J. MARK RICHARDSON

LEASE : SLOAN

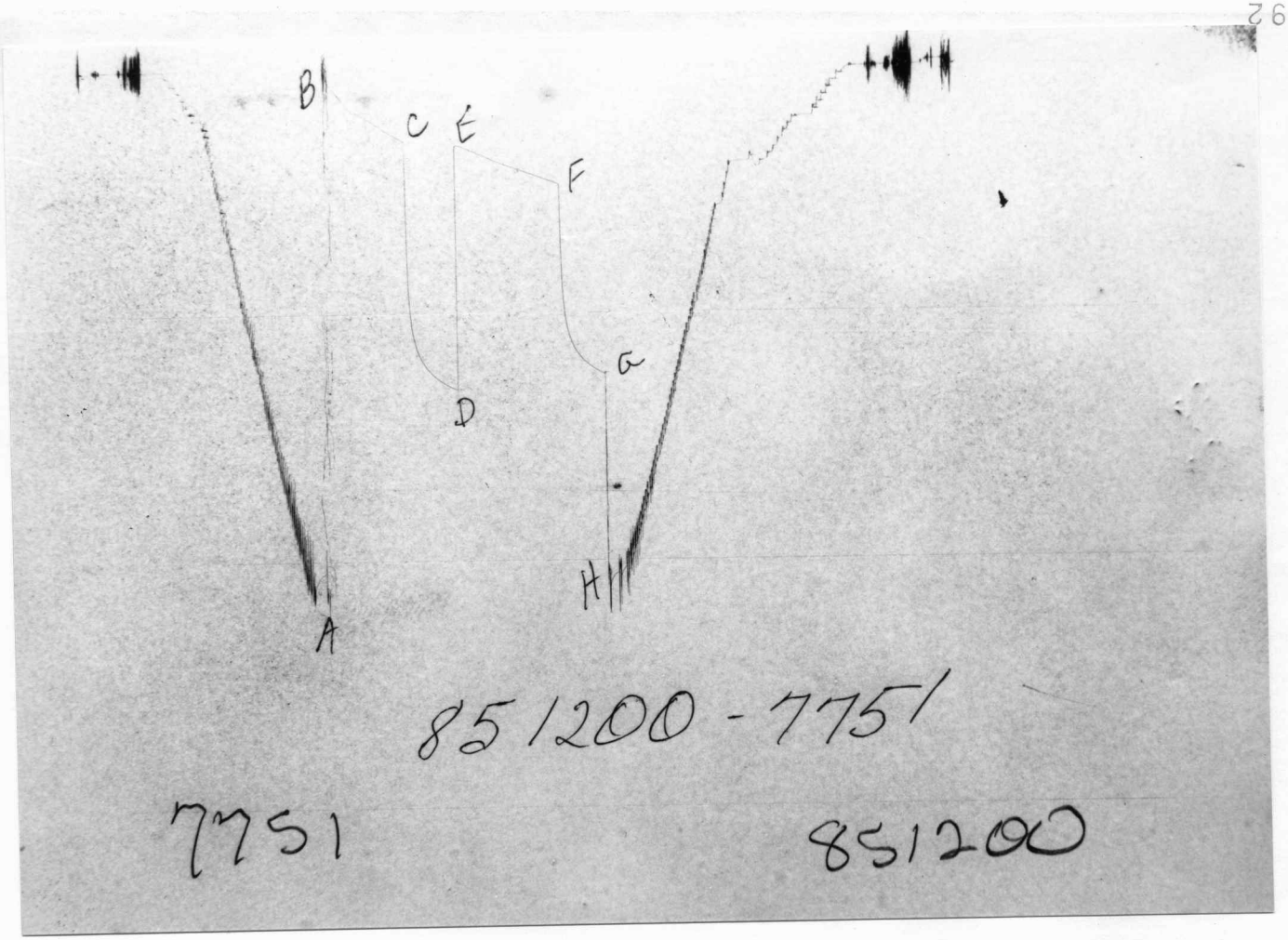
WELL NO.: 2

TEST NO.: 1

TICKET NO. 85120000
20-DEC-89
GREAT BEND

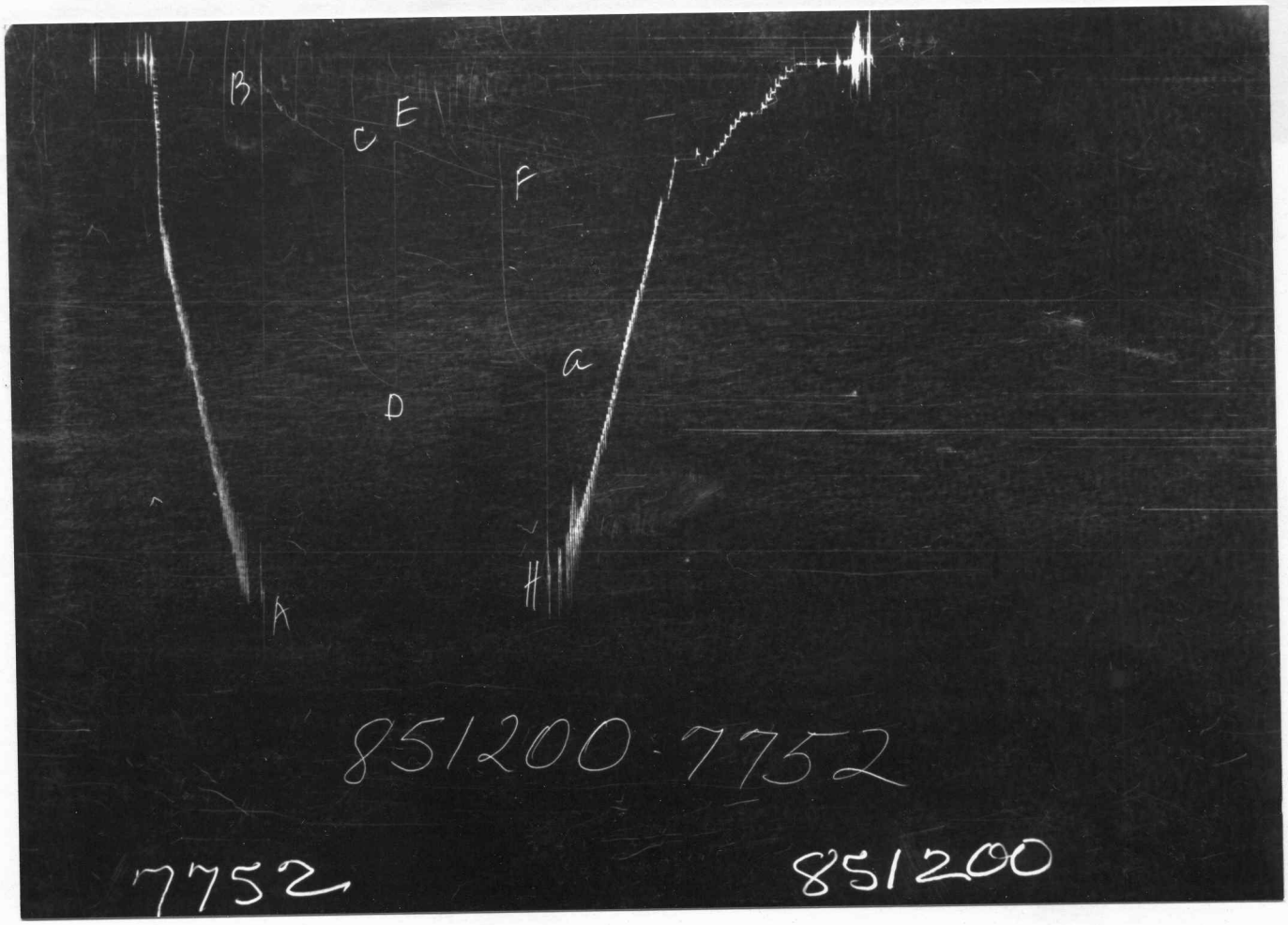
LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
27-28-20		KIOWA	KANSAS SM

LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
SLOAN	2	1	4366.2 - 4400.0	J. MARK RICHARDSON



GAUGE NO: 7751 DEPTH: 4345.1 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2047.4			
B	INITIAL FIRST FLOW		21.1	45.0	47.5	F
C	FINAL FIRST FLOW		298.8			
C	INITIAL FIRST CLOSED-IN		298.8	30.0	29.6	C
D	FINAL FIRST CLOSED-IN		1306.8			
E	INITIAL SECOND FLOW		315.7	60.0	62.6	F
F	FINAL SECOND FLOW		475.6			
F	INITIAL SECOND CLOSED-IN		475.6	30.0	25.3	C
G	FINAL SECOND CLOSED-IN		1246.5			
H	FINAL HYDROSTATIC		2053.1			



GAUGE NO: 7752 DEPTH: 4397.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2083	2080.1			
B	INITIAL FIRST FLOW	101	94.6	45.0	47.5	F
C	FINAL FIRST FLOW	385	376.7			
C	INITIAL FIRST CLOSED-IN	385	376.7	30.0	29.6	C
D	FINAL FIRST CLOSED-IN	1335	1340.4			
E	INITIAL SECOND FLOW	364	346.5	60.0	62.6	F
F	FINAL SECOND FLOW	486	509.7			
F	INITIAL SECOND CLOSED-IN	486	509.7	30.0	25.3	C
G	FINAL SECOND CLOSED-IN	1296	1281.6			
H	FINAL HYDROSTATIC	2083	2087.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: KANSAS CITY
NET PAY (ft):
GROSS TESTED FOOTAGE: 33.8
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2346.0 KELLY BUSHING
TOTAL DEPTH (ft): 4400.0
PACKER DEPTH(S) (ft): 4360, 4366
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.00
MUD VISCOSITY (sec): 39
ESTIMATED HOLE TEMP. (°F): 101
ACTUAL HOLE TEMP. (°F): ____ @ _____ ft

TICKET NUMBER: 85120000
DATE: 12-12-89 TEST NO: 1
TYPE DST: OPEN HOLE
FIELD CAMP: GREAT BEND
TESTER: D. BROZEK
WITNESS: J. MARK RICHARDSON
DRILLING CONTRACTOR: GABBERT & JONES RIG #11

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT MUD	____ @ ____ °F	10500 ppm
TEST WATER	____ @ ____ °F	119850 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:

1140 FEET OF GAS IN PIPE
120 FEET OF GASSY OIL CUT MUD
180 FEET OF GASSY OILY WATERY MUD
660 FEET OF SALT WATER

MEASURED FROM TESTER VALVE

REMARKS:

GRIND OUT = 50% MUD, 37.5% OIL, 2.5% GAS, & 10% WATER

CHARTS INDICATE POSSIBLE PARTIAL PLUGGING OF ANCHOR PIPE PERFORATIONS DURING FIRST FLOW PERIOD.

TYPE & SIZE MEASURING DEVICE: _____ | TICKET NO: 85120000

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
12-12-89					
1330					CALLED OUT
1550					ON LOCATION
1600					MADE UP TOOLS
1625					TOOL IN TABLE
1630					STARTED TOOL IN HOLE
1821					TOOL ON BOTTOM
1824	BH				OPENED TOOL WITH BLOW TO BOTTOM
					OF BUCKET IN 1 MINUTE THROUGH
					1/4" BLOW HOSE, NO GAS TO THE
					SURFACE
1909	BH				CLOSED TOOL
1939	BH				OPENED TOOL WITH BLOW TO BOTTOM
					OF BUCKET IN 1 MINUTE THROUGH
					1/4" BLOW HOSE, NO GAS TO THE
					SURFACE
2039	BH				CLOSED TOOL
2109					OFF BOTTOM

TICKET NO: 85120000

CLOCK NO: 4153 HOUR: 12

GAUGE NO: 7751

DEPTH: 4345.1

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	21.1			
	2	4.0	70.2	49.0		
	3	8.0	105.2	35.0		
	4	12.0	140.8	35.6		
	5	16.0	171.0	30.2		
	6	20.0	182.5	11.5		
	7	24.0	197.5	15.0		
	8	28.0	214.0	16.5		
	9	32.0	234.2	20.2		
	10	36.0	252.6	18.4		
	11	40.0	268.4	15.8		
C	12	47.5	298.8	30.4		
		FIRST CLOSED-IN				
C	1	0.0	298.8			
	2	1.0	831.9	533.1	1.0	1.689
	3	2.0	983.5	684.7	1.9	1.394
	4	3.0	1047.8	749.0	2.8	1.232
	5	4.0	1092.6	793.9	3.7	1.112
	6	5.0	1124.4	825.7	4.5	1.020
	7	6.0	1147.1	848.3	5.3	0.949
	8	7.0	1164.9	866.1	6.1	0.889
	9	8.0	1179.4	880.7	6.8	0.842
	10	9.0	1192.9	894.2	7.6	0.797
	11	10.0	1203.9	905.1	8.3	0.760
	12	12.0	1223.0	924.2	9.6	0.696
	13	14.0	1238.5	939.7	10.8	0.642
	14	16.0	1251.5	952.7	12.0	0.599
	15	18.0	1262.7	963.9	13.0	0.562
	16	20.0	1272.8	974.0	14.1	0.528
	17	22.0	1281.3	982.5	15.0	0.500
	18	24.0	1288.6	989.8	15.9	0.474
	19	26.0	1295.9	997.1	16.8	0.451
	20	28.0	1302.6	1003.9	17.6	0.431
D	21	29.6	1306.8	1008.0	18.2	0.416
		SECOND FLOW				
E	1	0.0	315.7			
	2	5.0	320.1	4.4		
	3	10.0	334.6	14.5		
	4	15.0	350.4	15.8		
	5	20.0	365.2	14.7		
	6	25.0	381.0	15.8		
	7	30.0	394.0	13.0		
	8	35.0	406.6	12.6		
	9	40.0	418.7	12.0		
	10	45.0	430.9	12.2		
	11	50.0	443.4	12.5		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	12	55.0	455.2	11.8		
	13	60.0	467.8	12.5		
F	14	62.6	475.6	7.8		
		SECOND CLOSED-IN				
F	1	0.0	475.6			
	2	1.0	862.2	386.7	1.0	2.041
	3	2.0	979.8	504.2	2.0	1.741
	4	3.0	1030.9	555.3	3.0	1.571
	5	4.0	1065.7	590.1	3.8	1.458
	6	5.0	1093.1	617.5	4.8	1.362
	7	6.0	1113.7	638.2	5.7	1.285
	8	7.0	1128.9	653.4	6.5	1.226
	9	8.0	1143.4	667.9	7.5	1.169
	10	9.0	1155.7	680.1	8.4	1.120
	11	10.0	1164.9	689.3	9.1	1.081
	12	12.0	1182.8	707.2	10.8	1.007
	13	14.0	1197.0	721.4	12.5	0.946
	14	16.0	1208.9	733.4	14.0	0.896
	15	18.0	1218.8	743.3	15.4	0.853
	16	20.0	1226.8	751.2	16.9	0.814
	17	22.0	1235.0	759.4	18.3	0.779
	18	24.0	1242.6	767.1	19.7	0.747
G	19	25.3	1246.5	770.9	20.6	0.729

REMARKS:

TICKET NO: 85120000

CLOCK NO: 16166 HOUR: 12

GAUGE NO: 7752

DEPTH: 4397.0

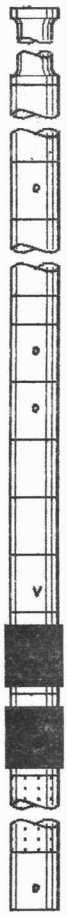
REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	94.6			
	2	4.0	129.1	34.5		
	3	8.0	186.6	57.5		
	4	12.0	195.9	9.2		
	5	16.0	244.1	48.2		
	6	20.0	242.6	-1.4		
	7	24.0	280.1	37.5		
	8	28.0	290.2	10.1		
	9	32.0	314.3	24.1		
	10	36.0	332.9	18.5		
	11	40.0	350.8	17.9		
C	12	47.5	376.7	25.9		
			FIRST CLOSED-IN			
C	1	0.0	376.7			
	2	1.0	910.5	533.8	1.0	1.678
	3	2.0	1033.3	656.6	1.9	1.394
	4	3.0	1101.7	725.0	2.9	1.220
	5	4.0	1135.7	759.0	3.7	1.109
	6	5.0	1164.9	788.2	4.5	1.025
	7	6.0	1187.8	811.0	5.3	0.949
	8	7.0	1203.9	827.2	6.1	0.894
	9	8.0	1216.9	840.2	6.8	0.843
	10	9.0	1232.9	856.2	7.6	0.796
	11	10.0	1243.5	866.8	8.3	0.759
	12	12.0	1262.2	885.5	9.6	0.696
	13	14.0	1276.6	899.9	10.8	0.643
	14	16.0	1289.0	912.3	12.0	0.598
	15	18.0	1300.0	923.3	13.1	0.561
	16	20.0	1309.4	932.7	14.1	0.528
	17	22.0	1317.2	940.5	15.0	0.500
	18	24.0	1324.8	948.1	15.9	0.474
	19	26.0	1331.2	954.5	16.8	0.451
	20	28.0	1337.4	960.7	17.6	0.431
D	21	29.6	1340.4	963.7	18.2	0.416
			SECOND FLOW			
E	1	0.0	346.5			
	2	5.0	351.3	4.8		
	3	10.0	366.0	14.7		
	4	15.0	382.4	16.4		
	5	20.0	398.2	15.8		
	6	25.0	413.0	14.8		
	7	30.0	427.2	14.2		
	8	35.0	439.6	12.4		
	9	40.0	452.7	13.1		
	10	45.0	466.1	13.5		
	11	50.0	478.5	12.4		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	12	55.0	491.4	12.9		
	13	60.0	502.6	11.2		
F	14	62.6	509.7	7.2		
			SECOND CLOSED-IN			
F	1	0.0	509.7			
	2	1.0	952.3	442.5	1.0	2.050
	3	2.0	1042.6	532.9	2.0	1.743
	4	3.0	1085.1	575.4	2.9	1.574
	5	4.0	1115.5	605.7	3.9	1.453
	6	5.0	1137.5	627.7	4.7	1.366
	7	6.0	1158.0	648.3	5.7	1.287
	8	7.0	1170.6	660.9	6.6	1.221
	9	8.0	1183.1	673.3	7.4	1.171
	10	9.0	1195.7	686.0	8.4	1.120
	11	10.0	1204.1	694.4	9.2	1.079
	12	12.0	1219.7	709.9	10.8	1.008
	13	14.0	1233.5	723.8	12.4	0.947
	14	16.0	1245.1	735.4	14.0	0.897
	15	18.0	1254.6	744.8	15.5	0.852
	16	20.0	1264.2	754.4	16.9	0.813
	17	22.0	1271.2	761.5	18.3	0.779
	18	24.0	1278.5	768.8	19.7	0.747
G	19	25.3	1281.6	771.8	20.6	0.729

REMARKS:

TICKET NO. 85120000

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE	4.500	3.826	3880.4	
3	DRILL COLLARS	6.250	2.250	330.0	
50	IMPACT REVERSING SUB	5.750	2.750	1.0	4211.4
3	DRILL COLLARS	6.250	2.250	121.0	
5	CROSSOVER	4.500	2.762	1.0	
12	DUAL CIP VALVE	5.750	0.870	6.0	
60	HYDROSPRING TESTER	5.000	0.750	5.0	4343.9
80	AP RUNNING CASE	5.000	2.250	4.1	4345.1
15	JAR	5.000	1.000	2.8	
16	VR SAFETY JOINT	5.000	1.000	5.0	
70	OPEN HOLE PACKER	6.750	1.530	5.8	4360.4
70	OPEN HOLE PACKER	6.750	1.530	5.8	4366.2
20	FLUSH JOINT ANCHOR	5.000	2.440	28.0	
81	BLANKED-OFF RUNNING CASE	5.000		4.1	4397.0
	TOTAL DEPTH				4400.0



EQUIPMENT DATA

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
27-28-20		KIOWA	KANSAS

LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
SLOAN	2	2	4639.0 - 4671.0	J. MARK RICHARDSON

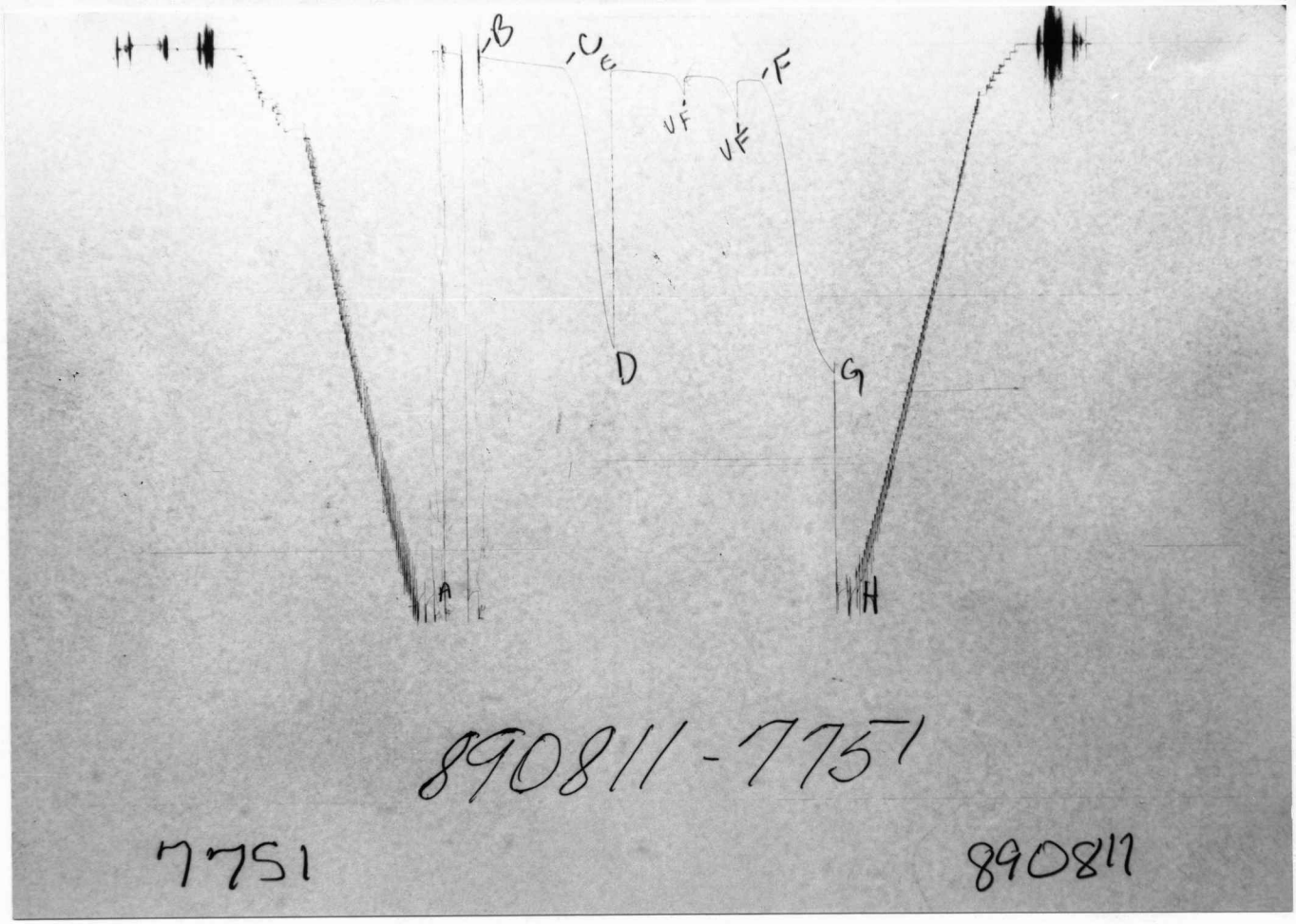
J. MARK RICHARDSON

LEASE : SLOAN

WELL NO.: 2

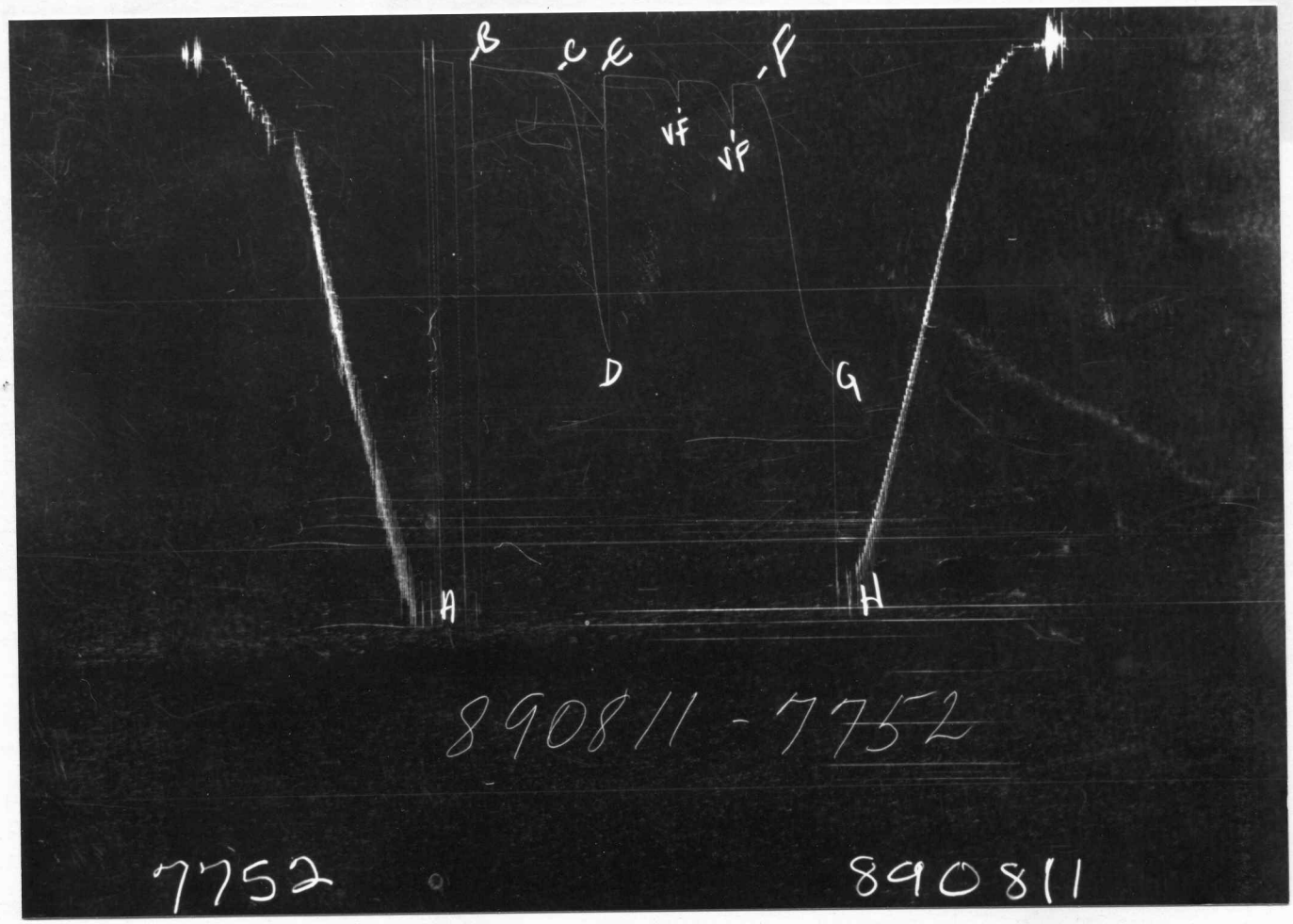
TEST NO.: 2

TICKET NO. 89081100
20-DEC-89
GREAT BEND



GAUGE NO: 7751 DEPTH: 4617.1 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2178.5			
B	INITIAL FIRST FLOW		36.4	45.0	50.5	F
C	FINAL FIRST FLOW		86.4			
C	INITIAL FIRST CLOSED-IN		86.4	30.0	27.9	C
D	FINAL FIRST CLOSED-IN		1202.9			
E	INITIAL SECOND FLOW		101.8	90.0	89.0	F
F	FINAL SECOND FLOW		143.0			
F	INITIAL SECOND CLOSED-IN		143.0	45.0	42.5	C
G	FINAL SECOND CLOSED-IN		1307.9			
H	FINAL HYDROSTATIC		2168.6			



GAUGE NO: 7752 DEPTH: 4668.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2182	2199.1			
B	INITIAL FIRST FLOW	81	57.0	45.0	50.5	F
C	FINAL FIRST FLOW	122	104.6			
C	INITIAL FIRST CLOSED-IN	122	104.6	30.0	27.9	C
D	FINAL FIRST CLOSED-IN	1198	1231.3			
E	INITIAL SECOND FLOW	122	121.9	90.0	89.0	F
F	FINAL SECOND FLOW	142	163.6			
F	INITIAL SECOND CLOSED-IN	142	163.6	45.0	42.5	C
G	FINAL SECOND CLOSED-IN	1296	1340.6			
H	FINAL HYDROSTATIC	2182	2194.1			

EQUIPMENT & HOLE DATA

FORMATION TESTED: KANSAS CITY
NET PAY (ft):
GROSS TESTED FOOTAGE: 32.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2346.0 KELLY BUSHING
TOTAL DEPTH (ft): 4671.0
PACKER DEPTH(S) (ft): 4632, 4639
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.10
MUD VISCOSITY (sec): 43
ESTIMATED HOLE TEMP. (°F): 103
ACTUAL HOLE TEMP. (°F): ___ @ _____ ft

TICKET NUMBER: 89081100

DATE: 12-14-89 TEST NO: 2

TYPE DST: OPEN HOLE

FIELD CAMP: GREAT BEND

TESTER: D. BROZEK / FRANK SNYDER

WITNESS: J. MARK RICHARDSON

DRILLING CONTRACTOR: GABBERT AND JONES #11

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT MUD	____ @ ____ °F	12500 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:

60 FEET OF SLIGHT OIL CUT MUD
120 FEET OF GASSY OIL CUT MUD
60 FEET OF GASSY SLIGHT OIL CUT MUD

MEASURED FROM TESTER VALVE

REMARKS:

SET TOOL 3 TIMES DUE TO NO BLOW AT SURFACE RESULTING FROM SURFACE VALVE BEING FROZEN.

TYPE & SIZE MEASURING DEVICE: ____________ | TICKET NO: 89081100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
12-14-89					
					ON LOCATION
0040					MADE UP TOOLS
0115					TOOL IN TABLE
0130					STARTED TOOL IN HOLE
0401					TOOL ON BOTTOM
0404	1/4"BH				TOOL OPENED 1/4" TO 2" BLOW
0449	1/4"BH				CLOSED TOOL
0519	1/4"BH				OPENED TOOL 1/4" TO 2" BLOW
0649	1/4"BH				CLOSED TOOL
0734					OFF BOTTOM

TICKET NO: 89081100

CLOCK NO: 4153 HOUR: 12

GAUGE NO: 7751

DEPTH: 4617.1

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	36.4			
	2	3.0	42.4	6.0		
	3	6.0	46.1	3.7		
	4	9.0	49.8	3.7		
	5	12.0	53.0	3.2		
	6	15.0	55.8	2.8		
	7	18.0	58.6	2.8		
	8	21.0	61.5	2.9		
	9	24.0	64.0	2.5		
	10	27.0	66.8	2.8		
	11	30.0	69.5	2.7		
	12	33.0	71.4	1.9		
	13	36.0	74.5	3.1		
	14	39.0	76.8	2.3		
	15	42.0	79.4	2.6		
	16	45.0	82.1	2.7		
	17	48.0	84.1	2.0		
C	18	50.5	86.4	2.3		
			FIRST CLOSED-IN			
C	1	0.0	86.4			
	2	1.0	90.4	4.0	1.0	1.707
	3	2.0	99.0	12.6	1.9	1.414
	4	3.0	109.6	23.2	2.9	1.248
	5	4.0	122.2	35.8	3.7	1.137
	6	5.0	136.0	49.6	4.5	1.048
	7	6.0	153.5	67.1	5.4	0.974
	8	7.0	171.5	85.1	6.2	0.914
	9	8.0	192.0	105.6	6.9	0.863
	10	9.0	217.5	131.0	7.6	0.820
	11	10.0	245.6	159.1	8.3	0.784
	12	12.0	318.3	231.9	9.7	0.718
	13	14.0	420.0	333.6	10.9	0.665
	14	16.0	565.0	478.5	12.2	0.619
	15	18.0	725.2	638.8	13.3	0.581
	16	20.0	885.2	798.7	14.4	0.547
	17	22.0	998.8	912.4	15.3	0.518
	18	24.0	1093.4	1007.0	16.3	0.492
	19	26.0	1160.2	1073.8	17.2	0.469
D	20	27.9	1202.9	1116.5	18.0	0.449
			SECOND FLOW			
E	1	0.0	101.8			
	2	5.0	98.1	-3.7		
	3	10.0	100.1	2.0		
	4	15.0	102.5	2.4		
	5	20.0	105.5	3.0		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	6	25.0	108.8	3.3		
	7	30.0	111.7	2.9		
	8	35.0	115.7	4.0		
	9	40.0	142.5	26.8		
[1]	10	43.6	198.7	56.1		
	11	45.0	128.4	-70.3		
	12	50.0	124.1	-4.3		
	13	55.0	125.6	1.5		
	14	60.0	128.5	2.9		
	15	65.0	140.1	11.6		
	16	70.0	189.2	49.0		
	17	75.0	273.8	84.7		
[1]	18	75.7	290.5	16.7		
	19	80.0	140.5	-150.0		
F	20	89.0	143.0	2.5		
			SECOND CLOSED-IN			
F	1	0.0	143.0			
	2	1.0	147.4	4.4	1.0	2.144
	3	2.0	158.2	15.2	2.0	1.852
	4	3.0	171.0	28.0	3.0	1.673
	5	4.0	182.9	39.9	3.9	1.555
	6	5.0	199.5	56.5	4.8	1.462
	7	6.0	217.2	74.2	5.8	1.382
	8	7.0	233.2	90.2	6.7	1.320
	9	8.0	254.9	111.9	7.6	1.264
	10	9.0	278.8	135.8	8.5	1.217
	11	10.0	305.0	162.0	9.4	1.174
	12	12.0	363.2	220.2	11.0	1.103
	13	14.0	442.4	299.4	12.7	1.041
	14	16.0	539.7	396.8	14.4	0.988
	15	18.0	648.4	505.4	15.9	0.943
	16	20.0	769.6	626.7	17.5	0.901
	17	22.0	880.3	737.3	19.0	0.865
	18	24.0	972.8	829.8	20.5	0.833
	19	26.0	1047.8	904.8	21.9	0.804
	20	28.0	1108.9	965.9	23.3	0.777
	21	30.0	1157.3	1014.3	24.7	0.752
	22	35.0	1240.4	1097.4	28.0	0.698
	23	40.0	1290.8	1147.8	31.1	0.652
G	24	42.5	1307.9	1164.9	32.6	0.632

LEGEND:
[1] VALVE FROZEN

REMARKS:

TICKET NO: 89081100	GAUGE NO: 7752
CLOCK NO: 16166 HOUR: 12	DEPTH: 4668.0

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	57.0			
	2	3.0	61.3	4.3		
	3	6.0	65.2	3.9		
	4	9.0	69.6	4.4		
	5	12.0	74.3	4.7		
	6	15.0	78.2	3.9		
	7	18.0	80.9	2.7		
	8	21.0	84.3	3.3		
	9	24.0	86.2	1.9		
	10	27.0	86.4	0.2		
	11	30.0	88.1	1.7		
	12	33.0	91.1	2.9		
	13	36.0	93.8	2.7		
	14	39.0	95.8	2.0		
	15	42.0	98.2	2.4		
	16	45.0	100.6	2.3		
	17	48.0	102.8	2.2		
C	18	50.5	104.6	1.8		
		FIRST CLOSED-IN				
C	1	0.0	104.6			
	2	1.0	114.0	9.4	1.0	1.718
	3	2.0	123.8	19.1	1.9	1.426
	4	3.0	134.5	29.9	2.8	1.254
	5	4.0	147.6	42.9	3.7	1.133
	6	5.0	161.3	56.7	4.5	1.049
	7	6.0	179.0	74.4	5.4	0.972
	8	7.0	195.3	90.7	6.1	0.917
	9	8.0	217.6	113.0	6.9	0.864
	10	9.0	241.2	136.6	7.6	0.821
	11	10.0	273.0	168.4	8.4	0.780
	12	12.0	347.7	243.1	9.7	0.716
	13	14.0	453.0	348.4	11.0	0.664
	14	16.0	599.0	494.4	12.2	0.618
	15	18.0	763.6	659.0	13.2	0.581
	16	20.0	932.0	827.4	14.3	0.548
	17	22.0	1054.5	949.9	15.3	0.518
	18	24.0	1133.9	1029.2	16.3	0.492
	19	26.0	1196.3	1091.7	17.2	0.469
D	20	27.9	1231.3	1126.7	18.0	0.449
		SECOND FLOW				
E	1	0.0	121.9			
	2	5.0	115.1	-6.7		
	3	10.0	117.2	2.1		
	4	15.0	120.8	3.5		
	5	20.0	124.1	3.3		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	6	25.0	127.0	2.8		
	7	30.0	130.4	3.4		
	8	35.0	136.1	5.7		
	9	40.0	170.1	34.0		
[1]	10	43.6	227.5	57.4		
	11	45.0	141.9	-85.6		
	12	50.0	141.9	0.0		
	13	55.0	145.1	3.1		
	14	60.0	147.8	2.7		
	15	65.0	163.8	16.0		
	16	70.0	215.3	51.5		
	17	75.0	307.0	91.8		
[1]	18	75.7	319.6	12.6		
	19	80.0	159.8	-159.8		
F	20	89.0	163.6	3.7		
		SECOND CLOSED-IN				
F	1	0.0	163.6			
	2	1.0	176.0	12.5	1.0	2.129
	3	2.0	190.4	26.8	2.0	1.844
	4	3.0	203.2	39.6	3.0	1.673
	5	4.0	216.7	53.1	3.9	1.553
	6	5.0	233.9	70.3	4.9	1.459
	7	6.0	250.6	87.0	5.8	1.384
	8	7.0	270.1	106.5	6.7	1.320
	9	8.0	290.6	127.0	7.6	1.266
	10	9.0	315.9	152.4	8.5	1.217
	11	10.0	343.9	180.3	9.3	1.174
	12	12.0	406.3	242.7	11.1	1.100
	13	14.0	487.7	324.1	12.7	1.041
	14	16.0	593.1	429.5	14.4	0.987
	15	18.0	703.8	540.2	16.0	0.941
	16	20.0	817.5	654.0	17.5	0.902
	17	22.0	926.4	762.8	19.0	0.865
	18	24.0	1018.6	855.0	20.5	0.833
	19	26.0	1091.4	927.8	21.9	0.804
	20	28.0	1153.3	989.7	23.3	0.777
	21	30.0	1195.4	1031.8	24.7	0.752
	22	35.0	1273.5	1110.0	28.0	0.698
	23	40.0	1324.0	1160.4	31.1	0.652
G	24	42.5	1340.6	1177.0	32.6	0.632

LEGEND:
[1] VALVE FROZEN

REMARKS:

TICKET NO. 89081100

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE	4.500	3.826	4182.4	
3	DRILL COLLARS	6.250	2.250	300.0	
50	IMPACT REVERSING SUB	5.750	2.750	1.0	4483.4
3	DRILL COLLARS	6.250	2.250	121.0	
5	CROSSOVER	4.500	2.760	1.0	
12	DUAL CIP VALVE	5.750	0.870	6.0	
60	HYDROSPRING TESTER	5.000	0.750	5.0	4615.9
80	AP RUNNING CASE	5.000	2.250	4.1	4617.1
15	JAR	5.000	1.000	5.0	
16	VR SAFETY JOINT	5.000	1.000	2.8	
70	OPEN HOLE PACKER	6.750	1.530	5.8	4632.4
70	OPEN HOLE PACKER	6.750	1.530	5.8	4639.0
20	FLUSH JOINT ANCHOR	5.000	2.440	27.0	
81	BLANKED-OFF RUNNING CASE	5.000		4.1	4668.0
	TOTAL DEPTH				4671.0

EQUIPMENT DATA