HALLIBURTON
SERVICES

TICKET NO. 70110200
10-OCT-83
GREAT BEND

FORMATION TESTING SERVICE REPORT

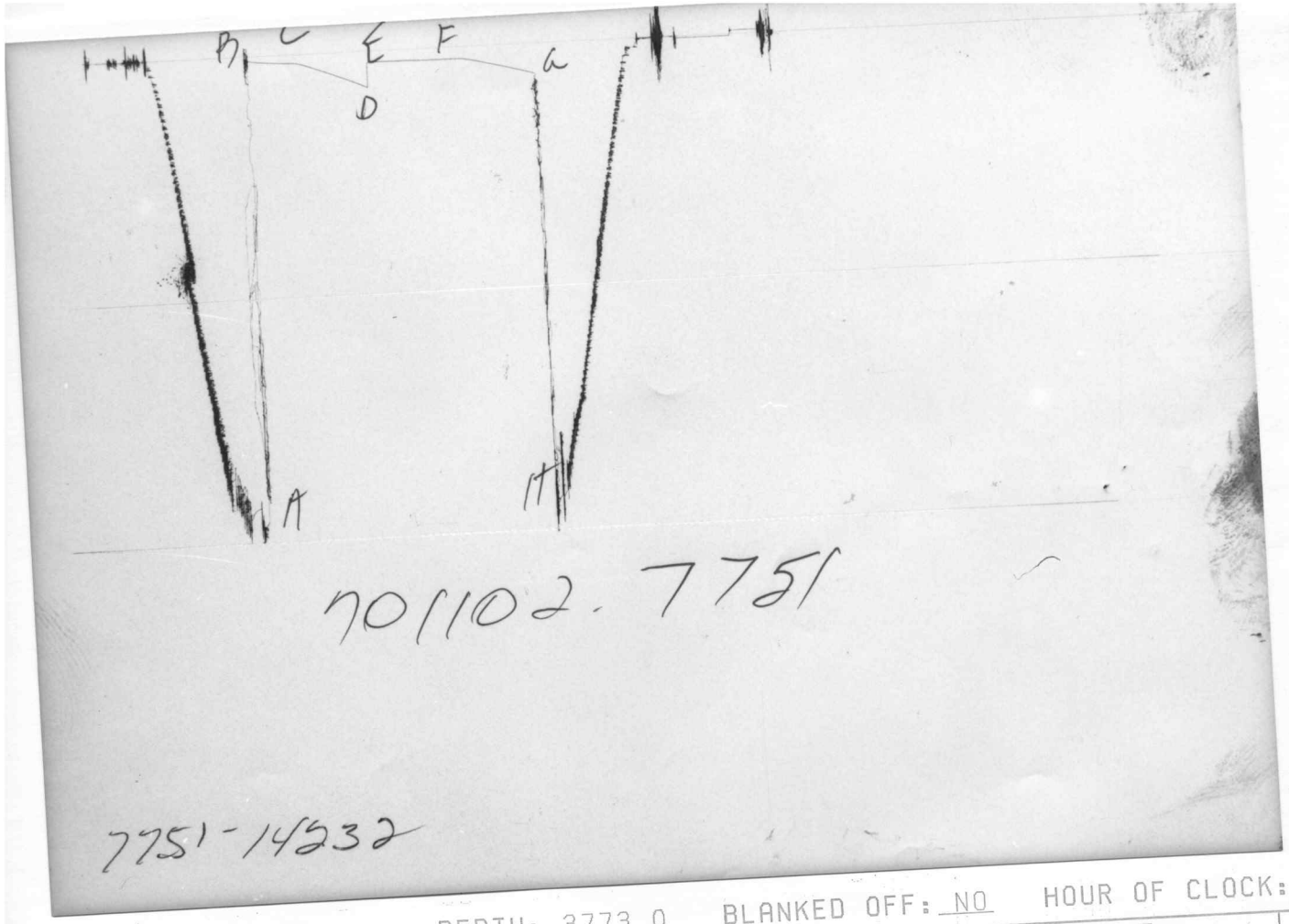
LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.	FIELD AREA	COUNTY	STATE
20-13-15				PAWNEE	KANSAS

LEASE NAME

TESTED INTERVAL

LEASE OWNER/COMPANY NAME

SM

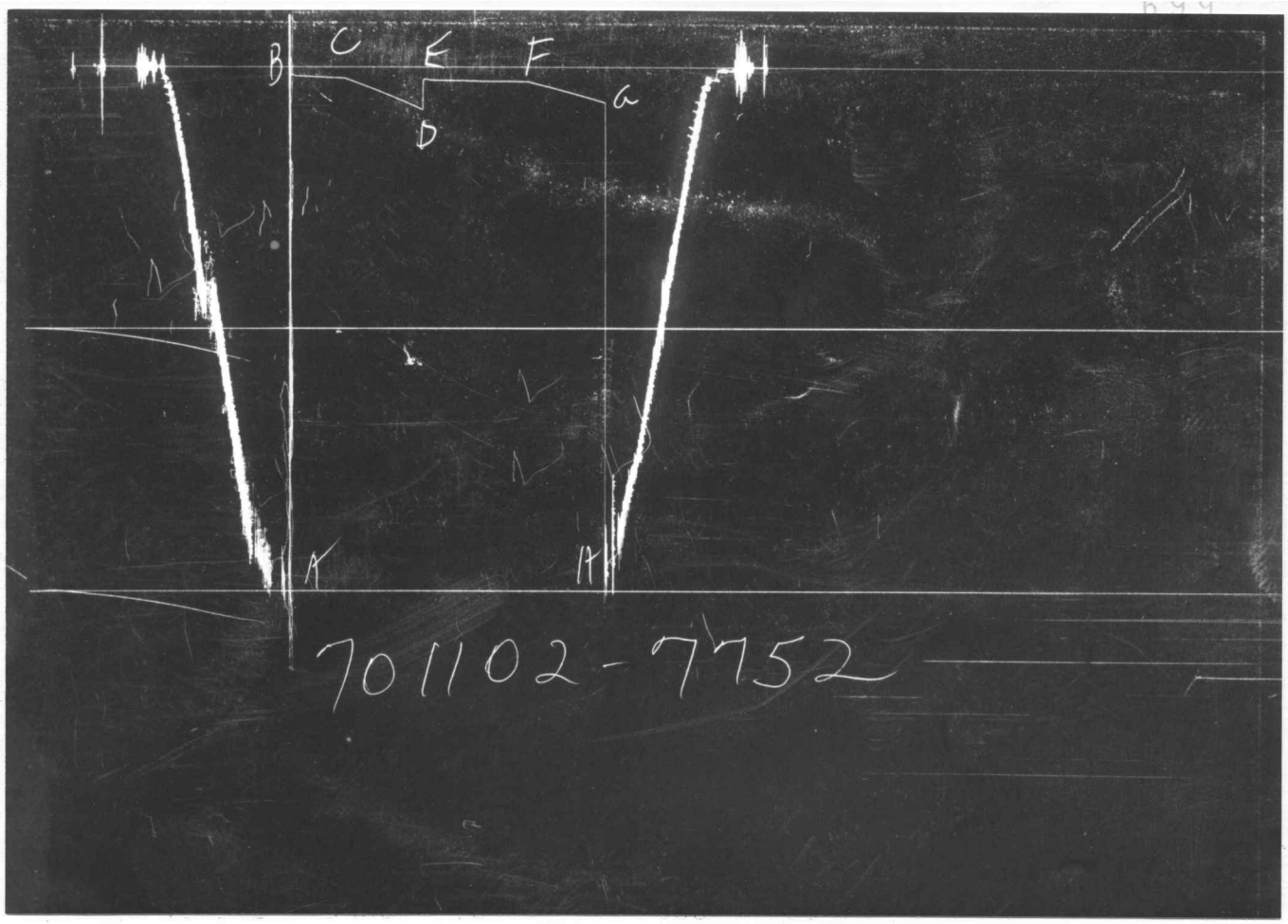


701102.7751

7751-14232

GAUGE NO: 7751 DEPTH: 3773.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1871.7			
B	INITIAL FIRST FLOW	17.9		30.0	30.0	F
C	FINAL FIRST FLOW	35.7				
C	INITIAL FIRST CLOSED-IN	35.7		45.0	45.0	C
D	FINAL FIRST CLOSED-IN	149.8				
E	INITIAL SECOND FLOW	47.9		60.0	60.0	F
F	FINAL SECOND FLOW	47.9				
F	INITIAL SECOND CLOSED-IN	47.9		45.0	45.0	C
G	FINAL SECOND CLOSED-IN	123.4				
H	FINAL HYDROSTATIC		1874.4			



GAUGE NO: 7752 DEPTH: 3803.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1983	1884.6			
B	INITIAL FIRST FLOW	40	27.3	30.0	30.0	F
C	FINAL FIRST FLOW	40	42.4			
C	INITIAL FIRST CLOSED-IN	40	42.4	45.0	45.0	C
D	FINAL FIRST CLOSED-IN	180	166.3			
E	INITIAL SECOND FLOW	60	47.8	60.0	60.0	F
F	FINAL SECOND FLOW	60	57.3			
F	INITIAL SECOND CLOSED-IN	60	57.3	45.0	45.0	C
G	FINAL SECOND CLOSED-IN	140	136.7			
H	FINAL HYDROSTATIC	1904	1880.0			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LANSING (H-ZONE)
NET PAY (ft):
GROSS TESTED FOOTAGE: 19.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 0
TOTAL DEPTH (ft): 3806.0
PACKER DEPTH(S) (ft): 3781, 3787
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 38
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 108 @ 3801.0 ft

TICKET NUMBER: 70110200

DATE: 10-5-83 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: GREAT BEND

TESTER: G.D. WILSON

WITNESS:

DRILLING CONTRACTOR: J AND W DRILLING #1

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:

40 FEET OF GAS AND OIL CUT MUD
60 FEET OF HEAVY GAS AND OIL CUT MUD

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: 1/8" BUBBLE HOSE					TICKET NO: 70110200
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
10-5-83					
0700					ON LOCATION
0715					PICKED UP AND MADE UP TOOLS
0800					STARTED IN HOLE WITH DST #1
0900	1/8"BH				OPENED TOOL- 1" BLOW INCREAS-
					ING TO 6" BLOW.
0930					CLOSED TOOL
1015	1/8"BH				OPENED TOOL WITH STRONG BLOW.
					8" BLOW INCREASING TO 12"
					BLOW AT TIME TO CLOSE.
1115					CLOSED TOOL
1200					PULLED OUT OF THE HOLE.
1310					OUT OF HOLE.

TICKET NO. 70110200

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3190.0	
4	FLEX WEIGHT.....	4.500	2.764	450.0	
50	IMPACT REVERSING SUB.....	6.000	3.000	1.0	3640.0
4	FLEX WEIGHT.....	4.500	2.764	120.0	
5	CROSSOVER.....	5.750	2.875	0.8	
12	DUAL CIP VALVE.....	5.000	0.750	6.3	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3771.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	3773.0
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	3781.0
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	3787.0
20	FLUSH JOINT ANCHOR.....	5.000	3.840	12.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.5	3801.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.1	3803.0

TOTAL DEPTH 3806.0

EQUIPMENT DATA

HALLIBURTON
SERVICES

TICKET NO. 70110300
11-OCT-83
GREAT BEND

FORMATION TESTING SERVICE REPORT

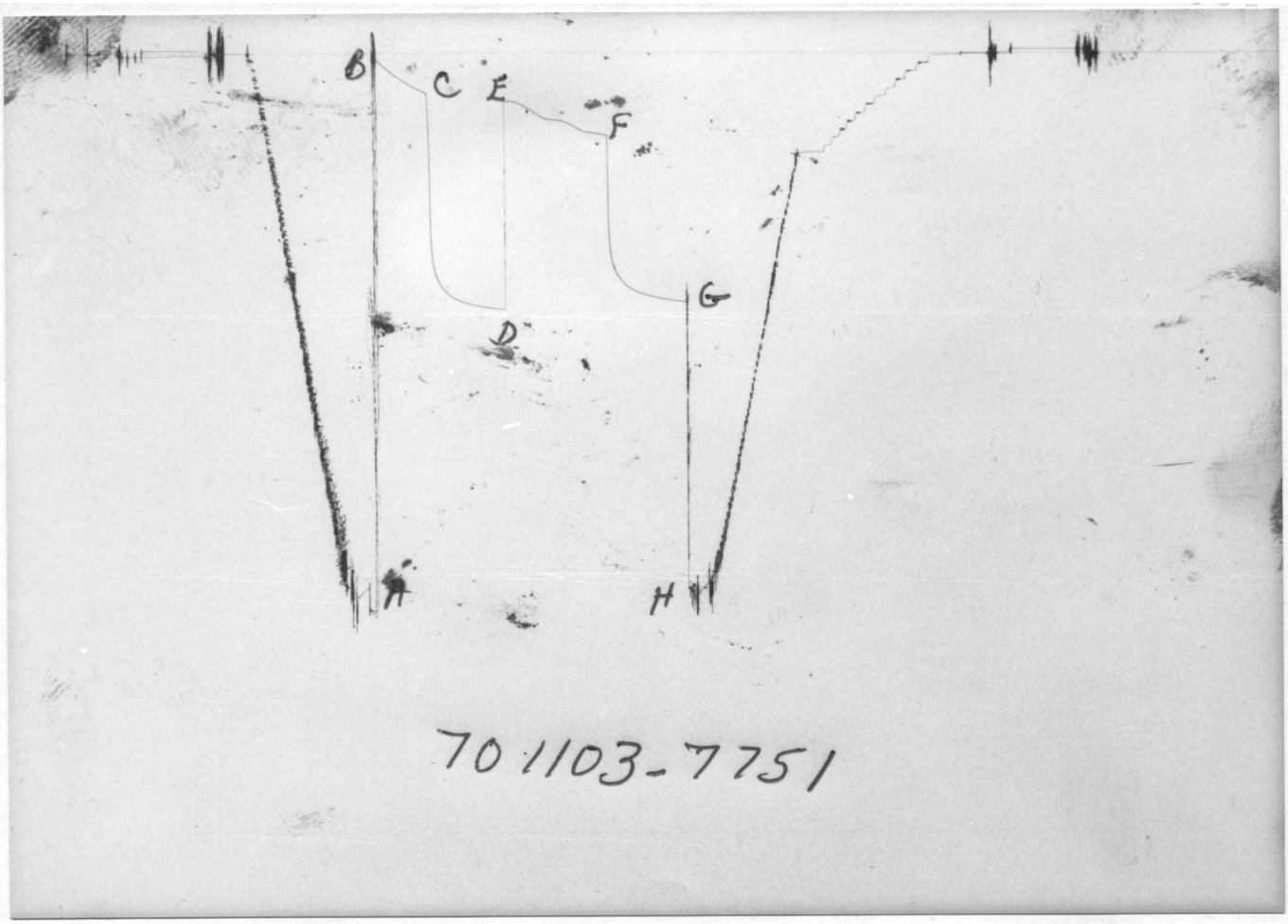
LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.
20-13-15		

FIELD AREA	TESTED INTERVAL

COUNTY	STATE
PAWNEE SAND	KANSAS DR

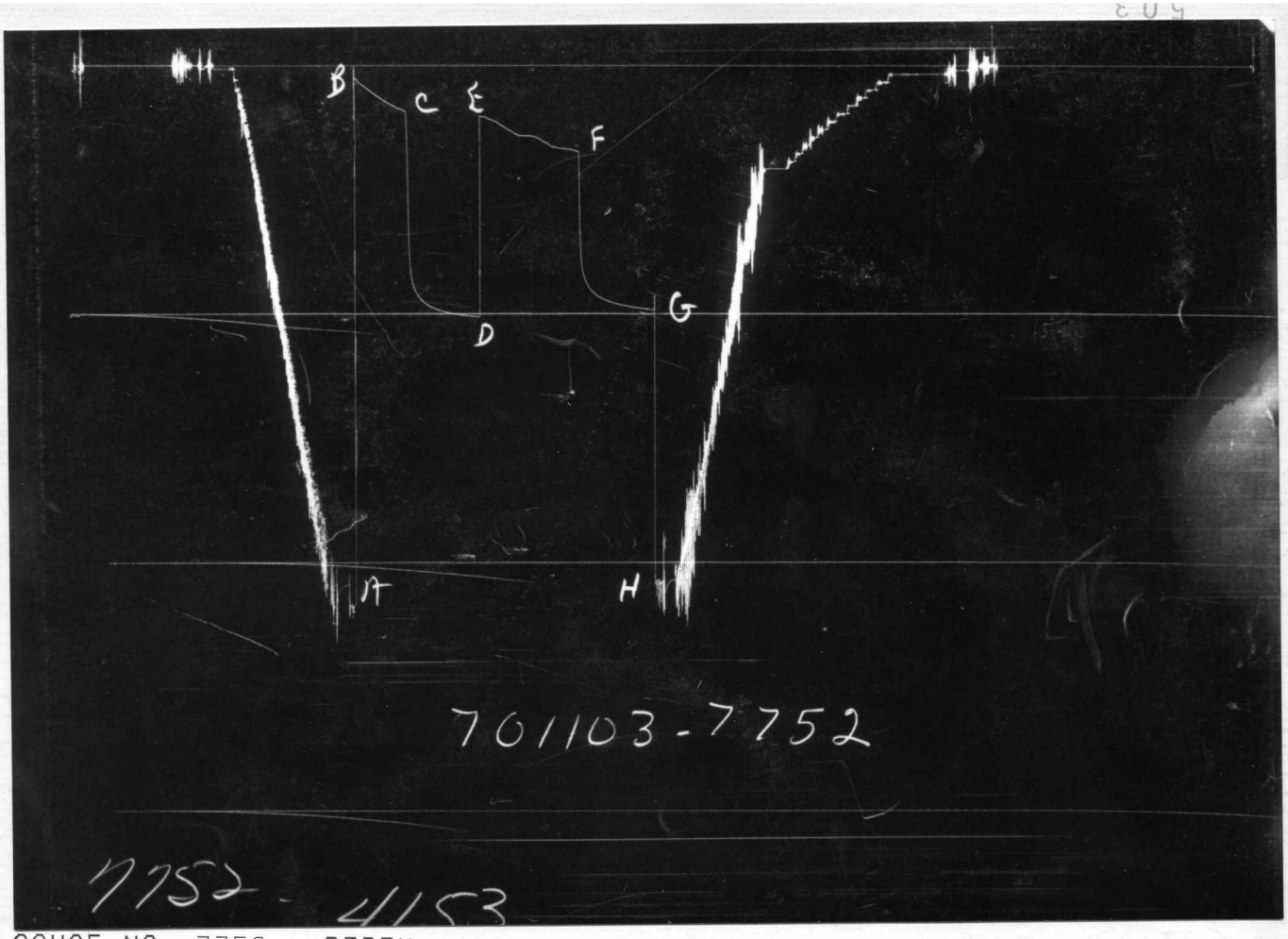
LEASE NAME

LEASE OWNER/COMPANY NAME



GAUGE NO: 7751 DEPTH: 4037.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2058.1			
B	INITIAL FIRST FLOW		15.6	30.0	31.0	F
C	FINAL FIRST FLOW		155.8			
C	INITIAL FIRST CLOSED-IN		155.8	45.0	44.1	C
D	FINAL FIRST CLOSED-IN		987.6			
E	INITIAL SECOND FLOW		193.1	60.0	59.9	F
F	FINAL SECOND FLOW		322.8			
F	INITIAL SECOND CLOSED-IN		322.8	45.0	45.0	C
G	FINAL SECOND CLOSED-IN		960.0			
H	FINAL HYDROSTATIC		2044.0			



GAUGE NO: 7752 DEPTH: 4102.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2181	2090.2			
B	INITIAL FIRST FLOW	60	49.3	30.0	31.0	F
C	FINAL FIRST FLOW	200	186.4			
C	INITIAL FIRST CLOSED-IN	200	186.4	45.0	44.1	C
D	FINAL FIRST CLOSED-IN	1015	1014.4			
E	INITIAL SECOND FLOW	200	207.3	60.0	59.9	F
F	FINAL SECOND FLOW	339	351.4			
F	INITIAL SECOND CLOSED-IN	339	351.4	45.0	45.0	C
G	FINAL SECOND CLOSED-IN	995	987.5			
H	FINAL HYDROSTATIC	2082	2071.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: SIMPSON SAND
NET PAY (ft):
GROSS TESTED FOOTAGE: 47.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in):
ELEVATION (ft): 0
TOTAL DEPTH (ft): 4105.0
PACKER DEPTH(S) (ft): 4052, 4058
FINAL SURFACE CHOKE (in): 0.125
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.70
MUD VISCOSITY (sec): 40
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 112 @ 4099.0 ft

TICKET NUMBER: 70110300

DATE: 10-6-83 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: GREAT BEND

TESTER: WILSON

WITNESS:

DRILLING CONTRACTOR: J & W DRILLING #1

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:

840' OF OIL AND GAS WITH TRACE OF DRILLING MUD

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 70110300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
10-6=83					
1645					ON LOCATION
1745					PICKED UP AND MADE UP TOOLS
1830					STARTED IN HOLE WITH DST #2
1945					OPENED TOOL WITH A WEAK BLOW,
					INCREASING TO A STRONG BLOW IN
					15 MINUTES, OFF BOTTOM OF
					BUCKET
2015					CLOSED TOOL WITH A STRONG BLOW,
					NO GAS.
2100					OPENED TOOL WITH A FAIR BLOW,
					INCREASING TO A STRONG BLOW
					OFF BOTTOM OF BUCKET IN 15
					MINUTES AND INCREASED THROUGH-
					OUT FLOW-NO GAS.
2200					CLOSED TOOL
2245					PULLED OUT OF HOLE
10-7-83					
0145					OUT OF HOLE-BROKE AND LAID
					DOWN TOOLS.

TICKET NO: 70110300

CLOCK NO: 14232 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 7751

DEPTH: 4037.0

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	15.6			
	2	5.0	42.6	27.0		
	3	10.0	70.9	28.3		
	4	15.0	96.8	25.9		
	5	20.0	117.3	20.5		
	6	25.0	137.1	19.7		
	7	30.0	152.3	15.2		
C	8	31.0	155.8	3.5		
		FIRST CLOSED-IN				
C	1	0.0	155.8			
	2	3.0	808.6	652.9	2.8	1.052
	3	6.0	878.3	722.5	5.0	0.789
	4	9.0	910.3	754.5	7.0	0.647
	5	12.0	929.4	773.6	8.7	0.554
	6	15.0	942.7	787.0	10.1	0.486
	7	18.0	953.5	797.8	11.4	0.435
	8	21.0	960.8	805.0	12.5	0.394
	9	24.0	966.7	810.9	13.5	0.360
	10	27.0	972.0	816.2	14.4	0.332
	11	30.0	975.5	819.8	15.2	0.308
	12	33.0	978.0	822.2	16.0	0.287
	13	36.0	981.5	825.8	16.6	0.270
	14	39.0	983.4	827.6	17.3	0.254
	15	42.0	986.1	830.4	17.8	0.240
D	16	44.1	987.6	831.8	18.2	0.231
		SECOND FLOW				
E	1	0.0	193.1			
	2	10.0	199.0	5.9		
	3	20.0	239.3	40.3		
	4	30.0	260.0	20.6		
	5	40.0	282.9	22.9		
	6	50.0	309.4	26.5		
F	7	59.9	322.8	13.4		
		SECOND CLOSED-IN				
F	1	0.0	322.8			
	2	3.0	817.4	494.6	2.9	1.495
	3	6.0	861.9	539.1	5.6	1.210
	4	9.0	887.1	564.3	8.2	1.046
	5	12.0	904.4	581.6	10.6	0.933
	6	15.0	915.1	592.3	12.9	0.850
	7	18.0	924.1	601.3	15.0	0.781
	8	21.0	931.3	608.5	17.1	0.726
	9	24.0	936.6	613.8	19.0	0.680

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	10	27.0	941.5	618.6	20.8	0.640
	11	30.0	945.7	622.9	22.5	0.606
	12	33.0	949.0	626.2	24.2	0.575
	13	36.0	952.8	629.9	25.8	0.547
	14	39.0	955.1	632.3	27.3	0.522
	15	42.0	957.6	634.8	28.7	0.500
G	16	45.0	960.0	637.2	30.1	0.480

REMARKS:

TICKET NO: 70110300	
CLOCK NO: 4153	HOUR: 12

HALLIBURTON SERVICES

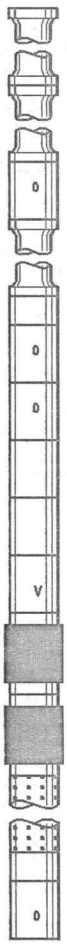
GAUGE NO: 7752	
DEPTH: 4102.0	

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	49.3			
	2	5.0	79.1	29.8		
	3	10.0	104.6	25.5		
	4	15.0	129.4	24.8		
	5	20.0	149.9	20.5		
	6	25.0	168.6	18.7		
	7	30.0	168.6	0.0		
C	8	31.0	186.4	17.9		
			FIRST CLOSED-IN			
C	1	0.0	186.4			
	2	3.0	852.3	665.8	2.7	1.059
	3	6.0	918.4	731.9	5.0	0.790
	4	9.0	946.9	760.5	7.0	0.647
	5	12.0	964.8	778.4	8.7	0.554
	6	15.0	976.1	789.6	10.1	0.487
	7	18.0	984.8	798.3	11.4	0.435
	8	21.0	991.8	805.4	12.5	0.394
	9	24.0	996.5	810.1	13.5	0.360
	10	27.0	1001.2	814.7	14.4	0.332
	11	30.0	1003.6	817.1	15.2	0.308
	12	33.0	1006.9	820.5	16.0	0.288
	13	36.0	1009.9	823.5	16.7	0.270
	14	39.0	1012.3	825.8	17.3	0.254
	15	42.0	1013.9	827.4	17.8	0.240
D	16	44.1	1014.4	827.9	18.2	0.231
			SECOND FLOW			
E	1	0.0	207.3			
	2	10.0	227.8	20.5		
	3	20.0	270.1	42.3		
	4	30.0	286.0	16.0		
	5	40.0	313.6	27.5		
	6	50.0	337.1	23.6		
F	7	59.9	351.4	14.3		
			SECOND CLOSED-IN			
F	1	0.0	351.4			
	2	3.0	857.4	506.0	2.9	1.503
	3	6.0	899.5	548.1	5.6	1.208
	4	9.0	920.8	569.4	8.2	1.046
	5	12.0	936.6	585.2	10.6	0.932
	6	15.0	945.7	594.2	12.9	0.849
	7	18.0	953.2	601.8	15.0	0.782
	8	21.0	960.0	608.6	17.0	0.727
	9	24.0	965.6	614.2	19.0	0.680

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	10	27.0	970.4	619.0	20.8	0.640
	11	30.0	973.6	622.2	22.6	0.605
	12	33.0	977.3	625.9	24.2	0.574
	13	36.0	980.2	628.8	25.8	0.547
	14	39.0	982.4	631.0	27.3	0.523
	15	42.0	985.5	634.1	28.7	0.500
G	16	45.0	987.5	636.1	30.1	0.480

REMARKS:

TICKET NO. 70110300



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3454.0	
4	FLEX WEIGHT.....	4.500	2.764	450.0	
50	IMPACT REVERSING SUB.....	6.000	3.000	1.0	3904.0
4	FLEX WEIGHT.....	4.500	2.764	120.0	
5	CROSSOVER.....	5.750	2.875	0.8	
12	DUAL CIP VALVE.....	5.000	0.750	6.3	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	4035.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	4037.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.8	
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	4052.0
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	4058.0
20	FLUSH JOINT ANCHOR.....	5.000	3.840	40.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.5	4099.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.1	4102.0

TOTAL DEPTH 4105.0

EQUIPMENT DATA

HALLIBURTON
SERVICES

TICKET NO. 70110400
11-OCT-83
GREAT BEND

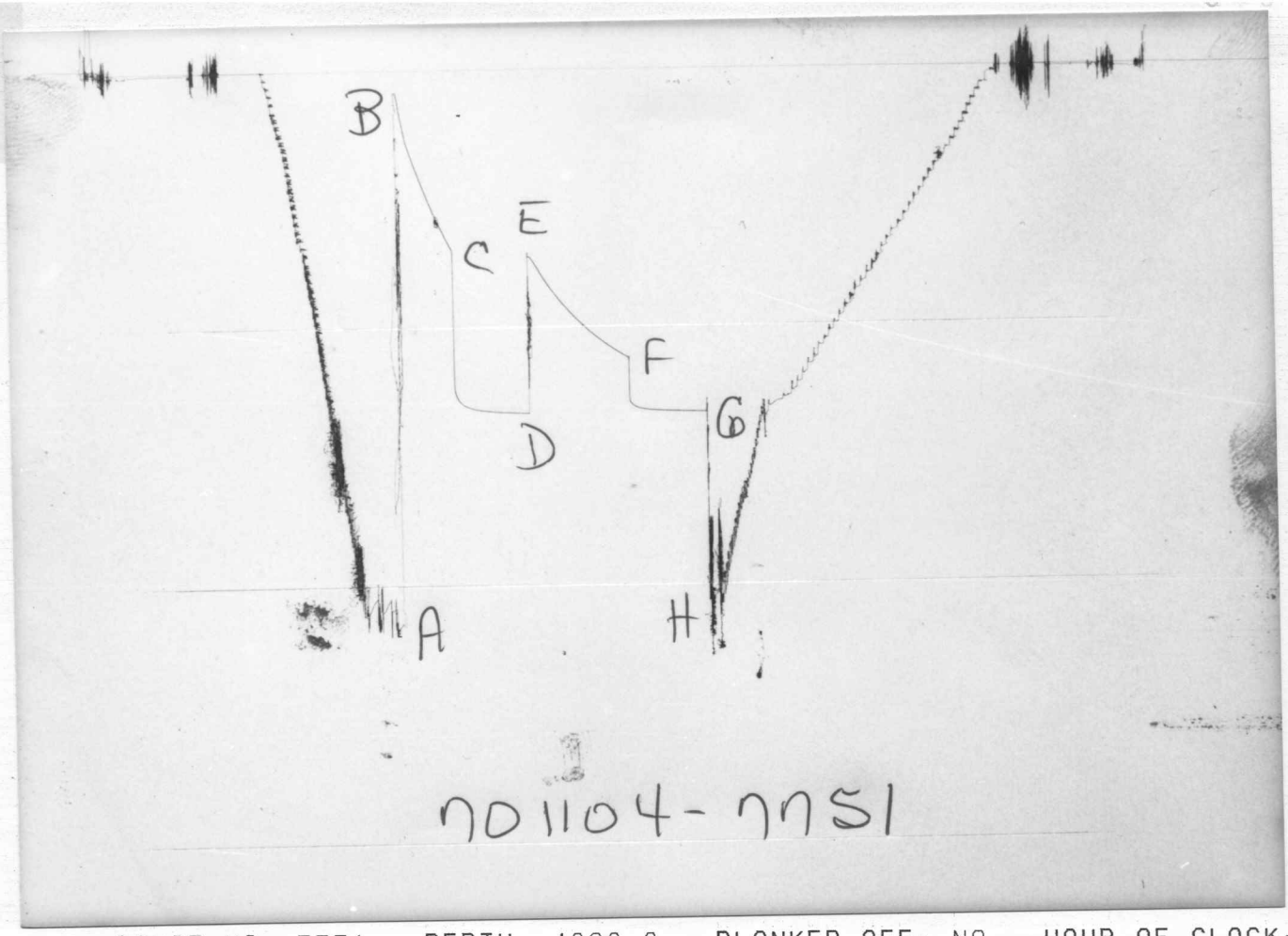
FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
20 - 13 - 15	7	3	4101.' - 4130.'	ALPINE DRILLING COMPANY, INCORPORATED

FIELD AREA	COUNTY	STATE
	PAWNEE	KANSAS

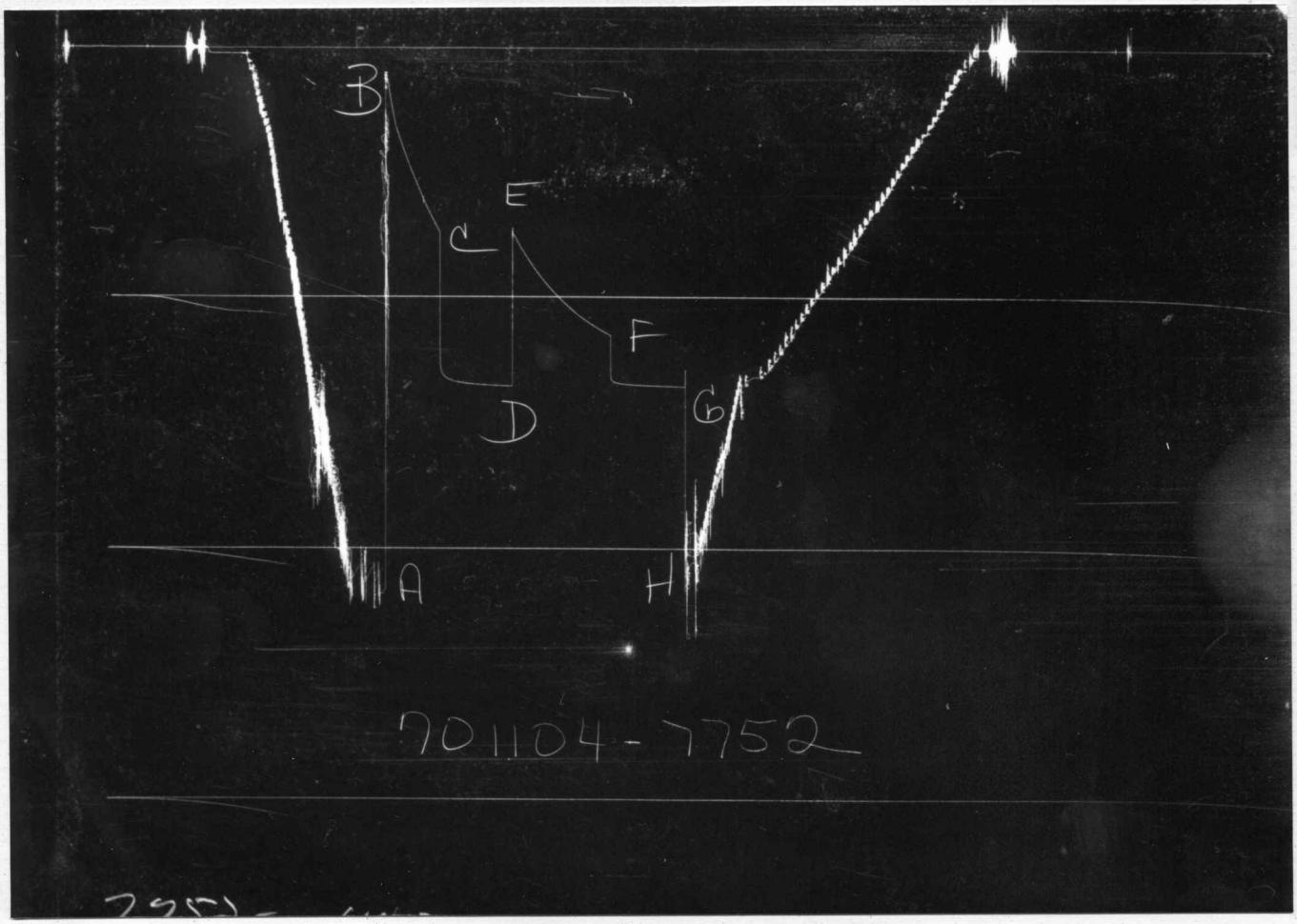
COSSMAN
LEASE NAME

PW



GAUGE NO: 7751 DEPTH: 4080.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2048.5			
B	INITIAL FIRST FLOW		88.1	30.0	32.8	F
C	FINAL FIRST FLOW		699.7			
C	INITIAL FIRST CLOSED-IN		699.7	45.0	43.6	C
D	FINAL FIRST CLOSED-IN		1331.6			
E	INITIAL SECOND FLOW		726.4	60.0	58.7	F
F	FINAL SECOND FLOW		1119.7			
F	INITIAL SECOND CLOSED-IN		1119.7	45.0	44.9	C
G	FINAL SECOND CLOSED-IN		1332.8			
H	FINAL HYDROSTATIC		2032.2			



GAUGE NO: 7752 DEPTH: 4127.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2181	2065.7			
B	INITIAL FIRST FLOW	100	99.7	30.0	32.8	F
C	FINAL FIRST FLOW	737	737.9			
C	INITIAL FIRST CLOSED-IN	737	737.9	45.0	43.6	C
D	FINAL FIRST CLOSED-IN	1351	1350.5			
E	INITIAL SECOND FLOW	737	748.6	60.0	58.7	F
F	FINAL SECOND FLOW	1153	1148.1			
F	INITIAL SECOND CLOSED-IN	1153	1148.1	45.0	44.9	C
G	FINAL SECOND CLOSED-IN	1351	1352.5			
H	FINAL HYDROSTATIC	2082	2050.2			

EQUIPMENT & HOLE DATA

FORMATION TESTED: ARBUCKLE
NET PAY (ft):
GROSS TESTED FOOTAGE: 29.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 0
TOTAL DEPTH (ft): 4130.0
PACKER DEPTH(S) (ft): 4095, 4101
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.50
MUD VISCOSITY (sec): 42
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 121 @ 4124.0 ft

TICKET NUMBER: 70110400

DATE: 10-7-83 TEST NO: 3

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: GREAT BEND

TESTER: G.D. WILSON

WITNESS:

DRILLING CONTRACTOR: J & W DRILLING

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:

90 FEET OF HEAVY OIL AND GAS CUT MUDDY WATER
800 FEET OF LIGHT GAS AND OIL CUT WATER
536 FEET OF OIL AND GAS CUT WATER
1054 FEET OF SALTWATER - LIGHTLY GAS CUT

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: _____ | TICKET NO: 70110400

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
10-7-83					
1055					PICKED-UP AND MADE-UP DST #3
1135					STARTED IN HOLE WITH DST #3
1245					OPENED TOOL - STRONG BLOW OFF
					BOTTOM OF BUCKET IN 3 MINUTES
					INCREASING THROUGHOUT FLOW.
1315					CLOSED TOOL
1400					REOPENED TOOL - STRONG BLOW OFF
					BOTTOM OF BUCKET - THROUGHOUT
					FLOW PERIOD.
1500					CLOSED TOOL
1545					PULLED OUT OF HOLE
1830					OUT OF HOLE - BREAK TOOLS AND
					LOAD OUT.
2030					JOB COMPLETED

TICKET NO: 70110400	GAUGE NO: 7751
CLOCK NO: 14232 HOUR: 12	DEPTH: 4080.0

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	88.1			
	2	5.0	228.0	139.8		
	3	10.0	348.3	120.3		
	4	15.0	439.0	90.7		
	5	20.0	524.5	85.4		
	6	25.0	599.1	74.7		
	7	30.0	666.7	67.6		
C	8	32.8	699.7	33.0		
		FIRST CLOSED-IN				
C	1	0.0	699.7			
	2	3.0	1281.5	581.8	2.7	1.083
	3	6.0	1299.8	600.1	5.1	0.809
	4	9.0	1308.1	608.4	7.1	0.667
	5	12.0	1314.0	614.3	8.8	0.572
	6	15.0	1318.3	618.6	10.3	0.503
	7	18.0	1320.6	620.9	11.6	0.450
	8	21.0	1323.0	623.3	12.8	0.408
	9	24.0	1324.9	625.1	13.8	0.374
	10	27.0	1326.1	626.4	14.8	0.345
	11	30.0	1327.5	627.8	15.7	0.321
	12	33.0	1328.5	628.8	16.4	0.299
	13	36.0	1329.5	629.8	17.2	0.281
	14	39.0	1330.6	630.9	17.8	0.265
	15	42.0	1331.3	631.6	18.4	0.250
D	16	43.6	1331.6	631.9	18.7	0.243
		SECOND FLOW				
E	1	0.0	726.4			
	2	10.0	816.6	90.2		
	3	20.0	905.7	89.1		
	4	30.0	977.7	72.0		
	5	40.0	1038.1	60.4		
	6	50.0	1085.6	47.5		
F	7	58.7	1119.7	34.1		
		SECOND CLOSED-IN				
F	1	0.0	1119.7			
	2	3.0	1308.4	188.7	2.9	1.495
	3	6.0	1316.1	196.4	5.6	1.211
	4	9.0	1320.5	200.8	8.2	1.048
	5	12.0	1323.1	203.4	10.6	0.936
	6	15.0	1324.8	205.0	12.9	0.852
	7	18.0	1325.9	206.2	15.0	0.784
	8	21.0	1327.0	207.3	17.1	0.728
	9	24.0	1328.0	208.3	19.0	0.682

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	10	27.0	1328.8	209.1	20.8	0.643
	11	30.0	1329.3	209.6	22.6	0.607
	12	33.0	1330.1	210.4	24.2	0.577
	13	36.0	1330.8	211.0	25.8	0.549
	14	39.0	1331.3	211.5	27.3	0.525
	15	42.0	1332.1	212.3	28.8	0.502
G	16	44.9	1332.8	213.1	30.1	0.483

REMARKS:

TICKET NO: 70110400	GAUGE NO: 7752
CLOCK NO: 4153 HOUR: 12	DEPTH: 4127.0

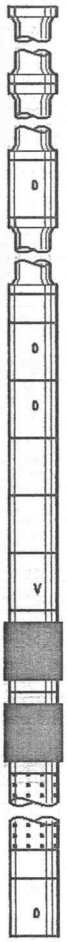
HALLIBURTON SERVICES

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	99.7			
	2	5.0	275.6	175.9		
	3	10.0	390.2	114.6		
	4	15.0	482.0	91.9		
	5	20.0	562.8	80.8		
	6	25.0	637.5	74.6		
	7	30.0	705.3	67.9		
C	8	32.8	737.9	32.6		
			FIRST CLOSED-IN			
C	1	0.0	737.9			
	2	3.0	1311.5	573.5	2.7	1.081
	3	6.0	1325.1	587.2	5.1	0.811
	4	9.0	1332.2	594.2	7.1	0.665
	5	12.0	1336.0	598.1	8.8	0.572
	6	15.0	1339.1	601.2	10.3	0.502
	7	18.0	1341.0	603.0	11.6	0.450
	8	21.0	1343.2	605.2	12.8	0.408
	9	24.0	1344.4	606.4	13.8	0.374
	10	27.0	1345.6	607.7	14.8	0.345
	11	30.0	1347.1	609.2	15.6	0.321
	12	33.0	1347.9	610.0	16.4	0.299
	13	36.0	1348.9	611.0	17.1	0.281
	14	39.0	1349.2	611.3	17.8	0.265
	15	42.0	1350.1	612.2	18.4	0.251
D	16	43.6	1350.5	612.6	18.7	0.243
			SECOND FLOW			
E	1	0.0	748.6			
	2	10.0	853.0	104.3		
	3	20.0	941.5	88.5		
	4	30.0	1011.7	70.2		
	5	40.0	1069.7	58.0		
	6	50.0	1115.0	45.3		
F	7	58.7	1148.1	33.1		
			SECOND CLOSED-IN			
F	1	0.0	1148.1			
	2	3.0	1335.2	187.1	2.9	1.501
	3	6.0	1340.2	192.1	5.6	1.210
	4	9.0	1342.4	194.3	8.2	1.048
	5	12.0	1344.2	196.0	10.6	0.935
	6	15.0	1345.7	197.6	12.9	0.850
	7	18.0	1346.5	198.4	15.0	0.785
	8	21.0	1347.8	199.7	17.1	0.729
	9	24.0	1348.6	200.5	19.0	0.683

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	10	27.0	1349.0	200.9	20.8	0.643
	11	30.0	1349.9	201.8	22.6	0.607
	12	33.0	1350.6	202.5	24.3	0.576
	13	36.0	1351.2	203.1	25.8	0.549
	14	39.0	1351.6	203.5	27.3	0.524
	15	42.0	1352.3	204.2	28.8	0.502
G	16	44.9	1352.5	204.4	30.1	0.483

REMARKS:

TICKET NO. 70110400



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3497.0	
4	FLEX WEIGHT.....	4.500	2.764	450.0	
50	IMPACT REVERSING SUB.....	4.500	3.000	1.0	3947.0
4	FLEX WEIGHT.....	4.500	2.764	120.0	
5	CROSSOVER.....	5.750	2.875	0.8	
12	DUAL CIP VALVE.....	5.000	0.750	6.3	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	4078.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	4080.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.8	
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	4095.0
70	OPEN HOLE PACKER.....	5.250	1.530	5.8	4101.0
20	FLUSH JOINT ANCHOR.....	5.000	3.840	22.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.5	4124.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.1	4127.0

TOTAL DEPTH 4130.0

EQUIPMENT DATA