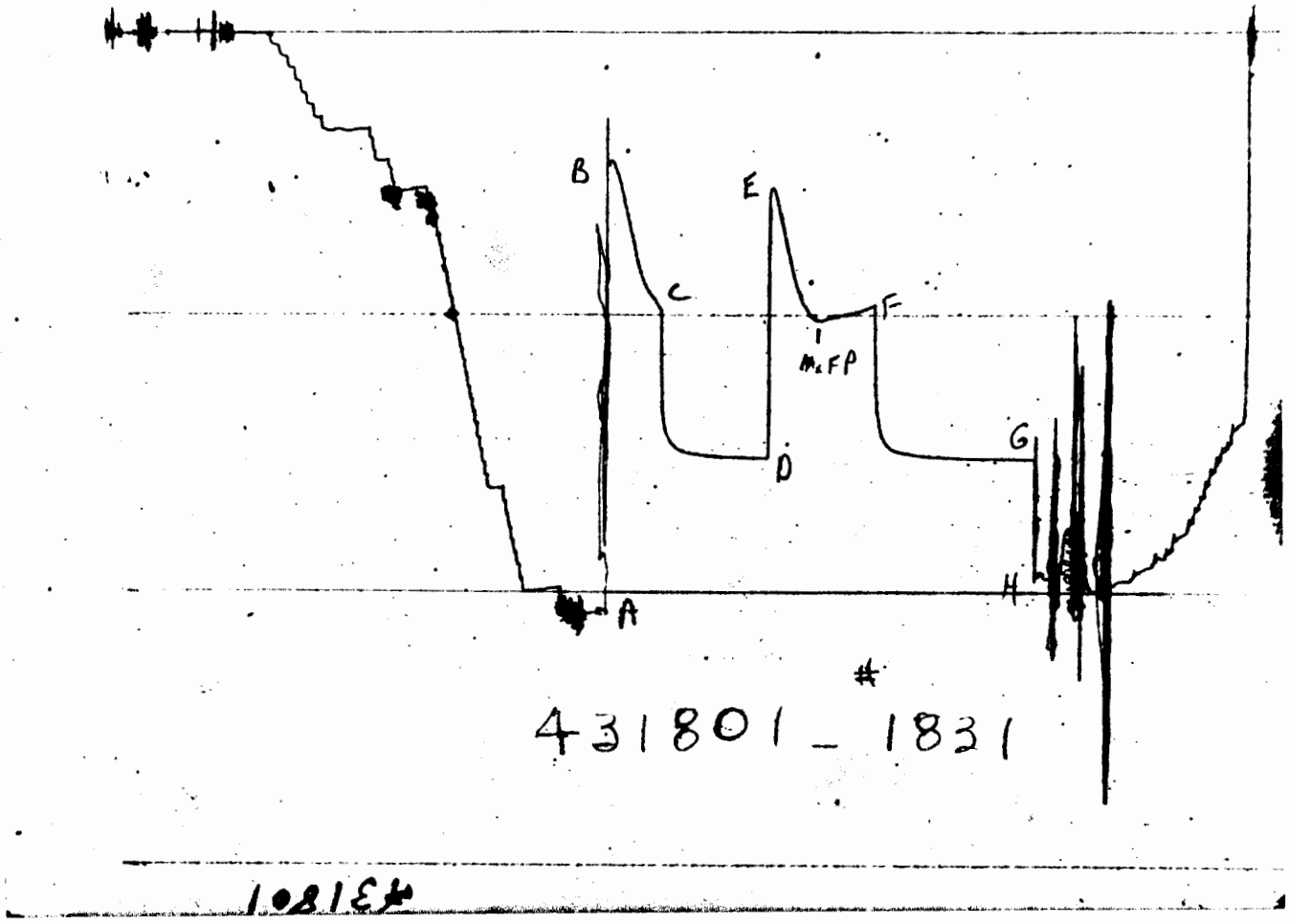
HALLIBURTON
SERVICES

TICKET NO. 43180100
02-SEP-82
PRATT

FORMATION TESTING SERVICE REPORT

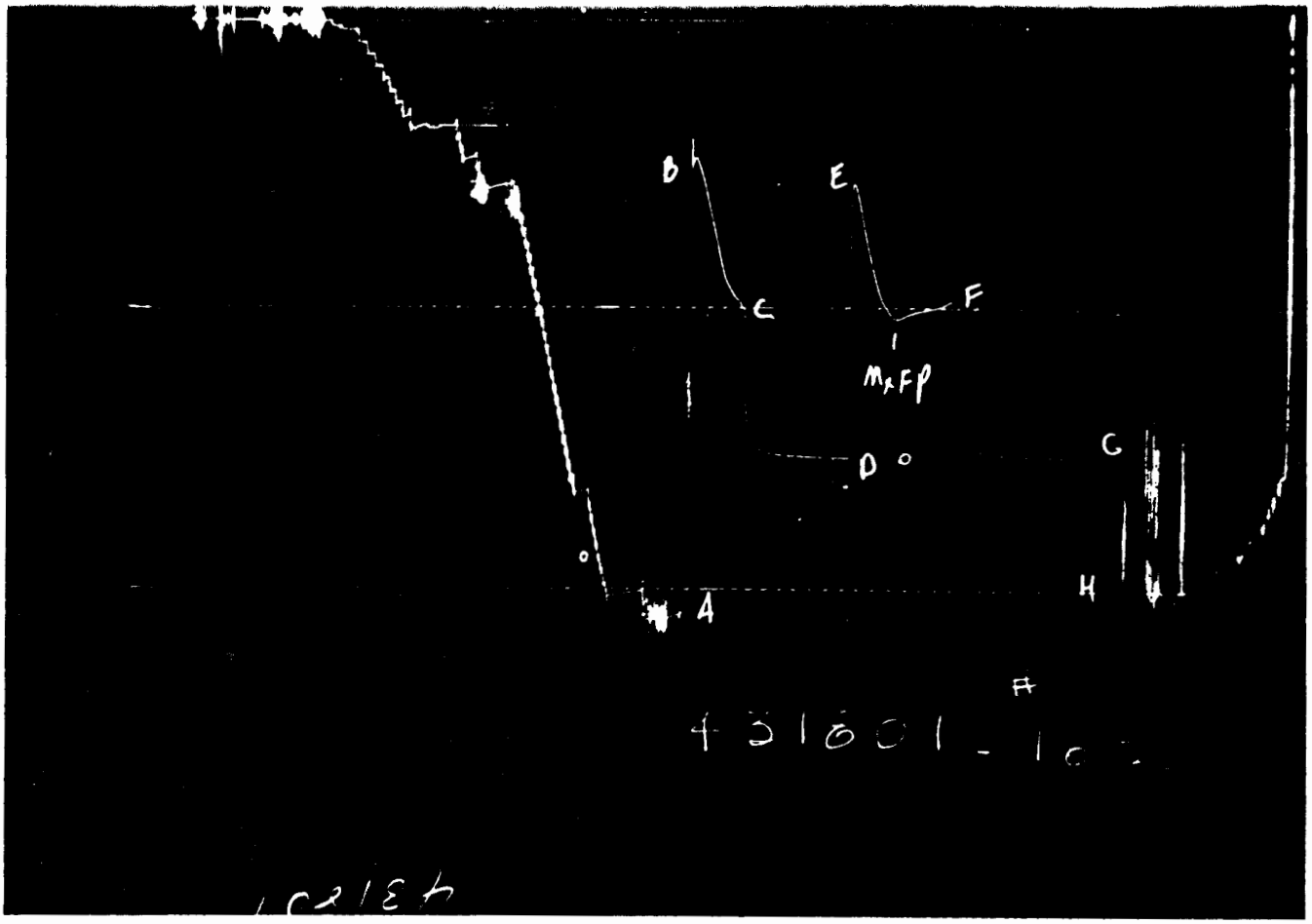
LEASE NAME: BARBY	WELL NO.: 2-23	TEST NO.: 1	TESTED INTERVAL: 4270.' - 4314.'	LEASE OWNER/COMPANY NAME: RINE DRILLING COMPANY	
LEGAL LOCATION SEC. - TWP. - RNG.: 23-34S-21W	FIELD AREA	COUNTY: CLARK	STATE: KANSAS	BM/IC	



10816

GAUGE NO: 1831 DEPTH: 4253.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2072.3			
B	INITIAL FIRST FLOW		463.3	32.0	31.8	F
C	FINAL FIRST FLOW		982.8			
C	INITIAL FIRST CLOSED-IN		982.8	63.0	62.6	C
D	FINAL FIRST CLOSED-IN		1515.7			
E	INITIAL SECOND FLOW		579.6	60.0	61.1	F
F	FINAL SECOND FLOW		963.7			
F	INITIAL SECOND CLOSED-IN		963.7	95.0	94.5	C
G	FINAL SECOND CLOSED-IN		1519.4			
H	FINAL HYDROSTATIC		1950.8			



GAUGE NO: 1830 DEPTH: 4311.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2091.5			
B	INITIAL FIRST FLOW		510.6	32.0	31.8	F
C	FINAL FIRST FLOW		1006.5			
C	INITIAL FIRST CLOSED-IN		1006.5	63.0	62.6	C
D	FINAL FIRST CLOSED-IN		1529.2			
E	INITIAL SECOND FLOW		585.2	60.0	61.1	F
F	FINAL SECOND FLOW		973.5			
F	INITIAL SECOND CLOSED-IN		973.5	95.0	94.5	C
G	FINAL SECOND CLOSED-IN		1525.0			
H	FINAL HYDROSTATIC		1969.1			

EQUIPMENT & HOLE DATA

FORMATION TESTED: TORONTO
NET PAY (ft): 18.0
GROSS TESTED FOOTAGE: 44.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 1783
TOTAL DEPTH (ft): 4314.0
PACKER DEPTH(S) (ft): 4264, 4270
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.10
MUD VISCOSITY (sec): 38
ESTIMATED HOLE TEMP. (°F): 113
ACTUAL HOLE TEMP. (°F): 112 @ 4309.0 ft

TICKET NUMBER: 43180100

DATE: 8-30-82 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: PRATT

TESTER: V. ROLF

WITNESS: JERRY YOUNG

DRILLING CONTRACTOR: RINE DRILLING COMPANY RIG #8

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): 43.5 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

SEE REMARKS

MEASURED FROM TESTER VALVE

REMARKS:

ON THE FIRST FLOW, GASSY OIL FLOWED TO SURFACE - 39 @ 60 DEGREES F.
ON THE SECOND FLOW, GASSY OIL FLOWED TO SURFACE - 43.5 @ 60 DEGREES F.

TYPE & SIZE MEASURING DEVICE: MERLA

TICKET NO: 43180100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
8-30-82					
2100					CALLED OUT
2345					ON LOCATION-RIG COMING OUT OF
					HOLE
8-30-82					
0055					STARTED CLOCKS
0200					TOOL MADE UP AND IN TABLE
0540	.5	5	78.1		OPENED TOOL WITH GAS TO SURFACE
					IN 2 MINUTES
0545	.5	4	68.1		
0555					GASSY OIL TO SURFACE-OIL FLOWED
					THROUGHOUT FLOW.
0612					CLOSED TOOL
0715					OPENED TOOL WITH STRONG BLOW AND
					AND GAS TO SURFACE IN 2 MINUTES.
0727					GASSY OIL TO SURFACE-OIL FLOWED
					THROUGHOUT OPENING
0815					CLOSED TOOL
0950					TOOL OFF BOTTOM-DROPPED BAR.

HT

MEASURED FROM TESTER VALVE

TICKET NO: 43180100	GAUGE NO: 1831
CLOCK NO: 17482 HOUR: 12	DEPTH: 4253.0

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	463.3			
	2	5.0	476.3	13.1		
	3	10.0	591.7	115.4		
	4	15.0	727.4	135.7		
	5	20.0	857.5	130.1		
	6	25.0	922.0	64.5		
	7	30.0	967.6	45.7		
C	8	31.8	982.8	15.2		
FIRST CLOSED-IN						
C	1	0.0	982.8			
	2	3.0	1428.1	445.3	2.7	1.067
	3	6.0	1462.0	479.2	5.0	0.801
	4	9.0	1480.5	497.6	7.0	0.658
	5	12.0	1489.3	506.4	8.7	0.563
	6	15.0	1496.5	513.6	10.2	0.495
	7	18.0	1499.8	517.0	11.5	0.441
	8	21.0	1501.8	518.9	12.7	0.400
	9	24.0	1504.6	521.7	13.7	0.367
	10	27.0	1507.0	524.1	14.6	0.338
	11	30.0	1508.6	525.7	15.4	0.314
	12	33.0	1510.4	527.6	16.2	0.293
	13	36.0	1512.0	529.2	16.9	0.275
	14	39.0	1512.0	529.2	17.5	0.259
	15	42.0	1512.5	529.6	18.1	0.245
	16	45.0	1512.9	530.1	18.6	0.232
	17	48.0	1513.9	531.0	19.1	0.221
	18	51.0	1515.5	532.6	19.6	0.210
	19	54.0	1515.5	532.6	20.0	0.201
	20	57.0	1515.6	532.8	20.4	0.192
	21	60.0	1516.2	533.4	20.8	0.185
D	22	62.6	1515.7	532.9	21.1	0.178
SECOND FLOW						
E	1	0.0	579.6			
	2	5.0	609.2	29.6		
	3	10.0	754.1	144.8		
	4	15.0	882.8	128.8		
	5	20.0	964.8	81.9		
	6	25.0	1010.2	45.4		
[1]	7	28.2	1020.2	10.0		
	8	30.0	1019.8	-0.4		
	9	35.0	1011.5	-8.3		
	10	40.0	1002.2	-9.3		
	11	45.0	995.8	-6.5		
	12	50.0	990.2	-5.5		
	13	55.0	980.5	-9.7		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
SECOND FLOW - CONTINUED						
F	14	61.1	963.7	-16.9		
SECOND CLOSED-IN						
F	1	0.0	963.7			
	2	5.0	1446.4	482.7	4.8	1.289
	3	10.0	1483.8	520.1	9.0	1.012
	4	15.0	1493.7	530.1	12.9	0.858
	5	20.0	1499.9	536.3	16.5	0.751
	6	25.0	1505.0	541.4	19.7	0.674
	7	30.0	1507.4	543.7	22.7	0.612
	8	35.0	1510.4	546.8	25.4	0.563
	9	40.0	1511.6	548.0	28.0	0.521
	10	45.0	1513.3	549.7	30.3	0.486
	11	50.0	1514.9	551.2	32.5	0.456
	12	55.0	1516.2	552.5	34.5	0.430
	13	60.0	1516.2	552.5	36.4	0.406
	14	65.0	1516.3	552.6	38.2	0.385
	15	70.0	1516.5	552.8	39.9	0.367
	16	75.0	1516.5	552.8	41.5	0.350
	17	80.0	1516.5	552.8	43.0	0.335
	18	85.0	1518.1	554.4	44.4	0.321
	19	90.0	1518.6	555.0	45.7	0.308
G	20	94.5	1519.4	555.7	46.9	0.297

LEGEND:
[1] MAXIMUM FLOW PRESSURE

REMARKS:

TICKET NO: 43180100		GAUGE NO: 1830
CLOCK NO: 17480 HOUR: 12	HALLIBURTON SERVICES	DEPTH: 4311.0

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	510.6			
	2	5.0	519.4	8.8		
	3	10.0	637.5	118.2		
	4	15.0	768.5	131.0		
	5	20.0	898.1	129.5		
	6	25.0	953.8	55.7		
	7	30.0	994.5	40.7		
C	8	31.8	1006.5	12.0		
		FIRST CLOSED-IN				
C	1	0.0	1006.5			
	2	3.0	1454.1	447.6	2.8	1.060
	3	6.0	1488.0	481.5	5.1	0.798
	4	9.0	1501.4	494.9	7.0	0.655
	5	12.0	1509.3	502.8	8.7	0.563
	6	15.0	1514.1	507.6	10.2	0.494
	7	18.0	1517.4	511.0	11.5	0.441
	8	21.0	1520.0	513.6	12.6	0.400
	9	24.0	1521.8	515.3	13.7	0.367
	10	27.0	1523.2	516.7	14.6	0.338
	11	30.0	1524.1	517.7	15.4	0.314
	12	33.0	1525.1	518.7	16.2	0.293
	13	36.0	1526.0	519.5	16.9	0.275
	14	39.0	1526.9	520.4	17.5	0.259
	15	42.0	1527.8	521.4	18.1	0.245
	16	45.0	1528.6	522.1	18.6	0.232
	17	48.0	1528.8	522.3	19.1	0.221
	18	51.0	1529.4	522.9	19.6	0.211
	19	54.0	1529.3	522.9	20.0	0.201
	20	57.0	1530.0	523.5	20.4	0.192
	21	60.0	1530.0	523.5	20.8	0.185
D	22	62.6	1529.2	522.8	21.1	0.178
		SECOND FLOW				
E	1	0.0	585.2			
	2	5.0	654.1	68.9		
	3	10.0	802.3	148.2		
	4	15.0	919.4	117.1		
	5	20.0	994.1	74.8		
	6	25.0	1034.8	40.7		
[1]	7	28.2	1039.7	4.9		
	8	30.0	1035.1	-4.5		
	9	35.0	1021.7	-13.5		
	10	40.0	1012.5	-9.2		
	11	45.0	1006.9	-5.5		
	12	50.0	1001.0	-5.9		
	13	55.0	991.8	-9.2		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
F	14	61.1	973.5	-18.3		
		SECOND CLOSED-IN				
F	1	0.0	973.5			
	2	5.0	1463.2	489.7	4.8	1.289
	3	10.0	1492.5	519.0	9.0	1.014
	4	15.0	1502.7	529.2	12.9	0.856
	5	20.0	1508.7	535.2	16.5	0.751
	6	25.0	1512.9	539.4	19.7	0.674
	7	30.0	1515.7	542.2	22.7	0.612
	8	35.0	1517.5	544.0	25.4	0.563
	9	40.0	1518.8	545.3	28.0	0.521
	10	45.0	1520.1	546.6	30.3	0.486
	11	50.0	1521.0	547.5	32.5	0.456
	12	55.0	1522.0	548.5	34.6	0.429
	13	60.0	1522.5	549.1	36.5	0.406
	14	65.0	1523.5	550.0	38.3	0.385
	15	70.0	1523.5	550.0	39.9	0.367
	16	75.0	1524.5	551.0	41.5	0.350
	17	80.0	1525.1	551.7	43.0	0.335
	18	85.0	1525.1	551.7	44.4	0.321
	19	90.0	1525.7	552.2	45.7	0.308
G	20	94.5	1525.0	551.6	46.9	0.297

LEGEND:
[1] MAXIMUM FLOW PRESSURE

REMARKS:

HALLIBURTON

SERVICES

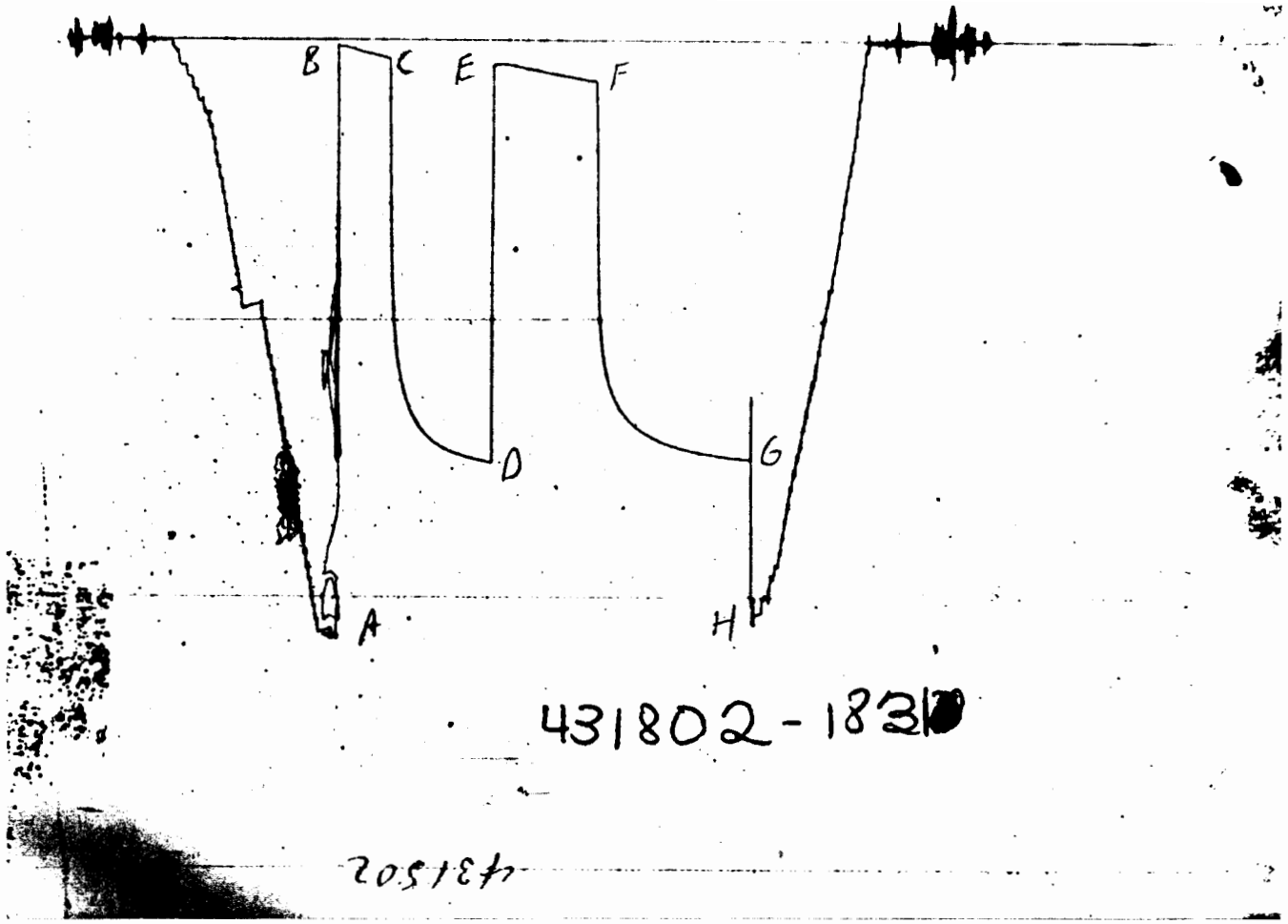
TICKET NO. 43180200

02-SEP-82

PRATT

FORMATION TESTING SERVICE REPORT

LEASE NAME: BARBY	WELL NO.: 2-23	TEST NO.: 2	TESTED INTERVAL: 4314' - 4344'	LEASE OWNER/COMPANY NAME: RINE DRILLING COMPANY	
LEGAL LOCATION SEC. - TWP. - RNG.: 23-34-21W	FIELD AREA:	COUNTY: CLARK	STATE: KANSAS	PWSM	

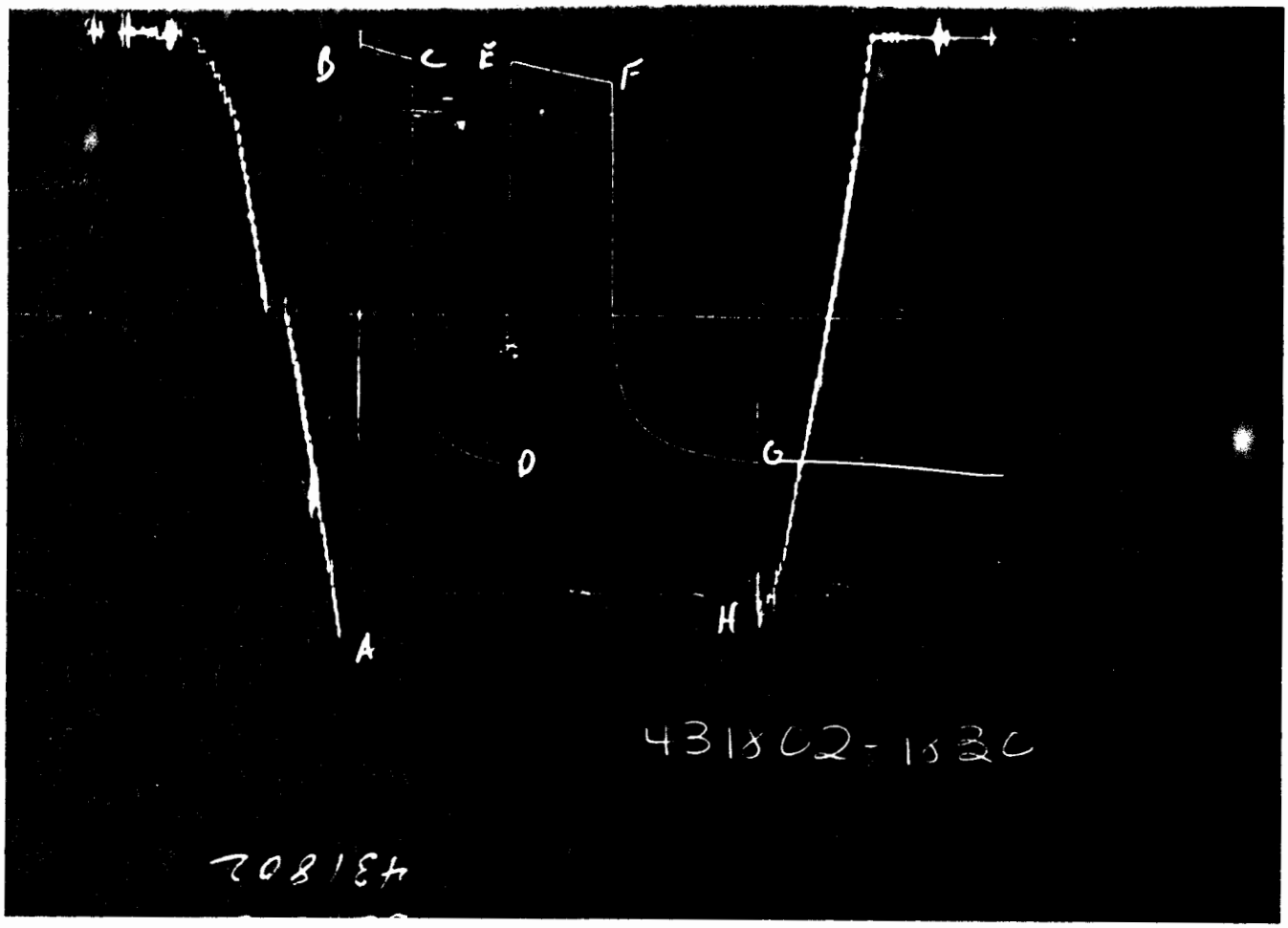


431802-1831

20518th

GAUGE NO: 1831 DEPTH: 4297.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2123.0			
B	INITIAL FIRST FLOW		23.7	30.0	30.1	F
C	FINAL FIRST FLOW		67.3			
C	INITIAL FIRST CLOSED-IN		67.3	60.0	59.6	C
D	FINAL FIRST CLOSED-IN		1518.4			
E	INITIAL SECOND FLOW		88.7	60.0	60.3	F
F	FINAL SECOND FLOW		146.8			
F	INITIAL SECOND CLOSED-IN		146.8	89.0	90.3	C
G	FINAL SECOND CLOSED-IN		1508.4			
H	FINAL HYDROSTATIC		2061.0			



GAUGE NO: 1830 DEPTH: 4341.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2134.9			
B	INITIAL FIRST FLOW		43.1	30.0	30.1	F
C	FINAL FIRST FLOW		89.4			
C	INITIAL FIRST CLOSED-IN		89.4	60.0	59.6	C
D	FINAL FIRST CLOSED-IN		1537.5			
E	INITIAL SECOND FLOW		104.0	60.0	60.3	F
F	FINAL SECOND FLOW		169.8			
F	INITIAL SECOND CLOSED-IN		169.8	89.0	90.3	C
G	FINAL SECOND CLOSED-IN		1525.5			
H	FINAL HYDROSTATIC		2071.6			

EQUIPMENT & HOLE DATA

FORMATION TESTED: TORONTO
NET PAY (ft): 6.0
GROSS TESTED FOOTAGE: 30.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 1783
TOTAL DEPTH (ft): 4344.0
PACKER DEPTH(S) (ft): 4308, 4314
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 8.90
MUD VISCOSITY (sec): 46
ESTIMATED HOLE TEMP. (°F): 113
ACTUAL HOLE TEMP. (°F): 112 @ 4339.0 ft

TICKET NUMBER: 43180200

DATE: 9-1-82 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:
PRATT

TESTER: V. ROLF

WITNESS: JERRY YOUNG

DRILLING CONTRACTOR:
RINE DRILLING COMPANY RIG #8

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:

300 FEET OF MUDDY WATER

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: MERLA

TICKET NO: 43180200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
9-1-82					
0455					STARTED CLOCKS
0545					TOOLS MADE UP AND IN TABLE.
0731					TOOL OPENED WITH WEAK BLOW
					1 1/2" IN BUCKET, NO GAS TO
					THE SURFACE.
0801					CLOSED TOOL.
0901					REOPENED TOOL WITH WEAK BLOW
					1 1/2" IN BUCKET, NO GAS TO
					THE SURFACE.
1001					CLOSED TOOL
1130					TOOL OFF BOTTOM
1300					TOOL IN TABLE

TICKET NO: 43180200		GAUGE NO: 1831
CLOCK NO: 17482 HOUR: 12	HALLIBURTON SERVICES	DEPTH: 4297.0

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	23.7			
	2	5.0	26.2	2.4		
	3	10.0	35.7	9.6		
	4	15.0	44.3	8.6		
	5	20.0	52.4	8.1		
	6	25.0	59.9	7.5		
C	7	30.1	67.3	7.3		
			FIRST CLOSED-IN			
C	1	0.0	67.3			
	2	4.0	1110.9	1043.7	3.5	0.930
	3	8.0	1252.7	1185.4	6.3	0.677
	4	12.0	1328.7	1261.4	8.6	0.545
	5	16.0	1375.4	1308.1	10.4	0.460
	6	20.0	1410.4	1343.1	12.0	0.399
	7	24.0	1435.9	1368.7	13.3	0.353
	8	28.0	1454.5	1387.3	14.5	0.317
	9	32.0	1468.2	1401.0	15.5	0.288
	10	36.0	1479.6	1412.4	16.4	0.264
	11	40.0	1488.3	1421.1	17.2	0.244
	12	44.0	1496.8	1429.5	17.9	0.226
	13	48.0	1503.3	1436.0	18.5	0.211
	14	52.0	1509.4	1442.1	19.1	0.198
	15	56.0	1515.4	1448.1	19.6	0.187
D	16	59.6	1518.4	1451.2	20.0	0.177
			SECOND FLOW			
E	1	0.0	88.7			
	2	10.0	87.2	-1.5		
	3	20.0	100.8	13.6		
	4	30.0	112.5	11.7		
	5	40.0	124.1	11.6		
	6	50.0	135.7	11.6		
F	7	60.3	146.8	11.0		
			SECOND CLOSED-IN			
F	1	0.0	146.8			
	2	6.0	1181.5	1034.7	5.6	1.206
	3	12.0	1298.4	1151.7	10.6	0.931
	4	18.0	1355.2	1208.4	15.0	0.779
	5	24.0	1392.5	1245.7	19.0	0.678
	6	30.0	1416.5	1269.7	22.5	0.604
	7	36.0	1436.5	1289.7	25.7	0.545
	8	42.0	1452.2	1305.5	28.7	0.498
	9	48.0	1465.0	1318.2	31.3	0.460
	10	54.0	1474.6	1327.9	33.8	0.427

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	11	60.0	1482.6	1335.8	36.0	0.399
	12	66.0	1489.3	1342.5	38.1	0.375
	13	72.0	1496.4	1349.6	40.1	0.353
	14	78.0	1500.7	1354.0	41.9	0.334
	15	84.0	1504.6	1357.8	43.5	0.317
G	16	90.3	1508.4	1361.6	45.2	0.301

REMARKS:

TICKET NO: 43180200	GAUGE NO: 1830
CLOCK NO: 17480 HOUR: 12	DEPTH: 4341.0

HALLIBURTON SERVICES

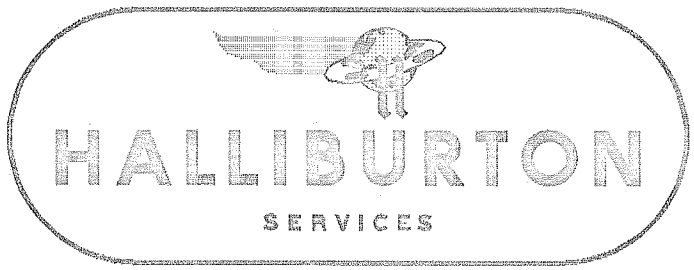
REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	43.1			
	2	5.0	48.0	4.9		
	3	10.0	57.7	9.7		
	4	15.0	66.4	8.7		
	5	20.0	74.9	8.5		
	6	25.0	82.8	7.9		
C	7	30.1	89.4	6.6		
		FIRST CLOSED-IN				
C	1	0.0	89.4			
	2	4.0	1179.9	1090.5	3.5	0.931
	3	8.0	1302.2	1212.8	6.3	0.677
	4	12.0	1365.6	1276.2	8.6	0.544
	5	16.0	1406.4	1317.0	10.4	0.460
	6	20.0	1437.4	1348.0	12.0	0.398
	7	24.0	1458.5	1369.1	13.3	0.353
	8	28.0	1473.8	1384.4	14.5	0.317
	9	32.0	1488.5	1399.1	15.5	0.288
	10	36.0	1499.8	1410.4	16.4	0.264
	11	40.0	1509.4	1420.0	17.2	0.244
	12	44.0	1516.0	1426.7	17.9	0.226
	13	48.0	1523.6	1434.2	18.5	0.212
	14	52.0	1529.2	1439.8	19.1	0.198
	15	56.0	1534.2	1444.9	19.6	0.187
D	16	59.6	1537.5	1448.1	20.0	0.177
		SECOND FLOW				
E	1	0.0	104.0			
	2	10.0	107.0	3.0		
	3	20.0	121.6	14.6		
	4	30.0	134.6	12.9		
	5	40.0	146.4	11.8		
	6	50.0	158.5	12.1		
F	7	60.3	169.8	11.3		
		SECOND CLOSED-IN				
F	1	0.0	169.8			
	2	6.0	1220.2	1050.4	5.6	1.207
	3	12.0	1326.0	1156.2	10.6	0.932
	4	18.0	1379.4	1209.6	15.0	0.780
	5	24.0	1414.9	1245.2	19.0	0.678
	6	30.0	1439.9	1270.2	22.5	0.603
	7	36.0	1458.1	1288.3	25.7	0.545
	8	42.0	1472.5	1302.7	28.7	0.499
	9	48.0	1483.8	1314.0	31.3	0.460
	10	54.0	1492.6	1322.8	33.8	0.427

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	11	60.0	1500.6	1330.9	36.0	0.399
	12	66.0	1507.4	1337.6	38.1	0.375
	13	72.0	1512.6	1342.8	40.1	0.353
	14	78.0	1517.2	1347.4	41.9	0.334
	15	84.0	1521.8	1352.0	43.5	0.317
G	16	90.3	1525.5	1355.7	45.2	0.301

REMARKS:

LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
BARBY	2-23	3	4720' - 4765'	RINE DRILLING COMPANY

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE	
23-34-21W		CLARK	KANSAS	PWBC

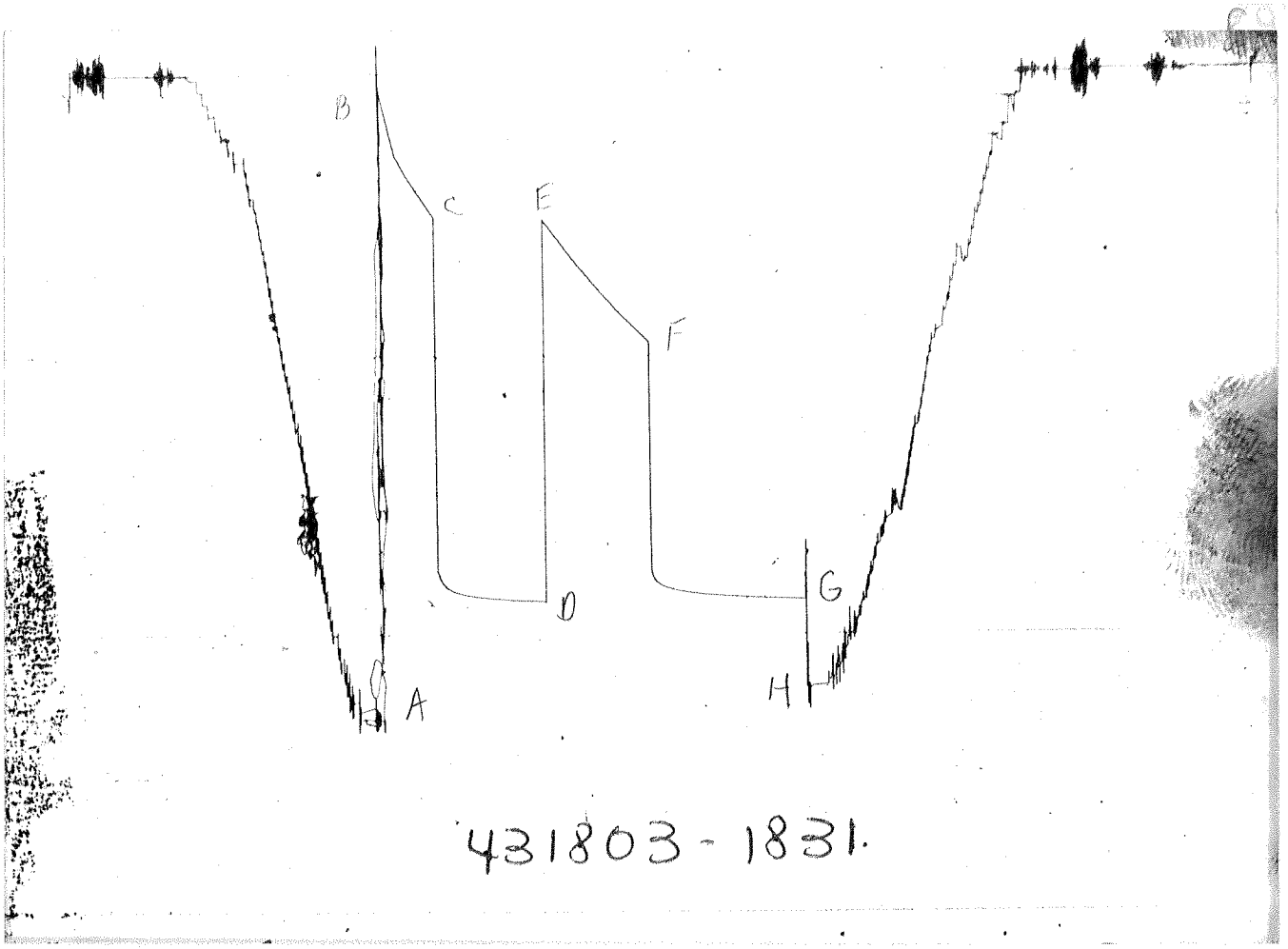


TICKET NO. 43180300

09-SEP-82

PRATT

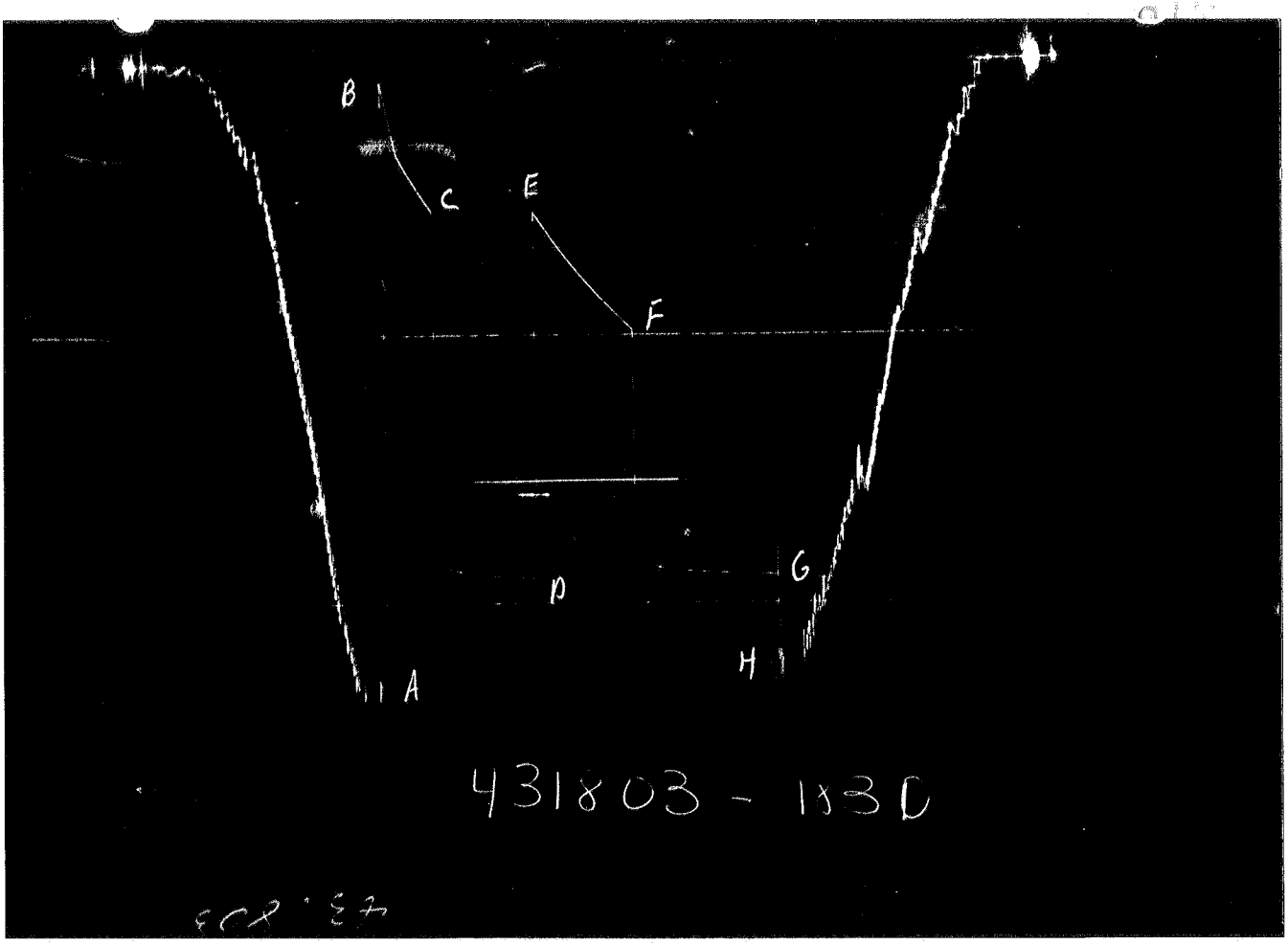
FORMATION TESTING SERVICE REPORT



431803-1831.

GAUGE NO: 1831 DEPTH: 4699.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2266.5				
B	INITIAL FIRST FLOW	47.5		31.0	31.1	F
C	FINAL FIRST FLOW	515.0				
C	INITIAL FIRST CLOSED-IN	515.0		61.0	62.6	C
D	FINAL FIRST CLOSED-IN	1883.8				
E	INITIAL SECOND FLOW	524.6		60.0	60.7	F
F	FINAL SECOND FLOW	957.5				
F	INITIAL SECOND CLOSED-IN	957.5		91.0	88.6	C
G	FINAL SECOND CLOSED-IN	1878.3				
H	FINAL HYDROSTATIC	2184.6				



GAUGE NO: 1830 DEPTH: 4762.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2293.4				
B	INITIAL FIRST FLOW	72.3		31.0	31.1	F
C	FINAL FIRST FLOW	545.3				
C	INITIAL FIRST CLOSED-IN	545.3		61.0	62.6	C
D	FINAL FIRST CLOSED-IN	1911.2				
E	INITIAL SECOND FLOW	557.5		60.0	60.7	F
F	FINAL SECOND FLOW	986.0				
F	INITIAL SECOND CLOSED-IN	986.0		91.0	88.6	C
G	FINAL SECOND CLOSED-IN	1901.4				
H	FINAL HYDROSTATIC	2204.6				

TLT

EQUIPMENT & HOLE DATA

FORMATION TESTED: IOLA
NET PAY (ft): 10.0
GROSS TESTED FOOTAGE: 45.0
ALL DEPTHS MEASURED FROM: KB
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 1783
TOTAL DEPTH (ft): 4765.0
PACKER DEPTH(S) (ft): 4714, 4720
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.00
MUD VISCOSITY (sec): 54
ESTIMATED HOLE TEMP. (°F): 117
ACTUAL HOLE TEMP. (°F): 122 @ 4760.0 ft

TICKET NUMBER: 43180300

DATE: 9-2-82 TEST NO: 3

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: PRATT

TESTER: ROLF

WITNESS: SLADEK (GEOLOGIST)

DRILLING CONTRACTOR: RINE DRILLING COMPANY #8

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:

186' OF MUDDY WATER
465' OF GASSY, MUDDY WATER
930' OF GASSY WATER

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: MERLA ORIFICE WELL TESTER | TICKET NO: 43180300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
9-1-82					
2000					CALLED OUT
2250					ON LOCATION, RIG COMING OUT
2315					STARTED CLOCKS
9-2-82					
0015					TOOL MADE UP & IN TABLE
0209					TOOL OPENED WITH A STRONG BLOW
					TO BOTTOM OF BUCKET IN 4
					MINUTES. NO GAS TO SURFACE.
0240					CLOSED TOOL
0341					OPENED TOOL WITH A STRONG BLOW
					TO BOTTOM OF BUCKET IN 5
					MINUTES. NO GAS TO SURFACE.
0441					CLOSED TOOL
0612					TOOL OFF BOTTOM
0830					TOOL TO TABLE
0900					TOOL LAID DOWN

TICKET NO: 43180300		GAUGE NO: 1831
CLOCK NO: 17482 HOUR: 12	HALLIBURTON SERVICES	DEPTH: 4699.0

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	47.5			
	2	5.0	185.9	138.4		
	3	10.0	304.2	118.3		
	4	15.0	362.0	57.8		
	5	20.0	411.4	49.4		
	6	25.0	458.1	46.7		
C	7	31.1	515.0	57.0		
			FIRST CLOSED-IN			
C	1	0.0	515.0			
	2	4.0	1823.3	1308.2	3.5	0.946
	3	8.0	1843.0	1328.0	6.4	0.689
	4	12.0	1853.1	1338.0	8.6	0.556
	5	16.0	1859.6	1344.6	10.6	0.468
	6	20.0	1864.2	1349.2	12.2	0.407
	7	24.0	1868.0	1352.9	13.5	0.361
	8	28.0	1870.5	1355.4	14.7	0.324
	9	32.0	1873.3	1358.2	15.8	0.295
	10	36.0	1875.4	1360.4	16.7	0.270
	11	40.0	1877.7	1362.6	17.5	0.249
	12	44.0	1879.2	1364.2	18.2	0.232
	13	48.0	1881.0	1366.0	18.9	0.217
	14	52.0	1882.0	1367.0	19.4	0.203
	15	56.0	1883.2	1368.2	20.0	0.192
	16	60.0	1883.3	1368.3	20.5	0.181
D	17	62.6	1883.8	1368.8	20.8	0.175
			SECOND FLOW			
E	1	0.0	524.6			
	2	10.0	603.8	79.2		
	3	20.0	685.9	82.1		
	4	30.0	759.6	73.7		
	5	40.0	829.2	69.6		
	6	50.0	892.8	63.7		
F	7	60.7	957.5	64.7		
			SECOND CLOSED-IN			
F	1	0.0	957.5			
	2	6.0	1827.2	869.7	5.7	1.209
	3	12.0	1841.4	884.0	10.6	0.936
	4	18.0	1849.5	892.1	15.0	0.785
	5	24.0	1855.6	898.1	19.0	0.684
	6	30.0	1860.3	902.9	22.6	0.606
	7	36.0	1863.3	905.8	25.9	0.550
	8	42.0	1866.1	908.6	28.8	0.503
	9	48.0	1868.2	910.8	31.5	0.464

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	10	54.0	1870.4	912.9	34.0	0.431
	11	60.0	1872.4	915.0	36.3	0.403
	12	66.0	1874.7	917.2	38.4	0.379
	13	72.0	1875.5	918.0	40.4	0.357
	14	78.0	1876.6	919.2	42.2	0.338
	15	84.0	1878.1	920.6	43.9	0.321
G	16	88.6	1878.3	920.8	45.1	0.309

REMARKS:

TICKET NO: 43180300		GAUGE NO: 1830
CLOCK NO: 17480 HOUR: 12	HALLIBURTON SERVICES	DEPTH: 4762.0

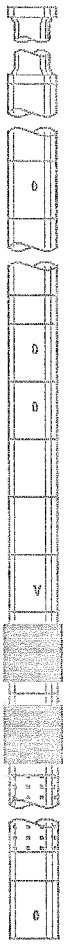
REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
FIRST FLOW					
B	1	0.0	72.3		
	2	5.0	215.2	142.9	
	3	10.0	343.3	128.2	
	4	15.0	399.7	56.4	
	5	20.0	449.4	49.6	
	6	25.0	493.8	44.5	
C	7	31.1	545.3	51.5	
FIRST CLOSED-IN					
C	1	0.0	545.3		
	2	4.0	1849.7	1304.4	3.6 0.941
	3	8.0	1870.2	1324.9	6.3 0.691
	4	12.0	1880.1	1334.7	8.6 0.556
	5	16.0	1886.8	1341.5	10.6 0.468
	6	20.0	1891.5	1346.1	12.2 0.407
	7	24.0	1895.4	1350.0	13.5 0.361
	8	28.0	1898.3	1353.0	14.7 0.324
	9	32.0	1900.3	1355.0	15.8 0.295
	10	36.0	1902.1	1356.8	16.7 0.270
	11	40.0	1904.0	1358.7	17.5 0.249
	12	44.0	1905.7	1360.3	18.2 0.232
	13	48.0	1907.0	1361.6	18.9 0.217
	14	52.0	1908.5	1363.2	19.4 0.203
	15	56.0	1909.7	1364.4	20.0 0.192
	16	60.0	1910.3	1365.0	20.5 0.181
D	17	62.6	1911.2	1365.9	20.8 0.175
SECOND FLOW					
E	1	0.0	557.5		
	2	10.0	639.3	81.7	
	3	20.0	720.4	81.1	
	4	30.0	794.3	73.9	
	5	40.0	861.9	67.6	
	6	50.0	921.3	59.4	
F	7	60.7	986.0	64.7	
SECOND CLOSED-IN					
F	1	0.0	986.0		
	2	6.0	1853.2	867.2	5.7 1.210
	3	12.0	1867.8	881.8	10.6 0.937
	4	18.0	1874.8	888.8	15.0 0.786
	5	24.0	1880.5	894.6	19.0 0.684
	6	30.0	1884.4	898.5	22.6 0.609
	7	36.0	1887.5	901.5	25.9 0.550
	8	42.0	1890.4	904.5	28.8 0.503
	9	48.0	1892.5	906.5	31.5 0.464

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
	10	54.0	1894.2	908.3	34.0 0.431
	11	60.0	1896.1	910.1	36.3 0.403
	12	66.0	1897.2	911.3	38.4 0.379
	13	72.0	1898.5	912.6	40.3 0.357
	14	78.0	1899.6	913.7	42.2 0.338
	15	84.0	1900.5	914.5	43.9 0.321
G	16	88.6	1901.4	915.4	45.1 0.309

REMARKS:

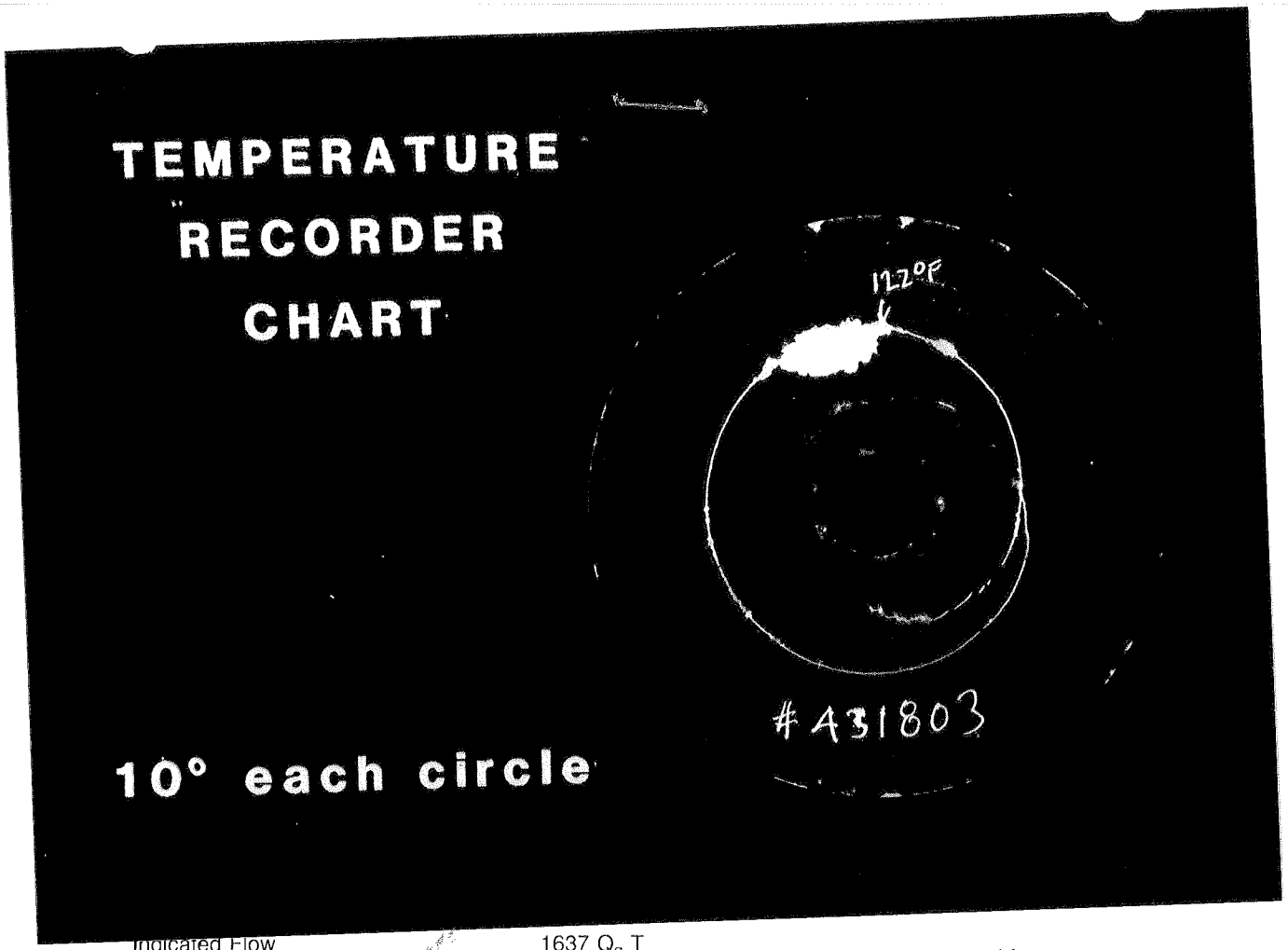
9245203

TICKET NO. 43180300



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	4087.0	
3	DRILL COLLARS.....	6.000	2.250	504.0	
50	IMPACT REVERSING SUB.....	5.750	2.750	1.0	4591.0
3	DRILL COLLARS.....	6.000	2.250	94.0	
5	CROSSOVER.....	5.750	2.750	1.0	
12	DUAL CIP VALVE.....	5.030	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	4693.0
80	AP RUNNING CASE.....	5.000	3.060	4.0	4699.0
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	4714.0
70	OPEN HOLE PACKER.....	6.750	1.530	6.0	4720.0
20	FLUSH JOINT ANCHOR.....	5.000	3.840	38.0	
83	HT-500 TEMPERATURE CASE.....	5.000	3.350	1.0	4760.0
81	BLANKED-OFF RUNNING CASE.....	5.000	2.440	4.0	4762.0
	TOTAL DEPTH				4765.0

EQUIPMENT DATA



Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG}\ \frac{kt}{\phi\ \mu\ c_t r_w^2} + 3.23 \right]$	—
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	$r_i = 0.032 \sqrt{\frac{kt}{\phi \mu c_t}}$	ft