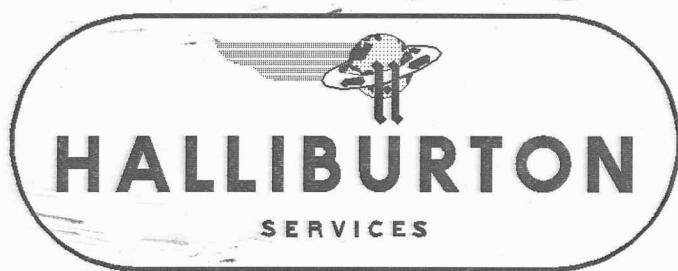


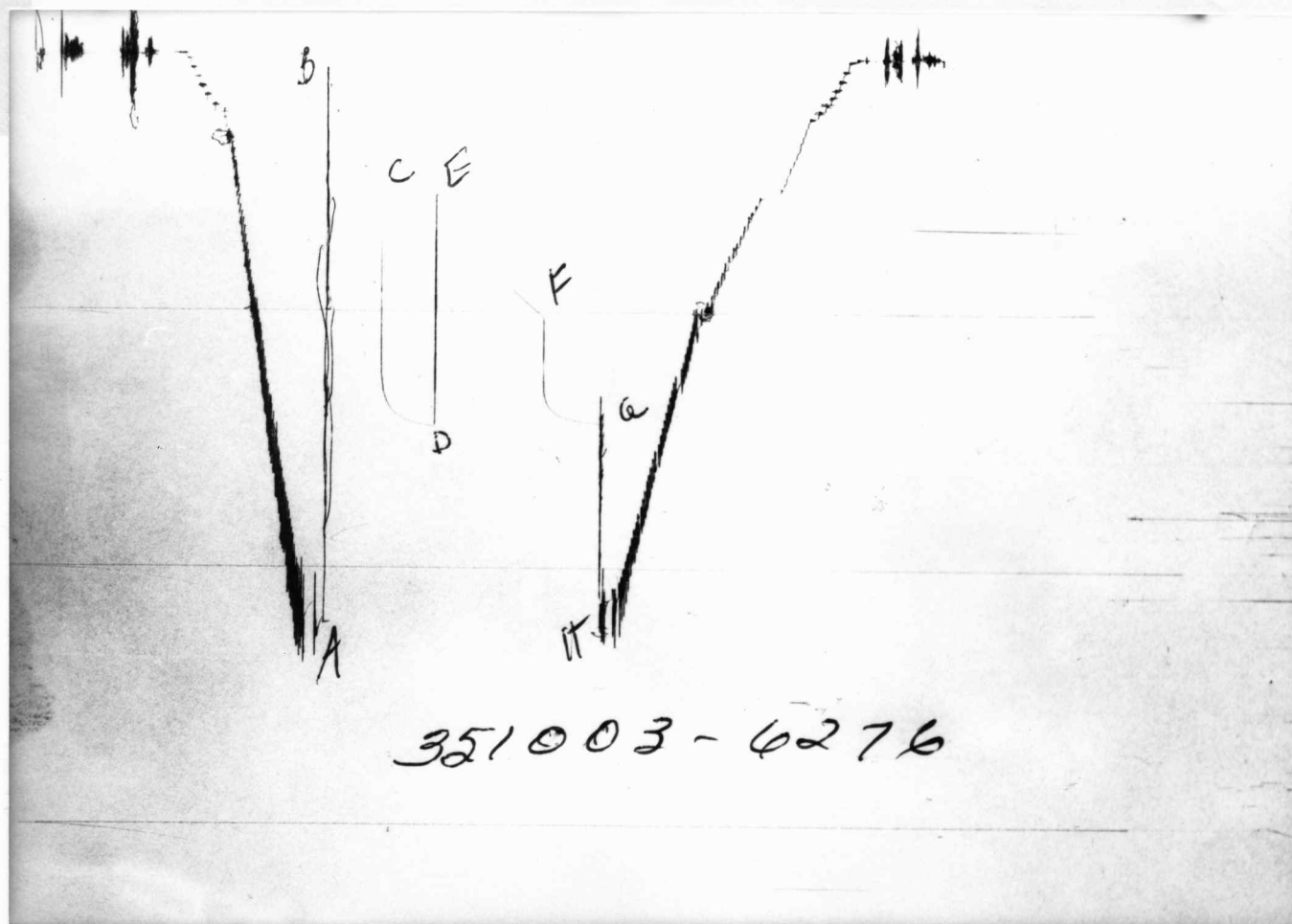
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TICKET NO. 35100300
08-NOV-85
PRATT

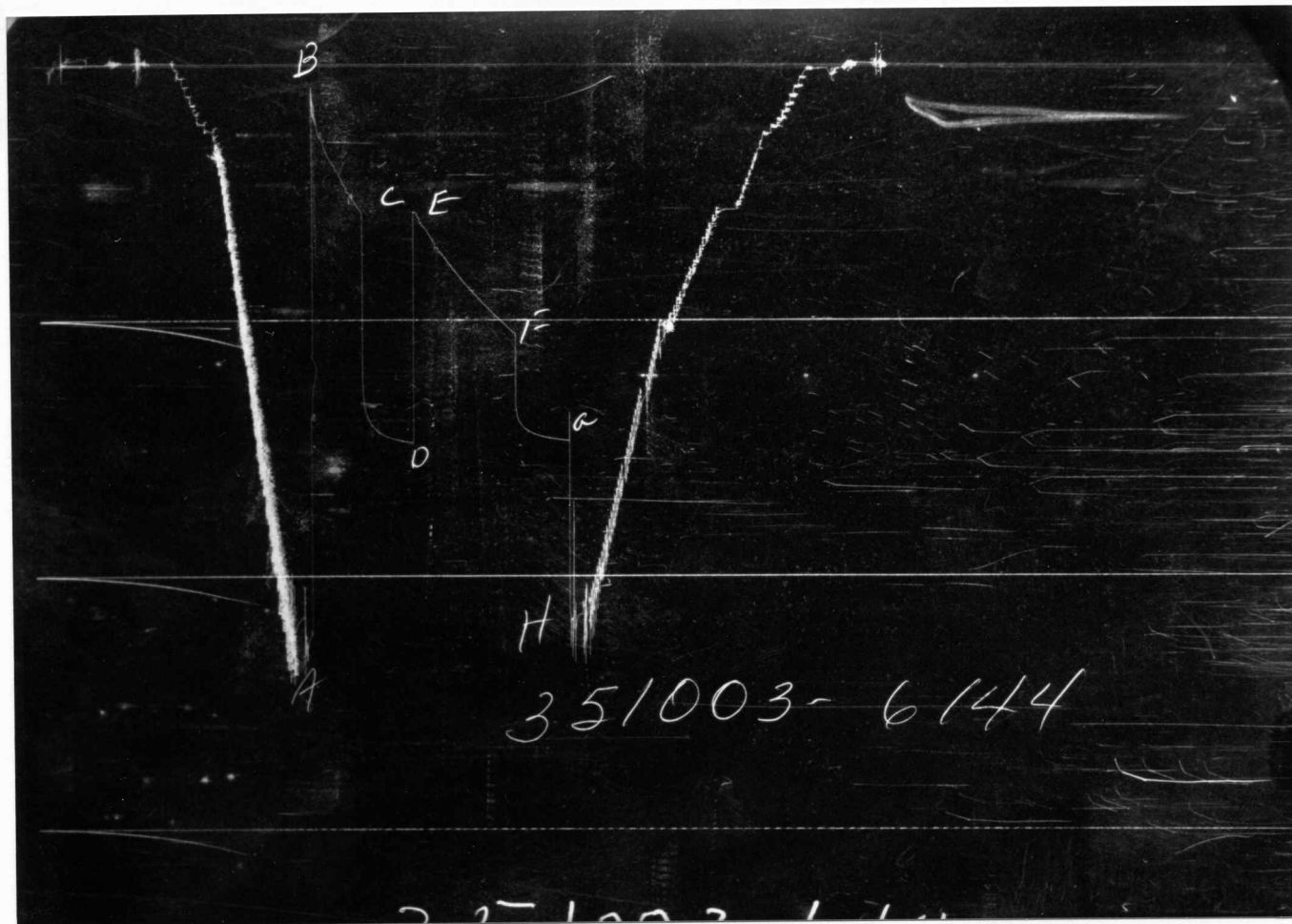
FORMATION TESTING SERVICE REPORT

LEASE NAME		WELL NO.		TEST NO.		TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
RICHARDSON-ALBERTS		1		2		444.0 - 4510.0		J. MARK RICHARDSON	
LEGAL LOCATION SEC. - TWP. - RNG.		12-29-20		FIELD AREA		COUNTY		STATE	
						KIOWA		KANSAS SM	



GAUGE NO: 6276 DEPTH: 4423.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2148.3			
B	INITIAL FIRST FLOW		50.7			
C	FINAL FIRST FLOW		526.7	30.0	29.6	F
C	INITIAL FIRST CLOSED-IN		526.7			
D	FINAL FIRST CLOSED-IN		1452.3	30.0	30.1	C
E	INITIAL SECOND FLOW		544.4			
F	FINAL SECOND FLOW		1023.4	60.0	60.3	F
F	INITIAL SECOND CLOSED-IN		1023.4			
G	FINAL SECOND CLOSED-IN		1441.9	30.0	31.9	C
H	FINAL HYDROSTATIC		2127.8			



GAUGE NO: 6144 DEPTH: 4507.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2266	2179.5			
B	INITIAL FIRST FLOW	69	96.0			
C	FINAL FIRST FLOW	575	587.7	30.0	29.6	F
C	INITIAL FIRST CLOSED-IN	575	587.7			
D	FINAL FIRST CLOSED-IN	1459	1488.8	30.0	30.1	C
E	INITIAL SECOND FLOW	575	585.0			
F	FINAL SECOND FLOW	1058	1062.9	60.0	60.3	F
F	INITIAL SECOND CLOSED-IN	1058	1062.9			
G	FINAL SECOND CLOSED-IN	1459	1479.4	30.0	31.9	C
H	FINAL HYDROSTATIC	2167	2163.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: KANSAS CITY
 NET PAY (ft): _____
 GROSS TESTED FOOTAGE: 66.0
 ALL DEPTHS MEASURED FROM: KELLY BUSHING
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): _____
 TOTAL DEPTH (ft): 4510.0
 PACKER DEPTH(S) (ft): 4438, 4444
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 9.00 PLUS
 MUD VISCOSITY (sec): 46
 ESTIMATED HOLE TEMP. (°F): 115
 ACTUAL HOLE TEMP. (°F): _____ @ _____ ft

TICKET NUMBER: 35100300DATE: 11-1-85 TEST NO: 2TYPE DST: OPEN HOLEHALLIBURTON CAMP:
PRATTTESTER: L.R. PARKERWITNESS: J. M. RICHARDSON

DRILLING CONTRACTOR:

GABBERT-JONES DRILLING COMPANYFLUID 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:

120 FEET OF MUD
 60 FEET OF THIN MUD
 120 FEET OF MUDDY WATER
 1740 FEET OF GAS CUT WATER

MEASURED FROM
TESTER VALVE

REMARKS:

TIGHT HOLE INFORMATION....

CHARTS INDICATE POSSIBLE SLIGHT PLUGGING OF THE ANCHOR PIPE PERFORATIONS
 DURING THE INITIAL FLOW PERIOD.

TICKET NO: 35100300

CLOCK NO: 10288 HOUR: 12


HALLIBURTON
SERVICES

GAUGE NO: 6276

DEPTH: 4423.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	
FIRST FLOW						SECOND CLOSED-IN - CONTINUED						
B	1	0.0	50.7			11	20.0	1431.0	407.5	16.4	0.740	
	2	5.0	190.7	140.0		12	22.0	1433.2	409.8	17.7	0.706	
	3	10.0	291.3	100.6		13	24.0	1435.1	411.7	18.9	0.676	
	4	15.0	354.0	62.7		14	26.0	1436.7	413.3	20.2	0.649	
	5	20.0	416.1	62.2		15	28.0	1438.8	415.4	21.4	0.624	
	6	25.0	478.1	62.0		G	16	30.0	1440.2	416.8	22.5	0.602
C	7	29.6	526.7	48.6			17	31.9	1441.9	418.5	23.6	0.581
FIRST CLOSED-IN												
C	1	0.0	526.7									
	2	2.0	1327.3	800.6	1.9	1.191						
	3	4.0	1365.0	838.3	3.6	0.919						
	4	6.0	1387.5	860.8	5.0	0.771						
	5	8.0	1402.3	875.6	6.3	0.672						
	6	10.0	1411.8	885.2	7.5	0.598						
	7	12.0	1420.7	894.0	8.5	0.540						
	8	14.0	1428.3	901.6	9.5	0.493						
	9	16.0	1432.9	906.2	10.4	0.454						
	10	18.0	1437.7	911.0	11.2	0.422						
	11	20.0	1441.1	914.4	11.9	0.395						
	12	22.0	1444.2	917.5	12.6	0.370						
	13	24.0	1446.6	920.0	13.2	0.349						
	14	26.0	1448.7	922.0	13.8	0.330						
	15	28.0	1449.9	923.3	14.4	0.313						
D	16	30.1	1452.3	925.6	14.9	0.297						
SECOND FLOW												
E	1	0.0	544.4									
	2	10.0	639.1	94.6								
	3	20.0	736.1	97.0								
	4	30.0	818.2	82.2								
	5	40.0	894.4	76.2								
	6	50.0	962.5	68.0								
F	7	60.3	1023.4	60.9								
SECOND CLOSED-IN												
F	1	0.0	1023.4									
	2	2.0	1364.5	341.0	1.9	1.665						
	3	4.0	1384.8	361.4	3.8	1.372						
	4	6.0	1397.2	373.8	5.6	1.203						
	5	8.0	1406.6	383.2	7.4	1.086						
	6	10.0	1413.0	389.6	9.0	0.999						
	7	12.0	1417.9	394.5	10.6	0.927						
	8	14.0	1422.4	399.0	12.1	0.869						
	9	16.0	1425.7	402.3	13.6	0.821						
	10	18.0	1428.9	405.5	15.0	0.778						

REMARKS:

TICKET NO: 35100300

CLOCK NO: 3004 HOUR: 12



GAUGE NO: 6144

DEPTH: 4507.0

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	96.0			
2	5.0	274.0	178.0		
3	10.0	371.5	97.6		
4	15.0	428.7	57.2		
5	20.0	488.3	59.6		
6	25.0	546.4	58.1		
C 7	29.6	587.7	41.4		
FIRST CLOSED-IN					
C 1	0.0	587.7			
2	2.0	1367.4	779.7	1.9	1.189
3	4.0	1402.3	814.5	3.5	0.925
4	6.0	1423.6	835.9	5.0	0.771
5	8.0	1438.0	850.3	6.3	0.671
6	10.0	1449.6	861.9	7.5	0.596
7	12.0	1457.2	869.5	8.5	0.539
8	14.0	1463.7	876.0	9.5	0.493
9	16.0	1469.3	881.6	10.4	0.455
10	18.0	1473.1	885.4	11.2	0.422
11	20.0	1476.9	889.1	11.9	0.395
12	22.0	1479.1	891.4	12.6	0.370
13	24.0	1482.8	895.0	13.2	0.349
14	26.0	1485.2	897.5	13.8	0.330
15	28.0	1486.8	899.1	14.4	0.313
D 16	30.1	1488.8	901.0	14.9	0.297
SECOND FLOW					
E 1	0.0	585.0			
2	10.0	677.1	92.1		
3	20.0	774.8	97.6		
4	30.0	859.5	84.7		
5	40.0	932.8	73.3		
6	50.0	1000.6	67.8		
F 7	60.3	1062.9	62.3		
SECOND CLOSED-IN					
F 1	0.0	1062.9			
2	2.0	1401.8	338.9	2.0	1.662
3	4.0	1422.7	359.8	3.9	1.366
4	6.0	1435.0	372.1	5.6	1.204
5	8.0	1444.2	381.4	7.4	1.087
6	10.0	1450.9	388.1	9.0	1.001
7	12.0	1456.0	393.1	10.6	0.929
8	14.0	1460.0	397.1	12.1	0.870
9	16.0	1463.5	400.7	13.6	0.820
10	18.0	1467.2	404.3	15.0	0.778

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	1469.5	406.7	16.4	0.740
12	22.0	1471.6	408.8	17.7	0.706
13	24.0	1473.4	410.5	18.9	0.676
14	26.0	1475.1	412.2	20.2	0.649
15	28.0	1476.9	414.1	21.3	0.625
16	30.0	1478.8	416.0	22.5	0.602
G 17	31.9	1479.4	416.5	23.6	0.581

REMARKS:

TICKET NO. 35100300

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	3918.0	
3		DRILL COLLARS.....	6.000	2.250	375.0	
50		IMPACT REVERSING SUB.....	6.250	2.750	1.0	4293.0
3		DRILL COLLARS.....	6.000	2.250	116.0	
5		CROSSOVER.....	6.000	2.250	1.0	
12		DUAL CIP VALVE.....	5.750	0.870	6.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	4421.0
80		AP RUNNING CASE.....	5.000	2.250	4.0	4423.0
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	4438.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4444.0
20		FLUSH JOINT ANCHOR.....	5.000	2.370	10.0	
5		CROSSOVER.....	6.000	2.250	1.0	
3		DRILL COLLARS.....	6.000	2.250	29.0	
5		CROSSOVER.....	6.000	2.250	1.0	
5		CROSSOVER.....	6.000	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	18.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	4507.0
TOTAL DEPTH					4510.0	

EQUIPMENT DATA

201

RICHARDSON-ALBERTS

1

3

4715.0 - 4760.0

J. MARK RICHARDSON

LEASE OWNER/COMPANY NAME

LEASE NAME

WELL NO.

TEST NO.

TESTED INTERVAL

LEGAL LOCATION
SEC. - TWP. - RNG.

12-29-20

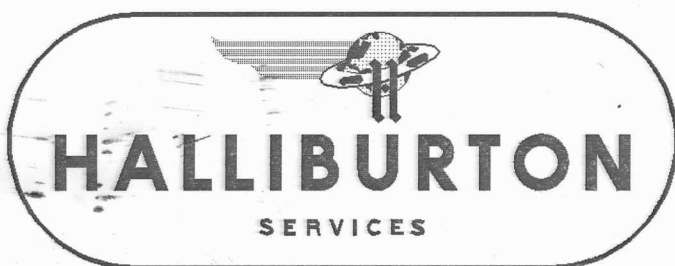
FIELD
AREA

COUNTY

KIOWA

STATE

KANSAS SM

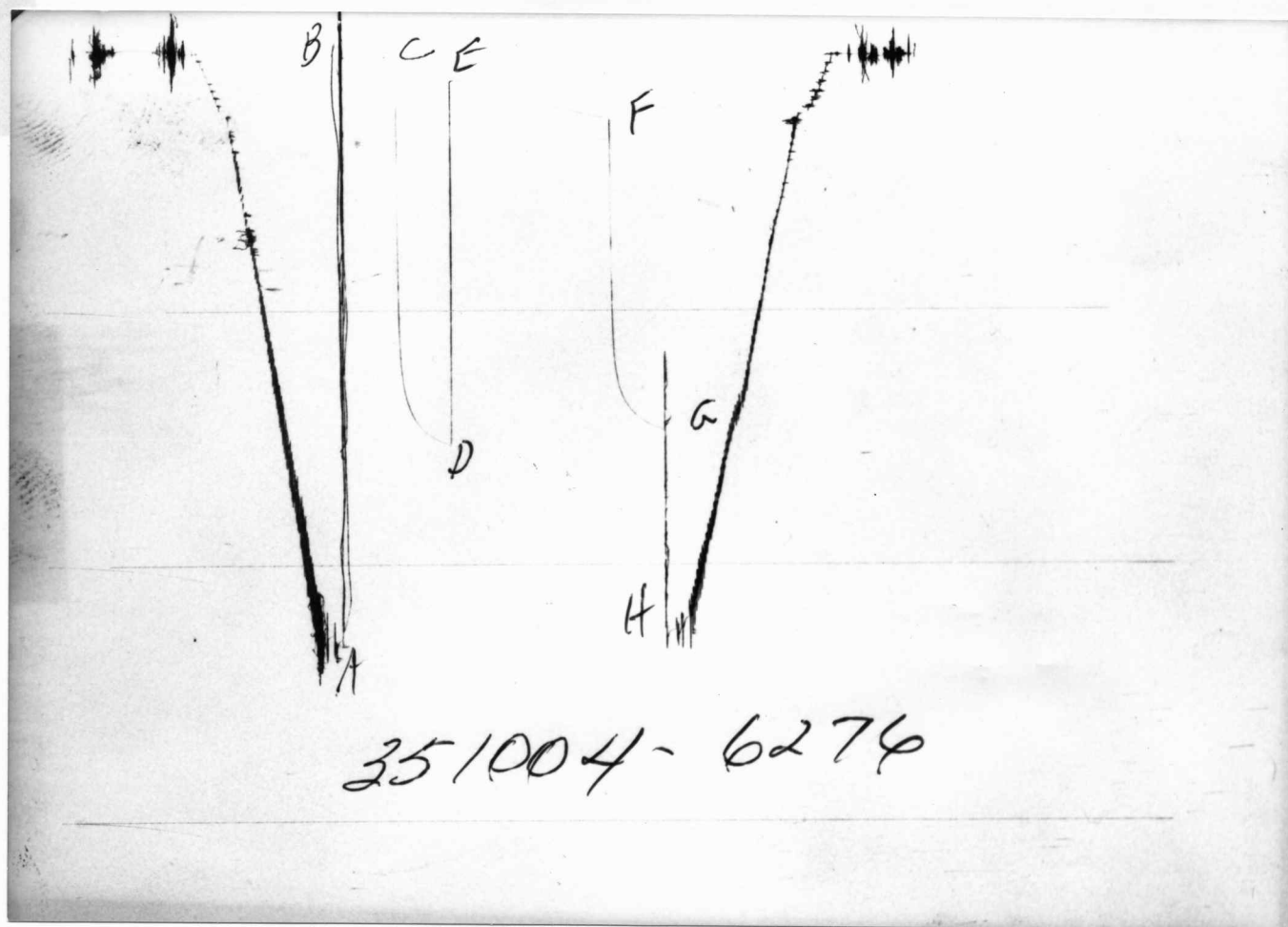


TICKET NO. 35100400

08-NOV-85

PRATT

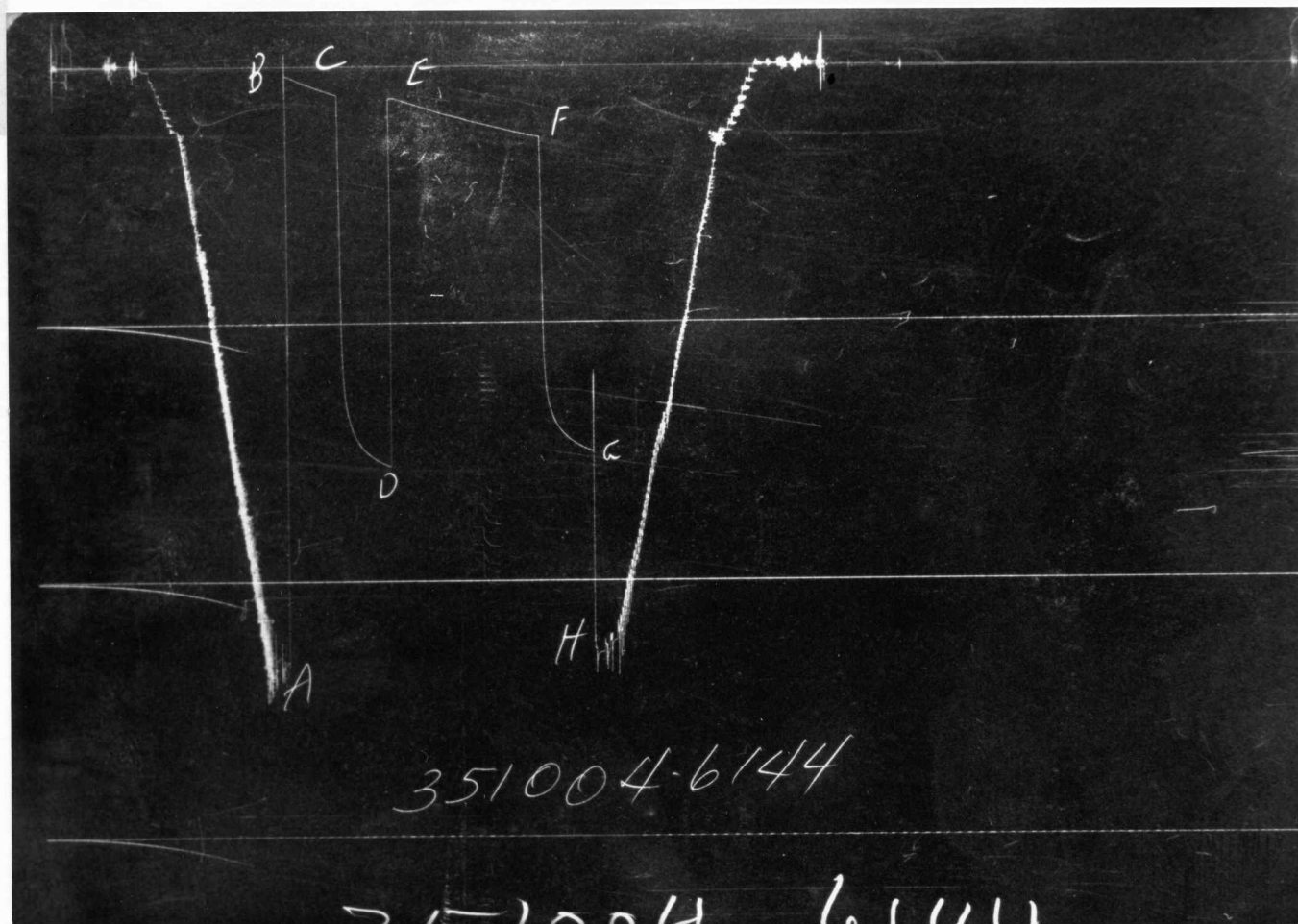
FORMATION TESTING SERVICE REPORT



351004-6276

GAUGE NO: 6276 DEPTH: 4694.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2289.1			
B	INITIAL FIRST FLOW		10.5			
C	FINAL FIRST FLOW		88.2	30.0	30.6	F
C	INITIAL FIRST CLOSED-IN		88.2			
D	FINAL FIRST CLOSED-IN		1541.1	30.0	30.1	C
E	INITIAL SECOND FLOW		107.4			
F	FINAL SECOND FLOW		250.1	90.0	88.5	F
F	INITIAL SECOND CLOSED-IN		250.1			
G	FINAL SECOND CLOSED-IN		1479.4	30.0	30.8	C
H	FINAL HYDROSTATIC		2265.5			



GAUGE NO: 6144 DEPTH: 4757.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2305	2311.8			
B	INITIAL FIRST FLOW	30	44.9			
C	FINAL FIRST FLOW	109	118.3	30.0	30.6	F
C	INITIAL FIRST CLOSED-IN	109	118.3			
D	FINAL FIRST CLOSED-IN	1547	1564.5	30.0	30.1	C
E	INITIAL SECOND FLOW	109	135.4			
F	FINAL SECOND FLOW	268	282.0	90.0	88.5	F
F	INITIAL SECOND CLOSED-IN	268	282.0			
G	FINAL SECOND CLOSED-IN	1498	1506.8	30.0	30.8	C
H	FINAL HYDROSTATIC	2288	2291.6			

EQUIPMENT & HOLE DATA

FORMATION TESTED: KANSAS CITY
 NET PAY (ft): 7.0
 GROSS TESTED FOOTAGE: 45.0
 ALL DEPTHS MEASURED FROM: KELLY BUSHING
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): _____
 TOTAL DEPTH (ft): 4760.0
 PACKER DEPTH(S) (ft): 4709, 4715
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 9.10
 MUD VISCOSITY (sec): 45
 ESTIMATED HOLE TEMP. (°F): 117
 ACTUAL HOLE TEMP. (°F): ____ @ _____ ft

TICKET NUMBER: 35100400DATE: 11-2-85 TEST NO: 3TYPE DST: OPEN HOLEHALLIBURTON CAMP:
PRATTTESTER: L.R. PARKERWITNESS: J. MARK RICHARDSONDRILLING CONTRACTOR:
GABBERT AND JONES DRILLING COMPANYFLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>TOP</u>	<u>0.050 @ 75 °F</u>	<u>105666 ppm</u>
<u>BOTTOM</u>	<u>0.050 @ 75 °F</u>	<u>123000 ppm</u>
_____	_____ @ _____ °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 MUD WITH FEW SPECKS OF OIL
 60 FEET OF MUDDY WATER
 280 FEET OF WATER

MEASURED FROM
TESTER VALVE

REMARKS:

TIGHT HOLE INFORMATION

FLUID PROPERTIES CONTINUED:

TOP SAMPLE: SP. GR = 1.1217, IRON = NEG, PH=7, CALCIUM = 9630 MPL,
 MAGNESIUM= 1825 MPL, SULFATES = NEGATIVE
 BOTTOM SAMPLE: SP. GR. = 1.1422, IRON= NEG, PH=7, CALCIUM= 11342 MPL,
 MAGNESIUM= 652 MPL, SULFATES = NEGATIVE

[illegible]

TICKET NO: 35100400

CLOCK NO: 10288 HOUR: 12



GAUGE NO: 6276

DEPTH: 4694.0

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	10.5			
2	5.0	23.7	13.2		
3	10.0	39.8	16.2		
4	15.0	51.6	11.7		
5	20.0	64.4	12.9		
6	25.0	74.9	10.5		
C 7	30.6	88.2	13.3		
FIRST CLOSED-IN					
C 1	0.0	88.2			
2	2.0	1156.2	1068.0	1.9	1.206
3	4.0	1298.0	1209.8	3.5	0.937
4	6.0	1363.8	1275.6	5.0	0.785
5	8.0	1405.9	1317.7	6.4	0.682
6	10.0	1434.4	1346.2	7.5	0.610
7	12.0	1457.7	1369.5	8.6	0.550
8	14.0	1473.6	1385.5	9.6	0.503
9	16.0	1486.6	1398.4	10.5	0.465
10	18.0	1498.2	1410.0	11.3	0.431
11	20.0	1506.4	1418.2	12.1	0.403
12	22.0	1517.0	1428.8	12.8	0.379
13	24.0	1524.0	1435.8	13.5	0.357
14	26.0	1531.5	1443.3	14.1	0.338
15	28.0	1536.7	1448.5	14.6	0.321
D 16	30.1	1541.1	1452.9	15.2	0.304
SECOND FLOW					
E 1	0.0	107.4			
2	15.0	125.6	18.2		
3	30.0	156.0	30.4		
4	45.0	184.2	28.2		
5	60.0	208.8	24.6		
6	75.0	233.0	24.2		
F 7	88.5	250.1	17.1		
SECOND CLOSED-IN					
F 1	0.0	250.1			
2	2.0	1152.7	902.5	2.0	1.772
3	4.0	1270.8	1020.7	3.8	1.492
4	6.0	1326.0	1075.9	5.7	1.320
5	8.0	1358.8	1108.7	7.5	1.202
6	10.0	1382.2	1132.1	9.3	1.109
7	12.0	1400.7	1150.6	10.9	1.038
8	14.0	1415.2	1165.1	12.6	0.977
9	16.0	1429.4	1179.3	14.1	0.926
10	18.0	1438.8	1188.6	15.7	0.881

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	1447.4	1197.2	17.1	0.842
12	22.0	1455.2	1205.1	18.6	0.807
13	24.0	1462.5	1212.3	20.0	0.775
14	26.0	1469.3	1219.1	21.4	0.746
15	28.0	1475.0	1224.9	22.7	0.720
G 16	30.8	1479.4	1229.3	24.4	0.688

REMARKS:

TICKET NO: 35100400

CLOCK NO: 3004 HOUR: 12



GAUGE NO: 6144

DEPTH: 4757.0

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	44.9			
2	5.0	55.6	10.7		
3	10.0	70.0	14.4		
4	15.0	82.4	12.4		
5	20.0	94.1	11.7		
6	25.0	105.8	11.7		
C 7	30.6	118.3	12.5		
FIRST CLOSED-IN					
C 1	0.0	118.3			
2	2.0	1169.0	1050.7	1.9	1.218
3	4.0	1324.6	1206.3	3.5	0.936
4	6.0	1388.2	1269.9	5.0	0.786
5	8.0	1430.9	1312.6	6.4	0.682
6	10.0	1459.2	1340.9	7.5	0.608
7	12.0	1480.1	1361.7	8.6	0.551
8	14.0	1496.8	1378.4	9.6	0.503
9	16.0	1510.2	1391.9	10.5	0.464
10	18.0	1521.7	1403.3	11.3	0.432
11	20.0	1531.6	1413.3	12.1	0.403
12	22.0	1540.2	1421.8	12.8	0.378
13	24.0	1548.1	1429.8	13.5	0.357
14	26.0	1554.2	1435.9	14.1	0.338
15	28.0	1560.1	1441.7	14.6	0.321
D 16	30.1	1564.5	1446.2	15.2	0.304
SECOND FLOW					
E 1	0.0	135.4			
2	15.0	155.5	20.2		
3	30.0	187.3	31.8		
4	45.0	214.0	26.7		
5	60.0	239.6	25.6		
6	75.0	264.6	24.9		
F 7	88.5	282.0	17.5		
SECOND CLOSED-IN					
F 1	0.0	282.0			
2	2.0	1156.1	874.1	2.0	1.775
3	4.0	1297.1	1015.0	3.9	1.484
4	6.0	1352.7	1070.7	5.8	1.316
5	8.0	1385.2	1103.1	7.5	1.201
6	10.0	1409.1	1127.1	9.2	1.111
7	12.0	1427.7	1145.7	10.9	1.037
8	14.0	1442.1	1160.0	12.5	0.978
9	16.1	1455.3	1173.3	14.2	0.925
10	18.0	1465.1	1183.0	15.6	0.882

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	1473.7	1191.7	17.1	0.842
12	22.0	1482.3	1200.2	18.6	0.807
13	24.0	1489.2	1207.1	20.0	0.776
14	26.0	1495.0	1212.9	21.4	0.746
15	28.0	1501.2	1219.1	22.7	0.720
G 16	30.8	1506.8	1224.7	24.4	0.688

REMARKS:

TICKET NO. 35100400

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4189.0	
3		DRILL COLLARS.....	6.000	2.250	375.0	
50		IMPACT REVERSING SUB.....	6.000	2.750	1.0	4564.0
3		DRILL COLLARS.....	6.000	2.250	116.0	
5		CROSSOVER.....	6.000	2.250	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	6.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	4692.0
80		AP RUNNING CASE.....	5.000	2.250	4.0	4694.0
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	4709.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4715.0
5		CROSSOVER.....	6.000	2.250	1.0	
3		DRILL COLLARS.....	6.000	2.250	29.0	
5		CROSSOVER.....	6.000	2.250	1.0	
5		CROSSOVER.....	6.000	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	7.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	4757.0
TOTAL DEPTH					4760.0	

EQUIPMENT DATA

RICHARDSON-ALBERTS

LEASE NAME

1
WELL NO.

4
TEST NO.

TESTED INTERVAL

J. MARK RICHARDSON
LEASE OWNER/COMPANY NAME

LEGAL LOCATION
SEC. - TWP. - RNG.

12-29-20

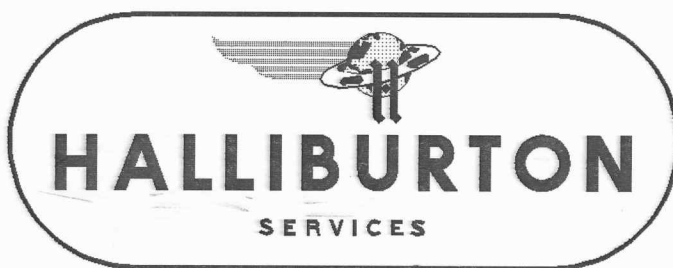
FIELD
AREA

COUNTY

KIOWA

STATE

KANSAS SM

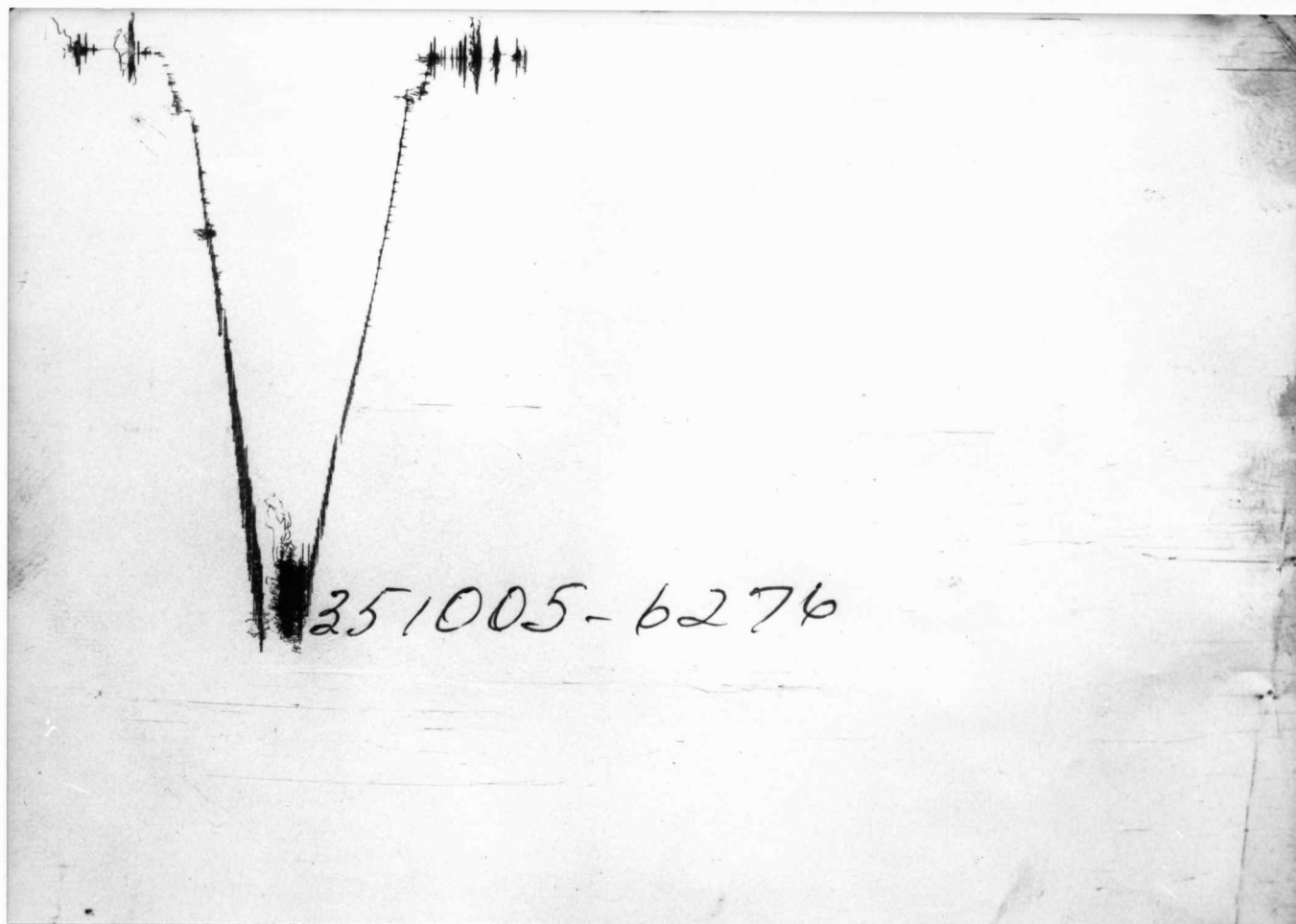


TICKET NO. 35100500

08-NOV-85

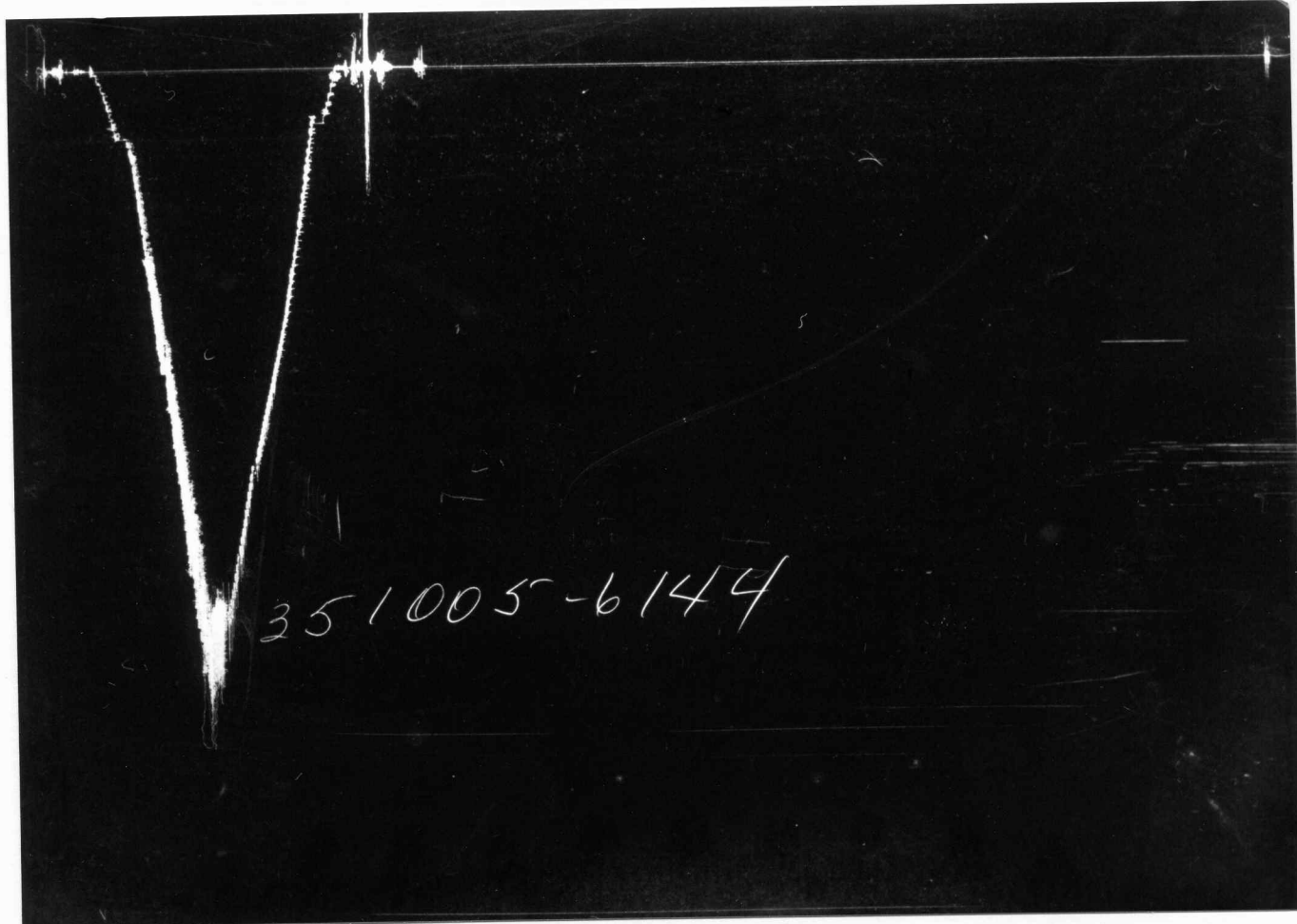
PRATT

FORMATION TESTING SERVICE REPORT



GAUGE NO: 6276 DEPTH: _____ BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	FAILED TO REACH BOTTOM					



GAUGE NO: 6144 DEPTH: _____ BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	FAILED TO REACH BOTTOM					

EQUIPMENT & HOLE DATA

FORMATION TESTED: _____
 NET PAY (ft): _____
 GROSS TESTED FOOTAGE: _____
 ALL DEPTHS MEASURED FROM: KELLY BUSHING
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): _____
 TOTAL DEPTH (ft): 5006.0
 PACKER DEPTH(S) (ft): _____
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 9.10
 MUD VISCOSITY (sec): 41
 ESTIMATED HOLE TEMP. (°F): 120
 ACTUAL HOLE TEMP. (°F): ____ @ _____ ft

TICKET NUMBER: 35100500DATE: 11-3-85 TEST NO: 4TYPE DST: OPEN HOLEHALLIBURTON CAMP:
PRATTTESTER: L.R. PARKERWITNESS: J. MARK RICHARDSONDRILLING CONTRACTOR:
GABBERT- JONESFLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm

SAMPLER DATA

Pstg 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:

MEASURED FROM
TESTER VALVE

REMARKS:

TIGHT HOLE INFORMATION

MISRUN.....COULD NOT GET TO BOTTOM.....ATTEMPTED TO TEST 4944- 5006'.

TICKET NO. 35100500

		O.D.	I.D.	LENGTH	DEPTH
1					
	DRILL PIPE.....	4.500	3.826		
3					
	DRILL COLLARS.....	6.000	2.250	375.0	
50					
	IMPACT REVERSING SUB.....	6.000	2.750	1.0	
3					
	DRILL COLLARS.....	6.000	2.250	116.0	
5					
	CROSSOVER.....	6.000	2.250	1.0	
12					
	DUAL CIP VALVE.....	5.000	0.870	6.0	
60					
	HYDROSPRING TESTER.....	5.000	0.750	5.0	
80					
	AP RUNNING CASE.....	5.000	2.250	4.0	
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	
70					
	OPEN HOLE PACKER.....	6.750	1.530	6.0	
20					
	FLUSH JOINT ANCHOR.....	5.000	2.370	5.0	
5					
	CROSSOVER.....	6.000	2.250	1.0	
3					
	DRILL COLLARS.....	6.000	2.250	29.0	
5					
	CROSSOVER.....	6.000	2.250	1.0	
5					
	CROSSOVER.....	6.000	2.250	1.0	
20					
	FLUSH JOINT ANCHOR.....	5.000	2.370	19.0	
81					
	BLANKED-OFF RUNNING CASE.....	5.000		4.0	
TOTAL DEPTH					5006.0

EQUIPMENT DATA



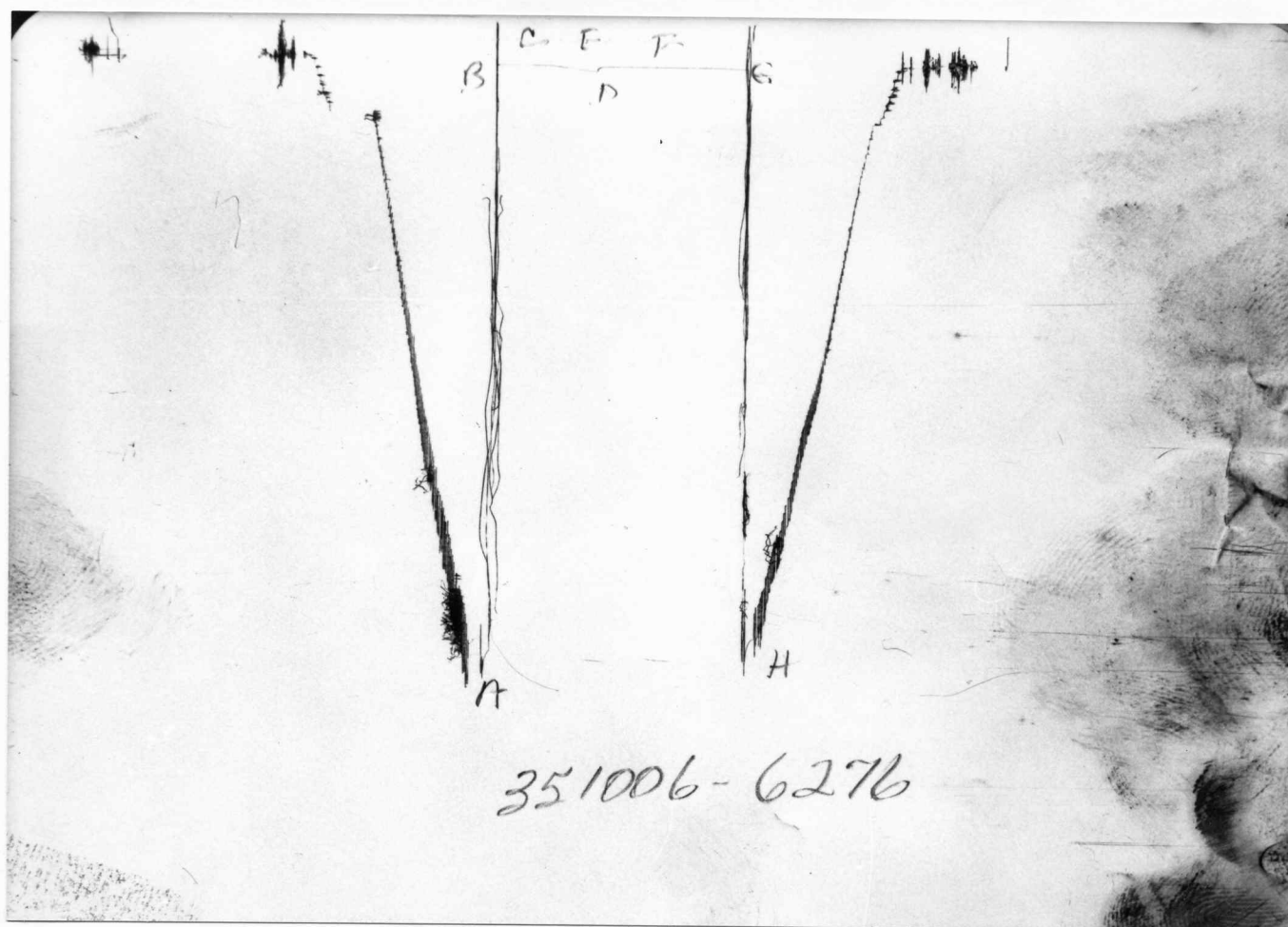
TICKET NO. 35100600

08-NOV-85

PRATT

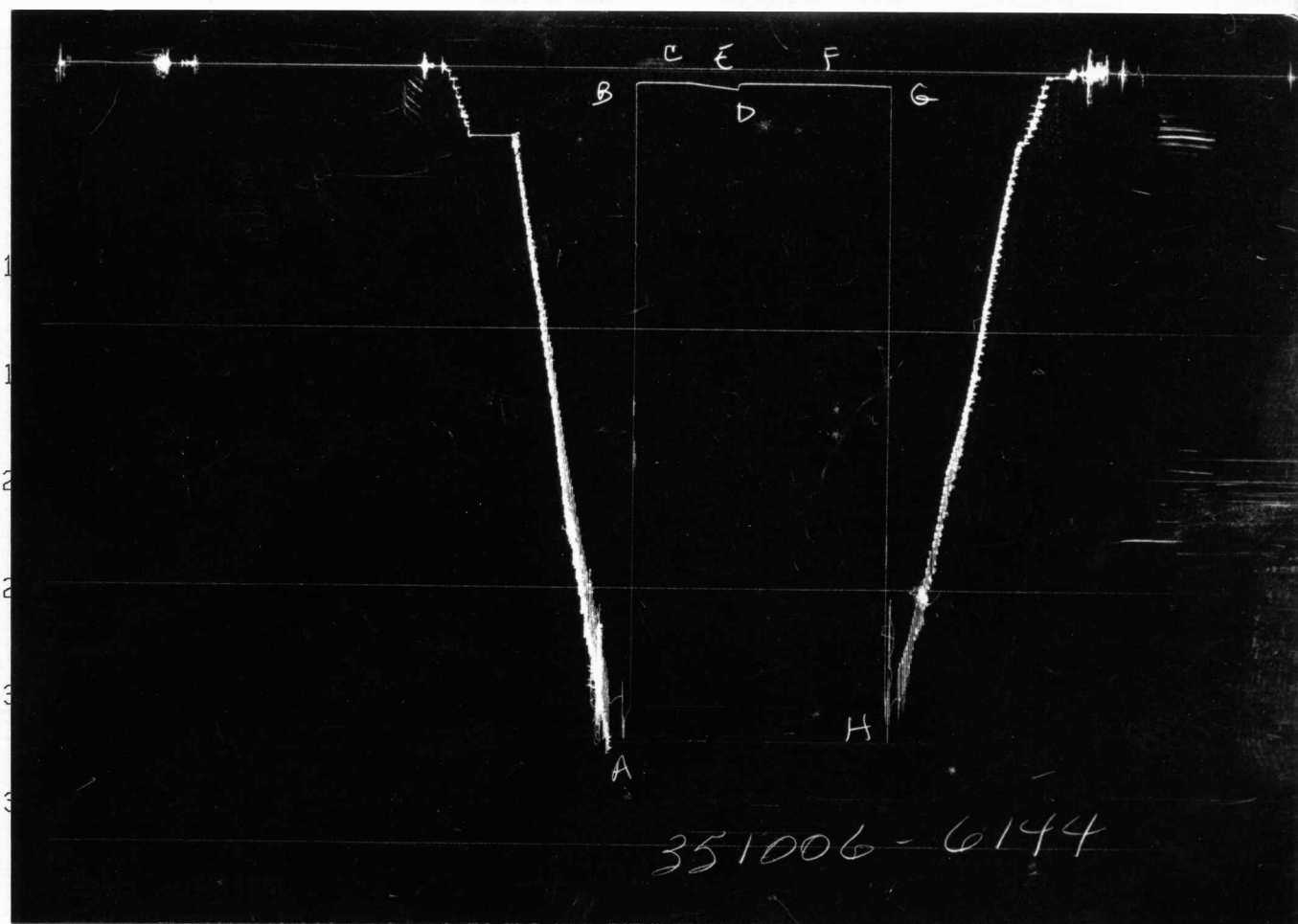
FORMATION TESTING SERVICE REPORT

LEASE NAME		WELL NO.		TEST NO.		TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
RICHARDSON-ALBERTS		1		5		4944.0 - 5006.0		J. MARK RICHARDSON	
LEGAL LOCATION		FIELD AREA		COUNTY		STATE		IC	
SEC. - TWP. - RNG.		12-29-20		KIOWA		KANSAS			



GAUGE NO: 6276 DEPTH: 4923.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2414.1			
B	INITIAL FIRST FLOW		27.9			
C	FINAL FIRST FLOW		27.9	25.0	25.0	F
C	INITIAL FIRST CLOSED-IN		27.9			
D	FINAL FIRST CLOSED-IN		52.6	30.0	30.0	C
E	INITIAL SECOND FLOW		38.4			
F	FINAL SECOND FLOW		30.1	60.0	60.0	F
F	INITIAL SECOND CLOSED-IN		30.1			
G	FINAL SECOND CLOSED-IN		36.5	30.0	30.0	C
H	FINAL HYDROSTATIC		2411.9			



GAUGE NO: 6144 DEPTH: 5003.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2423	2432.7			
B	INITIAL FIRST FLOW	50	60.8			
C	FINAL FIRST FLOW	50	55.1	25.0	25.0	F
C	INITIAL FIRST CLOSED-IN	50	55.1			
D	FINAL FIRST CLOSED-IN	79	78.5	30.0	30.0	C
E	INITIAL SECOND FLOW	50	58.7			
F	FINAL SECOND FLOW	50	54.4	60.0	60.0	F
F	INITIAL SECOND CLOSED-IN	50	54.4			
G	FINAL SECOND CLOSED-IN	60	60.3	30.0	30.0	C
H	FINAL HYDROSTATIC	2423	2430.7			

EQUIPMENT & HOLE DATA

FORMATION TESTED: _____
 NET PAY (ft): _____
 GROSS TESTED FOOTAGE: 62.0
 ALL DEPTHS MEASURED FROM: KELLY BUSHING
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): _____
 TOTAL DEPTH (ft): 5006.0
 PACKER DEPTH(S) (ft): 4938, 4944
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 9.30
 MUD VISCOSITY (sec): 54
 ESTIMATED HOLE TEMP. (°F): 120
 ACTUAL HOLE TEMP. (°F): ____ @ _____ ft

TICKET NUMBER: 35100600DATE: 11-4-85 TEST NO: 5TYPE DST: OPEN HOLEHALLIBURTON CAMP:
PRATTTESTER: L. R. PARKER
AND ROLFWITNESS: J. MARK RICHARDSONDRILLING CONTRACTOR:
GABBERT AND JONESFLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>MUD SYSTEM</u>	____ @ ____ °F	<u>22000</u> ppm
<u>BOTTOM</u>	<u>0.190</u> @ <u>70</u> °F	<u>22100</u> ppm
_____	____ @ ____ °F	_____ ppm
_____	____ @ ____ °F	_____ ppm
_____	____ @ ____ °F	_____ ppm
_____	____ @ ____ °F	_____ ppm

SAMPLER DATA

Pstg 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:

30 FEET OF MUD

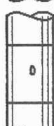
MEASURED FROM
TESTER VALVE

REMARKS:

TIGHT HOLE INFORMATION....

BOTTOM SAMPLE INFORMATION: SPECIFIC GRAVITY-1.02; PH=9.5; SAMPLE WAS
100% MUD.

TICKET NO. 35100600

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4418.0	
3		DRILL COLLARS.....	6.000	2.250	375.0	
50		IMPACT REVERSING SUB.....	6.000	2.750	1.0	4793.0
3		DRILL COLLARS.....	6.000	2.250	116.0	
5		CROSSOVER.....	6.000	2.250	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	6.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	4921.0
80		AP RUNNING CASE.....	5.000	2.250	4.0	4923.0
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	4938.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4944.0
20		FLUSH JOINT ANCHOR.....	5.000	2.370	5.0	
5		CROSSOVER.....	6.000	2.250	1.0	
3		DRILL COLLARS.....	6.000	2.250	29.0	
5		CROSSOVER.....	6.000	2.250	1.0	
5		CROSSOVER.....	6.000	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	19.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	5003.0
TOTAL DEPTH					5006.0	

EQUIPMENT DATA

887

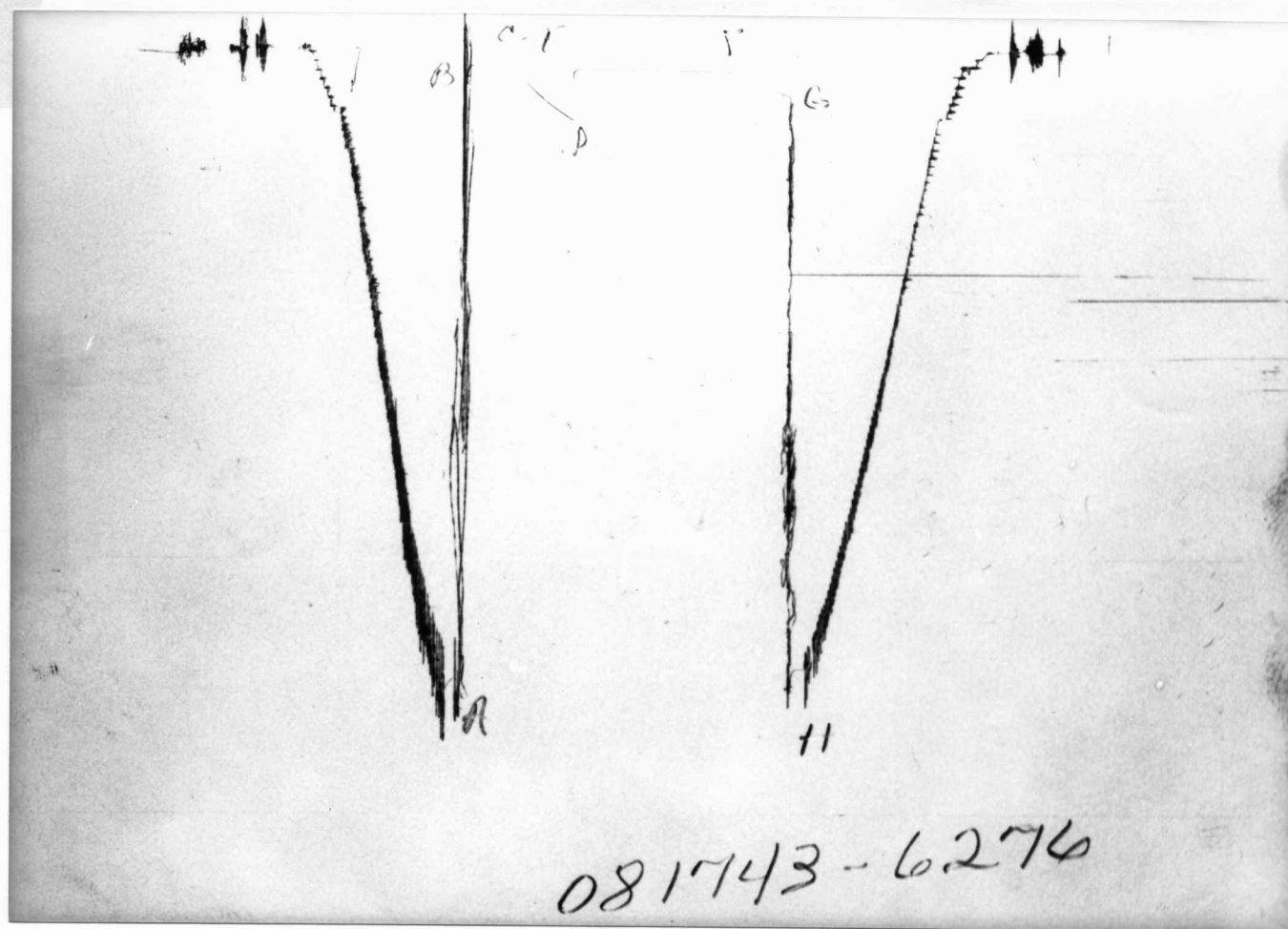
RICHARDSON - ALBERTS
LEASE NAME
WELL NO. 1
TEST NO. 6
TESTED INTERVAL 5047.0 - 5070.0
LEASE OWNER/COMPANY NAME J. MARK RICHARDSON

LEGAL LOCATION
SEC. - TWP. - RNG. 12-29-20
FIELD AREA
COUNTY KIOWA
STATE KANSAS
IC



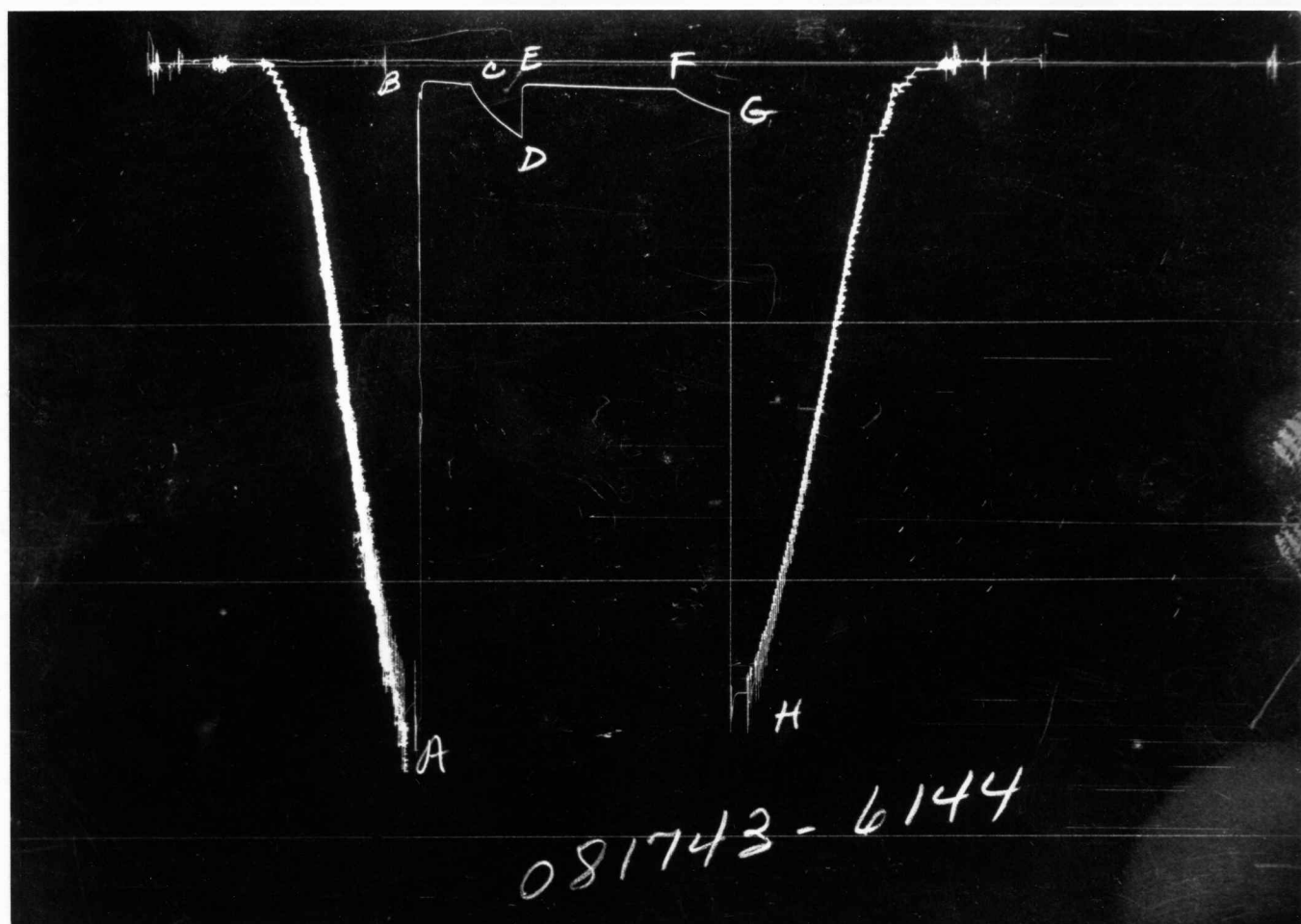
TICKET NO. 08174300
11-NOV-85
PRATT

FORMATION TESTING SERVICE REPORT



GAUGE NO: 6276 DEPTH: 5026.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2477.2			
B	INITIAL FIRST FLOW		117.1			
C	FINAL FIRST FLOW		75.4	30.0	30.4	F
C	INITIAL FIRST CLOSED-IN		75.4			
D	FINAL FIRST CLOSED-IN		281.1	30.0	29.5	C
E	INITIAL SECOND FLOW		97.8			
F	FINAL SECOND FLOW		90.8	90.0	88.6	F
F	INITIAL SECOND CLOSED-IN		90.8			
G	FINAL SECOND CLOSED-IN		184.8	30.0	31.5	C
H	FINAL HYDROSTATIC		2441.7			



GAUGE NO: 6144 DEPTH: 5067.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2482	2484.4			
B	INITIAL FIRST FLOW	79	113.1			
C	FINAL FIRST FLOW	99	82.9	30.0	30.4	F
C	INITIAL FIRST CLOSED-IN	99	82.9			
D	FINAL FIRST CLOSED-IN	298	290.7	30.0	29.5	C
E	INITIAL SECOND FLOW	89	94.8			
F	FINAL SECOND FLOW	99	102.2	90.0	88.6	F
F	INITIAL SECOND CLOSED-IN	99	102.2			
G	FINAL SECOND CLOSED-IN	199	197.8	30.0	31.5	C
H	FINAL HYDROSTATIC	2463	2450.7			

EQUIPMENT & HOLE DATA

FORMATION TESTED: _____
 NET PAY (ft): _____
 GROSS TESTED FOOTAGE: 23.0
 ALL DEPTHS MEASURED FROM: KELLY BUSHING
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): _____
 TOTAL DEPTH (ft): 5070.0
 PACKER DEPTH(S) (ft): 5041, 5047
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 9.30
 MUD VISCOSITY (sec): 49
 ESTIMATED HOLE TEMP. (°F): 120
 ACTUAL HOLE TEMP. (°F): ____ @ _____ ft

TICKET NUMBER: 08174300DATE: 11-5-85 TEST NO: 6TYPE DST: OPEN HOLEHALLIBURTON CAMP:
PRATTTESTER: ROLFWITNESS: J. MARK RICHARDSON

DRILLING CONTRACTOR:

GABBERT - JONES RIG #9FLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD SYSTEM	____ @ ____ °F	<u>24000</u> ppm
MIDDLE	<u>0.190</u> @ <u>70</u> °F	<u>25000</u> ppm
BOTTOM	<u>0.190</u> @ <u>70</u> °F	<u>25000</u> ppm
_____	____ @ ____ °F	_____ ppm
_____	____ @ ____ °F	_____ ppm
_____	____ @ ____ °F	_____ ppm

SAMPLER DATA

Pstg AT SURFACE: _____
 cu.ft. OF GAS: _____
 cc OF OIL: _____
 cc OF WATER: _____
 cc OF MUD: _____
 TOTAL LIQUID cc: _____

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 36.6 @ 60 °F
 GAS/OIL RATIO (cu.ft. per bbl): _____
 GAS GRAVITY: _____

CUSHION DATA

TYPE AMOUNT WEIGHT

RECOVERED:

60 FEET OF FREE OIL
 120 FEET OF HEAVY OIL CUT MUD

MEASURED FROM
TESTER VALVE

REMARKS:

TIGHT HOLE INFORMATION.

FLUID PROPERTIES CONTINUED:

BOTTOM SAMPLE: SPECIFIC GRAVITY-1.03; PH=9.0; SAMPLE CONTAINED 2% GAS, 12% OIL, AND 86% MUD.

MIDDLE SAMPLE: SPECIFIC GRAVITY-1.03; PH=9.0; SAMPLE CONTAINED 2% GAS, 15% OIL, AND 83% MUD.

TOP SAMPLE WAS FREE OIL.

[illegible]

TICKET NO: 08174300

CLOCK NO: 10288 HOUR: 12



GAUGE NO: 6276

DEPTH: 5026.0

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	117.1			
2	5.0	66.1	-51.0		
3	10.0	66.7	0.6		
4	15.0	68.5	1.8		
5	20.0	69.9	1.5		
6	25.0	72.7	2.8		
C 7	30.4	75.4	2.7		

FIRST CLOSED-IN

C 1	0.0	75.4			
2	2.0	104.4	29.0	1.9	1.216
3	4.0	128.6	53.1	3.5	0.938
4	6.0	144.6	69.1	5.0	0.784
5	8.0	161.1	85.6	6.3	0.682
6	10.0	174.8	99.3	7.5	0.606
7	12.0	186.6	111.2	8.6	0.549
8	14.0	200.6	125.2	9.6	0.502
9	16.0	213.0	137.5	10.5	0.462
10	18.0	223.0	147.6	11.3	0.430
11	20.0	233.1	157.7	12.1	0.401
12	22.0	244.1	168.7	12.8	0.377
13	24.0	253.7	178.2	13.4	0.355
14	26.0	263.8	188.4	14.0	0.336
15	28.0	274.3	198.9	14.6	0.319
D 16	29.5	281.1	205.6	15.0	0.308

SECOND FLOW

E 1	0.0	97.8			
2	15.0	80.7	-17.1		
3	30.0	81.4	0.7		
4	45.0	82.9	1.5		
5	60.0	86.4	3.5		
6	75.0	89.0	2.6		
F 7	88.6	90.8	1.8		

SECOND CLOSED-IN

F 1	0.0	90.8			
2	2.0	99.0	8.2	2.0	1.776
3	4.0	106.8	16.0	3.9	1.490
4	6.0	114.7	23.9	5.7	1.317
5	8.0	123.1	32.3	7.5	1.203
6	10.0	129.8	39.0	9.2	1.112
7	12.0	136.3	45.5	10.9	1.038
8	14.0	142.4	51.6	12.5	0.979
9	16.0	148.8	58.0	14.1	0.927
10	18.0	153.8	63.0	15.6	0.882

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	159.2	68.4	17.1	0.843
12	22.0	164.7	73.9	18.6	0.806
13	24.0	169.0	78.2	20.0	0.775
14	26.0	173.6	82.8	21.4	0.746
15	28.0	178.2	87.4	22.7	0.721
G 16	31.5	184.8	94.1	24.9	0.680

REMARKS:

TICKET NO: 08174300

CLOCK NO: 3004 HOUR: 12



GAUGE NO: 6144

DEPTH: 5067.0

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	113.1			
2	5.0	69.8	-43.4		
3	10.0	71.0	1.2		
4	15.0	73.3	2.4		
5	20.0	75.9	2.6		
6	25.0	80.7	4.8		
C 7	30.4	82.9	2.2		

FIRST CLOSED-IN					
C 1	0.0	82.9			
2	2.0	111.6	28.8	1.9	1.207
3	4.0	132.7	49.8	3.6	0.932
4	6.0	152.1	69.3	5.0	0.784
5	8.0	168.1	85.3	6.4	0.679
6	10.0	183.9	101.0	7.6	0.605
7	12.0	196.9	114.0	8.6	0.549
8	14.0	210.2	127.3	9.6	0.502
9	16.0	222.3	139.4	10.5	0.463
10	18.0	233.0	150.2	11.3	0.430
11	20.0	244.0	161.2	12.1	0.402
12	22.0	255.2	172.3	12.8	0.377
13	24.0	264.9	182.0	13.4	0.356
14	26.0	275.1	192.2	14.0	0.336
15	28.0	284.9	202.1	14.6	0.320
D 16	29.5	290.7	207.8	15.0	0.308

SECOND FLOW					
E 1	0.0	94.8			
2	15.0	86.7	-8.1		
3	30.0	90.8	4.1		
4	45.0	93.9	3.1		
5	60.0	98.7	4.9		
6	75.0	101.2	2.5		
F 7	88.6	102.2	1.0		

SECOND CLOSED-IN					
F 1	0.0	102.2			
2	2.0	111.6	9.4	2.0	1.786
3	4.0	120.8	18.6	3.9	1.489
4	6.0	128.8	26.6	5.7	1.316
5	8.0	136.0	33.8	7.5	1.202
6	10.0	142.9	40.7	9.2	1.111
7	12.0	148.7	46.6	10.9	1.038
8	14.0	155.2	53.0	12.5	0.977
9	16.0	161.3	59.1	14.1	0.926
10	18.0	166.4	64.2	15.7	0.881

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	172.2	70.0	17.2	0.841
12	22.0	177.1	74.9	18.6	0.807
13	24.0	182.1	79.9	20.0	0.775
14	26.0	186.5	84.3	21.3	0.747
15	28.0	190.8	88.6	22.7	0.720
G 16	31.5	197.8	95.6	24.9	0.680

REMARKS:

TICKET NO. 08174300

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4521.0	
3		DRILL COLLARS.....	6.250	2.250	375.0	
50		IMPACT REVERSING SUB.....	5.750	2.750	1.0	4896.0
3		DRILL COLLARS.....	6.250	2.250	116.0	
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	5024.0
80		AP RUNNING CASE.....	5.000	2.250	4.0	5026.0
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	5041.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	5047.0
20		FLUSH JOINT ANCHOR.....	5.000	3.840	17.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	5067.0
TOTAL DEPTH						5070.0

EQUIPMENT DATA