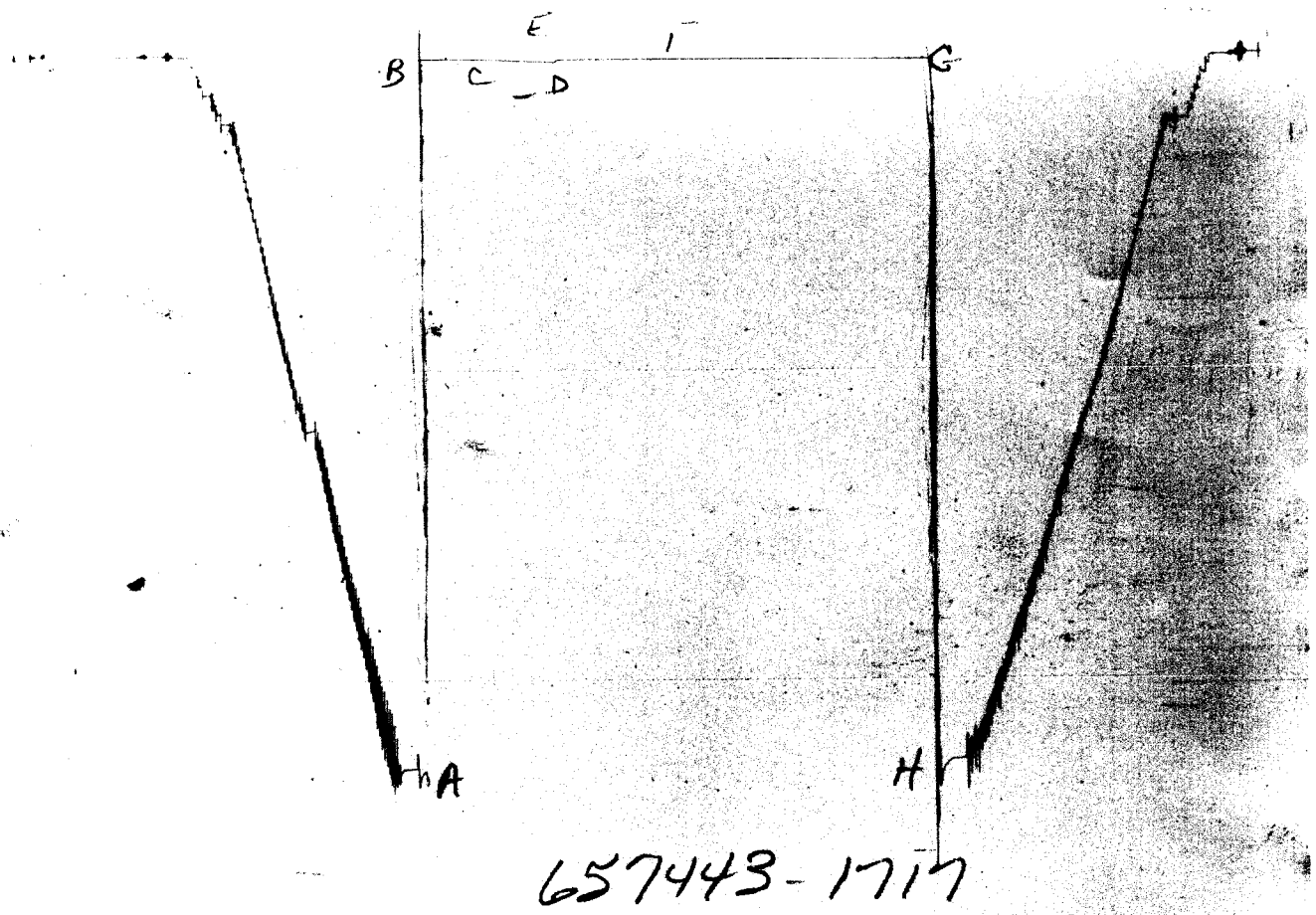


657443-1717

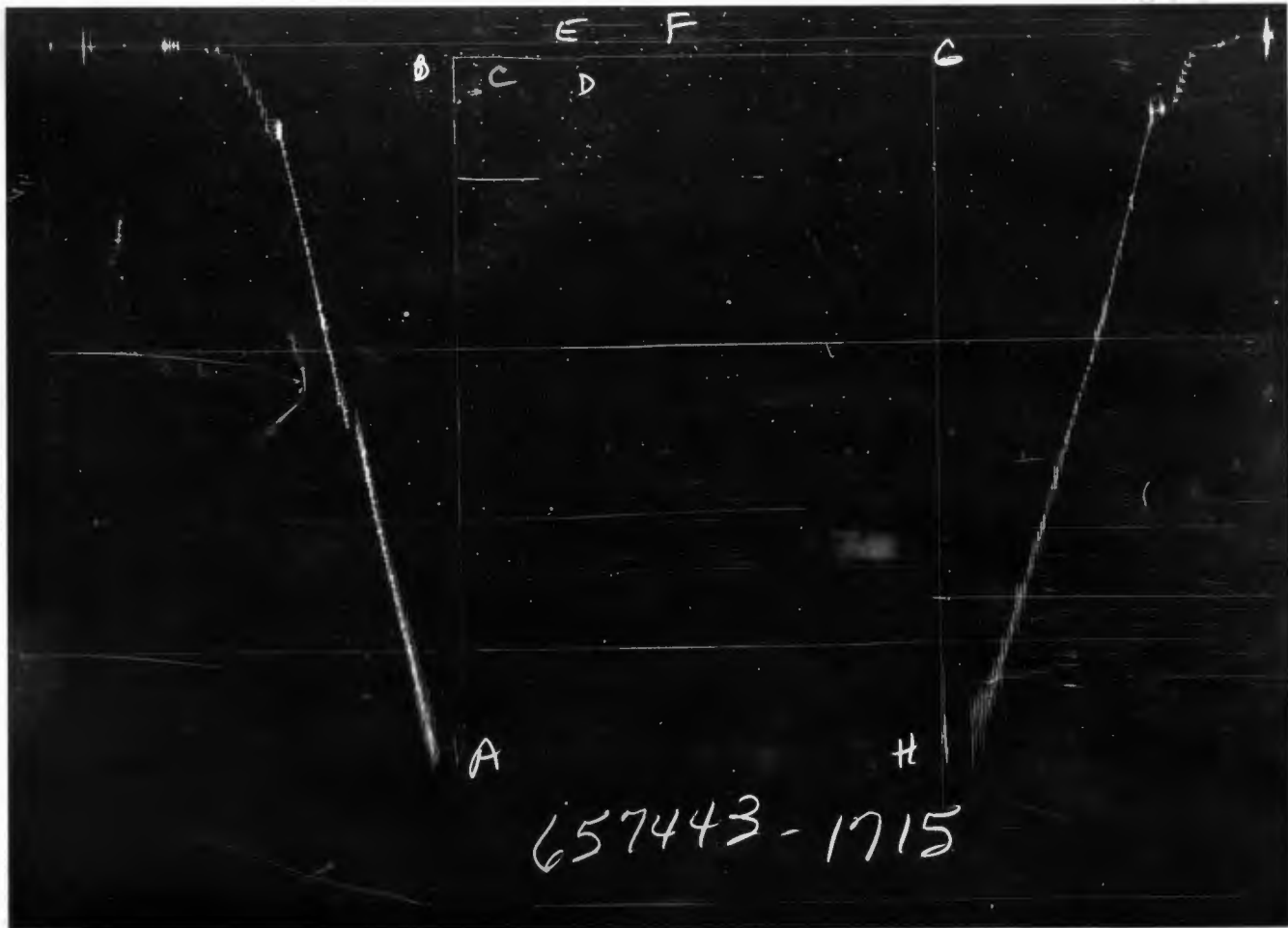
GAUGE NO: 1717 DEPTH: 4671.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2291.4			
B	INITIAL FIRST FLOW		13.6	15.0	15.0	F
C	FINAL FIRST FLOW		13.6			
C	INITIAL FIRST CLOSED-IN		13.6	60.0	60.0	C
D	FINAL FIRST CLOSED-IN		23.6			
E	INITIAL SECOND FLOW		15.2	90.0	90.0	F
F	FINAL SECOND FLOW		13.3			
F	INITIAL SECOND CLOSED-IN		13.3	120.0	120.0	C
G	FINAL SECOND CLOSED-IN		15.1			
H	FINAL HYDROSTATIC		2261.0			



GAUGE NO: 1717 DEPTH: 4671.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2291.4			
B	INITIAL FIRST FLOW		13.6	15.0	15.0	F
C	FINAL FIRST FLOW		13.6			
C	INITIAL FIRST CLOSED-IN		13.6	60.0	60.0	C
D	FINAL FIRST CLOSED-IN		23.6			
E	INITIAL SECOND FLOW		15.2	90.0	90.0	F
F	FINAL SECOND FLOW		13.3			
F	INITIAL SECOND CLOSED-IN		13.3	120.0	120.0	C
G	FINAL SECOND CLOSED-IN		15.1			
H	FINAL HYDROSTATIC		2261.0			



GAUGE NO: 1715 DEPTH: 4737.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2318	2326.7			
B	INITIAL FIRST FLOW	3	47.9			
C	FINAL FIRST FLOW	3	46.7	15.0	15.0	F
C	INITIAL FIRST CLOSED-IN	3	46.7			
D	FINAL FIRST CLOSED-IN	5	58.9	60.0	60.0	C
E	INITIAL SECOND FLOW	3	50.1			
F	FINAL SECOND FLOW	3	49.6	90.0	90.0	F
F	INITIAL SECOND CLOSED-IN	3	49.6			
G	FINAL SECOND CLOSED-IN	5	54.1	120.0	120.0	C
H	FINAL HYDROSTATIC	2309	2298.5			

## EQUIPMENT & HOLE DATA

FORMATION TESTED: MARMATON

NET PAY (ft): 5.0

GROSS TESTED FOOTAGE: 48.0

ALL DEPTHS MEASURED FROM: KELLY BUSHING

CASING PERFS. (ft): \_\_\_\_\_

HOLE OR CASING SIZE (in): 7.875

ELEVATION (ft): 1903

TOTAL DEPTH (ft): 4740.0

PACKER DEPTH(S) (ft): 4686, 4692

FINAL SURFACE CHOKE (in): 0.250

BOTTOM HOLE CHOKE (in): 0.750

MUD WEIGHT (lb/gal): 9.30

MUD VISCOSITY (sec): 42

ESTIMATED HOLE TEMP. (°F): 116

ACTUAL HOLE TEMP. (°F): 0 ft

TICKET NUMBER: 65744300

DATE: 8-28-83 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: PRATT

TESTER: DON GRAHAM

WITNESS: RAY PALMER

DRILLING CONTRACTOR: H-30 DRILLING #5

## FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES	
SYSTEM _____	_____ @ _____ °F	_____	_____ ppm
SAMPLE TOOL _____	0.230 @ 75 °F	15000	ppm
_____	_____ @ _____ °F	_____	ppm
_____	_____ @ _____ °F	_____	ppm
_____	_____ @ _____ °F	_____	ppm

## SAMPLER DATA

Pstg AT SURFACE: 4

cu.ft. OF GAS: 0.00

cc OF OIL: 0

cc OF WATER: 0

cc OF MUD: 1550

TOTAL LIQUID cc: 1550

## HYDROCARBON PROPERTIES

OIL GRAVITY (°API): \_\_\_\_\_ @ \_\_\_\_\_ °F

GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_

GAS GRAVITY: \_\_\_\_\_

## CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

## RECOVERED:





















5 FEET OF MUD

MEASURED FROM TESTER VALVE

## REMARKS:

SAMPLE TOOL: SPECIFIC GRAVITY=1.0171; IRON WAS LIGHT; PH=6.0; CALCIUM=1641 MPL; MAGNESIUM=997; AND HAD HEAVY SULFATES.



		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4181.0	
3		DRILL COLLARS.....	6.250	2.250	345.0	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	4526.0
3		DRILL COLLARS.....	6.250	2.250	124.0	
5		CROSSOVER.....	6.000	2.000	1.0	
11		HANDLING SUB & CHOKE ASSEMBLY...	5.870	3.000	5.0	
5		CROSSOVER.....	6.000	2.000	1.0	
13		DUAL CIP SAMPLER.....	5.000	0.750	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	4669.0
80		AP RUNNING CASE.....	5.000	3.060	4.0	4671.0
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	4686.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4692.0
20		FLUSH JOINT ANCHOR.....	5.000	3.840	1.0	
5		CROSSOVER.....	6.000	2.000	1.0	
3		DRILL COLLARS.....	6.250	2.250	29.0	
5		CROSSOVER.....	6.000	2.000	2.0	
20		FLUSH JOINT ANCHOR.....	5.000	3.840	9.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	4737.0
TOTAL DEPTH						4740.0

EQUIPMENT DATA

# D.S.T. Report Distribution



A Division of Halliburton Company

FORM 1809RS

DUNCAN, OKLAHOMA 72833

Luff Exploration Company  
Company Name -- Lease Owner

Requested Distribution of Completed D.S.T. Report Folder  
for Ticket No. 657444

(This Order Must Be Filled Out and Signed By Company Representative)

Company Luff Exploration Company  
Orig. Chart

ATT. L.A. Carrill

5 P.O. BOX  
& Reports STREET & NO. 1530 Lincoln St  
BUILDING  
CITY STATE Denver Co  
ZIP CODE NUMBER 80203

Company \_\_\_\_\_

○ ATT. \_\_\_\_\_  
P.O. BOX  
STREET & NO.  
BUILDING  
CITY STATE \_\_\_\_\_  
ZIP CODE NUMBER \_\_\_\_\_

Company \_\_\_\_\_

○ ATT. \_\_\_\_\_  
P.O. BOX  
STREET & NO.  
BUILDING  
CITY STATE \_\_\_\_\_  
ZIP CODE NUMBER \_\_\_\_\_

Company \_\_\_\_\_

○ ATT. \_\_\_\_\_  
P.O. BOX  
STREET & NO.  
BUILDING  
CITY STATE \_\_\_\_\_  
ZIP CODE NUMBER \_\_\_\_\_

Company \_\_\_\_\_

○ ATT. \_\_\_\_\_  
P.O. BOX  
STREET & NO.  
BUILDING  
CITY STATE \_\_\_\_\_  
ZIP CODE NUMBER \_\_\_\_\_

Owner - Operator - or His Agent

SIGNED Raymond S. Palmer Agent

Send 1st, 2nd and 3rd Copy with Charts

(Use Additional Sheets When Necessary)



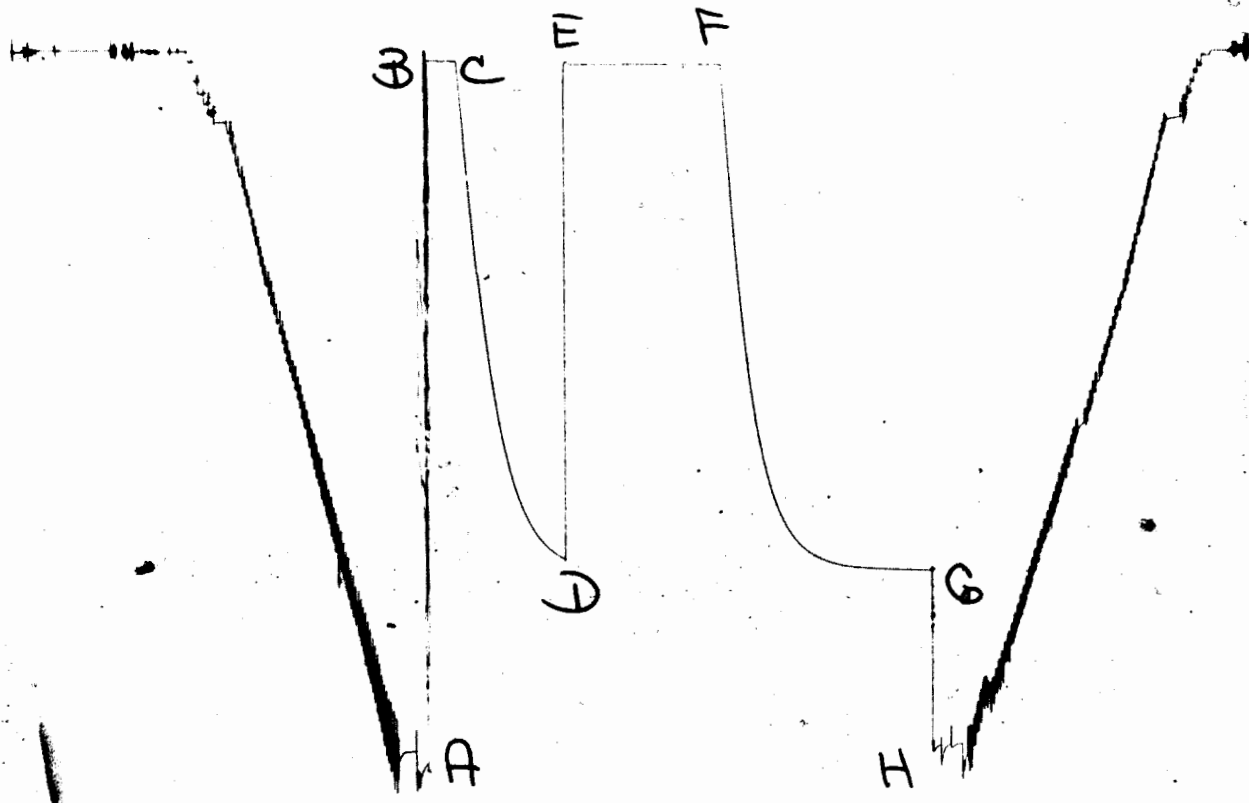
TICKET NO. 65744400

08-SEP-83

PRATT

# FORMATION TESTING SERVICE REPORT

LEASE NAME	L.G.K.	WELL NO.	E-30	TEST NO.	2	TESTED INTERVAL	4814.1 - 4867.1	LEASE OWNER/COMPANY NAME	LUFF EXPLORATION COMPANY
LEGAL LOCATION	30 - 31 - 16 WEST	FIELD AREA		COUNTY	COMANCHE	STATE	KANSAS		PY



657444-1717

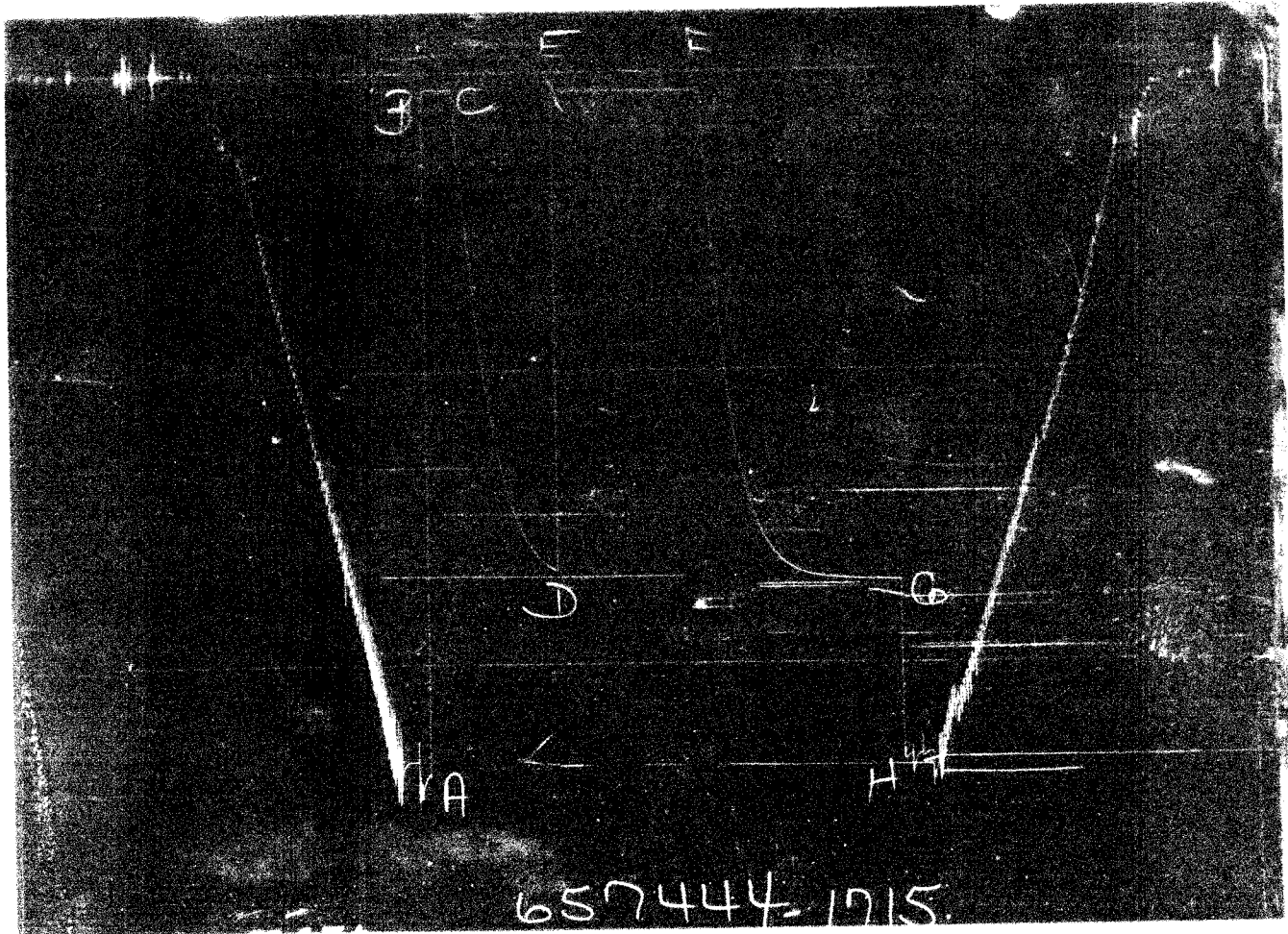
7.10.15T 657444

GAUGE NO: 1717 DEPTH: 4791.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2293.1			
B	INITIAL FIRST FLOW		32.7			
C	FINAL FIRST FLOW		32.7	17.0	17.7	F
C	INITIAL FIRST CLOSED-IN		32.7			
D	FINAL FIRST CLOSED-IN		1657.3	60.0	59.5	C
E	INITIAL SECOND FLOW		43.4			
F	FINAL SECOND FLOW		44.5	90.0	89.8	F
F	INITIAL SECOND CLOSED-IN		44.5			
G	FINAL SECOND CLOSED-IN		1697.8	120.0	117.1	C
H	FINAL HYDROSTATIC		2278.6			

GAUGE NO: 1715 DEPTH: 4864.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2412	2325.3			
B	INITIAL FIRST FLOW	59	56.9	17.0	17.7	F
C	FINAL FIRST FLOW	59	56.9			
C	INITIAL FIRST CLOSED-IN	59	56.9	60.0	59.5	C
D	FINAL FIRST CLOSED-IN	1677	1679.9			
E	INITIAL SECOND FLOW	59	58.5	90.0	89.8	F
F	FINAL SECOND FLOW	59	66.1			
F	INITIAL SECOND CLOSED-IN	59	66.1	120.0	117.1	C
G	FINAL SECOND CLOSED-IN	1703	1721.7			
H	FINAL HYDROSTATIC	2343	2313.2			



Graph for page 11

## EQUIPMENT & HOLE DATA

FORMATION TESTED: MISSISSIPPI  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 53.0  
 ALL DEPTHS MEASURED FROM: KELLY BUSHING  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 7.875  
 ELEVATION (ft): 1903  
 TOTAL DEPTH (ft): 4867.0  
 PACKER DEPTH(S) (ft): 4808, 4814  
 FINAL SURFACE CHOKE (in): 0.250  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 9.10  
 MUD VISCOSITY (sec): 46  
 ESTIMATED HOLE TEMP. (°F): 119  
 ACTUAL HOLE TEMP. (°F):    @    ft

TICKET NUMBER: 65744400  
 DATE: 8-30-83 TEST NO: 2  
 TYPE DST: OPEN HOLE  
 HALLIBURTON CAMP: PRATT  
 TESTER: DON GRAHAM  
 WITNESS: RAY PALMER  
 DRILLING CONTRACTOR: H-30 DRILLING, INC. (RIG #5)

## FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES	
SYSTEM	_____ @ _____ °F	14000	ppm
SAMPLER	0.230 @ 75 °F	15500	ppm
_____	_____ @ _____ °F	_____	ppm
_____	_____ @ _____ °F	_____	ppm
_____	_____ @ _____ °F	_____	ppm
_____	_____ @ _____ °F	_____	ppm

## SAMPLER DATA

Pstg AT SURFACE: 54  
 cu.ft. OF GAS: 0.04  
 cc OF OIL: 0  
 cc OF WATER: 0  
 cc OF MUD: 1850  
 TOTAL LIQUID cc: 1850

## HYDROCARBON PROPERTIES

OIL GRAVITY (°API): \_\_\_\_\_ @ \_\_\_\_\_ °F  
 GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_  
 GAS GRAVITY: \_\_\_\_\_

## CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

## RECOVERED:

90 FEET OF SLIGHTLY GAS CUT MUD  
 (3% GAS - 6% WATER - 91% MUD)

MEASURED FROM TESTER VALVE

## REMARKS:

SAMPLE SOURCE: DCIP SAMPLER  
 SPECIFIC GRAVITY = 1.0175  
 IRON = LIGHT  
 PH = 6+  
 CALCIUM = 1641 MPL  
 MAGNESIUM = 997 MPL  
 SULFATES = HEAVY



TICKET NO: 65744400  
 CLOCK NO: 25710 HOUR: 12



GAUGE NO: 1717  
 DEPTH: 4791.0

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	32.7			
C 2	17.7	32.7	0.0		
FIRST CLOSED-IN					
C 1	0.0	32.7			
2	4.0	298.9	266.2	3.2	0.737
3	8.0	552.1	519.4	5.5	0.509
4	12.0	759.5	726.8	7.2	0.393
5	16.0	948.0	915.3	8.4	0.323
6	20.0	1103.7	1071.1	9.4	0.276
7	24.0	1236.0	1203.3	10.2	0.240
8	28.0	1343.8	1311.1	10.8	0.213
9	32.0	1426.6	1393.9	11.4	0.191
10	36.0	1491.5	1458.8	11.9	0.174
11	40.0	1540.8	1508.1	12.3	0.159
12	44.0	1579.0	1546.3	12.6	0.147
13	48.0	1608.0	1575.4	12.9	0.136
14	52.0	1629.8	1597.1	13.2	0.127
15	56.0	1646.3	1613.6	13.4	0.119
D 16	59.5	1657.3	1624.6	13.6	0.113
SECOND FLOW					
E 1	0.0	43.4			
2	10.0	43.9	0.5		
3	20.0	43.9	0.0		
4	30.0	43.9	0.0		
5	40.0	43.9	0.0		
6	50.0	43.9	0.0		
7	60.0	44.3	0.3		
8	70.0	44.3	0.0		
9	80.0	44.3	0.0		
F 10	89.8	44.5	0.3		
SECOND CLOSED-IN					
F 1	0.0	44.5			
2	8.0	672.1	627.5	7.4	1.161
3	16.0	1100.7	1056.2	13.9	0.888
4	24.0	1359.7	1315.2	19.6	0.738
5	32.0	1505.8	1461.3	24.7	0.639
6	40.0	1589.0	1544.4	29.2	0.567
7	48.0	1634.7	1590.2	33.2	0.511
8	56.0	1660.8	1616.3	36.8	0.466
9	64.0	1675.9	1631.3	40.1	0.428
10	72.0	1684.8	1640.3	43.1	0.397
11	80.0	1689.5	1645.0	45.9	0.370
12	88.0	1692.3	1647.8	48.4	0.347

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
13	96.0	1694.6	1650.1	50.7	0.326
14	104.0	1695.5	1651.0	52.9	0.308
15	112.0	1697.3	1652.8	54.9	0.292
G 16	117.1	1697.8	1653.3	56.1	0.283

REMARKS:

TICKET NO: 65744400

CLOCK NO: 17854 HOUR: 12






















GAUGE NO: 1715

DEPTH: 4864.0

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	56.9			
C 2	17.7	56.9	0.0		
FIRST CLOSED-IN					
C 1	0.0	56.9			
2	4.0	334.7	277.7	3.2	0.739
3	8.0	589.6	532.7	5.5	0.508
4	12.0	802.3	745.3	7.2	0.393
5	16.0	990.1	933.1	8.4	0.324
6	20.0	1144.8	1087.9	9.4	0.275
7	24.0	1269.1	1212.2	10.2	0.240
8	28.0	1369.2	1312.3	10.9	0.213
9	32.0	1450.3	1393.3	11.4	0.191
10	36.0	1514.0	1457.1	11.9	0.174
11	40.0	1562.1	1505.2	12.3	0.159
12	44.0	1599.7	1542.7	12.6	0.147
13	48.0	1629.3	1572.3	12.9	0.136
14	52.0	1652.7	1595.8	13.2	0.127
15	56.0	1670.1	1613.1	13.4	0.119
D 16	59.5	1679.9	1622.9	13.6	0.113
SECOND FLOW					
E 1	0.0	58.5			
2	10.0	63.5	5.0		
3	20.0	63.0	-0.4		
4	30.0	63.6	0.6		
5	40.0	63.6	0.0		
6	50.0	64.3	0.7		
7	60.0	64.6	0.3		
8	70.0	65.1	0.4		
9	80.0	65.3	0.3		
F 10	89.8	66.1	0.8		
SECOND CLOSED-IN					
F 1	0.0	66.1			
2	8.0	732.1	666.1	7.5	1.158
3	16.0	1144.0	1077.9	13.9	0.888
4	24.0	1389.0	1323.0	19.6	0.739
5	32.0	1531.1	1465.1	24.7	0.639
6	40.0	1613.9	1547.8	29.2	0.566
7	48.0	1660.0	1593.9	33.2	0.511
8	56.0	1686.9	1620.8	36.8	0.465
9	64.0	1700.9	1634.9	40.1	0.428
10	72.0	1708.6	1642.5	43.1	0.397
11	80.0	1713.1	1647.0	45.9	0.370
12	88.0	1716.1	1650.1	48.4	0.347

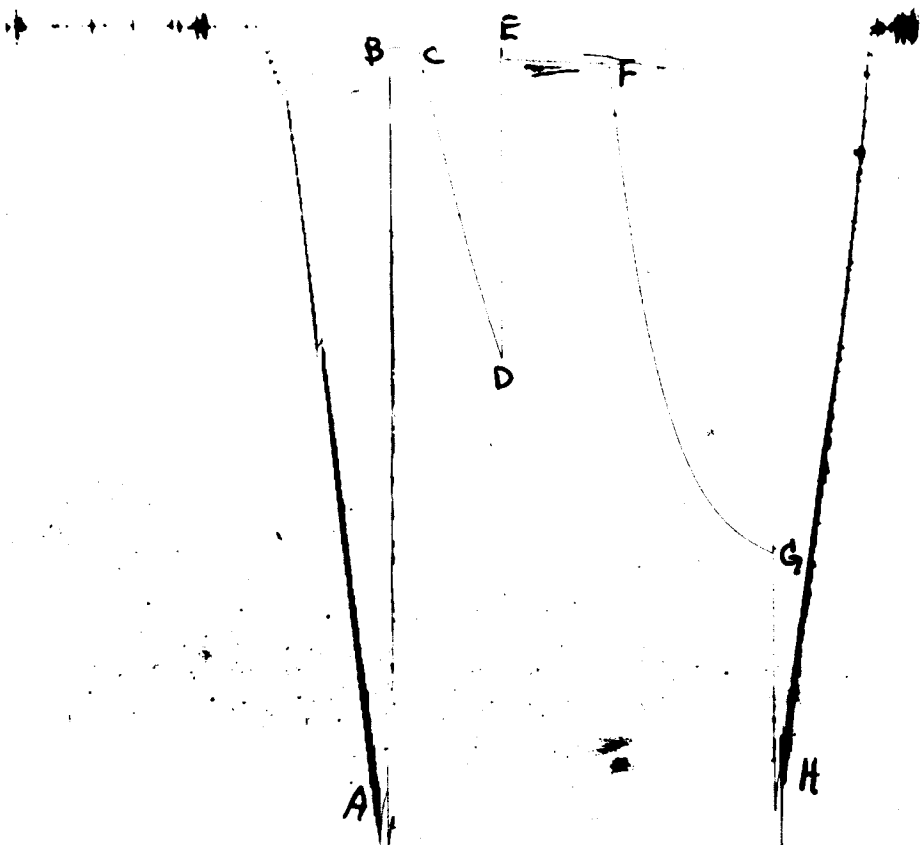
REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
13	96.0	1718.1	1652.0	50.7	0.326
14	104.0	1719.4	1653.3	52.9	0.308
15	112.0	1721.2	1655.1	54.9	0.292
G 16	117.1	1721.7	1655.6	56.1	0.283

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4303.0	
3		DRILL COLLARS.....	6.250	2.250	287.0	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	4588.0
3		DRILL COLLARS.....	6.250	2.250	182.0	
5		CROSSOVER.....	6.000	2.250	1.0	
11		HANDLING SUB & CHOKE ASSEMBLY...	5.870	3.000	5.0	
5		CROSSOVER.....	6.000	2.250	1.0	
13		DUAL CIP SAMPLER.....	5.000	0.750	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	4789.0
80		AP RUNNING CASE.....	5.000	3.060	4.0	4791.0
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	4808.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4814.0
5		CROSSOVER.....	6.000	2.250	1.0	
3		DRILL COLLARS.....	6.250	2.250	29.0	
5		CROSSOVER.....	6.000	2.000	2.0	
20		FLUSH JOINT ANCHOR.....	5.000	3.840	15.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	4864.0
TOTAL DEPTH						4867.0

EQUIPMENT DATA





DST # 3 503 674 503674-1717

GAUGE NO: 1717 DEPTH: 4788.0 BLANKED OFF: NO HOUR OF CLOCK: 24

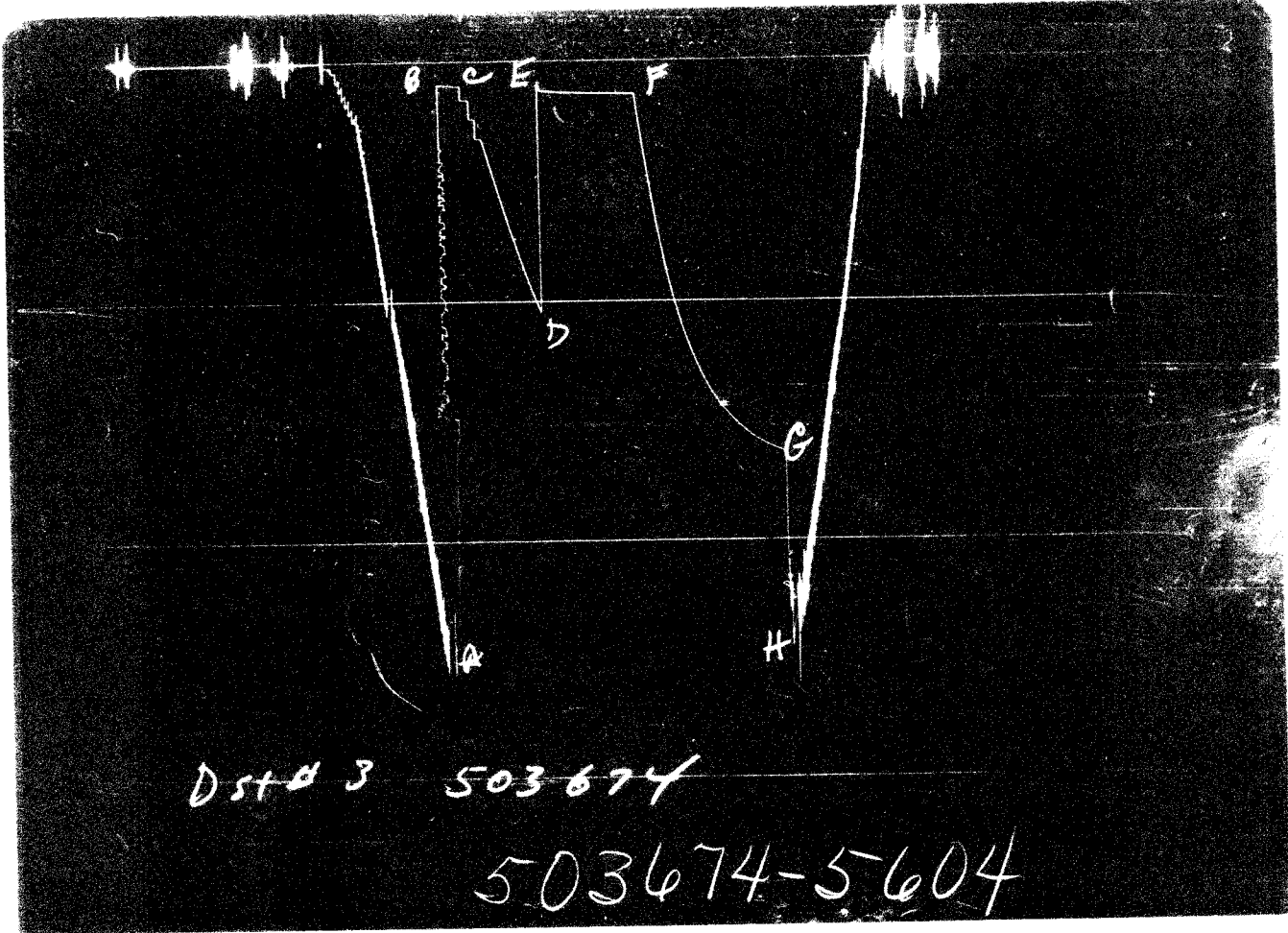
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		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2348.9			
B	INITIAL FIRST FLOW		65.8			
C	FINAL FIRST FLOW		74.2	30.0	31.2	F
C	INITIAL FIRST CLOSED-IN		74.2			
D	FINAL FIRST CLOSED-IN		1012.1	90.0	90.4	C
E	INITIAL SECOND FLOW		65.5			
F	FINAL SECOND FLOW		113.3	120.0	119.6	F
F	INITIAL SECOND CLOSED-IN		113.3			
G	FINAL SECOND CLOSED-IN		1610.3	180.0	178.8	C
H	FINAL HYDROSTATIC		2285.4			
I	HYDROSTATIC RELEASE					

B C E F

Dst # 3 503674

GAUGE NO: 5604 DEPTH: 4862.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2303	2327.7			
B	INITIAL FIRST FLOW	103	93.5			
C	FINAL FIRST FLOW	103	101.1	30.0	31.2	F
C	INITIAL FIRST CLOSED-IN	103	101.1			
D	FINAL FIRST CLOSED-IN	1025	1039.9	90.0	90.4	C
E	INITIAL SECOND FLOW	123	84.9			
F	FINAL SECOND FLOW	144	137.1	120.0	119.6	F
F	INITIAL SECOND CLOSED-IN	144	137.1			
G	FINAL SECOND CLOSED-IN	1621	1630.2	180.0	178.8	C
H	FINAL HYDROSTATIC	2324	2312.2			
I	HYDROSTATIC RELEASE					



Better image of graph on page 20

503674-1715

DST# 3 503674

GAUGE NO: 1715 DEPTH: 4945.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2419.8			
B	INITIAL FIRST FLOW			30.0		F
C	FINAL FIRST FLOW					
C	INITIAL FIRST CLOSED-IN			90.0		C
D	FINAL FIRST CLOSED-IN					
E	INITIAL SECOND FLOW			120.0		F
F	FINAL SECOND FLOW					
F	INITIAL SECOND CLOSED-IN			180.0		C
G	FINAL SECOND CLOSED-IN					
H	FINAL HYDROSTATIC					
I	HYDROSTATIC RELEASE		2302.2			

## EQUIPMENT & HOLE DATA

FORMATION TESTED: MISSISSIPPI  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 55.0  
 ALL DEPTHS MEASURED FROM: KB  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 7.875  
 ELEVATION (ft): 1903  
 TOTAL DEPTH (ft): 4948.0  
 PACKER DEPTH(S) (ft): 4804, 4810, 4865  
 FINAL SURFACE CHOKE (in): 0.250  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 9.50  
 MUD VISCOSITY (sec): 47  
 ESTIMATED HOLE TEMP. (°F): 119  
 ACTUAL HOLE TEMP. (°F):      @      ft

TICKET NUMBER: 50367400  
 DATE: 9-1-83 TEST NO: 3  
 TYPE DST: ON BTM. STRADDLE  
 HALLIBURTON CAMP:  
PRATT  
 TESTER: ROLF  
 WITNESS: PALMER  
 DRILLING CONTRACTOR:  
H-30 RIG #5

### FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES	
<u>PIT</u>	<u>    </u> @ <u>    </u> °F	<u>14000</u> ppm	
<u>SAMPLER</u>	<u>0.230</u> @ <u>85</u> °F	<u>15300</u> ppm	
_____	_____ @ _____ °F	_____ ppm	
_____	_____ @ _____ °F	_____ ppm	
_____	_____ @ _____ °F	_____ ppm	
_____	_____ @ _____ °F	_____ ppm	

### SAMPLER DATA

Pstg AT SURFACE: 78  
 cu.ft. OF GAS: 0.01  
 cc OF OIL: 0  
 cc OF WATER: 0  
 cc OF MUD: 713  
 TOTAL LIQUID cc: 713

### HYDROCARBON PROPERTIES

OIL GRAVITY (°API):      @      °F  
 GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_  
 GAS GRAVITY: \_\_\_\_\_

### CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

### RECOVERED:

217' OF MUD

MEASURED FROM TESTER VALVE

### REMARKS:

GAUGE #5604 IS STAIR-STEPPING. INITIAL HYDROSTATIC IS QUESTIONABLE ON THIS CHART.  
 HYDROSTATIC RELEASE (POINT I ) ON GAUGE #1715 IS READ PRIOR TO CHART TIME EXPIRING. FINAL HYDROSTATIC PRESSURE IS NOT RECORDED.



TICKET NO: 50367400

CLOCK NO: 13239 HOUR: 24



GAUGE NO: 1717

DEPTH: 4788.0

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	65.8		
	2	5.0	65.7	-0.1	
	3	10.0	66.8	1.1	
	4	15.0	68.7	1.9	
	5	20.0	70.9	2.3	
	6	25.0	72.3	1.4	
C	7	31.2	74.2	1.9	
FIRST CLOSED-IN					
C	1	0.0	74.2		
	2	8.0	162.4	88.3	6.3 0.692
	3	16.0	254.6	180.4	10.6 0.470
	4	24.0	345.3	271.1	13.6 0.362
	5	32.0	437.2	363.1	15.8 0.295
	6	40.0	525.8	451.6	17.5 0.250
	7	48.0	614.3	540.2	18.9 0.217
	8	56.0	696.7	622.6	20.0 0.192
	9	64.0	777.3	703.1	21.0 0.172
	10	72.0	846.5	772.4	21.7 0.156
	11	80.0	921.5	847.4	22.4 0.143
	12	88.0	991.4	917.3	23.0 0.132
D	13	90.4	1012.1	937.9	23.2 0.129
SECOND FLOW					
E	1	0.0	65.5		
	2	20.0	101.3	35.7	
	3	40.0	105.3	4.1	
	4	60.0	107.5	2.2	
	5	80.0	110.0	2.4	
	6	100.0	111.5	1.5	
F	7	119.6	113.3	1.8	
SECOND CLOSED-IN					
F	1	0.0	113.3		
	2	10.0	359.3	246.0	9.4 1.207
	3	20.0	573.1	459.8	17.7 0.931
	4	30.0	752.9	639.6	25.0 0.780
	5	40.0	904.2	790.9	31.6 0.678
	6	50.0	1029.0	915.7	37.5 0.604
	7	60.0	1137.2	1024.0	42.9 0.545
	8	70.0	1226.0	1112.8	47.8 0.499
	9	80.0	1301.3	1188.0	52.3 0.460
	10	90.0	1364.5	1251.2	56.4 0.427
	11	100.0	1417.3	1304.1	60.1 0.399
	12	110.0	1458.9	1345.7	63.6 0.375
	13	120.0	1494.2	1381.0	66.8 0.353

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
	14	130.0	1524.1	1410.9	69.8 0.334
	15	140.0	1548.4	1435.1	72.6 0.317
	16	150.0	1568.7	1455.4	75.2 0.302
	17	160.0	1586.4	1473.1	77.6 0.288
	18	170.0	1600.3	1487.0	79.9 0.276
G	19	178.8	1610.3	1497.0	81.8 0.266

REMARKS:

TICKET NO: 50367400

CLOCK NO: 12920 HOUR: 24



GAUGE NO: 5604

DEPTH: 4862.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
<b>FIRST FLOW</b>					
B	1	0.0	93.5		
	2	5.0	94.6	1.0	
	3	10.0	95.3	0.7	
	4	15.0	97.7	2.5	
	5	20.0	98.8	1.0	
	6	25.0	100.8	2.1	
C	7	31.2	101.1	0.3	
<b>FIRST CLOSED-IN</b>					
C	1	0.0	101.1		
<input type="checkbox"/>	2	9.7	160.0	58.8	7.4 0.624
<input type="checkbox"/>	3	16.8	238.7	137.6	10.9 0.455
<input type="checkbox"/>	4	23.6	321.0	219.9	13.4 0.365
	5	24.0	323.7	222.6	13.5 0.362
	6	32.0	420.1	319.0	15.8 0.295
	7	40.0	518.6	417.5	17.5 0.250
	8	48.0	612.1	510.9	18.9 0.217
	9	56.0	702.6	601.4	20.0 0.192
	10	64.0	790.0	688.9	21.0 0.172
	11	72.0	871.5	770.3	21.7 0.156
	12	80.0	950.5	849.4	22.4 0.143
	13	88.0	1020.8	919.7	23.0 0.132
D	14	90.4	1039.9	938.8	23.2 0.129
<b>SECOND FLOW</b>					
E	1	0.0	84.9		
	2	20.0	127.5	42.6	
	3	40.0	130.8	3.3	
	4	60.0	133.4	2.6	
	5	80.0	135.0	1.6	
	6	100.0	136.1	1.1	
F	7	119.6	137.1	0.9	
<b>SECOND CLOSED-IN</b>					
F	1	0.0	137.1		
	2	10.0	378.9	241.8	9.4 1.207
	3	20.0	589.7	452.6	17.6 0.932
	4	30.0	777.3	640.2	25.0 0.780
	5	40.0	934.8	797.7	31.6 0.678
	6	50.0	1057.5	920.4	37.6 0.604
	7	60.0	1159.8	1022.7	42.9 0.546
	8	70.0	1248.2	1111.1	47.8 0.499
	9	80.0	1322.4	1185.3	52.3 0.460
	10	90.0	1383.9	1246.8	56.4 0.427
	11	100.0	1433.1	1296.0	60.1 0.399



























REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
<b>SECOND CLOSED-IN - CONTINUED</b>					
	12	110.0	1473.7	1336.7	63.6 0.375
	13	120.0	1508.7	1371.6	66.8 0.353
	14	130.0	1540.5	1403.4	69.8 0.334
	15	140.0	1566.7	1429.7	72.6 0.317
	16	150.0	1587.8	1450.7	75.2 0.302
	17	160.0	1605.0	1467.9	77.6 0.288
	18	170.0	1620.0	1483.0	79.9 0.276
G	19	178.8	1630.2	1493.1	81.8 0.266

**LEGEND:**

STAIR-STEP


**REMARKS:**

INITIAL HYDROSTATIC PRESSURE READING IS QUESTIONABLE.

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4443.0	
3		DRILL COLLARS.....	6.250	2.250	90.0	
50		IMPACT REVERSING SUB.....	5.750	2.750	1.0	4533.0
3		DRILL COLLARS.....	6.250	2.750	240.0	
5		CROSSOVER.....	5.750	2.750	1.0	
13		DUAL CIP SAMPLER.....	5.000	0.750	7.0	
60		HYDROSPRING TESTER.....	5.000	0.870	5.0	4786.0
80		AP RUNNING CASE.....	5.000	3.060	4.0	4788.0
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	3.0	
5		CROSSOVER.....	5.750	2.750	1.0	
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4804.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4810.0
20		FLUSH JOINT ANCHOR.....	5.000	3.840	10.0	
5		CROSSOVER.....	5.750	2.750	1.0	
5		CROSSOVER.....	5.750	2.750	1.0	
3		DRILL COLLARS.....	6.250	2.250	31.0	
5		CROSSOVER.....	5.750	2.750	1.0	
5		CROSSOVER.....	5.750	2.750	1.0	
5		CROSSOVER.....	5.750	2.750	1.0	
5		CROSSOVER.....	5.750	2.750	1.0	
80		AP RUNNING CASE.....	5.000	3.060	4.0	4862.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	4865.0
5		CROSSOVER.....	5.750	2.750	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	3.840	5.0	
5		CROSSOVER.....	5.750	2.750	1.0	
3		DRILL COLLARS.....	6.250	2.250	62.0	
5		CROSSOVER.....	5.750	2.750	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.440	5.0	

CONTINUED

EQUIPMENT DATA

	O.D.	I.D.	LENGTH	DEPTH
81  BLANKED-OFF RUNNING CASE.....	5.000		4.0	4945.0
TOTAL DEPTH				4948.0

EQUIPMENT DATA