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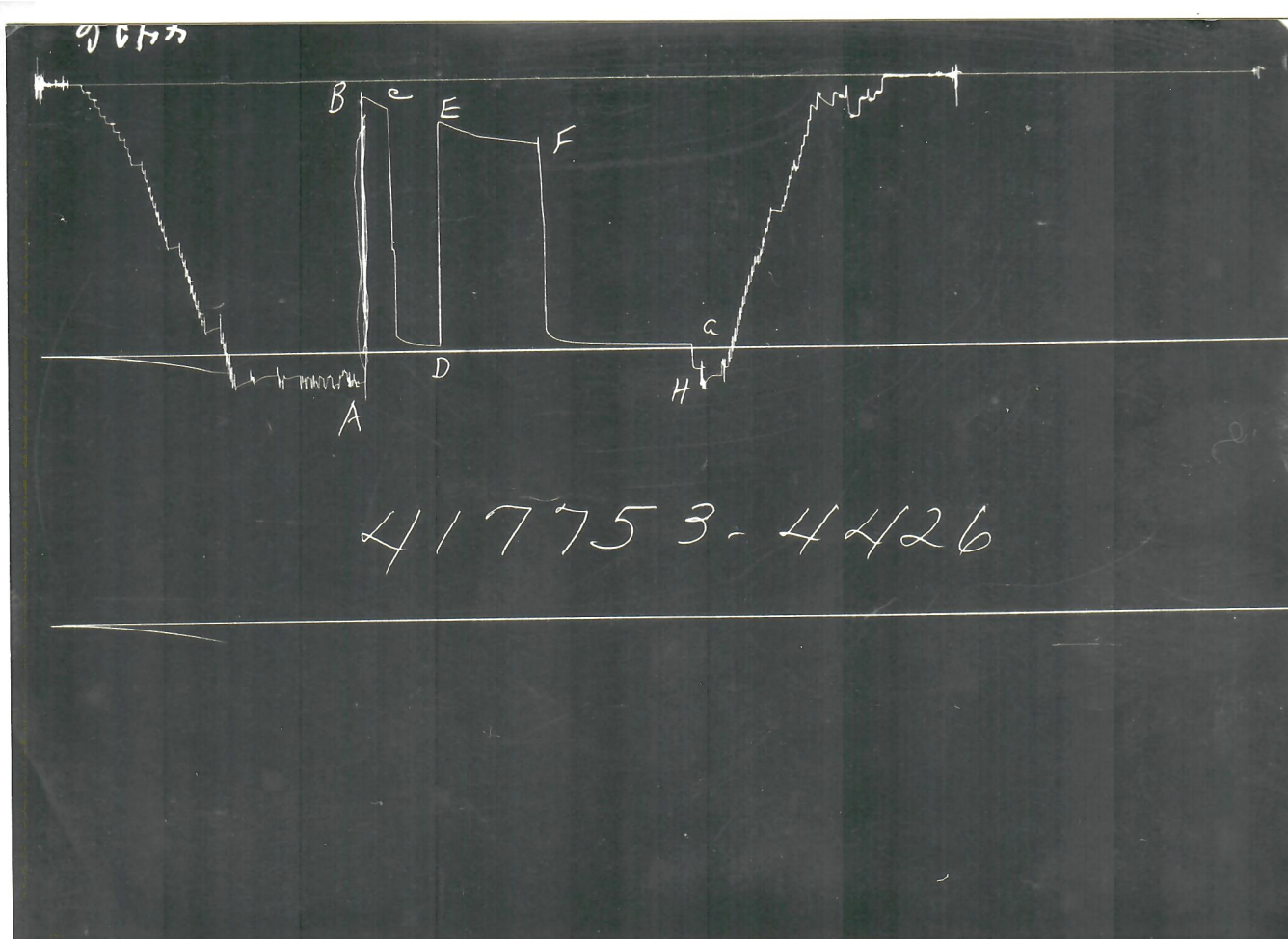


TICKET NO. 41775300
10-SEP-86
VERNAL



FORMATION TESTING SERVICE REPORT

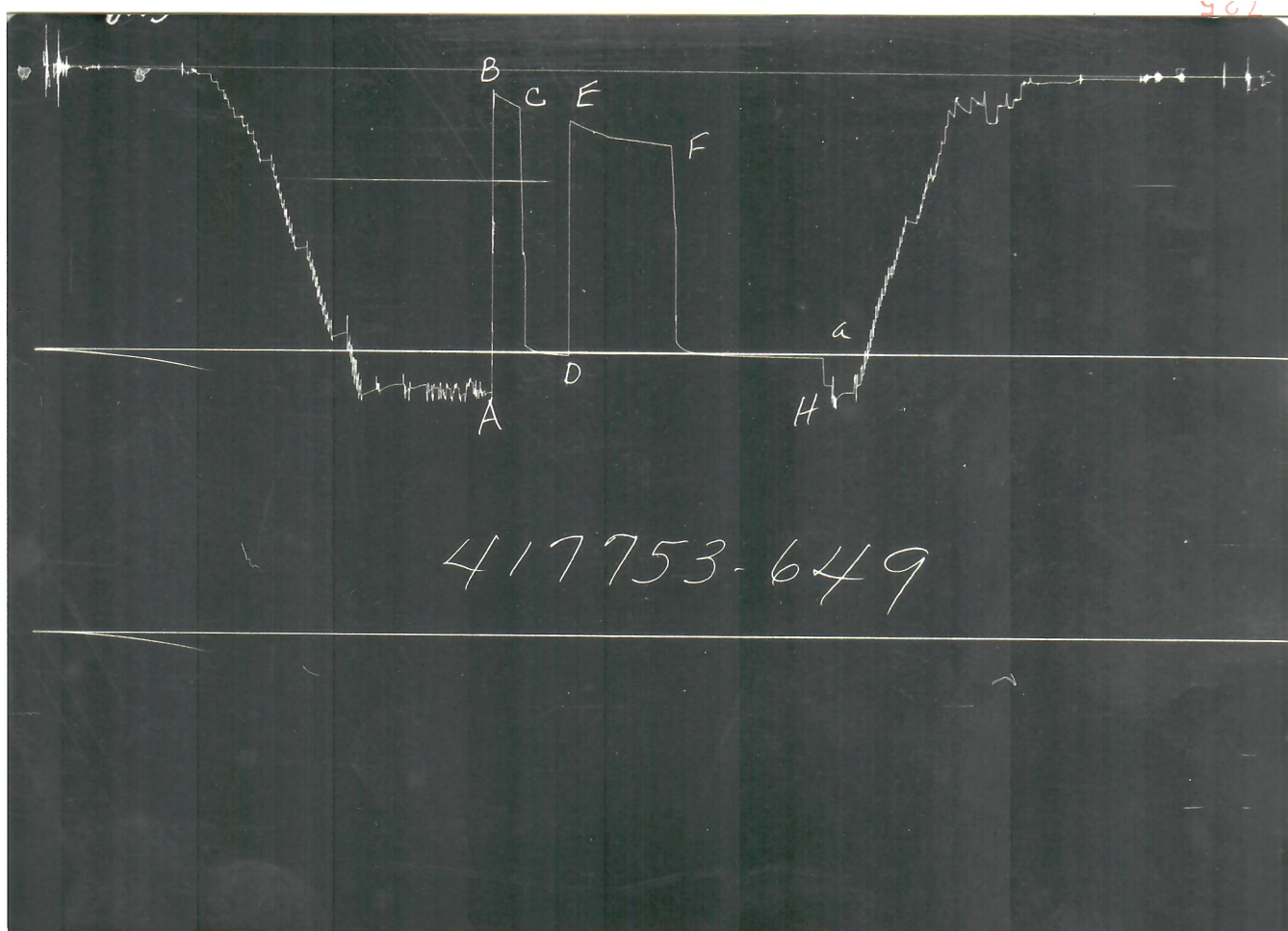
LEASE NAME	STEHLER	WELL NO.	17-22	TEST NO.	3	TESTED INTERVAL	2264.6 - 2301.0	LEASE OWNER/COMPANY NAME	B.W.A.B. INCORPORATED
LEGAL LOCATION SEC. - TWP. - RNG.	17 7N 90W	FIELD AREA	CRAIG	COUNTY	MOFFAT	STATE	COLORADO		SM



GAUGE NO: 4426 DEPTH: 2243.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1115	1116.0			
B	INITIAL FIRST FLOW	56	64.7			
C	FINAL FIRST FLOW	97	103.3	16.0	15.8	F
C	INITIAL FIRST CLOSED-IN	97	103.3			
D	FINAL FIRST CLOSED-IN	984	986.3	30.0	30.3	C
E	INITIAL SECOND FLOW	149	159.0			
F	FINAL SECOND FLOW	228	239.5	61.0	60.8	F
F	INITIAL SECOND CLOSED-IN	228	239.5			
G	FINAL SECOND CLOSED-IN	984	990.4	90.0	92.0	C
H	FINAL HYDROSTATIC	1077	1107.3			
I	HYDROSTATIC RELEASE					

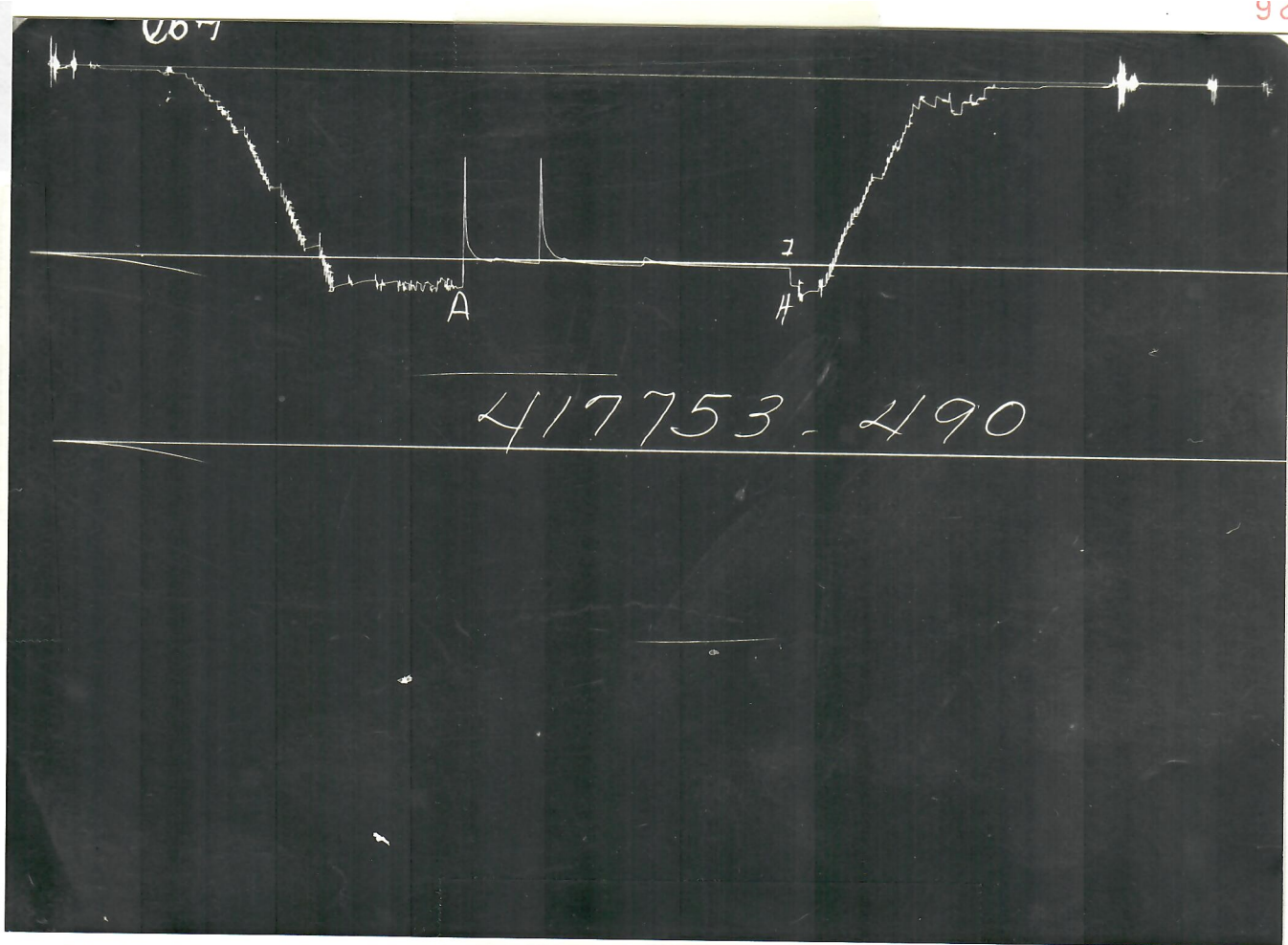
BEST IMAGE
AVAILABLE



GAUGE NO: 649 DEPTH: 2296.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1152	1142.4			
B	INITIAL FIRST FLOW	71	85.2	16.0	15.8	F
C	FINAL FIRST FLOW	124	133.1			
C	INITIAL FIRST CLOSED-IN	124	133.1	30.0	30.3	C
D	FINAL FIRST CLOSED-IN	1010	1011.0			
E	INITIAL SECOND FLOW	177	178.2	61.0	60.8	F
F	FINAL SECOND FLOW	266	264.8			
F	INITIAL SECOND CLOSED-IN	266	264.8	90.0	92.0	C
G	FINAL SECOND CLOSED-IN	1010	1012.2			
H	FINAL HYDROSTATIC	1116	1132.3			
I	HYDROSTATIC RELEASE					

BEST IMAGE
AVAILABLE



GAUGE NO: 490 DEPTH: 2312.3 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1013	1153.5			
B	INITIAL FIRST FLOW			16.0		F
C	FINAL FIRST FLOW					
C	INITIAL FIRST CLOSED-IN			30.0		C
D	FINAL FIRST CLOSED-IN					
E	INITIAL SECOND FLOW			61.0		F
F	FINAL SECOND FLOW					
F	INITIAL SECOND CLOSED-IN			90.0		C
G	FINAL SECOND CLOSED-IN					
H	FINAL HYDROSTATIC	1013	1139.7			
I	HYDROSTATIC RELEASE	1013	1019.8			

BEST IMAGE
AVAILABLE

EQUIPMENT & HOLE DATA

FORMATION TESTED: LANCE
NET PAY (ft): _____
GROSS TESTED FOOTAGE: 36.4
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft): _____
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 6384.0 GROUND LEVEL
TOTAL DEPTH (ft): 3289.0
PACKER DEPTH(S) (ft): 2259, 2265, 2301
FINAL SURFACE CHOKE (in): _____
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 50
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 94 @ 2311.0 ft

TICKET NUMBER: 41775300

DATE: 9-6-86 TEST NO: 3

TYPE DST: OFF BTM STRADDLE

HALLIBURTON CAMP: VERNAL

TESTER: EROS ROY AROCHO

WITNESS: GENE NICE

DRILLING CONTRACTOR: OLSEN DRILLING

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	<u>1.200 @ 68 °F</u>	<u>3200</u> ppm
TOP FLUID	<u>1.300 @ 68 °F</u>	<u>2900</u> ppm
MIDDLE FLUID	<u>1.250 @ 68 °F</u>	<u>2850</u> ppm
SAMPLE CHAMBER	<u>1.350 @ 68 °F</u>	<u>3750</u> ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm

SAMPLER DATA

Pstg AT SURFACE: 18.0
cu.ft. OF GAS: 0.219
cc OF OIL: _____
cc OF WATER: 2050.0
cc OF MUD: _____
TOTAL LIQUID cc: 2050.0

HYDROCARBON PROPERTIES

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

CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

RECOVERED:

490 FEET OF MUD OF WHICH 60' WAS GOOD MUD; THEN
BEGAN GETTING WATER CUT

.....
SAMPLE CHAMBER WAS MUD CUT WATER

MEASURED FROM
TESTER VALVE

REMARKS:

CHARTS INDICATE POSSIBLE MOMENTARY COMMUNICATION AT THE BEGINNING OF EACH
CLOSED-IN PERIOD. THE REMAINDER OF THE CLOSED-IN BUILDUPS APPEAR TO BE
UNAFFECTED BY COMMUNICATION.

TICKET NO: 41775300

CLOCK NO: 4203 HOUR: 12



GAUGE NO: 4426

DEPTH: 2243.0

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	64.7			
2	2.0	60.7	-4.0		
3	4.0	66.9	6.2		
4	6.0	73.7	6.8		
5	8.0	81.3	7.6		
6	10.0	87.2	5.9		
7	12.0	93.3	6.0		
8	14.0	98.6	5.3		
C 9	15.8	103.3	4.7		

FIRST CLOSED-IN					
C 1	0.0	103.3			
2	1.0	284.9	181.7	0.9	1.232
3	2.0	620.5	517.2	1.8	0.944
4	3.0	624.2	520.9	2.5	0.795
5	4.0	950.2	846.9	3.2	0.697
6	5.0	956.2	852.9	3.8	0.619
7	6.0	960.6	857.3	4.3	0.562
8	7.0	964.4	861.1	4.8	0.515
9	8.0	967.2	863.9	5.3	0.475
10	9.0	970.0	866.7	5.8	0.440
11	10.0	972.0	868.7	6.1	0.412
12	12.0	975.4	872.1	6.8	0.365
13	14.0	978.5	875.2	7.4	0.328
14	16.0	980.5	877.2	8.0	0.299
15	18.0	981.5	878.2	8.4	0.274
16	20.0	982.9	879.6	8.8	0.253
17	22.0	984.0	880.7	9.2	0.235
18	24.0	984.7	881.5	9.5	0.220
19	26.0	985.3	882.0	9.8	0.206
20	28.0	986.1	882.8	10.1	0.194
D 21	30.3	986.3	883.0	10.4	0.182

SECOND FLOW					
E 1	0.0	159.0			
2	3.0	159.3	0.4		
3	6.0	167.4	8.1		
4	9.0	175.9	8.5		
5	12.0	183.3	7.3		
6	15.0	190.3	7.1		
7	18.0	195.6	5.3		
8	21.0	202.8	7.1		
9	24.0	208.4	5.7		
10	27.0	212.1	3.7		
11	30.0	214.4	2.2		
12	33.0	216.8	2.4		
13	36.0	219.2	2.4		
14	39.0	221.9	2.7		

SECOND FLOW - CONTINUED					
15	42.0	224.8	3.0		
16	45.0	226.9	2.0		
17	48.0	229.1	2.2		
18	51.0	231.2	2.0		
19	54.0	233.8	2.7		
20	57.0	236.3	2.5		
F 21	60.8	239.5	3.2		

SECOND CLOSED-IN					
F 1	0.0	239.5			
2	1.0	339.0	99.5	1.0	1.888
3	2.0	487.1	247.6	2.0	1.590
4	3.0	887.7	648.2	2.9	1.420
5	4.0	939.4	699.9	3.8	1.305
6	5.0	947.5	708.0	4.7	1.214
7	6.0	954.7	715.2	5.5	1.141
8	7.0	959.5	720.0	6.4	1.078
9	8.0	963.0	723.5	7.2	1.027
10	9.0	966.4	726.9	8.1	0.978
11	10.0	968.7	729.2	8.9	0.937
12	12.0	972.4	732.9	10.4	0.868
13	14.0	974.6	735.1	11.8	0.812
14	16.0	976.8	737.3	13.3	0.762
15	18.0	978.0	738.5	14.6	0.721
16	20.0	979.3	739.8	15.8	0.685
17	22.0	980.6	741.1	17.1	0.652
18	24.0	981.5	742.0	18.3	0.622
19	26.0	982.1	742.6	19.4	0.596
20	28.0	982.6	743.1	20.5	0.573
21	30.0	983.3	743.7	21.6	0.551
22	35.0	984.7	745.2	24.0	0.504
23	40.0	985.8	746.3	26.3	0.465
24	45.0	986.3	746.8	28.4	0.432
25	50.0	986.3	746.8	30.3	0.404
26	55.0	987.5	748.0	32.0	0.379
27	60.0	987.9	748.4	33.6	0.358
28	70.0	989.0	749.5	36.6	0.321
29	80.0	990.0	750.5	39.1	0.292
30	90.0	990.9	751.4	41.4	0.267
G 31	92.0	990.4	750.9	41.8	0.263

REMARKS:

TICKET NO: 41775300

CLOCK NO: 3806 HOUR: 12



GAUGE NO: 649




















DEPTH: 2296.0

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	85.2			
2	2.0	88.9	3.6		
3	4.0	96.8	8.0		
4	6.0	103.8	6.9		
5	8.0	110.8	7.0		
6	10.0	117.1	6.4		
7	12.0	122.6	5.5		
8	14.0	128.1	5.5		
C 9	15.8	133.1	5.0		
FIRST CLOSED-IN					
C 1	0.0	133.1			
2	1.0	338.5	205.4	1.0	1.208
3	2.0	513.7	380.6	1.8	0.950
4	3.0	645.6	512.5	2.6	0.792
5	4.0	689.0	555.9	3.2	0.696
6	5.0	980.1	847.0	3.8	0.622
7	6.0	985.2	852.1	4.3	0.563
8	7.0	988.6	855.5	4.8	0.515
9	8.0	991.9	858.8	5.3	0.475
10	9.0	994.2	861.1	5.7	0.441
11	10.0	996.7	863.6	6.1	0.413
12	12.0	1000.2	867.1	6.8	0.365
13	14.0	1002.5	869.4	7.4	0.329
14	16.0	1004.7	871.6	7.9	0.299
15	18.0	1006.0	872.9	8.4	0.274
16	20.0	1007.1	874.0	8.8	0.254
17	22.0	1008.0	874.9	9.2	0.235
18	24.0	1009.1	876.0	9.5	0.220
19	26.0	1009.8	876.7	9.8	0.207
20	28.0	1010.5	877.4	10.1	0.194
D 21	30.3	1011.0	877.9	10.4	0.182
SECOND FLOW					
E 1	0.0	178.2			
2	3.0	188.5	10.3		
3	6.0	197.0	8.5		
4	9.0	205.0	8.0		
5	12.0	211.8	6.8		
6	15.0	218.6	6.8		
7	18.0	223.2	4.5		
8	21.0	229.2	6.0		
9	24.0	235.6	6.4		
10	27.0	238.8	3.3		
11	30.0	241.2	2.3		
12	33.0	243.5	2.3		
13	36.0	246.0	2.6		
14	39.0	248.7	2.7		

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND FLOW - CONTINUED					
15	42.0	251.4	2.7		
16	45.0	253.4	2.0		
17	48.0	255.3	2.0		
18	51.0	257.5	2.1		
19	54.0	260.0	2.6		
20	57.0	262.0	2.0		
F 21	60.8	264.8	2.8		
SECOND CLOSED-IN					
F 1	0.0	264.8			
2	1.0	357.7	92.8	1.0	1.871
3	2.0	495.6	230.7	2.0	1.585
4	3.0	552.1	287.2	2.9	1.428
5	4.0	957.8	693.0	3.8	1.300
6	5.0	968.2	703.4	4.7	1.214
7	6.0	974.7	709.9	5.6	1.137
8	7.0	980.2	715.4	6.4	1.075
9	8.0	983.6	718.8	7.2	1.026
10	9.0	987.4	722.6	8.1	0.978
11	10.0	989.8	725.0	8.9	0.938
12	12.0	994.2	729.4	10.4	0.869
13	14.0	996.3	731.5	11.9	0.810
14	16.0	998.2	733.4	13.2	0.764
15	18.0	999.9	735.1	14.6	0.721
16	20.0	1001.1	736.3	15.8	0.685
17	22.0	1002.5	737.7	17.1	0.652
18	24.0	1003.2	738.3	18.3	0.622
19	26.0	1003.8	739.0	19.4	0.596
20	28.0	1004.6	739.8	20.5	0.573
21	30.0	1005.2	740.4	21.6	0.551
22	35.0	1006.2	741.4	24.0	0.504
23	40.0	1007.2	742.4	26.3	0.465
24	45.0	1008.5	743.7	28.3	0.432
25	50.0	1008.8	744.0	30.3	0.404
26	55.0	1009.6	744.7	32.0	0.379
27	60.0	1010.0	745.2	33.7	0.357
28	70.0	1010.9	746.1	36.6	0.321
29	80.0	1011.6	746.8	39.1	0.292
30	90.0	1012.2	747.4	41.4	0.268
G 31	92.0	1012.2	747.4	41.8	0.263

REMARKS:

TICKET NO. 41775300

		O.D.	I.D.	LENGTH	DEPTH
1					
	DRILL PIPE.....	4.000	3.340	1807.2	
3					
	DRILL COLLARS.....	6.000	2.250	362.9	
152					
	PUMPOUT & IMPACT REVERSING SUB..	6.000	3.000	1.0	2169.0
3					
	DRILL COLLARS.....	6.000	2.250	58.9	
5					
	CROSSOVER.....	5.750	3.000	0.6	
13					
	DUAL CIP SAMPLER.....	5.000	0.750	7.0	
60					
	HYDROSPRING TESTER.....	5.000	0.750	5.0	2240.9
80					
	AP RUNNING CASE.....	5.000	2.250	4.1	2243.0
15					
	JAR.....	5.000	1.750	5.0	
16					
	VR SAFETY JOINT.....	5.000	1.000	2.8	
17					
	PRESSURE EQUALIZING CROSSOVER...	5.000	1.000	1.0	
70					
	OPEN HOLE PACKER.....	7.000	1.530	5.8	2258.8
70					
	OPEN HOLE PACKER.....	7.000	1.530	5.8	2264.6
20					
	FLUSH JOINT ANCHOR.....	5.750	3.500	26.9	
17					
	PRESSURE EQUALIZING CROSSOVER...	5.000	1.000	1.6	
81					
	BLANKED-OFF RUNNING CASE.....	5.000		4.1	2296.0
70					
	OPEN HOLE PACKER.....	7.000	1.530	7.4	2301.0
90					
	SIDE WALL ANCHOR.....	6.750	1.620	4.8	2307.4
81					
	BLANKED-OFF RUNNING CASE.....	5.000		4.1	2312.3
TOTAL DEPTH					3289.0

EQUIPMENT DATA