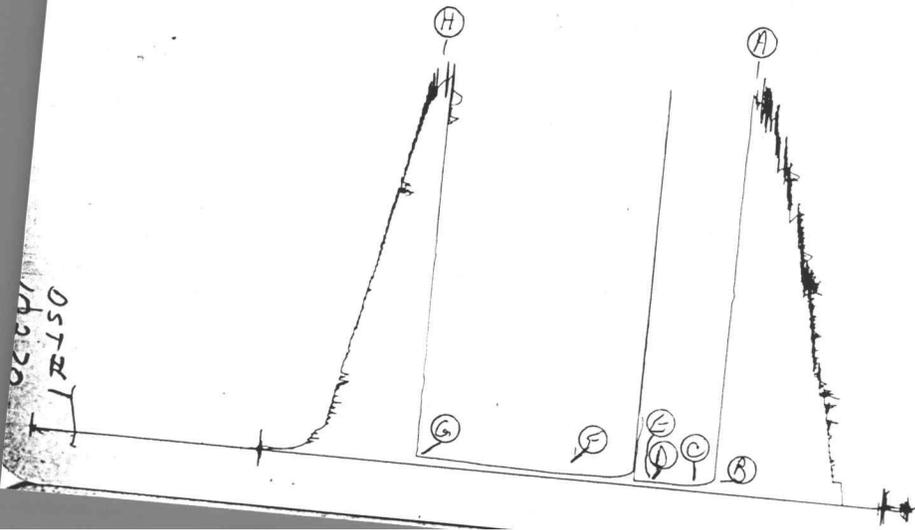


TK 11019

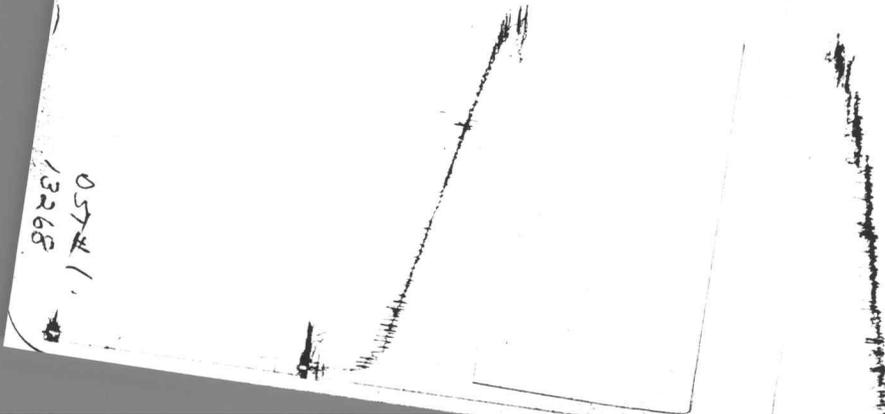
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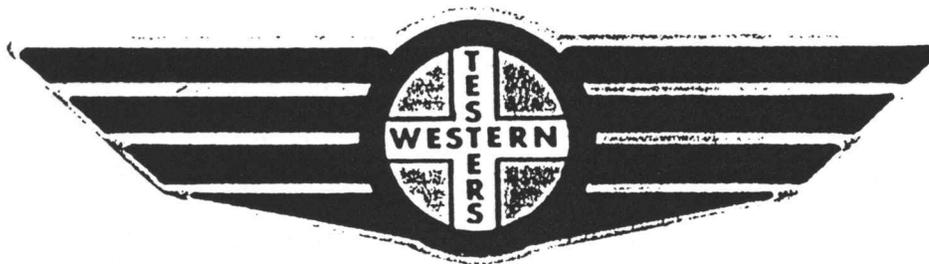
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# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 6-28-87  
CUSTOMER : NCRA  
WELL : #3 TEST: 1  
ELEVATION : 2310 KB  
SECTION : 20  
RANGE : 21W COUNTY : NESS  
GAUGE SN# : 10270 RANGE : 4150  
TICKET : 11019  
LEASE : PFAFF  
GEOLOGIST : E. BAKER  
FORMATION : CHEROKEE SD  
TOWNSHIP : 16S  
STATE : KANSAS  
CLOCK : 12

INTERVAL FROM : 4184 TO : 4205 TOTAL DEPTH : 4205  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 4179 SIZE : 6.63  
PACKER DEPTH : 4184 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : RAINS & WILLIAMSON RIG #2  
MUD TYPE : CHEMCIAL VISCOSITY : 50  
WEIGHT : 9.2 WATER LOSS (CC) : 9.6  
CHLORIDES (PPM) : 8000  
JARS-MAKE : WTC SERIAL NUMBER : 421  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 240 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3914 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 30 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 21 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : VERY WEAK BLOW THROUGHOUT THE INITIAL FLOW.  
BLOW COMMENT #2 : NO BLOW ON THE FINAL FLOW-FLUSHED TOOL.  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :

RECOVERED : 5 FT OF: MUD

Total Barrels Fluid = 0.02  
Total Fluid Prod Rate = 0.45 BFPD  
Indicated Wtr Rate = 0.05 BWPD

REMARK 1 : FLUSHED TOOL FINAL FLOW  
REMARK 2 : TIGHT HOLE !  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) : 12:20 AM

TIME STARTED OFF BOTTOM : 4:00 AM

WELL TEMPERATURE : 117

INITIAL HYDROSTATIC PRESSURE

(A) 2159

INITIAL FLOW PERIOD MIN: 15

(B) 20 PSI TO (C) : 20

INITIAL CLOSED IN PERIOD MIN: 30

(D) 20

FINAL FLOW PERIOD MIN: 60

(E) 20 PSI TO (F) : 21

FINAL CLOSED IN PERIOD MIN: 120

(G) 34

FINAL HYDROSTATIC PRESSURE

(H) 2124

FLUID SAMPLE REPORT

Date : 6-28-87

Ticket No. : 11019

Company : NCRA

Well Name & No. : PFAFF #3

DST No. 1

County : NESS

State : KANSAS

Sampler No. : 2

Test Interval : 4184-4205

=====

Pressure in Sampler 30 PSIG BHT 117 Deg F

Total Volume of Sampler : 3150 cc  
 Total Volume of Sample : 30 cc  
     Oil: - cc  
     Water: - cc  
     Mud: 30 cc  
     Gas: - cu ft  
     Other: - cc

=====

RESITIVITY

RECOVERY .29 @ 70 F Chloride Content 9000 ppm

Mud Pit Sample .28 @ 70 F Chloride Content 8000 ppm

Gas/Oil Ratio Gravity API @ Deg F

Where was sample drained RIG

Remarks:

WESTERN TESTING CO. INC.  
WICHITA - KANSAS

Pressure Transient Report  
-----

COMPANY : NCRA  
RIG : NESS-KANSAS  
FIELD : PFAFF  
WELL : #3  
DATE : 6-28-87  
GAUGE NO : 10270

OPERATIONAL COMMENTS

FLUSHED TOOL FINAL FLOW.  
TIGHT HOLE !

COMPANY : NCRA  
 WELL : #3  
 GAUGE # : 10270  
 DATE : 28/ 6/87

FIELD : PFAFF  
 JOB # : 11019  
 DEPTH : 4205  
 TEST : FLUSHED TOOL FINAL FLOW.

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	12:20: 0	0.000	20.000	117.00	0.000
2	12:24:59	0.083	20.000	117.00	0.000
3	12:30: 0	0.167	20.000	117.00	0.000
4	12:35: 0	0.250	20.000	117.00	0.000
5	12:38: 0	0.300	20.000	117.00	0.000
6	12:41: 0	0.350	20.000	117.00	0.000
7	12:44: 0	0.400	20.000	117.00	0.000
8	12:47: 0	0.450	20.000	117.00	0.000
9	12:50: 0	0.500	20.000	117.00	0.000
10	12:53: 0	0.550	20.000	117.00	0.000
11	12:56: 0	0.600	20.000	117.00	0.000
12	12:59: 0	0.650	20.000	117.00	0.000
13	13: 2: 0	0.700	20.000	117.00	0.000
14	13: 5: 0	0.750	20.000	117.00	0.000
15	13: 6: 0	0.767	20.000	117.00	0.000
16	13: 9:59	0.833	20.000	117.00	0.000
17	13:15: 0	0.917	20.000	117.00	0.000
18	13:20: 0	1.000	20.000	117.00	0.000
19	13:24:59	1.083	47.000	117.00	27.000
20	13:30: 0	1.167	37.000	117.00	-10.000
21	13:35: 0	1.250	27.000	117.00	-10.000
22	13:39:59	1.333	24.000	117.00	-3.000
23	13:45: 0	1.417	24.000	117.00	0.000
24	13:50: 0	1.500	24.000	117.00	0.000
25	13:54:59	1.583	23.000	117.00	-1.000
26	14: 0: 0	1.667	22.000	117.00	-1.000
27	14: 5: 0	1.750	21.000	117.00	-1.000
28	14: 8: 0	1.800	21.000	117.00	0.000
29	14:11: 0	1.850	21.000	117.00	0.000
30	14:14: 0	1.900	21.000	117.00	0.000
31	14:17: 0	1.950	21.000	117.00	0.000
32	14:20: 0	2.000	21.000	117.00	0.000
33	14:23: 0	2.050	21.000	117.00	0.000
34	14:26: 0	2.100	21.000	117.00	0.000
35	14:29: 0	2.150	21.000	117.00	0.000
36	14:32: 0	2.200	21.000	117.00	0.000
37	14:35: 0	2.250	21.000	117.00	0.000
38	14:38: 0	2.300	21.000	117.00	0.000
39	14:41: 0	2.350	21.000	117.00	0.000
40	14:44: 0	2.400	21.000	117.00	0.000
41	14:47: 0	2.450	21.000	117.00	0.000
42	14:50: 0	2.500	21.000	117.00	0.000
43	14:53: 0	2.550	22.000	117.00	1.000
44	14:56: 0	2.600	23.000	117.00	1.000
45	14:59: 0	2.650	24.000	117.00	1.000
46	15: 2: 0	2.700	24.000	117.00	0.000
47	15: 5: 0	2.750	24.000	117.00	0.000
48	15: 8: 0	2.800	25.000	117.00	1.000
49	15:11: 0	2.850	25.000	117.00	0.000
50	15:14: 0	2.900	25.000	117.00	0.000
51	15:17: 0	2.950	26.000	117.00	1.000
52	15:20: 0	3.000	26.000	117.00	0.000

COMPANY : NCRA  
WELL • : #3  
GAUGE # : 10270  
DATE : 28/ 6/87

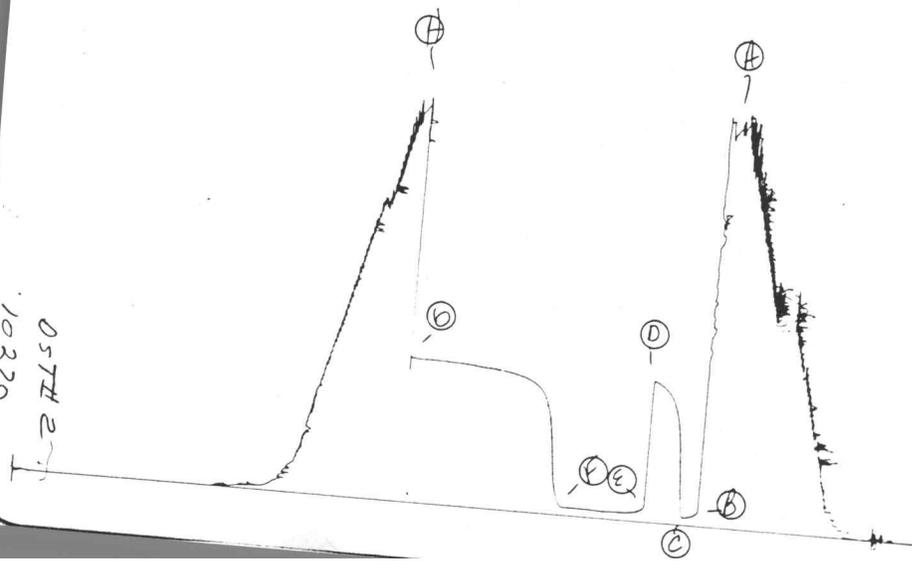
FIELD : PFAFF  
JOB # : 11019  
DEPTH : 4205  
TEST : FLUSHED TOOL FINAL FLOW.

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	15:23: 0	3.050	27.000	117.00	1.000
54	15:26: 0	3.100	27.000	117.00	0.000
55	15:29: 0	3.150	28.000	117.00	1.000
56	15:32: 0	3.200	28.000	117.00	0.000
57	15:35: 0	3.250	29.000	117.00	1.000
58	15:38: 0	3.300	29.000	117.00	0.000
59	15:41: 0	3.350	30.000	117.00	1.000
60	15:44: 0	3.400	31.000	117.00	1.000
61	15:47: 0	3.450	32.000	117.00	1.000
62	15:50: 0	3.500	33.000	117.00	1.000
63	15:53: 0	3.550	34.000	117.00	1.000
64	15:56: 0	3.600	34.000	117.00	0.000
65	15:59: 0	3.650	34.000	117.00	0.000
66	16: 2: 0	3.700	34.000	117.00	0.000
67	16: 5: 0	3.750	34.000	117.00	0.000

WESTERN TESTING CO. INC.

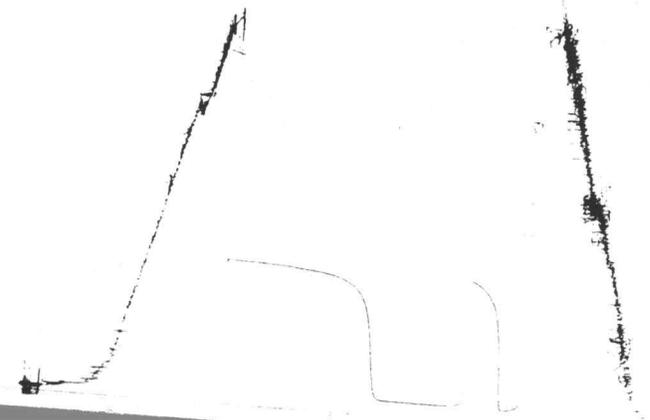
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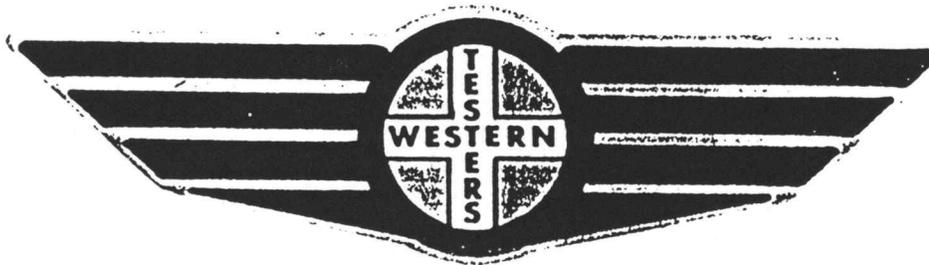


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OST# 2  
13268



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 062987 TICKET : 11020  
CUSTOMER : NATIONAL COOPERATIVE REFINERY ASSOC.  
WELL : #3 TEST: 2 LEASE : PFAFF  
ELEVATION : 2810 GEOLOGIST : E. BAKER  
SECTION : 20 FORMATION : CHEROKEE SAND  
RANGE : COUNTY : NESS TOWNSHIP :  
GAUGE SN# : 10270 RANGE : 4150 STATE : KANSAS  
CLOCK : 12

INTERVAL FROM : 4230 TO : 4255 TOTAL DEPTH : 4255  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 4225 SIZE : 6.63  
PACKER DEPTH : 4230 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : R & W #2  
MUD TYPE : CHEMICAL VISCOSITY : 48  
WEIGHT : 9.3 WATER LOSS (CC) : 14.4  
CHLORIDES (PPM) : 8000  
JARS-MAKE : WTC SERIAL NUMBER : 421  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 240 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3961 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 30 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 25 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5XH

BLOW COMMENT #1 : VERY WEAK BLOW THROUGHOUT INITIAL  
BLOW COMMENT #2 : FLOW PERIOD. 1/4" BLOW.  
BLOW COMMENT #3 : NO BLOW FOR 15 MIN. THEN VERY WEAK BLOW  
BLOW COMMENT #4 : THROUGHOUT FINAL FLOW PERIOD.



FLUID SAMPLE REPORT

Date : 6-29-87

Ticket No. : 11020

Company : NATIONAL COOPERATIVE REFINERY ASSOC.

Well Name & No. : PFAFF #3

DST No. 2

County : NESS

State : KANSAS

Sampler No. : 2

Test Interval : 4230-4255

=====  
Pressure in Sampler 25 PSIG BHT 117 Deg F

Total Volume of Sampler : 3150 cc  
Total Volume of Sample : 250 cc  
Oil: 30 cc  
Water: - cc  
Mud: 220 cc  
Gas: - cu ft  
Other: - cc  
=====

RESITIVITY

RECOVERY .34 @ 68 F Chloride Content 9000 ppm

Mud Pit Sample .35 @ 68 F Chloride Content 9000 ppm

Gas/Oil Ratio Gravity 39 API @ Deg F

Where was sample drained RIG

Remarks:

WESTERN TESTING CO. INC.  
WICHITA - KANSAS

Pressure Transient Report  
-----

COMPANY : NATIONAL COOPERATIVE REFINERY ASSOC.  
RIG : NESS-KANSAS  
FIELD : PFAFF  
WELL : #3  
DATE : 062987  
GAUGE NO : 10270

OPERATIONAL COMMENTS

TIGHT HOLE

COMPANY : NATIONAL COOPERATIVE REFINERY ASSOC.

FIELD : PFAFF

WELL : #3

JOB # : 11020

GAUGE # : 10270

DEPTH : 4255

DATE : 29/ 6/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	10:35: 0	0.000	35.000	117.00	0.000
2	10:39:59	0.083	35.000	117.00	0.000
3	10:45: 0	0.167	35.000	117.00	0.000
4	10:48: 0	0.217	41.000	117.00	6.000
5	10:51: 0	0.267	179.000	117.00	138.000
6	10:54: 0	0.317	456.000	117.00	277.000
7	10:57: 0	0.367	593.000	117.00	137.000
8	11: 0: 0	0.417	672.000	117.00	79.000
9	11: 3: 0	0.467	705.000	117.00	33.000
10	11: 6: 0	0.517	730.000	117.00	25.000
11	11: 9: 0	0.567	748.000	117.00	18.000
12	11:12: 0	0.617	761.000	117.00	13.000
13	11:15: 0	0.667	764.000	117.00	3.000
14	11:16: 0	0.683	35.000	117.00	-729.000
15	11:20: 0	0.750	35.000	117.00	0.000
16	11:25: 0	0.833	35.000	117.00	0.000
17	11:30: 0	0.917	35.000	117.00	0.000
18	11:35: 0	1.000	35.000	117.00	0.000
19	11:40: 0	1.083	35.000	117.00	0.000
20	11:45: 0	1.167	35.000	117.00	0.000
21	11:50: 0	1.250	35.000	117.00	0.000
22	11:55: 0	1.333	35.000	117.00	0.000
23	12: 0: 0	1.417	35.000	117.00	0.000
24	12: 5: 0	1.500	35.000	117.00	0.000
25	12:10: 0	1.583	35.000	117.00	0.000
26	12:15: 0	1.667	35.000	117.00	0.000
27	12:18: 0	1.717	45.000	117.00	10.000
28	12:21: 0	1.767	91.000	117.00	46.000
29	12:24: 0	1.817	175.000	117.00	84.000
30	12:27: 0	1.867	310.000	117.00	135.000
31	12:30: 0	1.917	487.000	117.00	177.000
32	12:33: 0	1.967	595.000	117.00	108.000
33	12:36: 0	2.017	651.000	117.00	56.000
34	12:39: 0	2.067	680.000	117.00	29.000
35	12:42: 0	2.117	697.000	117.00	17.000
36	12:45: 0	2.167	711.000	117.00	14.000
37	12:48: 0	2.217	719.000	117.00	8.000
38	12:51: 0	2.267	732.000	117.00	13.000
39	12:54: 0	2.317	738.000	117.00	6.000
40	12:57: 0	2.367	740.000	117.00	2.000
41	13: 0: 0	2.417	744.000	117.00	4.000
42	13: 3: 0	2.467	748.000	117.00	4.000
43	13: 6: 0	2.517	752.000	117.00	4.000
44	13: 9: 0	2.567	755.000	117.00	3.000
45	13:12: 0	2.617	757.000	117.00	2.000
46	13:15: 0	2.667	759.000	117.00	2.000
47	13:18: 0	2.717	761.000	117.00	2.000
48	13:21: 0	2.767	763.000	117.00	2.000
49	13:24: 0	2.817	764.000	117.00	1.000
50	13:27: 0	2.867	765.000	117.00	1.000
51	13:30: 0	2.917	766.000	117.00	1.000
52	13:33: 0	2.967	767.000	117.00	1.000

COMPANY : NATIONAL COOPERATIVE REFINERY ASSOC.

FIELD : PFAFF

WELL : #3

JOB # : 11020

GAUGE # : 10270

DEPTH : 4255

DATE : 29/ 6/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	13:36: 0	3.017	768.000	117.00	1.000
54	13:39: 0	3.067	769.000	117.00	1.000
55	13:42: 0	3.117	769.000	117.00	0.000
56	13:45: 0	3.167	770.000	117.00	1.000
57	13:48: 0	3.217	770.000	117.00	0.000
58	13:51: 0	3.267	771.000	117.00	1.000
59	13:54: 0	3.317	771.000	117.00	0.000
60	13:57: 0	3.367	773.000	117.00	2.000
61	14: 0: 0	3.417	773.000	117.00	0.000
62	14: 3: 0	3.467	774.000	117.00	1.000
63	14: 6: 0	3.517	775.000	117.00	1.000
64	14: 9: 0	3.567	775.000	117.00	0.000
65	14:12: 0	3.617	775.000	117.00	0.000
66	14:15: 0	3.667	775.000	117.00	0.000

WESTERN TESTING CO. INC.