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TASK CLOSE OUT DOCUMENT

Task Scope EXAMINE REASONS FOR TEMPERATURE RISE IN TC 9H

To: M. Levenson
S. Levy
E. Zebroski

Task No. 41 Date Complete 4/30/79

Reason felt task is complete:

AFTER EXAMINATION AND CORRELATION OF SEVERAL PLANT PARAMETERS AS A FUNCTION OF TIME - TC 9H IS DIRECTLY CORRELATED TO PLANT PER PRESSURE

Members of Committee

A. (TONY) BUHL

W. STROUPE

Signed
Committee Leader

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5/1/79

TO: S. Levy

FROM: Buhl and Stroupe

SUBJECT: Temperature Increase in TC 9H on 4/29 and 4/30

Conclusion: The temperature indicated by TC 9H is correlated to changes in pressure and not to other plant parameters. As pressure decreases the temperature indicated by TC 9H increases. This suggests a small boiling hot spot somewhere in the vicinity of TC 9H. Noise tests do not indicate boiling which says that boiling is not substantial nor located in the immediate vicinity of any of the TC's.

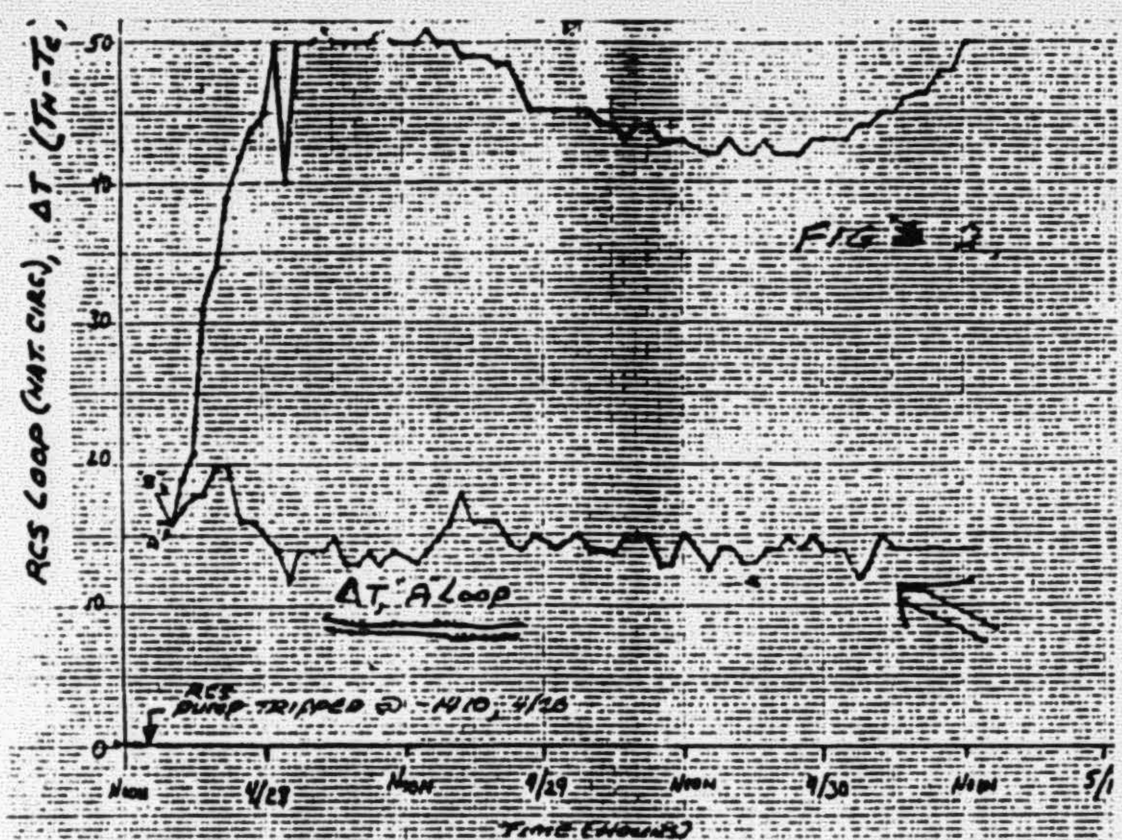
Recommendation: Continue to monitor TC 9H with all other TC's. When pressure increases the temperature indicated by TC 9H should stabilize or decrease. When pressure is reduced substantially TC 9H will increase and the surrounding TC's can be monitored to determine if boiling area is increasing. Also noise on the TC's should be monitored to pick up vigorous boiling.

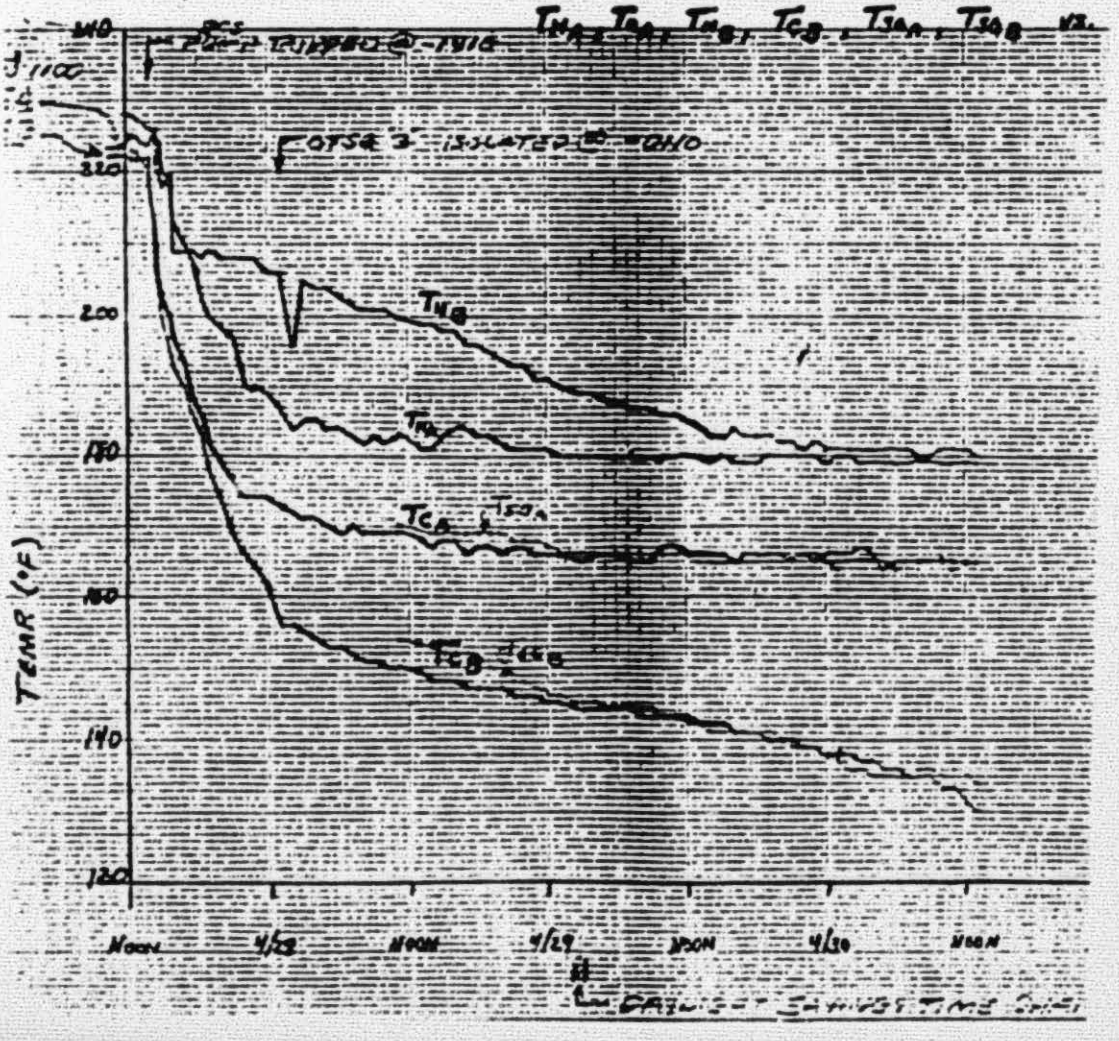
Background: Several plant parameters were examined to determine the reasons for TC 9H temperature increases on 4/29 and 4/30/79. The system pressure and the 6 hottest TC's are plotted on Figure 1 from 4/20 through 5/1. The correlation of TC 9H temperatures and system pressure is evident as noted in the upper right corner of Figure 1.

Other plant parameters are plotted on Figure 2 and no correlations are apparent.

These data suggest that a small hot spot may exist somewhere below TC 9H which produces some boiling. If so, boiling is not vigorous and does not extend to other TC's. Noise analysis of the TC's did not locate boiling which says that if boiling is occurring it is limited and below the threshold of noise detection. Further, since no other TC's are showing increasing temperatures, the hot spot is small enough as to not affect adjacent TC's.

The correlation of TC readings with pressure for the hottest TC's was apparent in early April. Figures 3 and 4 were taken from IAG Task Report #30 dated 4/23/79 and on IAG memo Kolar to Lieb dated 4/27/79 respectiveiy. These data show the same correlation with pressure.


RCS LOOP (NAT. CIRC.), ΔT (TH-TC)
50
40
30
20
10
0
FIG. 2
ΔT, A LOOP
RCS PUMP TRIPPED @ ~1410, 4/28
NOON
4/28
NOON
4/29
NOON
4/30
NOON
5/1
TIME (HOURS)


THA, TCA, THB, TCB, TSGA, TSGB vs.
RCS PUMP TRIPPED @ ~1410
OTSG B ISOLATED @ ~0410
TEMP (°F)
220
200
180
160
140
120
THB
THA
TCA & TSGA
TCB & TSGB
NOON
4/28
NOON
4/29
NOON
4/30
NOON

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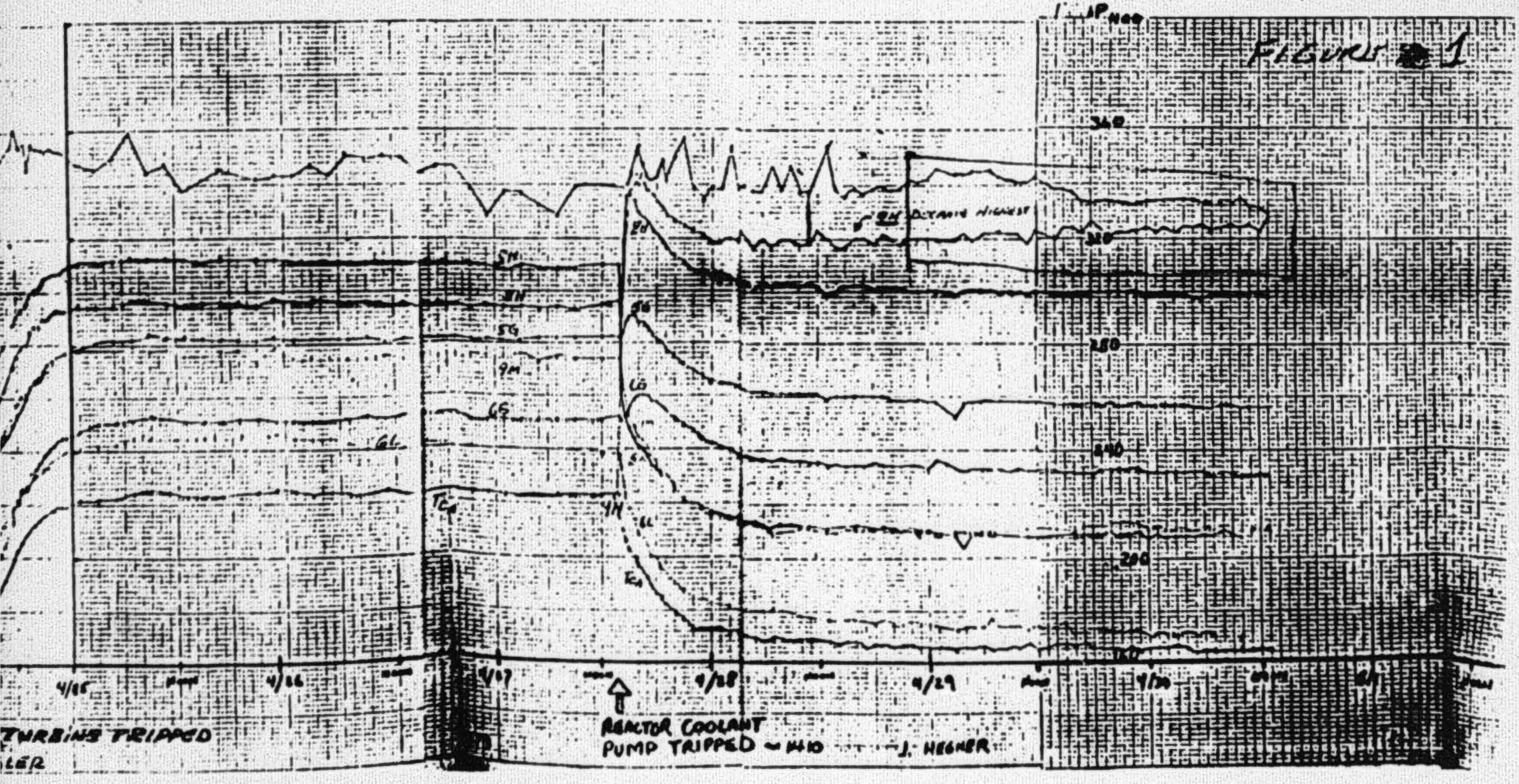

FIGURE 1

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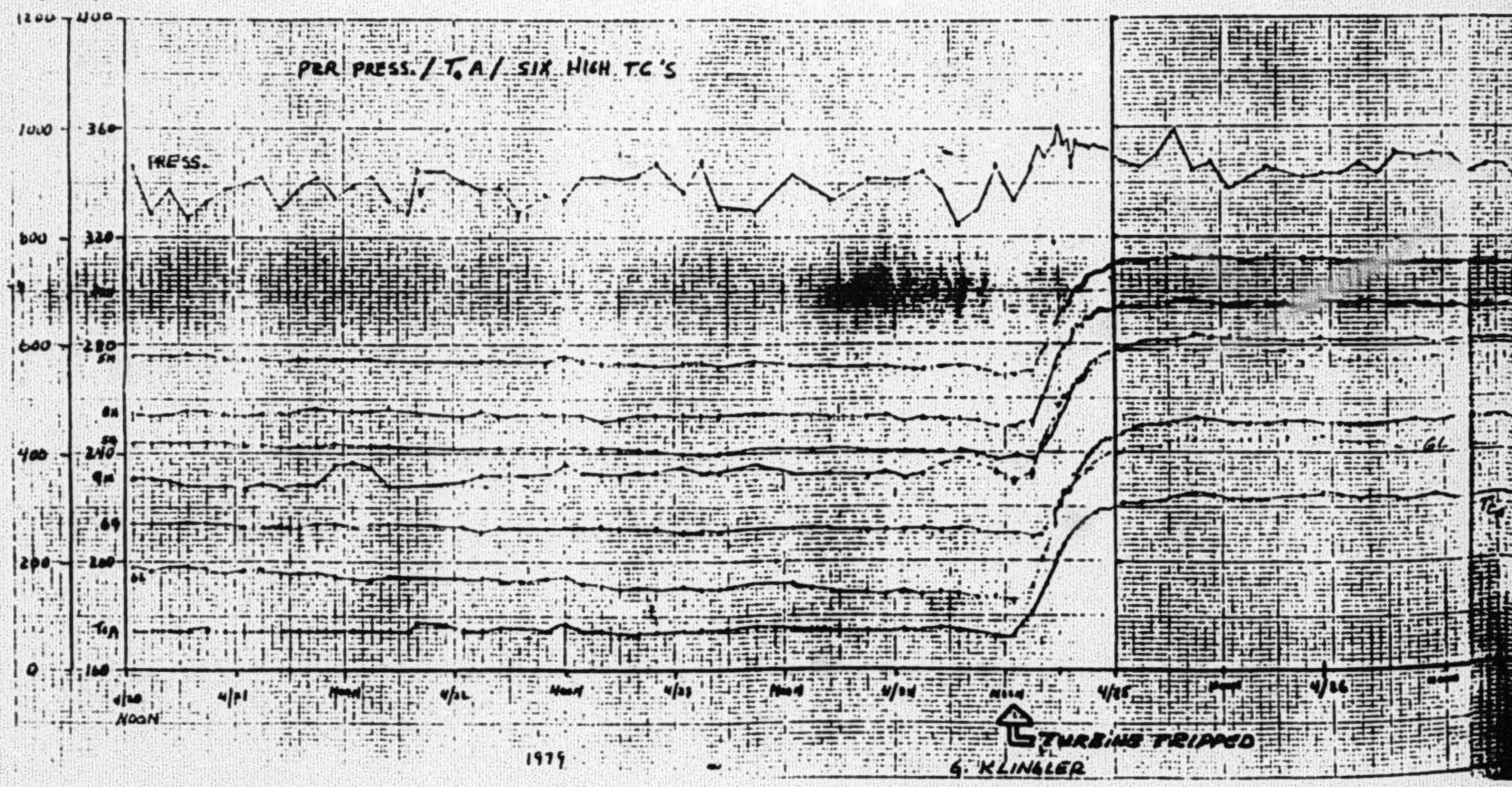

PZR PRESS. / T. A / SIX HIGH T.C'S
PSIG
PRESS.
1200
1000
800
600
400
200
0
400
360
320
280
240
200
160
T.A
TURBINE TRIPPED
G. KLINGLER
4/20 NOON
4/21
NOON
4/22
NOON
4/23
NOON
4/24
NOON
4/25
4/26
1979

FIGURE 3

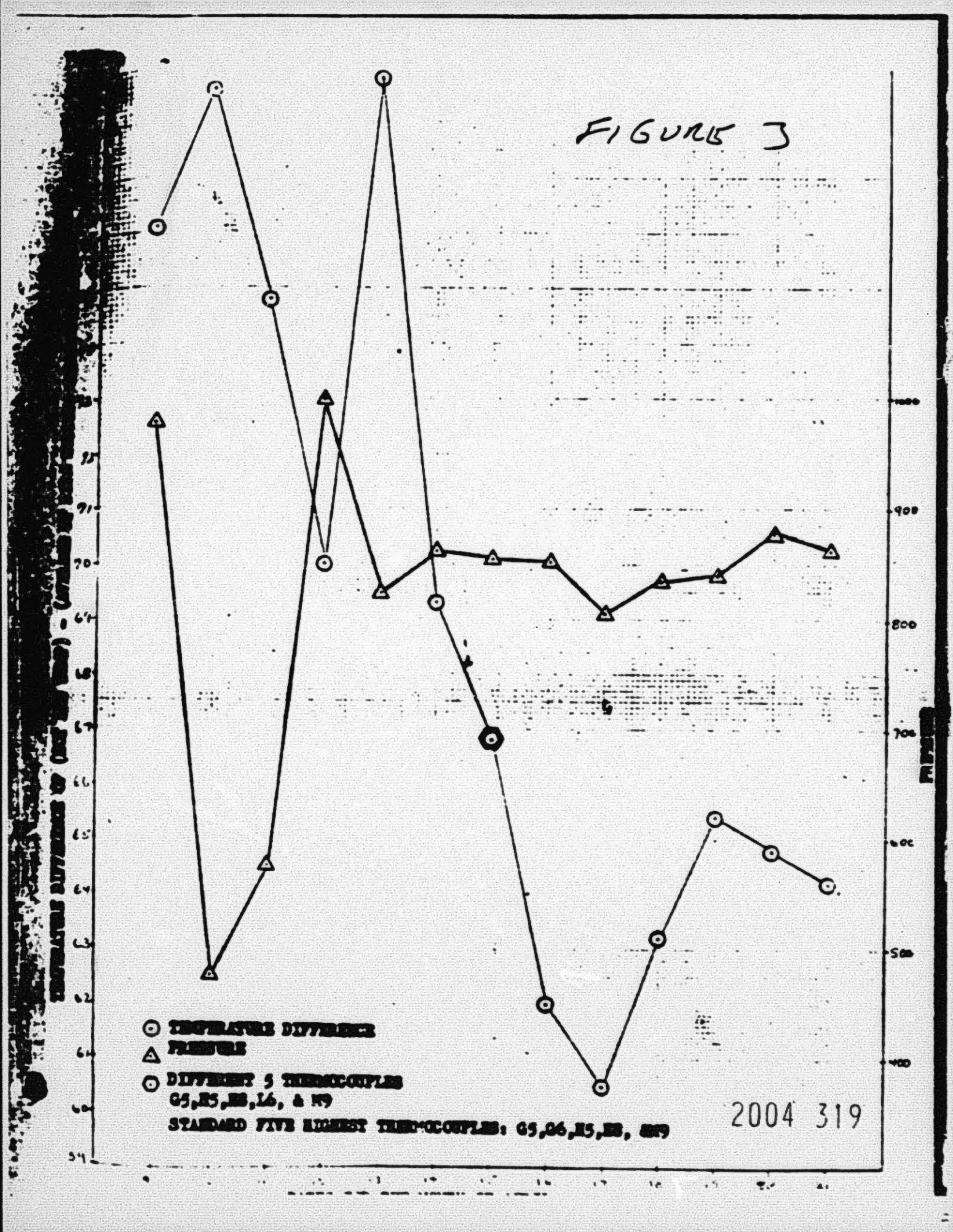
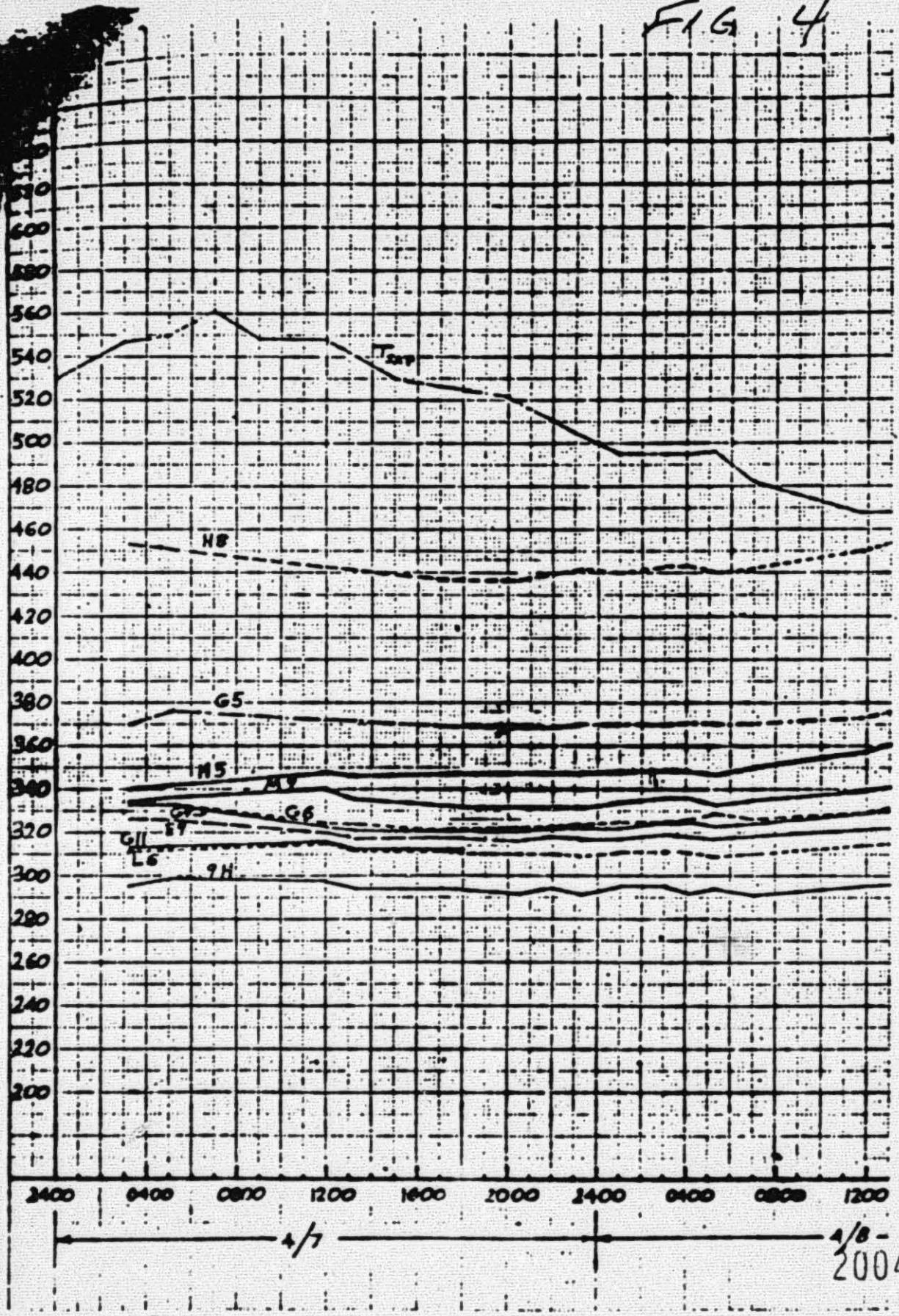


FIG 4



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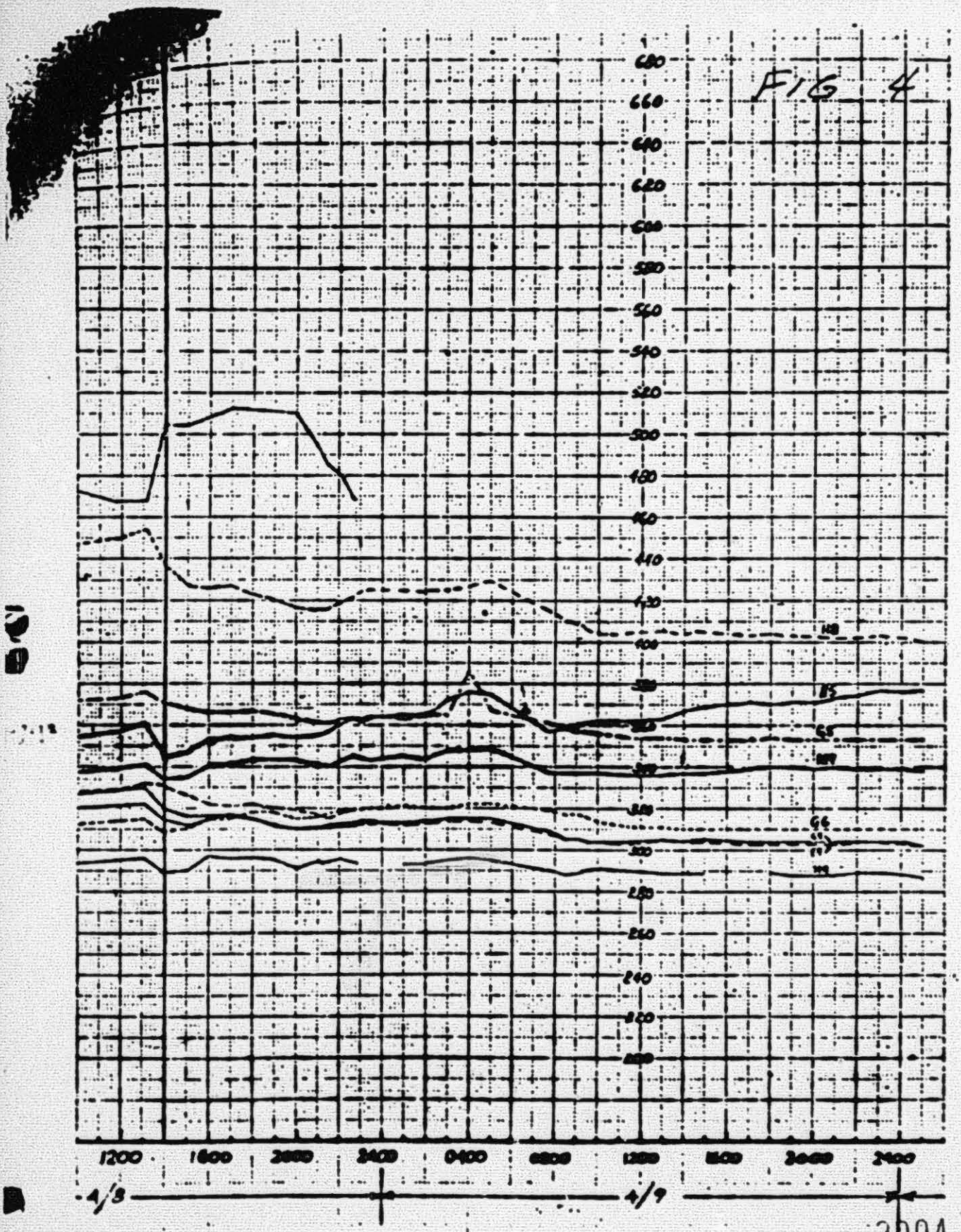

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Figure 5.