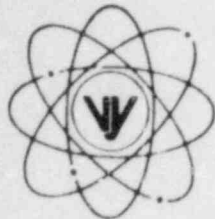


VERMONT YANKEE NUCLEAR POWER CORPORATION



RD 5, Box 169, Ferry Road, Brattleboro, VT 05301

July 31, 1984

FVY 84-95

REPLY TO:
ENGINEERING OFFICE
1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation
Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch No. 2
Division of Licensing

References: (a) License No. DPR-28 (Docket No. 50-271)
(b) Letter, VYNPC to USNRC, FVY 84-93, dated July 30, 1984
(c) Letter, USNRC to VYNPC, Generic Letter 84-11, dated
April 19, 1984
(d) Letter, VYNPC to USNRC, FVY 84-59, dated June 5, 1984

Subject: Supplemental Information Regarding the Vermont Yankee 1984
Refuel Outage Augmented In-Service Inspection Program

Dear Sir:

By letter dated July 30, 1984 [Reference (b)], we provided you with our Final Report regarding the results of the Vermont Yankee 1984 Refuel Outage Augmented In-Service Inspection Program. This program was conducted to address the concerns of I&E Bulletin 83-02 and Generic Letter 84-11 [Reference (b)].

As a result of recent conference calls with members of your Staff, we are providing you with the following supplemental information regarding our Final Report:

1. Our Final Report included commitments for reactor coolant leakage limits. These limits were provided as Attachment D to our report. Your Staff requested that we compare the limits provided in Attachment D with those requested by the NRC in Attachment 1 to generic letter 84-11 [Reference (b)].

Supplemental Information

We have reviewed the leakage limits proposed in Generic Letter 84-11 and have revised Attachment D of our Final Report to be consistent with the intent of the Generic Letter.

8408060226 840731
PDR ADOCK 05000271
Q PDR

AOA7
11

The necessary changes have been incorporated into Revision 1 of Attachment D, which is attached to this letter.

The modified reactor coolant leakage limits will be in place upon start-up from our present refueling outage.

2. By letter dated June 5, 1984 [Reference (d)], we committed to performing a visual examination for leakage of the reactor coolant piping at each plant outage during which the containment is de-inerted. Your staff requested that we restate this commitment.

Supplemental Information

As stated in our letter dated June 5, 1984, we will perform a visual examination of the reactor coolant piping at each plant outage during which the containment is de-inerted. The examination will be performed consistent with the criteria of IWA-5241 and IWA-5242 of the 1980 Edition (Winter 1980 Addenda) of Section XI of the ASME Boiler and Pressure Vessel Code. The system boundary subject to this examination will be in accordance with the criteria of IWA-5221, for piping which is susceptible to Inter-Granular Stress Corrosion Cracking (IGSCC).

This commitment will be in effect for the 1984-1985 cycle of operation.

3. Enclosure 3 to our Final Report provides criteria for notifying the NRC regarding the operability status of the moisture-sensitive tape system. Your staff requested that we clarify the time-frame for NRC notification.

Supplemental Information

Vermont Yankee will verbally notify the NRC Project Manager for Vermont Yankee, before the close of the next working day, of any significant changes in the status of the moisture-sensitive tape system, during the 1984-1985 operating cycle.

4. Table VIII of our Final Report provides a summary of weld joint flaws for 1983. Your Staff requested that we submit weld flaw diagrams for 1983 similar to those provided in Table IX of our Final Report.

Your Staff also requested that we describe the criteria for how we determined the flaw lengths for 1983. This information is provided in Attachment A to our Final Report; however, additional clarification was requested.

Supplemental Information

The requested weld joint flaw diagrams for 1983 are attached to this letter. These diagrams are supplements of Table VIII of our Final Report.

It should be noted that the 1983 flaw summary diagrams are reconstructions called "flaws" from 1983 examinations. In comparing the 1983 flaw diagram to the 1984 diagram, it must be recognized that the 0° points are not exact. In addition, neither the 1983 or the 1984 summary diagrams contain all recorded indications, but rather, they represent the end results of the detection and discrimination processes.

In 1983, the procedural requirements (which served as the basis for the I&E Bulletin 83-02 Qualification) were to carry the linear extent of an indication to the point where its amplitude dropped to one-half the maximum amplitude. In instances where indications continued for any distance at less than one-half maximum amplitude, the indication was continued over the full extent until the indication definitively dropped.

5. Table V of our Final Report depicts a comparison of 1983 to 1984 inspection results. Your Staff requested that we revise the third column of this Table to reflect total length of all circumferential indications, regardless of separation.

Supplemental Information

Table V of our Final Report has been revised and is attached to this letter (see Table V - Revision 1).

In addition, we have identified the following typographical errors in our Final Report which should be corrected:

1. Page 1 of the "Introduction and Program Overview." The seventh bullet under "Summary" should state:

In the 1984 inspection, no flaw indications were found on the 24" RHR piping. One flaw indication was found during the 1983 inspection.

2. Page 2 of the "Introduction and Program Overview." The last sentence of the eighth bullet under "Summary" should state:

Twenty-seven out of 35 28" susceptible welds have been inspected at least once during the 1983 and 1984 inspections.

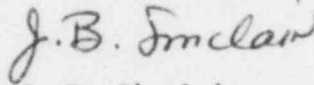
United States Nuclear Regulatory Commission
Attention: Domenic B. Vassallo

July 31, 1984
Page 4

We trust that this information is deemed acceptable; however, should you have any questions regarding this matter, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION



J. B. Sinclair
Licensing Engineer

JBS/cmj

Enclosures

ATTACHMENT D - REVISION 1

VERMONT YANKEE REACTOR COOLANT LEAKAGE LIMITS

COOLANT LEAKAGE

1. During power operation, Reactor Coolant System leakage into the primary containment shall be limited to:
 - a. 5 GPM unidentified leakage when averaged over the previous 24-hour period; and
 - b. 20 GPM identified leakage when averaged over the previous 24-hour period.
2. Any time the reactor is in the run mode, Reactor Coolant System leakage into the primary containment from unidentified sources shall be limited to:
 - a. 2 GPM increase in unidentified leakage within the previous 24-hour period (see Note 1).
3. If the requirements of Item 1 cannot be met, initiate action as follows:
 - a. With any Reactor Coolant System leakage greater than any one of the limits specified in Item 1.a or 1.b reduce the leakage rate to within the limits or be in at least hot shutdown in 12 hours and in cold shutdown in the next 24 hours.
4. If the requirements of Item 2 cannot be met, initiate action as follows:
 - a. With any increase in unidentified leakage of greater than or equal to 2 GPM, averaged over the previous 24-hour period, identify the source of leakage or be in at least hot shutdown in 12 hours and in cold shutdown in the next 24 hours.
5. Both the drywell sump and air sampling systems shall be operable during power operation. From and after the date that one of the drywell sump systems is made or found inoperable for any reason, reactor operation is permissible only during the succeeding 24 hours. From and after the date that the air sampling system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 7 days.
6. If the requirements of Item 5 cannot be met, an orderly shutdown shall be initiated and the reactor brought to a cold shutdown condition within 24 hours.

NOTE 1: During the first 24 hours in the run mode following startup, the limits of Item 2 may be waived provided the requirements of Item 1 are met.

COOLANT LEAKAGE (Surveillance)

Reactor Coolant System leakage shall be demonstrated to be within the limits of Items 1 and 2 by checking and logging the leakage collected in the primary containment floor and equipment sumps at least once per 4 hours. In addition, the primary containment atmosphere activity shall be checked and logged at least once per 8 hours.

TABLE V - REVISION 1

Large Diameter Piping
 Comparison of 1983 to 1984 Inspection Results

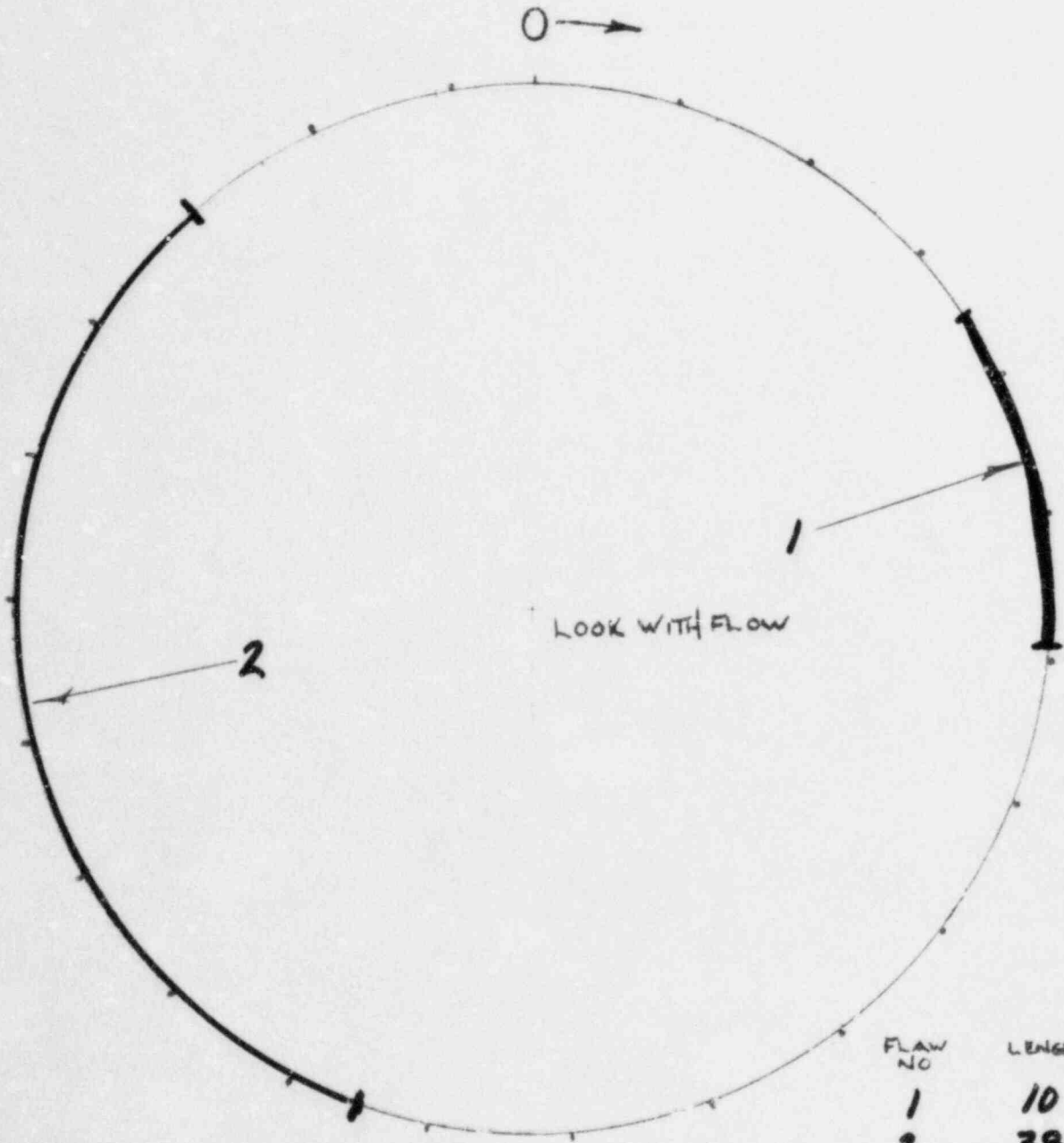
Pipe Size	Weld ISI No.	1983		1984	
		L ⁽¹⁾	A/T ⁽²⁾ (% TWD)	L ⁽¹⁾	A/T ⁽²⁾ (% TWD)
28"	64	20"	10-15	No Flaw	N/A
	1A	48"	15	5"	22
	2	360° (intermittent)	10	2"	15
	9A	360° (intermittent)	10	5"	20
	65A	9.5"	15	15"	23
	15A	23"	15	No Flaw	N/A
	58	31.5"	15	No Flaw	N/A
	59	36"	15	13"	20
	22"	16B	4.5"	10	0.8"
36B		14.5"	10	No Flaw	N/A
30B		17"	15	24.0"	20
24"	RHR-31 Weld 1	4.0"	7	No Flaw	N/A

(1) L - Total length of all circumferential indications.

(2) A/T - Flaw depth as a percentage of wall thickness (based on weighted average depths of all flaws).

VY 1983 FLAW
SUMMARY

WELD NO. **1A**
VIEW **ELBOW**



FLAW NO	LENGTH	% THRU-WALL
1	10"	15
2	38"	20

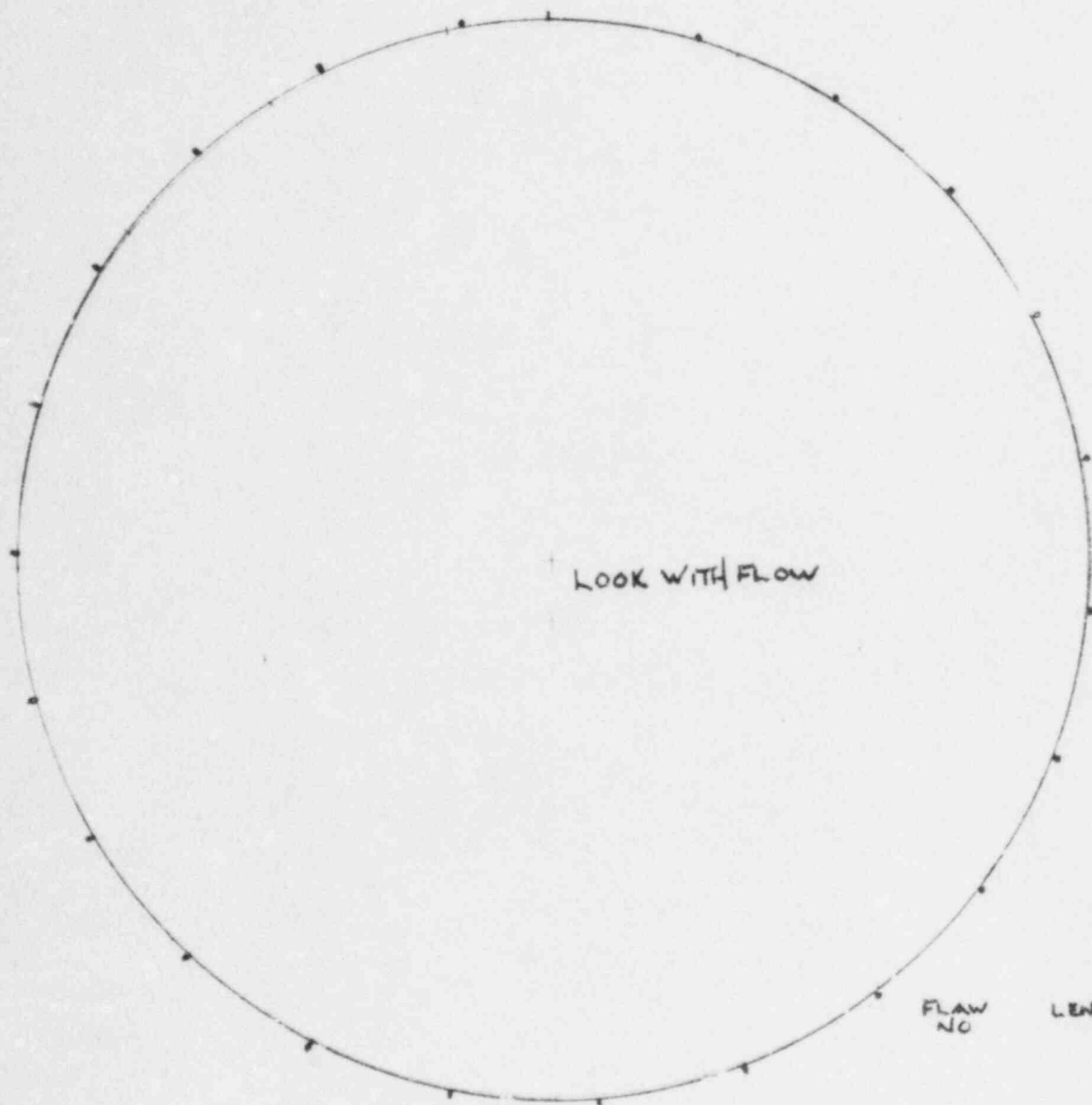
VY 1983 FLAW SUMMARY

WELD
NO. **2**

VIEW

CALLED "INTERMITTANT"
360° \leq 10% TWD

0 →



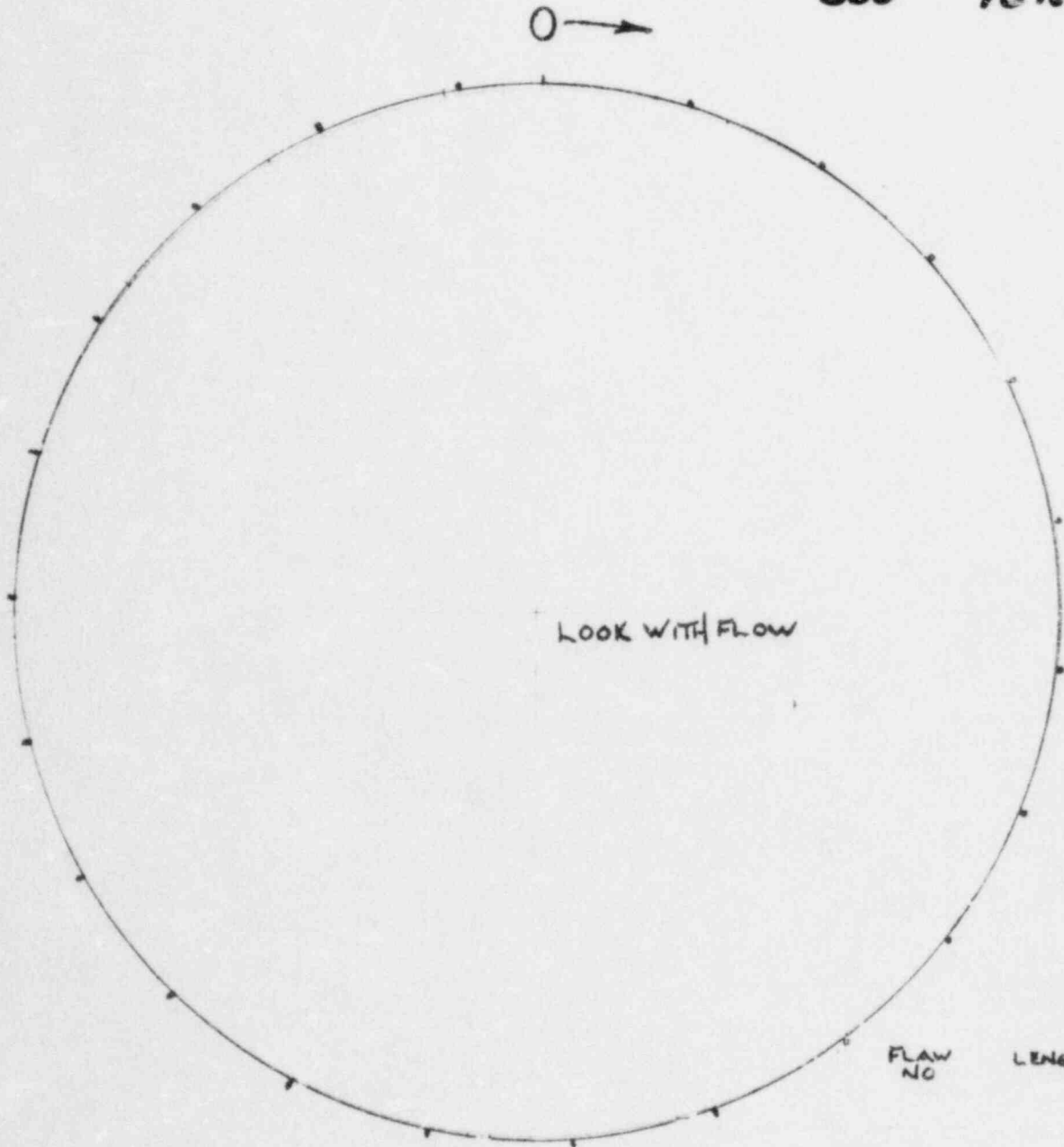
FLAW NO	LENGTH	% THRU-WALL
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VY 1983 FLAW SUMMARY

WELD
NO. **9A**

VIEW

CALLED "INTERMITTANT
360°" 10% THRU
WALL



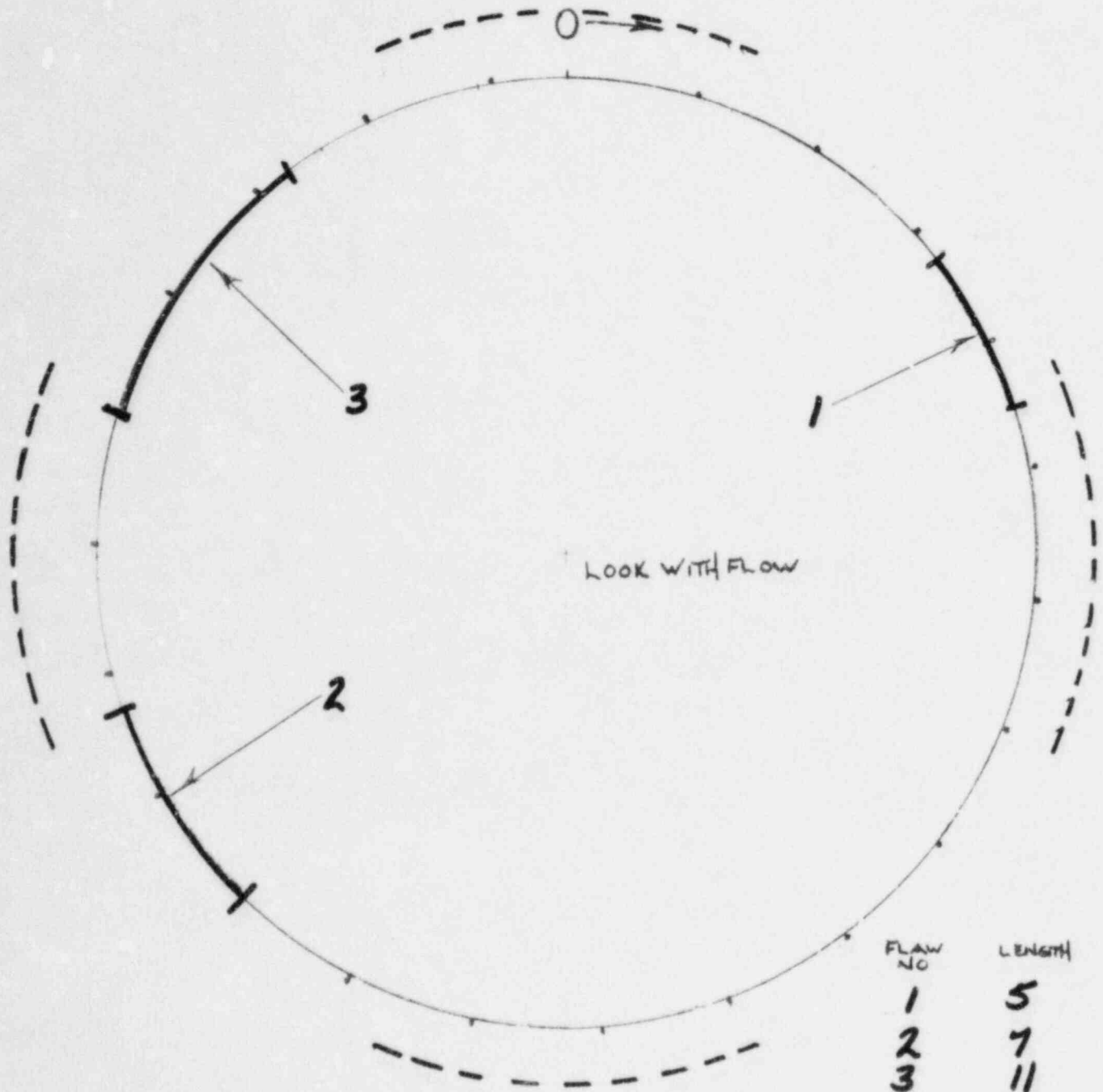
FLAW NO	LENGTH	% THRU-WALL
------------	--------	----------------

VY 1983 FLAW SUMMARY

WELD
NO. 15A

VIEW PIPE

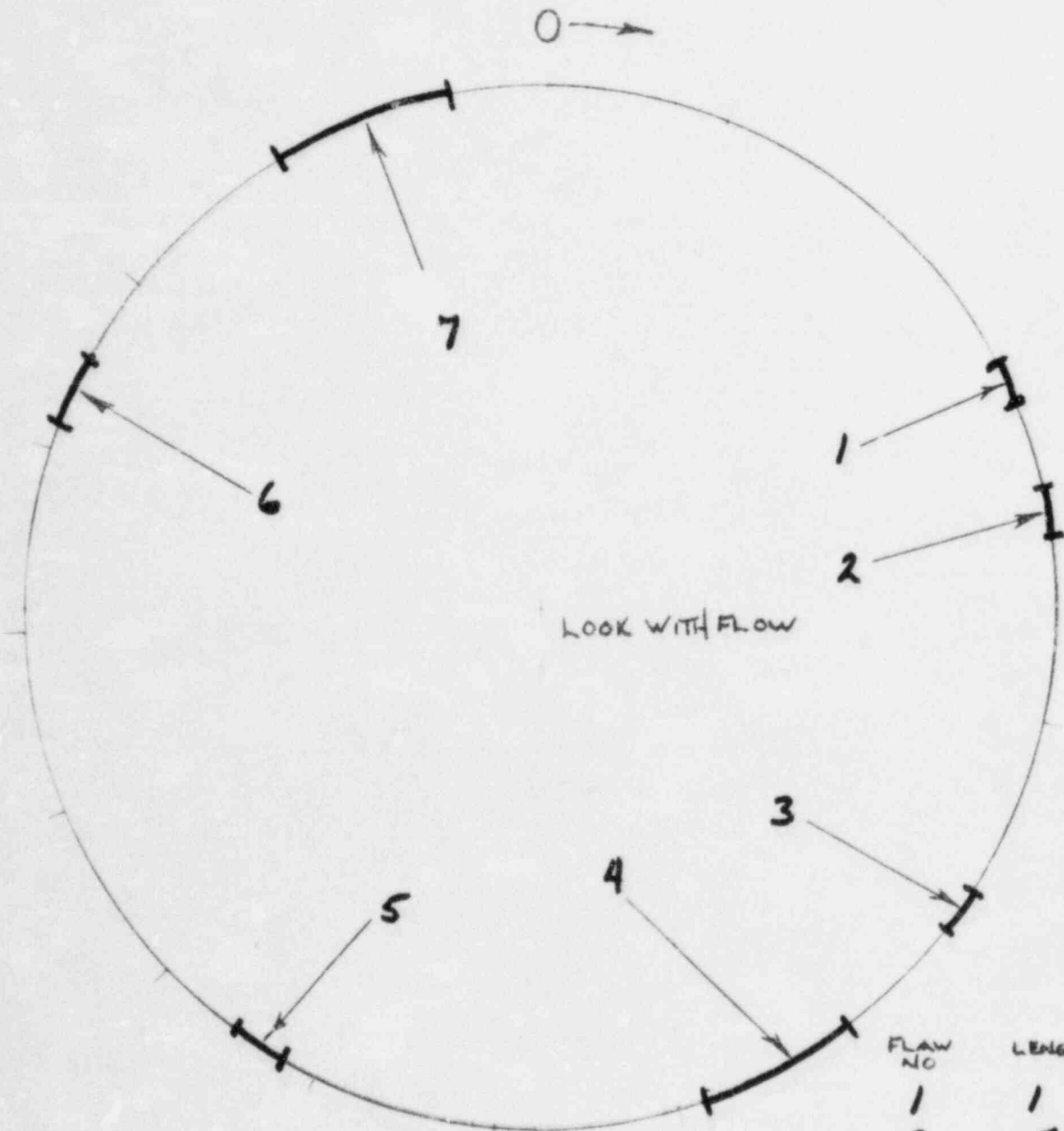
CARDINAL POINT



VY 1983 FLAW SUMMARY

WELD NO. 30B

VIEW PIPE

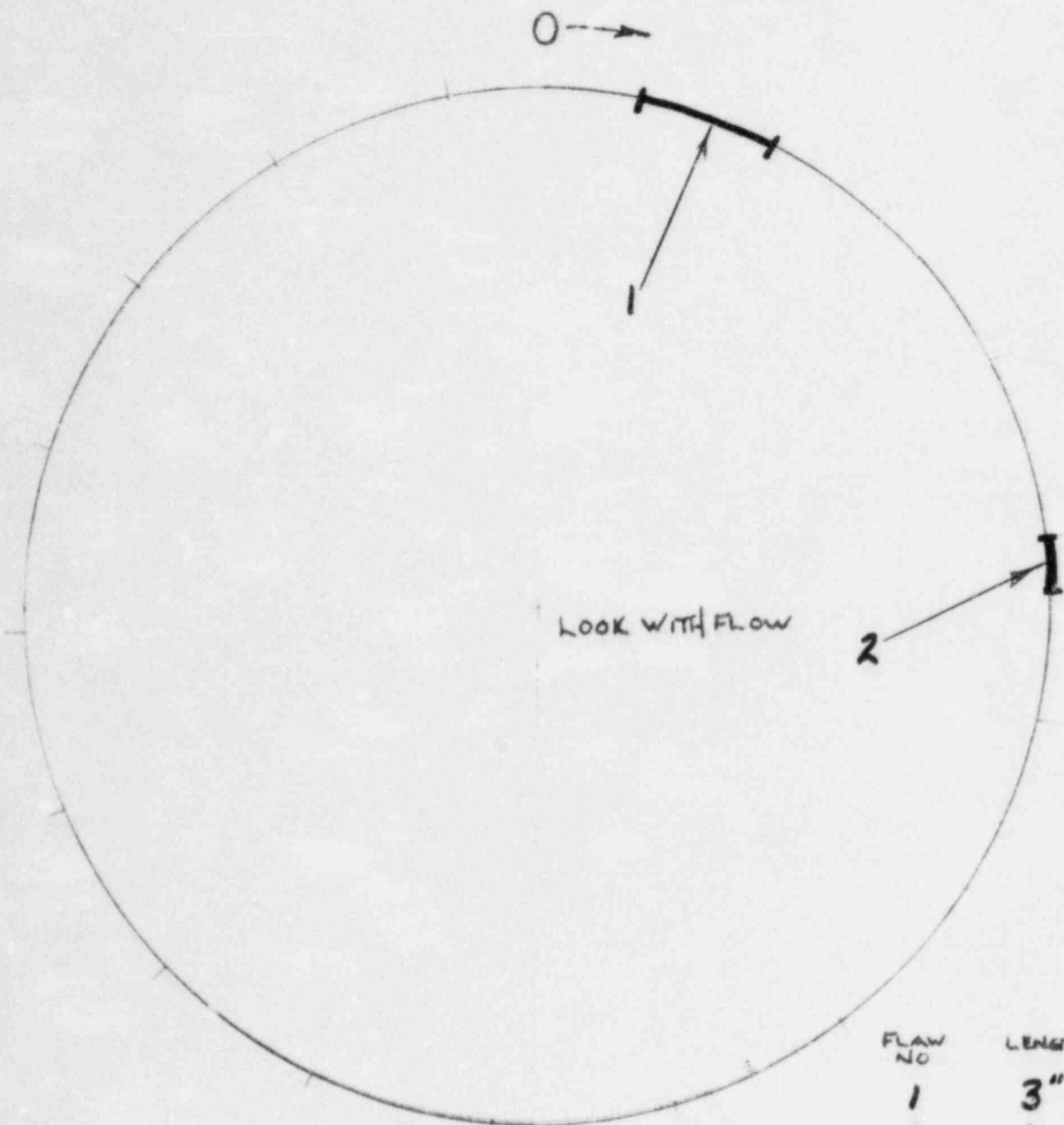


FLAW NO	LENGTH	% THRU-WALL
1	1	7
2	.7	≤10
3	1	≤15
4	3.5	15
5	1	10
6	1.5	≤15
7	4	

VY 1983 FLAW SUMMARY

WELD NO. 30B

VIEW CAP

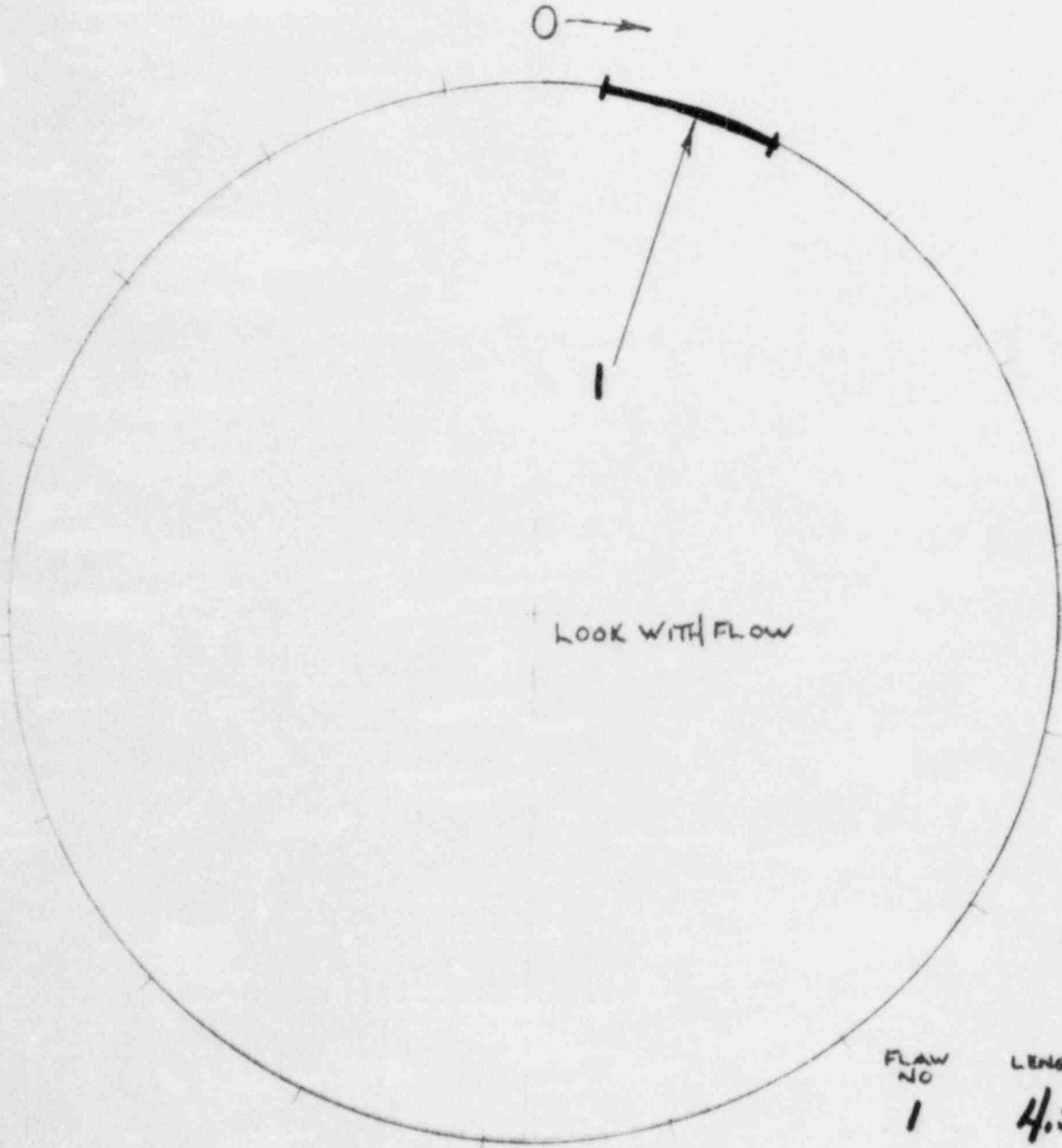


FLAW NO	LENGTH	% THRU-WALL
1	3"	15
2	1	10

VY 1983 FLAW SUMMARY

WELD
NO. 16B

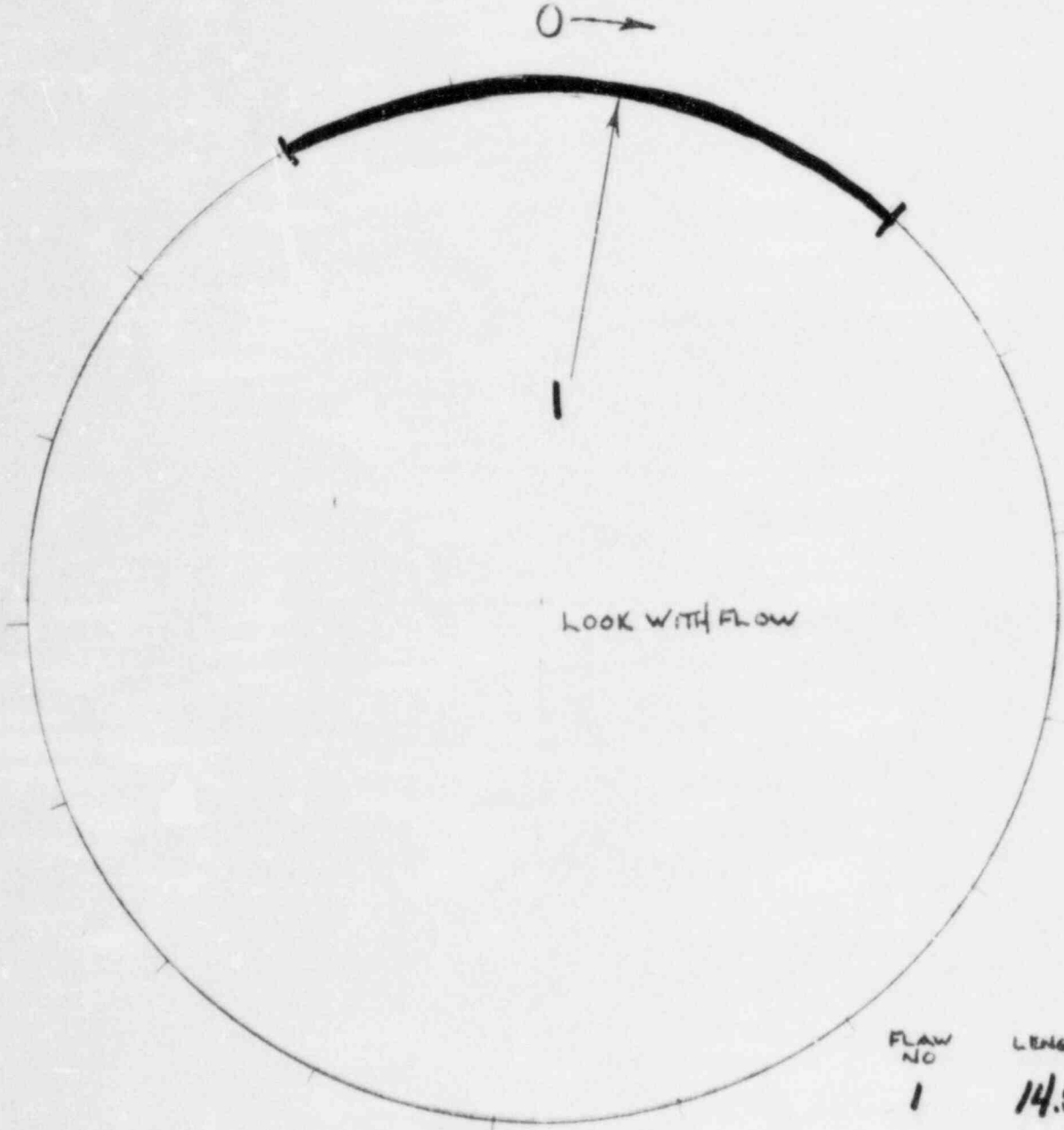
VIEW PIPE



VY 1983 FLAW
SUMMARY

WELD
NO. 36B

VIEW PIPE



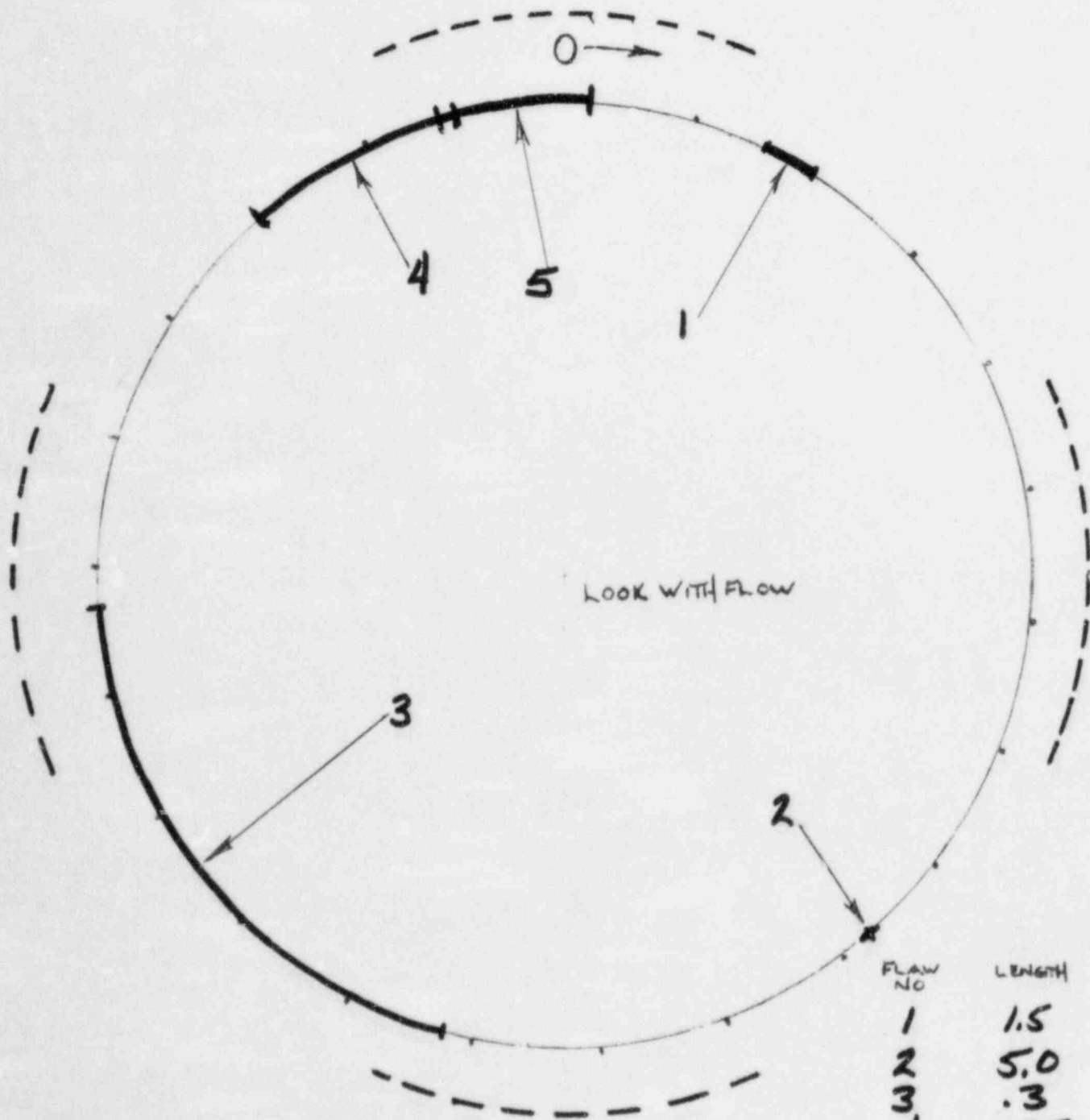
FLAW NO	LENGTH	% THRU-WALL
1	14.5	10%

VY 1983 FLAW SUMMARY

WELD NO. 58

VIEW ELBOW

CARDINAL POINT



LOOK WITH FLOW

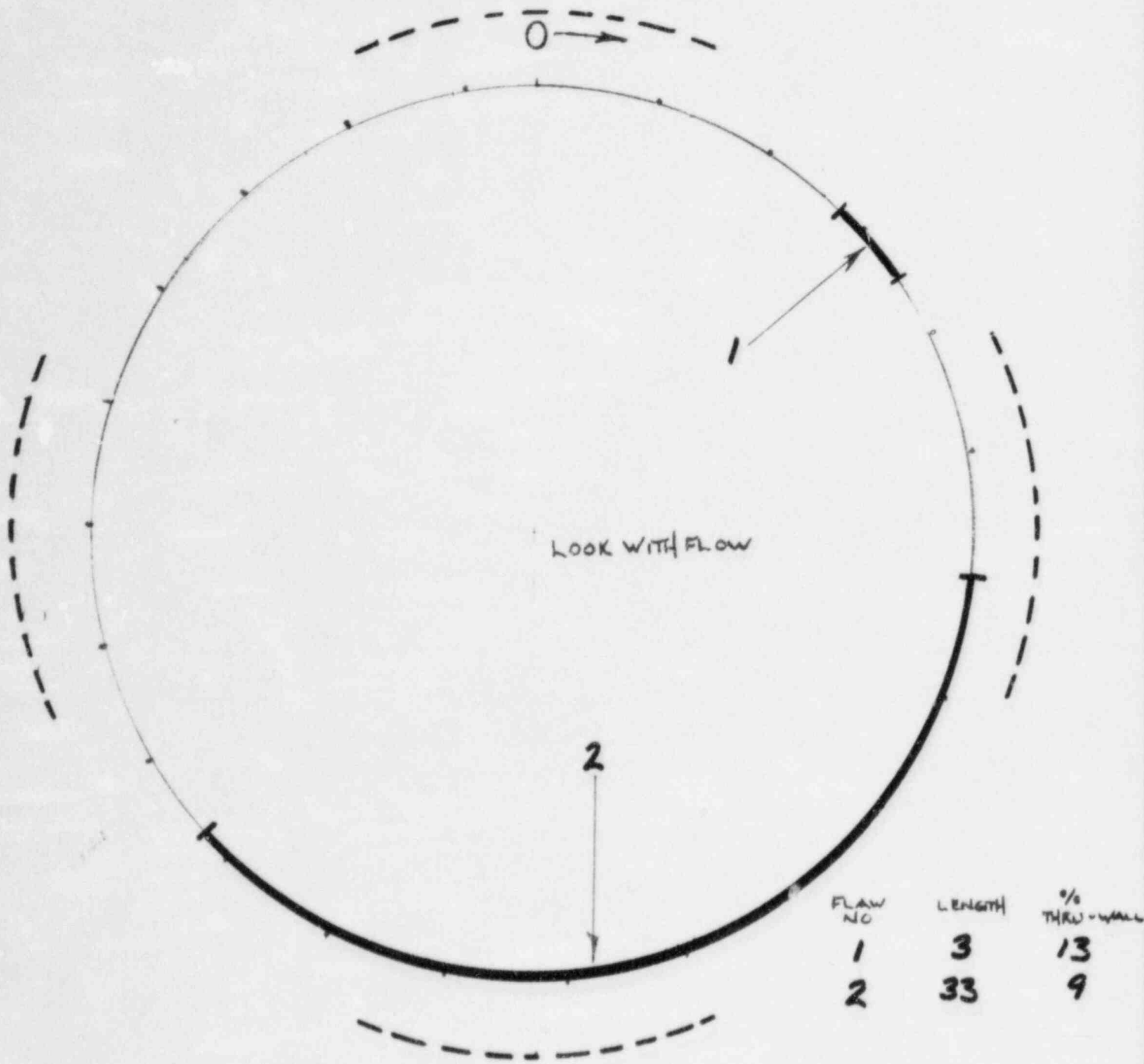
FLAW NO	LENGTH	% THRU-WALL
1	1.5	7
2	5.0	7
3	.3	15
4	17.5	15
5	7.0	5-7

VY 1983 FLAW SUMMARY

WELD
NO. 59

VIEW PIPE

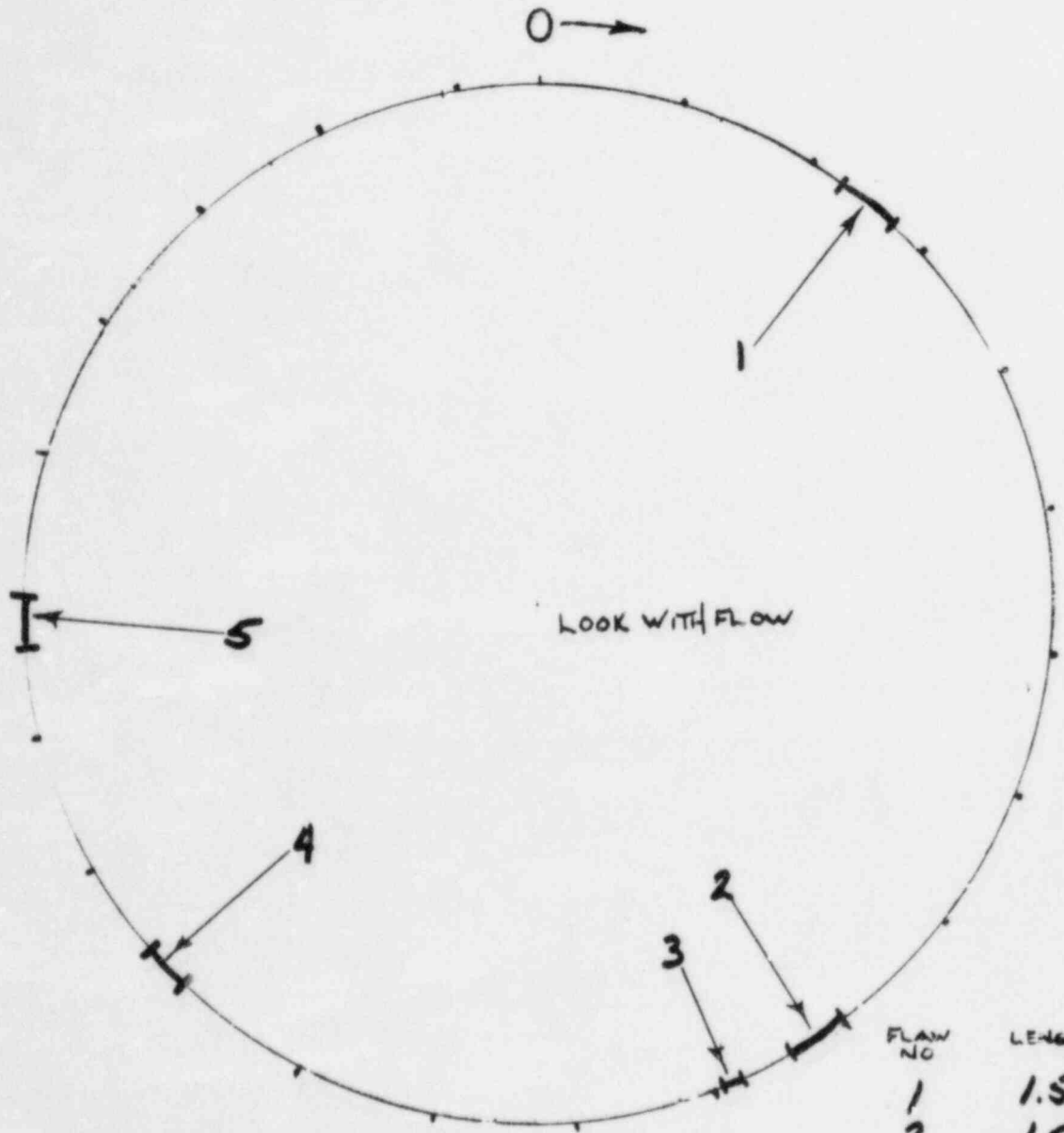
CARDINAL POINT



VY 1983 FLAW SUMMARY

WELD NO. 64

VIEW ELBOW

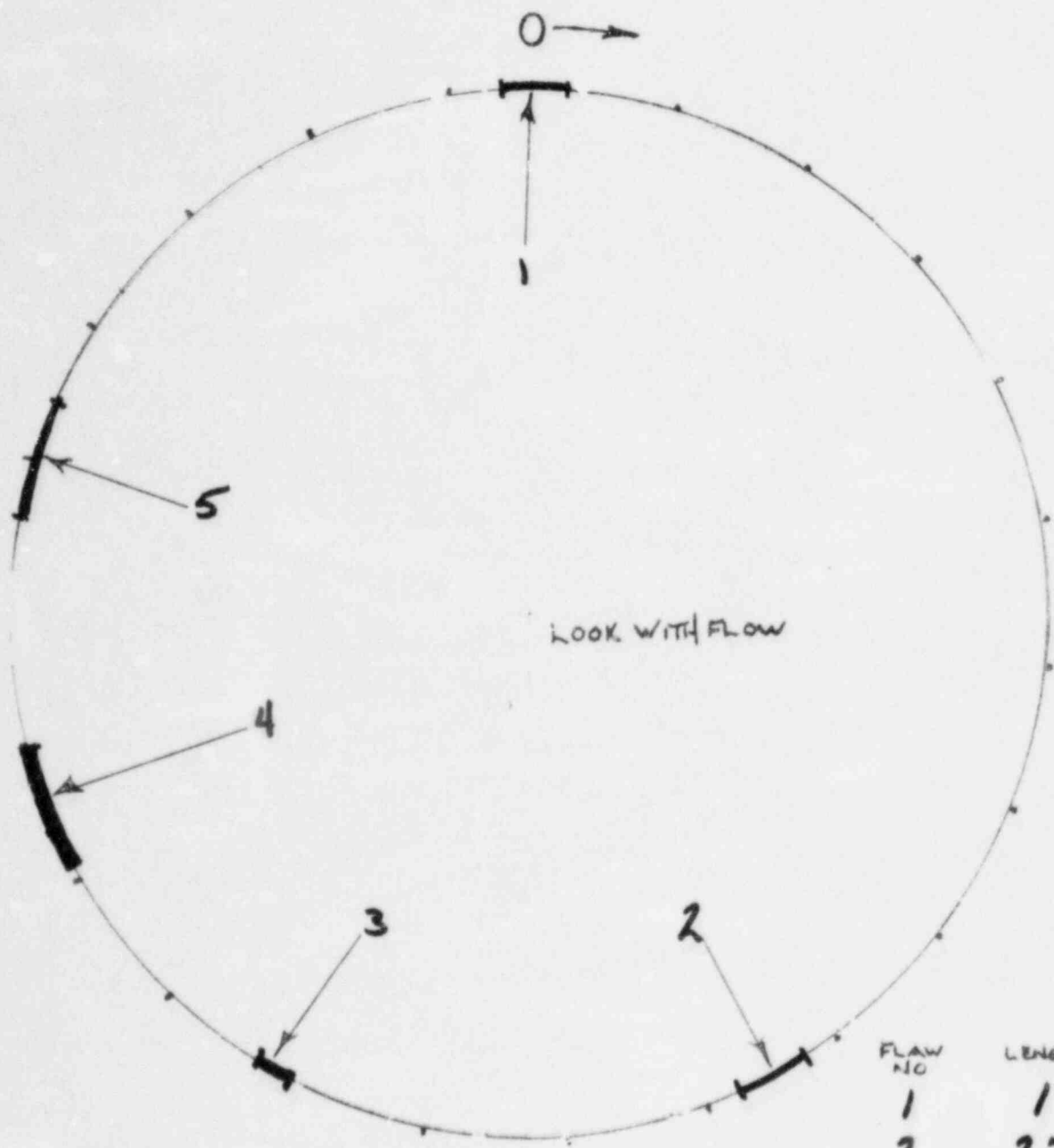


FLAW NO	LENGTH	% THRU-WALL
1	1.5	15
2	1.5	15
3	.5	15
4	2.0	15
5	2.0	15

VY 1983 FLAW SUMMARY

WELD NO. **64**

VIEW **PIPE**

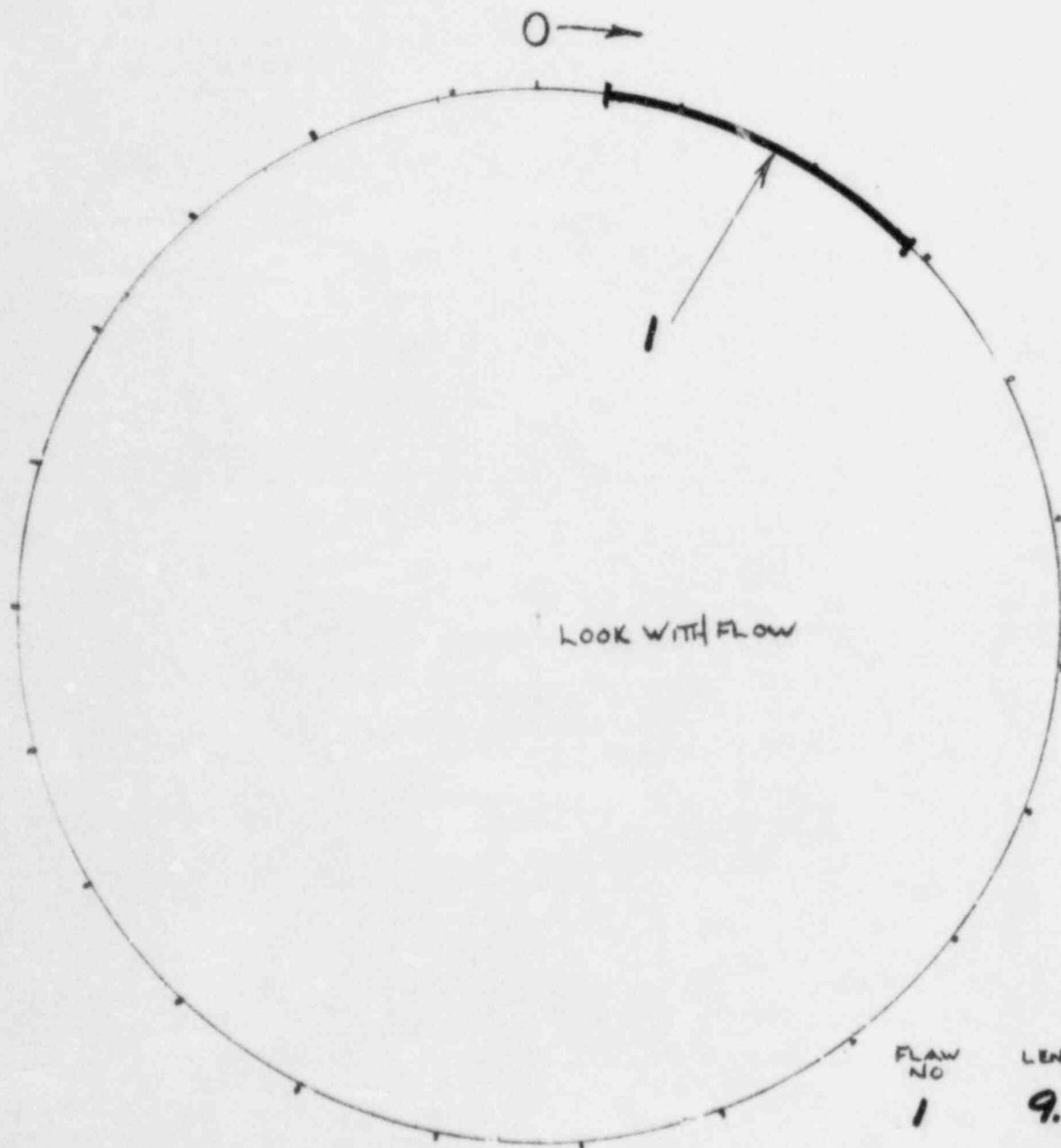


FLAW NO	LENGTH	% THRU-WALL
1	1	15
2	2.7	15
3	.7	15
4	4	15
5	4	15

VY 1983 FLAW SUMMARY

WELD
NO. 65A

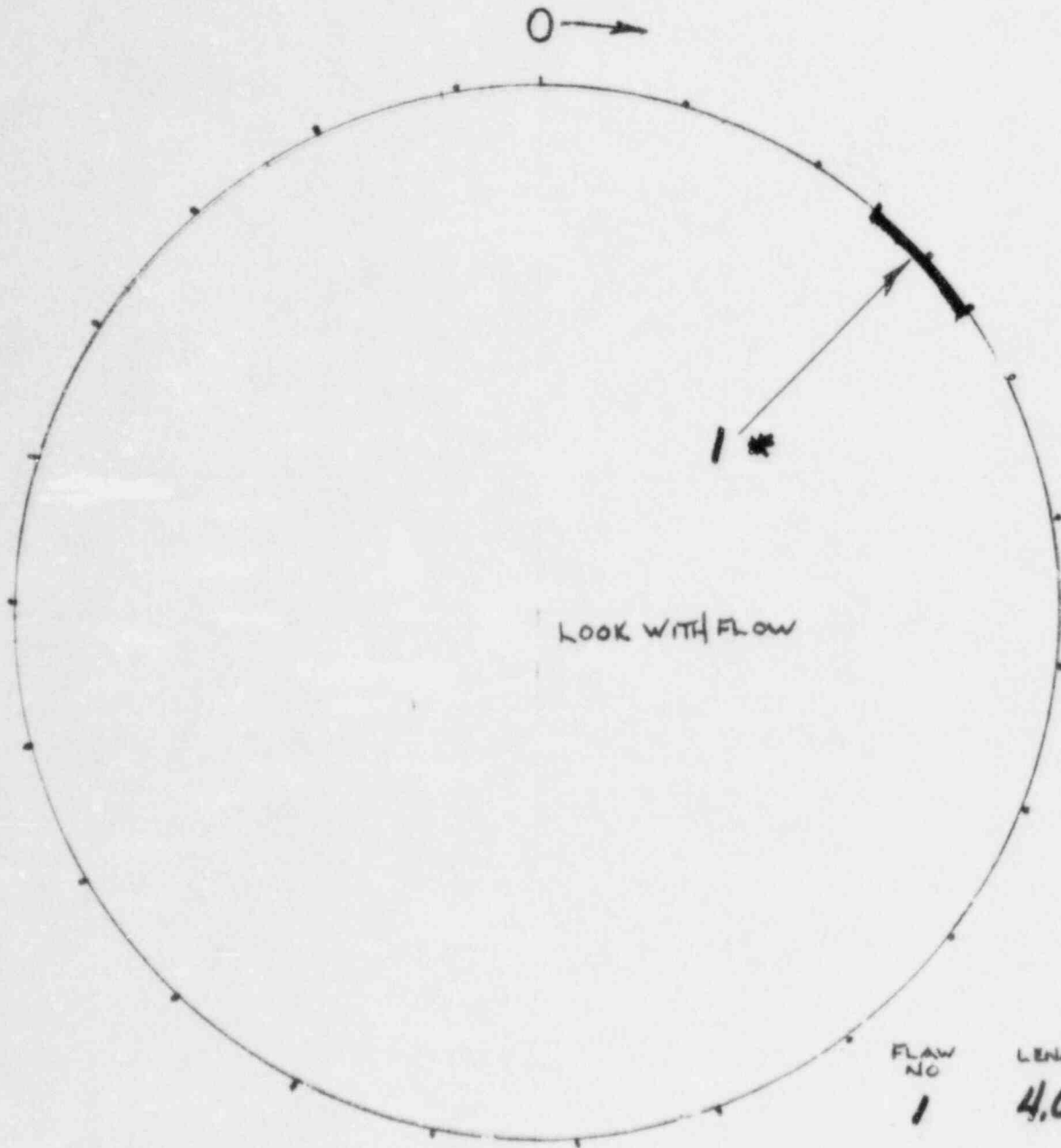
VIEW PIPE



VY 1983 FLAW SUMMARY

WELD
NO. **RHR 31-1**

VIEW **ELBOW**



FLAW NO	LENGTH	% THRU-WALL
1	4.0	7

*ASSUME 0° TO BE SAME AS B4°