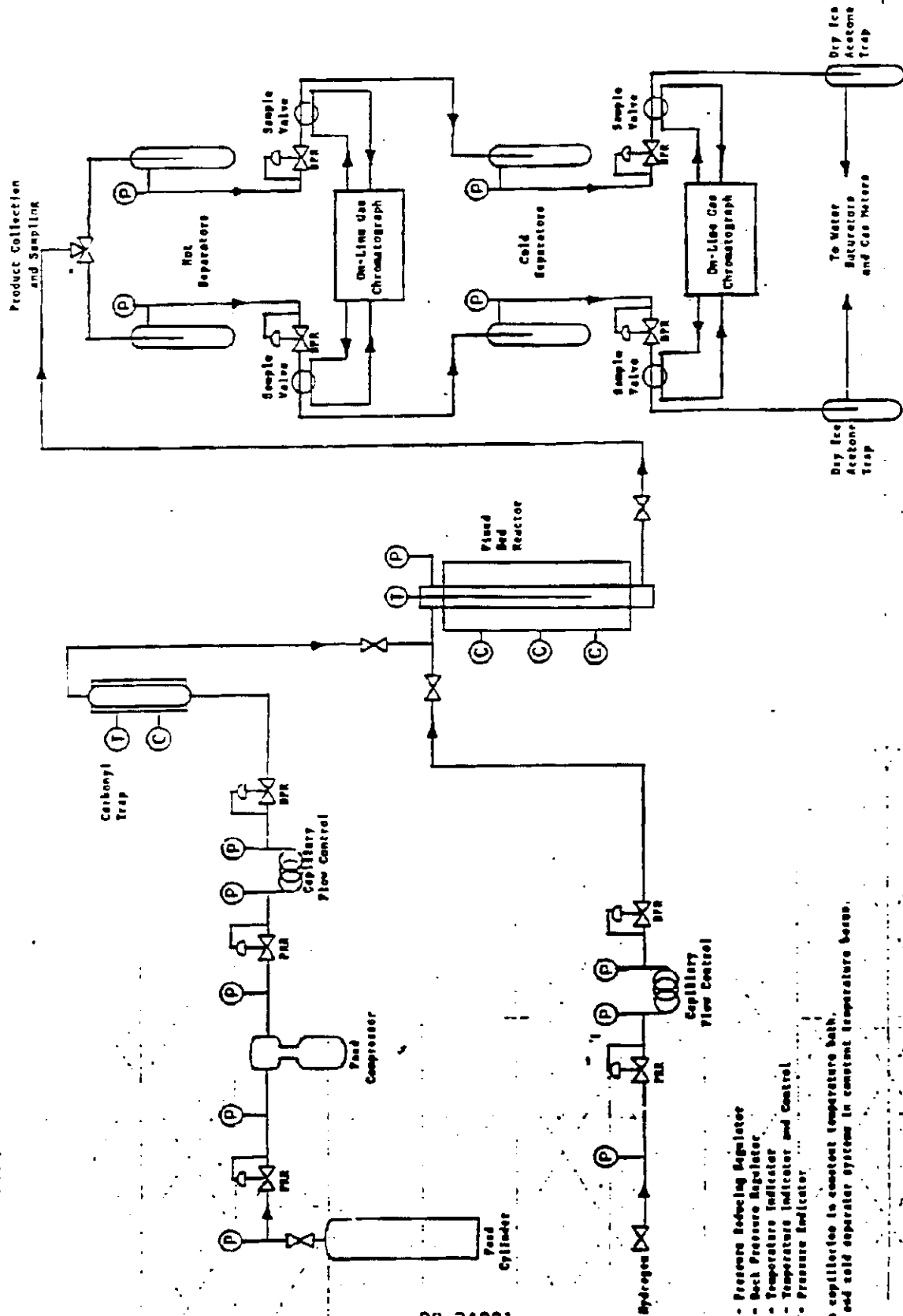


Figure 1

FISCHER-TROPSCH CATALYSE TEST PLANT  
PROCESS FLOW DIAGRAM  
PART I



88-34221

- PFR - Pressure Reducing Regulator
- BPR - Back Pressure Regulator
- T - Temperature Indicator
- C - Temperature Indicator and Control
- P - Pressure Indicator

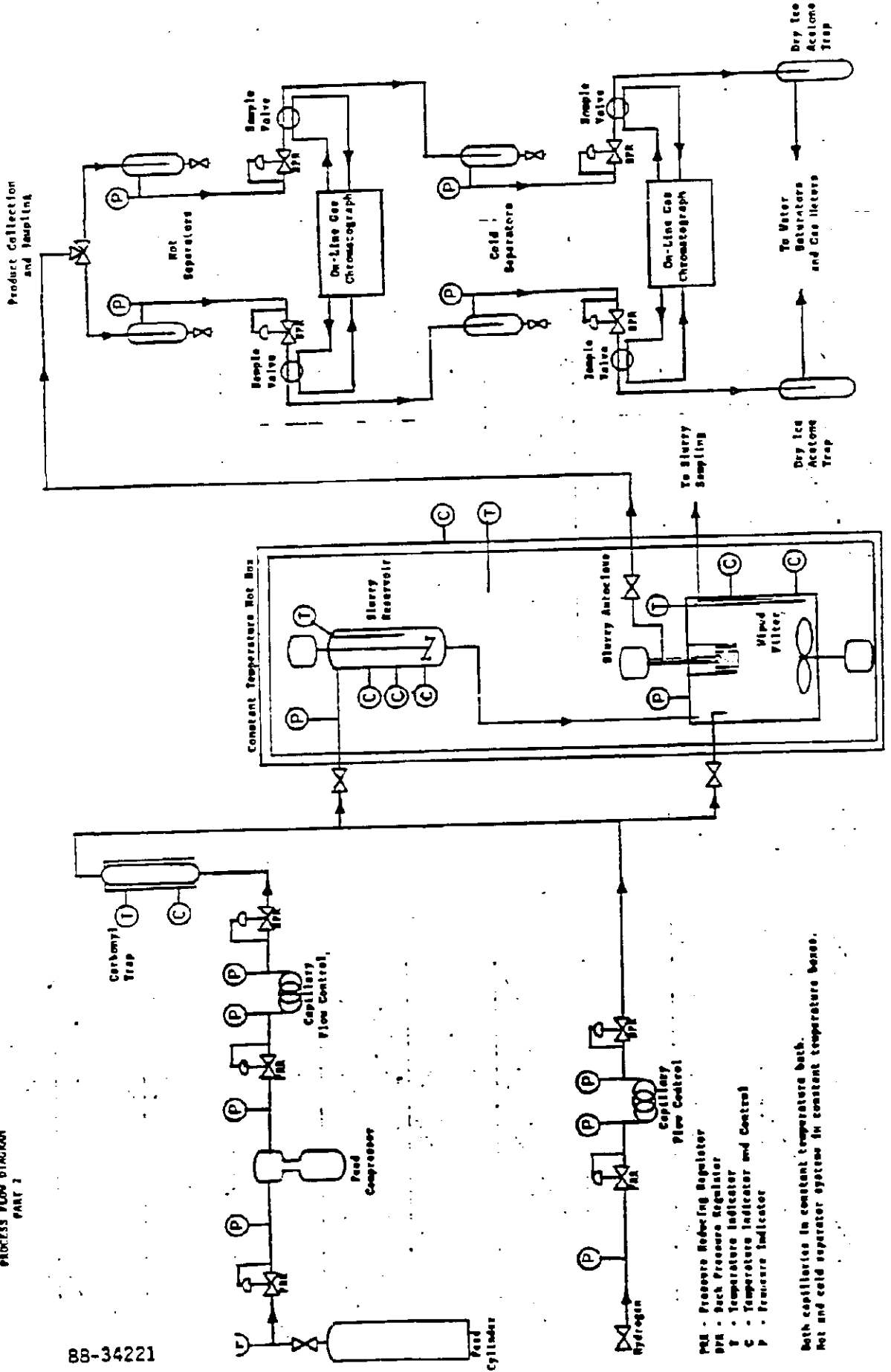
Both capillaries in constant temperature bath.  
Hot and cold separator system in constant temperature bath.

Figure 2-1. Integrated Fischer-Tropsch Pilot Plant

Figure 2

FISCHER TROPSCH CATALYST TEST PLANT  
PROCESS FLOW DIAGRAM  
PART 2

BB-34221



- P&R - Pressure Reducing Regulator
- PR - Back Pressure Regulator
- T - Temperature Indicator and Control
- C - Pressure Indicator

Both capillaries in constant temperature bath.  
Hot and cold separator systems in constant temperature bases.

Figure 3

**MOBIL MCSG-4 IRON CATALYST**

CO + H<sub>2</sub> CONVERSION

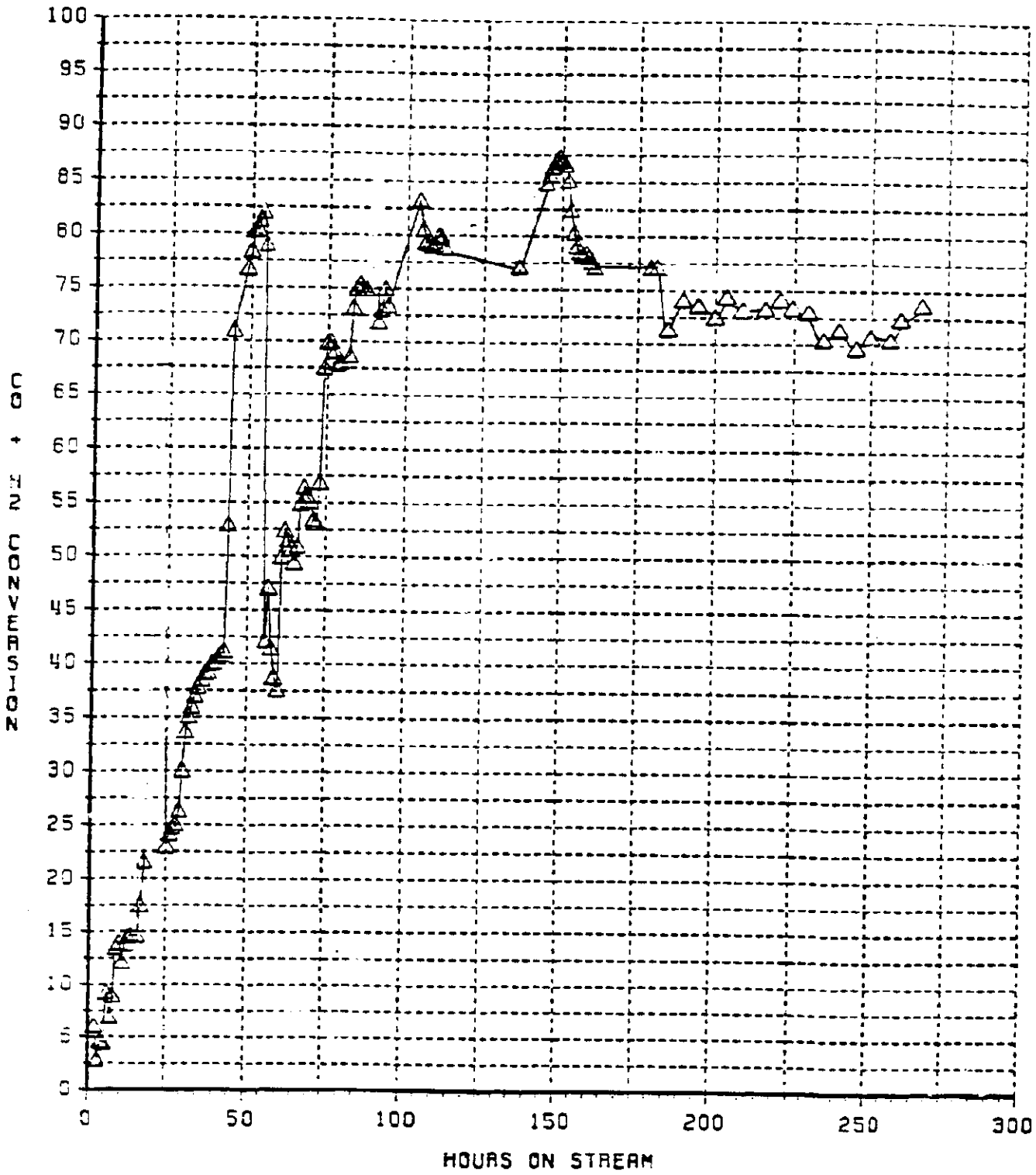


Figure 4

**MOBIL MCSG-4 IRON CATALYST**

CO<sub>2</sub> SELECTIVITY

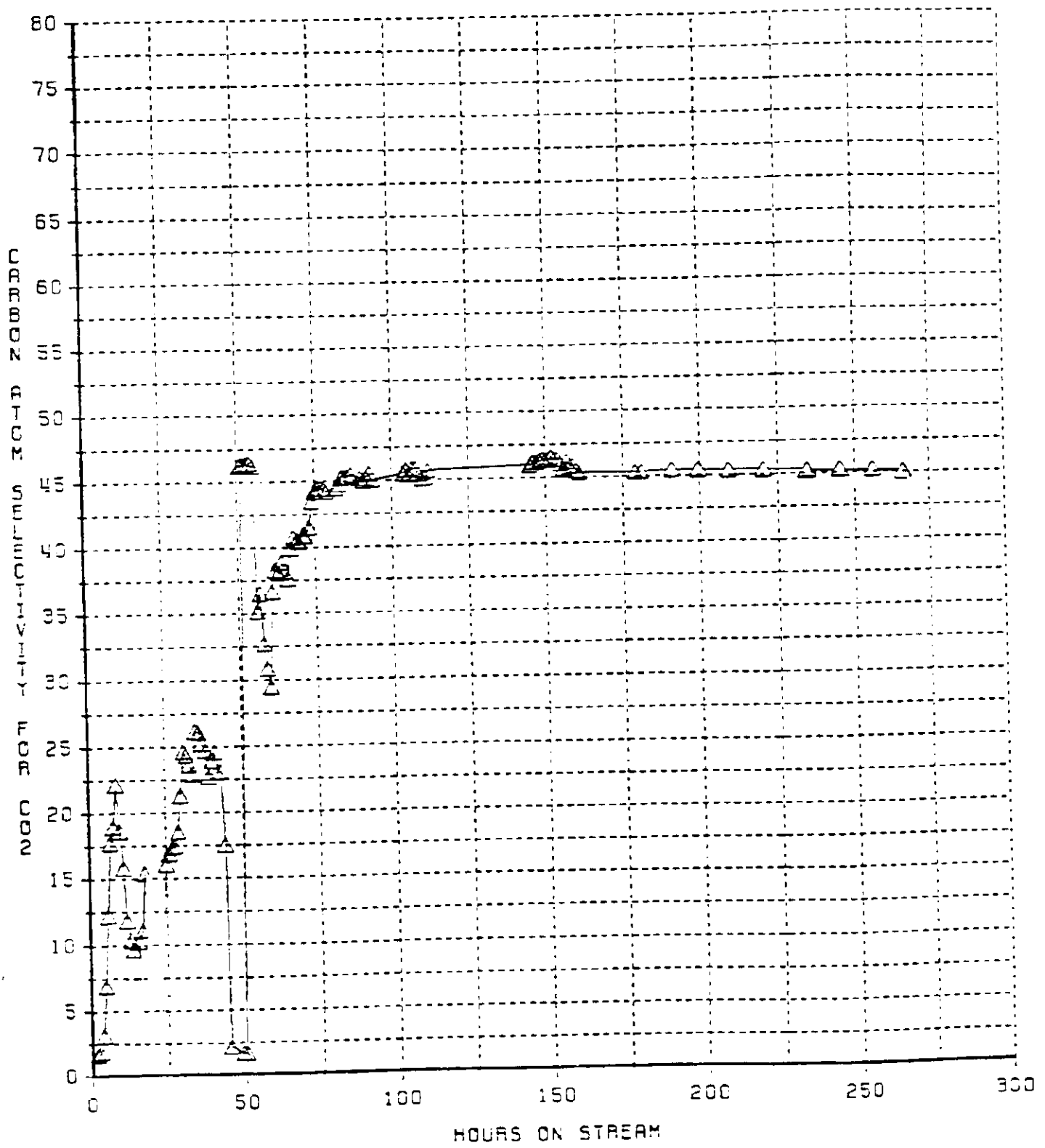


Figure 5

**MOBIL MCSG-4 IRON CATALYST**

**C<sub>1</sub> SELECTIVITY**

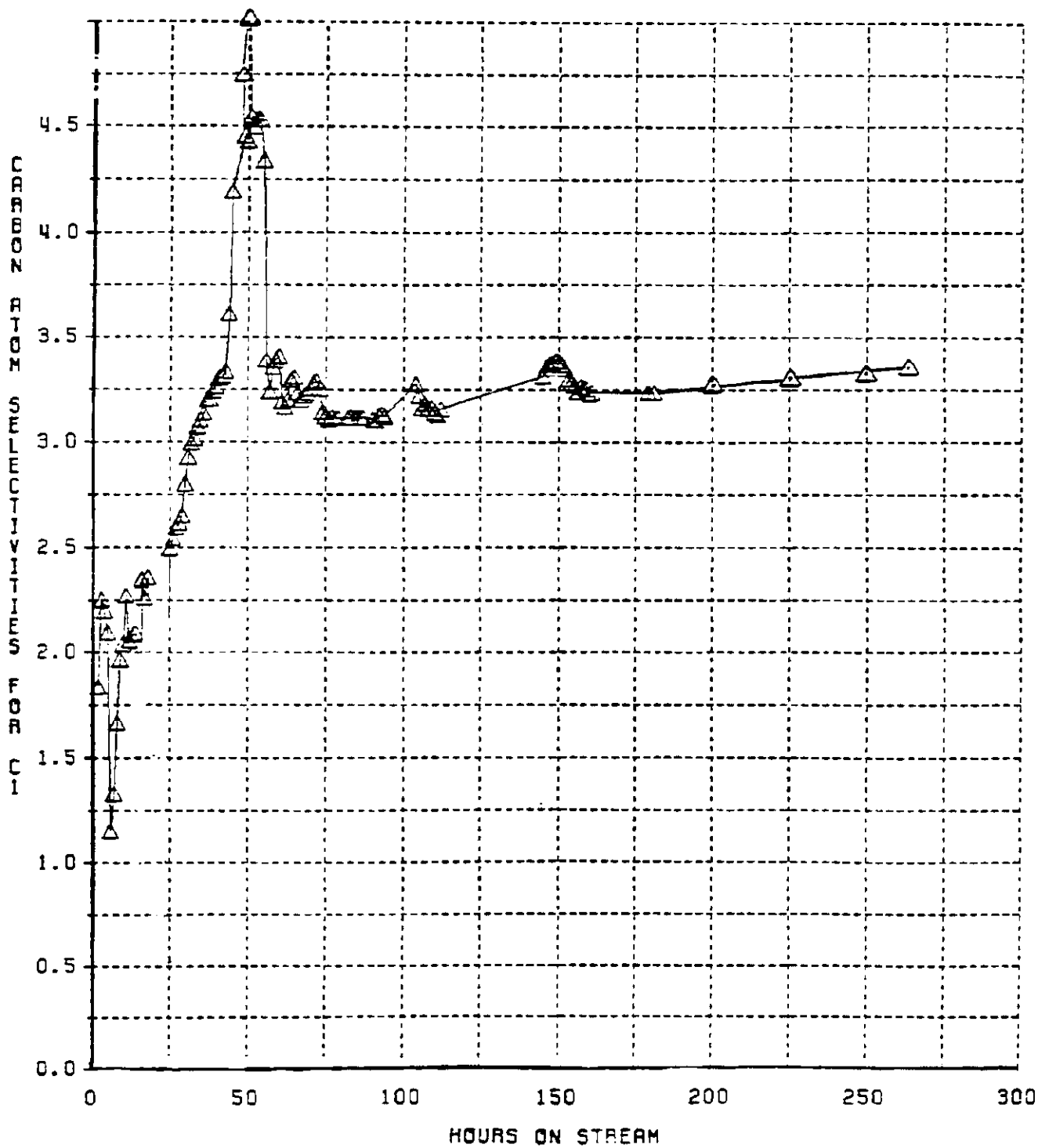


Figure 6

**MOBIL MCSG-4 IRON CATALYST**

H<sub>2</sub> TO CO USAGE RATIO

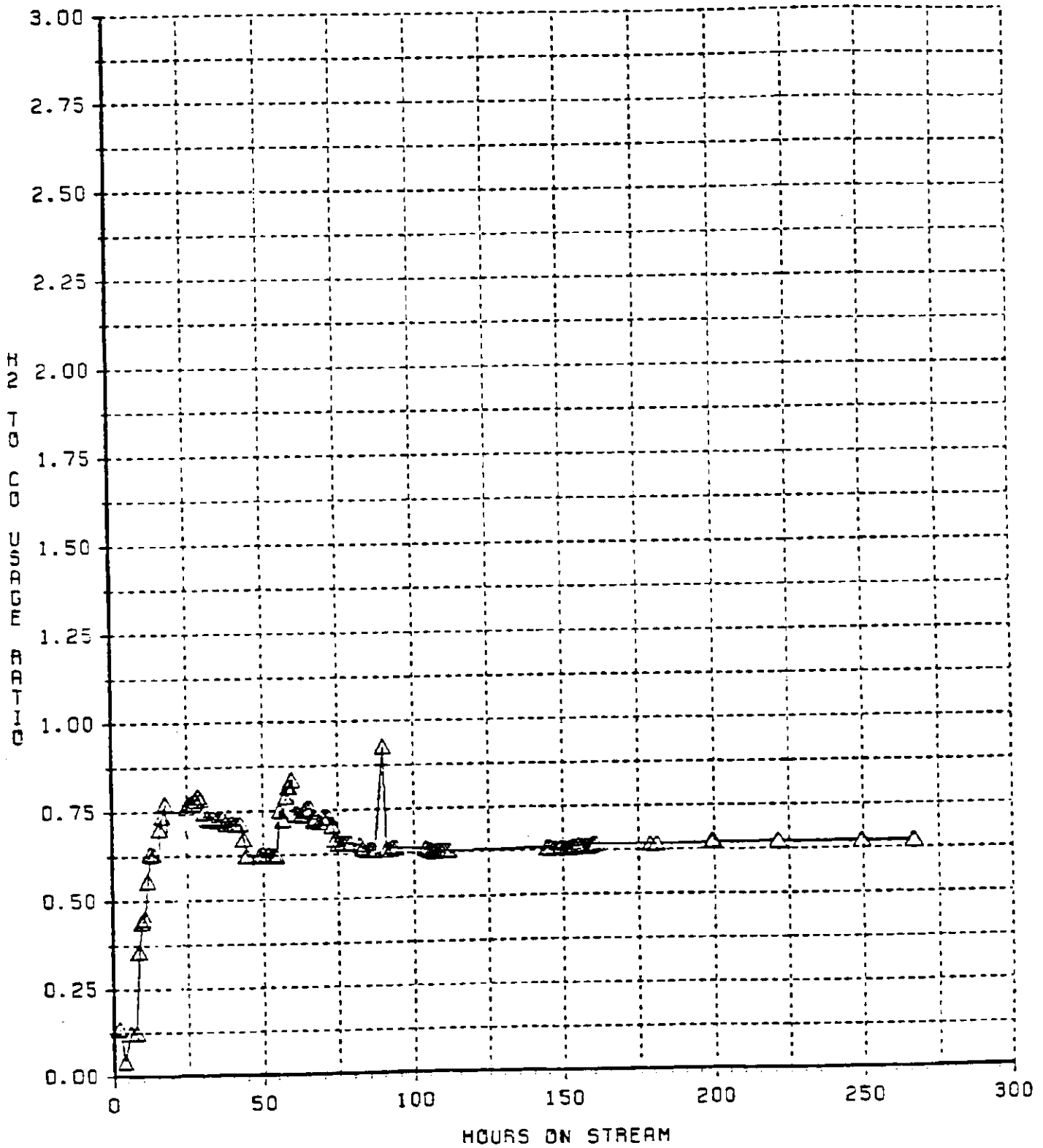


Figure 7

**MOBIL MCSG-4 IRON CATALYST**

**PROPYLENE TO PROPANE RATIO**

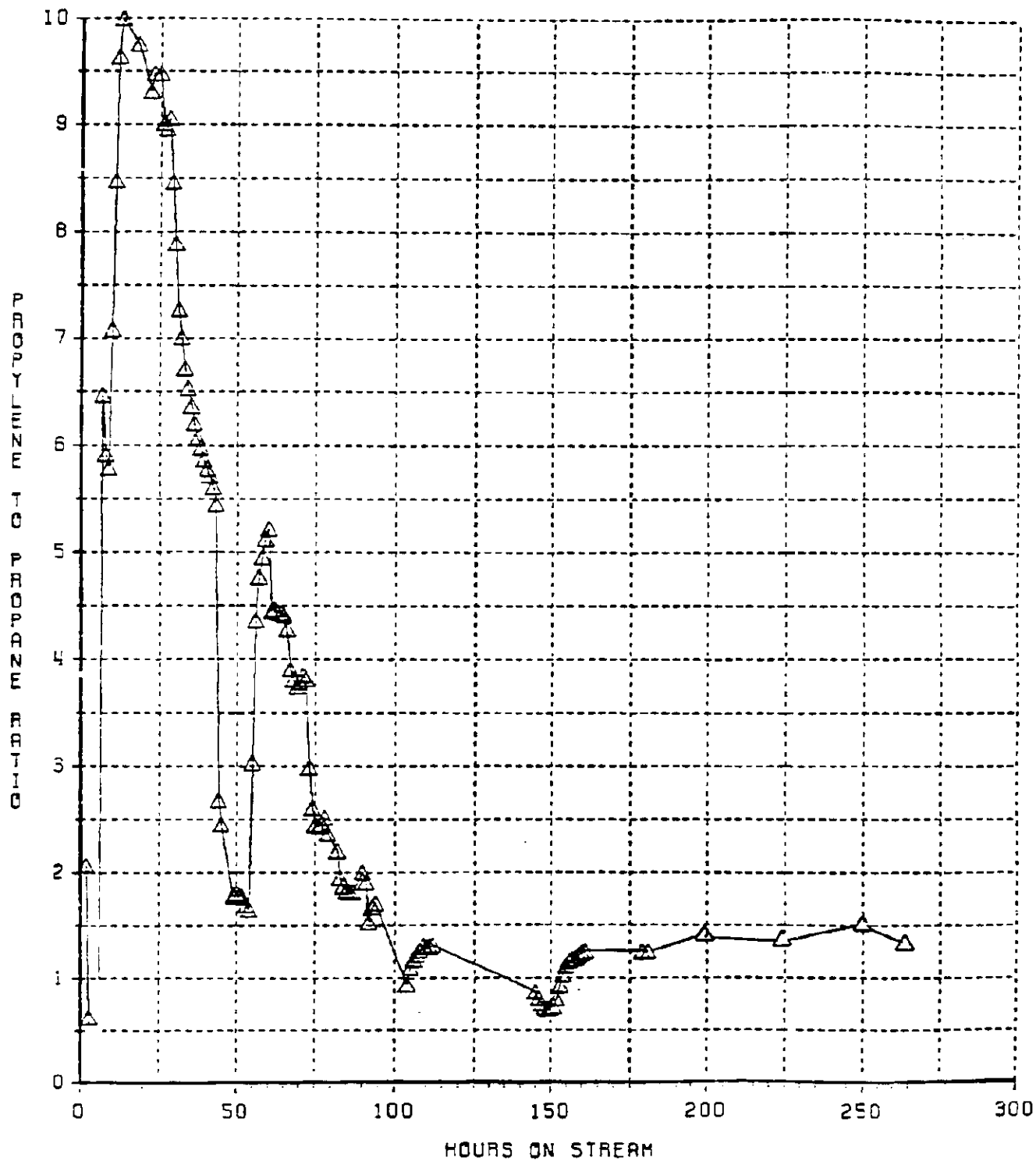


Figure 8

MOBIL MCSG-4 IRON CATALYST

H<sub>2</sub> TO CO RATIO

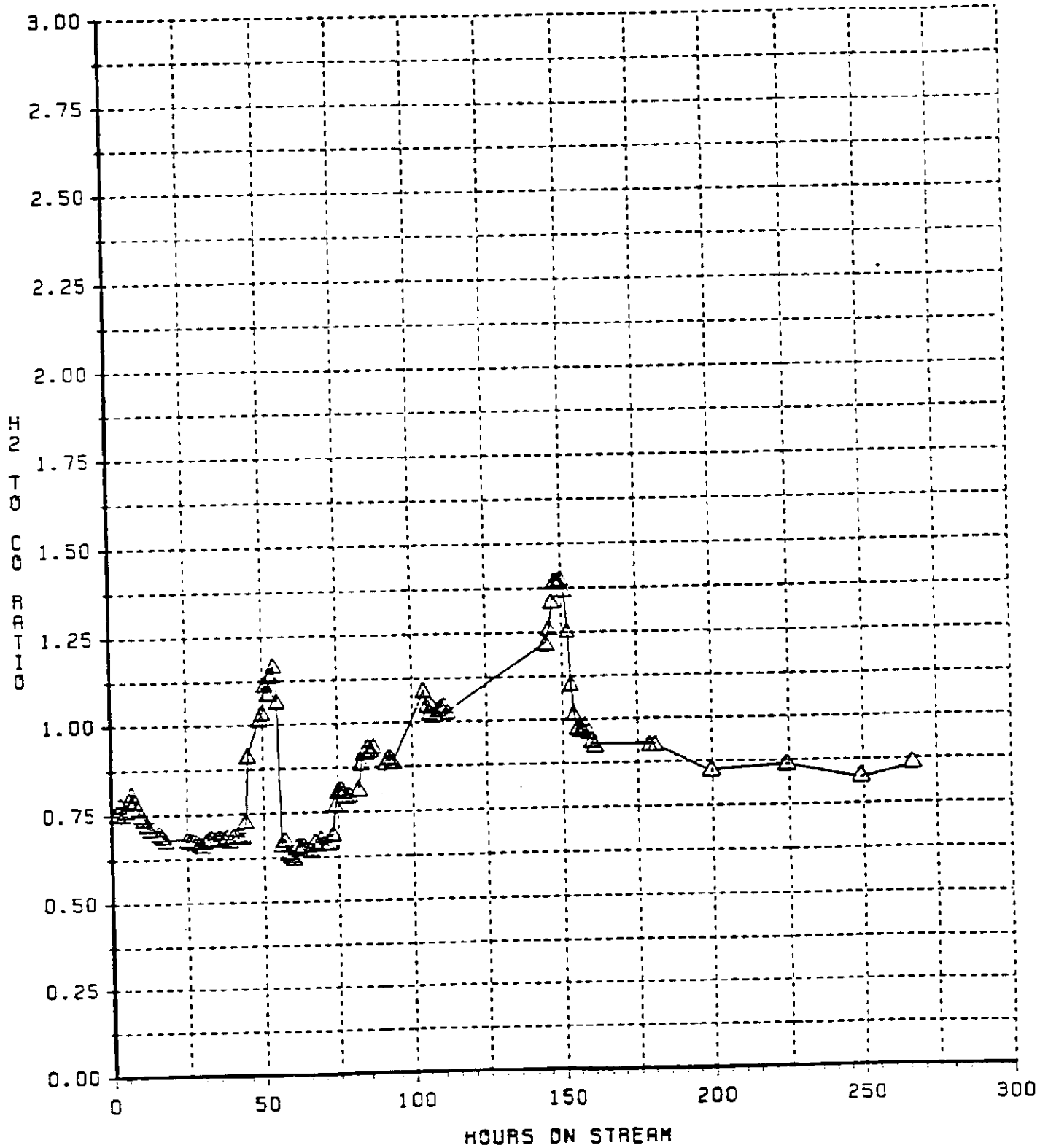




Figure 9

TITRATION OF  $\text{Fe}(\text{NO}_3)_3$  SOLUTION (5 WT. % Fe) WITH 1N  $\text{Na}_2\text{CO}_3$  SOLUTION

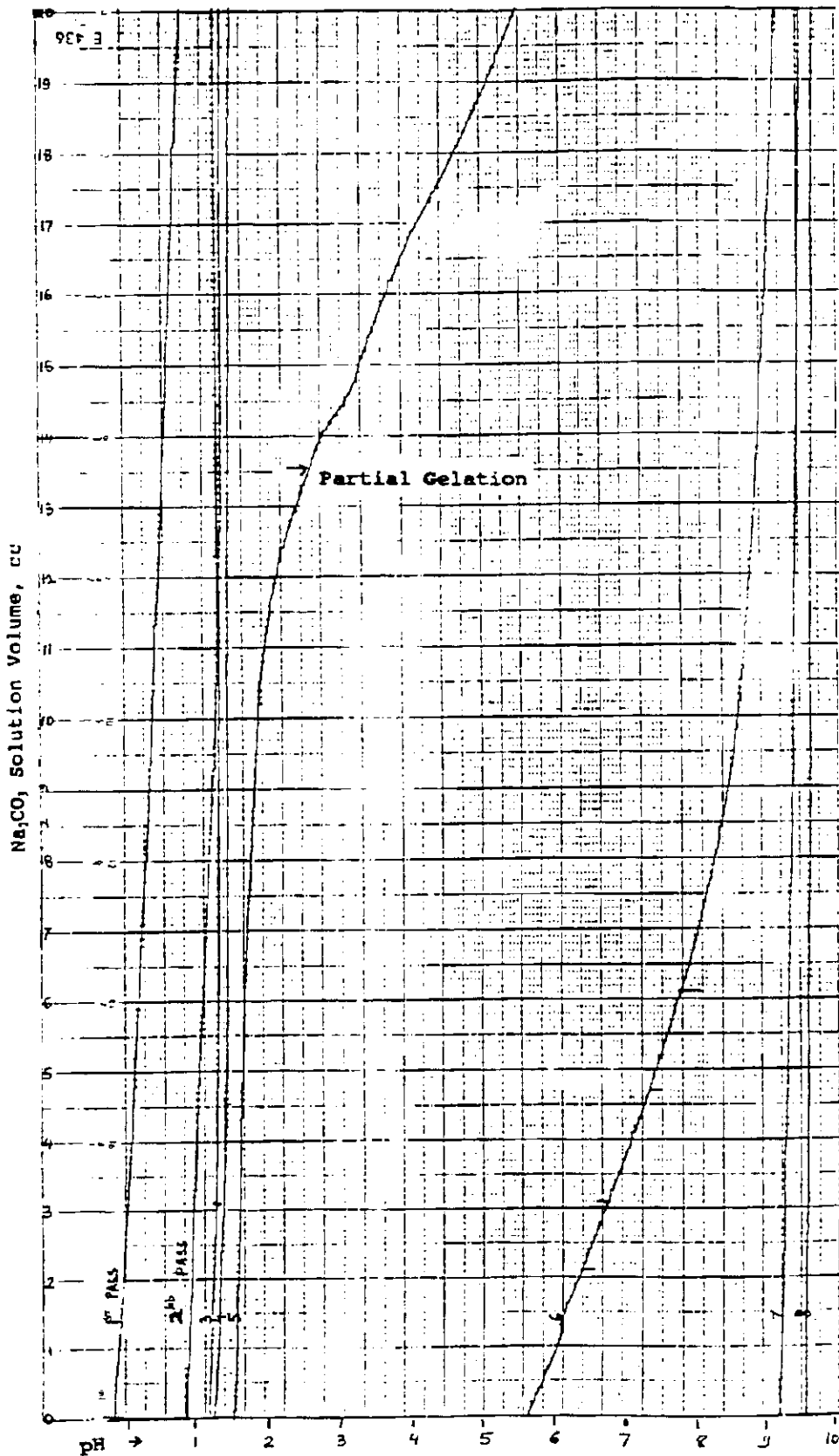


Figure 10

TITRATION OF  $\text{Fe}(\text{NO}_3)_3$  SOLUTION (5 WT. % Fe) WITH 1N  $\text{NH}_4\text{OH}$  SOLUTION

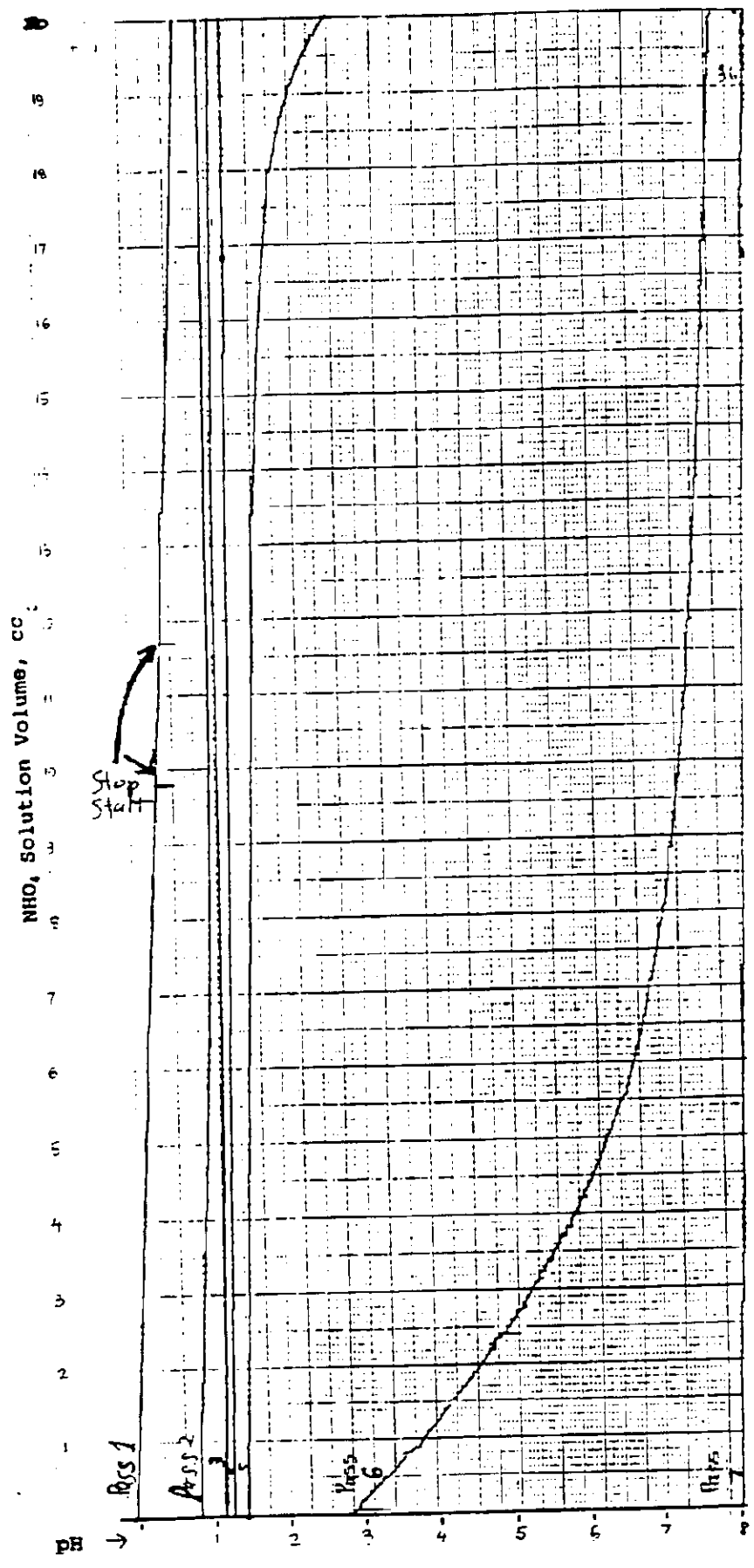


Figure 11

TITRATION OF  $\text{Cu}(\text{NO}_3)_2$  SOLUTION (0.5 WT. % Cu) WITH 1N  $\text{Na}_2\text{CO}_3$  SOLUTION

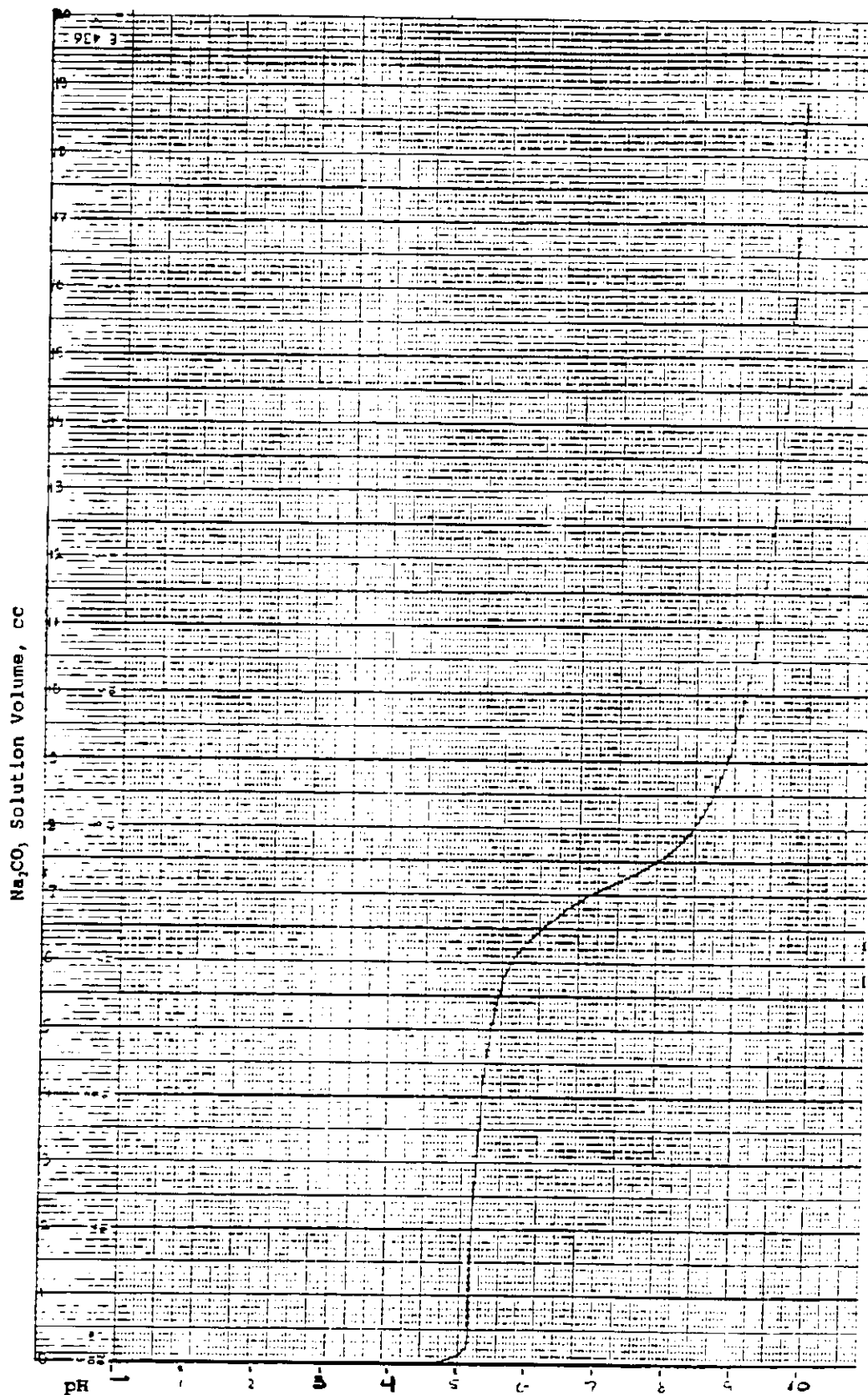


Figure 12

TITRATION OF  $\text{Cu}(\text{NO}_3)_2$  SOLUTION (0.5 WT. % Cu) WITH 1N  $\text{NH}_4\text{OH}$  SOLUTION

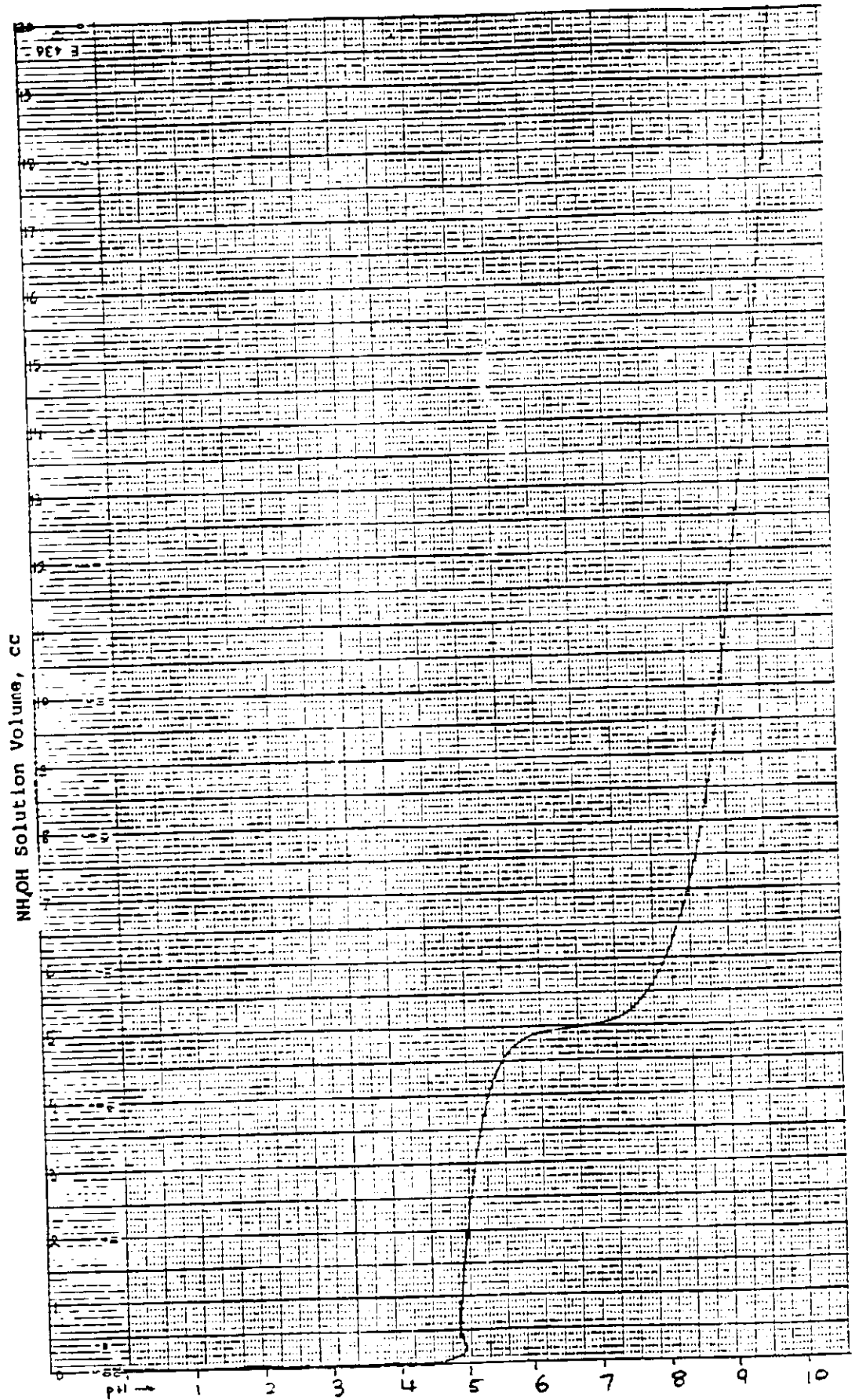


Figure 13

REPRODUCIBILITY OF DSC EXPERIMENTS WITH pH=4.3 CATALYST 5685-53

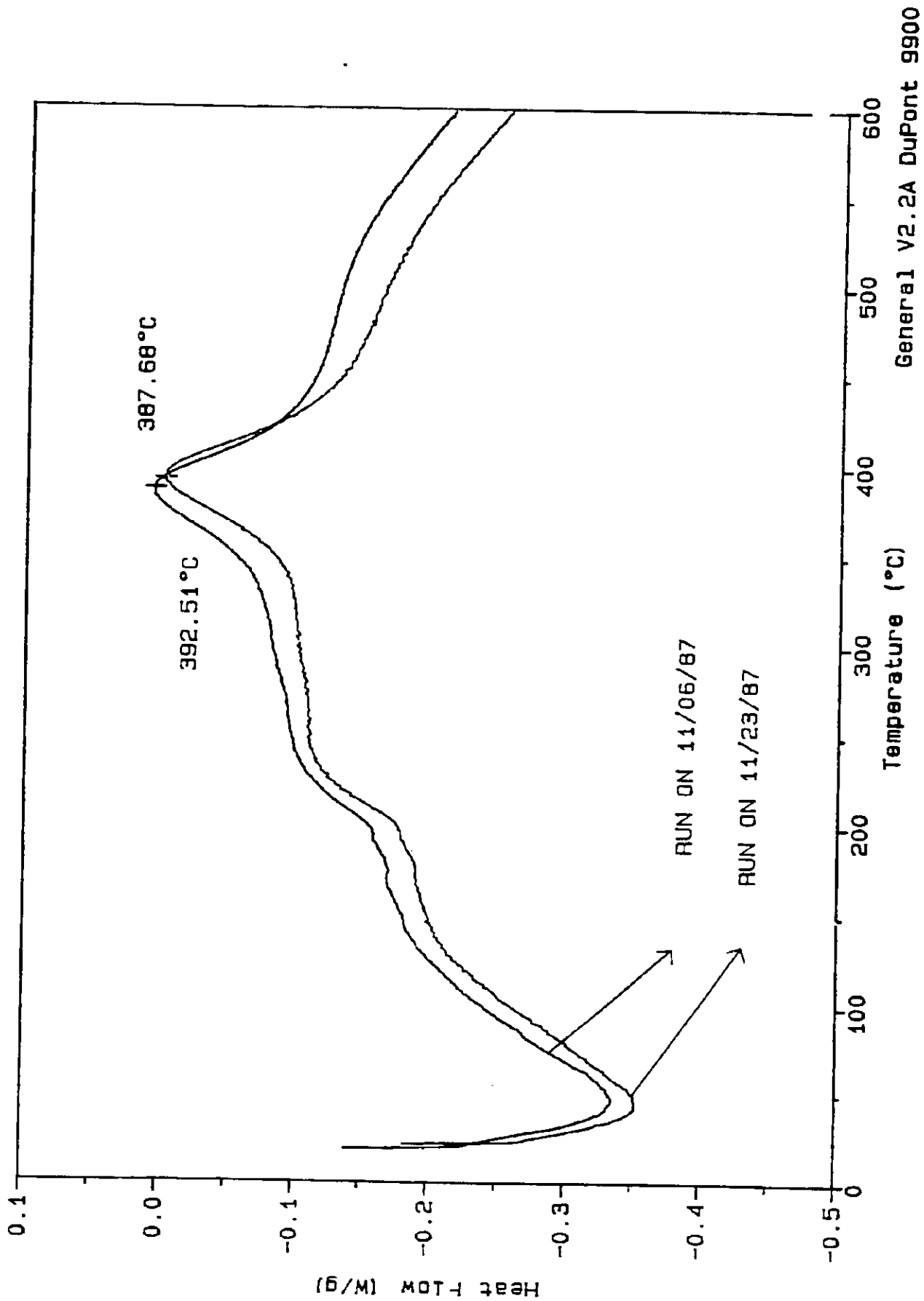
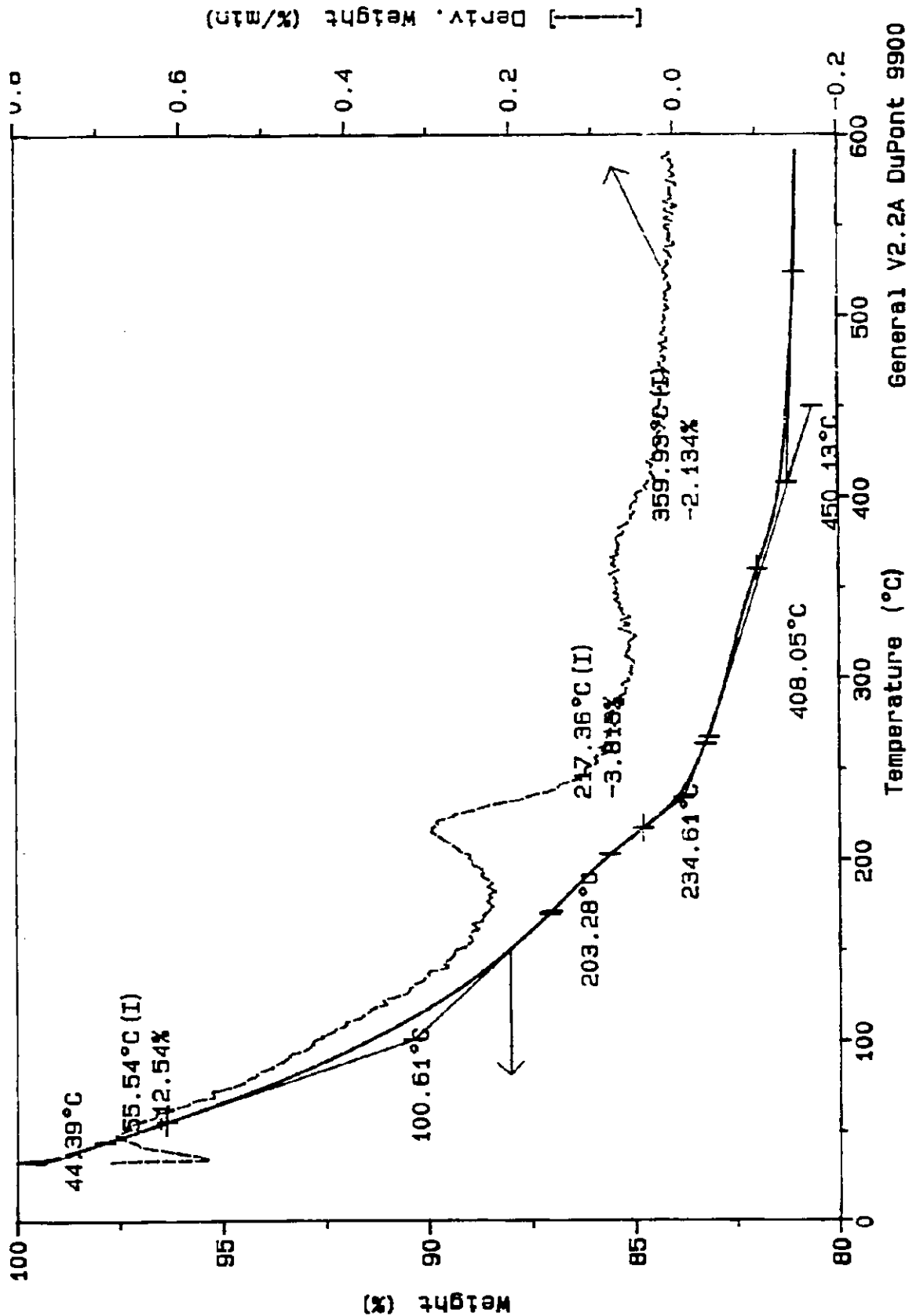


Figure 14 TGA OF pH-4.3 CATALYST 5685-53



**Figure 15** REPRODUCIBILITY OF DSC EXPERIMENTS WITH PH-3.5 CATALYST 5685-61

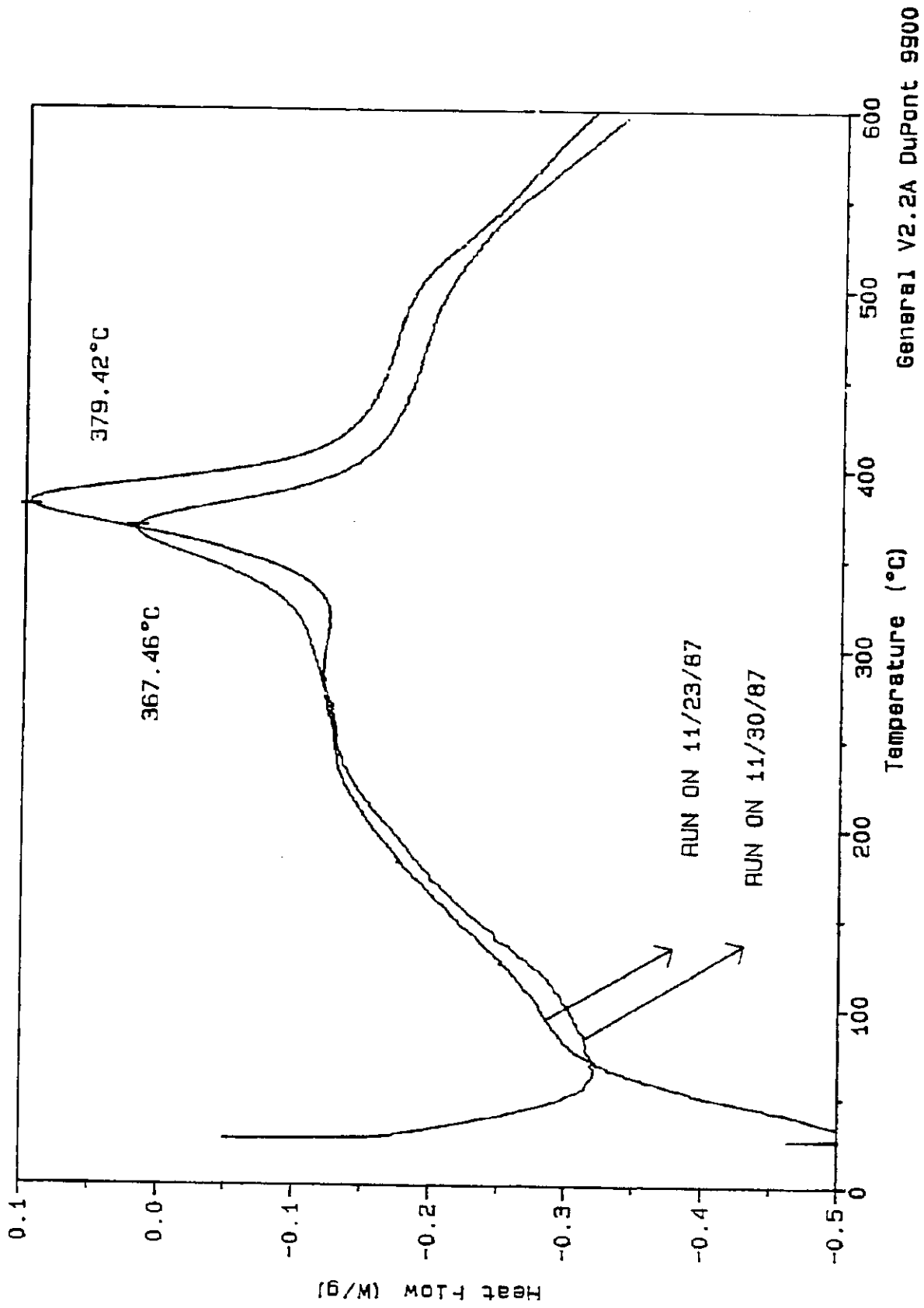


Figure 16 TGA OF pH=3.5 CATALYST 5685-61

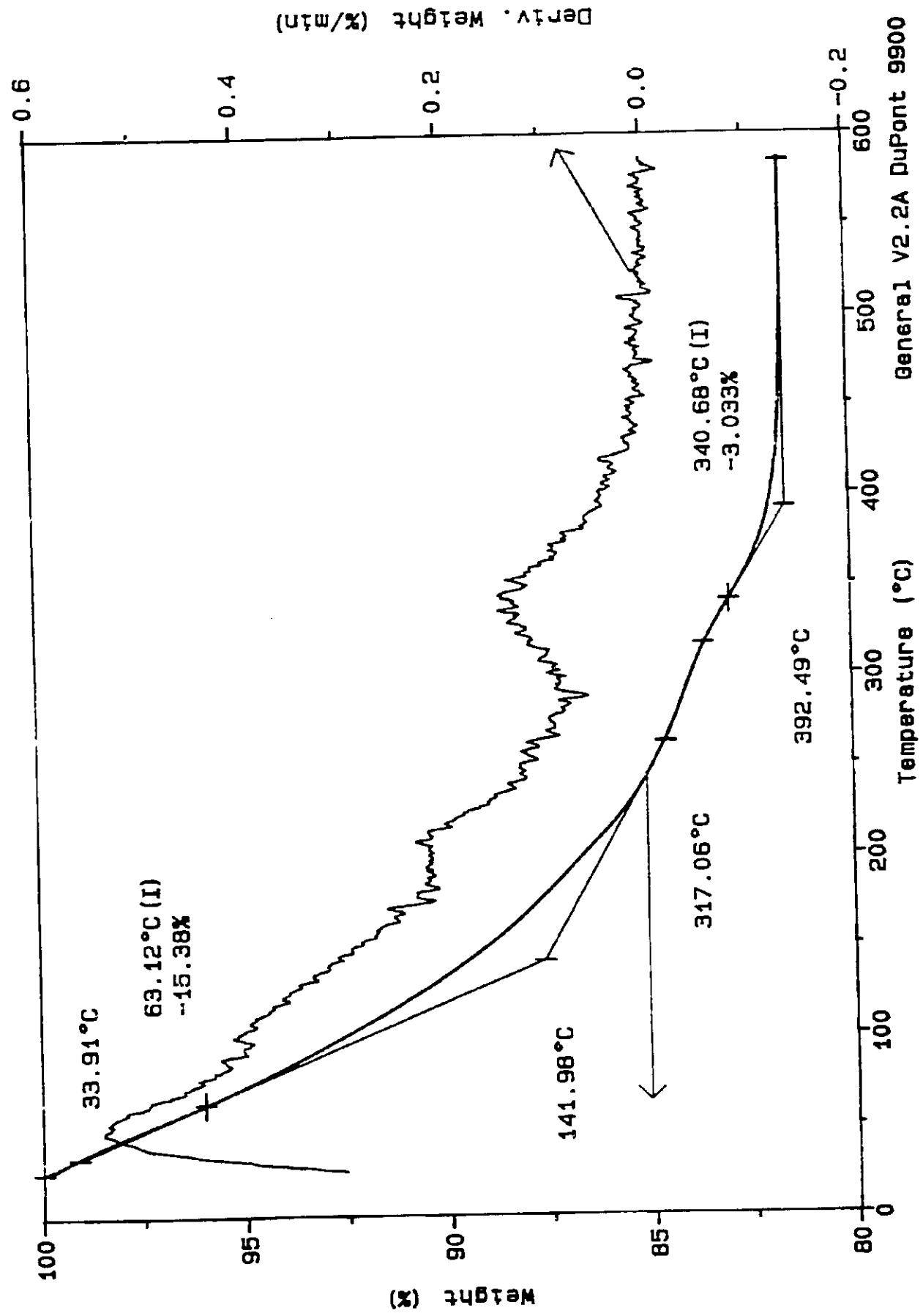




Figure 17 REPRODUCIBILITY OF TPR FOR Fe/Cu CATALYSTS (5685-145)

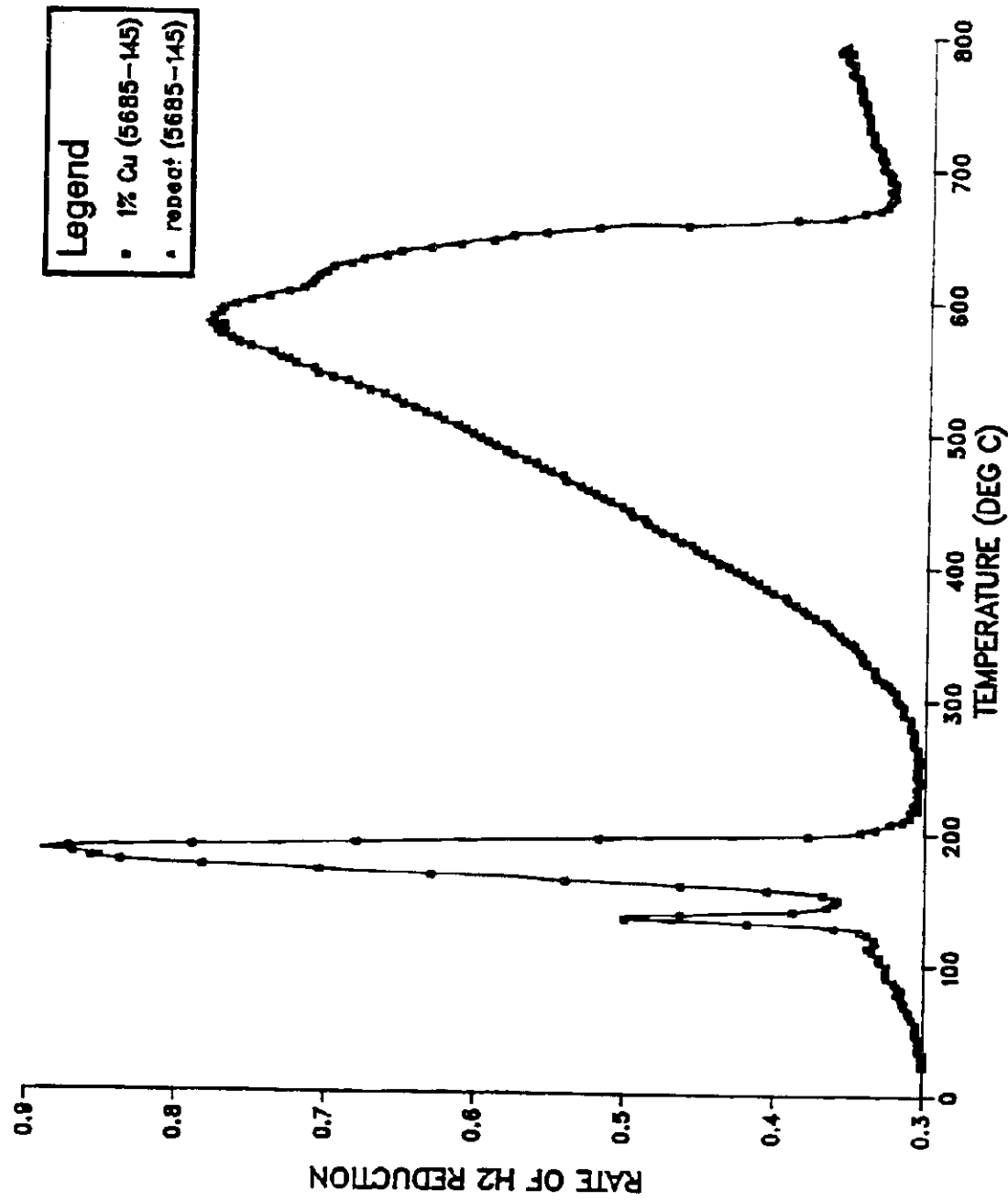


Figure 18 XRD OF pH=6.5 CATALYST 5685-145 AFTER H<sub>2</sub> TREATMENT AT 150°C

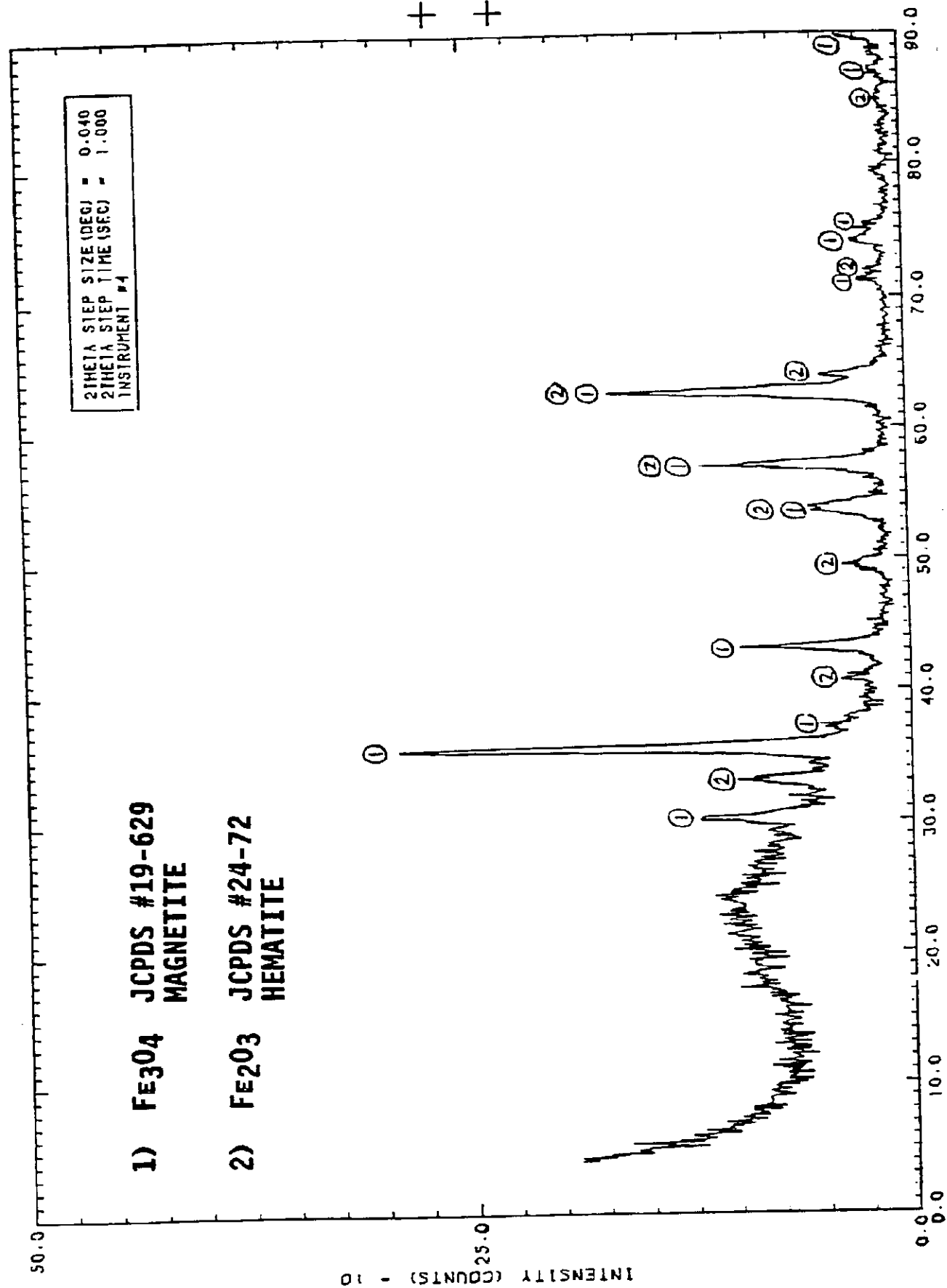


Figure 19 XRD OF pH-6.5 CATALYST 5685-145 AFTER H<sub>2</sub> TREATMENT AT 250°C

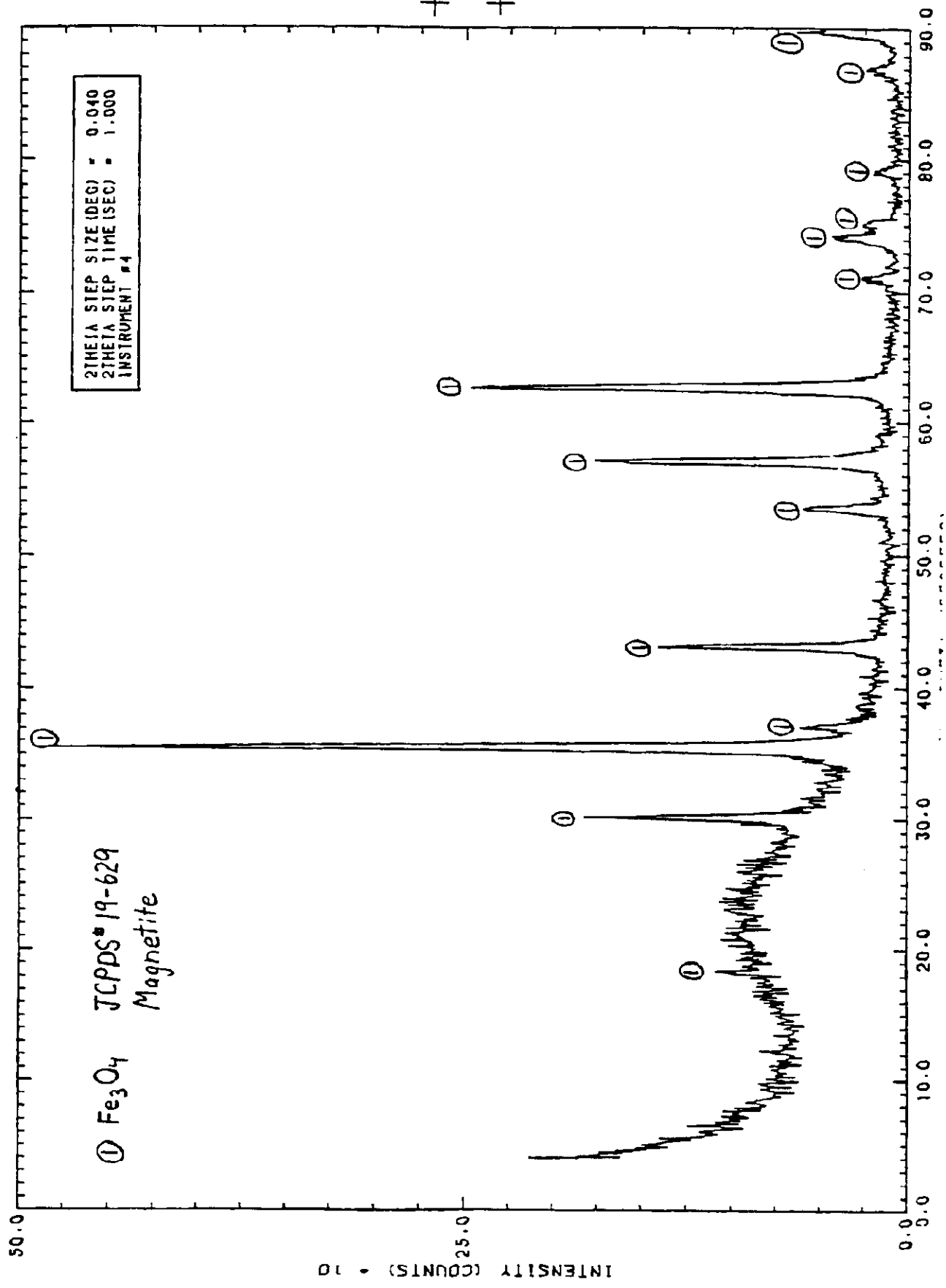
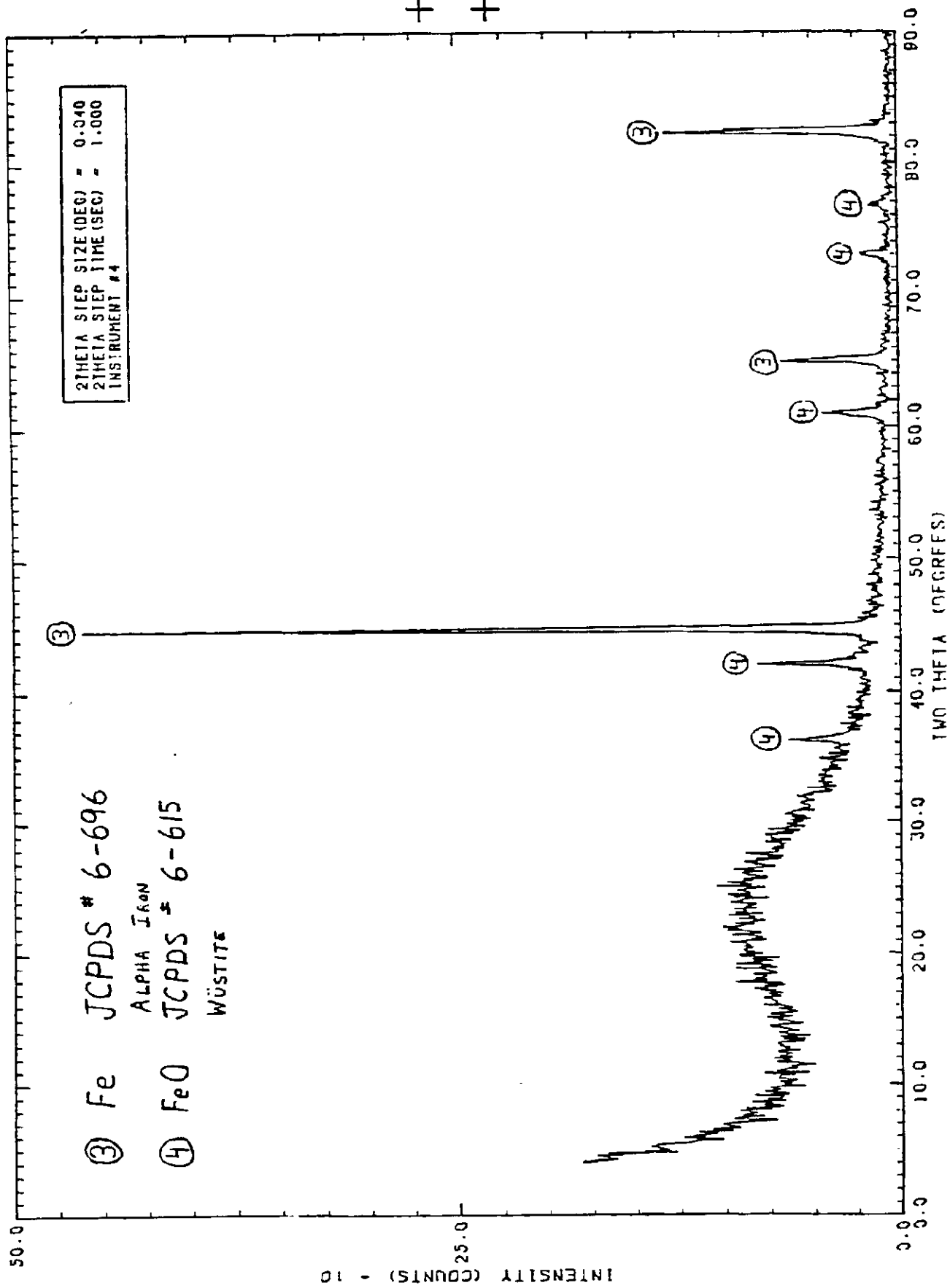
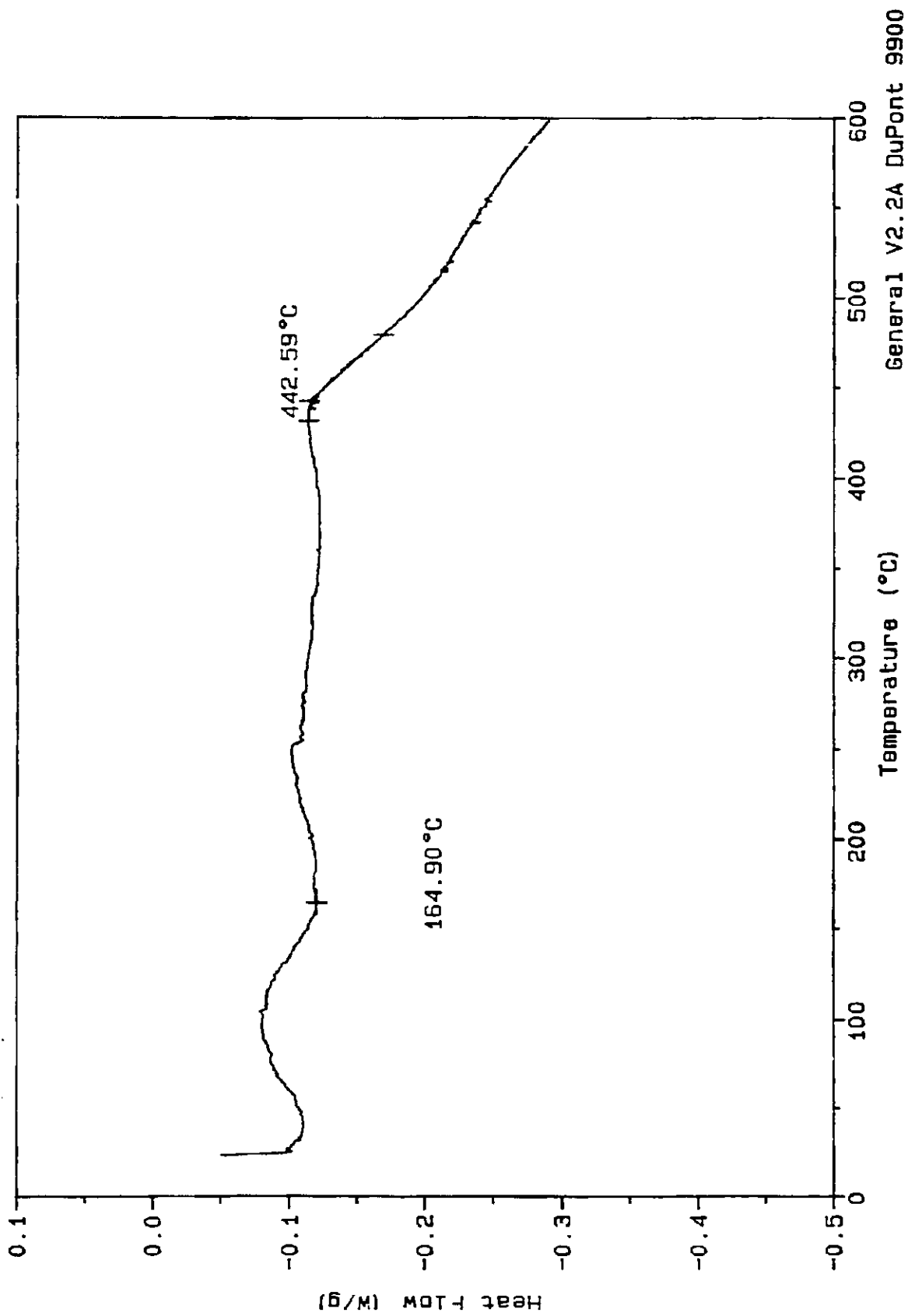


Figure 20 XRD OF PH-6.5 CATALYST 5685-145 AFTER H<sub>2</sub> TREATMENT AT 800°C



**Figure 21** DSC OF pH=9.7 CATALYST 5685-75 PRECIPITATED BY  $\text{Na}_2\text{CO}_3$



**Figure 22** DSC OF pH=9.5 CATALYST 5685-111 PRECIPITATED BY NH<sub>4</sub>OH

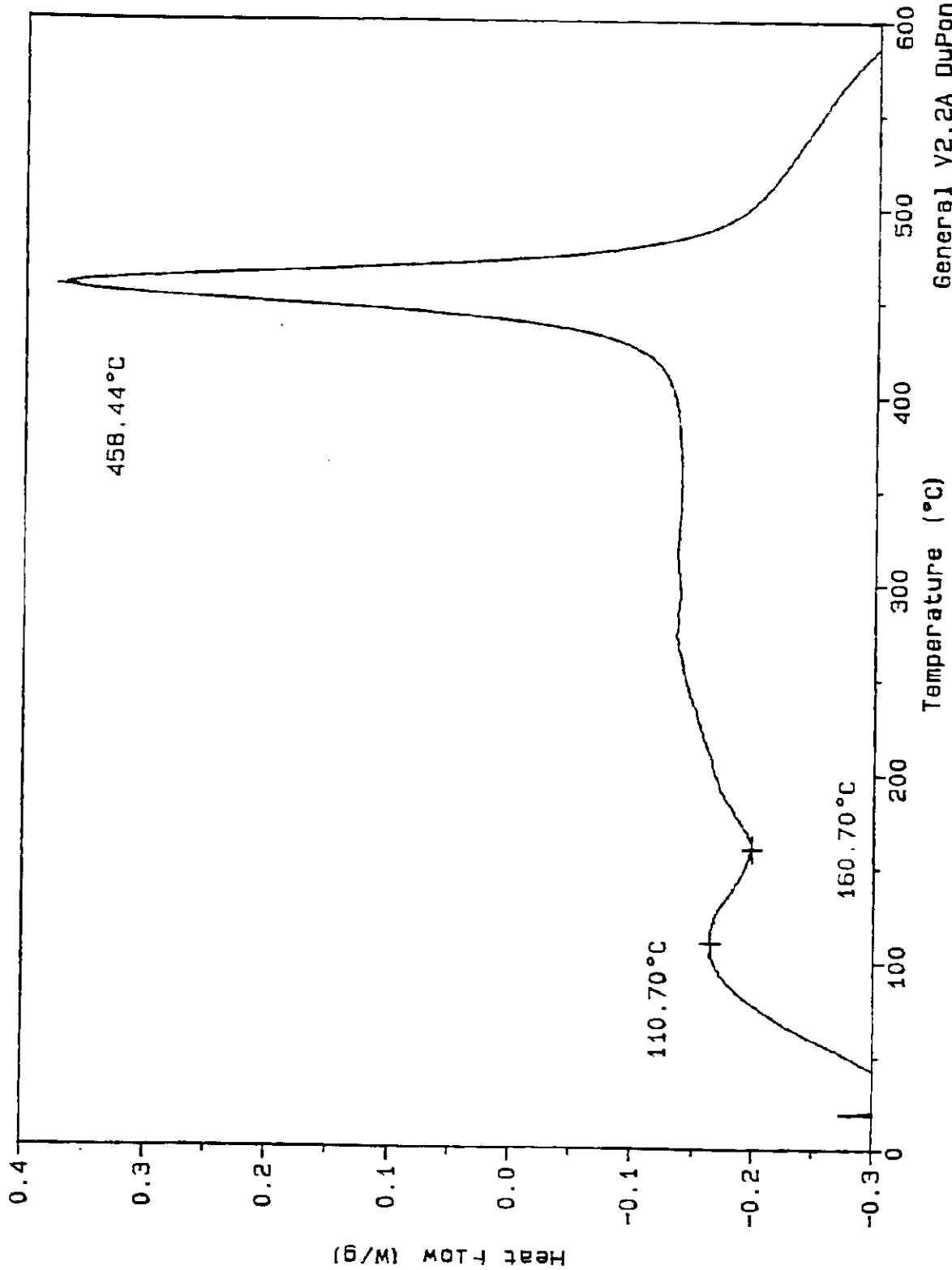


Figure 23 ISOTHERMAL DSC AT 350°C OF PH-9.5 CATALYST 5685-111 PRECIPITATED BY  $\text{NH}_4\text{OH}$

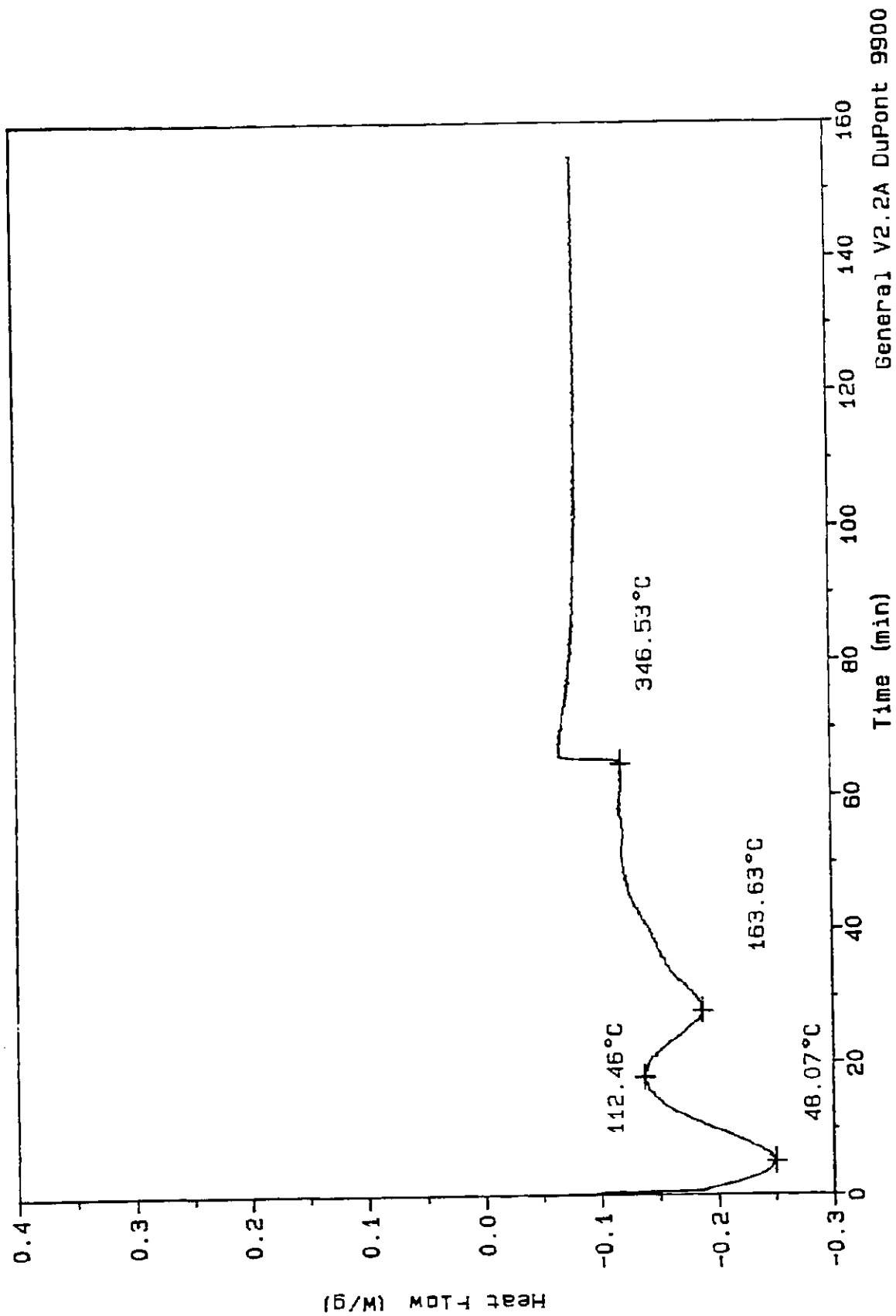


Figure 24 STANDARD DSC AFTER ISOTHERMAL DSC OF pH=9.5 CATALYST 5685-111 PRECIPITATED

BY NH<sub>4</sub>OH

