

006945

To Ron Murarka  
 From Yvon Boudreau  
 Date May 3, 1984  
 Subject Special Geology Sample

*File B-7-409*

Purpose: Evaluation of a special sample from Geology for Zn preactivation.

- Conclusions:
- Due to a low Zn head the preactivation of Zn was reduced in the Pb circuit.
  - Pb recovery was low when it was compared to a 2BCD ore (2BCD reagent/optimization test #1) of similar Pb and Zn calculated heads.
  - The Ag recovery in the Pb circuit was lower because of a lower Ag feed grade.

Recommendation: Further work with this ore be suspended at this time.

Analysis and Discussion:

The results of this test were compared to the results of 2BCD reagent optimization standard test #1. The graphs show a significant decrease in the grades from this test over the results of 2BCD tests. The reason for having such a big difference in the results is that the calculated Pb and Zn feeds are lower on this special sample. Table I shows results of both tests.

\* For further details see: Graphs - Appendix A  
 Printouts - Appendix B  
 Reagent Schemes - Appendix C

TABLE I

TEST NUMBER	RECOVERY @ 25% GRADE		RECOVERY @ 25% Pb GRADE	CALC. HEAD ASSAY		Zn IN Pb @ 25% Pb GRADE	RATE CONSTANT K	
	Pb	Zn	Ag	Pb FEED	Zn FEED		Pb	Zn
1 Special Sample	79	69	50	1.93	2.37	11	0.73	0.83
1 2BCD Rea/Optim.	84	92	62	3.03	5.24	16	0.70	0.61

*Yvon Boudreau*  
 Yvon Boudreau  
 Metallurgical Technician



APPENDIX A

GRAPHS

CYPRUS ANVIL MINING CORPORATION

TEST No: 1

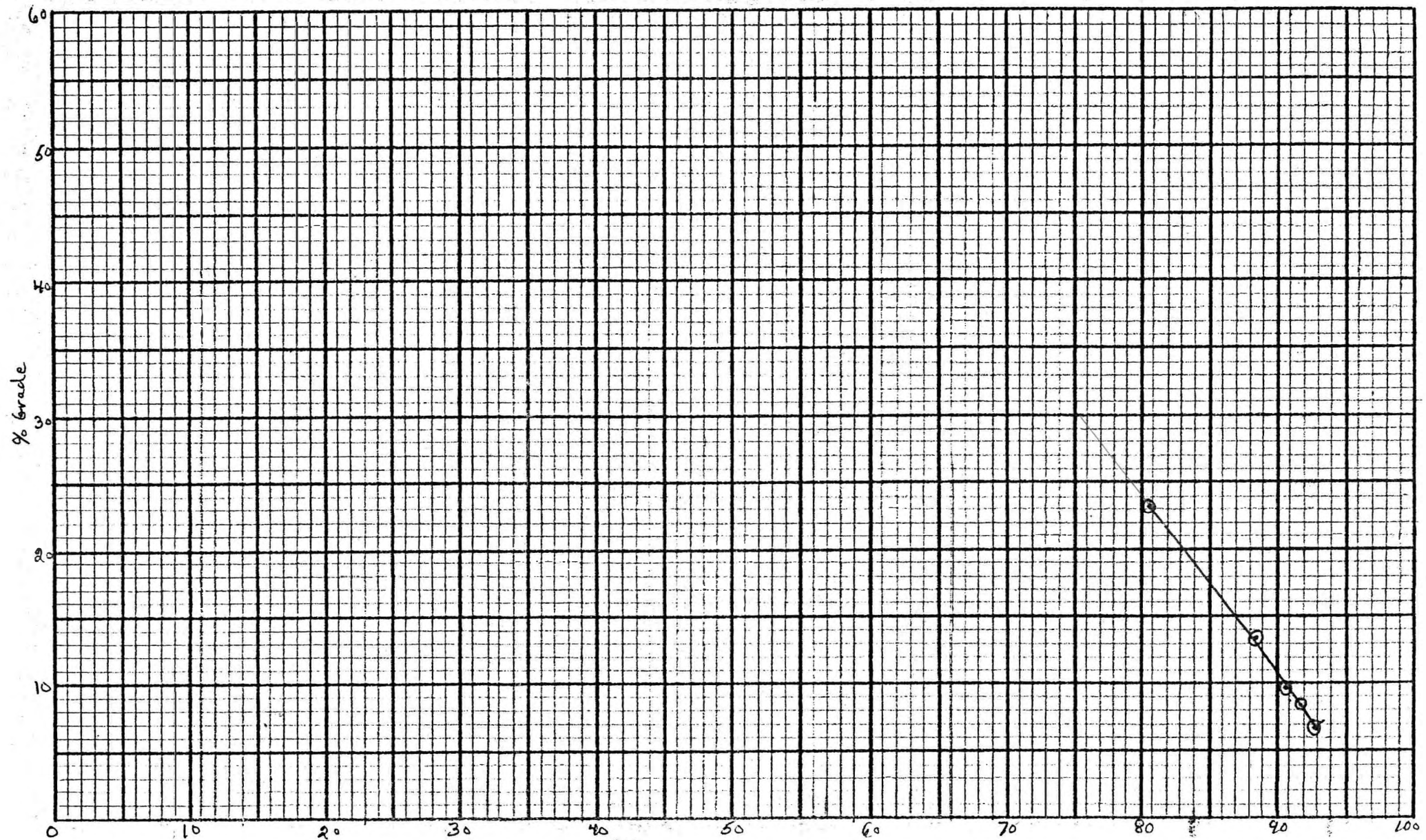
OBJECTIVE: Zn Preactivation Examination

DATE: April 27th, 1984

CONDITIONS: Pb circuit

TITLE: Special Geology Sample

LEGEND: ○ Test #1 Pb circuit



CYPRUS ANVIL MINING CORPORATION

TEST No: 1

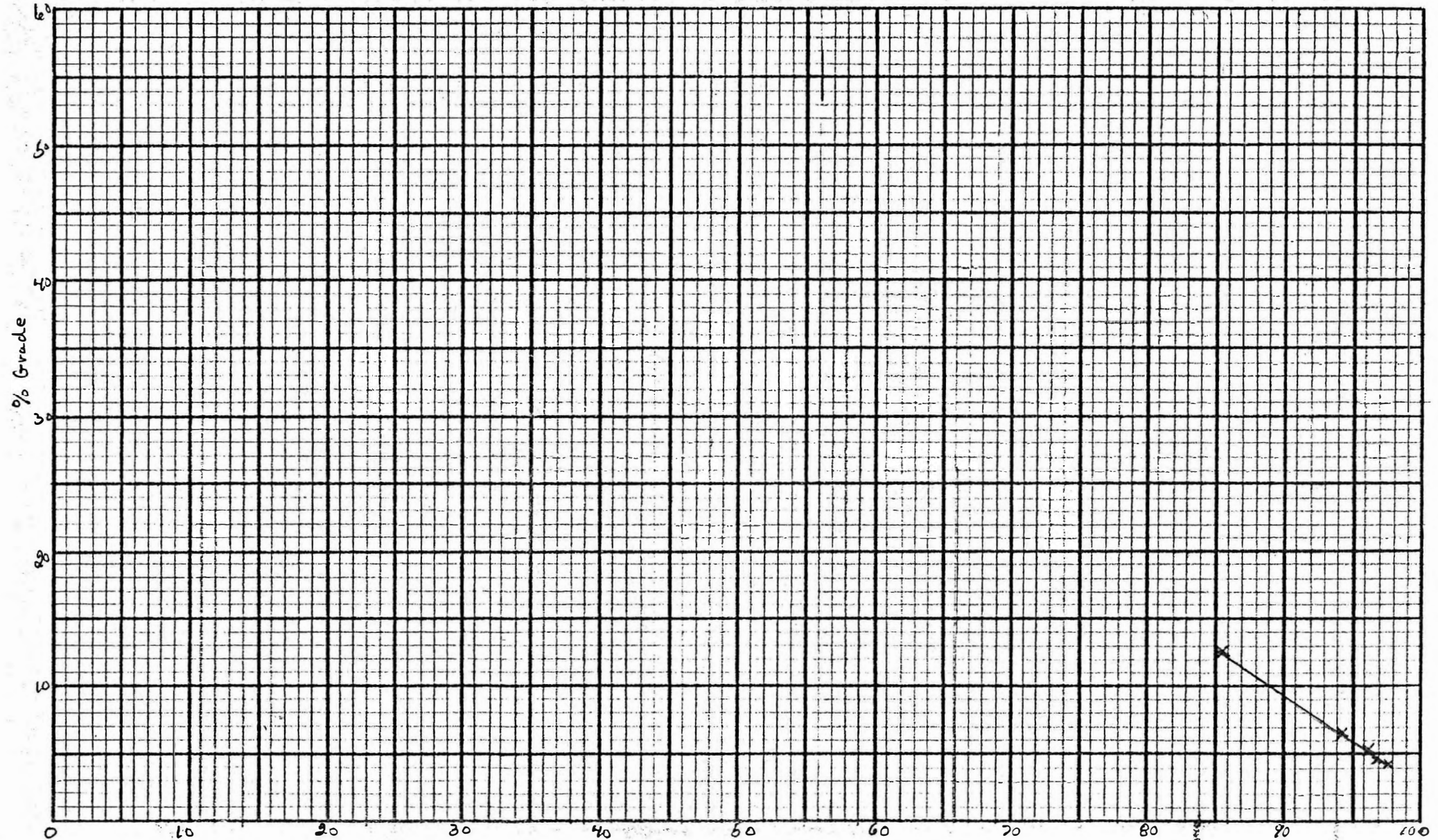
OBJECTIVE: Zn Preactivation Examination

DATE: April 27th, 1984

CONDITIONS: Zn Circuit

TITLE: Special Geology Sample

LEGEND: X Test#1 Zn Circuit



CYPRUS ANVIL MINING CORPORATION

TEST No: 1

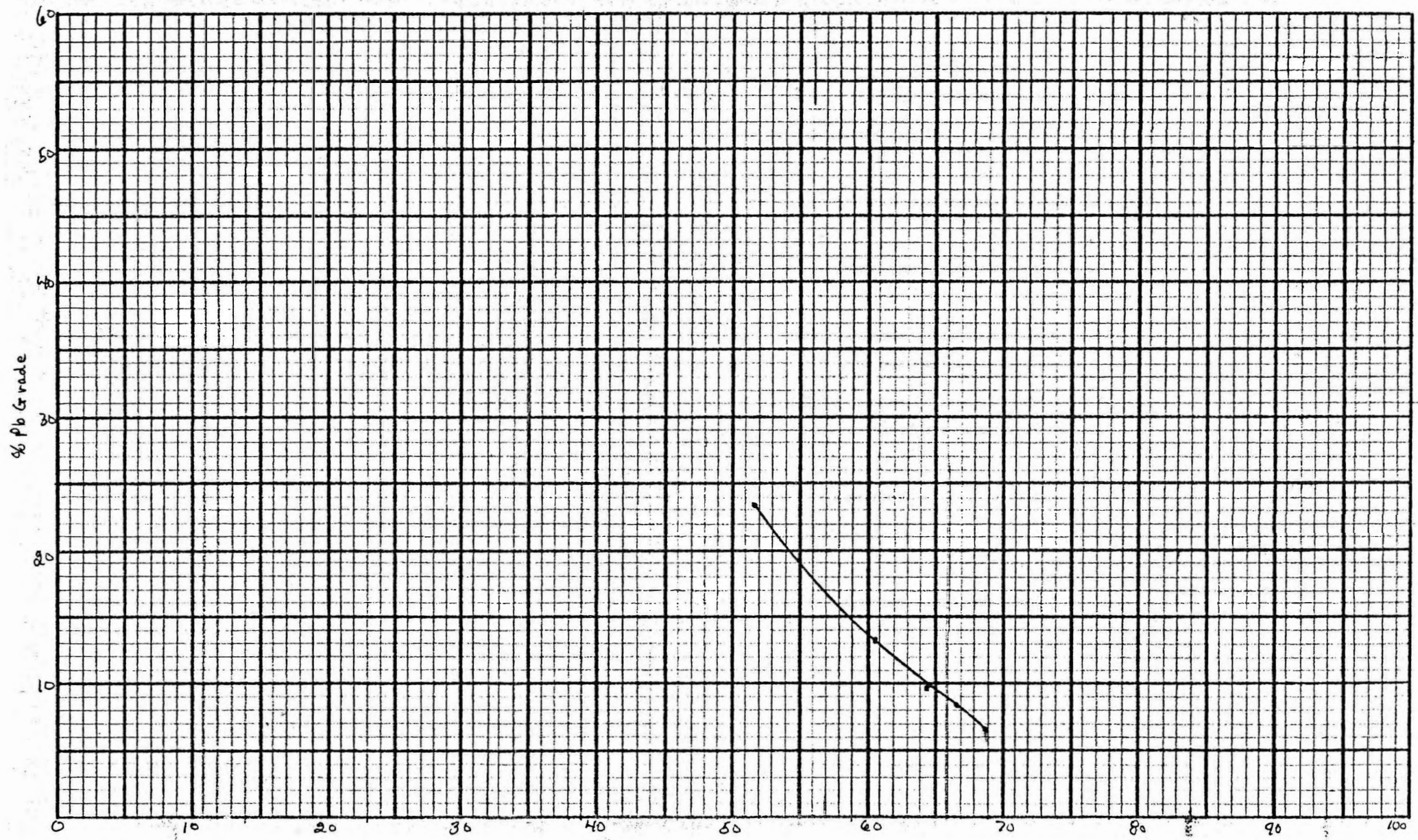
OBJECTIVE: Zn preactivation examination

DATE: April 27th, 1984

CONDITIONS: Ag in the Pb circuit

TITLE: Special Geology Sample

LEGEND: • Ag in the Pb circuit test #1



CYPRUS ANVIL MINING CORPORATION

TEST No: 1

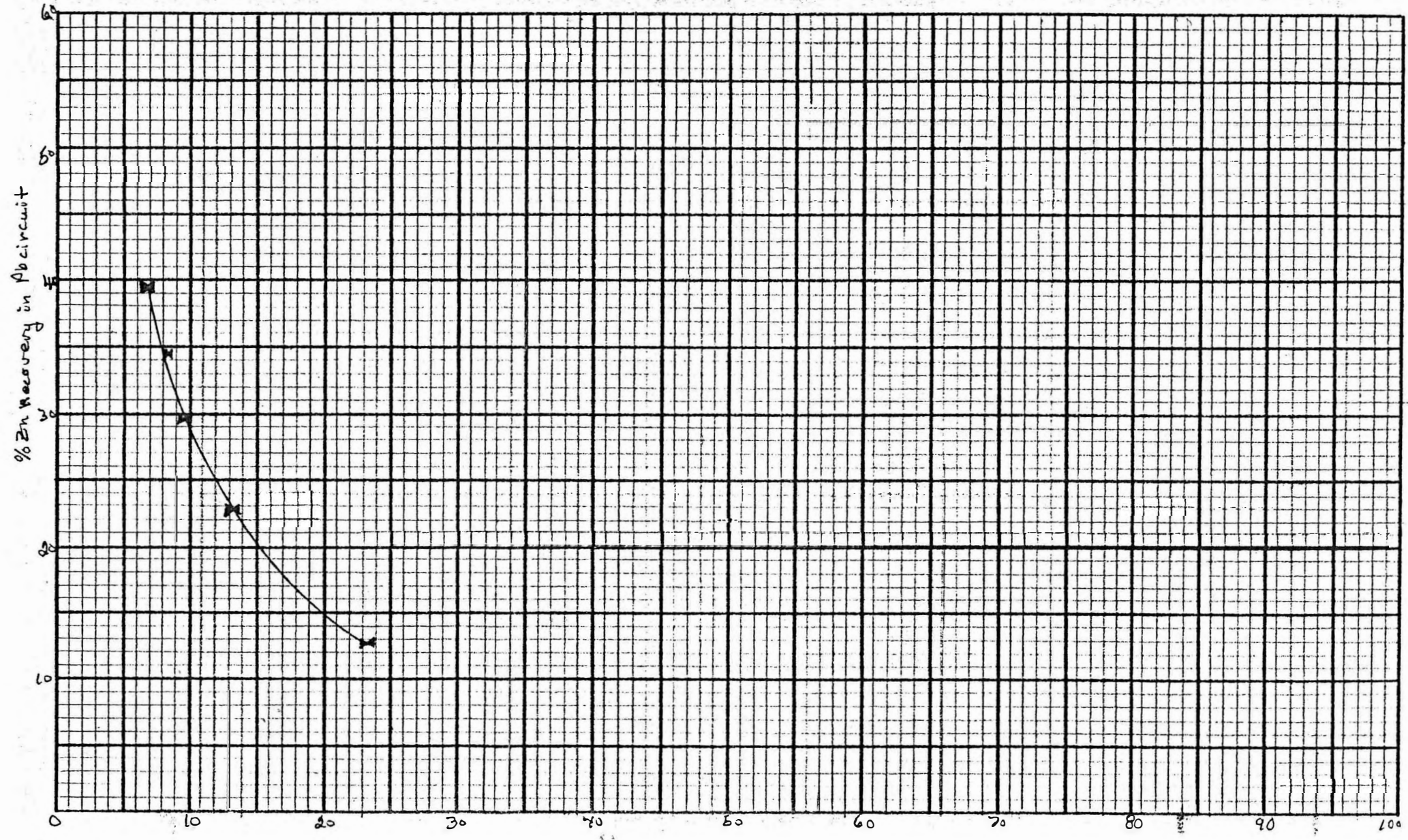
OBJECTIVE: Zn Preactivation Examination

DATE: April 27th, 1984

CONDITIONS: Zn in the Pb circuit

TITLE: Special Geology Sample

LEGEND: test #1 Zn in the Pb circuit



APPENDIX B

PRINTOUTS



APPENDIX C  
REAGENT SCHEMES

TEST NO.: 1

PURPOSE: Preactivation of Zn in the Pb circuit

PROCEDURE: Standard Rougher Test

FEED: Special Geology Sample

GRIND: 14 min primary

STAGE	REAGENTS ADDED (g/t)								TIME (MIN)			SCAV TL P <sub>80</sub> <sup>μ</sup>	PH	
	Na <sub>2</sub> CO <sub>3</sub>	Na <sub>2</sub> SO <sub>3</sub>	NaCN	Z-11	CuSO <sub>4</sub>	CaO	MIBC drops	DOW drops	GRIND	COND	FROTH		START	FINIS.
PRIMARY GRIND	3000		200	60					12					
PbRo <sub>1</sub>							1				1	9.1	10.0	
PbRo <sub>2</sub>							1				2			
PbSc <sub>1</sub>				20			1				2			
PbSc <sub>2</sub>											2			
PbSc <sub>3</sub>				20			1				3			
Zn COND.				60	700					8		Start 9.8	After Cond 11.1 end	
ZnPo <sub>1</sub>								2			1			
ZnPo <sub>2</sub>											2			
ZnSc <sub>1</sub>				20							2			
ZnSc <sub>2</sub>											2			
ZnSc <sub>3</sub>				20							3			

TEST NO.: 1

PURPOSE: reagent optimization

PROCEDURE: Standard. Rougher Test

FEED: 2BCD

GRIND: 14 min. primary

STAGE	REAGENTS ADDED (g/t)								TIME (MIN)			SCAV TL P <sub>80</sub> <sup>μ</sup>	PH	
	Na <sub>2</sub> CO <sub>3</sub>	Na <sub>2</sub> SO <sub>3</sub>	NaCN	Z-11	CuSO <sub>4</sub>	CaO	MIBC drops	DOW drops	GRIND	COND	FROTH		START	FINIS.
PRIMARY GRIND	9000	—	900	60	—	—	—	—	12 2	—	—	—	—	
PbRo <sub>1</sub>	1500	—	—	—	—	—	0	—	—	2	1	10.0	10.0	
PbRo <sub>2</sub>	—	—	—	—	—	—	1	—	—	—	2	—	—	
PbSc <sub>1</sub>	—	—	—	20	—	—	1	—	—	—	2	—	—	
PbSc <sub>2</sub>	—	—	—	—	—	—	0	—	—	—	2	—	—	
PbSc <sub>3</sub>	—	—	—	20	—	—	1 1/2	—	—	—	3	—	—	
Zn COND.	—	—	—	50	700	—	—	—	—	5 2	—	9.9 4.8	— 11.3	
ZnRo <sub>1</sub>	—	—	—	—	—	—	—	0	—	—	1	—	—	
ZnRo <sub>2</sub>	—	—	—	—	—	—	—	3	—	—	2	—	—	
ZnSc <sub>1</sub>	—	—	—	15	—	—	—	2	—	—	2	—	—	
ZnSc <sub>2</sub>	—	—	—	—	—	—	—	2	—	—	2	—	—	
ZnSc <sub>3</sub>	—	—	—	15	—	—	—	3	—	—	3	—	—	