

WAK 11-12 M.C.

4223

REPORT ON

GEOCHEMICAL SURVEY - 10 SEPTEMBER TO 12 SEPTEMBER 1972

OWNER

AMERICAN SMELTING AND REFINING COMPANY

LOCATED

14 MILES NNE OF MERRITT, B.C.

NICOLA MINING DIVISION

50° - 120° S.E.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4223	MAP.....

ROBERT EARLE GALE, P. Eng., B.C.

APRIL 1973

4223

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	1
LOCATION AND ACCESS	1
GENERAL GEOLOGY	1
GEOCHEMISTRY	2
SAMPLE TECHNIQUES	2
CONCLUSIONS	2
STATEMENT OF EXPENDITURES	4
APPENDIX "A"	5

ATTACHMENTS

- #1 FIGURE ONE - INDEX MAP -LOCATION WAK 11 AND 12
MAP.
- GEOCHEMISTRY WAK CLAIMS, SCALE
1" = 375'.
- #2 FIGURE TWO CUMULATIVE FREQUENCY CURVE.

INTRODUCTION

WAK 11 AND 12 M.C. ARE 2 CLAIMS WITHIN A GROUP OF 12 CLAIMS LOCATED ON THE NORTHWEST SLOPE OF SWAKUM MOUNTAIN, ABOUT 14 MILES NNE OF MERRITT, B.C.

THESE CLAIMS PARTLY COVER AN OLDER GROUP OF LAPSED CLAIMS CALLED THE GOLD GOSSAN GROUP, WHICH ARE DESCRIBED IN G.S.C. MEMOIR 249, 1948.

LOCATION AND ACCESS

THE CLAIMS ARE LOCATED AT $50^{\circ}17.5'N$, $120^{\circ}42'W$, ON THE NORTHWEST SLOPE OF SWAKUM MOUNTAIN AND ADJOINING L4505, ALAMEDA #3 M.C. ON THE WEST. THE CLAIMS ARE ACCESSIBLE BY A 12 MILE LONG ROAD FROM NICOLA TO THE LAST CHANCE CLAIM, FROM WHICH A POOR BULLDOZER TRAIL RUNS ONE-HALF MILE WEST TO THE WAK CLAIMS.

GENERAL GEOLOGY

THE PRINCIPAL ROCKS ON THE CLAIMS ARE PORPHYRITIC ANDESITE FLOWS BELONGING TO THE NICOLA GROUP OF TRIASSIC AGE.

THE MAIN SHOWING, PARTIALLY OPENED UP BY TWO OLD TUNNELS, IS IN A 75 FOOT HIGH BLUFF ON THE WEST SIDE OF A $N10^{\circ}$ TO $N20^{\circ}E$ GULLY WHICH IS PRESUMED TO BE A FAULT ZONE. THE BLUFF OF OUTCROP IS ABOUT 500 FEET LONG AND EXCEPT FOR THIS OUTCROP, NO OTHER OUTCROPS WERE NOTED ON THE WAK 11 AND WAK 12 CLAIMS. A DOZER TRENCH AND WHAT APPEARS TO BE THE COLLAR OF AN OLD DRILL HOLE ARE LOCATED IN AN AREA OF PYRITIZED ANDESITE OUTCROPS ABOUT 600' SOUTHEAST OF THE BLUFF SHOWING.

THE ANDESITE IN THE BLUFF SHOWING IS WELL FRACTURED ALONG WIDE-SPACED NORTHEAST AND WESTERLY TRENDING FRACTURE PLANES. SCATTERED, IRREGULAR FRACTURE PLANE COATINGS OF QUARTZ CHALCOPYRITE-PYRITE OCCUR IN THE ANDESITE NORTH OF THE ADITS. A SAMPLE OF THIS ROCK TAKEN AT RANDOM FROM A NUMBER

OF POINTS ON THE OUTCROP, ASSAYED 0.03% CU, 0.01% PB, 0.02% ZN, AND 0.14 OZ/AG PER TON.

NEAR THE CENTER OF THE BLUFF A NW TRENDING, 2 FOOT WIDE INCLINE HAS BEEN DRIVEN ON A THIN QUARTZ-CHALCOPYRITE-GALENA VEIN. ABOUT 100' SOUTH ALONG THE BLUFF, A 3 FOOT WIDE TUNNEL HAS BEEN DRIVEN WESTERLY IN SHEARED ANDESITE, MINERALIZED WITH PYRITE AND CHALCOPYRITE. A PEGMATITE DIKE IS ASSOCIATED WITH THE MINERALIZATION.

THE VEIN SHOWINGS APPEAR TO HAVE NO VALUE, BUT A GEOCHEM SOIL SAMPLING PROGRAM WAS WARRANTED TO ATTEMPT TO DETERMINE THE LIMITS OF THE FRACTURE PLANE-TYPE COPPER MINERALIZATION.

GEOCHEMISTRY

(1) SAMPLE TECHNIQUE

FIFTY-TWO SOIL SAMPLES WERE TAKEN ON WAK 11 AND 12, AND AN ADDITIONAL 21 SAMPLES WERE COLLECTED AT THE ENDS OF GEOCHEM LINES TO PROVIDE BETTER BACKGROUND DATA ON GEOCHEM VALUES.

THE SAMPLES WERE COLLECTED AT 200 FOOT INTERVALS ON EAST-WEST GRID LINES 400 FEET APART. ALL SAMPLES WERE TAKEN FROM THE "B" SOIL HORIZON AND PROCESSED BY A CUSTOM GEOCHEMICAL LABORATORY IN VANCOUVER.

TOTAL METAL DETERMINATIONS WERE MADE ON THE SAMPLES FOR COPPER, AFTER A HOT ACID ($\text{HClO}_4 + \text{HNO}_3$) DIGESTION, BY THE ATOMIC ABSORPTION METHOD (TECTRON AA4 AND 5).

THE DATA ARE PRESENTED IN FIGURES ONE AND TWO.

CONCLUSIONS

AS THE OVERBURDEN IS PROBABLY RELATIVELY THIN IN THIS AREA, THE GEOCHEMICAL RESULTS SHOULD REFLECT BEDROCK MINERALIZATION. STATISTICALLY, TAKING THE TOP 2.5% OF RESULTING VALUES, THRESHOLD IS 282 PPM CU AND ALL VALUES ABOVE

THIS ARE ANOMALOUSLY HIGH.

HOWEVER, WITH REFERENCE TO THE CUMULATIVE FREQUENCY CURVE, FIGURE TWO, TWO POPULATIONS OF VALUES ARE INDICATED. IF THE HIGHER VALUED POPULATION IS ASSUMED TO BE DUE TO MINERALIZED BEDROCK, THEN VALUES IN EXCESS OF 80 PPM CU WILL INDICATE AREAS UNDERLAIN BY COPPER MINERALIZATION.

THE EAST HALF OF THE SURVEY AREA CONTAINS SEVERAL ANOMALOUS SECTIONS, TWO SMALLER ONES STRIKING TO THE NORTHEAST AND OPEN IN THAT DIRECTION, AND A LARGER ANOMALY (CONCAVE EASTWARD) WHICH IS OPEN TO THE NORTHEAST AND SOUTHEAST.

THE NORTHEAST TREND PROBABLY REFLECTS THE MAJOR FRACTURE TREND IN THE ROCKS IN THIS AREA. DOWN SLOPE MOVEMENT AWAY FROM THE OLD SHOWINGS MAY ACCOUNT FOR SOME OF THE ANOMALOUS READINGS NORTHEAST OF THE TUNNELS, BUT FURTHER WORK WOULD BE JUSTIFIED TO DETERMINE THE FULL EXTENT OF THE ANOMALY.

STATEMENT OF EXPENDITURES

FIELD COSTS

<u>R.E. GALE</u> - 1 DAY @ \$40.00/DAY	\$ 40.00
<u>BRIAN HOWARD</u> , 3 DAYS @ \$25.00/DAY PREPARING GRID AND COLLECTION OF 52 SOIL SAMPLES	75.00

LABORATORY ANALYSIS

CHEMEX LABORATORIES LIMITED
NORTH VANCOUVER, BRITISH COLUMBIA

52 SOIL SAMPLES ANALYZED FOR COPPER @ \$1.25 PER SAMPLE	65.00
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REPORT AND MAP PREPARATION

<u>R.E. GALE</u> - 1/2 DAY @ \$40.00/DAY	20.00
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T O T A L

\$ 200.00

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 21
day of April, 1961, A.D.

Robert Earle Gale

ROBERT EARLE GALE, P. ENG.

Jill [Signature]
A Commissioner of the Province of British Columbia or
A Notary Public in and for the Province of British Columbia,
SUB-MINING RECORDER

APPENDIX "A"

MINERAL CLAIM SCHEDULE

<u>GROUP</u>	<u>CLAIM NUMBER</u>	<u>RECORD NUMBER</u>
WAK GROUP	WAK 11, WAK 12	52283, 52284

CERTIFICATE

I, ROBERT EARLE GALE, OF 4338 RUTH CRESCENT, NORTH VANCOUVER, B.C., HEREBY CERTIFY THAT

(1) I AM A REGISTERED PROFESSIONAL ENGINEER IN THE PROVINCE OF BRITISH COLUMBIA.

(2) I AM A UNIVERSITY GRADUATE WITH THE FOLLOWING DEGREES:

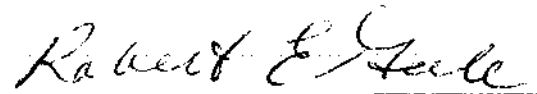
BSc UNIVERSITY OF ALBERTA, 1955

MSc UNIVERSITY OF BRITISH COLUMBIA, 1957

PHD STANFORD UNIVERSITY, 1965

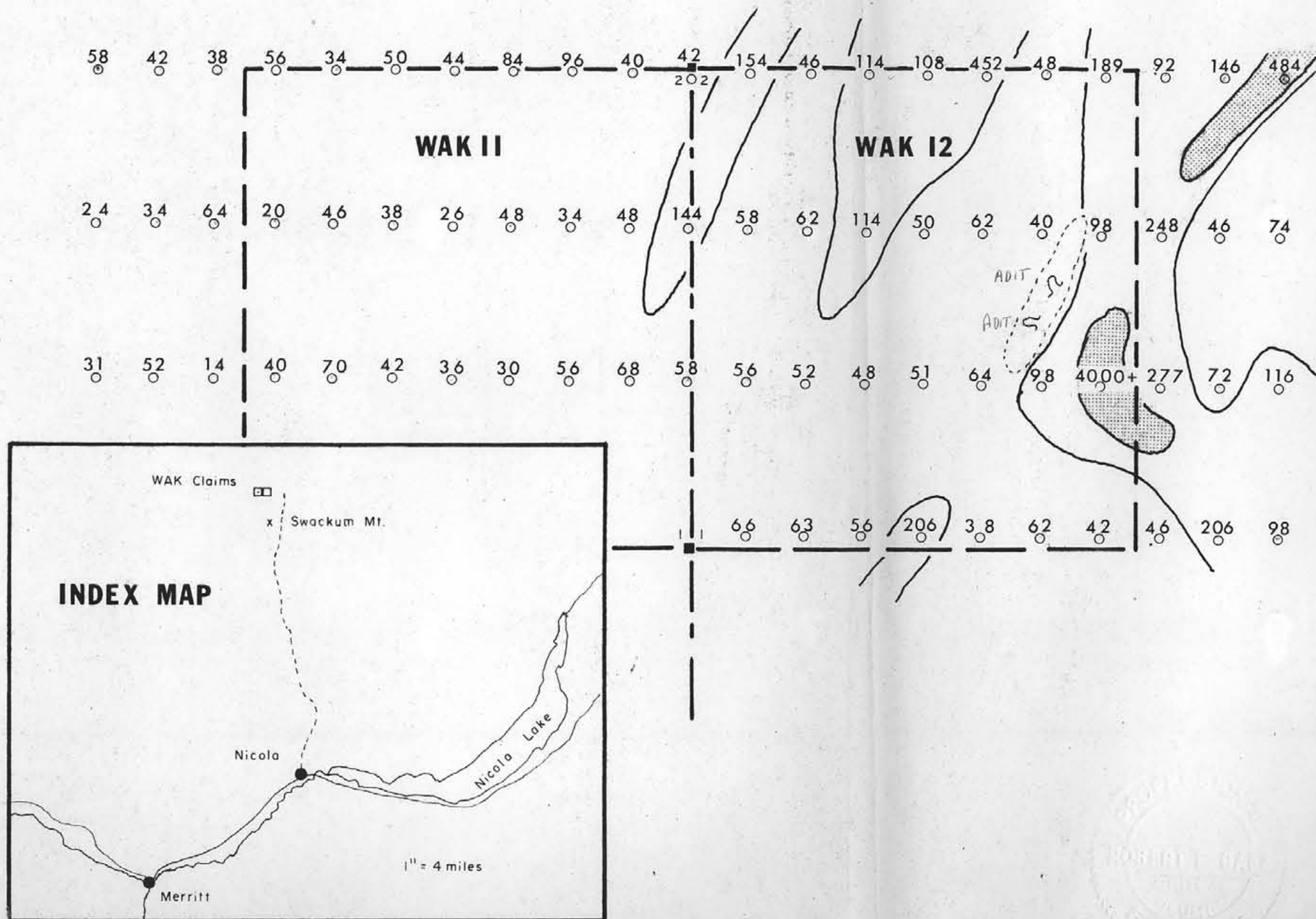
(3) I HAVE PRACTICED MY PROFESSION FOR THE PAST 18 YEARS.

(4) I AM CURRENTLY RESIDENT GEOLOGIST WITH AMERICAN SMELTING AND REFINING COMPANY, 504-535 THURLOW STREET, VANCOUVER, BRITISH COLUMBIA.



ROBERT EARLE GALE, P. ENG.

DATE: APRIL 5, 1973



Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. **4223** MAP # **1**

- Contour interval**
- 80+ ppm
 - 280+ ppm
 - Soil sample location
 - Claim post
 - Adit
 - Outcrop

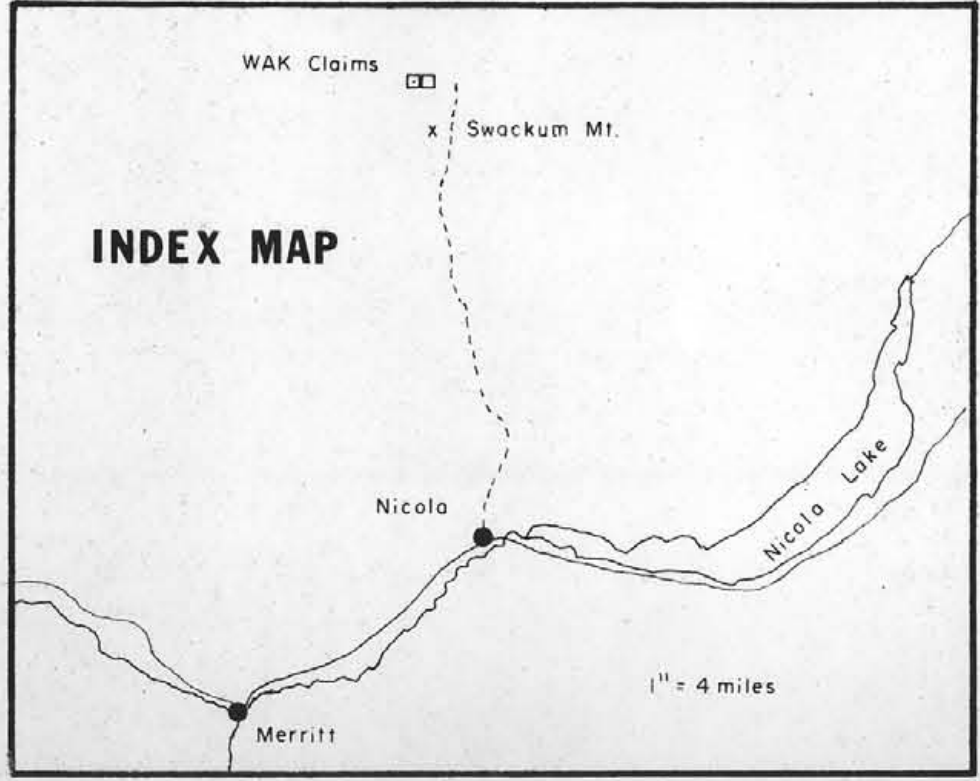
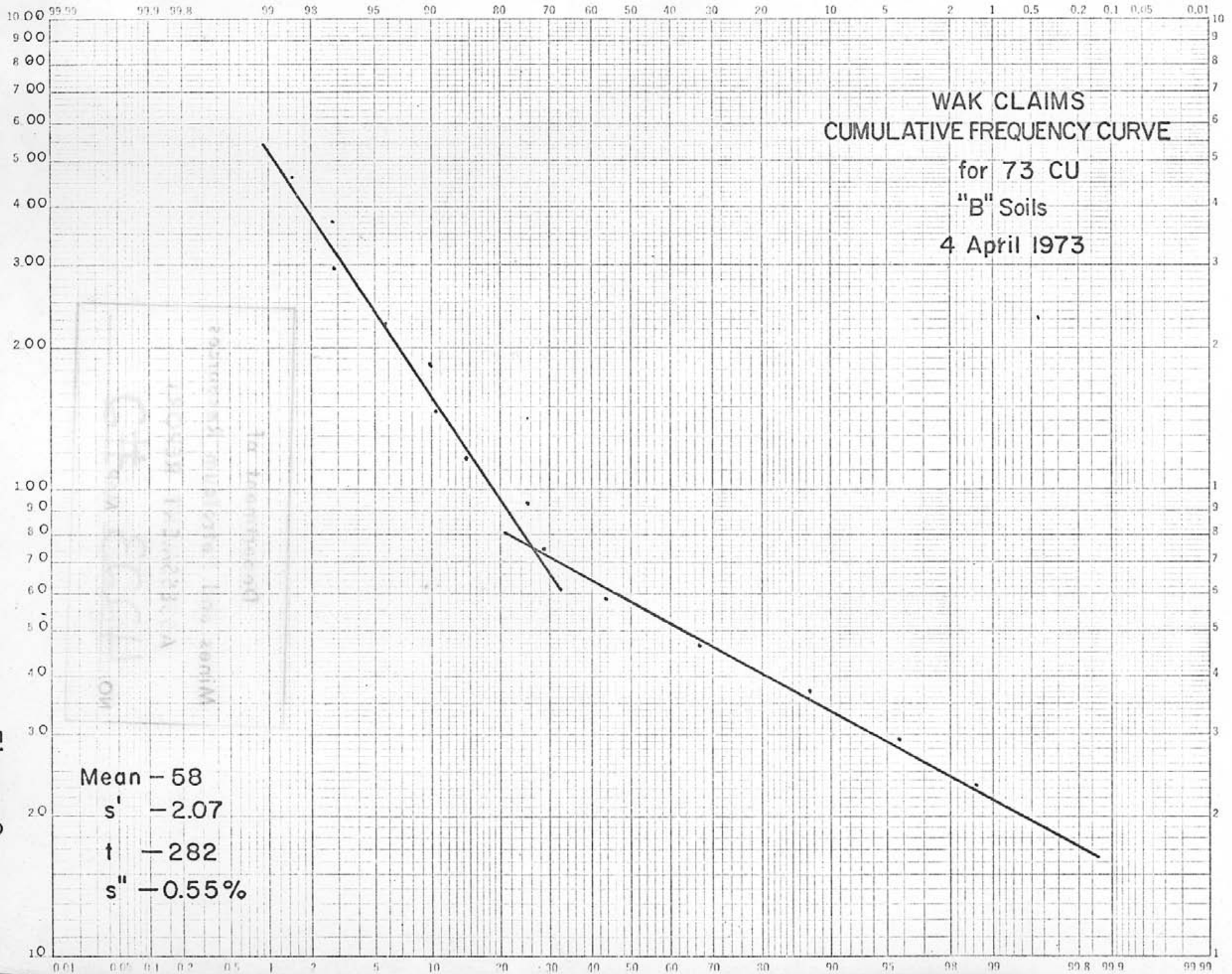


FIGURE 1

AMERICAN SMELTING AND REFINING CO. UNIT:				
WAK CLAIMS		GEOCHEMISTRY		
Scale 1"=375'	Drawn	Date 4/6/73	Approved	File No.

Robert E. Seale



PPM

Figure 2