

KERR ADDISON MINES LIMITED

Geochemical Survey
of the

Swim Nos. 11-16 inclusive, 20, 22-45 inclusive,
49-72 inclusive, and WHI Nos. 88-89 M.C.'s

June 13 - August 17, 1967

Sept. 20 - 26, 1967

Claim Sheet No. 105K-2 and 105K-3

Latitude $62^{\circ}13'30''N$ Longitude $133^{\circ}00'W$

Yukon Territory

W. M. Sirola, P. Eng; B.C.

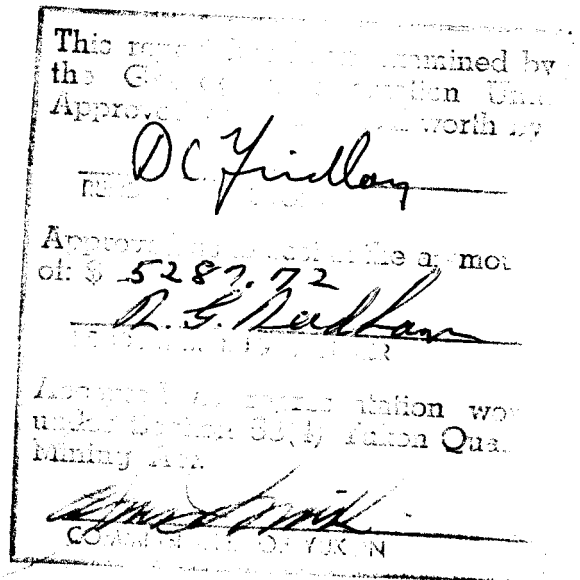
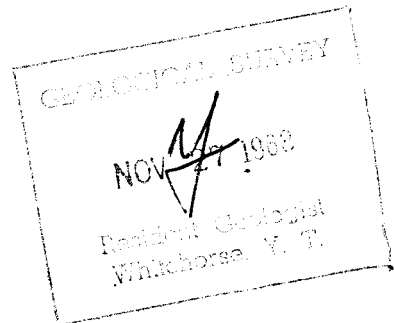


TABLE OF CONTENTS

	<u>Page:</u>
1. Introduction	1
2. Evidence of Expenditures Incurred	2
3. Property and Location	3
4. Geochemical Survey	3
5. Interpretation of Geochemical Results	5
6. Conclusions	7
7. Schedule of Accompanying Maps	8

INTRODUCTION

Kerr Addison Mines Limited with head offices at Suite 1600 - 44 King Street West, Toronto, owns a block of seventy-two (72) claims at the west end of Swim Lakes, Y.T. These claims are the Swim 1 - 72 inclusive.

A detailed soil sampling survey of these claims was programmed for the summer of 1967 to provide information on the feasibility of geochemical surveys in permafrost terrain and to determine the reliability of these procedures in the location of existing mineralization and in the search for other concealed deposits.

To supervise this work, Kerr Addison hired Dr. B. W. Brown who at that time was Professor of Geology at the University of Southern Mississippi, Southern Station, Box 166, Hattiesburg, Mississippi. He was assisted by Mr. R. F. Reid, a U.B.C. student. Jim Etzel of Ross River, Y.T., assisted for a period of eight days. Map draughting was done by Fred Chow of Kerr Addison's Vancouver office. The program was organized and directed by W. M. Sirola.

The work was begun on July 15th, 1967 and was completed on August 7th, 1967.

A total of 1,567 soil samples was collected from the Swim 11 - 16 inclusive, 20, 22 - 45 inclusive, 49 - 72 inclusive, and WHI 88 - 89 M.C.'s. This work however, is intended to cover assessment requirements on the Swim 49 - 72 M.C.'s.

EVIDENCE OF EXPENDITURES INCURRED

Assaying	\$ 2,649.00
Air Transportation	726.42
Ground Transportation	77.90
Food & Provisions	348.12
Wages	3,166.63
Supervisory	<u>487.36</u>
TOTAL	\$ 7,455.43

PROPERTY AND LOCATION

The property consists of seventy-two (72) Mineral Claims and two (2) fractions held by location and designated Swim 1 - 72 inclusive, and WHI #88 and 89. The claims are held in the name of Kerr Addison Mines Limited, 44 King Street West, Toronto, Ontario and are located at the west end of Swim Lakes, Y. T. This location is 20 miles northwest of Ross River and approximately 125 air miles northeast of Whitehorse.

GEOCHEMICAL SURVEY

Approximately 52 line miles were completed in the course of the soil sampling program which encompassed the following mineral claims: Swim 11 - 16 inclusive, Swim 20, Swim 22 - 45 inclusive, Swim 49 - 72 inclusive and fractions WHI 88 and 89.

Soil samples were collected along lines oriented $N45^{\circ}E$ at 200-foot intervals. The lines were established by a Brunton compass and chain and were spaced 400 feet apart. All of the lines started from base line number one and wherever possible, were tied to claim posts or existing picket lines. All sample locations were marked with a length of orange flagging on which the sample number was written. At each location a hole was dug with a mattock and,

shovel large enough to clearly expose the different soil horizons. The soil profile varies considerably making it difficult in some locations to ensure that the same horizon is being sampled. Permafrost covers most of the area and a recent ash layer is usually present. Our experience indicates that mid-summer is the optimum time for soil sampling under these conditions.

A generalized soil profile in the area of the claim group is as follows:

Moss

Humus - dark brown to black

Volcanic Ash - white, often mixed with sand, humus and clay

Soil - sandy, light to medium brown ("B" Horizon)

Sand - clay, pebbles and rock chips ("C" Horizon)

Broken Bedrock

Wherever possible, samples were collected from the "B" horizon which occurs at a depth of ten inches to thirty inches. Each sample weighed approximately 50 grams and was analyzed for total lead and zinc by the use of a combination of hot H_2SO_4 digestion and measurement by the atomic absorption procedure. Certain samples were analyzed for total copper content as well. The results were plotted in ppm Pb, Zn, and Cu on a 400-scale plan which shows the sampling grid in relation to the claims and known topographic features.

INTERPRETATION OF GEOCHEMICAL RESULTS

The average lead content in the 1,567 samples taken was 46 ppm Pb and 111 ppm Zn. These figures correlate well with the 46 ppm Pb and 122 ppm Zn obtained by Dahlberg and MacKenzie at Pennsylvania State University for an average metamorphic rock. On the basis of these figures, it was decided that 100 ppm Pb and 200 ppm Zn should be considered anomalous.

The known mineralized zone on Swim 23 and 25 and the similar zone on Swim 10 and 12 is clearly indicated by a 100 ppm lead contour which extends downhill from the deposit for a distance of 1,800 feet. The average width of this contour or fan is approximately 2,000 feet which approximates the total length of mineralization between the two zones. Within this 100 ppm Pb contour are local highs including one sample which ran 6,000 ppm Pb on Line 77W.

A 200 ppm zinc contour extends downhill a distance of 3,000 feet from the known deposit and has a total width of almost one mile. Therefore it may be said that both metals could be used in determining the position of the deposit but the 100 ppm Pb contour defines the position of this mineralization more closely.

The 200 ppm zinc contour clearly indicates that the dispersion of that metal is much greater than the dispersion of lead and on a purely reconnaissance basis, it would be more useful to determine zinc patterns rather than lead patterns.

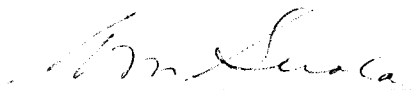
The more westerly anomaly which occurs on claims 13 to 16 inclusive and tails northwestward into claims 29 and 31 exhibits a rather classical fan shape as outlined by the 100 ppm Pb contour. This contour suggests an origin on or near the boundary of claims Swim 12 and 14. For reasons as yet unknown, there is no typical zinc fan within this anomaly and the zinc pattern is indicated by a series of amoeba shapes outlined by 200 ppm Zn contours. Conceivably there is simply less zinc associated with this particular geochemical anomaly.

On claim Swim 18 there is a narrow 100 ppm Pb and 200 ppm Zn anomaly with a length of approximately 1,000 feet. This anomaly occurs in glacial till and is thought to result from mineralized float, a sample of which was found on the road near the south end of the anomaly.

In assessing the results of the total program, it should be borne in mind that the soils on the higher ground are essentially residual whereas in the valley bottoms and part way up the slopes, glacial till predominates.

CONCLUSIONS

The results obtained from the geochemical survey clearly indicate that geochemical soil testing is an important exploration procedure in locating mineral deposits in permafrost terrain. The zinc determination is useful because the dispersion of that metal is much greater than that of lead but lead determinations by the same token are very helpful in that they more accurately define the position of the deposit. It would appear that dispersion of both lead and zinc in this particular instance is caused by a combination of gravity and ground water movement. It is not yet known whether the movement of glacial ice had any function in the development of the more westerly geochemical fan. It is strongly suspected that this latter fan results from small amounts of lead and zinc in the rocks rather than from a sizeable mineralized zone.



W. M. Sirola.

June 27, 1968.

SCHEDULE OF ACCOMPANYING MAPS

Page:

1)	Key Map, Scale 1" = 1/2 mile	I
2)	Soil Sampling Plan, Scale 1" = 400' ...	II

KERR ADDISON MINES LIMITED

SWIM LAKES GROUP

SWIM LAKE AREA WHITEHORSE MINING DIV.

YUKON TERRITORY

SCALE: 1" = 1/2 MILE

120°15' Lat.

133°00'



SWIM LAKE



LEGEND

- Sample location / Number
- p.p.m. 11/28/15
- 45 Actual Chain Number
- Contour Lines - Topographic
- Bank Outcrop
- 4-wheel drive Road
- Trails, cut roads
- 100m wide flood - Shown sands, sediments
- Symbol 1 = edge
- 2 = edge
- 3 = edge
- 4 = edge
- 5 = edge
- 6 = edge
- 7 = edge
- 8 = edge
- 9 = edge
- 10 = edge
- 11 = edge
- 12 = edge
- 13 = edge
- 14 = edge
- 15 = edge
- 16 = edge
- 17 = edge
- 18 = edge
- 19 = edge
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- 27 = edge
- 28 = edge
- 29 = edge
- 30 = edge
- 31 = edge
- 32 = edge
- 33 = edge
- 34 = edge
- 35 = edge
- 36 = edge
- 37 = edge
- 38 = edge
- 39 = edge
- 40 = edge
- 41 = edge
- 42 = edge
- 43 = edge
- 44 = edge
- 45 = edge
- 46 = edge
- 47 = edge
- 48 = edge

Red Contours - 100 p.p.m. Pb
 Yellow Contours - 200 p.p.m. Zn

Additional samples collected on 11/28/15, 12/22/15, 1/12/16 by F. Chou in 1980-2017

KERR ADDISON MINES LTD.
 SWIM LAKE 'A' GROUP (OSK)
 YUKON TERRITORY

SOIL SAMPLING PLAN

SAMPLED BY: Dr. G.M. Brown Robert E. Reid
 ANALYSIS BY: CURT ELDORDE LTD.
 SCALE: 1" = 400'
 DRAWN BY: F. CHOU DATE: June to Aug, 1987