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AMALGAMATED RARE EARTH MINES LTD.

SAVANT LAKE PROSPECT

ONTARIO

INTRODUCTION

*523/8 New Survey  
M1883*

This is a report on a group of 28 claims controlled by Amalgamated Rare Earth Mines Ltd. located in the Sturgeon-Savant Lake Area, Ontario. The purpose of this report is to summarize the exploration status of the claims and to outline exploration plans for the immediate future.

This report is based on the following sources of information:

1. A general report on part of the claims by C. D. Huston, P. Eng., March 1971.
2. Reports by the writer on geophysical and geochemical surveys of the property.
3. The results of 2196 linear feet of diamond drilling.
4. Geological maps published by the Ontario Department of Mines.
5. A surface examination of the property, including the logging of the diamond drill cores, during the fall of 1971 and the winter of 1972.

PROPERTY AND LOCATION

The claim group lies in the north west corner of Smye Township with one claim extending northward into McGillis Township; Patricia Mining Division, Ontario. The claims are numbered as follows:

- PA 254506 to PA 254512 inclusive
- PA 254515 to PA 254517 inclusive
- PA 261210 and
- PA 285924 to PA 285930 inclusive
- PA 285935 and PA 285936
- PA 285961 to PA 285967 inclusive, and
- PA 285972

The claims are recorded on plans M1893 and M1806, Smye and McGillis Township Claim maps published by the Ontario Department of Mines. The titles were not searched.

### ACCESS AND FACILITIES

The point of departure for the property is Savant Lake Station located 20 miles south of <sup>the</sup> 28' property on Highway 59' and the main line of the CNR. The property, which lies on the east side of Savant Lake is reached by crossing the lake from Wildwood Tourist Camp which is accessible from Highway 599.

### HISTORY AND DEVELOPMENT

The gold-silver-lead-zinc showing located near the No. 1 Post of PA 254517 was probably discovered during the 1930's, and is the only evidence of early mining history known to the company.

Since the present claim group was staked in late 1970 and early 1971, work done has included <sup>1</sup>line cutting, mapping, sampling, electromagnetic and magnetic surveying, geochemical prospecting, and 2196 linear feet of diamond drilling.

### GENERAL GEOLOGY

The geology of the area is shown on Map P352, Savant-Carlou Lakes Sheet, published by the Ontario Department of Mines.

In general the claim group straddles a contact between volcanic and granitic rocks with the bulk of the claim area lying on the volcanic side of the contact. The volcanics and their contact with the granite strike northeasterly at the southwest end of the property and are folded around a granite nose near the middle of the property.

Recent mapping in Smye and McGills Townships by the Ontario Ministry of National Resources has added materially to the geological knowledge of the Company's claims. The volcanic rocks are chiefly intermediate pillow lavas and porphyritic flows.

ECONOMIC GEOLOGY

The showing on claim PA 254517 has returned interesting values in copper, lead, zinc, gold and silver from surface samples but the drill results produced only very low values. It may be that the drilling was done in the wrong direction, for there is an almost unbelievable variation in professional opinion as to the strike and dip of this zone. C.D. Huston, P. Eng. states that the zone strikes N50E and dips south. W. D. Bond, of the Ontario Ministry of Natural Resources states that the showing strikes N85E and dips from vertical to 80 degrees north west. The writer described the strike as "south west in conformity with the electromagnetic conductors" with a dip to the south. Most of the drilling was based on the writer's observations and the geophysical survey results. The confusion in strike may be due to magnetic versus astronomic azimuth measurements, azimuth measurements on vein echelons versus the zone as a whole, or to some combination of the above. The difference in opinion on the dip may be due to variation in echelon dips versus those of fracture systems. Some short drill holes, drilled in tiers will resolve the problem.

Several strong electromagnetic conductors with fair magnetic association were located during the surveys. Several of these were spot checked by 284 soil samples which were analysed for copper, lead, and zinc. The soil sampling was indecisive in that no ready correlation between geophysical and geochemical results was possible. ~~Two of the better geochemical results was possible.~~ Two of the better geochemical responses were drill tested with negative results. It is evident that on this property geochemical techniques provide no basis for evaluating Ronka EM16 conductors.

CONCLUSIONS AND RECOMMENDATIONS

1. The confusion respecting the strike and dip of the mineralized zone and the possibility that the drilling already completed was done in the wrong direction can be resolved by <sup>2</sup> series of short, tiered, drill holes.
2. The Ronka 16EM conductors should be check surveyed using a more definitive unit.

COST ESTIMATE

1. Drilling, mobilization, engineering, assaying etc. 750 feet at \$15 per foot		\$11,250
2. Check Surveying		<u>2,500</u>
	Total	\$13,750
Contingencies		<u>2,250</u>
	Grand Total	<del>\$15,000</del> <u>\$ 16,000</u>

My report is respectfully submitted.

*H. G. Harper.*

Willowdale Ontario  
November 1, 1973

H. Grant Harper, F.G.A.C. P. Eng.  
Economic Geologist

CERTIFICATE

I, HUGH GRANT HARPER, of Metropolitan Toronto, in the Province of Ontario, certify as follows with respect to my report entitled Amalgamated Rare Earth Mines Ltd., Savant Lake Prospect, Ontario, dated November 1, 1973.

1. For over ten years I have been practising as an Independent economic geologist, carrying on business as

H. Grant Harper, P. Eng.  
314 Hendon Avenue  
Willowdale, Ontario.

2. I graduated from the University of Toronto with the degree of B.A.Sc., 1950 and M.A.Sc., 1951 and have been engaged in my profession since that time. I am a Fellow of the Geological Association of Canada, a Member of the Ontario Association of Professional Engineers registered in the Mining Branch, a Member of the Canadian Institute of Mining and Metallurgy, and a Member of the Board of Trade of Metropolitan Toronto.
3. I have no interest, nor do I expect to receive any, either direct or indirect, in either the property or securities of Amalgamated Rare Earth Mines Ltd.
4. I have made an examination of this property. My report is based on the sources of information outlined in the body of my report.

*H. G. Harper.*

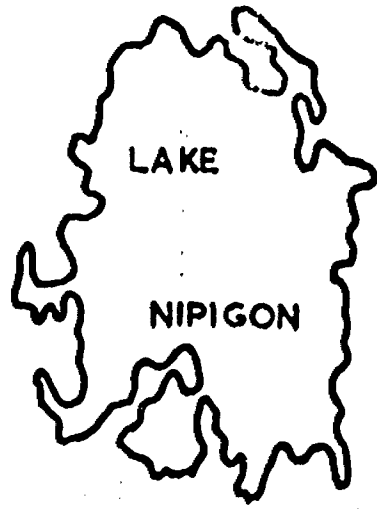
Willowdale, Ontario  
November 1, 1973

H. Grant Harper, F.C.A.C. P.Eng.  
Economic Geologist



Property

TASHOTA

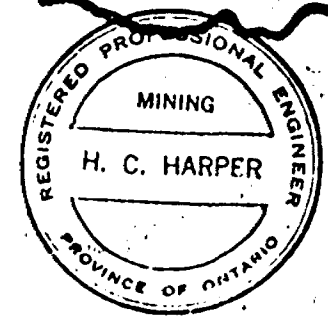


GERALDTON

UPSALA

RED ROCK

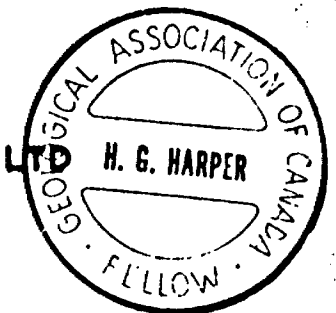
THUNDER BAY



1 inch = 25 miles

### KEY MAP

AMALGAMATED RARE EARTH MINES LTD



DATE NOV 1 '73

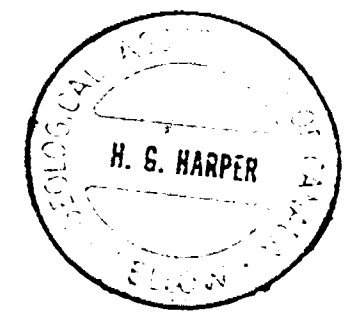
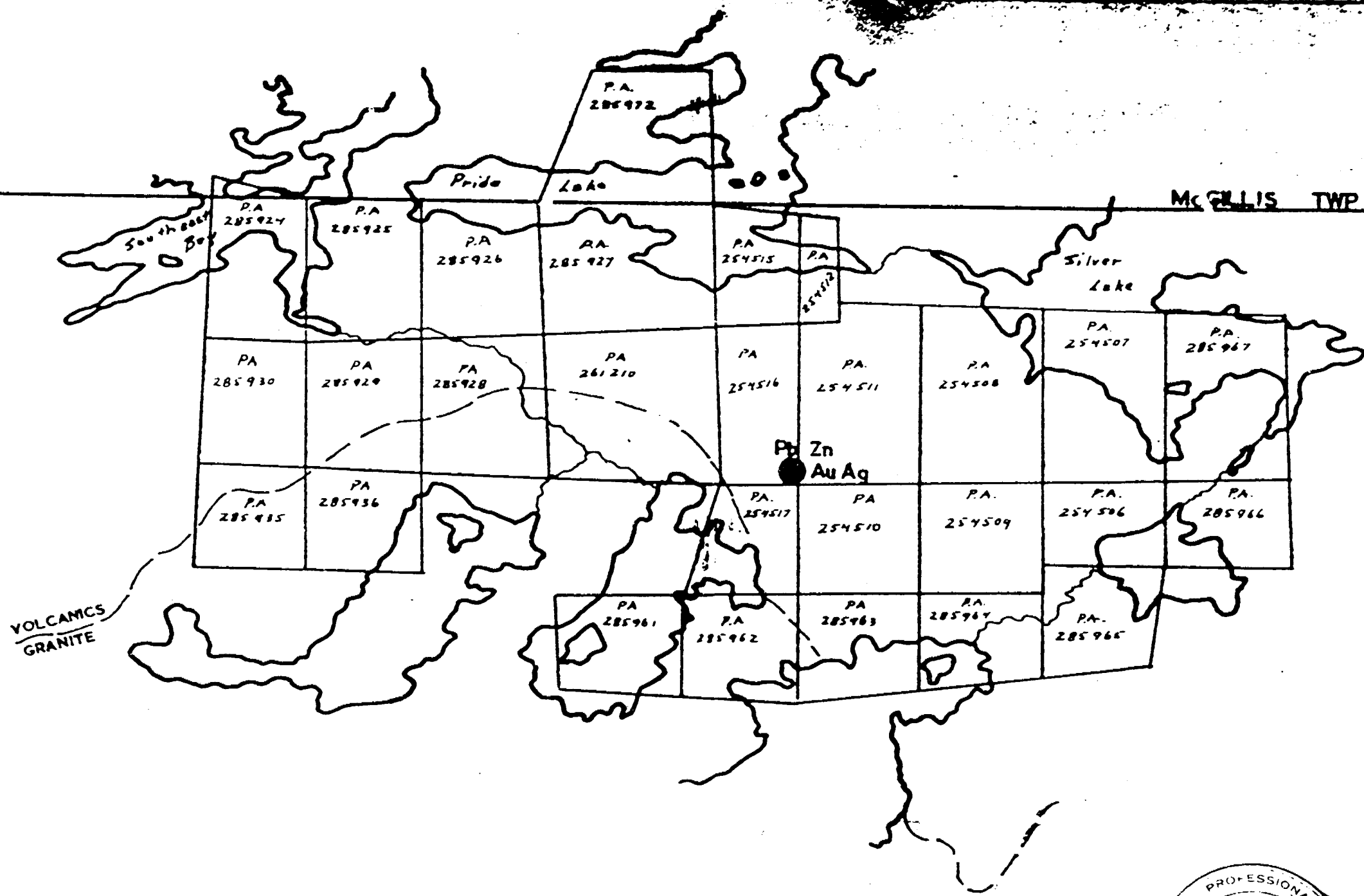
SIGNED

*H. G. Harper*



JUTTEN TWP.

McGILLIS TWP.



AMALGAMATED RARE EARTH MINES LTD

SMYE & McGILLIS TWPS.



DATE JUL 1 73 SIGNED H.G. Harper