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GEOLOGY  
OF THE  
NORTHERN PORTION  
OF  
SOLID SILVER MINES PROPERTY  
CANE-AULD TOWNSHIPS  
TIMISKAMING DISTRICT, ONTARIO

Toronto, Ontario

December 31, 1963

A. C. A. HOWE, P.ENG.

PROPERTY

The property consists of 32 unpatented contiguous claims forming a block  $2\frac{1}{4}$  miles north to south and  $1\frac{1}{4}$  miles east to west.

The geological mapping was confined to the north half of the property and included claims: -

T.47676  
T.47601  
T.52513 - 19, inclusive  
T.53640  
T.53643

LOCATION AND ACCESS

There are two means of access, both by road. Both roads are all weather roads, about  $3\frac{1}{2}$  miles long connecting with Highway 65 at about 21 miles west of New Liskeard. One road provides access to the portion of the group, east of the steep diabase ridge which runs down the centre of the property; and the other road provides access to the western portion.

Hydro power lines and the Ontario Northland Railway pass about  $2\frac{1}{2}$  miles due north of the boundary.

TOPOGRAPHY

The property is traversed by a steep ridge of diabase, about 100 feet high, which swings in an arc from the north eastern corner west and then south to the south western corner. There is a creek on each side of the ridge, draining comparatively flat farm land. The southeastern part of the property is mainly covered with trees--pine, and birch.

GEOLOGY OF THE AREA

The property is situated between the silver producing areas

of Cobalt and Gowganda. In general the geology is similar across the whole area and a brief description follows. The oldest rock types are lavas and tuffs of Keewatin age. These are intruded by large granitic stocks and batholiths of Algomian age. Intruding both the Keewatin and Algomian series are quartz diabase dykes classed as Matachewan. These dykes do not intrude the overlying Huronian sediments.

The sediments (Cobalt series) consist of conglomerates, greywacke and quartzites, and they overlie the older formations with a great unconformity. These sediments are intruded by a series of sills and dykes classed as Keweenawan in age. The intrusives are almost entirely of quartz diabase composition, except for a small amount of granophyre and the silver-cobalt veins. The earliest rock in the Keweenawan system is the Nipissing quartz diabase sill, which is of paramount importance since the only commercial silver deposits in the Cobalt-Gowganda area are controlled by it. Diabase dykes of later age cut the sill and the sediments, as narrow vertical intrusives.

Silver veins in the Cobalt-Gowganda belt are found close to the contacts of the diabase sill. In Cobalt they generally occur in the surrounding rock -- either sediments or Keewatin lavas -- as well as in the diabase, whereas in Gowganda they generally occur in the diabase itself. These veins are mostly fissure fillings of calcite or aplite, and mineralized with native silver, argentite, cobalt and some sulphides of nickel and copper.

The silver veins found to date on the property occur in the diabase, and consist of aplite and calcite in the underground workings, and of altered diabase injected with native silver and aplite in the drill core.

GEOLOGY OF THE PROPERTY

The major portion of the area mapped is underlain by Nipissing diabase. The diabase occurs as a flat dipping sill intruding quartzites of the Cobalt series sediments. The diabase dips eastward at an average of  $125^{\circ}$ , and forms a ridge 800' wide, which curves in an arc across the claims. The contact with the quartzites strikes E-W in the northeast corner and N-S in the southwest corner. The bottom contact of the diabase is exposed on surface, however, the upper contact is covered by overburden.

Numerous old pits and trenches on the property, also two shafts and a short adit, provide evidence of exploration for silver.

Silver mineralization has been found in calcite veins in several parts of the property, notably on Claim T.47601, near the lower contact of the diabase and Claim T.52513 near the upper contact.

The calcite veins occur in a fracture pattern consisting of one set of veins running normal to the diabase contact, and a second set parallel to the diabase contact. The silver mineralization has been found mainly in the veins striking normal to the contact. The silver bearing veins are more numerous in areas where the diabase contact changes direction of strike. On Claim T.52513 is located the 150 ft. deep shaft, which was sunk in 1921. In this area, the diabase changes strike from E-W to almost N-S. On Claim T.47601, several silver intersections were obtained in diamond drilling, and in this area, the diabase changes strike from N-S to almost E-W, and then NE.

CONCLUSIONS AND RECOMMENDATIONS

The geological mapping has traced the upper and lower contacts of the Nipissing diabase sill. In addition, areas of silver mineralization including old pits, trenches and shafts have been indicated. The silver deposition appears to be related to changes of strike in the diabase. This seems logical since the stresses producing the fractures would be greater in these areas.

It is recommended that further exploration work be concentrated on the areas covered by overburden where new veins may be discovered. A geochemical survey is recommended using the mercury detector method. This survey should consist of:

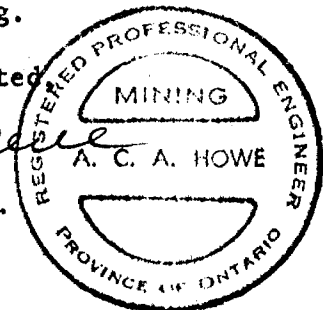
1. Reconnaissance along the upper contact of the diabase, which is largely covered by overburden.
2. Detailed soil sampling over Claim T.47601 to detect other veins in the neighbourhood of the drill intersections obtained previously, and also to further outline the known veins.

In addition, it is recommended that any anomalous mercury reading be investigated by diamond drilling.

Respectfully submitted

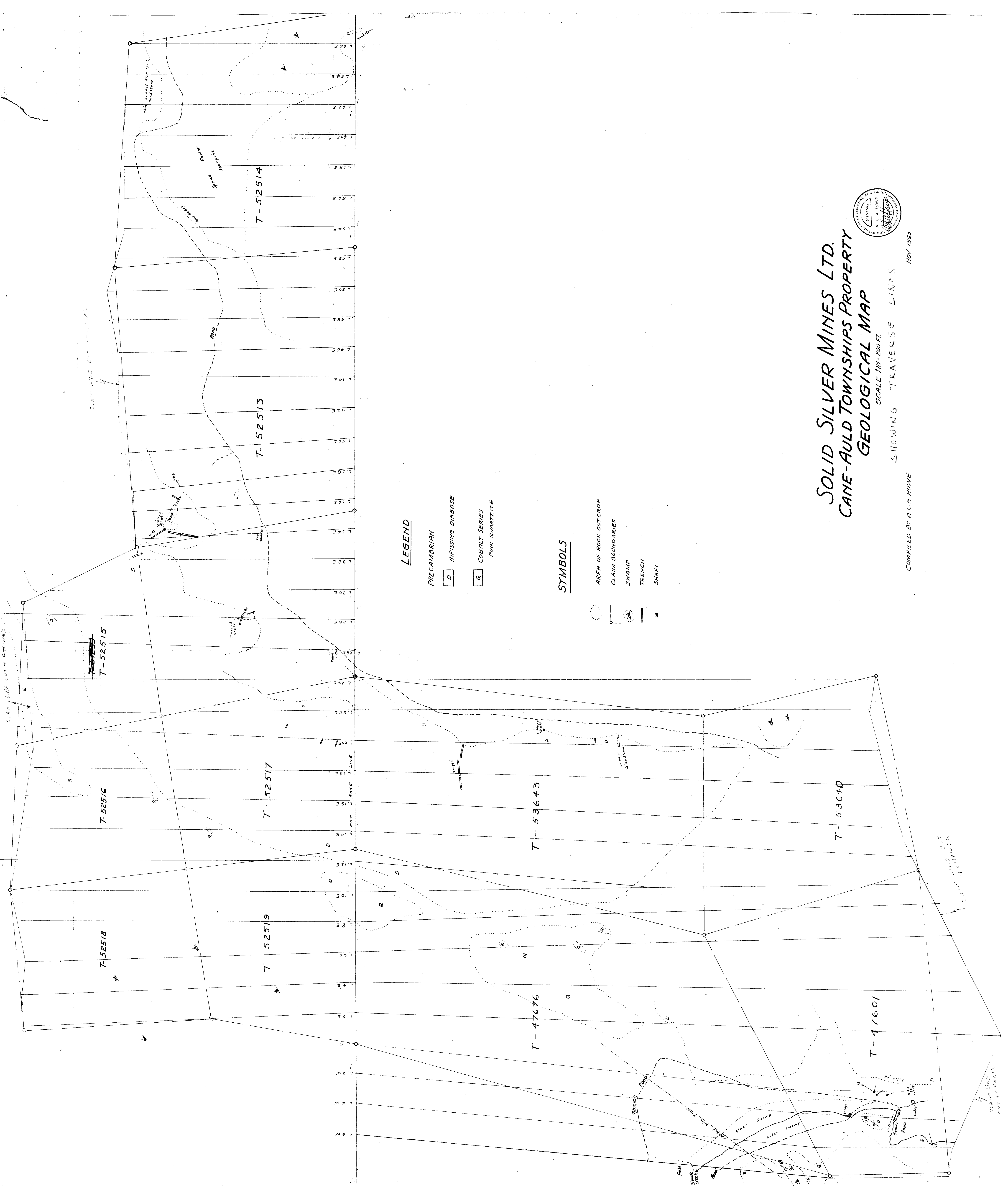
*A. C. A. Howe*

A.C.A. Howe, P. Eng.

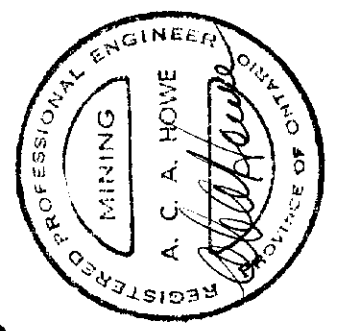


Toronto, Ont.

December 31, 1964.



**SOLID SILVER MINES LTD.**  
**CANE-AULD TOWNSHIPS PROPERTY**  
**GEOLOGICAL MAP**



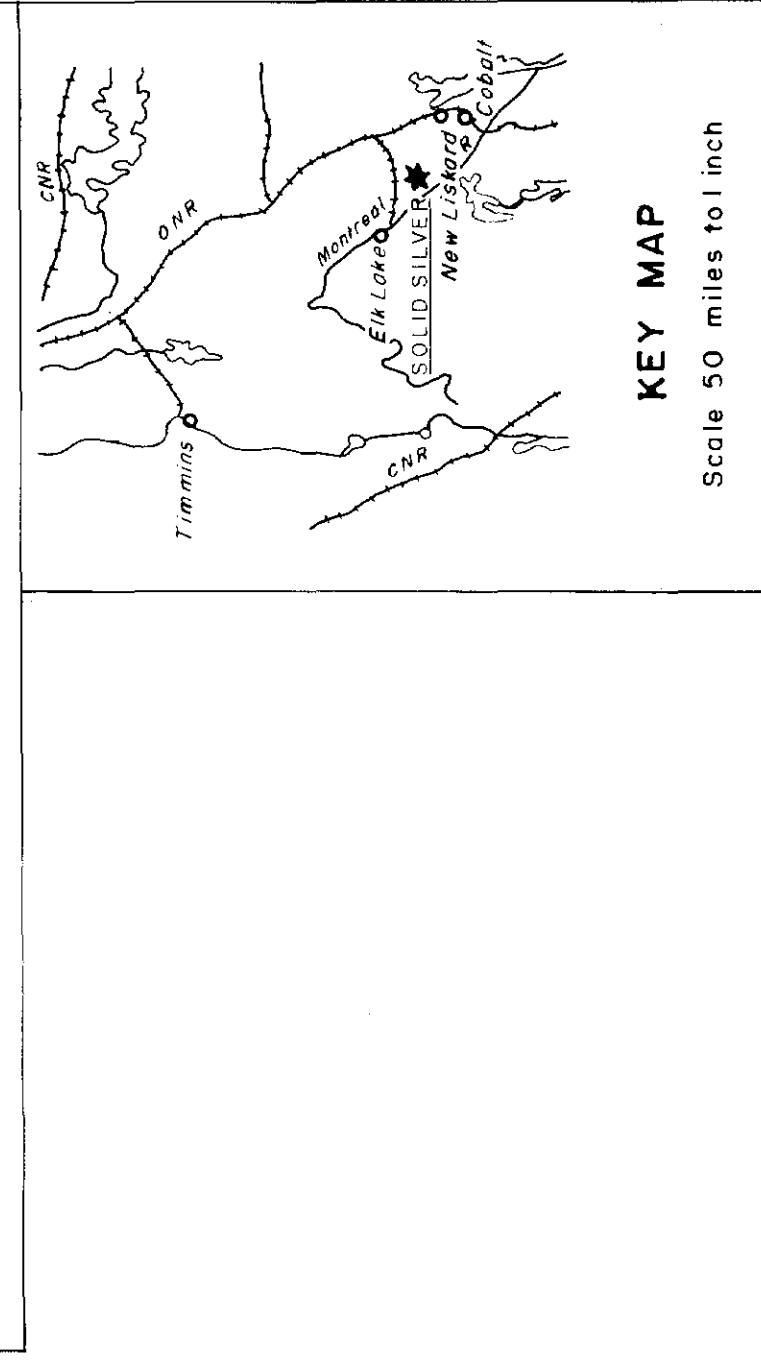
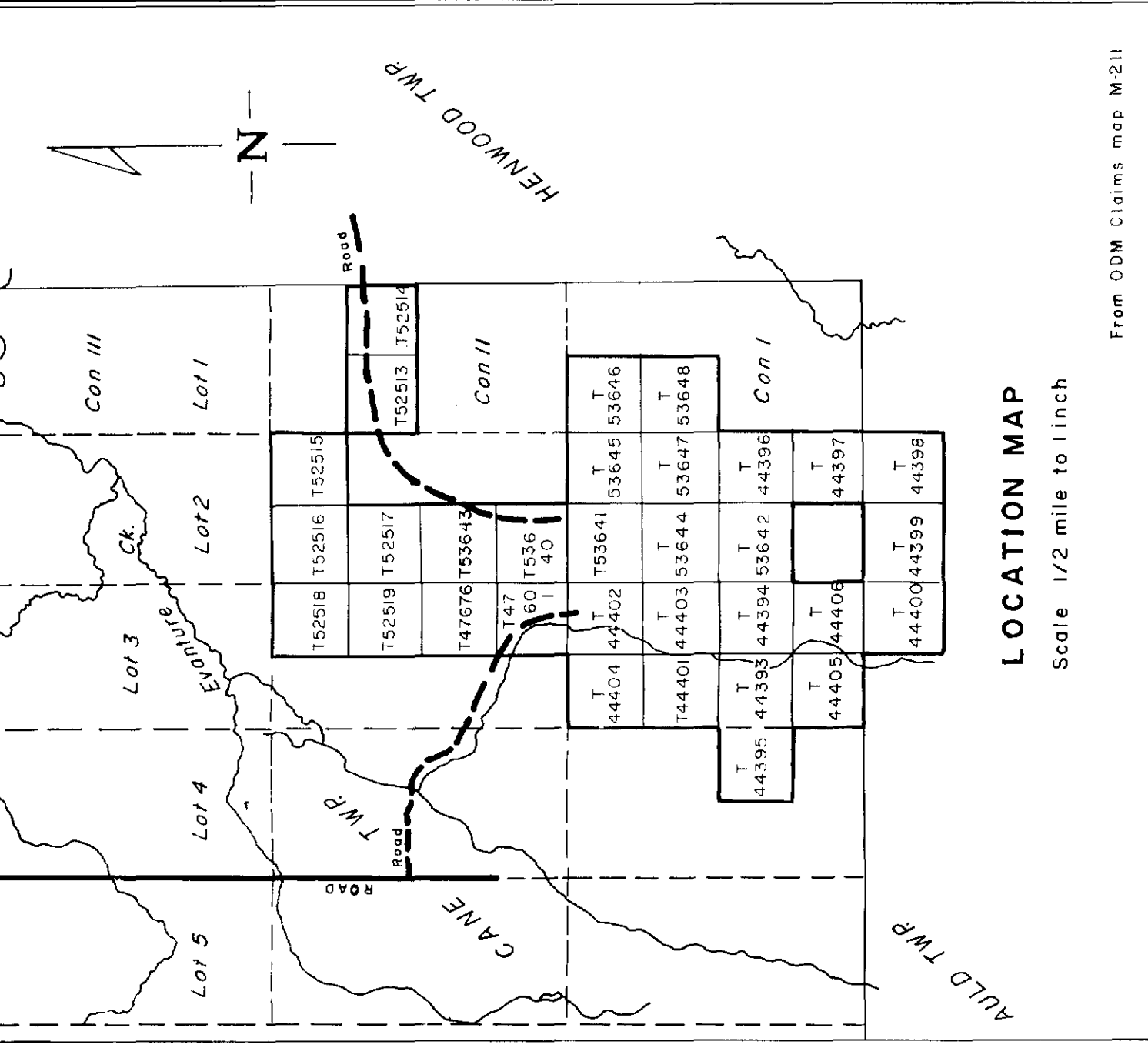
SCALE 1/4" = 200 FT.  
 SHOWING TRAVERSE LINES

NOV. 1963

COMPILED BY A. C. A. HOWE







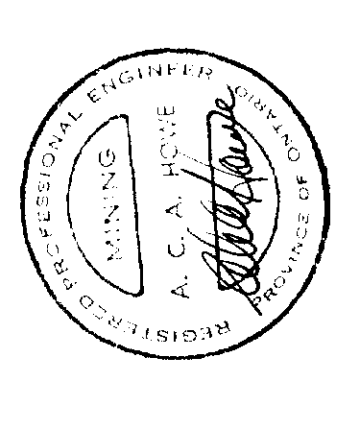
**SYMBOLS**

	Contact
	Outcrop
	Fault
	Geochronological contours
	Diamond drill holes
	Diamond drill holes (by A.C.A. Howe)
	Boundary of claim
	Intersection on 30-50' horizon
	Intersection on 50-70' horizon
	Intersection on 70-90' horizon
	Intersection on 90-110' horizon

# SOLID SILVER MINES LTD.

Showing diamond drill holes, mercury survey results, and other features in Cane Township

Scale 200 feet to 1 inch



Field notes etc. A.C.A. Howe - Intersections on various horizons from diamond drill records  
August 1964 by R. Massey Williams, Professional Engineer

Compilation: Cartographic Services  
Unionville Ont.  
63 A 427



**INSERT**  
Part of claim 47601  
Scale 40 feet to 1 inch

