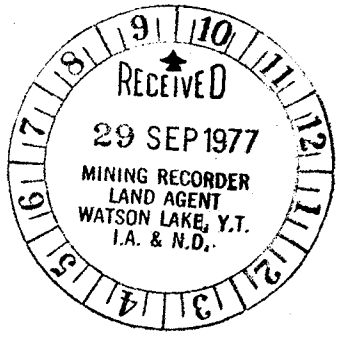
A Report on a Magnetometer Survey on the Seatu Claims

Seagull Creek Area, Watson Lake M.D., Yukon

Comprising

61° 31' N. Lat., 132° 38' W. Long.

NTS Sheet 105-F-10



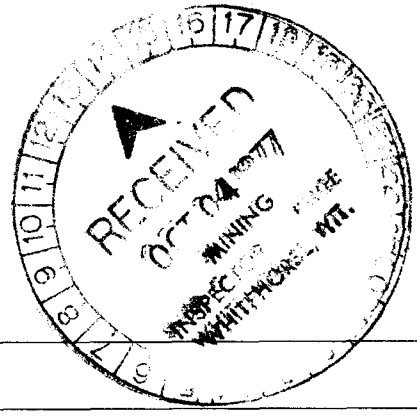
By

T.L. Sadlier-Brown and A.E. Nevin

On

Work performed between July 17th and August 5th, 1977

Vancouver, B.C.
September 19, 1977



SUMMARY

The Seatu group comprises 20 contiguous mineral claims located in an overburden covered area in Seagull Creek Valley 35 miles south of Ross River, Yukon. During July and August of 1977 a three man crew carried out magnetometer and geochemical surveys over the eastern part of the property. About 8.2 line kilometres were read using an Adams magnetometer and two anomalous areas were identified. Both are open to the west and further magnetometer work and EM profiling is recommended in order to define them more accurately and to provide a preliminary evaluation of any economic potential.

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Suite 503 - 134 Abbott St., Vancouver, B.C. Canada V6B 2K4 (604) 683-8271

Claim Group Location Map : Seatu Claims

Fig. 1

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1.0 INTRODUCTION

1.1 Terms of Reference and Scope of Survey

The work described in this report was carried out as part of a combined geochemical and geophysical program on the Seatu Claims by Nevin Sadlier-Brown Goodbrand Ltd. during July and August of 1977.

Recent exploration and development on adjacent claims has revealed several occurrences of zinc, copper, and lead which are located in an area believed to be geologically similar to the terrane which hosts the showings and are at least partly underlain by a magnetic anomaly detected by a government airborne magnetic survey and plotted on Geophysical Map 7005 G, "Quiet Lake". As bedrock is entirely obscured by overburden initial exploration of the claims restricted to geophysical and geochemical prospecting methods.

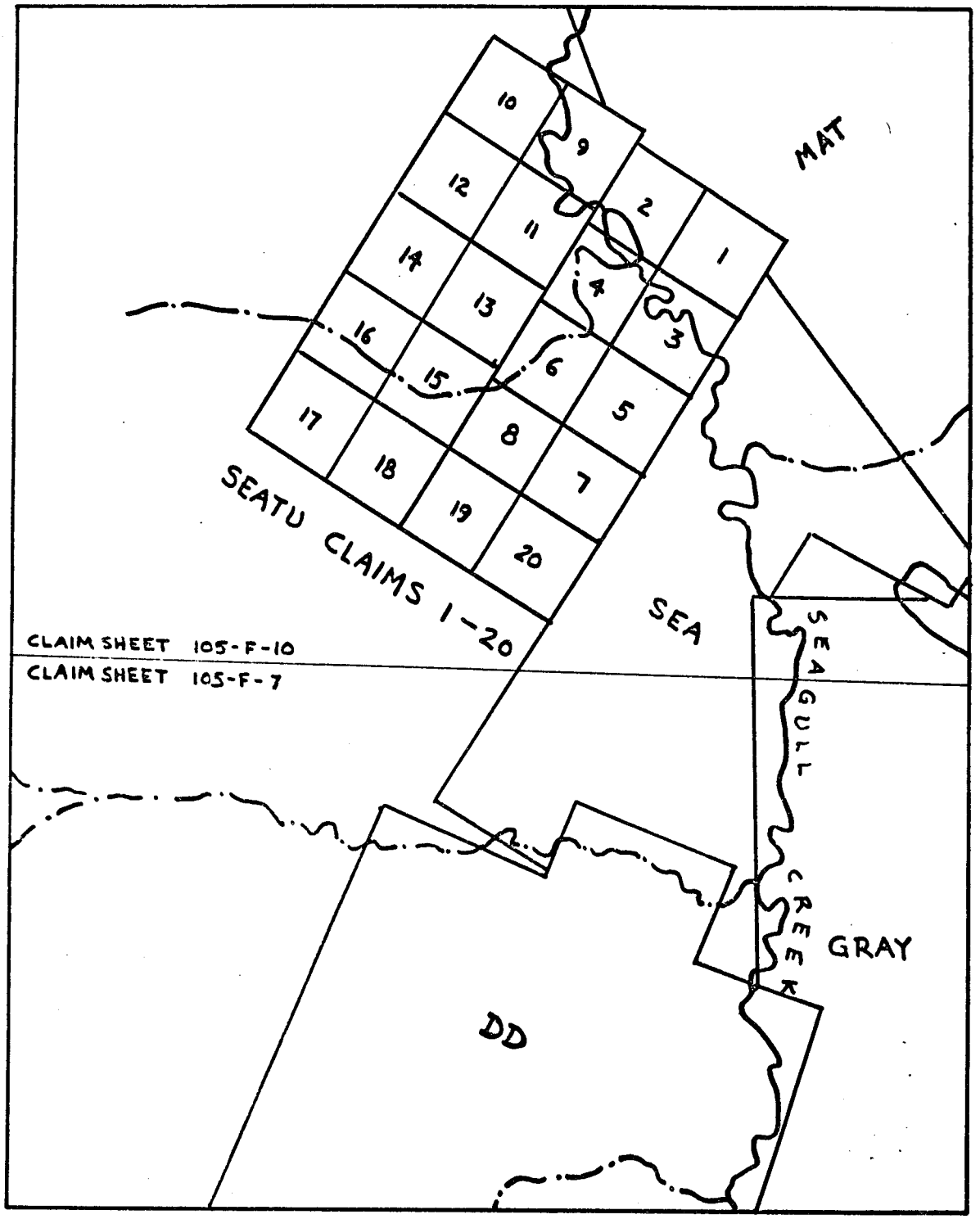
The surveys were carried out on cut and chained picket lines using a metric grid totalling about 8.2 line kilometres (km). The field work was done by M. Cloutier of Richmond, B.C., J. Hill of Whitehorse, Yukon Territory, and T.L. Sadlier-Brown of Vancouver, B.C. in accordance with recommendations proposed by Andrew E. Nevin, Ph.D., P.Eng. who visited the property in August 1976. The field was done from a camp established on the access road on the north side of Seagull Creek at a point just north of the claim boundary and about a mile northwest of Greyling Lake.

1.2 Claims and Ownership

The property consists of 20 contiguous mineral claims including Seatu 1 - 2 (Grant numbers YA 11044 to YA 11063 incl.) The claims are held by John Crandall of 2445 W. 8th Avenue, Vancouver, B.C. V6B 2B2. Work performed on behalf of Tachyon Venture Management Ltd., of Calgary under the terms of an agreement with Mr. Crandall.

1.3 Location and Access

The Seatu claims lie in and near the valley of Seagull Creek immediately west of Greyling Lake and some 35 miles south



Claim Map: Seatu Group

Fig. 2

of the Community of Ross River. The most convenient access is by helicopter from Ross River but surface access is possible via a road which leads from the Canol road just south of Groundhog Creek easterly to the northern part of the property. The road was improved during the 1977 field season but it is rough and access should only be attempted by four wheel drive vehicles. It was the route utilized during the course of the present survey.

1.4 Topography and Physiography

The area surrounding the Seatu Claims is mountainous and rugged with ridges exceeding 6000 feet ASL. The Seagull Creek Valley is, in the claim locality, at an elevation of 3600 to 3800 feet ASL and most of the claims lie within it on the lower slopes generally below about 5000 feet ASL. The eastern part of the property is flat valley bottom muskeg with numerous ponds, sloughs, and swamps while the western claims lie at the higher elevations on the forested lower slopes.

Drainage over much of the property is poor. Overburden appears to be fairly heavy and no outcrop was observed in the survey area. Isolated occurrences have, however, been reported in Seagull Valley nearby.

Forest cover consists primarily of northern black spruce with minor amounts of balsam. Underbrush consisting of dwarf birch, willow, and alder is heavy and tends both to hamper travel on the ground and to make linecutting slow and costly.

2.0 GEOLOGY

The geology of the area was recently mapped by D.J. Templeman-Kluit (see GSC Open File Map 486). Virtually all bedrock on the claim group is obscured by overburden so the property geology is only speculative being based on extrapolations from adjacent areas.

The oldest rocks lie in the western part of the area of interest on the ridges west of Seagull Creek. They consist of a sequence of clastic sedimentary rocks, carbonates, and minor volcanics of proterozoic, lower Cambrian, and Cambro-Ordovician ages and are unconformably overlain by Siluro-Devonian dolomite near the west boundary of the claims. The youngest

rocks are the Mississippian felsic volcanics which occur immediately east of Seagull Creek as well as in the cirque west of Seagull Creek and southwest of Greyling Lake. They may also underly the northern and extreme southern part of the Seatu Group. They are of particular interest as they host the sulphide deposits on the MM Claims to the south and on the Mat Claims to the east.

3.0 MAGNETIC SURVEY

3.1 Method and Equipment

The magnetic survey was carried out on hand cut and picketed lines turned off at 200 metre intervals from a base line bearing 030°T.

Readings of the relative vertical intensity of the earths magnetic field were taken every 50 metres along the lines using an Adams Fluxgate Magnetometer (Distributed by Adams Marine and Electronics Ltd., Vancouver, B.C.). Corrections for diurnal variations were made by tying in to established base stations several times a day during the course of the survey. Relative readings were multiplied by a factor of 40 to give absolute values in gammas which are presented and plotted (as $\gamma - 10$) on the map which accompanies this report.

3.2 Observations and Conclusions

Background values of about 23000 gammas were observed throughout the southern and eastern part of the survey grid.

Two anomalous areas were identified in the northwest. The smaller is centred at about 2+00 S, 11+00W (claims 4 & 6) and reaches a peak of about 4000 γ above background. It lies at the southeastern edge of the valley bottom in an overburden covered area and is open, although diminishing to the west. A more intense anomaly lies to the north on Seatu Claims 2, 9, and 11. It reaches an observed peak of 40,840 γ and is open to the west and possibly northeast. No outcrop is present in the area and there are no indications respecting the native of the source of either anomaly. Potential source materials in this area, however, are serpentinized basic volcanic rocks, ultramafic

intrusives, or magnetite and/or pyrhotite in sulphide rich skarns or stratiform deposits. The economic potential, if any, of these features is virtually unknown although a basic volcanic origin is tentatively considered unlikely. Only additional survey work and ultimately drilling or trenching will reveal the answer.

4.0 RECOMMENDATIONS

Both magnetometer anomalies should be closed to the west and defined more accurately by extending the survey area to cover claims 9 through 15 comprehensively. EM profiles over the anomalous areas should be run using a Crone CEM or similar unit. Geochemical sampling of the claim group should be completed on a reconnaissance scale. Only the sloping southwest part of the property warrants coverage, however, as glacial and alluvial overburden on the lower slopes and in the valley precludes meaningful results.

The geophysical work would probably be most expediently carried out during the winter months when surface travel and grid preparation in the swamp and heavy underbrush areas would be facilitated by snow. Access to the property would be by helicopter from Ross River.

An estimate of the cost of the work outlined above and based upon a crew of 4 men is as follows:

Wages:

Grid preparation	$ 1,550
Magnetometer Survey	760
EM Profiling	820
Planning & Supervision	985
Administration & Reporting	1,825
Travel Time	2,675
SUB TOTAL	$ 8,615
Camp costs (food, expendable gear, rentals)	1,050
Instrument Rentals:	400

Transportation:

	Helicopter	$ 660
	Air fares	975
	Vehicle Rental & fuel	475
	SUB TOTAL	$2, 110
Miscellaneous expenses:		155
Contingency allowance:		1,470
	TOTAL	$13,800

Respectfully submitted

NEVIN SADLIER-BROWN GOODBRAND LTD.

T. L. Sadlier-Brown

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA ANDREW E. NEVIN

Andrew E. Nevin, Ph.D., P.Eng.

Magnetometer Plan

SEATU CLAIMS

WATSON LAKE, M.D., Y.T. — parts of maps F-9 & 10

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DATE: Aug. 1977 — FIG. 3

To accompany report by T. Sadlier-Brown and A. E. Nevin

Values plotted in γ^{-10}

Contour Interval 2000 γ

scale in meters: 0, 100, 200, 300

ROAD

Limit of valley muskeg

Seagull Creek

BL 750 W

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

0 2 S 4 S 6 S 8 S 10 S

16W 15W 14W 13W 12W 11W 10W 9W 8W 7W 6W 5W 4W