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KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

GEOLOGICAL AND GEOCHEMICAL SURVEYS

S.G. CLAIM GROUP

Sam Goosly Prospect
21 miles SE of Houston, B.C.

Omineca Mining Division, British Columbia
54° 11' N 126° 16' W

By

A. Panteleyev

July 3 - August 26, 1968 P.T. Black, Supervisor

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Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. <u>1683</u>	MAP

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

on

GEOLOGICAL AND GEOCHEMICAL SURVEYS

of

SAM GOOSLY PROSPECT

INTRODUCTION

This report describes the work and results applied to the S.G. Mineral Claims at the Sam Goosly Prospect, Omenica Mining Division, about 21 miles southeast of Houston, B.C. For assessment purposes the claims have been divided into two groups containing 29 claims each according to the Notice to Group, dated September 12th, 1968.

The Sam Goosly prospect is in a forested area of moderate topographic relief. At least half of the property contains stands of commercial timber but the rest is an old burn, non-commercial scrub growth and marsh. Rock exposures are not numerous and are largely restricted to creek beds and ridge crests, although outcrops can be easily exposed in many areas by scraping away a thin cover of moss or soil.

Work during July has been to map and prospect the property, establish a roughly surveyed grid, collect soil samples, conduct a magnetometer survey and do some hand trenching and hydraulicking in areas of interest.

Soil samples (508) were taken on the grid in an effort to delineate and define better the anomaly indicated by work done in 1967.

FIELD METHODS

A chain and compass survey was carried out and survey lines cut over the area which was believed to have the best potential. A 10,000-foot base line was located in a north-south direction using a hand-held Brunton compass. East-west cross lines were turned off at 400-foot intervals. All survey lines were blazed and cleared of undergrowth for easy line of sight and walking. Pickets with flagging and survey coordinates were placed at 100-foot intervals. Outcrops and claim posts were tied in to the surveyed grid by pace and compass traverses. The total length of line cut and surveyed is 105,800 feet.

SAMPLE COLLECTION

Soil samples were taken with a trenching tool at 200-foot intervals on the base and cross lines. In most cases the 'B' soil horizon was sampled but where it was absent the 'A' horizon was taken. On the 100N line, 1 to 2 pounds of sample was taken at each location and elsewhere about $\frac{1}{2}$ pound samples were collected.

Five silt samples were collected to check the composite geochemical character of drainage areas or to check for metal concentrations affected by groundwater seepages.

All samples were sun-dried but otherwise untreated before transport to the Kennco laboratory in North Vancouver for analysis. Laboratory analysis was performed on the dried, screened, minus 80 mesh fraction using perchloric digestion and atomic absorption techniques. The content of Cu, Mo, Ag, Pb and Zn was determined and results were given in p.p.m.

GEOLOGY

The property is underlain by coarse clastic sedimentary rocks and porphyritic volcanic flows of the Hazelton Group. The regional structural trend is not well defined but bedding seems to strike in a northeasterly direction with moderately steep dips to the northwest. The generalized structure would dictate a stratigraphic section with coarse clastic beds in the southeast overlain by mixed finer grained sediments, felsites, porphyritic volcanics and rhyolite giving way to porphyritic andesites and basalts in the west and northwest. Intrusive rocks in the area are of three types. The most significant is a poorly exposed quartz monzonite body in the west-central part of the claim area. This body appears to lie along or near the sedimentary-volcanic division of the intruded Hazelton rocks. In the northeast portion of the claims is a large coarse-grained monzonite body. A number of small exposures of a fine-grained quartz diorite are seen along the eastern boundary of the claim group. Brecciated and sheared zones commonly contain pyrite and give rise to gossanous zones and outcrops. The dominant direction of shearing appears to be northeasterly to easterly.

Intrusive Rocks

Quartz Monzonite: a medium-grained to weakly porphyritic rock with both biotite and hornblende and fine disseminated magnetite. The rock appears fresh and unaltered and is only weakly fractured to give a coarse blocky or jointed appearance. In some outcrops minor fracture controlled quartz veining and pyrite can be seen. Weak chalcopyrite and molybdenite together with fine pyrite was observed in outcrops in the main creek and in one of the trenches. In many of the outcrops the fractures contain at least some limonite but significant leaching is not probable.

Monzonite-Monzonite Porphyry: a coarse-grained porphyry which often shows a trachytic or subtrachytic texture. Large feldspar phenocrysts to $\frac{1}{2}$ inch in length form the bulk of the rock and are contained in a fine matrix resulting in a "crowded" porphyry. The rock is dark grey in colour and shows weak chlorite and epidote alteration. Sulphides are generally absent and were observed in only small sheared and brecciated zones near the southwest contact of the mapped intrusive body.

Quartz Diorite-Diorite: exposures of this rock type were observed along the eastern border of the claim group. The rock is a medium to fine-grained quartz diorite but in some outcrops is so very finely granular that it has an appearance of a crystallized, massive migmatic or granulitic hornfels. The relationship of this unit to other rocks in the area is not known. No sulphides nor significant alteration were observed in outcrops of this type.

Hazelton Group

Sedimentary Rocks: well bedded clastic rocks are found in the south and southeast portion of the claim group. The beds are mainly coarse breccias, conglomerates, coarse to fine greywackes and some fine-grained beds of siltstone and argillite. The rocks appear to be totally devoid of sulphide mineralization.

Undifferentiated Sedimentary and Volcanic Rocks

These rocks form most of the exposures in the central and south-central portion of the claims. They probably represent a transgression from coarse clastic to predominantly volcanic conditions. Sedimentary members are dark grey and commonly have a green cast. The size of the clastic grains varies from $\frac{1}{4}$ inch breccia fragments to silt-size. Rounded quartz and chert grains are common constituents in what appears to be a chloritic matrix derived from volcanic rocks or a mixed tuffaceous and sedimentary source. The fine-grained beds are argillite and dense siliceous or cherty argillite. Light coloured members of siliceous, often brecciated rock which contains pyrite and frequently vuggy quartz and limonite-filled cavities are believed to be felsites. The felsitic rocks form gossanous, well fractured outcrops. Fractures may be vuggy with quartz lining or contain thin quartz veins. Pyrite in very minor amounts was the only sulphide observed, although the presence of considerable goethite indicates that much of the sulphides in the fractures have been leached. Thin beds of porphyritic volcanics of andesitic or more acidic composition are intercalated throughout this unit.

Rhyolite

Rhyolite forms a distinctive light coloured, banded unit that is exposed in the creek in the central part of the claims. The rock is porphyritic with numerous small, rounded, quartz-eye phenocrysts in a tan to orange microcrystalline matrix. Surface oxidations reveal $\frac{1}{2}$ to 1 inch banded structure in the outcrops. Fine-grained pyrite crystals are weakly disseminated throughout the outcrops.

Basic and Intermediate Volcanics

These rocks outcrop along the entire western edge of the claim area. The rocks form structureless outcrops of porphyritic and less frequently, massive or weakly vesicular flow units. No sulphide mineralization was found in these volcanics, but they do contain much fine-grained and interstitial magnetite which causes a very pronounced magnetic anomaly in the region. Some of the coarsest porphyritic flows have a sub-trachytic texture and contain tabular plagioclase phenocrysts to 1 inch in length. This unit is part of the Hazelton Group and not a younger Tertiary cover rock, although it may be separated by a (local) paraconformity from the underlying volcanic-sedimentary and coarse clastic rocks.

Conclusions

The quartz monzonite stock seems to be roughly coincident with most of the soil anomaly as it is presently defined. The quartz monzonite must be regarded as the genetic host for potential mineralization and the monzonite can be regarded as country rock or an older intrusive which may have "prepared" the ground for the subsequent quartz monzonite intrusion. The geochemical soil anomaly extends uphill beyond the projected eastern contact of the stock and in this area very little about the bedrock geology is known. Where the quartz monzonite is exposed in the creek bed and in two trenches, it shows very little hydrothermal alteration and only traces of copper and molybdenum mineralization.

In the most northeasterly trench a slight increase in alteration was noted along with weak Cu, Mo mineralization. This may be an indication that the border of the quartz monzonite and its hornfels contact zone may be more altered and contain stronger mineralization. The most favourable area for investigation appears to be along the northeast contact of the quartz monzonite body where it may be in contact with felsitic or quartz-eye rhyolite rocks.

A magnetic survey has been useful on the property. The results indicate that the quartz monzonite body can be outlined as an area of moderately high magnetic susceptibility relative to the country rocks. The porphyritic volcanics along the western part of the claim group appear in contrast as a strong positive anomaly.

GEOCHEMISTRY

Outcrops are scarce (<5%), but bedrock lies at shallow depths so that residual soil horizons are developed throughout most portions of the claim group. It was hoped that areas of Cu, Mo and Ag concentration would provide targets for further investigation and Pb, Zn concentrations would indicate peripheral or boundary zones to areas of interest.

Geochemical Results

Anomalous zones with maximum values of Cu to 4100 ppm, Mo to 70 ppm and Ag to 32 ppm were outlined. The Cu and Mo profiles indicate a northerly trending anomalous zone and show good correspondence in their peak areas. There appears to be greater dispersion of Cu to form broader anomalies of moderate intensity relative to the Mo. The Ag shows an inverse relation to the Cu-Mo peaks and has a generally more erratic distribution. The area of Ag enrichment is contained in a broad northeasterly trending zone which is composed of many small individual concentration peaks in a broad anomalous area of low to moderate intensity.

Conclusions

The north-trending anomaly appears to be confined to the area that has been observed or is inferred to be underlain by the quartz monzonite intrusive or its contact zone. Borders or limits of enrichment in the soil have been indicated for Mo-Cu. The enrichment of some Cu and all the Ag appears to be erratic. It may well be related to structural elements in the peripheral zones of the quartz monzonite. More detailed sampling is needed to delineate these anomalies.



Andre Panteleyev

Vancouver, B.C.

September 12, 1968



P. T. Black (Supervisor), P.Eng.

STATEMENT OF COSTS

FOR

WORKING PERIOD JULY 3 TO AUGUST 26, 1968

<u>Personnel</u>	<u>Rate</u>	<u>Days</u>	<u>Total</u>
Surveying, line-cutting, picketing and chaining			
R. Sebastian	\$16.44	8	\$ 131.52
M. Huhtala	13.97	7	97.79
A. Vanderhorst	13.97	7	97.79
Geochemical Soil Sample Collection			
M. Huhtala	13.97	10	139.70
A. Vanderhorst	13.97	10	139.70
R. Sebastian	16.44	2	32.88
Geological Mapping			
A. Panteleyev	24.65	13	320.45
R. Sebastian	16.44	1	16.44
Soil Sample Analyses: 508 samples @ \$3.25			1,651.00
Direct costs applicable to line-cutting, geochemical sampling and geological mapping			2,200.00
Supervision: R.R. Blusson (Field Chief) 31 days @ \$24.00			744.00
P.T. Black (Engineer-in-Charge) 7 days @ \$35.00			245.00
			<u>5,816.27</u>

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 13
day of September, 1968, A.D.

P.T. Black

A. Geanotte
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder

KENNCO EXPLORATIONS WESTERN LIMITED
ONE BENTALL CENTRE
SUITE 730 505 BURNARD STREET
VANCOUVER 1, B. C.

November 18th, 1968

Mr. G. H. Beley,
Mining Recorder,
Box 340,
Smithers, B. C.

Dear Geoff:

In answer to your letter, with enclosure, of November 14th, the following information is presented in the order of request.

1. Sampling instrument - long handle spade.
2. Where identifiable, sample material is from "B" soil horizon. Where soil profile is obscure, soil material was of unweathered glacial till. All samples were free of organic material.
3. Samples were placed in kraft paper soil sample bags and shipped in groups of 8 to 10 samples in heavy plastic bags.
4. Samples were partially sun-dried in the field. In the Vancouver lab they were oven-dried in their original field sample bags at a temperature of 110°F for up to 24 hours. These were screened and the -80 mesh sieved fraction was used for analyses.
5. All samples were tested in our company Vancouver laboratory.
6. Sieved fraction of samples were treated by perchloric digestion and content of Cu, Mo, Ag, Pb and Zn was determined using the atomic absorption equipment. Results were reported in parts per million (ppm).

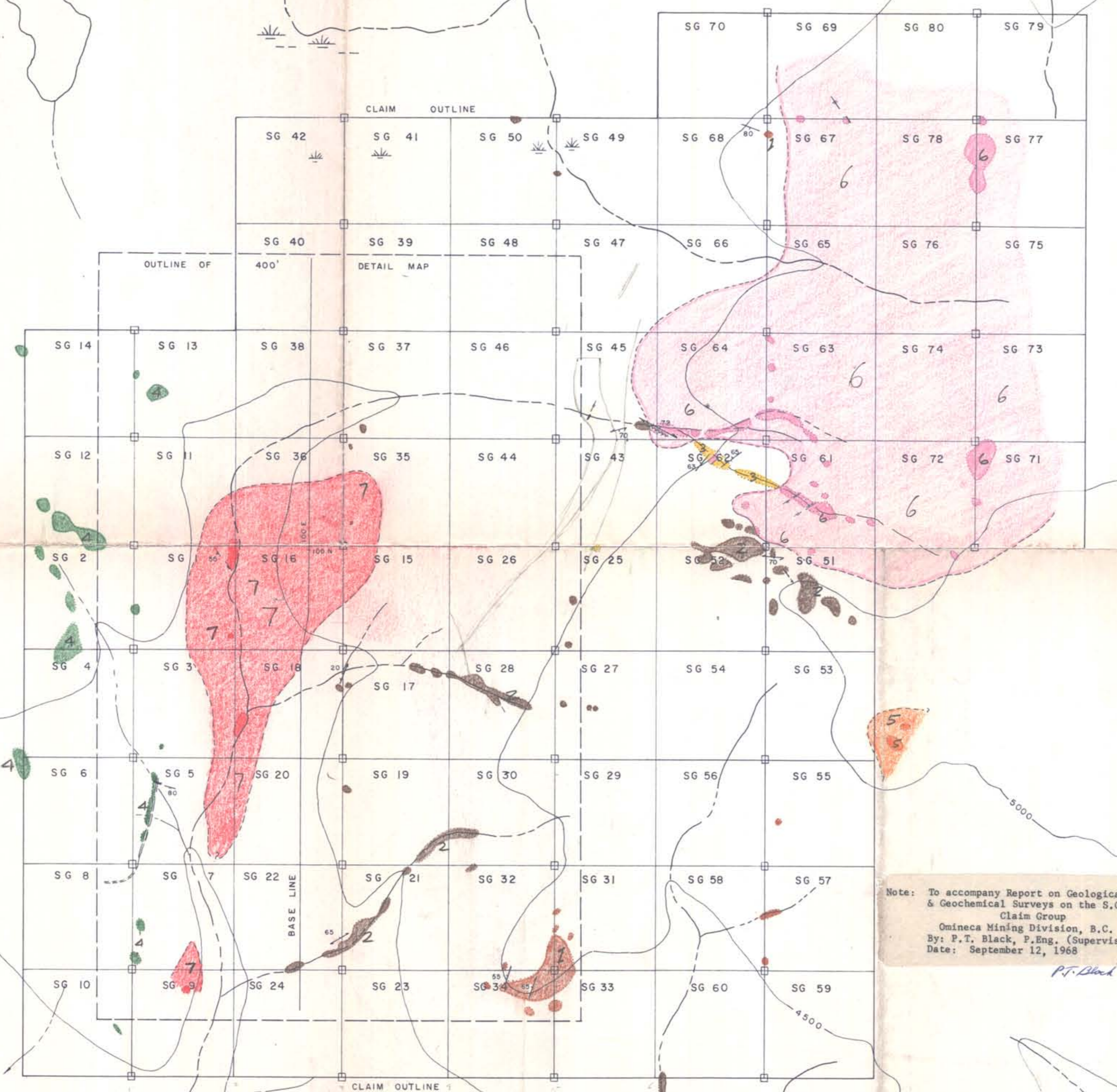
I trust the above information is what was required.

Best regards.

Yours sincerely,

P. T. Black
P. T. Black

PTB/fh

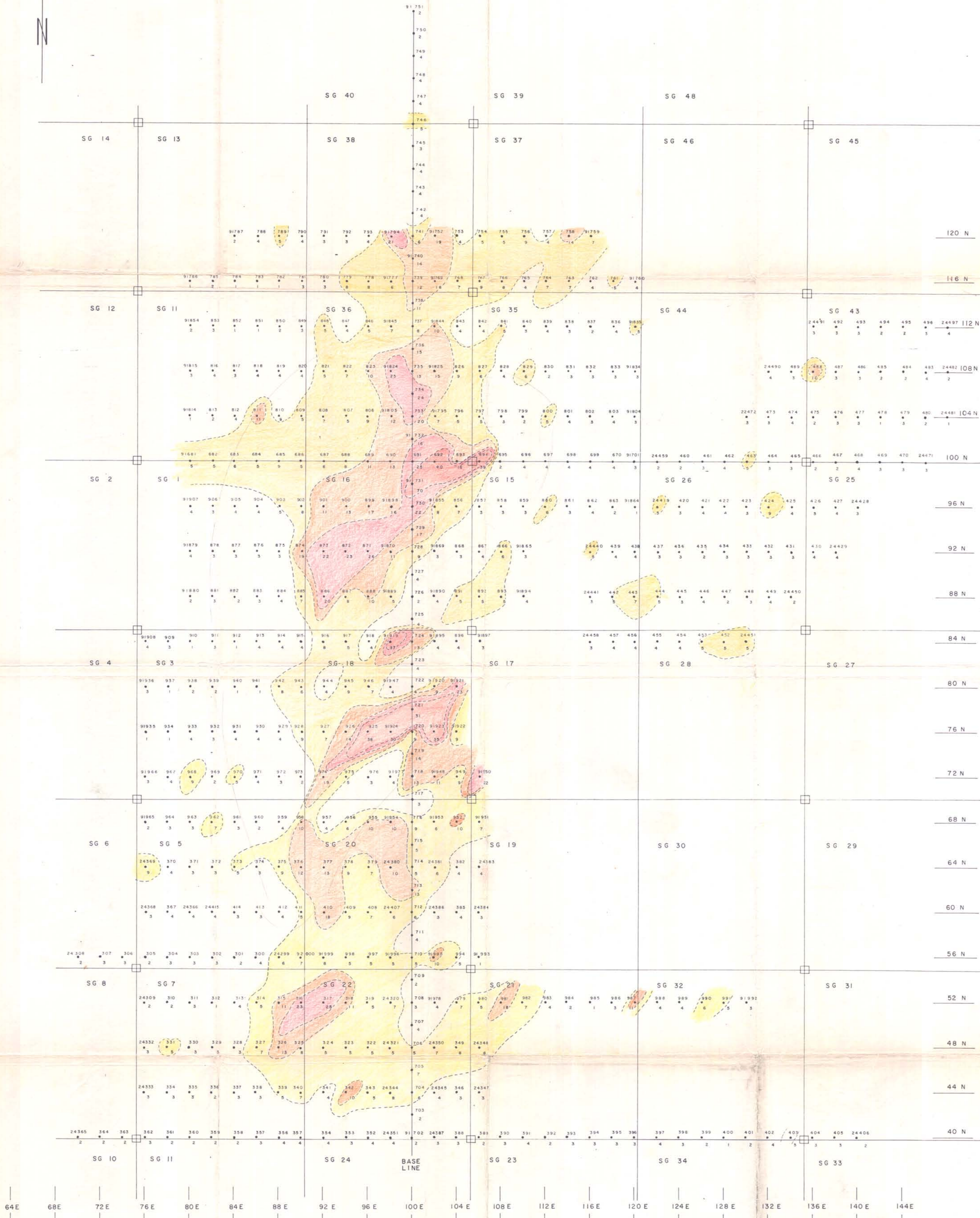


- LEGEND**
- 7 BIOTITE QUARTZ MONZONITE
 - 6 MONZONITE - MONZONITE PORPHYRY
 - 5 DIORITE - QUARTZDIORITE - (MIGMATITE)
 - 4 VOLCANICS - Andesite, Andesite and Feldspar Porphyries, Some Pyroclastic beds and Basalt
 - 3 VOLCANICS - RHYOLITE
 - 2 SEDIMENTS and VOLCANICS Undifferentiated Units of Volcanic and Tuffaceous Sandstone, Argillite, Chert with Felsites and Some Intercalated Andesite and Feldspar Porphyries
 - 1 CONGLOMERATE, BRECCIA, GREYWACKE and ARGILLITE
 - DYKE - Andesite, Feldspar Porphyry

Note: To accompany Report on Geological & Geochemical Surveys on the S.G. Claim Group
Omineca Mining Division, B.C.
By: P.T. Black, P.Eng. (Supervisor)
Date: September 12, 1968
P.T. Black

KENCO EXPLORATIONS (WESTERN) LIMITED			
CLAIM OUTLINE AND GEOLOGY 1968			
SAM GOOSLY			
OMINECA M.D., B.C.			
DATE: Aug 5, 68	DRAWN BY:	PLATE NO.: 1	
REVISED BY:	DATE:	SCALE:	
A. P.		1" to 1000'	

1683



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NO. 1683 MAP 3

Mo in Soil (p.p.m.)
 30 and greater
 20-29
 10-19
 5-9
 <5

Note: To accompany Report on Geological & Geochemical Surveys on the S.G. Claim Group
 Omineca Mining Division, B.C.
 By: P.T. Black, P.Eng. (Supervisor)
 Date: September 12, 1968

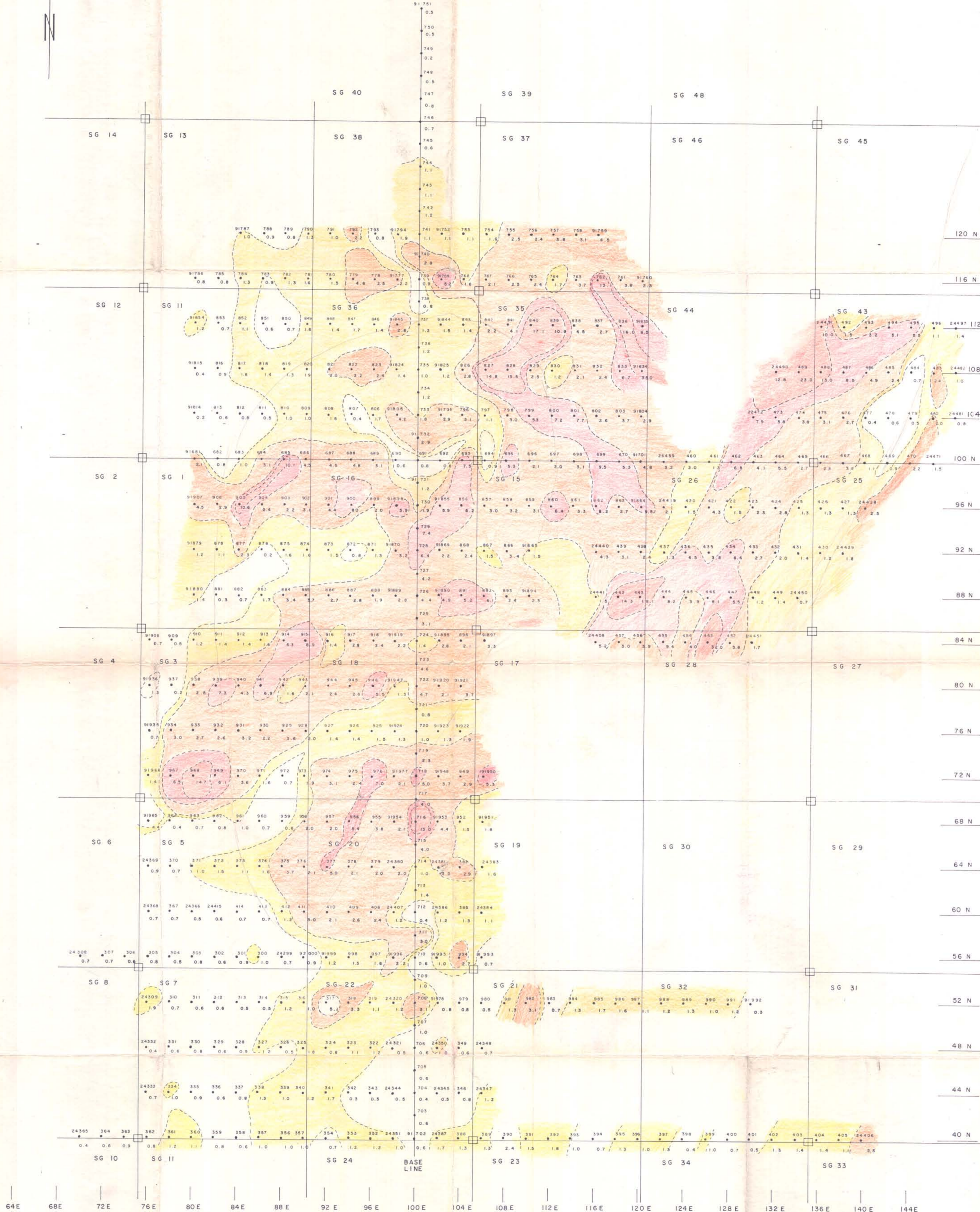
KENCO EXPLORATIONS (WESTERN) LIMITED

SOIL GEOCHEMICAL SURVEY
 Mo in p.p.m.
 SAM GOOSLY PROSPECT
 OMINECA M. D., B. C.

DATE: AUG. 1968 DRAWN BY: PLATE NO.: 3
 REVISED BY: DATE SCALE: 1" to 400'

1683

3



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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1683 MAP 4

Ag in Soil (p.p.m.)
 10 and greater
 5-9
 2-4
 1-2
 <1

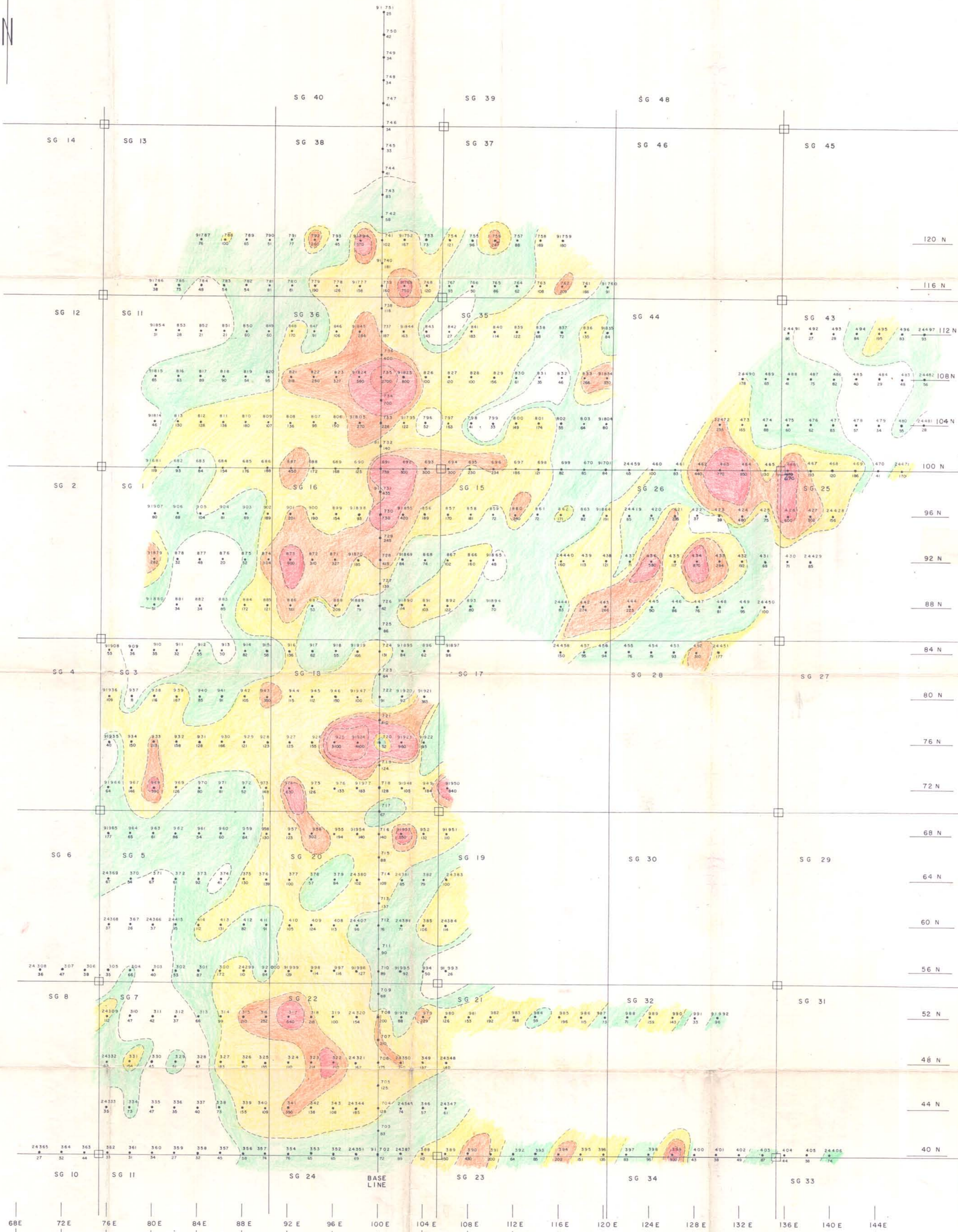
Note: To accompany Report on Geological & Geochemical Surveys on the S.O. Claim Group
 Omineca Mining Division, B.C.
 By: P.T. Black, P.Eng. (Supervisor)
 Date: September 12, 1968

KENCO EXPLORATIONS (WESTERN) LIMITED
SOIL GEOCHEMICAL SURVEY
Ag in p.p.m.
SAM GOOSLY PROSPECT
 OMINECA M. D., B. C.

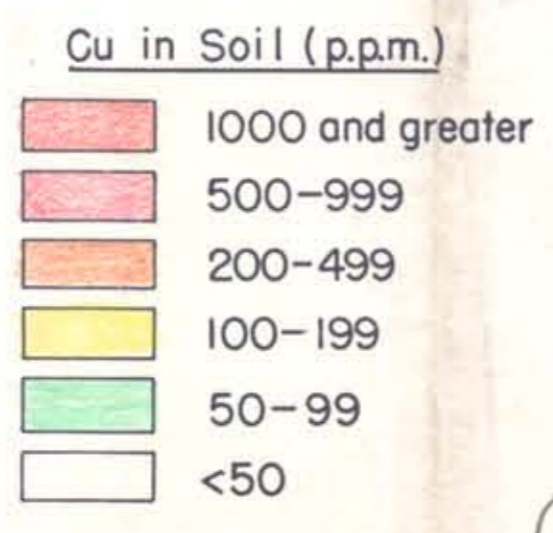
DATE: AUG. 1968 DRAWN BY: PLATE NO.: 4
 REVISED BY: DATE: SCALE: 1" to 400'

1683

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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1683 MAP 2



Note: To accompany Report on Geological & Geochemical Surveys on the S.G. Claim Group
Omineca Mining Division, B.C.
By: P.T. Black, P.Eng. (Supervisor)
Date: September 12, 1968

KENNCO EXPLORATIONS (WESTERN) LIMITED

SOIL GEOCHEMICAL SURVEY
Cu in p.p.m.
SAM GOOSLY PROSPECT
OMINECA M. D., B. C.

DATE: AUG. 1968	DRAWN BY:	PLATE NO.: 2
REVISED BY:	DATE:	SCALE:
		1" to 400'

1683

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