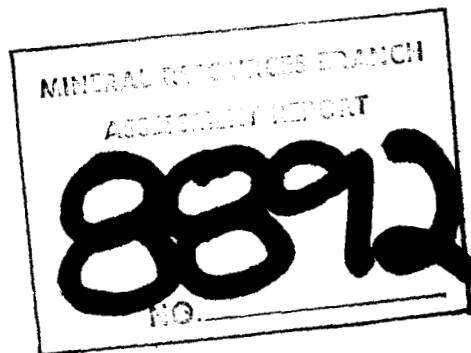


81-# 44-# 8892
GEOLOGICAL AND GEOCHEMICAL SURVEY
OF THE SILICA CLAIMS
KAMLOOPS MINING DIVISION
BRITISH COLUMBIA

D. Gamble

December, 1980



GUICHON EXPLORCO LIMITED
GEOLOGICAL AND GEOCHEMICAL SURVEYS
SILICA CLAIMS - KAMLOOPS MINING DIVISION, B.C.

N.T.S. 92I/11W 50°40'N & 121°20'

D. Gamble
December 1980

TABLE OF CONTENTS

	<u>Page No.</u>
Summary of Conclusions and Recommendations	1
Introduction	2
Location and Access	2
Topography and Vegetation	3
Procedure	3
Previous Work	4
Geology	
Regional Geology	7
Silica Group Geology	8
Lithologies	11
Mineralization	14
Geochemistry	16
Cost Statement	20
Conclusions and Recommendations	22
References	23
Appendix	
i) Geochemical Assay Tables	
ii) Whole Rock Analyses	

LIST OF ILLUSTRATIONS

		<u>Page No.</u>
Fig. 1	Location Map, 1:250,000	5a
Fig. 2	Topographic Map Showing Silica Claims, 1:50,000	6a
Fig. 3	Geological Map of Silica Claims, 1:5000	Back pocket
Fig. 4a	Geochemical Map of Au Silica Claims, 1:5000	Back pocket
4b	Geochemical Map of HG Silica Claims, 1:5000	Back pocket
4c	Geochemical Map of As Silica Claims, 1:5000	Back pocket

GEOLOGICAL AND GEOCHEMICAL SURVEY
OF THE SILICA CLAIMS, KAMLOOPS MINING DIVISION
BRITISH COLUMBIA

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Gold, mercury, arsenic and copper occur anomalously in altered Triassic volcanics at Red Hill, Kamloops Mining Division, British Columbia. The mineralization is associated with a favourable host rhyolite as thin bedded, stratabound pyrite lenses and as finely disseminated interstitial pyrite. Late stage copper bearing quartz veins cut the volcanic strata and intrusive rocks. Late Triassic tectonism accompanied by the intrusion of the quartz diorite pluton released epithermal solutions that extensively hydrothermally altered the pyrite mineralization in the acid volcanics. Surface oxidation has enhanced the alteration effect with the extensive development of bright orange, yellow and red surface gossan. The copper-bearing quartz veins are probably related to the epithermal fluid activity.

Three anomalous gold zones with values ranging from 55 ppb. to 235 ppb. (10^{-9} g/tonne) occur with anomalous arsenic and mercury halos in the survey area. Anomalous mercury values exceed 200 ppb., and anomalous arsenic values exceed 20 ppm. and anomalous gold values exceed 20 ppb.

It is proposed that a program of seven 100 meter percussion drill holes be drilled to test the three anomalous zones at depth.

INTRODUCTION

This report describes the results obtained from a geological mapping and geochemical sampling project conducted over the group of claims known as Silica 1 to 5 situated 17 kilometers south of Cache Creek, B.C.

The claims referred to in the report are registered in the name of Guichon Explorco Limited of Toronto. The names and record numbers of the mineral claims are as follows:

<u>Mineral Claim</u>	<u>Record Date</u>	<u>Record Number</u>	<u>Number units</u>
Silica 1	Jan. 1980	2365	12
Silica 2	Jan. 1980	2366	15
Silica 3	Jan. 1980	2367	10
Silica 4	Jan. 1980	2368	6
Silica 5	Jan. 1980	2369	fraction

Location and Access

The claims, located 17 kilometers south of Cache Creek, B.C. straddle the Trans Canada Highway No. 1 and include the topographic feature known as Red Hill, N.T.S. 92I/11 (Figure 1). The summit of Red Hill has N.T.S. northing and easting coordinates of 5,613,000 mN and 617,500 mE. Access to the property is gained via range, farm and previous mineral exploration roads leading from the highway.

Topography and Vegetation

Relief is gentle throughout the claim groups with the exception of the elongated north-south trending Red Hill that exhibits the maximum range from 1500 to 2300 feet above sea level (see Figure 2 for topography and claim location).

At the lower elevations the vegetation consists of open sagebrush, grass and farmland changing to scattered pine and fir at the higher elevations on Red Hill.

Procedure

To maintain control for the surveys carried out a centrally located 4.5 kilometers baseline with 25 meter stations was laid out bearing 180° connecting the north and south plateau summits of Red Hill. Peripheral claim lines were chained and tied into the baseline. Geological mapping and sampling was conducted over east-west traverse grid lines spaced at 200 meter intervals along the baseline. Traverses were flagged, chained and tied into the claim/tie lines. Samples were taken at every outcrop encountered during the survey. A total of 47 line kilometers of grid traversing, 9 kilometers of tie line and 4.5 kilometers of baseline were surveyed.

A total of 363 rock and soil samples were collected, bagged and shipped to Vancouver where analysis were done by Chemex Laboratories

Limited for gold, mercury and arsenic. Of this total 16 samples were soil/scree material taken where bedrock exposures were scarce. The remaining 347 samples were from bedrock.

In addition to gold, mercury and arsenic determinations, (58) copper, (36) silver and (1) zinc, tin and tungsten were also determined.

Eighteen (18) selected rock samples were shipped to Bondar-Clegg and Company Ltd., Ottawa, Ontario for whole rock analysis. In conjunction, a representative suite of (36) rocks were shipped to Mr. H. Sheriff, Toronto, Ontario to prepare thin sections for a petrological study (A.E. Albrechtsons B.Sc. thesis in preparation, Lakehead University).

The grid preparation, the sampling and geological mapping were carried out under the direction of Dr. H. Squair with field supervision by A.P.D. Gamble. A junior geologist, E.A. Albrechtsons (geology student) and one local labourer assisted. The work was carried out during the periods 6 June 1980 to 11 July 1980 and 20 August 1980 to 31 August 1980.

Previous Work

The Ashcroft map area, G.S.C. Memoir No. 262 by S. Duffell and K.C. McTaggart (1952) represents the first major geological survey and report of work conducted in the region. Ten years later, J.M. Carr included Red Hill and area in his report on the geology in the Thompson

River Valley between Ashcroft and Spences Bridge. More recently, independent thesis and reports by J.H. Ladd (1977, 1979) and W.B. Travers (1978) have been conducted under the auspices of the B.C.D.M. to further the understanding of the geology and structural complexities of the region.

Much of the area was staked previously with various follow-up exploration activities undertaken. The first recorded work on the property occurs in Assessment Report No. 299 for the Cache Creek Silica Co. The work involved mapping and sampling of the "silica schist" units exploring for high silica content.

Reported in Lode Metals in B.C., 1962 Noranda Exploration Co. optioned a group of mineral claims on the northern part of Red Hill. Work conducted consisted of ground e.m. and magnetometer surveying, soil sampling, stripping and diamond drilling (6 holes). No assessment report was filed.

Quintana Minerals Corp. in 1968 conducted geological mapping and drilled 4 rotary holes (2646 feet). Lode Metals in B.C., 1968. No assessment report was filed.

Cerro Mining Company of Canada with Ducanex Resources Ltd. acquired property in 1970 and conducted a geological survey, ground magnetometer survey and drilled 12 percussion holes (3150 feet). The following

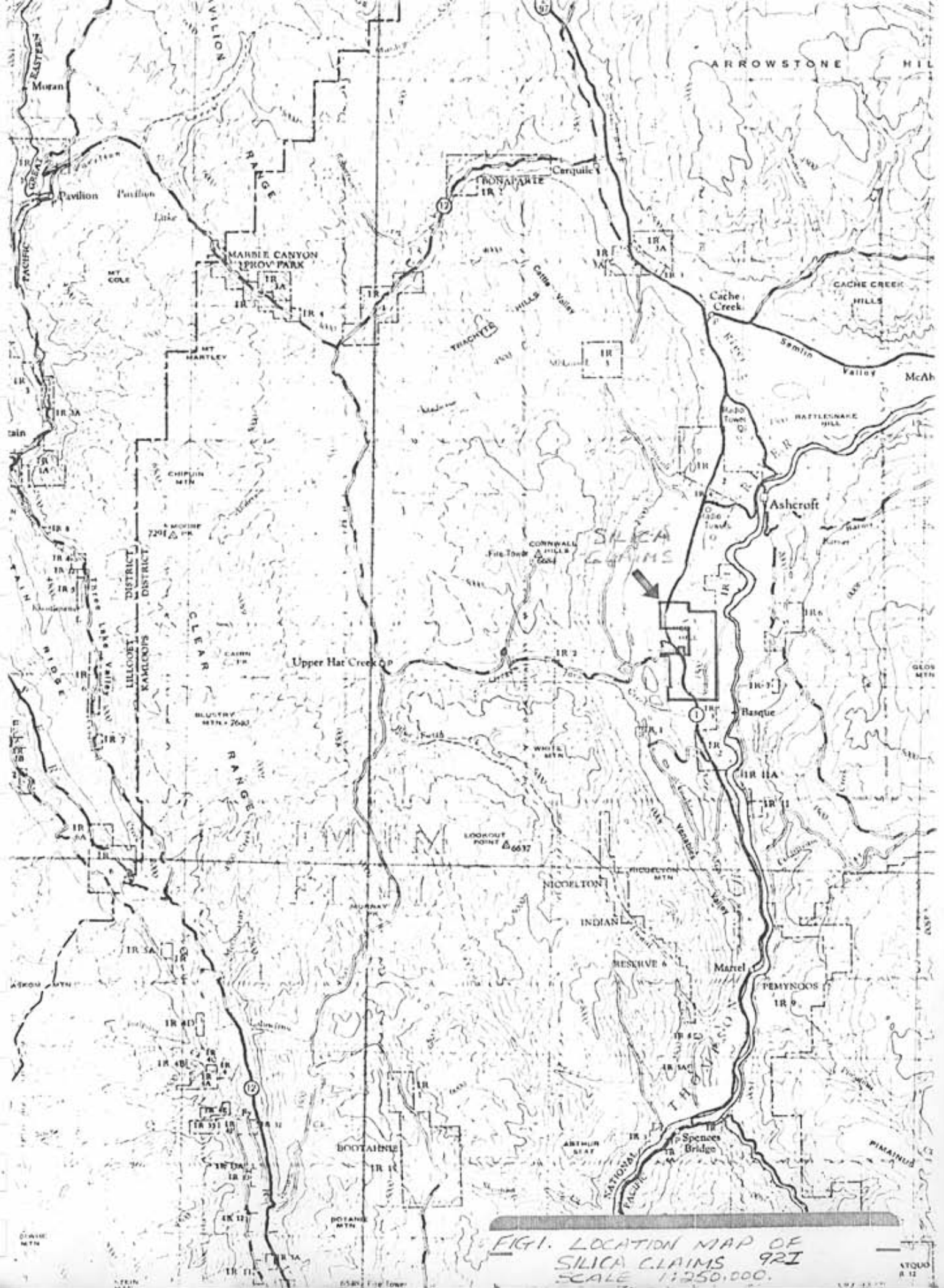


FIG. 1. LOCATION MAP OF SILICA CLAIMS 921 SCALE 1:250,000.

year an I.P. survey and diamond drilling, 4 holes (1966 feet) was completed. G.E.M. in B.C., 1970, 1971. No assessment report was filed.

The most recent work was conducted by Bethlehem Copper Corp. in 1974, Assessment Report No. 5308. The work consisted of geological mapping, soil sampling and 3 percussion drill holes (580 feet).

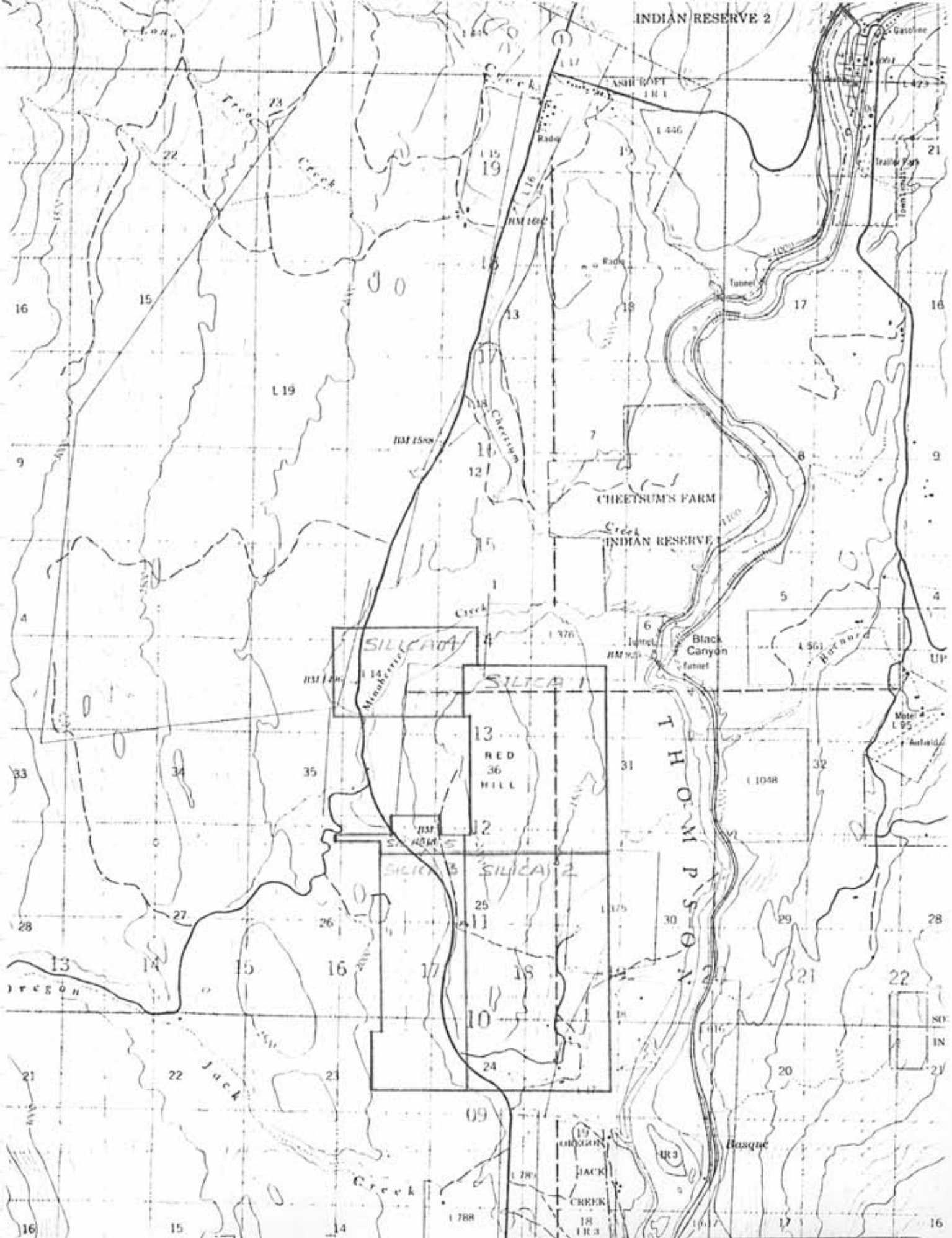


FIG 2. TOPOGRAPHIC MAP OF SILICA CLAIMS 92-1/11 SCALE 1:50,000

GEOLOGY

Regional Geology

The Silica claims lie within a north to northwest trending belt of volcanic and sedimentary rocks belonging to the Triassic Nicola Group. This belt is bound on the east by the nonconformable, overlying Jurassic sediments of the Ashcroft Formation. On the west margin, the Nicola assemblage is in an apparent fault contact with the older Marble Canyon limestone Formation of the Permian Cache Creek Group. Intruding the Nicola strata are quartz diorite plutons that are approximately the same age (196± 15 m.g.) as the Guichon Creek Batholith (Ladd 1979, unpublished thesis).

The Nicola Group in this section was originally interpreted as belonging to the Permian Cache Creek Group (Duffell and McTaggart, 1952), however, recent mappers (Ladd, 1977, 1979 and Travers, 1978) have reassessed this earlier conclusion. According to Ladd (1979), the Cache Creek Group composed of oceanic crust and upper mantle material represented in part an oceanic plate. The continental plate margin was represented by the Nicola Group. It has been proposed that there may have been a converging plate margin ocean-ward of the Nicola Group during late Triassic and early Jurassic time. During this time the ocean basin lying between the oceanic plate margin and continental plate margin was closed which resulted in the Permian Marble Canyon limestone Formation and oceanic crust of the Permian

Cache Creek Group being overthrust onto the Nicola Group. Prior to this overthrusting the deformation of the Cache Creek Group and late Triassic Nicola intrusions took place. Deposition of Jurassic sediments, the Ashcroft Formation, is thought to have occurred contemporaneously with the overthrusting of the Cache Creek Group.

Silica Group Geology

The Silica property is mainly comprised of a north to northwest striking and steeply southwest dipping homoclinal sequence of Nicola Group acid and mafic metavolcanic rocks. The assemblage includes the following in decreasing order of abundance: rhyolite flows that include aphanitic and quartz-feldspar porphyritic varieties (Unit 3, 3a) and sheared equivalents "quartz-eye" sericite schist (Unit 3b); intermediate to mafic flows, i.e. andesite to basalt flows (Unit 2a), and andesite-basalt tuff (Unit 2b). These volcanic units have been intruded by a late Triassic quartz-diorite to diorite pluton in the central part of the property (Unit 4). All of the above rock types are locally cut by either quartz + carbonate veins, or mafic dikes and sills, or by acid dikes and sills.

Lying in the eastern part of the property is the buried nonconformable contact between the Nicola type volcanics and the overlying Jurassic sediments of the Ashcroft Formation. The Ashcroft Formation outcrops on the eastern margin of the property and consists of grey-brown shale,

sandstone and conglomerate beds (Unit 5) that are unmetamorphosed and gently folded.

Local minor exposures of poorly indurated Tertiary conglomerate nonconformably overlies the Nicola volcanics and intrusive (Unit 6).

Recent glacial debris occurs throughout the claims area with the thickest accumulations of sand and gravel flanking the east side of Red Hill and thickening towards the center of the present Thompson River Valley.

A small exposure of limestone similar to the Marble Canyon Fm is preserved as wedge-shaped fault bounded block on the east side of Red Hill (Unit 1). This occurrence represents the oldest rock type (Permian) found on the property.

The geological map Figure 3 (back pocket) illustrates the distribution of all lithologies and especially the bedded nature of the Nicola volcanic assemblage.

Shearing and a strong to moderate foliation fabric has obliterated most primary bedding features. However, in the southwest corner (Silica 3) of the property graded bedding in an andesite tuff indicates tops to the southwest.

Along with the extensive and often flamboyantly coloured gossan zones the most noticeable characteristics in the claim area is the pervasive

extent of shearing. The Nicola volcanics are foliated and hydrothermally altered to such degree that it masks the identity of the original texture locally. This is especially true with the rhyolite quartz-feldspar flow (Unit 3) which has been referred to as an acid tuff in previous work (Carr, Ladd). Although extensive, the intensity of shearing is variable and localized. Unsheared rhyolite flows are found in the same exposures as sheared equivalents that appear to approximate a pyroclastic texture.

Faulting is seen at several localities on the Silica claim area. On the east side of Red Hill (Silica 1) a major fault cuts across the Nicola assemblage striking approximately 300° and dipping vertical to steeply south. The east part of this fault zone is marked by an intensive shearing fabric in strongly carbonated mafic volcanic wall rocks that host an allochthonous wedge of limestone (Marble Canyon Fm). The limestone exhibits convoluted healed carbonate fractures, is blocky appearing and contains mafic volcanic fragments that have been included during movement. This fault zone continues into the overlying acid assemblage which displays a brecciated texture. Continuing along strike numerous quartz filled tension gash veins occur in the overlying andesite flow (L10+00S/BL) indicative of the influence of this northwest trending structure. Near the west boundary of Silica 1 this structure or subsidiary is seen as an intense shear zone cutting acid volcanics that become increasingly chloritized towards the fault. Weak malachite staining accompanies the occasional quartz stringers in this fault zone and also in the surrounding subsidiary fractures. In the southeast corner of Silica 4 this zone of intense shearing,

chlorite alteration accompanying the shearing represents the northwest extension of this zone on the property.

The quartz diorite intrusive (Unit 4) is unsheared, however, it does display a joint set parallel to the northwest trending fault system.

A northeast trending fault structure is presumed at the southeast corner of Silica 1. A northeast trending foliation fabric in the andesite flows coupled with a 75 meter x 3 meter quartz vein trends towards the major northwest fault system at a point near the limestone occurrence (Unit 1). A possible extension of this northeast system is presumed near the Silica 2/3 boundary near L34S/2W. Here the strata has been offset with intense shearing present.

Lithologies

The following are brief descriptive notes on each of the lithologies present in the map area.

Unit 1, Limestone: A fine grained, crystalline gray limestone with healed microfractures containing white carbonate. The limestone is sheared and contains xenoliths of mafic volcanic material.

Unit 2a, Andesite Flows: A fine grained, dark green rock which may contain 2-3 mm. chloritic inclusions and appears massive in texture. It is locally fractured and may be highly sheared and foliated

especially where interbedded with schistose acid rocks. Silicification in the form of pervasive quartz veining is seen in some of the exposures proximal to the intrusive quartz diorite. Tends to be carbonated where the foliation fabric is advanced.

Unit 2b, Andesite Tuff: A fine grained dark grey to green unit consist-
int of ash and lapilli sized fragments. Grading is seen in the south-
west corner of Silica 3, with tops facing southwest. Abundant
interstitial carbonate and veinlets. This unit tends to have a well
developed foliation/bedding fabric.

Unit 3a, Rhyolite Flow (Quartz Feldspar Porphyry): The most extensive
rock type seen on the property, this member appears in a variety of
forms. The common feature is the presence of angular to euhedral
1-3 mm. clear quartz phenocrysts in a fine crystalline white to pale
yellow siliceous groundmass. Variations within the rock type include:
presence or absence of 1-2 mm. euhedral feldspar phenocrysts; colour
differences of the siliceous matrix (white, grey, pink, apple green);
as well as the degree of foliation and accompanying hydrothermal
alteration that is present in the form of extensive gossans. Fine
grained disseminated pyrite is a common accessory. Dikes of similar
composition are found cutting the flow units.

Unit 3b, Quartz-Sericite Schist: This unit is an extreme variation of
Unit 3a where shearing has been intense. It is composed of a highly
foliated "quartz eye" bearing mica schist (sericite). The quartz

eyes are 1-4 mm. in size in a flaky mica matrix and tends to be carbonate rich, The degree of shearing is localized and can change within meters in an outcrop to Unit 3a.

Unit 4, Quartz Diorite - Diorite: A medium grained, light to medium green phaneritic rock composed of 20% quartz, 45% white feldspar and 35% mafic and accessory minerals. Saussuritization and chloritization gives the rock a distinct epidote green colour. There tends to be a decrease in quartz content towards the margin of the intrusive zoning towards a diorite in composition. Country rocks xenoliths (andesite) are found at the margins. Pyrite and magnetite are found as accessory minerals. Quartz veining and jointing cut the intrusive. Related mafic dikes and sills lie proximal to this intrusion.

Unit 5, Sandstone/Conglomerate: The sedimentary rocks of the Ashcroft Fm. consist of rounded cobbles and pebbles in a fine sandy brown-grey matrix. Outcrops occur on and near the east margin of the property.

Unit 6, Immature Conglomerate-Breccia: This unit is only locally exposed and consists of a tan-brown poorly indurated conglomerate. Clasts are composed of Nicola volcanics and Tertiary basalt fragments ranging in cm to 0.5 m. in size. A degree of imbrication of the clasts is present and they are suspended in a weakly cemented sandy matrix. This deposit could be either Tertiary to Quaternary in age.

Mineralization

Red Hill as its name implies displays an extensive oxidation surface of flamboyant colours of red, orange and yellow gossan. This gossan is primarily restricted to the acid volcanic portion of the Nicola volcanics on the Silica claims. Within the rhyolite flows (Unit 3a) and its sheared equivalents (Unit 3b) fine grained disseminated pyrite occurs. Hydrothermal activity and surface oxidation of pyrite is thought to have contributed to the development of the gossans.

Pyritiferous chlorite schists are also found forming lenses within the acid volcanics. At L11+00S/3+00W one of these lenses is exposed over 20 meters in strike length with variable thickness up to a maximum of 1 meter. Copper values in the massive pyrite exceeded the 4000 ppm. value. (Upper detection limit for geochemical assay procedure.) In addition, quartz veining at this location cuts the rhyolite flows and contains malachite and azurite copper mineralization. No primary copper sulphides were seen.

A quartz-vein copper oxide (malachite) association is also seen cutting the quartz diorite (L13+00S/2+00E). Previous stripping has exposed malachite and pyrite associated with a bull white quartz vein.

A third previously stripped area (L31+00S/7+00W) displays massive to disseminated pyrite in sheared acid volcanics. Despite extensive gossans and a wealth of pyrite, no copper sulphides were seen.

Gossan formation is also commonly found at interflow contacts within the rhyolite flows throughout the claim area.

It therefore appears that the pyrite lenses are of volcanogenic origin, a stratabound type deposit, and that the disseminated pyrite is contained in a favourable host that underwent hydrothermal alteration culminating with a very effective surface oxidation to produce the gossan zones. The copper-bearing quartz veins that are found cutting both volcanics and intrusive is suggestive of a later stage mineralization

GEOCHEMICAL SURVEY

Three hundred and sixty-three (363) rock and soil samples were collected from the claims area for a total area sampled of 1100 hectares.

Assay values of rock and soil/talus samples range from 10 ppb. mercury (10^{-9} g/tonne) to 2500 ppb. mercury; from 1 ppm. arsenic (10^{-6} g/tonne) to 65 ppm. arsenic; and from less than 5 ppb. gold (10^{-9} g/tonne) to 235 ppb. gold. The samples analysed for silver ranged from 0.1 ppm. (10^{-6} g/tonne) to 6.0 ppm. silver. Those analysed for copper ranged from 1 ppm. (10^{-6} g/tonne) to greater than 4000 ppm. copper. One sample was analysed for tin (3 ppm.), tungsten (1 ppm.) and another sample for zinc returned 30 ppm. zinc. Analyses appear in the appendix and distribution of values are shown below:

(1) Greater than 2000 ppb. Hg	1 sample (s)
1001 - 2000	1 sample
501 - 1000	6 sample
401 - 500	3 sample
301 - 400	6 sample
201 - 300	4 sample
101 - 200	12 sample
51 - 100	25 sample
0 - 50	<u>305</u>
TOTAL	363

(2)	61 - 65 ppm. As	1 sample (s)
	56 - 60	7 sample
	51 - 55	13 sample
	46 - 50	2 sample
	41 - 45	1 sample
	36 - 40	1 sample
	31 - 35	5 sample
	26 - 30	6 sample
	21 - 25	6 sample
	16 - 20	14 sample
	11 - 15	29 sample
	6 - 10	82 sample
	0 - 5	<u>196</u> sample
	TOTAL	363

(3)	201 - 300 ppb. Au	1 sample (s)
	101 - 200	7 sample
	51 - 100	13 sample
	46 - 50	2 sample
	41 - 45	1 sample
	36 - 40	1 sample
	31 - 35	5 sample
	26 - 30	6 sample
	21 - 25	6 sample
	16 - 20	14 sample
	11 - 15	29 sample
	6 - 10	82 sample
	0 - 5	<u>196</u> sample
	TOTAL	363

(4)	Greater than 4000 ppm. Cu	9 sample (s)
	3001 - 4000	1 sample
	2001 - 3000	2 sample
	1001 - 2000	2 sample
	501 - 1000	2 sample
	101 - 500	7 sample
	51 - 100	5 sample
	0 - 50	<u>30</u> sample
	TOTAL	58

Mercury, arsenic and copper were determined using atomic absorption and gold was determined by using a combination fire assay and atomic absorption method.

Three significant gold anomalies occur on the Silica claim group with coincidental mercury and arsenic halos. The first anomaly on Silica 1 claim extends from L8+00mS/B0 to L12+00mS/3+50mW. Anomalous copper occurs within the area of the gold anomaly and is associated with a pyrite lense lying with acid volcanic strata. The northern part of this anomaly is centered in a gossaneous, disseminated pyrite bearing rhyolite flow. The anomalous gold zone occurs as two discrete spikes of gold and arsenic linked by an anomalous mercury halo.

The second gold anomaly occurs on Silica claim 2 at L34+00mS/0+75mE. The gold zone is flanked by an arsenic zone and both lie in an arcuate mercury anomalous halo. The host rock for this zone is a sheared, foliated, gossaneous, weakly disseminated pyrite bearing rhyolite.

The third gold anomaly occurs on Silica claim 3, L31+00mS/7+00mW. The anomalous gold is coupled with a moderate arsenic anomaly which lies in a weak mercury halo. A gossaned rhyolite with massive and disseminated pyrite host this anomaly.

In addition to the above mentioned coincidental gold, mercury, arsenic zones, there are also a number of isolated spike-like single element anomalies occurring within the rhyolite assemblage throughout the claim area.

The overall distribution of the anomalous gold, mercury and arsenic zones lie in a favourable host, the Nicola rhyolite volcanic assemblage. Where the fracturing and shearing is intense and alteration strong as in the bleached white quartz-sericite schist, anomalies tend to be absent. However, where moderate to weak fracturing occurs coupled with alteration, extensive gossans and pyrite mineralization, anomalies of one or more elements tend to occur. Also the massive pyrite lenses tend to be anomalous in gold, mercury and arsenic as well as copper.

SILICA CLAIMS - COST STATEMENT

(June 6-July 11 and August 20-August 31, 1980)

Geological and Geochemical Surveys

2 man days @ \$200.00/day	\$ 400.00
21 man days @ \$100.00/day	2100.00
35 man days @ \$70.00/day	2450.00
14 man days @ \$70.00/day	980.00

Report and Drafting

22 man days @ \$100.00/day	\$2200.00
11 man days @ \$70.00/day	770.00

Accommodation

53 days @ \$26.25/day	\$1391.25
-----------------------	-----------

Food

53 days @ \$19.25/man day	\$1020.25
---------------------------	-----------

Support

Flagging, pickets, sample bags, shipping, axe, etc.	\$ 698.75
--	-----------

Transportation

Truck lease 6 weeks @ \$100.00/week	\$ 600.00
Vehicle operation 6 weeks @ \$105.00/week	630.00

Sample Analysis

363 soil & rock chip samples (Au, Hg, As, <u>+Cu</u> , Ag) \$	4328.91
18 whole rock analysis and thin sections	<u>588.00</u>
	\$18,157.16

CONCLUSIONS

Gold, mercury and arsenic occur in anomalous concentrations within altered Triassic Nicola Group rhyolite. Three anomalous zones with values ranging from 55 ppb. to 235 ppb. gold occur within and proximal to arsenic and mercury halos. The mineralized zones are hydrothermally altered with moderate fracturing and shearing. Extensive gossan is restricted to the rhyolite assemblage and is associated with finely disseminated pyrite. Massive pyrite lenses containing anomalous copper values (greater than 4000 ppm.) occur stratabound within the acid volcanic part of the pile. Quartz veining containing copper (malachite) mineralization cut the volcanics and quartz diorite intrusive as a late stage of mineralization.

RECOMMENDATIONS

A follow-up percussion drill program is recommended to be carried out on the three coincidental gold, mercury, arsenic anomalies for depth extension and upgrading of values. It is proposed that 4 holes be drilled to test the northern anomaly on Silica 1, 2 holes be drilled to test the southern anomaly on Silica 2 and 1 hole be drilled into the west anomaly on Silica 3.

LIST OF REFERENCES

- CARR, J.M. (1962) "The Geology of part of the Thompson River Valley between Ashcroft and Spences Bridge, B.C." Lode Metals in B.C. 1962. B.C. Dept. of Mines and Petroleum Resources
- DUFFELL, S. and McTAGGERT, K.C. (1952) "Ashcroft Map - Area, British Columbia"; G.S.C. Memoir 262.
- LADD, J.H. (1977) "Cache Creek - Nicola Contact Ashcroft Area" Geological Fieldwork 1977, B.C.M.M.P.R. (PP.89-95).
- LADD, J.H. (1979) "Mesozoic Overthrusting of Oceanic Crust in South Central British Columbia"; unpublished M.Sc. Thesis, Cornell University.
- TRAVERS, W.B. (1978) "Overtured Nicola and Ashcroft Strata and their Relation to the Cache Creek Group, Southwestern Intermontane Belt British Columbia, Cdn. Journal Earth Science, Vol. 15, 1978, PP. 99-116.
- Minister of Mines B.C., Annual Report
"Lode Metals in B.C." 1962 P. 46 Noranda Exploration Co. Ltd.

Minister of Mines B.C., Annual Report

"Lode Metals in B.C." 1968 P. 174 Quintana Minerals Corporation

Minister of Mines, B.C.

"Geology, Exploration and Mining in British Columbia" 1970 P. 326 Cerro Mining Co. of Canada Ltd. & Ducanex Resources Ltd.

"Geology, Exploration and Mining in British Columbia" 1971 P. 299-300 Cerro Mining Co. of Canada Ltd. & Ducanex Resources Ltd.

"Geology, Exploration and Mining in British Columbia" 1974 P. 157-158 Bethlehem Copper Corp. Ltd.

Kamloops Mining Division #299 Cache Creek Silica Co. Ltd.

Assessment Reports #5308 Bethlehem Copper Corp. Ltd.

CERTIFICATE

I, Dave Gamble of 7182 Blackwell Road, Kamloops, British Columbia hereby certify as follows:

- (1) I am a geologist residing at the above address.
- (2) I am a graduate of the University of Ottawa with an Honours B.Sc. (1973) and pursuing a M.Sc. at Laurentian University as an inactive student.
- (3) I have practised my profession for more than 7 years.
- (4) I supervised the geological and geochemical work carried out on the Silica Claim group by Mr. E.A. Albrechtsons and assistant, and attest that values presented and their spatial relationships to each other are correct within reasonable limits of error.
- (5) I interpreted the results of the survey.
- (6) I hold no interest direct or indirect in the Silica Claim Group which is the subject of this report.

Kamloops, B.C.
January 8, 1981

Respectively submitted,

A.P.D. Gamble

CERTIFICATE

I, Hugh Squair of 4287 Staulo Crescent, Vancouver, hereby certify that:

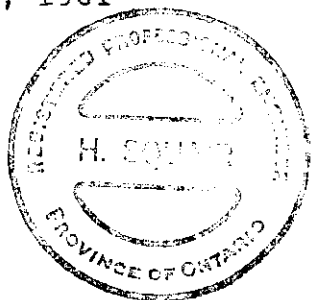
- (1) I am a geologist residing at the above address.
- (2) I am a graduate of the University of Saskatchewan and London with B.A. 1959 and Phd. 1965, degrees in Geology and Mining Geology and have practiced my profession for 15 years.
- (3) I am registered as a member of the Association of Professional Engineers of the Province of Ontario.
- (4) I directed the geological and geochemical work carried out on the Silica Claim group by Mr. A.P.D. Gamble and Mr. E.A. Albrechtsons and attest that the values presented and their spatial relationships to each other are correct within reasonable limits of error.
- (5) I hold no interest direct or indirect in the Silica Claim group which is the subject of this report.

Vancouver, B.C.

Jan. 15, 1981

Respectively submitted,

Hugh Squair
Hugh Squair



APPENDIX i
GEOCHEMICAL ASSAY LISTS



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. 69162 ✓
 INVOICE NO. 37640
 RECEIVED July 17/80
 ANALYSED Aug. 8/80

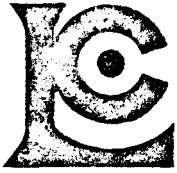
ATTN: cc: Mr. Dave Gamble

SAMPLE NO.	"ROCK TYPE UNIT"	ppb Gold	(Combo Au)	Rocks
12047	3	10		
12048	↑	185		
12049		100		
12050		10		From 54675
12051		5		
12052		< 5		
12053		5		
12054		< 5		
12055		85		
12056		10		
12057		10		
12058		10		
12059	↓	15		
12060	3	10		
12061	2	30		
12062	2	15		
12063	3	30		
12064	↑	15		
12065	↓	5		
12066	3	10		
12067	2	10		
12068	3	10		
12069	↑	50		
12070		10		
12071		10		
12072		10		
12073		< 5		
12074		10		
12075		5		
12076		5		
12077	↓	5		
12078	3	< 5		
12079	2	< 5		
12080	2	70		
12081	3	5		
12082	↑	5		
12083	3	30		
12084	2	5		
12085	2	5		
12086	3	5		



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. 6 9163
 INVOICE NO. 37640
 RECEIVED July 17/8
 ANALYSED Aug. 8/80

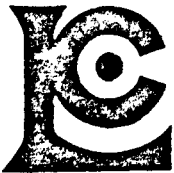
ATTN: cc: D. Gamble

SAMPLE NO	ROCK TYPE UNIT	PPB Au	(Combo.)	Rocks
12087	3	15		From 54676
12088	3	5		
12089	3	5		
12090	3	< 5		
12091	3	5		
12092	3	10		
12093	4	10		
12094	4	10		
12095	4	5		
12096	4	25		
12097	4	15		
12098	4	5		
12099	4	5		
12100	4	35		
12101	4	10		
12102	g.v. 4	35		
12103	g.v. 4	15		
12104	4	15		
12105	1	25		
12106	2	10		
12107	2	20		
12108	4	15		
12109	3	10		
12110	3	15		
12111	3	30		
12112	2	5		
12113	2	10		
12114	2	5		
12115	2	5		
12116	2	5		
12117	2	5		
12118	2	15		
12119	2	5		
12120	2	5		
12121	2	< 5		
12122	2	10		
12123	2	20		
12124	g.v. + pyrite	10		
12125	3	20		
12126	3	10		



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: Hart Bickle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. 69164
 INVOICE NO. 37640
 RECEIVED July 17/80
 ANALYSED Aug. 8/80

ATTN: cc: D. Gamble

SAMPLE NO.	"ROCK TYPE" UNIT	PPB Au	(Combo.)	Rocks
12127	3	5		
12128	3	5		
12129	2	10		
12130	2	10		
12131	4	5		From 54677
12132	a.v.+4	35		
12133	3	10		
12134	4	5		
12135	3	5		
12136	3	5		
12137	2	10		
12138	4	5		
12139	↑	10		
12140	↓	5		
12141	4	10		
12142	2	10		
12143	↓	5		
12144	2	10		
12145	1	10		
12146	4	5		
12147	4	5		
12148	4	5		
12149	3	10		
12150	↑	10		
12151	↓	10		
12152	3	5		
12153	4 + a.v.	15		
12154	3	5		
12155	5	5		
12156	6	5		
12157	2	10		
12158	3	80		
12159	3	5		
12160	↑	5		
12161	↓	10		
12162	↓	10		
12163	↓	10		
12164	↓	5		
12165	↓	5		
12166	3	10		



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

217 BROOKSBANK AVE
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE ~~965-0645~~ 984-0221
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C. V6E 3L2

CERTIFICATE NO. 69165
 INVOICE NO. 37729
 RECEIVED July 17, 1980
 ANALYSED August 11, 1980

ATTN: c.c. Dave Gamble ROCKS

SAMPLE NO. :	PPB Au (combo)	"ROCK TYPE" UNIT
12167	<5	3
12168	<5	↑
12169	<5	↑
12170	<5	↑
12171	<5	↑
12172	5	↓
12173	15	↓
12174	10	↓
12175	5	↓
12176	<5	3
12177	<5	2
12178	<5	2
12179	<5	2
12180	<5	3
12181	<5	2
12182	<5	3
12183	<5	3
12184	<5	2
12185	<5	↑
12186	<5	↑
12187	<5	↓
12188	<5	2
12189	<5	3
12190	<5	6
12191	<5	↓
12192	<5	6
12193	<5	2
12194	<5	2
12195	<5	3
12196	<5	↑
12197	<5	↑
12198	<5	3
12199	<5	2
12200	<5	2 & 3
12201	<5	4
12202	<5	2
12203	<5	2
12204	<5	3
12205	<5	1
12206	<5	3

From #54678



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Stefano

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE 985-0648
 AREA CODE 604
 TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corporation Ltd.
 303 - 535 Thurlow Street
 Vancouver, B.C.
 V6E 3L2

CERTIFICATE NO. 69166
 INVOICE NO. 37737
 RECEIVED July 17/80
 ANALYSED Aug. 10/80

ATTN: cc: Dave Gamble

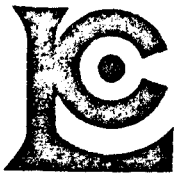
SAMPLE NO. :	"ROCK TYPE" UNIT	PPB Gold	Rocks From 54679 (Combo.)
12207	4	10	
12208	3	40	
12209	3	10	
12210	3	15	
12211	3	10	
12212	2	10	
12213	3	10	
12214	3	10	
12215	3	15	
12216	3	15	
12217	3	10	
12218	3	20	
12219	3	20	
12220	3	150	
12221	3	25	
12222	3	15	
12223	3	5	
12224	3	5	
12225	3	5	
12226	2	10	
12227	2	10	
12228	3	10	
12229	2	5	
12230	3	10	
12231	3	10	
12232	3	10	
12233	3	15	
12234	4	5	
12235	4	5	
12236	6	5	
12237	3	20	
12238	3	10	
12239	4	5	
12240	4	20	
12241	4	5	
12242	4	10	
12243	4	5	
12244	4	15	
12245	4	5	
12246	4	5	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Steve Anderson

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C
 CANADA V7J 2C1
 TELEPHONE 985-0648
 AREA CODE 604
 TELEX. 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corporation Ltd.
 303 - 535 Thurlow Street
 Vancouver, B.C.
 V6E 3L2

CERTIFICATE NO. 69167
 INVOICE NO. 37737
 RECEIVED July 17/80
 ANALYSED Aug. 10/80

ATTN: COMBO AU ROCKS

SAMPLE NO.	"ROCK TYPE" UNIT	PPB Au	
12247	↑	10	
12248	↑	5	
12249	↑	5	
12250	↑	10	From 54680
12251	↑	10	
12252	↓	5	
12253	↓	5	
12254	4	10	
12255	3	5	
12256	↑	10	
12257	↓	25	
12258	↓	10	
12259	3	5	
12260	2	10	
12261	↑	5	
12262	↓	5	
12263	↓	10	
12264	↓	5	
12265	2	15	
12266	3	20	
12267	2	< 5	
12268	3	5	
12269	2	5	
12270	2	15	
12271	3	10	
12272	↑	5	
12273	↑	< 5	
12274	↑	5	
12275	↑	25	
12276	↑	5	
12277	↑	5	
12278	↑	5	
12279	↑	5	
12280	↑	10	
12281	↑	10	
12282	↓	10	
12283	3	20	
12284	2	10	
12285	2	80	
12286	3	10	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Steve Anagnostis
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE 985-0649 984-0221
 AREA CODE 604
 TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69168

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C. V6E 3L2

INVOICE NO. 37729

RECEIVED July 17, 1980

ATTN: c.c. Dave Gamble ROCKS

ANALYSED August 11, 1980

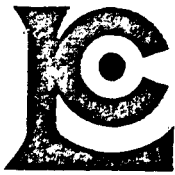
SAMPLE NO. :	PPB Au (combo)	"Rock TYPE" UNIT
12287	<5	M K M R E K R O C K S
12288	<5	
12289	<5	
12290	<5	
12291	10	
12292	<5	
12293	<5	
12294	<5	
12295	5	
12296	<5	
12297	20	
12298	5	
12299	<5	
12300	<5	
12301	60	
12302	<5	
12303	<5	
12304	<5	
12305	<5	
12306	<5	
12307	<5	
12308	<5	
12309	<5	
12310	5	
12311	5	
12312	5	
12313	<5	
12314	5	
12315	10	
12316	5	
12317	85	
12318	<5	
12319	75	
12320	10	
12321	<5	
12322	<5	
12323	<5	
12324	5	
12325	<5	
12326	<5	

From #54681



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Alv. Amari
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: ~~565-0648~~ 934 0221
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C. V6E 3L2

CERTIFICATE NO. 69169

INVOICE NO. 37729

RECEIVED July 17, 1980

ATTN: c.c. Dave Gamble

ROCKS

ANALYSED August 11, 1980

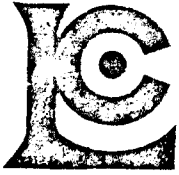
SAMPLE NO. :	PPB Au (combo)	"ROCK TYPE" UNIT	
12327	5	2	
12328	10	3	
12329	5	3	
12330	<5	2	
12331	<5	2	
12332	<5	3	
12333	5	↑	
12334	<5		
12335	10		
12336	5		
12337	25		
12338	55		
12339	5	↓	
12340	<5		
12341	10		
12342	<5		3
12343	<5		2
12344	100		Q.V.
12345	50	3	
12362	<5	4	
12363	<5	4 + Q.V.	
12364	5	Q.V.	
12365	5	2	
12366	5	3	
12367	10	3	
12368	<5	3	
12369	<5	3	
12370	5	3	
12371	<5	2	
12372	5	2 & 3	
12373	15	3	
12374	15	3	
12375	5	3	
12376	<5	3	
12377	10	3	
12378	140	3	
12379	175	3	
12380	25	3	
12381	5	3	
12382	10	3	

From #54682



MEMBER
 CANADIAN TESTING
 ASSOCIATION

John Amann
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE ~~604-271-2112~~ 934-0221
 AREA CODE 604
 TELEX 043 52597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corp. Ltd.
 303 - 535 Thurlow St.
 Vancouver, B.C.
 V6E 3L2

CERTIFICATE NO. 69170
 INVOICE NO. 37729
 RECEIVED July 17/80
 ANALYSED Aug. 11/80

ATTN: CC: Dave Gamble

SAMPLE NO.	PPB Au (Combo)	"RockType" UNT	From #54683.
12383	25	3	
12384	15	3	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Stan Amadori
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: ~~985-0678~~ 984-0221
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Selco Mining Corp. Ltd.
 303 - 535 Thurlow St.
 Vancouver, B.C.
 V6E 3L2

CERTIFICATE NO. 69161 ✓
 INVOICE NO. 37683
 RECEIVED July 17/80
 ANALYSED Aug. 8/80

ATTN: CC: Dave Gamble

SAMPLE NO. :	PPB Au (Combo)	From #54674.
12346	150	<i>SOIL SAMPLES</i>
12347	80	
12348	30	
12349	10	
12350	20	
12351	5	
12352	5	
12353	5	
12354	65	
12355	5	
12356	5	
12357	15	
12358	235	
12359	15	
12360	10	
12361	15	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

Al. Amisani
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corporation Ltd.,
303 - 535 Thurlow St.,
Vancouver, B.C.
V6E 3L2

c.c. - Dave Gambell
Kamloops, B.C.

ATTN:

CERTIFICATE NO. 54674
INVOICE NO. 37469
RECEIVED July 17, 1980
ANALYSED July 31, 1980

SAMPLE NO. :	PPM	PPB
	As	Hg
12346	7	40
12347	3	50
12348	6	60
12349	4	730
12350	2	60
12351	9	670
12352	4	60
12353	2	80
12354	11	430
12355	3	80
12356	1	130
12357	3	30
12358	10	60
12359	2	40
12360	9	30
12361	9	60

Also on #69161



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54675

TO: Selco Mining Corporation Ltd.,
 303 - 535 Thurlow St., c.c.- Dave Gamble
 Vancouver, B.C. Kamloops, B.C.
 V6E 3L2

INVOICE NO. 37469

RECEIVED July 17, 1980

ANALYSED July 31, 1980

ATTN:

ROCKS

SAMPLE NO. :	PPM	PPB
	As	Hg
12047	1	20
12048	1	50
12049	3	170
12050	1	30
12051	1	30
12052	1	20
12053	1	40
12054	1	20
12055	1	20
12056	1	20
12057	1	20
12058	2	10
12059	1	10
12060	1	10
12061	2	20
12062	1	20
12063	3	30
12064	1	10
12065	1	10
12066	1	20
12067	1	10
12068	1	10
12069	2	30
12070	7	20
12071	1	20
12072	1	20
12073	1	20
12074	1	20
12075	1	330
12076	1	50
12077	1	40
12078	1	30
12079	3	30
12080	27	2500
12081	1	80
12082	1	30
12083	3	150
12084	1	20
12085	1	20
12086	1	10

Also on #69162



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54676

TO: Selco Mining Corporation Ltd.,
 303 - 535 Thurlow St., c.c.- Dave Gamble
 Vancouver, B.C. Kamloops, B.C.
 V6E 3L2

INVOICE NO. 37469

RECEIVED July 17, 1980

ANALYSED July 31, 1980

ATTN: ROCKS

SAMPLE NO. :	PPM Cu	PPM As	PPM Ag	PPB Hg
12087		1		10
12088		1		10
12089		1		10
12090		1		10
12091		1		20
12092		2		20
12093		1		10
12094		2		10
12095		2		10
12096		1		10
12097		1		10
12098	20	1		20
12099		2		10
12100		2		10
12101		1		10
12102	126	1		10
12103	220	1		10
12104		1		10
12105		1		50
12106		4		10
12107		2		10
12108		1		10
12109		2		10
12110		1		20
12111		1		10
12112		3		10
12113		1		10
12114		2		10
12115		2		40
12116		4		10
12117		2		10
12118		1		10
12119		4		90
12120		1		40
12121		1		10
12122		2		130
12123	22	5		140
12124	4	2	0.1	220
12125		1		140
12126		6		20

Also on #69163



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54677

TO: Selco Mining Corporation Ltd.,
 303 - 535 Thurlow St.,
 Vancouver, B.C.
 V6E 3L2

c.c.- Dave Gamble
 Kamloops, B.C.

INVOICE NO. 37469

RECEIVED July 17, 1980

ANALYSED July 31, 1980

ATTN: ROCKS

SAMPLE NO. :	PPM Cu	PPM As	PPM Ag	PPB Hg
12127		11		20
12128		7		10
12129		3		10
12130		1		10
12131		1		20
12132	230	1	0.1	10
12133		1		10
12134		4		10
12135		1		10
12136		1		10
12137		3		30
12138		1		10
12139		1		10
12140		1		10
12141		1		10
12142		1		10
12143		1		10
12144		1		10
12145		3		10
12146		1		10
12147		1		10
12148		1		10
12149		1		10
12150		4		10
12151		1		10
12152	18	1		20
12153		1		10
12154		6		10
12155		6		20
12156		3		20
12157		3		10
12158		1		10
12159		1		20
12160		1		20
12161		1		10
12162	4	1	0.1	90
12163		1		10
12164		1		20
12165	2	1	0.1	420
12166		2		40



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54678

TO: Selco Mining Corporation Ltd.,
 303 - 535 Thurlow St., c.c.- Dave Gamble
 Vancouver, B.C. Kamloops, B.C.
 V6E 3L2

INVOICE NO. 37469

RECEIVED July 17, 1980

ATTN: ROCKS

ANALYSED July 31, 1980

SAMPLE NO. :	PPM Cu	PPM As	PPM Ag	PPB Hg
12167		1		20
12168		1		10
12169		1		10
12170		1		10
12171		1		10
12172		1		10
12173		1		200
12174		1		30
12175		1		170
12176		5		340
12177		2		20
12178		4		20
12179		2		10
12180	8	1	0.1	100
12181		2		10
12182		1		10
12183		1		50
12184	10	2	0.1	10
12185		1		10
12186	2	1	1.2	10
12187		2		10
12188		1		10
12189		8		10
12190		1		130
12191		6		100
21292		4		20
12193		2		40
12194		3		20
12195		1		30
12196		3		140
12197		1		20
12198		1		10
12199		1		70
12200		1		20
12201		3		10
12202		3		30
12203		1		10
12204		3		20
12205		1		10
12206		2		20

also on #69165



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54679 ✓
 INVOICE NO. 37521
 RECEIVED July 17/80
 ANALYSED Aug. 4/80

TO: Selco Mining Corporation Limited
 303 - 535 Thurlow Street
 Vancouver, B.C.

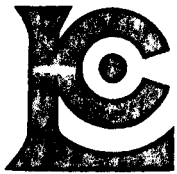
ATTN: cc: Dave Gamble

SAMPLE NO. :	PPM Cu	PPM As	PPM Ag	PPB Hg	ROCKS
12207		2		10	
12208	6	3		420	
12209	4	2		230	
12210	2	1	0.1	200	
12211		1		70	
12212		1		230	
12213		1		20	
12214		1		20	
12215	8	1		10	
12216	50	3		10	
12217		3		10	
12218	>4000	4	0.1	10	
12219	>4000	6	0.1	60	
12220	>4000	5	2.6	30	
12221		5		10	
12222		1		10	
12223		1		10	
12224		1		10	
12225		1		10	
12226		5		730	
12227		4		40	
12228		1		40	
12229		1		20	
12230		1		10	
12231		1		10	
12232		2		30	
12233		1		10	
12234	80	7	0.1	10	
12235		3		10	
12236		2		10	
12237	10	1	0.1	10	
12238		1		10	
12239		1		10	
12240		1		10	
12241		1		10	Also on 69166
12242		1		10	
12243		1		10	
12244		1		10	
12245		1		10	
12246		1		10	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hartmann*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: **Selco Mining corporation Ltd.**
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. **54680** ✓
 INVOICE NO. **37521**
 RECEIVED **July 17/80**
 ANALYSED **Aug. 4/80**

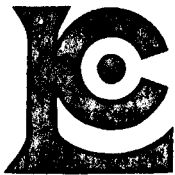
ATTN: cc: **Dave Gamble**

SAMPLE NO. :	PPM	PPB	ROCKS
	As	Hg	
12247	1	10	
12248	48	10	
12249	2	10	
12250	1	10	
12251	1	10	
12252	1	10	
12253	1	10	
12254	3	10	
12255	1	10	
12256	1	10	
12257	12	10	
12258	1	10	
12259	1	10	
12260	1	10	
12261	1	10	
12262	3	10	
12263	1	10	
12264	1	10	
12265	1	10	
12266	2	10	
12267	1	10	
12268	1	10	
12269	2	10	
12270	1	10	
12271	1	10	
12272	4	70	
12273	1	10	
12274	1	10	
12275	1	10	
12276	1	10	Rocks
12277	1	10	Also on 69167
12278	1	10	
12279	1	10	
12280	1	10	
12281	1	10	
12282	2	10	
12283	1	10	
12284	1	10	
12285	2	10	
12286	1	10	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corporation Ltd.
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. 54681
 INVOICE NO. 37521
 RECEIVED July 17/80
 ANALYSED Aug. 4/80

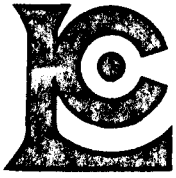
ATTN: cc: Dave Gamble

SAMPLE NO. :	PPM	PPB	ROCKS
	As	Hg	
12287	1	10	
12288	2	20	
12289	1	10	
12290	1	10	
12291	1	10	
12292	1	10	
12293	NSS	10	
12294	5	10	
12295	2	10	
12296	1	10	
12297	1	10	
12298	1	10	
12299	1	10	
12300	1	10	
12301	1	10	Also on 69168
12302	1	10	
12303	1	10	
12304	1	10	
12305	1	10	
12306	1	10	
12307	1	10	
12308	1	10	
12309	1	10	
12310	1	10	
12311	1	10	
12312	1	10	
12313	1	10	
12314	1	10	
12315	2	20	
12316	1	10	
12317	1	10	
12318	1	10	
12319	1	30	
12320	1	10	
12321	2	10	
12322	2	10	
12323	1	10	
12324	1	10	
12325	1	10	
12326	1	10	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 984-0221
 AREA CODE: 604
 TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Selco Mining Corp. Ltd.
 303 - 535 Thurlow Street
 Vancouver, B.C.

CERTIFICATE NO. 54682
 INVOICE NO. 37521
 RECEIVED July 17/80
 ANALYSED Aug. 4/80

ATTN: cc: Dave Gamble

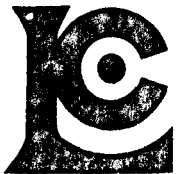
SAMPLE NO. :	PPM Cu	PPM As	PPM Ag	PPB Hg	RCCKS
12327		3		20	
12328		1		10	
12329		1		10	
12330		2		10	
12331		2		10	
12332		10		10	
12333		1		10	
12334		19		20	
12335		32		10	
12336		50		70	
12337	52	30	5.4	30	
12338	330	39	5.8	60	
12339	550	19	1.6	60	
12340		1		10	
12341		1		10	
12342		1		10	
12343		5		10	
12344		1	0.8	10	
12345	26	33	6.0	40	
12362	56	1		20	
12363	2500	1		20	
12364	82	1		20	
12365	430	4		50	
12366	6	6	0.4	300	
12367	20	5		40	
12368	4	1	0.2	50	
12369	8	1	0.1	870	
12370	38	1	0.1	350	
12371	20	2	0.1	130	
12372	1	1	0.1	40	Also on 69169
12373	2	29		540	
12374	2	2		830	
12375	2	1	0.1	380	
12376	4	2		90	
12377	28	3		50	
12378	> 4000	7	2.6	30	
12379	> 4000	7	1.4	60	
12380	> 4000	1	0.1	20	
12381	142	1	0.2	20	
12382	68	1	0.2	20	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54683

INVOICE NO. 37521

RECEIVED July 17/80

ANALYSED Aug. 4/80

TO: Selco Mining Corp. Ltd.
303 - 535 Thurlow Street
Vancouver, B.C.

ATTN:

cc: Dave Gamble

SAMPLE NO. :	PPM	PPM	PPM	PPB	ROCKS
	Cu	As	Ag	Hg	
12383	200	45	1.8	30	
12384	530	15	2.0	70	

Also on 69170



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Selco Mining Corporation Ltd.,
Ste. 303 - 535 Thurlow St.,
Vancouver, B.C.
V6E 3L2

CERT. # : A8010499-001-1
INVOICE # : 39665
DATE : 20-OCT-80

ATTN. D. Gamble

Sample description	Prep code	As ppm	Hg ppb	AU-FA+AA ppb			
12423	205	38	20	<5	--	--	--
12424	205	65	20	<5	--	--	--
12425	205	4	10	<5	--	--	--
12426	205	3	10	<5	--	--	--
12427	205	2	10	<5	--	--	--
12428	205	3	10	<5	--	--	--
12429	205	3	10	<5	--	--	--
12430	205	2	10	5	--	--	--
12431	205	2	10	<5	--	--	--
12432	205	10	40	65	--	--	--
12433	205	3	10	5	--	--	--
12434	205	53	350	35	--	--	--
12435	205	6	1300	5	--	--	--
12436	205	6	100	45	--	--	--
12437	205	9	60	15	--	--	--
12438	205	2	30	15	--	--	--
12439	205	1	100	<5	--	--	--
12440	205	4	30	60	--	--	--
12441	205	1	50	185	--	--	--
12442	205	5	10	30	--	--	--
12443	205	7	330	35	--	--	--
12444	205	5	20	<5	--	--	--
12445	205	9	40	20	--	--	--
12446	205	3	10	10	--	--	--
12447	205	1	10	15	--	--	--

Certified by *Hart Biddle*





CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Selco Mining Corporation Ltd.,
Ste. 303 - 535 Thurlow St.,
Vancouver, B.C.
V6E 3L2

CERT. # : A8010983-001-A
INVOICE # : 40313
DATE : 11-NOV-80
P.O. # : NONE

ATTN: MR. GAMBLE

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm	W ppm	Sn ppm	
12431	214	--	--	0.1	1	3	--
12432	214	>4000	--	1.0	--	--	--
12433	214	--	--	1.0	--	--	--
12439	214	>4000	--	--	--	--	--
12440	214	1500	--	--	--	--	--
12441	214	>4000	--	1.6	--	--	--
12442	214	2000	--	--	--	--	--
12443	214	3100	--	--	--	--	--
12445	214	2200	--	--	--	--	--

Certified by *Hart Bichler*



APPENDIX ii
WHOLE ROCK ANALYSES

Keyed to
GEOCHEMICAL NUMBER
SERIES, SAMPLE NUMBERS
ON GEOCHEMICAL MAP
FOR LOCATION & ROCK TYPE.



BONDAR-CLEGG & COMPANY LTD.

784 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5

PHONE: 237-3110

Report No: 1873-80

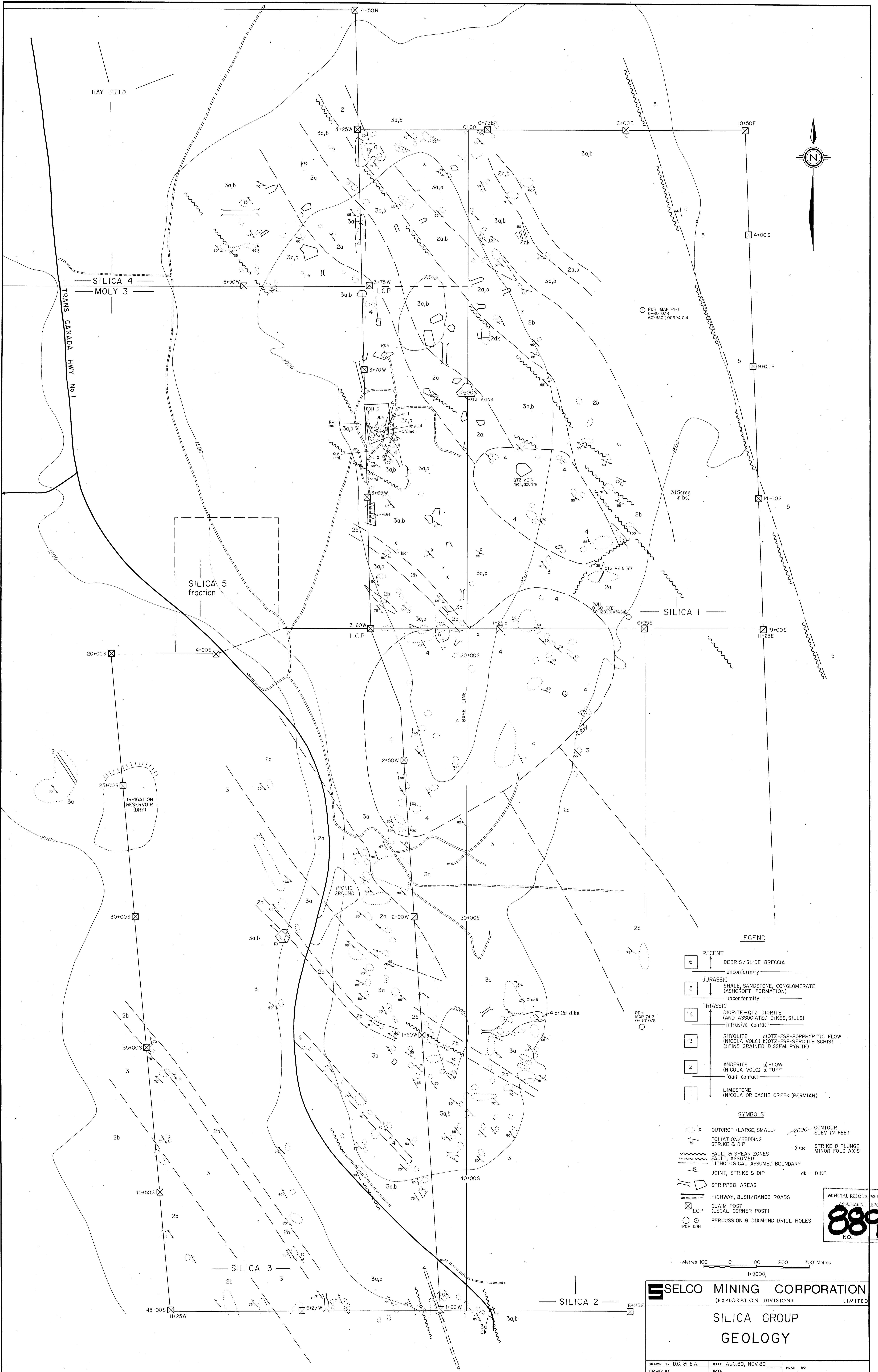
— WHOLE ROCK ANALYSIS —

From: Selco M

Date: October

Sple No.	% SiO ₂	% TiO ₂	% Al ₂ O ₃	% Fe ₂ O ₃	% FeO	% MnO	% MgO	% CaO	% Na ₂ O	% K ₂ O	Free % H ₂ O	Combined % H ₂ O	% P ₂ O ₅	% CO ₂	% S	% L.O.I.
12054 16-6	71.5	0.2	14.8	1.5		0.03	1.6	0.25	4.4	2.0			0.06		L0.02	
12068 17-58B	75.5	0.1	12.2	2.0		0.04	1.9	0.55	4.9	0.3			0.05		L0.02	
12080 18-1	77.5	0.15	12.8	1.7		0.03	1.3	0.1	1.2	3.0			0.2		0.06	
12092 18-3A	69.5	0.4	15.9	3.6		0.03	1.1	0.35	5.6	1.1			0.15		L0.02	
12093 18-4	63.0	0.45	15.0	7.05		0.10	2.7	3.65	4.3	2.3			0.08		L0.02	
12112 19-4	44.5	0.4	15.9	9.6		0.22	6.3	9.8	1.1	0.9			0.06		L0.02	
12150 19-27	63.0	0.4	15.3	5.45		0.12	2.0	3.0	3.7	2.5			0.14		L0.02	
12157 20-20	45.0	0.75	16.8	11.9		0.16	7.8	11.0	1.8	0.6			0.08		L0.02	
12185 25-4	75.5	0.1	12.6	1.9		0.01	0.05	0.2	6.0	0.1			0.02		1.11	
12169 23-8	69.5	0.2	14.6	3.3		0.03	1.2	1.1	5.7	1.5			0.09		L0.02	
12210 24-10	75.0	0.25	12.6	3.15		0.01	0.7	0.3	5.7	0.1			0.08		1.21	
12257 25-25	78.5	0.15	12.5	1.5		0.01	0.5	0.3	4.0	1.6			0.06		0.03	
12264 23-28	50.0	0.35	15.3	9.15		0.25	10.3	6.3	2.1	2.2			0.05		L0.02	
12293 26-22	73.0	0.3	14.2	3.5		0.07	2.0	0.25	5.5	0.2			0.10		L0.02	
12315 27-6	68.5	L0.05	7.5	2.2		0.12	1.95	7.8	1.9	1.0			0.3		0.02	
12313 27-9	82.0	0.1	10.2	1.8		0.03	1.0	0.2	4.7	0.2			0.10		L0.02	
12313 27-14	41.0	0.15	14.2	6.15		0.24	3.3	15.5	5.0	0.4			0.14		0.11	
12325 27-16	48.5	0.5	13.0	6.05		0.18	3.0	13.0	4.8	0.2			0.53		0.04	

L means less than



LEGEND

- 6 RECENT
DEBRIS / SLIDE BRECCIA
unconformity
- 5 JURASSIC
SHALE, SANDSTONE, CONGLOMERATE
(ASHCROFT FORMATION)
unconformity
- 4 TRIASSIC
DIORITE - QTZ DIORITE
(AND ASSOCIATED DIKES, SILLS)
intrusive contact
- 3 RHYOLITE a) FLOW
(NICOLA VOLC.) b) TUFF
fault contact
- 2 ANDESITE a) FLOW
(NICOLA VOLC.) b) TUFF
fault contact
- 1 LIMESTONE
(NICOLA OR CACHE CREEK (PERMIAN))

SYMBOLS

- x OUTCROP (LARGE, SMALL)
- FOLIATION / BEDDING STRIKE & DIP
- ~ FAULT & SHEAR ZONES
- ~ FAULT, ASSUMED
- ~ LITHOLOGICAL ASSUMED BOUNDARY
- ~ JOINT, STRIKE & DIP
- dk - DIKE
- STRIPPED AREAS
- == HIGHWAY, BUSH / RANGE ROADS
- ⊠ LCP
- ⊠ LEGAL CORNER POST
- PERCUSSION & DIAMOND DRILL HOLES
- PDH DDH
- 2000- CONTOUR ELEV. IN FEET
- ↗+20 STRIKE & PLUNGE MINOR FOLD AXIS

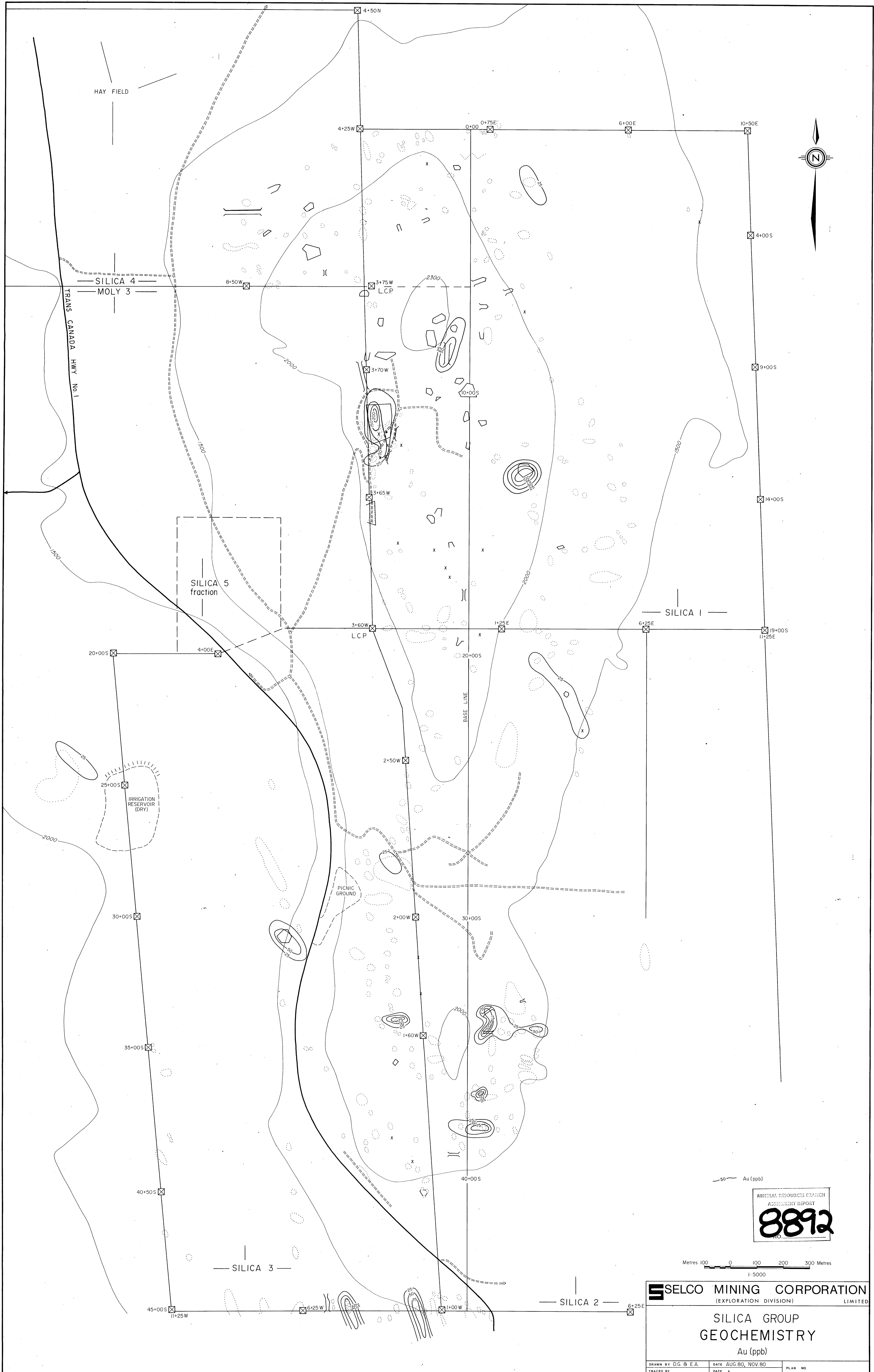
Metres 100 0 100 200 300 Metres
1:5000

SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

SILICA GROUP
GEOLOGY

DRAWN BY: D.G. & E.A. DATE: AUG. 80, NOV. 80
TRACED BY: DATE: PLAN NO.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8892
NO.



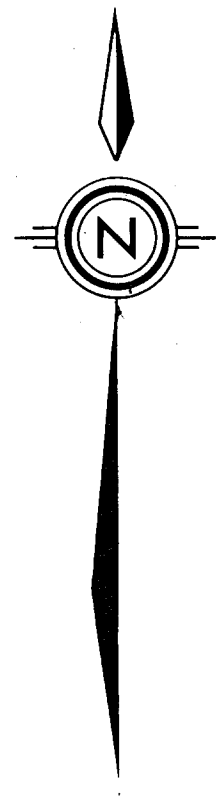
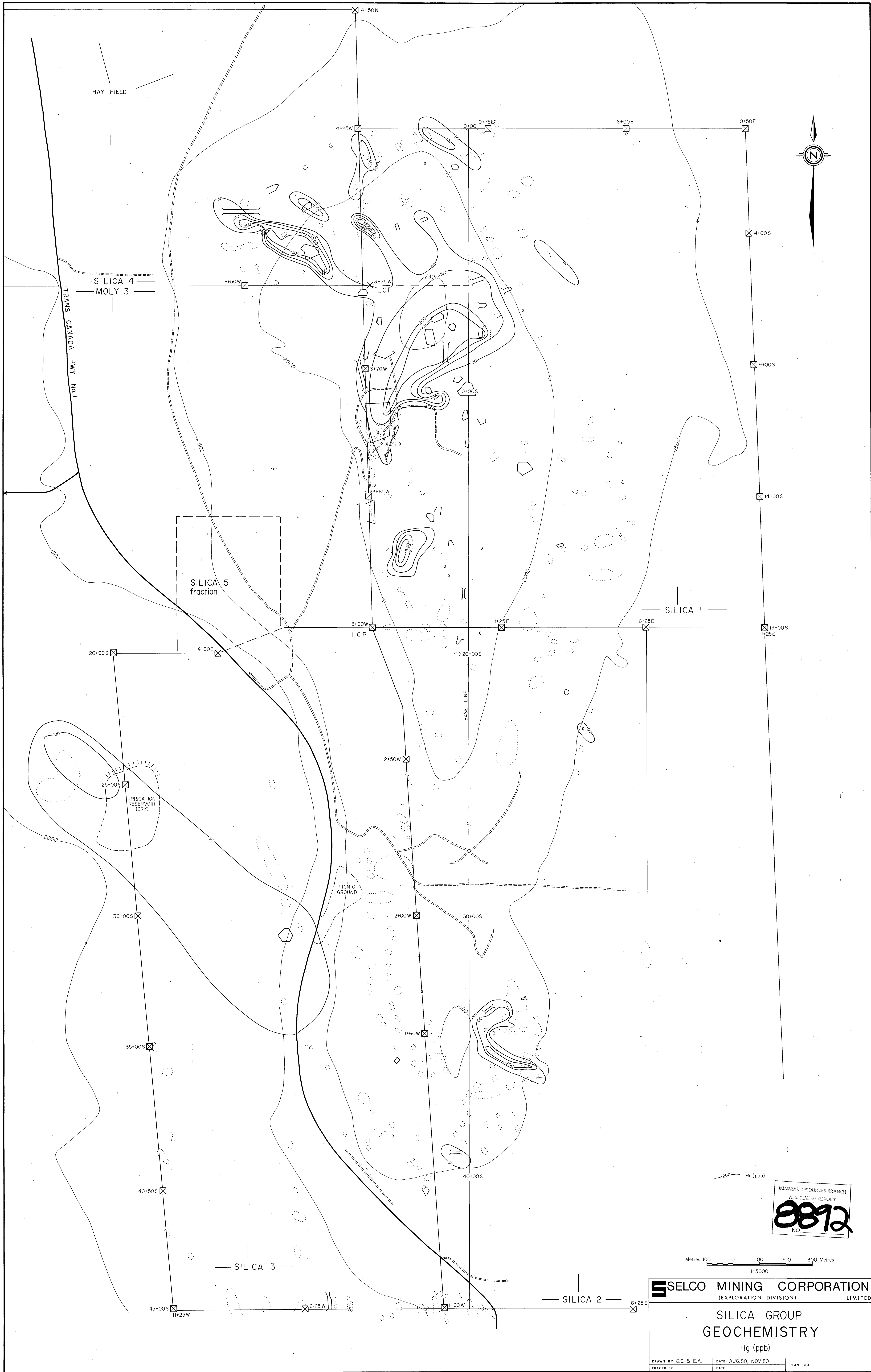
MINERAL RESOURCES DIVISION
ASSESSMENT REPORT
8892
NO.

Metres 100 0 100 200 300 Metres
1:5000

SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

**SILICA GROUP
GEOCHEMISTRY**
Au (ppb)

DRAWN BY D.G. & E.A.	DATE AUG.80, NOV.80	PLAN NO.
TRACED BY	DATE	



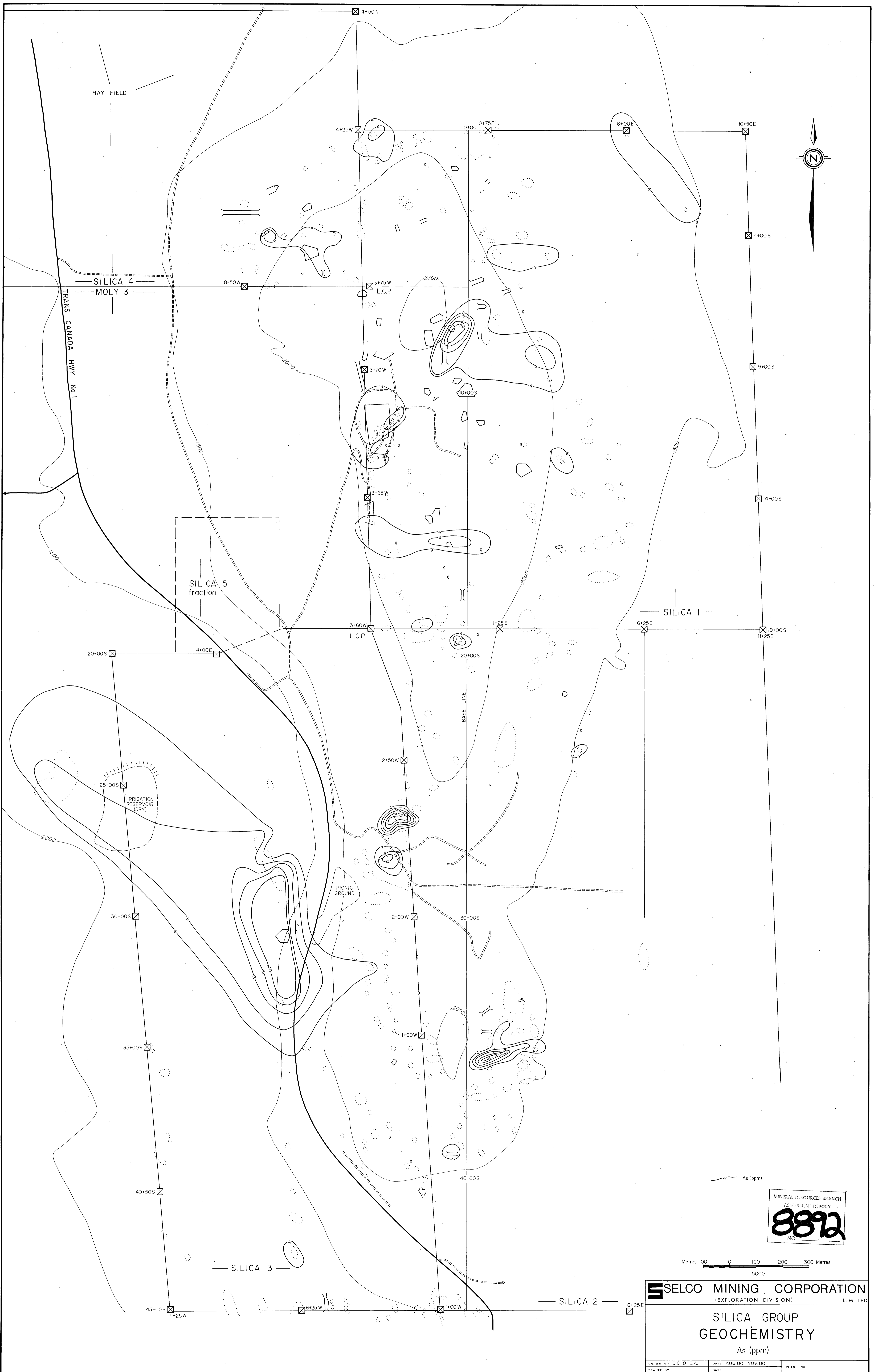
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8892
NO.

Metres 100 0 100 200 300 Metres
1:5000

SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

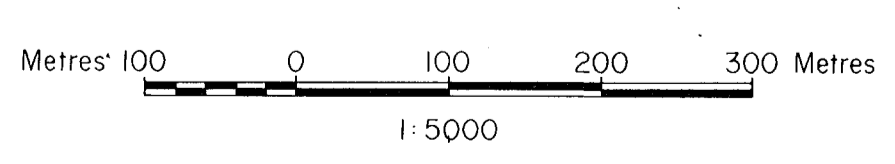
**SILICA GROUP
GEOCHEMISTRY**
Hg (ppb)

DRAWN BY D.G. & E.A. DATE AUG. 80, NOV. 80 PLAN NO.
TRACED BY DATE



As (ppm)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8892
NO.



SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

**SILICA GROUP
GEOCHEMISTRY**
As (ppm)

DRAWN BY D.G. & E.A. DATE AUG. 80, NOV. 80
TRACED BY DATE PLAN NO.