BRITISH COLUMBIA
The Best Place on Earth

BC Geological Survey
Assessment Report
39295

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemical, Geophysical

TOTAL COST: $90,028.49

RECEIVED
FEB 10 2021
MINISTRY OF ENERGY AND MINES

AUTHOR(S): Andris Kikauka

SIGNATURE(S): A. Kikauka

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2020

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5827615

PROPERTY NAME: Tillicum

CLAIM NAME(S) (on which the work was done): work done on 1071800 & 1072051. All MTO Mineral Claims listed as follows:
1071800 1072049 1072050 1072051 1072052 1073170 1075801 1075802 1075803 1075807 1075913 1075917 1075918 1075920 1077308

COMMODITIES SOUGHT: Au, Ag,

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082FNW234,082FNW296,082FNW220,082FNW234,082FNW295,082FNW297

MINING DIVISION: Slocan

NTS/BCGS: 082F 13E, 082F.092

LATITUDE: 49 ° 59 '08 " **LONGITUDE:** 117 ° 42 '41 " **(at centre of work)**

OWNER(S):
1) Gustafson Holdings
2) 1240089 BC LTD

MAILING ADDRESS:
SEESTRASSE 82, City HERGISWIL, Province NW
Country SWITZERLAND Postal Code 6052

3-1572 LORNE STREET EAST City KAMLOOPS
Province BC Country CANADA Postal Code V2C 1X6

OPERATOR(S) [who paid for the work]:
1) MGX Minerals Inc
2) MGX Minerals Inc

MAILING ADDRESS:
Suite 303, 1040 Hamilton Street
Vancouver, B.C. V6B 2R9

Suite 303, 1040 Hamilton Street
Vancouver, B.C. V6B 2R9

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Triassic and older volcanic/sedimentary rocks, younger aplite, feldspar porphyry dikes, granitic intrusions underlie the property
skarn zones occur in intensely brecciated & calc-silicate– altered sediment within the hanging wall of syenite porphyry sill
At least two stages of folding are recognized with metamorphic grade throughout the region typically of the sillimanite facies
Gold-silver mineralization occurs in sheared calc-silicate quartz skarns developed in metavolcanic and metasedimentary rocks

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 7909, 9455, 11161, 12269, 15700, 19437, 25004, 26847, 27144, 30488, 31182, 35269

Next Page

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	4.55 line-km ground survey	1071800 & 1072051	4,229.90
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil	245 soil multi-element ICP (ME-MS41)	1071800 & 1072051	28,955.75
Silt			
Rock	48 rock multi-element ICP (ME-MS41, Au-GR22)	1071800 & 1072051	13,941.74
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic	1 rock sample described (VanPetro)	1071800	1,350.75
Mineralographic			
Metallurgic	3 samples sent to ALS Metallurgical	1071800	41,550.35
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$ 90,028.49

NTS 082F 13/E, TRIM 082F.092
LAT. 49 59' 08" N
LONG. 117 42' 41" W

GEOCHEMICAL, GEOPHYSICAL REPORT ON TILLICUM MOUNTAIN MINERAL TENURES HEINO-EAST RIDGE (GRIZZLY, SILVER QUEEN, JENNIE, ROAD, ARNIE FLATS, GOLDEN HOPE) MINERAL ZONES BURTON, B.C.

Slocan Mining Division

by

Andris Kikauka, P.Geo.
4199 Highway 101,
Powell River, BC V8A 0C7

February 2, 2021

TABLE OF CONTENTS AND LIST OF FIGURES

LIST OF FIGURES

1.0 SUMMARY

The Tillicum Heino Gold Project is an advanced developed mineral property located in south-eastern British Columbia, Canada. The Tillicum Heino has undergone several phases of geochemical sampling, core drilling & underground bulk sampling during the 1980's and early 1990's. In June-Oct, 2020 MGX Minerals Inc performed exploration fieldwork that included 4.55 line kilometers ground magnetometer surveying, geochemistry soil (245 samples), rock chip (48 samples), & petrographic description (1 sample). Also, metallurgical testing of a 150 kg rock chip sample from Heino Zone was carried out by ALS Metallurgy Ltd, Kamloops. The results of MGX Minerals Inc 2020 geochemistry, geophysics, petrology and metallurgy are listed and discussed with relevance to geology (see section 7-9). The objective of MGX Minerals 2020 geophysical and geochemical fieldwork was to identify orientation, structure, lithology, & alteration of Au-Ag bearing mineralization zones and relevance to analytical results in order to determine follow-up drill targets (with reference to previous drilling).

The property consists of 15 contiguous MTO mineral titles, covering an area of approximately 6,085.8 hectares (6 claims owned by 1240089 BC Ltd, 9 claims owned by MGX Minerals Inc), one mining lease 40.3 hectares (owner Gustafson Holdings Ltd), and 6 active Crown Grants named 'Silver Queen' Group (owner Gustafson Holdings Ltd). The Mineral Options Agreement state that MGX will pay an initial cash payment of CAD $2,000,000 for a 90% right, title and interest in and to the Assets, free and clear of all encumbrances, along with 20,000,000 common shares, on or before May 01, 2024. MGX may, at any time, make a cash payment of CAD$1,000,000 to acquire the additional 10% consideration.

The centre of the property is located at approximately 49° 49' degrees latitude north and 117° 43' degrees longitude west. Fieldwork carried out by MGX Minerals has been applied to MTO mineral claims only. Work done in 2020 by MGX Minerals on the lease and Crown Grant claims was done with written authorization from Gustafson Holdings Ltd, and all 2020 fieldwork (MGX Minerals Inc) was done within boundaries of MTO 1071800 and 10720151.

Considerable exploration has occurred on the property since its discovery in 1980 by two local prospectors. During 1981 and 1989, Esperanza Explorations Ltd. diamond drilled at least 24,148 m and developed approximately 1,928 m of underground development on 5 levels. In 1993, an agreement with Columbia Gold Mines Ltd. (formerly Esperanza Explorations Ltd.) and Bethlehem Resources Corp and Goldnev Resources Inc. saw the property advance into the mining stage, where a total of 6,800 tonnes were mined from 4 levels and 5,503 tonnes were shipped to Bethlehem's Goldstream mill, north of Revelstoke, for milling. Recovered grades were 18.62 g/t Au and 29.81 g/t Ag. Between 1996 and 2014, the Property was acquired by AMT Resources Ltd. and then optioned by 1033275 Ontario Limited and then returned to AMT Tillicum Holdings (the successor to AMT Resources Ltd.). Work during that period included surface and underground infrastructure evaluations, geological mapping, soil, stream and rock chip sampling, geophysical survey work, road rehabilitation, and compilation and digitization of historical data and 3D modelling. Various private groups held the property between 2014 and 2020 before MGX optioned the property on May 05, 2020.

In 2020, MGX Minerals Inc carried out metallurgical testing of a 180 kg sample named **'Heino Surface Comp'** from outcrop located near the Heino 2130 m adit entrance (Fig 5). Additional metallurgical samples include two samples, one named **'East Ridge Comp'** 170 kgs (source from 1988 DDH core samples, 75 samples in total, interval lengths 0.3-3.2 m, from 19 drill holes covering approximately 150 X 300 m area, see Fig 5B for location & Appendix E for descriptions), the other named **'East Ridge Comp 2'** was taken from outcrop at 1,970 m elevation at UTM co-ordinates 449,265 E 5,537,436 N, occurring within the north portion of East Ridge B band. The samples were submitted to ALS Metallurgical, Kamloops. The following table lists geochemical analysis (head grade) of 3 metallurgical samples:

Sample Type	Sample ID	% Pb	% Zn	% Fe	% S	Au g/t fire assay	Au g/t fire assay duplicate	Au g/t metallic screen	Ag g/t
Outcrop	Heino Surface Comp	.19	.36	7.5	3.9	20.7	23.4	17.3	17
DDH	East Ridge Comp	.13	.37	6.7	3.8	1.97	1.9	2.57	12
Outcrop	East Ridge Comp 2	.08	1.1	11.5	7.5	1.14	1.1	1.0	4

Metallurgical testwork of the Heino Zone identified coarse grained gold, and head grades ranging from 17.3 to 23.4 g/t Au, and was used for chemical and mineralogy analysis, bond ball work index testing, gravity & froth flotation, concentrating, rougher-cleaner, & locked cycle flotation. In the locked cycle, approximately 63% o the gold was recovered in gravity concentration. A further 29% of feed gold was recovered in the froth flotation stage. Approximately 17% of silver was recovered by gravity concentration, with a further 60% reporting to the froth flotation (Appendix J).

Conclusions of the metallurgical test by ALS include the following statements (Roulston, 2020):

Gold was highly variable within the feed for the testing. Future testing should consider a bulk gravity concentration on a large mass of gravity feed sufficient enough to test variables using a more consistent precious metal content in the flotation feed.

- Sulphur was readily rejectable in the cleaner circuit without a corresponding loss in precious metals. This suggests the gold and silver in the flotation circuit is either unassociated with other minerals or perhaps associated with the other sulphide minerals such as galena, sphalerite, arsenopyrite, or copper sulphides.
- Although gold recovery was notable at a combined 92 percent, the gold content of the bulk 1st cleaner tailing and bulk rougher tailing in locked cycle testing measured about 7 and 2 g/tonne, respectively and would be considered high for a tailing stream, in our experience.

2.0 INTRODUCTION

A program of rock and soil geochemical sampling for geological and metallurgical data was carried out by MGX Minerals Inc in 2020. Also, magnetometer geophysics was performed to identify zones of increased and depleted magnetic bedrock was carried out. The fieldwork was performed between June 19-October 9, 2020 by the writer and field assistant. The total cost of fieldwork and support carried out by MGX Minerals Inc was $90,028.49 (listed in attached itemized cost statement). This report summarizes results of geochemical sampling, magnetometer geophysics and correlation between previous work. Recommendations for further exploration include core drilling collar locations that target precious and base metals. Petrographic descriptions (Heino) and metallurgical testing (Heino & East Ridge) are also summarized in this report.

3.0 LOCATION, ACCESS, PHYSIOGRAPHY

The Heino Gold Project is an exploration gold property in British Columbia, Canada. It is located approximately 64 km north-northwest of Nelson in southeastern British Columbia within NTS map sheets 82F/13 and 82K/04. The Heino Gold Project is located in the Arrow Lakes region of southeastern British Columbia, Canada, approximately 600 km, by road, east-northeast of the city of Vancouver. The property is situated about 30 km southeast of Nakusp, BC and 12 km east of the village of Burton and overlies Tillicum Mountain on the western limits of the Valhalla Range, within the Slocan Mining District. The claims are centred near Tillicum Mountain at approximately 117°42'36.99'' W, 49°59'22.55'' N, located within UTM Zone 11 NTS mapsheets 82F/13 and 82K/4, about 12.5 km east of Burton, lying at an elevation between 920 and 2,300 meters above sea level between Caribou and Snow Creeks.

The Heino Gold Property can be accessed by way of logging and mining roads extending from Burton, BC, along the south side of Caribou Creek to a former exploration camp near the headwaters of Londonderry Creek. The total distance from Burton is approximately 17 km. Four-wheel drive vehicles are required to negotiate the steep access road to the principal workings near the summit of Tillicum Mountain. Access to the Heino Gold Project from Burton is by way of a network of logging and property access roads along the watersheds of Burton and Londonderry

Creeks, a distance of approximately 17 km. This portion of the road is accessible by 2-wheel drive vehicle. Food, fuel and accommodation is available in the village of Burton, while the town of Nakusp, approximately 30 km to the North, offers more extensive services.
British Columbia occurs almost entirely within the North American Cordillera, and consists of parallel mountain ranges with intervening plateaus, valleys and plains. The Heino Gold Project occurs within the West Kootenay mountains of the Canadian Cordillera.

The Kootenay Region is mountainous encompassing four mountain ranges. From east to west these include: the Rocky Mountains, the Purcell Mountains, the Selkirk Mountains and the Monashee Mountains. The region extends from the Alberta border in the east to the Okanagan Similkameen Regional District in the west and the Columbia-Shuswap Regional District in the North, encompassing the Canadian portion of the Columbia River Basin. The Heino Gold Project is situated in the West Kootenay's within the Selkirk Mountain Range.

The project area is characterized as having warm, moderately moist summers and cool, snowy winters, where temperatures range significantly between the lows of winter and highs of summer.. The winter season can begin in October and extend through April, with temperatures ranging from 15°C to less than -5°C. Temperatures range from approximately of 15°C to 27°C during the summer months. Precipitation is at a maximum in June and a minimum in February. Total annual precipitation in the main valley is 810 mm with about 280 mm of that in the form of rain between May and September (Government of Canada, 2020). Both precipitation and temperature vary significantly with altitude; reinforcing the influence of local conditions. The property is generally free from snow (below 2,000 m elevation) from mid-June until late October. Areas above 2,000 m elevation contain small pockets of snow on north facing slopes into August.

Elevations on the property range from 885 m to over 2,300 m on the highest peaks, with the historical camp area located at an elevation of 2,040 m. Topography is generally steep and in places, precipitous. Bedrock outcrop is generally restricted to ridge crests covering approximately 10% of the surface area. Slopes are mostly covered with overburden consisting of talus slopes, snow-avalanche debris tracks and unconsolidated glacial debris. Cedar-hemlock forests covers the entire area except for the highest peaks and ridges where barren rock occurs (Campbell, 2014; Dykes, 2003). The area is contained within the Southern Interior Mountains Eco-province, in the Northern Columbia Mountain Ecoregion.

4.0 Mineral Tenure

The boundaries of the mineral claims have not been legally surveyed. A summary of the land tenure information, as extracted from the Government of British Columbia MTO website is presented below.

Summary of current MGX mineral claims in map numbers 082F and 082K

Source: Minerals Titles Online Viewer, Government of British Columbia. Retrieved from https://www.mtonline.gov.bc.ca/mtov/jsp/searchTenures.jsp

Title No.	Claim Name	Owner	Type	Issue Date	Good To Date	Area (ha)
1075801	ICE	283853 (100%)	Mineral	2020/APR/19	2023/SEP/24	249.4449
1075802	SC	283853 (100%)	Mineral	2020/APR/20	2023/SEP/24	166.2744
1075803	JO	283853 (100%)	Mineral	2020/APR/20	2023/SEP/24	311.5098
1075807	TILLICUM MOUNTAIN CHIEF	283853 (100%)	Mineral	2020/APR/20	2023/SEP/24	20.7638
1075913	TILLICUM NE EXT	283853 (100%)	Mineral	2020/APR/27	2023/SEP/24	415.1992
1075917	CARIBOU CREEK	283853 (100%)	Mineral	2020/APR/27	2023/SEP/24	394.3329
1075918	WOLF	283853 (100%)	Mineral	2020/APR/27	2023/SEP/23	291.0015
1075920	SNOW CREEK	283853 (100%)	Mineral	2020/APR/27	2023/SEP/23	311.7934
1077308	CARIBOU CREEK Arnie Conn	283853 (100%)	Mineral	2020/APR/20	2023/SEP/23	41.517
1071800	SLOCAN TILLICUM GRIZZLY	286934 (100%)	Mineral	2019/OCT/15	2023/SEP/24	477.855
1072049	SLOCAN CHIEFTAIN EUREKA	286934 (100%)	Mineral	2019/OCT/15	2023/SEP/24	290.5356
1072050	TILLICUM CHIEFTAIN CONN	286934 (100%)	Mineral	2019/OCT/15	2023/SEP/24	41.5165
1072051	ARNIELAINE1	286934 (100%)	Mineral	2019/OCT/15	2023/SEP/24	3032.51
1072052	TIL NE	286934 (100%)	Mineral	2019/OCT/15	2023/SEP/24	20.7673
1073170	TIL NE 2	286934 (100%)	Mineral	2019/DEC/07	2023/SEP/24	20.7673
						6085.7886

Title No.	Claim Name	Owner	Title Sub Type	Issue Date	Good To Date	Area (ha)
320414		138164 (100%)	Lease	1996/JAN/23	2022/JAN/23	40.3

Silver Queen Active Crown Grants: Owner Gustafson Holdings

1. Undersurface Rights No. KX 28257 registered against Parcel Identifier: 016-769-465 District Lot 2204 Kootenay District, known as "Grey Wolf" mineral claim.

2. Undersurface Rights No. KX 28258 registered against Parcel Identifier: 016-908-040 District Lot 2205 Kootenay District, known as "Red Fox" mineral claim.

3. Undersurface Rights No. KX 28259 registered against Parcel Identifier: 016-907-736 District Lot 2206 Kootenay District, known as "Black Fox" mineral claim.

4. Undersurface Rights No. KX 28260 registered against Parcel Identifier: 016-907-841 District Lot 2207 Kootenay District, known as "Black Fox Fraction" mineral claim.

5. Undersurface Rights No. KX 28261 registered against Parcel Identifier: 016-769-473, known as "Grey Wolf Fraction" mineral claim.

6. Undersurface Rights No. KX 28262 registered against Parcel Identifier: 016-908-163 District Lot 2582 Kootenay District, known as "Black Bear Fraction" mineral claim.

   Owner: Gustafson Holdings Ltd. 100.0%

Note: Gustafson Holdings Ltd FMC 138164, MGX Minerals Inc FMC 283853, and 1240089 BC Ltd FMC 286934

4.1 Underlying Agreements

On May 05, 2020, MGX Minerals Inc. entered into a mineral property option agreement with 1240089 B.C. Ltd., and Gustafson Holdings Ltd. to grant MGX the sole and exclusive right and option to acquire up to 100% of the right, title and interest in and to the Assets, free and clear of all encumbrances. The contract states that 90% of the option will be satisfied after an initial cash payment of CAD$2,000,000, in 17 installments, is made prior to May 01, 2024. In addition, 20,000,000 common shares will be made in 9 installments prior to May 01, 2024. MGX may expend an aggregate amount of CAD$1,050,000 of expenditures in respect of the Assets prior to December 01, 2023. The right to purchase the outstanding 10% is conditional upon a cash payment of CAD$1,000,000 at any time.

4.2 Taxes, Royalties & Payments

Not applicable.

4.3 Permits and Authorization

MGX is currently in the process of acquiring the necessary permits to conduct the work proposed for the East Ridge, Heino, and Grizzly (@ 1,850-2,220 m elevation) within lease 320414, and MTO mineral tenure 1071800. No permits have yet been obtained by MGX.

4.4 Environmental Considerations

There are legacy mining related structures, equipment and mine workings. The workings are mainly located on Heino and East Ridge Zones between 2,050-2,170 m elevation

Access road to the lower camp of the Heino-Money Mine site was determined to be in excellent condition, requiring only a two-wheel drive vehicle. From the lower camp to the Heino- Money mine roads were in reasonable shape requiring drainage ditching and rock debris clearing in several spots.

The lower camp area, at elevation 1,340 masl, immediately west of Londonderry Creek has one large, empty 12 x 18 m workshop with cement floor. Other buildings on the site include several connected Atco trailers forming office, dry, sleeping and kitchen facilities which require significant renovation to be useable. The upper camp area located 800 m north of the main Heino-Money workings, occurs at an elevation of 2,040 masl. It has a small core storage area and a single wooden building with metal roof cladding. Drill core is stored in racks as well as in cross-stacked piles, however, winter snow cover and core box deterioration has contributed to damaging the upper parts of the piles and rendered most of the historical core as non- referenceable. Drill core stored underneath (mainly 1988 drilling) has been mostly preserved and originates mainly from East Ridge Zone drill holes.

Reported conditions from 2002 described the underground workings to be in good condition with little or no water observed flowing out of any of the 5 adits. The large 3.7 m x 3.7 m main haulage level of the 2050 level and all other openings have been closed by solid wood boards, and rocks piled at the openings to prevent inadvertent entry, as well as marked with Caution yellow tape, and "Keep Out" signage. Minor spall had occurred in some of the other levels, but overall, they were well ventilated, generally dry, and in good condition. Equipment stored inside the building and scattered around the general area includes 2 mine cars, slusher and motor, one electric motor, a small generator, various first aid equipment, underground track, drill steel, rock bolts and plates and miscellaneous parts. An electric locomotive is stored behind a tarp just inside the portal of the Heino-Money main haulage level (Carter and Hinzer, 2002).

5.0 PROPERTY HISTORY

Since it's discovery in 1980 by two local prospectors, the Heino Gold Project has undergone two periods of exploration and minor development. From 1981 to 1993, the project was advanced rapidly by means of acquisition by Esperanza Explorations Ltd. who conducted surface and underground diamond drilling, geophysical and geochemical surveys, mapping, trenching and underground development and bulk sampling. Early exploration work was initially focused on the discovery zone, which later became the Heino-Money Mine. Later exploration work led to the finding of several other significant mineralized zones. In total, 376 diamond holes were drilled for a total of 32,874 m, and a sum of 1,928 m in underground development was completed. In 1993, a permit was obtained for an underground mining operation and 3 bulk samples for a total of 5,788 tonnes was extracted that summer.

The second period of exploration occurred between 1995 and 2014 when AMT Tillicum Holdings Inc. and 1330275 Ontario Limited successively owned the property. Between that time, surface and underground geological mapping were conducted, as well as rock chip, soil and stream sediment sampling. In addition, two geophysical surveys were completed during this time frame. This second period of exploration endeavoured to digitize the existing data, and build and rejuvenate the existing infrastructure. No drilling or bulk sampling was conducted during this time frame.

The following paragraphs regarding the history of the Heino Gold Project are largely extracted from previous reports prepared by Dykes (2003) and Campbell (2014) using BC Government Minfile information, internal company reports, and assessment files.

The town of Burton was founded in 1895 as a result of gold mining activity in the area. There are reports of numerous placer operations within the Caribou Creek drainage system during the early 1890's. During the period 1896 to 1930 several small-scale, hard rock mine workings were active and are found throughout the area. Prospecting was carried out in the Tillicum Mountain area up to 1960, but the source of the placer gold was never identified. In 1980 local prospectors, Arnie and Elaine Gustafson, discovered gold in what is now known as the Heino-Money Zone, on the north slope of Tillicum Mountain.

Esperanza Explorations Ltd. optioned the property in the fall of 1981 and initiated an exploration program that sparked a district wide staking rush. The original Tillicum property covered over 15,000 acres containing 10 known deposits and prospects of gold-silver mineralization. Early exploration was initially focused on the Discovery Zone, which later became the Heino-Money Mine. Work consisted of geophysical and geochemical surveys, mapping, trenching, surface drilling, underground development, underground drilling and bulk sampling. Exploration work outside of the Heino-Money Zone led to the finding of several other significant mineralized zones; including the East Ridge and Grizzly Zones.

In 1993 Bethlehem Resources Corporation and Goldnev Resources Inc. optioned the property from Columbia Gold Mines Ltd. (formerly Esperanza Explorations Ltd.) and obtained a permit for an underground mining operation. Mining commenced in mid-August of that year and was completed in late October. A total of 6,800 tonnes were mined from 4 levels, and 5,503 tonnes were shipped to Bethlehem's Goldstream mill, north of Revelstoke, for milling. Recovered grades were reported as 18.62 g/t Au and 29.81 g/t Ag.

The Gustafson's held the property for several years until AMT Resources Ltd. acquired the property from them in 1996. In that year the company undertook surface and underground geological evaluation and sampling, geophysical survey work, access road rehabilitation, VLF-EM surveys, extensive mapping and sampling and an updated tonnage estimate (historical estimate not compliant with NI43-101 reporting guidelines).

In 1997 the property was optioned to 1033275 Ontario Limited, a subsidiary of Mustang Minerals Corporation. In 2001 this company performed rock and soil sampling, a compilation of historical data and geological interpretation of the mineralization.

In 2002, 1033275 Ontario Limited undertook digitization of the existing data, geostatistical analysis of assay data and 3D modelling. Subsequently, the property was returned to AMT Industries Canada Inc. ("AMT-I"), the successor to AMT Resources Ltd. in 2007. The company then completed a soil sampling program in 2007.

In 2009, AMT-I completed a VLF-EM survey along the network of exploration roads on the claims. Since that time, AMT-I was restructured into AMT Tillicum Holdings, Inc. In 2013 and 2014, AMT-Tillicum Holdings Inc. completed significant physical improvements to the property, including the installation of a new 12-person sleeper with complete washrooms, washing and drying areas along with a refurbished kitchen with all new appliances. A new septic system and 100 kilo watt generator was installed, as well as a workshop with concrete floors measuring 10 m x 22 m. In addition, 17 new culverts and numerous ditches were installed for erosion control along the mine access roads; one of which was a 12.2 m x 2.4 m culvert on Londonderry Creek.

In May 2020 MGX signed an option agreement to acquire 100% interest in the Heino Gold Project, according to the terms specified in the option agreement, and commissioned SRK to complete a NI43-101 compliant exploration technical report.

Table 6-1: Historical summary of the Heino Gold Project

Year(s)	Mining Company	Activities
1895	n/a	Town of Burton founded due to placer activities along the Caribou Creek drainage system
1980	Arnie & Elaine Gustafson	Prospecting led to the discovery of the Heino-Money Zone
1981	Esperanza Exploration Ltd.	Geophysical & geochemical surveys, mapping, trenching, surface drilling, underground drifting & raising, underground drilling, bulk sampling
1981, 1985, 1991, 1993	Esperanza Exploration Ltd. (renamed to Columbia Gold Mines Ltd.)	Small scale mining from the Heino-Money Zone; discovery of other Zones, including East Ridge and Grizzly
1993	Bethlehem Resources Corporation & Goldney Resources Inc.	Underground mining commenced between mid-August to mid-October; surface & underground drilling; underground development
1994-1996	Arnie & Elaine Gustafson	Property held with no active work programs
1996	AMT Resources Ltd.	Surface & underground geological evaluations and sampling, geophysical survey work, access road rehabilitation, VLF-EM surveys, extensive mapping and sampling and tonnage estimate
1997	1033275 Ontario Limited	Optioned from AMT Resources Ltd.
2000	1033275 Ontario Limited	Report on the project was prepared (Handfield and Glanville, 2000)
2001	1033275 Ontario Limited	Soil sampling, compilation of historical data and modelling of the mineralization
2002	1033275 Ontario Limited	Computerization of existing data, geostatistical analysis and, 3D modelling
Fall 2002	AMT Industries Canada Inc. (AMT-I)	Bought the company
2009	AMT Tillicum Holdings Inc. (restructured from AMT-I)	Soil sampling
2009	AMT Tillicum Holdings Inc.	VLF-EM survey
2013-2014	AMT Tillicum Holdings Inc.	Infrastructure rejuvenation & geological remote sensing investigation
2020	MGX Minerals Inc.	Acquired 100% Interest in Heino Gold Project

Historical Exploration Work

The following summary of exploration activities has been compiled from all available in-house and assessment reports available to SRK. A timeline of exploration activities on the Heino Gold Project is summarized as follows

Summary of exploration activities on the Heino Gold Project

Year(s)	Mining Company	Activities
1980	Arnie & Elaine Gustafson	Discovered Money Zone while prospecting
1982	Esperanza Explorations Ltd.	Prospecting, geological mapping, soil sampling, trenching and diamond drilling. Extension of the previously discovered Money Pit now called the Heino-Money Zone.
1982		Airborne VLF-EM and Mag Survey
1982		Petrographic and environmental report
1983		Geological mapping, trenching, road building, diamond drilling, underground development; East Ridge Zone discovered; baseline environmental study
1985		227 tonne bulk sample from the Heino-Money Zone sent to Dankoe mill at Keremeos
1986		Surface and underground drilling; underground development (155 m drifting; 131 m slashing, 225 m test hole drilling)
1987		Preliminary engineering and environmental Report (Knight and Piesold, 1987)
1989	Esperanza Explorations Ltd. (renamed to Columbia Gold Mines Ltd.)	Diamond drilling on East Ridge Zone
1993	Bethlehem Resources Corporation & Goldney Resources Inc.	Bulk sampling commenced in mid-August and completed in late-October. Rock sample analysis and report
1994	Columbia Gold Mines Ltd.	Commissioned Ross Glanville & Associates to carry out a valuation of the Tillicum Mountain Project
1996	AMT Resources Ltd.	Surface and underground geological evaluations and sampling, geophysical survey work, limited road rehabilitation, data review; VLF EM-16 and limited Self-Potential surveys
2001	1330275 Ontario Limited (wholly owned subsidiary of Mustang Minerals Corp.)	Exhaustive re-examination of the historical database; stream sediment sampling, soil and rock chip samples; survey of the access road; camp and equipment inspections
2002	1330275 Ontario Limited	Site inspection of on-site facilities and underground workings, brief examination of mineralization and geology of the area
2009	AMT Tillicum Holdings Inc.	Soil sampling grid, VLF-EM Survey

Between 1982 and 1993, when Esperanza Explorations Ltd. held the property, the Heino Gold Project was taken from a grassroots prospect through to an advanced stage exploration project including limited underground exploration development. Over the 11 years, Esperanza Explorations Ltd. built roads, geologically mapped and prospected the area, collected and assayed rock samples, and conducted limited geochemical soil surveys. Surface and underground diamond drilling programs were undertaken almost continuously throughout those years (see Section 10). Gold mineralization discoveries outside of the Heino-Money and East Ridge Zones were also made.

In 1982 exploration work included geological mapping at a scale of 1:1,000 by Dr. J. Crawford, which concentrated on the north side of Tillicum Mountain, and over the area of the Heino-Money Zone. In addition, Dr. Ken Northcote, under the contract of Vancouver Petrographics Ltd., carried out a preliminary petrographic and mineralographic study on 34 thin sections collected from drill core and hand specimens. Geochemical soil surveys on the Tillicum Property during 1982 were restricted to four lines across the south end of Grizzly Valley and to 'reconnaissance contour-type' sampling in Sue Valley to the northwest of Tillicum Peak. Other short soil sample traverses were conducted in conjunction with prospecting on Hailstorm Ridge (Guild, 1983).

During 1982, Western Geophysical Aero Data Ltd. conducted a regional, low level airborne magnetometer and VLF-electromagnetometer survey across the Tillicum Mountain Gold prospect area. The purpose of the survey was to delineate any variations in magnetic intensity and near surface conductivity that assisted in the search for gold or massive sulphide mineralization (Guild, 1983).

Exploration in 1983 consisted of geological mapping at a scale of 1:300, surface rock chip sampling, bulldozer trenching, and 325 m of road building. In addition, 61 m of underground development was completed into the East Ridge Zone (Roberts and McClintock, 1983).

The Esperanza Explorations Ltd. exploration programs between 1985 and 1989 were focused on delineating "reserves" within the Heino-money Zone, as well as determining metallurgical qualities of mineralization; details of which are presented in Section 6.3 of this report. In addition to historical preliminary "ore reserve" estimates, the exploration programs included 1,518 m of underground development on the Heino-Money Zone and 410 m of drifting on the East Ridge Zone; all of which were conducted by Nemo Resources of New Denver, B.C. The underground development and bulk sampling program defined continuous gold bearing skarn along 37 m of drift length (Dewonck, McClintock and Roberts, 1986). Small-scale mining occurred in the summer of 1993.

After a hiatus of 5 years, exploration resumed on the property in 2001. Principal work included a partial survey of the access roads, an inspection and inventory of existing on-site facilities and equipment, and the collection of 79 stream sediment, soil and rock samples from selected parts of the property. Timberland Consultants of Nelson B.C. were contracted to collect Differentially Corrected Global Positioning System survey data along the access road to the mineralized area on the Tillicum property to confirm the location of the road in NAD83 coordinates to a precision of +/-1 m. In addition to the road, the survey was also designed to locate the position of the warehouse, the Heino-Money 2050, 2130 and 2160 level portals, the East Ridge 2060 level portal and other claim boundaries (Campbell, 2014).

In 2013 and 2014, significant physical improvements to the property were made, including the installation of a new 12-man sleeper, a new septic system and 100 kilo watt generator, and 10 m x 22 m workshop. In addition, the access road was refurbished with new culverts and ditches installed for erosion control (Campbell, 2014).

Historical Underground Development and Bulk Sampling

Underground development on the Heino-Money Zone totaled 1,518 m along with an additional 410 m of development on the East Ridge Zone (Addie, 1997), summarizes the meterage of underground development per year of exploration.

Summary of underground development within the Heino-Money and East Ridge Zones

Year(s)	Mineral Zone	Underground Development
1981-1987	Heino-Money	955 m on 4 levels
1988		442 m
1993		121 m
1981-1984	East Ridge	60 m on cross-section 2118
1988		350 m on drive 2062
Totals		
Heino-Money		**1,518m (on 5 levels)**
East Ridge		**410 m**

Small scale production occurred in 1981, 1984, and 1993 from the Heino-Money Zone, summarizes tonnages and metal content recovered per year of extraction.

Summary of bulk sampling conducted on the Heino-Money Zone

Year	Mined Tonnes	Milled Tonnes	Au Grams Recovered	Au Ounces Recovered	Ag Grams Recovered	Ag Ounces Recovered
1981	58	58	4,570	145	3,259	105
1984	227	168	48,351	1,554	51,570	1,658
1985/1986	2,972	2,972	98,910	3,180		
1993	6,800	5,503	102,455	3,294	164,071	5,275
Total	**10.057**	**8,701**	**254,286**	**8,173**	**218, 900**	**7,038**

In 1981 a bulk sample of 58 tonnes was extracted from the Heino-Money pit, which averaged 78.8 g/t Au and 56.2 g/t Ag.

In 1984, a 227-tonne bulk sample was extracted from an underground adit driven into the upper part of the Heino-Money zone. Wire gold was report in the blast, and some coarse grain native gold was identiied. This material was shipped to the Dankoe mill located in Keremeos, BC, in 1985, where 168 tonnes was milled. The average recovered Au grade was reported at 287.8 g/t

In 1985 and 1986, a bulk sample of 2,972 tonnes of material was extracted from underground development and surface trenching on the Heino-Money Zone. This material was collected for metallurgical testwork that was conducted at a custom mill. It is reported that this material was found to be free-milling and standard crushing, grinding and gravity and flotation circuits yielded 92% gold recovery. A total of 3,180 oz of gold was recovered from this testwork, and it is reported that two-thirds of the gold was found to be associated with sulphide minerals. Results of this historical testwork have not been reviewed by SRK.

In May 1993, a total of 6,800 tonnes of material was mined from four underground levels within the Heino-Money zone and 5,503 tonnes were shipped to Bethlehem's Goldstream mill located north of Revelstoke, BC. Recovered average grades from this bulk sample were reported at 18.62 g/t Au and 29.81 g/t Ag.

Historical Mineral Resource and Reserve Estimates

A number of historical "reserve" estimates have been reported for the various mineralized zones located within the Tillicum area. The historical estimates are only relevant in that it presents an estimate of the relative size and grade of the property at the time that it was prepared. The historical estimates do not use mineral resource categories as defined in NI43-101 and the historic estimates are not current mineral resource estimates and therefore these estimates should not be relied upon. There are no current mineral resources for the Heino Gold Project.

The historical "ore reserve' estimate for the Heino-Money zone (circa 1986) was prepared by projecting the ore zones on to a longitudinal section and subdividing the zones into 16 separate blocks based on location of underground sampling and drill holes. Grades of individual blocks were assigned using the weighted average values obtained from muck, back and floor sampling of the underground or surface workings bounding the blocks. Drill hole assays within blocks were used to confirm continuity of the zone but were not included in the calculation of the grades of blocks. Volume estimates of individual blocks were calculated by determining the area of each block using a planimeter then multiplying by thickness. The block volumes were converted to tonnes using a density factor of 3 tonnes per cubic meter. Conversion of metric tonnes to imperial tons was achieved by multiplying tonnes by a factor of 1.1023 (Dewonck, McClintock and Roberts, 1986).

In 1997, historical "reserve" estimates for the East Ridge and Grizzly Zones were developed by George Addie (Consulting Geologist) for AMT Resource Ltd.. A total of 734,487 tonnes containing 260,159 oz Au with an average grade of 9.99 g/t Au were estimated (Addie, 1997).

In 1984 following the completion of a twelve-hole drill program, a "Potential reserves" estimate was developed consisting of 2.7 to 4.5 Mt grading at 103 g/t Ag. No significant gold content has been reported within the Silver Queen zone.

Summary of historical reserve estimates

Zone	Year	Tonnes	Au Grade (g/t)	Cut-off Grade (Au g/t)	Ag Grade (g/t)
Heino- Money	1983	36,287	18.75	--	--
	1986	45,355	31.1	6.86	--
East Ridge	1988	238,268	13.51	6.86	--
	1989	1,259,415	8.23	4.11	--
	1990	1,063,185	8.91	5.14	--
	1997	474,642	8.75	9.38	--
Silver Queen	1984	2.7 – 4.5 Mt	--	--	103
Grizzly	1997	252,065	12.5	--	--

6.0 Geology and Mineralization

The Heino Gold Project is located on Tillicum Mountain, which is underlain by a sequence of pelitic schists, calc-silicates and meta-volcaniclastics assigned to the Milford Group, of Upper Paleozoic to Triassic age. The strata trends northwesterly and lies between the Slocan syncline to the north and the Valhalla dome to the south. Three episodes of intrusion are recognized: The first consists of swarms of porphyritic dioritic sills, the second comprise large-scale Cretaceous monzonitic stocks (Goatcanyon and Halifax Creek stocks), and the third are swarms of late stage lamprophyre dykes of probable Eocene age. Gold and/or silver mineralization occurs in shear related calc-silicate quartz skarns developed adjacent to, or in close proximity to quartz monzodiorite porphyry sills. The area is structurally complex with at least two stages of folding recognized with metamorphic grade throughout the region typically of sillimanite facies.

A number of significant mineralized zones have been identified. These include the gold-rich zones: Heino-Money Zone, East Ridge Zone, Grizzly, Lower Jennie, and Road Ridge; and the silver-rich zones: Silver Queen and Arnie Flats. Mineralization is structurally controlled with two structural styles recognized: A steeply dipping, crosscutting Heino-Money Zone type mineralization and shallower dipping stratabound East Ridge Zone type mineralization. The Heino-Money Zone is contained within a north trending shear/fracture zone. The steep fracture zone likely post-dates an earlier mineralization phase, probably represented by the East Ridge Zone, but predates faults and fractures associated with Cretaceous stocks and Tertiary lamprophyre dykes. The interrelationship between the East Ridge Zone and the Heino-Money Zone is poorly understood but high-grade mineralization is possibly the result of remobilization and enrichment of the earlier phase into the shear/fracture zone.

Skarn assemblages consist of quartz, plagioclase, sericite, tremolite-actinolite, clinozoisite, garnet, biotite and microcline with high grade gold hosted within quartz-actinolite-chlorite assemblages.

Skarns contain quartz calc-silicate segregations and veins that vary from a few centimetres to 4 meters in width. Skarn zones vary in thickness from 1 to 60 meters and contain finely disseminated sulphides orientated within the foliation or as coarse-grained aggregates within segregations.
Sulphides include pyrrhotite, pyrite, sphalerite, galena, as well as traces of chalcopyrite and tetrahedrite. Native gold occurs within the skarn assemblages as 25-micron disseminations to over several millimeter diameter flakes within and along the margins of the quartz calc-silicate segregations. Gold is generally free, but associated with pyrrhotite, arsenopyrite, sphalerite and pyrite-marcasite.

6.1 Regional Geology

The following paragraphs have been largely extracted from an assessment report written by Campbell (2014).

The area is underlain by the Early to Late Triassic Slocan Group, a sequence of metasedimentary argillites, carbonates and metavolcanics. The Slocan Group is underlain by the Milford Formation, a series of Pennsylvanian to Triassic volcano-sedimentary wackes, and overlain by the Lower Jurassic Rossland Group, a series of basaltic-andesitic flows and tuffaceous siltstones (Addie, 1997).

Intrusive into these are Jurassic granites and the Early to Late Cretaceous granodioritic Whatshan Batholith. On the property, Devlin and Roberts (1989) described a range of porphyritic stocks and sills intruding the sedimentary and volcanic country rocks with sub-alkalic to calc-alkaline affinities and quartz monzonite to quartz monzodiorite compositions. Dykes (2003) recognized three episodes of intrusion. The first consists of swarms of dioritic sills, the second comprise large-scale Cretaceous monzonitic stocks and sills (Goatcanyon and Halifax Creek stocks), and the third are swarms of late stage lamprophyre dykes of probable Eocene age (Addie, 1997).

At least two stages of folding are recognized with metamorphic grade throughout the region typically of the sillimanite facies, however the grade is lower around Tillicum Mountain with biotite, muscovite, chlorite and amphibole observed as the main metamorphic minerals (Dykes, 2003).

Gold and/or silver mineralization occurs in shear related calc-silicate quartz skarns developed in metavolcanic and metasedimentary rocks adjacent to, or in close proximity to stocks and sills.

7.0 Property Fieldwork 2020

MGX Minerals Inc. acquired the Heino Gold Project in June, 2020 and in August contracted SRK Consulting (Saskatoon/Vancouver) to write a NI 43-101 compliant technical report (Revering, 2020). The technical report has been uploaded to SEDAR (MGX Minerals Inc) and is available for public viewing. In addition to SRK technical report and geochemical/ geophysical fieldwork, a LiDAR high resolution laser scanning was carried out in Oct, 2020, on about 4 square kilometers of terrain, however about 2 square kilometers of the higher elevation terrain was not completed, and LiDAR and gradiometer magnetometer survey (operator: Axiom Group) completion is planned for 2021. The LiDAR survey will be used for surveying, volumetric calculations, numerical terrain modelling, 3D modelling, CAD drawing, calculation of tree height, autonomous vehicle tracking and volume & geological purposes. Gradiometer magnetic survey is intended to define geological features. A report by Axiom LiDAR/gradiometer mag survey will be delivered when the survey is completed.

In June-Oct, 2020 MGX Minerals Inc performed exploration fieldwork that included 4.55 line kilometers ground magnetometer surveying, geochemistry soil (245 samples), rock chip (48 samples), & petrographic description (1 sample). Also, metallurgical testing of a 150 kg rock chip sample from Heino Zone was carried out by ALS Metallurgy Ltd, Kamloops. The sampling protocol and results of MGX Minerals Inc 2020 geochemistry, geophysics, petrology and metallurgy are listed and discussed:

7.1 METHODS AND PROCEDURES

Navigation to fieldwork site was assisted by Garmin 60Cx GPS receiver. A total of 48 rock chip samples were collected across intervals of 10-50 centimeters from bedrock (and angular float) located near areas of previous work as well as several outlying areas. Rock chip sample material was taken with a maul and rock hammer. Approximately 0.5-1.8 kilograms of acorn sized rock chips were placed in poly ore bags and site was flagged with ID # (prefix 20). Samples were dried and shipped to ALS Minerals, Kamloops, BC for Prepartion-31, ME-ICP41, and AuGRA-22 geochemical analysis by aqua regia digestion, with AES finish (Appendix A, B, Fig 6-17).

Geophysical readings were taken using GEM Systems GSM19T v 7.0, vertical component (absolute values) of total field (measured in nano-Teslas), and was recorded at 12.5 m intervals over 2 separate grid areas covering South East Ridge and South Grizzly Zones (Fig 65-68). Survey lines were oriented E-W and were 200-400 meters in length. A total of 4.55 line-kilometers were surveyed and a total of 364 readings were taken (Appendix F). Diurnal variation was corrected by looping to a common station and comparing the readings over time intervals. Also, NR Canada magnetic observatory data was examined for their Canada wide base station readings that display daily nT variation over time to confirm indicated local diurnal variations.

A total of 245 soil samples were taken in the central portion of the subject property to locate extensions of gold-silver bearing mineralization of the Heino, East Ridge, Jennie, Road, Grizzly, Golden Hope, Silver Queen, and Arnie Flats Zones (Fig 18-64). Samples were taken from a depth of 25 cm with a tree planting shovel, and approximately 100-400 grams of 'B' horizon soil (distinguished by darker colour than overlying 'A' horizon) was placed into marked (by last 5 digits of UTM co-ordinates, and later given an ID # S1 to S245) kraft soil bags. Samples were dried and shipped to ALS Minerals Kamloops for prep 41, and ME-ICP41 (Appendix A, B).

A total of 3 metallurgical samples (approximately 150 kilograms each) were collected from:
1) Heino 2130 m adit outcrop see Fig 5 for location (adjacent to adit entrance, sloughed in by rock talus) UTM location Zone 11, 449,037 E, 5,537,219 N elevation 2,130 m (4 m total rock chip sample interval).
2) East Ridge composite sample consisted of total of 95.93 m interval from 17 drill holes (DDH 88-150, 151, 154, 155, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 173) listed in Appendix E, DDH's shown in plan view Fig 5B (includes samples from A, B & C Bands).
3) East Ridge (Central 'B Band') UTM location Zone 11, 449,265 E, 5,537,436 N, elevation 1,971 meters (3 m total rock chip sample interval), see Fig 5 for location.

The outcrop samples were taken with sledge hammer and chisel. Acorn to cobble sized clasts from Heino & East Ridge 'B Band' outcrop, were placed in rice sacks (5 X 30 kgs) for shipment to ALS Metallurgical, Kamloops BC. The East Ridge split drill core composite sample was taken by referencing Dykes, 2003 Au assay data for drill holes, and locating the stored 1988 drill core total of 95.93 m interval from 17 drill holes (DDH 88-150, 151, 154, 155, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 173) to form a 150 kg composite sample for metallurgical testing. The only sample that was fully tested by ALS Metallurgy was the Heino outcrop sample which had a head grade that exceeded 28 g/t Au. The East Ridge outcrop and drill core composite sample returned assay values <2 g/t Au and were considered too low for a metallurgical test.

A petrographic description of high grade gold sample #303 (angular float taken from Heino 2,130 m adit) was performed by John Payne, Ph D, P Geol (Vancouver Petrographics Ltd, Langley, BC, see Appendix G). The petrographic sample was taken with a rock hammer, labeled and placed in sample bag. Location of the sample is at UTM Zone 11, 449,037 E, 5,537,219 N elevation 2,130 m

In 2020, MGX Minerals Inc carried out metallurgical testing of a 180 kg sample named **'Heino Surface Comp'** from outcrop located near the Heino 2130 m adit entrance (Fig 5). Additional metallurgical samples include two samples, one named **'East Ridge Comp'** 170 kgs (source from 1988 DDH core samples, 75 samples in total, interval lengths 0.3-3.2 m, from 19 drill holes covering approximately 150 X 300 m area, see Fig 5B for location & Appendix E for descriptions), the other named **'East Ridge Comp 2'** was taken from outcrop at 1,970 m elevation at UTM co-ordinates 449,265 E 5,537,436 N, occurring within the north portion of East Ridge B band (Fig 5). The 3 metallurgical samples were submitted to ALS Metallurgical, Kamloops for gold and multielement analysis, mineralogy, bulk mineral analysis, QEMSCAN, comminution properties, circuit recovery, upgrading potential, rougher/cleaner flotation tests, and closed circuit locked-cycle testing (Appendix I).

7.2 2020 ROCK CHIP SAMPLE GEOCHEMISTRY

Fieldwork in 2020 included a total of 48 rock chip samples taken from Heino, East Ridge, Jennie, Road, Grizzly, Golden Hope, Silver Queen, and Arnie Flats (see Fig 6-17). Rock samples submitted to ALS Minerals for ICP multi-element geochemical analysis (certificates of analysis Appendix A). Above average gold bearing samples were selected for Au fire assay.

Certificate number (zone name)
KL20134180 & KL20151535 (Heino),
KL20184570 (East Ridge, Silver Queen, Grizzly, Arnie Flats, Jennie),
KL20212439 (Grizzly, Golden Hope, Jennie, Road).

A summary of 2020 rock chip sample descriptions and select geochemical analysis results are listed below:

Sample number	MTO tenure	Zone	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type
301	320414	Heino	449035	5537218	2130	outcrop (near portal)
302	320414	Heino	449036	5537219	2130	outcrop (near portal)
303	320414	Heino	449037	5537219	2130	angular float (at portal)
304	320414	Heino	449037	5537220	2130	angular float (at portal)
305	320414	Heino	449038	5537220	2130	angular float (at portal)
306	320414	Heino	449038	5537219	2130	angular float (at portal)
20EAST1	320414	East Ridge	449274	5537365	2029	angular float
20EAST2	320414	East Ridge	449265	5537436	1971	outcrop (at met sample)
20EAST3	320414	East Ridge	449314	5537479	1967	angular float
20SQ1	1072051	Silver Queen	450307	5535369	2041	outcrop
20SQ2	1072051	Silver Queen	450308	5535370	2042	outcrop
20SQ3	1072051	Silver Queen	450364	5535475	2075	outcrop
20SQ4	1072051	Silver Queen	450422	5535523	2127	angular float
20SQ5	1072051	Silver Queen	450516	5535558	2196	outcrop
20SQ6	1072051	Silver Queen	450524	5535580	2214	outcrop
20SQ7	1072051	Silver Queen	450550	5535555	2220	angular float
20GRIZ1	1071800	Grizzly	449592	5536342	2055	angular float
20GRIZ2	1071800	Grizzly	449620	5536339	2059	outcrop
20GRIZ3	1071800	Grizzly	449644	5536312	2060	outcrop
20GRIZ4	1071800	Grizzly	449686	5536390	2055	outcrop
20GRIZ5	1071800	Grizzly	449660	5536378	2062	outcrop
20GRIZ6	1071800	Grizzly	449648	5536363	2062	outcrop
20GRIZ7	1071800	Grizzly	449946	5536804	1869	outcrop
20GRIZ8	1071800	Grizzly	449898	5536859	1878	outcrop
20GRIZ9	1071800	Grizzly	449797	5536847	1900	outcrop
20GRIZ10	1071800	Grizzly	449615	5536290	2057	outcrop
20GRIZ7 B WR	1071800	Grizzly	449945	5536804	1876	outcrop wallrock
20GRIZ8 B WR	1071800	Grizzly	449897	5536859	2095	outcrop wallrock

Sample number	MTO tenure	Zone	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type
20GRIZ9 B WR	1071800	Grizzly	449796	5536847	2099	outcrop wallrock
20GRIZ10 B WR	1071800	Grizzly	449614	5536290	2103	outcrop wallrock
20GRIZ11	1071800	Grizzly	449892	5536896	1876	angular float
20GRIZ12	1071800	Grizzly	449667	5536204	2095	angular float
20GRIZ13	1071800	Grizzly	449572	5536198	2099	angular float
20AF1	1071800	Arnie Flats	448006	5535748	2103	outcrop
20AF2	1071800	Arnie Flats	448014	5535751	2108	outcrop
20AF3	1071800	Arnie Flats	447960	5535719	2091	angular float
20AF4	1071800	Arnie Flats	447951	5535714	2090	angular float
20JEN1	320414	East Ridge W	449065	5537427	1992	outcrop
20JEN2	320414	East Ridge W	449089	5537418	1991	outcrop
20JEN3	320414	East Ridge W	449072	5537410	2003	outcrop
20JEN4	320414	East Ridge W	449109	5537380	2003	outcrop
20ROAD1	1071800	Road 950 N	448964	5537584	1959	outcrop
20ROAD2	1071800	Road 950 N	448964	5537669	1930	outcrop
20GHOPE1	1071800	Golden Hope	449102	5536610	2064	angular float
20GHOPE2	1071800	Golden Hope	449087	5536452	2061	angular float
20GHOPE3	1071800	Golden Hope	449067	5536547	2102	outcrop
20GHOPE4	1071800	Golden Hope	449417	5536971	1980	outcrop
20GHOPE5	1071800	Golden Hope	449415	5536984	1981	outcrop

Sample number	Lithology	Alteration
301	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay minerals in shear
302	amphibolite (metamorphosed basaltic tuff) contact porphyritic diorite	silica, sericite, carbonate, garnet, clay minerals in shear
303	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay minerals in shear
304	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay minerals in shear
Sample number	Lithology	Alteration
305	metasediments (Millford Group)	silica, sericite, carbonate, garnet, clay minerals in shear
306	metasediments (Millford Group)	sericite, silica,calcite, pyrolusite,hematite,garnet
20EAST1	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST2	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST3	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,magnetite
20SQ1	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite
20SQ2	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite
20SQ3	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite
20SQ4	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite,hematite,limonite
20SQ5	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite,hematite,limonite
20SQ6	meta-sediment/volcanic (greywacke, limy sandstone protolith)	quartz,carbonate,sericite,chlorite,hematite,limonite
20SQ7	meta-sediment/volcanic (greywacke, limy sandstone protolith)	quartz,carbonate,sericite,chlorite,hematite,limonite
20GRIZ1	metamorphosed tuffaceous basalt hybrid diorite contact	quartz,carbonate,sericite,chlorite,magnetite
20GRIZ2	metamorphosed tuffaceous basalt hybrid diorite contact	quartz,carbonate,sericite,chlorite,magnetite

20GRIZ3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite
20GRIZ4	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite
20GRIZ5	metamorphosed tuffaceous basalt hybrid diorite contact	quartz,carbonate,sericite,chlorite,magnetite
20GRIZ6	metamorphosed tuffaceous basalt, meta-greywacke contact	quartz,carbonate,chlorite
20GRIZ7	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite,magnetite
20GRIZ8	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite,magnetite
20GRIZ9	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ10	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ7 B WR	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ8 B WR	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ9 B WR	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ10 B WR	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ11	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20GRIZ12	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite
20GRIZ13	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite
20AF1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,chlorite
20AF2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20AF3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20AF4	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN4	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20GHOPE1	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate
20GHOPE2	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite
Sample number	Lithology	Alteration
20GHOPE3	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate
20GHOPE4	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,chlorite
20GHOPE5	siliceous meta-sediment/volcanic (greywacke protolith)	quartz,carbonate,sericite,chlorite

Sample number	Mineralization
301	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
302	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
303	pyrrhotite, sphalerite, galena
304	pyrrhotite, sphalerite, galena, chalcopyrite
305	pyrrhotite, sphalerite, galena, chalcopyrite
306	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST1	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST2	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST3	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite

20SQ1	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ2	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ3	pyrrhotite, sphalerite, galena
20SQ4	pyrrhotite, sphalerite, galena, chalcopyrite
20SQ5	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ6	pyrrhotite, sphalerite, galena
20SQ7	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ1	pyrrhotite, sphalerite, galena
20GRIZ2	pyrrhotite, sphalerite, galena
20GRIZ3	pyrrhotite, sphalerite, galena
20GRIZ4	pyrrhotite, sphalerite, galena
20GRIZ5	pyrrhotite, sphalerite, galena
20GRIZ6	pyrrhotite, sphalerite, galena
20GRIZ7	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ8	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ9	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ10	pyrrhotite, sphalerite, galena
20GRIZ7 B WR	pyrrhotite, sphalerite, galena
20GRIZ8 B WR	pyrrhotite, sphalerite, galena
20GRIZ9 B WR	pyrrhotite, sphalerite, galena
20GRIZ10 B WR	pyrrhotite, sphalerite, galena
20GRIZ11	pyrrhotite, sphalerite, galena
20GRIZ12	pyrrhotite, sphalerite, galena
20GRIZ13	pyrrhotite, sphalerite, galena
20AF1	pyrrhotite, sphalerite, galena, chalcopyrite
20AF2	pyrrhotite, sphalerite, galena, chalcopyrite
20AF3	pyrrhotite, sphalerite, galena
20AF4	pyrrhotite, sphalerite, galena
Sample number	Mineralization
20JEN1	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN2	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN3	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN4	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20ROAD1	pyrrhotite, sphalerite, galena, chalcopyrite
20ROAD2	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE1	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE2	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE3	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE4	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE5	pyrrhotite, sphalerite, galena, chalcopyrite

Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
301	138.5	1075	1950	90500	39200	1.9	19.5	>10.0	1465	10000	1030
302	87.4	524	2150	47500	49400	2.29	18.8	>10.0	1835	3140	427
303	207	112	398	10150	33800	1.03	16.4	9.45	1120	228	52
304	114	1080	2900	91300	44900	2.05	23.2	10	1370	985	845
305	85.5	1035	2320	75000	53500	1.11	23.4	9.99	1140	890	824
306	7.52	284	1910	34500	125500	1.18	30.6	8.85	1910	1530	303
20EAST1	1.33	13.95	2170	15.5	13300	1.33	28	9.72	488	1530	3.06
20EAST2	2.32	47.8	961	2350	4520	2.99	22.7	8.75	1400	4180	85.1
20EAST3	0.87	23.3	1790	472	9250	0.12	45.2	10	693	9200	13.3
20SQ1	1.48	19	57.5	40.2	62	2.48	5.16	2.94	325	7740	20.5
20SQ2	2.87	9.06	37.7	45.5	73	1.83	6.19	3.23	373	10000	74.5
20SQ3	0.22	51.3	270	358	52800	4.94	5.91	3.67	3140	135.5	33.5
20SQ4	0.73	1895	422	63400	130500	11.85	14.85	10	10150	32	779
20SQ5	0.7	96.1	120.5	546	54500	5.45	4.56	2.79	2810	832	60
20SQ6	0.89	1270	366	72000	21900	2.19	9.93	6.12	1340	97.7	921
20SQ7	1.08	2590	807	110500	180000	2.45	19	10	4620	60.2	2330
20GRIZ1	10.55	16	1665	345	456	0.15	14.25	10	201	138	6.88
20GRIZ2	3.52	10.55	274	355	416	0.29	3.97	2.06	396	33.5	6.79
20GRIZ3	0.02	1.64	49.1	33.2	51	0.43	2.35	0.39	235	4.1	0.37
20GRIZ4	0.1	2.1	186.5	75.8	68	1.08	3.43	1.27	299	4.2	0.3
20GRIZ5	14.25	6.21	208	23.4	86	0.44	3.97	1.03	395	319	0.26
20GRIZ6	0.02	15.9	80.6	147.5	66	0.91	4.19	0.19	360	5.7	0.15
20GRIZ7	0.07	128	584	22800	13400	0.42	7.51	5.32	725	1.8	0.25
20GRIZ8	0.07	158	840	152500	72800	0.16	25.3	10	673	4.1	117
20GRIZ9	6.75	3.18	733	205	98	0.01	22.2	10	54	4.7	0.24
20GRIZ10	0.03	0.87	33.7	453	165	0.12	2.19	0.18	121	6.5	0.42
20GRIZ7 B WR	0.02	0.93	161	10	75	1.4	6.69	2.46	519	25.3	0.49
20GRIZ8 B WR	0.04	14.7	435	433	118	1.28	11.35	6.21	339	2.2	0.38
20GRIZ9 B WR	0.02	0.69	158.5	4.4	31	0.52	3.92	1.06	411	4.1	0.24
20GRIZ10 B WR	0.02	0.99	147.5	26.4	38	0.31	4.85	1.25	354	5.8	0.16
20GRIZ11	0.02	0.53	78.6	3.8	32	0.61	4.09	1.37	403	1.2	0.13
20GRIZ12	0.02	1.69	83.6	11.6	10	0.7	6.14	0.61	122	3.2	0.38
20GRIZ13	0.02	1.86	76.9	14.7	22	0.49	5.83	0.11	158	2.2	0.42
20AF1	4.17	430	460	1085	403	0.08	13.7	0.36	252	39.9	53.9
20AF2	3.47	421	462	889	278	0.19	12.6	0.5	263	34.5	61.3
20AF3	0.02	2.39	122	19.3	53	1.01	4.78	1.22	293	4.4	0.52
20AF4	0.02	1.65	86.3	13.3	39	0.72	6.17	1.5	262	7.9	0.54
20JEN1	1.13	42.4	295	6990	13300	1.63	6.84	3.96	832	162	29.4
20JEN2	0.85	2.21	74.1	128	491	1.06	3.65	1.17	937	112	0.82
20JEN3	0.02	1.75	83.7	36.4	195	1.62	4.8	2.4	273	32.3	2.35
20JEN4	1.46	3.02	99	177.5	3690	1.53	6.31	2.24	1160	1985	3.15

	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
20ROAD1	2.28	7.55	109	396	2700	1.27	7.4	2.56	1370	17	0.46
20ROAD2	0.03	1.68	126.5	57.2	1400	1.64	4.95	2.29	1140	73.5	1.35
20GHOPE1	0.04	1.22	104	25.9	94	1.66	3.89	0.52	562	17.5	0.59
20GHOPE2	0.58	3.4	171	28.4	52	0.71	4.6	0.98	343	31.6	0.66
20GHOPE3	0.02	2.72	208	139	201	3.32	7.67	4.45	271	3.2	0.48
20GHOPE4	0.21	3.04	372	37.5	2200	0.31	9.81	1.39	796	21.7	0.39
20GHOPE5	0.27	2.33	198.5	37.9	2610	1.93	8.31	0.74	1200	25.7	0.31

7.3 2020 SOIL SAMPLE GEOCHEMISTRY

A soil geochemical survey was conducted over extensions of the key mineral zones of the Tillicum property in 2020. A total of 245 samples were taken and results are illustrated in Fig 18-64, descriptions of soil samples are listed in Appendix D, and geochemical analysis certificates are listed in Appendix A, KL20147674 (Heino-East Ridge S), KL20184584 (Heino-East Ridge S, Grizzly, Silver Queen, Arnie Flats, note: QC for this certificate was included in the Appendix, however all rock and soil samples were subjected to similar QC and not included), KL20212435 (Jennie, Road, Golden Hope, Grizzly), KL20231816 (East Ridge N).

The 245 soil samples were identified by last 5 digits of UTM northing and easting (actual ground location where sample was taken), and designated with an ID number S1to S245 (Fig 18, 19, 27, 33, 39, 46, 53, & 59). The location of each sample ID number is listed as follows:

S-1 to S-40: south extension of the Heino-East Ridge mineral zone.
S-41 to S-63, S87 to S-106, and S-107 to S-136: Grizzly S & N mineral zones.
S-64 to S-77: Silver Queen mineral zone
S-78 to S-86: Arnie Flats mineral zone
S-137-198, and S-199 to S-208: Golden Hope S & N mineral zones
S-209 to S-220: Jennie mineral zone
S-221 to S-229: Road mineral zone
S-230 to S-245: East Ridge N mineral zone

A summary of 2020 soil sample descriptions & select geochemical analysis results listed below:

HEINO-EAST RIDGE S EXTENSION SOIL GRID:

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
448975	5536900	clay, silt, sand	25	brown-red	57.8	21.7	71	1.19	0.02	3.21	98.7	S1
449000	5536900	clay, silt, sand	25	brown-red	92.7	44.9	230	0.94	0.02	3.73	235	S2
449025	5536900	clay, silt, sand	25	brown-red	49.3	35.5	229	0.61	0.02	3.34	53.2	S3
449050	5536900	clay, silt, sand	25	brown-red	76.6	81.6	301	2.04	0.02	3.1	167.5	S4
449075	5536900	clay, silt, sand	25	brown-red	49.7	106.5	550	1.72	0.17	3.8	536	S5
449100	5536900	clay, silt, sand	25	brown-red	65.4	103.5	543	2.53	0.13	3.93	425	S6
449125	5536900	clay, silt, sand	25	brown-red	32.5	46.5	155	1.91	0.05	2.81	165	S7
449150	5536900	clay, silt, sand	25	brown-red	27.5	39.8	297	0.77	0.02	2.9	88.1	S8

448975	5536950	clay, silt, sand	25	brown-red	77.5	20	157	1.21	0.02	4.16	68.7	S9
449000	5536950	clay, silt, sand	25	brown-red	91.7	40	227	0.65	0.02	3.95	203	S10
449025	5536950	clay, silt, sand	25	brown-red	111.5	39.3	253	0.3	0.03	4.04	147	S11
449050	5536950	clay, silt, sand	25	brown-red	125	40.5	522	0.32	0.02	3.87	89.2	S12
449125	5536950	clay, silt, sand	25	brown-red	40.3	62.6	619	0.97	0.09	3.48	138.5	S13
449150	5536950	clay, silt, sand	25	brown-red	47.5	53.5	601	0.54	0.08	4.16	105.5	S14
449175	5536950	clay, silt, sand	25	brown-red	35.3	61.6	476	0.66	0.28	3.99	101.5	S15
449100	5537000	clay, silt, sand	25	brown-red	50.9	71.5	774	6.99	0.04	4.18	435	S16
449125	5537000	clay, silt, sand	25	brown-red	60.9	243	366	3.5	0.39	4.8	1040	S17
449150	5537000	clay, silt, sand	25	brown-red	53	202	391	3.43	0.12	4.34	765	S18
449175	5537000	clay, silt, sand	25	brown-red	37.6	175	644	5.3	0.1	3.83	269	S19
449200	5537000	clay, silt, sand	25	brown-red	36.9	233	774	1.53	0.08	3.97	167.5	S20
449225	5537000	clay, silt, sand	25	brown-red	42.6	31.3	688	0.47	0.16	4.72	185.5	S21
449100	5537050	clay, silt, sand	25	brown-red	43.5	75.4	532	1.17	0.05	3.5	672	S22
449125	5537050	clay, silt, sand	25	brown-red	135.5	196.5	660	2.33	0.15	7.8	547	S23
449150	5537050	clay, silt, sand	25	brown-red	55.6	67.9	770	1.16	0.14	4.65	439	S24
449175	5537050	clay, silt, sand	25	brown-red	42.1	36.6	970	0.73	0.17	4.58	256	S25
449200	5537050	clay, silt, sand	25	brown-red	53.5	88.1	909	1.39	0.11	5.03	497	S26
449100	5537100	clay, silt, sand	25	brown-red	179.5	188.5	3010	4.94	1.86	8.4	2110	S27
449125	5537100	clay, silt, sand	25	brown-red	75	73.9	1860	1.28	0.33	5.42	703	S28
449150	5537100	clay, silt, sand	25	brown-red	110.5	456	1540	5.14	0.37	13.45	6040	S29
449175	5537100	clay, silt, sand	25	brown-red	59.6	89.5	1240	0.79	0.09	4.06	503	S30
449200	5537100	clay, silt, sand	25	brown-red	137	72.6	1620	3.02	0.92	8.83	577	S31
449225	5537100	clay, silt, sand	25	brown-red	305	1185	1410	3.6	1.18	11.05	609	S32
449250	5537100	clay, silt, sand	25	brown-red	133	199.5	706	2.99	0.18	5.37	762	S33
449100	5537150	clay, silt, sand	25	brown-red	159	117.5	4390	4.12	0.49	10.45	3240	S34
449125	5537150	clay, silt, sand	25	brown-red	60.2	52.1	1300	1.07	0.33	4.75	430	S35
449150	5537150	clay, silt, sand	25	brown-red	114.5	172.5	904	3.18	0.7	13.1	2030	S36
449175	5537150	clay, silt, sand	25	brown-red	199.5	583	4080	2.07	0.39	7.37	643	S37
449200	5537150	clay, silt, sand	25	brown-red	120	98	2490	1.18	0.36	5.98	1240	S38
449225	5537150	clay, silt, sand	25	brown-red	30.3	112	202	0.95	0.07	5.12	1015	S39
449250	5537150	clay, silt, sand	25	brown-red	59.7	85.4	770	1.08	0.13	5.03	133.5	S40
Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #

JENNIE, ROAD & EAST RIDGE N SOIL GRIDS:

Easting	Northing	Texture	Depth	Colour	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppm	Fe %	As ppm	ID #
449025	5537400	clay, silt, sand	25	brown-red	209	488	926	1.13	0.11	5.89	735	S209
449050	5537400	clay, silt, sand	25	brown-red	157	90	469	1.83	0.1	5.98	757	S210
449075	5537400	clay, silt, sand	25	brown-red	150	104.5	993	1.5	0.17	5.66	703	S211
449100	5537400	clay, silt, sand	25	brown-red	481	554	2590	9.26	0.39	12.9	3910	S212
449125	5537400	clay, silt, sand	25	brown-red	167	11.6	300	0.48	0.02	5.32	144	S213
449150	5537400	clay, silt, sand	25	brown-red	67.3	138	903	1.94	0.34	5.93	830	S214
449025	5537450	clay, silt, sand	25	brown-red	179	72.5	292	0.91	0.02	6.67	241	S215
449050	5537450	clay, silt, sand	25	brown-red	165	362	1000	1.59	0.1	5.74	409	S216
449075	5537450	clay, silt, sand	25	brown-red	89.4	353	878	4.44	0.32	14.45	529	S217
449100	5537450	clay, silt, sand	25	brown-red	255	281	646	5.47	0.41	8.18	1720	S218
449125	5537450	clay, silt, sand	25	brown-red	222	65.2	1870	3.35	0.03	3.51	490	S219
449150	5537450	clay, silt, sand	25	brown-red	128	51.7	399	0.88	0.02	7.54	107.5	S220
448950	5537600	clay, silt, sand	25	brown-red	116	179	866	4.75	0.67	10.05	1285	S221
448975	5537600	clay, silt, sand	25	brown-red	51.2	64.1	89	1.49	0.06	24.2	71.3	S222
449000	5537600	clay, silt, sand	25	brown-red	325	64.3	2050	10.75	0.05	5.14	102.5	S223
449025	5537600	clay, silt, sand	25	brown-red	69.2	65.4	614	1.6	0.31	5.37	244	S224
449050	5537600	clay, silt, sand	25	brown-red	106.5	102	486	2.54	0.23	6.7	420	S225
449000	5537650	clay, silt, sand	25	brown-red	176	120	4770	1.47	0.16	8.94	385	S226
449025	5537650	clay, silt, sand	25	brown-red	433	44.6	991	2.67	0.06	9.86	365	S227
449050	5537650	clay, silt, sand	25	brown-red	202	1475	520	32.8	2.58	15.5	210	S228
449075	5537650	clay, silt, sand	25	brown-red	106.5	543	755	7.94	0.31	15.65	662	S229
449150	5537450	clay, silt, sand	25	brown-red	185	40	342	1.38	0.02	9.07	71	S230
449175	5537450	clay, silt, sand	25	brown-red	202	312	3460	1.1	0.09	6.93	1240	S231
449200	5537450	clay, silt, sand	25	brown-red	103.5	172.5	1380	3.12	1.9	6.75	7250	S232
449225	5537450	clay, silt, sand	25	brown-red	343	410	1270	4.95	1.04	8.18	563	S233
449250	5537450	clay, silt, sand	25	brown-red	101.5	235	455	3.89	0.32	14.35	240	S234
449275	5537450	clay, silt, sand	25	brown-red	80.4	162.5	227	1.94	0.08	5.39	217	S235
449300	5537450	clay, silt, sand	25	brown-red	125	652	617	7.56	0.74	11.45	1820	S236
449150	5537500	clay, silt, sand	25	brown-red	97.9	45.2	994	0.63	0.05	6.04	845	S237
449175	5537500	clay, silt, sand	25	brown-red	199	47	2190	0.93	0.09	5.01	797	S238
449200	5537500	clay, silt, sand	25	brown-red	214	147	642	5.05	0.16	3.8	446	S239
449225	5537500	clay, silt, sand	25	brown-red	49.9	97.8	249	4.14	0.11	3.84	487	S240
449250	5537500	clay, silt, sand	25	brown-red	22.8	82.5	176	1.15	0.17	2.29	75.5	S241
449275	5537500	clay, silt, sand	25	brown-red	18.4	36.1	147	0.63	0.06	3.37	16.9	S242
449300	5537500	clay, silt, sand	25	brown-red	31.7	49.7	211	1.79	0.09	3.57	21.1	S243
449325	5537500	clay, silt, sand	25	brown-red	98.9	347	224	2.74	0.31	3.89	36.6	S244
449350	5537500	clay, silt, sand	25	brown-red	20.8	62.9	121	0.76	0.15	3.72	52	S245
Easting	Northing	Texture	Depth	Colour	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppm	Fe %	As ppm	ID #

GRIZZLY SOIL GRIDS:

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
449550	5536300	clay, silt, sand	25	brown-red	100	62.1	136	0.57	0.15	3.15	36.2	S41
449575	5536300	clay, silt, sand	25	brown-red	157	333	539	1.5	0.42	3.23	335	S42
449600	5536300	clay, silt, sand	25	brown-red	136.5	78.8	146	4.01	0.04	8.52	7.3	S43
449625	5536300	clay, silt, sand	25	brown-red	250	84.5	88	5.69	0.05	10.85	19.5	S44
449650	5536300	clay, silt, sand	25	brown-red	42	13.3	48	0.49	<0.02	4.18	8.4	S45
449675	5536300	clay, silt, sand	25	brown-red	14.3	17.8	16	0.18	<0.02	2.03	4.8	S46
449575	5536350	clay, silt, sand	25	brown-red	64.3	27.8	74	0.61	0.12	3.95	31.8	S47
449600	5536350	clay, silt, sand	25	brown-red	167	28.1	51	1.58	8.76	4.49	15.8	S48
449625	5536350	clay, silt, sand	25	brown-red	172	21	53	1.31	0.09	5.11	34.2	S49
449650	5536350	clay, silt, sand	25	brown-red	108.5	7.9	68	0.19	<0.02	5.84	7.4	S50
449675	5536350	clay, silt, sand	25	brown-red	48.8	114.5	64	0.51	<0.02	3.57	10.2	S51
449700	5536350	clay, silt, sand	25	brown-red	45.4	18.8	55	0.47	<0.02	3.87	6.7	S52
449725	5536350	clay, silt, sand	25	brown-red	325	69.1	153	0.55	0.03	8.07	8.4	S53
449750	5536350	clay, silt, sand	25	brown-red	97.1	40.6	70	0.55	0.08	5.32	18.1	S54
449550	5536400	clay, silt, sand	25	brown-red	155	1590	269	8.9	0.1	9.51	37.3	S55
449575	5536400	clay, silt, sand	25	brown-red	142	51.7	238	0.32	0.02	5.64	72	S56
449600	5536400	clay, silt, sand	25	brown-red	24.7	30.2	36	0.38	<0.02	3	6.4	S57
449625	5536400	clay, silt, sand	25	brown-red	63.5	35.2	139	0.4	<0.02	3.82	17.1	S58
449650	5536400	clay, silt, sand	25	brown-red	51.8	132.5	185	0.61	0.12	4.9	13.5	S59
449675	5536400	clay, silt, sand	25	brown-red	80	49.9	187	0.51	<0.02	4.28	12	S60
449700	5536400	clay, silt, sand	25	brown-red	124.5	49.8	95	0.72	0.05	4.95	13.2	S61
449725	5536400	clay, silt, sand	25	brown-red	115.5	69.1	65	0.49	0.12	8.44	37.3	S62
449750	5536400	clay, silt, sand	25	brown-red	119	222	82	2.01	0.17	4.34	22.8	S63
449500	5536200	clay, silt, sand	25	brown-red	42.2	11.8	26	0.82	<0.02	1.57	7.3	S87
449525	5536200	clay, silt, sand	25	brown-red	25.6	18.6	42	0.96	0.05	4.8	12.7	S88
449550	5536200	clay, silt, sand	25	brown-red	36.2	13.2	20	1.49	0.04	2.49	3.8	S89
449575	5536200	clay, silt, sand	25	brown-red	25.5	11.2	23	0.53	<0.02	3.25	4.4	S90
449600	5536200	clay, silt, sand	25	brown-red	31.8	8.5	19	0.87	<0.02	2.47	3.4	S91
449625	5536200	clay, silt, sand	25	brown-red	185	7.6	222	0.67	<0.02	3.77	8.8	S92
449650	5536200	clay, silt, sand	25	brown-red	46.2	11	52	0.41	<0.02	3.52	6.6	S93
449675	5536200	clay, silt, sand	25	brown-red	23.5	8.8	24	0.44	<0.02	2.47	3.2	S94
449700	5536200	clay, silt, sand	25	brown-red	41	8.8	25	0.3	<0.02	3.62	7.6	S95
449725	5536200	clay, silt, sand	25	brown-red	56.7	2.5	33	0.45	<0.02	4.48	0.9	S96
449525	5536250	clay, silt, sand	25	brown-red	19.1	13.2	20	0.44	0.15	1.82	9.5	S97
449550	5536250	clay, silt, sand	25	brown-red	63.3	17.5	85	0.94	0.03	3.17	24.7	S98
449575	5536250	clay, silt, sand	25	brown-red	88	55.7	46	0.43	<0.02	4.39	15.2	S99
449600	5536250	clay, silt, sand	25	brown-red	121	51	56	0.39	0.06	3.97	26.3	S100
449625	5536250	clay, silt, sand	25	brown-red	177	5.8	82	0.31	<0.02	4.77	3.5	S101
449650	5536250	clay, silt, sand	25	brown-red	58.8	15.2	45	0.66	<0.02	3.71	7.8	S102

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
449675	5536250	clay, silt, sand	25	brown-red	87	15.1	53	0.47	<0.02	4.58	8.8	S103
449700	5536250	clay, silt, sand	25	brown-red	11.3	10.2	6	0.84	<0.02	1.23	1.6	S104
449725	5536250	clay, silt, sand	25	brown-red	29.8	8.6	21	0.22	<0.02	2.77	3.5	S105
449750	5536250	clay, silt, sand	25	brown-red	38	7.6	38	0.42	<0.02	4.17	4.3	S106
449750	5536800	clay, silt, sand	25	brown-red	41.3	14.6	117	0.26	<0.02	4.4	21.9	S107
449775	5536800	clay, silt, sand	25	brown-red	50.4	30.2	79	1.48	<0.02	5.35	12.3	S108
449800	5536800	clay, silt, sand	25	brown-red	35.5	21	42	0.82	<0.02	3.3	7.2	S109
449825	5536800	clay, silt, sand	25	brown-red	53.7	47.1	48	1.3	<0.02	4.45	16.2	S110
449850	5536800	clay, silt, sand	25	brown-red	100.5	186.5	84	0.86	0.21	6.6	55.1	S111
449875	5536800	clay, silt, sand	25	brown-red	100.5	177	254	0.91	0.04	4.43	27	S112
449900	5536800	clay, silt, sand	25	brown-red	134	554	191	6.44	0.04	6.49	45.5	S113
449925	5536800	clay, silt, sand	25	brown-red	34.1	568	112	0.98	0.04	3.77	18.7	S114
449950	5536800	clay, silt, sand	25	brown-red	59.9	744	193	1.82	0.17	4.31	47	S115
449750	5536850	clay, silt, sand	25	brown-red	100.5	309	131	1.6	1.51	4.94	25.3	S116
449775	5536850	clay, silt, sand	25	brown-red	62.1	190.5	127	0.49	<0.02	4.46	13	S117
449800	5536850	clay, silt, sand	25	brown-red	49.5	55.2	201	0.71	<0.02	4.82	98.4	S118
449825	5536850	clay, silt, sand	25	brown-red	69.2	18.4	74	1.25	0.02	7.14	43.3	S119
449850	5536850	clay, silt, sand	25	brown-red	20.8	12.4	15	0.78	<0.02	1.67	8.5	S120
449875	5536850	clay, silt, sand	25	brown-red	50.9	97.2	52	0.59	0.02	4.05	13.4	S121
449900	5536850	clay, silt, sand	25	brown-red	47.5	101	104	0.65	0.05	3.22	34.3	S122
449925	5536850	clay, silt, sand	25	brown-red	82.4	46.5	71	0.96	<0.02	4.91	24.5	S123
449950	5536850	clay, silt, sand	25	brown-red	83.1	271	142	1.44	0.02	8	9.6	S124
449975	5536850	clay, silt, sand	25	brown-red	31.5	130	106	0.6	<0.02	3.68	10.9	S125
450000	5536850	clay, silt, sand	25	brown-red	121.5	369	341	1.06	0.29	4.8	38.8	S126
449750	5536900	clay, silt, sand	25	brown-red	23.2	13.9	27	0.32	<0.02	2.57	159	S127
449775	5536900	clay, silt, sand	25	brown-red	58.6	38.8	211	0.55	<0.02	3.59	61.2	S128
449800	5536900	clay, silt, sand	25	brown-red	29.8	16.8	61	0.65	<0.02	3.77	40.5	S129
449825	5536900	clay, silt, sand	25	brown-red	60.4	105	111	0.24	<0.02	4.48	20.1	S130
449850	5536900	clay, silt, sand	25	brown-red	81.1	28.1	146	0.5	<0.02	4.88	36.3	S131
449875	5536900	clay, silt, sand	25	brown-red	97.9	43.3	192	0.52	<0.02	5.99	24.3	S132
449900	5536900	clay, silt, sand	25	brown-red	50.7	50	117	0.41	<0.02	4.14	23.3	S133
449925	5536900	clay, silt, sand	25	brown-red	24.2	37.5	73	0.36	<0.02	3.53	9.2	S134
449950	5536900	clay, silt, sand	25	brown-red	34.3	37.2	159	0.59	<0.02	4.07	31.7	S135

GOLDEN HOPE SOIL GRIDS:

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
448700	5536450	clay, silt, sand	25	brown-red	57.7	27.4	137	0.61	0.08	3.72	23.7	S137
448725	5536450	clay, silt, sand	25	brown-red	33.9	17.9	130	0.46	0.02	3.44	17.5	S138
448750	5536450	clay, silt, sand	25	brown-red	38.1	23.2	386	0.36	<0.02	3.9	34	S139
448775	5536450	clay, silt, sand	25	brown-red	56.1	35.8	300	0.5	<0.02	3.36	51.1	S140
448800	5536450	clay, silt, sand	25	brown-red	46.5	46.1	266	1.11	0.02	3.57	60.6	S141
448825	5536450	clay, silt, sand	25	brown-red	50.5	73.6	206	0.76	0.04	3.55	61.3	S142
448850	5536450	clay, silt, sand	25	brown-red	101	25.7	231	1.23	0.02	3.41	32.2	S143
448875	5536450	clay, silt, sand	25	brown-red	46.9	43.4	380	0.52	0.13	2.99	37.6	S144
448900	5536450	clay, silt, sand	25	brown-red	62.5	73.3	303	1.04	0.11	3.95	52.4	S145
448925	5536450	clay, silt, sand	25	brown-red	38	32.9	215	0.75	0.17	4.03	40.2	S146
448950	5536450	clay, silt, sand	25	brown-red	33	40.6	134	0.53	<0.02	3.45	20.2	S147
448975	5536450	clay, silt, sand	25	brown-red	33.9	41.6	113	0.99	<0.02	3.23	17.2	S148
449000	5536450	clay, silt, sand	25	brown-red	81	33.1	168	1.02	<0.02	4.57	21.5	S149
449025	5536450	clay, silt, sand	25	brown-red	70.9	89	278	1.2	0.07	3.45	37.9	S150
449050	5536450	clay, silt, sand	25	brown-red	53.7	116	198	1.09	0.07	3.53	26.3	S151
449075	5536450	clay, silt, sand	25	brown-red	65.7	120.5	178	1.47	0.11	3.92	29.3	S152
449100	5536450	clay, silt, sand	25	brown-red	62.5	27.9	113	0.9	<0.02	3.99	19.3	S153
448725	5536500	clay, silt, sand	25	brown-red	58.4	28.8	269	1.71	0.02	4.38	33.4	S154
448750	5536500	clay, silt, sand	25	brown-red	60.9	63.4	269	0.97	0.1	3.75	47.2	S155
448775	5536500	clay, silt, sand	25	brown-red	58.7	60.1	284	0.69	0.02	3.52	55.7	S156
448800	5536500	clay, silt, sand	25	brown-red	47.3	73.1	290	1.04	<0.02	3.54	39.2	S157
448825	5536500	clay, silt, sand	25	brown-red	44.4	77.3	332	0.57	0.02	2.99	50.3	S158
448850	5536500	clay, silt, sand	25	brown-red	44.5	103.5	593	0.6	0.02	3.22	50.2	S159
448875	5536500	clay, silt, sand	25	brown-red	62.6	55.3	351	1.24	0.05	3.01	89.8	S160
448900	5536500	clay, silt, sand	25	brown-red	49.6	35.7	373	0.56	<0.02	2.95	44.5	S161
448925	5536500	clay, silt, sand	25	brown-red	58.3	50.1	394	0.53	0.02	2.99	47.4	S162
448950	5536500	clay, silt, sand	25	brown-red	43.7	80.7	271	1.33	0.04	2.89	26.1	S163
448975	5536500	clay, silt, sand	25	brown-red	76.3	67.9	262	0.96	0.02	3.28	36.9	S164
449000	5536500	clay, silt, sand	25	brown-red	67	77.6	134	1.49	0.03	3.7	50.6	S165
449025	5536500	clay, silt, sand	25	brown-red	44.9	116	177	0.95	0.33	3.35	39.9	S166
449050	5536500	clay, silt, sand	25	brown-red	29.5	142	149	0.89	0.07	2.7	33.9	S167
449075	5536500	clay, silt, sand	25	brown-red	45.1	105	218	1.25	0.02	3.43	29.8	S168
449100	5536500	clay, silt, sand	25	brown-red	36.5	76.6	150	0.64	0.03	3	22.8	S169
449125	5536500	clay, silt, sand	25	brown-red	69.5	90.3	284	0.53	0.03	3.47	34.8	S170
449150	5536500	clay, silt, sand	25	brown-red	25.6	26.4	87	0.81	<0.02	2.99	12.7	S171
448900	5536550	clay, silt, sand	25	brown-red	42.9	26.2	305	0.59	0.07	3.28	122.5	S172
448925	5536550	clay, silt, sand	25	brown-red	52.7	39.7	247	1.21	0.02	3.36	92.8	S173
448950	5536550	clay, silt, sand	25	brown-red	52.2	26.8	169	1.9	<0.02	3.3	38.4	S174
448975	5536550	clay, silt, sand	25	brown-red	52.6	39.2	104	2.21	0.46	2.99	55.4	S175
449000	5536550	clay, silt, sand	25	brown-red	58.7	53.2	134	2.31	0.04	3.25	86.6	S176
449025	5536550	clay, silt, sand	25	brown-red	81.4	53.2	131	1.31	0.04	2.79	58.9	S177

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
449050	5536550	clay, silt, sand	25	brown-red	31.7	33.3	87	0.4	0.03	3.08	62.9	S178
449075	5536550	clay, silt, sand	25	brown-red	101	58.5	392	0.69	0.05	2.87	65.5	S179
449100	5536550	clay, silt, sand	25	brown-red	75.4	41.3	148	1.3	0.07	2.87	118	S180
449125	5536550	clay, silt, sand	25	brown-red	69.2	33.3	362	0.58	0.05	2.83	74.4	S181
449150	5536550	clay, silt, sand	25	brown-red	16.5	14.2	95	0.59	<0.02	2.67	8.7	S182
449175	5536550	clay, silt, sand	25	brown-red	15.2	13.1	69	0.25	<0.02	2.72	7.1	S183
449200	5536550	clay, silt, sand	25	brown-red	43.6	29.4	227	0.31	<0.02	4.49	12.3	S184
448900	5536600	clay, silt, sand	25	brown-red	39.4	19.3	267	0.88	0.02	2.79	119	S185
448925	5536600	clay, silt, sand	25	brown-red	38.4	17.6	214	0.65	<0.02	3.27	94.1	S186
448950	5536600	clay, silt, sand	25	brown-red	36.2	24.2	158	1.17	<0.02	3.18	86.6	S187
448975	5536600	clay, silt, sand	25	brown-red	28.7	22.3	151	0.91	<0.02	3.76	45.6	S188
449000	5536600	clay, silt, sand	25	brown-red	46.4	31.8	120	2.24	0.02	3.32	39.6	S189
449025	5536600	clay, silt, sand	25	brown-red	25.8	19.5	88	1.94	<0.02	1.87	25.6	S190
449050	5536600	clay, silt, sand	25	brown-red	161	215	190	4.01	0.44	3.17	90.6	S191
449075	5536600	clay, silt, sand	25	brown-red	104.5	85.2	162	3.36	0.05	3.54	54.5	S192
449100	5536600	clay, silt, sand	25	brown-red	149.5	60.2	185	0.78	0.08	3.14	113.5	S193
449125	5536600	clay, silt, sand	25	brown-red	61.5	54.6	157	1.94	0.2	2.65	68.6	S194
449150	5536600	clay, silt, sand	25	brown-red	21.4	12.9	86	1.32	<0.02	1.77	41.6	S195
449175	5536600	clay, silt, sand	25	brown-red	11.8	10	21	0.8	0.12	1.79	7.5	S196
449200	5536600	clay, silt, sand	25	brown-red	19	29.4	45	0.92	0.06	2.15	34.1	S197
449225	5536600	clay, silt, sand	25	brown-red	93.3	27	427	1.5	1.01	3.74	280	S198
449400	5536900	clay, silt, sand	25	brown-red	58.1	28.4	277	0.99	0.06	4.86	87.5	S199
449425	5536900	clay, silt, sand	25	brown-red	51	40.6	133	0.75	0.05	4.51	50.6	S200
449450	5536900	clay, silt, sand	25	brown-red	39.3	25.1	116	0.68	0.05	4.28	58.7	S201
449475	5536900	clay, silt, sand	25	brown-red	26.3	25.4	87	0.24	0.02	3.9	56.4	S202
449500	5536900	clay, silt, sand	25	brown-red	42.1	40.9	134	0.42	0.03	3.81	44.6	S203
449375	5536950	clay, silt, sand	25	brown-red	322	44	370	6.54	0.07	9.76	39.1	S204
449400	5536950	clay, silt, sand	25	brown-red	94.9	22	232	0.7	0.07	5.18	79.6	S205
449425	5536950	no sample oc		ns								
449450	5536950	clay, silt, sand	25	brown-red	59.8	46.8	964	0.54	0.05	4.73	113.5	S206
449475	5536950	clay, silt, sand	25	brown-red	70.8	30.9	695	0.44	0.03	4.18	92.1	S207
449500	5536950	clay, silt, sand	25	brown-red	72.2	32.7	673	0.64	0.05	4.53	121.5	S208

SILVER QUEEN SOIL GRID:

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
450400	5535400	clay, silt, sand	25	brown-red	65.3	22.1	146	2.41	0.02	3.84	78.3	S71
450400	5535425	clay, silt, sand	25	brown-red	48	26	147	0.97	0.02	3.11	76.1	S72
450400	5535450	clay, silt, sand	25	brown-red	22.5	35.9	142	5.75	0.02	3.1	319	S73
450400	5535475	clay, silt, sand	25	brown-red	31.6	58.9	169	7.71	0.02	2.38	111.5	S74
450400	5535500	clay, silt, sand	25	brown-red	25.8	76.6	227	7.95	0.04	2.62	264	S75
Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
450400	5535525	clay, silt, sand	25	brown-red	41.1	58.7	198	7.5	0.02	2.76	62.2	S76
450400	5535550	clay, silt, sand	25	brown-red	27.5	53.3	220	4.59	0.02	2.67	32.7	S77
450300	5535350	clay, silt, sand	25	brown-red	70.2	33.8	107	3.76	0.05	3.6	302	S64
450300	5535375	clay, silt, sand	25	brown-red	48.5	89.9	31	13	2.28	5.64	6720	S65
450300	5535400	clay, silt, sand	25	brown-red	106	18.1	182	0.76	0.02	4.4	48.6	S66
450300	5535425	clay, silt, sand	25	brown-red	112.5	16.5	182	2.24	0.02	4.25	58.5	S67
450300	5535450	clay, silt, sand	25	brown-red	69.8	64.7	158	13.55	0.04	6.11	297	S68
450300	5535475	clay, silt, sand	25	brown-red	81.7	10.4	445	2.64	0.04	2.66	49.7	S69
450300	5535500	clay, silt, sand	25	brown-red	52.4	24	239	2.8	0.02	2.98	37.9	S70

ARNIE FLATS SOIL GRID:

Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
447950	5535700	clay, silt, sand	25	brown-red	1.38	7.7	120	1.38	0.02	4.66	2.2	S78
447950	5535725	clay, silt, sand	25	brown-red	9.73	9.7	72	9.73	0.02	3.21	3.9	S79
447950	5535750	clay, silt, sand	25	brown-red	4.53	9.9	37	4.53	0.03	3.45	8	S80
447950	5535775	clay, silt, sand	25	brown-red	4.96	7.2	79	4.96	0.02	3.94	5.5	S81
448050	5535700	clay, silt, sand	25	brown-red	3.76	11.2	36	3.76	0.02	2.66	4	S82
448050	5535725	clay, silt, sand	25	brown-red	44.6	111	24	44.6	0.19	2.17	7.3	S83
448050	5535750	clay, silt, sand	25	brown-red	97	144.5	25	97	0.25	4.06	14	S84
448050	5535775	clay, silt, sand	25	brown-red	2.86	11.8	99	2.86	0.02	3.75	3.5	S85
448050	5535800	clay, silt, sand	25	brown-red	3.97	29.3	86	3.97	0.02	3.37	6.6	S86

7.4 2020 GROUND MAGNETOMETER SURVEY

Magnetometer grids (total 4.55 line-km) were carried out on the following mineral zones:

Date of Mag Survey	Zone Name	Figure number	Line kilometers
Aug 19, 2020	Heino, East Ridge	65, 66	1.7
Aug 20, 2020	Heino S, East Ridge S	65, 66	1.9
Aug 22, 2020	S Grizzly	67, 68	0.95

A list of high and low magnetometer reading thresholds are listed as follows (Fig 65-68, Appendix F):

Heino-East Ridge S & Grizzly S Grid Magnetometer Positive Anomalous Values (>56,500 nT)
Heino-East Ridge S & Grizzly S Grid Magnetometer Negative Anomalous Values (<54,000 nT)

The Heino-East Ridge S magnetometer grid outlined 4 localized, 'spot high' positive values:
1)L 5,537,150 N 449,245 E to 449,255 E
2)L 5,537,050 N 449,082 E to 449,092 E
3)L 5,537,000 N 449,110 E to 449,140 E
4)L 5,536,900 N 448,950 E to 448,970 E

The East Ridge S magnetometer anomalies 2)L 5,537,050 N 449,082 E to 449,092 E, & 3)L 5,537,000 N 449,110 E to 449,140 E are located on steep, bedrock exposed sections and correlate with known NNE trending, steeply W dipping shear zones. The magnetometer positive anomalies are indicators that massive pyrrhotite and/or magnetite may be present. Follow-up mapping and sampling exploration work is suggested. Magnetometer positive anomaly 4)L 5,536,900 N 448,950 E to 448,970 E is located on the southern slope of Tillicum Mountain that has a moderate (low-angle) slope with scarce bedrock and detailed mapping and sampling is suggested.

The Grizzly S magnetometer grids outlined 2 localized, 'spot high' positive values:
1)L 5,536,450 N 449,682 E to 449,692 E
2)L 5,536,350 N 449,560 E to 449,590 E

The Grizzly S magnetometer positive anomaly 2)L 5,536,350 N 449,560 E to 449,590 E is located adjacent to the water source for core drilling (in creekbed). It is postulated that this positive magnetometer anomaly represents massive pyrrhotite and/or magnetite. This was the highest positive anomaly in the 4.55 line-km surveyed and drilling an angle hole collared 25 m west of the anomaly edge is recommended.

The magnetometer positive anomalies are postulated to correlate with massive and/or semi massive pyrrhotite mineralization. The southern portion of the Heino-East Ridge has several spot high anomalies that roughly correlate with N-S trending East Ridge A, B & C Bands and Heino Band to the west. The Grizzly S magnetometer survey indicates there may be 3 bands of mineralization (similar to East Ridge A, B & C Bands). The Grizzly easternmost band appears to be the main mineralized trend, and the middle and westernmost Grizzly bands are more localized and include a small 50 m diameter circular lake between the Grizzly N & S Zones. The circular lake is located adjacent to the strong Pb in soil anomaly and widening/flexure/fault splayed alteration zone in the ridge to the NE. The main focus of development of Grizzly should focus on easternmost band (main zone) and secondary focus on other bands of mineralization (& circular lake breccia target) to the west.

7.5 PETROGRAPHIC DESCRIPTIONS

A petrographic description of high grade gold sample #303 (angular float taken from Heino 2,130 m adit) was performed by John Payne, Ph D, P Geol (Vancouver Petrographics Ltd, Langley, BC, see Appendix G, & for location see Fig 5. Location of the sample is at UTM Zone 11, 449,037 E, 5,537,219 N elevation 2,130 m. This sample (#303), contained the highest Au geochemical analysis (207 g/t Au, 112 g/t Ag, 1% Pb, 3.4% Zn).

7.6 METALLURGICAL TEST DESCRIPTIONS

In 2020, MGX Minerals Inc carried out metallurgical testing of a 180 kg sample named **'Heino Surface Comp'** from outcrop located near the Heino 2130 m adit entrance (Fig 5). Additional metallurgical samples include two samples, one named **'East Ridge Comp'** 170 kgs (source from 1988 DDH core samples, 75 samples in total, interval lengths 0.3-3.2 m, from 19 drill holes covering approximately 150 X 300 m area, see Fig 5B for location & Appendix E for descriptions), the other named **'East Ridge Comp 2'** was taken from outcrop at 1,970 m elevation at UTM co-ordinates 449,265 E 5,537,436 N, occurring within the north portion of East Ridge B band. The samples were submitted to ALS Metallurgical, Kamloops. The following table lists geochemical analysis (head grade) of 3 metallurgical samples:

Sample Type	Sample ID	% Pb	% Zn	% Fe	% S	Au g/t fire assay	Au g/t fire assay duplicate	Au g/t metallic screen	Ag g/t
Outcrop	Heino Surface Comp	.19	.36	7.5	3.9	20.7	23.4	17.3	17
DDH	East Ridge Comp	.13	.37	6.7	3.8	1.97	1.9	2.57	12
Outcrop	East Ridge Comp 2	.08	1.1	11.5	7.5	1.14	1.1	1.0	4

Conclusions of the metallurgical test by ALS include the following statements (Roulston, 2020):

Gold was highly variable within the feed for the testing. Future testing should consider a bulk gravity concentration on a large mass of gravity feed sufficient enough to test variables using a more consistent precious metal content in the flotation feed.

- Sulphur was readily rejectable in the cleaner circuit without a corresponding loss in precious metals. This suggests the gold and silver in the flotation circuit is either unassociated with other minerals or perhaps associated with the other sulphide minerals such as galena, sphalerite, arsenopyrite, or copper sulphides.
- Although gold recovery was notable at a combined 92 percent, the gold content of the bulk 1st cleaner tailing and bulk rougher tailing in locked cycle testing measured about 7 and 2 g/tonne, respectively and would be considered high for a tailing stream, in our experience.

8.0 DISCUSSION OF RESULTS

Gold geochemistry in rock chip samples: Gold is highest in Heino rock samples (ranging 8-207 g/t Au), with moderate to high values in Grizzly rock samples (4 samples ranging 3.5-14.3 g/t Au). Arnie Flats, East Ridge, Silver Queen and Road Zones rock samples contain moderate gold values (9 samples ranging 1-2.9 g/t Au). It is notable that Grizzly and Arnie Flats elevated Au values in rock samples are not associated with strong (polymetallic) sulphides and massive pyrrhotite, sphalerite, minor arsenopyrite, but rather with moderate galena with trace sulphosalt minerals. Both Grizzly and Arnie Flats have lenses and pods of massive pyrrhotite in close proximity to parallel Au-Ag bearing (galena-sulphosalt) shear zones. East Ridge and to a lesser extent Grizzly are characterized by parallel to sub-parallel bands of massive to semi-massive pyrrhotite in close proximity to parallel Au-Ag bearing shear zones striking north and dipping west. The East Ridge, Heino and Silver Queen mineral zones contain relatively high sphalerite content (>1% Zn). The high silver values in Silver Queen rock samples (3 samples ranging 1,270-2,590 g/t Ag, 779-2,330 ppm Sb) are likely to be associated with argentiferous galena-sphalerite and sulphosalt minerals such as tetrahedrite and pyrargyrite.

Silver geochemistry in rock chip samples: Silver is highest in Silver Queen and Heino rock samples (6 samples ranging 1075-2590 g/t Ag), with moderate to high values in Arnie Flats rock samples (2 samples ranging 421-430 g/t Ag). East Ridge, Grizzly, Jennie Zones rock samples contain moderate silver values (11 samples ranging 10.5-158 g/t Ag).

The Heino and East Ridge Zones exhibit a strong polymetallic (Cu-Pb-Zn) mineralogy that correlates with >5% pyrrhotite (elevated Fe% & S%), and minor arsenopyrite, and trace tetrahedrite/tennantite (elevated ppm As & Sb).

Higher grades of gold and silver on the Grizzly rock samples don't correlate with polymetallic base metals, and the best precious metal values are in shear zones adjacent to lenses of massive pyrrhotite with base metals. The Grizzly mineral zone has widespread galena with minor sphalerite in the hangingwall (west of mineral zone) and some rare but significant tungsten values.

The Silver Queen exhibits similar polymetallic mineralogy to Heino & East Ridge, however the high Ca% and ppm Mn suggest the Silver Queen has more of the classic skarn alteration (e.g. diopside-tremolite-garnet-actinolite), and is characterized by quartz-feldspar porphyry (granitic) dykes (whereas the Heino & East Ridge have a late-stage lamprophyre dyke swarm).

The Arnie Flats mineralogy is characterized by trace argentite-tetrahedrite and moderate galena with low chalcopyrite-sphalerite content that contains elevated gold-silver. A large cliff-exposed well mineralized sill located approximately 200 m ENE of Arnie Flats know mineral zone requires mountaineering equipped sampling crew (on cliff face) to test this mineral zone that was observed from a distance. The heavily oxidized sill of interest appears to be thicker (> 15 m true width) or swollen in the center, and this bulge may be an anticline structure that traces the Arnie Flats mineral zone. There is a sill underneath the upper sill and the Arnie Flats sills may correlate with the two main shallow dipping hybrid diorite sills that host the lower East Ridge ore zones.

Hybrid diorite sills are shallow dipping and the related mineralized shear structures are steeper dipping. This geological setting is similar to the East Ridge and Heino Zones, that both appear to have mineral zones that are steep dipping above approximately 2,000 m elevation, and shallow dipping related to hybrid diorite sills that occur below 2,000 m elevation. The hybrid diorite sill and dyke complex is considered to be Jurassic age and has been altered and metamorphosed by Cretaceous emplacement of the Whatshan granodioritic batholith, and cut by Eocene late-stage lamprophyre dykes (that affect, and displace by several meters), the East Ridge mineral zones as to a lesser degree, the Heino zone. The dyke/sill complex in close proximity to Tillicum Mountain may be the edge of a deep-seated Jurassic porphyry system.

Soil analysis results from 2020 sampling suggest the main areas to follow up elevated gold and silver (precious metals) values are listed in order of importance:

1)**Heino-East Ridge-Jennie-Road (Fig 19-26, Fig 33-38)** (5,537,000 N to 5,537,150 N & 449,100 E to 449,250 E covering East Ridge S, also 5,537,450 N to 5,537,500 N & 449,200 E to 449,300 E covering East Ridge N, 5,537,400 N to 5,537,450 N & 449,075 E to 449,150 E covering Jennie, 5,537,600 N to 5,537,650 N & 449,000 E to 449,075 E covering Road Zone. This area is generally where all the previous mine development work on Heino-East Ridge was carried out between 2,050 to 2,170 m elevation, as well as the north extensions of the Heino-East Ridge (e.g. Road, Jennie) between 1,900 to 2,050 m elevation. Generally, there are 4 bands of N-S trending, steep to moderate W dipping Au-Ag bearing shear zones with banded siliceous skarn alteration (from W to E: 1-'Heino', 2-'East Ridge C', 2-'East Ridge B', 2-'East Ridge A'). The Heino trends NNW, and Jennie-Road trends WNW. The soil anomaly trends correlate with the geological mapping. The geological mapping of the Jennie, East Ridge N & Road Zones are somewhat more difficult to trace due to the shallow dip of the hybrid diorite sills and complex ENE trending late-stage faulting. The large volume of galena-sphalerite present in the area of Heino-East Ridge-Jennie-Road showings suggest there is porphyry (or sedex) deposit type(s) in the area of Tillicum Mountain. The strong arsenic in soil anomaly in the area of Heino-East Ridge-Jennie-Road showings suggest there is considerable thermal-contact metasomatism from the close proximity of the Cretaceous Whatshan batholith (which is not present on more distal zones such as Grizzly, Silver Queen, Arnie Flats). The arsenopyrite present in the area of Heino-East Ridge-Jennie-Road showings are considered secondary (Cretaceous age) whereas the gold-silver bearing mineralization is interpreted as Jurassic age and related to galena (to a lesser degree sphalerite). The Heino-East Ridge Zones are proximal to Jurassic volcanic center/dyke-sill complex, and are considered 'banded-siliceous skarn' deposit type.

2) **Silver Queen (Fig 59-64)** 5,535,350 N to 5,535,550 N & 450,300 E to 450,400 E covering south-central portion of Silver Queen. The strong silver in soil values over a width exceeding 100 meters suggests there is a large silver resource in this zone that has an apparent strike length of 900 meters. The high Ca% and Mn ppm present in Silver Queen soil samples are more typical skarn deposit porphyry intrusions in contact with marble, whereas the Heino-East Ridge are marble-poor, meta-basalt-hosted. The Silver Queen marble bands form large-scale traps for hydrothermal fluids and wide zones of skarn alteration. The Silver Queen soils are unusually

low in Pb-Zn, however the As-Sb values are high suggesting that silver is associated with sulphosalts such as tetrahedrite-pyrargyrite as opposed to argentiferous galena such as the galena in the Silverton-New Denver area (with high Zn/Pb ratio, as well as Sn-Cd bearing minerals) to the east. The Silver Queen (located 2 km SE of Tillicum Mountain) is characterized by high Ca% and Mn ppm suggesting it is a CRD (carbonate replacement deposit), whereby the Silver Queen hydrothermal mineralization is more distal than the proximal Heino-East Ridge Heino-East Ridge Zones (proximal to Jurassic volcanic center/dyke-sill complex) located north of Tillicum Mountain are considered banded skarn deposit type.

3) **Grizzly N** (**Fig 39-45**) 5,536,800 N to 5,536,850 N & 449,900 E to 450,000 E covering Grizzly N (strong lead in soil anomaly 5,536,800 N from 449,900 E to 449,075 E). There is a wide zone of clay/silica altered feldspar porphyry contact with meta-sediments adjacent to the soil anomaly. Geological mapping suggests that the widening of the alteration is accompanied by several fault splays and flexure of the strike of the faults ranging from NNE to NE (Addie, 1997). It is possible this strong lead in soil anomaly 5,536,800 N from 449,900 E to 449,075 E is underlain by a fold structure due to a localized dip-slope on the east side of the ridge (as it appears that all foliation dips west in the area on both sides of the ridge north and south of the Grizzly N Zone). Also, there is a small 50 m diameter circular lake about 100 m ESE of the strong lead in soil anomaly. It is unclear whether there may be breccia deposit type (diapir structure) associated with the circular lake.

4) **Grizzly S (Fig 46-52)** 5,536,300 N to 5,537,400 N & 449,550 E to 449,625 E covering Grizzly S. The Au-Ag in soil anomalies correlate with massive pyrrhotite lenses & localized strong positive magnetometer anomaly. Also at 5,536,350 N to 5,536,400 N & 449,100 E to 449,250 E covering Grizzly S Au-Ag in soil anomaly (banded skarn, siliceous meta-volcanic/sediment adjacent to hybrid diorite sill/dyke). There is a complex series of hybrid diorite sill/dyke/stock intrusive bedrock with at least distinct 3 bands of mineralization in the Grizzly southern area, and the soil sampling reflects these 3 bands. The 3 mineralized bands generally trend NNE and dip moderate to steep to the west, and compare favourably to the same geological setting as the East Ridge Zone, however the Grizzly S area is not cut by Eocene age, vertically dipping lamprophyre dyke swarms that occur on the East Ridge.

5) **Arnie Flats (Fig 53-58)** Au-Ag in soil anomalies occur at the west limit of known surface mineralization and correlates with elevated Au-Ag in rock samples (20AF-1 4.17 g/t Au, 430 g/t Ag, and 20AF-2 3.47 g/t Au, 421 g/t Ag). The soil survey suggests that silver-bearing mineralization may be widespread, whereas gold bearing zones are confined to narrower, banded siliceous skarn hosted shear zones.

6) **Golden Hope (Fig 27-32)** 5,536,550 N to 5,536,600 N, and 448,975 E to 449,075 E is the area with elevated Au-Ag in soil values, and also correlates with elevated Cu. One soil sample from the northeast extension of Golden Hope contains anomalous Cu-Ag, but Au values are low.

The Heino-East Ridge S magnetometer grid outlined 4 localized, 'spot high' positive values:
1)L 5,537,150 N 449,245 E to 449,255 E
2)L 5,537,050 N 449,082 E to 449,092 E
3)L 5,537,000 N 449,110 E to 449,140 E
4)L 5,536,900 N 448,950 E to 448,970 E

The East Ridge S magnetometer anomalies 2)L 5,537,050 N 449,082 E to 449,092 E, & 3)L 5,537,000 N 449,110 E to 449,140 E are located on steep, bedrock exposed sections and correlate with known NNE trending, steeply W dipping shear zones. The magnetometer positive anomalies are indicators that massive pyrrhotite and/or magnetite may be present. Follow-up mapping and sampling exploration work is suggested. Magnetometer positive anomaly 4)L 5,536,900 N 448,950 E to 448,970 E is located on the southern slope of Tillicum Mountain that has a moderate (low-angle) slope with scarce bedrock and detailed mapping and sampling is suggested.

The Grizzly S magnetometer grids outlined 2 localized, 'spot high' positive values:
1)L 5,536,450 N 449,682 E to 449,692 E
2)L 5,536,350 N 449,560 E to 449,590 E

The Grizzly S magnetometer positive anomaly 2)L 5,536,350 N 449,560 E to 449,590 E is located adjacent to the water source for core drilling (in creekbed). It is postulated that this positive magnetometer anomaly represents massive pyrrhotite and/or magnetite. This was the highest positive anomaly in the 4.55 line-km surveyed and drilling an angle hole collared 25 m west of the anomaly edge is recommended. The magnetometer positive anomalies are postulated to correlate with massive and/or semi massive pyrrhotite mineralization. The southern portion of the Heino-East Ridge has several spot high anomalies that roughly correlate with N-S trending East Ridge A, B & C Bands and Heino Band to the west. The Grizzly S magnetometer survey indicates there may be 3 bands of mineralization (similar to East Ridge A, B & C Bands). The Grizzly easternmost band appears to be the main mineralized trend, and the middle and westernmost Grizzly bands are more localized and include a small 50 m diameter circular lake between the Grizzly N & S Zones. The circular lake is located adjacent to the strong Pb in soil anomaly and widening/flexure/fault splayed alteration zone in the ridge to the NE. The main focus of development of Grizzly should focus on easternmost band (main zone) and secondary focus on other bands of mineralization (& circular lake breccia target) to the west.

A petrographic description of high grade gold sample #303 (angular float taken from Heino 2,130 m adit) was performed by John Payne, Ph D, P Geol (Vancouver Petrographics Ltd, Langley, BC, see Appendix G, & for location see Fig 5. Location of the sample is at UTM Zone 11, 449,037 E, 5,537,219 N elevation 2,130 m. This sample (#303), contained the highest Au geochemical analysis (207 g/t Au, 112 g/t Ag, 1% Pb, 3.4% Zn).

It is noteworthy that native Au is abundant as irregular concentrations up to 1.5 mm grains hosted in quartz and 'mineral A'. The distribution of native Au as irregular grains and not distributed evenly would make this sample difficult using standard geochemical analysis. Based on petrographic description of sample #303, it is suggested that future Au ore assays should be either metallic screen or Actlab Neutron Activation Au (and multi-element ICP) geochemical analysis (the latter choice has lower cost/sample).

The K-feldspar alteration identified in sample #303 (adjacent to coarse-grained quartz), is a secondary alteration that is considered an important pathfinder for gold bearing mineralization. The high percentage of feldspar in the sulphide-rich skarn/replacement (metasomatic) portions of meta-basalt may be sourced by nearby monzonitic-diorite intrusive rock. Tremolite & chlorite occur in meta-basalt host rock (primary) and in skarn/replacement (secondary). Diopside, garnet and quartz are important indicators for secondary skarn/replacement.

Metallurgical testing by ALS Metallurgy of a 180 kg sample named **'Heino Surface Comp'** was carried out from outcrop located near the Heino 2130 m adit entrance (Fig 5). Additional metallurgical samples include two samples, one named **'East Ridge Comp'** 170 kgs (source from 1988 DDH core samples, 75 samples in total, interval lengths 0.3-3.2 m, from 19 drill holes covering approximately 150 X 300 m area, see Fig 5B for location & Appendix E for descriptions), the other named **'East Ridge Comp 2'** was taken from outcrop at 1,970 m elevation at UTM co-ordinates 449,265 E 5,537,436 N, occurring within the north portion of East Ridge B band. The samples were submitted to ALS Metallurgical, Kamloops. The following table lists geochemical analysis (head grade) of 3 metallurgical samples:

Sample Type	Sample ID	% Pb	% Zn	% Fe	% S	Au g/t fire assay	Au g/t fire assay duplicate	Au g/t metallic screen	Ag g/t
Outcrop	Heino Surface Comp	.19	.36	7.5	3.9	20.7	23.4	17.3	17
DDH	East Ridge Comp	.13	.37	6.7	3.8	1.97	1.9	2.57	12
Outcrop	East Ridge Comp 2	.08	1.1	11.5	7.5	1.14	1.1	1.0	4

Metallurgical testwork of the Heino Zone identified coarse grained gold, and head grades ranging from 17.3 to 23.4 g/t Au, and was used for chemical and mineralogy analysis, bond ball work index testing, gravity & froth flotation, concentrating, rougher-cleaner, & locked cycle flotation.

In the locked cycle, approximately 63% o the gold was recovered in gravity concentration. A further 29% of feed gold was recovered in the froth flotation stage. Approximately 17% of silver was recovered by gravity concentration, with a further 60% reporting to the froth flotation (Appendix J).

Conclusions of the metallurgical test by ALS include the following statements (Roulston, 2020):

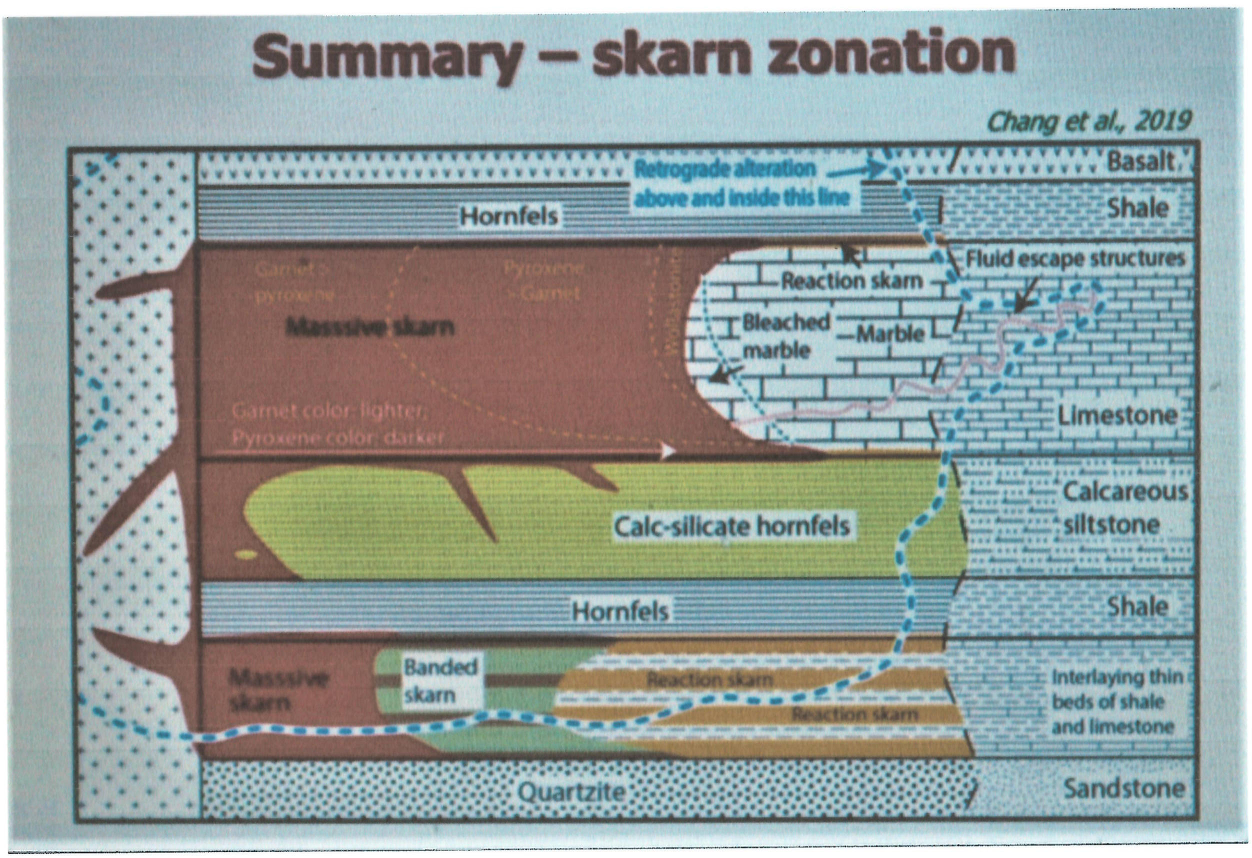
Gold was highly variable within the feed for the testing. Future testing should consider a bulk gravity concentration on a large mass of gravity feed sufficient enough to test variables using a more consistent precious metal content in the flotation feed.

- Sulphur was readily rejectable in the cleaner circuit without a corresponding loss in precious metals. This suggests the gold and silver in the flotation circuit is either unassociated with other minerals or perhaps associated with the other sulphide minerals such as galena, sphalerite, arsenopyrite, or copper sulphides.
- Although gold recovery was notable at a combined 92 percent, the gold content of the bulk 1st cleaner tailing and bulk rougher tailing in locked cycle testing measured about 7 and 2 g/tonne, respectively and would be considered high for a tailing stream, in our experience.

The writer recommends using neutron activation for gold analysis based on the method advantages, listed as follows: Samples analyzed by Instrumental Neutron Activation Analysis (INAA) are encapsulated and irradiated in a nuclear reactor. After a suitable decay, samples are measured for the emitted gamma ray fingerprint. The INAA technique allows for multiple elements to be determined simultaneously and a small sample size can be used. A major advantage of INAA analysis is the fact that the sample does not have to be put into solution, particularly beneficial for some geological matrices where complete dissolution is difficult to effect. This method is quite sensitive, accurate and precise, and is used to analyze for minor and select trace elements in low concentrations. INAA is very good for Au, Co, As, Sb, W, Ta, U, Th, Cs, In, Re, Cl and lower levels of most LREE.

9.0 Conclusions & Recommendations

In general, the large portion of skarn mineralization present on Tillicum Mountain is banded skarn at Heino-East Ridge, Jennie, Road, Grizzly, Arnie Flats, Golden Hope Zones with reaction skarn (carbonate replacement) at Silver Queen. There is a strong possibility that massive skarn and/or porphyry deposit type mineralization may be present in closer proximity to the causative intrusions (adjacent to dyke/sill swarms and Tillicum Mountain). This summary of skarn zonation (by Chang 2019, SEG lecture series) suggests that basalt is impervious to skarn fluids, however the Tillicum deposits are mainly basalt hosted shear zones and have a high degree of skarn minerals associated with silicification.



In reviewing the compiled database and historical reports pertaining to the Heino Gold Project, recommendations include relog and resample historical drill core, channel sample exposed mineralization within the existing underground and surface development, twin drill a small sub-set of historical drill holes for data verification purposes, obtain a high-resolution topography for the site via LiDAR (or equivalent) survey technique, re-survey existing underground workings using laser methods.

REFERENCES

Addie, G.G., 1997; Geology report on the Tillicum Mountain gold property, Slocan Mining Division, British Columbia; unpublished report for AMT Resources Ltd.; dated May 2, 1997; B.C. Mineral Resources Assessment Report 25004; 246 pp

Carter, N.C., 2001; Geological and geochemical report on the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly mineral claims, Tillicum gold property, Slocan Mining Division, B.C.; unpublished report for 1330275 Ontario Limited; dated November 2, 2001; B.C. Mineral Resources Assessment Report 26681; 26pp.

Carter, N.C. and Hinzer, J.B., 2002; Assessment report, geological and geochemical program and digitization of geotechnical database; Arrow Lakes area, Slocan Mining Division, B.C.; unpublished report for 1330275 Ontario Limited; dated April 22, 2002; B.C. Mineral Resources Assessment Report 26847; 83pp.

Chang, et al, 2019, SEG lecture series, Skarn Mineral Deposits (youtube)

Devlin, D.B. and Roberts, W.J. (1989); Summary Report, 1989 Exploration Program on the Tillicum Mountain Property, Burton, B.C., unpublished report for Esperanza Explorations Ltd.

Dykes, S.M., 2003; Assessment work report, Tillicum Mountain gold property, Slocan Mining District; unpublished report for 1330275 Ontario Limited; dated April 15, 2003; B.C. Mineral Resources Assessment Report 27144; 45 pp.

Glanville, R., 1994; A valuation of the Tillicum Mountain project for Columbia Gold Mines Ltd. prepared by Ross Glanville & Associates Ltd., Vancouver, B.C.

Holland, S.S., 1976; Landforms of British Columbia; British Columbia Department of Mines and Petroleum Resources; Bulletin 48; 138pp.

Kwong, Y.T.J., 1985; The Tillicum Mountain gold property; a petrologic update; British Columbia Geological Survey; Geological Fieldwork 1984; Paper 1985-1; pp. 23-34.

Kwong, Y.T.J. and Addie, G.G., 1982; Tillicum Mountain gold prospect; British Columbia Geological Survey; Geological Fieldwork 1981; Paper 1982-1, pp. 38-45.

Loughlin, W.P., 1991; Principal component analysis for alteration mapping; Proceedings of the Eighth Thematic Conference on Geologic Remote Sensing; April 29-May 2, 1991; Volume I, pp. 293+-306.

Massey, N.W.D, MacIntyre, D.G., Desjardins, P.J. and Cooney, R.T., 2005; Digital geology map of British Columbia; B.C. Ministry of Energy and Mines, Geological Survey Branch, Open File 2005-2.

Ray, G.E., McClintock, J. and Roberts, W., 1985; Tillicum Mountain gold-silver project; British Columbia Geological Survey; Geological Fieldwork 1984; Paper 1985-1; pp. 35-48.

Walker, R., 2008; Assessment report for the Tillicum property, 2008 soils, Slocan Mining Division; unpublished report for AMT Industries Canada Inc.; dated December 2008; B.C. Mineral Resources Assessment Report 30488; 55 pp.

Walker, R. 2009; Assessment report for the Tillicum property, 2009 VLF/road survey, Slocan Mining Division; unpublished report for AMT Industries Canada Inc.; dated November 2009; B.C. Mineral Resources Assessment Report 31182; 72 pp.

CERTIFICATE AND DATE

I, Andris Kikauka, of 4199 Highway, Powell River, BC am a self-employed professional geoscientist. I hereby certify that:

1. I am a graduate of Brock University, St. Catharines, Ont., with an Honours Bachelor of Science Degree in Geological Sciences, 1980.
2. I am a Fellow in good standing with the Geological Association of Canada.
3. I am registered in the Province of British Columbia as a Professional Geoscientist.
4. I have practiced my profession for forty years in precious and base metal exploration in the Cordillera of Western Canada, U.S.A., Mexico, Central America, and South America, as well as for three years in uranium exploration in the Canadian Shield.
5. The information, opinions, and recommendations in this report are based on fieldwork carried out in my presence on the subject property during which time a technical evaluation consisting of rock and soil sampling, and magnetometer geophysics carried out June-October, 2020.
6. I have a direct interest in the Tillicum Property and MGX Minerals Inc. The recommendations in this report are for the purpose of describing future exploration work, and cannot be used for the purpose of public financing.
7. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. This technical work report supports requirements of BCEMPR for Exploration and Development Work/Expiry Date Change.

Andris Kikauka, P. Geo.,

A. Kikauka

PROFESSIONAL
PROVINCE OF
A. A. KIKAUKA
BRITISH COLUMBIA
GEOSCIENTIST

February 2, 2021

ITEMIZED COST STATEMENT- TILLICUM (HEINO) GOLD PROJECT
MTO MINERAL CLAIM LIST:

1071800
1072049
1072050
1072051
1072052
1073170
1075801
1075802
1075803
1075807
1075913
1075917
1075918
1075920
1077308

MINERAL TENURE NUMBERS WHERE WORK WAS DONE: 1071800, 1072051
GEOPHYSICAL & GEOCHEMICAL FIELDWORK DONE MAY 30-JUNE 8, 2020
WORK PERFORMED ON MINERAL TENURE 1071800, 1072051
SLOCAN MINING DIVISION, NTS 82F 13E (TRIM 082F 092)
FIELD CREW:

A. Kikauka (Geologist) June 19-26, 2020, July 5-20, 2020, Aug 17-24, 2020, Sept 15-20, 2020, Oct 3-9, 2020 45 days (surveying, sampling, mapping) $ 28,350.00

J. Cliff (Geotechnician) Aug 18-22, 2020, Sept 17-20, 2020, Oct 6-9, 2020
13 days (surveying, sampling) $ 4,095.00

FIELD COSTS:		
Mob/demob/preparation	**2,202.50**	
Meals and accommodations	**2,195.90**	
Truck mileage & fuel (6,440 km @ $0.55/km)	**3,542.00**	
Magnetometer rental (14 days)	**735.00**	
Equipment and Supplies (bags, flags, tags, field gear)	**383.95**	
ICP AES (ALS ME-MS41, & prep 31) geochemical analysis geochemistry (48 rock samples)	**1,419.00**	
ICP AES (ALS ME-MS41 & prep 41) geochemical analysis geochemistry (245 soil samples)	**7,694.44**	
Petrographic Report (Van Petro Inc)	**585.70**	
Metallurigical testing Au recovery (ALS Metallurgical)	**36,575.00**	
Report	**2,250.00**	
Total=	**$ 90,028.49**	

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

CERTIFICATE KL20147674

Project: Tillicum

This report is for 25 Soil samples submitted to our lab in Kamloops, BC, Canada on 13-JUL-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS41	Ultra Trace Aqua Regia ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20147674

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L37000N 49100E		0.23	6.99	3.33	435	0.04	<10	70	0.57	1.03	0.08	2.21	25.3	7.2	25	3.61
L37000N 49125E		0.35	3.50	2.02	1040	0.39	<10	50	0.34	3.14	0.12	3.27	23.4	3.8	15	4.20
L37000N 49150E		0.27	3.43	2.06	765	0.12	<10	60	0.37	2.51	0.09	1.94	16.95	4.4	11	3.07
L37000N 49175E		0.21	5.30	2.44	269	0.10	<10	60	0.39	1.39	0.13	1.53	14.70	6.9	12	5.08
L37000N 49200E		0.19	1.53	2.65	167.5	0.08	<10	70	0.49	1.23	0.23	1.87	18.50	10.5	14	5.34
L37000N 49225E		0.25	0.47	2.86	185.5	0.16	<10	320	0.71	0.36	0.39	2.04	59.3	19.9	50	5.13
L37050N 49100E		0.20	1.17	2.00	672	0.05	<10	80	0.47	1.09	0.09	4.46	17.10	10.1	18	4.51
L37050N 49125E		0.33	2.33	1.94	547	0.15	<10	20	0.23	1.15	0.10	3.44	9.02	3.8	49	3.20
L37050N 49150E		0.26	1.16	3.03	439	0.14	<10	40	0.58	1.08	0.23	4.87	18.85	10.0	26	4.14
L37050N 49175E		0.25	0.73	3.05	256	0.17	<10	80	0.58	0.73	0.13	1.89	23.4	9.8	22	5.12
L37050N 49200E		0.20	1.39	2.98	497	0.11	<10	90	0.64	1.18	0.15	3.92	22.5	13.7	31	5.21
L37100N 49100E		0.31	4.94	2.29	2110	1.86	<10	30	1.77	1.78	0.64	73.2	38.8	34.5	8	10.75
L37100N 49125E		0.42	1.28	2.35	703	0.33	<10	40	1.27	1.22	0.50	30.4	33.2	24.6	8	9.53
L37100N 49150E		0.29	5.14	4.36	6040	0.37	<10	20	0.82	7.94	2.24	27.3	12.20	25.6	46	8.21
L37100N 49175E		0.31	0.79	3.11	503	0.09	<10	40	0.63	0.83	0.23	3.55	22.1	18.0	58	4.22
L37100N 49200E		0.23	3.02	3.90	577	0.92	<10	160	0.47	2.19	0.76	10.25	27.6	18.2	43	2.72
L37100N 49225E		0.37	3.60	4.83	609	1.18	<10	620	0.90	3.44	0.79	32.0	28.8	33.2	39	6.68
L37100N 49250E		0.28	2.99	3.08	762	0.18	<10	90	0.77	2.27	0.32	8.26	22.8	14.5	31	5.11
L37150N 49100E		0.39	4.12	1.67	3240	0.49	<10	20	1.32	1.89	0.47	112.0	33.2	34.2	6	8.64
L37150N 49125E		0.45	1.07	2.02	430	0.33	<10	40	0.86	0.82	0.35	13.90	26.4	19.4	8	7.07
L37150N 49150E		0.38	3.18	1.99	2030	0.70	<10	30	0.40	1.75	0.25	8.55	28.4	23.5	30	3.99
L37150N 49175E		0.36	2.07	2.87	643	0.39	<10	60	0.75	3.68	0.41	8.19	34.7	28.8	57	4.40
L37150N 49200E		0.25	1.18	3.46	1240	0.36	<10	70	1.00	2.11	0.22	7.11	22.7	32.3	74	5.14
L37150N 49225E		0.22	0.95	2.20	1015	0.07	<10	60	0.31	1.66	0.07	0.79	20.6	3.0	28	1.77
L37150N 49250E		0.32	1.08	2.30	133.5	0.13	<10	140	0.53	1.21	0.46	3.38	54.9	19.6	25	4.71

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20147674

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L37000N 49100E		50.9	4.18	8.06	0.07	0.05	0.06	0.218	0.09	13.5	26.0	0.59	355	3.46	0.01	1.61
L37000N 49125E		60.9	4.80	6.27	0.07	0.02	0.06	1.145	0.17	11.1	12.5	0.36	525	8.45	0.02	1.24
L37000N 49150E		53.0	4.34	6.57	0.05	<0.02	0.05	0.405	0.17	8.3	13.8	0.41	567	2.92	0.02	0.73
L37000N 49175E		37.6	3.83	8.25	0.05	<0.02	0.04	0.129	0.20	6.9	21.3	0.61	978	1.30	0.01	0.94
L37000N 49200E		36.9	3.97	8.19	0.07	0.02	0.06	0.120	0.24	8.7	23.0	0.70	969	1.32	0.01	1.44
L37000N 49225E		42.6	4.72	10.20	0.10	0.05	0.03	0.117	0.17	24.2	25.9	1.84	1260	1.12	0.02	5.32
L37050N 49100E		43.5	3.50	5.81	<0.05	0.02	0.15	0.126	0.08	7.5	16.2	0.41	622	1.12	<0.01	1.00
L37050N 49125E		135.5	7.80	8.55	0.10	<0.02	0.06	0.281	0.23	4.0	24.1	0.73	484	1.48	<0.01	1.38
L37050N 49150E		55.6	4.65	8.37	0.06	0.02	0.06	0.281	0.11	7.5	22.4	0.62	994	1.28	<0.01	1.30
L37050N 49175E		42.1	4.58	9.05	0.05	0.02	0.08	0.259	0.11	11.1	24.4	0.75	855	1.44	<0.01	1.84
L37050N 49200E		53.5	5.03	8.67	0.05	0.02	0.05	0.292	0.12	11.2	22.3	0.71	1300	1.69	<0.01	1.63
L37100N 49100E		179.5	8.40	7.49	0.10	0.04	0.08	0.849	0.15	16.7	22.2	0.53	4650	2.45	<0.01	0.78
L37100N 49125E		75.0	5.42	7.87	0.07	0.04	0.03	0.203	0.12	15.9	28.3	0.61	3220	2.21	<0.01	0.72
L37100N 49150E		110.5	13.45	14.40	0.10	0.15	0.09	2.17	0.11	4.4	21.2	0.65	2100	3.38	<0.01	0.78
L37100N 49175E		59.6	4.06	9.44	<0.05	0.03	0.06	0.152	0.09	10.2	31.8	0.81	953	1.18	<0.01	1.25
L37100N 49200E		137.0	8.83	5.63	0.12	0.13	0.07	2.68	0.08	9.8	6.8	0.45	720	1.68	0.06	1.86
L37100N 49225E		305	11.05	10.05	0.14	0.18	0.10	1.150	0.17	12.9	18.5	0.77	990	10.65	0.02	2.10
L37100N 49250E		133.0	5.37	7.78	0.07	0.08	0.07	0.299	0.16	9.9	15.3	0.65	959	4.39	0.01	1.40
L37150N 49100E		159.0	10.45	7.89	0.10	0.03	0.03	0.883	0.14	15.5	19.2	0.49	3580	3.31	<0.01	0.57
L37150N 49125E		60.2	4.75	6.75	0.07	0.02	0.03	0.164	0.12	11.9	25.4	0.58	2510	1.42	<0.01	0.56
L37150N 49150E		114.5	13.10	7.83	0.12	0.02	0.06	0.200	0.07	8.8	16.9	0.55	1600	7.59	<0.01	2.33
L37150N 49175E		199.5	7.37	7.03	0.11	0.09	0.10	0.317	0.16	12.6	28.4	1.05	1070	1.80	0.01	1.36
L37150N 49200E		120.0	5.98	7.38	0.06	0.10	0.08	0.295	0.09	11.3	30.1	1.02	1160	2.78	<0.01	1.28
L37150N 49225E		30.3	5.12	10.85	<0.05	0.06	0.06	0.192	0.05	11.5	14.5	0.31	158	1.75	0.01	3.13
L37150N 49250E		59.7	5.03	7.37	0.10	0.05	0.03	0.078	0.23	20.4	27.4	1.03	1140	1.36	0.01	1.81

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20147674

Sample Description / Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
L37000N 49100E	19.2	900	71.5	13.2	0.001	0.08	0.56	2.3	1.7	0.5	34.5	0.02	0.08	0.8	0.073
L37000N 49125E	7.8	1750	243	20.7	0.001	0.26	1.64	2.3	3.9	0.4	73.1	0.01	0.20	1.2	0.066
L37000N 49150E	4.9	1280	202	20.3	0.001	0.19	0.84	1.5	2.6	0.4	66.8	<0.01	0.12	0.3	0.053
L37000N 49175E	6.8	1130	175.0	37.3	0.001	0.07	0.40	1.7	1.0	0.4	55.6	<0.01	0.08	0.3	0.088
L37000N 49200E	9.3	1470	233	38.1	<0.001	0.07	0.50	1.9	0.7	0.4	60.5	0.01	0.07	0.4	0.092
L37000N 49225E	67.2	1920	31.3	29.3	0.001	0.03	0.29	2.9	0.3	0.5	107.5	0.01	0.10	1.4	0.191
L37050N 49100E	13.1	1250	75.4	11.8	0.001	0.07	1.77	1.1	0.9	0.6	29.4	<0.01	0.10	0.2	0.046
L37050N 49125E	18.5	1440	196.5	19.7	<0.001	0.30	0.83	3.9	7.9	0.4	30.3	0.01	0.10	1.4	0.095
L37050N 49150E	11.4	980	67.9	16.1	<0.001	0.04	0.75	2.8	1.5	0.5	85.0	0.03	0.13	0.7	0.092
L37050N 49175E	15.2	960	36.6	19.7	0.001	0.04	0.43	2.2	1.1	0.6	64.5	0.01	0.11	0.5	0.096
L37050N 49200E	18.1	1390	88.1	23.2	0.001	0.09	0.66	2.0	1.2	0.5	69.3	0.01	0.13	0.4	0.083
L37100N 49100E	10.8	1640	188.5	13.8	0.001	0.04	4.33	4.5	2.0	0.5	131.0	0.01	0.43	3.0	0.031
L37100N 49125E	9.9	1430	73.9	15.2	0.001	0.01	1.20	3.9	1.3	0.3	159.0	0.02	0.18	2.0	0.035
L37100N 49150E	34.3	1200	456	10.2	0.001	0.39	9.66	4.8	5.3	0.5	233	<0.01	1.43	2.1	0.046
L37100N 49175E	33.2	1030	89.5	14.5	<0.001	0.03	0.66	2.8	1.0	0.5	48.0	0.02	0.13	0.8	0.067
L37100N 49200E	28.2	1440	72.6	4.7	0.001	0.19	1.04	11.2	2.5	0.3	603	0.02	0.17	2.0	0.101
L37100N 49225E	38.0	3160	1185	9.7	0.001	0.30	0.93	7.5	4.7	0.5	685	0.02	0.41	3.0	0.108
L37100N 49250E	20.6	2240	199.5	16.0	0.001	0.25	1.10	4.1	1.8	0.5	76.4	0.02	0.23	2.0	0.101
L37150N 49100E	9.0	1630	117.5	12.1	0.002	0.08	4.31	3.9	1.6	0.4	90.3	0.01	0.72	4.1	0.019
L37150N 49125E	7.1	1400	52.1	16.0	0.001	0.02	0.77	2.6	0.9	0.3	118.5	0.01	0.13	1.3	0.037
L37150N 49150E	23.9	1820	172.5	6.9	<0.001	0.42	2.43	5.8	2.9	0.7	41.0	0.04	0.25	6.0	0.138
L37150N 49175E	57.6	1510	583	14.9	0.001	0.17	1.40	6.8	2.3	0.3	95.8	0.01	0.36	2.6	0.106
L37150N 49200E	61.3	1170	98.0	10.2	0.001	0.04	2.14	4.7	1.8	0.3	72.3	0.02	0.19	2.4	0.067
L37150N 49225E	8.6	740	112.0	4.9	<0.001	0.04	1.12	1.9	1.2	0.7	32.6	0.01	0.20	1.4	0.129
L37150N 49250E	23.9	1740	85.4	20.5	<0.001	0.05	0.41	3.5	0.8	0.3	138.0	0.01	0.14	2.9	0.122

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20147674

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Tl	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.05	1	0.05	0.05	2	0.5
L37000N 49100E		0.17	0.98	56	1.28	6.89	774	2.2
L37000N 49125E		0.26	0.88	44	1.47	4.09	366	0.6
L37000N 49150E		0.23	0.67	48	1.40	3.70	391	<0.5
L37000N 49175E		0.33	0.53	64	1.37	3.95	644	<0.5
L37000N 49200E		0.30	0.63	64	1.55	5.38	774	0.8
L37000N 49225E		0.20	0.63	90	0.90	5.23	688	2.9
L37050N 49100E		0.22	0.61	42	1.26	5.20	532	0.5
L37050N 49125E		0.22	0.65	65	1.99	5.38	660	0.6
L37050N 49150E		0.22	0.81	63	1.80	6.23	770	0.8
L37050N 49175E		0.22	0.71	71	1.83	5.46	970	0.8
L37050N 49200E		0.22	0.75	66	2.70	5.44	909	0.8
L37100N 49100E		0.37	0.90	38	1.93	48.1	3010	0.9
L37100N 49125E		0.29	0.82	51	3.15	36.4	1860	0.9
L37100N 49150E		0.33	0.90	56	1.59	4.85	1540	4.9
L37100N 49175E		0.20	0.75	65	1.45	8.76	1240	0.9
L37100N 49200E		0.11	0.93	68	4.85	5.65	1620	4.4
L37100N 49225E		0.21	2.39	98	9.37	10.40	1410	7.3
L37100N 49250E		0.19	1.06	65	4.46	11.15	706	3.2
L37150N 49100E		0.53	0.84	33	1.48	34.7	4390	0.8
L37150N 49125E		0.26	0.69	51	1.05	22.8	1300	<0.5
L37150N 49150E		0.15	1.51	62	2.11	7.70	904	0.8
L37150N 49175E		0.23	0.94	82	3.76	12.00	4080	3.1
L37150N 49200E		0.21	0.96	84	3.29	7.44	2490	3.4
L37150N 49225E		0.10	0.53	75	3.68	2.60	202	3.5
L37150N 49250E		0.31	0.61	71	4.78	9.63	770	1.7

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 31-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20147674

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method: DISP-01 LOG-22 SCR-41 WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method: ME-MS41

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 22-JUL-2020
Account: KIKAND

CERTIFICATE KL20151535

Project: Tillicum

This report is for 6 Rock samples submitted to our lab in Kamloops, BC, Canada on 17-JUL-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-GRA22	Au 50 g FA-GRAV finish	WST-SIM

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 22-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20151535

Sample Description	Method / Analyte / Units / LOD: Au-GRA22 / Au / ppm / 0.05
301	138.5
302	87.4
303	207
304	114.0
305	85.5
306	7.52

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 22-JUL-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20151535

	CERTIFICATE COMMENTS	
	LABORATORY ADDRESSES	
	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.	
Applies to Method:	Au-GRA22	FND-02

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

CERTIFICATE KL20184570

Project: Tillicum

This report is for 25 Rock samples submitted to our lab in Kamloops, BC, Canada on 25-AUG-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
CRU-QC	Crushing QC Test
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
Ag-OG46	Ore Grade Ag - Aqua Regia	
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Pb-OG46	Ore Grade Pb - Aqua Regia	
Zn-OG46	Ore Grade Zn - Aqua Regia	
Ag-GRA21	Ag 30g FA-GRAV finish	WST-SIM
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184570

Sample Description	Method	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
20 EAST-1		1.13	13.95	0.17	1530	1.33	<10	<10	0.08	0.84	1.33	448	0.88	37.6	5	0.88
20 SQ-1		1.07	19.00	3.21	7740	1.48	<10	20	0.85	0.16	2.48	1.10	6.91	5.4	9	0.85
20 SQ-2		1.37	9.06	2.31	>10000	2.87	<10	20	0.77	0.65	1.83	0.99	5.33	7.6	8	0.43
20 SQ-3		1.18	51.3	2.88	135.5	0.22	<10	10	0.82	6.11	4.94	564	5.60	6.7	5	1.47
20 SQ-4		1.00	>100	0.07	32.0	0.73	<10	<10	0.09	681	11.85	>1000	2.89	13.3	<1	0.05
20 SQ-5		1.29	96.1	3.28	832	0.70	<10	10	0.97	7.21	5.45	394	5.91	6.7	6	1.51
20 SQ-6		0.79	>100	2.60	97.7	0.89	<10	10	0.63	336	2.19	471	4.90	4.7	4	0.56
20 SQ-7		1.82	>100	0.08	60.2	1.08	<10	<10	0.09	177.0	2.45	>1000	1.01	20.1	1	0.09
20 GRIZ-1		1.10	16.00	0.40	138.0	10.55	<10	10	0.09	20.2	0.15	5.65	3.23	81.0	8	0.80
20 GRIZ-2		0.95	10.55	0.71	33.5	3.52	<10	10	0.08	2.82	0.29	3.86	7.59	15.4	10	0.98
20 GRIZ-3		1.13	1.64	0.69	4.1	<0.02	<10	60	0.13	2.46	0.43	0.30	7.42	11.8	21	1.95
20 GRIZ-4		0.69	2.10	0.76	4.2	0.10	<10	40	0.35	4.57	1.08	0.57	9.11	25.1	21	2.18
20 GRIZ-5		1.36	6.21	1.03	319	>25.0	<10	20	0.13	24.5	0.44	0.54	19.05	9.5	14	3.42
20 GRIZ-6		0.91	15.90	1.11	5.7	<0.02	<10	80	0.67	33.8	0.91	0.17	6.71	7.9	27	4.26
20 GRIZ-7		1.02	>100	0.24	1.8	0.07	<10	<10	0.58	256	0.42	234	0.80	11.4	5	0.05
20 GRIZ-8		0.46	>100	0.64	4.1	0.07	<10	<10	0.18	79.2	0.16	>1000	1.69	52.0	1	1.31
20 GRIZ-9		1.44	3.18	0.07	4.7	6.75	<10	<10	0.05	4.28	0.01	1.66	0.11	79.1	10	0.14
20 GRIZ-10		0.97	0.87	0.21	6.5	0.03	<10	10	0.13	0.87	0.12	2.44	1.41	0.9	18	1.05
20 AF-1		1.32	>100	0.52	39.9	4.17	<10	50	0.32	1.86	0.08	0.69	3.01	1.8	21	0.28
20 AF-2		0.96	>100	0.74	34.5	3.47	<10	60	0.36	1.28	0.19	0.67	3.81	4.0	22	0.28
20 AF-3		1.11	2.39	1.61	4.4	<0.02	<10	70	0.28	2.06	1.01	0.73	12.85	22.7	22	3.88
20 AF-4		0.86	1.65	1.79	7.9	<0.02	<10	20	0.18	1.24	0.72	0.13	12.85	27.0	26	0.33
20 JEN-1		1.36	42.4	2.99	162.0	1.13	<10	20	0.83	24.6	1.63	179.5	5.59	17.7	39	2.15
20 JEN-2		1.50	2.21	2.57	112.0	0.85	<10	10	0.53	2.89	1.06	5.07	6.48	10.7	35	5.35
20 JEN-3		1.34	1.75	2.16	32.3	<0.02	<10	10	0.61	0.33	1.62	2.48	4.37	17.1	17	0.72

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184570

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
20 EAST-1		2170	28.0	1.03	0.19	<0.02	0.08	3.98	0.04	0.5	1.2	0.03	488	1.18	0.01	0.15
20 SQ-1		57.5	5.16	7.80	0.10	0.02	<0.01	0.014	0.04	4.0	4.6	0.08	325	1.23	0.14	0.42
20 SQ-2		37.7	6.19	6.10	0.10	<0.02	<0.01	0.026	0.05	3.2	2.3	0.04	373	1.01	0.10	0.28
20 SQ-3		270	5.91	8.98	0.10	0.02	0.43	3.50	0.14	3.3	11.3	0.28	3140	0.56	0.07	0.42
20 SQ-4		422	14.85	2.09	0.42	<0.02	0.60	5.45	<0.01	1.4	1.2	0.17	10150	0.45	0.01	<0.05
20 SQ-5		120.5	4.56	9.51	0.09	0.02	0.26	2.43	0.16	3.3	10.0	0.27	2810	0.58	0.10	0.50
20 SQ-6		366	9.93	6.14	0.27	0.02	0.21	3.40	0.06	2.6	4.5	0.08	1340	0.68	0.06	0.34
20 SQ-7		807	19.00	2.30	0.40	<0.02	1.80	7.84	0.01	0.5	1.0	0.03	4620	0.38	0.01	0.09
20 GRIZ-1		1665	14.25	2.40	0.18	0.02	<0.01	0.042	0.06	1.4	10.6	0.17	201	6.62	0.02	0.73
20 GRIZ-2		274	3.97	4.81	0.13	0.03	<0.01	0.038	0.13	3.7	23.4	0.46	396	5.14	0.04	0.79
20 GRIZ-3		49.1	2.35	2.88	0.07	0.07	<0.01	0.011	0.25	3.5	12.1	0.46	235	1.40	0.06	0.54
20 GRIZ-4		186.5	3.43	2.78	0.24	0.10	<0.01	0.035	0.24	4.6	12.3	0.63	299	18.95	0.07	0.19
20 GRIZ-5		208	3.97	6.41	0.13	0.05	<0.01	0.031	0.38	10.0	32.7	0.70	395	16.55	0.05	0.57
20 GRIZ-6		80.6	4.19	3.75	0.26	0.08	0.01	0.016	0.41	3.2	24.0	0.88	360	8.00	0.04	0.28
20 GRIZ-7		584	7.51	1.12	0.21	<0.02	0.05	0.143	<0.01	0.4	3.1	0.20	725	3.29	0.01	<0.05
20 GRIZ-8		840	25.3	3.82	0.47	<0.02	0.06	0.628	0.03	0.8	8.9	0.13	673	0.48	0.01	0.20
20 GRIZ-9		733	22.2	0.76	0.15	<0.02	<0.01	0.006	<0.01	<0.2	0.5	0.01	54	3.60	0.01	0.10
20 GRIZ-10		33.7	2.19	1.48	0.05	0.03	<0.01	0.008	0.06	0.7	3.7	0.08	121	4.07	0.02	1.43
20 AF-1		460	13.70	3.64	0.19	0.05	0.08	0.148	0.03	1.6	2.6	0.08	252	148.5	0.01	0.48
20 AF-2		462	12.60	3.78	0.16	0.05	0.05	0.111	0.04	1.8	5.6	0.14	263	172.0	0.02	0.57
20 AF-3		122.0	4.78	6.20	0.13	0.15	<0.01	0.031	0.32	6.4	13.5	0.81	293	5.05	0.13	0.20
20 AF-4		86.3	6.17	7.44	0.13	0.14	<0.01	0.031	0.05	6.1	21.3	0.89	262	2.51	0.08	0.22
20 JEN-1		295	6.84	8.28	0.12	0.04	0.04	0.491	0.08	2.7	36.7	0.82	832	5.93	0.17	0.11
20 JEN-2		74.1	3.65	8.14	0.08	0.03	<0.01	0.072	0.08	3.2	45.6	1.25	937	24.5	0.09	0.23
20 JEN-3		83.7	4.80	5.24	0.07	0.04	<0.01	0.016	0.09	1.9	7.1	0.24	273	52.9	0.15	0.26

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184570

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
20 EAST-1		65.0	40	15.5	2.7	0.004	9.72	3.06	0.6	22.1	<0.2	9.9	<0.01	1.17	<0.2	0.005
20 SQ-1		4.7	970	40.2	2.4	0.002	2.94	20.5	1.9	6.3	0.3	143.0	0.01	0.05	2.6	0.030
20 SQ-2		7.2	870	45.5	2.3	<0.001	3.23	74.5	1.5	5.8	<0.2	124.5	0.01	0.14	2.1	0.014
20 SQ-3		4.3	940	358	13.9	0.001	3.67	33.5	3.0	8.1	0.3	176.5	0.01	0.17	2.2	0.043
20 SQ-4		19.9	10	>10000	0.2	0.003	>10.0	779	0.4	138.0	5.6	337	<0.01	32.1	<0.2	<0.005
20 SQ-5		3.2	1010	546	14.7	<0.001	2.79	60.0	3.4	6.7	0.3	160.0	0.01	0.43	2.4	0.046
20 SQ-6		2.6	910	>10000	5.5	0.001	6.12	921	1.3	90.4	4.0	200	0.01	12.35	1.7	0.037
20 SQ-7		18.8	40	>10000	0.5	0.002	>10.0	2330	0.3	126.0	12.9	41.4	<0.01	9.17	<0.2	<0.005
20 GRIZ-1		11.5	400	345	4.6	0.032	>10.0	6.88	1.5	26.2	0.2	6.0	<0.01	6.19	0.4	0.036
20 GRIZ-2		2.3	820	355	9.5	0.031	2.06	6.79	2.7	7.4	0.3	9.3	<0.01	0.94	1.1	0.092
20 GRIZ-3		9.6	1100	33.2	17.9	0.001	0.39	0.37	2.8	0.9	0.2	10.1	<0.01	0.26	1.9	0.081
20 GRIZ-4		26.5	1890	75.8	21.0	0.080	1.27	0.30	5.2	2.4	1.0	21.6	<0.01	0.46	1.3	0.116
20 GRIZ-5		5.2	1350	23.4	35.5	0.084	1.03	0.26	4.2	2.8	0.4	11.1	<0.01	9.13	4.4	0.134
20 GRIZ-6		4.5	1880	147.5	37.9	0.006	0.19	0.15	5.3	2.6	0.5	24.4	<0.01	2.44	1.0	0.127
20 GRIZ-7		3.5	40	>10000	0.1	0.004	5.32	0.25	0.2	43.4	0.2	6.4	<0.01	24.7	<0.2	<0.005
20 GRIZ-8		21.6	110	>10000	3.3	<0.001	>10.0	117.0	1.2	136.0	0.8	15.5	<0.01	9.77	0.3	0.012
20 GRIZ-9		49.9	<10	205	0.3	0.016	>10.0	0.24	0.2	21.9	<0.2	0.4	<0.01	0.97	<0.2	<0.005
20 GRIZ-10		0.8	260	453	8.0	0.003	0.18	0.42	1.0	1.5	0.2	7.0	0.01	0.12	0.7	0.022
20 AF-1		1.9	910	1085	2.0	0.013	0.36	53.9	2.3	4.7	1.0	17.7	0.01	7.05	0.5	0.084
20 AF-2		4.0	970	889	2.5	0.015	0.50	61.3	3.0	3.1	0.9	20.7	0.01	7.68	0.8	0.095
20 AF-3		20.9	1910	19.3	37.2	0.008	1.22	0.52	6.2	2.3	0.6	50.1	<0.01	0.12	1.8	0.184
20 AF-4		19.3	2010	13.3	2.5	0.004	1.50	0.54	6.2	3.2	0.8	25.8	<0.01	0.12	1.7	0.206
20 JEN-1		19.6	980	6990	5.5	0.003	3.96	29.4	6.1	9.5	0.3	93.8	<0.01	2.54	1.0	0.089
20 JEN-2		40.0	690	128.0	5.3	0.052	1.17	0.82	4.9	4.1	0.3	56.7	0.01	0.15	2.2	0.116
20 JEN-3		99.6	970	36.4	6.9	0.060	2.40	2.35	1.5	7.9	0.2	81.0	0.01	0.22	0.7	0.079

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184570

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5	Ag-OG46 Ag ppm 1	Pb-OG46 Pb % 0.001	Zn-OG46 Zn % 0.001	Ag-GRA21 Ag ppm 5
20 EAST-1		0.09	0.48	5	0.38	1.78	>10000	<0.5			2.53	
20 SQ-1		0.04	0.23	14	0.71	2.96	62	<0.5				
20 SQ-2		0.05	0.14	8	0.99	1.95	73	<0.5				
20 SQ-3		0.22	0.27	30	1.52	4.39	>10000	<0.5			5.28	
20 SQ-4		0.66	0.08	<1	0.20	4.82	>10000	<0.5	>1500	6.34	13.05	1895
20 SQ-5		0.24	0.35	31	2.28	5.34	>10000	<0.5			4.17	
20 SQ-6		0.20	0.21	12	0.98	3.41	>10000	<0.5	1270	7.20	3.39	
20 SQ-7		0.36	<0.05	<1	0.12	2.42	>10000	<0.5	>1500	11.05	18.00	2590
20 GRIZ-1		0.11	0.25	20	3.81	4.10	456	<0.5				
20 GRIZ-2		0.11	0.40	46	1.98	8.17	416	<0.5				
20 GRIZ-3		0.25	3.79	33	0.19	4.05	51	1.2				
20 GRIZ-4		0.37	0.66	59	1.42	5.09	68	1.7				
20 GRIZ-5		0.39	0.85	76	0.89	7.40	86	0.9				
20 GRIZ-6		0.60	0.42	73	16.05	3.72	66	1.6				
20 GRIZ-7		0.41	<0.05	7	330	2.66	>10000	<0.5	128	2.28	1.340	
20 GRIZ-8		0.57	0.06	11	6.05	1.47	>10000	<0.5	158	15.25	7.28	
20 GRIZ-9		0.12	1.15	2	6.03	0.33	98	<0.5				
20 GRIZ-10		0.10	1.26	11	1.05	1.05	165	<0.5				
20 AF-1		0.04	0.26	74	5.03	1.66	403	1.0	430			
20 AF-2		0.04	0.40	96	2.45	1.67	278	1.0	421			
20 AF-3		0.58	0.85	110	6.48	6.69	53	3.8				
20 AF-4		0.17	0.91	146	1.65	7.06	39	3.1				
20 JEN-1		0.17	0.29	117	12.70	2.99	>10000	0.6			1.330	
20 JEN-2		0.07	3.31	312	2.26	6.05	491	1.0				
20 JEN-3		0.14	1.60	71	3.78	5.45	195	1.1				

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 17-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184570

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method:			
CRU-31	CRU-QC	DISP-01	LOG-22
PUL-31	PUL-QC	SPL-21	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
Ag-GRA21	Ag-OG46	ME-MS41	ME-OG46
Pb-OG46	Zn-OG46		

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

CERTIFICATE KL20184584

Project: Tillicum

This report is for 61 Soil samples submitted to our lab in Kamloops, BC, Canada on 24-AUG-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
ME-MS41	Ultra Trace Aqua Regia ICP-MS	
Ag-OG46	Ore Grade Ag - Aqua Regia	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L47950E35700N		0.24	1.38	3.42	2.2	<0.02	<10	150	0.62	0.31	0.15	1.42	18.65	20.4	86	3.08
L47950E35725N		0.20	9.73	2.65	3.9	<0.02	<10	70	0.47	0.67	0.08	0.61	9.43	4.7	23	3.03
L47950E35750N		0.19	4.53	2.17	8.0	0.03	<10	40	0.34	0.60	0.06	0.18	6.51	2.5	29	1.99
L47950E35775N		0.24	4.96	2.38	5.5	<0.02	<10	90	0.30	0.51	0.09	0.28	8.73	6.6	37	4.40
L48050E35700N		0.14	3.76	1.68	4.0	<0.02	<10	50	0.32	0.42	0.10	0.34	9.23	2.5	17	1.96
L48050E35725N		0.21	44.6	2.59	7.3	0.19	<10	40	0.33	0.65	0.06	0.20	8.86	1.6	9	1.37
L48050E35750N		0.18	>100	4.43	14.0	0.25	<10	20	0.27	1.21	0.03	0.40	5.15	1.4	18	1.49
L48050E35775N		0.35	2.86	2.47	3.5	0.02	<10	70	0.52	1.68	0.06	0.30	15.50	4.8	23	1.53
L48050E35800N		0.30	3.97	2.72	6.6	<0.02	<10	60	0.52	0.39	0.09	0.32	15.15	8.2	38	2.36
L50400E39400N		0.17	2.41	2.48	78.3	<0.02	<10	90	0.73	0.71	0.11	0.89	12.70	11.7	45	5.71
L50400E39425N		0.13	0.97	3.01	76.1	<0.02	<10	80	1.00	0.59	0.15	1.02	16.90	16.4	48	9.36
L50400E39450N		0.14	5.75	2.93	319	<0.02	<10	50	0.85	0.61	0.28	0.77	11.25	10.4	50	7.24
L50400E39475N		0.09	7.71	2.17	111.5	<0.02	<10	50	0.77	1.04	0.22	0.75	10.30	9.5	30	4.49
L50400E39500N		0.10	7.95	2.05	264	0.04	<10	50	0.69	1.05	0.30	1.86	9.66	10.8	30	4.96
L50400E39525N		0.14	7.50	2.73	62.2	0.02	<10	40	0.79	0.89	0.20	1.15	12.85	12.8	16	4.10
L50400E39550N		0.19	4.59	1.96	32.7	0.02	<10	50	0.65	0.95	0.26	1.55	10.25	11.5	21	3.85
L50300E39350N		0.16	3.76	2.40	302	0.05	<10	50	0.77	0.47	0.62	1.42	22.6	18.5	50	5.57
L50300E39375N		0.26	13.00	1.72	6720	2.28	<10	90	0.72	0.24	0.53	1.74	10.55	13.8	9	1.39
L50300E39400N		0.20	0.76	3.47	48.6	<0.02	<10	130	0.70	0.61	0.29	0.79	17.00	25.7	71	6.02
L50300E39425N		0.12	2.24	3.47	58.5	<0.02	<10	120	0.68	0.60	0.22	0.52	18.65	19.7	60	5.97
L50300E39450N		0.12	13.55	1.68	297	0.04	<10	60	0.40	0.79	0.23	0.52	12.25	10.1	42	5.81
L50300E39475N		0.21	2.64	3.04	49.7	0.04	<10	20	0.89	0.24	0.57	2.54	11.65	15.1	38	2.02
L50300E39500N		0.20	2.80	2.74	37.9	0.02	<10	50	0.73	0.55	0.27	1.22	21.8	13.6	21	3.57
L36300N49550E		0.23	0.57	3.91	36.2	0.15	<10	60	1.14	1.01	1.26	0.60	16.05	12.0	24	10.45
L36300N49575E		0.33	1.50	3.04	335	0.42	<10	40	0.97	5.29	0.49	1.62	26.1	34.6	19	4.76
L36300N49600E		0.20	4.01	3.55	7.3	0.04	<10	350	0.72	2.24	0.44	0.14	5.08	7.6	57	20.7
L36300N49625E		0.38	5.69	2.69	19.5	0.05	<10	210	0.61	6.03	0.38	0.38	14.25	53.4	71	9.38
L36300N49650E		0.12	0.49	2.43	8.4	<0.02	<10	100	0.33	0.44	0.09	0.37	9.03	4.9	31	4.35
L36300N49675E		0.09	0.18	0.99	4.8	<0.02	<10	30	0.10	0.47	0.03	0.43	6.58	1.7	11	3.28
L36350N49575E		0.26	0.61	2.33	31.8	0.12	<10	80	0.53	1.15	0.29	0.40	10.45	6.5	20	4.30
L36350N49600E		0.24	1.58	2.21	15.8	8.76	<10	20	0.62	1.61	0.75	0.13	10.15	20.7	13	5.68
L36350N49625E		0.28	1.31	2.34	34.2	0.09	<10	50	0.37	1.03	0.10	0.31	10.60	4.8	17	2.94
L36350N49650E		0.26	0.19	2.47	7.4	<0.02	<10	290	0.38	0.43	0.34	0.15	8.81	18.1	60	6.44
L36350N49675E		0.23	0.51	1.69	10.2	<0.02	<10	90	0.36	1.01	0.18	0.60	9.34	9.6	23	8.33
L36350N49700E		0.16	0.47	2.11	6.7	<0.02	<10	170	0.29	0.67	0.11	0.23	8.56	4.9	27	6.98
L36350N49725E		0.28	0.55	3.43	8.4	0.03	<10	150	1.48	0.63	0.60	0.30	25.4	105.0	74	19.45
L36350N49750E		0.17	0.55	2.47	18.1	0.08	<10	80	0.27	1.15	0.06	0.06	9.48	5.5	47	10.75
L36400N49550E		0.29	8.90	0.56	37.3	0.10	<10	10	0.12	19.10	0.20	1.09	7.11	2.5	13	1.07
L36400N49575E		0.18	0.32	3.39	72.0	0.02	<10	80	0.82	2.03	0.44	0.80	22.9	17.2	36	6.51
L36400N49600E		0.27	0.38	2.26	6.4	<0.02	<10	40	0.29	0.96	0.09	0.25	10.40	2.5	19	3.36

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
L47950E35700N		69.9	4.66	11.65	0.06	0.05	0.06	0.053	0.04	8.5	26.4	1.14	573	2.63	0.03	3.06
L47950E35725N		163.5	3.21	8.94	0.06	0.06	0.04	0.026	0.04	4.9	12.8	0.38	417	24.7	0.02	1.47
L47950E35750N		177.0	3.45	8.74	0.07	0.06	0.06	0.035	0.03	3.5	15.4	0.42	185	53.6	0.02	1.61
L47950E35775N		161.5	3.94	9.36	0.08	0.03	0.03	0.054	0.06	4.7	27.2	0.73	580	18.65	0.02	1.55
L48050E35700N		116.0	2.66	6.81	<0.05	0.02	0.06	0.023	0.03	4.7	6.0	0.15	390	12.00	0.02	1.09
L48050E35725N		86.5	2.17	7.34	<0.05	0.03	0.07	0.031	0.03	4.5	7.9	0.18	272	15.65	0.02	1.02
L48050E35750N		52.6	4.06	11.20	0.05	0.38	0.19	0.063	0.02	2.3	4.9	0.11	89	16.75	0.03	3.00
L48050E35775N		350	3.75	6.83	0.11	0.04	0.01	0.079	0.15	7.2	23.3	0.60	179	20.5	0.02	0.76
L48050E35800N		174.5	3.37	6.43	0.07	0.04	0.02	0.029	0.09	8.2	28.3	0.72	219	11.15	0.02	1.51
L50400E39400N		65.3	3.84	10.45	0.06	0.02	0.07	0.028	0.13	6.6	33.8	0.81	585	3.26	0.02	1.34
L50400E39425N		48.0	3.11	9.79	0.06	0.03	0.04	0.024	0.14	8.7	33.0	0.82	1080	1.97	0.02	1.42
L50400E39450N		22.5	3.10	8.92	0.05	0.02	0.06	0.023	0.10	5.3	36.6	0.75	955	1.13	0.02	1.05
L50400E39475N		31.6	2.38	7.43	0.06	<0.02	0.05	0.022	0.06	5.6	17.5	0.47	2680	1.91	0.02	0.39
L50400E39500N		25.8	2.62	6.51	0.06	<0.02	0.03	0.020	0.09	4.7	19.6	0.59	1760	3.91	0.03	0.45
L50400E39525N		41.1	2.76	6.38	0.07	0.04	0.04	0.020	0.08	7.0	16.1	0.42	1130	8.09	0.02	0.62
L50400E39550N		27.5	2.67	5.77	0.07	<0.02	0.05	0.020	0.08	5.2	17.3	0.51	853	10.65	0.02	0.54
L50300E39350N		70.2	3.60	6.76	0.10	0.04	0.03	0.016	0.15	11.1	34.4	1.05	1420	2.91	0.05	0.89
L50300E39375N		48.5	5.64	5.12	0.08	0.03	0.03	0.008	0.03	8.4	10.4	0.27	5880	0.89	0.02	0.34
L50300E39400N		106.0	4.40	8.61	0.08	0.03	0.03	0.022	0.29	8.8	43.2	1.39	764	4.13	0.03	1.70
L50300E39425N		112.5	4.25	8.36	0.09	0.04	0.04	0.022	0.24	9.8	44.2	1.22	508	3.99	0.03	1.43
L50300E39450N		69.8	6.11	7.60	0.07	0.37	0.04	0.047	0.15	6.0	27.0	0.82	871	2.02	0.03	0.80
L50300E39475N		81.7	2.66	7.83	0.11	0.03	0.03	0.011	0.07	6.3	51.2	0.98	811	2.77	0.10	0.57
L50300E39500N		52.4	2.98	5.98	0.08	0.07	0.04	0.015	0.17	11.2	34.0	0.66	430	5.33	0.03	1.12
L36300N49550E		100.0	3.15	8.18	0.10	0.12	0.05	0.030	0.24	8.7	37.2	0.70	373	2.72	0.02	1.18
L36300N49575E		157.0	3.23	5.48	0.08	0.05	0.08	0.038	0.15	9.2	35.7	0.55	971	7.90	0.02	0.76
L36300N49600E		136.5	8.52	14.90	0.34	0.02	0.03	0.014	1.73	2.4	65.8	2.28	1020	31.4	0.04	1.03
L36300N49625E		250	10.85	10.40	0.24	0.02	0.03	0.039	1.15	5.1	43.4	1.86	1240	42.9	0.03	0.36
L36300N49650E		42.0	4.18	10.45	0.05	0.05	0.07	0.024	0.14	4.7	20.9	0.66	739	2.54	0.02	1.30
L36300N49675E		14.3	2.03	11.10	<0.05	0.08	0.04	0.018	0.04	3.1	3.3	0.11	174	1.91	0.02	1.69
L36350N49575E		64.3	3.95	7.77	0.06	0.03	0.04	0.015	0.19	5.2	35.6	0.60	330	8.45	0.02	1.11
L36350N49600E		167.0	4.49	6.70	0.09	0.05	0.03	0.013	0.19	4.7	23.0	0.48	468	6.33	0.02	0.91
L36350N49625E		172.0	5.11	7.50	0.07	0.02	0.08	0.032	0.19	5.5	20.6	0.44	332	6.78	0.02	1.33
L36350N49650E		108.5	5.84	6.48	0.11	0.02	0.02	0.017	0.57	4.3	38.6	1.38	373	4.04	0.02	0.22
L36350N49675E		48.8	3.57	7.51	0.06	0.02	0.04	0.019	0.23	5.3	21.2	0.62	446	4.65	0.02	0.84
L36350N49700E		45.4	3.87	7.87	0.06	0.02	0.03	0.018	0.29	4.3	21.8	0.89	309	1.75	0.02	0.61
L36350N49725E		325	8.07	10.20	0.16	0.06	0.02	0.044	1.01	10.7	52.0	2.28	1920	5.23	0.03	0.26
L36350N49750E		97.1	5.32	9.10	0.09	0.08	0.04	0.018	0.41	5.1	42.1	1.00	260	10.40	0.02	0.78
L36400N49550E		155.0	9.51	5.57	0.10	<0.02	0.04	0.107	0.12	4.0	11.0	0.39	316	3.87	0.02	1.08
L36400N49575E		142.0	5.64	8.94	0.09	0.02	0.06	0.037	0.25	10.7	74.0	1.01	527	13.75	0.02	1.26
L36400N49600E		24.7	3.00	9.72	<0.05	0.04	0.04	0.020	0.12	5.1	14.4	0.42	176	2.49	0.02	1.16

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
L47950E35700N		41.5	1710	7.7	11.7	<0.001	0.03	0.26	5.5	0.3	0.8	69.0	<0.01	0.06	0.6	0.142
L47950E35725N		9.6	990	9.7	10.1	0.001	0.04	0.25	1.9	1.0	0.8	11.2	0.04	0.12	0.3	0.110
L47950E35750N		8.3	1130	9.9	5.5	<0.001	0.04	1.23	2.7	1.5	1.2	10.5	0.03	0.13	0.8	0.134
L47950E35775N		15.3	1170	7.2	13.4	0.001	0.03	0.47	3.1	0.7	1.0	16.7	<0.01	0.17	0.6	0.168
L48050E35700N		6.3	1420	11.2	6.9	<0.001	0.04	0.40	0.9	1.0	0.8	13.3	<0.01	0.09	<0.2	0.071
L48050E35725N		3.4	900	111.0	4.5	<0.001	0.05	3.88	1.5	1.1	0.5	17.2	0.03	0.66	0.2	0.062
L48050E35750N		4.8	1880	144.5	3.5	<0.001	0.06	6.17	3.3	1.8	1.0	9.5	0.05	0.38	2.2	0.152
L48050E35775N		7.0	630	11.8	9.5	0.001	0.05	1.24	7.8	1.6	2.3	28.8	<0.01	0.14	1.9	0.192
L48050E35800N		20.4	770	29.3	10.9	<0.001	0.06	0.95	3.6	1.5	0.6	21.5	<0.01	0.32	1.7	0.123
L50400E39400N		24.7	770	22.1	33.2	<0.001	0.06	0.49	2.1	1.0	0.5	22.2	<0.01	0.10	0.3	0.110
L50400E39425N		36.0	990	26.0	49.1	<0.001	0.06	0.51	1.9	0.9	0.5	22.4	0.01	0.09	0.3	0.094
L50400E39450N		14.3	940	35.9	20.0	<0.001	0.05	0.85	1.9	0.6	0.4	26.4	0.02	0.06	0.2	0.082
L50400E39475N		26.3	1610	58.9	13.9	<0.001	0.05	3.10	0.6	1.1	0.3	18.7	<0.01	0.09	<0.2	0.037
L50400E39500N		26.1	1310	76.6	20.8	<0.001	0.08	3.08	0.6	1.3	0.2	23.7	<0.01	0.09	<0.2	0.036
L50400E39525N		26.3	1800	58.7	15.5	<0.001	0.06	1.36	1.4	1.9	0.2	17.3	0.02	0.10	0.4	0.043
L50400E39550N		38.4	1430	53.3	15.1	<0.001	0.05	1.26	0.8	1.3	0.2	19.0	0.01	0.12	0.2	0.041
L50300E39350N		56.6	1580	33.8	17.4	0.001	0.04	1.15	4.3	1.7	0.2	59.7	0.01	0.09	2.0	0.085
L50300E39375N		9.2	1520	89.9	4.1	<0.001	0.07	11.55	3.3	1.1	<0.2	56.7	0.01	0.05	2.2	0.016
L50300E39400N		47.9	1280	18.1	44.7	<0.001	0.09	0.27	3.3	1.3	0.3	40.6	0.01	0.17	0.6	0.118
L50300E39425N		41.4	1060	16.5	27.8	0.001	0.07	0.40	3.9	1.6	0.3	33.2	0.01	0.15	1.1	0.133
L50300E39450N		28.7	1500	64.7	24.7	<0.001	0.25	3.08	2.9	1.5	0.3	31.0	<0.01	0.11	0.4	0.068
L50300E39475N		52.3	840	10.4	9.6	0.001	0.07	0.40	5.8	1.3	<0.2	69.4	<0.01	0.07	1.8	0.063
L50300E39500N		45.2	1020	24.0	21.6	<0.001	0.08	0.47	3.4	1.8	0.2	45.8	0.02	0.10	2.9	0.081
L36300N49550E		22.4	1010	62.1	24.1	0.001	0.07	0.15	3.7	1.0	0.2	169.5	<0.01	0.22	2.5	0.089
L36300N49575E		22.9	1820	333	15.9	0.001	0.08	0.33	2.8	1.3	0.2	35.0	0.01	0.57	1.4	0.068
L36300N49600E		5.1	1530	78.8	163.0	0.019	0.84	0.24	6.0	11.6	0.4	39.2	<0.01	0.69	1.1	0.210
L36300N49625E		24.5	1640	84.5	86.6	0.032	1.18	0.31	22.9	12.2	0.5	24.6	<0.01	1.28	1.4	0.193
L36300N49650E		6.0	1150	13.3	20.9	<0.001	0.08	0.16	1.9	1.3	0.5	11.8	<0.01	0.11	0.5	0.137
L36300N49675E		3.1	830	17.8	7.6	<0.001	0.06	0.42	0.8	0.6	1.2	5.6	<0.01	0.04	<0.2	0.144
L36350N49575E		6.8	980	27.8	17.9	0.001	0.10	0.14	2.0	3.2	0.3	39.8	0.02	0.20	0.5	0.107
L36350N49600E		9.4	1400	28.1	17.5	<0.001	0.08	0.07	2.5	5.5	0.2	88.2	0.01	0.29	1.5	0.069
L36350N49625E		4.2	1250	21.0	15.5	<0.001	0.17	0.20	2.1	3.8	0.4	23.3	<0.01	0.30	0.3	0.086
L36350N49650E		14.3	1790	7.9	50.0	<0.001	0.10	0.11	5.0	1.8	0.2	18.8	<0.01	0.14	1.3	0.124
L36350N49675E		6.6	1120	114.5	32.1	<0.001	0.10	0.18	2.0	1.1	0.4	14.1	<0.01	0.28	0.3	0.110
L36350N49700E		5.2	1010	18.8	33.6	<0.001	0.11	0.15	1.8	0.4	0.4	11.5	<0.01	0.08	0.3	0.116
L36350N49725E		44.0	2310	69.1	106.0	<0.001	0.09	0.26	10.3	2.3	0.4	38.1	<0.01	0.27	2.9	0.204
L36350N49750E		8.1	670	40.6	52.2	<0.001	0.12	0.15	2.7	0.9	0.5	17.0	<0.01	0.22	1.6	0.208
L36400N49550E		1.9	1350	1590	10.3	<0.001	0.81	0.58	2.3	6.1	0.3	4.0	<0.01	1.64	1.6	0.054
L36400N49575E		46.1	1170	51.7	24.4	0.004	0.11	0.35	4.4	2.9	0.3	48.0	0.02	0.36	1.2	0.129
L36400N49600E		4.5	580	30.2	14.2	<0.001	0.06	0.17	1.4	0.8	0.7	21.2	<0.01	0.07	0.2	0.117

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5	Ag-OG46 Ag ppm 1
L47950E35700N		0.10	0.68	127	1.80	3.56	120	1.8	
L47950E35725N		0.08	0.74	63	0.90	3.20	72	2.5	
L47950E35750N		0.10	0.75	113	1.08	2.06	37	2.7	
L47950E35775N		0.20	0.51	122	3.62	2.47	79	1.6	
L48050E35700N		0.08	0.96	62	0.73	2.52	36	0.9	
L48050E35725N		0.09	0.63	30	6.38	3.18	24	1.5	
L48050E35750N		0.07	1.22	63	5.27	1.96	25	24.1	97
L48050E35775N		0.17	1.44	133	0.51	7.51	99	1.3	
L48050E35800N		0.16	0.80	86	1.65	3.82	86	2.0	
L50400E39400N		0.21	0.81	102	1.79	3.22	146	1.0	
L50400E39425N		0.25	0.77	71	1.86	5.50	147	1.6	
L50400E39450N		0.30	0.49	71	0.53	3.74	142	1.0	
L50400E39475N		0.18	0.57	42	3.21	3.46	169	<0.5	
L50400E39500N		0.20	0.43	44	2.45	3.18	227	<0.5	
L50400E39525N		0.21	0.76	42	3.11	4.75	198	1.4	
L50400E39550N		0.15	0.59	40	1.92	2.94	220	<0.5	
L50300E39350N		0.43	0.76	68	1.16	8.91	107	1.3	
L50300E39375N		0.13	0.34	31	1.78	14.25	31	0.8	
L50300E39400N		0.34	0.76	117	1.65	4.77	182	1.2	
L50300E39425N		0.37	0.84	129	1.29	6.19	182	1.4	
L50300E39450N		0.31	0.66	72	2.26	5.79	158	0.5	
L50300E39475N		0.23	0.73	79	2.68	6.63	445	1.0	
L50300E39500N		0.38	0.80	68	2.87	6.04	239	2.4	
L36300N49550E		0.31	0.69	74	1.01	4.16	136	4.5	
L36300N49575E		0.31	4.80	65	109.5	7.98	539	2.2	
L36300N49600E		2.14	0.60	234	0.63	3.18	146	0.5	
L36300N49625E		1.90	0.84	231	0.81	5.04	88	0.9	
L36300N49650E		0.26	0.59	114	0.54	1.80	48	2.5	
L36300N49675E		0.10	0.66	45	0.36	1.64	16	4.6	
L36350N49575E		0.26	1.35	81	1.14	4.78	74	1.3	
L36350N49600E		0.28	0.68	60	1.96	5.12	51	1.7	
L36350N49625E		0.24	0.89	66	0.73	5.53	53	0.9	
L36350N49650E		0.68	0.41	132	0.44	2.33	68	0.7	
L36350N49675E		0.40	1.07	92	0.68	4.87	64	1.1	
L36350N49700E		0.39	0.61	112	0.48	1.85	55	1.0	
L36350N49725E		1.66	3.20	184	0.92	7.74	153	1.5	
L36350N49750E		0.75	0.41	141	3.86	1.60	70	3.1	
L36400N49550E		0.16	0.38	53	29.8	2.04	269	<0.5	
L36400N49575E		0.35	2.86	107	3.10	7.99	238	0.8	
L36400N49600E		0.23	0.63	76	0.63	2.60	36	2.3	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L36400N49625E		0.19	0.40	2.56	17.1	<0.02	<10	70	0.48	0.86	0.13	0.45	11.15	10.7	29	7.63
L36400N49650E		0.23	0.61	2.93	13.5	0.12	<10	90	0.50	1.25	0.14	0.59	12.40	8.2	33	10.25
L36400N49675E		0.21	0.51	2.43	12.0	<0.02	<10	70	0.44	1.41	0.09	0.56	13.25	10.2	39	10.05
L36400N49700E		0.23	0.72	2.15	13.2	0.05	<10	110	0.34	0.73	0.23	0.26	13.85	10.5	22	5.35
L36400N49725E		0.18	0.49	1.45	37.3	0.12	<10	130	0.24	1.51	0.05	0.05	11.00	3.8	25	8.71
L36400N49750E		0.15	2.01	2.31	22.8	0.17	<10	60	0.32	2.06	0.05	0.24	15.70	2.9	19	5.78
L36900N48975E		0.09	1.19	3.01	98.7	<0.02	<10	110	0.62	0.31	0.09	0.65	12.75	9.6	27	5.01
L36900N49000E		0.14	0.94	3.02	235	<0.02	<10	90	0.63	0.35	0.17	0.99	20.5	20.5	56	4.01
L36900N49025E		0.19	0.61	3.01	53.2	<0.02	<10	80	0.61	0.30	0.09	1.21	16.70	14.3	48	3.90
L36900N49050E		0.12	2.04	3.30	167.5	<0.02	<10	60	0.81	0.52	0.10	2.43	14.45	12.1	27	2.73
L36900N49075E		0.17	1.72	2.52	536	0.17	<10	60	0.49	1.13	0.08	1.56	17.15	5.5	26	2.92
L36900N49100E		0.17	2.53	3.12	425	0.13	<10	60	0.53	1.13	0.07	1.65	18.10	7.4	25	2.70
L36900N49125E		0.12	1.91	4.04	165.0	0.05	<10	50	0.60	0.88	0.04	0.85	15.10	2.9	13	2.55
L36900N49150E		0.12	0.77	2.99	88.1	0.02	<10	70	0.69	0.68	0.05	2.12	20.6	6.4	14	2.97
L36950N48975E		0.18	1.21	3.39	68.7	<0.02	<10	60	0.77	0.30	0.10	0.55	30.2	16.4	61	3.99
L36950N49000E		0.13	0.65	3.85	203	<0.02	<10	110	0.78	0.34	0.17	1.22	22.0	25.2	60	7.77
L36950N49025E		0.21	0.30	3.34	147.0	0.03	<10	90	0.56	0.22	0.33	0.96	23.3	25.0	74	6.16
L36950N49050E		0.13	0.32	3.24	89.2	<0.02	<10	90	0.59	0.24	0.26	1.76	25.9	19.6	49	4.08
L36950N49125E		0.15	0.97	2.86	138.5	0.09	<10	70	0.54	0.78	0.09	1.61	22.8	4.8	17	3.03
L36950N49150E		0.18	0.54	2.82	105.5	0.08	<10	210	0.67	0.54	0.39	5.65	45.2	23.3	34	11.05
L36950N49175E		0.22	0.66	3.44	101.5	0.28	<10	170	0.82	0.62	0.25	1.66	31.9	19.2	36	7.53

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L36400N49625E		63.5	3.82	9.26	0.05	0.04	0.06	0.027	0.13	5.8	32.6	0.64	351	7.63	0.02	1.06
L36400N49650E		51.8	4.90	9.01	0.07	0.03	0.06	0.031	0.37	6.6	37.9	0.93	541	5.42	0.03	0.92
L36400N49675E		80.0	4.28	9.50	0.06	0.03	0.04	0.026	0.17	7.8	51.2	0.73	512	16.15	0.02	1.24
L36400N49700E		124.5	4.95	6.81	0.10	0.03	0.05	0.024	0.44	7.2	36.6	0.78	421	7.92	0.02	1.10
L36400N49725E		115.5	8.44	9.53	0.10	0.08	0.02	0.037	0.31	6.2	28.5	0.69	306	10.40	0.03	3.71
L36400N49750E		119.0	4.34	7.49	0.12	0.06	0.08	0.028	0.37	7.7	33.6	0.68	284	14.75	0.03	2.33
L36900N48975E		57.8	3.21	11.00	0.05	0.04	0.08	0.035	0.19	6.5	19.3	0.51	905	5.76	0.02	1.29
L36900N49000E		92.7	3.73	7.94	0.05	0.02	0.06	0.029	0.10	10.4	34.2	0.98	1170	0.89	0.02	0.74
L36900N49025E		49.3	3.34	9.83	0.05	0.03	0.04	0.032	0.11	8.0	29.2	0.75	876	1.08	0.02	1.09
L36900N49050E		76.6	3.10	9.49	0.05	0.02	0.11	0.101	0.06	7.3	17.3	0.40	1160	1.90	0.02	1.23
L36900N49075E		49.7	3.80	8.59	0.06	0.03	0.06	0.253	0.06	9.3	18.4	0.47	358	3.75	0.02	1.67
L36900N49100E		65.4	3.93	8.48	0.06	0.05	0.09	0.201	0.07	9.5	19.0	0.48	343	2.82	0.02	1.67
L36900N49125E		32.5	2.81	10.80	<0.05	0.11	0.09	0.157	0.06	7.7	9.5	0.22	441	2.73	0.02	2.36
L36900N49150E		27.5	2.90	9.78	<0.05	0.04	0.05	0.091	0.08	10.7	14.5	0.33	847	1.33	0.02	1.75
L36950N48975E		77.5	4.16	6.19	0.08	0.05	0.04	0.038	0.09	15.3	24.7	0.80	335	15.60	0.02	1.44
L36950N49000E		91.7	3.95	9.29	0.07	0.03	0.04	0.031	0.20	11.1	40.8	0.98	1050	1.19	0.02	0.93
L36950N49025E		111.5	4.04	8.17	0.09	0.03	0.02	0.024	0.35	11.2	39.8	1.36	889	0.53	0.02	0.61
L36950N49050E		125.0	3.87	7.99	0.08	0.04	0.02	0.035	0.23	12.9	42.7	1.31	558	0.49	0.02	0.82
L36950N49125E		40.3	3.48	8.71	0.06	0.06	0.05	0.116	0.12	13.0	23.4	0.56	362	1.38	0.02	2.03
L36950N49150E		47.5	4.16	8.78	0.09	0.03	0.04	0.069	0.18	19.5	29.9	1.34	1360	1.15	0.03	3.59
L36950N49175E		35.3	3.99	8.77	0.09	0.03	0.04	0.067	0.15	14.1	26.9	1.17	1200	1.00	0.02	3.40

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
L36400N49625E		11.1	720	35.2	22.9	<0.001	0.07	0.20	2.4	1.5	0.5	25.7	<0.01	0.12	0.3	0.121
L36400N49650E		8.8	880	132.5	51.7	<0.001	0.11	0.16	3.3	1.3	0.4	21.5	<0.01	0.17	0.8	0.152
L36400N49675E		16.1	720	49.9	46.0	<0.001	0.07	0.36	3.1	1.1	0.5	16.4	<0.01	0.19	0.7	0.137
L36400N49700E		9.4	1420	49.8	37.6	0.001	0.24	0.18	4.0	3.0	0.3	40.6	0.01	0.16	0.8	0.113
L36400N49725E		7.4	1520	69.1	39.2	0.001	0.42	0.24	3.9	3.4	0.6	26.2	<0.01	0.55	1.6	0.176
L36400N49750E		4.5	820	222	34.8	<0.001	0.16	0.69	3.1	2.7	0.6	16.6	0.01	0.46	2.0	0.170
L36900N48975E		14.6	3520	21.7	28.5	<0.001	0.07	0.33	1.2	0.6	0.8	10.7	0.01	0.07	0.2	0.074
L36900N49000E		30.9	1160	44.9	19.5	<0.001	0.05	0.33	2.6	0.6	0.4	23.1	<0.01	0.06	0.4	0.088
L36900N49025E		19.8	1020	35.5	28.7	<0.001	0.05	0.26	1.7	0.6	0.7	9.1	0.01	0.04	0.2	0.095
L36900N49050E		10.9	1940	81.6	17.7	<0.001	0.07	0.33	1.5	1.0	0.8	16.7	0.01	0.07	0.2	0.064
L36900N49075E		14.4	1070	106.5	14.9	<0.001	0.04	0.49	2.3	0.8	0.6	21.8	0.02	0.11	1.1	0.088
L36900N49100E		17.6	920	103.5	12.4	<0.001	0.06	0.59	2.4	1.4	0.5	20.4	0.02	0.08	1.0	0.095
L36900N49125E		6.3	1140	46.5	14.0	<0.001	0.06	0.31	2.1	1.4	0.9	12.5	0.07	0.04	0.7	0.101
L36900N49150E		8.3	1120	39.8	21.1	<0.001	0.07	0.30	1.5	0.8	0.8	15.1	0.04	0.06	0.3	0.084
L36950N48975E		78.3	1130	20.0	12.0	<0.001	0.07	0.46	3.0	2.2	0.3	22.2	0.01	0.09	1.5	0.077
L36950N49000E		30.8	1490	40.0	55.9	<0.001	0.08	0.34	2.6	0.6	0.4	18.5	0.01	0.07	0.4	0.082
L36950N49025E		37.4	1730	39.3	53.6	<0.001	0.04	0.27	3.2	0.2	0.3	18.5	<0.01	0.06	0.7	0.106
L36950N49050E		27.3	1350	40.5	32.2	<0.001	0.03	0.22	3.3	0.3	0.3	15.3	0.01	0.03	1.3	0.131
L36950N49125E		10.9	930	62.6	17.9	<0.001	0.06	0.44	2.7	0.7	0.6	33.1	0.01	0.07	1.5	0.109
L36950N49150E		43.5	1740	53.5	30.1	<0.001	0.06	0.45	2.4	0.7	0.5	164.0	0.01	0.08	0.9	0.124
L36950N49175E		37.7	1330	61.6	25.4	<0.001	0.09	0.29	1.7	0.7	0.5	98.7	0.02	0.12	0.3	0.100

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5	Ag-OG46 Ag ppm 1
L36400N49625E		0.26	0.98	98	0.95	3.89	139	1.7	
L36400N49650E		0.57	0.85	132	1.84	3.41	185	1.5	
L36400N49675E		0.37	1.54	139	2.47	4.09	187	1.3	
L36400N49700E		0.53	0.97	85	1.28	5.84	95	1.4	
L36400N49725E		0.58	0.39	97	3.45	1.74	65	5.2	
L36400N49750E		0.49	0.76	87	3.54	3.24	82	2.8	
L36900N48975E		0.23	1.55	63	0.92	2.96	71	1.9	
L36900N49000E		0.23	0.82	92	1.26	3.97	230	0.6	
L36900N49025E		0.20	0.91	77	0.45	3.48	229	1.7	
L36900N49050E		0.15	1.25	69	0.50	3.13	301	1.3	
L36900N49075E		0.15	0.98	67	1.69	3.70	550	1.7	
L36900N49100E		0.15	1.06	62	2.36	3.68	543	2.1	
L36900N49125E		0.13	1.31	39	1.16	3.89	155	6.4	
L36900N49150E		0.13	0.98	45	1.56	5.64	297	2.4	
L36950N48975E		0.19	1.98	63	2.55	6.66	157	2.0	
L36950N49000E		0.37	1.06	93	1.29	4.55	227	1.5	
L36950N49025E		0.46	0.83	109	0.91	5.40	253	1.2	
L36950N49050E		0.37	0.89	99	0.47	5.94	522	1.7	
L36950N49125E		0.20	0.83	58	1.88	6.82	619	3.0	
L36950N49150E		0.36	0.76	72	1.00	6.14	601	1.6	
L36950N49175E		0.26	0.72	70	1.02	5.49	476	1.7	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 11-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20184584

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method:	DISP-01	LOG-22	SCR-41	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	Ag-OG46	ME-MS41	ME-OG46

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

CERTIFICATE KL20212435

Project: Tillicum

This report is for 143 Soil samples submitted to our lab in Kamloops, BC, Canada on 22-SEP-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS41	Ultra Trace Aqua Regia ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
L36200N-49500E		0.08	0.82	2.15	7.3	<0.02	<10	30	0.38	0.37	0.10	0.32	15.60	3.5	9	3.72
L36200N-49525E		0.21	0.96	2.05	12.7	0.05	<10	30	0.34	0.65	0.08	0.57	13.15	3.4	18	5.60
L36200N-49550E		0.12	1.49	3.59	3.8	0.04	<10	20	0.44	0.28	0.04	0.79	13.30	3.6	10	2.82
L36200N-49575E		0.14	0.53	1.22	4.4	<0.02	<10	40	0.18	0.44	0.07	0.17	7.06	1.7	17	2.67
L36200N-49600E		0.13	0.87	2.97	3.4	<0.02	<10	20	0.39	0.28	0.06	0.42	12.00	2.3	19	2.96
L36200N-49625E		0.17	0.67	3.72	8.8	<0.02	<10	50	0.60	0.40	0.20	1.11	21.5	51.5	42	3.73
L36200N-49650E		0.23	0.41	2.71	6.6	<0.02	<10	30	0.33	0.42	0.11	0.26	9.03	6.6	31	3.23
L36200N-49675E		0.13	0.44	2.53	3.2	<0.02	<10	50	0.42	0.31	0.04	0.10	20.6	4.4	31	3.50
L36200N-49700E		0.19	0.30	2.30	7.6	<0.02	<10	70	0.26	0.33	0.05	0.14	8.44	2.3	30	3.08
L36200N-49725E		0.22	0.45	2.04	0.9	<0.02	<10	60	0.14	0.27	0.04	0.04	12.50	1.7	67	3.00
L36250N-49525E		0.17	0.44	0.79	9.5	0.15	<10	30	0.21	0.75	0.06	0.27	7.06	1.3	6	2.70
L36250N-49550E		0.16	0.94	3.39	24.7	0.03	<10	40	0.78	0.50	0.34	0.60	17.10	7.6	15	10.25
L36250N-49575E		0.22	0.43	1.99	15.2	<0.02	<10	40	0.33	1.04	0.07	0.53	11.50	5.4	22	3.45
L36250N-49600E		0.18	0.39	2.05	26.3	0.06	<10	50	0.31	0.95	0.13	0.23	8.97	8.2	32	2.43
L36250N-49625E		0.22	0.31	3.30	3.5	<0.02	<10	30	0.63	0.20	0.51	0.29	15.95	35.4	57	4.86
L36250N-49650E		0.19	0.66	2.89	7.8	<0.02	<10	80	0.32	0.50	0.09	0.11	12.55	4.7	28	6.63
L36250N-49675E		0.15	0.47	2.74	8.8	<0.02	<10	150	0.39	0.45	0.11	0.27	15.35	7.3	43	4.97
L36250N-49700E		0.10	0.84	1.04	1.6	<0.02	<10	30	0.13	0.36	0.03	0.15	5.62	0.5	10	1.22
L36250N-49725E		0.26	0.22	1.30	3.5	<0.02	<10	50	0.15	0.32	0.04	0.08	8.60	1.2	24	2.02
L36250N-49750E		0.32	0.42	2.42	4.3	<0.02	<10	60	0.22	0.46	0.07	0.09	9.70	1.8	34	3.41
L36450N-48700E		0.25	0.61	1.86	23.7	0.08	<10	80	0.35	0.58	0.09	1.09	13.15	4.7	20	3.93
L36450N-48725E		0.23	0.46	1.21	17.5	0.02	<10	50	0.21	1.55	0.12	1.35	8.39	2.5	12	3.20
L36450N-48750E		0.24	0.36	1.62	34.0	<0.02	<10	80	0.42	0.68	0.12	2.80	8.98	4.9	14	4.70
L36450N-48775E		0.21	0.50	1.75	51.1	<0.02	<10	70	0.39	0.50	0.10	1.87	11.00	6.2	17	5.16
L36450N-48800E		0.19	1.11	1.86	60.6	0.02	<10	90	0.45	0.56	0.12	1.85	10.95	7.7	21	5.71
L36450N-48825E		0.19	0.76	1.98	61.3	0.04	<10	50	0.42	0.67	0.08	1.23	12.60	4.9	19	3.38
L36450N-48850E		0.26	1.23	1.88	32.2	0.02	<10	50	0.46	0.54	0.10	1.78	13.40	4.6	16	4.48
L36450N-48875E		0.24	0.52	1.72	37.6	0.13	<10	60	0.46	0.56	0.10	2.73	14.25	6.9	18	6.02
L36450N-48900E		0.16	1.04	2.22	52.4	0.11	<10	50	0.42	0.60	0.11	1.16	14.65	6.3	23	3.20
L36450N-48925E		0.16	0.75	2.46	40.2	0.17	<10	60	0.62	0.42	0.20	1.06	12.60	8.0	18	8.50
L36450N-48950E		0.21	0.53	1.31	20.2	<0.02	<10	50	0.25	0.45	0.08	0.80	8.78	5.1	12	3.98
L36450N-48975E		0.17	0.99	1.57	17.2	<0.02	<10	50	0.26	0.41	0.08	0.52	8.81	3.6	12	4.38
L36450N-49000E		0.25	1.02	2.76	21.5	<0.02	<10	60	0.58	0.46	0.33	0.63	15.05	14.4	12	4.65
L36450N-49025E		0.17	1.20	2.48	37.9	0.07	<10	60	0.54	0.65	0.14	0.89	17.05	8.8	22	4.60
L36450N-49050E		0.25	1.09	2.44	26.3	0.07	<10	60	0.49	0.60	0.10	0.52	14.40	5.7	22	5.74
L36450N-49075E		0.28	1.47	2.32	29.3	0.11	<10	70	0.45	0.58	0.09	0.62	14.85	6.8	26	3.84
L36450N-49100E		0.27	0.90	1.80	19.3	<0.02	<10	90	0.39	0.39	0.13	0.44	12.75	11.5	31	4.91
L36500N-48725E		0.20	1.71	2.28	33.4	0.02	<10	100	0.59	0.67	0.11	1.67	11.95	10.5	32	4.61
L36500N-48750E		0.21	0.97	1.99	47.2	0.10	<10	70	0.46	0.82	0.11	3.33	13.05	9.4	17	5.18
L36500N-48775E		0.21	0.69	2.33	55.7	0.02	<10	70	0.59	0.72	0.09	2.28	15.10	7.2	19	4.27

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L36200N-49500E		42.2	1.57	6.60	<0.05	0.03	0.05	0.020	0.08	8.0	9.1	0.21	168	2.68	0.01	0.88
L36200N-49525E		25.6	4.80	12.35	<0.05	0.02	0.09	0.028	0.08	7.0	9.8	0.29	355	4.65	0.01	1.62
L36200N-49550E		36.2	2.49	8.26	<0.05	0.07	0.14	0.023	0.06	6.9	8.5	0.18	252	2.93	<0.01	1.22
L36200N-49575E		25.5	3.25	8.38	<0.05	0.03	0.04	0.017	0.06	3.7	11.0	0.36	168	2.96	0.01	1.05
L36200N-49600E		31.8	2.47	9.13	<0.05	0.06	0.09	0.020	0.05	6.0	9.9	0.26	77	6.04	0.01	1.04
L36200N-49625E		185.0	3.77	8.46	0.08	0.07	0.08	0.016	0.19	7.1	88.8	0.92	633	20.1	0.02	0.58
L36200N-49650E		46.2	3.52	9.69	0.05	0.06	0.09	0.020	0.07	4.5	45.4	0.54	144	17.50	0.01	1.32
L36200N-49675E		23.5	2.47	10.20	<0.05	0.11	0.03	0.022	0.05	9.9	13.1	0.37	180	2.20	0.01	2.23
L36200N-49700E		41.0	3.62	8.32	0.05	0.03	0.05	0.013	0.17	4.4	19.9	0.52	145	4.44	0.01	1.07
L36200N-49725E		56.7	4.48	7.69	0.16	0.03	0.03	0.015	0.70	6.2	30.8	1.03	157	4.12	0.01	0.67
L36250N-49525E		19.1	1.82	7.51	<0.05	<0.02	0.07	0.013	0.03	3.4	3.5	0.08	114	2.94	0.01	0.70
L36250N-49550E		63.3	3.17	10.80	0.05	0.04	0.12	0.025	0.15	9.6	25.4	0.39	325	3.95	0.01	1.43
L36250N-49575E		88.0	4.39	9.86	<0.05	0.02	0.07	0.031	0.08	6.2	18.2	0.40	346	7.53	0.01	1.22
L36250N-49600E		121.0	3.97	8.22	<0.05	0.03	0.05	0.028	0.08	4.5	23.6	0.59	299	6.15	0.01	0.91
L36250N-49625E		177.0	4.77	10.50	0.07	0.07	0.03	0.016	0.37	5.4	62.5	1.12	568	10.25	<0.01	0.36
L36250N-49650E		58.8	3.71	8.83	<0.05	0.04	0.07	0.020	0.21	6.8	25.7	0.68	214	5.19	0.01	1.17
L36250N-49675E		87.0	4.58	8.91	0.06	0.04	0.09	0.029	0.25	8.8	29.4	0.93	252	5.23	0.01	3.37
L36250N-49700E		11.3	1.23	7.18	<0.05	0.02	0.06	0.011	0.02	2.9	2.8	0.06	20	2.01	0.01	0.77
L36250N-49725E		29.8	2.77	6.79	0.05	0.03	0.03	0.010	0.14	4.4	12.0	0.34	88	5.18	0.01	1.19
L36250N-49750E		38.0	4.17	11.50	0.06	0.08	0.03	0.011	0.15	4.7	25.8	0.77	128	8.54	0.02	1.51
L36450N-48700E		57.7	3.72	9.28	<0.05	0.03	0.03	0.043	0.10	7.1	19.4	0.52	288	5.68	0.01	2.07
L36450N-48725E		33.9	3.44	8.56	<0.05	<0.02	0.04	0.042	0.06	4.4	13.9	0.44	311	4.32	<0.01	1.66
L36450N-48750E		38.1	3.90	9.67	<0.05	0.02	0.03	0.035	0.11	4.6	33.3	0.57	436	3.79	0.01	2.05
L36450N-48775E		56.1	3.36	8.10	<0.05	0.02	0.03	0.036	0.12	6.0	27.7	0.59	468	2.39	0.01	1.67
L36450N-48800E		46.5	3.57	9.49	<0.05	0.02	0.05	0.045	0.13	5.8	26.3	0.71	633	2.33	0.01	2.04
L36450N-48825E		50.5	3.55	9.83	<0.05	0.02	0.06	0.055	0.09	7.2	24.0	0.54	324	2.62	0.01	1.91
L36450N-48850E		101.0	3.41	8.59	0.05	<0.02	0.03	0.038	0.13	7.4	26.6	0.59	350	2.55	0.01	1.43
L36450N-48875E		46.9	2.99	8.69	<0.05	0.02	0.04	0.039	0.11	7.7	28.9	0.55	715	1.98	0.01	1.39
L36450N-48900E		62.5	3.95	9.89	<0.05	0.02	0.06	0.052	0.08	7.7	28.5	0.62	384	3.42	0.01	1.86
L36450N-48925E		38.0	4.03	10.75	0.05	<0.02	0.05	0.034	0.18	6.7	32.1	0.71	809	3.22	0.01	1.20
L36450N-48950E		33.0	3.45	8.82	<0.05	0.02	0.04	0.027	0.08	4.5	16.9	0.42	458	2.92	<0.01	1.90
L36450N-48975E		33.9	3.23	8.68	<0.05	0.02	0.04	0.024	0.13	4.6	18.0	0.50	385	2.49	0.01	1.69
L36450N-49000E		81.0	4.57	8.59	0.07	0.04	0.05	0.044	0.23	6.9	28.9	0.74	567	3.55	0.01	1.40
L36450N-49025E		70.9	3.45	8.75	<0.05	0.02	0.06	0.036	0.11	9.4	23.4	0.65	536	4.03	0.01	2.02
L36450N-49050E		53.7	3.53	8.25	0.06	0.03	0.04	0.033	0.12	8.2	26.1	0.68	400	4.27	0.01	2.28
L36450N-49075E		65.7	3.92	8.17	0.06	0.03	0.06	0.033	0.11	8.4	23.4	0.63	362	4.76	0.01	2.55
L36450N-49100E		62.5	3.99	7.40	0.06	0.02	0.02	0.027	0.14	7.4	23.5	0.68	501	2.51	0.01	1.83
L36500N-48725E		58.4	4.38	10.25	0.06	0.03	0.04	0.046	0.13	6.4	32.5	0.84	579	3.77	0.01	2.30
L36500N-48750E		60.9	3.75	8.94	0.06	0.03	0.02	0.040	0.13	6.9	26.6	0.57	515	2.59	<0.01	2.12
L36500N-48775E		58.7	3.52	9.59	0.06	0.03	0.04	0.050	0.13	8.1	28.5	0.58	461	2.63	0.01	2.09

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
L36200N-49500E		4.6	1220	11.8	12.6	<0.001	0.08	0.37	1.1	0.6	0.6	11.8	0.02	0.07	<0.2	0.068
L36200N-49525E		5.5	990	18.6	22.6	<0.001	0.09	0.32	1.4	0.9	0.7	14.6	<0.01	0.17	0.4	0.110
L36200N-49550E		2.5	1330	13.2	8.2	<0.001	0.11	0.23	1.1	1.4	0.6	7.6	0.03	0.05	0.2	0.057
L36200N-49575E		2.9	660	11.2	10.4	<0.001	0.05	0.29	1.2	0.6	0.6	9.4	<0.01	0.07	0.5	0.132
L36200N-49600E		4.1	890	8.5	8.2	0.001	0.12	0.20	1.3	1.9	0.5	10.8	0.02	0.06	<0.2	0.061
L36200N-49625E		36.4	1230	7.6	16.8	0.005	0.12	0.22	3.5	2.5	0.2	27.5	0.01	0.20	0.5	0.080
L36200N-49650E		9.5	550	11.0	10.0	0.001	0.06	0.21	2.1	1.3	0.5	15.2	0.02	0.12	0.4	0.112
L36200N-49675E		6.3	1030	8.8	10.3	0.001	0.05	0.21	2.0	0.6	0.9	8.3	0.04	0.07	0.6	0.151
L36200N-49700E		5.0	680	8.8	15.5	<0.001	0.10	0.14	1.9	2.0	0.3	22.4	0.01	0.16	0.5	0.122
L36200N-49725E		3.0	1120	2.5	47.4	0.001	0.21	0.10	6.1	5.4	0.3	50.1	0.02	0.09	1.4	0.199
L36250N-49525E		2.7	470	13.2	7.0	<0.001	0.04	0.12	0.3	0.2	0.6	22.0	<0.01	0.09	<0.2	0.045
L36250N-49550E		10.1	960	17.5	32.7	<0.001	0.07	0.34	2.0	0.9	0.5	61.2	0.03	0.11	0.5	0.082
L36250N-49575E		6.8	900	55.7	12.2	0.001	0.09	0.37	1.8	1.0	0.5	14.0	<0.01	0.21	0.4	0.100
L36250N-49600E		11.7	970	51.0	11.1	0.001	0.06	0.24	1.9	0.8	0.5	9.9	0.01	0.14	0.3	0.102
L36250N-49625E		40.8	1100	5.8	34.9	0.001	0.04	0.10	4.9	1.5	<0.2	49.9	<0.01	0.10	1.3	0.131
L36250N-49650E		9.6	630	15.2	30.1	0.001	0.09	0.15	2.5	2.2	0.4	19.5	0.01	0.17	0.4	0.113
L36250N-49675E		19.5	1250	15.1	27.3	<0.001	0.13	0.23	3.0	1.8	0.3	22.5	0.01	0.20	0.7	0.140
L36250N-49700E		1.7	400	10.2	3.0	<0.001	0.04	0.13	0.4	0.7	0.6	7.8	<0.01	0.04	<0.2	0.068
L36250N-49725E		2.9	490	8.6	13.5	<0.001	0.08	0.12	2.2	1.8	0.3	18.9	<0.01	0.10	1.3	0.147
L36250N-49750E		4.5	450	7.6	14.9	<0.001	0.07	0.14	4.3	2.0	0.4	19.5	0.02	0.12	1.7	0.203
L36450N-48700E		9.0	1200	27.4	19.5	0.001	0.04	0.23	2.5	0.7	0.6	17.4	<0.01	0.16	1.3	0.124
L36450N-48725E		4.1	1020	17.9	15.5	<0.001	0.03	0.30	1.7	0.5	0.6	13.4	<0.01	0.27	0.6	0.120
L36450N-48750E		7.0	940	23.2	25.4	0.001	0.04	0.24	2.4	0.4	0.6	20.0	<0.01	0.15	1.0	0.140
L36450N-48775E		9.9	810	35.8	24.7	<0.001	0.04	0.32	2.4	0.5	0.5	21.5	<0.01	0.14	0.8	0.113
L36450N-48800E		12.9	1260	46.1	31.9	<0.001	0.04	0.43	2.5	0.6	0.6	26.1	0.01	0.14	0.9	0.122
L36450N-48825E		10.2	2210	73.6	19.3	<0.001	0.04	0.38	2.0	0.4	0.5	20.2	<0.01	0.17	1.1	0.108
L36450N-48850E		8.9	810	25.7	33.3	<0.001	0.03	0.31	2.2	0.4	0.7	18.8	<0.01	0.11	0.7	0.095
L36450N-48875E		9.7	940	43.4	34.3	0.001	0.04	0.22	1.7	0.5	0.6	20.1	<0.01	0.10	0.5	0.099
L36450N-48900E		12.3	1330	73.3	15.4	0.001	0.04	0.48	2.1	0.4	0.6	20.6	<0.01	0.14	0.9	0.108
L36450N-48925E		8.5	1670	32.9	64.1	<0.001	0.03	0.34	2.0	0.4	0.6	45.0	0.01	0.11	0.4	0.097
L36450N-48950E		6.2	1010	40.6	33.9	<0.001	0.03	0.35	1.8	0.3	0.6	15.8	<0.01	0.13	1.1	0.120
L36450N-48975E		5.6	1220	41.6	29.2	0.001	0.03	0.26	1.7	0.5	0.5	18.0	<0.01	0.10	0.8	0.114
L36450N-49000E		6.7	1870	33.1	22.5	<0.001	0.03	0.49	3.6	1.7	0.6	39.0	0.01	0.11	1.9	0.102
L36450N-49025E		14.2	1130	89.0	19.9	<0.001	0.04	0.38	2.3	0.7	0.5	40.8	0.02	0.14	1.0	0.105
L36450N-49050E		13.1	1350	116.0	22.6	<0.001	0.05	0.59	2.0	0.9	0.5	28.8	0.01	0.11	1.1	0.116
L36450N-49075E		14.0	1300	120.5	22.5	0.001	0.07	0.78	2.3	1.0	0.6	25.7	0.01	0.14	0.8	0.119
L36450N-49100E		16.5	1980	27.9	35.7	<0.001	0.08	0.41	2.7	0.8	0.5	29.5	<0.01	0.10	0.6	0.116
L36500N-48725E		16.5	1060	28.8	31.1	0.001	0.05	0.29	2.6	0.6	0.8	20.5	<0.01	0.15	0.7	0.152
L36500N-48750E		8.9	870	63.4	28.5	<0.001	0.05	0.43	2.8	0.7	0.6	19.7	<0.01	0.15	1.6	0.137
L36500N-48775E		10.3	1130	60.1	29.0	0.001	0.04	0.44	2.6	0.5	0.7	18.4	0.01	0.15	1.0	0.122

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Tl	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.05	1	0.05	0.05	2	0.5
L36200N-49500E		0.18	2.67	31	0.52	4.91	26	1.6
L36200N-49525E		0.29	0.98	87	1.28	3.04	42	1.1
L36200N-49550E		0.20	2.25	36	1.33	4.45	20	2.8
L36200N-49575E		0.15	0.45	82	0.83	1.68	23	1.2
L36200N-49600E		0.16	1.45	60	4.80	5.45	19	2.9
L36200N-49625E		0.26	1.64	110	1.55	11.30	222	2.6
L36200N-49650E		0.12	0.86	88	1.70	3.14	52	3.1
L36200N-49675E		0.17	0.90	50	0.50	2.93	24	5.9
L36200N-49700E		0.20	0.54	103	2.60	1.86	25	1.4
L36200N-49725E		0.59	0.67	181	0.37	6.32	33	0.6
L36250N-49525E		0.11	0.73	34	0.81	1.47	20	<0.5
L36250N-49550E		0.28	3.70	56	0.61	5.04	85	1.9
L36250N-49575E		0.21	0.92	98	0.96	2.83	46	1.1
L36250N-49600E		0.16	0.53	76	0.72	2.24	56	1.8
L36250N-49625E		0.55	0.85	137	0.33	4.55	82	2.5
L36250N-49650E		0.36	0.80	98	2.68	3.94	45	2.1
L36250N-49675E		0.30	0.84	112	1.37	2.88	53	2.3
L36250N-49700E		0.09	0.56	42	0.27	1.31	6	0.9
L36250N-49725E		0.18	0.69	113	1.27	1.52	21	1.0
L36250N-49750E		0.25	0.86	188	3.15	2.61	38	3.8
L36450N-48700E		0.17	0.58	71	2.24	2.90	137	1.3
L36450N-48725E		0.10	0.37	65	1.46	1.65	130	0.5
L36450N-48750E		0.14	0.46	70	2.30	2.58	386	1.2
L36450N-48775E		0.15	0.61	62	2.03	2.98	300	0.9
L36450N-48800E		0.19	0.43	67	2.36	2.34	266	1.1
L36450N-48825E		0.15	0.56	65	4.01	1.90	206	0.8
L36450N-48850E		0.22	0.74	64	2.54	2.92	231	<0.5
L36450N-48875E		0.16	0.52	56	2.01	3.03	380	0.6
L36450N-48900E		0.14	0.69	71	3.96	2.73	303	1.2
L36450N-48925E		0.28	0.64	78	1.40	2.58	215	0.5
L36450N-48950E		0.15	0.43	62	2.79	1.81	134	0.8
L36450N-48975E		0.18	0.37	65	4.28	1.74	113	0.8
L36450N-49000E		0.30	0.63	74	3.10	3.74	168	1.4
L36450N-49025E		0.18	0.58	60	6.96	3.35	278	0.9
L36450N-49050E		0.20	0.53	62	13.15	2.71	198	1.2
L36450N-49075E		0.20	0.65	74	5.59	2.70	178	1.3
L36450N-49100E		0.27	0.53	79	1.20	1.99	113	1.0
L36500N-48725E		0.15	0.58	79	1.83	2.65	269	1.6
L36500N-48750E		0.16	0.50	67	2.97	3.52	269	1.5
L36500N-48775E		0.15	0.68	63	4.51	3.11	284	1.3

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L36500N-48800E		0.25	1.04	2.07	39.2	<0.02	<10	70	0.56	0.80	0.08	1.65	13.25	6.0	18	4.72
L36500N-48825E		0.20	0.57	2.30	50.3	0.02	<10	60	0.48	0.78	0.10	1.73	14.75	6.5	19	3.51
L36500N-48850E		0.18	0.60	2.24	50.2	0.02	<10	60	0.51	0.82	0.11	2.53	13.60	6.1	20	4.91
L36500N-48875E		0.25	1.24	2.13	89.8	0.05	<10	50	0.59	0.77	0.15	4.13	17.90	8.2	19	4.52
L36500N-48900E		0.23	0.56	1.88	44.5	<0.02	<10	90	0.49	0.58	0.15	3.14	15.90	6.6	18	3.96
L36500N-48925E		0.19	0.53	1.87	47.4	0.02	<10	70	0.51	0.71	0.15	3.72	16.35	9.7	18	4.32
L36500N-48950E		0.22	1.33	2.04	26.1	0.04	<10	70	0.43	0.67	0.16	1.03	12.40	6.5	16	3.96
L36500N-48975E		0.20	0.96	2.34	36.9	0.02	<10	40	0.57	0.72	0.11	0.65	10.50	5.3	13	3.59
L36500N-49000E		0.17	1.49	1.79	50.6	0.03	<10	40	0.30	0.77	0.06	0.47	12.50	3.2	15	2.36
L36500N-49025E		0.17	0.95	2.16	39.9	0.33	<10	50	0.30	0.95	0.09	0.41	14.90	4.4	20	3.47
L36500N-49050E		0.20	0.89	1.74	33.9	0.07	<10	40	0.29	0.96	0.08	0.46	11.55	2.7	15	2.99
L36500N-49075E		0.25	1.25	3.13	29.8	0.02	<10	70	0.57	0.56	0.10	0.81	19.40	5.3	24	3.78
L36500N-49100E		0.21	0.64	2.14	22.8	0.03	<10	60	0.43	0.51	0.09	0.53	16.60	4.1	21	2.77
L36500N-49125E		0.25	0.53	3.15	34.8	0.03	<10	80	0.56	0.57	0.18	0.76	21.0	7.0	27	3.47
L36500N-49150E		0.16	0.81	1.80	12.7	<0.02	<10	70	0.28	0.36	0.08	0.46	15.15	3.5	21	3.63
L36550N-48900E		0.20	0.59	2.38	122.5	0.07	<10	80	0.54	0.53	0.08	1.46	15.75	7.0	23	3.74
L36550N-48925E		0.26	1.21	3.00	92.8	0.02	<10	70	0.67	0.76	0.07	0.84	16.60	5.7	19	3.41
L36550N-48950E		0.28	1.90	2.59	38.4	<0.02	<10	70	0.54	0.68	0.11	0.66	20.4	5.8	23	2.93
L36550N-48975E		0.22	2.21	1.49	55.4	0.46	<10	50	0.23	0.87	0.06	0.56	12.05	2.8	14	2.30
L36550N-49000E		0.20	2.31	2.18	86.6	0.04	<10	50	0.35	0.64	0.08	0.78	13.70	3.2	15	2.44
L36550N-49025E		0.26	1.31	2.72	58.9	0.04	<10	60	0.47	0.59	0.09	0.47	15.50	2.9	11	2.41
L36550N-49050E		0.15	0.40	2.52	62.9	0.03	<10	50	0.31	0.59	0.05	0.45	14.00	3.0	15	2.76
L36550N-49075E		0.34	0.69	2.93	65.5	0.05	<10	90	0.46	0.56	0.25	0.89	20.8	8.7	19	3.48
L36550N-49100E		0.26	1.30	2.61	118.0	0.07	<10	50	0.39	1.10	0.08	0.44	18.20	2.9	15	2.15
L36550N-49125E		0.27	0.58	2.72	74.4	0.05	<10	70	0.47	0.57	0.25	1.00	22.4	5.9	19	3.93
L36550N-49150E		0.15	0.59	3.17	8.7	<0.02	<10	50	0.50	0.24	0.21	0.38	36.1	6.5	31	1.72
L36550N-49175E		0.14	0.25	2.64	7.1	<0.02	<10	70	0.38	0.25	0.08	0.34	13.80	3.3	15	3.15
L36550N-49200E		0.32	0.31	3.83	12.3	<0.02	<10	190	0.76	0.29	0.21	0.54	34.6	14.2	51	6.48
L36600N-48900E		0.28	0.88	2.88	119.0	0.02	<10	80	0.57	0.61	0.11	1.47	19.60	6.4	21	3.24
L36600N-48925E		0.34	0.65	3.24	94.1	<0.02	<10	70	0.70	0.44	0.16	0.66	26.6	6.4	24	3.52
L36600N-48950E		0.25	1.17	2.45	86.6	<0.02	<10	60	0.61	0.41	0.09	0.77	18.05	5.0	21	3.36
L36600N-48975E		0.27	0.91	1.95	45.6	<0.02	<10	50	0.42	0.51	0.08	0.81	15.30	4.7	19	3.64
L36600N-49000E		0.15	2.24	2.28	39.6	0.02	<10	50	0.44	0.61	0.06	0.48	12.55	3.1	16	2.79
L36600N-49025E		0.17	1.94	2.15	25.6	<0.02	<10	30	0.34	0.31	0.10	0.31	12.05	1.5	8	1.81
L36600N-49050E		0.26	4.01	2.99	90.6	0.44	<10	80	0.55	1.86	0.10	0.67	24.1	4.1	15	2.35
L36600N-49075E		0.21	3.36	2.14	54.5	0.05	<10	60	0.38	1.59	0.07	0.55	13.25	3.9	13	2.74
L36600N-49100E		0.27	0.78	2.57	113.5	0.08	<10	70	0.58	0.60	0.11	0.49	18.50	3.5	12	2.66
L36600N-49125E		0.20	1.94	1.61	68.6	0.20	<10	60	0.23	1.05	0.08	0.50	13.80	2.8	14	2.32
L36600N-49150E		0.13	1.32	3.19	41.6	<0.02	<10	40	0.43	0.22	0.08	0.51	14.90	2.5	8	2.83
L36600N-49175E		0.16	0.80	3.10	7.5	0.12	<10	30	0.38	0.21	0.03	0.34	10.85	1.2	7	0.89

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L36500N-48800E		47.3	3.54	10.15	0.05	0.03	0.04	0.049	0.11	7.4	28.8	0.55	385	2.71	0.01	2.32
L36500N-48825E		44.4	2.99	8.79	0.06	0.03	0.05	0.053	0.09	7.9	29.3	0.56	526	2.37	0.01	1.79
L36500N-48850E		44.5	3.22	9.38	0.05	0.02	0.05	0.047	0.10	7.3	31.8	0.58	403	2.26	0.01	1.75
L36500N-48875E		62.6	3.01	8.66	0.06	<0.02	0.04	0.052	0.09	9.8	26.2	0.56	474	2.74	0.01	1.41
L36500N-48900E		49.6	2.95	7.97	0.06	<0.02	0.04	0.048	0.12	8.8	28.0	0.55	944	1.63	0.01	1.11
L36500N-48925E		58.3	2.99	8.38	0.06	<0.02	0.02	0.047	0.11	9.2	29.7	0.60	987	1.89	0.01	1.32
L36500N-48950E		43.7	2.89	8.17	0.05	0.02	0.05	0.039	0.08	5.9	25.9	0.51	1130	2.95	0.01	1.67
L36500N-48975E		76.3	3.28	8.37	0.05	<0.02	0.07	0.063	0.09	6.1	23.7	0.48	562	3.88	0.01	1.65
L36500N-49000E		67.0	3.70	9.14	0.05	0.02	0.05	0.051	0.05	7.0	13.6	0.38	235	4.25	<0.01	1.99
L36500N-49025E		44.9	3.35	9.94	0.05	0.05	0.03	0.050	0.07	8.0	19.9	0.51	298	3.44	0.01	3.51
L36500N-49050E		29.5	2.70	9.83	0.05	0.02	0.06	0.041	0.05	6.2	17.1	0.44	408	2.85	0.01	2.15
L36500N-49075E		45.1	3.43	8.92	0.06	0.06	0.08	0.045	0.09	10.8	26.9	0.59	331	3.26	0.01	3.50
L36500N-49100E		36.5	3.00	9.23	0.05	0.04	0.05	0.037	0.05	9.2	18.4	0.47	285	2.72	0.01	3.63
L36500N-49125E		69.5	3.47	7.46	0.08	0.06	0.07	0.050	0.10	11.7	31.5	0.74	386	3.49	0.01	2.94
L36500N-49150E		25.6	2.99	10.60	0.05	0.05	0.03	0.033	0.11	7.9	11.2	0.49	345	2.27	0.01	4.40
L36550N-48900E		42.9	3.28	9.04	0.06	0.03	0.03	0.051	0.16	8.5	25.9	0.60	536	1.95	0.01	1.69
L36550N-48925E		52.7	3.36	9.52	0.06	0.04	0.06	0.057	0.12	9.5	25.9	0.53	503	3.76	0.01	2.44
L36550N-48950E		52.2	3.30	9.58	0.06	0.03	0.09	0.052	0.09	11.6	23.8	0.57	317	1.77	0.01	2.47
L36550N-48975E		52.6	2.99	9.14	0.05	0.02	0.07	0.070	0.07	6.6	12.4	0.39	256	2.59	0.01	1.75
L36550N-49000E		58.7	3.25	10.00	0.05	0.03	0.05	0.068	0.10	7.3	19.5	0.49	307	2.09	0.01	1.65
L36550N-49025E		81.4	2.79	7.51	0.07	0.09	0.05	0.078	0.15	8.7	25.7	0.58	261	2.77	0.01	1.58
L36550N-49050E		31.7	3.08	10.35	0.05	0.06	0.03	0.045	0.09	7.6	16.8	0.42	225	2.09	0.01	1.89
L36550N-49075E		101.0	2.87	6.70	0.09	0.13	0.05	0.065	0.20	11.9	31.6	0.80	379	2.01	0.01	2.37
L36550N-49100E		75.4	2.87	7.96	0.07	0.04	0.05	0.113	0.10	10.4	23.1	0.57	284	2.56	<0.01	1.50
L36550N-49125E		69.2	2.83	7.36	0.10	0.07	0.05	0.075	0.21	13.2	32.0	0.86	416	1.52	0.01	1.84
L36550N-49150E		16.5	2.67	10.65	0.07	0.13	0.05	0.031	0.05	18.7	15.7	0.77	284	1.43	0.02	7.46
L36550N-49175E		15.2	2.72	11.10	0.06	0.09	0.04	0.025	0.11	7.0	16.4	0.43	256	1.83	0.01	3.29
L36550N-49200E		43.6	4.49	12.90	0.10	0.09	0.03	0.038	0.20	18.1	41.7	1.77	712	1.24	0.01	7.35
L36600N-48900E		39.4	2.79	7.75	0.06	0.05	0.04	0.045	0.14	10.1	23.5	0.55	418	1.43	0.01	1.60
L36600N-48925E		38.4	3.27	8.70	0.07	0.07	0.05	0.045	0.13	14.2	31.2	0.63	338	1.42	0.01	1.96
L36600N-48950E		36.2	3.18	9.26	0.06	0.03	0.07	0.046	0.10	9.5	24.0	0.48	346	1.84	0.01	1.68
L36600N-48975E		28.7	3.76	11.65	0.07	0.07	0.07	0.043	0.08	8.1	19.4	0.43	299	1.86	0.01	2.90
L36600N-49000E		46.4	3.32	11.45	0.06	0.06	0.08	0.069	0.08	6.4	16.9	0.37	324	2.60	0.01	2.20
L36600N-49025E		25.8	1.87	8.60	0.07	0.09	0.07	0.037	0.11	5.9	16.8	0.35	183	2.06	0.01	1.83
L36600N-49050E		161.0	3.17	8.37	0.12	0.05	0.10	0.210	0.23	13.3	28.7	0.72	352	4.08	0.01	1.56
L36600N-49075E		104.5	3.54	8.99	0.07	0.02	0.04	0.091	0.12	7.2	20.3	0.52	371	4.03	<0.01	1.83
L36600N-49100E		149.5	3.14	7.28	0.09	0.08	0.06	0.071	0.16	10.4	31.9	0.62	286	3.84	0.01	1.60
L36600N-49125E		61.5	2.65	8.45	0.07	0.02	0.04	0.117	0.11	7.5	20.7	0.61	378	2.19	<0.01	1.54
L36600N-49150E		21.4	1.77	7.98	0.07	0.10	0.06	0.037	0.06	7.6	11.6	0.23	200	1.28	0.01	1.70
L36600N-49175E		11.8	1.79	10.60	0.07	0.12	0.10	0.024	0.02	5.2	6.2	0.08	108	1.69	0.01	1.97

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
L36500N-48800E		9.8	1310	73.1	29.3	<0.001	0.05	0.34	2.3	0.4	0.7	18.2	<0.01	0.15	1.2	0.130
L36500N-48825E		10.7	1610	77.3	22.4	0.001	0.05	0.54	2.0	0.8	0.6	19.0	0.01	0.15	0.8	0.103
L36500N-48850E		10.8	1850	103.5	24.2	<0.001	0.05	0.54	1.8	0.5	0.6	19.0	<0.01	0.16	0.7	0.107
L36500N-48875E		10.2	600	55.3	18.8	<0.001	0.05	0.34	1.9	0.9	0.6	26.3	0.01	0.13	0.4	0.092
L36500N-48900E		10.8	1360	35.7	26.0	<0.001	0.06	0.29	1.3	0.4	0.5	30.3	<0.01	0.12	0.3	0.073
L36500N-48925E		10.1	1190	50.1	28.9	0.001	0.05	0.24	1.6	0.4	0.6	26.8	<0.01	0.12	0.4	0.098
L36500N-48950E		9.8	1470	80.7	17.4	<0.001	0.04	0.51	1.9	0.6	0.6	25.2	0.02	0.09	0.8	0.103
L36500N-48975E		7.9	1150	67.9	17.1	<0.001	0.04	0.44	1.9	0.7	0.6	24.0	0.02	0.13	0.7	0.092
L36500N-49000E		6.7	1560	77.6	9.7	<0.001	0.05	0.37	1.8	0.8	0.6	17.4	<0.01	0.14	1.2	0.106
L36500N-49025E		10.2	830	116.0	15.4	0.001	0.04	0.68	2.2	0.6	0.7	20.9	0.01	0.14	1.9	0.138
L36500N-49050E		6.5	1240	142.0	14.4	<0.001	0.04	0.80	1.5	0.5	0.7	13.9	<0.01	0.12	0.6	0.103
L36500N-49075E		13.1	1060	105.0	16.5	<0.001	0.07	0.53	2.0	1.0	0.6	24.9	0.02	0.13	0.6	0.110
L36500N-49100E		11.4	770	76.6	11.5	<0.001	0.04	0.42	1.7	0.6	0.7	19.9	0.01	0.09	0.7	0.120
L36500N-49125E		18.3	1310	90.3	13.5	0.001	0.06	0.54	2.0	0.8	0.4	34.8	0.02	0.14	0.9	0.093
L36500N-49150E		10.4	1030	26.4	19.1	<0.001	0.04	0.24	1.8	0.4	0.8	18.0	<0.01	0.05	0.6	0.157
L36550N-48900E		11.8	860	26.2	33.0	<0.001	0.05	0.32	3.0	0.6	0.6	20.0	0.01	0.10	1.2	0.121
L36550N-48925E		10.0	1080	39.7	26.4	<0.001	0.05	0.30	2.8	0.8	0.6	23.1	0.03	0.14	1.7	0.126
L36550N-48950E		13.0	910	26.8	20.3	<0.001	0.05	0.30	2.1	0.7	0.6	33.0	0.01	0.09	0.8	0.109
L36550N-48975E		5.4	1320	39.2	14.0	0.001	0.05	0.29	1.5	0.4	0.6	21.6	<0.01	0.13	0.5	0.106
L36550N-49000E		5.3	1190	53.2	15.2	0.001	0.07	0.25	1.7	0.6	0.6	19.3	0.01	0.08	0.5	0.102
L36550N-49025E		4.2	1130	53.2	14.6	<0.001	0.09	0.19	3.0	1.0	0.5	26.1	0.02	0.11	1.6	0.101
L36550N-49050E		5.4	1240	33.3	13.1	<0.001	0.06	0.26	2.0	0.7	0.7	13.3	0.02	0.11	0.6	0.110
L36550N-49075E		18.2	1450	58.5	20.0	<0.001	0.06	0.34	3.1	0.5	0.3	41.3	0.02	0.17	2.4	0.105
L36550N-49100E		6.1	880	41.3	11.5	<0.001	0.08	0.26	2.2	1.1	0.4	24.5	0.01	0.18	0.8	0.085
L36550N-49125E		14.4	1390	33.3	23.9	<0.001	0.05	0.22	2.9	0.6	0.3	46.7	0.01	0.19	2.0	0.106
L36550N-49150E		29.2	1670	14.2	7.0	<0.001	0.04	0.25	2.3	0.4	0.9	33.4	0.07	0.03	0.8	0.167
L36550N-49175E		8.9	1050	13.1	19.2	<0.001	0.05	0.23	1.7	0.5	0.9	13.0	0.05	0.04	0.3	0.140
L36550N-49200E		47.4	1410	29.4	35.6	<0.001	0.05	0.26	3.5	0.5	0.7	54.2	0.03	0.07	1.4	0.210
L36600N-48900E		12.4	1130	19.3	25.7	0.001	0.05	0.32	3.0	0.7	0.5	29.8	0.02	0.07	1.2	0.103
L36600N-48925E		13.5	910	17.6	21.5	0.001	0.05	0.24	3.3	1.0	0.5	44.2	0.02	0.07	1.8	0.104
L36600N-48950E		11.2	1030	24.2	22.6	<0.001	0.03	0.35	2.1	0.8	0.6	21.6	0.01	0.07	0.7	0.101
L36600N-48975E		10.3	800	22.3	22.0	<0.001	0.02	0.30	2.4	0.5	0.9	19.2	0.01	0.07	1.9	0.157
L36600N-49000E		6.7	1680	31.8	19.5	<0.001	0.04	0.31	1.8	0.6	0.9	15.9	0.01	0.10	0.7	0.124
L36600N-49025E		2.8	840	19.5	14.4	<0.001	0.02	0.21	2.0	0.3	0.7	7.0	0.04	0.05	0.9	0.111
L36600N-49050E		8.6	1940	215	20.8	<0.001	0.15	0.40	2.8	2.3	0.4	48.0	0.01	0.30	0.7	0.088
L36600N-49075E		6.2	980	85.2	17.5	<0.001	0.06	0.20	2.1	0.7	0.6	27.8	<0.01	0.27	0.6	0.113
L36600N-49100E		6.2	1370	60.2	16.1	0.001	0.09	0.21	2.7	1.0	0.4	39.0	0.02	0.17	1.5	0.098
L36600N-49125E		6.2	1030	54.6	14.7	<0.001	0.05	0.31	1.4	0.7	0.5	29.2	<0.01	0.25	0.4	0.092
L36600N-49150E		4.5	930	12.9	14.8	<0.001	0.06	0.34	1.4	0.7	0.6	10.2	0.03	0.07	0.2	0.083
L36600N-49175E		2.9	780	10.0	4.4	<0.001	0.05	0.21	1.4	0.8	1.0	5.6	0.07	0.03	<0.2	0.094

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
L36500N-48800E		0.14	0.55	65	4.03	2.25	290	1.2
L36500N-48825E		0.13	0.57	59	4.51	2.72	332	1.1
L36500N-48850E		0.12	0.57	62	5.22	2.62	593	1.1
L36500N-48875E		0.15	0.58	64	3.71	5.66	351	0.5
L36500N-48900E		0.15	0.54	54	1.65	3.07	373	0.5
L36500N-48925E		0.16	0.49	61	2.38	3.23	394	<0.5
L36500N-48950E		0.16	0.44	54	6.15	2.50	271	0.9
L36500N-48975E		0.13	0.51	58	4.73	2.12	262	0.6
L36500N-49000E		0.12	0.57	65	8.08	2.25	134	1.0
L36500N-49025E		0.14	0.60	64	9.04	3.09	177	3.1
L36500N-49050E		0.12	0.57	59	5.77	2.13	149	0.9
L36500N-49075E		0.15	0.63	60	5.08	4.14	218	2.7
L36500N-49100E		0.10	0.57	55	4.37	3.11	150	2.2
L36500N-49125E		0.15	0.64	58	6.89	4.61	284	2.2
L36500N-49150E		0.13	0.57	62	0.81	2.90	87	2.5
L36550N-48900E		0.22	0.72	71	1.09	3.21	305	1.3
L36550N-48925E		0.18	0.83	63	2.53	3.01	247	2.4
L36550N-48950E		0.19	0.79	61	2.22	3.25	169	1.5
L36550N-48975E		0.12	0.44	62	2.77	1.81	104	0.8
L36550N-49000E		0.16	0.64	62	2.22	3.07	134	1.8
L36550N-49025E		0.23	0.51	62	3.21	3.61	131	3.7
L36550N-49050E		0.20	0.61	65	1.92	3.07	87	3.0
L36550N-49075E		0.25	0.52	62	11.80	5.71	392	5.2
L36550N-49100E		0.17	0.57	63	4.12	3.94	148	1.5
L36550N-49125E		0.27	0.63	69	9.68	5.23	362	2.6
L36550N-49150E		0.08	0.87	54	1.28	5.50	95	7.1
L36550N-49175E		0.14	0.63	51	0.40	3.86	69	5.3
L36550N-49200E		0.26	0.86	91	0.55	6.98	227	5.3
L36600N-48900E		0.22	0.98	58	0.97	4.48	267	2.1
L36600N-48925E		0.24	0.95	59	1.15	5.80	214	2.5
L36600N-48950E		0.19	0.78	63	0.83	2.94	158	1.2
L36600N-48975E		0.16	0.78	68	1.31	2.65	151	3.2
L36600N-49000E		0.14	0.79	59	2.72	2.45	120	3.2
L36600N-49025E		0.15	0.66	47	1.69	3.45	88	4.7
L36600N-49050E		0.25	0.71	66	7.43	4.32	190	1.9
L36600N-49075E		0.16	0.60	68	5.36	2.53	162	1.1
L36600N-49100E		0.22	0.48	63	5.02	4.13	185	3.0
L36600N-49125E		0.19	0.46	65	5.79	1.96	157	0.7
L36600N-49150E		0.18	0.62	39	1.05	3.86	86	4.8
L36600N-49175E		0.07	0.86	28	0.43	2.72	21	6.3

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L36600N-49200E		0.13	0.92	1.23	34.1	0.06	<10	40	0.26	0.39	0.04	0.69	10.55	2.0	11	1.94
L36600N-49225E		0.28	1.50	3.43	280	1.01	<10	60	0.83	0.47	0.24	1.49	24.2	11.3	15	8.36
L36800N-49750E		0.15	0.26	2.37	21.9	<0.02	<10	30	0.31	0.30	0.09	0.51	9.95	10.0	40	3.87
L36800N-49775E		0.26	1.48	3.72	12.3	<0.02	<10	50	0.69	0.76	0.07	0.59	11.20	8.3	24	3.25
L36800N-49800E		0.12	0.82	2.45	7.2	<0.02	<10	30	0.41	0.77	0.06	0.37	9.75	2.5	19	2.85
L36800N-49825E		0.16	1.30	4.39	16.2	<0.02	<10	40	0.52	1.06	0.05	0.28	10.85	2.1	25	1.61
L36800N-49850E		0.17	0.86	3.47	55.1	0.21	<10	20	0.57	2.63	0.05	2.05	11.20	3.0	17	1.80
L36800N-49875E		0.23	0.91	1.68	27.0	0.04	<10	20	0.30	10.10	0.09	0.80	8.21	3.9	15	2.04
L36800N-49900E		0.24	6.44	3.34	45.5	0.04	<10	20	0.86	7.80	0.13	1.16	9.11	3.9	26	3.96
L36800N-49925E		0.23	0.98	1.71	18.7	0.04	<10	70	0.28	1.34	0.07	0.35	9.42	2.7	31	3.67
L36800N-49950E		0.25	1.82	3.00	47.0	0.17	<10	70	0.45	1.21	0.09	0.67	12.45	3.5	49	4.53
L36800N-49975E		0.38	1.60	2.99	25.3	1.51	<10	80	0.40	3.37	0.13	0.59	17.30	6.4	42	3.81
L36800N-50000E		0.30	0.49	2.98	13.0	<0.02	<10	130	0.47	1.01	0.10	0.33	19.55	3.5	52	3.64
L36850N-49750E		0.21	0.71	3.30	98.4	<0.02	<10	50	0.72	2.27	0.12	0.83	16.05	21.6	33	9.22
L36850N-49775E		0.27	1.25	1.29	43.3	0.02	<10	50	0.16	0.66	0.18	0.19	11.10	7.0	21	2.65
L36850N-49800E		0.12	0.78	3.06	8.5	<0.02	<10	20	0.41	0.28	0.03	0.54	8.81	1.5	7	1.54
L36850N-49825E		0.31	0.59	3.20	13.4	0.02	<10	40	0.55	2.17	0.05	0.27	11.30	2.1	12	2.21
L36850N-49850E		0.32	0.65	3.35	34.3	0.05	<10	40	0.60	1.34	0.07	0.41	8.79	4.1	19	2.02
L36850N-49875E		0.31	0.96	2.26	24.5	<0.02	<10	30	0.60	0.57	0.08	0.50	8.17	4.9	15	2.96
L36850N-49900E		0.36	1.44	2.10	9.6	0.02	<10	60	0.31	1.39	0.10	0.37	14.25	4.8	49	5.66
L36850N-49925E		0.35	0.60	2.26	10.9	<0.02	<10	60	0.51	0.83	0.07	0.58	10.20	3.7	26	3.47
L36850N-49950E		0.27	1.06	2.67	38.8	0.29	<10	70	0.55	1.21	0.23	2.36	18.40	17.7	46	4.60
L36900N-49750E		0.33	0.32	1.00	159.0	<0.02	<10	40	0.15	0.81	0.06	0.62	6.28	1.7	15	2.36
L36900N-49775E		0.24	0.55	2.11	61.2	<0.02	<10	50	0.73	0.70	0.54	3.04	17.10	18.3	24	6.35
L36900N-49800E		0.26	0.65	2.28	40.5	<0.02	<10	60	0.32	0.36	0.08	0.57	10.60	5.0	23	3.77
L36900N-49825E		0.34	0.24	2.64	20.1	<0.02	<10	40	0.55	0.44	0.17	0.26	15.35	7.9	18	2.81
L36900N-49850E		0.36	0.50	3.57	36.3	<0.02	<10	60	0.84	0.67	0.40	0.72	15.00	17.4	26	3.93
L36900N-49875E		0.62	0.52	3.90	24.3	<0.02	<10	110	1.14	0.81	0.21	0.51	23.2	17.2	25	5.69
L36900N-49900E		0.37	0.41	3.21	23.3	<0.02	<10	60	0.59	0.65	0.13	0.44	13.00	8.4	26	2.82
L36900N-49925E		0.32	0.36	1.63	9.2	<0.02	<10	80	0.28	1.26	0.08	0.33	10.15	4.3	13	3.03
L36900N-49950E		0.31	0.59	5.31	31.7	<0.02	<10	80	1.06	0.49	0.13	0.90	15.90	11.3	21	4.57
L36900N-49400E		0.31	0.99	1.81	87.5	0.06	<10	50	0.27	0.48	0.21	1.22	11.55	6.2	10	3.84
L36900N-49425E		0.29	0.75	2.18	50.6	0.05	<10	50	0.33	0.59	0.09	0.44	13.60	4.2	7	3.15
L36900N-49450E		0.30	0.68	2.01	58.7	0.05	<10	60	0.39	0.63	0.08	0.56	13.30	3.1	7	2.96
L36900N-49475E		0.21	0.24	1.15	56.4	0.02	<10	80	0.17	0.68	0.09	0.44	9.28	1.7	7	2.41
L36900N-49500E		0.28	0.42	1.61	44.6	0.03	<10	50	0.25	0.53	0.09	0.29	10.70	4.0	6	3.31
L36950N-49375E		0.37	6.54	1.01	39.1	0.07	<10	30	0.09	1.04	0.13	3.07	7.35	4.1	5	3.61
L36950N-49400E		0.27	0.70	2.11	79.6	0.07	<10	40	0.35	0.48	0.39	1.54	10.55	16.4	6	4.23
L36950N-49425E		Not Recvd														
L36950N-49450E		0.19	0.54	2.28	113.5	0.05	<10	70	0.62	0.50	0.78	11.75	20.4	26.1	12	6.31

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L36600N-49200E		19.0	2.15	9.61	0.06	<0.02	0.06	0.037	0.03	5.1	4.7	0.16	169	1.92	0.01	1.01
L36600N-49225E		93.3	3.74	7.97	0.09	0.06	0.12	0.050	0.24	10.8	29.8	0.67	658	3.91	0.01	1.57
L36800N-49750E		41.3	4.40	11.70	0.08	0.05	0.05	0.021	0.05	4.7	30.1	0.80	334	3.60	0.01	1.13
L36800N-49775E		50.4	5.35	9.56	0.07	0.04	0.10	0.045	0.04	5.6	31.7	0.56	611	4.46	<0.01	1.08
L36800N-49800E		35.5	3.30	11.20	0.05	0.05	0.12	0.029	0.03	5.0	10.8	0.21	155	3.23	0.01	1.82
L36800N-49825E		53.7	4.45	8.24	0.06	0.24	0.16	0.039	0.04	5.7	18.9	0.34	155	2.98	0.01	2.24
L36800N-49850E		100.5	6.60	13.30	0.07	0.14	0.16	0.078	0.04	5.7	15.7	0.32	174	3.37	0.01	3.18
L36800N-49875E		100.5	4.43	9.65	0.05	0.02	0.08	0.035	0.03	4.2	19.7	0.45	256	2.77	0.01	1.75
L36800N-49900E		134.0	6.49	12.05	0.06	0.06	0.14	0.066	0.09	4.4	26.0	0.49	349	4.37	0.01	2.50
L36800N-49925E		34.1	3.77	10.85	0.10	0.03	0.04	0.024	0.18	4.7	20.2	0.60	398	5.20	0.01	1.27
L36800N-49950E		59.9	4.31	10.40	0.16	0.05	0.05	0.034	0.50	6.3	36.3	1.13	507	6.65	0.01	0.90
L36800N-49975E		100.5	4.94	7.69	0.20	0.04	0.03	0.036	0.52	8.9	39.6	1.06	419	6.80	0.01	0.84
L36800N-50000E		62.1	4.46	9.06	0.19	0.04	0.05	0.029	0.52	10.7	42.7	1.18	377	8.04	0.01	0.73
L36850N-49750E		49.5	4.82	9.65	0.09	0.04	0.11	0.046	0.10	7.5	45.3	0.71	781	6.35	0.01	1.23
L36850N-49775E		69.2	7.14	6.31	0.10	<0.02	0.02	0.017	0.12	4.7	26.2	0.68	354	2.14	0.01	0.78
L36850N-49800E		20.8	1.67	9.69	<0.05	0.09	0.14	0.027	0.02	4.0	3.5	0.04	157	1.52	0.01	1.69
L36850N-49825E		50.9	4.05	10.45	0.07	0.09	0.09	0.038	0.04	5.6	16.6	0.25	246	2.13	0.01	2.20
L36850N-49850E		47.5	3.22	9.87	0.05	0.17	0.09	0.032	0.03	4.3	26.5	0.34	218	2.09	0.01	2.18
L36850N-49875E		82.4	4.91	10.85	0.05	0.02	0.10	0.032	0.04	4.2	15.0	0.29	275	2.68	0.01	1.77
L36850N-49900E		83.1	8.00	10.70	0.14	0.03	0.03	0.033	0.44	8.0	39.3	1.06	439	4.99	0.01	0.73
L36850N-49925E		31.5	3.68	11.55	0.06	0.07	0.06	0.026	0.08	5.3	26.4	0.45	236	3.62	0.01	2.13
L36850N-49950E		121.5	4.80	8.93	0.17	0.04	0.02	0.029	0.48	9.1	40.7	1.18	599	5.11	0.01	0.68
L36900N-49750E		23.2	2.57	8.90	<0.05	0.03	0.08	0.025	0.04	3.3	3.6	0.13	99	1.68	0.01	0.92
L36900N-49775E		58.6	3.59	7.27	0.08	<0.02	0.06	0.051	0.09	8.3	46.1	0.64	1120	7.15	0.01	0.51
L36900N-49800E		29.8	3.77	10.90	0.06	0.03	0.10	0.028	0.07	5.3	15.1	0.41	460	2.45	0.01	1.01
L36900N-49825E		60.4	4.48	8.16	0.07	0.09	0.04	0.027	0.05	7.5	27.3	0.55	501	1.92	0.01	1.06
L36900N-49850E		81.1	4.88	8.89	<0.05	0.07	0.08	0.035	0.08	7.0	31.8	0.77	784	2.01	0.01	1.53
L36900N-49875E		97.9	5.99	9.75	<0.05	0.08	0.07	0.055	0.07	9.9	41.1	0.97	813	2.52	0.01	1.17
L36900N-49900E		50.7	4.14	9.62	<0.05	0.05	0.06	0.035	0.06	6.8	29.2	0.63	423	2.00	0.01	1.61
L36900N-49925E		24.2	3.53	11.90	<0.05	<0.02	0.02	0.027	0.06	5.2	14.4	0.30	313	1.43	0.01	1.69
L36900N-49950E		34.3	4.07	10.55	<0.05	0.41	0.09	0.044	0.07	7.2	34.3	0.45	418	1.66	0.01	2.64
L36900N-49400E		58.1	4.86	6.87	0.06	<0.02	0.04	0.034	0.36	5.8	24.0	0.74	668	1.47	0.01	1.36
L36900N-49425E		51.0	4.51	7.26	0.05	<0.02	0.03	0.021	0.29	7.1	21.3	0.56	512	1.66	0.01	1.68
L36900N-49450E		39.3	4.28	7.68	<0.05	<0.02	0.04	0.026	0.28	7.2	21.0	0.52	584	1.59	0.01	1.61
L36900N-49475E		26.3	3.90	7.80	<0.05	<0.02	0.04	0.026	0.20	4.9	10.7	0.42	358	1.29	0.01	1.64
L36900N-49500E		42.1	3.81	6.16	<0.05	<0.02	0.06	0.022	0.30	5.8	20.0	0.54	616	1.58	0.01	1.36
L36950N-49375E		322	9.76	5.85	0.10	<0.02	0.04	0.158	0.32	3.8	17.3	0.51	516	2.04	0.01	1.12
L36950N-49400E		94.9	5.18	7.29	0.05	<0.02	0.04	0.076	0.29	4.8	20.3	0.54	892	1.48	0.01	1.18
L36950N-49425E																
L36950N-49450E		59.8	4.73	6.88	0.08	<0.02	0.02	0.039	0.33	12.7	47.1	0.87	1690	1.65	0.01	1.17

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
L36600N-49200E		7.1	730	29.4	7.0	<0.001	0.05	0.41	0.3	0.3	1.0	19.0	<0.01	0.06	<0.2	0.048
L36600N-49225E		12.8	1710	27.0	41.1	<0.001	0.04	0.39	2.2	1.1	0.4	35.2	0.02	0.28	0.7	0.077
L36800N-49750E		11.8	390	14.6	12.3	<0.001	0.02	0.22	2.0	0.8	0.6	6.9	<0.01	0.05	0.5	0.185
L36800N-49775E		9.5	1240	30.2	8.9	<0.001	0.06	0.24	2.2	1.9	0.5	19.7	0.02	0.20	0.3	0.049
L36800N-49800E		6.4	620	21.0	6.2	<0.001	0.05	0.34	1.4	1.7	0.9	13.2	0.02	0.14	0.2	0.095
L36800N-49825E		5.0	770	47.1	3.8	<0.001	0.07	0.33	3.3	2.1	0.5	12.2	0.05	0.30	1.5	0.109
L36800N-49850E		6.7	1380	186.5	5.0	<0.001	0.09	0.71	2.5	3.2	0.9	11.1	0.04	0.52	1.3	0.131
L36800N-49875E		7.9	810	177.0	5.1	<0.001	0.03	0.60	2.4	1.2	0.6	12.9	0.01	1.54	1.2	0.079
L36800N-49900E		9.5	1090	554	12.1	<0.001	0.06	1.16	4.4	4.2	0.8	20.6	0.03	1.16	1.1	0.121
L36800N-49925E		5.1	610	568	27.8	<0.001	0.13	0.82	4.9	2.2	0.8	18.6	<0.01	0.27	0.9	0.194
L36800N-49950E		7.4	750	744	42.2	<0.001	0.18	0.78	9.1	3.2	0.5	28.2	0.01	0.21	1.4	0.175
L36800N-49975E		12.4	1050	309	35.6	<0.001	0.18	0.32	8.2	4.8	0.3	43.6	0.02	1.37	1.7	0.139
L36800N-50000E		9.3	980	190.5	33.1	<0.001	0.21	0.13	9.4	4.6	0.3	44.7	0.01	0.15	1.5	0.152
L36850N-49750E		15.9	950	55.2	39.8	<0.001	0.04	0.30	2.9	1.5	0.5	12.8	0.01	0.26	0.6	0.125
L36850N-49775E		8.1	1430	18.4	12.4	<0.001	0.45	0.27	2.7	3.0	0.5	7.8	<0.01	0.52	1.2	0.096
L36850N-49800E		2.4	1030	12.4	3.9	<0.001	0.05	0.34	1.2	1.0	1.0	4.9	0.05	0.04	<0.2	0.084
L36850N-49825E		3.9	1060	97.2	7.2	<0.001	0.06	0.32	2.2	1.1	0.7	14.1	0.05	0.57	0.7	0.090
L36850N-49850E		7.7	520	101.0	5.0	<0.001	0.03	0.32	3.2	0.8	0.8	11.9	0.04	0.21	1.6	0.105
L36850N-49875E		8.1	1270	46.5	6.9	<0.001	0.03	0.40	2.0	1.4	0.6	13.9	0.01	0.15	0.6	0.083
L36850N-49900E		11.1	1100	271	39.1	<0.001	0.51	0.26	9.2	5.7	0.4	34.7	<0.01	0.23	2.1	0.167
L36850N-49925E		7.8	590	130.0	14.8	<0.001	0.06	0.29	3.6	1.1	0.9	22.0	0.02	0.13	1.1	0.158
L36850N-49950E		21.0	930	369	39.0	0.001	0.14	0.45	9.7	3.5	0.3	45.2	0.01	0.23	1.9	0.146
L36900N-49750E		3.8	1450	13.9	6.8	<0.001	0.04	0.28	0.8	0.7	0.9	10.3	<0.01	0.08	<0.2	0.079
L36900N-49775E		17.0	1100	38.8	16.9	0.007	0.06	0.50	1.6	3.1	0.6	24.6	<0.01	0.13	0.2	0.072
L36900N-49800E		5.7	1140	16.8	16.2	<0.001	0.05	0.54	1.4	1.1	0.5	8.8	<0.01	0.08	0.2	0.098
L36900N-49825E		9.6	1760	105.0	13.4	<0.001	0.04	0.23	3.1	1.4	0.3	12.3	0.02	0.17	0.8	0.077
L36900N-49850E		17.3	1400	28.1	10.8	<0.001	0.05	0.41	3.8	1.4	0.4	39.2	0.01	0.22	1.1	0.098
L36900N-49875E		20.3	1820	43.3	14.9	<0.001	0.05	0.48	4.8	1.5	0.4	93.3	0.02	0.45	1.2	0.067
L36900N-49900E		12.5	930	50.0	9.2	<0.001	0.08	0.31	3.9	0.8	0.6	21.9	0.02	0.12	1.2	0.117
L36900N-49925E		7.6	680	37.5	13.0	<0.001	0.05	0.39	1.8	0.5	1.0	25.9	<0.01	0.32	0.3	0.074
L36900N-49950E		12.7	1010	37.2	18.3	<0.001	0.07	0.28	4.4	0.7	0.7	22.9	0.03	0.14	2.6	0.133
L36900N-49400E		5.3	1500	28.4	45.4	<0.001	0.13	0.30	1.4	0.8	0.2	34.8	0.01	0.13	0.6	0.117
L36900N-49425E		2.4	1020	40.6	42.6	0.001	0.13	0.27	1.3	0.8	0.3	38.3	<0.01	0.16	0.7	0.129
L36900N-49450E		2.3	1070	25.1	45.9	<0.001	0.14	0.28	1.0	0.5	0.4	42.6	<0.01	0.18	0.5	0.117
L36900N-49475E		2.1	1150	25.4	33.4	<0.001	0.12	0.42	0.9	0.5	0.5	35.4	<0.01	0.16	0.4	0.129
L36900N-49500E		2.3	1300	40.9	45.3	<0.001	0.12	0.29	1.1	0.6	0.3	29.7	<0.01	0.15	0.6	0.118
L36950N-49375E		2.3	1180	44.0	46.7	0.001	1.16	0.77	1.3	8.0	0.4	26.9	<0.01	1.50	0.7	0.107
L36950N-49400E		3.4	1260	22.0	35.9	<0.001	0.13	0.58	1.7	1.2	0.3	79.8	0.01	0.18	0.7	0.104
L36950N-49425E																
L36950N-49450E		12.1	1670	46.8	53.6	0.001	0.11	0.61	1.9	0.7	0.3	63.6	0.01	0.13	0.5	0.110

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
L36600N-49200E		0.10	0.56	36	3.19	2.03	45	1.0
L36600N-49225E		0.42	5.08	72	12.25	6.59	427	2.0
L36800N-49750E		0.12	0.59	132	0.59	2.23	117	1.9
L36800N-49775E		0.17	0.89	97	5.78	3.19	79	1.3
L36800N-49800E		0.10	0.85	63	1.50	2.60	42	2.5
L36800N-49825E		0.08	0.82	72	3.47	2.90	48	10.3
L36800N-49850E		0.09	0.73	74	3.71	3.21	84	6.5
L36800N-49875E		0.08	0.41	78	5.12	2.50	254	0.8
L36800N-49900E		0.16	0.80	99	1.97	3.05	191	2.3
L36800N-49925E		0.36	0.46	164	1.75	1.93	112	1.3
L36800N-49950E		0.51	0.66	193	2.47	3.10	193	2.2
L36800N-49975E		0.46	0.95	153	6.85	4.08	131	1.0
L36800N-50000E		0.45	0.96	210	1.76	4.04	127	1.9
L36850N-49750E		0.25	1.08	113	1.51	4.53	201	2.1
L36850N-49775E		0.12	0.44	84	0.83	4.47	74	<0.5
L36850N-49800E		0.08	0.84	28	0.36	2.63	15	5.2
L36850N-49825E		0.11	0.69	56	5.54	3.16	52	3.3
L36850N-49850E		0.11	0.67	76	2.31	2.47	104	8.3
L36850N-49875E		0.08	0.58	71	3.43	2.51	71	0.9
L36850N-49900E		0.50	0.63	167	2.01	2.46	142	1.4
L36850N-49925E		0.17	0.49	113	1.97	1.85	106	3.2
L36850N-49950E		0.48	1.04	172	6.51	5.96	341	1.4
L36900N-49750E		0.12	0.49	66	0.46	1.03	27	1.3
L36900N-49775E		0.21	0.99	84	4.27	7.60	211	0.5
L36900N-49800E		0.15	0.65	93	0.42	2.30	61	1.6
L36900N-49825E		0.09	0.63	73	1.01	5.70	111	3.6
L36900N-49850E		0.15	0.77	89	2.33	6.21	146	2.2
L36900N-49875E		0.20	0.88	100	2.55	13.40	192	2.4
L36900N-49900E		0.13	0.67	103	2.02	4.31	117	2.5
L36900N-49925E		0.18	0.33	85	1.47	2.74	73	<0.5
L36900N-49950E		0.15	1.06	72	1.56	6.10	159	21.8
L36900N-49400E		0.36	0.45	69	2.26	3.43	277	<0.5
L36900N-49425E		0.28	0.51	63	1.56	3.56	133	<0.5
L36900N-49450E		0.23	0.51	61	1.79	2.88	116	0.5
L36900N-49475E		0.16	0.33	62	1.46	1.58	87	<0.5
L36900N-49500E		0.29	0.34	58	1.66	2.34	134	<0.5
L36950N-49375E		0.42	0.19	55	2.62	2.42	370	<0.5
L36950N-49400E		0.35	0.47	53	2.99	4.78	232	<0.5
L36950N-49425E								
L36950N-49450E		0.43	0.76	69	1.88	12.40	964	<0.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L36950N-49475E		0.17	0.44	2.14	92.1	0.03	<10	70	0.51	0.39	0.56	9.28	21.0	26.2	12	5.95
L36950N-49500E		0.24	0.64	2.17	121.5	0.05	<10	70	0.56	0.54	0.52	8.53	18.00	26.1	10	4.89
L37400N-49025E		0.32	1.13	3.78	735	0.11	<10	160	0.77	0.33	0.41	4.23	18.10	37.9	187	9.51
L37400N-49050E		0.33	1.83	2.58	757	0.10	<10	130	0.55	0.57	0.79	4.72	13.70	31.0	72	7.00
L37400N-49075E		0.33	1.50	2.99	703	0.17	<10	160	0.54	0.62	0.77	11.15	14.75	33.4	72	9.20
L37400N-49100E		0.18	9.26	6.52	3910	0.39	<10	50	2.36	1.64	0.39	111.5	65.1	74.9	18	5.55
L37400N-49125E		0.27	0.48	2.30	144.0	<0.02	<10	90	0.46	0.20	0.54	1.83	14.80	60.4	160	4.96
L37400N-49150E		0.21	1.94	3.91	830	0.34	<10	40	0.70	1.30	0.17	3.35	19.60	16.1	26	7.28
L37450N-49025E		0.25	0.91	3.61	241	0.02	<10	100	0.91	0.46	0.40	1.79	22.6	74.5	101	4.60
L37450N-49050E		0.32	1.59	5.48	409	0.10	<10	70	1.11	0.77	0.29	4.43	31.1	49.1	57	5.96
L37450N-49075E		0.33	4.44	3.28	529	0.32	<10	20	0.74	1.06	1.59	9.59	5.64	11.5	20	13.15
L37450N-49100E		0.21	5.47	4.69	1720	0.41	<10	30	1.01	1.99	0.07	7.82	22.5	10.5	20	6.07
L37450N-49125E		0.06	3.35	3.85	490	0.03	<10	40	1.15	0.87	0.68	28.7	28.2	31.1	37	7.13
L37450N-49150E		0.30	0.88	4.10	107.5	<0.02	<10	50	1.00	0.63	0.27	3.45	29.4	28.5	48	7.52
L37600N-48950E		0.10	4.75	3.64	1285	0.67	<10	80	0.73	2.30	0.14	5.95	9.52	18.1	52	6.49
L37600N-48975E		0.12	1.49	0.75	71.3	0.06	<10	50	0.06	0.89	0.06	1.59	7.23	1.1	13	2.15
L37600N-49000E		0.23	10.75	11.70	102.5	0.05	<10	70	2.20	3.38	0.14	30.8	22.3	105.5	157	8.55
L37600N-49025E		0.07	1.60	1.68	244	0.31	<10	80	0.21	0.98	0.41	6.04	9.23	6.0	31	4.70
L37600N-49050E		0.32	2.54	3.10	420	0.23	<10	170	0.43	1.70	0.20	3.28	12.60	15.0	54	8.02
L37650N-49000E		0.14	1.47	3.39	385	0.16	<10	60	1.30	1.80	0.73	54.7	29.7	24.4	30	10.75
L37650N-49025E		0.16	2.67	9.74	365	0.06	<10	20	1.92	0.71	0.11	16.95	17.45	64.4	13	2.57
L37650N-49050E		0.26	32.8	0.78	210	2.58	<10	30	0.07	47.8	0.04	1.24	4.55	1.1	10	2.02
L37650N-49075E		0.22	7.94	2.10	662	0.31	<10	110	0.25	8.56	0.30	3.21	10.35	4.8	34	6.29

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L36950N-49475E		70.8	4.18	6.07	0.09	<0.02	0.01	0.034	0.35	11.3	41.2	0.77	1590	1.48	0.01	1.12
L36950N-49500E		72.2	4.53	7.00	0.08	<0.02	0.02	0.037	0.34	10.3	38.7	0.77	1620	1.90	0.01	1.14
L37400N-49025E		209	5.89	8.70	0.09	0.03	0.05	0.032	0.58	8.3	54.4	1.77	1140	2.72	0.02	0.39
L37400N-49050E		157.0	5.98	7.61	0.09	0.02	0.02	0.050	0.37	7.2	51.2	1.54	946	14.65	0.03	0.35
L37400N-49075E		150.0	5.66	8.29	0.08	<0.02	0.02	0.069	0.49	7.4	54.7	1.66	936	7.10	0.03	0.41
L37400N-49100E		481	12.90	5.88	0.13	0.41	0.21	0.761	0.06	21.7	23.8	0.31	11350	25.7	0.01	0.69
L37400N-49125E		167.0	5.32	7.06	0.07	0.02	0.01	0.026	0.33	7.2	36.9	1.16	904	8.88	0.01	0.50
L37400N-49150E		67.3	5.93	9.40	<0.05	0.04	0.05	0.185	0.09	9.0	31.8	0.69	1190	4.26	0.01	1.25
L37450N-49025E		179.0	6.67	8.38	0.08	0.06	0.06	0.034	0.14	9.4	56.5	1.37	1300	6.62	0.02	0.67
L37450N-49050E		165.0	5.74	9.63	0.07	0.22	0.08	0.059	0.11	15.5	35.3	0.88	1100	6.49	0.04	1.13
L37450N-49075E		89.4	14.45	9.70	0.11	0.04	0.05	0.138	0.08	1.8	29.7	0.68	872	4.24	0.03	0.14
L37450N-49100E		255	8.18	9.33	0.06	0.08	0.16	0.603	0.04	10.9	17.3	0.25	577	9.52	0.01	1.60
L37450N-49125E		222	3.51	10.55	0.06	0.07	0.09	0.058	0.04	18.8	45.2	0.69	1400	4.03	0.02	1.10
L37450N-49150E		128.0	7.54	8.77	0.05	0.23	0.11	0.083	0.05	9.1	40.1	0.92	1210	31.0	0.01	0.91
L37600N-48950E		116.0	10.05	7.61	0.05	0.07	0.17	0.619	0.11	4.6	25.6	0.62	728	9.87	0.01	1.25
L37600N-48975E		51.2	24.2	3.51	0.14	0.02	0.07	0.112	0.28	2.8	7.4	0.37	186	0.74	0.01	0.70
L37600N-49000E		325	5.14	4.39	0.11	0.02	0.06	0.105	0.38	6.7	43.4	1.20	3520	10.15	0.01	0.91
L37600N-49025E		69.2	5.37	6.24	0.05	<0.02	0.07	0.174	0.23	4.3	20.6	0.81	498	3.08	0.02	0.81
L37600N-49050E		106.5	6.70	9.31	0.08	<0.02	0.05	0.422	0.56	6.3	33.8	1.30	942	3.10	0.03	0.76
L37650N-49000E		176.0	8.94	5.70	0.07	0.05	0.05	0.222	0.14	14.2	27.5	0.52	1360	13.30	0.02	1.03
L37650N-49025E		433	9.86	2.65	0.09	0.02	0.10	0.321	0.11	7.8	9.9	0.27	1480	22.9	0.01	0.24
L37650N-49050E		202	15.50	6.22	0.17	0.02	1.24	1.300	0.22	2.2	6.4	0.32	237	6.39	0.01	1.30
L37650N-49075E		106.5	15.65	8.68	0.17	<0.02	0.10	1.115	0.61	4.9	23.9	1.12	798	10.65	0.05	0.66

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
L36950N-49475E		10.2	1710	30.9	61.7	<0.001	0.13	0.45	1.4	0.6	0.2	48.0	0.01	0.11	0.3	0.095
L36950N-49500E		9.4	1660	32.7	54.1	<0.001	0.11	0.37	1.8	0.6	0.2	50.2	0.01	0.13	0.5	0.104
L37400N-49025E		88.6	1690	488	46.3	0.001	0.07	0.72	6.5	1.0	0.2	30.2	<0.01	0.11	1.6	0.159
L37400N-49050E		59.2	1450	90.0	27.3	0.006	0.11	1.86	6.4	3.4	0.2	54.6	<0.01	0.19	1.5	0.128
L37400N-49075E		53.9	1430	104.5	36.8	0.003	0.06	1.40	5.5	2.2	0.2	52.1	<0.01	0.13	1.3	0.154
L37400N-49100E		35.3	2010	554	6.8	0.002	0.35	4.91	6.7	4.7	0.3	35.7	0.01	0.16	1.7	0.045
L37400N-49125E		94.7	1950	11.6	18.1	0.001	0.09	0.42	8.8	2.9	0.2	16.9	<0.01	0.07	1.3	0.137
L37400N-49150E		12.3	1230	138.0	20.2	<0.001	0.08	2.07	4.6	1.6	0.4	33.5	0.01	0.15	1.4	0.083
L37450N-49025E		83.6	1640	72.5	13.3	<0.001	0.07	0.59	6.1	1.6	0.3	22.5	0.01	0.25	1.4	0.124
L37450N-49050E		44.9	1520	362	12.9	<0.001	0.10	0.86	7.9	2.3	0.4	48.6	0.01	0.15	1.9	0.115
L37450N-49075E		14.8	920	353	6.8	0.001	0.76	3.52	8.2	1.7	<0.2	70.8	<0.01	0.20	0.8	0.030
L37450N-49100E		8.5	1250	281	8.2	0.001	0.14	4.05	3.6	3.7	0.6	14.7	0.03	0.15	0.8	0.079
L37450N-49125E		40.8	1430	65.2	7.3	0.004	0.12	1.35	3.7	2.3	0.8	33.7	0.03	0.04	0.3	0.095
L37450N-49150E		97.7	1340	51.7	7.2	0.002	0.09	2.01	7.1	8.7	0.4	166.5	0.02	0.33	2.2	0.048
L37600N-48950E		20.4	2110	179.0	20.1	<0.001	0.16	1.78	4.3	3.8	0.4	26.7	0.01	0.23	1.8	0.112
L37600N-48975E		2.9	920	64.1	17.2	0.001	1.33	2.70	2.3	1.9	0.5	14.5	<0.01	0.27	1.1	0.083
L37600N-49000E		105.5	1270	64.3	22.1	0.001	1.04	0.49	9.2	5.3	0.2	12.1	<0.01	0.43	1.1	0.096
L37600N-49025E		12.9	870	65.4	20.2	0.001	0.20	1.38	3.6	2.4	0.5	42.1	<0.01	0.28	0.8	0.122
L37600N-49050E		18.2	1150	102.0	47.8	<0.001	0.29	0.86	7.7	3.5	0.4	40.9	<0.01	0.35	1.6	0.171
L37650N-49000E		30.9	1350	120.0	15.9	0.002	0.18	1.61	3.5	2.5	0.5	58.4	0.01	0.51	3.2	0.070
L37650N-49025E		29.5	1140	44.6	9.4	0.001	1.18	1.55	8.0	5.8	0.2	14.3	<0.01	0.08	0.9	0.025
L37650N-49050E		2.1	1090	1475	12.3	<0.001	0.69	39.8	3.1	22.1	0.6	15.6	0.01	4.68	2.1	0.090
L37650N-49075E		9.3	1410	543	36.3	0.002	1.02	2.62	10.0	10.9	0.4	48.5	<0.01	1.02	2.2	0.127

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

Sample Description / Method / Analyte / Units / LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
L36950N-49475E	0.39	0.67	61	2.20	11.30	695	<0.5
L36950N-49500E	0.42	0.61	64	1.77	10.35	673	<0.5
L37400N-49025E	0.71	1.16	154	4.40	4.83	926	1.2
L37400N-49050E	0.40	2.26	138	5.40	6.79	469	0.5
L37400N-49075E	0.46	1.54	134	2.45	6.95	993	0.6
L37400N-49100E	0.75	7.12	51	2.52	84.3	2590	13.6
L37400N-49125E	0.57	1.48	156	0.46	9.36	300	0.5
L37400N-49150E	0.35	0.79	107	2.42	7.57	903	1.8
L37450N-49025E	0.37	3.55	109	3.91	6.10	292	2.1
L37450N-49050E	0.31	1.88	114	1.16	11.60	1000	7.9
L37450N-49075E	0.07	0.28	71	3.50	2.08	878	1.7
L37450N-49100E	0.19	2.49	65	1.54	23.7	646	2.9
L37450N-49125E	0.23	6.52	64	0.52	22.6	1870	3.2
L37450N-49150E	0.27	3.53	132	3.38	12.60	399	7.8
L37600N-48950E	0.24	1.36	89	2.10	2.72	866	2.7
L37600N-48975E	0.29	0.46	47	0.20	5.51	89	0.7
L37600N-49000E	0.40	9.88	52	0.39	15.50	2050	0.5
L37600N-49025E	0.33	0.81	87	0.80	5.43	614	<0.5
L37600N-49050E	0.60	1.14	140	1.06	4.59	486	<0.5
L37650N-49000E	0.23	16.20	45	1.13	27.8	4770	1.5
L37650N-49025E	0.30	7.04	31	4.39	28.4	991	0.7
L37650N-49050E	0.26	0.58	49	4.65	1.69	520	0.8
L37650N-49075E	0.60	1.05	141	25.3	4.31	755	0.5

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212435

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method: DISP-01 LOG-22 SCR-41 WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method: ME-MS41

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

CERTIFICATE KL20212439

Project: Tillicum

This report is for 16 Rock samples submitted to our lab in Kamloops, BC, Canada on 22-SEP-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
CRU-QC	Crushing QC Test
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS41	Ultra Trace Aqua Regia ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212439

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
20GRIZ-7		0.59	0.93	1.68	25.3	0.02	<10	30	0.30	2.15	1.40	0.72	12.25	36.3	47	1.42
20GRIZ-8		1.54	14.70	0.68	2.2	0.04	<10	10	0.28	23.1	1.28	2.59	3.44	56.7	13	0.35
20GRIZ-9		1.04	0.69	1.10	4.1	<0.02	<10	20	0.14	0.47	0.52	0.18	14.45	6.8	9	0.47
20GRIZ-10		0.44	0.99	0.75	5.8	<0.02	<10	10	0.10	0.81	0.31	0.22	13.30	6.2	8	0.60
20GRIZ-11		1.41	0.53	1.00	1.2	<0.02	<10	20	0.10	0.25	0.61	0.11	11.55	13.1	13	0.80
20GRIZ-12		1.56	1.69	0.49	3.2	<0.02	<10	20	0.11	3.05	0.70	0.12	4.24	10.2	10	0.22
20GHOPE-1		0.51	1.22	1.24	17.5	0.04	<10	30	0.26	0.37	1.66	0.93	9.78	28.2	53	5.34
20GHOPE-2		0.94	3.40	0.95	31.6	0.58	<10	10	0.17	0.55	0.71	0.39	8.73	29.1	39	0.47
20GHOPE-3		0.42	2.72	4.43	3.2	<0.02	<10	30	1.21	1.03	3.32	2.65	9.58	37.6	49	1.11
20GHOPE-4		1.03	3.04	0.98	21.7	0.21	<10	10	0.23	0.91	0.31	38.6	11.75	7.8	7	0.60
20GHOPE-5		1.27	2.33	0.96	25.7	0.27	<10	10	0.18	0.94	1.93	64.4	12.20	7.3	7	0.76
20JEN-4		1.14	3.02	3.45	1985	1.46	<10	20	0.69	0.62	1.53	62.0	9.99	29.5	52	7.55
20EAST-2		1.37	47.8	1.76	4180	2.32	<10	10	0.27	24.4	2.99	70.8	3.12	37.4	22	0.68
20ROAD-1		0.38	7.55	3.28	17.0	2.28	<10	20	0.44	9.71	1.27	43.6	9.39	19.1	47	1.21
20ROAD-2		1.52	1.68	3.44	73.5	0.03	<10	50	0.61	0.92	1.64	17.55	5.44	7.9	31	4.98
20GRIZ-13		0.69	1.86	0.43	2.2	<0.02	<10	30	0.12	4.06	0.49	0.12	1.45	3.7	8	0.50

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212439

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
20GRIZ-7		161.0	6.69	6.77	0.14	0.17	<0.01	0.037	0.07	5.5	34.1	1.59	519	0.83	0.08	0.15
20GRIZ-8		435	11.35	2.63	0.35	0.09	<0.01	0.017	0.03	1.6	3.0	0.09	339	18.55	0.01	0.45
20GRIZ-9		158.5	3.92	6.13	0.14	0.19	<0.01	0.009	0.07	6.5	24.8	0.65	411	0.71	0.07	1.19
20GRIZ-10		147.5	4.85	4.11	0.09	0.06	<0.01	0.009	0.05	6.3	11.9	0.48	354	1.52	0.07	1.08
20GRIZ-11		78.6	4.09	5.16	0.12	0.10	<0.01	0.024	0.08	5.4	17.4	0.71	403	1.72	0.07	0.38
20GRIZ-12		83.6	6.14	2.12	0.18	0.11	<0.01	0.013	0.05	2.4	1.3	0.08	122	11.25	0.05	0.76
20GHOPE-1		104.0	3.89	4.47	0.18	0.20	<0.01	0.032	0.46	4.0	23.7	1.26	562	1.80	0.13	0.22
20GHOPE-2		171.0	4.60	4.17	0.15	0.11	<0.01	0.029	0.06	3.7	16.1	0.71	343	1.15	0.07	0.36
20GHOPE-3		208	7.67	10.60	0.11	0.07	<0.01	0.019	0.15	3.9	13.9	0.42	271	6.59	0.34	0.25
20GHOPE-4		372	9.81	6.05	0.09	0.07	<0.01	0.559	0.10	5.8	14.1	0.39	796	4.84	0.04	1.18
20GHOPE-5		198.5	8.31	5.42	0.08	0.06	0.01	0.492	0.15	6.0	15.9	0.46	1200	2.22	0.04	0.95
20JEN-4		99.0	6.31	9.14	0.11	0.05	0.01	0.319	0.13	4.8	57.6	1.32	1160	2.47	0.15	0.12
20EAST-2		961	22.7	6.04	0.14	0.03	0.02	0.486	0.06	1.6	11.9	0.53	1400	5.73	0.12	0.14
20ROAD-1		109.0	7.40	9.58	0.08	0.05	<0.01	0.281	0.18	4.4	45.6	1.67	1370	0.95	0.29	0.06
20ROAD-2		126.5	4.95	8.05	0.10	0.02	<0.01	0.254	0.75	2.6	30.0	1.39	1140	1.87	0.25	<0.05
20GRIZ-13		76.9	5.83	2.04	0.28	0.05	0.18	0.024	0.09	0.7	1.2	0.09	158	6.07	0.01	0.72

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212439

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
20GRIZ-7		25.7	2080	10.0	4.3	0.001	2.46	0.49	7.5	4.6	0.8	38.4	<0.01	0.98	2.2	0.246
20GRIZ-8		71.5	1350	433	1.4	0.015	6.21	0.38	1.8	21.4	0.6	41.8	<0.01	2.55	0.3	0.112
20GRIZ-9		3.6	1060	4.4	2.6	<0.001	1.06	0.24	2.5	2.3	0.7	32.2	0.01	0.11	1.4	0.175
20GRIZ-10		2.5	1090	26.4	2.9	0.001	1.25	0.16	2.5	3.0	0.5	9.7	0.01	0.27	1.5	0.104
20GRIZ-11		7.7	1280	3.8	3.7	0.001	1.37	0.13	3.8	1.6	0.4	19.5	<0.01	0.09	1.5	0.167
20GRIZ-12		9.5	1320	11.6	2.2	0.006	0.61	0.38	2.1	5.9	0.5	35.3	0.01	1.32	0.4	0.189
20GHOPE-1		25.1	2090	25.9	43.4	0.005	0.52	0.59	12.4	1.5	0.8	31.4	<0.01	0.16	1.0	0.202
20GHOPE-2		13.2	1790	28.4	3.6	0.020	0.98	0.66	6.7	4.4	0.9	15.4	<0.01	0.23	1.2	0.156
20GHOPE-3		94.7	1830	139.0	11.2	0.007	4.45	0.48	2.1	23.2	0.6	163.0	0.01	0.51	1.2	0.162
20GHOPE-4		3.3	1210	37.5	6.2	0.001	1.39	0.39	3.6	4.2	0.9	22.3	0.01	0.63	2.7	0.128
20GHOPE-5		2.5	1110	37.9	9.7	0.001	0.74	0.31	3.0	3.5	0.8	23.4	0.01	0.51	2.2	0.110
20JEN-4		27.3	1290	177.5	8.6	0.003	2.24	3.15	9.1	2.5	0.4	74.2	<0.01	0.24	1.5	0.134
20EAST-2		52.1	470	2350	3.2	0.012	8.75	85.1	3.1	17.7	0.5	71.4	<0.01	1.89	0.6	0.047
20ROAD-1		20.4	1280	396	9.4	0.004	2.56	0.46	11.2	3.9	0.6	88.5	<0.01	0.61	1.5	0.146
20ROAD-2		14.5	1300	57.2	48.7	0.003	2.29	1.35	5.7	2.4	0.4	100.5	<0.01	0.09	1.4	0.119
20GRIZ-13		2.4	680	14.7	4.4	0.016	0.11	0.42	2.0	5.4	0.4	22.8	0.01	1.56	<0.2	0.139

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212439

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
20GRIZ-7		0.29	0.92	137	1.55	7.23	75	3.7
20GRIZ-8		0.30	0.37	26	0.65	3.70	118	2.0
20GRIZ-9		0.09	0.48	46	0.75	14.00	31	3.4
20GRIZ-10		0.04	0.43	40	0.38	11.70	38	0.7
20GRIZ-11		0.07	0.49	77	0.58	9.19	32	1.6
20GRIZ-12		0.06	0.46	34	2.14	3.34	10	2.4
20GHOPE-1		0.55	0.71	120	0.32	5.72	94	3.5
20GHOPE-2		0.16	0.64	96	0.37	4.46	52	2.0
20GHOPE-3		0.21	0.78	65	2.37	6.85	201	1.2
20GHOPE-4		0.08	0.57	56	7.91	9.17	2200	1.1
20GHOPE-5		0.11	0.43	57	8.52	10.70	2610	0.7
20JEN-4		0.13	0.81	136	3.27	8.76	3690	1.2
20EAST-2		0.13	0.49	70	1.32	6.91	4520	0.6
20ROAD-1		0.15	0.47	213	0.48	6.21	2700	0.9
20ROAD-2		0.63	0.52	101	0.51	6.58	1400	<0.5
20GRIZ-13		0.19	0.16	40	1060	2.25	22	1.7

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 9-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20212439

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method:

CRU-31	CRU-QC	DISP-01	LOG-22
PUL-31	PUL-QC	SPL-21	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method: ME-MS41

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 26-SEP-2020
This copy reported on 27-SEP-2020
Account: KIKAND

CERTIFICATE KL20214033

Project: Tillicum

This report is for 1 Rock sample submitted to our lab in Kamloops, BC, Canada on 24-SEP-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-GRA21	Au 30g FA-GRAV finish	WST-SIM

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 26-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20214033

Sample Description	Method / Analyte / Units / LOD	Au-GRA21 / Au / ppm / 0.05
20 GRIZ-5		14.25

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 26-SEP-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20214033

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	Au-GRA21	FND-02

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

CERTIFICATE KL20231816

Project: Tillicum

This report is for 16 Soil samples submitted to our lab in Kamloops, BC, Canada on 12-OCT-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS41	Ultra Trace Aqua Regia ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231816

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
L37450N49150E		0.28	1.38	2.28	71.0	0.02	<10	40	0.98	0.59	0.66	5.94	24.1	25.8	36	2.69
L37450N49175E		0.39	1.10	4.49	1240	0.09	<10	90	1.32	1.53	0.69	7.23	36.8	41.8	268	8.92
L37450N49200E		0.21	3.12	5.36	7250	1.90	<10	40	1.18	0.89	0.34	10.10	20.2	35.5	25	5.00
L37450N49225E		0.30	4.95	4.89	563	1.04	<10	40	1.40	2.34	0.20	21.9	32.2	81.6	28	5.34
L37450N49250E		0.32	3.89	1.54	240	0.32	<10	30	0.23	2.69	0.19	5.37	8.63	5.2	26	3.44
L37450N49275E		0.25	1.94	2.26	217	0.08	<10	50	0.29	1.34	0.12	1.74	14.75	4.6	25	3.25
L37450N49300E		0.28	7.56	1.64	1820	0.74	<10	30	0.18	5.33	0.37	7.36	5.93	2.3	17	4.24
L37500N49150E		0.31	0.63	3.37	845	0.05	<10	180	0.54	0.39	0.63	7.90	20.3	36.2	73	7.83
L37500N49175E		0.27	0.93	3.84	797	0.09	<10	60	0.89	1.17	0.61	10.40	37.3	53.4	214	7.13
L37500N49200E		0.45	5.05	3.63	446	0.16	<10	30	0.78	0.84	0.19	18.60	31.6	20.1	16	9.44
L37500N49225E		0.25	4.14	4.88	487	0.11	<10	30	0.62	0.71	0.10	1.21	15.65	2.7	16	3.39
L37500N49250E		0.25	1.15	1.06	75.5	0.17	<10	20	0.20	1.23	0.09	5.23	7.96	1.5	6	2.48
L37500N49275E		0.31	0.63	2.13	16.9	0.06	<10	60	0.43	0.49	0.06	0.37	12.80	1.8	6	3.19
L37500N49300E		0.21	1.79	0.43	21.1	0.09	<10	20	0.07	1.04	0.06	0.78	3.45	1.0	5	1.86
L37500N49325E		0.26	2.74	2.13	36.6	0.31	<10	20	0.31	1.72	0.34	0.55	8.51	5.9	7	3.56
L37500N49350E		0.24	0.76	2.23	52.0	0.15	<10	30	0.39	0.51	0.06	0.98	9.56	1.9	17	2.81

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231816

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
L37450N49150E		185.0	9.07	6.23	0.12	0.07	0.06	0.169	0.03	7.8	30.5	0.73	2210	29.3	0.03	0.15
L37450N49175E		202	6.93	10.70	0.15	0.07	0.02	0.070	0.25	21.9	49.9	2.62	2210	1.77	0.06	0.39
L37450N49200E		103.5	6.75	8.39	0.09	0.17	0.13	1.575	0.08	9.5	25.6	0.56	1340	10.55	0.03	0.64
L37450N49225E		343	8.18	10.15	0.14	0.12	0.17	1.755	0.17	12.1	36.9	0.69	1680	5.85	0.04	0.98
L37450N49250E		101.5	14.35	7.59	0.11	0.03	0.11	0.755	0.15	4.0	21.3	0.64	538	3.72	0.03	1.15
L37450N49275E		80.4	5.39	7.34	0.06	0.02	0.06	0.149	0.19	7.9	20.9	0.58	446	3.68	0.02	0.95
L37450N49300E		125.0	11.45	7.59	0.16	0.02	0.03	0.496	0.33	3.0	30.0	1.03	674	3.03	0.04	0.47
L37500N49150E		97.9	6.04	8.97	0.12	0.03	0.03	0.041	0.34	8.2	61.9	1.83	840	5.91	0.03	0.63
L37500N49175E		199.0	5.01	8.11	0.13	0.02	0.03	0.030	0.19	15.0	137.0	1.83	752	2.38	0.07	0.40
L37500N49200E		214	3.80	7.54	0.10	0.07	0.11	0.106	0.11	13.4	22.0	0.45	591	2.52	0.03	1.07
L37500N49225E		49.9	3.84	9.43	0.09	0.44	0.12	0.124	0.06	7.2	17.9	0.39	267	2.31	0.03	1.90
L37500N49250E		22.8	2.29	7.81	<0.05	<0.02	0.04	0.039	0.05	4.0	8.5	0.19	213	1.59	0.02	1.38
L37500N49275E		18.4	3.37	8.26	0.05	0.03	0.05	0.045	0.10	6.2	19.8	0.34	327	0.82	0.02	1.43
L37500N49300E		31.7	3.57	3.58	0.06	<0.02	0.04	0.167	0.12	1.7	10.3	0.22	123	0.95	0.03	0.40
L37500N49325E		98.9	3.89	7.03	0.09	0.03	0.04	0.026	0.37	3.8	35.5	0.80	457	1.67	0.02	1.29
L37500N49350E		20.8	3.72	9.49	0.05	0.05	0.05	0.056	0.08	4.9	17.0	0.36	242	1.08	0.02	2.08

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231816

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
L37450N49150E		125.0	3590	40.0	3.7	0.005	0.28	3.76	11.4	11.3	<0.2	37.6	<0.01	0.42	3.5	0.008
L37450N49175E		127.0	1990	312	20.0	<0.001	0.03	1.26	7.1	0.7	0.2	62.7	<0.01	0.22	2.8	0.167
L37450N49200E		29.7	1460	172.5	9.5	0.001	0.13	10.20	5.2	4.1	0.2	33.7	0.01	0.73	1.5	0.057
L37450N49225E		12.6	1390	410	11.9	0.002	0.28	2.66	7.9	5.4	0.4	28.2	0.01	0.24	1.4	0.125
L37450N49250E		6.4	1160	235	13.9	<0.001	0.84	1.19	5.8	5.9	0.4	22.6	0.01	0.36	1.2	0.112
L37450N49275E		5.6	1070	162.5	15.5	0.001	0.16	0.76	2.7	1.4	0.4	15.9	0.01	0.19	0.6	0.112
L37450N49300E		2.6	1090	652	26.5	0.004	0.92	6.74	5.2	7.4	0.4	31.6	0.01	0.77	1.4	0.106
L37500N49150E		53.2	1390	45.2	22.0	0.001	0.06	1.38	5.7	1.2	0.3	51.7	0.01	0.14	1.5	0.162
L37500N49175E		136.5	750	47.0	18.0	0.003	0.07	1.27	2.9	1.3	0.2	52.6	<0.01	0.17	1.3	0.105
L37500N49200E		11.8	1140	147.0	14.4	0.002	0.13	1.19	3.4	1.8	0.5	16.7	0.04	0.13	0.6	0.087
L37500N49225E		4.8	960	97.8	7.0	<0.001	0.09	1.33	4.2	1.1	0.5	9.6	0.04	0.09	2.0	0.125
L37500N49250E		3.0	440	82.5	6.2	<0.001	0.06	0.47	0.8	0.4	0.7	9.2	<0.01	0.09	0.2	0.116
L37500N49275E		2.0	1020	36.1	11.5	<0.001	0.10	0.37	1.5	0.4	0.5	17.5	0.02	0.08	0.5	0.115
L37500N49300E		1.7	550	49.7	7.3	0.001	0.36	0.60	0.8	1.6	0.4	9.0	<0.01	0.18	<0.2	0.064
L37500N49325E		1.8	1110	347	32.4	<0.001	0.08	1.04	2.8	2.2	0.3	39.1	0.03	0.95	1.2	0.121
L37500N49350E		5.1	560	62.9	10.6	<0.001	0.07	0.64	2.0	0.5	0.6	9.5	0.04	0.17	1.3	0.137

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231816

Sample Description	Method Analyte Units LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
L37450N49150E		0.26	9.16	101	1.83	23.2	342	2.5
L37450N49175E		0.63	2.82	148	1.96	11.45	3460	2.2
L37450N49200E		0.29	1.06	76	19.45	7.54	1380	5.5
L37450N49225E		0.47	1.57	104	3.90	29.3	1270	4.0
L37450N49250E		0.19	0.41	92	2.21	2.94	455	1.3
L37450N49275E		0.22	0.89	86	2.17	4.30	227	0.9
L37450N49300E		0.36	0.41	97	10.75	4.05	617	0.6
L37500N49150E		0.47	1.67	144	2.61	5.31	994	1.0
L37500N49175E		0.30	2.43	104	3.55	11.00	2190	0.7
L37500N49200E		0.27	1.54	49	3.53	20.6	642	2.4
L37500N49225E		0.15	1.02	62	3.15	4.56	249	18.1
L37500N49250E		0.11	0.36	55	1.20	2.48	176	0.6
L37500N49275E		0.18	0.57	62	7.21	3.05	147	1.3
L37500N49300E		0.13	0.17	35	1.10	0.86	211	<0.5
L37500N49325E		0.42	0.80	64	10.95	3.59	224	1.1
L37500N49350E		0.17	0.62	61	2.49	2.75	121	2.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 6-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231816

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method: DISP-01 LOG-22 SCR-41 WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method: ME-MS41

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
This copy reported on 9-NOV-2020
Account: KIKAND

CERTIFICATE KL20231823

Project: Tillicum

This report is for 1 Rock sample submitted to our lab in Kamloops, BC, Canada on 12-OCT-2020.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
CRU-QC	Crushing QC Test
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS41	Ultra Trace Aqua Regia ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231823

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
20EAST-3		0.98	23.3	0.35	9200	0.87	<10	<10	<0.05	15.45	0.12	170.5	0.52	42.8	2	0.28

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231823

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
20EAST-3		1790	45.2	1.65	0.40	<0.02	0.04	1.525	0.06	0.2	5.0	0.19	693	1.41	0.01	0.12

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: **KIKAUKA, ANDRIS**
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231823

Sample Description	Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
20EAST-3		87.0	60	472	4.7	0.001	>10.0	13.30	0.5	46.8	<0.2	5.8	<0.01	3.37	<0.2	0.009

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231823

Sample Description	Method / Analyte / Units / LOD	ME-MS41 Tl ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
20EAST-3		0.10	<0.05	11	0.87	0.69	9250	<0.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: KIKAUKA, ANDRIS
4199 HIGHWAY 101
POWELL RIVER BC V8A 0C7

Finalized Date: 8-NOV-2020
Account: KIKAND

Project: Tillicum

CERTIFICATE OF ANALYSIS KL20231823

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

Applies to Method:				
	CRU-31	CRU-QC	DISP-01	LOG-22
	PUL-31	PUL-QC	SPL-21	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method: ME-MS41

APPENDIX B Geochemical Methods & Procedures

ALS minerals

SAMPLE PREPARATION PACKAGE

PREP- 31

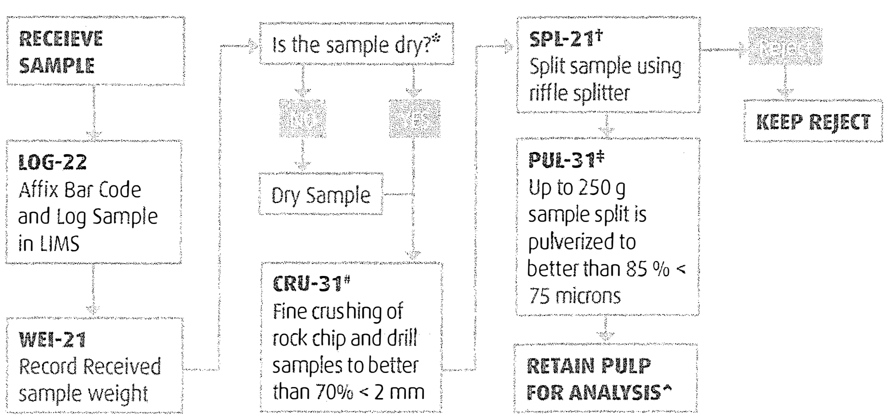
STANDARD SAMPLE PREPARATION: DRY, CRUSH, SPLIT AND PULVERIZE

Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory.

The sample is logged in the tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g is taken and pulverized to better than 85 % passing a 75 micron (Tyler 200 mesh, US Std. No. 200) screen. This method is appropriate for rock chip or drill samples.

METHOD CODE	DESCRIPTION
LOG-22	Sample is logged in tracking system and a bar code label is attached.
DRY-21	Drying of excessively wet samples in drying ovens. This is the default drying procedure for most rock chip and drill samples.
CRU-31	Fine crushing of rock chip and drill samples to better than 70% of the sample passing 2 mm.
SPL-21	Split sample using riffle splitter.
PUL-31	A sample split of up to 250 g is pulverized to better than 85% of the sample passing 75 microns.

FLOW CHART - SAMPLE PREPARATION PACKAGE – PREP-31
STANDARD SAMPLE PREPARATION: DRY, CRUSH, SPLIT AND PULVERIZE



*If samples air-dry overnight, no charge to client. If samples are excessively wet, the sample should be dried to a maximum of 120°C. (**DRY-21**)

#QC testing of crushing efficiency is conducted on random samples (**CRU-QC**).

†The sample reject is saved or dumped pending client instructions. Prolonged storage (> 45 days) of rejects will be charged to the client.

‡QC testing of pulverizing efficiency is conducted on random samples (**PUL-QC**).

^Lab splits are required when analyses must be performed at a location different than where samples received.

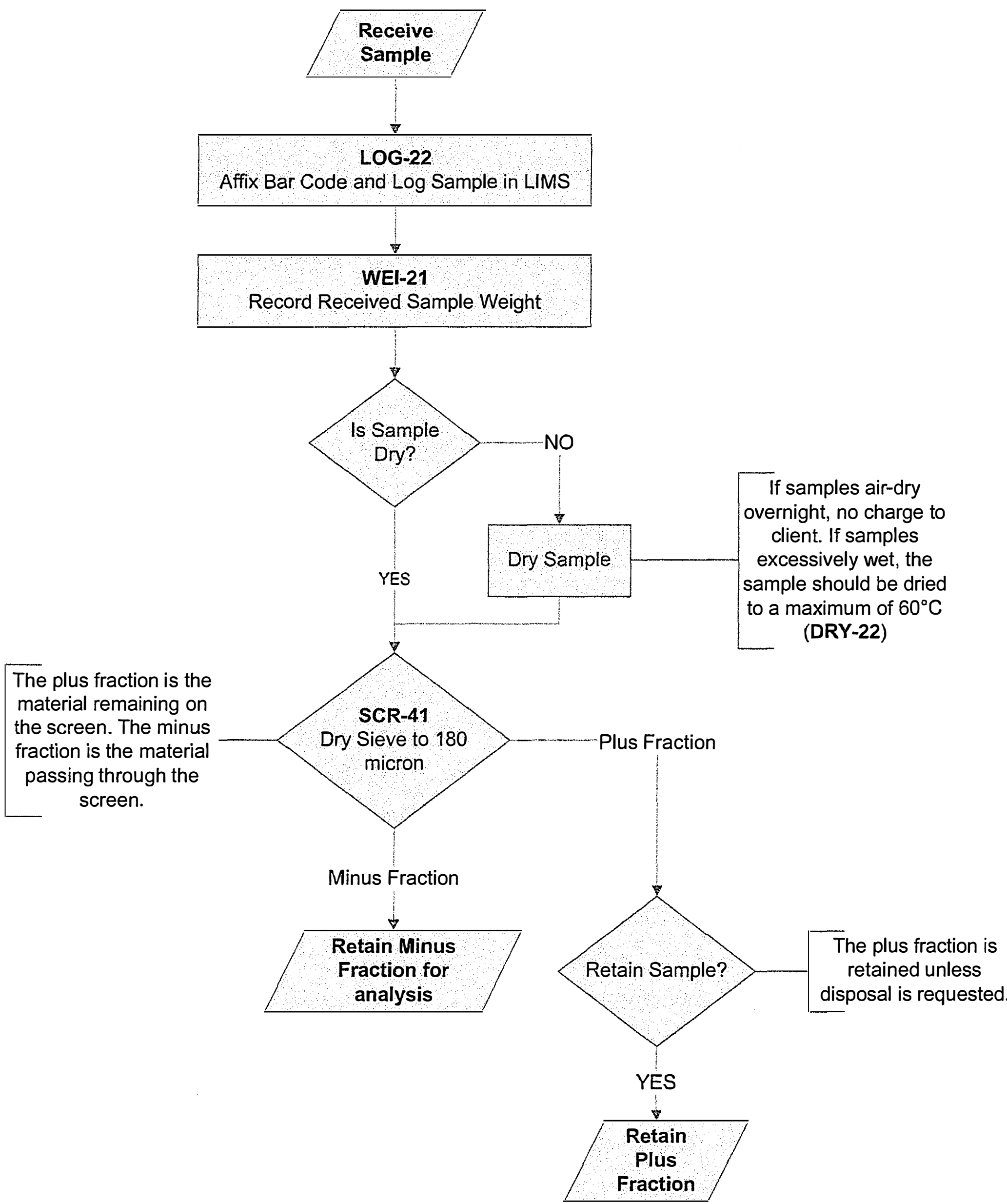
PREP-41
Standard Preparation: Dry sample and dry-sieve to -180 micron

Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory.

An entire sample is dried and then dry-sieved using a 180 micron (Tyler 80 mesh) screen. The plus fraction is retained unless disposal is requested. This method is appropriate for soil or sediment samples up to 1 kg in weight.

Method Code	Description
LOG-22	Sample is logged in tracking system and a bar code label is attached.
SCR-41	Sample is dry-sieved to - 180 micron and both the plus and minus fractions are retained.

Sample Preparation Flowchart Package -PREP-41



ALS Minerals

GEOCHEMICAL PROCEDURE

ME- MS41

ULTRA- TRACE LEVEL METHODS USING ICP- MS AND ICP- AES

SAMPLE DECOMPOSITION

Aqua Regia Digestion (GEO-AR01)

ANALYTICAL METHOD

Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)
Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

A prepared sample (0.50 g) is digested with aqua regia in a graphite heating block. After cooling, the resulting solution is diluted to with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, ment spectral interferences.

ELEMENT	SYMBOL	UNITS	LOWER LIMIT	UPPER LIMIT
Silver	Ag	ppm	0.01	100
Aluminum	Al	%	0.01	25
Arsenic	As	ppm	0.1	10 000
Gold	Au	ppm	0.2	25
Boron	B	ppm	10	10 000
Barium	Ba	ppm	10	10 000
Beryllium	Be	ppm	0.05	1 000
Bismuth	Bi	ppm	0.01	10 000
Calcium	Ca	%	0.01	25
Cadmium	Cd	ppm	0.01	1 000
Cerium	Ce	ppm	0.02	500
Cobalt	Co	ppm	0.1	10 000
Chromium	Cr	ppm	1	10 000
Cesium	Cs	ppm	0.05	500
Copper	Cu	ppm	0.2	10 000
Iron	Fe	%	0.01	50
Gallium	Ga	ppm	0.05	10 000
Germanium	Ge	ppm	0.05	500
Hafnium	Hf	ppm	0.02	500

ALS Minerals

ME- MS41

ELEMENT	SYMBOL	UNITS	LOWER LIMIT	UPPER LIMIT
Mercury	Hg	ppm	0.01	10 000
Indium	In	ppm	0.005	500
Potassium	K	%	0.01	10
Lanthanum	La	ppm	0.2	10 000
Lithium	Li	ppm	0.1	10 000
Magnesium	Mg	%	0.01	25
Manganese	Mn	ppm	5	50 000
Molybdenum	Mo	ppm	0.05	10 000
Sodium	Na	%	0.01	10
Niobium	Nb	ppm	0.05	500
Nickel	Ni	ppm	0.2	10 000
Phosphorus	P	ppm	10	10 000
Lead	Pb	ppm	0.2	10 000
Rubidium	Rb	ppm	0.1	10 000
Rhenium	Re	ppm	0.001	50
Sulphur	S	%	0.01	10
Antimony	Sb	ppm	0.05	10 000
Scandium	Sc	ppm	0.1	10 000
Selenium	Se	ppm	0.2	1 000
Tin	Sn	ppm	0.2	500
Strontium	Sr	ppm	0.2	10 000
Tantalum	Ta	ppm	0.01	500
Tellurium	Te	ppm	0.01	500
Thorium	Th	ppm	0.2	10000
Titanium	Ti	%	0.005	10
Thallium	Tl	ppm	0.02	10 000
Uranium	U	ppm	0.05	10 000
Vanadium	V	ppm	1	10 000
Tungsten	W	ppm	0.05	10 000
Yttrium	Y	ppm	0.05	500
Zinc	Zn	ppm	2	10 000
Zirconium	Zr	ppm	0.5	500

NOTE: In the majority of geological matrices, data reported from an aqua regia leach should be considered as representing only the leachable portion of the particular analyte.

ALS Minerals

FIRE ASSAY PROCEDURE

Ag-GRA21, Ag-GRA22, Au-GRA21 and Au-GRA22

PRECIOUS METALS GRAVIMETRIC ANALYSIS METHODS

SAMPLE DECOMPOSITION

Fire Assay Fusion (FA-FUSAG1, FA-FUSAG2, FA-FUSGV1 and FA-FUSGV2)

ANALYTICAL METHOD

Gravimetric

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metals is cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold. Silver, if requested, is then determined by the difference in weights.

METHOD CODE	ELEMENT	SYMBOL	UNITS	SAMPLE WEIGHT (G)	DETECTION LIMIT	UPPER LIMIT
Ag-GRA21	Silver	Ag	ppm	30	5	10,000
Ag-GRA22	Silver	Ag	ppm	50	5	10,000
Au-GRA21	Gold	Au	ppm	30	0.05	1,000
Au-GRA22	Gold	Au	ppm	50	0.05	1,000

Jen, Heino, East Ridge, Road Rock Chip Sample Description APPENDIX C ROCK SAMPLE DESCRIPTIONS

ID #	tenure ID	Zone	Easting	Northing	Elev (m)	Sample Type	sample width	Shear/Foliation strike	Shear/Foliation dip
301	320414	Heino	449035	5537218	2130	outcrop (near portal)	10 cm	157	84 W
302	320414	Heino	449036	5537219	2130	outcrop (near portal)	10 cm	174	86 E
303	320414	Heino	449037	5537219	2130	angular float (at portal)			
304	320414	Heino	449037	5537220	2130	angular float (at portal)			
305	320414	Heino	449038	5537220	2130	angular float (at portal)			
306	320414	Heino	449038	5537219	2130	angular float (at portal)			
20EAST1	320414	East Ridge	449274	5537365	2029	angular float			
20EAST2	320414	East Ridge	449265	5537436	1971	outcrop (at met sample)	30 cm	5	68 W
20EAST3	320414	East Ridge	449314	5537479	1967	angular float			
20JEN1	320414	East Ridge W	449065	5537427	1992	outcrop	20 cm	31	27 NW
20JEN2	320414	East Ridge W	449089	5537418	1991	outcrop	22 cm	15	88 W
20JEN3	320414	East Ridge W	449072	5537410	2003	outcrop	18 cm	30	25 NW
20JEN4	320414	East Ridge W	449109	5537380	2003	outcrop	38 cm	37	86 W
20ROAD1	1071800	Road 950 N	448964	5537584	1959	outcrop	30 cm	160	68 W
20ROAD2	1071800	Road 950 N	448964	5537669	1930	outcrop	25 cm	165	62 W

Jen, Heino, East Ridge, Road Rock Chip Sample Description

ID #	Lithology	Alteration
301	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn
302	amphibolite, contact porphyritic diorite	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn
303	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn
304	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn
305	metasediments (Millford Group)	silica, sericite, carbonate, garnet, clay minerals in shear
306	metasediments (Millford Group)	sericite, silica,calcite, pyrolusite,hematite,garnet
20EAST1	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST2	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST3	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,magnetite
20JEN1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN4	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite

Jen, Heino, East Ridge, Road Rock Chip Sample Description

ID #	Mineralization
301	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
302	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
303	pyrrhotite, sphalerite, galena
304	pyrrhotite, sphalerite, galena, chalcopyrite
305	pyrrhotite, sphalerite, galena, chalcopyrite
306	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST1	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST2	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST3	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20JEN1	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN2	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN3	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN4	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20ROAD1	pyrrhotite, sphalerite, galena, chalcopyrite
20ROAD2	pyrrhotite, sphalerite, galena, chalcopyrite

Jen, Heino, East Ridge, Road Rock Chip Sample Description (Geochemical Analysis)

ID #	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
301	138.5	1075	1950	90500	39200	1.9	19.5	>10.0	1465	10000	1030	1	10	68
302	87.4	524	2150	47500	49400	2.29	18.8	>10.0	1835	3140	427	1	10	67
303	207	112	398	10150	33800	1.03	16.4	9.45	1120	228	52	1	30	46
304	114	1080	2900	91300	44900	2.05	23.2	10	1370	985	845	1	10	60
305	85.5	1035	2320	75000	53500	1.11	23.4	9.99	1140	890	824	1	10	45
306	7.52	284	1910	34500	125500	1.18	30.6	8.85	1910	1530	303	1	10	4
20EAST1	1.33	13.95	2170	15.5	13300	1.33	28	9.72	488	1530	3.06	1.18	0.38	5
20EAST2	2.32	47.8	961	2350	4520	2.99	22.7	8.75	1400	4180	85.1	5.73	1.32	70
20EAST3	0.87	23.3	1790	472	9250	0.12	45.2	10	693	9200	13.3	13.3	0.87	11
20JEN1	1.13	42.4	295	6990	13300	1.63	6.84	3.96	832	162	29.4	5.93	12.7	117
20JEN2	0.85	2.21	74.1	128	491	1.06	3.65	1.17	937	112	0.82	24.5	2.26	312
20JEN3	0.02	1.75	83.7	36.4	195	1.62	4.8	2.4	273	32.3	2.35	52.9	3.78	71
20JEN4	1.46	3.02	99	177.5	3690	1.53	6.31	2.24	1160	1985	3.15	2.47	3.27	136
20ROAD1	2.28	7.55	109	396	2700	1.27	7.4	2.56	1370	17	0.46	0.95	0.48	213
20ROAD2	0.03	1.68	126.5	57.2	1400	1.64	4.95	2.29	1140	73.5	1.35	1.87	0.52	101

Golden Hope Rock Chip Sample Description

ID number	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	sampled width	Shear strike	Shear dip	Lithology
20GHOPE1	449102	5536610	2064	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE2	449087	5536452	2061	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE3	449067	5536547	2102	outcrop	20 cm	55	80 NW	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE4	449417	5536971	1980	outcrop	45 cm	19	78 E	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE5	449415	5536984	1981	outcrop	35 cm	20	77 E	siliceous meta-sediment/volcanic (greywacke protolith)

Golden Hope Rock Chip Sample Description

Sample no	Alteration	Mineralization
20GHOPE1	quartz,carbonate	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE3	quartz,carbonate	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE4	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE5	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite

Golden Hope Rock Chip Sample Description (Geochemical Analysis)

Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppı	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20GHOPE1	0.04	1.22	104	25.9	94	1.66	3.89	0.52	562	17.5	0.59	1.8	0.32	120
20GHOPE2	0.58	3.4	171	28.4	52	0.71	4.6	0.98	343	31.6	0.66	1.15	0.37	96
20GHOPE3	0.02	2.72	208	139	201	3.32	7.67	4.45	271	3.2	0.48	6.59	2.37	65
20GHOPE4	0.21	3.04	372	37.5	2200	0.31	9.81	1.39	796	21.7	0.39	4.84	7.91	56
20GHOPE5	0.27	2.33	198.5	37.9	2610	1.93	8.31	0.74	1200	25.7	0.31	2.22	8.52	57

Arnie Flats Rock Chip Sample Description

ID #	Easting	Northing	Elev (m)	Sample Type	width	Sample number	Alteration	Mineralization
20AF1	448006	5535748	2103	outcrop	25 cm	20AF1	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20AF2	448014	5535751	2108	outcrop (trench)	28 cm	20AF2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20AF3	447960	5535719	2091	angular float		20AF3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20AF4	447951	5535714	2090	angular float		20AF4	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena

Arnie Flats Rock Chip Sample Description (Geochemical Analysis)

Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20AF1	4.17	430	460	1085	403	0.08	13.7	0.36	252	39.9	53.9	148.5	5.03	74
20AF2	3.47	421	462	889	278	0.19	12.6	0.5	263	34.5	61.3	172	2.45	96
20AF3	0.02	2.39	122	19.3	53	1.01	4.78	1.22	293	4.4	0.52	5.05	6.48	110
20AF4	0.02	1.65	86.3	13.3	39	0.72	6.17	1.5	262	7.9	0.54	2.51	1.65	146

Silver Queen Rock Chip Sample Description

ID #	Easting	Northing	Elev (m)	Sample Type	width	ID #	Alteration	Mineralization	ID no
20SQ1	450307	5535369	2041	outcrop	30 cm	20SQ1	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite	20SQ1
20SQ2	450308	5535370	2042	outcrop	30 cm	20SQ2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite	20SQ2
20SQ3	450364	5535475	2075	outcrop	20 cm	20SQ3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena	20SQ3
20SQ4	450422	5535523	2127	angular float		20SQ4	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite	20SQ4
20SQ5	450516	5535558	2196	outcrop		20SQ5	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, arsenopyrite	20SQ5
20SQ6	450524	5535580	2214	outcrop		20SQ6	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena	20SQ6
20SQ7	450550	5535555	2220	angular float		20SQ7	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite	20SQ7

Silver Queen Rock Chip Sample Description (Geochemical Analysis)

ID no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
20SQ1	1.48	19	57.5	40.2	62	2.48	5.16	2.94	325	7740	20.5
20SQ2	2.87	9.06	37.7	45.5	73	1.83	6.19	3.23	373	10000	74.5
20SQ3	0.22	51.3	270	358	52800	4.94	5.91	3.67	3140	135.5	33.5
20SQ4	0.73	1895	422	63400	130500	11.85	14.85	10	10150	32	779
20SQ5	0.7	96.1	120.5	546	54500	5.45	4.56	2.79	2810	832	60
20SQ6	0.89	1270	366	72000	21900	2.19	9.93	6.12	1340	97.7	921
20SQ7	1.08	2590	807	110500	180000	2.45	19	10	4620	60.2	2330

Grizzly Rock Sample Descriptions (Grizzly North 20GRIZ-7,8,9,11)

ID #	Easting	Northing	Elev (m)	Sample Type	width
20GRIZ1	449592	5536342	2055	angular float	
20GRIZ2	449620	5536339	2059	outcrop	35 cm
20GRIZ3	449644	5536312	2060	outcrop	20 cm
20GRIZ4	449686	5536390	2055	outcrop	22 cm
20GRIZ5	449660	5536378	2062	outcrop	35 cm
20GRIZ6	449648	5536363	2062	outcrop	35 cm
20GRIZ7	449946	5536804	1869	outcrop	20 cm
20GRIZ8	449898	5536859	1878	outcrop	15 cm
20GRIZ9	449797	5536847	1900	outcrop	20 cm
20GRIZ10	449615	5536290	2057	outcrop	18 cm
20GRIZ7 B WR*	449945	5536804	1876	outcrop wallrock	40 cm
20GRIZ8 B WR*	449897	5536859	2095	outcrop wallrock	40 cm
20GRIZ9 B WR*	449796	5536847	2099	outcrop wallrock	45 cm
20GRIZ10 B WR*	449614	5536290	2103	outcrop wallrock	45 cm
20GRIZ11	449892	5536896	1876	angular float	[illegible]
20GRIZ12	449667	5536204	2095	angular float	
20GRIZ13	449572	5536198	2099	angular float	

* wallrock

Grizzly Rock Sample Descriptions (Grizzly North 20GRIZ-7,8,9,11)

ID number	Alteration	Mineralization
20GRIZ1	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ2	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ3	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ4	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ5	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ6	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ7	quartz,carbonate,chlorite,magnetite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ8	quartz,carbonate,chlorite,magnetite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ9	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ10	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ7 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ8 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ9 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ10 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ11	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ12	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ13	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena

* wallrock

Grizzly Rock Chip Sample Description (Geochemical Analysis)

	ID number	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %
	20GRIZ1	10.55	16	1665	345	456	0.15
	20GRIZ2	3.52	10.55	274	355	416	0.29
	20GRIZ3	0.02	1.64	49.1	33.2	51	0.43
	20GRIZ4	0.1	2.1	186.5	75.8	68	1.08
	20GRIZ5	14.25	6.21	208	23.4	86	0.44
	20GRIZ6	0.02	15.9	80.6	147.5	66	0.91
	20GRIZ7	0.07	128	584	22800	13400	0.42
NORTH GRIZZLY	20GRIZ8	0.07	158	840	152500	72800	0.16
	20GRIZ9	6.75	3.18	733	205	98	0.01
	20GRIZ10	0.03	0.87	33.7	453	165	0.12
	20GRIZ7 B WR*	0.02	0.93	161	10	75	1.4
NORTH GRIZZLY	20GRIZ8 B WR*	0.04	14.7	435	433	118	1.28
	20GRIZ9 B WR*	0.02	0.69	158.5	4.4	31	0.52
	20GRIZ10 B WR*	0.02	0.99	147.5	26.4	38	0.31
	20GRIZ11	0.02	0.53	78.6	3.8	32	0.61
	20GRIZ12	0.02	1.69	83.6	11.6	10	0.7
	20GRIZ13	0.02	1.86	76.9	14.7	22	0.49

* wallrock

Grizzly Rock Chip Sample Description (Geochemical Analysis)

Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm	ID number	
14.25	10	201	138	6.88	0.02	3.81	20	20GRIZ1	
3.97	2.06	396	33.5	6.79	0.04	1.98	46	20GRIZ2	
2.35	0.39	235	4.1	0.37	0.06	0.19	33	20GRIZ3	
3.43	1.27	299	4.2	0.3	0.07	1.42	59	20GRIZ4	
3.97	1.03	395	319	0.26	0.05	0.89	76	20GRIZ5	
4.19	0.19	360	5.7	0.15	0.04	16.05	73	20GRIZ6	
7.51	5.32	725	1.8	0.25	0.01	330	7	20GRIZ7	NORTH GRIZZLY
25.3	10	673	4.1	117	0.01	6.05	11	20GRIZ8	
22.2	10	54	4.7	0.24	0.01	6.03	2	20GRIZ9	
2.19	0.18	121	6.5	0.42	0.02	1.05	11	20GRIZ10	
6.69	2.46	519	25.3	0.49	0.83	1.55	137	20GRIZ7 B WR*	NORTH GRIZZLY
11.35	6.21	339	2.2	0.38	18.55	0.65	26	20GRIZ8 B WR*	
3.92	1.06	411	4.1	0.24	0.71	0.75	46	20GRIZ9 B WR*	
4.85	1.25	354	5.8	0.16	1.52	0.38	40	20GRIZ10 B WR*	
4.09	1.37	403	1.2	0.13	1.72	0.58	77	20GRIZ11	
6.14	0.61	122	3.2	0.38	11.25	2.14	34	20GRIZ12	
5.83	0.11	158	2.2	0.42	6.07	1060	40	20GRIZ13	

* wallrock

APPENDIX D Heino S, East Ridge S Soil Sample Geochemical Analysis

Line N	Sample ID N	Sample ID E	Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
36900	36900	48975	448975	5536900	clay, silt, sand	25	brown-red	57.8	21.7	71	1.19	0.02	3.21	98.7	S1
36900	36900	49000	449000	5536900	clay, silt, sand	25	brown-red	92.7	44.9	230	0.94	0.02	3.73	235	S2
36900	36900	49025	449025	5536900	clay, silt, sand	25	brown-red	49.3	35.5	229	0.61	0.02	3.34	53.2	S3
36900	36900	49050	449050	5536900	clay, silt, sand	25	brown-red	76.6	81.6	301	2.04	0.02	3.1	167.5	S4
36900	36900	49075	449075	5536900	clay, silt, sand	25	brown-red	49.7	106.5	550	1.72	0.17	3.8	536	S5
36900	36900	49100	449100	5536900	clay, silt, sand	25	brown-red	65.4	103.5	543	2.53	0.13	3.93	425	S6
36900	36900	49125	449125	5536900	clay, silt, sand	25	brown-red	32.5	46.5	155	1.91	0.05	2.81	165	S7
36900	36900	49150	449150	5536900	clay, silt, sand	25	brown-red	27.5	39.8	297	0.77	0.02	2.9	88.1	S8
36950	36950	48975	448975	5536950	clay, silt, sand	25	brown-red	77.5	20	157	1.21	0.02	4.16	68.7	S9
36950	36950	49000	449000	5536950	clay, silt, sand	25	brown-red	91.7	40	227	0.65	0.02	3.95	203	S10
36950	36950	49025	449025	5536950	clay, silt, sand	25	brown-red	111.5	39.3	253	0.3	0.03	4.04	147	S11
36950	36950	49050	449050	5536950	clay, silt, sand	25	brown-red	125	40.5	522	0.32	0.02	3.87	89.2	S12
36950	36950	49125	449125	5536950	clay, silt, sand	25	brown-red	40.3	62.6	619	0.97	0.09	3.48	138.5	S13
36950	36950	49150	449150	5536950	clay, silt, sand	25	brown-red	47.5	53.5	601	0.54	0.08	4.16	105.5	S14
36950	36950	49175	449175	5536950	clay, silt, sand	25	brown-red	35.3	61.6	476	0.66	0.28	3.99	101.5	S15
37000	37000	49100	449100	5537000	clay, silt, sand	25	brown-red	50.9	71.5	774	6.99	0.04	4.18	435	S16
37000	37000	49125	449125	5537000	clay, silt, sand	25	brown-red	60.9	243	366	3.5	0.39	4.8	1040	S17
37000	37000	49150	449150	5537000	clay, silt, sand	25	brown-red	53	202	391	3.43	0.12	4.34	765	S18
37000	37000	49175	449175	5537000	clay, silt, sand	25	brown-red	37.6	175	644	5.3	0.1	3.83	269	S19
37000	37000	49200	449200	5537000	clay, silt, sand	25	brown-red	36.9	233	774	1.53	0.08	3.97	167.5	S20
37000	37000	49225	449225	5537000	clay, silt, sand	25	brown-red	42.6	31.3	688	0.47	0.16	4.72	185.5	S21
37050	37050	49100	449100	5537050	clay, silt, sand	25	brown-red	43.5	75.4	532	1.17	0.05	3.5	672	S22
37050	37050	49125	449125	5537050	clay, silt, sand	25	brown-red	135.5	196.5	660	2.33	0.15	7.8	547	S23
37050	37050	49150	449150	5537050	clay, silt, sand	25	brown-red	55.6	67.9	770	1.16	0.14	4.65	439	S24
37050	37050	49175	449175	5537050	clay, silt, sand	25	brown-red	42.1	36.6	970	0.73	0.17	4.58	256	S25
37050	37050	49200	449200	5537050	clay, silt, sand	25	brown-red	53.5	88.1	909	1.39	0.11	5.03	497	S26
37100	37100	49100	449100	5537100	clay, silt, sand	25	brown-red	179.5	188.5	3010	4.94	1.86	8.4	2110	S27
37100	37100	49125	449125	5537100	clay, silt, sand	25	brown-red	75	73.9	1860	1.28	0.33	5.42	703	S28
37100	37100	49150	449150	5537100	clay, silt, sand	25	brown-red	110.5	456	1540	5.14	0.37	13.45	6040	S29
37100	37100	49175	449175	5537100	clay, silt, sand	25	brown-red	59.6	89.5	1240	0.79	0.09	4.06	503	S30
37100	37100	49200	449200	5537100	clay, silt, sand	25	brown-red	137	72.6	1620	3.02	0.92	8.83	577	S31
37100	37100	49225	449225	5537100	clay, silt, sand	25	brown-red	305	1185	1410	3.6	1.18	11.05	609	S32
37100	37100	49250	449250	5537100	clay, silt, sand	25	brown-red	133	199.5	706	2.99	0.18	5.37	762	S33

Heino S, East RidgeS Soil Sample Geochemical Analysis

37150	37150	49100	449100	5537150	clay, silt, sand	25	brown-red	159	117.5	4390	4.12	0.49	10.45	3240	S34
37150	37150	49125	449125	5537150	clay, silt, sand	25	brown-red	60.2	52.1	1300	1.07	0.33	4.75	430	S35
37150	37150	49150	449150	5537150	clay, silt, sand	25	brown-red	114.5	172.5	904	3.18	0.7	13.1	2030	S36
37150	37150	49175	449175	5537150	clay, silt, sand	25	brown-red	199.5	583	4080	2.07	0.39	7.37	643	S37
37150	37150	49200	449200	5537150	clay, silt, sand	25	brown-red	120	98	2490	1.18	0.36	5.98	1240	S38
37150	37150	49225	449225	5537150	clay, silt, sand	25	brown-red	30.3	112	202	0.95	0.07	5.12	1015	S39
37150	37150	49250	449250	5537150	clay, silt, sand	25	brown-red	59.7	85.4	770	1.08	0.13	5.03	133.5	S40

S. GRIZZLY SOIL SAMPLES

Sample ID N	Sample ID E	Easting	Northing	Texture	Depth cm	Colour	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Au	% Fe	ppm As	ID #
36300	49550	449550	5536300	clay, silt, sand	25	brown-red	100	62.1	136	0.57	0.15	3.15	36.2	S41
36300	49575	449575	5536300	clay, silt, sand	25	brown-red	157	333	539	1.5	0.42	3.23	335	S42
36300	49600	449600	5536300	clay, silt, sand	25	brown-red	136.5	78.8	146	4.01	0.04	8.52	7.3	S43
36300	49625	449625	5536300	clay, silt, sand	25	brown-red	250	84.5	88	5.69	0.05	10.85	19.5	S44
36300	49650	449650	5536300	clay, silt, sand	25	brown-red	42	13.3	48	0.49	<0.02	4.18	8.4	S45
36300	49675	449675	5536300	clay, silt, sand	25	brown-red	14.3	17.8	16	0.18	<0.02	2.03	4.8	S46
36350	49575	449575	5536350	clay, silt, sand	25	brown-red	64.3	27.8	74	0.61	0.12	3.95	31.8	S47
36350	49600	449600	5536350	clay, silt, sand	25	brown-red	167	28.1	51	1.58	8.76	4.49	15.8	S48
36350	49625	449625	5536350	clay, silt, sand	25	brown-red	172	21	53	1.31	0.09	5.11	34.2	S49
36350	49650	449650	5536350	clay, silt, sand	25	brown-red	108.5	7.9	68	0.19	<0.02	5.84	7.4	S50
36350	49675	449675	5536350	clay, silt, sand	25	brown-red	48.8	114.5	64	0.51	<0.02	3.57	10.2	S51
36350	49700	449700	5536350	clay, silt, sand	25	brown-red	45.4	18.8	55	0.47	<0.02	3.87	6.7	S52
36350	49725	449725	5536350	clay, silt, sand	25	brown-red	325	69.1	153	0.55	0.03	8.07	8.4	S53
36350	49750	449750	5536350	clay, silt, sand	25	brown-red	97.1	40.6	70	0.55	0.08	5.32	18.1	S54
36400	49550	449550	5536400	clay, silt, sand	25	brown-red	155	1590	269	8.9	0.1	9.51	37.3	S55
36400	49575	449575	5536400	clay, silt, sand	25	brown-red	142	51.7	238	0.32	0.02	5.64	72	S56
36400	49600	449600	5536400	clay, silt, sand	25	brown-red	24.7	30.2	36	0.38	<0.02	3	6.4	S57
36400	49625	449625	5536400	clay, silt, sand	25	brown-red	63.5	35.2	139	0.4	<0.02	3.82	17.1	S58
36400	49650	449650	5536400	clay, silt, sand	25	brown-red	51.8	132.5	185	0.61	0.12	4.9	13.5	S59
36400	49675	449675	5536400	clay, silt, sand	25	brown-red	80	49.9	187	0.51	<0.02	4.28	12	S60
36400	49700	449700	5536400	clay, silt, sand	25	brown-red	124.5	49.8	95	0.72	0.05	4.95	13.2	S61
36400	49725	449725	5536400	clay, silt, sand	25	brown-red	115.5	69.1	65	0.49	0.12	8.44	37.3	S62
36400	49750	449750	5536400	clay, silt, sand	25	brown-red	119	222	82	2.01	0.17	4.34	22.8	S63
36200	49500	449500	5536200	clay, silt, sand	25	brown-red	42.2	11.8	26	0.82	<0.02	1.57	7.3	S87
36200	49525	449525	5536200	clay, silt, sand	25	brown-red	25.6	18.6	42	0.96	0.05	4.8	12.7	S88
36200	49550	449550	5536200	clay, silt, sand	25	brown-red	36.2	13.2	20	1.49	0.04	2.49	3.8	S89
36200	49575	449575	5536200	clay, silt, sand	25	brown-red	25.5	11.2	23	0.53	<0.02	3.25	4.4	S90
36200	49600	449600	5536200	clay, silt, sand	25	brown-red	31.8	8.5	19	0.87	<0.02	2.47	3.4	S91
36200	49625	449625	5536200	clay, silt, sand	25	brown-red	185	7.6	222	0.67	<0.02	3.77	8.8	S92
36200	49650	449650	5536200	clay, silt, sand	25	brown-red	46.2	11	52	0.41	<0.02	3.52	6.6	S93
36200	49675	449675	5536200	clay, silt, sand	25	brown-red	23.5	8.8	24	0.44	<0.02	2.47	3.2	S94
36200	49700	449700	5536200	clay, silt, sand	25	brown-red	41	8.8	25	0.3	<0.02	3.62	7.6	S95
36200	49725	449725	5536200	clay, silt, sand	25	brown-red	56.7	2.5	33	0.45	<0.02	4.48	0.9	S96

N & S GRIZZLY SOIL SAMPLES

Sample ID N	Sample ID E	Easting	Northing	Texture	Depth cm	Colour	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Au	Fe %	ppm As	ID#
36250	49525	449525	5536250	clay, silt, sand	25	brown-red	19.1	13.2	20	0.44	0.15	1.82	9.5	S97
36250	49550	449550	5536250	clay, silt, sand	25	brown-red	63.3	17.5	85	0.94	0.03	3.17	24.7	S98
36250	49575	449575	5536250	clay, silt, sand	25	brown-red	88	55.7	46	0.43	<0.02	4.39	15.2	S99
36250	49600	449600	5536250	clay, silt, sand	25	brown-red	121	51	56	0.39	0.06	3.97	26.3	S100
36250	49625	449625	5536250	clay, silt, sand	25	brown-red	177	5.8	82	0.31	<0.02	4.77	3.5	S101
36250	49650	449650	5536250	clay, silt, sand	25	brown-red	58.8	15.2	45	0.66	<0.02	3.71	7.8	S102
36250	49675	449675	5536250	clay, silt, sand	25	brown-red	87	15.1	53	0.47	<0.02	4.58	8.8	S103
36250	49700	449700	5536250	clay, silt, sand	25	brown-red	11.3	10.2	6	0.84	<0.02	1.23	1.6	S104
36250	49725	449725	5536250	clay, silt, sand	25	brown-red	29.8	8.6	21	0.22	<0.02	2.77	3.5	S105
36250	49750	449750	5536250	clay, silt, sand	25	brown-red	38	7.6	38	0.42	<0.02	4.17	4.3	S106
36800	49750	449750	5536800	clay, silt, sand	25	brown-red	41.3	14.6	117	0.26	<0.02	4.4	21.9	S107
36800	49775	449775	5536800	clay, silt, sand	25	brown-red	50.4	30.2	79	1.48	<0.02	5.35	12.3	S108
36800	49800	449800	5536800	clay, silt, sand	25	brown-red	35.5	21	42	0.82	<0.02	3.3	7.2	S109
36800	49825	449825	5536800	clay, silt, sand	25	brown-red	53.7	47.1	48	1.3	<0.02	4.45	16.2	S110
36800	49850	449850	5536800	clay, silt, sand	25	brown-red	100.5	186.5	84	0.86	0.21	6.6	55.1	S111
36800	49875	449875	5536800	clay, silt, sand	25	brown-red	100.5	177	254	0.91	0.04	4.43	27	S112
36800	49900	449900	5536800	clay, silt, sand	25	brown-red	134	554	191	6.44	0.04	6.49	45.5	S113
36800	49925	449925	5536800	clay, silt, sand	25	brown-red	34.1	568	112	0.98	0.04	3.77	18.7	S114
36800	49950	449950	5536800	clay, silt, sand	25	brown-red	59.9	744	193	1.82	0.17	4.31	47	S115
~~36850~~ 36800	~~49750~~ 49975	~~449750~~ 449975	~~5536850~~ 5536800	clay, silt, sand	25	brown-red	100.5	309	131	1.6	1.51	4.94	25.3	S116
~~36850~~ 36800	~~49775~~ 50000	~~449775~~ 450000	~~5536850~~ 5536800	clay, silt, sand	25	brown-red	62.1	190.5	127	0.49	<0.02	4.46	13	S117
36850	49800	449800	5536850	clay, silt, sand	25	brown-red	49.5	55.2	201	0.71	<0.02	4.82	98.4	S118
36850	49825	449825	5536850	clay, silt, sand	25	brown-red	69.2	18.4	74	1.25	0.02	7.14	43.3	S119
36850	49850	449850	5536850	clay, silt, sand	25	brown-red	20.8	12.4	15	0.78	<0.02	1.67	8.5	S120
36850	49875	449875	5536850	clay, silt, sand	25	brown-red	50.9	97.2	52	0.59	0.02	4.05	13.4	S121
36850	49900	449900	5536850	clay, silt, sand	25	brown-red	47.5	101	104	0.65	0.05	3.22	34.3	S122
36850	49925	449925	5536850	clay, silt, sand	25	brown-red	82.4	46.5	71	0.96	<0.02	4.91	24.5	S123
36850	49950	449950	5536850	clay, silt, sand	25	brown-red	83.1	271	142	1.44	0.02	8	9.6	S124
36850	49975	449975	5536850	clay, silt, sand	25	brown-red	31.5	130	106	0.6	<0.02	3.68	10.9	S125
36850	50000	450000	5536850	clay, silt, sand	25	brown-red	121.5	369	341	1.06	0.29	4.8	38.8	S126
36900	49750	449750	5536900	clay, silt, sand	25	brown-red	23.2	13.9	27	0.32	<0.02	2.57	159	S127
36900	49775	449775	5536900	clay, silt, sand	25	brown-red	58.6	38.8	211	0.55	<0.02	3.59	61.2	S128
36900	49800	449800	5536900	clay, silt, sand	25	brown-red	29.8	16.8	61	0.65	<0.02	3.77	40.5	S129
36900	49825	449825	5536900	clay, silt, sand	25	brown-red	60.4	105	111	0.24	<0.02	4.48	20.1	S130

N. Grizzly Soil Samples

Sample ID N	Sample ID E	Easting	Northing	Texture	Depth cm	Colour	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Au	Fe%	ppm As	ID#
36900	49850	449850	5536900	clay, silt, sand	25	brown-red	81.1	28.1	146	0.5	<0.02	4.88	36.3	S131
36900	49875	449875	5536900	clay, silt, sand	25	brown-red	97.9	43.3	192	0.52	<0.02	5.99	24.3	S132
36900	49900	449900	5536900	clay, silt, sand	25	brown-red	50.7	50	117	0.41	<0.02	4.14	23.3	S133
36900	49925	449925	5536900	clay, silt, sand	25	brown-red	24.2	37.5	73	0.36	<0.02	3.53	9.2	S134
36900	49950	449950	5536900	clay, silt, sand	25	brown-red	34.3	37.2	159	0.59	<0.02	4.07	31.7	S135

Silver Queen Soil Sample Description & Geochemical Analysis

Sample ID N	Sample ID E	Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
35400	50400	450400	5535400	clay, silt, sand	25	brown-red	65.3	22.1	146	2.41	0.02	3.84	78.3	S71
35425	50400	450400	5535425	clay, silt, sand	25	brown-red	48	26	147	0.97	0.02	3.11	76.1	S72
35450	50400	450400	5535450	clay, silt, sand	25	brown-red	22.5	35.9	142	5.75	0.02	3.1	319	S73
35475	50400	450400	5535475	clay, silt, sand	25	brown-red	31.6	58.9	169	7.71	0.02	2.38	111.5	S74
35500	50400	450400	5535500	clay, silt, sand	25	brown-red	25.8	76.6	227	7.95	0.04	2.62	264	S75
35525	50400	450400	5535525	clay, silt, sand	25	brown-red	41.1	58.7	198	7.5	0.02	2.76	62.2	S76
35550	50400	450400	5535550	clay, silt, sand	25	brown-red	27.5	53.3	220	4.59	0.02	2.67	32.7	S77
35350	50300	450300	5535350	clay, silt, sand	25	brown-red	70.2	33.8	107	3.76	0.05	3.6	302	S64
35375	50300	450300	5535375	clay, silt, sand	25	brown-red	48.5	89.9	31	13	2.28	5.64	6720	S65
35400	50300	450300	5535400	clay, silt, sand	25	brown-red	106	18.1	182	0.76	0.02	4.4	48.6	S66
35425	50300	450300	5535425	clay, silt, sand	25	brown-red	112.5	16.5	182	2.24	0.02	4.25	58.5	S67
35450	50300	450300	5535450	clay, silt, sand	25	brown-red	69.8	64.7	158	13.55	0.04	6.11	297	S68
35475	50300	450300	5535475	clay, silt, sand	25	brown-red	81.7	10.4	445	2.64	0.04	2.66	49.7	S69
35500	50300	450300	5535500	clay, silt, sand	25	brown-red	52.4	24	239	2.8	0.02	2.98	37.9	S70

Arnie Flats Soil Sample Descriptions & Geochemical Analysis

Sample ID N	Sample ID E	Easting	Northing	Texture	Depth	Colour	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
35700	47950	447950	5535700	clay, silt, sand	25	brown-red	1.38	7.7	120	1.38	0.02	4.66	2.2	S78
35725	47950	447950	5535725	clay, silt, sand	25	brown-red	9.73	9.7	72	9.73	0.02	3.21	3.9	S79
35750	47950	447950	5535750	clay, silt, sand	25	brown-red	4.53	9.9	37	4.53	0.03	3.45	8	S80
35775	47950	447950	5535775	clay, silt, sand	25	brown-red	4.96	7.2	79	4.96	0.02	3.94	5.5	S81
35700	48050	448050	5535700	clay, silt, sand	25	brown-red	3.76	11.2	36	3.76	0.02	2.66	4	S82
35725	48050	448050	5535725	clay, silt, sand	25	brown-red	44.6	111	24	44.6	0.19	2.17	7.3	S83
35750	48050	448050	5535750	clay, silt, sand	25	brown-red	97	144.5	25	97	0.25	4.06	14	S84
35775	48050	448050	5535775	clay, silt, sand	25	brown-red	2.86	11.8	99	2.86	0.02	3.75	3.5	S85
35800	48050	448050	5535800	clay, silt, sand	25	brown-red	3.97	29.3	86	3.97	0.02	3.37	6.6	S86

S. Gold Hope Soil

Line N	Sample ID Northing	Sample ID Easting	Easting	Northing	Texture	Depth	Colour	
36450	36450	48700	448700	5536450	clay, silt, sand	25	brown-red	s137
36450	36450	48725	448725	5536450	clay, silt, sand	25	brown-red	s138
36450	36450	48750	448750	5536450	clay, silt, sand	25	brown-red	s139
36450	36450	48775	448775	5536450	clay, silt, sand	25	brown-red	s140
36450	36450	48800	448800	5536450	clay, silt, sand	25	brown-red	s141
36450	36450	48825	448825	5536450	clay, silt, sand	25	brown-red	s142
36450	36450	48850	448850	5536450	clay, silt, sand	25	brown-red	s143
36450	36450	48875	448875	5536450	clay, silt, sand	25	brown-red	s144
36450	36450	48900	448900	5536450	clay, silt, sand	25	brown-red	s145
36450	36450	48925	448925	5536450	clay, silt, sand	25	brown-red	s146
36450	36450	48950	448950	5536450	clay, silt, sand	25	brown-red	s147
36450	36450	48975	448975	5536450	clay, silt, sand	25	brown-red	s148
36450	36450	49000	449000	5536450	clay, silt, sand	25	brown-red	s149
36450	36450	49025	449025	5536450	clay, silt, sand	25	brown-red	s150
36450	36450	49050	449050	5536450	clay, silt, sand	25	brown-red	s151
36450	36450	49075	449075	5536450	clay, silt, sand	25	brown-red	s152
36450	36450	49100	449100	5536450	clay, silt, sand	25	brown-red	s153
36500	36500	48725	448725	5536500	clay, silt, sand	25	brown-red	s154
36500	36500	48750	448750	5536500	clay, silt, sand	25	brown-red	s155
36500	36500	48775	448775	5536500	clay, silt, sand	25	brown-red	s156
36500	36500	48800	448800	5536500	clay, silt, sand	25	brown-red	s157
36500	36500	48825	448825	5536500	clay, silt, sand	25	brown-red	s158
36500	36500	48850	448850	5536500	clay, silt, sand	25	brown-red	s159
36500	36500	48875	448875	5536500	clay, silt, sand	25	brown-red	s160
36500	36500	48900	448900	5536500	clay, silt, sand	25	brown-red	s161
36500	36500	48925	448925	5536500	clay, silt, sand	25	brown-red	s162
36500	36500	48950	448950	5536500	clay, silt, sand	25	brown-red	s163
36500	36500	48975	448975	5536500	clay, silt, sand	25	brown-red	s164
36500	36500	49000	449000	5536500	clay, silt, sand	25	brown-red	s165
36500	36500	49025	449025	5536500	clay, silt, sand	25	brown-red	s166
36500	36500	49050	449050	5536500	clay, silt, sand	25	brown-red	s167
36500	36500	49075	449075	5536500	clay, silt, sand	25	brown-red	s168
36500	36500	49100	449100	5536500	clay, silt, sand	25	brown-red	s169
36500	36500	49125	449125	5536500	clay, silt, sand	25	brown-red	s170
36500	36500	49150	449150	5536500	clay, silt, sand	25	brown-red	s171
36550	36550	48900	448900	5536550	clay, silt, sand	25	brown-red	s172
36550	36550	48925	448925	5536550	clay, silt, sand	25	brown-red	s173
36550	36550	48950	448950	5536550	clay, silt, sand	25	brown-red	s174
36550	36550	48975	448975	5536550	clay, silt, sand	25	brown-red	s175
36550	36550	49000	449000	5536550	clay, silt, sand	25	brown-red	s176
36550	36550	49025	449025	5536550	clay, silt, sand	25	brown-red	s177
36550	36550	49050	449050	5536550	clay, silt, sand	25	brown-red	s178
36550	36550	49075	449075	5536550	clay, silt, sand	25	brown-red	s179
36550	36550	49100	449100	5536550	clay, silt, sand	25	brown-red	s180
36550	36550	49125	449125	5536550	clay, silt, sand	25	brown-red	s181
36550	36550	49150	449150	5536550	clay, silt, sand	25	brown-red	s182

S. Gold Hope Soil

Easting	Northing	Cu	Pb	Zn	Ag	Au	Fe	As	ID #
448700	5536450	57.7	27.4	137	0.61	0.08	3.72	23.7	S137
448725	5536450	33.9	17.9	130	0.46	0.02	3.44	17.5	S138
448750	5536450	38.1	23.2	386	0.36	<0.02	3.9	34	S139
448775	5536450	56.1	35.8	300	0.5	<0.02	3.36	51.1	S140
448800	5536450	46.5	46.1	266	1.11	0.02	3.57	60.6	S141
448825	5536450	50.5	73.6	206	0.76	0.04	3.55	61.3	S142
448850	5536450	101	25.7	231	1.23	0.02	3.41	32.2	S143
448875	5536450	46.9	43.4	380	0.52	0.13	2.99	37.6	S144
448900	5536450	62.5	73.3	303	1.04	0.11	3.95	52.4	S145
448925	5536450	38	32.9	215	0.75	0.17	4.03	40.2	S146
448950	5536450	33	40.6	134	0.53	<0.02	3.45	20.2	S147
448975	5536450	33.9	41.6	113	0.99	<0.02	3.23	17.2	S148
449000	5536450	81	33.1	168	1.02	<0.02	4.57	21.5	S149
449025	5536450	70.9	89	278	1.2	0.07	3.45	37.9	S150
449050	5536450	53.7	116	198	1.09	0.07	3.53	26.3	S151
449075	5536450	65.7	120.5	178	1.47	0.11	3.92	29.3	S152
449100	5536450	62.5	27.9	113	0.9	<0.02	3.99	19.3	S153
448725	5536500	58.4	28.8	269	1.71	0.02	4.38	33.4	S154
448750	5536500	60.9	63.4	269	0.97	0.1	3.75	47.2	S155
448775	5536500	58.7	60.1	284	0.69	0.02	3.52	55.7	S156
448800	5536500	47.3	73.1	290	1.04	<0.02	3.54	39.2	S157
448825	5536500	44.4	77.3	332	0.57	0.02	2.99	50.3	S158
448850	5536500	44.5	103.5	593	0.6	0.02	3.22	50.2	S159
448875	5536500	62.6	55.3	351	1.24	0.05	3.01	89.8	S160
448900	5536500	49.6	35.7	373	0.56	<0.02	2.95	44.5	S161
448925	5536500	58.3	50.1	394	0.53	0.02	2.99	47.4	S162
448950	5536500	43.7	80.7	271	1.33	0.04	2.89	26.1	S163
448975	5536500	76.3	67.9	262	0.96	0.02	3.28	36.9	S164
449000	5536500	67	77.6	134	1.49	0.03	3.7	50.6	S165
449025	5536500	44.9	116	177	0.95	0.33	3.35	39.9	S166
449050	5536500	29.5	142	149	0.89	0.07	2.7	33.9	S167
449075	5536500	45.1	105	218	1.25	0.02	3.43	29.8	S168
449100	5536500	36.5	76.6	150	0.64	0.03	3	22.8	S169
449125	5536500	69.5	90.3	284	0.53	0.03	3.47	34.8	S170
449150	5536500	25.6	26.4	87	0.81	<0.02	2.99	12.7	S171
448900	5536550	42.9	26.2	305	0.59	0.07	3.28	122.5	S172
448925	5536550	52.7	39.7	247	1.21	0.02	3.36	92.8	S173
448950	5536550	52.2	26.8	169	1.9	<0.02	3.3	38.4	S174
448975	5536550	52.6	39.2	104	2.21	0.46	2.99	55.4	S175
449000	5536550	58.7	53.2	134	2.31	0.04	3.25	86.6	S176
449025	5536550	81.4	53.2	131	1.31	0.04	2.79	58.9	S177
449050	5536550	31.7	33.3	87	0.4	0.03	3.08	62.9	S178
449075	5536550	101	58.5	392	0.69	0.05	2.87	65.5	S179
449100	5536550	75.4	41.3	148	1.3	0.07	2.87	118	S180
449125	5536550	69.2	33.3	362	0.58	0.05	2.83	74.4	S181
449150	5536550	16.5	14.2	95	0.59	<0.02	2.67	8.7	S182

N. & S. Gold Hope

36550	36550	49175	449175	5536550	clay, silt, sand	25	brown-red	S183
36550	36550	49200	449200	5536550	clay, silt, sand	25	brown-red	S184
36600	36600	48900	448900	5536600	clay, silt, sand	25	brown-red	S185
36600	36600	48925	448925	5536600	clay, silt, sand	25	brown-red	S186
36600	36600	48950	448950	5536600	clay, silt, sand	25	brown-red	S187
36600	36600	48975	448975	5536600	clay, silt, sand	25	brown-red	S188
36600	36600	49000	449000	5536600	clay, silt, sand	25	brown-red	S189
36600	36600	49025	449025	5536600	clay, silt, sand	25	brown-red	S190
36600	36600	49050	449050	5536600	clay, silt, sand	25	brown-red	S191
36600	36600	49075	449075	5536600	clay, silt, sand	25	brown-red	S192
36600	36600	49100	449100	5536600	clay, silt, sand	25	brown-red	S193
36600	36600	49125	449125	5536600	clay, silt, sand	25	brown-red	S194
36600	36600	49150	449150	5536600	clay, silt, sand	25	brown-red	S195
36600	36600	49175	449175	5536600	clay, silt, sand	25	brown-red	S196
36600	36600	49200	449200	5536600	clay, silt, sand	25	brown-red	S197
36600	36600	49225	449225	5536600	clay, silt, sand	25	brown-red	S198
36900	36900	49400	449400	5536900	clay, silt, sand	25	brown-red	S199
36900	36900	49425	449425	5536900	clay, silt, sand	25	brown-red	S200
36900	36900	49450	449450	5536900	clay, silt, sand	25	brown-red	S201
36900	36900	49475	449475	5536900	clay, silt, sand	25	brown-red	S202
36900	36900	49500	449500	5536900	clay, silt, sand	25	brown-red	S203
36950	~~36900~~ 36950	49375	449375	5536950	clay, silt, sand	25	brown-red	S204
36950	~~36900~~ 36950	49400	449400	5536950	clay, silt, sand	25	brown-red	S205
36950	~~36900~~ 36950	49425	449425	5536950	no sample oc	ns		
36950	~~36900~~ 36950	49450	449450	5536950	clay, silt, sand	25	brown-red	S206
36950	~~36900~~ 36950	49475	449475	5536950	clay, silt, sand	25	brown-red	S207
36950	~~36900~~ 36950	49500	449500	5536950	clay, silt, sand	25	brown-red	S208
ID ~~East~~ North LINE	ID ~~East~~ North	ID North	Easting	Northing	Texture	depth cm	colour	ID #

N. & S. Gold Hope

Easting	Northing	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Au	% Fe	ppm As	ID#
449175	5536550	15.2	13.1	69	0.25	<0.02	2.72	7.1	S183
449200	5536550	43.6	29.4	227	0.31	<0.02	4.49	12.3	S184
448900	5536600	39.4	19.3	267	0.88	0.02	2.79	119	S185
448925	5536600	38.4	17.6	214	0.65	<0.02	3.27	94.1	S186
448950	5536600	36.2	24.2	158	1.17	<0.02	3.18	86.6	S187
448975	5536600	28.7	22.3	151	0.91	<0.02	3.76	45.6	S188
449000	5536600	46.4	31.8	120	2.24	0.02	3.32	39.6	S189
449025	5536600	25.8	19.5	88	1.94	<0.02	1.87	25.6	S190
449050	5536600	161	215	190	4.01	0.44	3.17	90.6	S191
449075	5536600	104.5	85.2	162	3.36	0.05	3.54	54.5	S192
449100	5536600	149.5	60.2	185	0.78	0.08	3.14	113.5	S193
449125	5536600	61.5	54.6	157	1.94	0.2	2.65	68.6	S194
449150	5536600	21.4	12.9	86	1.32	<0.02	1.77	41.6	S195
449175	5536600	11.8	10	21	0.8	0.12	1.79	7.5	S196
449200	5536600	19	29.4	45	0.92	0.06	2.15	34.1	S197
449225	5536600	93.3	27	427	1.5	1.01	3.74	280	S198
449400	5536900	58.1	28.4	277	0.99	0.06	4.86	87.5	S 199
449425	5536900	51	40.6	133	0.75	0.05	4.51	50.6	S 200
449450	5536900	39.3	25.1	116	0.68	0.05	4.28	58.7	S 201
449475	5536900	26.3	25.4	87	0.24	0.02	3.9	56.4	S 202
449500	5536900	42.1	40.9	134	0.42	0.03	3.81	44.6	S 203
449375	5536950	322	44	370	6.54	0.07	9.76	39.1	S 204
449400	5536950	94.9	22	232	0.7	0.07	5.18	79.6	S 205
449425	5536950								
449450	5536950	59.8	46.8	964	0.54	0.05	4.73	113.5	S 206
449475	5536950	70.8	30.9	695	0.44	0.03	4.18	92.1	S 207
449500	5536950	72.2	32.7	673	0.64	0.05	4.53	121.5	S 208

Jennie, Road, East RidgeN Soil Sample Description & Geochemical Analysis

Line N	Sample ID N	Sample ID E	Easting	Northing	Texture	Depth	Colour	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppm	Fe %	As ppm	ID #
37400	37400	49025	449025	5537400	clay, silt, sand	25	brown-red	209	488	926	1.13	0.11	5.89	735	S209
37400	37400	49050	449050	5537400	clay, silt, sand	25	brown-red	157	90	469	1.83	0.1	5.98	757	S210
37400	37400	49075	449075	5537400	clay, silt, sand	25	brown-red	150	104.5	993	1.5	0.17	5.66	703	S211
37400	37400	49100	449100	5537400	clay, silt, sand	25	brown-red	481	554	2590	9.26	0.39	12.9	3910	S212
37400	37400	49125	449125	5537400	clay, silt, sand	25	brown-red	167	11.6	300	0.48	0.02	5.32	144	S213
37400	37400	49150	449150	5537400	clay, silt, sand	25	brown-red	67.3	138	903	1.94	0.34	5.93	830	S214
37450	37450	49025	449025	5537450	clay, silt, sand	25	brown-red	179	72.5	292	0.91	0.02	6.67	241	S215
37450	37450	49050	449050	5537450	clay, silt, sand	25	brown-red	165	362	1000	1.59	0.1	5.74	409	S216
37450	37450	49075	449075	5537450	clay, silt, sand	25	brown-red	89.4	353	878	4.44	0.32	14.45	529	S217
37450	37450	49100	449100	5537450	clay, silt, sand	25	brown-red	255	281	646	5.47	0.41	8.18	1720	S218
37450	37450	49125	449125	5537450	clay, silt, sand	25	brown-red	222	65.2	1870	3.35	0.03	3.51	490	S219
37450	37450	49150	449150	5537450	clay, silt, sand	25	brown-red	128	51.7	399	0.88	0.02	7.54	107.5	S220
37600	37600	48950	448950	5537600	clay, silt, sand	25	brown-red	116	179	866	4.75	0.67	10.05	1285	S221
37600	37600	48975	448975	5537600	clay, silt, sand	25	brown-red	51.2	64.1	89	1.49	0.06	24.2	71.3	S222
37600	37600	49000	449000	5537600	clay, silt, sand	25	brown-red	325	64.3	2050	10.75	0.05	5.14	102.5	S223
37600	37600	49025	449025	5537600	clay, silt, sand	25	brown-red	69.2	65.4	614	1.6	0.31	5.37	244	S224
37600	37600	49050	449050	5537600	clay, silt, sand	25	brown-red	106.5	102	486	2.54	0.23	6.7	420	S225
37650	37650	49000	449000	5537650	clay, silt, sand	25	brown-red	176	120	4770	1.47	0.16	8.94	385	S226
37650	37650	49025	449025	5537650	clay, silt, sand	25	brown-red	433	44.6	991	2.67	0.06	9.86	365	S227
37650	37650	49050	449050	5537650	clay, silt, sand	25	brown-red	202	1475	520	32.8	2.58	15.5	210	S228
37650	37650	49075	449075	5537650	clay, silt, sand	25	brown-red	106.5	543	755	7.94	0.31	15.65	662	S229
37450	37450	49150	449150	5537450	clay, silt, sand	25	brown-red	185	40	342	1.38	0.02	9.07	71	S230
37450	37450	49175	449175	5537450	clay, silt, sand	25	brown-red	202	312	3460	1.1	0.09	6.93	1240	S231
37450	37450	49200	449200	5537450	clay, silt, sand	25	brown-red	103.5	172.5	1380	3.12	1.9	6.75	7250	S232
37450	37450	49225	449225	5537450	clay, silt, sand	25	brown-red	343	410	1270	4.95	1.04	8.18	563	S233
37450	37450	49250	449250	5537450	clay, silt, sand	25	brown-red	101.5	235	455	3.89	0.32	14.35	240	S234
37450	37450	49275	449275	5537450	clay, silt, sand	25	brown-red	80.4	162.5	227	1.94	0.08	5.39	217	S235
37450	37450	49300	449300	5537450	clay, silt, sand	25	brown-red	125	652	617	7.56	0.74	11.45	1820	S236
37500	37500	49150	449150	5537500	clay, silt, sand	25	brown-red	97.9	45.2	994	0.63	0.05	6.04	845	S237
37500	37500	49175	449175	5537500	clay, silt, sand	25	brown-red	199	47	2190	0.93	0.09	5.01	797	S238
37500	37500	49200	449200	5537500	clay, silt, sand	25	brown-red	214	147	642	5.05	0.16	3.8	446	S239
37500	37500	49225	449225	5537500	clay, silt, sand	25	brown-red	49.9	97.8	249	4.14	0.11	3.84	487	S240
37500	37500	49250	449250	5537500	clay, silt, sand	25	brown-red	22.8	82.5	176	1.15	0.17	2.29	75.5	S241

Jennie zone

Road zone

East Ridge N.

East Ridge N Soil Sample Description & Geochemical Analysis

37500	37500	49275	449275	5537500	clay, silt, sand	25	brown-red	18.4	36.1	147	0.63	0.06	3.37	16.9	S242
37500	37500	49300	449300	5537500	clay, silt, sand	25	brown-red	31.7	49.7	211	1.79	0.09	3.57	21.1	S243
37500	37500	49325	449325	5537500	clay, silt, sand	25	brown-red	98.9	347	224	2.74	0.31	3.89	36.6	S244
37500	37500	49350	449350	5537500	clay, silt, sand	25	brown-red	20.8	62.9	121	0.76	0.15	3.72	52	S245

APPENDIX E East Ridge Metallurgical Sample from Diamond Drill Hole Composite Samples

Sample#	MTO ID	DDH no.	From (m)	To (m)	int. (m)	Type	Band	1st Au g/t	2nd Au g/t	3rd Au g/t	4th Au g/t	5th Au g/t
2567	320414	151	77.72	78.03	0.31	split core	B	1.53				
2568	320414	151	111.56	111.86	0.3	split core	B	2.06				
2569	320414	151	120.32	122.32	2	split core	A	0.13	7.85	0.7		
2570	320414	154	52.73	54.86	2.13	split core	C	2.26	3.7	4.97	1.37	
2571	320414	154	58.67	60.5	1.83	split core	C	5.07	3.22	1.1		
2572	320414	154	65.99	66.75	0.76	split core	B	3.77				
2573	320414	150	5.33	6.4	1.07	split core	C	2.43				
2574	320414	150	7.01	8.23	1.22	split core	C	1.82	1.33			
2575	320414	150	26.67	27.13	1.5	split core	C	27.97				
2576	320414	150	87.47	88.98	1.51	split core	B	0.4				
2577	320414	150	90.83	92.35	1.52	split core	B	2.23	2.02	3.58	1.71	3.12
2578	320414	155	41.45	43.74	2.29	split core	C	1.81	8.67			
2579	320414	155	63.4	65.08	1.68	split core	B	1.44	1.57	13.85		
2580	320414	159	146	147.83	1.83	split core	A	1.88	4.39			
2581	320414	159	153.92	154.84	0.92	split core	A	2.13				
2582	320414	159	158.19	160.63	2.44	split core	A	1.16	6.38	1.03	3.15	3.02
2583	320414	159	181.05	182.88	1.83	split core	A	2.19				
2584	320414	159	185.01	185.47	0.46	split core	A	4.18				
2585	320414	160	86.56	87.48	0.92	split core	B					
2586	320414	160	125.5	126.1	0.6	split core	B					
2587	320414	160	127.1	128.93	1.83	split core	B	3.84	1.23	2.54		
2588	320414	160	135.33	136.25	0.92	split core	A	2.67				
2589	320414	160	144.48	145.39	0.91	split core	A	1.3	3.98			
2590	320414	160	153.31	153.92	0.62	split core	A	3.63				
2591	320414	161	78.03	78.33	0.3	split core	C	1.85				
2592	320414	161	80.46	81.69	1.23	split core	C	3.84	2.19			
2593	320414	161	108.05	111.25	3.2	split core	B	1.64	1.44	2.26	1.16	2.06
2594	320414	161	130	131.91	1.91	split core	A	1.51				
2595	320414	161	144.17	145.3	1.13	split core	A	2.43	4.18			
2596	320414	162	19.05	19.8	0.75	split core	C	1.65				
2597	320414	162	21.79	22.4	0.61	split core	C	1.57				
2598	320414	162	34.14	34.75	0.61	split core	C	1.1	5.28			
2599	320414	162	36.27	36.88	0.61	split core	C	5.28				

EAST RIDGE SPLIT CORE COMPOSITE METALLURGICAL SAMPLE TOTAL = 95.93 m intervals from 17 DDH's (1988)

East Ridge Metallurgical Sample from Diamond Drill Hole Composite Samples

2600	320414	162	37.49	38.1	0.61	split core	C	g/t Au = 2.54			
2601	320414	162	47.24	47.85	0.61	split core	C	1.78			
2602	320414	162	48.46	49.38	0.92	split core	C	19.68			
2603	320414	162	56.08	56.69	0.61	split core	C	1.65			
2604	320414	162	65.84	66.45	0.61	split core	B	1.3			
2605	320414	162	85.8	87.17	1.37	split core	B	1.78	g/t Au=1.58		
2606	320414	162	91.14	93.27	2.13	split core	A	4.32	5.55		
2607	320414	162	102.87	105.16	2.29	split core	A	6.72	5.14	g/t Au 2.19	g/t Au 3.36
2608	320414	163	7.32	8.53	1.21	split core	C	1.41			
2609	320414	163	12.5	13.56	1.06	split core	C	2.81			
2610	320414	163	41.15	42.67	1.52	split core	C	1.78	1.37		
2611	320414	163	72.09	72.39	0.3	split core	C	1.85			
2612	320414	163	82.91	83.82	0.91	split core	B	6.58	2.61		
2613	320414	163	85.65	86.87	1.22	split core	B	1.78	1.85		
2614	320414	163	97.84	98.91	1.07	split core	A	3.63			
2615	320414	164	9.75	11.89	2.14	split core	C	1.61	2.61		
2616	320414	164	45.11	46.8	1.69	split core	C	2.26	20.37	2.19	
2617	320414	164	48.8	50.9	2.1	split core	C	2.19	0.5	2.37	
2618	320414	164	78.03	78.94	0.91	split core	B	3.47			
2619	320414	164	79.86	80.77	0.91	split core	B	20.3			
2620	320414	164	85.04	86.26	1.22	split core	B	2.95	3.21		
2621	320414	164	95.4	95.71	0.31	split core	A	4.87			
2622	320414	164	97.84	99.82	1.98	split core	A	3.91	2.2		
2623	320414	165	16.46	16.92	0.46	split core	C	2.81			
2624	320414	165	21.64	22.71	1.07	split core	C	1.61			
2625	320414	165	54.1	57	2.9	split core	C	1.44	4.4	1.1	5.9
2626	320414	165	92.96	94.79	1.83	split core	A	4.94	6.4		
2627	320414	165	104.85	105.77	0.92	split core	A	3.36			
2628	320414	166	25.91	26.98	1.07	split core	C	2.54			
2629	320414	166	31.39	32.6	1.21	split core	C	1.7	2.4	0.6	
2630	320414	166	45.11	45.72	0.61	split core	B	4.11			
2631	320414	166	48.16	50.6	2.44	split core	B	2.26	2.4	7.5	1.85
2632	320414	166	58.83	60.6	1.77	split core	B	1.4	2	4.05	
2633	320414	167	3.35	3.69	0.31	split core	C	1.78			

East Ridge Metallurgical Sample from Diamond Drill Hole Composite Samples

2634	320414	167	15.39	16.46	1.07	split core	C	2.74				
2635	320414	167	19.2	20.12	0.92	split core	C	20.12	3.77			
2636	320414	167	32	32.61	0.61	split core	C	2.13				
2637	320414	167	45.11	45.72	0.61	split core	B					
2638	320414	167	48.16	50.6	2.44	split core	B	2.4	0.9	2.19	5.14	
2639	320414	168	64.31	64.62	0.31	split core	B	345.12				
2640	320414	169	91.75	94.18	2.43	split core	A	17.55				
2641	320414	170	81.08	82.6	1.52	split core	A	14.2				
2642	320414	173	25.91	27.89	1.98	split core	C	38.61				
					95.93	g/t Au	average =	9.16109589	3.839090909	3.26375	2.955	2.733333333
							17 A					
							23 B					
							36 C					

APPENDIX F

HEINO SOUTH & EAST RIDGE SOUTH MAGNETOMETER SURVEY DATA

```
/Gem Systems GSM-19T 6112151 v7.0 7 XI 2006 M t-e2.v7
/ID 1 file 01survey.m   15 II 00
/
/X Y nT sq cor-nT time
37250N  49050.00E   54135.86 99  000000.00 213250.0
37250N  49062.50E   54300.98 99  000000.00 213314.0
37250N  49075.00E   54118.92 99  000000.00 213438.0
37250N  49087.50E   53571.71 99  000000.00 213506.0
37250N  49100.00E   54109.22 99  000000.00 213542.0
37250N  49112.50E   54636.53 99  000000.00 213614.0
37250N  49125.00E   54947.32 99  000000.00 213710.0
37250N  49137.50E   55199.77 99  000000.00 213750.0
37250N  49150.00E   54977.59 99  000000.00 213830.0
37250N  49162.50E   54781.86 99  000000.00 213930.0
37250N  49175.00E   54641.18 99  000000.00 214018.0
37250N  49187.50E   54478.86 99  000000.00 214130.0
37250N  49200.00E   54562.53 99  000000.00 214250.0
37250N  49212.50E   54586.88 99  000000.00 214330.0
37250N  49225.00E   54851.45 99  000000.00 214454.0
37250N  49237.50E   54822.70 99  000000.00 214554.0
37250N  49237.50E   55004.87 99  000000.00 214714.0
37250N  49250.00E   54546.30 99  000000.00 214946.0
37250N  49262.50E   54688.31 99  000000.00 215046.0
37250N  49275.00E   54798.81 99  000000.00 215222.0
37250N  49287.50E   54984.15 99  000000.00 215302.0
37250N  49300.00E   54863.35 99  000000.00 215350.0
37250N  49312.50E   55089.76 99  000000.00 215446.0
37250N  49325.00E   55002.40 99  000000.00 215518.0
37250N  49337.50E   54620.50 99  000000.00 215638.0
```

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping
>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

37350N	49375.00E	53332.15	19	000000.00	221058.0
37350N	49362.50E	54507.94	99	000000.00	221350.0
37350N	49350.00E	54583.67	99	000000.00	222406.0
37350N	49337.50E	54723.96	99	000000.00	222458.0
37350N	49325.00E	54697.24	99	000000.00	222618.0
37350N	49312.50E	54639.66	99	000000.00	223034.0
37350N	49300.00E	54941.66	99	000000.00	223222.0
37350N	49287.50E	54798.35	99	000000.00	223306.0
37350N	49275.00E	54833.60	99	000000.00	223354.0
37350N	49262.50E	54922.06	99	000000.00	223442.0
37350N	49250.00E	54563.00	99	000000.00	223510.0
37350N	49237.50E	54753.16	99	000000.00	223558.0
37350N	49225.00E	54570.74	99	000000.00	223638.0
37350N	49212.50E	54596.09	99	000000.00	223702.0
37350N	49200.00E	54700.42	99	000000.00	223726.0
37350N	49187.50E	54755.03	99	000000.00	223750.0
37350N	49175.00E	54894.72	99	000000.00	223858.0
37350N	49162.50E	54869.22	99	000000.00	223926.0
37350N	49150.00E	54830.98	99	000000.00	223942.0
37350N	49137.50E	54728.64	99	000000.00	224006.0
37350N	49125.00E	54943.35	99	000000.00	224034.0
37350N	49112.50E	55039.35	99	000000.00	224054.0
37350N	49100.00E	54475.98	99	000000.00	224122.0
37350N	49087.50E	54768.30	99	000000.00	224226.0
37350N	49075.00E	54800.80	99	000000.00	224258.0
37350N	49062.50E	55302.53	49	000000.00	224342.0
37350N	49050.00E	54956.98	99	000000.00	224414.0
37350N	49037.50E	54946.43	99	000000.00	224442.0
37350N	49025.00E	54749.70	99	000000.00	224518.0
37350N	49012.50E	54818.27	99	000000.00	224538.0
37350N	49000.00E	54806.84	99	000000.00	224610.0

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping
>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

```
/Gem Systems GSM-19T 6112151 v7.0 7 XI 2006 M t-e2.v7
/ID 1 file 01survey.m   15 II 00
/
/X Y nT sq cor-nT time
37050N  49000.00E   55054.99 99  000000.00 000922.0
37050N  49012.50E   55092.00 99  000000.00 001006.0
37050N  49025.00E   55071.64 99  000000.00 001030.0
37050N  49037.50E   55178.13 99  000000.00 001110.0
37050N  49050.00E   55554.21 99  000000.00 001142.0
37050N  49062.50E   55403.22 99  000000.00 001218.0
37050N  49075.00E   54257.12 99  000000.00 001258.0
37050N  49087.50E   55796.79 99  000000.00 001342.0
37050N  49100.00E   54900.27 99  000000.00 001426.0
37050N  49112.50E   54979.78 99  000000.00 001514.0
37050N  49125.00E   55016.21 99  000000.00 001614.0
37050N  49137.50E   53683.99 99  000000.00 001734.0
37050N  49150.00E   53970.91 99  000000.00 002202.0
37050N  49162.50E   54760.70 99  000000.00 000458.0
37050N  49175.00E   55083.47 99  000000.00 001110.0
37050N  49187.50E   55062.15 99  000000.00 001238.0
37050N  49200.00E   54977.18 99  000000.00 002046.0

3700N   49225.00E   54788.21 99  000000.00 014342.0
3700N   49212.50E   54812.35 99  000000.00 014222.0
3700N   49200.00E   54821.98 99  000000.00 014130.0
3700N   49187.50E   54791.24 99  000000.00 013650.0
3700N   49175.00E   54829.27 99  000000.00 013030.0
3700N   49162.50E   55319.43 99  000000.00 012834.0
3700N   49150.00E   54614.56 99  000000.00 012654.0
37000N  49137.50E   56748.55 49  000000.00 002650.0
37000N  49125.00E   57097.10 99  000000.00 002854.0
37000N  49112.50E   56749.41 99  000000.00 003002.0
37000N  49100.00E   55478.23 79  000000.00 003134.0
37000N  49087.50E   54168.34 99  000000.00 003226.0
37000N  49075.00E   54953.81 99  000000.00 003314.0
37000N  49062.50E   55067.92 99  000000.00 003406.0
37000N  49050.00E   55057.14 99  000000.00 003442.0
37000N  49037.50E   55057.11 99  000000.00 003510.0
37000N  49025.00E   55063.10 99  000000.00 003542.0
37000N  49012.50E   55040.61 99  000000.00 003622.0
37000N  49000.00E   55427.18 99  000000.00 003650.0
37000N  48987.50E   55255.98 99  000000.00 003742.0
37000N  48975.00E   55165.18 99  000000.00 003806.0
```

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping

- >56,500 nT
- 55,701-56,500 nT
- 55,501-55,700 nT
- 55,301-55,500 nT
- 55,101-55,300 nT
- <54,000 nT

37100N	49100.00E	54935.82	99	000000.00	024606.0
37100N	49112.50E	54900.43	99	000000.00	024650.0
37100N	49125.00E	54878.70	99	000000.00	024730.0
37100N	49137.50E	54847.94	99	000000.00	025350.0
37100N	49150.00E	54603.29	99	000000.00	025458.0
37100N	49162.50E	54147.05	99	000000.00	025818.0
37100N	49175.00E	55413.49	99	000000.00	030102.0
37100N	49187.50E	55425.50	99	000000.00	030142.0
37100N	49200.00E	55490.55	99	000000.00	030858.0
37100N	49212.50E	54773.01	19	000000.00	030954.0
37100N	49225.00E	54563.19	69	000000.00	031202.0
37100N	49237.50E	54678.93	99	000000.00	031454.0
37100N	49250.00E	55004.79	99	000000.00	031510.0

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping

>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

36950N	48975.00E	55388.94	99	000000.00	003942.0
36950N	48987.50E	55257.51	99	000000.00	004014.0
36950N	49000.00E	55148.73	99	000000.00	004034.0
36950N	49012.50E	55056.86	99	000000.00	004058.0
36950N	49025.00E	54913.78	99	000000.00	004130.0
36950N	49037.50E	55225.56	99	000000.00	004202.0
36950N	49050.00E	54973.01	99	000000.00	004238.0
36950N	49062.50E	54897.32	99	000000.00	004310.0
36950N	49075.00E	54923.59	99	000000.00	004342.0
36950N	49087.50E	54778.46	99	000000.00	004414.0
36950N	49100.00E	53940.53	99	000000.00	004458.0
36950N	49112.50E	53874.63	99	000000.00	004530.0
36950N	49125.00E	55183.20	99	000000.00	004558.0
36950N	49137.50E	54443.26	99	000000.00	004630.0
36950N	49150.00E	55010.94	99	000000.00	004702.0
36950N	49162.50E	55113.99	99	000000.00	004734.0
36950N	49175.00E	55300.39	99	000000.00	004854.0
36900N	49200.00E	54965.10	99	000000.00	005238.0
36900N	49187.50E	54998.01	99	000000.00	005258.0
36900N	49175.00E	55124.56	99	000000.00	005434.0
36900N	49162.50E	54966.50	99	000000.00	005538.0
36900N	49150.00E	54752.57	99	000000.00	005630.0
36900N	49137.50E	55423.86	99	000000.00	005718.0
36900N	49125.00E	55486.42	99	000000.00	005810.0
36900N	49112.50E	55153.18	99	000000.00	005838.0
36900N	49100.00E	54623.27	89	000000.00	005906.0
36900N	49087.50E	55148.59	99	000000.00	005954.0
36900N	49075.00E	54802.89	99	000000.00	010026.0
36900N	49062.50E	54947.87	99	000000.00	010058.0
36900N	49050.00E	54934.73	99	000000.00	010122.0
36900N	49037.50E	55074.81	99	000000.00	010154.0
36900N	49025.00E	55082.16	99	000000.00	010222.0
36900N	49012.50E	55018.02	99	000000.00	010246.0
36900N	49000.00E	55018.19	99	000000.00	010306.0
36900N	48987.50E	55131.45	99	000000.00	010338.0
36900N	48975.00E	55388.37	99	000000.00	010402.0
36900N	48962.50E	56642.28	79	000000.00	010438.0
36900N	48950.00E	55758.09	99	000000.00	010506.0
36900N	48937.50E	55512.46	99	000000.00	010542.0
36900N	48925.00E	55088.96	99	000000.00	010610.0
36900N	48912.50E	55113.90	99	000000.00	010634.0
36900N	48900.00E	54993.77	99	000000.00	010658.0

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping

- >56,500 nT
- 55,701-56,500 nT
- 55,501-55,700 nT
- 55,301-55,500 nT
- 55,101-55,300 nT
- <54,000 nT

36850N	48875.00E	54986.82	99	000000.00	010850.0
36850N	48887.50E	54773.22	99	000000.00	010918.0
36850N	48900.00E	54792.13	99	000000.00	010942.0
36850N	48912.50E	54951.39	99	000000.00	011006.0
36850N	48925.00E	54752.04	99	000000.00	011030.0
36850N	48937.50E	55154.05	99	000000.00	011054.0
36850N	48950.00E	54832.85	99	000000.00	011122.0
36850N	48962.50E	54797.24	99	000000.00	011154.0
36850N	48975.00E	54874.54	99	000000.00	011222.0
36850N	48987.50E	54929.11	99	000000.00	011246.0
36850N	49000.00E	54881.51	99	000000.00	011314.0
36850N	49012.50E	54879.25	99	000000.00	011334.0
36850N	49025.00E	55185.68	99	000000.00	011414.0
36850N	49037.50E	55428.18	99	000000.00	011446.0
36850N	49050.00E	55322.49	99	000000.00	011530.0
36850N	49062.50E	55170.37	99	000000.00	011618.0
36850N	49075.00E	54909.58	99	000000.00	011650.0
36850N	49087.50E	54925.10	99	000000.00	011730.0
36850N	49100.00E	55336.41	99	000000.00	011810.0
36850N	49112.50E	54897.16	99	000000.00	011854.0
36850N	49125.00E	54814.27	99	000000.00	011918.0
36850N	49137.50E	54767.50	99	000000.00	011938.0
36850N	49150.00E	54872.07	99	000000.00	012010.0
36850N	49162.50E	54971.86	99	000000.00	012038.0
36850N	49175.00E	54866.80	99	000000.00	012054.0
36850N	49187.50E	54983.40	99	000000.00	012118.0
36850N	49200.00E	54949.14	99	000000.00	012146.0
36850N	49212.50E	55024.05	99	000000.00	012226.0
36850N	49225.00E	55081.31	99	000000.00	012254.0

37150N	49250.00E	56379.74	99	000000.00	020526.0
37150N	49237.50E	54867.85	99	000000.00	021054.0
37150N	49225.00E	54535.99	99	000000.00	021150.0
37150N	49212.50E	54705.44	69	000000.00	021542.0
37150N	49200.00E	54624.51	99	000000.00	022214.0
37150N	49187.50E	54607.60	99	000000.00	022310.0
37150N	49175.00E	54559.43	99	000000.00	022622.0
37150N	49162.50E	54426.82	99	000000.00	022846.0
37150N	49150.00E	54431.36	99	000000.00	022922.0
37150N	49137.50E	54821.72	99	000000.00	023222.0
37150N	49125.00E	54902.17	99	000000.00	023350.0
37150N	49112.50E	54919.62	99	000000.00	023850.0
37150N	49100.00E	54954.41	99	000000.00	023914.0
37150N	49087.50E	54742.63	18	000000.00	024150.0
37150N	49075.00E	54735.47	18	000000.00	024154.0

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping

>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

GRIZZLY SOUTH MAGNETOMETER SURVEY DATA

```
/Gem Systems GSM-19T 6112151 v7.0 7 XI 2006 M t-e2.v7
/ID 1 file 01survey.m   15 II 00
/
/X Y nT sq cor-nT time
36350N  49450.00E   54759.19 99   000000.00 024806.0
36350N  49462.50E   54848.78 99   000000.00 025426.0
36350N  49475.00E   54944.09 99   000000.00 025450.0
36350N  49487.50E   54955.21 99   000000.00 025518.0
36350N  49500.00E   55117.41 99   000000.00 025542.0
36350N  49512.50E   54671.07 99   000000.00 025618.0
36350N  49525.00E   54774.91 99   000000.00 025706.0
36350N  49537.50E   54983.84 99   000000.00 025734.0
36350N  49550.00E   55211.87 99   000000.00 025914.0
36350N  49562.50E   56423.97 99   000000.00 030010.0
36350N  49575.00E   57266.75 99   000000.00 030026.0
36350N  49587.50E   58067.15 49   000000.00 030106.0
36350N  49600.00E   48613.84 15   000000.00 030134.0
36350N  49612.50E   54569.51 99   000000.00 030230.0
36350N  49625.00E   54749.31 99   000000.00 032746.0
36350N  49637.50E   54824.41 99   000000.00 032846.0
36350N  49650.00E   54890.36 99   000000.00 032930.0
36350N  49662.50E   54875.36 99   000000.00 033010.0
36350N  49675.00E   54984.51 89   000000.00 033042.0
36350N  49687.50E   54958.24 99   000000.00 033106.0
36350N  49700.00E   55639.51 99   000000.00 033134.0
36350N  49712.50E   54849.66 99   000000.00 033210.0
36350N  49725.00E   54246.43 99   000000.00 033238.0
36350N  49737.50E   54873.43 99   000000.00 033318.0
36350N  49750.00E   54611.78 99   000000.00 033454.0
36300N  49750.00E   55125.14 79   000000.00 035042.0
36300N  49737.50E   54869.19 99   000000.00 035222.0
36300N  49725.00E   54910.92 99   000000.00 035314.0
36300N  49712.50E   54787.21 99   000000.00 035418.0
36300N  49700.00E   54624.73 99   000000.00 035534.0
36300N  49687.50E   54809.64 99   000000.00 035610.0
36300N  49675.00E   54941.22 99   000000.00 035642.0
36300N  49662.50E   55556.36 99   000000.00 035714.0
36300N  49650.00E   55407.69 99   000000.00 035802.0
36300N  49637.50E   55035.44 99   000000.00 041506.0
36300N  49625.00E   54943.43 99   000000.00 043226.0
36300N  49612.50E   54708.58 99   000000.00 043358.0
36300N  49600.00E   54738.69 99   000000.00 043442.0
36300N  49587.50E   54745.36 99   000000.00 043526.0
36300N  49575.00E   54808.69 99   000000.00 043554.0
36300N  49562.50E   54989.73 99   000000.00 044510.0
36300N  49550.00E   55036.55 99   000000.00 044550.0
36300N  49537.50E   54972.26 99   000000.00 044854.0
36300N  49525.00E   55046.07 99   000000.00 044922.0
36400N  49500.00E   54609.90 99   000000.00 051254.0
36400N  49512.50E   54858.45 99   000000.00 051314.0
36400N  49525.00E   54799.90 99   000000.00 051334.0
36400N  49537.50E   54680.20 99   000000.00 051430.0
```

>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping

36400N	49550.00E	54526.90	99	000000.00	051618.0
36400N	49562.50E	54637.31	99	000000.00	053714.0
36400N	49575.00E	54700.57	99	000000.00	054554.0
36400N	49587.50E	54935.76	99	000000.00	054638.0
36400N	49587.50E	54653.09	99	000000.00	054722.0
36400N	49600.00E	54701.65	99	000000.00	055126.0
36400N	49612.50E	54708.11	99	000000.00	055146.0
36400N	49625.00E	54707.05	99	000000.00	055210.0
36400N	49637.50E	54760.83	99	000000.00	055258.0
36400N	49650.00E	54720.82	99	000000.00	061718.0
36400N	49662.50E	54769.26	99	000000.00	061802.0
36400N	49675.00E	54684.79	89	000000.00	061858.0
36400N	49687.50E	54753.05	99	000000.00	061926.0
36400N	49700.00E	54760.67	99	000000.00	062014.0
36400N	49712.50E	54687.00	99	000000.00	062058.0
36400N	49725.00E	54809.69	99	000000.00	062134.0
36400N	49737.50E	55242.48	99	000000.00	062158.0
36450N	49750.00E	54749.41	99	000000.00	062630.0
36450N	49737.50E	54911.86	99	000000.00	062818.0
36450N	49725.00E	54870.86	99	000000.00	062902.0
36450N	49712.50E	54733.71	99	000000.00	063010.0
36450N	49700.00E	54753.60	99	000000.00	063106.0
36450N	49687.50E	55882.47	79	000000.00	063142.0
36450N	49675.00E	55057.07	99	000000.00	063202.0
36450N	49662.50E	54756.38	99	000000.00	063226.0
36450N	49650.00E	54803.49	99	000000.00	063246.0
36450N	49637.50E	54896.28	99	000000.00	063322.0
36450N	49625.00E	54890.95	99	000000.00	063346.0
36450N	49612.50E	54694.14	99	000000.00	063418.0
36450N	49600.00E	54866.09	99	000000.00	063454.0
36450N	49587.50E	54749.86	99	000000.00	063530.0
36450N	49575.00E	54299.72	99	000000.00	063602.0
36450N	49562.50E	54525.91	99	000000.00	063634.0
36450N	49550.00E	54761.50	99	000000.00	063710.0

Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping
>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT

APPENDIX G

Vancouver Petrographics Ltd.
8080 GLOVER ROAD, LANGLEY, B.C. V1M 3S3
PHONE (604) 888-1323 • FAX (604) 888-3642
email: vanpetro@vancouver.net

Report 200206 for
Andris Kikauka,
MGX Minerals Inc.,
4199 Hwy 101,
Powell River, BC, V8A 0C7
tel: 250-514-7802
andriskikauka@hotmail.com

August 2020

Sample: #303 (Tillicum ~~2210 m~~ 2130 m adit)

Note: A polished thick section was prepared and opaque minerals described (Section 303). Non-reflective minerals were identified tentatively as quartz and Mineral A. Later, in order to identify the silicates, a thin section was made from the part rock that in the polished section contained the most native gold. This section was much more complex than expected from the polished section. In the future, it would be best to make polished thin sections in order to see the detailed distribution of both reflective and transmitting phases in the same section.

Summary:

Sample 303 is of massive sulphide dominated by intimate intergrowths of pyrrhotite (fresh to altered slightly to strongly to secondary Fe-minerals), sphalerite, quartz, and a silicate (Mineral A). Minor minerals include galena, hematite, arsenopyrite, chalcopyrite, and native gold (which occurs mainly in quartz and in Mineral A). Two proximal patches up to 1.5 mm across are of medium to coarse grained quartz. A vein is of pyrite and lesser silicate(s). A few seams are of sheared rock, one of which contains sphalerite and the others of which contain hematite/limonite. The K-feldspar stain on the offcut block indicates the presence of K-feldspar, mainly in a patch in one corner of the block near the large quartz patches; however, none was identified positively in the thin section.

Sample 303t is complex. It contains patches of host rock consisting of plagioclase, with lesser tremolite, accessory epidote and patches of cryptocrystalline chlorite, and minor garnet and sphene. It has sharp to gradational contacts with patches of sulphide-rich skarn/replacement dominated by intimate intergrowths of sphalerite and opaque (mainly pyrrhotite); these are intergrown in distinct patches with each of tremolite, tremolite-quartz, and lesser diopside, with minor garnet and chlorite. Two proximal patches up to 1.5 mm across are of medium to coarse grained quartz. A vein up to 0.5 mm wide is of opaque-chlorite.

Photographic Notes:

The scanned section shows the gross textural features of the sections; these features are seen much better on the digital image than on the printed image. For the photographs, sample numbers are shown in the upper left corner, photo numbers are shown in the lower left corner, and the letter in the lower right corner indicates the lighting conditions: plane polarized incident light (= P); incident light in crossed nicols (= X); reflected light (= R); reflected light in nearly crossed nicols and incident light in crossed nicols (= ~RX). Locations of photographs are shown on the scanned section. Descriptions of the photographs are at the end of the report.

Sample #303 **Massive Sulphide: Pyrrhotite-Sphalerite-Quartz-Mineral A**
Minor Galena, Arsenopyrite, Hematite, Chalcopyrite, Native Gold
Patches: Quartz
Vein: Pyrite-(Silicate)

The sample is of massive sulphide dominated by intimate intergrowths of pyrrhotite (fresh to altered slightly to strongly to secondary Fe-minerals), sphalerite, quartz, and a silicate (Mineral A). Minor minerals include galena, hematite, arsenopyrite, chalcopyrite, and native gold (which occurs mainly in quartz and in Mineral A). Two proximal patches up to 1.5 mm across are of medium to coarse grained quartz. A vein is of pyrite and lesser silicate(s). A few seams are of sheared rock, one of which contains sphalerite and the others of which contain hematite/limonite.

mineral	percentage	main grain size range (mm)
quartz	50-55%	0.05-0.5; 1-5
pyrrhotite	10-12	0.1-0.3
sphalerite	5- 7	0.2-1
galena	0.3	0.1-0.3
hematite	0.3	0.005-0.02(?)
arsenopyrite	0.2	0.5-0.7
chalcopyrite	0.1	0.03-0.05
native gold	minor	0.01-0.05
native silver (?)	trace	0.005-0.01

Quartz occurs in two main modes. It forms two proximal medium to coarse grained patches, each of which is up to 1.5 cm across. It forms very fine to fine anhedral to locally euhedral grains intergrown very finely to finely with sulphides and with a second non-reflective mineral, Mineral A, probably a silicate.

Mineral A occurs with quartz in patches interstitial to sulphides; it has slightly lower reflectivity than quartz and in places contains inclusions of quartz.

Pyrrhotite forms anhedral patches intergrown very finely to finely with minor to abundant sphalerite and silicates. It is strongly anisotropic and strongly magnetic. Some patches are fresh, some are altered slightly to moderately to botryoidal aggregates of secondary Fe-sulphide, and some are altered moderately to strongly to secondary Fe-sulphides and patches of non-reflective opaque. A few patches were replaced by secondary pyrite.

Sphalerite forms anhedral grains, most of the larger ones of which contain inclusions of pyrrhotite as grains from 0.1-0.5 mm in size and as exsolution blebs from 0.005-0.015 mm in size.

Galena forms scattered to locally moderately abundant patches, mainly intergrown coarsely with sphalerite.

Hematite forms a few secondary massive to less commonly botryoidal patches that are intergrown coarsely with sphalerite, quartz, and pyrrhotite.

Arsenopyrite forms one euhedral prismatic grain in sphalerite with lesser quartz and pyrrhotite.

Chalcopyrite forms scattered patches, mainly in silicates and mainly near patches of sphalerite. It also forms elongates lenses up to 0.1 mm long in fractures in silicates.

Native gold is concentrated in one area up to 1.5 mm in size as abundant disseminated irregular grains in quartz and in Mineral A. Elsewhere it forms very few disseminated grains, mainly in quartz and Mineral A.

Native silver (or possibly galena) occurs locally with native gold or in quartz and Mineral A in the area with abundant native gold.

(continued on page 2)

A vein up to 1 mm wide is of massive pyrite and patches of silicates.

A sheared zone up to 0.1 mm wide contain granulated sphalerite and silicates.
A few veinlets (possibly sheared zones) up to 0.15 mm wide contain limonite/hematite.

Sample #303t **Host Rock: Plagioclase-Tremolite-Epidote-Garnet-Chlorite**
Skarn: Tremolite-Sphalerite-Opaque-Quartz-Diopside-(Garnet-Chlorite)
Patches: Quartz
Vein: Opaque-(Chlorite)

The thin section is complex. It contains patches of host rock consisting of plagioclase, with lesser tremolite, accessory epidote and patches of cryptocrystalline chlorite, and minor garnet and sphene. It has sharp to gradational contacts with patches of sulphide-rich skarn/replacement dominated by intimate intergrowths of sphalerite and opaque (mainly pyrrhotite); these are intergrown in distinct patches with each of tremolite, tremolite-quartz, and lesser diopside, with accessory garnet and chlorite. Two proximal patches up to 1.5 mm across are of medium to coarse grained quartz. A vein up to 0.5 mm wide is of opaque-chlorite.

mineral	percentage	main grain size range (mm)	
host rock			
plagioclase	10-12%	0.05-0.1	
tremolite	2- 3	0.2-1 (a few up to 1.5 mm long)	
chlorite	1- 2	0.001-0.003	
epidote	1	0.05-0.1	
sphene	minor	0.07-0.1	
skarn/replacement			
tremolite	15-17	0.3-1.5	
opaque	5- 7	0.1-0.3	(mainly pyrrrhotite)
sphalerite	4- 5	0.2-1	
diopside	3- 4	0.2-0.5 (a few up to 1 mm long)	
quartz	2- 3	0.05-0.2	
chlorite	1- 2	0.003-0.01	
patches			
quartz	50-55	1-7	
vein			
opaque-chlorite	0.3	0.1-0.2 (op); cryptocrystalline (cl)	

Patches up to several mm across of host rock (hr in the scanned section) consist of intergrowths of unoriented anhedral plagioclase with disseminated porphyroblasts of tremolite, patches of epidote (probably in part at least secondary after plagioclase), lesser grains of garnet, and minor disseminated anhedral grains of sphene. Chlorite forms diffuse to sharply defined patches, in part concentrated along margins of or near patches of skarn/replacement.

In the replacement/skarn zones, tremolite (tr) occurs in patches of anhedral to subhedral, commonly prismatic grains intergrown with sphalerite and opaque.

Sphalerite forms anhedral grains with a deep reddish brown colour, most of the larger ones of which contain inclusions of opaque (probably pyrrhotite) as grains from 0.1-0.5 mm in size and as exsolution blebs from 0.005-0.015 mm in size.

Opaque (mainly pyrrhotite) forms anhedral patches intergrown very finely to finely with sphalerite and silicates. See Section 303 for the description of minor opaque minerals).

Diopside is concentrated in one corner of the section (di) intergrown with minor to moderately abundant sulphides and minor tremolite.

(continued on page 2)

Sample 303t (page 2)

Quartz is concentrated in two areas with tremolite and sphalerite, with lesser opaque (Photo 10). (Note: much of the prismatic mineral that was identified as quartz in the polished section is actually tremolite).

Garnet forms disseminated, equant grains intergrown with tremolite or diopside.

Chlorite is concentrated in patches mainly less than 0.2 mm in size but locally up to 1.5 mm as cryptocrystalline, pale greenish brown aggregates.

Quartz forms two proximal medium to coarse grained patches up to 1.5 cm across.

A vein up to 0.5 mm wide is of cryptocrystalline chlorite with patches of opaque (probably pyrite).

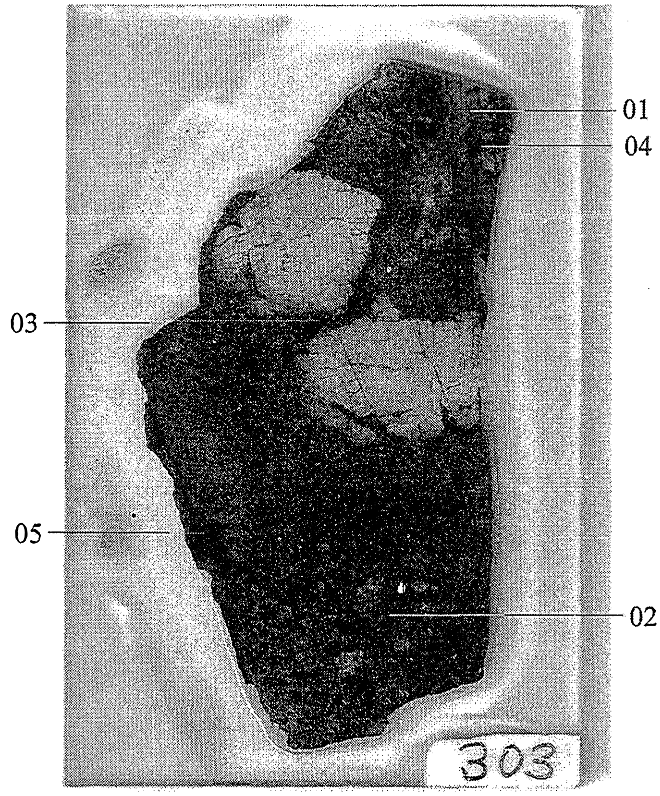
PROFESSIONAL PROVINCE OF J. G. PAYNE #27828 BRITISH COLUMBIA GEOSCIENTIST

John G. Payne, Ph.D., P.Geol.
Tel: (604)-597-1080
e-mail: jppayne@telus.net

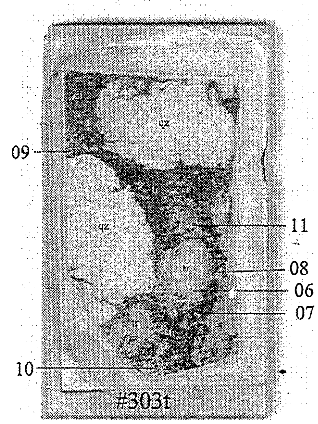
List of Photographs

Photo	Section	Description
01	303	abundant patches of native gold and minor native silver disseminated in quartz and Mineral A; larger patches of sphalerite (the largest with exsolution blebs of pyrrhotite) and lesser pyrrhotite (locally altered to botryoidal patches of secondary Fe-sulphide (= po*); near the top: seam of granulated sphalerite.
02	303	very fine intergrowth of pyrrhotite and quartz-Mineral A, with local concentrations of sphalerite and minor galena.
03	303	euhedral arsenopyrite grain surrounded by sphalerite (with exsolution blebs of pyrrhotite), pyrrhotite (altered slightly to secondary Fe-sulphide [= po*]) and quartz; patches of galena, locally with native gold; patches of hematite, in part botryoidal, of uncertain origin.
04	303	sphalerite (with exsolution blebs of pyrrhotite), pyrrhotite (alteredslightly to moderately to secondary Fe-sulphide (= po*), quartz, and Mineral A; clusters and stringers of native gold in a few patches of quartz and locally Mineral A.
04	303	sphalerite (with exsolution blebs and lenses of pyrrhotite), patches of pyrrhotite (altered slightly to moderately to secondary Fe-sulphide [= po*]); interstitial patches of quartz (in part subhedral) and Mineral A; native gold forms patches and lenses in three patches of quartz-Mineral A.
05	303	to the left: pyrrhotite (altered partly to secondary Fe-minerals (= po*) and, near the pyrite vein, altered partly to secondary pyrite (= py*); cut by veinlet of hematite(?); to the right: vein of pyrite-silicate with a seam of hematite along the contact with the host rock.
06	303t	host rock: plagioclase with porphyroblasts of garnet and of tremolite, and a patch of epidote.
07	303t	most of photo: skarn/replacement: sphalerite, prismatic tremolite, with lesser plagioclase, opaque (probably pyrrhotite), and minor quartz; to the right: host rock: plagioclase-tremolite.
08	303t	intergrowth of tremolite and sphalerite with small patches of cryptocrystalline chlorite and lenses of opaque (probably mainly pyrrhotite); at top: anhedral garnet grain; top left corner: host rock: plagioclase-epidote-tremolite.
09	303t	diopside-rich patch with lesser opaque (mainly pyrrhotite) and plagioclase, with a prismatic grain of tremolite, a few patches of sphalerite, and a patch of cryptocrystalline chlorite.
10	303t	intergrowth of tremolite, quartz, and patches of sphalerite-opaque (mainly pyrrhotite).
11	303t	patchy skarn: chlorite, tremolite, quartz, garnet, sphalerite, opaque, epidote, with minor plagioclase.

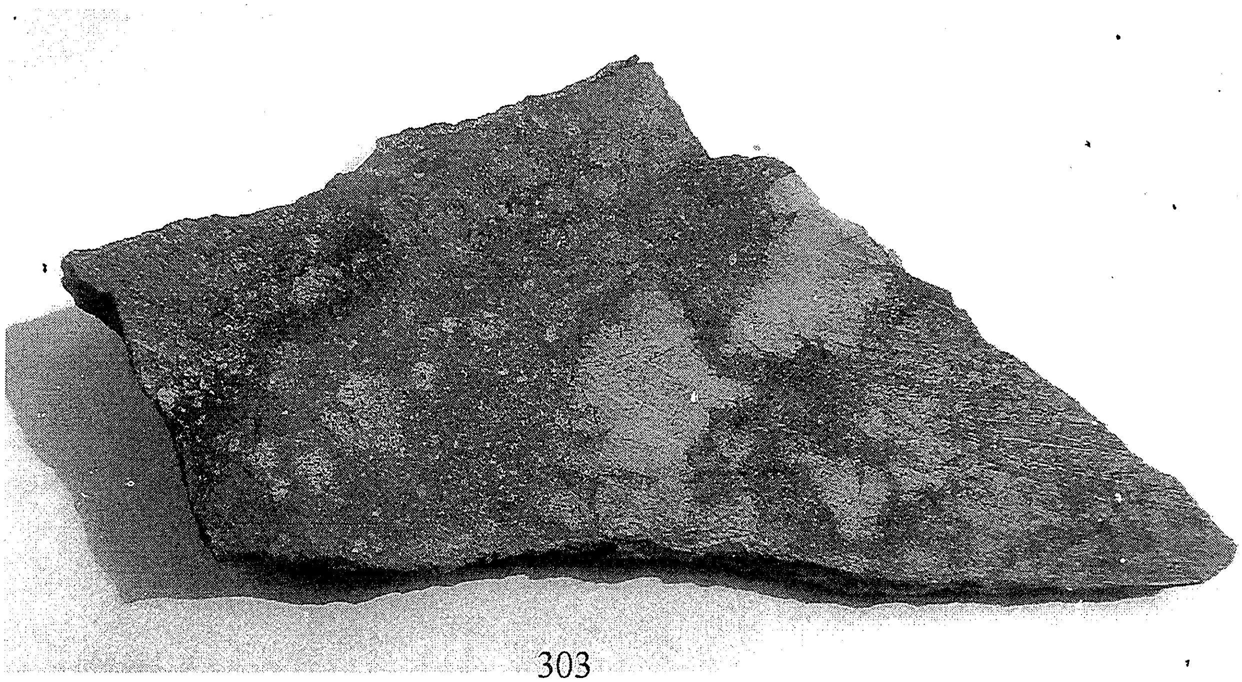
200206 mgx section



200206 mgx section (2)



200206 mgx block



APPENDIX H

MINFILE Record Summary
MINFILE No 082FNW234

Print Preview PDF – SELECT REPORT –

XML Extract / Production Report / Inventory Report

File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
Last Edit: 10-May-2018 by Karl A. Flower (KAF)

SUMMARY Summary Help

Name	TILLICUM, HEINO-MONEY, EAST RIDGE, MONEY PIT, JENNY, BLUE, CULTUS, VALLEY VIEW, WOLF, HUGH, SANDY, NEAR, TIL, ESPERANZA GOLD, SCREAMER, 950, BBB, WEST RIDGE, COMMAND	**NMI**	082F13 Au1
		Mining Division	Slocan
		BCGS Map	082F092
Status	Developed Prospect	**NTS Map**	082F13E
Latitude	049° 59' 08"	**UTM**	11 (NAD 83)
Longitude	117° 42' 41"	**Northing**	5537267
		Easting	449002
Commodities	Gold, Silver, Lead, Zinc, Cadmium, Copper, Tungsten	**Deposit Types**	K04 : Au skarn K02 : Pb-Zn skarn K05 : W skarn
Tectonic Belt	Omineca	**Terrane**	Quesnel

Capsule Geology

The Tillicum (Heino-Money) occurrence is located at approximately 2130 metres elevation on a north- trending spur of Tillicum Mountain and approximately 12 kilometres east of the Lower Arrow Lake community of Burton.

Regionally, metavolcanic rocks and a predominant metasedimentary succession form the highly deformed, east-trending Nemo Lakes Belt. It is intruded to the north and west by the Jurassic and/or Cretaceous Goatcanyon-Halifax Creeks quartz monzonite stock, while to the south it is invaded by the Eocene Nemo Lakes quartz monzonite stock. Supracrustal rocks of the Nemo Lakes Belt in the Tillicum Mountain area are dominated by metamorphosed siltstone, calcareous siltstone, arkose, and wacke, with lesser amounts of basalt, tuff, argillite, impure carbonate and marble layers. The supracrustal rocks underwent a post-Lower Jurassic phase of regional metamorphism and folding that predates the Middle to Upper Jurassic intrusion of the monzonitic stocks. This resulted in sillimanite-grade metamorphism throughout most of the Nemo Lakes Belt, however, the metamorphic grade is lower around Tillicum Mountain and resulted in the formation of biotite, muscovite, chlorite and amphibole. In addition to the regional metamorphism, the rocks were locally subjected to two episodes of contact metamorphism. The first is associated with swarms of dioritic sills that probably accompanied the regional deformation;, the second is hornfelsing related to the intrusion of the large monzonitic stocks and postdates the regional deformation.

On the Tillicum property, the metamorphosed sedimentary rocks appear to correlate with the Lower and Middle Jurassic Archibald and Hall formations and the metamorphosed volcanic rocks with the older Lower Jurassic Elise Formation. All formations belong to the Lower Jurassic Rossland Group. These country rocks are intruded by swarms of deformed, often schistose, feldspar porphyritic diorite to quartz diorite sills that vary from 1 to greater than 100 metres in width. These intrusive rocks are widely distributed and are spatially and probably genetically related to gold-rich skarn mineralization on the Tillicum property. The country rocks immediately adjacent to the sills are often weakly hornfelsed. Locally the margins of some diorite sills and country rock adjacent to them are overprinted with skarn alteration.

The structure on the property is complex and is dominated by steep angle normal and reverse faults. Most faults have little offsets, however, several faults with major displacements divide the property into fault-bounded blocks. The metamorphic fabric of the rock closely parallels the bedding planes with minor or parasitic folding only very rarely observed. The Heino-Money zone is offset by a series of left-lateral, steep- angle, northeast- striking faults that have displacements of up to 9.0 metres. Within a 500 metre radius of the Heino-Money zone, three other significant mineralized zones have been discovered. These are the East Ridge zone, the Jenny zone and the Blue zone.

At the Heino-Money (Screamer) zone, strata-bound, gold-bearing, siliceous calc-silicate skarn alteration is hosted in a thin, wedge-shaped package of basaltic tuff and tuffaceous sedimentary rocks, which is bounded to the west by metabasalts and to the east by a large, altered feldspar porphyritic diorite body. The skarn is pinkish-green and is generally well layered with sub-parallel thin quartz veins and variable amounts of sulphides. The skarn assemblage includes quartz, tremolite-actinolite, clinozoisite, plagioclase, diopside, biotite, garnet and microcline, with minor amounts of sericite and carbonate. Free gold occurs as fine to coarse disseminations and fracture fillings within and along walls of the quartz sulphide veins; gold is generally associated with pyrrhotite, pyrite, galena and sphalerite. The zone is cut by north-trending, steeply dipping lamprophyre dykes, which postdate both the skarn development and sulphide mineralization. A polished section study of this mineralization shows that gold grains are generally free, but may also be intimately associated with pyrrhotite, arsenopyrite, sphalerite and pyrite-marcasite. Some pyrrhotite grains are rimmed with colloform pyrite-marcasite while others contain small masses of hematite and graphitic material. Minor to trace amounts of tetrahedrite, chalcopyrite and possibly electrum also occur. Polished thin section studies and geochemical studies suggest that the mineralizing process at the Heino-Money zone involved two phases of precious metal deposition. The first phase included the introduction of gold, arsenopyrite and possibly sphalerite, accompanied by the crystallization of quartz, carbonate and calc-silicate minerals. This was followed by the deposition of argentiferous galena and the continued introduction of arsenopyrite and sphalerite. Gold and silver-bearing horizons are present in the skarns at the Heino-Money zone but they do not occur together. Silver is probably carried in galena.

In 1983, drilling outlined a drill-indicated reserve of 36,287 tonnes at 20.5 grams per tonne gold and a total inferred potential of 90,720 tonnes (George Cross News Letter, February 28, 1984). In 1989, the Heino-Money zone was explored by drilling and underground exploration and had a reported reserve potential of 45,355 tonnes grading 34.28 grams per tonne gold. Within this reserve, a mining reserve has been calculated to be 15,874 tonnes with a diluted grade of 34.28 grams per tonne gold using a cut-off grade of 11.99 grams per tonne gold. The mining reserve is outlined in four south- raking shoots that occur in a near vertical gold-bearing skarn structure that averages approximately 2 metres in width along a strike length of approximately 200 metres and a vertical extent of 100 metres. Additional reserve potential occurs between the delineated shoots as well as along strike and depth projections of the skarn structure (Assessment Report 19437). Columbia Gold Mines (1991), formerly Esperanza, estimated reserves of the Heino-Money zone to be 13,600 tonnes grading 34.79 grams per tonne gold (Information Circular 1993-13, page 17).

In 1981, a bulk sample of 58 tonnes shipped from the Money Pit averaged 78.8 grams per tonne gold. In 1986, a 3175- tonne bulk sample was shipped to the Dankoe mill at Keremeos and yielded 109.44 kilograms of gold (Assessment Report 19437). In 1993, as a result of mining at the Heino-Money zone, a total of 5503 tonnes of ore with an estimated head grade of 24.4 grams per tonne gold was shipped to the Goldstream mill (MINFILE 082M 141) for processing. Approximately 102,443 grams of gold and 149,546 grams of silver were recovered into concentrates that were shipped to Japan for smelting (George Cross News Letter No. 237 (December 10), 1993).

The East Ridge zone is 300 metres east of the Heino-Money zone. Gold mineralization occurs in a blanket-like zone that straddles the contact between porphyritic diorite and meta-arkose, quartzite, siltstone and minor argillite. The gold-bearing, near-vertical calc-silicate skarn structures occur within a 9.1 to 24.3- metre zone that strikes northeast and dips 70 degrees northwest. The skarn structures have widths that vary from 1.5 to 4.6 metres, but average 2.1 metres. The East Ridge zone has been traced by drilling for 1100 metres along strike and 365 metres down-dip at an average width of 1.5 metres. The East Ridge zone is comprised of two parallel upper skarn structures 0.9 to 1.5 metres thick and a lower skarn structure. Gold occurs in randomly distributed high- grade pockets separated by areas of lower grade material. Within the zone, gold-bearing sulphide mineralization consists of pyrrhotite, pyrite-marcasite, arsenopyrite, chalcopyrite, sphalerite, galena and native gold with traces of tetrahedrite.

In 1982, a 180- kilogram bulk sample from the upper cut assayed 3.8 grams per tonne gold (Assessment Report 11161). In 1984, drilling on the East Zone yielded an inferred resource of 4,536,000 tonnes at 1.7 grams per tonne gold (Northern Miner, November 15, 1984). In 1989, exploratory underground drifting (300 metres) and drilling on the East Ridge zone resulted in indicated reserves of 1,184,672 tonnes grading 5.82 grams per tonne gold. Within this reserve are measured geological reserves of 238,567 tonnes grading 13.36 grams per tonne gold using a minimum width of 1.5 metres and a cut-off grade of 6.85 grams per tonne gold (Assessment Report 19437). Columbia Gold Mines (1991) estimated reserves of the East Ridge zone to be 440,000 tonnes grading 10.26 grams per tonne gold (Information Circular 1993-13). In 1997, a drill- indicated reserve of 474,640 tonnes averaging 9.6 grams per tonne gold with a total possible resource of 1,063,220 tonnes averaging 8.9 grams per tonne gold with a cut-off grade of 5.1 grams per tonne gold was reported (Assessment Report 25004).

The Jenny zone is 150 metres north and 100 metres lower in elevation than the Heino-Money zone. The Jenny zone consists of alternating bands of glassy quartz and sericitic quartzite overlain by pyritic, black, fine-grained, thinly bedded argillite. Very fine -grained galena, sphalerite and pyrite occur in the quartzite with euhedral magnetite and pyrite in the glassy quartz. Occasional cavity fillings of gold-bearing chalcedonic quartz and actinolite- rich bands are also evident. In 1982, diamond drilling, on the zone, yielded up to 4.5 grams per tonne gold over 3.0 metres from drill hole S82-5 (Assessment Report 11161). Also at this time, a chip sample across 0.4 metres returned 12.9 grams per tonne gold and 19.8 grams per tonne silver (Assessment Report 11161). In 1997, sampling of the Lower Jenny zone, located another 50 metres north, yielded up to 7.6 grams per tonne gold and grams per tonne silver, while a select sample assayed 413.9 grams per tonne gold (Assessment Report 25004).

The Blue (BBB) zone is 280 metres north-northeast of the Heino-Money zone. Three pits expose pyrite, pyrrhotite, galena and sphalerite massive stringers and lenses within a fractured and sheared, thinly bedded quartz-biotite gneiss. Just above the pits, scheelite occurs disseminated in a siliceous matrix and along fractures. In 1982, sampling yielded values up to 6.9 grams per tonne gold (Assessment Report 11161).

The Tillicum group, comprising the Tillicum, Cultus and Valley View claims, was apparently located in this vicinity. During 1917 through 1921, owners J. G. Reveler and L. Robson carried out exploration work in one or more short drift adits for approximately 75 metres. Approximately 3.3 tonnes of sorted ore averaging 66.2 grams per tonne gold and 3420 grams per tonne silver was stockpiled in 1921 (Assessment Report 07909). The Tillicum portal is located at approximately 150 metres to the south east of Heino-Money pit zone and at an elevation of 2160 metres.

In 1979 and 1980, the area was prospected by Arnold and Elaine Gustafson, of Burton, on ground held as the Wolf, Hugh, Sandy and Near claim groups (12 units). This led to the discovery of high-grade gold in the "Money Pit" area in September 1980. Esperanza Explorations Ltd and Welcome North Mines Ltd., as a joint venture, optioned 100 per cent interest in the property from the Gustafson's by a September 20, 1980, agreement, subject to a percentage of net smelter returns. The existing claims and adjacent ground was over staked as the Til 1-4 claims (72 units). Work in 1981 included geochemical and geophysical surveys, bulk sampling and trenching.

Welcome North withdrew from the joint venture in March 1982. On June 23, 1982, La Teko Resources Ltd. acquired an option to purchase a 50.4 per cent share interest in Esperanza Explorations prior to December 31, 1984 for $5,125,000. Additional staking expanded the property to some 237 units. Exploration activity in 1982 included 1128 metres of diamond drilling in 16 holes on the Heino-Money zone, eight holes on the East Ridge zone and three holes on the Jenny zone. In 1983, a 60.9-metre crosscut adit was driven on the East Ridge zone and further geochemical surveys and trenching carried out. Diamond drilling was done in 18 holes on the Heino-Money zone. Drilling in 1983 totalled 2319 metres in 38 holes. In 1984, a 60-metre adit was driven into the upper part of the Heino-Money zone. Further diamond drilling was done in five holes on the East Ridge zone. La Teko provided financing of exploration to the end of 1985 ($2.28 million) to earn a 39.6 per cent interest in Esperanza. La Teko was unable to provide further financing and the 1982 option agreement expired at the end of 1985. In 1986, Esperanza Explorations completed a drill program of 25 surface diamond drill holes, totalling 835.5 metres and nine underground diamond drill holes, totalling 176.8 metres. Underground development, during this time, included 153 metres of drifting and 46.5 metres of raises. By this time 5 levels had been developed at elevations of 2112, 2130, 2148, 2160 and 2171 metres on the Heino-Money zone. In 1989, a further 10 diamond drill holes, totalling 1437.6 metres, were completed on the East Ridge zone.

In 1997, AMT Resources and IBEX Resources completed a program of geochemical sampling, trenching and a ground electromagnetic survey on the area. In 2001 and 2002, 1330275 Ontario Limited completed programs of rock, silt and soil sampling and geological mapping on the area. During 2008 through 2014, AMT Industries Canada completed programs of soil sampling, a ground electromagnetic survey and remote sensing analysis on the area.

Bibliography

EMPR AR 1917-F175; 1919-N160; 1920-N135; 1921-G174

EMPR ASS RPT *7909, 9455, *11161, *12269, *15700, *19437, *25004, 26847, 27144, 30488, 31182, 35269

EMPR BC METAL MM00136, MM01434

EMPR EXPL 1980-84; 1981-40; 1982-11,17,63; 1983-84; 1984-xvi; 1985-A38; 1986-A15,A58,A59; 1987-A6,A64

EMPR FIELDWORK 1980, p.84; 1981, pp. 39-45; 1983, pp. 19-21; 1984, pp. 23-51; *1985, pp. 37-49; 1986, pp. 19,21; 1987, pp. 5,67-70, 79, 277

EMPR INF CIRC 1984-1, pp. 20,21,25; 1985-1, pp. 5,39; 1986-1, pp. 41,43,47; 1987-1, pp. 17,29,55,56; 1988-1, pp. 4,19,59,60; 1988-10, p. 5; 1990-1; 1993-13, p. 17; 1994-1

EMPR IR 1984-3, p. 109

EMPR MAP 65 (1989)

EMPR MIN STATS 1985, p. 50; 1980-1992, p. 12

EMPR OF 1991-17; 1992-1; 1994-1

EMPR P *1989-3, pp. 44-49

EMPR PF (Roberts, W. and McClintock, J. (1985): Gold Mineralization at the Tillicum Gold Property; 1989 "Snapshot" Review Form; 1988 Snap Shot Review Progress Report on the Tillicum Gold Property; Notes

from CIM District 6, Kamloops, 1984; Columbia Gold Mines Ltd., May, 1990; Abstract by D.M. Peterson)

EMR MIN BULL MR 223 B.C. 37

EMR MP CORPFILE (Esperanza Explorations Ltd.; Welcome North Mines Ltd.; La Teko Resources Ltd.; Columbia Gold Mines Ltd.)

GSC BULL 161, p. 40

GSC MAP 3-1956; 1090A; 1176A

CIM Sept., 1983

CJES Vol.18, 1981, pp. 944-958

GCNL #218,#221, 1980; #229, 1981; #137,#150,#168,#177,#182,#193,#200, #204,#211,#215,#242, 1982; #24,#26,#64,#117,#140,#166,#168,#187, #198,#205, 1983; #41,#125,#145,#181,#214, 1984; #92,#139,#169, 1985; #4,#6,#105,#155,#157,#184,#219, 1986; #81,#124,#130,#195, #201,#231, 1987; #37,#131,#133,#145,#150,#175,#188,#197,#208,#211, #221, 1988; #20(Jan.30),#72,#86(May 4),#134(July 13),#156(Aug.15), #160(Aug.21),#163(Aug.24),#208(Oct.30), 1989; #5(Jan.8),#110(June 8), #228(Nov.26), 1992; #88(May7),#144(Jul.28),#147(Aug.3),#211 (Nov.3), #237(Dec.10), 1993; #118(June 21), 1994

IPDM Nov., 1985; Nov./Dec., 1982

N MINER Dec.10, 1981; Aug.12, Sept.8,23, Oct.14, Nov.4,18, 1982; Feb.17, June 23, July 28, Sept.23, Oct.20, 1983; Jan.5, Apr.11, June 21, Aug.2, Oct.4, Nov.22, 1984; Sept.23, 1985; Sept.8, 1986; Apr.27, July 20, 1987; Mar.7, Apr.18, July 4, Oct.17, 1988; Feb.6, May 1, July 17, Nov.13, 1989; Oct.14, 1991; June 15, 1992; May 17, Aug.16, Sept.13, Dec.20, 1993; Oct.23, 1995; Jan.18, 1999

NAGMIN June 7, 1985; Feb.15, Mar.30, July 6, 1984; June 1, 1983

NW PROSP 1985 (Winter) pp. 8,9

V STOCKWATCH Jan., Apr.22, May 22, Aug.17, Oct.9, Dec.1, 1987

W MINER Apr., 1984

WWW http://www.infomine.com/index/properties/TILLICUM.html

Placer Dome File

EMPR PFD 900038, 900057, 2508, 2517, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2521, 2518, 2519, 2520, 902110, 902589, 902657, 902902, 902964, 903199, 903226, 903359, 903388, 903431, 903458, 903494, 903523, 909330, 903637, 903638, 903639, 903865, 903918, 904131, 904276, 906573, 906744, 906917, 132874, 907040, 907155, 907200, 907518, 881130, 888824, 888828, 888829, 888830, 888832, 888833, 888834, 888835, 888836, 888838, 888839, 888841, 888842, 888843, 888844, 888845, 888846, 888847, 888848, 888849, 888850, 888851, 888852, 888853, 888854, 888855, 888856, 888857, 888858, 888859, 888860, 888861, 888862, 888863, 888864, 888865, 888866, 888867, 888868, 888869, 888870, 888871, 825272, 825275, 825352, 825353, 825354, 825355, 825356, 825357, 825358, 825360, 825361, 822756, 822757, 822758, 822759, 822760, 822761, 822762, 822763, 822764, 822766, 822767, 822768, 822769, 822770, 822771, 822772, 822773, 822774, 822776, 822777, 822784, 822786, 822785, 822794, 822795, 822796, 822797, 822798, 822799, 822800, 822803, 822804, 822805, 822806, 822807, 822808, 822809, 822810, 822811, 822812, 825135, 802934, 822793, 861835, 861836, 861837, 500022, 500028, 504776, 830644, 830645, 830646, 830647, 830648, 830649, 830650, 830651, 830652, 830653, 830654, 830655, 830656, 675482, 675483, 675484, 675485, 675486, 675487, 675488, 675489, 675490, 675491, 675492, 675493, 675494, 675495, 675496, 675497, 675498, 675499, 675500, 675501, 676687, 676688, 520427, 520428, 520429, 520823, 521378, 521379, 521380, 521381, 521382, 680095, 680096, 680097, 680098, 680099, 680100, 680101, 680102, 680103, 680104, 680105, 680106, 680107, 680201

MINFILE Record Summary
MINFILE No 082FNW296

XML Extract / Inventory Report

Print Preview PDF -- SELECT REPORT --

File Created: 24-Apr-2018 by Karl A. Flower (KAF)
Last Edit: 10-May-2018 by Karl A. Flower (KAF)

SUMMARY Summary Help

		NMI	
Name	GRIZZLY, NEAR 1, SANDY 2, TIL 2	**Mining Division**	Slocan
		BCGS Map	082F092
Status	Prospect	**NTS Map**	082F13E
Latitude	049° 58' 41"	**UTM**	11 (NAD 83)
Longitude	117° 42' 04"	**Northing**	5536426
		Easting	449731
Commodities	Gold, Silver, Lead, Zinc, Tungsten	**Deposit Types**	K04 : Au skarn K02 : Pb-Zn skarn
Tectonic Belt	Omineca	**Terrane**	Quesnel, Plutonic Rocks

Capsule Geology

The Grizzly occurrence is located at an elevation of approximately 2050 metres on a small, north- trending ridge, approximately 1 kilometre southeast of Tillicum Mountain.

The area is underlain by highly deformed Triassic and older (?) volcanic and sedimentary rocks of and younger aplite and feldspar porphyry dikes, and granitic intrusions. The volcanic rocks are the oldest units and are tentatively assigned to the Slocan or Kaslo Group, while the younger sedimentary rocks are correlated with the Slocan Group. A complete regional geology summary can be found in the Heino-Money (MINFILE 082FNW234) occurrence.

Locally, shear-related calc-silicate-quartz skarn zones host sulphide mineralization, consisting primarily of massive pyrrhotite with minor sphalerite, chalcopyrite, galena and traces of free gold, in conformable bands to pods with in a pelitic schist and feldspar porphyry intrusion. The mineralized zone has been traced along strike for a distance of approximately 400 metres with a thickness up to 15 metres and individual sulphide bands up to 0.6 metre wide.

In 1982, a chip sample from the northern end of the mineralized zone yielded 4.4 grams per tonne gold and 29.1 grams per tonne silver over 5.0 metres, while another chip sample from the same area yielded 4.8 grams per tonne gold, 85.5 grams per tonne silver and 4.99 per cent combined lead-zinc over approximately 1 metre (Assessment Report 11161). Grab sampling, from the southern end of the zone yielded up to 106.7 grams per tonne silver, 0.69 per cent tungsten trioxide and 11.17 per cent combine lead-zinc (Assessment Report 11161).

In 1989, diamond drilling yielded values up to 10.4 grams per tonne gold over 1.2 metres in hole G89-214; 19.9 grams per tonne gold over 0.9 metre in hole G89-213 and 2.6 grams per tonne gold with 15.3 grams per tonne silver over 14.4 metres in hole G89-220, including 3.3 metres yielding 5.1 grams per tonne gold and 15.8 grams per tonne silver (Assessment Report 25004).

In 1997, rock chip sampling yielded up to 4.4 grams per tonne gold and 4004.8 grams per tonne silver (Assessment Report 25004).

In 1997, an estimated possible reserve of 252,060 tonnes averaging 13.7 grams per tonne gold was reported (Assessment Report 25004).

The area has been explored historically in conjunction with the nearby approximately Heino-Money (MINFILE 082FNW234) occurrence to the northwest. In 1979 and 1980, the area was prospected by Arnold and Elaine Gustafson. Later in 1980, after the discovery of high-grade gold values on the nearby Tillicum Mountain (MINFILE 082FNW234) property, the area was subsequently acquired by the Esperanza Explorations Ltd and Welcome North Mines Ltd. joint venture, which led to additional claim staking (Til 1-4 claims) to include the Silver Queen (MINFILE 082FNW220) ground to the south. Welcome North terminated the joint venture in March 1982. In June 1982, La Teko Resources optioned a 50.4 per cent interest in Esperanza Explorations. Work in 1981 and 1982, included geological mapping, prospecting, geochemical sampling and an airborne geophysical survey. In 1984, a program of rock sampling and geological mapping was completed. The area was explored by Esperanza Explorations through 1989 in conjunction with the Tillicum Mountain. This work included four diamond drill holes, totalling 605.4 metres. In 1997, AMT Resources and IBEX Resources completed a program of geochemical sampling, trenching and a ground electromagnetic survey on the area. In 2001 and 2002, 1330275 Ontario Limited completed programs of rock, silt and soil sampling and geological mapping on the area. During 2008 through 2014, AMT Industries Canada completed programs of soil sampling, a ground electromagnetic survey and remote sensing analysis on the area.

Bibliography

EMPR ASS RPT 7909, 9455, *11161, 12269, 15700, 19437, *25004, 26847, 27144, 30488, 31182, 35269

EMPR FIELDWORK 1980, p.84; 1981, pp. 39-45; 1983, pp. 19-21; 1984, pp. 23-51; 1985, pp. 37-49; 1986, pp. 19,21; 1987, pp. 5,67-70, 79, 277

EMPR INF CIRC 1984-1, pp. 20,21,25; 1985-1, pp. 5,39; 1986-1, pp. 41,43,47; 1987-1, pp. 17,29,55,56; 1988-1, pp. 4,19,59,60; 1988-10, p. 5; 1990-1; 1993-13, p. 17; 1994-1

EMPR MAP 65 (1989)

EMPR OF 1991-17; 1992-1; 1994-1

EMPR P 1989-3, pp. 44-49

EMPR PFD 680103, 680106, 680201

MINFILE Record Summary
MINFILE No 082FNW220

Print Preview PDF – SELECT REPORT –

File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
Last Edit: 10-May-2018 by Karl A. Flower (KAF)

XML Extract / Inventory Report

SUMMARY Summary Help

		NMI	082F13 Ag1
Name	SILVER QUEEN, GREY WOLF (L.2204), RED FOX, BLACK FOX (L.2206), BLACK BEAR, GOLDEN HOPE (L.1797), TIL	**Mining Division**	Slocan
		BCGS Map	082F092
Status	Developed Prospect	**NTS Map**	082F13E
Latitude	049° 58' 16"	**UTM**	11 (NAD 83)
Longitude	117° 41' 20"	**Northing**	5535646
		Easting	450600
Commodities	Lead, Zinc, Gold, Silver	**Deposit Types**	K04 : Au skarn I05 : Polymetallic veins Ag-Pb-Zn+/-Au
Tectonic Belt	Omineca	**Terrane**	Quesnel, Plutonic Rocks

Capsule Geology

The Silver Queen property, comprising the Grey Wolf (Lot 2204), Red Fox, Black Fox (Lot 2206) and Black Bear Crown- granted claims and fractions, is located on the ridge between Goat Creek Canyon Creek and Snow Creek, near the summit of Grey Wolf Mountain and approximately 13 kilometres east-south east of Burton. Access is from Burton via the Londonderry Creek road to the Tillicum mine (MINFILE 082FNW234) on Tillicum Mountain and thence southeast by alpine trail 3 kilometres to a point 1 kilometre south west of the summit of Grey Wolf Mountain.

The area is underlain by highly deformed Triassic and older (?) volcanic and sedimentary rocks of and younger aplite and feldspar porphyry dikes, and granitic intrusions. The volcanic rocks are the oldest units and are tentatively assigned to the Slocan or Kaslo Group, while the younger sedimentary rocks are correlated with the Slocan Group. A complete regional geology summary can be found in the Heino-Money (MINFILE 082FNW234) occurrence.

Locally, impure tuffs and sandy sediments, striking east to north east and dipping steeply south, have been intruded by numerous dikes. An open cut at a point 50 metres down the southern slope, at an elevation of 2350 metres, exposes a carbonate band, approximately 1 metre wide, in these sedimentary rocks that hosts concentrations of pyrite and black manganese oxide (?). The gold and silver mineralization is thought to be related to hornfelsing episodes, associated with various dikes and sills and the mid-Jurassic Goatcanyon granitic stock. A 10-metre shaft at 2100 metres elevation and an adit 100 metres to the south west develop similar occurrences. The main adit is driven north east for 35 metres then turns north for approximately the same distance before ending in aplitic granite. The adit is principally in limy and garnetiferous greenstone. Mineralization has been traced over a strike length of 950 metres.

Drilling on the zone has identified several 20- metre thick mineralized skarn zones hosted in a 30- metre wide sequence of impure calcareous quartzites, siltstones and thin marble beds marginal to feldspar porphyry sills. Sulphide mineralization consisted of pyrite, pyrrhotite, tetrahedrite, sphalerite, galena, pyrargyrite and arsenopyrite. Alteration minerals include quartz, tremolite, actinolite and anhedral garnet.

In 1982, sampling of an open-cut exposing the carbonate band assayed 3.4 grams per tonne gold and 960 grams per tonne silver (Assessment Report 11161). While, a silicified sample from the portal of the adit assayed 3.4 grams per tonne gold and 1060 grams per tonne silver (Assessment Report 11161).

In 1984, diamond drilling intersected values from 40.1 grams per tonne silver over 3.65 metres to 144.7 grams per tonne over 4.51 metres (Assessment Report 26847).

In 2001, samples from the adit dump assayed from 1.4 to 3.4 grams per tonne gold and 685 to 1060 grams per tonne silver with 2.7 per cent lead and 2.6 per cent zinc (Assessment Report 26681). Another mineralized zone, located approximately 300 metres north east of the adit, yielded up to 2.1 grams per tonne gold and 257 grams per tonne silver, while another sample from the ridge crest approximately 200 metres west of the mountain summit assayed 3.4 grams per tonne gold and 960 grams per tonne silver (Assessment Report 26681).

In 1983, drilling is reported to have outlined a drill-indicated reserve of 2,721,550 tonnes averaging 103 grams per tonne silver (Assessment Report 15700).

The Silver Queen Mining Company, Limited Liability, was organized in 1897 to acquire eight claims in the Grey Wolf, Red Fox, Black Fox and Black Bear groups; the claims were Crown-granted (Lots 2204-2209, 2414, 2582) to the company in 1899. Development work included open cuts, a 9-metre shaft and approximately 107 metres of drifts and crosscuts in one adit on the south side of the mountain at approximately 1964 metres elevation. The Silver Queen property was owned in 1930's and early 1940's by H. Stones and J. Gayford, of Burton; some prospecting was reported.

In 1979 and 1980, the area was prospected by Arnold and Elaine Gustafson. Later in 1980, after the discovery of high- grade gold values on the nearby Tillicum Mountain (MINFILE 082FNW234) property, the area was subsequently acquired by the Esperanza Explorations Ltd and Welcome North Mines Ltd. joint venture, led to additional claim staking (Til 1-4 claims) to include the Silver Queen ground. Welcome North terminated the joint venture in March 1982. In June 1982, La Teko Resources optioned a 50.4 per cent interest in Esperanza Explorations. A geochemical survey on the Silver Queen, in 1983, indicated a strong silver anomaly over a 45.7 x 914.4-metre area. In 1984, 12 diamond d rill holes were completed. The area was explored in conjunction with the Tillicum Mountain occurrence by Esperanza Explorations through 1989. In 1983 and 1984, Braemer Resources completed programs of geological mapping and an airborne geophysical survey on the area, immediately south west, as the Olga claims. In 1990 and 1991, Jopec Resources completed programs of rock and silt sampling, prospecting and geological mapping on the area as the ICE and SC claims. In 1997, AMT Resources and IBEX Resources completed a program of geochemical sampling, trenching and a ground electromagnetic survey on the area.

In 2001 and 2002, 1330275 Ontario Limited completed programs of rock, silt and soil sampling and geological mapping on the area. During 2008 through 2014, AMT Industries Canada completed programs of soil sampling, a ground electromagnetic survey and remote sensing analysis on the area.

Bibliography

EMPR AR 1898-1071; 1899-842,846; 1901-1227; 1917-448; 1930-262;

*1935-E24-E25

EMPR ASS RPT 7692, 7909, 11161, 11206, 12939, *15700, 18638, 21375, 25004, *26681, 26847, 27144, 30488, 31182, 35269

EMPR P *1989-3, pp. 44-50

EMPR PFD 902184, 888843, 680096, 680103, 680105, 680106, 680201

MINFILE Record Summary
MINFILE No 082FNW295

Print Preview PDF – SELECT REPORT –

File Created: 24-Apr-2018 by Karl A. Flower (KAF)
Last Edit: 10-May-2018 by Karl A. Flower (KAF)

XML Extract / Inventory Report

SUMMARY Summary Help

		NMI	
Name	1250N, 950, RIDGE ROAD, TIL 1	**Mining Division**	Slocan
		BCGS Map	082F092
Status	Showing	**NTS Map**	082F13E
Latitude	049° 59' 26"	**UTM**	11 (NAD 83)
Longitude	117° 42' 45"	**Northing**	5537824
		Easting	448927
Commodities	Gold, Silver	**Deposit Types**	K04 : Au skarn
Tectonic Belt	Omineca	**Terrane**	Quesnel

Capsule Geology

The 1250N occurrence is located on north east- facing slopes to the north of Tillicum Mountain at an elevation of approximately 1900 metres. The Tillicum Mountain (Heino-Money, MINFILE 082FNW234) gold occurrence is located approximately 650 metres to the south.

The area is underlain by highly deformed Triassic and older (?) volcanic and sedimentary rocks of and younger aplite and feldspar porphyry dikes, and granitic intrusions. The volcanic rocks are the oldest units and are tentatively assigned to the Slocan or Kaslo Group, while the younger sedimentary rocks are correlated with the Slocan Group. A complete regional geology summary can be found in the Heino-Money (MINFILE 082FNW234) occurrence.

Locally, a parallel series of conformable sulphide-rich bands, up to 0.3 metre wide, are hosted by a sequence of rusty schistose and siliceous rocks. Sulphide mineralization consists of pyrrhotite with up to 10 per cent sphalerite.

In 1982, a chip sample assayed 8.9 grams per tonne gold and 35.2 grams per tonne silver over 2.6 metres (Assessment Report 11161).

The area has been explored historically in conjunction with the nearby Heino-Money (MINFILE 082FNW234) occurrence to the north west. In 1979 and 1980, the area was prospected by Arnold and Elaine Gustafson. Later in 1980, after the discovery of high- grade gold values on the nearby Tillicum Mountain (MINFILE 082FNW234) property, the area was subsequently acquired by the Esperanza Explorations Ltd and Welcome North Mines Ltd. joint venture, which led to additional claim staking (Til 1-4 claims) to include the Silver Queen (MINFILE 082FNW220) ground to the south. Welcome North terminated the joint venture in March 1982. In June 1982, La Teko Resources optioned a 50.4 per cent interest in Esperanza Explorations. Work in 1981 and 1982, included geological mapping, prospecting, geochemical sampling and an airborne geophysical survey. In 1984, a program of rock sampling and geological mapping was completed. The area was explored in conjunction with the Tillicum Mountain occurrence by Esperanza Explorations through 1989. In 1997, AMT Resources and IBEX Resources completed a program of geochemical sampling, trenching and a ground electromagnetic survey on the area. In 2001 and 2002, 1330275 Ontario Limited completed programs of rock, silt and soil sampling and geological mapping on the area. During 2008 through 2014, AMT Industries Canada completed programs of soil sampling, a ground electromagnetic survey and remote sensing analysis on the area.

Bibliography

EMPR ASS RPT 7909, 9455, *11161, ^12269, 15700, 19437, 25004, 26847, 27144, 30488, 31182, 35269

EMPR EXPL 1980-84; 1981-40; 1982-11,17,63; 1983-84; 1984-xvi; 1985-A38; 1986-A15,A58,A59; 1987-A6,A64

EMPR FIELDWORK 1980, p.84; 1981, pp. 39-45; 1983, pp. 19-21; 1984, pp. 23-51; 1985, pp. 37-49; 1986, pp. 19,21; 1987, pp. 5,67-70, 79, 277

EMPR INF CIRC 1984-1, pp. 20,21,25; 1985-1, pp. 5,39; 1986-1, pp. 41,43,47; 1987-1, pp. 17,29,55,56; 1988-1, pp. 4,19,59,60; 1988-10, p. 5; 1990-1; 1993-13, p. 17; 1994-1

EMPR IR 1984-3, p. 109

EMPR MAP 65 (1989)

EMPR MIN STATS 1985, p. 50; 1980-1992, p. 12

EMPR OF 1991-17; 1992-1; 1994-1

EMPR P 1989-3, pp. 44-49

EMR MIN BULL MR 223 B.C. 37

GSC BULL 161, p. 40

GSC MAP 3-1956; 1090A; 1176A

EMPR PFD 680105, 680201

Print Preview PDF – SELECT REPORT –

MINFILE Record Summary
MINFILE No 082FNW297

File Created: 24-Apr-2018 by Karl A. Flower (KAF)
Last Edit: 10-May-2018 by Karl A. Flower (KAF)

XML Extract / Inventory Report

SUMMARY Summary Help

Name	ARNIE FLATS, TIL 3	**NMI**	
		Mining Division	Slocan
		BCGS Map	082F092
Status	Prospect	**NTS Map**	082F13E
Latitude	049° 58' 19"	**UTM**	11 (NAD 83)
Longitude	117° 43' 26"	**Northing**	5535762
		Easting	448091
Commodities	Silver, Gold	**Deposit Types**	K : SKARN
Tectonic Belt	Omineca	**Terrane**	Quesnel, Plutonic Rocks

Capsule Geology

The Arnie Flats occurrence is located on a west striking ridge, approximately 2 kilometres west of Golden Hope Peak and at an elevation of 2100 metres.

The area is underlain by highly deformed Triassic and older (?) volcanic and sedimentary rocks of and younger aplite and feldspar porphyry dikes, and granitic intrusions. The volcanic rocks are the oldest units and are tentatively assigned to the Slocan or Kaslo Group, while the younger sedimentary rocks are correlated with the Slocan Group. A complete regional geology summary can be found in the Heino-Money (MINFILE 082FNW234) occurrence.

Locally, tuffaceous and meta-basaltic andesites near a hybrid diorite sill host two sub-parallel calc-silicate skarn zones. Sulphide mineralization consists of disseminated and stringer pyrite with pyrrhotite and trace argentite or tetrahedrite. Alteration minerals include epidote, quartz and chlorite. The zones trend east- north east with a moderate dip to the south west and have been traced for 120 metres along strike.

In 1984, trench samples yielded values up to 260.5 grams per tonne silver and 0.69 gram per tonne gold (Assessment Report 26847).

In 1989, diamond drilling yielded from 0.10 to 0.79 gram per tonne gold with 42.7 to 178.1 grams per tonne silver over lengths of 0.91 and 2.74 metres, respectively (Assessment Report 26847).

The area has been explored historically in conjunction with the nearby approximately Heino-Money (MINFILE 082FNW234) occurrence to the north west. In 1979 and 1980, the area was prospected by Arnold and Elaine Gustafson. Later in 1980, after the discovery of high- grade gold values on the nearby Tillicum Mountain (MINFILE 082FNW234) property, the area was subsequently acquired by the Esperanza Explorations Ltd and Welcome North Mines Ltd. joint venture, which led to additional claim staking (Til 1-4 claims) to include the Silver Queen (MINFILE 082FNW220) ground to the south. Welcome North terminated the joint venture in March 1982. In June 1982 La Teko Resources optioned a 50.4 per cent interest in Esperanza Explorations. Work in 1981 and 1982, included geological mapping, prospecting, geochemical sampling and an airborne geophysical survey. In 1984, a program of rock sampling and geological mapping was completed. The area was explored in conjunction with the Tillicum Mountain occurrence by Esperanza Explorations through 1989. This work included five5 diamond drill holes over a strike length of approximately 1000 metres. In 1997, AMT Resources and IBEX Resources completed a program of geochemical sampling, trenching and a ground electromagnetic survey on the area. In 2001 and 2002, 1330275 Ontario Limited completed programs of rock, silt and soil sampling and geological mapping on the area. During 2008 through 2014, AMT Industries Canada completed programs of soil sampling, a ground electromagnetic survey and remote sensing analysis on the area.

Bibliography

EMPR ASS RPT 7909, 9455, 11161, 12269, 15700, 19437, 25004, *26847, 27144, 30488, 31182, 35269

EMPR FIELDWORK 1980, p.84; 1981, pp. 39-45; 1983, pp. 19-21; 1984, pp. 23-51; 1985, pp. 37-49; 1986, pp. 19,21; 1987, pp. 5,67-70, 79, 277

EMPR MAP 65 (1989)

EMPR OF 1991-17; 1992-1; 1994-1

EMPR P 1989-3, pp. 44-49

EMPR PFD 680201

MINFILE Record Summary
MINFILE No 082KSW054

Print Preview PDF – SELECT REPORT –

XML Extract / Production Report / Inventory Report

File Created: 24-Jul-1985 by BC Geological Survey (BCGS)
Last Edit: 01-Feb-2019 by Karl A. Flower (KAF)

SUMMARY Summary Help

Name	CHIEFTAIN (L.5845), MAMMOTH NO. 2 (L.5841), DUNDAS (L.5843), DUCHESS (L.5846), SILVER TIP NO. 2 (L.5847)	**NMI**	
		Mining Division	Slocan
		BCGS Map	082K002
Status	Past Producer	**NTS Map**	082K04E
Latitude	050° 02' 23"	**UTM**	11 (NAD 83)
Longitude	117° 41' 22"	**Northing**	5543275
		Easting	450630
Commodities	Silver, Gold, Lead, Zinc, Copper	**Deposit Types**	I05 : Polymetallic veins Ag-Pb-Zn+/-Au
Tectonic Belt	Omineca	**Terrane**	Quesnel

Capsule Geology

The Chieftain (L.5845) adits are located on the south side of Caribou Creek, approximately 14 kilometres east of Burton, BC.

The area is underlain by the Triassic Slocan Group, which consists of metasedimentary rocks (mainly dark- grey to black argillites and shales), intercalated with massive, medium- grained, andesitic flows and tuffs (Assessment Report 12375). Bedding and foliation attitudes strike west to northwest with south dips. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock and granodioritic rocks of the Cretaceous Whatshan Batholith are exposed to the south of the area.

The Chieftain vein consists of quartz veinlets and lenses, varying from 0.9 to 1.5 metres in width and dipping approximately 20 degrees to the south west, carrying galena, sphalerite, chalcopyrite, tetrahedrite, pyrite and pyrrhotite within a 2-metre thick sheared graphitic zone in dark grey argillites. The vein has been developed by two south east directed adits approximately 30 metres apart. The upper adit is 75 metres long and follows the vein for 26 metres, after which the vein pinches out. A 15 metre winze is also located in the upper adit. The lower adit, located 10 metres below the upper one, extends for a length of 38 metres, following the vein for approximately 20 metres. A third adit, located 100 metres east of the upper adit, is 45 metres in length and, although it transected the "shear zone" for 20 metres, it intersected only sparse quartz vein material and insignificant sulphides.

In 1979, sampling yielded up to 70.7 grams per tonne gold and 3470 grams per tonne silver from the upper tunnel, 27.0 grams per tonne gold and 466 grams per tonne silver from the lower tunnel and 7.7 to 7.8 grams per tonne gold with 391 to 1640 grams per tonne silver from dump samples (Property File - Rockland Industries Ltd. [1979-11-08]: Certificate of Assay - No. 7910-3059 - Chieftain).

In 1981, sampling of the upper workings yielded 0.7 gram per tonne gold with 130 grams per tonne silver over 0.9 metre, while a sample of sorted ore from the tunnel assayed 45.1 grams per tonne gold with 294 grams per tonne silver (Property File - Chieftain Resources Ltd. [1981-04-04]: Letters Re: Chieftain Mine). Sampling of the lower tunnel yielded 8.2 grams per tonne gold, 171 grams per tonne silver with 1 per cent zinc over 32.5 centimetres and 10,120 grams per tonne silver, 0.5 per cent lead and 2 per cent zinc over 35 centimetres, while dump samples yielded from 7.6 to 70.7 grams per tonne gold with 391 to 3470 grams per tonne silver (Property File - Chieftain Resources Ltd. [1981-04-04]: Letters Re: Chieftain Mine).

In 1983, a 1.9-metre-wide chip sample from the vein in the upper adit assayed 4.1 grams per tonne gold, 788 grams per tonne silver, 0.29 per cent lead and 0.21 per cent zinc (Assessment Report 12375).

The property was first staked in 1890, and much of the underground development was completed prior to approximately 1903. The property remained idle until 1920, when it was re-examined by a government engineer. BC Ministry of Mines reports record attempts to achieve production in the period between 1928 and 1934. Production was recorded in 1934 and 1955. During 1979 through 1981, Rockland Industries examined and sampled the area in conjunction with Chieftain Resources. In 1982, an airborne magnetic and VLF-EM survey was completed. During 1983 through 1985, the property was geologically mapped and prospected. Soil geochemical, magnetic and VLF-EM surveys were completed. The underground workings were rehabilitated, geologically mapped and re-sampled.

Bibliography

EMPR AR 1899-709; 1900-856; 1902-164; 1903-150,242; 1919-138; 1920-135; 1928-357; 1929-429; 1930-262; 1932-180; 1934-A25; 1955-A49,65

EMPR ASS RPT 11122, *12375, 13797

EMPR BC METAL MM01143

EMPR INDEX 3-194

EMPR PF (unknown [unknown]: Mineral Claims Map - Chieftain; *Rockland Industries Ltd. [1979-11-08]: Certificate of Assay - No. 7910-3059 - Chieftain; *Chieftain Resources Ltd. [1981-04-04]: Letters Re: Chieftain Mine; C. Marshall [1981-04-01]: Mineral Property Submittal - Chieftan; unknown [1981-07-02]: Sample Notes and Sketch Maps - Chieftain Mine; Nakusp Resources Ltd. [1984-10-25]: Tillicum Mt. Claims Being Drilled)

GSC BULL 161

GSC OF 432; 464,#253

GCNL #206, 1984

EMPR PFD 4333, 521397, 521398, 521400, 521401, 521402

MINFILE Record Summary
MINFILE No 082KSW171

Print Preview PDF – SELECT REPORT –

XML Extract / Inventory Report

File Created: 09-Sep-1995 by Ron McMillan (RHM)
Last Edit: 12-Nov-2014 by Laura deGroot (LDG)

SUMMARY Summary Help

		NMI	
Name	EUREAKA, EUREKA, ORA	**Mining Division**	Slocan
		BCGS Map	082K002
Status	Prospect	**NTS Map**	082K04E
Latitude	050° 02' 15"	**UTM**	11 (NAD 83)
Longitude	117° 40' 12"	**Northing**	5543015
		Easting	452021
Commodities	Silver, Lead, Zinc, Gold	**Deposit Types**	I05 : Polymetallic veins Ag-Pb-Zn+/-Au
Tectonic Belt	Omineca	**Terrane**	Quesnel

Capsule Geology

The Eureaka and Ora claims are located on the south side of Caribou Creek, approximately 12 kilometres east of Burton.

The main Eureaka showing comprises tectono-clasts or fragments of brecciated galena-bearing white vein quartz within a 3.5 metre thick graphitic shear zone. The graphitic schist is located at the contact between mafic volcanic rocks and clastic metasedimentary rocks (argillites and quartzites), both of which are part of the Triassic Slocan Group. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock outcrops south of the area. Quartz-sulphide float carrying pyrite, pyrrhotite, sphalerite and galena reportedly assayed 1594.5 grams per tonne silver, 12.6 per cent lead, 3.9 per cent zinc and 4.8 grams per tonne gold (Assessment Report 8951).

The showings were explored in 1934 and 1935 by two short adits and an inclined shaft located at the 1310, 1360 and 1390 metre levels respectively. Between 1980 and 1983, R. Allen and Welcome North Mines Limited conducted prospecting and geological mapping, and collected more than 107 soil samples which were analysed for silver, lead and zinc.

Bibliography

EMPR AR 1896-74; 1935-E35
EMPR ASS RPT *8951, *10175, *12375, 13797
EMPR PF (Prospectors Report 1997-2 by Barbara Welsh)
GSC BULL 161
GSC OF 432; 464, #254

Fig 1 Tillicum Gold Project General Location

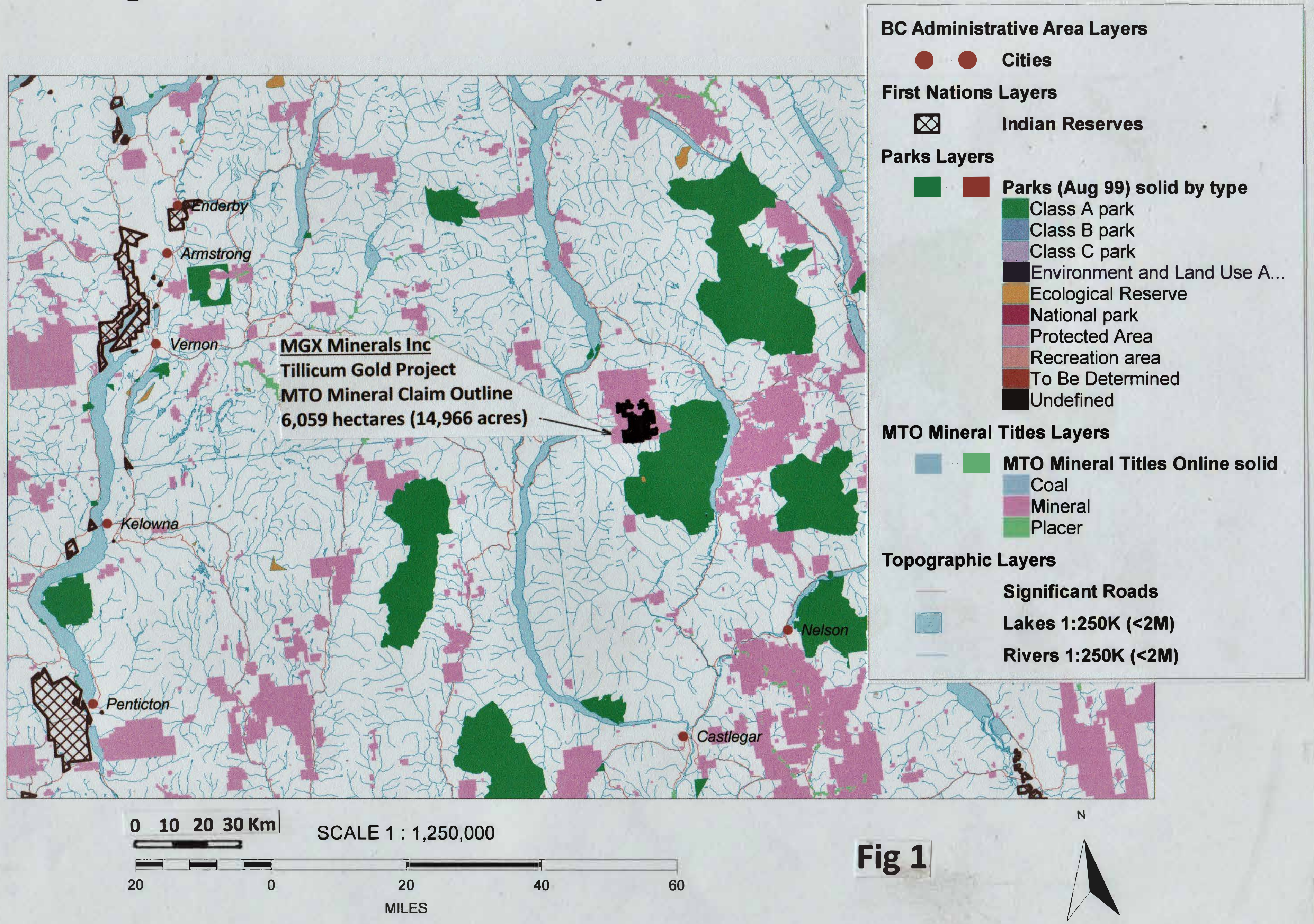


Fig 1

Fig 1B Tillicum Project General Location

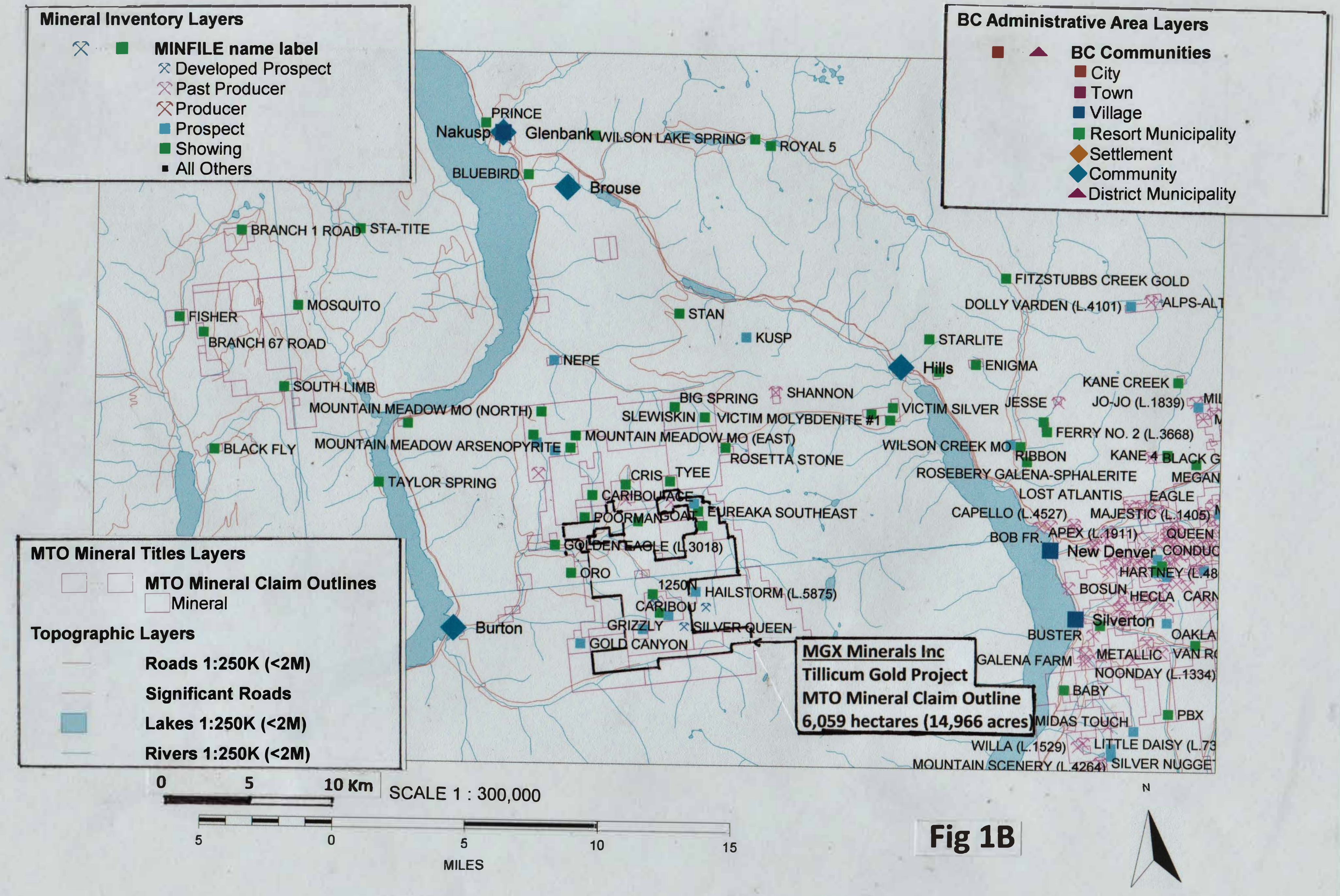
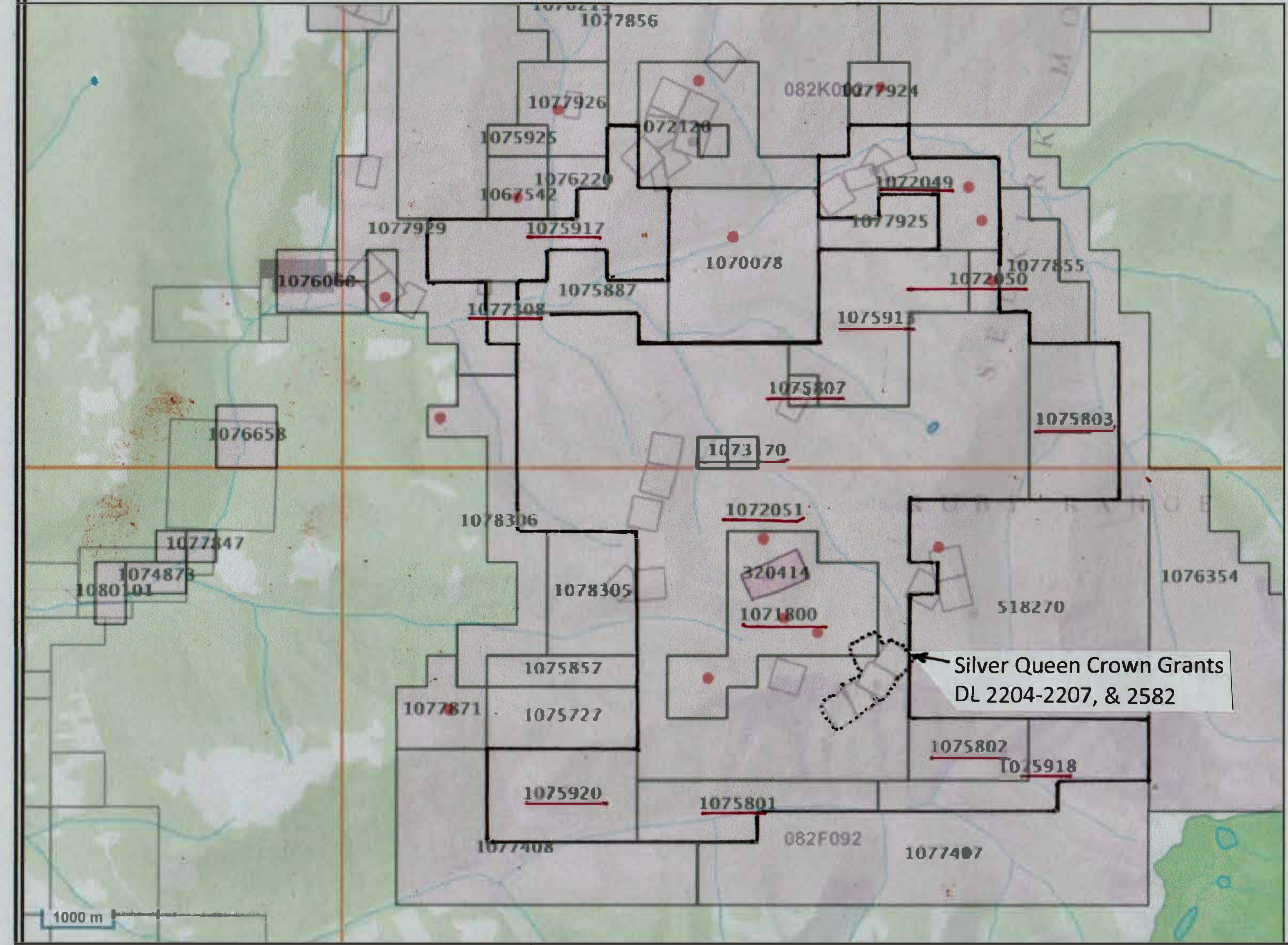


Fig 1B

BRITISH COLUMBIA

Fig 2 MTO Claim Map



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.

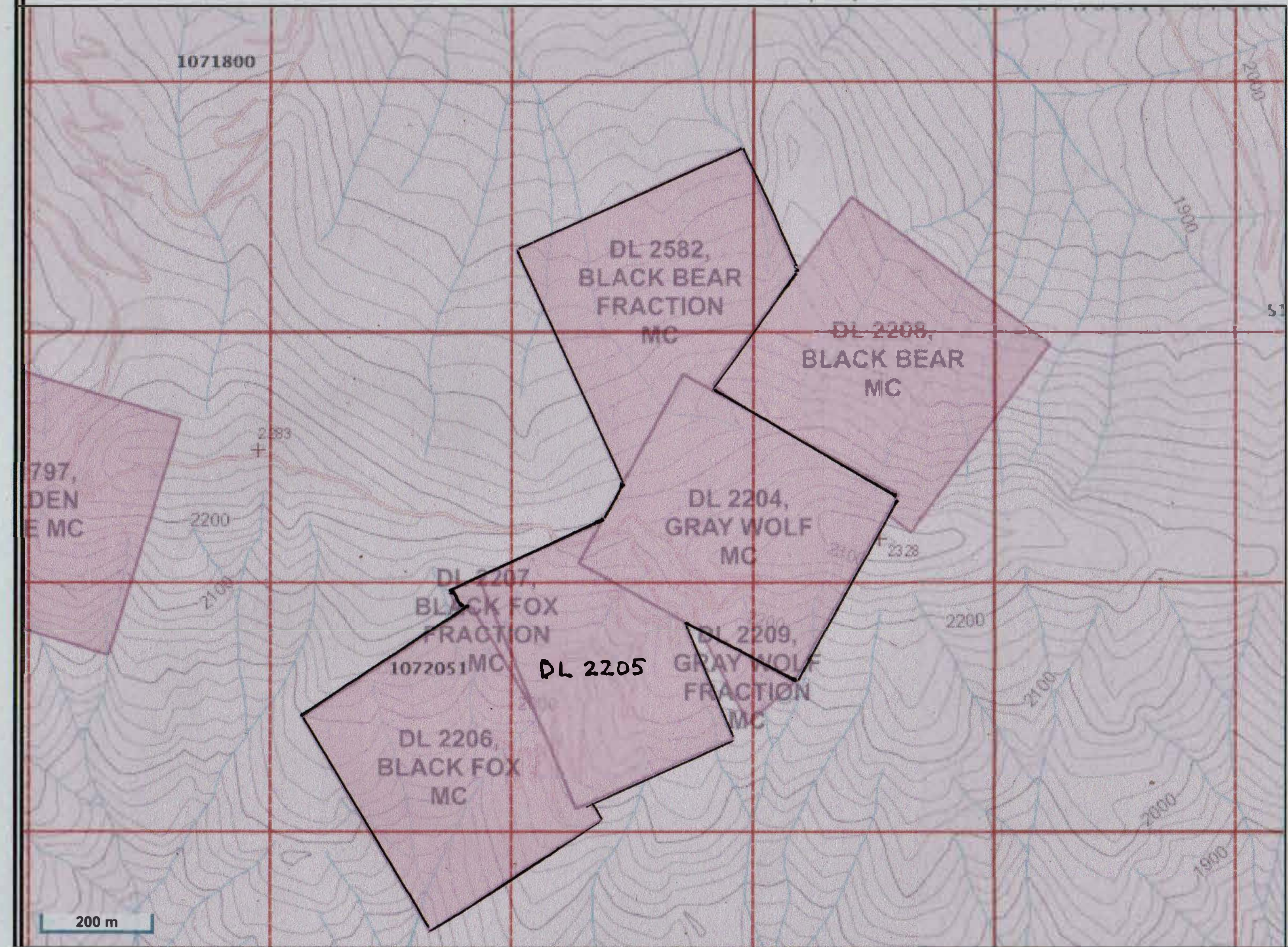
Printed using the Mineral Titles Online (MTO) application. BCGS 082F.092, Slocan Mining Division

Fig 2

Center: 49°59'57", -117°44'7"
Scale: 1 : 135420
SRS: EPSG:3857
UTM Zone: 11

N

Fig 2B Silver Queen CrownGrant



Legend

Mineral Titles (MTO)

MTO Grid

Title (current)

LEASE

CLAIM

Reserves

No Registration

Conditional

Heritage/Historic Site

Crown Land Layers (Tantalis)

Land Act Survey Parcels - Tantalis - Legal Descriptions

Label Text

Land Act Survey Parcels - Tantalis - Outlined

Administrative Boundaries

Local Regional Greenspaces - Outline

Local and Regional Greenspa

Local Regional Greenspaces - Colour Filled

Federal Transfer Lands - Outlined

Federal Transfer Lands - Colour Filled

National Parks - Outlined

National Park

National Parks - Colour Filled

Conservancy Areas - Tantalis - Colour Filled

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Printed using the Mineral Titles Online (MTO) application. BCGS 082F.092, Slocan Mining Division

Center: 49°58'21", -117°41'28"
Scale: 1 : 16927
SRS: EPSG:3857
UTM Zone: 11

N

Fig 3 Tillicum Project General Geology

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

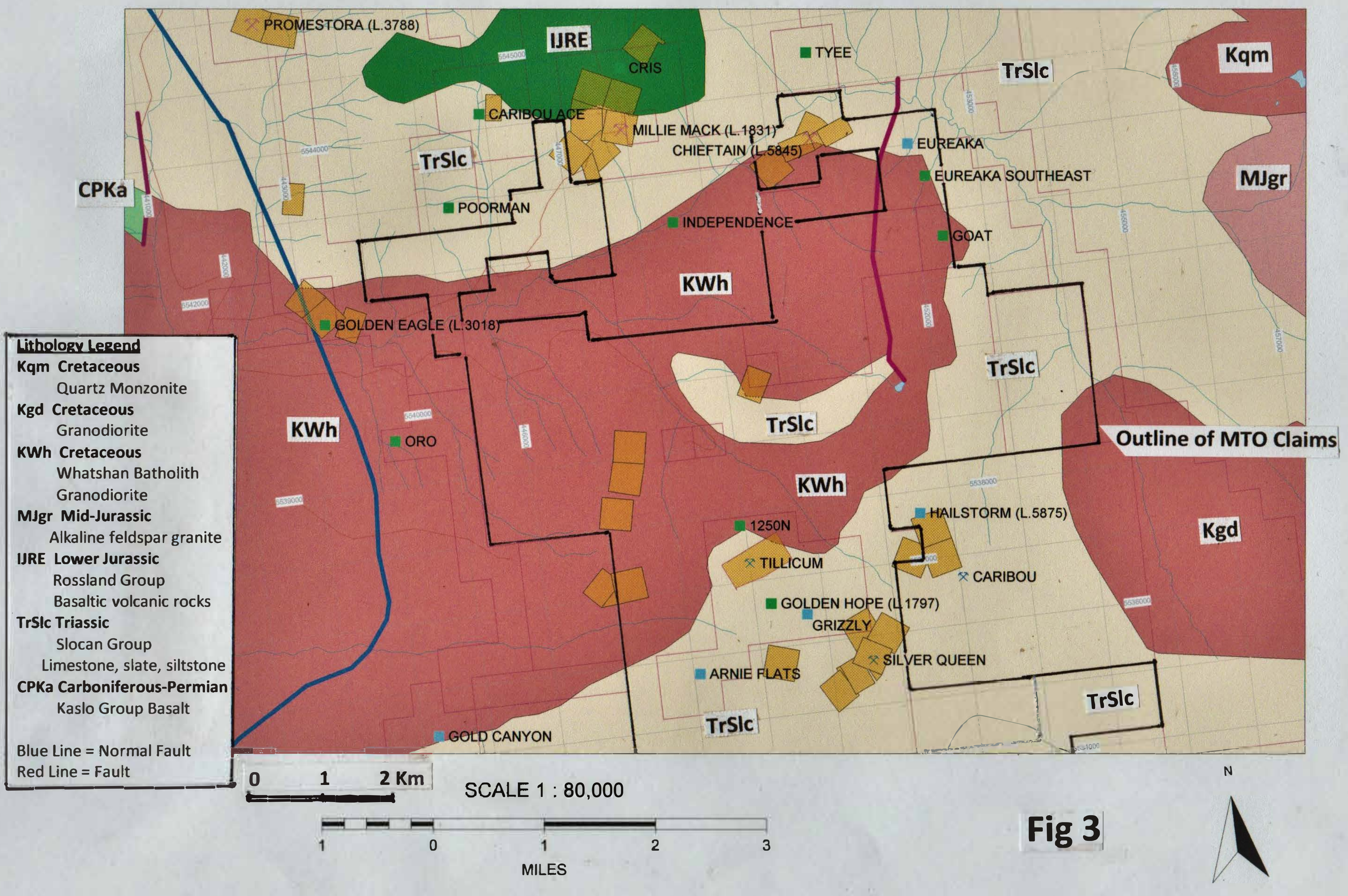
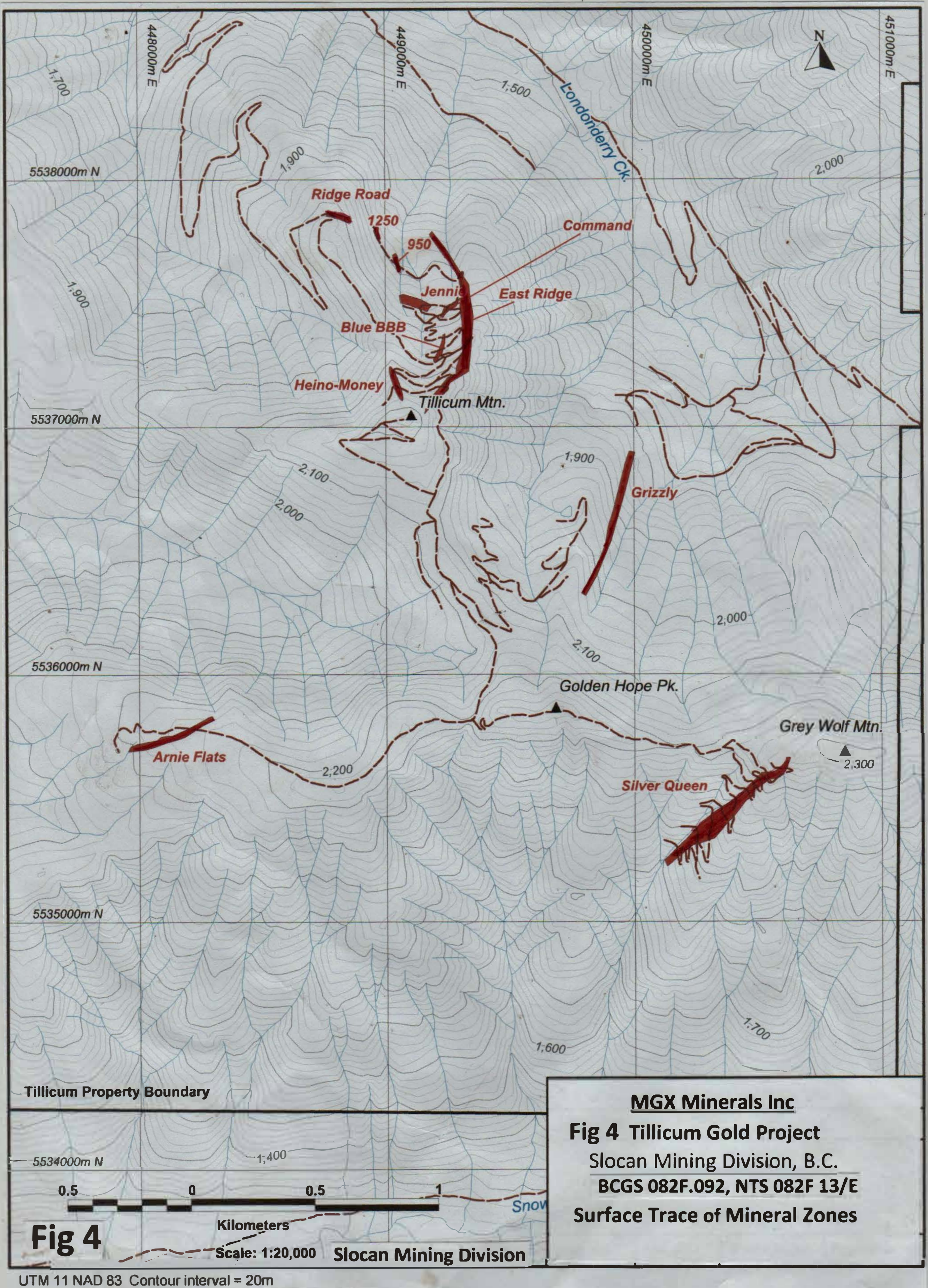


Fig 3



MGX Minerals Inc

Fig 4 Tillicum Gold Project

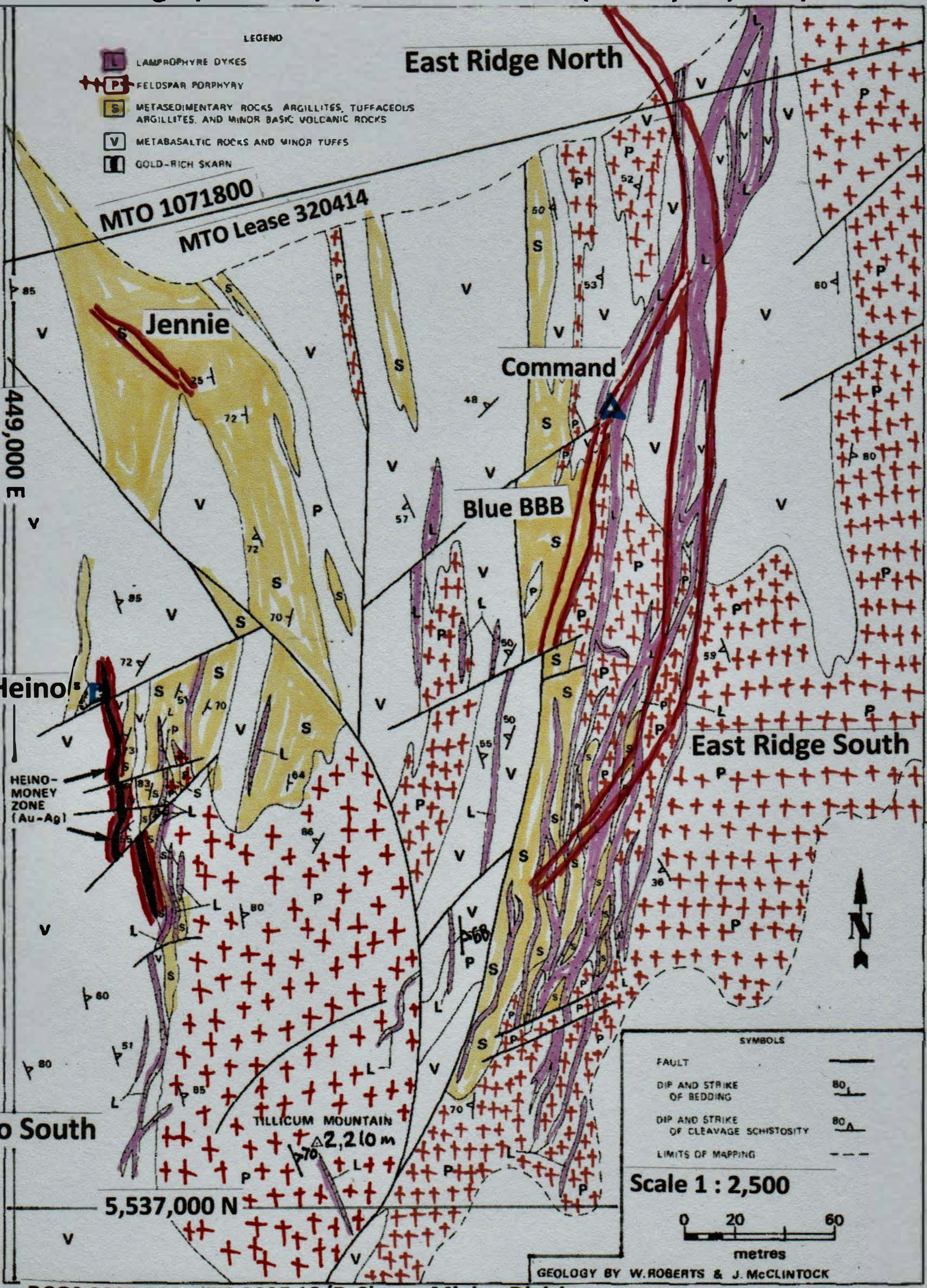
Slocan Mining Division, B.C.

BCGS 082F.092, NTS 082F 13/E

Surface Trace of Mineral Zones

UTM 11 NAD 83 Contour interval = 20m

Fig 5 Heino-East Ridge Geology & Metallurgical Outcrop Samples & #303 Vancouver Petrographic Sample 2130 m & Heino (Money Pit) Sample # 301-306



BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

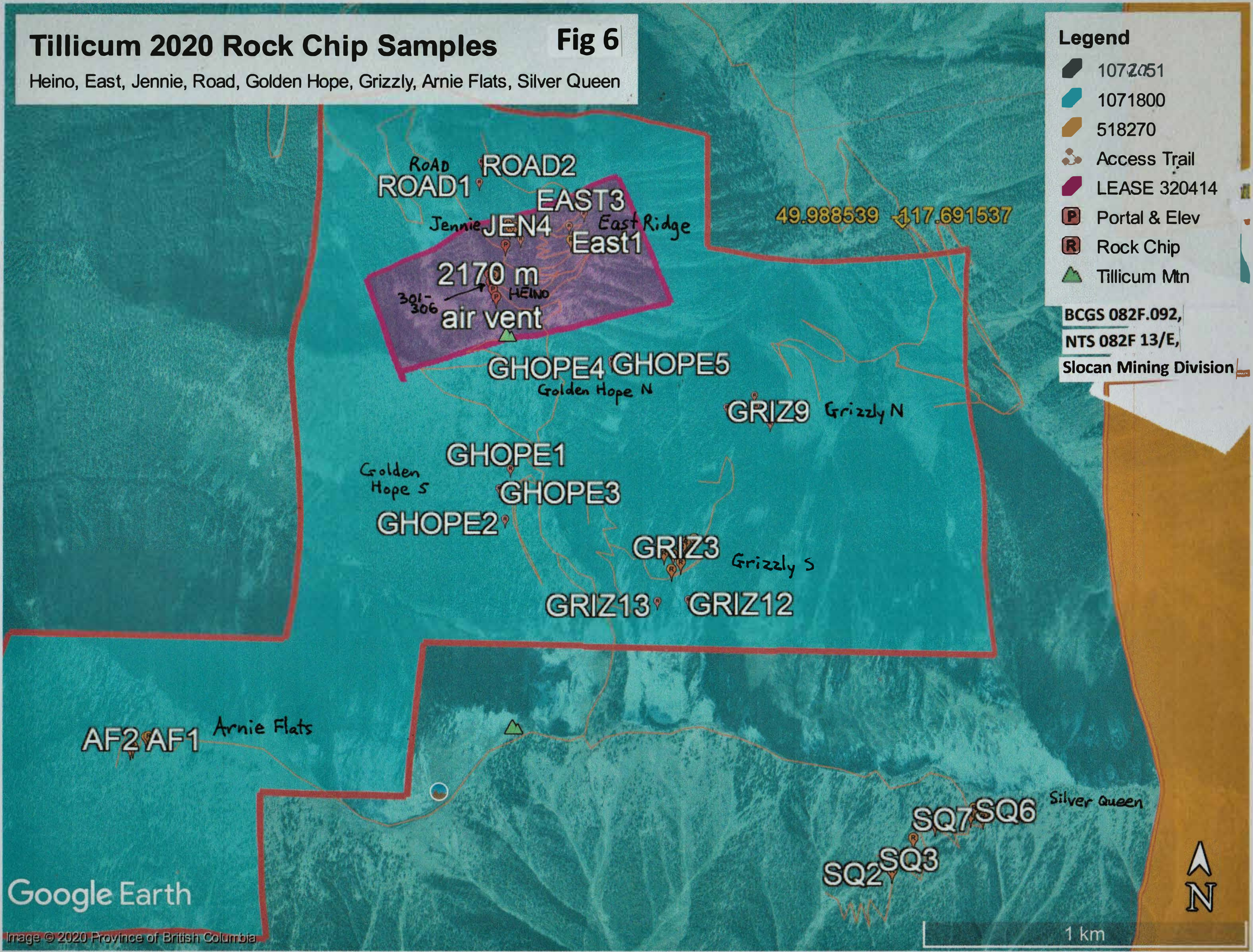
Fig 5 Geology of the Heino-Money zone.

Mineral Zone

Vancouver Petrographics Sample #303
Heino ALS Metallurgical Sample 2130 m 301-306 Rock Chip Sample

ALS Metallurgical sample 1980m

Heino Mineral Zone

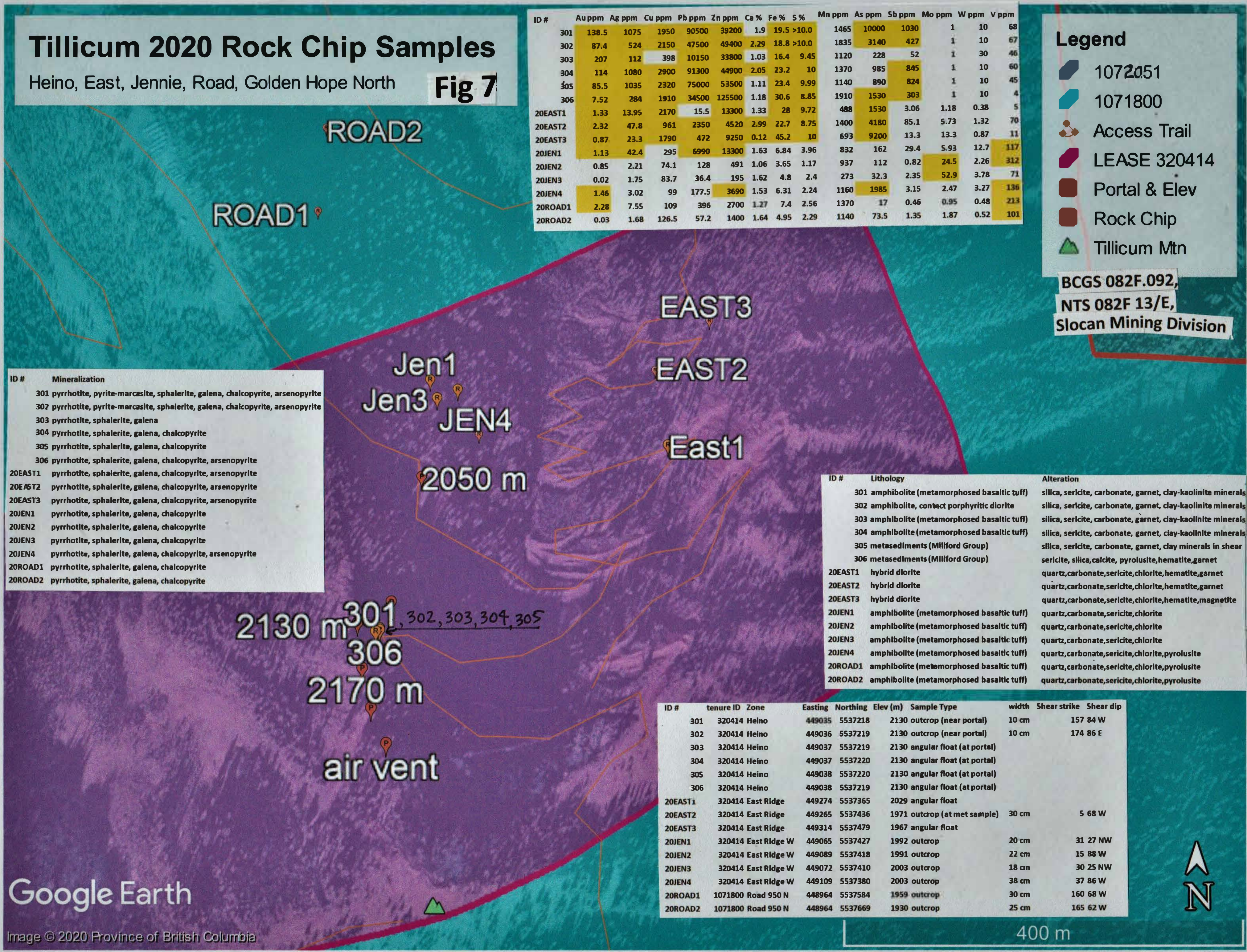


Tillicum 2020 Rock Chip Samples
Fig 6
Heino, East, Jennie, Road, Golden Hope, Grizzly, Arnie Flats, Silver Queen
Legend
1072051
1071800
518270
Access Trail
LEASE 320414
Portal & Elev
Rock Chip
Tillicum Mtn
BCGS 082F.092,
NTS 082F 13/E,
Slocan Mining Division
ROAD
ROAD1
ROAD2
EAST3
Jennie
JEN4
East Ridge
East1
2170 m
301-306
HEINO
air vent
49.988539 -117.691537
GHOPE4
GHOPE5
Golden Hope N
GRIZ9
Grizzly N
GHOPE1
Golden Hope S
GHOPE3
GHOPE2
GRIZ3
Grizzly S
GRIZ13
GRIZ12
AF2
AF1
Arnie Flats
Silver Queen
SQ7
SQ6
SQ2
SQ3
N
1 km
Google Earth
Image © 2020 Province of British Columbia

Tillicum 2020 Rock Chip Samples

Heino, East, Jennie, Road, Golden Hope North

Fig 7



ID #	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
301	138.5	1075	1950	90500	39200	1.9	19.5	>10.0	1465	10000	1030	1	10	68
302	87.4	524	2150	47500	49400	2.29	18.8	>10.0	1835	3140	427	1	10	67
303	207	112	398	10150	33800	1.03	16.4	9.45	1120	228	52	1	30	46
304	114	1080	2900	91300	44900	2.05	23.2	10	1370	985	845	1	10	60
305	85.5	1035	2320	75000	53500	1.11	23.4	9.99	1140	890	824	1	10	45
306	7.52	284	1910	34500	125500	1.18	30.6	8.85	1910	1530	303	1	10	4
20EAST1	1.33	13.95	2170	15.5	13300	1.33	28	9.72	488	1530	3.06	1.18	0.38	5
20EAST2	2.32	47.8	961	2350	4520	2.99	22.7	8.75	1400	4180	85.1	5.73	1.32	70
20EAST3	0.87	23.3	1790	472	9250	0.12	45.2	10	693	9200	13.3	13.3	0.87	11
20JEN1	1.13	42.4	295	6990	13300	1.63	6.84	3.96	832	162	29.4	5.93	12.7	117
20JEN2	0.85	2.21	74.1	128	491	1.06	3.65	1.17	937	112	0.82	24.5	2.26	312
20JEN3	0.02	1.75	83.7	36.4	195	1.62	4.8	2.4	273	32.3	2.35	52.9	3.78	71
20JEN4	1.46	3.02	99	177.5	3690	1.53	6.31	2.24	1160	1985	3.15	2.47	3.27	136
20ROAD1	2.28	7.55	109	396	2700	1.27	7.4	2.56	1370	17	0.46	0.95	0.48	213
20ROAD2	0.03	1.68	126.5	57.2	1400	1.64	4.95	2.29	1140	73.5	1.35	1.87	0.52	101

ID #	Mineralization
301	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
302	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
303	pyrrhotite, sphalerite, galena
304	pyrrhotite, sphalerite, galena, chalcopyrite
305	pyrrhotite, sphalerite, galena, chalcopyrite
306	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST1	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST2	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST3	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20JEN1	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN2	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN3	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN4	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20ROAD1	pyrrhotite, sphalerite, galena, chalcopyrite
20ROAD2	pyrrhotite, sphalerite, galena, chalcopyrite

ID #	Lithology	Alteration
301	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals
302	amphibolite, contact porphyritic diorite	silica, sericite, carbonate, garnet, clay-kaolinite minerals
303	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals
304	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals
305	metasediments (Millford Group)	silica, sericite, carbonate, garnet, clay minerals in shear
306	metasediments (Millford Group)	sericite, silica,calcite, pyrolusite,hematite,garnet
20EAST1	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST2	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet
20EAST3	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,magnetite
20JEN1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite
20JEN4	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite
20ROAD2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite

ID #	tenure ID	Zone	Easting	Northing	Elev (m)	Sample Type	width	Shear strike	Shear dip
301	320414	Heino	449035	5537218	2130	outcrop (near portal)	10 cm	157	84 W
302	320414	Heino	449036	5537219	2130	outcrop (near portal)	10 cm	174	86 E
303	320414	Heino	449037	5537219	2130	angular float (at portal)			
304	320414	Heino	449037	5537220	2130	angular float (at portal)			
305	320414	Heino	449038	5537220	2130	angular float (at portal)			
306	320414	Heino	449038	5537219	2130	angular float (at portal)			
20EAST1	320414	East Ridge	449274	5537365	2029	angular float			
20EAST2	320414	East Ridge	449265	5537436	1971	outcrop (at met sample)	30 cm	5	68 W
20EAST3	320414	East Ridge	449314	5537479	1967	angular float			
20JEN1	320414	East Ridge W	449065	5537427	1992	outcrop	20 cm	31	27 NW
20JEN2	320414	East Ridge W	449089	5537418	1991	outcrop	22 cm	15	88 W
20JEN3	320414	East Ridge W	449072	5537410	2003	outcrop	18 cm	30	25 NW
20JEN4	320414	East Ridge W	449109	5537380	2003	outcrop	38 cm	37	86 W
20ROAD1	1071800	Road 950 N	448964	5537584	1959	outcrop	30 cm	160	68 W
20ROAD2	1071800	Road 950 N	448964	5537669	1930	outcrop	25 cm	165	62 W

Tillicum 2020 Rock Chip Samples (Detail)

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Heino 301-306 Rock Samples 2130 m Adit **Fig 8**

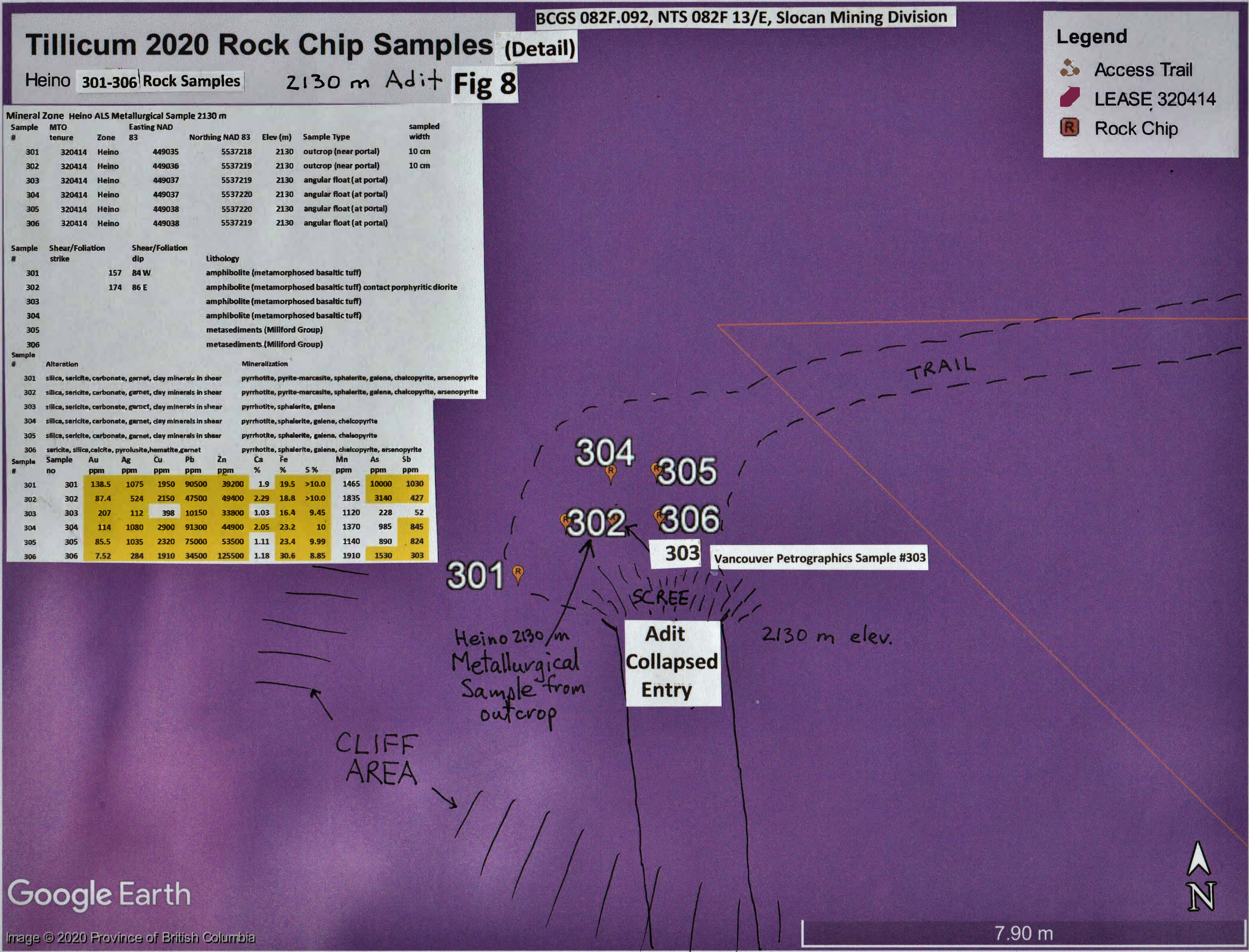
Mineral Zone Heino ALS Metallurgical Sample 2130 m

Sample #	MTO tenure	Zone	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	sampled width
301	320414	Heino	449035	5537218	2130	outcrop (near portal)	10 cm
302	320414	Heino	449036	5537219	2130	outcrop (near portal)	10 cm
303	320414	Heino	449037	5537219	2130	angular float (at portal)	
304	320414	Heino	449037	5537220	2130	angular float (at portal)	
305	320414	Heino	449038	5537220	2130	angular float (at portal)	
306	320414	Heino	449038	5537219	2130	angular float (at portal)	

Sample #	Shear/Foliation strike	Shear/Foliation dip	Lithology
301	157	84 W	amphibolite (metamorphosed basaltic tuff)
302	174	86 E	amphibolite (metamorphosed basaltic tuff) contact porphyritic diorite
303			amphibolite (metamorphosed basaltic tuff)
304			amphibolite (metamorphosed basaltic tuff)
305			metasediments (Milford Group)
306			metasediments (Miliford Group)

Sample #	Alteration	Mineralization
301	silica, sericite, carbonate, garnet, clay minerals in shear	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
302	silica, sericite, carbonate, garnet, clay minerals in shear	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
303	silica, sericite, cerbonete, garnet, clay minerals in shear	pyrrhotite, sphalerite, galena
304	silica, sericite, carbonate, garnet, clay minerals in shear	pyrrhotite, sphalerite, galene, chelcopyrite
305	silica, sericite, carbonate, garnet, clay minerals in shear	pyrrhotite, sphalerite, galena, chaleopyrite
306	sericite, silica,calcite, pyrolusite,hematite,garnet	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite

Sample #	Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
301	301	138.5	1075	1950	90500	39200	1.9	19.5	>10.0	1465	10000	1030
302	302	87.4	524	2150	47500	49400	2.29	18.8	>10.0	1835	3140	427
303	303	207	112	398	10150	33800	1.03	16.4	9.45	1120	228	52
304	304	114	1080	2900	91300	44900	2.05	23.2	10	1370	985	845
305	305	85.5	1035	2320	75000	53500	1.11	23.4	9.99	1140	890	824
306	306	7.52	284	1910	34500	125500	1.18	30.6	8.85	1910	1530	303

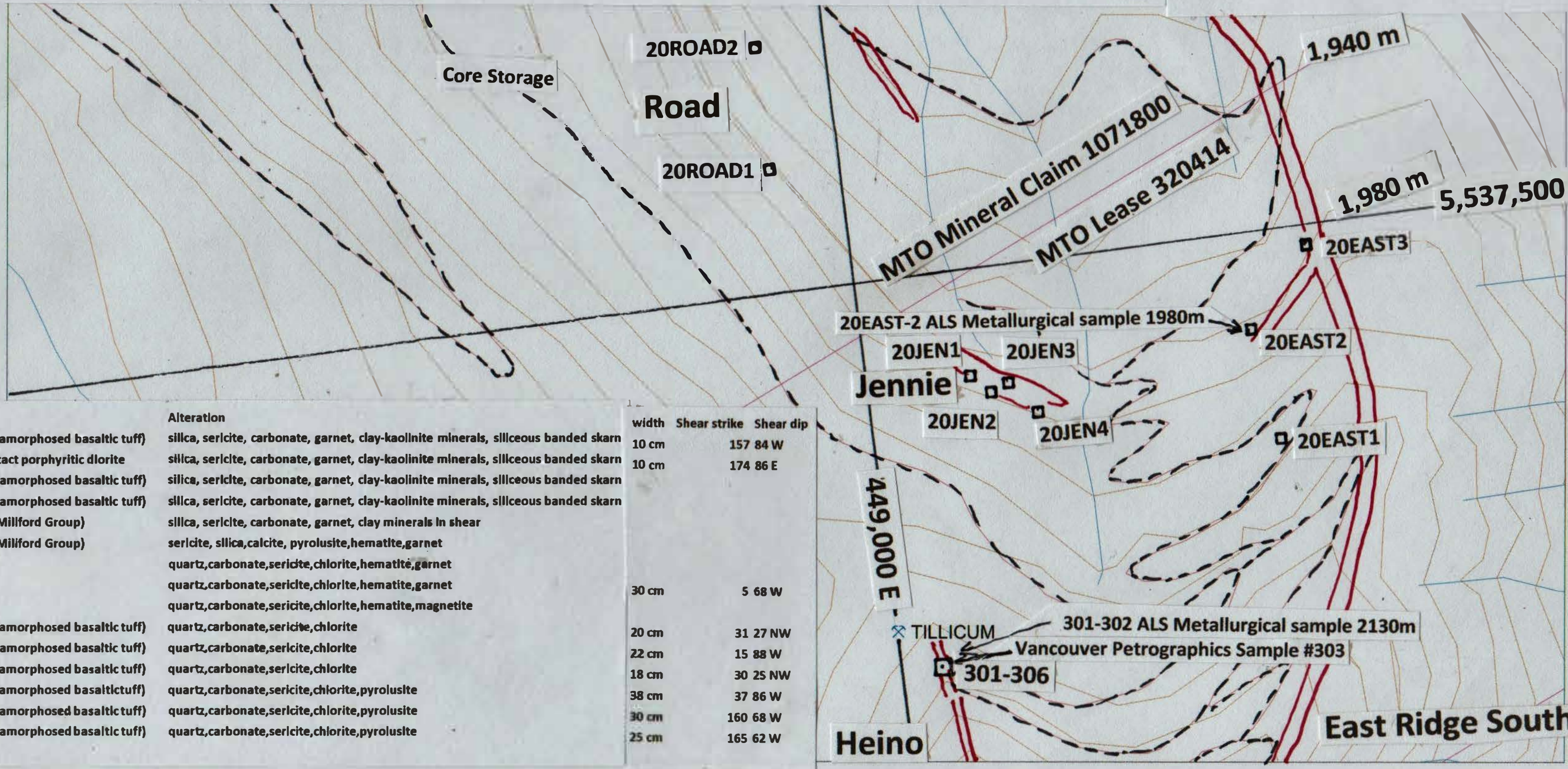


Tillicum Heino, East Ridge, Jennie, Road Zone Rock Samples

ID #	Mineralization
301	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
302	pyrrhotite, pyrite-marcasite, sphalerite, galena, chalcopyrite, arsenopyrite
303	pyrrhotite, sphalerite, galena
304	pyrrhotite, sphalerite, galena, chalcopyrite
305	pyrrhotite, sphalerite, galena, chalcopyrite
306	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST1	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST2	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20EAST3	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20JEN1	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN2	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN3	pyrrhotite, sphalerite, galena, chalcopyrite
20JEN4	pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite
20ROAD1	pyrrhotite, sphalerite, galena, chalcopyrite
20ROAD2	pyrrhotite, sphalerite, galena, chalcopyrite

ID #	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
301	138.5	1075	1950	90500	39200	1.9	19.5	>10.0	1465	10000	1030	1	10	68
302	87.4	524	2150	47500	49400	2.29	18.8	>10.0	1835	3140	427	1	10	67
303	207	112	398	10150	33800	1.03	16.4	9.45	1120	228	52	1	30	46
304	114	1080	2900	91300	44900	2.05	23.2	10	1370	985	845	1	10	60
305	85.5	1035	2320	75000	53500	1.11	23.4	9.99	1140	890	824	1	10	45
306	7.52	284	1910	34500	125500	1.18	30.6	8.85	1910	1530	303	1	10	4
20EAST1	1.33	13.95	2170	15.5	13300	1.33	28	9.72	488	1530	3.06	1.18	0.38	5
20EAST2	2.32	47.8	961	2350	4520	2.99	22.7	8.75	1400	4180	85.1	5.73	1.32	70
20EAST3	0.87	23.3	1790	472	9250	0.12	45.2	10	693	9200	13.3	13.3	0.87	11
20JEN1	1.13	42.4	295	6990	13300	1.63	6.84	3.96	832	162	29.4	5.93	12.7	117
20JEN2	0.85	2.21	74.1	128	491	1.06	3.65	1.17	937	112	0.82	24.5	2.26	312
20JEN3	0.02	1.75	83.7	36.4	195	1.62	4.8	2.4	273	32.3	2.35	52.9	3.78	71
20JEN4	1.46	3.02	99	177.5	3690	1.53	6.31	2.24	1160	1985	3.15	2.47	3.27	136
20ROAD1	2.28	7.55	109	396	2700	1.27	7.4	2.56	1370	17	0.46	0.95	0.48	213
20ROAD2	0.03	1.68	126.5	57.2	1400	1.64	4.95	2.29	1140	73.5	1.35	1.87	0.52	101

ID #	tenure ID	Zone	Easting	Northing	Elev (m)	Sample Type
301	320414	Heino	449035	5537218	2130	outcrop (near portal)
302	320414	Heino	449036	5537219	2130	outcrop (near portal)
303	320414	Heino	449037	5537219	2130	angular float (at portal)
304	320414	Heino	449037	5537220	2130	angular float (at portal)
305	320414	Heino	449038	5537220	2130	angular float (at portal)
306	320414	Heino	449038	5537219	2130	angular float (at portal)
20EAST1	320414	East Ridge	449274	5537365	2029	angular float
20EAST2	320414	East Ridge	449265	5537436	1971	outcrop (at met sample)
20EAST3	320414	East Ridge	449314	5537479	1967	angular float
20JEN1	320414	East Ridge W	449065	5537427	1992	outcrop
20JEN2	320414	East Ridge W	449089	5537418	1991	outcrop
20JEN3	320414	East Ridge W	449072	5537410	2003	outcrop
20JEN4	320414	East Ridge W	449109	5537380	2003	outcrop
20ROAD1	1071800	Road 950 N	448964	5537584	1959	outcrop
20ROAD2	1071800	Road 950 N	448964	5537669	1930	outcrop



ID #	Lithology	Alteration	width	Shear strike	Shear dip
301	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn	10 cm	157	84 W
302	amphibolite, contact porphyritic diorite	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn	10 cm	174	86 E
303	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn			
304	amphibolite (metamorphosed basaltic tuff)	silica, sericite, carbonate, garnet, clay-kaolinite minerals, siliceous banded skarn			
305	metasediments (Milford Group)	silica, sericite, carbonate, garnet, clay minerals in shear			
306	metasediments (Milford Group)	sericite, silica,calcite, pyrolusite,hematite,garnet			
20EAST1	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet			
20EAST2	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,garnet	30 cm	5	68 W
20EAST3	hybrid diorite	quartz,carbonate,sericite,chlorite,hematite,magnetite			
20JEN1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite	20 cm	31	27 NW
20JEN2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite	22 cm	15	88 W
20JEN3	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite	18 cm	30	25 NW
20JEN4	amphibolite (metamorphosed basaltictuff)	quartz,carbonate,sericite,chlorite,pyrolusite	38 cm	37	86 W
20ROAD1	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite	30 cm	160	68 W
20ROAD2	amphibolite (metamorphosed basaltic tuff)	quartz,carbonate,sericite,chlorite,pyrolusite	25 cm	165	62 W

0 200m

SCALE 1 : 5,000

----Access trail ▫ Rock Chip Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

N

Fig 9

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Tillicum 2020 Rock Chip Samples

Fig 10

Grizzly North and South

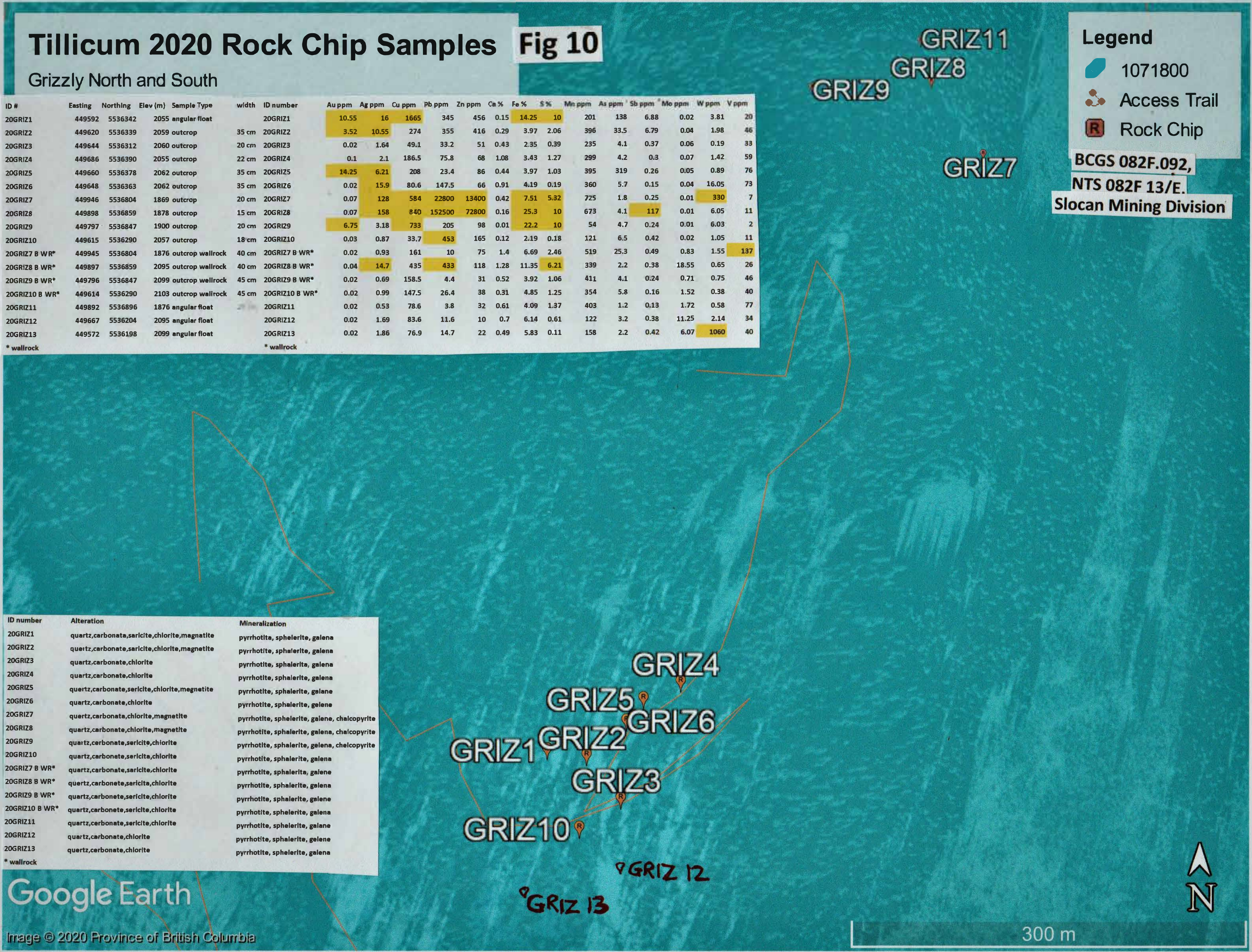
ID #	Easting	Northing	Elev (m)	Sample Type	width	ID number	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20GRIZ1	449592	5536342	2055	angular float		20GRIZ1	10.55	16	1665	345	456	0.15	14.25	10	201	138	6.88	0.02	3.81	20
20GRIZ2	449620	5536339	2059	outcrop	35 cm	20GRIZ2	3.52	10.55	274	355	416	0.29	3.97	2.06	396	33.5	6.79	0.04	1.98	46
20GRIZ3	449644	5536312	2060	outcrop	20 cm	20GRIZ3	0.02	1.64	49.1	33.2	51	0.43	2.35	0.39	235	4.1	0.37	0.06	0.19	33
20GRIZ4	449686	5536390	2055	outcrop	22 cm	20GRIZ4	0.1	2.1	186.5	75.8	68	1.08	3.43	1.27	299	4.2	0.3	0.07	1.42	59
20GRIZ5	449660	5536378	2062	outcrop	35 cm	20GRIZ5	14.25	6.21	208	23.4	86	0.44	3.97	1.03	395	319	0.26	0.05	0.89	76
20GRIZ6	449648	5536363	2062	outcrop	35 cm	20GRIZ6	0.02	15.9	80.6	147.5	66	0.91	4.19	0.19	360	5.7	0.15	0.04	16.05	73
20GRIZ7	449946	5536804	1869	outcrop	20 cm	20GRIZ7	0.07	128	584	22800	13400	0.42	7.51	5.32	725	1.8	0.25	0.01	330	7
20GRIZ8	449898	5536859	1878	outcrop	15 cm	20GRIZ8	0.07	158	840	152500	72800	0.16	25.3	10	673	4.1	117	0.01	6.05	11
20GRIZ9	449797	5536847	1900	outcrop	20 cm	20GRIZ9	6.75	3.18	733	205	98	0.01	22.2	10	54	4.7	0.24	0.01	6.03	2
20GRIZ10	449615	5536290	2057	outcrop	18 cm	20GRIZ10	0.03	0.87	33.7	453	165	0.12	2.19	0.18	121	6.5	0.42	0.02	1.05	11
20GRIZ7 B WR*	449945	5536804	1876	outcrop wallrock	40 cm	20GRIZ7 B WR*	0.02	0.93	161	10	75	1.4	6.69	2.46	519	25.3	0.49	0.83	1.55	137
20GRIZ8 B WR*	449897	5536859	2095	outcrop wallrock	40 cm	20GRIZ8 B WR*	0.04	14.7	435	433	118	1.28	11.35	6.21	339	2.2	0.38	18.55	0.65	26
20GRIZ9 B WR*	449796	5536847	2099	outcrop wellrock	45 cm	20GRIZ9 B WR*	0.02	0.69	158.5	4.4	31	0.52	3.92	1.06	411	4.1	0.24	0.71	0.75	46
20GRIZ10 B WR*	449614	5536290	2103	outcrop wallrock	45 cm	20GRIZ10 B WR*	0.02	0.99	147.5	26.4	38	0.31	4.85	1.25	354	5.8	0.16	1.52	0.38	40
20GRIZ11	449892	5536896	1876	angular float		20GRIZ11	0.02	0.53	78.6	3.8	32	0.61	4.09	1.37	403	1.2	0.13	1.72	0.58	77
20GRIZ12	449667	5536204	2095	angular float		20GRIZ12	0.02	1.69	83.6	11.6	10	0.7	6.14	0.61	122	3.2	0.38	11.25	2.14	34
20GRIZ13	449572	5536198	2099	angular float		20GRIZ13	0.02	1.86	76.9	14.7	22	0.49	5.83	0.11	158	2.2	0.42	6.07	1060	40

* wallrock

* wallrock

ID number	Alteration	Mineralization
20GRIZ1	quartz,carbonata,saricite,chlorite,magnatite	pyrrhotita, sphelerite, galena
20GRIZ2	quertz,carbonate,saricite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ3	quartz,carbonate,chlorite	pyrrhotite, sphalerita, galena
20GRIZ4	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ5	quertz,carbonate,sericite,chlorite,megnetite	pyrrhotite, sphalerite, galane
20GRIZ6	quartz,carbonate,chlorite	pyrrhotite, sphalerite, gelene
20GRIZ7	quertz,carbonata,chlorite,magnetite	pyrrhotite, sphelerite, galene, chalcopyrite
20GRIZ8	quartz,carbonate,chlorite,magnetite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ9	quartz,cerbonate,sericite,chlorite	pyrrhotite, sphalerite, gelena, chelcopyrite
20GRIZ10	quartz,carbonete,sericita,chlorite	pyrrhotite, sphalerite, galena
20GRIZ7 B WR*	quartz,carbonate,saricite,chlorite	pyrrhotite, sphalerita, galene
20GRIZ8 B WR*	quertz,carbonete,sericita,chlorite	pyrrhotite, sphalerite, galena
20GRIZ9 B WR*	quartz,carbonete,sericite,chlorite	pyrrhotite, sphalerite, galene
20GRIZ10 B WR*	quartz,carbonete,sericite,chlorite	pyrrhotite, sphelerite, galena
20GRIZ11	quartz,cerbonate,sericite,chlorite	pyrrhotite, sphelerite, galane
20GRIZ12	quartz,carbonate,chlorite	pyrrhotite, sphalerite, gelene
20GRIZ13	quertz,cerbonate,chlorite	pyrrhotite, sphelerite, galena

* wallrock



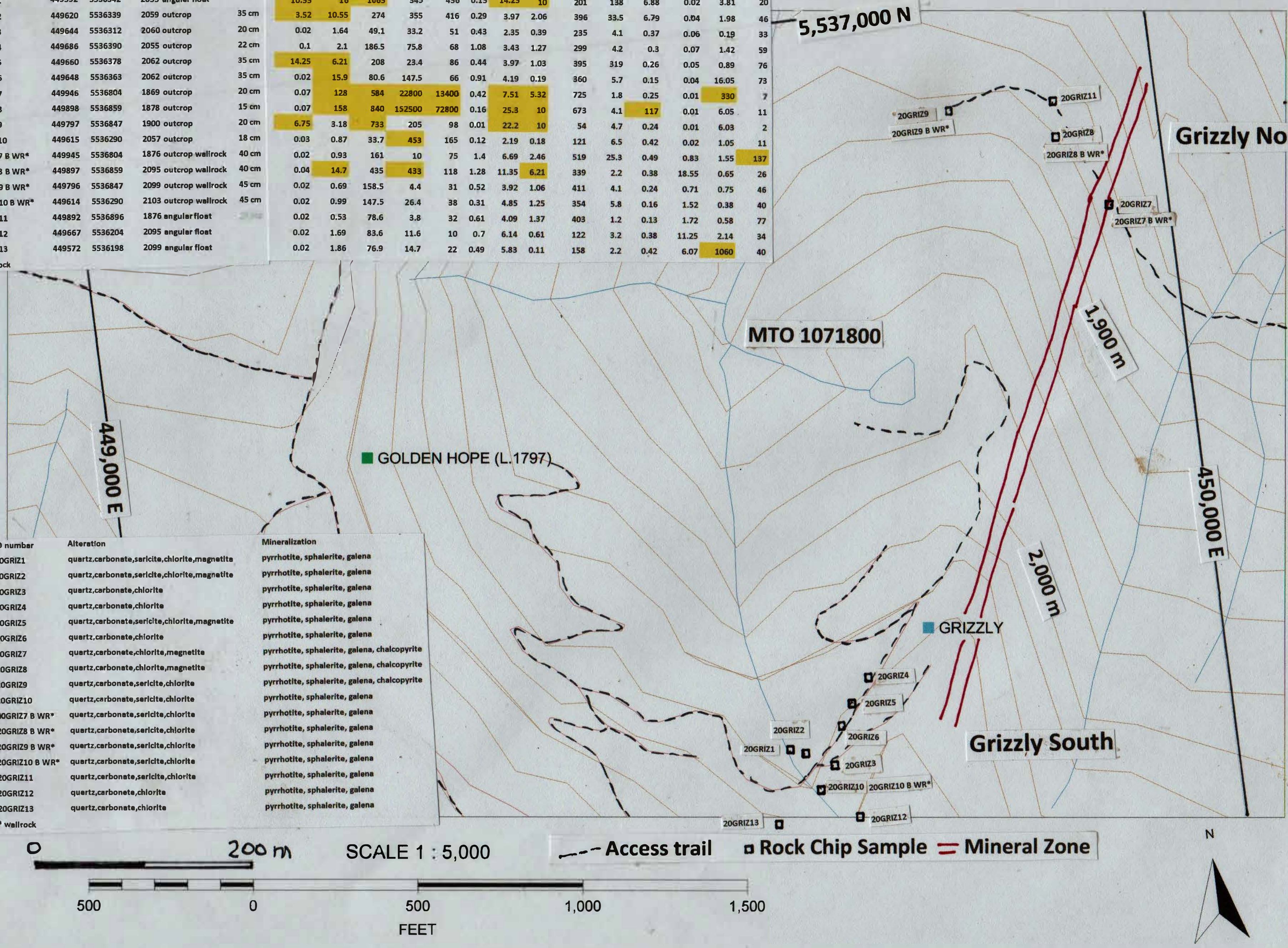
* wallrock

Fig 11 Tillicum Grizzly Zone Rock Samples

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

ID #	Easting	Northing	Elev (m)	Sample Type	width	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20GRIZ1	449592	5536342	2055	anguler float		10.55	16	1665	345	456	0.15	14.25	10	201	138	6.88	0.02	3.81	20
20GRIZ2	449620	5536339	2059	outcrop	35 cm	3.52	10.55	274	355	416	0.29	3.97	2.06	396	33.5	6.79	0.04	1.98	46
20GRIZ3	449644	5536312	2060	outcrop	20 cm	0.02	1.64	49.1	33.2	51	0.43	2.35	0.39	235	4.1	0.37	0.06	0.19	33
20GRIZ4	449686	5536390	2055	outcrop	22 cm	0.1	2.1	186.5	75.8	68	1.08	3.43	1.27	299	4.2	0.3	0.07	1.42	59
20GRIZ5	449660	5536378	2062	outcrop	35 cm	14.25	6.21	208	23.4	86	0.44	3.97	1.03	395	319	0.26	0.05	0.89	76
20GRIZ6	449648	5536363	2062	outcrop	35 cm	0.02	15.9	80.6	147.5	66	0.91	4.19	0.19	360	5.7	0.15	0.04	16.05	73
20GRIZ7	449946	5536804	1869	outcrop	20 cm	0.07	128	584	22800	13400	0.42	7.51	5.32	725	1.8	0.25	0.01	330	7
20GRIZ8	449898	5536859	1878	outcrop	15 cm	0.07	158	840	152500	72800	0.16	25.3	10	673	4.1	117	0.01	6.05	11
20GRIZ9	449797	5536847	1900	outcrop	20 cm	6.75	3.18	733	205	98	0.01	22.2	10	54	4.7	0.24	0.01	6.03	2
20GRIZ10	449615	5536290	2057	outcrop	18 cm	0.03	0.87	33.7	453	165	0.12	2.19	0.18	121	6.5	0.42	0.02	1.05	11
20GRIZ7 B WR*	449945	5536804	1876	outcrop wallrock	40 cm	0.02	0.93	161	10	75	1.4	6.69	2.46	519	25.3	0.49	0.83	1.55	137
20GRIZ8 B WR*	449897	5536859	2095	outcrop wallrock	40 cm	0.04	14.7	435	433	118	1.28	11.35	6.21	339	2.2	0.38	18.55	0.65	26
20GRIZ9 B WR*	449796	5536847	2099	outcrop wallrock	45 cm	0.02	0.69	158.5	4.4	31	0.52	3.92	1.06	411	4.1	0.24	0.71	0.75	46
20GRIZ10 B WR*	449614	5536290	2103	outcrop wallrock	45 cm	0.02	0.99	147.5	26.4	38	0.31	4.85	1.25	354	5.8	0.16	1.52	0.38	40
20GRIZ11	449892	5536896	1876	angular float		0.02	0.53	78.6	3.8	32	0.61	4.09	1.37	403	1.2	0.13	1.72	0.58	77
20GRIZ12	449667	5536204	2095	angular float		0.02	1.69	83.6	11.6	10	0.7	6.14	0.61	122	3.2	0.38	11.25	2.14	34
20GRIZ13	449572	5536198	2099	angular float		0.02	1.86	76.9	14.7	22	0.49	5.83	0.11	158	2.2	0.42	6.07	1060	40

* wallrock



ID number	Alteration	Mineralization
20GRIZ1	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ2	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ3	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ4	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ5	quartz,carbonate,sericite,chlorite,magnetite	pyrrhotite, sphalerite, galena
20GRIZ6	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ7	quartz,carbonate,chlorite,magnetite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ8	quartz,carbonate,chlorite,magnetite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ9	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GRIZ10	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ7 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ8 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ9 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ10 B WR*	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ11	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20GRIZ12	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena
20GRIZ13	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena

* wallrock

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Tillicum 2020 Rock Chip Samples

Fig 12

Silver Queen

ID #	Easting	Northing	Elev (m)	Sample Type	width	ID #	Alteration	Mineralization
20SQ1	450307	5535369	2041	outcrop	30 cm	20SQ1	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ2	450308	5535370	2042	outcrop	30 cm	20SQ2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ3	450364	5535475	2075	outcrop	20 cm	20SQ3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20SQ4	450422	5535523	2127	angular float		20SQ4	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite
20SQ5	450516	5535558	2196	outcrop		20SQ5	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ6	450524	5535580	2214	outcrop		20SQ6	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena
20SQ7	450550	5535555	2220	angular float		20SQ7	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite

ID no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
20SQ1	1.48	19	57.5	40.2	62	2.48	5.16	2.94	325	7740	20.5
20SQ2	2.87	9.06	37.7	45.5	73	1.83	6.19	3.23	373	10000	74.5
20SQ3	0.22	51.3	270	358	52800	4.94	5.91	3.67	3140	135.5	33.5
20SQ4	0.73	1895	422	63400	130500	11.85	14.85	10	10150	32	779
20SQ5	0.7	96.1	120.5	546	54500	5.45	4.56	2.79	2810	832	60
20SQ6	0.89	1270	366	72000	21900	2.19	9.93	6.12	1340	97.7	921
20SQ7	1.08	2590	807	110500	180000	2.45	19	10	4620	60.2	2330

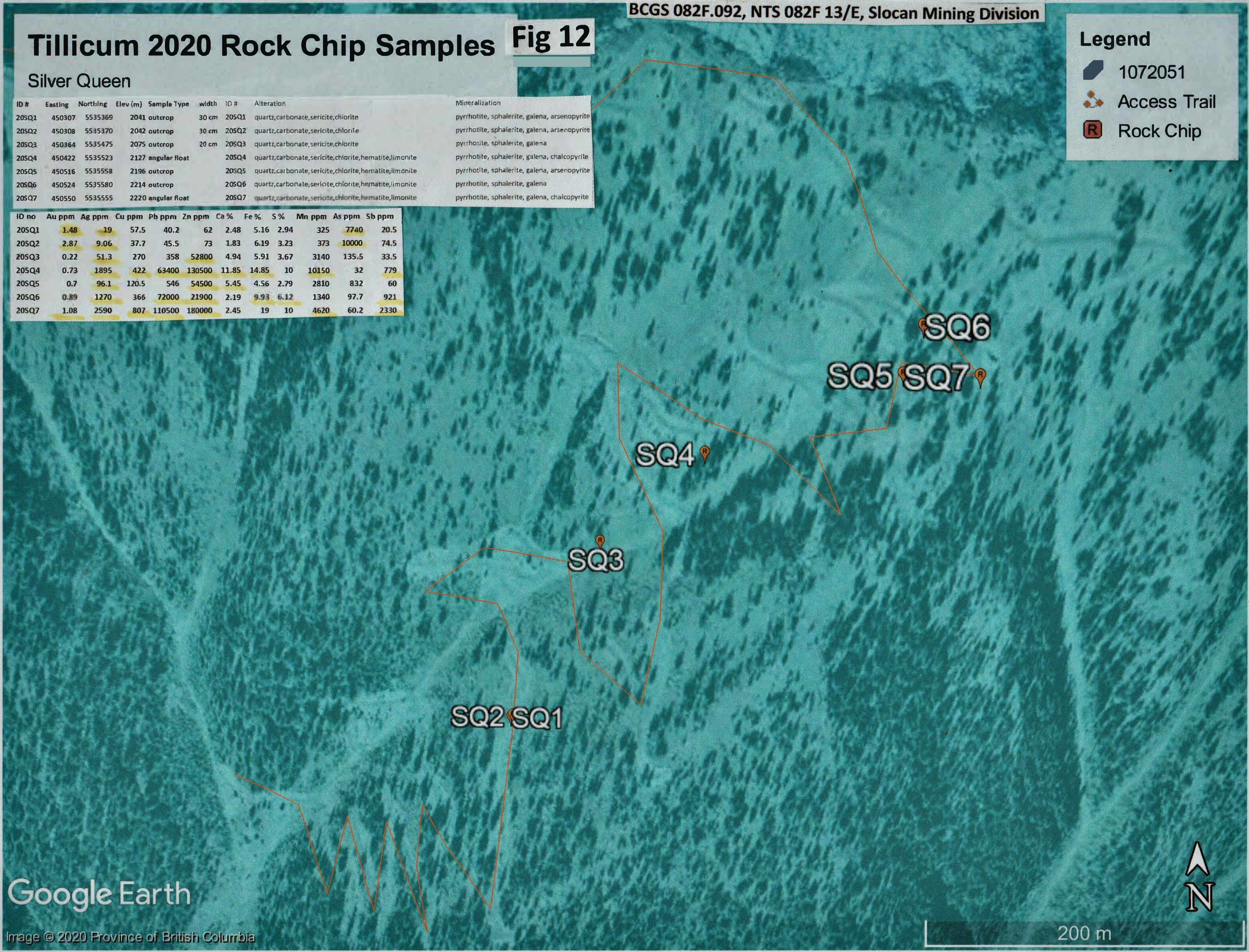
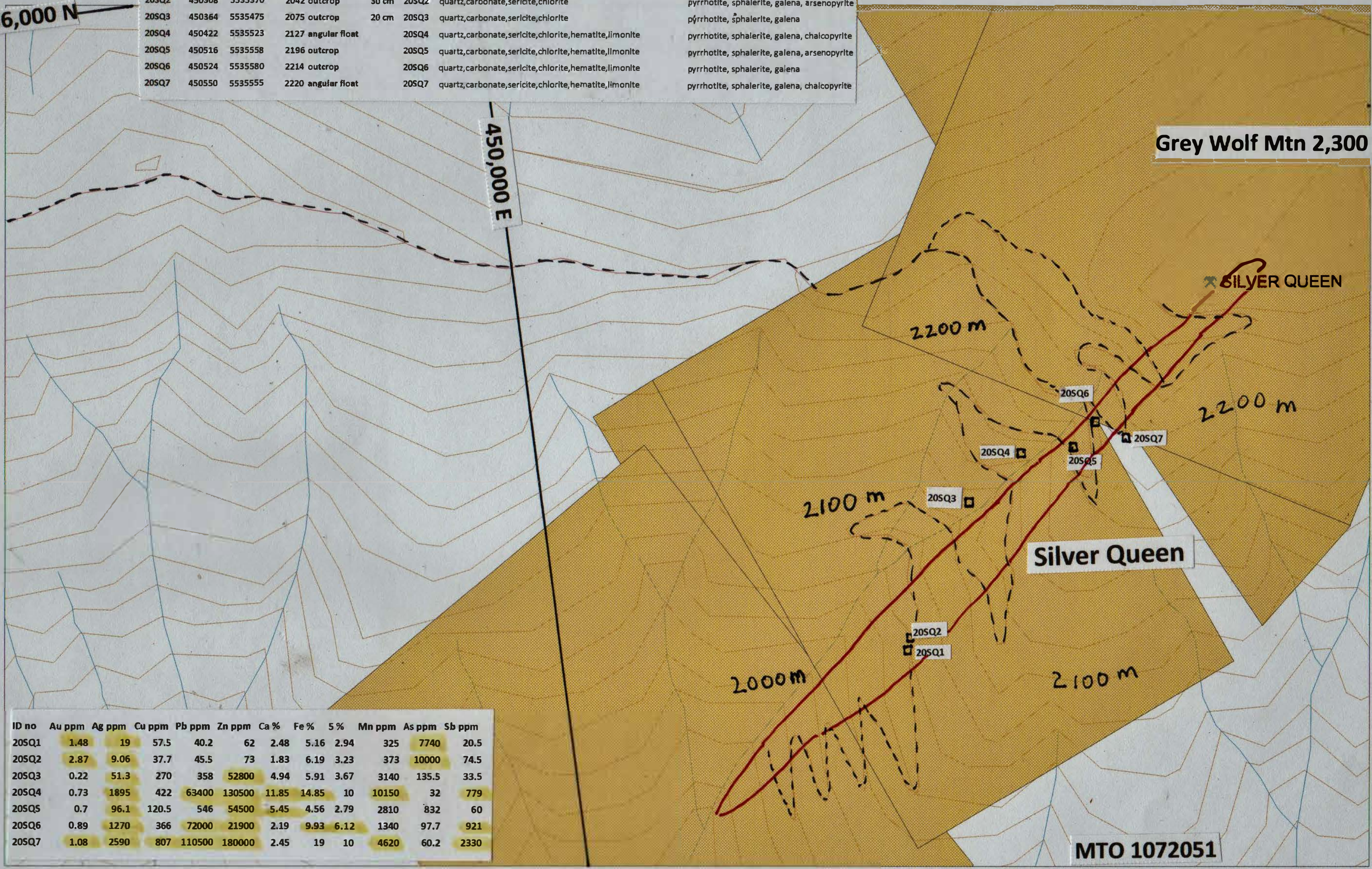


Fig 13 Tillicum Silver Queen Zone Rock Samples

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

ID #	Easting	Northing	Elev (m)	Sample Type	width	ID #	Alteration	Mineralization
20SQ1	450307	5535369	2041	outcrop	30 cm	20SQ1	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ2	450308	5535370	2042	outcrop	30 cm	20SQ2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ3	450364	5535475	2075	outcrop	20 cm	20SQ3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20SQ4	450422	5535523	2127	angular float		20SQ4	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite
20SQ5	450516	5535558	2196	outcrop		20SQ5	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, arsenopyrite
20SQ6	450524	5535580	2214	outcrop		20SQ6	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena
20SQ7	450550	5535555	2220	angular float		20SQ7	quartz,carbonate,sericite,chlorite,hematite,limonite	pyrrhotite, sphalerite, galena, chalcopyrite



ID no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm
20SQ1	1.48	19	57.5	40.2	62	2.48	5.16	2.94	325	7740	20.5
20SQ2	2.87	9.06	37.7	45.5	73	1.83	6.19	3.23	373	10000	74.5
20SQ3	0.22	51.3	270	358	52800	4.94	5.91	3.67	3140	135.5	33.5
20SQ4	0.73	1895	422	63400	130500	11.85	14.85	10	10150	32	779
20SQ5	0.7	96.1	120.5	546	54500	5.45	4.56	2.79	2810	832	60
20SQ6	0.89	1270	366	72000	21900	2.19	9.93	6.12	1340	97.7	921
20SQ7	1.08	2590	807	110500	180000	2.45	19	10	4620	60.2	2330

0 200m

SCALE 1 : 5,000

---- Access trail ▫ Rock Chip Sample ⊂ Mineral Zone

500 0 500 1,000 1,500

FEET

Yellow=Area of Crown Grants

Tillicum 2020 Rock Chip Samples

Fig 14

Golden Hope North and South

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

ID number	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	sampled width	Shear strike	Shear dip	Lithology
20GHOPE1	449102	5536610	2064	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE2	449087	5536452	2061	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE3	449067	5536547	2102	outcrop	20 cm	55	80 NW	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE4	449417	5536971	1980	outcrop	45 cm	19	78 E	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE5	449415	5536984	1981	outcrop	35 cm	20	77 E	siliceous meta-sediment/volcanic (greywacke protolith)

Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20GHOPE1	0.04	1.22	104	25.9	94	1.66	3.89	0.52	562	17.5	0.59	1.8	0.32	120
20GHOPE2	0.58	3.4	171	28.4	52	0.71	4.6	0.98	343	31.6	0.66	1.15	0.37	96
20GHOPE3	0.02	2.72	208	139	201	3.32	7.67	4.45	271	3.2	0.48	6.59	2.37	65
20GHOPE4	0.21	3.04	372	37.5	2200	0.31	9.81	1.39	796	21.7	0.39	4.84	7.91	56
20GHOPE5	0.27	2.33	198.5	37.9	2610	1.93	8.31	0.74	1200	25.7	0.31	2.22	8.52	57

Sample no	Alteration	Mineralization
20GHOPE1	quartz,carbonate	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE3	quartz,carbonate	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE4	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20GHOPE5	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite

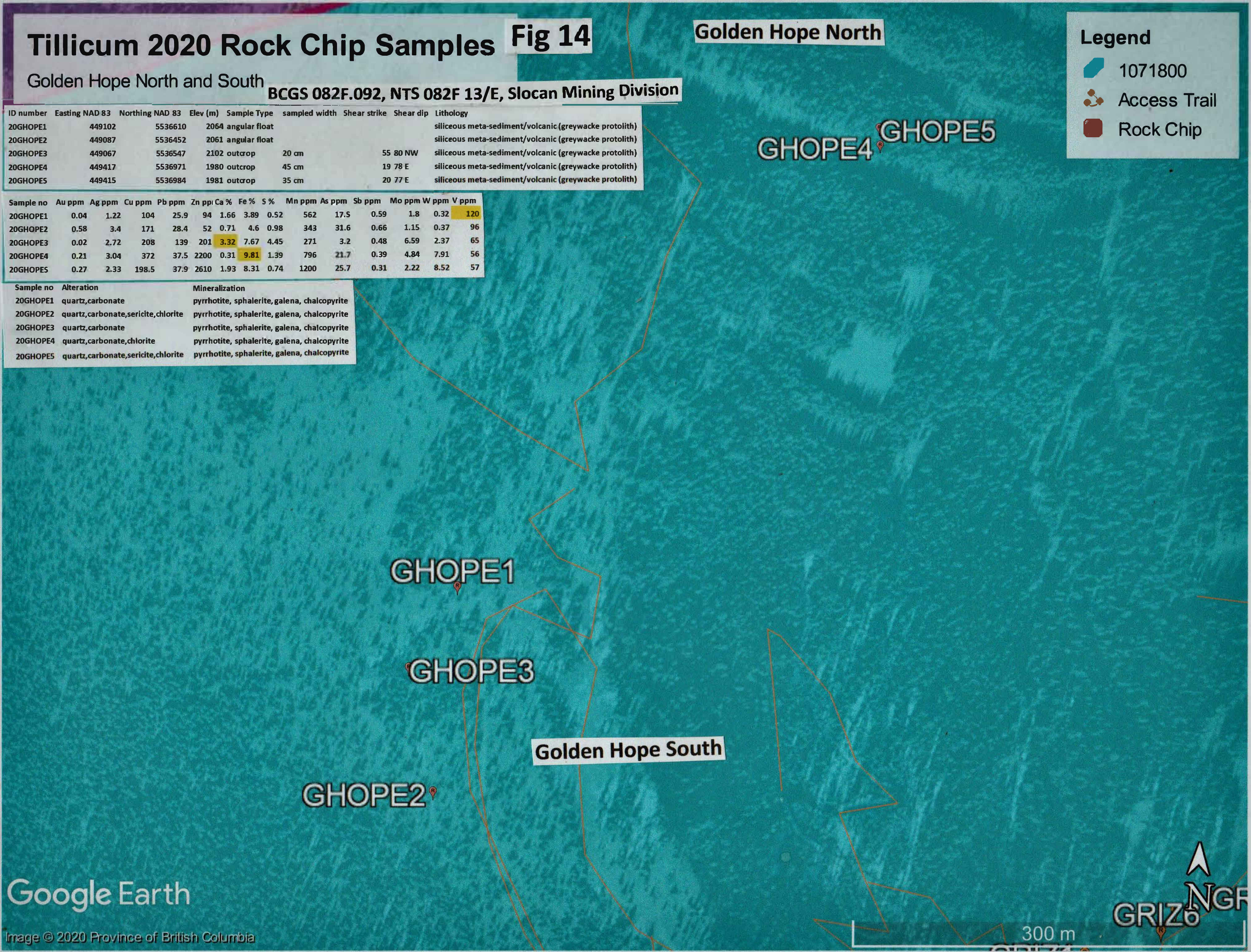
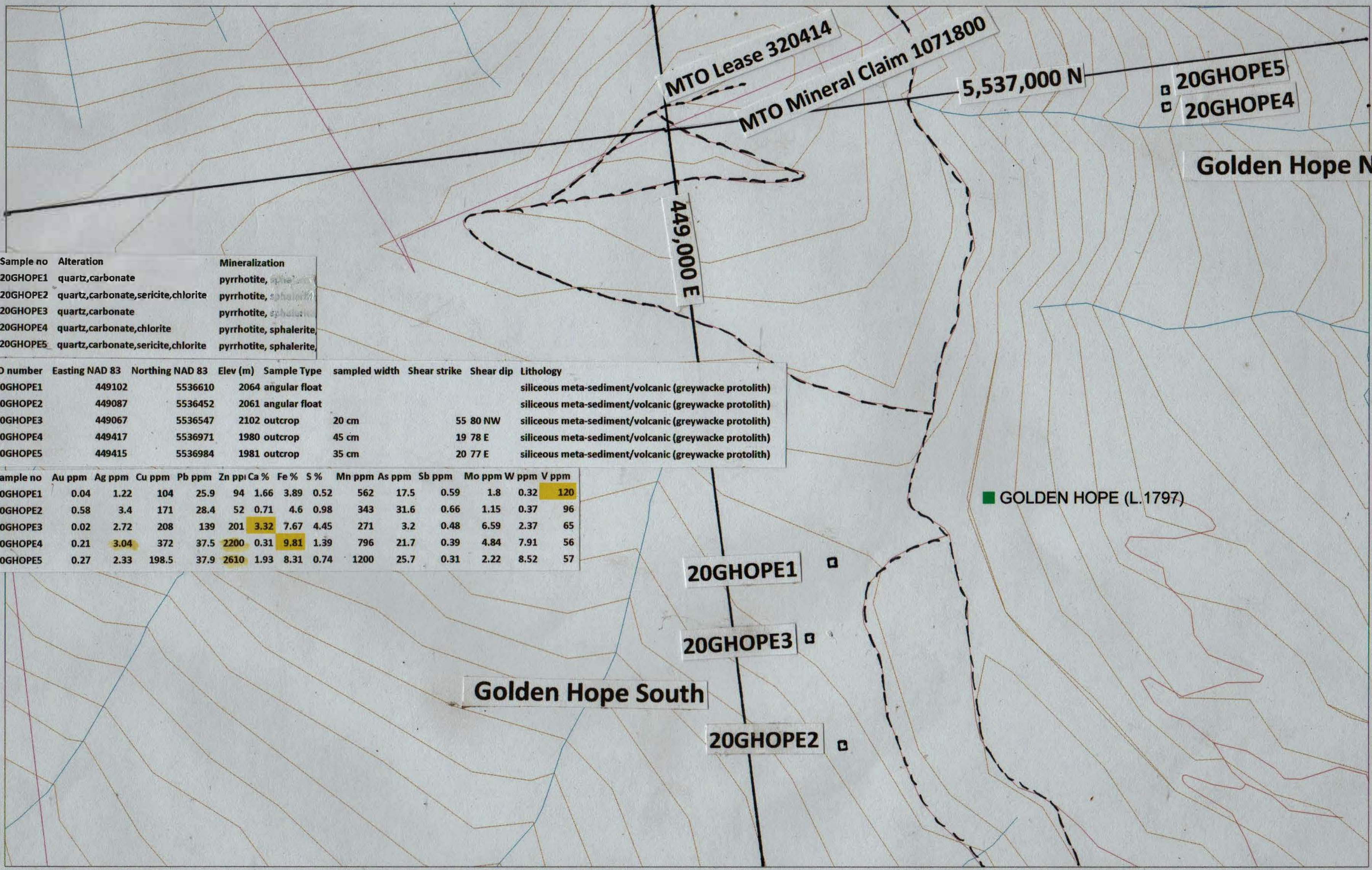


Fig 15 Tillicum Golden Hope Zone Rock Samples

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division



Sample no	Alteration	Mineralization
20GHOPE1	quartz,carbonate	pyrrhotite, sphalerite
20GHOPE2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite
20GHOPE3	quartz,carbonate	pyrrhotite, sphalerite
20GHOPE4	quartz,carbonate,chlorite	pyrrhotite, sphalerite,
20GHOPE5	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite,

ID number	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	sampled width	Shear strike	Shear dip	Lithology
20GHOPE1	449102	5536610	2064	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE2	449087	5536452	2061	angular float				siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE3	449067	5536547	2102	outcrop	20 cm	55	80 NW	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE4	449417	5536971	1980	outcrop	45 cm	19	78 E	siliceous meta-sediment/volcanic (greywacke protolith)
20GHOPE5	449415	5536984	1981	outcrop	35 cm	20	77 E	siliceous meta-sediment/volcanic (greywacke protolith)

Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20GHOPE1	0.04	1.22	104	25.9	94	1.66	3.89	0.52	562	17.5	0.59	1.8	0.32	120
20GHOPE2	0.58	3.4	171	28.4	52	0.71	4.6	0.98	343	31.6	0.66	1.15	0.37	96
20GHOPE3	0.02	2.72	208	139	201	3.32	7.67	4.45	271	3.2	0.48	6.59	2.37	65
20GHOPE4	0.21	3.04	372	37.5	2200	0.31	9.81	1.39	796	21.7	0.39	4.84	7.91	56
20GHOPE5	0.27	2.33	198.5	37.9	2610	1.93	8.31	0.74	1200	25.7	0.31	2.22	8.52	57

0 200 m

SCALE 1 : 5,000

--- Access Trail ▫ Rock Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

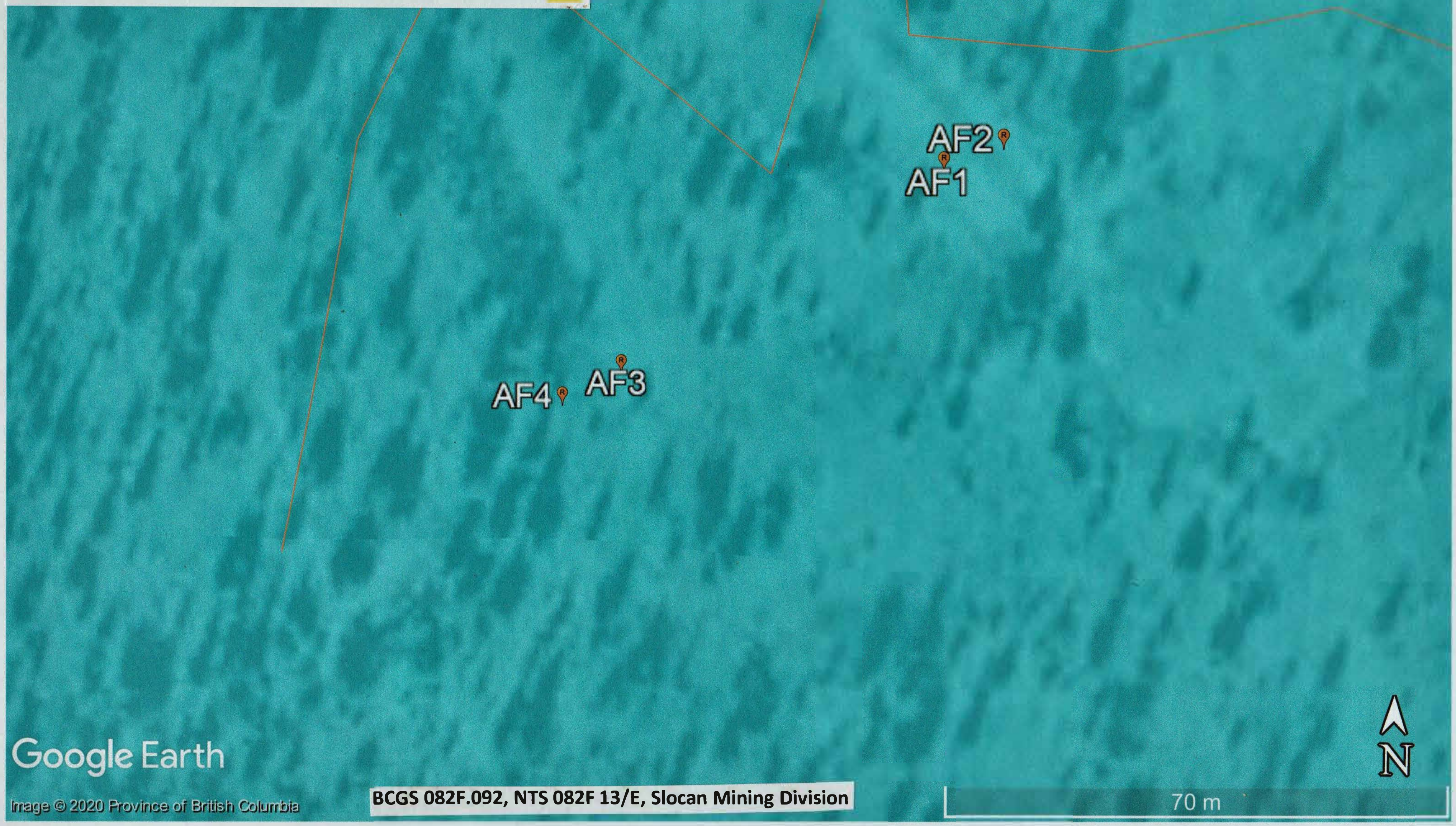
N

Tillicum 2020 Rock Chip Samples Fig 16

Arnie Flats

ID #	Easting	Northing	Elev (m)	Sample Type	width	Sample number	Alteration	Mineralization	Sample no
20AF1	448006	5535748	2103	outcrop	25 cm	20AF1	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite	20AF1
20AF2	448014	5535751	2108	outcrop (trench)	28 cm	20AF2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite	20AF2
20AF3	447960	5535719	2091	angular float		20AF3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena	20AF3
20AF4	447951	5535714	2090	angular float		20AF4	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena	20AF4

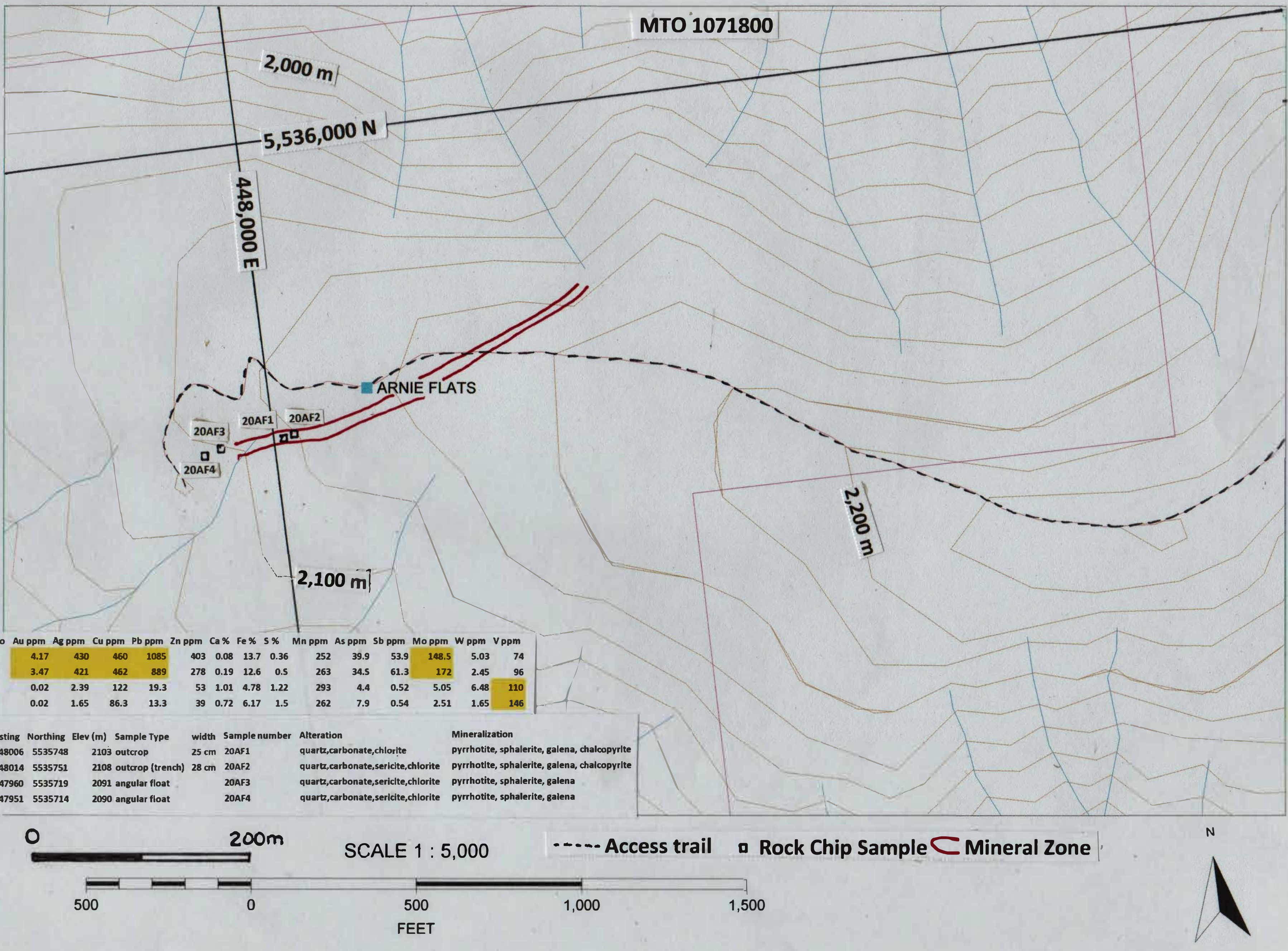
Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20AF1	4.17	430	460	1085	403	0.08	13.7	0.36	252	39.9	53.9	148.5	5.03	74
20AF2	3.47	421	462	889	278	0.19	12.6	0.5	263	34.5	61.3	172	2.45	96
20AF3	0.02	2.39	122	19.3	53	1.01	4.78	1.22	293	4.4	0.52	5.05	6.48	110
20AF4	0.02	1.65	86.3	13.3	39	0.72	6.17	1.5	262	7.9	0.54	2.51	1.65	146



BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Fig 17 Tillicum Arnie Flats Zone Rock Samples

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division



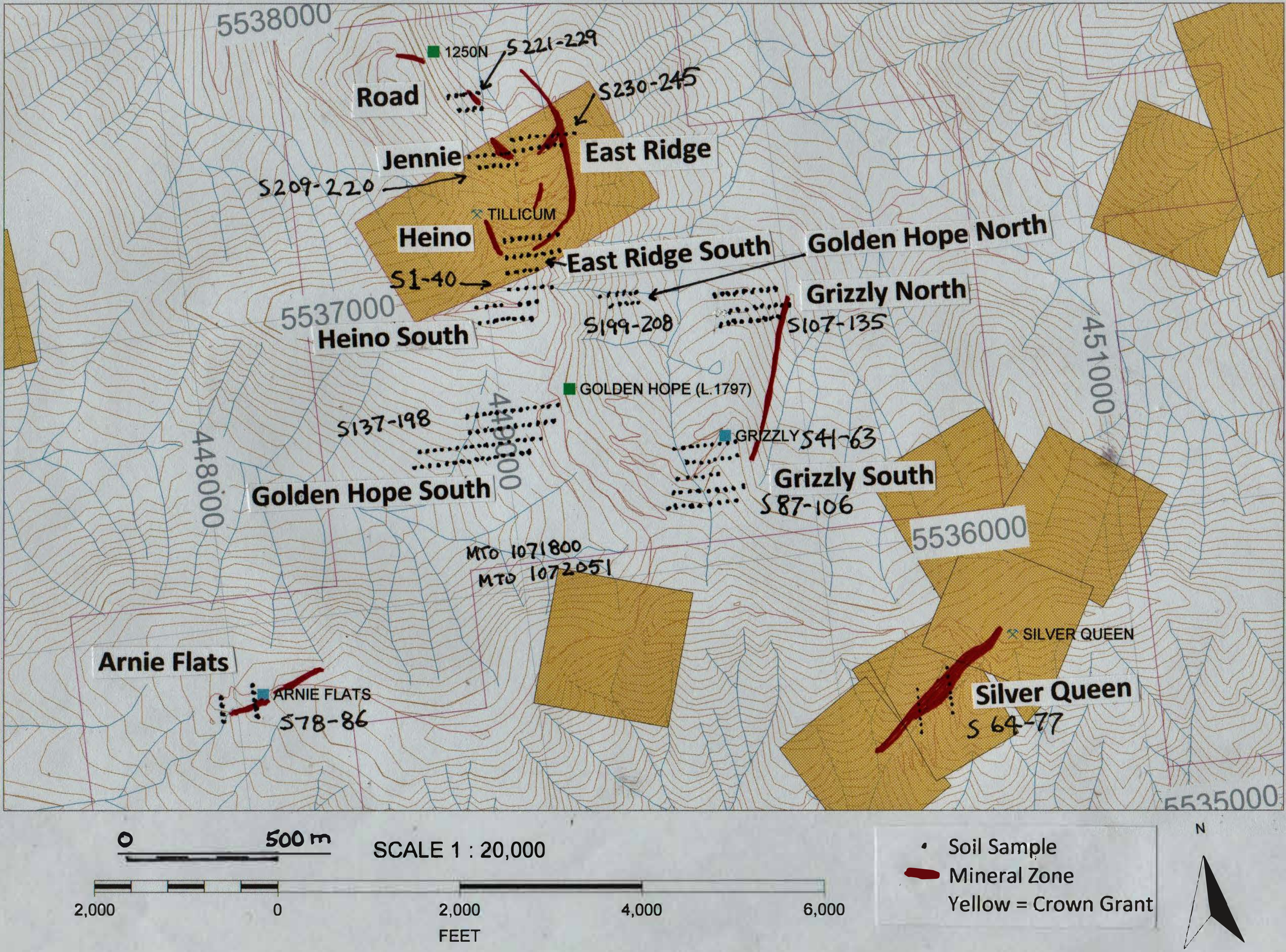
Sample no	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ca %	Fe %	S %	Mn ppm	As ppm	Sb ppm	Mo ppm	W ppm	V ppm
20AF1	4.17	430	460	1085	403	0.08	13.7	0.36	252	39.9	53.9	148.5	5.03	74
20AF2	3.47	421	462	889	278	0.19	12.6	0.5	263	34.5	61.3	172	2.45	96
20AF3	0.02	2.39	122	19.3	53	1.01	4.78	1.22	293	4.4	0.52	5.05	6.48	110
20AF4	0.02	1.65	86.3	13.3	39	0.72	6.17	1.5	262	7.9	0.54	2.51	1.65	146

ID #	Easting	Northing	Elev (m)	Sample Type	width	Sample number	Alteration	Mineralization
20AF1	448006	5535748	2103	outcrop	25 cm	20AF1	quartz,carbonate,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20AF2	448014	5535751	2108	outcrop (trench)	28 cm	20AF2	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena, chalcopyrite
20AF3	447960	5535719	2091	angular float		20AF3	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena
20AF4	447951	5535714	2090	angular float		20AF4	quartz,carbonate,sericite,chlorite	pyrrhotite, sphalerite, galena

Fig 18 Tillicum Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

S199-208 **Sample ID #'s**



Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

ID #

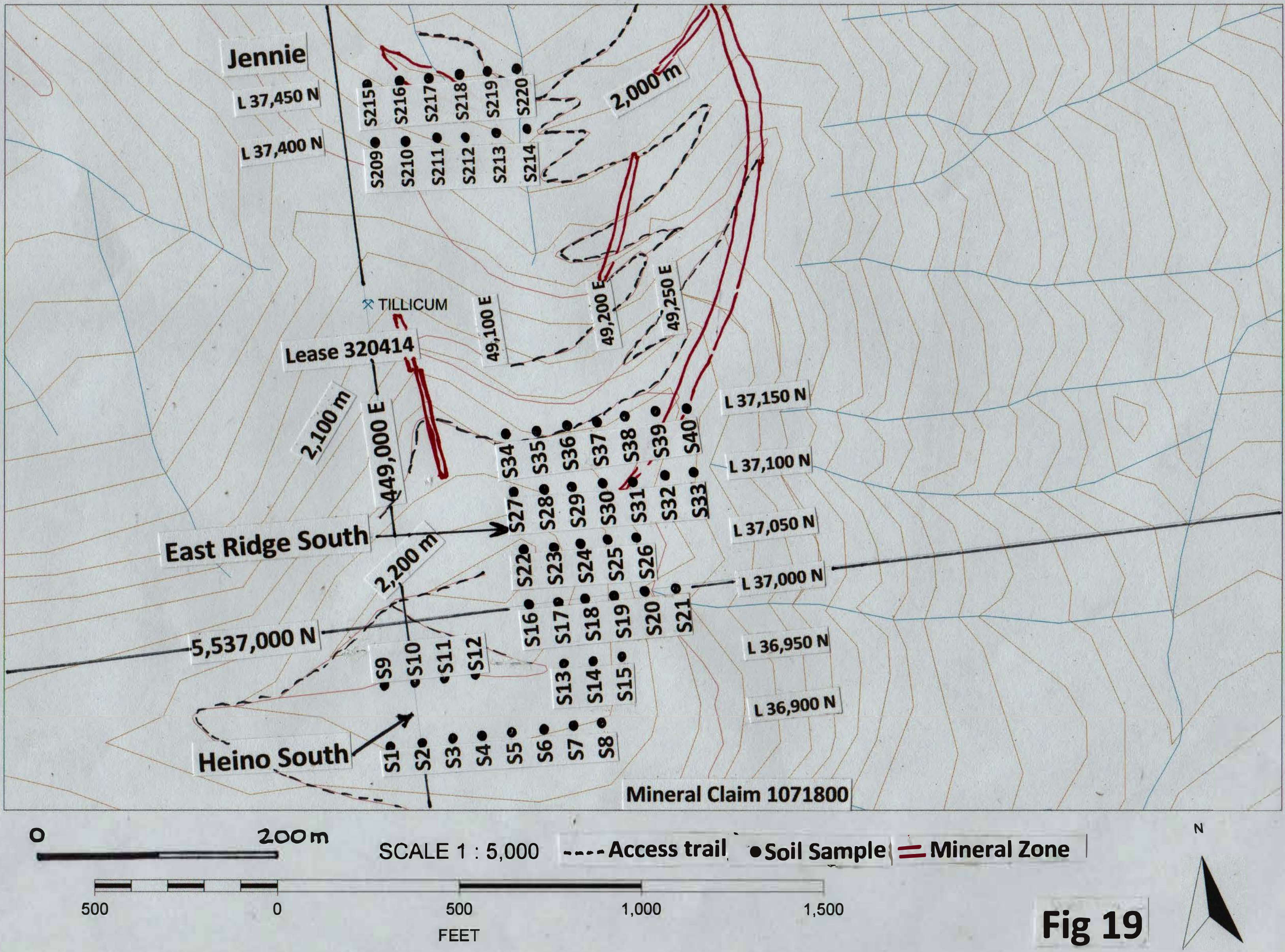


Fig 19

Sample ID #'s

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

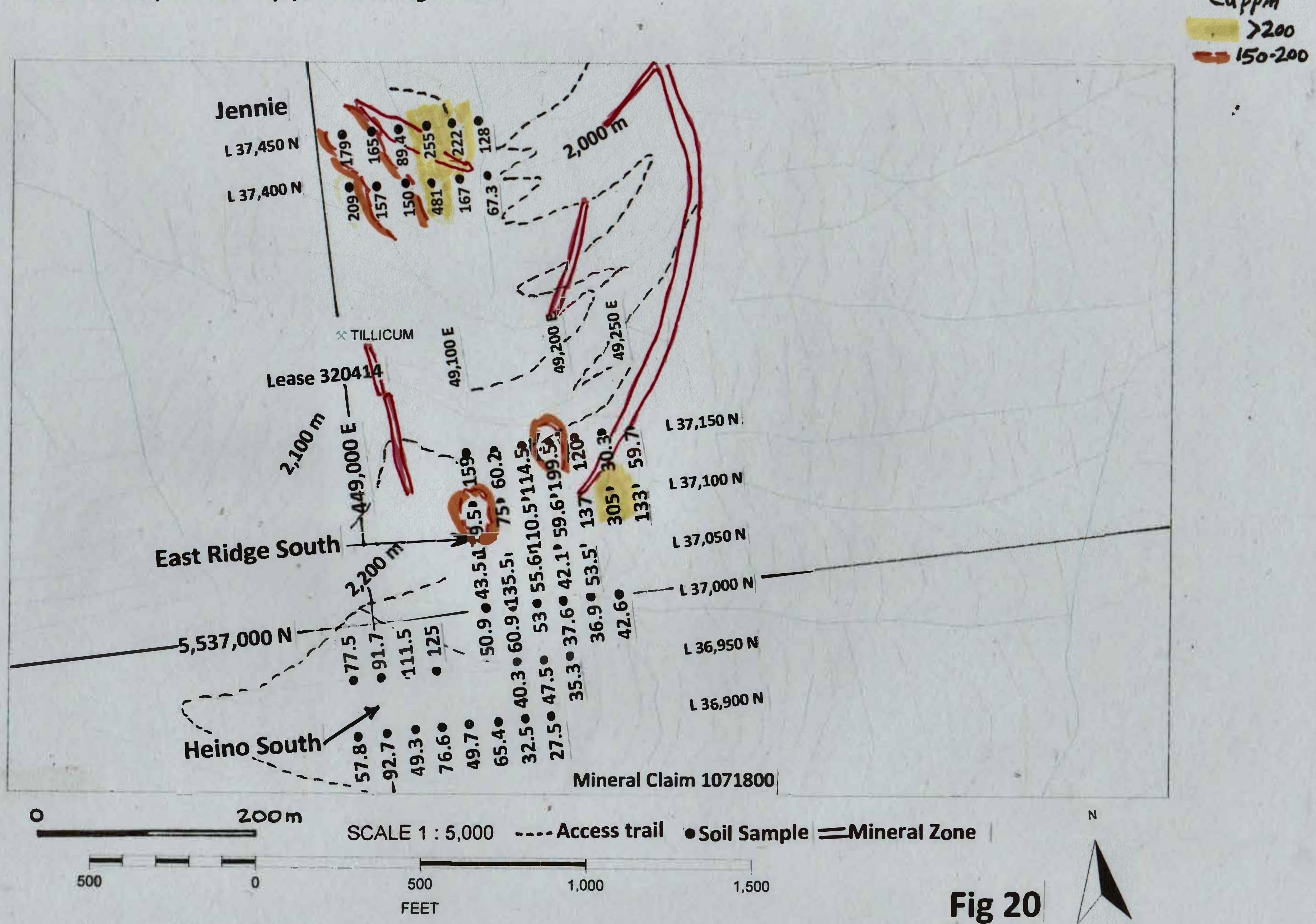


Fig 20

Cu ppm

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

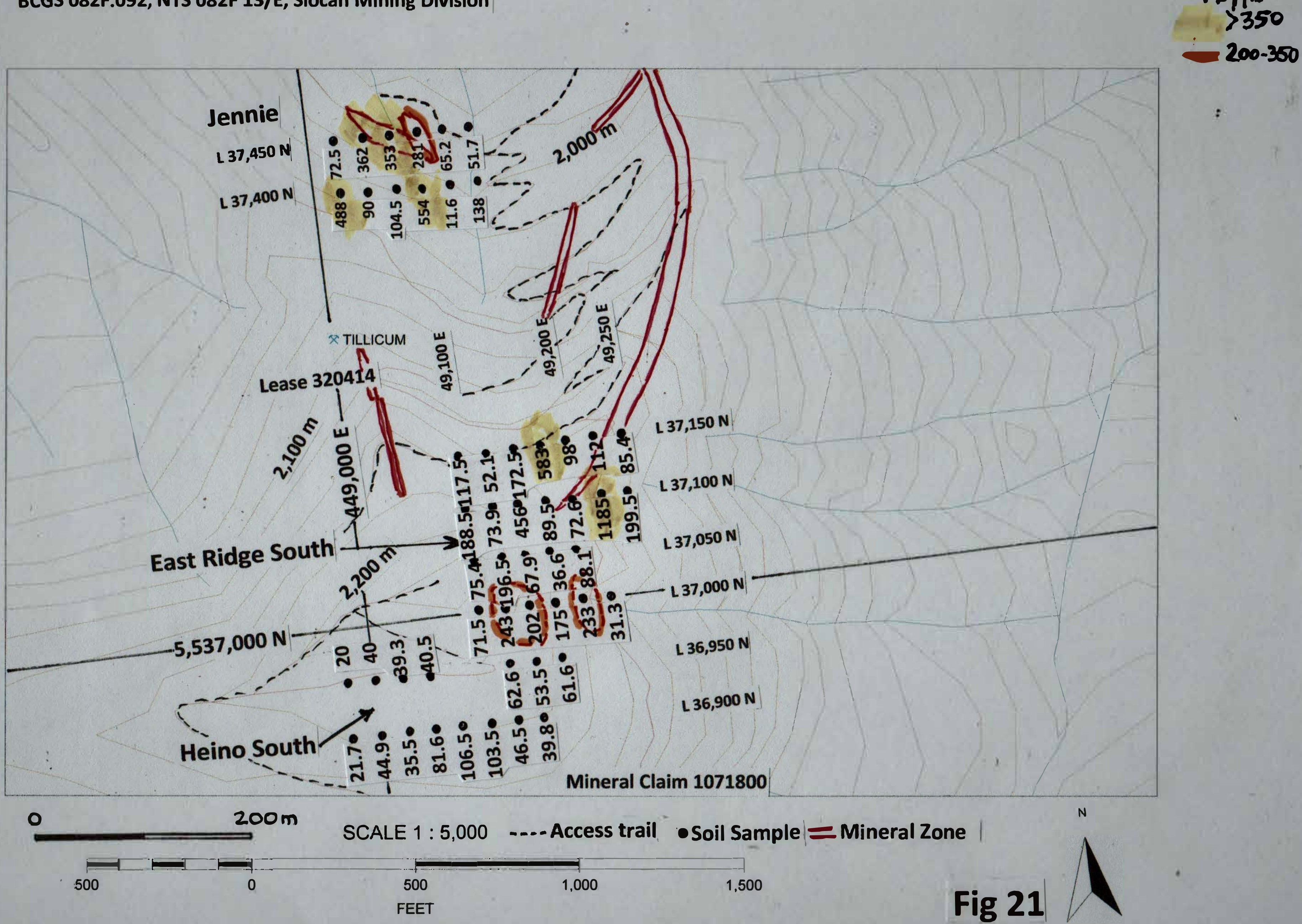


Fig 21

Pb ppm

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

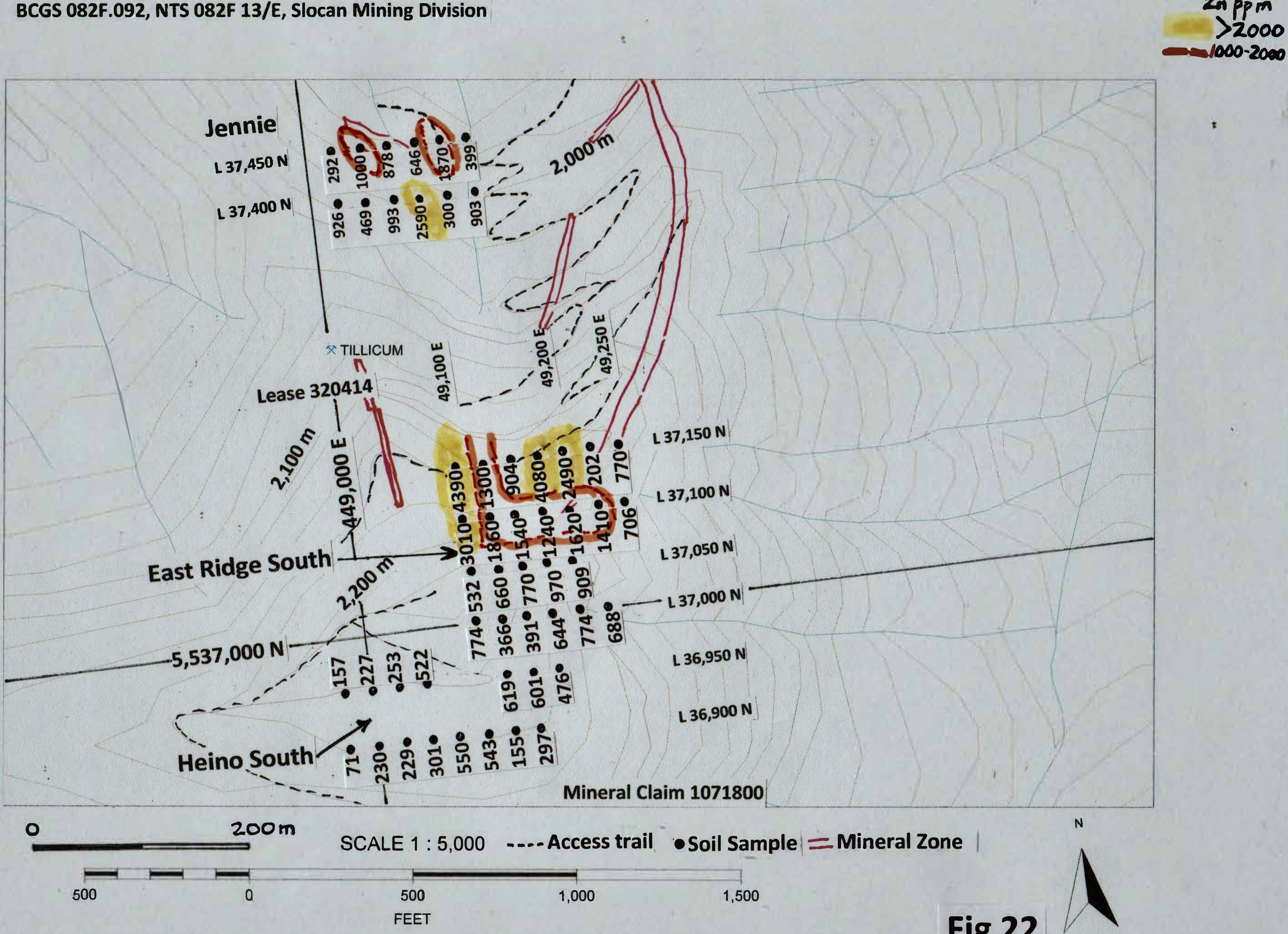


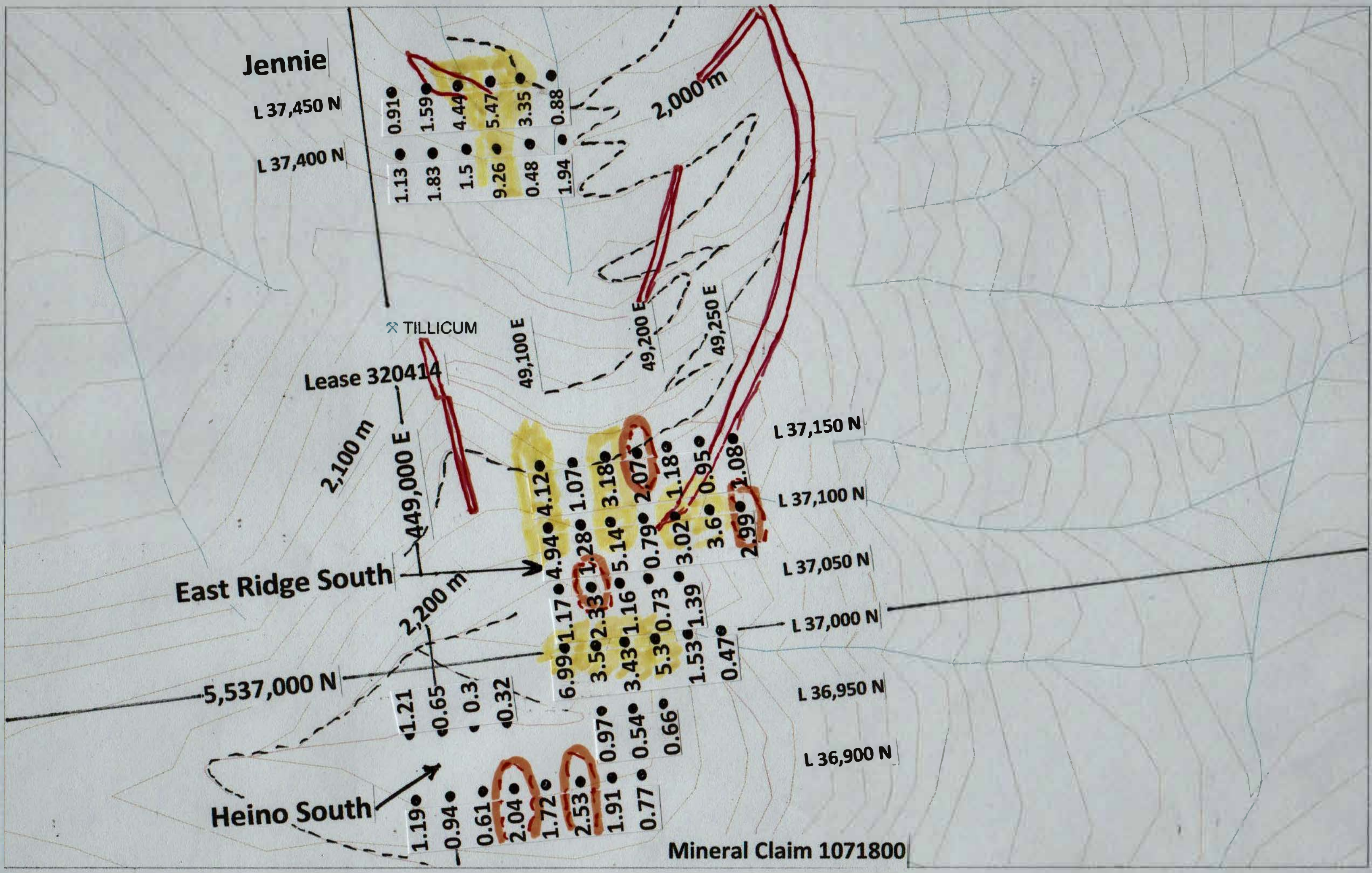
Fig 22

Zn ppm

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Ag ppm
>3
2-3



0 200m

SCALE 1 : 5,000 ---- Access trail ● Soil Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

N

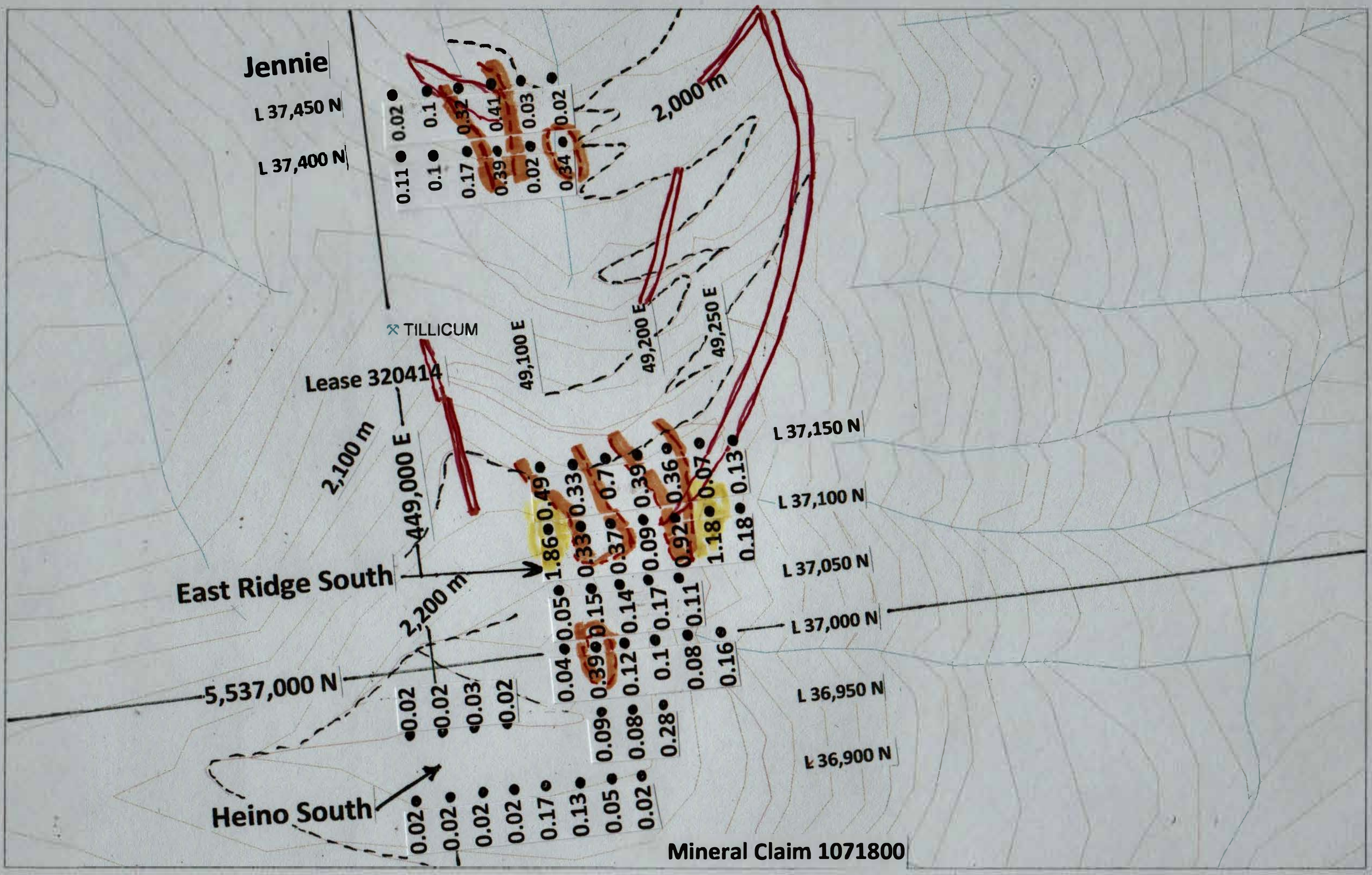
Fig 23

Ag ppm

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Au ppm
>1
0.3-1



0 200m

SCALE 1 : 5,000 ---- Access trail ● Soil Sample = Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 24

Au ppm

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

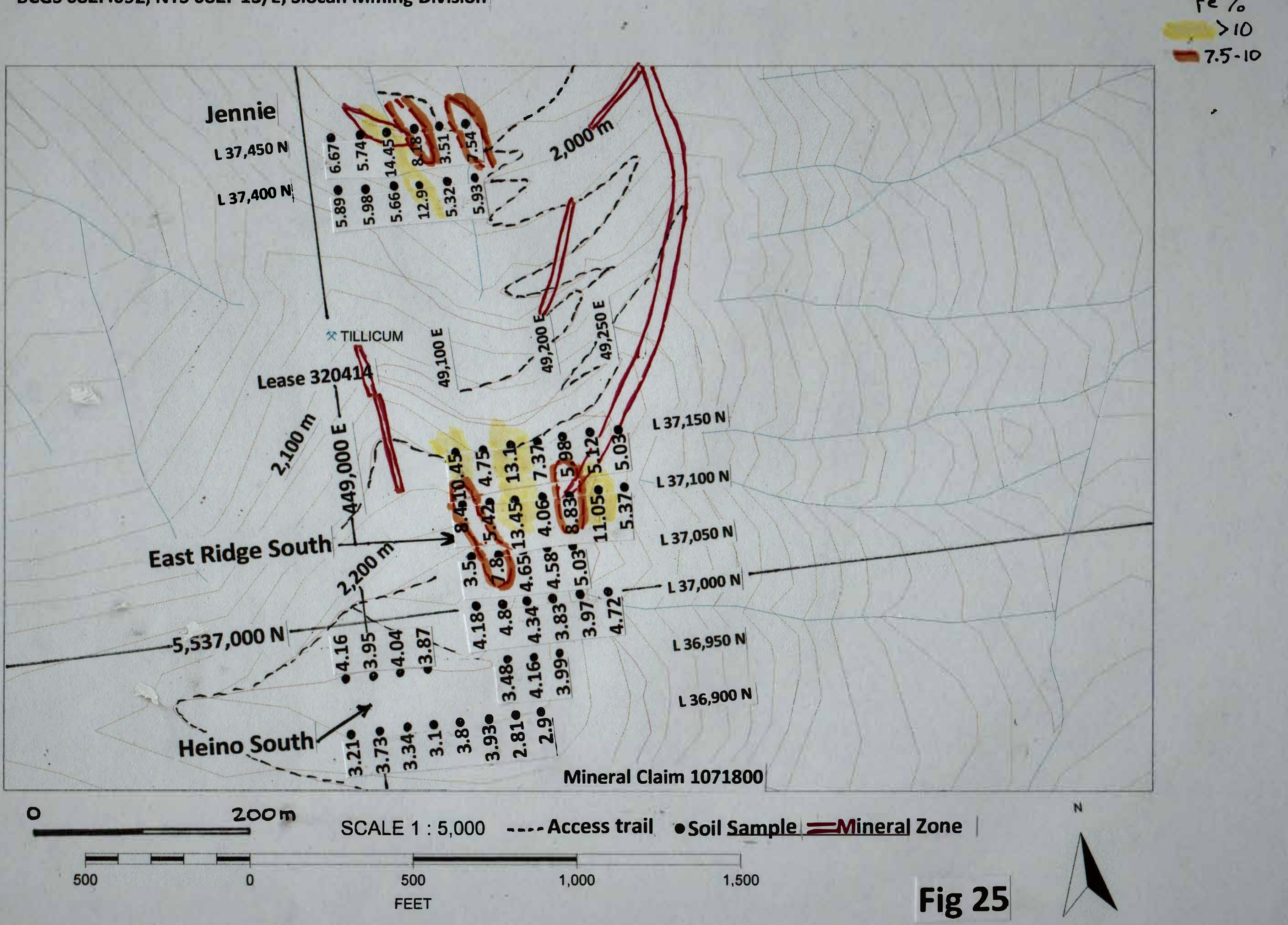


Fig 25

Fe %

Tillicum Mtn (Heino, East Ridge) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

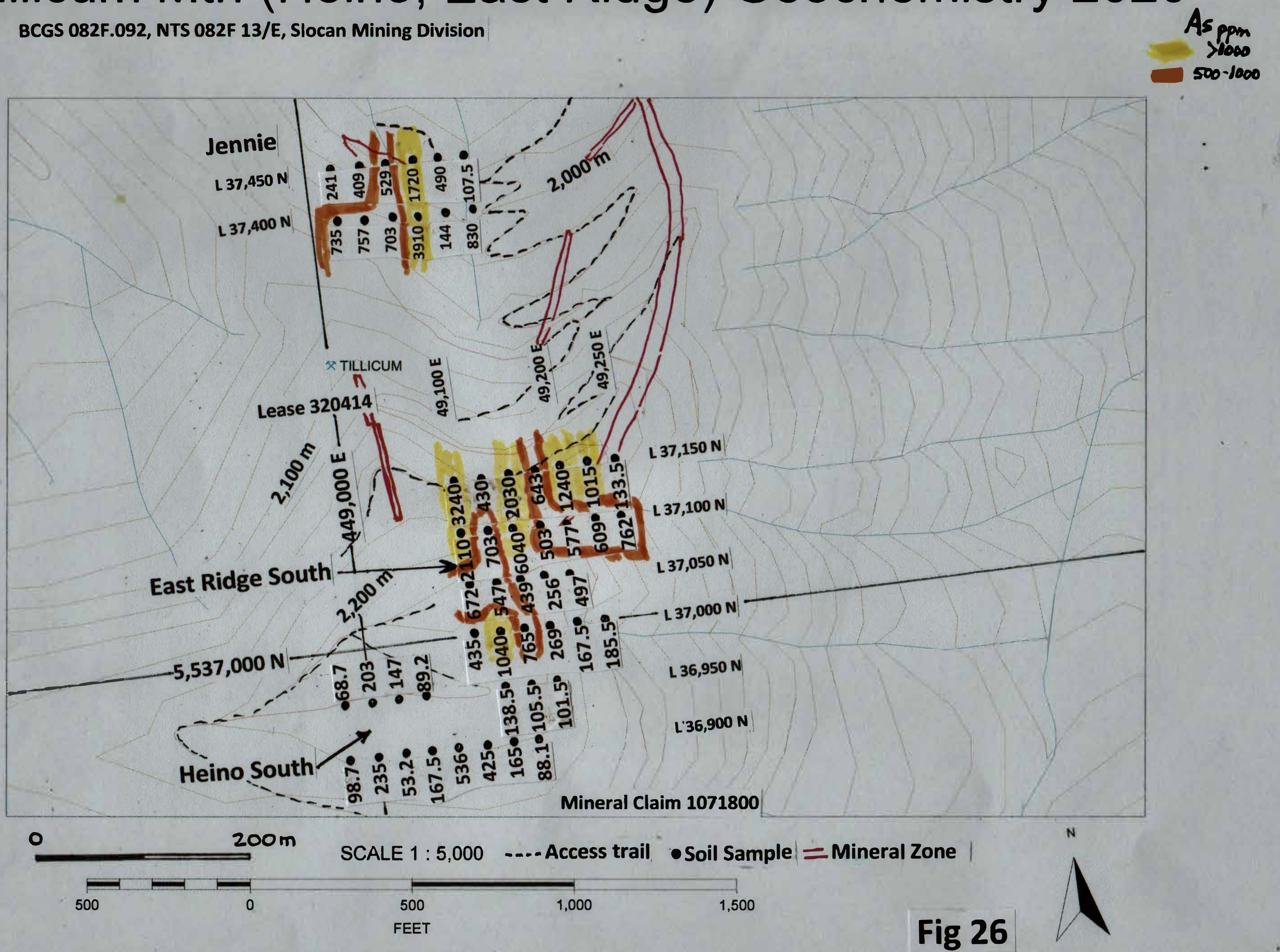


Fig 26

As ppm

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Soil Sample ID numbers

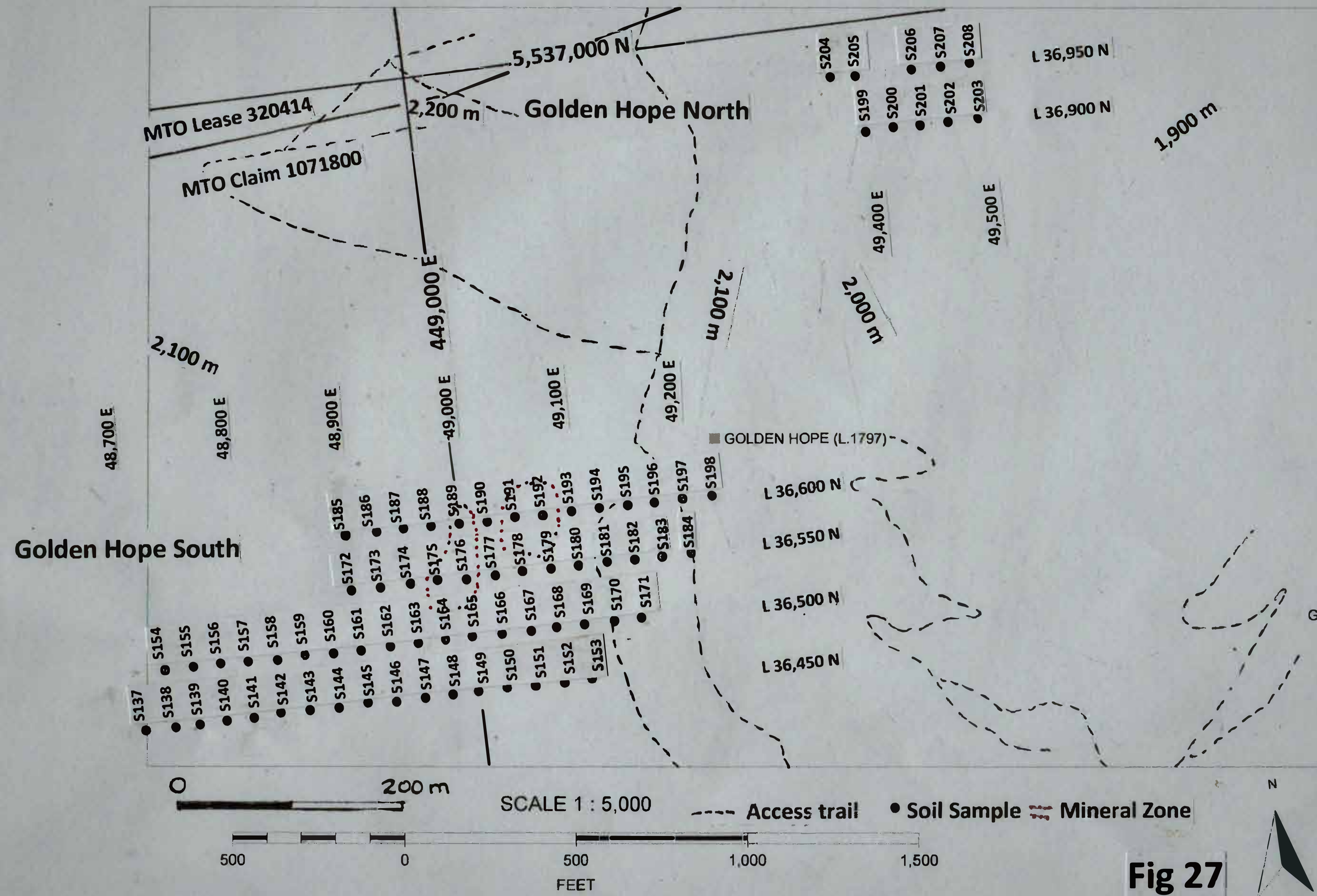


Fig 27

Sample ID #'s

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

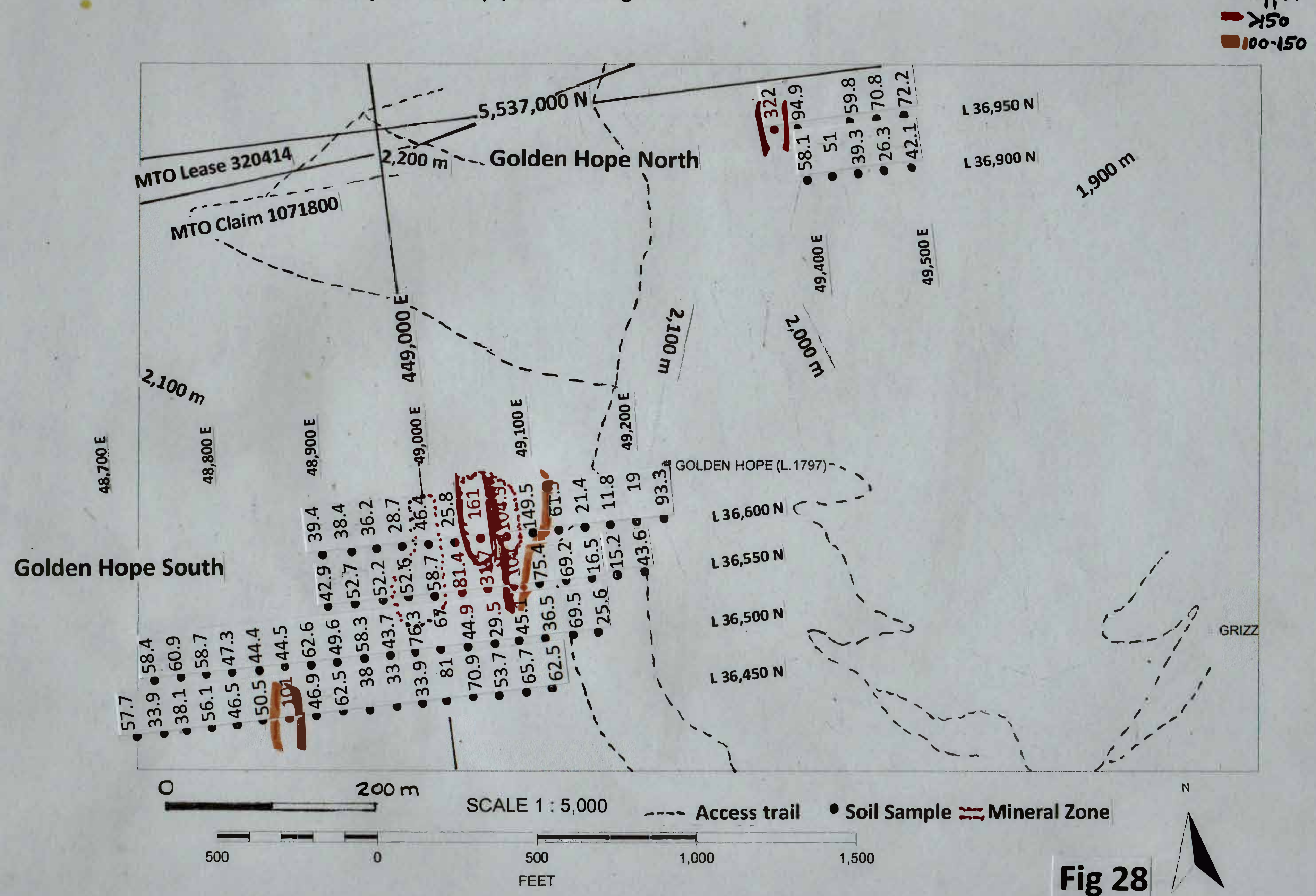


Fig 28

Cu ppm

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

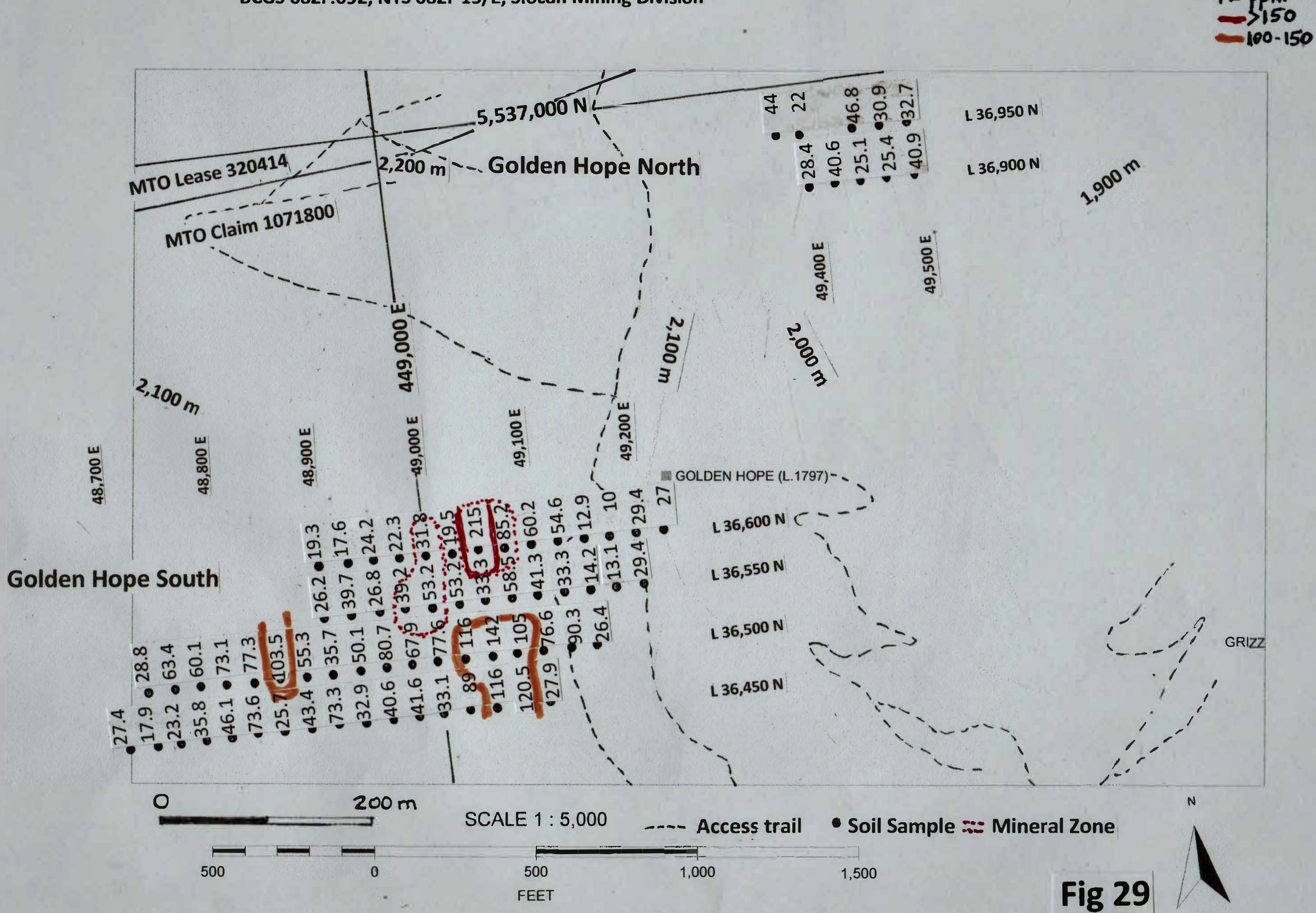


Fig 29

Pb ppm

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

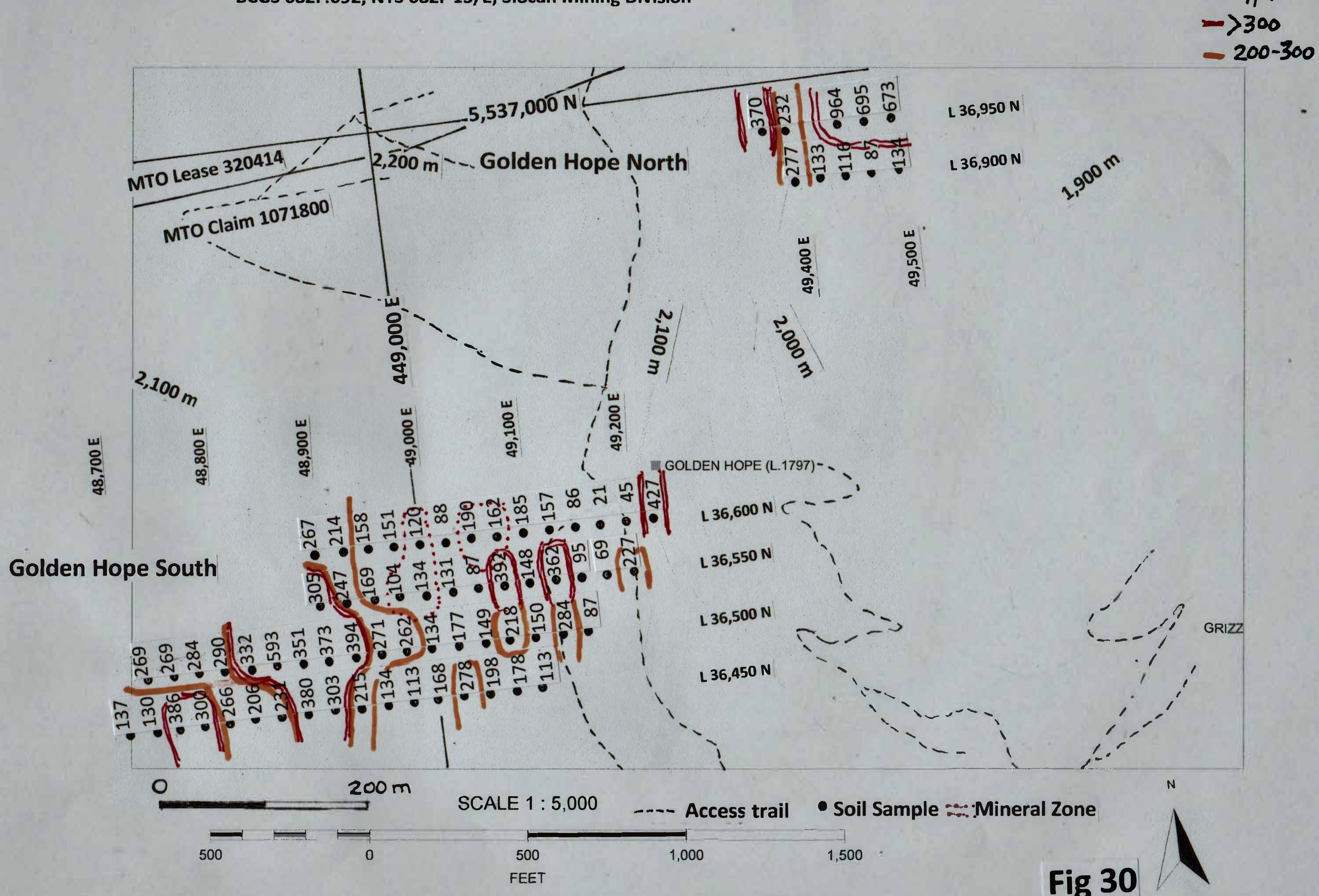


Fig 30

Zn ppm

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Ag ppm
>3
2-3

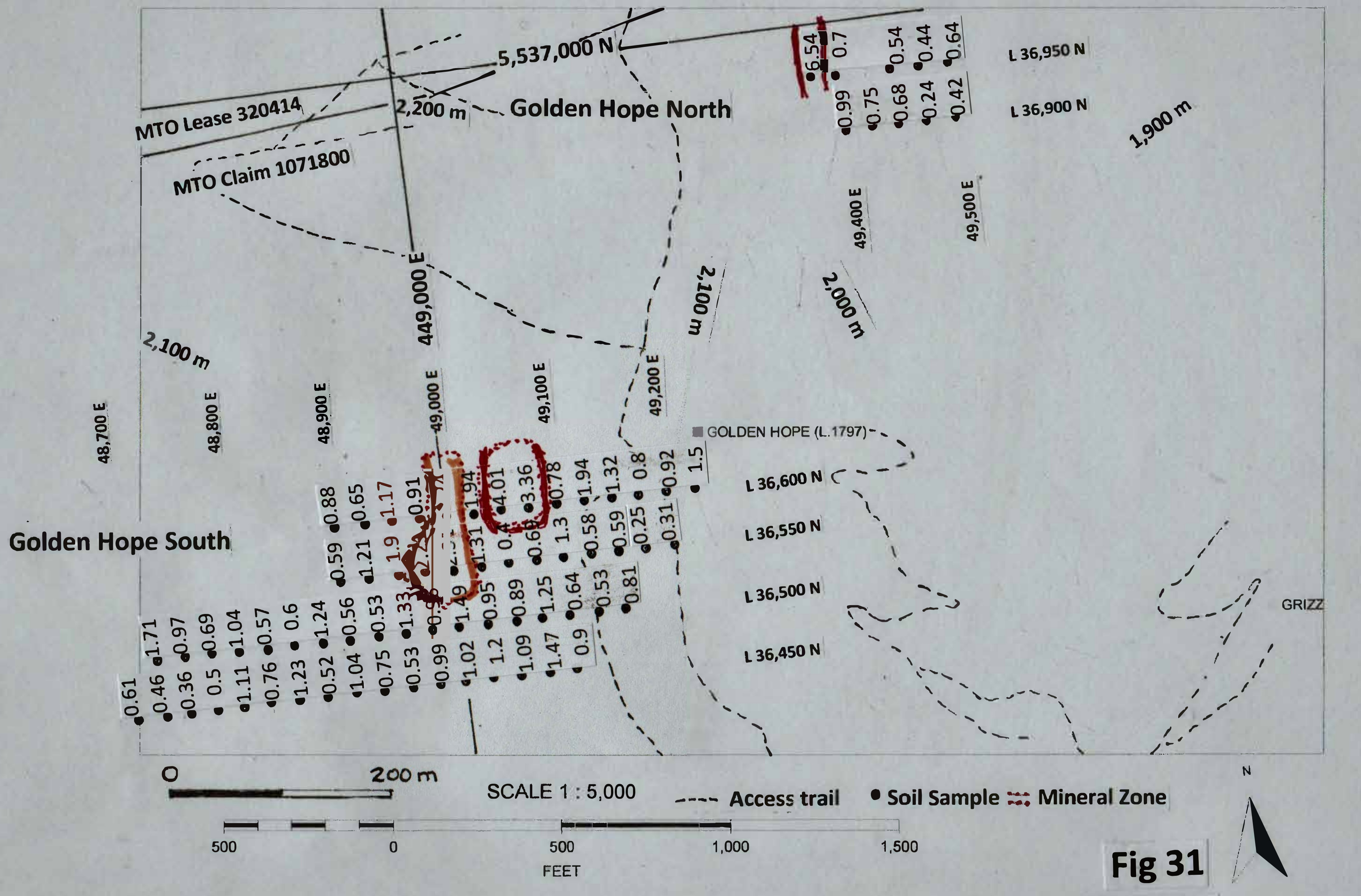


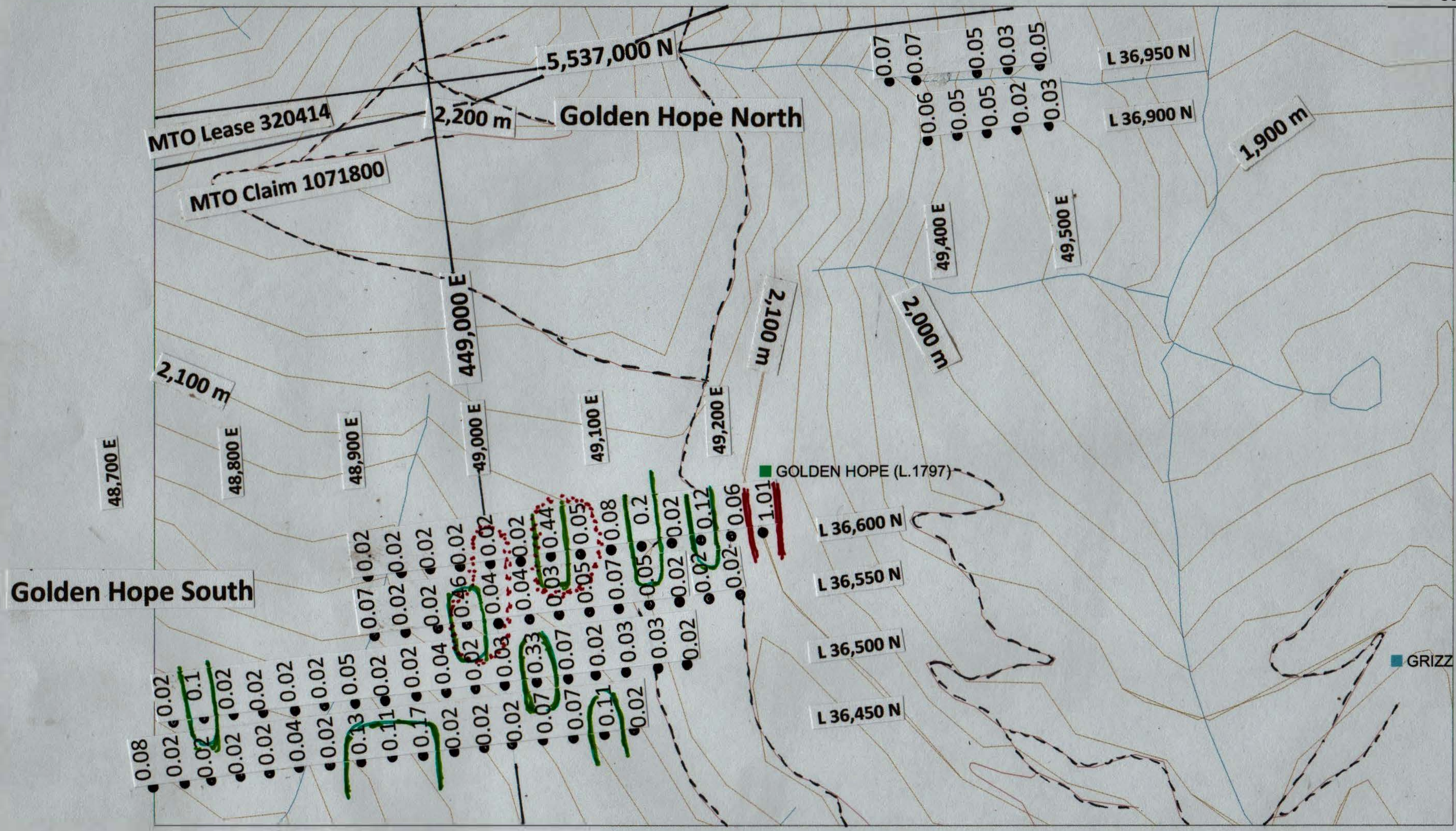
Fig 31

Ag ppm

Tillicum Golden Hope Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Au ppm
- >1
- 0.5-1
- 0.1-0.5



0 200 m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 32

Au ppm

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Soil Sample ID #

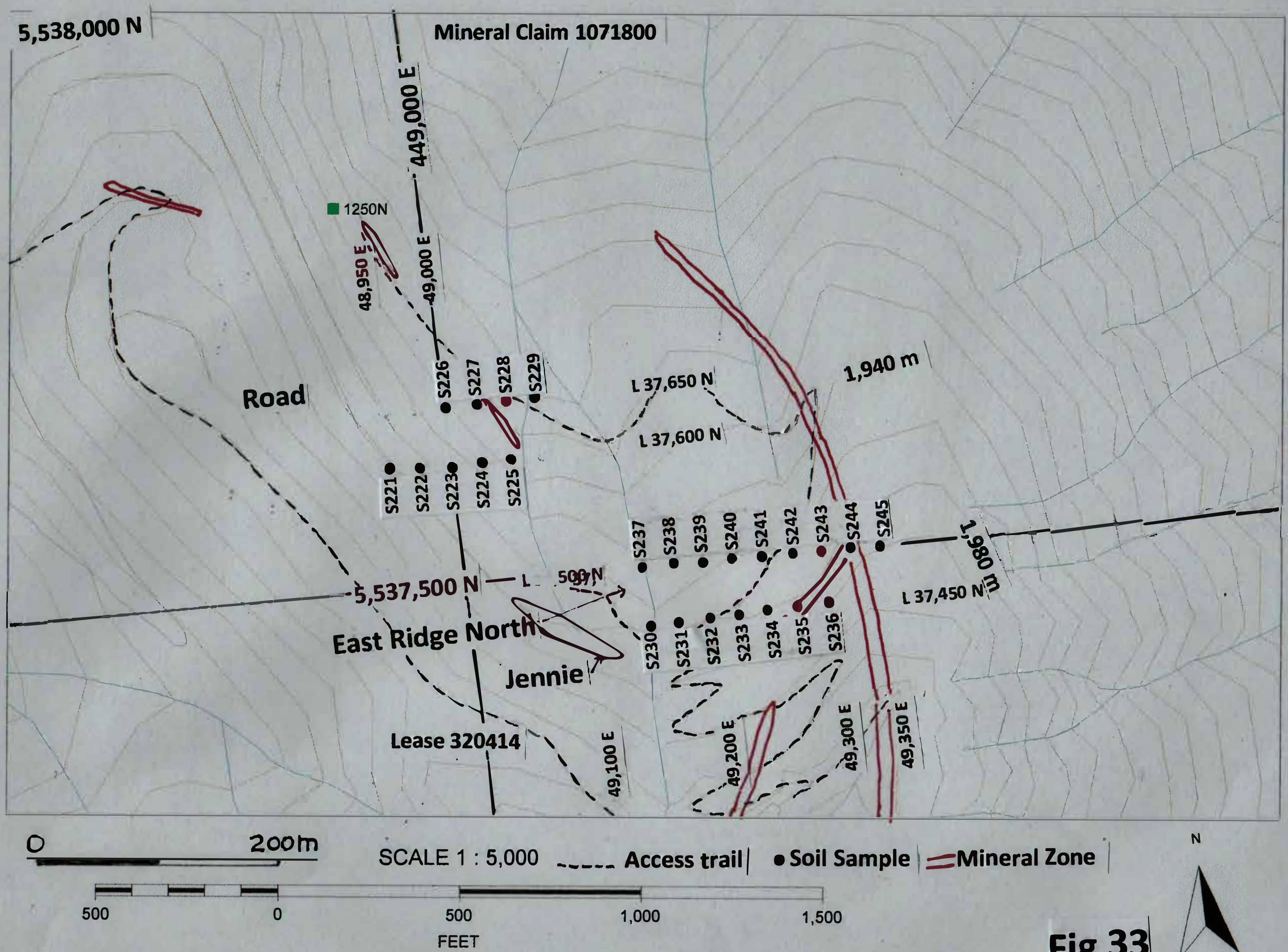


Fig 33

Sample ID #'s

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

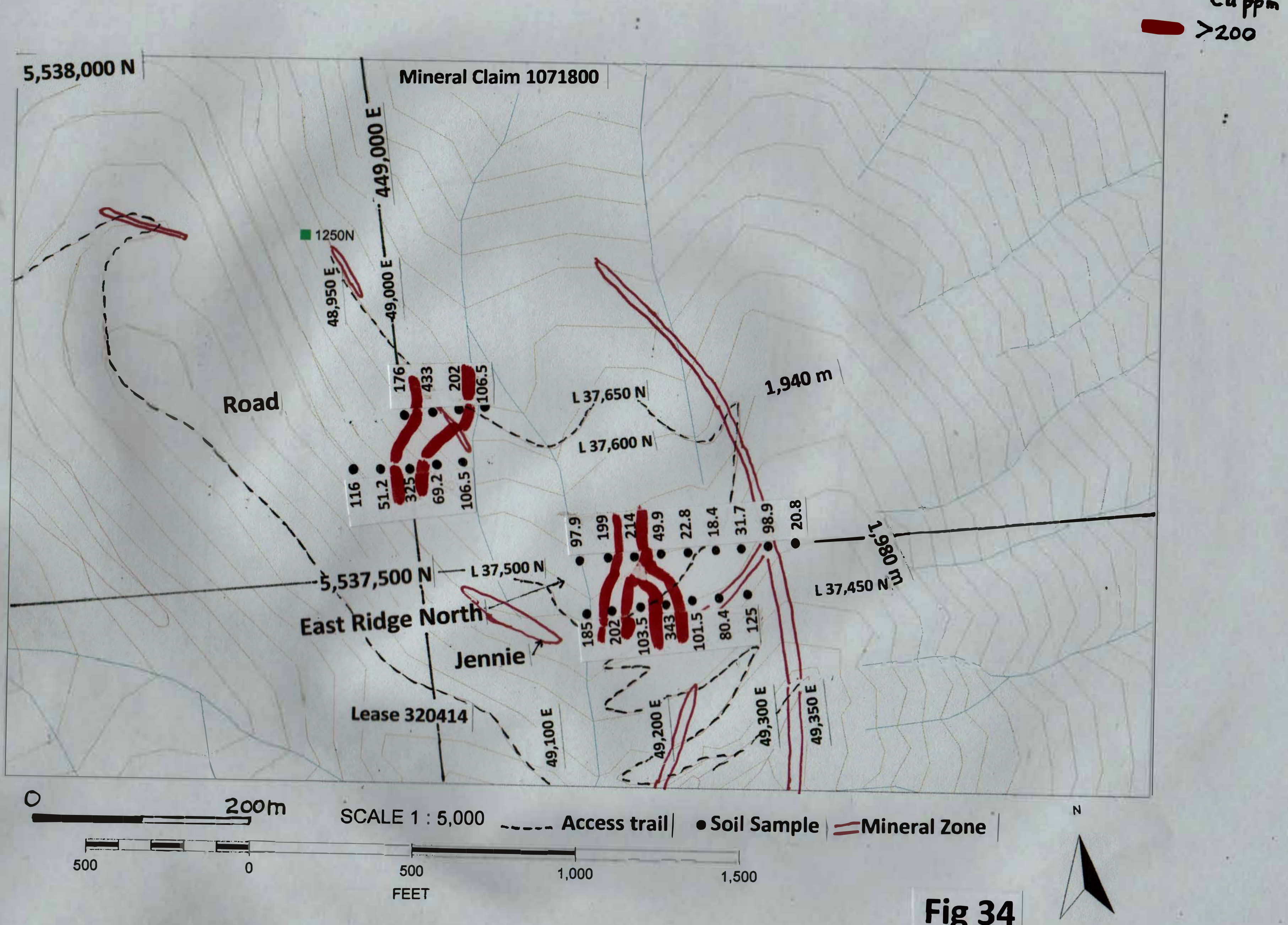


Fig 34

Cu ppm

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

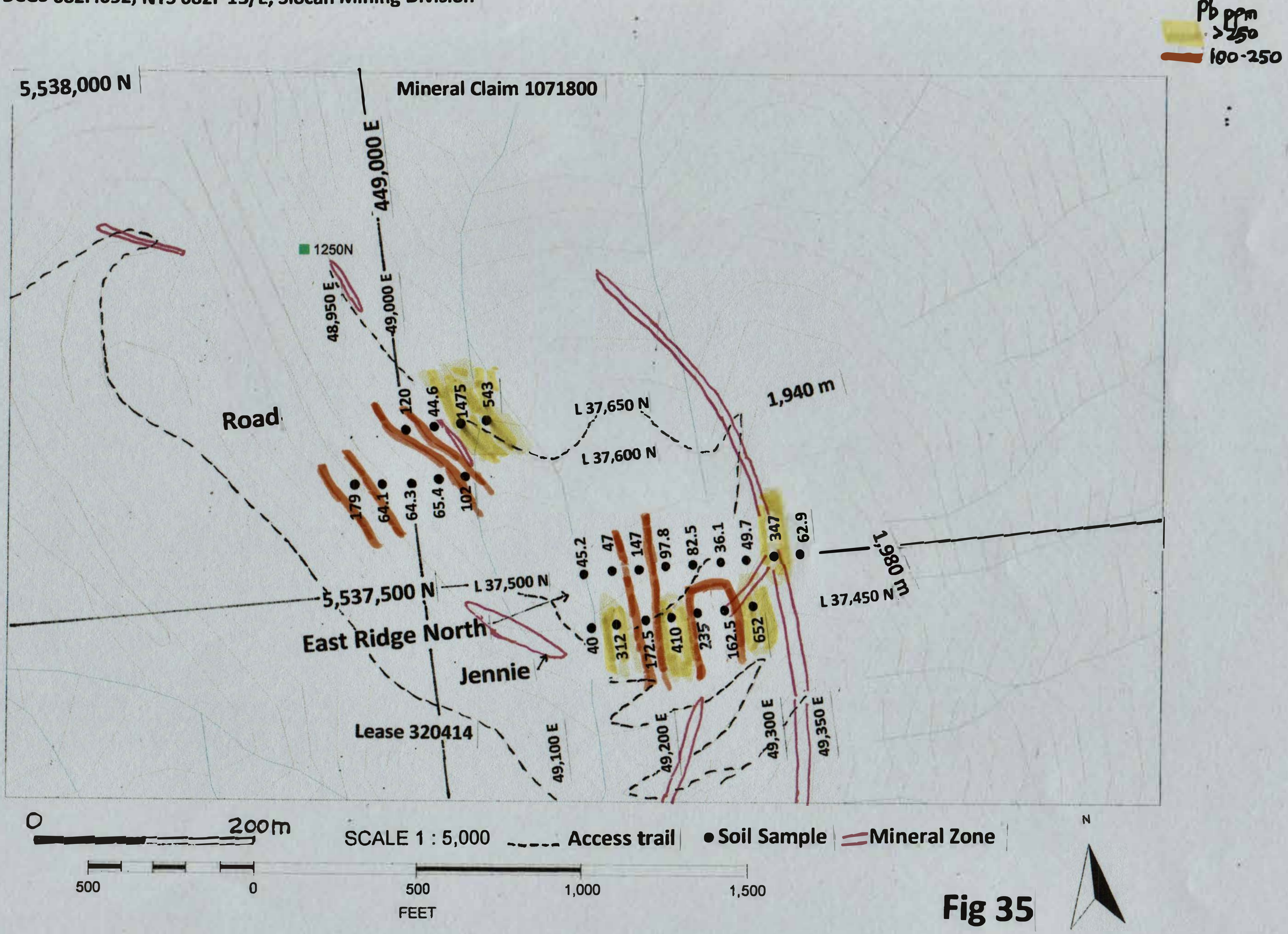


Fig 35

Pb ppm

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

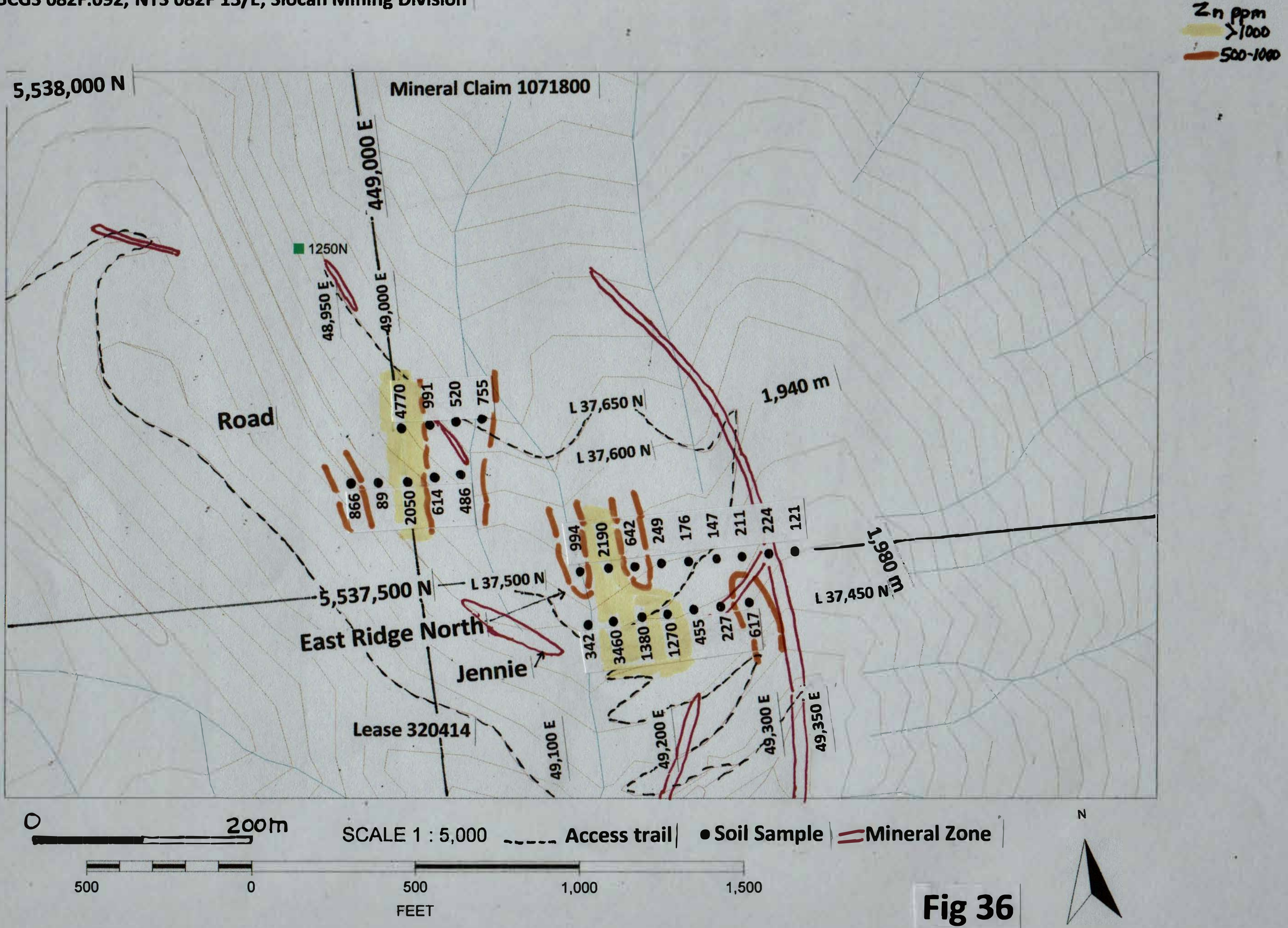


Fig 36

Zn ppm

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

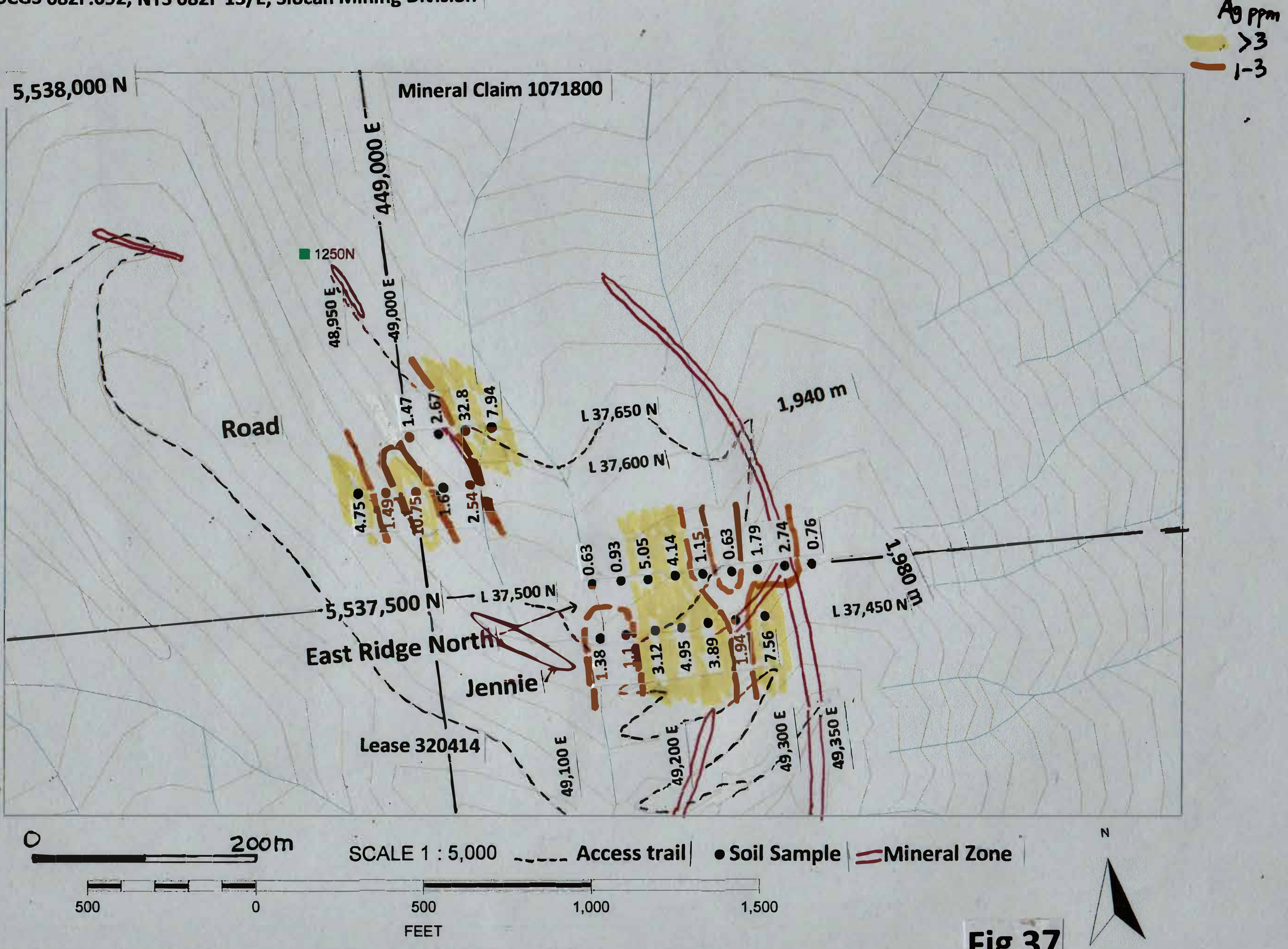


Fig 37

Ag ppm

Tillicum Road & East Ridge (N) Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

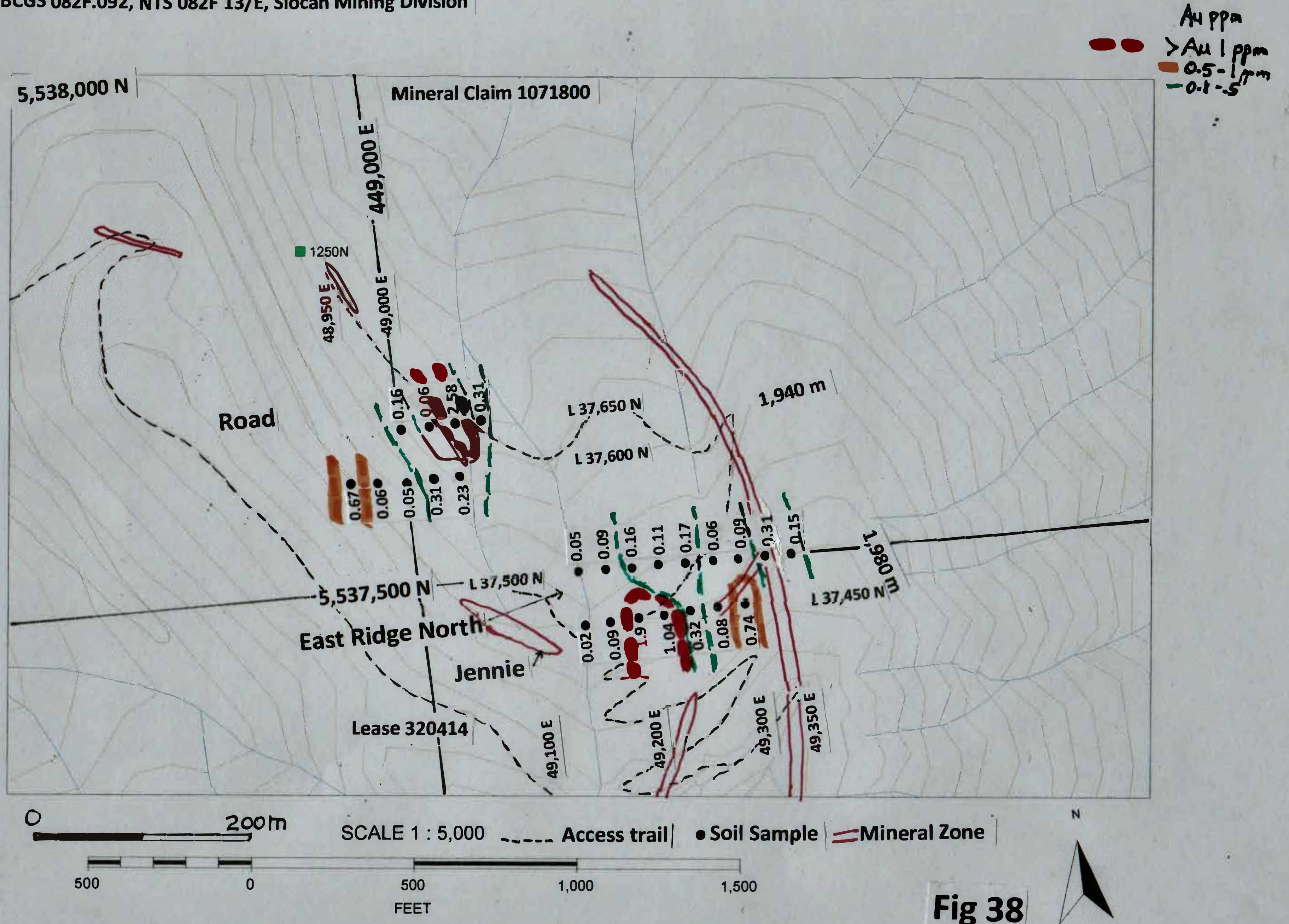


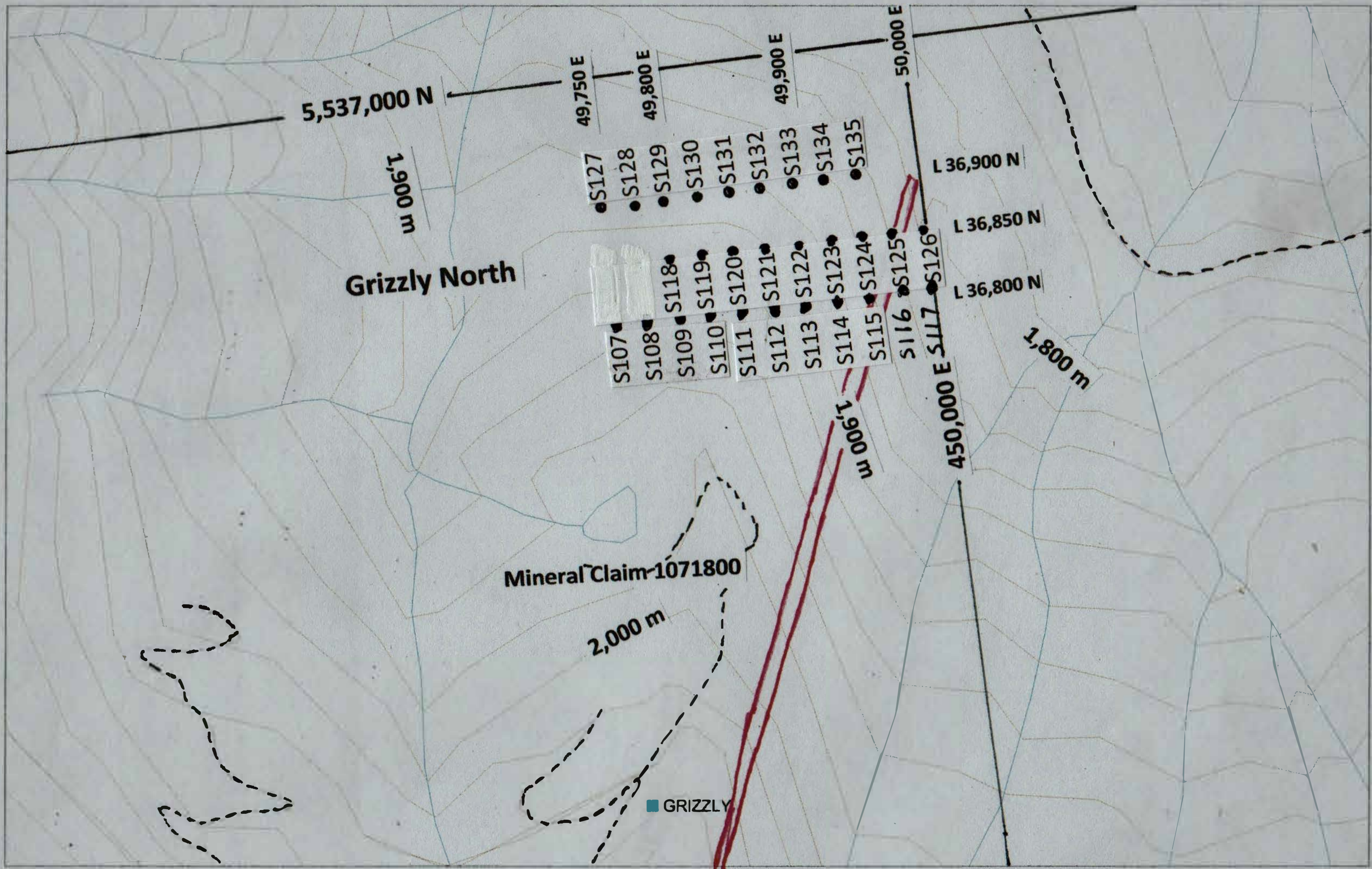
Fig 38

Au ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Soil Sample ID #'s



0 200m

SCALE 1 : 5,000

----- Access trail • Soil Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

N

Fig 39

Sample ID #'s

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Cu ppm

100-150

0 200m

SCALE 1 : 5,000

----- Access trail • Soil Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

N

Fig 40

Cu ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Pb ppm
100 - 250
>250

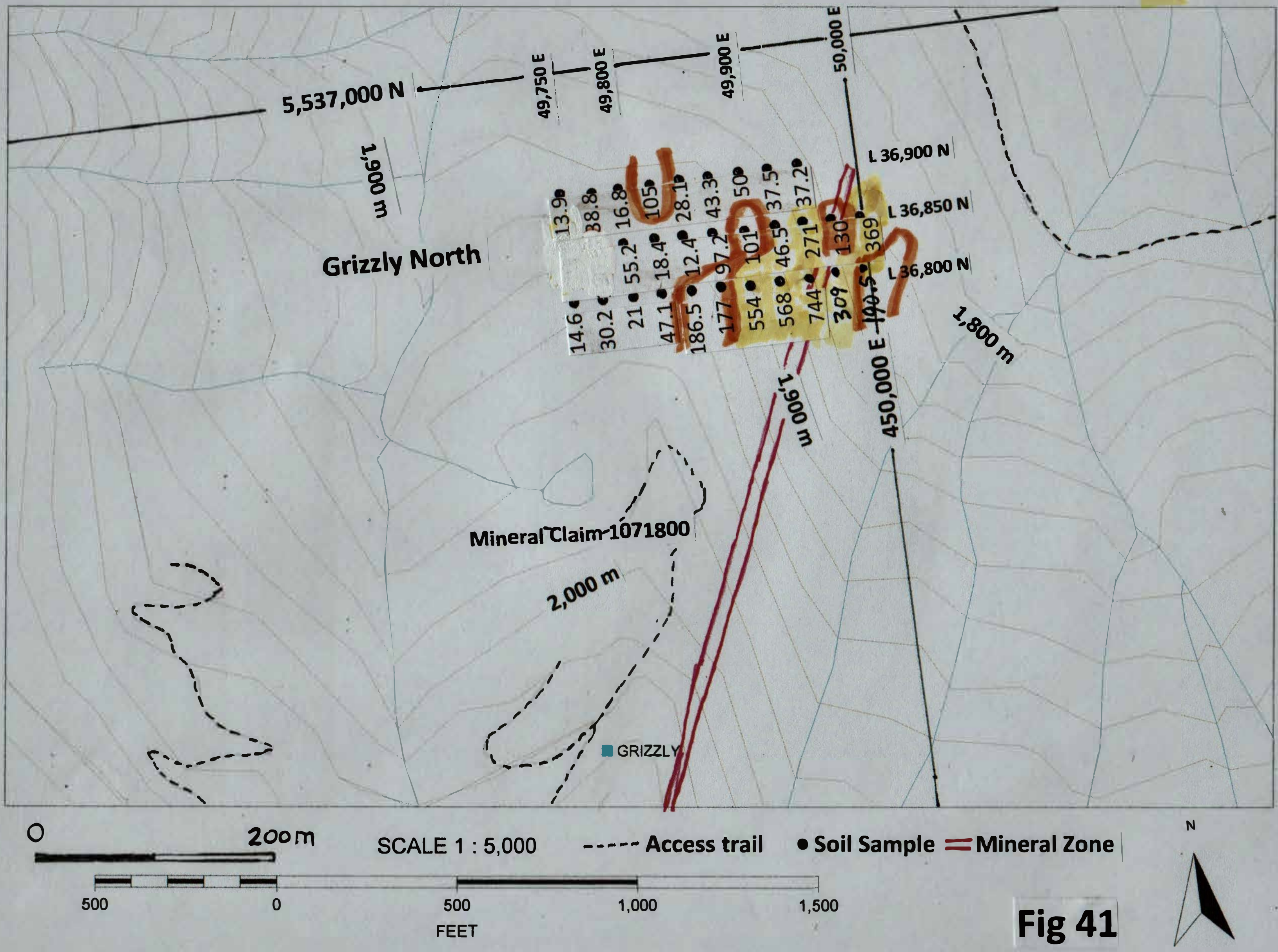


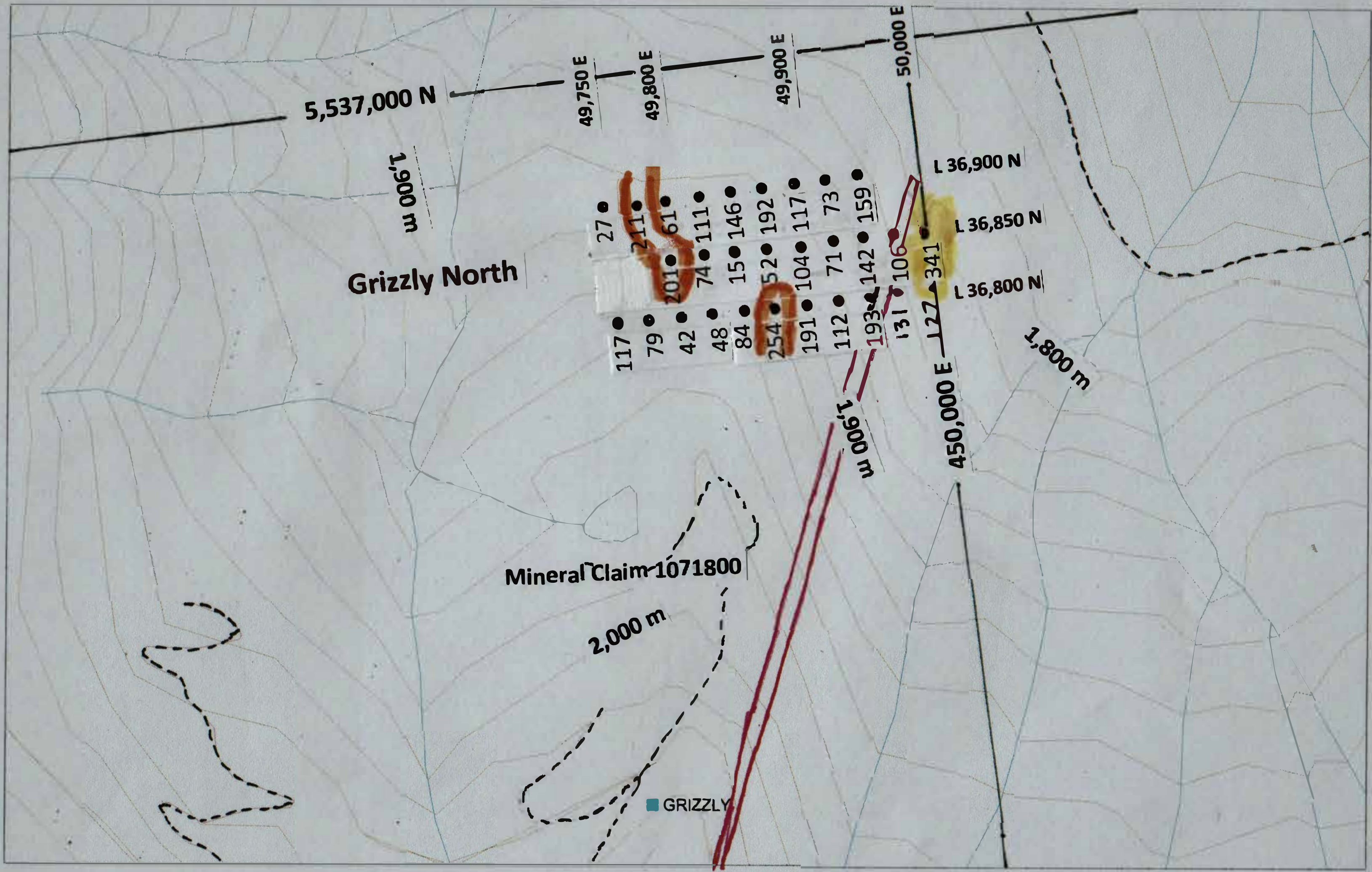
Fig 41

Pb ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Zn ppm
>300
200-300



0 200m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 42

Zn ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

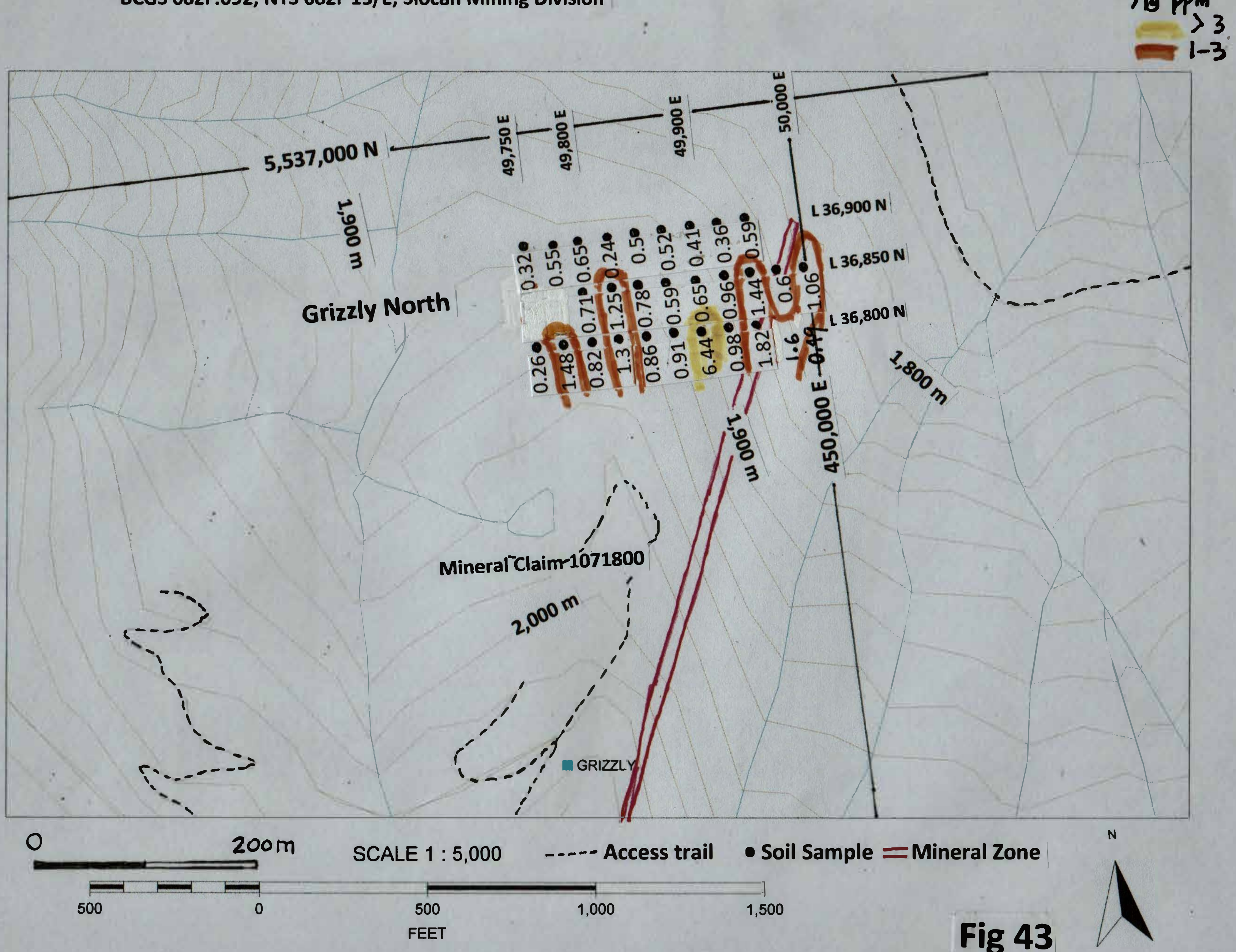


Fig 43

Ag ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

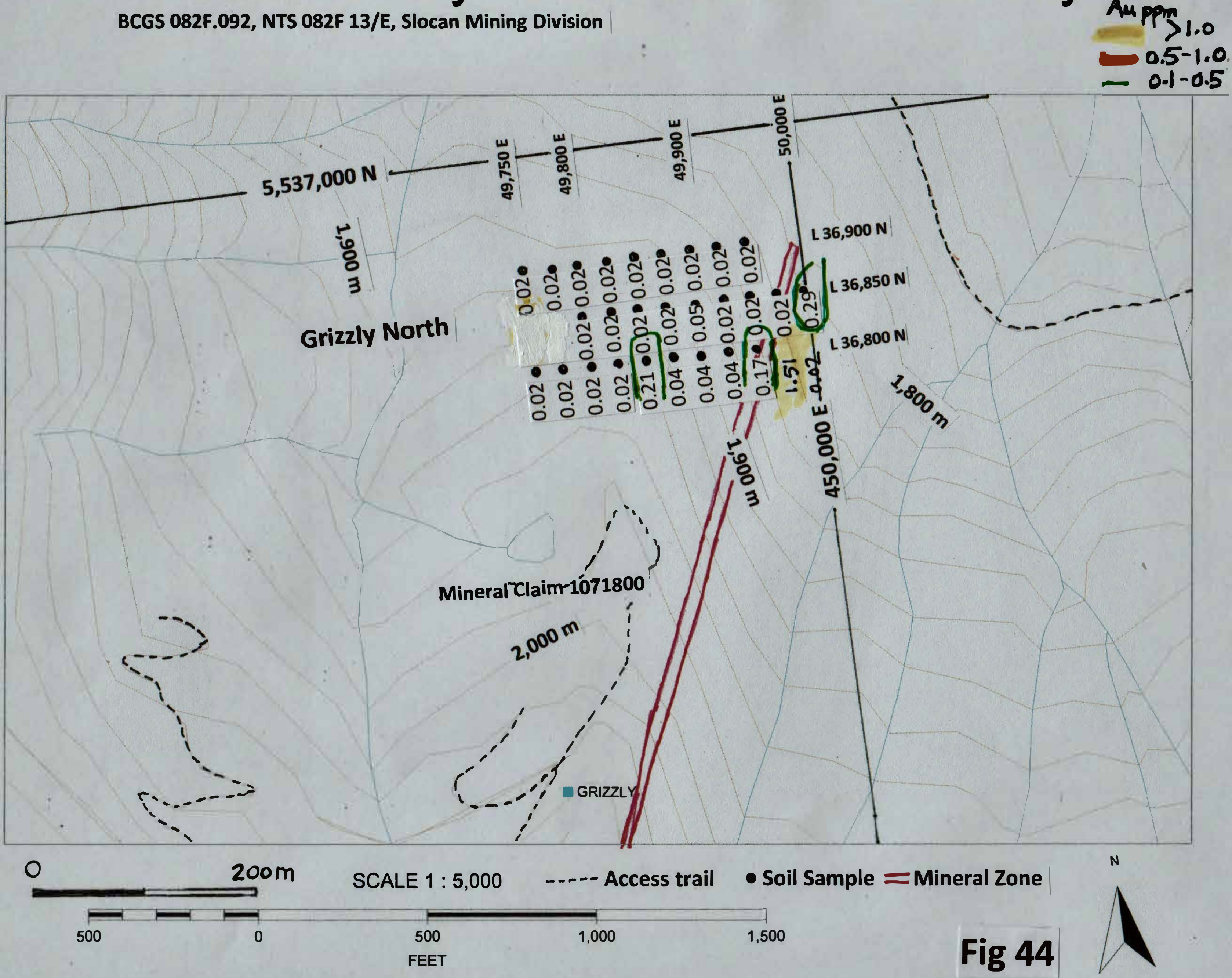


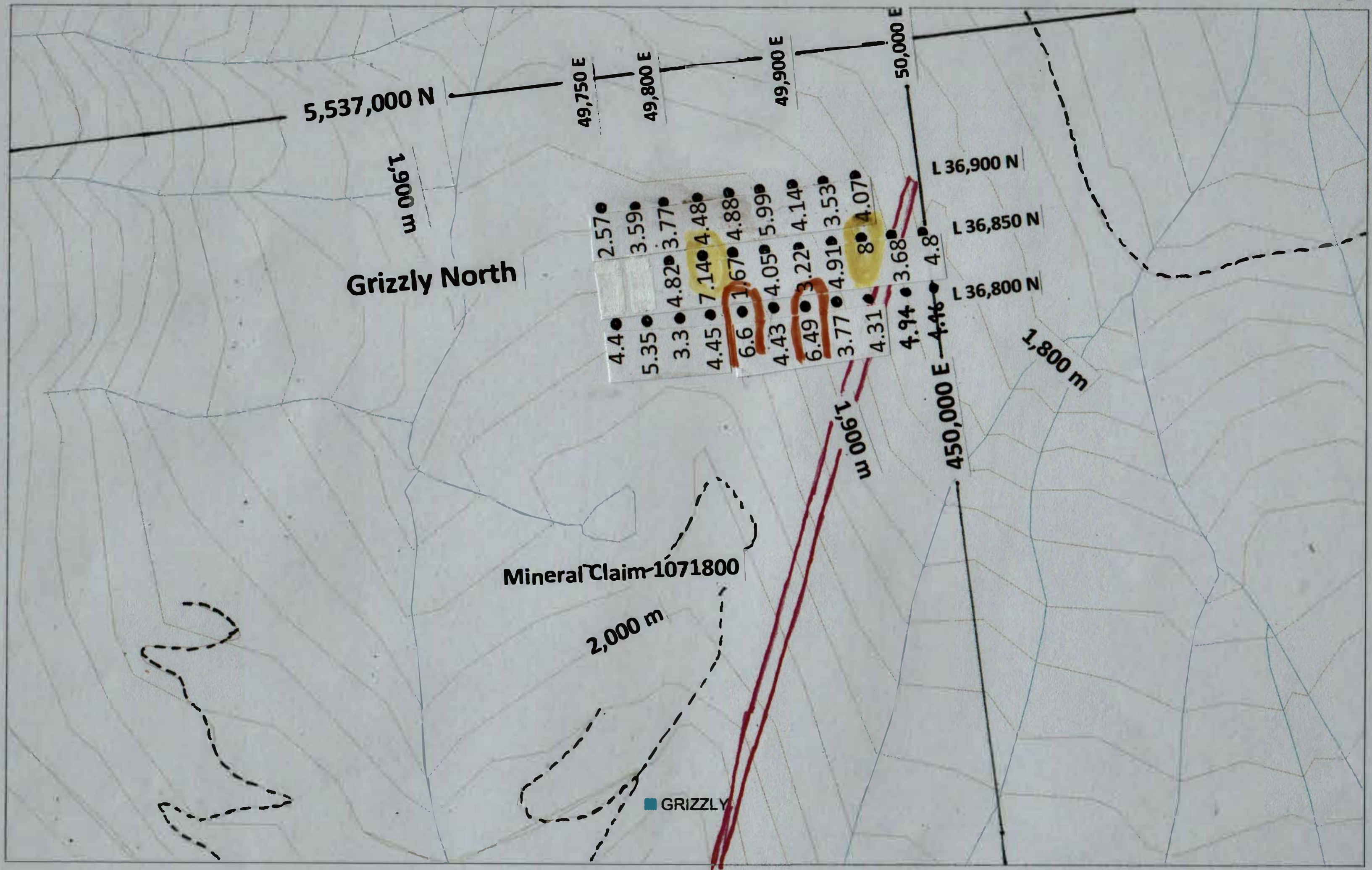
Fig 44

Au ppm

Tillicum Grizzly North Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Fe % >7
6-7



0 200m

SCALE 1 : 5,000

----- Access trail • Soil Sample = Mineral Zone

500 0 500 1,000 1,500

FEET

N

Fig 45

Fe %

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Soil Sample ID #'s

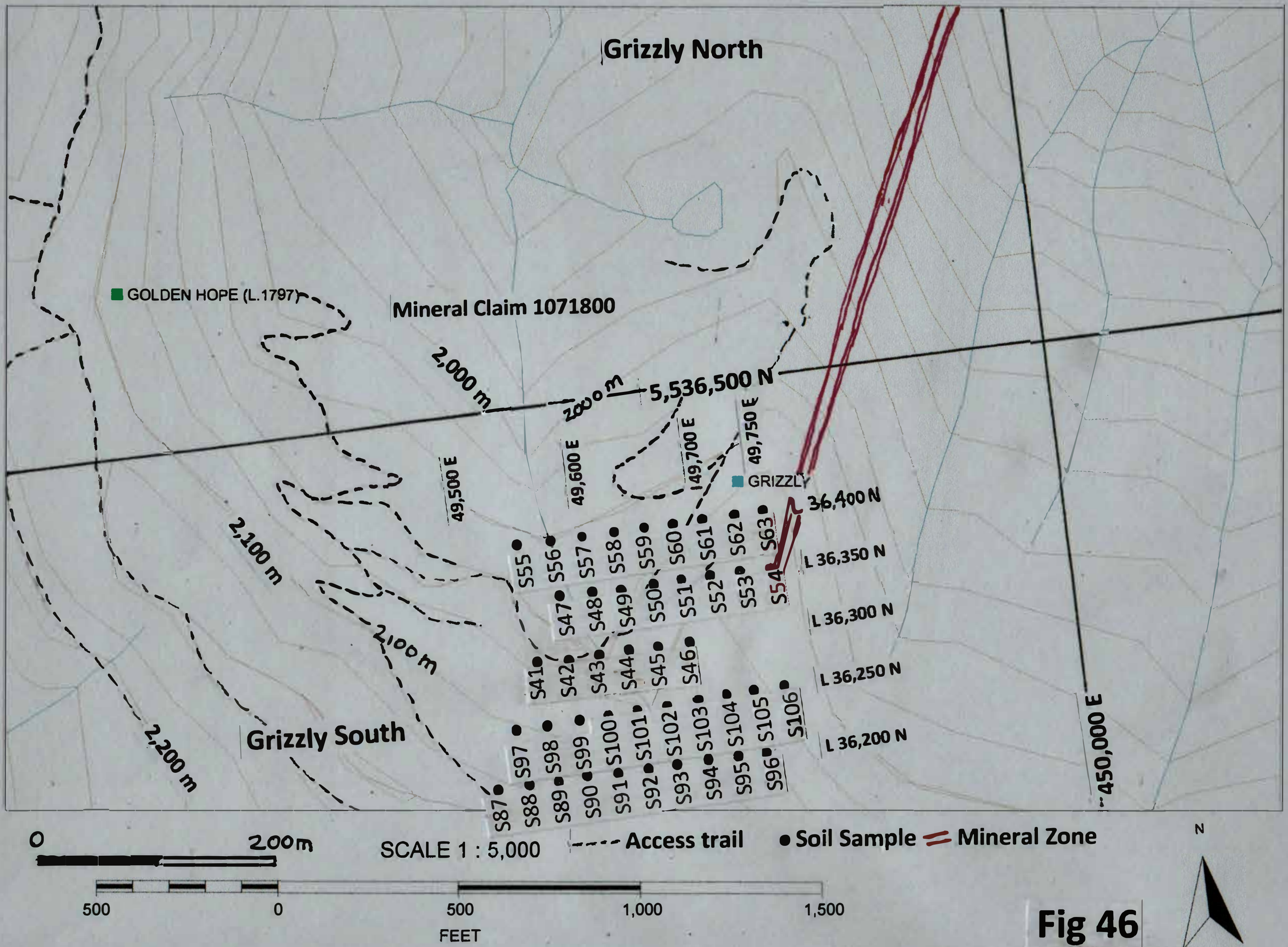


Fig 46

Sample ID #'s

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

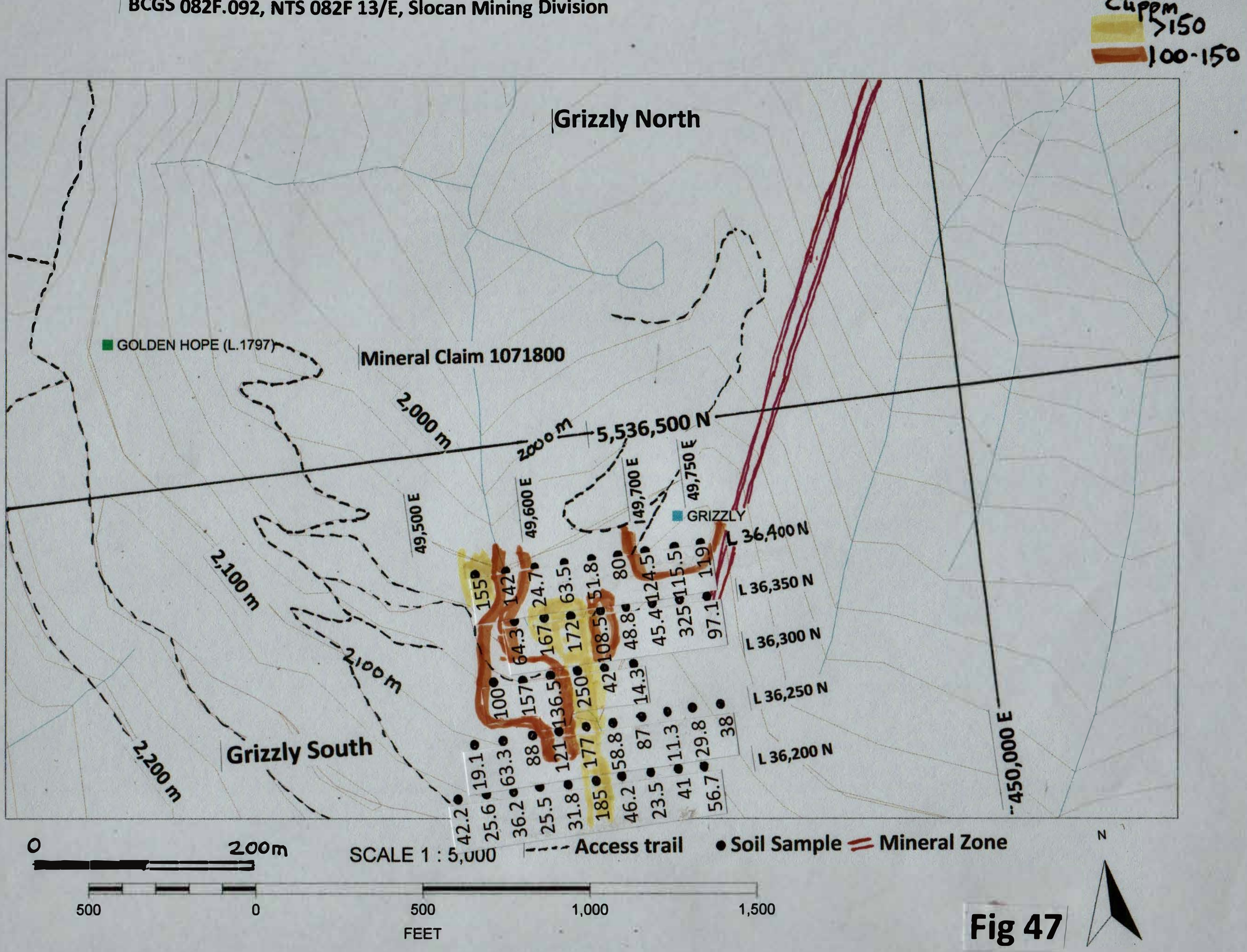


Fig 47

Cu ppm

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

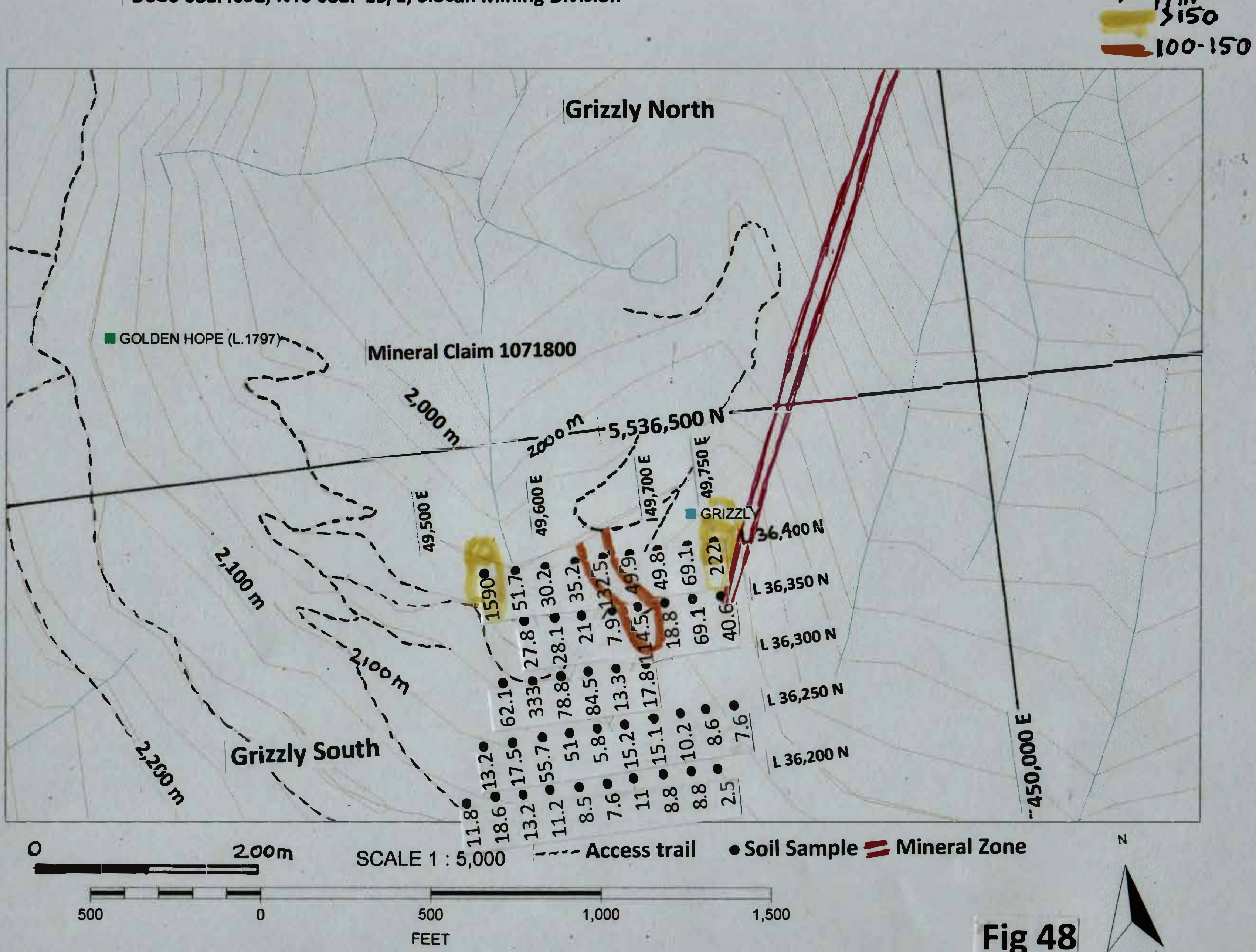


Fig 48

Pb ppm

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

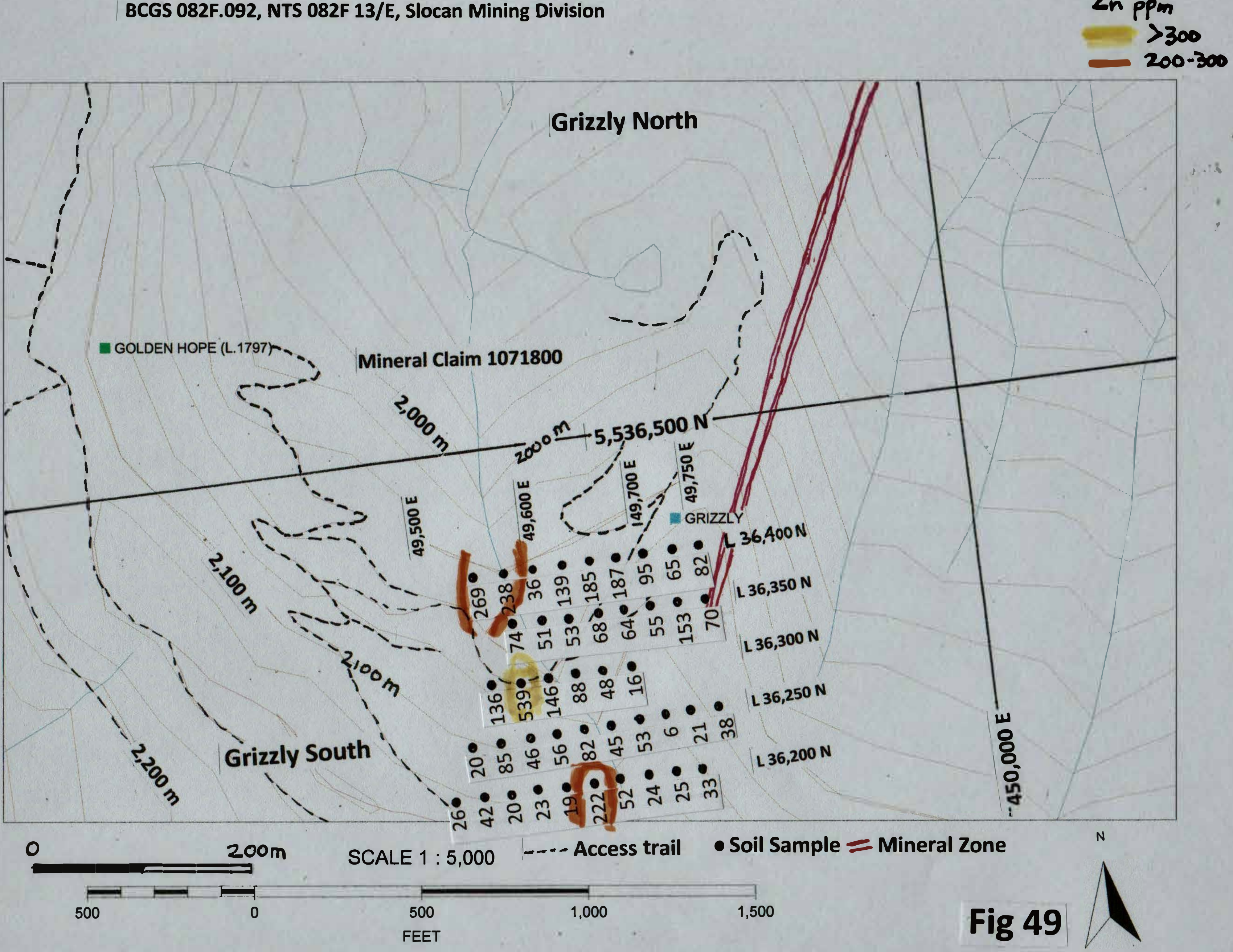


Fig 49

Zn ppm

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

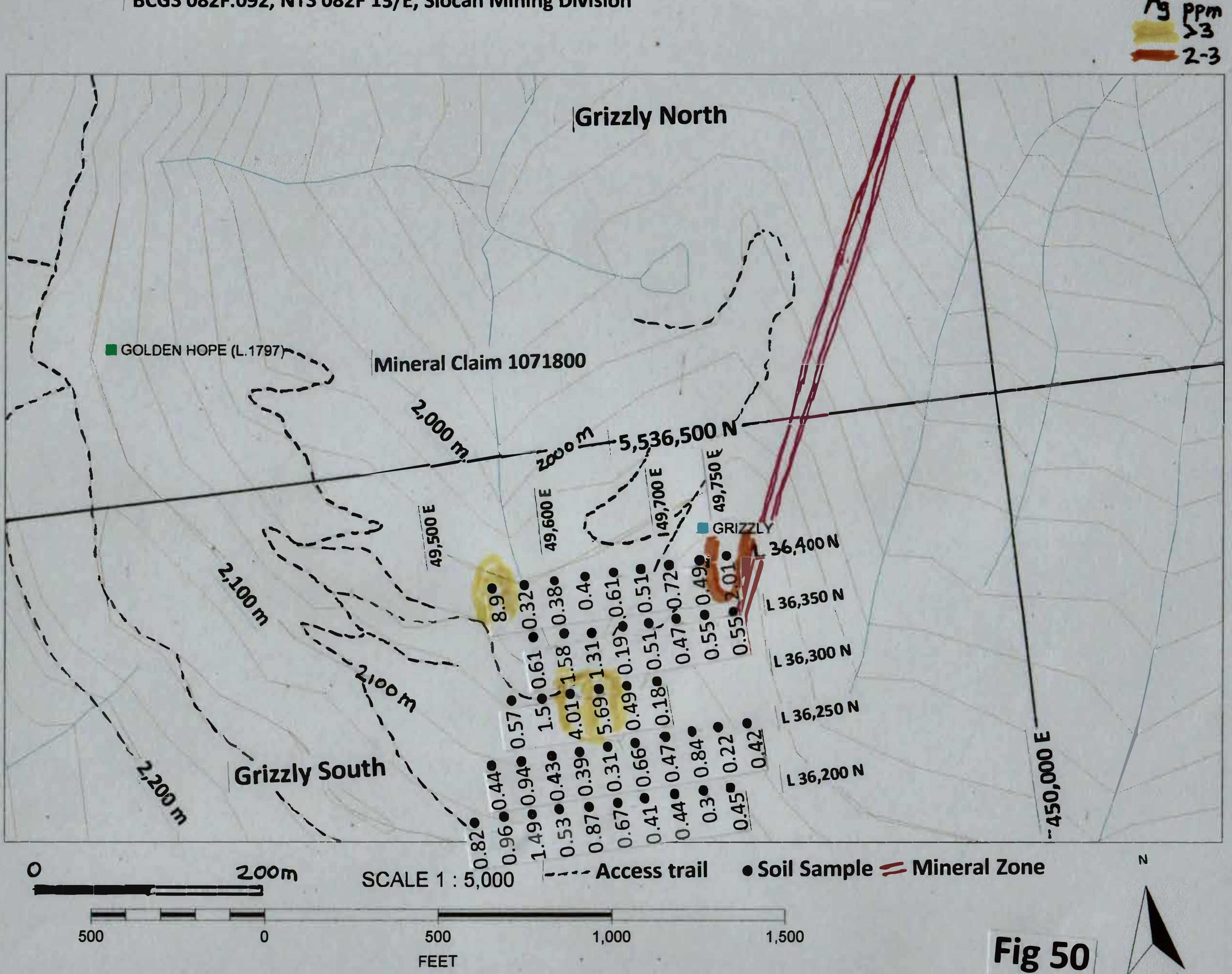


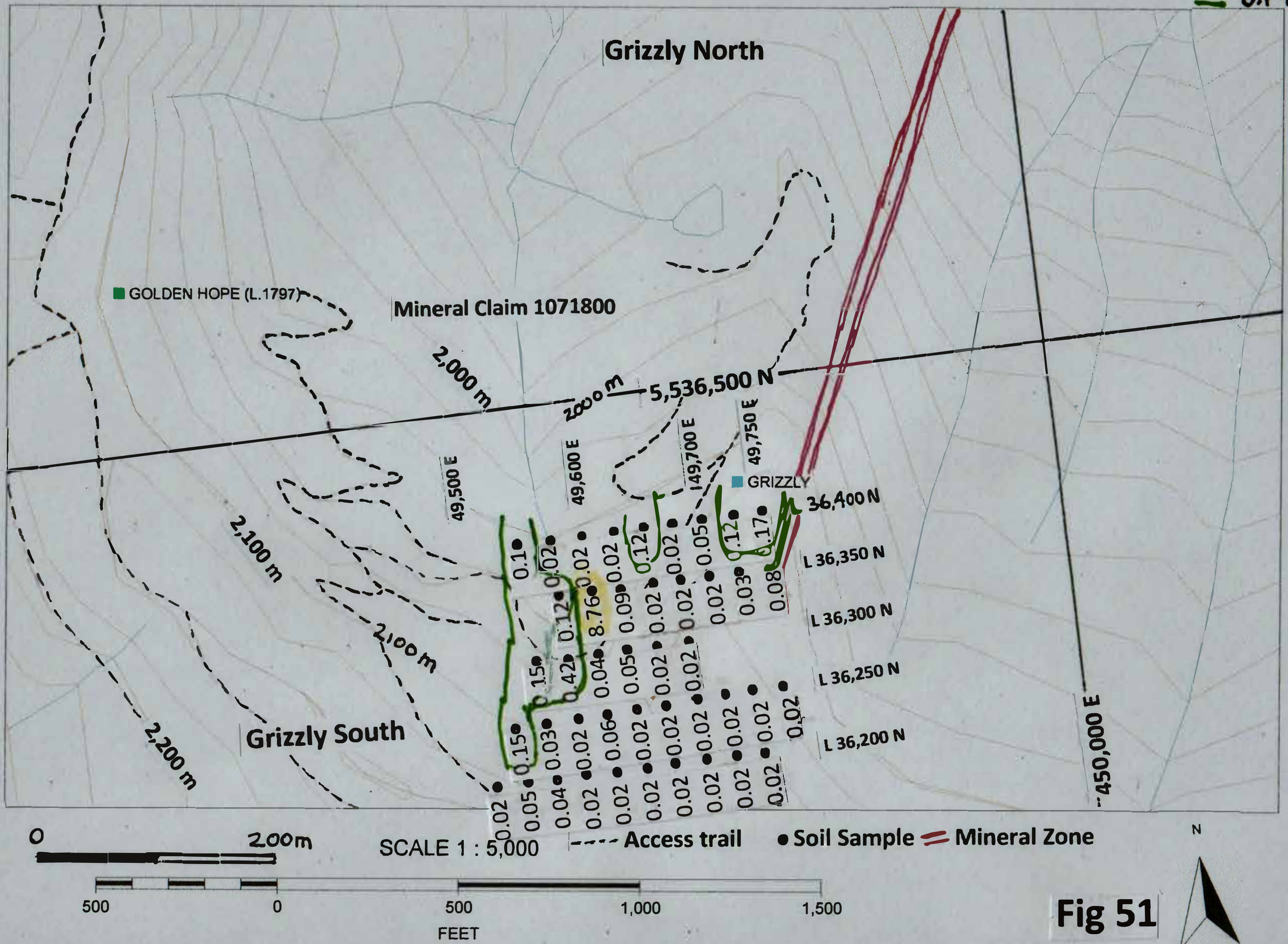
Fig 50

Ag ppm

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Au ppm
>1
0.5-1
0.1-0.5



SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

Fig 51

Au ppm

Tillicum Grizzly Soil Geochemistry 2020

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

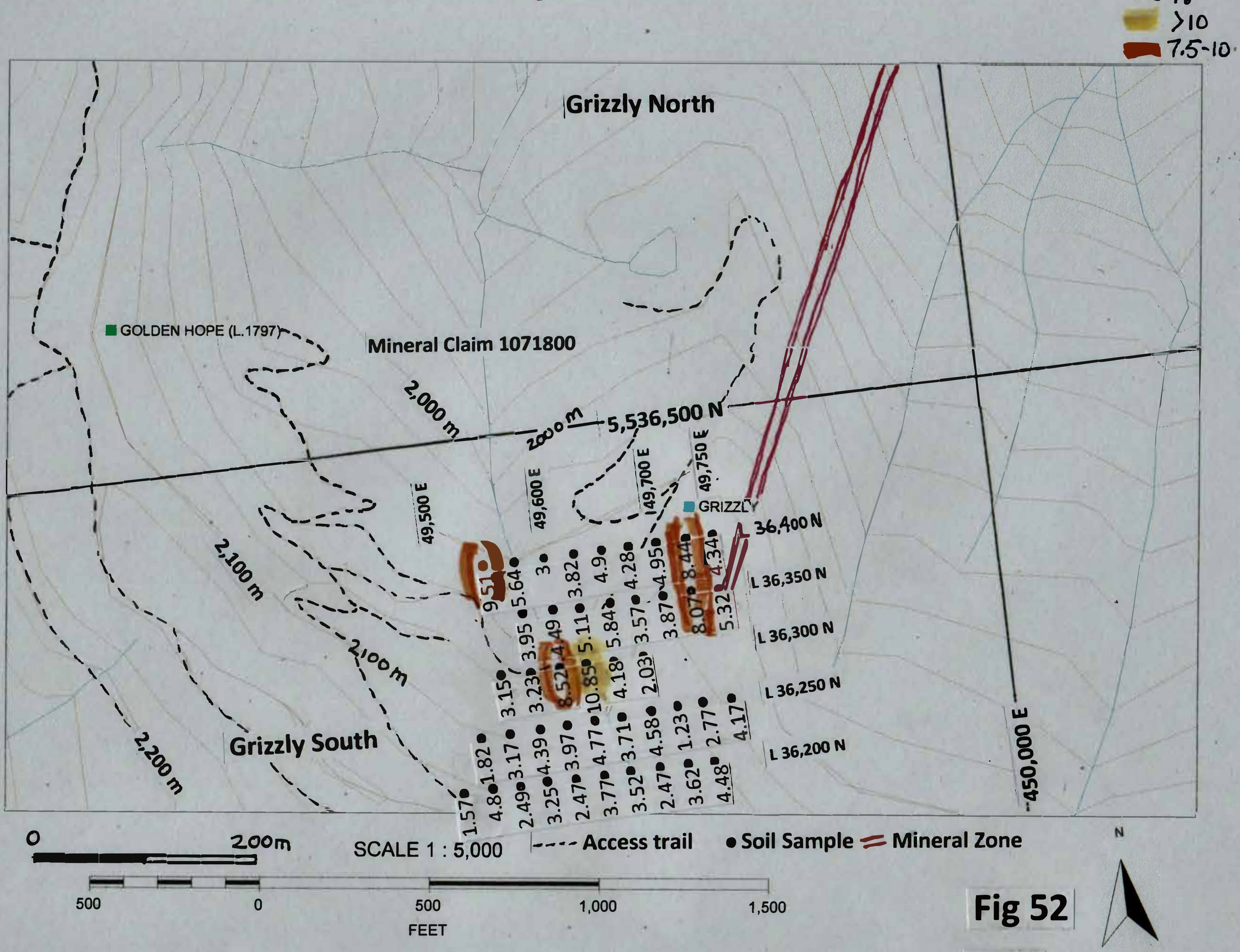


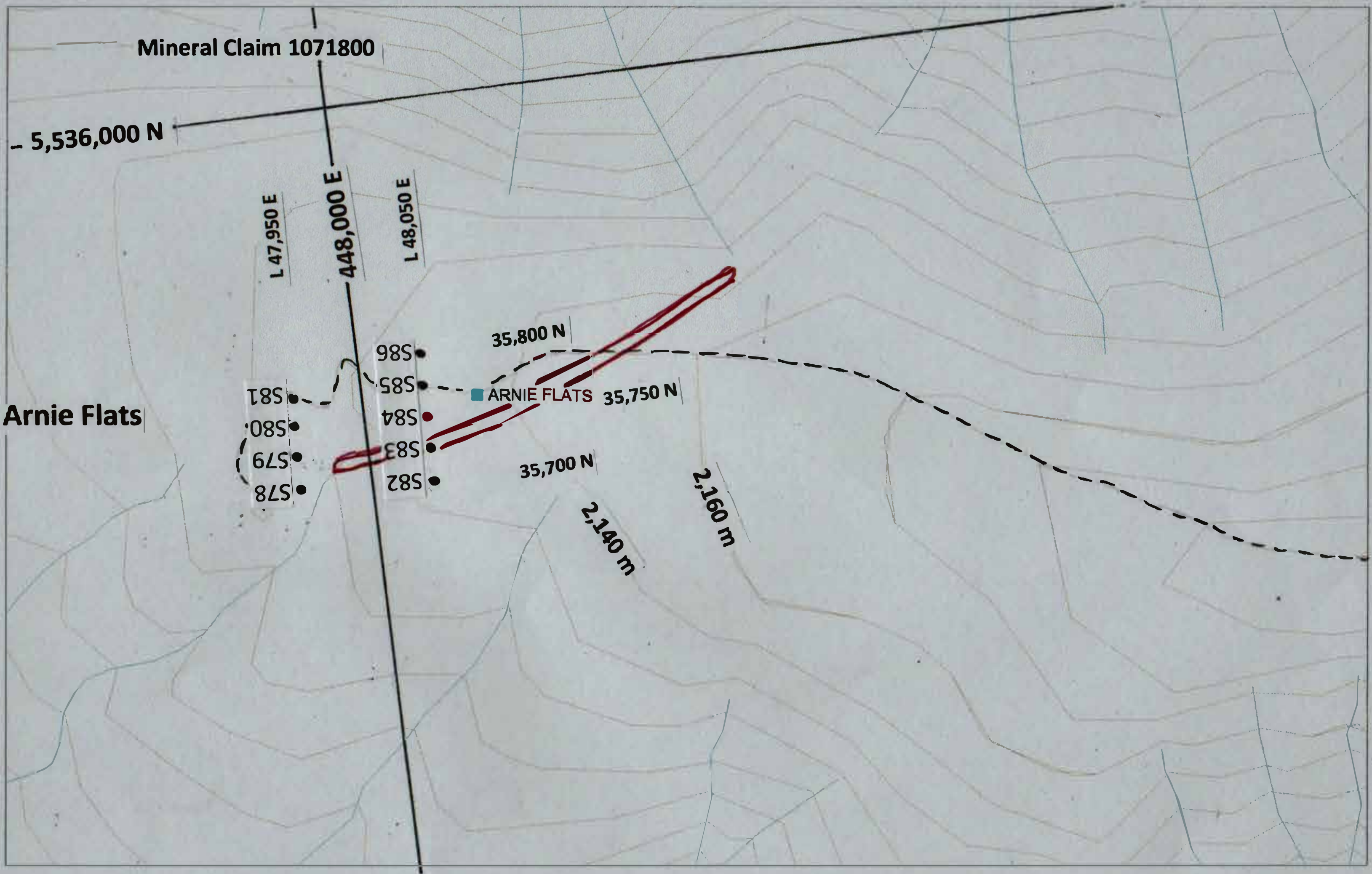
Fig 52

Fe %

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Soil Sample ID
(#'s shown inverted)



0 200 m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500

FEET

N

Fig 53

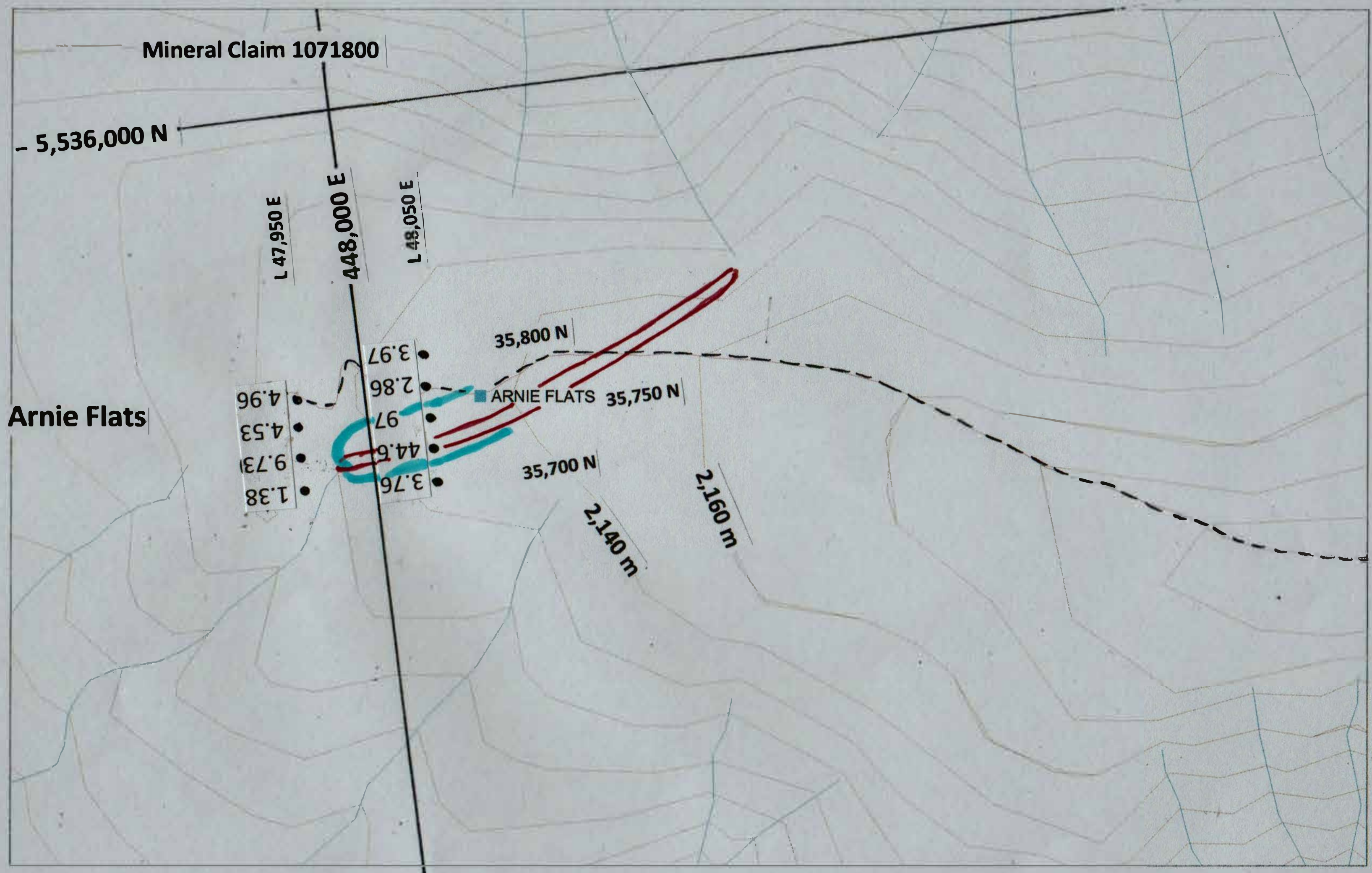
Sample ID #'s

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Cu ppm

40-100



0 200m

SCALE 1 : 5,000

500 0 500 1,000 1,500
FEET

Access trail • Soil Sample Mineral Zone

N

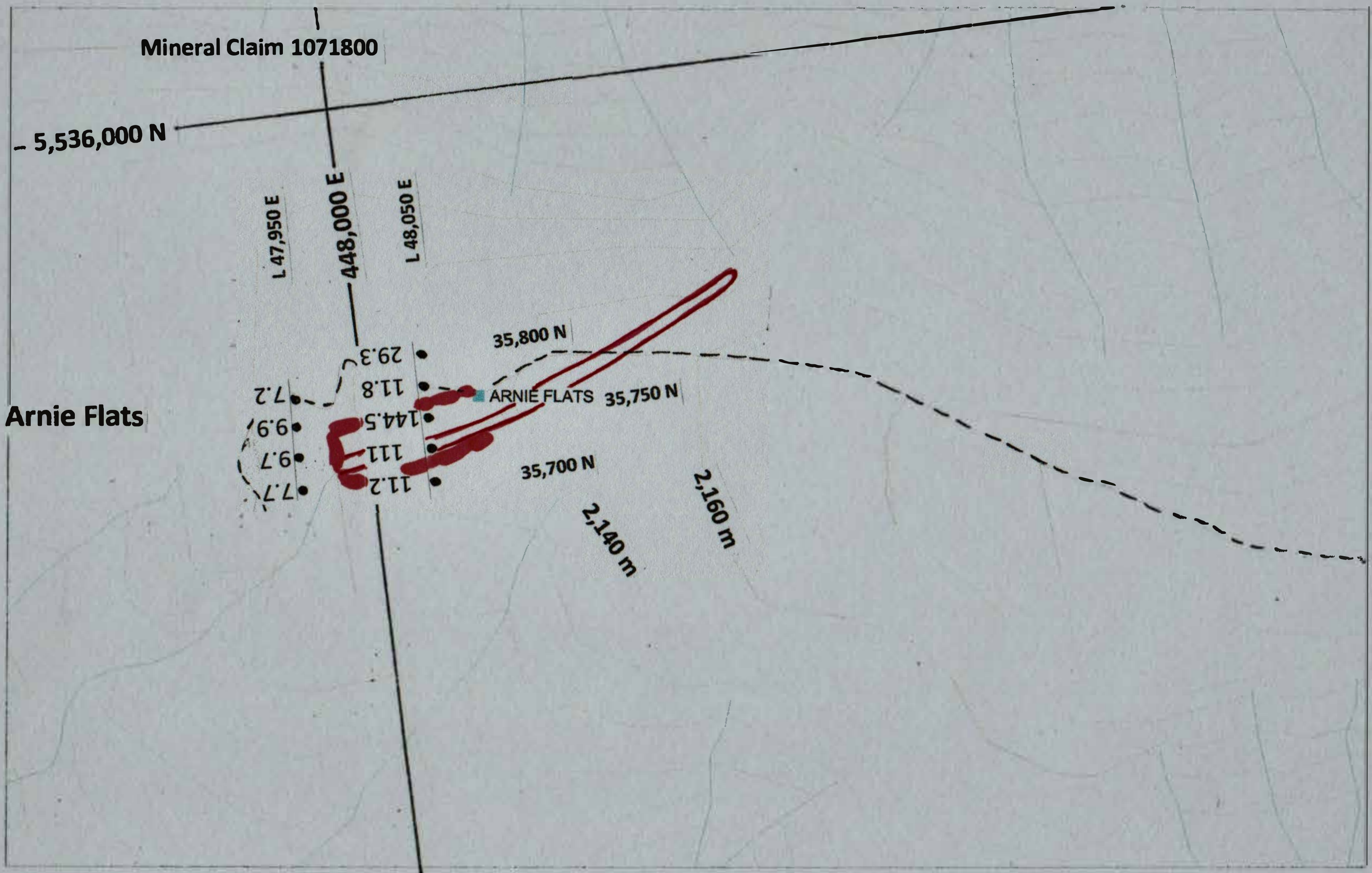
Fig 54

Cu ppm

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Pb ppm
>100



0 200 m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 55

Pb ppm

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

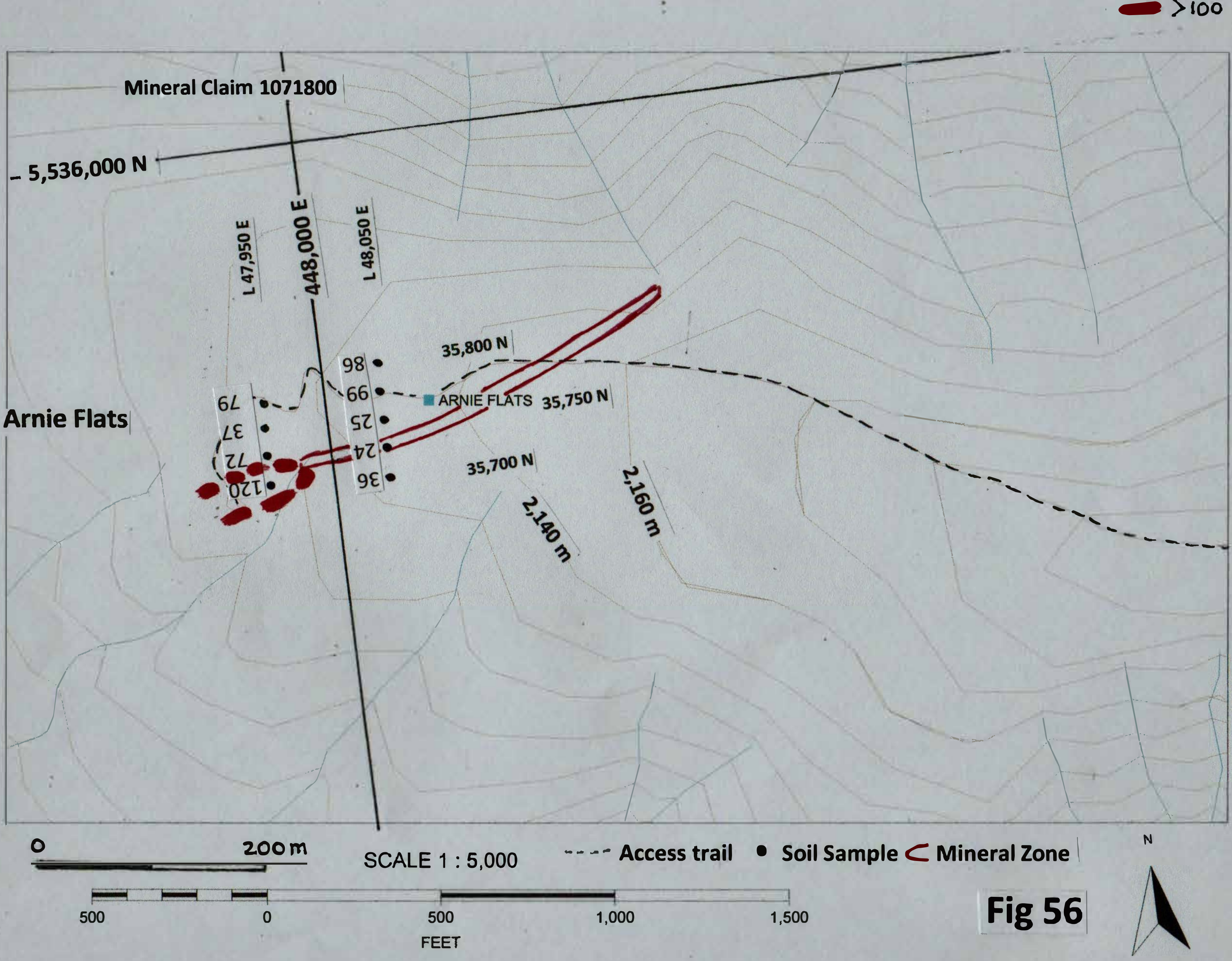


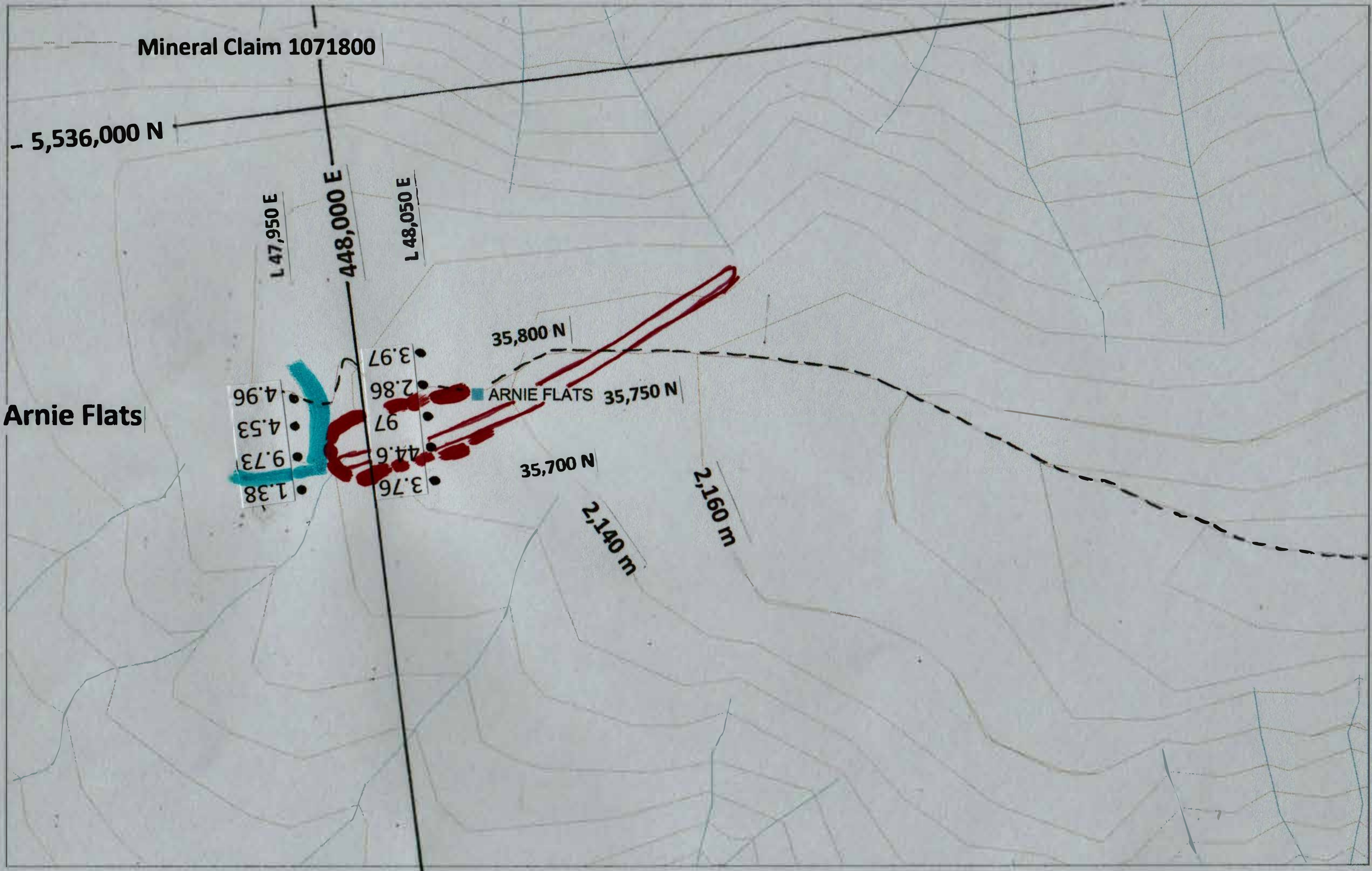
Fig 56

Zn ppm

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Ag ppm
>40
4-40



0 200m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500

FEET

N

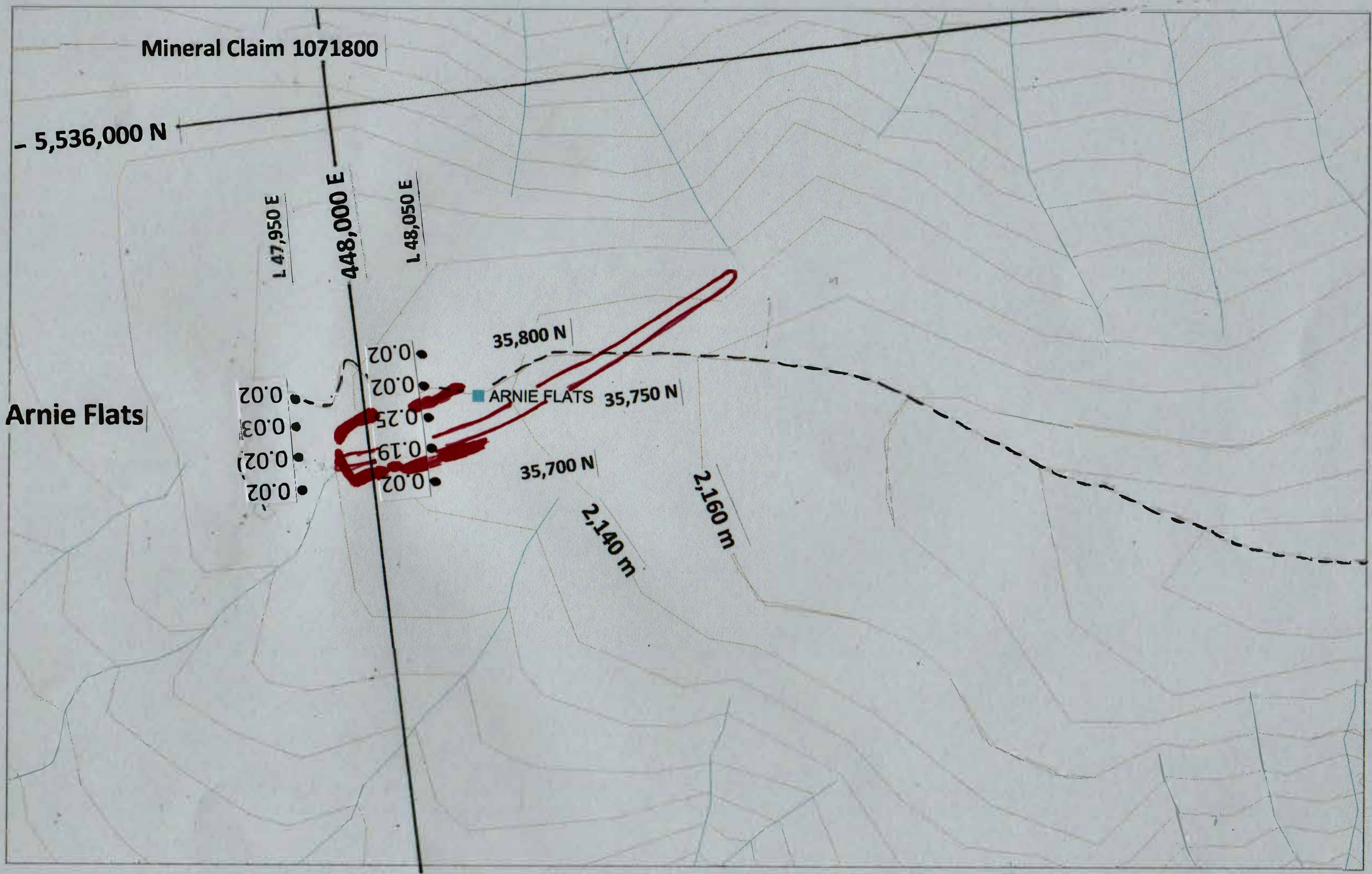
Fig 57

Ag ppm

Tillicum Arnie Flats Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Au ppm
> 0.15



0 200 m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 58

Au ppm

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Sample ID
(ID #'s shown inverted)

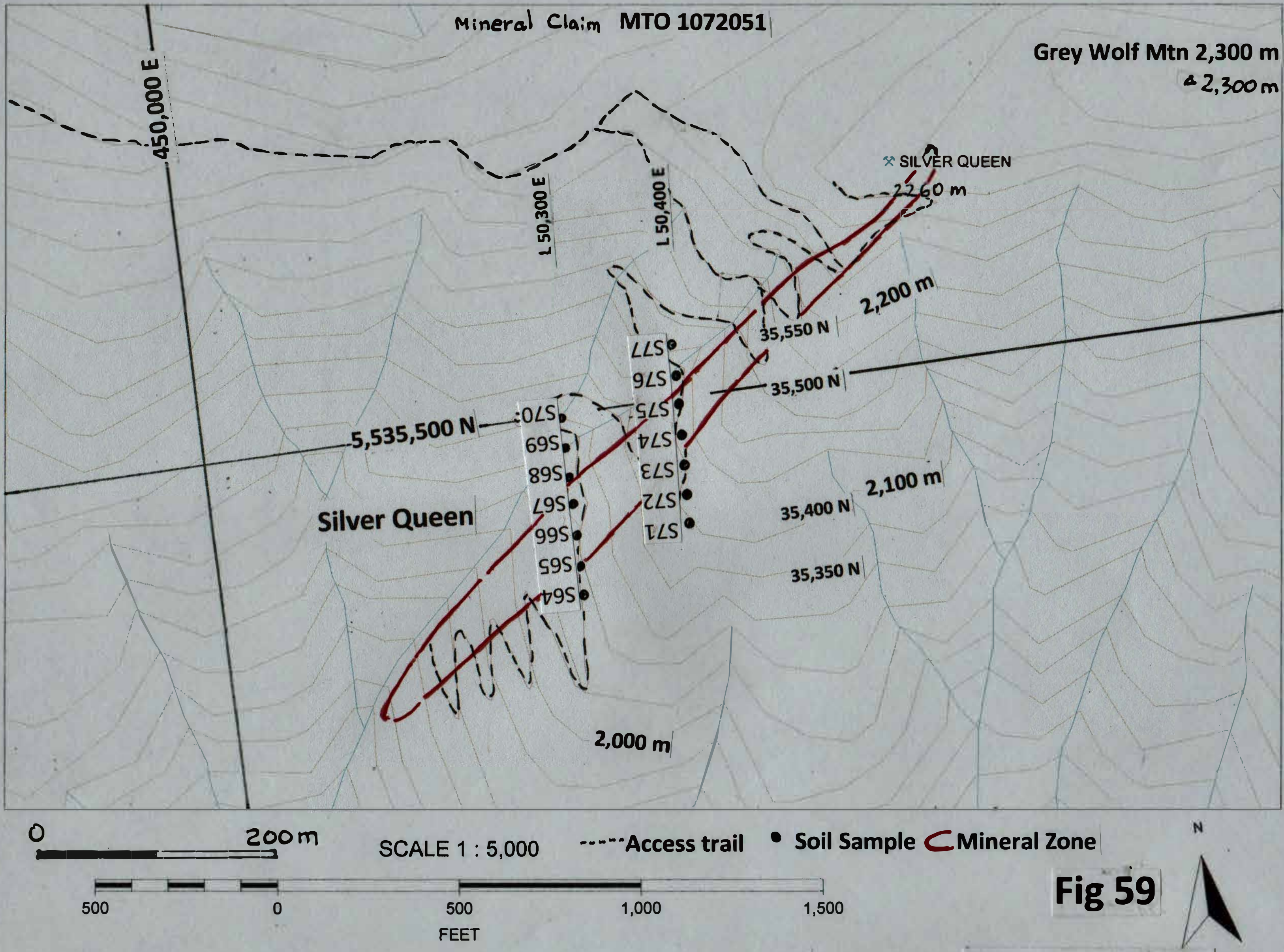


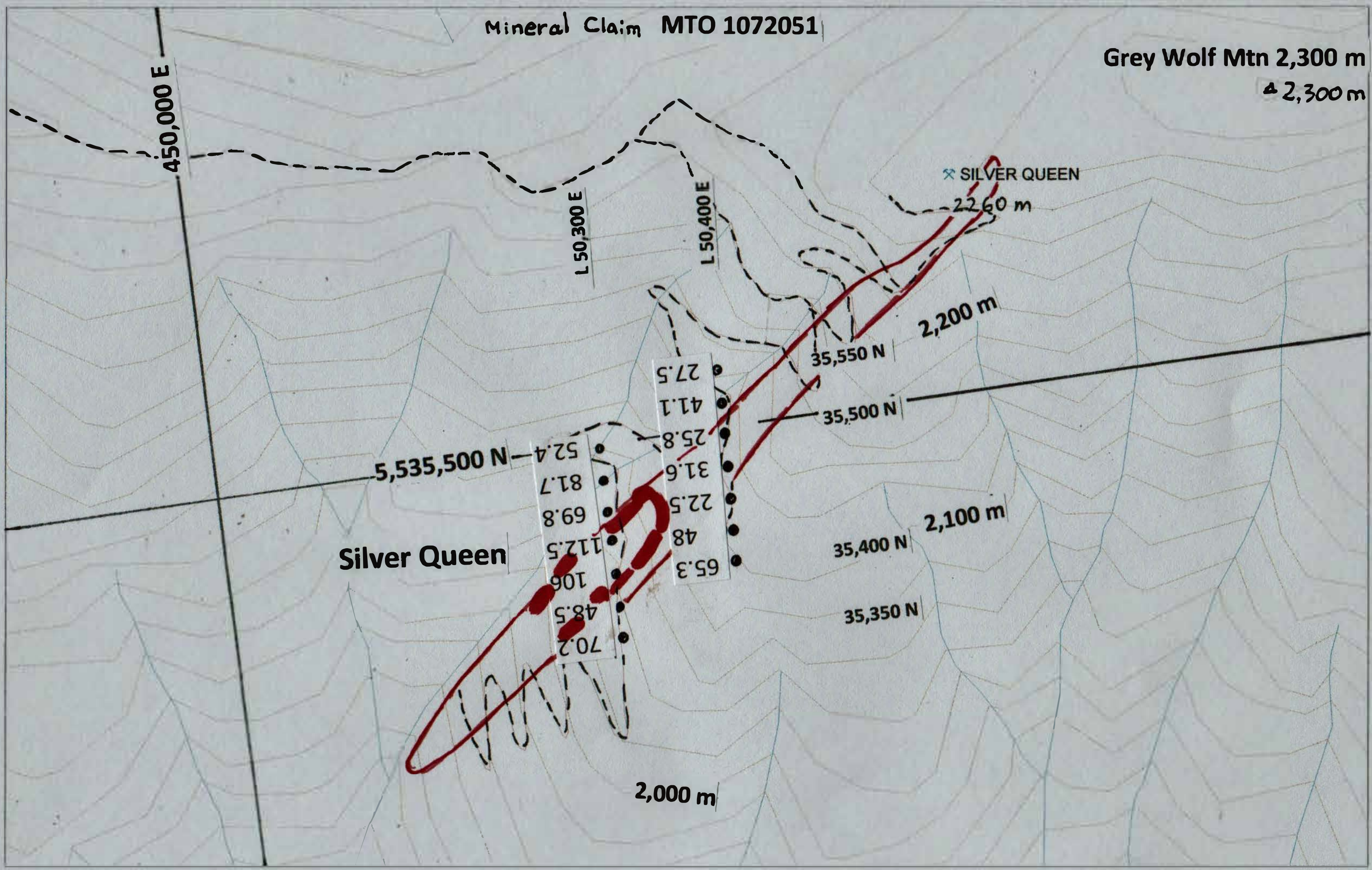
Fig 59

Sample ID #'s

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Cu ppm
> 100



0 200 m

SCALE 1 : 5,000

Access trail • Soil Sample Mineral Zone

500 0 500 1,000 1,500
FEET

N

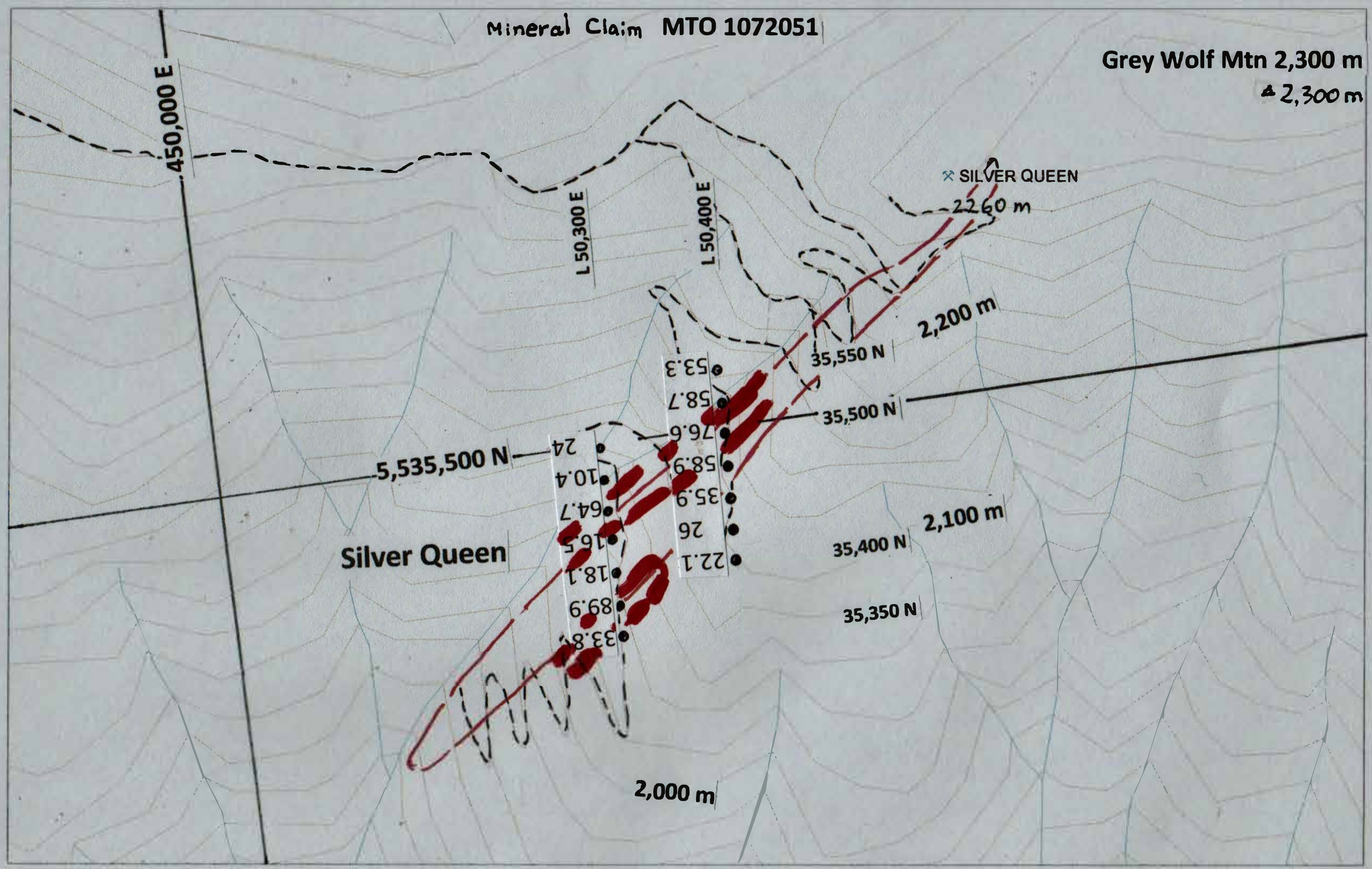
Fig 60

Cu ppm

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

Pb ppm
>60



0 200m

SCALE 1 : 5,000

----- Access trail • Soil Sample ⊂ Mineral Zone

500 0 500 1,000 1,500
FEET

N

Fig 61

Pb ppm

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

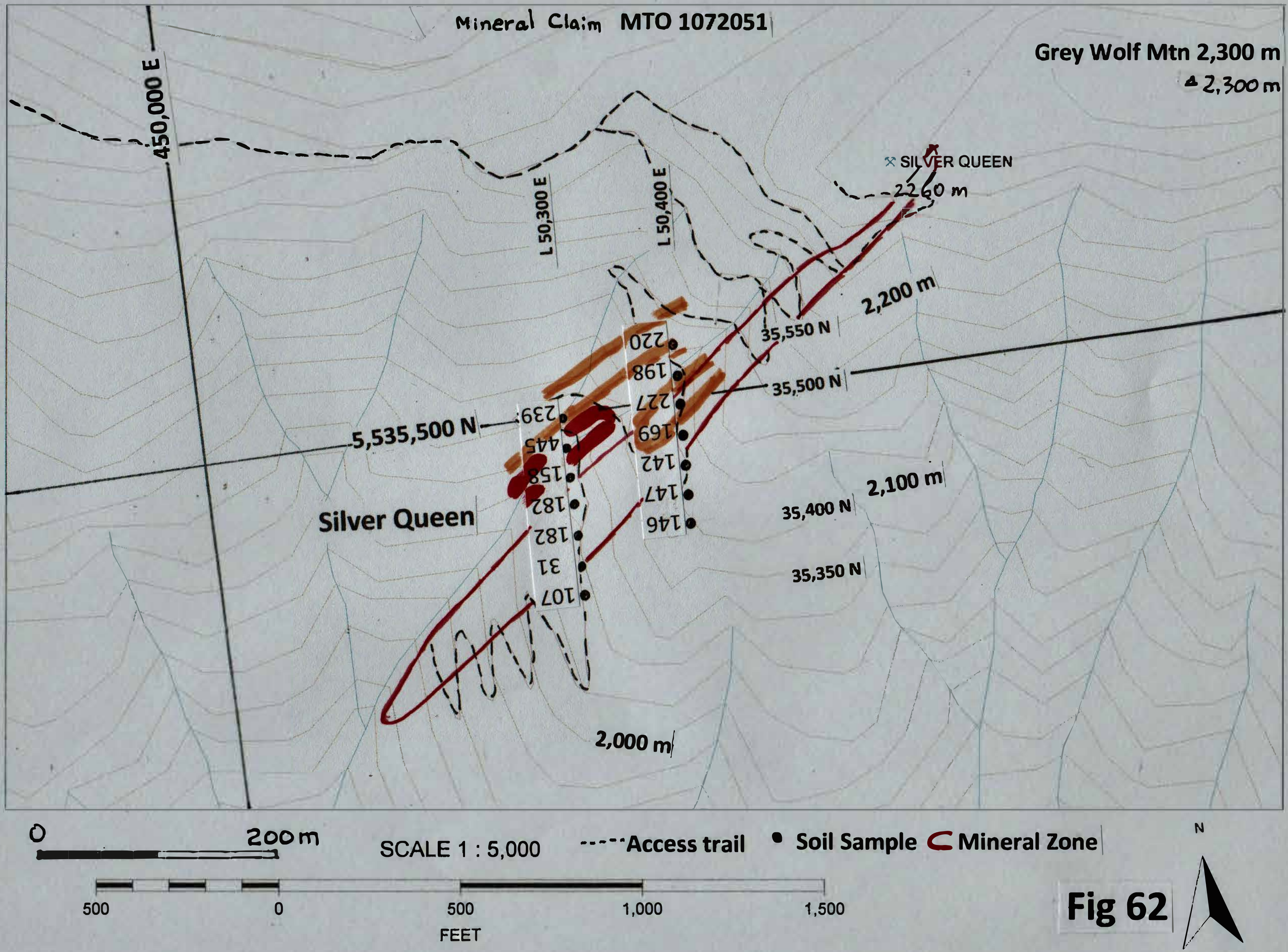


Fig 62

Zn ppm

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

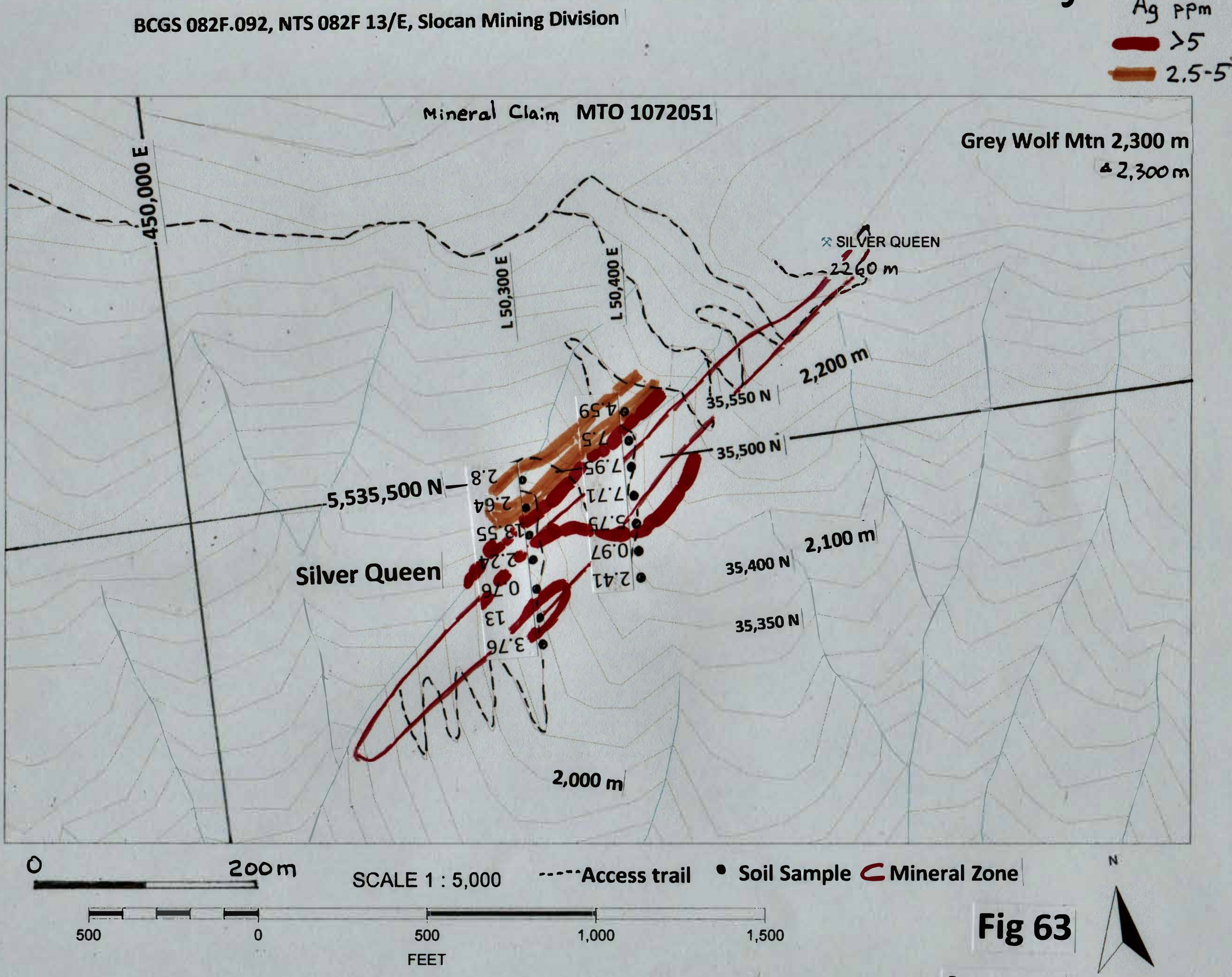


Fig 63

Ag ppm

Tillicum Silver Queen Soil Geochemistry

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

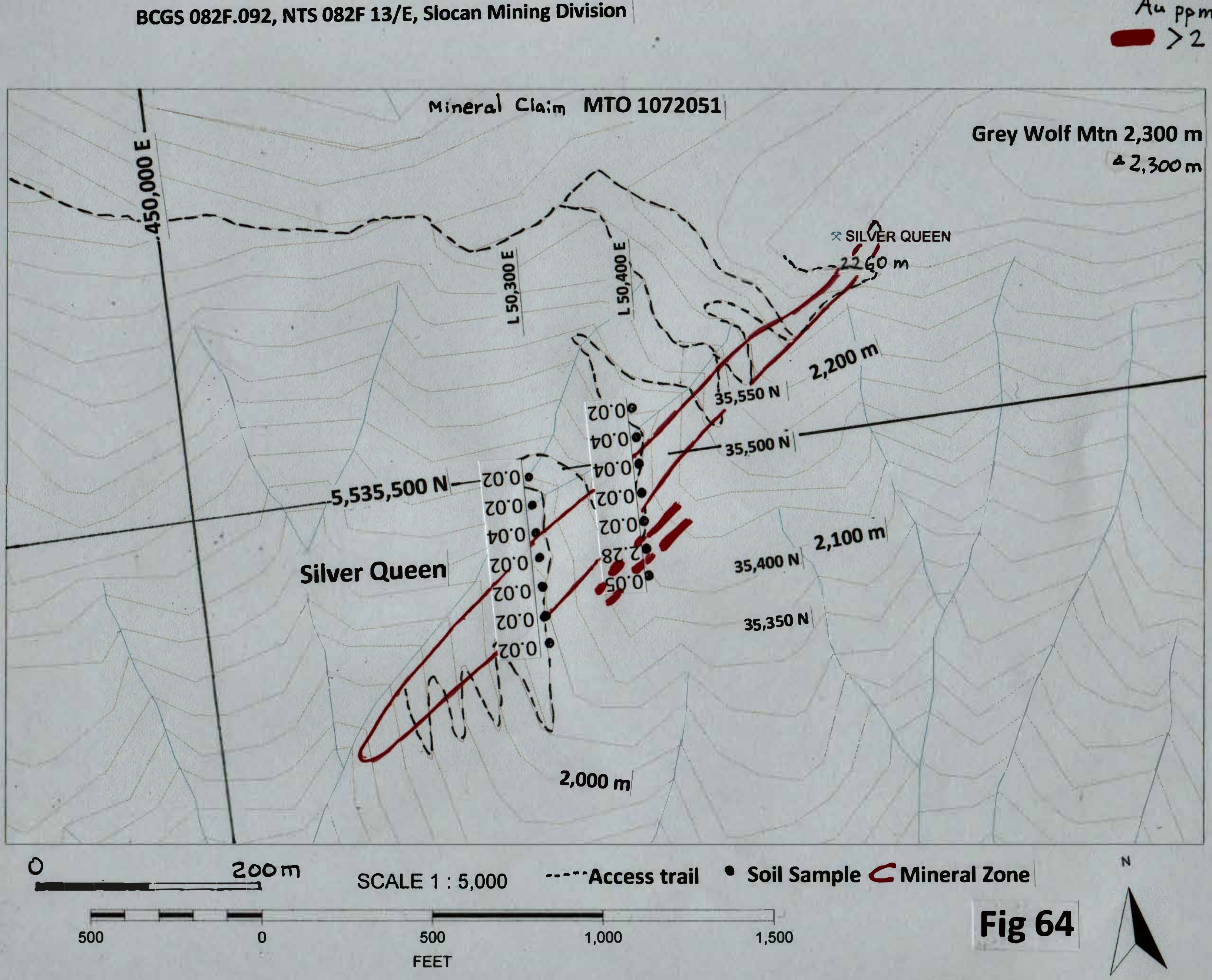
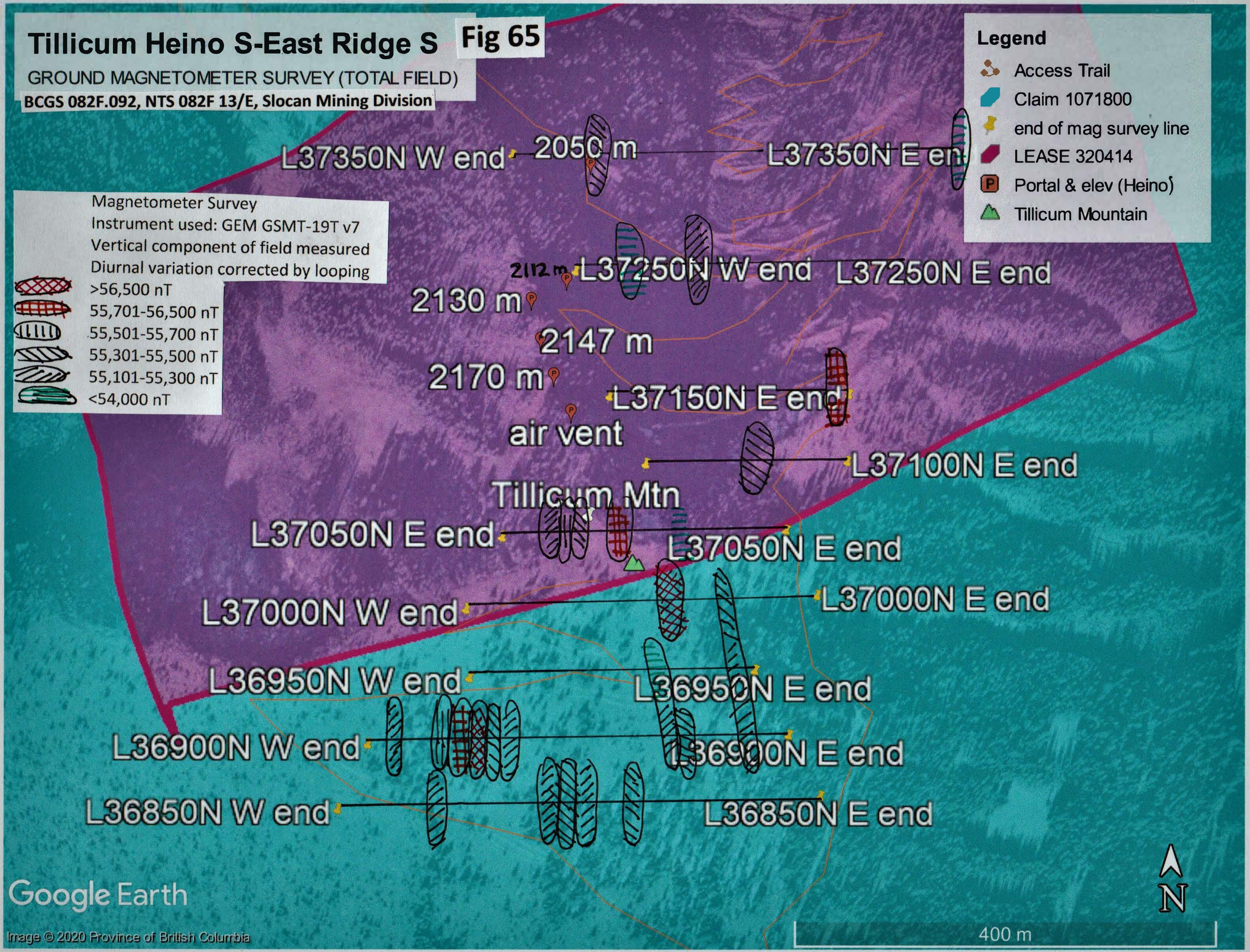


Fig 64

Au ppm


Tillicum Heino S-East Ridge S
Fig 65
GROUND MAGNETOMETER SURVEY (TOTAL FIELD)
BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division
Legend
Access Trail
Claim 1071800
end of mag survey line
LEASE 320414
Portal & elev (Heino)
Tillicum Mountain
Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping
>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT
L37350N W end
2050 m
L37350N E end
2112 m
L37250N W end
L37250N E end
2130 m
2147 m
2170 m
L37150N E end
air vent
L37100N E end
Tillicum Mtn
L37050N E end
L37050N E end
L37000N W end
L37000N E end
L36950N W end
L36950N E end
L36900N W end
L36900N E end
L36850N W end
L36850N E end
Google Earth
Image © 2020 Province of British Columbia
400 m
N

Tillicum Mountain 2020 Magnetometer Survey

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

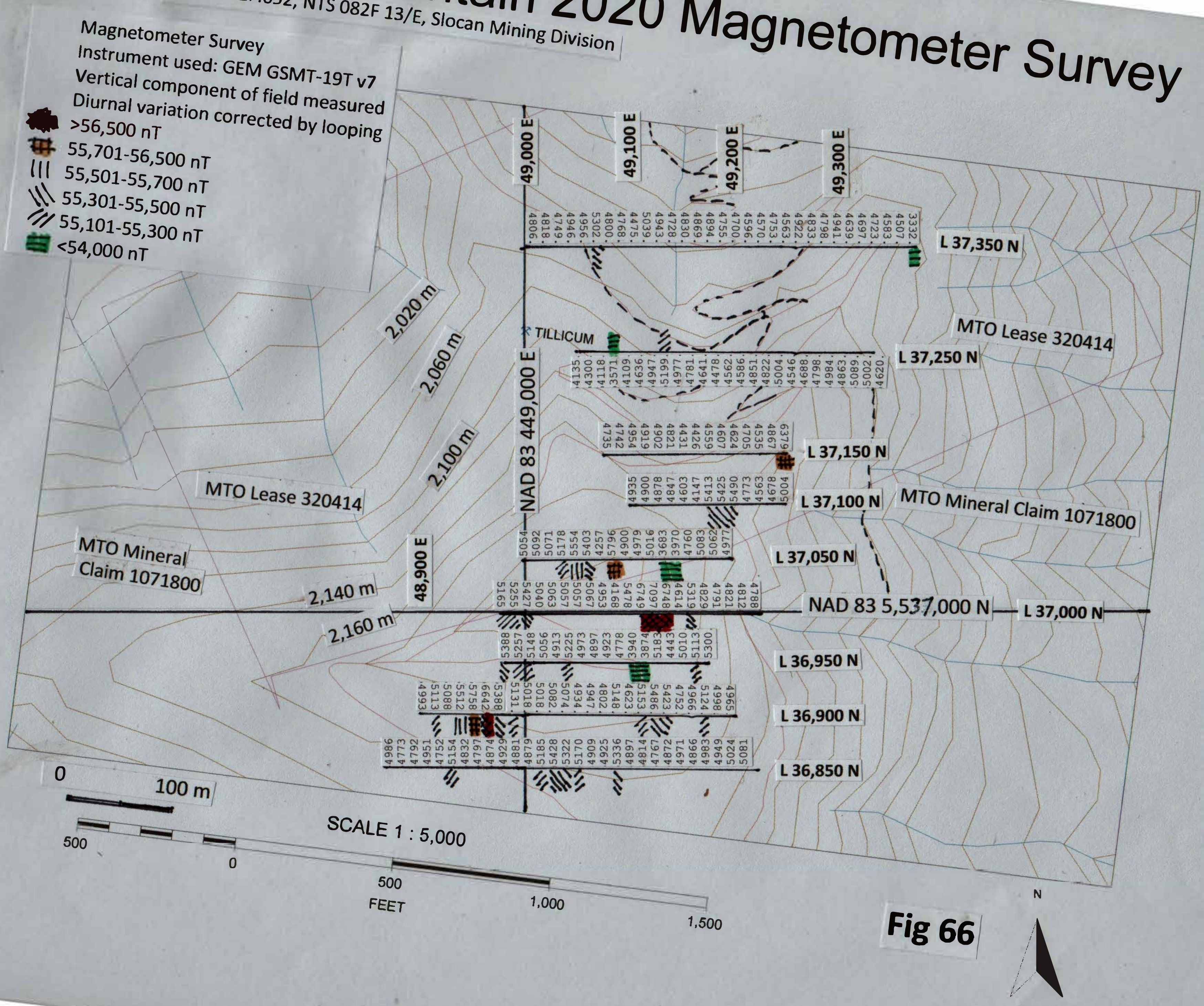
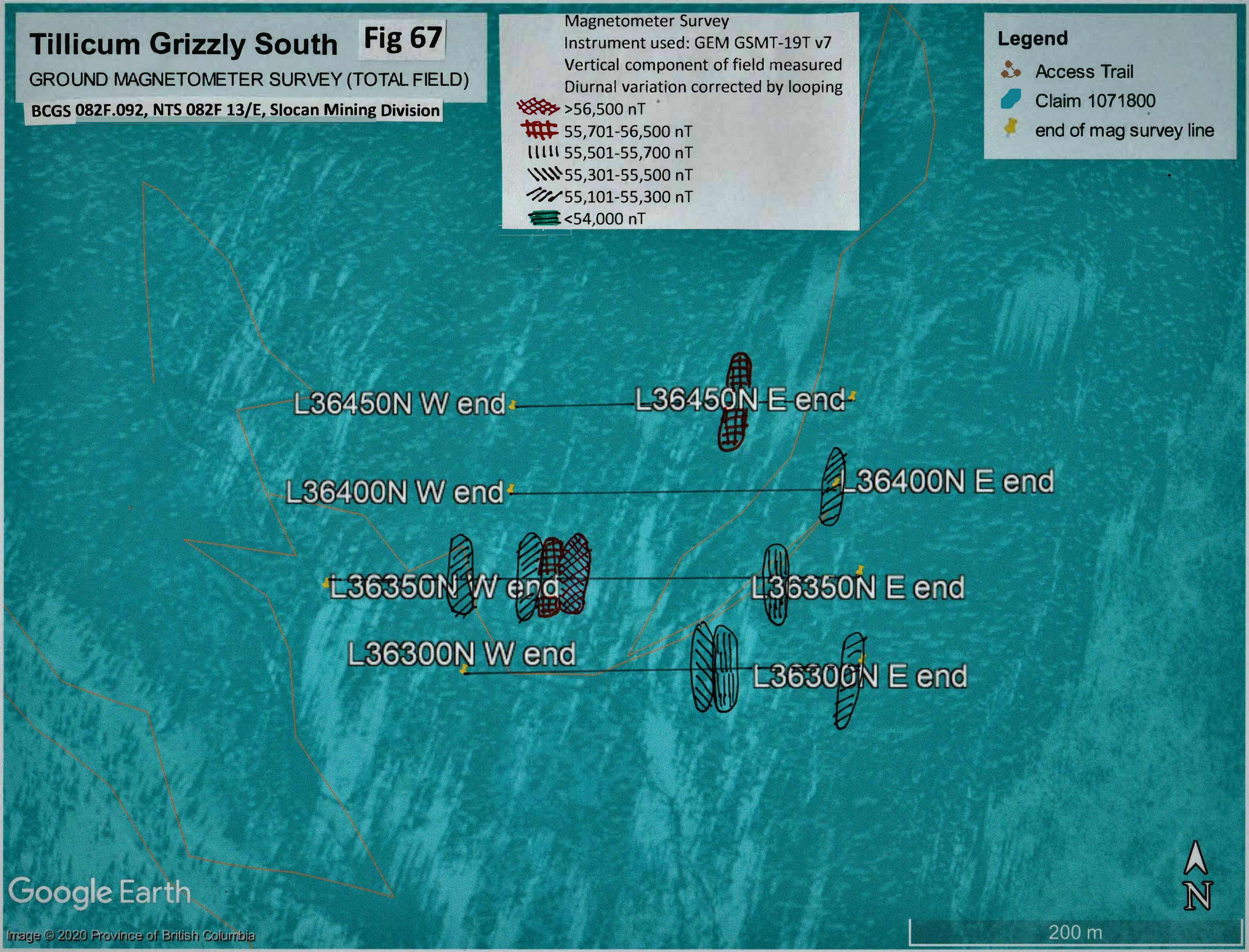


Fig 66



Tillicum Grizzly South
Fig 67
GROUND MAGNETOMETER SURVEY (TOTAL FIELD)
BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division
Magnetometer Survey
Instrument used: GEM GSMT-19T v7
Vertical component of field measured
Diurnal variation corrected by looping
>56,500 nT
55,701-56,500 nT
55,501-55,700 nT
55,301-55,500 nT
55,101-55,300 nT
<54,000 nT
Legend
Access Trail
Claim 1071800
end of mag survey line
L36450N W end
L36450N E end
L36400N W end
L36400N E end
L36350N W end
L36350N E end
L36300N W end
L36300N E end
Google Earth
Image © 2020 Province of British Columbia
200 m
N

Tillicum Grizzly 2020 Magnetometer Survey

BCGS 082F.092, NTS 082F 13/E, Slocan Mining Division

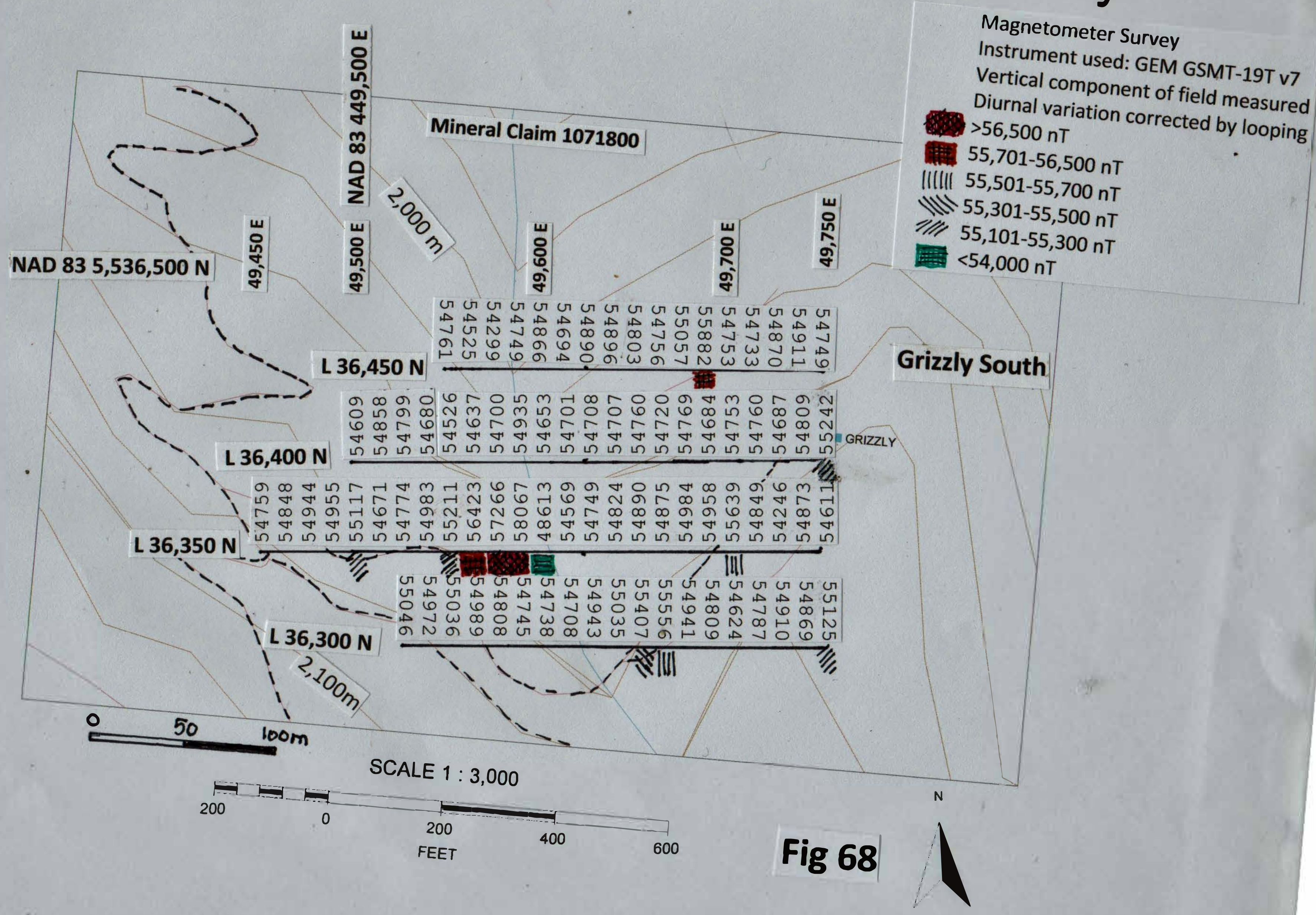


Fig 68

APPENDIX I

METALLURGICAL TESTING FOR THE TILLICUM PROJECT

MGX MINERALS INC.

KM6240

January 29, 2021

ISO 9001:2015
Certificate No. FS 63170

TABLE OF CONTENTS

1.0 Introduction

The Heino Gold Project is located at Tillicum Mountain approximately 12 kilometers east of Lower Arrow Lake; the metallurgical properties of material from this project are being investigated by MGX Minerals. A program of chemical and mineralogical analyses along with gravity and flotation testing has been completed on composites prepared from drill core and adit outcrop sampling. The primary objectives of the program were summarized as follows:

- Assess the gold and silver content of three subcomposites and thirteen drill core intervals comparing with previous analyses to better understand the content of these metals.

- Prepare composites representing "Heino Surface" and "East Ridge" material and assess the chemical content of the samples through standard analytical assays and multi-element ICP analyses.

- Complete Bulk Mineral Analyses (BMA) using QEMSCAN on each composite assessing mineral content.

- Assess the comminution properties of the composites through Bond ball mill work index tests.

- Conduct metallurgical testing on the composites to determine open circuit recovery and upgrading potential through gravity concentration and rougher/cleaner flotation testing.

- Assess closed circuit performance through locked-cycle testing and assess the quality of product concentrates.

This report provides a summary of the results from the program; all data, including individual test results, can be found in the appendices. Thank you for choosing ALS Metallurgy for your testing requirements. If you have any questions, please feel free to contact us directly.

Written by;

Kimberly Roulston
Senior Metallurgist

Reviewed by;

Peter Mehrfert, P.Eng.
Operations Manager
ALS Metallurgy Kamloops

PROFESSIONAL
PROVINCE OF
P. J. MEHRFERT
24527
BRITISH COLUMBIA
ENGINEER

PM
Jan. 29, 2021

January 29, 2021
KM6240

Electronic Distribution:
Andris Kikauka, P.Geo, MGX Minerals Inc.

2.0 Properties of the Composites

Prior to compositing, 11 drill core intervals, along with three sub-composites of each of the East Ridge and Heino Surface feed types, were assayed for gold to confirm the content. Details of these assays can be found in Appendix I - Sample Origin. Initially, two composites were prepared for testing; however, the East Ridge Composite was determined to be of lower grade than anticipated and a second East Ridge Composite was prepared. The following subsections discuss the chemical and mineral content of the composites as well as the comminution test results.

2.1 Chemical and Mineral Content

Table 1 displays a summary of the chemical content of the three composites tested in this program. Single head assays were completed for all elements but gold, which was completed in duplicate using standard fire assay techniques and also by a single screened metallic gold assay.

TABLE 1
SUMMARY OF CHEMICAL CONTENT

	Composite	Assay - percent or g/tonne							
		Pb	Zn	Fe	S	Au	Au*	$Au_{(SM)}$	Ag
Outcrop	Heino Surface Comp	0.19	0.36	7.50	3.85	20.7	23.4	17.3	17
DDH	East Ridge Comp	0.13	0.37	6.70	3.78	1.97	1.90	2.57	12
Outcrop	East Ridge Comp 2	0.08	1.06	11.5	7.49	1.14	1.10	1.00	4

Note: a) Gold and silver assays are displayed in g/tonne; other assays are displayed in percent.
b) *Duplicate gold assay.
c) $Au_{(SM)}$ – Gold assay by screened metallic method.
d) Complete head assay results can be located in Appendix V – Special Data.

Gold content in the Heino Surface Composite measured between 17 g/tonne using the screened metallic assay method and about 21 to 23 g/tonne using the standard fire assay method. In the screened metallic assay, a notably higher gold content was measured in the coarse sized fraction, indicating the presence of coarse gold.

Gold assayed about 2 to 2.5 g/tonne in the East Ridge Composite and about 1 g/tonne in East Ridge Composite 2. There was an indication of coarse gold in the screened metallic assay for the East Ridge Composite but not for East Ridge Composite 2.

Silver assayed between 4 g/tonne in East Ridge Composite 2 to about 17 g/tonne in the Heino Surface Composite.

Sulphur contents assayed similarly for the Hieno Surface and East Ridge Composites at about 3.8 and 3.9 percent, respectively, and measured higher in East Ridge Composite 2 at 7.5 percent. This sulfur was primarily contained within pyrrhotite followed by pyrite with lesser amounts within copper sulphides, galena, and sphalerite.

Lead assayed between about 0.1 and 0.2 percent and was present as galena. Zinc assayed between about 0.4 and 1.1 percent as was present as sphalerite.

Table 2 displays a summary of the mineral content determined through QEMSCAN Bulk Mineral Analyses completed on each composite.

TABLE 2
MINERAL CONTENT SUMMARY

Minerals	Heino Comp	East Ridge Comp	East Ridge Comp 2
Copper Sulphides	0.1	0.1	0.3
Sphalerite	0.6	0.7	2.0
Galena	0.2	0.2	0.1
Pyrite	1.5	0.3	5.4
Pyrrhotite	5.0	8.5	7.2
Arsenopyrite	<0.1	0.3	0.5
Iron Oxides	0.8	<0.1	1.4
Feldspars	37.9	47.1	42.0
Quartz	7.0	19.5	12.7
Micas	3.4	9.8	6.3
Amphibole/Pyroxene	34.3	5.3	11.1
Chlorite	3.6	4.3	6.3
Calcite	0.4	1.1	<0.1
Titanium Minerals	2.0	1.1	2.1
Apatite	1.0	0.4	0.4
Others	2.1	1.2	2.1

Note: a) Others includes calcium sulphate, zircon, epidote, and unresolved mineral species.
b) Complete mineralogical analysis results can be located in Appendix VI - Mineralogical Data.

The most abundant non-sulphide gangue minerals were measured to be feldspars in each of the samples; in the Heino Surface Composite amphinole/pyroxene were the second most abundant non-sulphide mineral group followed by quartz, chlorite and micas. In the East Ridge Composite, quartz was the second most abundant non-sulphide mineral, followed by micas, amphibole/pyroxene, and chlorite; East Ridge Composite 2 measured similar levels of quartz and amphibole/pyroxene as the second and third most abundant non-sulphide mineral groups with lesser amounts of micas and chlorite.

2.2 Comminution Test Results

A Bond ball work index test was completed on the Heino Composite and East Ridge Composite 2. The tests were completed using a 106µm closing screen size. A Bond ball work index of 9.6 kWhr/tonne was measured for the Heino Composite while for East Ridge Composite 2 a Bond ball work index of 12.9 kWhr/tonne was recorded. In terms of grinding in a ball mill the Heino Composite could be considered very soft while East Ridge Composite 2 could be considered soft.

3.0 Metallurgical Test Results

Metallurgical testing in this program was primarily completed using the Heino Surface Composite. Initial testing was completed on the East Ridge Composite but was discontinued due to the composite not being of expected grade; no testing was completed on East Ridge Composite 2 for the same reason. Testing consisted of upfront gravity concentration followed by bulk flotation separation, the following subsections discuss the results of this testing.

3.1 Gravity and Rougher Test Results

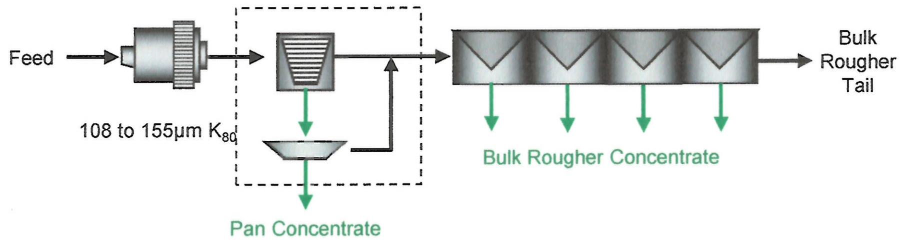
Figure 1 displays the flowsheet, conditions, and results of gravity concentration followed by rougher flotation tests completed on the East Ridge and Heino Surface Composites. Ground feed was fed through a Knelson gravity concentration unit with the Knelson concentrate being panned to reduce mass recovery. Gravity tailings proceeded to rougher flotation completed at natural pH with potassium amyl xanthate (PAX) being used as the sulphide collector and methyl iso butyl carbonyl (MIBC) as the frother. For both tested composites, collector dosage was a tested variabile at a nominal 150μm K_{80} primary grind target; a finer primary grind of 108μm K_{80} was also tested using the Heino Surface Composite. The following comments relate to the results of the rougher flotation testing:

- Increasing the dosage of collector to the rougher stage resulted in higher mass recovery without an improvement in metal recovery for both composites.

- Testing the Heino Surface Composite at a finer primary grind resulted in similar gold recovery for the overall test but with a lower rougher tailing gold grade.

- A similar gold and silver recovery was recorded for testing with and without a gravity circuit.

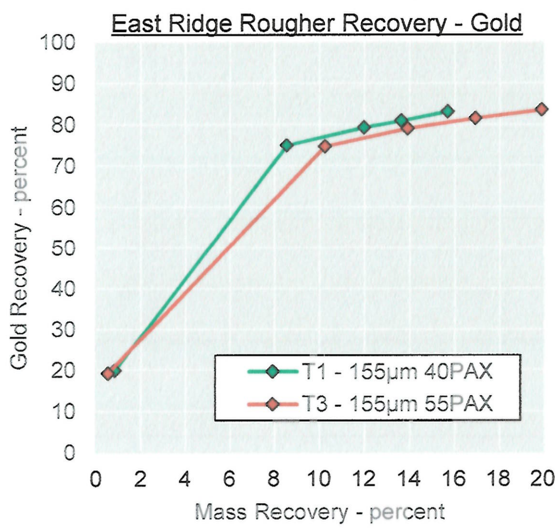
FIGURE 1
ROUGHER FLOWSHEET, TEST CONDITIONS, AND RESULTS

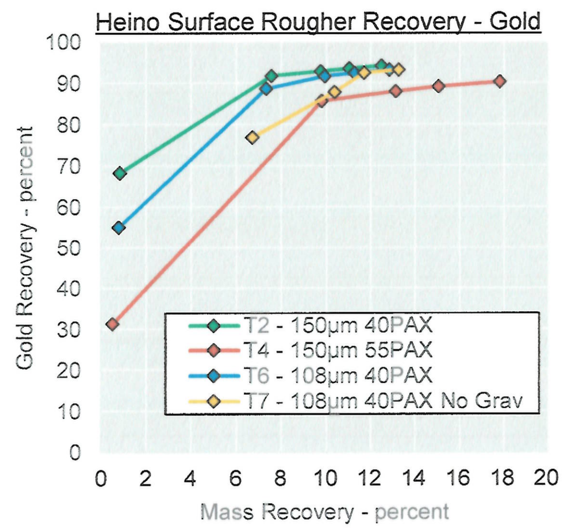


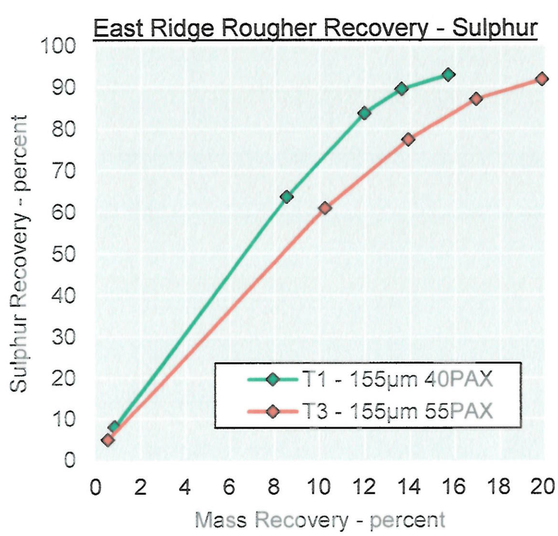
Flotation Circuit Conditions

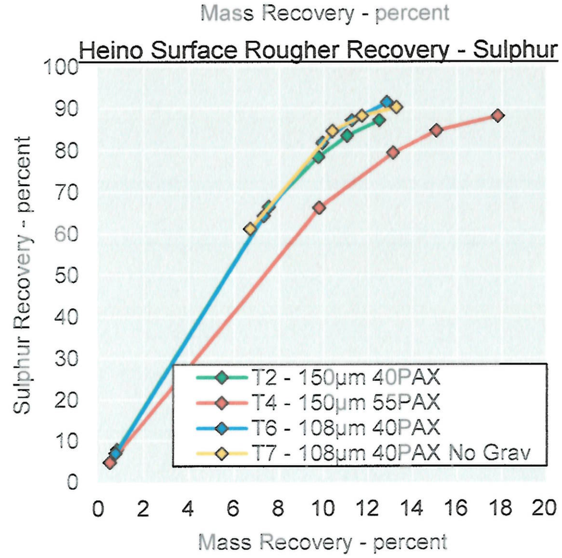
Stage	pH	redox mV	PAX - g/tonne
Primary Grind*	5.9	9	-
Flotation Feed	6.3-8.4	52 to 287	-
Rougher	5.9-8.4	-10 to 207	40-55

Notes: a) *One test (Test 7) did not include a gravity circuit prior to flotation.
b) Redox was measured using a Pt tip electrode in a standard AgCl solution.









Notes: a) Primary grind sizings are shown for each test.
b) The pan concentrate recovery is indicated by the first low mass recovery point in each data series.
c) Complete test conditions and results can be located in Appendix II – Metallurgical Test Data

3.2 Cleaner Test Results

A flowsheet of gravity concentration followed by rougher and cleaner flotation was tested on the Heino Surface and East Ridge Composites. Only a preliminary test was completed on the East Ridge Composite. Cleaner circuit variables tested using the Heino Surface Composite included application of regrinding and elevated cleaner circuit pH of 10. Lime was used to control pH, PAX was used as the sulphide collector, and MIBC was used as the frothing agent. Figure 2 displays a summary of the flowsheet, conditions, and results of this testing. The following comments relate to the results of the cleaner floation tests:

- The recorded final gold and silver recoveries measured in cleaner circuit testing appeared to be related to the recovery of gold to the rougher concentrate and not the variation in cleaner circuit variables. Similar losses of gold and silver to the cleaner tailings were recorded for cleaner testing completed on the Heino Surface Composite. Future testing may benefit from producing a large bulk mass of rougher concentrate to test cleaner circuit variables without the effect of variation in rougher recovery caused by the effects of coarse gold.

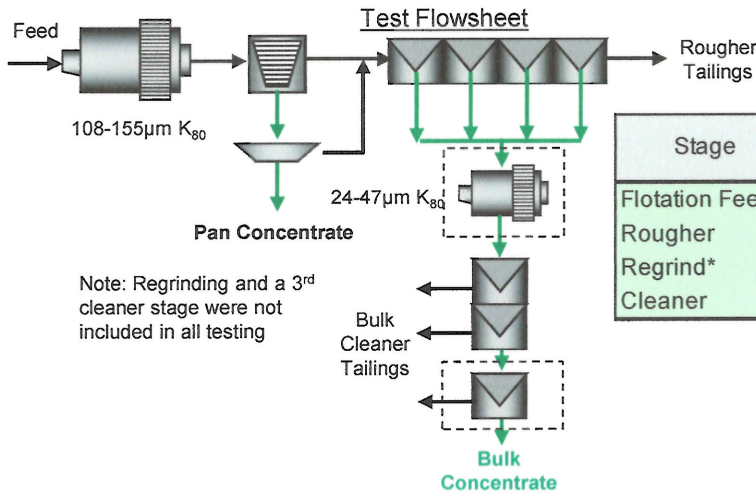
- Gold and silver recovery did not appear related to sulphur recovery.

- Application of regrinding improved concentrate grade by improving rejection of pyrrhotite/pyrite.

- A pH of 10 in the cleaner circuit improved selectivity against the recovery of pyrrhotite/pyrite resulting in higher rejection of sulphur with minimal change in cleaner circuit gold recovery.

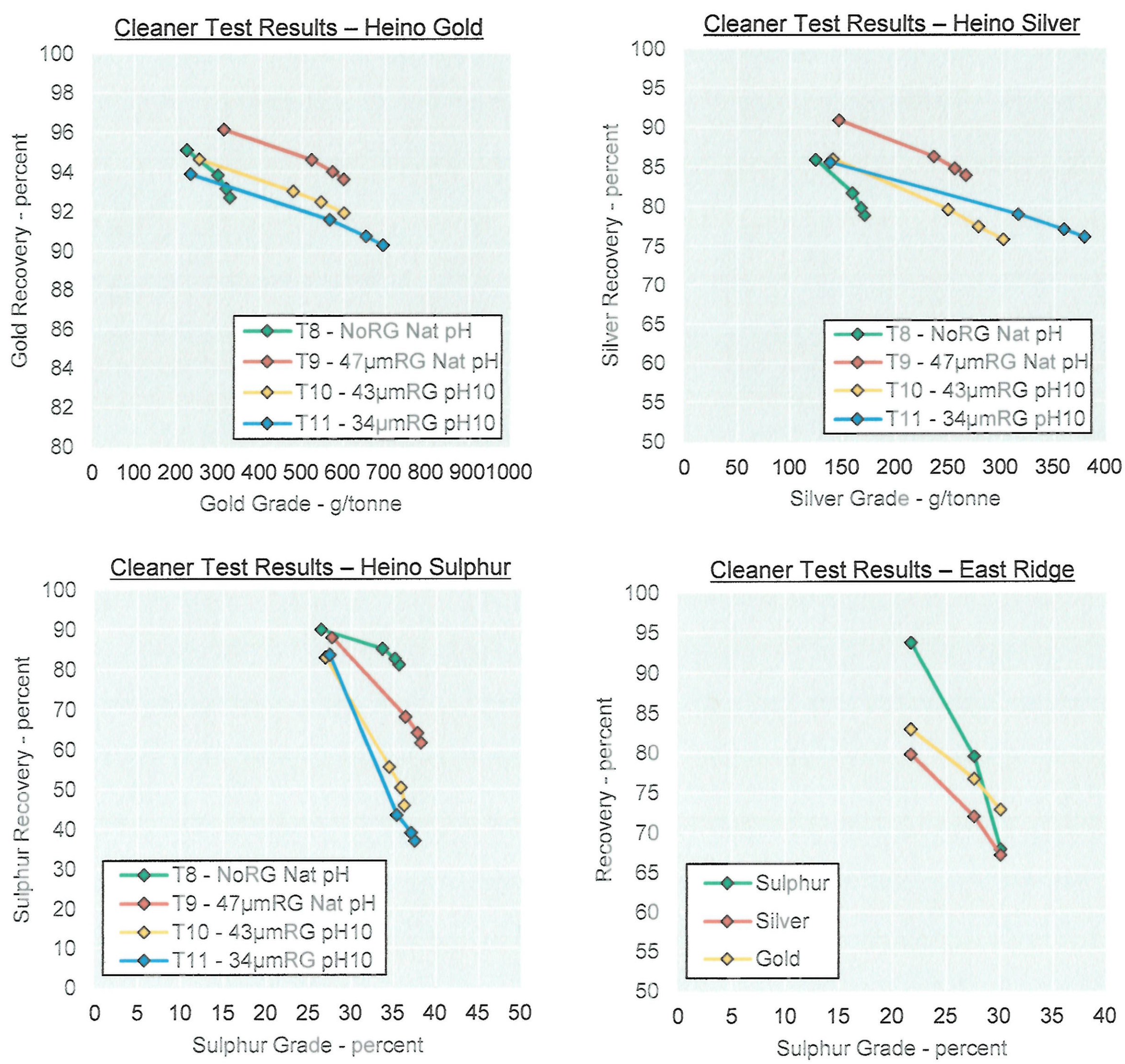
FIGURE 2
CLEANER FLOWSHEET, TEST CONDITIONS, AND RESULTS

Test Flowsheet



Test Conditions

Stage	pH	redox mV	Reagent - g/tonne PAX	Reagent - g/tonne Lime
Flotation Feed	6.2-8.2	70 to 280	-	-
Rougher	6.2-8.3	57 to 250	40	-
Regrind*	6.8-9.4	160 to 266	-	0-350
Cleaner	6.6-10.0	52 to 253	9-19	0-100



Note: a) The gravity concentrate has been included in the recovery/grade points for the above plots.
b) Complete test conditions and results can be located in Appendix II – Metallurgical Test Data

3.3 Locked Cycle Test Results

A single locked cycle test was completed using the Heino Surface Composite using the flotation conditions developed through batch gravity and cleaner circuit testing. A primary grind discharge sizing of 108μm K_{80} was used along with a regrind discharge sizing of 33μm K80. The cleaner circuit pH was elevated to 10 using lime. PAX was used as the sulphide collector and MIBC was utilized as the frother. A ten kilogram gravity separation was completed with the gravity tailings being portioned into 2 kilogram feed charges for the flotation circuit of the test to reduce the effects of variation in gold content of the feed. Figure 3 displays a summary of the flowsheet, conditions, and results of this test.

The combined gravity and flotation recovery of gold and silver was recorded to be about 92 percent for gold and 77 percent for silver.

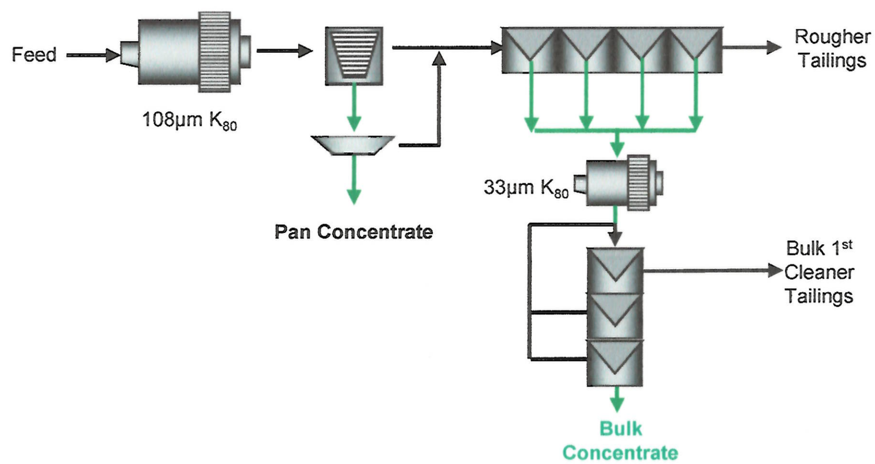
About 63 percent of the gold and 17 percent of the silver was recovered in the gravity circuit to a pan concentrate which contained about 0.3 percent of the mass, and measured about 6614 g/tonne gold amd 1172 g/tonne silver.

Based on the fourth and fifth cycles of the test, a further 60 percent of the silver and 29 percent of gold was recovered to a bulk concentrate containing 3.6 percent of the feed mass and measuring about 215 g/tonne gold and 290 g/tonne silver.

An acid-base accounting and net-acid generation analysis was completed on tailings from the locked cycle test. Results can be located in Appendix V – Special Data.

FIGURE 3
LOCKED CYCLE TEST FLOWSHEET, TEST CONDITIONS, AND RESULTS

Test Flowsheet



Test Conditions

Stage	pH	redox mV	Reagent - g/tonne	
			PAX	Lime
Flotation Feed	6.5	172	-	-
Rougher	6.8-7.1	124 to 136	40	-
Regrind	10	200	-	550
Cleaner	10	155 to 160	19	√

Locked Cycle Test Result Summary

Stream	Weight %	Assay - percent or g/tonne					Distribution - percent				
		Pb	Zn	S	Ag	Au	Pb	Zn	S	Ag	Au
Test 12 - Cycle IV + V											
Feed	100	0.18	0.35	3.49	17	26.8	100	100	100	100	100
Gravity Pan Con	**0.3**	3.36	0.68	32.8	**1172**	**6614**	4.7	0.5	2.4	**17.2**	**63.0**
Bulk Con	**3.6**	2.97	6.58	38.9	**290**	**215**	58.2	66.5	39.9	**59.5**	**28.6**
Bulk 1CT	8.5	0.18	0.91	15.6	17	6.97	8.4	21.9	38.0	8.3	2.2
Bulk Ro Tail	87.7	0.06	0.04	0.78	3	1.90	28.8	11.1	19.7	15.1	6.2

Note: a) The gravity circuit was completed as a 10 kilogram test with the gravity tails being split into 5x~2kg charges for the flotation locked cycle test.
b) Complete test conditions and results can be located in Appendix II – Metallurgical Test Data

3.4 Quality of the Concentrate

A composite of the fourth and fifth cycle flotation concentrates produced from the locked cycle test using the Heino Surface Composite was analyzed through a multi-element ICP analysis for minor element content. Table 3 displays a summary of key element content within this concentrate.

TABLE 3
CONCENTRATE QUALITY SUMMARY

Element	Symbol	Unit	Content
Antimony	Sb	g/tonne	182
Arsenic	As	g/tonne	3390
Bismuth	Bi	g/tonne	63
Cadmium	Cd	g/tonne	785
Copper	Cu	%	1.00
Gold*	Au	g/tonne	215
Iron*	Fe	%	37.6
Lead*	Pb	%	2.97
Selenium	Se	g/tonne	160
Silver*	Ag	g/tonne	290
Sulphur*	S	%	38.9
Tellurium	Te	g/tonne	6
Thorium	Th	g/tonne	<2
Uranium	U	g/tonne	<1
Zinc*	Zn	%	6.58

Notes: a)* Assays were completed at ALS Metallurgy Kamloops, other assays were completed at ALS North Vancouver via multi-element ICP analysis.
b) Complete ICP results can be located in Appendix V - Special Data.

The elements which comprised most of the Bulk Concentrate were sulphur, iron, zinc, lead, and copper, at about 39, 38, 7, 3, and 1 percent respectively.

Arsenic and cadmium were the only measured deleterious elements to be at levels of concern in the concentrate at about 3390 and 785 g/tonne, respectively. Consultation with a concentrate marketing expert would be required to assess if any negative levels of trace elements would affect marketing of such a concentrate.

4.0 Conclusions and Recommendations

A metallurgical test program has been completed using material from the Tillicum project. Three composites were provided for testing in this program; two "East Ridge" composites, both of which were determined to be too low grade to continue beyond preliminary testing, and the "Heino Surface Composite" which was used for the majority of the testing in this program. Testing included chemical and mineralogical analysis, Bond ball work index testing, and gravity and froth flotation testing, incorporating Knelson gravity separation with hand panning of the concentrate followed by rougher, cleaner, and locked cycle flotation testing.

Chemcial head analysis through various techniques measured a gold grade within the Heino Surface Composite ranging from 17 to 23 g/tonne; screened metallic gold assays indicated the presence of coarse gold which was noted in the variabile test feed gold grades recorded in testing. The silver content measured about 17 g/tonne in the feed. Sulphur measured about 3.9 percent in the composite and was present as the sulphide minerals pyrrhotite, pyrite, sphalerite, galena, and copper sulphide minerals.

Metallurgical testing on the Heino Surface Composite investigated primary grind sizing, the effect of collector dosage, application and extent of regrinding, and cleaner circuit pH. Testing culminated in a locked cycle test at a primary grind sizing of 108µm K_{80}, with a regrind discharge sizing of 33µm K_{80}, a cleaner circuit pH of 10, and using Potassium Amyl Xanthate as the sulphide collector and Methyl Isobutyl Carbonyl (MIBC) as the frother.

In the locked cycle test, about 63 percent of the gold was recovered in the gravity concentration stage preceding flotation. A further 29 percent of feed gold was recovered in the froth flotation stage. About 17 percent of the silver reported to the gravity concentrate with a further 60 percent reporting to the flotation concentrate. The flotation concentrate measured about 215 g/tonne gold and 290 g/tonne silver. Copper, lead, and zinc measured about 1.0, 3.0, and 6.6 percent within the concentrate with iron and sulphur comprising the bulk of the concentrate at 38 and 39 percent of the mass, respectively.

Some comments and conclusions that were observed in the testing would be:

- Gold was highly variable within the feed for the testing. Future testing should consider a bulk gravity concentration on a large mass of gravity feed sufficient enough to test variables using a more consistant precious metal content in the flotation feed.

- Sulphur was readily rejectable in the cleaner circuit without a corresponding loss in precious metals. This suggests the gold and silver in the flotation circuit is either unassociated with other minerals or perhaps assocated with the other sulphide minerals such as galena, sphalerite, arsenopyrite, or copper sulphides.

- Although gold recovery was notable at a combined 92 percent, the gold content of the bulk 1st cleaner tailing and bulk rougher tailing in locked cycle testing measured about 7 and 2 g/tonne, respectively and would be considered high for a tailing stream, in our experience.

APPENDIX I - KM6240

SAMPLE ORIGIN

1.0 Sample Origin

A shipment of sample was received at ALS Metallurgy on August 4, 2020. The shipment consisted of a series of ½ core drill core intervals as well as bulk rock samples. The total weight received in this shipment was 350 kilograms. Details of this receiving can be located in Table I-1.

Gold and silver assays were completed on 13 selected drill core intervals to compare to previously completed assays. Standard gold assays were completed in duplicate on the selected intervals as well as being completed using a screened metallic gold assay method. A summary of sample details as well as these assays can be located in Table I-2; complete details of screened metallic assay data can be located in Table I-3. Samples designated "Heino" were composited into predesignated A, B, and C sub-composites for assay. Following this, the entire mass of the samples designated "Heino" were composited into the "Heino Surface Composite" and the entire mass of the samples designated "East Ridge" were composited into the "East Ridge Composite"

A second shipment of bulk rock weighing about 205 kilograms was received on October 13, 2020 to form an additional composite for testing. Details of this shipment can be located in Table I-4. All this material received in this shipment was composited into "East Ridge Composite 2" for testing.

Storage has been paid on all material on site at ALS Metallurgy Kamloops and will remain in storage until August 2021 and then disposed of unless other arrangements are made.

TABLE I-1A
HEINO SAMPLES RECEIVED AUGUST 4, 2020

Zone ID	Weight kg	Sample Form	Location		Elevation m	Subcomposite Designation
			Easting	Northing		
2551	9.1	bulk rock	449015	5537224	2129	A
2552	9.2	bulk rock	449015	5537225	2129	A
2553	8.5	bulk rock	449014.5	5537224	2129	A
2554	9.6	bulk rock	449014.5	5537225	2129	A
2555	8.0	bulk rock	449014	5537225	2129	A
2556	10	bulk rock	449014	5537225	2129	B
2557	9.5	bulk rock	449013.5	5537225	2129	B
2558	8.7	bulk rock	449013.5	5537225	2129	B
2559	9.4	bulk rock	449013	5537225	2129	B
2560	9.2	bulk rock	449013	5537226	2129	B
2561	9.3	bulk rock	449012.5	5537225	2129	C
2562	9.5	bulk rock	449012.5	5537226	2129	C
2563	7.5	bulk rock	449012	5537225	2128	C
2564	7.9	bulk rock	449012	5537226	2128	C
2565	7.7	bulk rock	449011.5	5537226	2128	C
2566	7.2	bulk rock	449011.5	5537226	2128	C

TABLE I-1B
EAST RIDGE SAMPLES RECEIVED AUGUST 4, 2020

Zone ID	East Ridge kg	Sample Form	Drill Hole Number	Drill Hole Interval From (m)	To (m)	Subcomposite Designation
2567	0.6	1/2 core	151	77.7	78.0	B
2568	0.9	1/2 core	151	111.6	111.9	B
2569	3.9	1/2 core	151	120.3	122.3	A
2570	4.0	1/2 core	154	52.7	54.9	C
2571	3.6	1/2 core	154	58.7	60.5	C
2572	1.1	1/2 core	154	66.0	66.8	B
2573	2.1	1/2 core	150	5.3	6.4	C
2574	3.1	1/2 core	150	7.0	8.2	C
2575	0.7	1/2 core	150	26.7	27.1	C
2576	3.8	1/2 core	150	87.5	89.0	B
2577	5.0	1/2 core	150	90.8	92.4	B
2578	3.5	1/2 core	155	41.5	43.7	C
2579	4.1	1/2 core	155	63.4	65.1	B
2580	3.7	1/2 core	159	146.0	147.8	A
2581	1.5	1/2 core	159	153.9	154.8	A
2582	7.0	1/2 core	159	158.2	160.6	A
2583	4.0	1/2 core	159	181.1	182.9	A
2584	1.2	1/2 core	159	185.0	185.5	A
2585	2.3	1/2 core	160	86.6	87.5	B
2586	1.5	1/2 core	160	125.5	126.1	B
2587	4.1	1/2 core	160	127.1	128.9	B
2588	1.8	1/2 core	160	135.3	136.3	A
2589	1.6	1/2 core	160	144.5	145.4	A
2590	1.5	1/2 core	160	153.3	153.9	A
2591	0.5	1/2 core	161	78.0	78.3	C
2592	2.7	1/2 core	161	80.5	81.7	C
2593	7.4	1/2 core	161	108.1	111.3	B
2594	3.9	1/2 core	161	130.0	131.9	A
2595	2.7	1/2 core	161	144.2	145.3	A
2596	1.6	1/2 core	162	19.1	19.8	C
2597	1.0	1/2 core	162	21.8	22.4	C
2598	1.3	1/2 core	162	34.1	34.8	C
2599	1.3	1/2 core	162	36.3	36.9	C
2600	1.3	1/2 core	162	37.5	38.1	C
2601	0.8	1/2 core	162	47.2	47.9	C
2602	1.3	1/2 core	162	48.5	49.4	C
2603	1.7	1/2 core	162	56.1	56.7	C
2604	2.7	1/2 core	162	65.8	66.5	B
2605	3.7	1/2 core	162	85.8	87.2	B
2606	5.3	1/2 core	162	91.1	93.3	A

TABLE I-1B Continued
EAST RIDGE SAMPLES RECEIVED AUGUST 4, 2020

Zone ID	East Ridge kg	Sample Form	Drill Hole Number	Drill Hole Interval		Subcomposite Designation
				From (m)	To (m)	
2607	4.7	1/2 core	162	102.9	105.2	A
2608	2.4	1/2 core	163	7.3	8.5	C
2609	1.8	1/2 core	163	12.5	13.6	C
2610	3.8	1/2 core	163	41.2	42.7	C
2611	0.6	1/2 core	163	72.1	72.4	C
2612	1.7	1/2 core	163	82.9	83.8	B
2613	2.4	1/2 core	163	85.7	86.9	B
2614	2.1	1/2 core	163	97.8	98.9	A
2615	4.7	1/2 core	164	9.8	11.9	C
2616	3.0	1/2 core	164	45.1	46.8	C
2617	3.7	1/2 core	164	48.8	50.9	C
2618	2.4	1/2 core	164	78.0	78.9	B
2619	2.1	1/2 core	164	79.9	80.8	B
2620	0.8	1/2 core	164	85.0	86.3	B
2621	0.7	1/2 core	164	95.4	95.7	A
2622	4.6	1/2 core	164	97.8	99.8	A
2623	1.0	1/2 core	165	16.5	16.9	C
2624	2.0	1/2 core	165	21.6	22.7	C
2625	6.2	1/2 core	165	54.1	57.0	C
2626	4.4	1/2 core	165	93.0	94.8	A
2627	1.6	1/2 core	165	104.9	105.8	A
2627	1.9	1/2 core	166	25.9	27.0	C
2629	3.6	1/2 core	166	31.4	32.6	C
2630	1.4	1/2 core	166	45.1	45.7	B
2631	4.0	1/2 core	166	48.2	50.6	B
2632	4.3	1/2 core	166	58.8	60.6	B
2634	2.6	1/2 core	167	3.4	3.7	C
2635	2.0	1/2 core	167	15.4	16.5	C
2636	2.2	1/2 core	167	19.2	20.1	C
2637	1.3	1/2 core	167	32.0	32.6	C
2637	2.0	1/2 core	167	45.1	45.7	B
2638	7.0	1/2 core	167	48.2	50.6	B
2639	1.2	1/2 core	168	64.3	64.6	B
2640	6.4	1/2 core	169	91.8	94.2	A
2641	3.8	1/2 core	170	81.1	82.6	A
2642	3.9	1/2 core	173	25.9	27.9	C

TABLE I-2
SUBSAMPLE DETAILS

Sample ID	Zone	Drill Hole ID	Interval From (m)	Interval To (m)	Weight kg	Provided Au Assays	ALS Au FA #1	ALS Au FA #2	ALS Au SM	ALS Ag
N/A	Heino	Surface A	N/A	N/A	44.40	N/A	10.9	10.9	11.0	27
N/A	Heino	Surface B	N/A	N/A	46.80	N/A	48.9	57.8	63.3	10
N/A	Heino	Surface C	N/A	N/A	49.10	N/A	14.6	12.9	15.6	21
2569	East Ridge A	151	120.3	122.3	3.90	2.9	-	-	-	-
2580	East Ridge A	159	146.0	147.8	3.70	3.1	-	-	-	-
2581	East Ridge A	159	153.9	154.8	1.50	2.1	-	-	-	-
2582	East Ridge A	159	158.2	160.6	7.00	2.9	-	-	-	-
2583	East Ridge A	159	181.1	182.9	4.00	2.2	-	-	-	-
2584	East Ridge A	159	185.0	185.5	1.20	4.2	-	-	-	-
2588	East Ridge A	160	135.3	136.3	1.80	2.7	-	-	-	-
2589	East Ridge A	160	144.5	145.4	1.60	2.6	-	-	-	-
2590	East Ridge A	160	153.3	153.9	1.50	3.6	-	-	-	-
2594	East Ridge A	161	130.0	131.9	3.90	1.5	-	-	-	-
2595	East Ridge A	161	144.2	145.3	2.70	3.3	-	-	-	-
2606	East Ridge A	162	91.1	93.3	5.30	4.9	2.37	2.65	3.96	2
2607	East Ridge A	162	102.9	105.2	4.70	4.4	-	-	-	-
2614	East Ridge A	163	97.8	98.9	2.10	3.6	-	-	-	-
2621	East Ridge A	164	95.4	95.7	0.70	4.9	-	-	-	-
2622	East Ridge A	164	97.8	99.8	4.60	3.1	-	-	-	-
2626	East Ridge A	165	93.0	94.8	4.40	5.7	-	-	-	-
2627	East Ridge A	165	104.9	105.8	1.60	3.4	-	-	-	-
2640	East Ridge A	169	91.8	94.2	6.40	17.6	5.81	7.30	4.80	24
2641	East Ridge A	170	81.1	82.6	3.80	14.2	-	-	-	-

TABLE I-2
SUBSAMPLE DETAILS

Sample ID	Zone	Drill Hole ID	Interval From (m)	Interval To (m)	Weight kg	Provided Au Assays	ALS Au FA #1	ALS Au FA #2	ALS Au SM	ALS Ag
2576	East Ridge B	150	87.5	89.0	3.80	0.4	-	-	-	-
2577	East Ridge B	150	90.8	92.4	5.00	2.5	0.71	0.80	2.99	2
2567	East Ridge B	151	77.7	78.0	0.60	1.5	-	-	-	-
2568	East Ridge B	151	111.6	111.9	0.90	2.1	-	-	-	-
2572	East Ridge B	154	66.0	66.8	1.10	3.8	-	-	-	-
2579	East Ridge B	155	63.4	65.1	4.10	5.6	6.36	2.63	2.06	21
2585	East Ridge B	160	86.6	87.5	2.30	N/A	-	-	-	-
2586	East Ridge B	160	125.5	126.1	1.50	N/A	-	-	-	-
2587	East Ridge B	160	127.1	128.9	4.10	2.5	-	-	-	-
2593	East Ridge B	161	108.1	111.3	7.40	1.7	-	-	-	-
2604	East Ridge B	162	65.8	66.5	2.70	1.3	-	-	-	-
2605	East Ridge B	162	85.8	87.2	3.70	1.7	-	-	-	-
2612	East Ridge B	163	82.9	83.8	1.70	4.6	-	-	-	-
2613	East Ridge B	163	85.7	86.9	2.40	1.8	-	-	-	-
2618	East Ridge B	164	78.0	78.9	2.40	3.5	-	-	-	-
2619	East Ridge B	164	79.9	80.8	2.10	20.3	0.63	0.38	0.66	1
2620	East Ridge B	164	85.0	86.3	0.80	3.1	-	-	-	-
2630	East Ridge B	166	45.1	45.7	1.40	4.1	-	-	-	-
2631	East Ridge B	166	48.2	50.6	4.00	3.5	-	-	-	-
2632	East Ridge B	166	58.8	60.6	4.30	2.5	-	-	-	-
2637	East Ridge B	167	45.1	45.7	2.00	N/A	-	-	-	-
2638	East Ridge B	167	48.2	50.6	7.00	2.7	-	-	-	-
2639	East Ridge B	168	64.3	64.6	1.20	345.1	3.65	2.69	5.80	2

TABLE I-2
SUBSAMPLE DETAILS

Sample ID	Zone	Drill Hole ID	Interval From (m)	Interval To (m)	Weight kg	Provided Au Assays	ALS Au FA #1	ALS Au FA #2	ALS Au SM	ALS Ag
2573	East Ridge C	150	5.3	6.4	2.10	2.4	-	-	-	-
2574	East Ridge C	150	7.0	8.2	3.10	1.6	-	-	-	-
2575	East Ridge C	150	26.7	27.1	0.70	28.0	0.06	0.04	0.07	1
2570	East Ridge C	154	52.7	54.9	4.00	3.1	-	-	-	-
2571	East Ridge C	154	58.7	60.5	3.60	3.1	-	-	-	-
2578	East Ridge C	155	41.5	43.7	3.50	5.2	-	-	-	-
2591	East Ridge C	161	78.0	78.3	0.50	1.9	-	-	-	-
2592	East Ridge C	161	80.5	81.7	2.70	3.0	-	-	-	-
2596	East Ridge C	162	19.1	19.8	1.60	1.7	-	-	-	-
2597	East Ridge C	162	21.8	22.4	1.00	1.6	-	-	-	-
2598	East Ridge C	162	34.1	34.8	1.30	3.2	-	-	-	-
2599	East Ridge C	162	36.3	36.9	1.30	5.3	-	-	-	-
2600	East Ridge C	162	37.5	38.1	1.30	2.5	-	-	-	-
2601	East Ridge C	162	47.2	47.9	0.80	1.8	-	-	-	-
2602	East Ridge C	162	48.5	49.4	1.30	19.7	1.02	5.19	1.46	10
2603	East Ridge C	162	56.1	56.7	1.70	1.7	-	-	-	-
2608	East Ridge C	163	7.3	8.5	2.40	1.4	-	-	-	-
2609	East Ridge C	163	12.5	13.6	1.80	2.8	-	-	-	-
2610	East Ridge C	163	41.2	42.7	3.80	1.6	-	-	-	-
2611	East Ridge C	163	72.1	72.4	0.60	1.9	-	-	-	-
2615	East Ridge C	164	9.8	11.9	4.70	2.1	1.38	1.85	1.74	3
2616	East Ridge C	164	45.1	46.8	3.00	8.3	12.2	15.7	16.7	37
2617	East Ridge C	164	48.8	50.9	3.70	1.7	-	-	-	-
2623	East Ridge C	165	16.5	16.9	1.00	2.8	-	-	-	-
2624	East Ridge C	165	21.6	22.7	2.00	1.6	-	-	-	-
2625	East Ridge C	165	54.1	57.0	6.20	3.2	2.34	2.64	2.51	16
2627	East Ridge C	166	25.9	27.0	1.90	2.5	-	-	-	-
2629	East Ridge C	166	31.4	32.6	3.60	1.6	-	-	-	-
2634	East Ridge C	167	3.4	3.7	2.60	1.8	-	-	-	-
2635	East Ridge C	167	15.4	16.5	2.00	2.7	-	-	-	-
2636	East Ridge C	167	19.2	20.1	2.20	11.9	0.74	0.62	0.99	10
2637	East Ridge C	167	32.0	32.6	1.30	2.1	-	-	-	-
2642	East Ridge C	173	25.9	27.9	3.90	38.6	4.76	4.89	5.25	1

Notes: a) All gold and silver assays are displayed in g/tonne

b) Provided assay values are client provided assays from historical analyses and in several cases are averages of several assays.

TABLE I-3
SUBCOMPOSITE SCREENED METALLIC GOLD ASSAYS

Subcomposite	Assay Cut	Weight g	Au Assay g/tonne
Heino Comp A	+106µm Fraction	9.3	112
	Assay Cut #1 -106µm Fraction	30.0	8.89
	Assay Cut #2 -106µm Fraction	32.0	9.22
	Remainder -106µm Fraction	421.7	9.06
	Total	493.0	11.0
Heino Comp B	+106µm Fraction	17.9	930
	Assay Cut #1 -106µm Fraction	39.0	31.5
	Assay Cut #2 -106µm Fraction	34.6	30.7
	Remainder -106µm Fraction	408.6	31.1
	Total	584.5	31.0
Heino Comp C	+106µm Fraction	35.6	84.4
	Assay Cut #1 -106µm Fraction	36.3	11.0
	Assay Cut #2 -106µm Fraction	35.3	9.54
	Remainder -106µm Fraction	386.7	10.3
	Total	493.9	15.6
2577	+106µm Fraction	38.2	4.28
	Assay Cut #1 -106µm Fraction	39.6	3.05
	Assay Cut #2 -106µm Fraction	42.6	2.73
	Remainder -106µm Fraction	380.6	2.88
	Total	501.0	2.99
2575	+106µm Fraction	21.0	0.14
	Assay Cut #1 -106µm Fraction	40.7	0.07
	Assay Cut #2 -106µm Fraction	43.9	0.06
	Remainder -106µm Fraction	386.5	0.06
	Total	492.1	0.07
2579	+106µm Fraction	16.3	6.40
	Assay Cut #1 -106µm Fraction	39.0	1.86
	Assay Cut #2 -106µm Fraction	34.1	1.97
	Remainder -106µm Fraction	408.5	1.91
	Total	497.9	2.06
2602	+106µm Fraction	21.2	11.0
	Assay Cut #1 -106µm Fraction	38.4	0.84
	Assay Cut #2 -106µm Fraction	38.5	1.19
	Remainder -106µm Fraction	371.7	1.02
	Total	469.8	1.46
2606	+106µm Fraction	26.0	13.0
	Assay Cut #1 -106µm Fraction	35.2	3.65
	Assay Cut #2 -106µm Fraction	36.0	3.28
	Remainder -106µm Fraction	398.0	3.46
	Total	495.2	3.96

TABLE I-3

SUBCOMPOSITE SCREENED METALLIC GOLD ASSAYS

Subcomposite	Assay Cut	Weight g	Au Assay g/tonne
2615	+106μm Fraction	18.9	3.13
	Assay Cut #1 -106μm Fraction	39.9	1.71
	Assay Cut #2 -106μm Fraction	33.3	1.65
	Remainder -106μm Fraction	404.0	1.68
	Total	496.1	1.74
2616	+106μm Fraction	25.7	165
	Assay Cut #1 -106μm Fraction	40.4	8.08
	Assay Cut #2 -106μm Fraction	39.4	9.08
	Remainder -106μm Fraction	391.0	8.57
	Total	496.5	16.7
2619	+106μm Fraction	21.0	1.95
	Assay Cut #1 -106μm Fraction	40.0	0.66
	Assay Cut #2 -106μm Fraction	42.2	0.54
	Remainder -106μm Fraction	385.8	0.60
	Total	489.0	0.66
2625	+106μm Fraction	24.4	5.36
	Assay Cut #1 -106μm Fraction	35.5	2.22
	Assay Cut #2 -106μm Fraction	35.2	2.51
	Remainder -106μm Fraction	398.9	2.36
	Total	494.0	2.51
2636	+106μm Fraction	16.1	4.73
	Assay Cut #1 -106μm Fraction	38.2	0.79
	Assay Cut #2 -106μm Fraction	40.9	0.93
	Remainder -106μm Fraction	401.4	0.86
	Total	496.6	0.99
2639	+106μm Fraction	57.9	18.0
	Assay Cut #1 -106μm Fraction	32.9	4.08
	Assay Cut #2 -106μm Fraction	35.8	4.26
	Remainder -106μm Fraction	366.9	4.17
	Total	493.5	5.80
2640	+106μm Fraction	29.3	11.0
	Assay Cut #1 -106μm Fraction	33.4	4.36
	Assay Cut #2 -106μm Fraction	36.7	4.44
	Remainder -106μm Fraction	389.9	4.40
	Total	489.3	4.80
2642	+106μm Fraction	17.9	4.65
	Assay Cut #1 -106μm Fraction	35.1	5.22
	Assay Cut #2 -106μm Fraction	37.5	5.33
	Remainder -106μm Fraction	407.4	5.28
	Total	497.9	5.25

TABLE I-4
SAMPLES RECEIVED OCTOBER 13, 2020

SAMPLE ID	Weight kg	Sample Form
Tillicum East Ridge 1980m A	17.7	Bulk Rock
Tillicum East Ridge 1980m B	12.7	Bulk Rock
Tillicum East Ridge 1980m C	23.9	Bulk Rock
Tillicum East Ridge 1980m D	20.9	Bulk Rock
Tillicum East Ridge 1980m E	23.5	Bulk Rock
Tillicum East Ridge 1980m F	30.6	Bulk Rock
Tillicum East Ridge 1980m G	32.3	Bulk Rock
Tillicum East Ridge 1980m H	27.7	Bulk Rock
Tillicum East Ridge 1980m I	15.2	Bulk Rock

APPENDIX II - KM6240

METALLURGICAL TEST DATA

INDEX

DATE: September 25, 2020

PROJECT NO: KM6240-01A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of East Ridge Composite ground to a nominal 155µm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				6
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-01B

PURPOSE: Preliminary Rougher Test on Gravity Tailings.

PROCEDURE: Perform a one product rougher test.

FEED: 2 kg of Test 01A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								8.1	287
BULK CIRCUIT:									
Rougher 1		10		22		1	2	8.1	163
Rougher 2		10		11		1	2	8.0	164
Rougher 3		10		11		1	2	8.1	129
Rougher 4		10		11		1	4	8.1	94

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

KM6240-01 East Ridge Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.8	16.7	1.24	1.36	53.0	37.2	132	49.6	8.6	2.9	6.6	8.0	9.1	19.9
Bulk Ro Con 1	7.7	152.8	0.98	2.14	38.6	28.4	100	15.0	61.8	41.8	43.9	55.8	63.3	55.0
Bulk Ro Con 2	3.4	68.1	0.17	1.62	32.9	22.8	28	2.65	4.8	14.1	16.7	19.9	7.9	4.3
Bulk Ro Con 3	1.6	32.7	0.14	1.51	23.8	13.6	20	2.12	1.9	6.3	5.8	5.7	2.7	1.7
Bulk Ro Con 4	2.1	41.1	0.13	1.76	12.1	6.63	18	2.23	2.2	9.2	3.7	3.5	3.1	2.2
Bulk Ro Tail	84.3	1673.9	0.03	0.12	1.9	0.33	2	0.42	20.7	25.7	23.4	7.1	13.9	16.9
Feed	100.0	1985.3	0.12	0.39	6.8	3.92	12	2.10	100	100	100	100	100	100

KM6240-01 East Ridge Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.8	16.7	1.24	1.36	53.0	37.2	132	49.6	8.6	2.9	6.6	8.0	9.1	19.9
Product 2	7.7	152.8	0.98	2.14	38.6	28.4	100	15.0	61.8	41.8	43.9	55.8	63.3	55.0
Product 2 to 3	11.1	220.9	0.73	1.98	36.8	26.7	78	11.2	66.6	55.9	60.5	75.7	71.2	59.4
Product 2 to 4	12.8	253.6	0.65	1.92	35.2	25.0	70	10.0	68.5	62.2	66.3	81.4	73.9	61.0
Product 2 to 5	14.8	294.7	0.58	1.90	31.9	22.4	63	8.93	70.7	71.4	70.0	84.9	77.0	63.2
Product 6	84.3	1673.9	0.03	0.12	1.9	0.33	2	0.42	20.7	25.7	23.4	7.1	13.9	16.9
Feed	100.0	1985.3	0.12	0.39	6.8	3.92	12	2.1	100	100	100	100	100	100

Grav + Flot Con	15.7	311	0.62	1.87	33.1	23.2	67	11.1	79.3	74.3	76.6	92.9	86.1	83.1

DATE: September 25, 2020

PROJECT NO: KM6240-02A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 150µm K_{80}.

Stage	Inlet Pressure	Outlet Pressures Start	Outlet Pressures Finish	Time Minutes
Grind				6
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-02B

PURPOSE: Preliminary Rougher Test on Gravity Tailings.

PROCEDURE: Perform a one product rougher test.

FEED: 2 kg of Test 02A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.3	133
BULK CIRCUIT:									
Rougher 1		10		22		1	2	6.2	142
Rougher 2		10		22		1	2	6.4	164
Rougher 3		10		11		1	2	6.6	178
Rougher 4		10		11		1	4	6.7	170

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

KM6240-02 Heino Surface Composite

Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.8	16.5	2.22	1.08	43.2	34.6	644	2344	10.3	2.5	5.2	7.8	26.6	68.2
Bulk Ro Con 1	6.7	131.9	1.56	3.65	39.8	32.5	158	101	58.0	68.9	38.1	58.6	52.1	23.5
Bulk Ro Con 2	2.2	43.4	0.32	1.52	25.2	20.2	42	14.0	3.9	9.4	7.9	12.0	4.6	1.1
Bulk Ro Con 3	1.3	25.5	0.25	0.75	19.5	14.2	32	15.7	1.8	2.7	3.6	5.0	2.0	0.7
Bulk Ro Con 4	1.4	28.4	0.21	0.41	15.4	9.47	26	13.5	1.7	1.7	3.2	3.7	1.8	0.7
Bulk Ro Tail	87.5	1720.4	0.05	0.06	3.4	0.55	3	1.93	24.3	14.8	42.0	12.9	12.9	5.9
Feed	100.0	1966.1	0.18	0.36	7.0	3.72	20	28.8	100	100	100	100	100	100

KM6240-02 Heino Surface Composite

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.8	16.5	2.22	1.08	43.2	34.6	644	2344	10.3	2.5	5.2	7.8	26.6	68.2
Product 2	6.7	131.9	1.56	3.65	39.8	32.5	158	101	58.0	68.9	38.1	58.6	52.1	23.5
Product 2 to 3	8.9	175.3	1.25	3.12	36.2	29.5	129	79.3	61.9	78.3	46.1	70.6	56.7	24.5
Product 2 to 4	10.2	200.8	1.13	2.82	34.1	27.5	117	71.3	63.7	81.0	49.7	75.6	58.7	25.2
Product 2 to 5	11.7	229.2	1.01	2.52	31.8	25.3	106	64.1	65.4	82.7	52.8	79.3	60.5	25.9
Product 6	87.5	1720.4	0.05	0.06	3.4	0.55	3	1.93	24.3	14.8	42.0	12.9	12.9	5.9
Feed	100.0	1966.1	0.18	0.36	7.0	3.72	20	28.8	100	100	100	100	100	100

Grav + Flot Con	12.5	246	1.09	2.43	32.5	25.9	142	217	75.7	85.2	58.0	87.1	87.1	94.1

DATE: September 30, 2020

PROJECT NO: KM6240-03A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of East Ridge Composite ground to a nominal 155µm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				6
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-03B

PURPOSE: To Repeat Test 01 With More Collector.

PROCEDURE: Perform a one product rougher test.

FEED: 2 kg of Test 03A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								8.4	181
BULK CIRCUIT:									
Rougher 1		20		22		1	2	8.4	141
Rougher 2		15		11		1	2	8.4	91
Rougher 3		10		11		1	2	8.4	57
Rougher 4		10		11		1	4	8.3	35

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

KM6240-03 East Ridge Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.5	10.7	1.49	1.20	44.2	34.3	124	74.1	7.1	1.7	3.5	4.9	5.5	19.2
Bulk Ro Con 1	9.7	191.4	0.80	1.91	32.6	22.0	76	12.0	68.4	49.7	46.2	56.1	60.6	55.5
Bulk Ro Con 2	3.7	72.3	0.15	1.26	25.5	17.1	24	2.48	4.8	12.4	13.6	16.5	7.2	4.3
Bulk Ro Con 3	3.0	59.4	0.12	1.11	20.9	12.2	16	1.67	3.2	9.0	9.2	9.6	4.0	2.4
Bulk Ro Con 4	2.9	57.9	0.09	1.00	10.0	6.15	12	1.46	2.3	7.9	4.3	4.7	2.9	2.0
Bulk Ro Tail	80.2	1581.6	0.02	0.09	2.0	0.39	3	0.43	14.1	19.3	23.2	8.2	19.8	16.5
Feed	100.0	1973.3	0.11	0.37	6.8	3.81	12	2.09	100	100	100	100	100	100

KM6240-03 East Ridge Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.5	10.7	1.49	1.20	44.2	34.3	124	74.1	7.1	1.7	3.5	4.9	5.5	19.2
Product 2	9.7	191.4	0.80	1.91	32.6	22.0	76	12.0	68.4	49.7	46.2	56.1	60.6	55.5
Product 2 to 3	13.4	263.7	0.62	1.73	30.7	20.7	62	9.36	73.2	62.1	59.8	72.5	67.8	59.8
Product 2 to 4	16.4	323.1	0.53	1.62	28.9	19.1	53	7.95	76.4	71.0	69.0	82.2	71.8	62.2
Product 2 to 5	19.3	381.0	0.46	1.52	26.0	17.1	47	6.96	78.7	78.9	73.3	86.9	74.7	64.3
Product 6	80.2	1581.6	0.02	0.09	2.0	0.39	3	0.43	14.1	19.3	23.2	8.2	19.8	16.5
Feed	100.0	1973.3	0.11	0.37	6.8	3.81	12	2.09	100	100	100	100	100	100
Grav + Flot Con	19.8	392	0.49	1.51	26.5	17.6	49	8.80	85.9	80.7	76.8	91.8	80.2	83.5

DATE: September 30, 2020

PROJECT NO: KM6240-04A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 150µm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				6
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-04B

PURPOSE: To Repeat Test 02 With More Collector.

PROCEDURE: Perform a one product rougher test.

FEED: 2 kg of Test 04A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.5	161
BULK CIRCUIT:									
Rougher 1		20		33		1	2	6.5	131
Rougher 2		15		11		1	2	6.8	107
Rougher 3		10		11		1	2	6.9	93
Rougher 4		10		11		1	4	7.0	94

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

KM6240-04 Heino Surface Composite

Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.5	10.3	3.13	1.04	43.0	34.1	668	1156	8.8	1.5	3.2	4.7	17.3	31.4
Bulk Ro Con 1	9.3	182.9	1.32	2.98	27.8	25.2	126	113	65.7	78.4	37.3	61.5	57.9	54.3
Bulk Ro Con 2	3.3	65.9	0.21	0.60	20.0	14.9	28	13.4	3.8	5.7	9.7	13.1	4.6	2.3
Bulk Ro Con 3	1.9	38.3	0.17	0.27	15.6	10.2	20	11.2	1.8	1.5	4.4	5.2	1.9	1.1
Bulk Ro Con 4	2.7	54.1	0.16	0.16	10.4	4.90	14	7.89	2.4	1.2	4.1	3.5	1.9	1.1
Bulk Ro Tail	82.2	1621.4	0.04	0.05	3.5	0.55	4	2.29	17.6	11.7	41.3	11.9	16.3	9.8
Feed	100.0	1972.9	0.19	0.35	6.9	3.80	20	19.2	100	100	100	100	100	100

KM6240-04 Heino Surface Composite

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.5	10.3	3.13	1.04	43.0	34.1	668	1156	8.8	1.5	3.2	4.7	17.3	31.4
Product 2	9.3	182.9	1.32	2.98	27.8	25.2	126	113	65.7	78.4	37.3	61.5	57.9	54.3
Product 2 to 3	12.6	248.8	1.03	2.35	25.7	22.5	100	86.3	69.5	84.1	46.9	74.6	62.6	56.6
Product 2 to 4	14.6	287.1	0.91	2.07	24.4	20.8	89	76.3	71.2	85.6	51.3	79.9	64.5	57.7
Product 2 to 5	17.3	341.2	0.79	1.77	22.2	18.3	77	65.5	73.6	86.8	55.4	83.4	66.4	58.8
Product 6	82.2	1621.4	0.04	0.05	3.5	0.55	4	2.29	17.6	11.7	41.3	11.9	16.3	9.8
Feed	100.0	1972.9	0.19	0.35	6.9	3.80	20	19.2	100	100	100	100	100	100
Grav + Flot Con	17.8	352	0.86	1.75	22.8	18.8	95	97.4	82.4	88.3	58.7	88.1	83.7	90.2

DATE: October 5, 2020

PROJECT NO: KM6240-05A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of East Ridge Composite ground to a nominal 155μm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				6
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-05B

PURPOSE: Preliminary Cleaner Test.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Test 05A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								8.2	280
BULK CIRCUIT:									
Rougher 1		10		22		1	2	8.2	250
Rougher 2		10		11		1	2	8.3	216
Rougher 3		10		11		1	2	8.3	186
Rougher 4		10		11		1	4	8.2	122
Cleaner 1		6		22		1	5	8.3	218
Cleaner 2		3		11		1	4	8.3	185

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	1200

KM6240-05 East Ridge Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	1.0	18.9	1.25	1.25	55.8	36.8	106	70.8	9.8	3.4	7.9	9.4	8.1	28.6
Bulk Con	7.5	148.2	0.96	2.85	43.2	29.2	98	14.0	59.1	60.8	48.0	58.5	59.0	44.3
Bulk 2CT	2.3	46.1	0.22	0.96	27.7	18.7	26	3.88	4.2	6.4	9.6	11.6	4.9	3.8
Bulk 1CT	5.4	106.4	0.14	0.52	16.4	9.89	18	2.78	6.2	8.0	13.1	14.2	7.8	6.3
Bulk Rougher Tail	83.9	1661.2	0.03	0.09	1.7	0.28	3	0.48	20.7	21.5	21.4	6.3	20.2	17.0
Feed	100.0	1980.8	0.12	0.35	6.7	3.74	12	2.37	100	100	100	100	100	100

KM6240-05 East Ridge Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	1.0	18.9	1.25	1.25	55.8	36.8	106	70.8	9.8	3.4	7.9	9.4	8.1	28.6
Product 2	7.5	148.2	0.96	2.85	43.2	29.2	98	14.0	59.1	60.8	48.0	58.5	59.0	44.3
Product 2 to 3	9.8	194.3	0.78	2.40	39.5	26.7	81	11.6	63.3	67.1	57.6	70.1	63.8	48.1
Product 2 to 4	15.2	300.7	0.56	1.74	31.3	20.8	59	8.48	69.5	75.1	70.7	84.3	71.6	54.4
Product 5	83.9	1661.2	0.03	0.09	1.7	0.28	3	0.48	20.7	21.5	21.4	6.3	20.2	17.0
Feed	100.0	1980.8	0.12	0.35	6.7	3.74	12	2.37	100	100	100	100	100	100
Grav + Flot Con	8.4	167	0.99	2.67	44.6	30.1	99	20.4	68.9	64.2	55.9	67.9	67.1	72.8

DATE: October 5, 2020

PROJECT NO: KM6240-06A

PURPOSE: To Repeat Test 02 at a 100µm Primary Grind Target.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108µm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				8
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-06B

PURPOSE: To Repeat Test 02 at a Finer Primary Grind.

PROCEDURE: Perform a one product rougher test.

FEED: ~2 kg of Test 06A Gravity Tail.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.6	52
<u>BULK CIRCUIT:</u>									
Rougher 1		10		33		1	2	6.5	85
Rougher 2		10		-		1	2	6.8	156
Rougher 3		10		11		1	2	6.9	197
Rougher 4		10		11		1	4	7.0	207

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

KM6240-06 Heino Surface Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.8	15.4	2.62	1.05	43.2	33.0	512	1467	10.4	2.3	4.8	6.9	19.5	55.0
Bulk Ro Con 1	6.5	128.8	1.65	3.18	38.4	32.8	168	107	55.0	58.9	35.9	57.4	53.5	33.6
Bulk Ro Con 2	2.6	51.8	0.34	1.95	35.6	24.8	48	23.7	4.6	14.5	13.4	17.4	6.1	3.0
Bulk Ro Con 3	1.3	26.3	0.25	1.11	21.0	15.0	32	12.9	1.7	4.2	4.0	5.4	2.1	0.8
Bulk Ro Con 4	1.6	31.2	0.20	0.61	16.6	10.1	24	9.39	1.6	2.7	3.8	4.3	1.9	0.7
Bulk Ro Tail	87.1	1718.8	0.06	0.07	3.1	0.37	4	1.64	26.7	17.3	38.2	8.6	17.0	6.9
Feed	100.0	1972.3	0.20	0.35	7.0	3.73	21	20.8	100	100	100	100	100	100

KM6240-06 Heino Surface Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.8	15.4	2.62	1.05	43.2	33.0	512	1467	10.4	2.3	4.8	6.9	19.5	55.0
Product 2	6.5	128.8	1.65	3.18	38.4	32.8	168	107	55.0	58.9	35.9	57.4	53.5	33.6
Product 2 to 3	9.2	180.6	1.27	2.83	37.6	30.5	134	83.2	59.6	73.4	49.3	74.8	59.6	36.6
Product 2 to 4	10.5	206.9	1.14	2.61	35.5	28.5	121	74.2	61.3	77.6	53.3	80.2	61.7	37.4
Product 2 to 5	12.1	238.1	1.02	2.35	33.0	26.1	108	65.7	62.9	80.4	57.0	84.5	63.5	38.1
Product 6	87.1	1718.8	0.06	0.07	3.1	0.37	4	1.64	26.7	17.3	38.2	8.6	17.0	6.9
Feed	100.0	1972.3	0.20	0.35	7.0	3.73	21	20.8	100	100	100	100	100	100
Grav + Flot Con	12.9	253.5	1.12	2.27	33.6	26.5	133	151	73.3	82.7	61.8	91.4	83.0	93.1

DATE: October 23, 2020

PROJECT NO: KM6240-07

PURPOSE: To Repeat Test 06 Without a Gravity Circuit.

PROCEDURE: Perform a one product rougher test.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108µm K_{80}.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Primary Grind					8			5.9	9
BULK CIRCUIT:									
Rougher 1		10		33		1	2	5.9	-10
Rougher 2		10		11		1	2	5.8	81
Rougher 3		10		11		1	2	5.8	91
Rougher 4		10		11		1	4	6.0	137

Flotation Data	Rougher	
Flotation Machine	Denver	
Cell Size in liters	4.4	
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	

Grinding Data	Primary Grind
Mill:	M6-Mild
Charge/Material:	20kg-Mild
Water:	1000ml

KM6240-07 Heino Surface Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Bulk Ro Con 1	6.7	132.8	1.94	2.86	39.4	34.0	190	257	64.8	54.0	38.9	61.2	70.9	76.9
Bulk Ro Con 2	3.7	72.6	0.32	2.77	31.4	23.7	78	66.7	5.8	28.6	16.9	23.3	15.9	10.9
Bulk Ro Con 3	1.3	26.5	0.27	1.10	13.6	10.3	24	77.7	1.8	4.1	2.7	3.7	1.8	4.6
Bulk Ro Con 4	1.6	30.7	0.22	0.25	9.9	4.97	20	11.1	1.7	1.1	2.3	2.1	1.7	0.8
Bulk Ro Tail	86.7	1715.4	0.06	0.05	3.1	0.42	2	1.76	25.9	12.2	39.3	9.8	9.6	6.8
Feed	100.0	1978.0	0.20	0.36	6.8	3.73	18	22.4	100	100	100	100	100	100

KM6240-07 Heino Surface Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	6.7	132.8	1.94	2.86	39.4	34.0	190	257	64.8	54.0	38.9	61.2	70.9	76.9
Product 1 to 2	10.4	205.4	1.37	2.83	36.6	30.4	150	189	70.6	82.6	55.8	84.5	86.8	87.8
Product 1 to 3	11.7	231.9	1.24	2.63	33.9	28.1	136	177	72.4	86.7	58.5	88.2	88.6	92.4
Product 1 to 4	13.3	262.6	1.12	2.35	31.1	25.4	122	157	74.1	87.8	60.7	90.2	90.4	93.2
Product 5	86.7	1715.4	0.06	0.05	3.1	0.42	2	1.76	25.9	12.2	39.3	9.8	9.6	6.8
Feed	100.0	1978.0	0.20	0.36	6.8	3.73	18	22.4	100	100	100	100	100	100

DATE: October 27, 2020

PROJECT NO: KM6240-08A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108µm K_{80}.

Stage	Inlet Pressure	Outlet Pressures		Time Minutes
		Start	Finish	
Grind				8
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-08B

PURPOSE: Preliminary Cleaner Test.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Test 08A Gravity Tail.
Bulk Rougher Concentrate - 99µm K_{80}.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.2	96
BULK CIRCUIT:									
Rougher 1		10		22		1	2	6.2	64
Rougher 2		10		11		1	2	6.3	174
Rougher 3		10		11		1	2	6.5	195
Rougher 4		10		22		1	4	6.5	196
Cleaner 1		8		22		1	4	6.6	223
Cleaner 2		5		11		1	3	7.2	262
Cleaner 3		3		11		1	2	7.5	253

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	1200

KM6240-08 Heino Surface Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.8	16.4	1.24	0.98	41.0	32.3	440	2427	5.5	2.3	5.2	7.1	19.7	66.7
Bulk Con	7.7	152.4	1.45	3.53	40.6	36.0	142	102	59.6	77.1	47.6	74.0	59.1	26.0
Bulk 3CT*	0.3	5.3	0.64	0.98	25.4	20.8	66	50.0	0.9	0.7	1.0	1.5	1.0	0.4
Bulk 2CT	0.7	13.1	0.46	0.53	18.1	13.7	52	31.9	1.6	1.0	1.8	2.4	1.9	0.7
Bulk 1CT	3.3	64.6	0.26	0.17	11.0	5.64	24	11.7	4.5	1.6	5.5	4.9	4.2	1.3
Bulk Rougher Tail	87.2	1720.3	0.06	0.07	2.9	0.43	3	1.70	27.8	17.3	38.9	10.0	14.1	4.9
Feed	100.0	1972.1	0.19	0.35	6.6	3.76	19	30.3	100	100	100	100	100	100

Note: *Not enough sample for gold assay, value estimated.

KM6240-08 Heino Surface Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.8	16.4	1.24	0.98	41.0	32.3	440	2427	5.5	2.3	5.2	7.1	19.7	66.7
Product 2	7.7	152.4	1.45	3.53	40.6	36.0	142	102	59.6	77.1	47.6	74.0	59.1	26.0
Product 2 to 3	8.0	157.7	1.42	3.44	40.1	35.5	139	100	60.5	77.9	48.6	75.5	60.1	26.4
Product 2 to 4	8.7	170.8	1.35	3.22	38.4	33.8	133	94.8	62.1	78.9	50.5	78.0	61.9	27.1
Product 2 to 5	11.9	235.4	1.05	2.38	30.9	26.1	103	72.0	66.7	80.4	55.9	82.9	66.2	28.4
Product 6	87.2	1720.3	0.06	0.07	2.9	0.43	3	1.70	27.8	17.3	38.9	10.0	14.1	4.9
Feed	100.0	1972.1	0.19	0.35	6.6	3.76	19	30.3	100	100	100	100	100	100
Grav + Flot Con	8.6	169	1.43	3.28	40.6	35.6	171	327.7	65.1	79.4	52.8	81.2	78.8	92.7

DATE: October 27, 2020

PROJECT NO: KM6240-09A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108µm K_{80}.

Stage	Inlet	Outlet Pressures		Time
	Pressure	Start	Finish	Minutes
Grind				8
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-09B

PURPOSE: Preliminary Cleaner Test.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Test 09A Gravity Tail.
Bulk Regrind Discharge - 47µm K_{80}.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.7	97
BULK CIRCUIT:									
Rougher 1		10		22		1	2	6.6	172
Rougher 2		10		11		1	2	6.6	214
Rougher 3		10		11		1	2	6.7	208
Rougher 4		10		22		1	4	6.8	198
Regrind					5			6.8	266
Cleaner 1		8		22		1	4	6.9	237
Cleaner 2		5		11		1	3	7.3	213
Cleaner 3		3		11		1	2	7.5	212

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	1200

Grinding Data	Copper Regrind
Mill:	RM3-Mild
Charge/Material:	6kg-Stainless Steel
Water:	estimated

KM6240-09 Heino Surface Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	1.1	21.0	2.03	1.14	43.2	35.5	584	2796	11.7	3.1	6.7	10.1	32.5	77.0
Bulk Con	5.0	98.0	1.95	5.00	41.6	38.8	198	129	52.3	62.8	30.3	51.6	51.4	16.6
Bulk 3CT*	0.3	6.0	0.41	0.85	39.8	29.9	54	50.0	0.7	0.7	1.8	2.4	0.9	0.4
Bulk 2CT	0.7	13.0	0.37	0.80	32.8	23.1	44	35.5	1.3	1.3	3.2	4.1	1.5	0.6
Bulk 1CT	4.9	95.6	0.21	0.63	21.7	15.2	18	12.2	5.5	7.7	15.4	19.7	4.6	1.5
Bulk Rougher Tail	88.1	1733.1	0.06	0.11	3.3	0.51	2	1.70	28.5	24.4	42.6	12.0	9.2	3.9
Feed	100.0	1966.7	0.19	0.40	6.8	3.74	19	38.8	100	100	100	100	100	100

Note: *Not enough sample for gold assay, value estimated.

KM6240-09 Heino Surface Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	1.1	21.0	2.03	1.14	43.2	35.5	584	2796	11.7	3.1	6.7	10.1	32.5	77.0
Product 2	5.0	98.0	1.95	5.00	41.6	38.8	198	129	52.3	62.8	30.3	51.6	51.4	16.6
Product 2 to 3	5.3	104.0	1.86	4.76	41.5	38.3	190	124	53.0	63.4	32.1	54.1	52.3	17.0
Product 2 to 4	5.9	117.0	1.70	4.32	40.5	36.6	174	114	54.3	64.8	35.2	58.1	53.8	17.6
Product 2 to 5	10.8	212.6	1.03	2.66	32.1	27.0	104	68.5	59.8	72.5	50.6	77.9	58.3	19.1
Product 6	88.1	1733.1	0.06	0.11	3.3	0.51	2	1.70	28.5	24.4	42.6	12.0	9.2	3.9
Feed	100.0	1966.7	0.19	0.40	6.8	3.74	19	38.8	100	100	100	100	100	100

Grav + Flot Con	6.1	119	1.96	4.32	41.9	38.2	266	599.6	64.0	65.9	37.0	61.8	83.9	93.6

DATE: October 29, 2020

PROJECT NO: KM6240-10A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108μm K_{80}.

Stage	Inlet Pressure	Outlet Pressures Start	Outlet Pressures Finish	Time Minutes
Grind				8
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-10B

PURPOSE: To Repeat Test 09 at a pH of 10.0 in the Cleaner.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Test 10A Gravity Tail.
Bulk Regrind Discharge - 43μm K_{80}.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.6	208
BULK CIRCUIT:									
Rougher 1		10		22		1	2	6.5	190
Rougher 2		10		11		1	2	6.8	216
Rougher 3		10		11		1	2	6.9	230
Rougher 4		10		11		1	4	7.1	203
Regrind	250				5			8.8	214
Cleaner 1	100	8		22		1	4	10.0	102
Cleaner 2	√	5		11		1	3	10.0	120
Cleaner 3	√	3		11		1	2	10.0	138

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	1200

Grinding Data	Copper Regrind
Mill:	RM3-Mild
Charge/Material:	6kg-Stainless Steel
Water:	estimated

KM6240-10 Heino Surface Composite
Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	1.1	20.7	1.72	1.03	39.2	28.9	462	2083	9.5	3.0	6.1	8.1	25.8	70.8
Bulk Con	3.7	72.5	2.56	5.50	39.8	38.4	256	177	49.3	55.7	21.9	37.9	50.0	21.1
Bulk 3CT*	0.5	10.1	0.52	2.11	41.8	32.2	60	33.6	1.4	3.0	3.2	4.4	1.6	0.6
Bulk 2CT	0.8	15.0	0.43	1.51	31.8	24.9	54	22.1	1.7	3.2	3.6	5.1	2.2	0.5
Bulk 1CT	5.5	107.7	0.20	0.89	26.1	18.7	22	9.20	5.7	13.4	21.3	27.4	6.4	1.6
Bulk Rougher Tail	88.5	1739.5	0.07	0.09	3.3	0.72	3	1.88	32.4	21.9	43.9	17.0	14.1	5.4
Feed	100.0	1965.5	0.19	0.36	6.7	3.74	19	31.0	100	100	100	100	100	100

Note: *Not enough sample for gold assay, value estimated.

KM6240-10 Heino Surface Composite
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	1.1	20.7	1.72	1.03	39.2	28.9	462	2083	9.5	3.0	6.1	8.1	25.8	70.8
Product 2	3.7	72.5	2.56	5.50	39.8	38.4	256	177	49.3	55.7	21.9	37.9	50.0	21.1
Product 2 to 3	4.2	82.6	2.31	5.09	40.0	37.6	232	160	50.7	58.6	25.1	42.3	51.6	21.7
Product 2 to 4	5.0	97.6	2.02	4.54	38.8	35.7	205	139	52.4	61.8	28.7	47.4	53.8	22.2
Product 2 to 5	10.4	205.3	1.07	2.62	32.1	26.8	109	70.7	58.2	75.2	50.0	74.8	60.2	23.8
Product 6	88.5	1739.5	0.07	0.09	3.3	0.72	3	1.88	32.4	21.9	43.9	17.0	14.1	5.4
Feed	100.0	1965.5	0.19	0.36	6.7	3.74	19	31.0	100	100	100	100	100	100

Grav + Flot Con	4.7	93	2.37	4.51	39.7	36.3	302	600.6	58.8	58.6	28.0	46.0	75.7	91.9

DATE: November 3, 2020

PROJECT NO: KM6240-11A

PURPOSE: To Produce Tailings for Flotation.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 2 kg of Heino Surface Composite ground to a nominal 108μm K_{80}.

Stage	Inlet Pressure	Outlet Pressures		Time Minutes
		Start	Finish	
Grind				8
KN Separation 1	65	1.2	1.6	5

PROJECT NO: KM6240-11B

PURPOSE: To Repeat Test 10 at a Finer Regrind.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Test 11A Gravity Tail.
Bulk Regrind Discharge - 34μm K_{80}.

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
		PAX		MIBC	Grind	Cond.	Float		
Natural								6.7	70
BULK CIRCUIT:									
Rougher 1		10		22		1	2	6.4	57
Rougher 2		10		11		1	2	7.0	81
Rougher 3		10		11		1	2	7.1	108
Rougher 4		10		11		1	4	7.3	90
Regrind	350				10			9.4	160
Cleaner 1	50	10		22		1	5	10.0	52
Cleaner 2	√	6		11		1	4	10.0	79
Cleaner 3	√	3		11		1	3	10.0	122

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Fresh	
Impeller Speed in rpm	1100	1200

Grinding Data	Copper Regrind
Mill:	RM3-Mild
Charge/Material:	6kg-Stainless Steel
Water:	estimated

KM6240-11 Heino Surface Composite

Overall Metallurgical Balance

Product	Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.8	16.4	1.76	0.95	43.0	32.7	547	2340	7.8	2.2	5.4	7.3	24.7	68.5
Bulk Con	2.9	56.4	3.57	6.10	38.0	38.9	330	216	54.3	48.1	16.4	29.8	51.3	21.8
Bulk 3CT*	0.2	4.9	0.58	2.52	39.0	30.4	70	50.0	0.8	1.7	1.5	2.0	0.9	0.4
Bulk 2CT	0.7	12.9	0.48	2.03	33.5	25.6	54	36.9	1.7	3.7	3.3	4.5	1.9	0.8
Bulk 1CT	6.8	133.4	0.20	1.33	29.7	22.1	18	9.77	7.2	24.8	30.2	40.1	6.6	2.3
Bulk Rougher Tail	88.6	1744.3	0.06	0.08	3.3	0.69	3	1.96	28.2	19.5	43.3	16.4	14.4	6.1
Feed	100.0	1968.3	0.19	0.36	6.7	3.74	18	28.5	100	100	100	100	100	100

Note: *Not enough sample for gold assay, value estimated.

KM6240-11 Heino Surface Composite

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - percent or g/tonne						Distribution - percent					
	%	grams	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Product 1	0.8	16.4	1.76	0.95	43.0	32.7	547	2340	7.8	2.2	5.4	7.3	24.7	68.5
Product 2	2.9	56.4	3.57	6.10	38.0	38.9	330	216	54.3	48.1	16.4	29.8	51.3	21.8
Product 2 to 3	3.1	61.3	3.33	5.81	38.1	38.2	309	203	55.1	49.8	17.8	31.8	52.3	22.2
Product 2 to 4	3.8	74.2	2.84	5.16	37.3	36.0	265	174	56.8	53.5	21.1	36.3	54.2	23.0
Product 2 to 5	10.5	207.6	1.14	2.70	32.4	27.1	106	68.4	64.0	78.3	51.4	76.4	60.8	25.4
Product 6	88.6	1744.3	0.06	0.08	3.3	0.69	3	1.96	28.2	19.5	43.3	16.4	14.4	6.1
Feed	100.0	1968.3	0.19	0.36	6.7	3.74	18	28.5	100	100	100	100	100	100
Grav + Flot Con	3.7	73	3.16	4.94	39.1	37.5	379	694.5	62.1	50.3	21.7	37.1	76.1	90.3

DATE: August 11, 2020

PROJECT NO: KM6240-12A

PURPOSE: To Extract Gravity Recoverable Gold.

PROCEDURE: Perform a standard Knelson and panning procedure.

FEED: 10 kg of Heino Surface Composite ground to a nominal 108µm K_{80}.

Stage	Inlet Pressure	Outlet Pressures Start	Outlet Pressures Finish	Time Minutes
Grind				8
KN Separation 1	65	1.2	1.6	25

PROJECT NO: KM6240-12B

PURPOSE: Preliminary Locked Cycle Test.

PROCEDURE: Perform a one product locked cycle test.

FEED: 5 x 2 Test 12A Gravity Tailings.
Bulk 1st Cleaner Tail - 33µm K_{80}

Stage	Reagents Added g/tonne				Time (minutes)			pH	Redox
	Lime	PAX		MIBC	Grind	Cond.	Float		
Natural								6.5	172
BULK CIRCUIT:									
Rougher 1		10		44		1	2	6.8	124
Rougher 2		10		11		1	2	6.9	132
Rougher 3		10		11		1	2	7.0	136
Rougher 4		10		11		1	4	7.1	124
Regrind	550				12			10.0	200
Cleaner 1	-	10		22		1	5	10.0	155
Cleaner 2	√	6		11		1	4	10.0	157
Cleaner 3	√	3		11		1	3	10.0	160

Flotation Data	Rougher	Cleaner
Flotation Machine	Denver	Denver
Cell Size in liters	4.4	2.2
Aspiration	Air	
Water Type	Tap	
Impeller Speed in rpm	1100	1200

Grinding Data	Bulk Regrind
Mill:	RM3-Mild
Charge/Material:	6kg-Stainless Steel
Water:	estimated

KM6240-12
Estimated Dry Weight Table

Product	Cycles - Weight (gms)				
	I	II	III	IV	V
BULK CIRCUIT:					
Rougher Concentrate	275	250	250	230	230
Cleaner Tail 1	190	200	200	175	175
Cleaner Tail 2	21	26	23	28	29
Cleaner Tail 3	7	8	10	11	11
Bulk Concentrate	70	71	73	66	77
Flotation Feed pH	6.5	6.3	6.4	6.7	6.6
Flotation Feed Redox	172	115	182	252	178

KM6240-12 Heino Surface Composite
OVERALL CYCLE TEST MASS AND METALLURGICAL BALANCE

Product	Weight %	Weight g	Assay - percent or g/tonne						Distribution - percent					
			Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
Pan Con	0.25	24.8	3.36	0.68	46.0	32.8	1172	6614	4.5	0.5	1.4	2.2	16.5	61.6
Bulk Con I	0.71	70.7	2.95	6.10	38.4	38.4	282	183	11.3	12.0	3.3	7.4	11.3	4.9
Bulk Con II	0.70	69.0	3.17	6.60	38.7	39.5	304	238	11.8	12.7	3.2	7.5	11.9	6.2
Bulk Con III	0.75	73.7	3.19	6.00	38.1	39.4	308	267	12.7	12.3	3.4	8.0	12.8	7.4
Bulk Con IV	0.63	62.6	3.04	6.80	37.5	39.0	308	226	10.3	11.8	2.8	6.7	10.9	5.3
Bulk Con V	0.77	76.1	2.92	6.40	37.7	38.9	276	206	12.0	13.5	3.5	8.1	11.9	5.9
Bulk 3CT	0.10	10.0	0.49	2.23	35.6	28.9	60	41.0	0.3	0.6	0.4	0.8	0.3	0.2
Bulk 2CT	0.25	24.6	0.34	1.55	28.4	20.5	38	21.9	0.5	1.1	0.8	1.4	0.5	0.2
Bulk 1CT I	2.00	198.0	0.16	1.01	26.0	16.4	14	7.07	1.7	5.6	6.2	8.9	1.6	0.5
Bulk 1CT II	2.03	200.9	0.18	0.94	28.9	18.8	16	8.58	2.0	5.3	7.0	10.4	1.8	0.6
Bulk 1CT III	2.03	200.4	0.20	0.97	30.2	20.6	16	9.87	2.2	5.4	7.3	11.3	1.8	0.7
Bulk 1CT IV	1.63	161.2	0.19	0.90	23.3	15.0	18	5.94	1.7	4.0	4.5	6.6	1.6	0.4
Bulk 1CT V	1.71	169.1	0.17	0.92	25.8	16.1	16	7.96	1.6	4.3	5.3	7.5	1.5	0.5
Bulk RoTl I	17.1	1688.2	0.06	0.05	4.7	0.41	3	1.65	5.5	2.3	9.6	1.9	2.9	1.0
Bulk RoTl II	17.3	1714.1	0.06	0.05	4.8	0.43	4	1.81	5.6	2.4	10.0	2.0	3.9	1.2
Bulk RoTl III	17.6	1742.5	0.06	0.04	4.8	0.43	3	1.66	5.6	1.9	10.1	2.1	3.0	1.1
Bulk RoTl IV	16.8	1663.5	0.06	0.05	4.9	0.66	3	1.80	5.4	2.3	9.9	3.0	2.8	1.1
Bulk RoTl V	17.6	1739.4	0.06	0.04	5.3	0.90	3	2.00	5.6	1.9	11.2	4.3	3.0	1.3
FEED	100	9889	0.19	0.36	8.4	3.69	18	26.9	100.0	100.0	100.0	100.0	100.0	100.0

KM6240-12 Heino Surface Composite
METALLURGICAL BALANCES BY TEST CYCLES

Product	Weight	Weight	Assay - percent or g/tonne						Distribution - percent					
	%	g	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
CYCLE IV														
Feed	100.0	1892	0.18	0.35	7.65	3.23	17	26.9	100.0	100.0	100.0	100.0	100.0	100.0
Gravity Pan Con	0.26	5.0	3.36	0.68	46.0	32.8	1172	6614	4.9	0.5	1.6	2.7	17.6	64.5
Bulk Con	3.31	62.6	3.04	6.80	37.5	39.0	308	226	56.4	64.8	16.2	39.9	58.5	27.8
Bulk 1CT	8.52	161.2	0.19	0.90	23.3	15.0	18	5.94	9.1	22.1	25.9	39.5	8.8	1.9
Bulk Ro Tail	87.9	1663.5	0.06	0.05	4.90	0.66	3	1.80	29.6	12.7	56.3	17.9	15.1	5.9
CYCLE V														
Feed	100.0	1990	0.19	0.36	8.39	3.73	18	27.6	100.0	100.0	100.0	100.0	100.0	100.0
Gravity Pan Con	0.26	5.0	3.36	0.68	46.0	32.8	1172	6614	4.7	0.5	1.4	2.3	17.4	62.7
Bulk Con	3.82	76.1	2.92	6.40	37.7	38.9	276	206	59.6	68.0	17.2	39.9	59.9	28.5
Bulk 1CT	8.50	169.1	0.17	0.92	25.8	16.1	16	7.96	7.7	21.7	26.1	36.7	7.7	2.4
Bulk Ro Tail	87.4	1739.4	0.06	0.04	5.30	0.90	3	2.00	28.0	9.7	55.2	21.1	14.9	6.3
CYCLES IV and V														
Feed	100.0	3882	0.18	0.35	8.03	3.49	17	26.8	100.0	100.0	100.0	100.0	100.0	100.0
Gravity Pan Con	0.26	9.9	3.36	0.68	46.0	32.8	1172	6614	4.7	0.5	1.5	2.4	17.2	63.0
Bulk Con	3.57	138.7	2.97	6.58	37.6	38.9	290	215	58.2	66.5	16.7	39.9	59.5	28.6
Bulk 1CT	8.51	330.3	0.18	0.91	24.6	15.6	17	6.97	8.4	21.9	26.1	38.0	8.3	2.2
Bulk Ro Tail	87.7	3402.9	0.06	0.04	5.10	0.78	3	1.90	28.8	11.1	55.7	19.7	15.1	6.2

Cycle Test Stability Data

Cycles	Mass		Calculated Head						Metal Unit Variances (%)					
	%Var.	g/cycle	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
I	-0.8	1961.9	0.18	0.37	8.17	3.47	17	25.4	-3	0	-3	-7	-5	-6
II	0.6	1989.0	0.19	0.37	8.51	3.72	19	27.2	1	2	2	1	4	1
III	2.2	2021.6	0.20	0.35	8.63	3.93	18	28.4	7	-1	6	9	5	8
IV	-4.3	1892.3	0.18	0.35	7.65	3.23	17	26.9	-9	-9	-12	-16	-7	-5
V	0.6	1989.6	0.19	0.36	8.38	3.72	17	26.8	0	0	1	2	-2	0
Total	-	1977.8	0.19	0.36	8.36	3.69	18	26.9	-	-	-	-	-	-

KM6240-12 Heino Surface Composite

CYCLES (IV+V) MASS BALANCE FLOWSHEET AND METALLURGICAL BALANCE DATA

Flotation Stream		Weight	Assay (percent or g/tonne)						Distribution (percent)					
No.	Product	%	Pb	Zn	Fe	S	Ag	Au	Pb	Zn	Fe	S	Ag	Au
1	Feed	100.0	0.18	0.35	8.0	3.49	17	26.8	100	100	100	100	100	100.0
2	Gravity Pan Con	0.26	3.36	0.68	46.0	32.8	1172	6614	4.7	0.5	1.5	2.4	17.2	63.0
3	Gravity Tails	99.7	0.17	0.35	7.9	3.41	14	9.97	95.3	99.5	98.5	97.6	82.8	37.0
4	Bulk Ro Feed	99.7	0.17	0.35	7.9	3.41	14	9.97	95.3	99.5	98.5	97.6	82.8	37.0
5	Bulk Ro Tail	87.7	0.06	0.04	5.1	0.78	3	1.90	28.8	11.1	55.7	19.7	15.1	6.2
6	Bulk Ro Con	12.1	1.01	2.59	28.4	22.5	98	68.5	66.5	88.4	42.8	77.9	67.8	30.8
7	Bulk 1st Clnr Feed	13.8	0.93	2.48	28.7	22.5	91	63.3	70.2	97.0	49.4	89.4	72.2	32.6
8	Bulk 1st Clnr Tail	8.5	0.18	0.91	24.6	15.6	17	6.97	8.4	21.9	26.1	38.0	8.3	2.2
9	Bulk 1st Clnr Con	5.3	2.13	5.00	35.3	33.7	210	154	61.8	75.1	23.3	51.4	63.9	30.4
10	Bulk 2nd Clnr Tail	1.2	0.34	1.55	28.4	20.5	38	21.9	2.3	5.4	4.4	7.3	2.7	1.0
11	Bulk 2nd Clnr Con	4.1	2.67	9.23	16.5	9.32	115	215	59.5	69.7	19.0	44.1	61.2	29.4
12	Bulk 3rd Clnr Tail	0.5	0.49	2.23	35.6	28.9	60	41.0	1.3	3.2	2.2	4.2	1.7	0.8
13	Bulk 3rd Clnr Con	3.6	2.97	6.58	37.6	38.9	290	215	58.2	66.5	16.7	39.9	59.5	28.6
14	Gravity + Flot Con	3.8	3.00	6.19	38.2	38.5	349	642	62.8	67.0	18.2	42.3	76.6	91.6

APPENDIX III - KM6240

PARTICLE SIZING DATA

INDEX

TABLE III-1
SCREEN ANALYSIS
KM6240 East Ridge Composite - 6 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.80	99.2
65 Mesh	212	8.50	90.7
100 Mesh	150	11.80	78.9
150 Mesh	106	11.90	67.0
200 Mesh	75	12.00	55.0
270 Mesh	53	12.00	43.0
400 Mesh	38	11.30	31.7
TOTAL		100.00	**

K80= 155µm

Note: 6 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

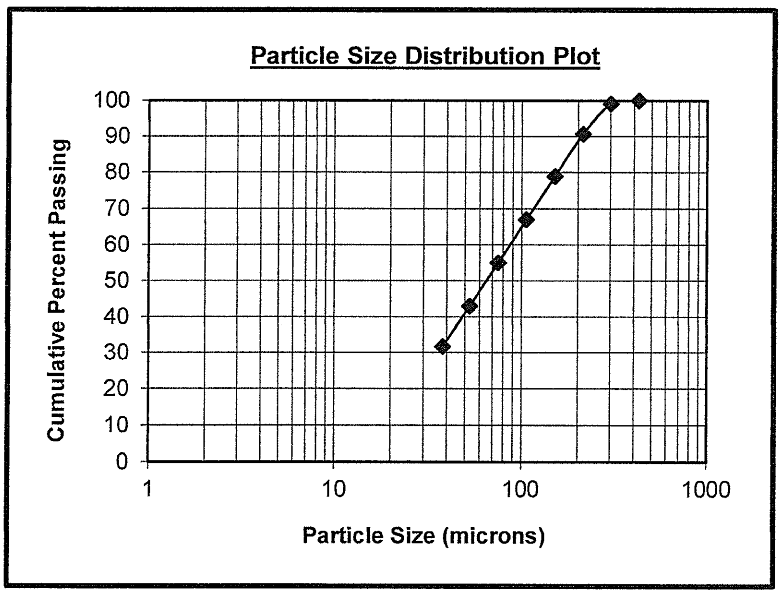


TABLE III-2

SCREEN ANALYSIS

KM6240 East Ridge Composite - 7 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.20	99.8
65 Mesh	212	2.20	97.6
100 Mesh	150	10.20	87.4
150 Mesh	106	13.40	74.0
200 Mesh	75	13.70	60.3
270 Mesh	53	13.40	46.9
400 Mesh	38	12.40	34.5
TOTAL		100.00	**

K80= 125µm

Note: 7 min. grind calibration using 2 kg. Ore, 1000 ml water and 20 kg. of Mild Steel rods in Mill: M6

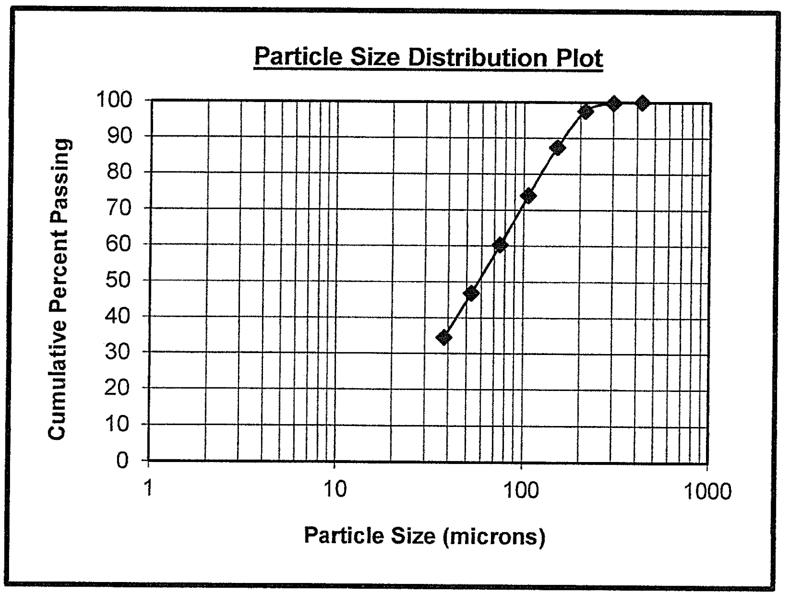


TABLE III-3
SCREEN ANALYSIS
KM6240 East Ridge Composite - 10 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	1.30	98.7
150 Mesh	106	9.60	89.1
200 Mesh	75	15.80	73.3
270 Mesh	53	17.40	55.9
400 Mesh	38	15.60	40.3
TOTAL		100.00	**

K80= 88µm

Note: 10 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

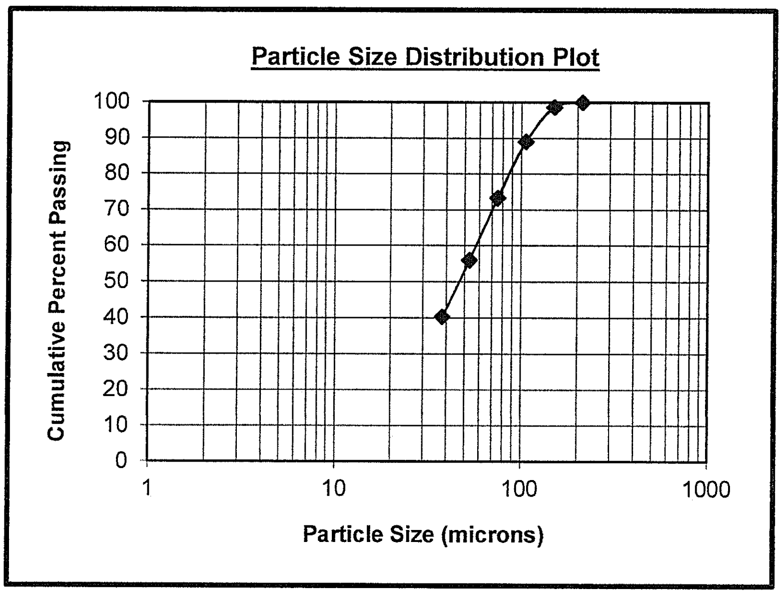


TABLE III-4

SCREEN ANALYSIS

KM6240 East Ridge Composite 2 - 10 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.90	99.1
65 Mesh	212	10.70	88.4
100 Mesh	150	13.50	74.9
150 Mesh	106	11.80	63.1
200 Mesh	75	10.60	52.5
270 Mesh	53	9.30	43.2
400 Mesh	38	8.30	34.9
TOTAL		100.00	**

K80= 172µm

Note: 10 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

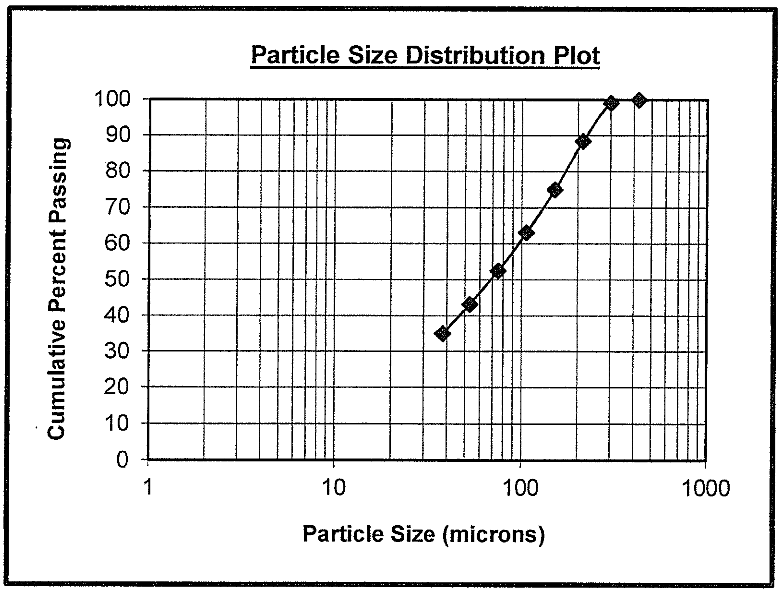


TABLE III-5
SCREEN ANALYSIS
KM6240 East Ridge Composite 2 - 10.5 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.20	99.8
65 Mesh	212	5.50	94.3
100 Mesh	150	13.50	80.8
150 Mesh	106	13.60	67.2
200 Mesh	75	11.70	55.5
270 Mesh	53	10.10	45.4
400 Mesh	38	8.70	36.7
TOTAL	100g	100.00	**

K80= 147µm

Note: 10.5 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

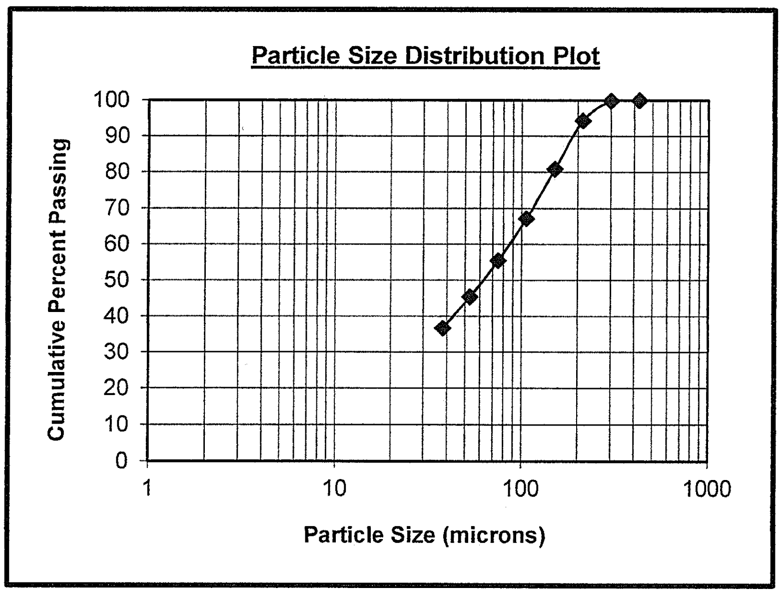


TABLE III-6
SCREEN ANALYSIS
KM6240 East Ridge Composite 2 - 12 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
48 Mesh	300	0.00	100.0
65 Mesh	212	0.50	99.5
100 Mesh	150	8.40	91.1
150 Mesh	106	14.80	76.3
200 Mesh	75	14.30	62.0
270 Mesh	53	11.40	50.6
400 Mesh	38	9.80	40.8
TOTAL		100.00	**

K80= 116µm

Note: 12 min. grind calibration using 2 kg. Ore, 1000 ml water and 20 kg. of Mild Steel rods in Mill: M6

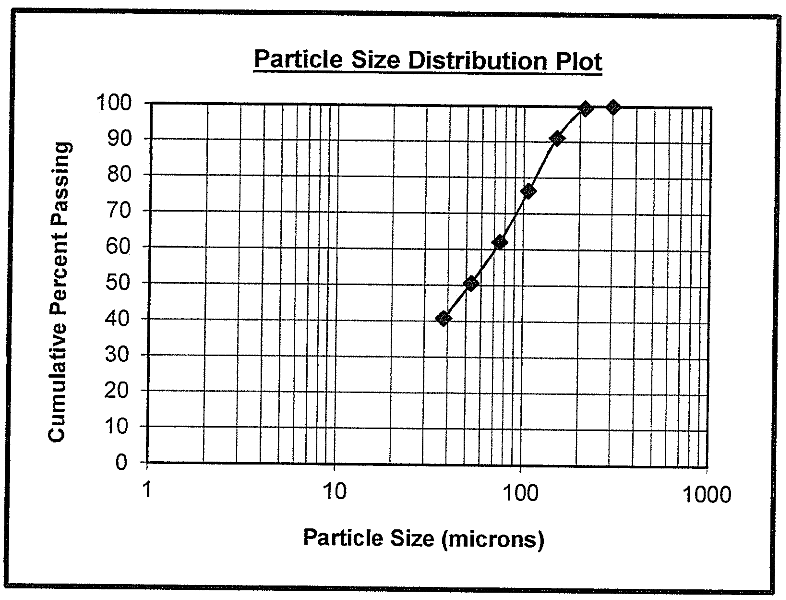


TABLE III-7
SCREEN ANALYSIS
KM6240 Heino Surface Composite - 6 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.20	99.8
65 Mesh	212	5.60	94.2
100 Mesh	150	14.20	80.0
150 Mesh	106	13.40	66.6
200 Mesh	75	13.20	53.4
270 Mesh	53	12.20	41.2
400 Mesh	38	10.60	30.6
TOTAL		100.00	**

K80= 150µm

Note: 6 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

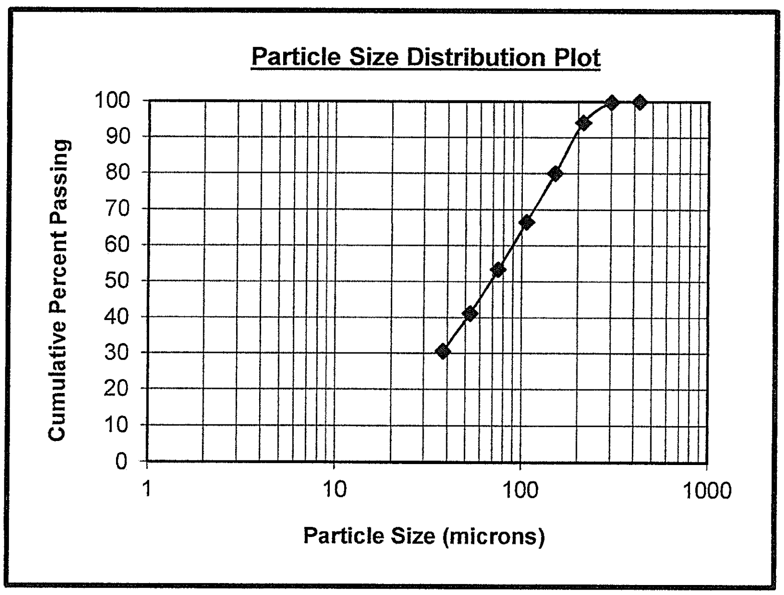


TABLE III-8
SCREEN ANALYSIS
KM6240 Heino Surface Composite - 7 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
48 Mesh	300	0.00	100.0
65 Mesh	212	1.70	98.3
100 Mesh	150	10.90	87.4
150 Mesh	106	15.10	72.3
200 Mesh	75	15.00	57.3
270 Mesh	53	13.30	44.0
400 Mesh	38	11.30	32.7
TOTAL		100.00	**

K80= 128µm

Note: 7 min. grind calibration using 2 kg. Ore, 1000 ml water and
20 kg. of Mild Steel rods in Mill: M6

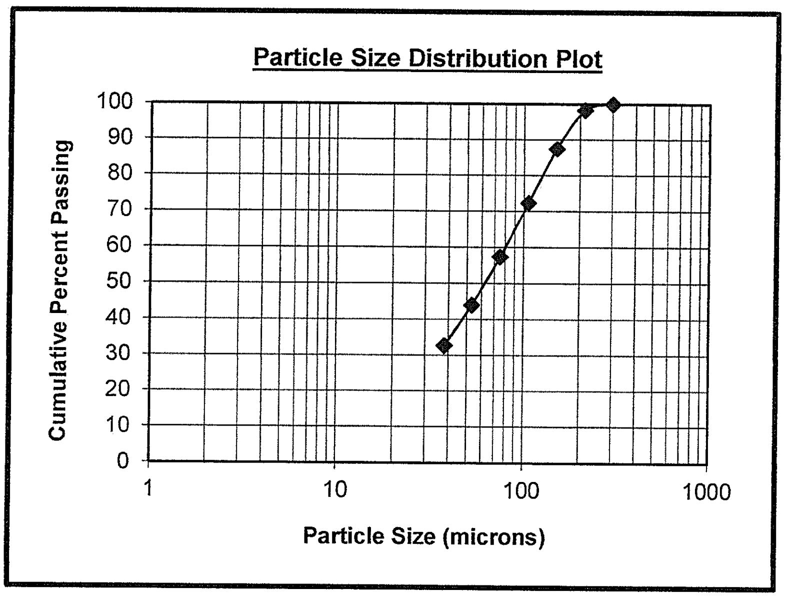


TABLE III-9
SCREEN ANALYSIS
KM6240-05 Bulk Rougher Concentrate

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.33	99.7
65 Mesh	212	5.67	94.0
100 Mesh	150	14.33	79.7
150 Mesh	106	13.67	66.0
200 Mesh	75	11.33	54.7
270 Mesh	53	10.00	44.7
400 Mesh	38	8.00	36.7
TOTAL		100.00	**

K80= 151µm

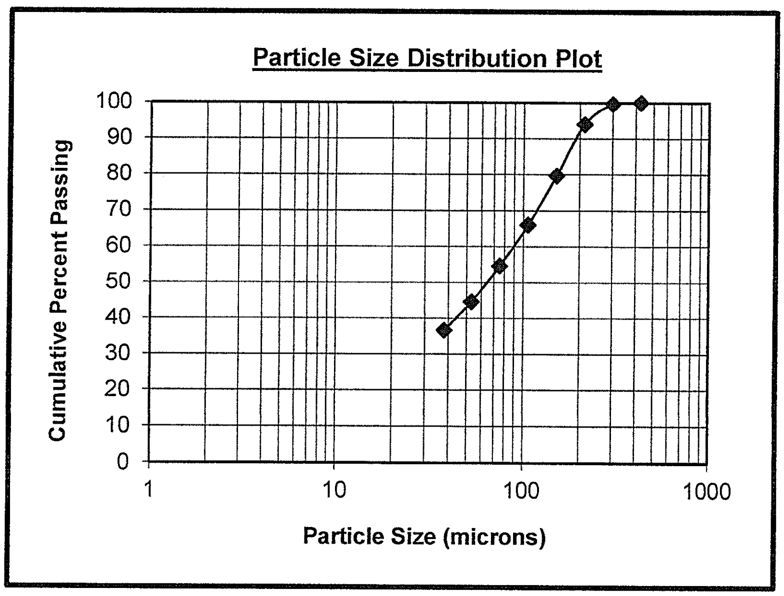


TABLE III-10
SCREEN ANALYSIS
KM6240-06 Flotation Feed

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
48 Mesh	300	0.00	100.0
65 Mesh	212	0.20	99.8
100 Mesh	150	5.50	94.3
150 Mesh	106	15.20	79.1
200 Mesh	75	17.90	61.2
270 Mesh	53	13.80	47.4
400 Mesh	38	11.80	35.6
TOTAL		100.00	**

K80= 108µm

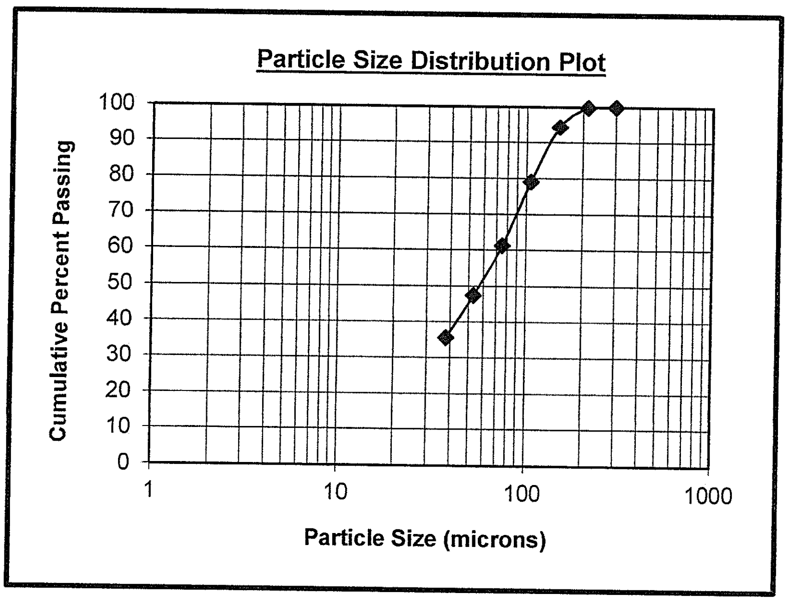
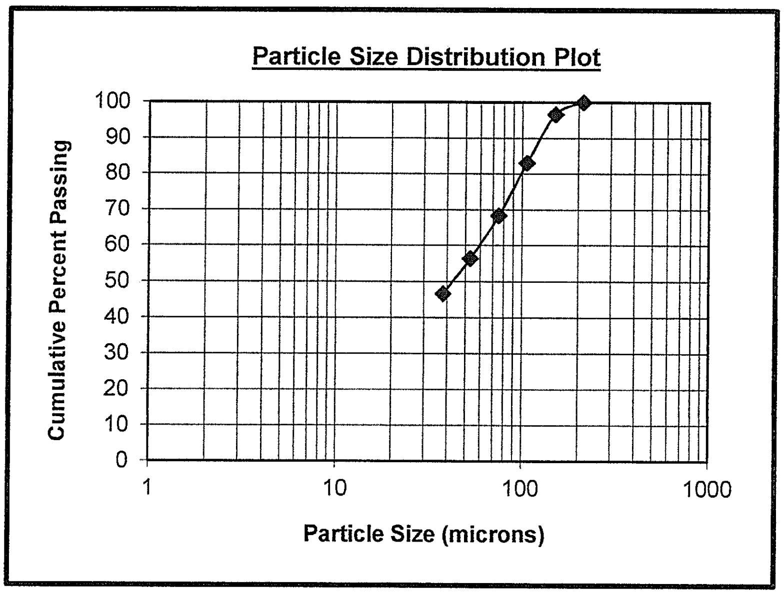


TABLE III-11
SCREEN ANALYSIS
KM6240-08 Bulk Rougher Concentrate

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	3.33	96.7
150 Mesh	106	13.67	83.0
200 Mesh	75	14.67	68.3
270 Mesh	53	12.00	56.3
400 Mesh	38	9.67	46.7
TOTAL		100.00	**

K80= 99µm



Particle Size Analysis

ALS Metallurgy

Measurement Details

Operator Name alkmm.metlab
Project and Test Number KM6240-09
Sample Name Bulk Regrind Discharge

Measurement Details

Analysis Date Time 10/27/2020 1:46:53 PM
Measurement Date Time 10/27/2020 1:46:53 PM
Result Source Measurement

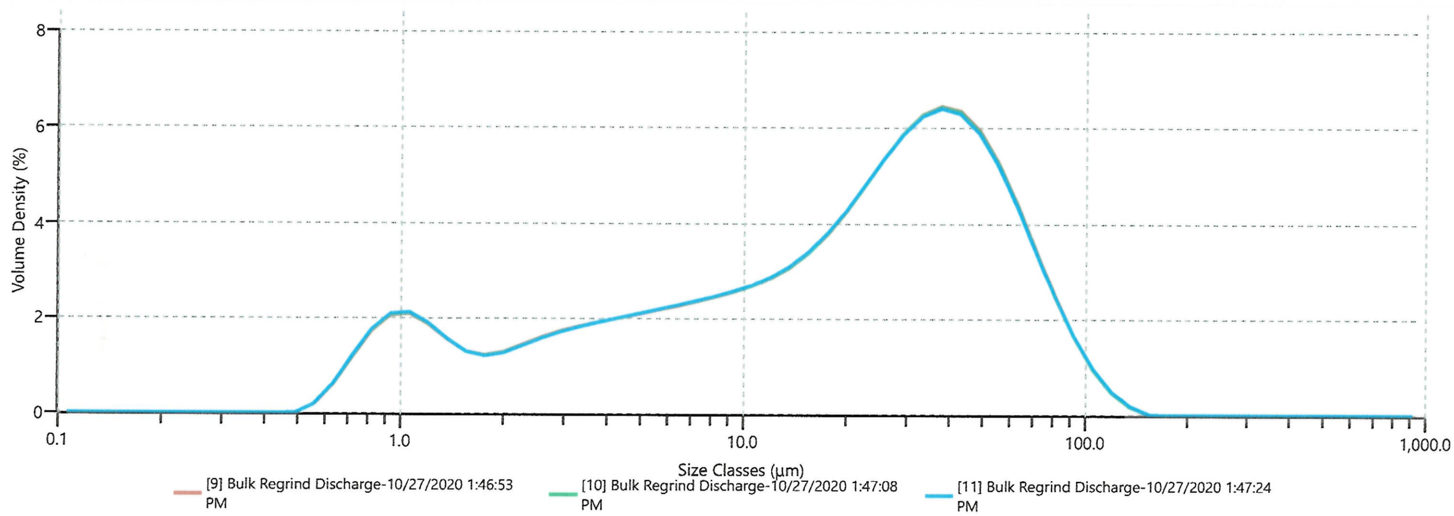
Analysis

Particle Name Silica SiO2
Particle Refractive Index 1.457
Particle Absorption Index 0.100
Dispersant Name Water
Dispersant Refractive Index 1.330
Scattering Model Mie
Analysis Model General Purpose
Weighted Residual 0.55 %
Laser Obscuration 16.62 %

Result

Concentration 0.0152 %
Span 2.823
Uniformity 0.907
Dv (10) 1.54 μm
Dv (50) 21.3 μm
Dv (80) 46.5 μm
Dv (90) 61.7 μm
Dv (98) 91.9 μm

Frequency (compatible)



Result

Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In
0.100	0.00	0.398	0.00	1.58	0.75	6.31	1.38	25.1	3.26	100	0.57	398	0.00
0.110	0.00	0.437	0.00	1.74	0.74	6.92	1.42	27.5	3.55	110	0.33	437	0.00
0.120	0.00	0.479	0.00	1.91	0.78	7.59	1.47	30.2	3.71	120	0.20	479	0.00
0.132	0.00	0.525	0.10	2.09	0.85	8.32	1.51	33.1	3.82	132	0.09	525	0.00
0.145	0.00	0.575	0.27	2.29	0.91	9.12	1.55	36.3	3.89	145	0.00	575	0.00
0.158	0.00	0.631	0.46	2.51	0.97	10.0	1.62	39.8	3.84	158	0.00	631	0.00
0.174	0.00	0.692	0.72	2.75	1.05	11.0	1.70	43.7	3.71	174	0.00	692	0.00
0.191	0.00	0.759	1.02	3.02	1.09	12.0	1.77	47.9	3.54	191	0.00	759	0.00
0.209	0.00	0.832	1.16	3.31	1.12	13.2	1.86	52.5	3.20	209	0.00	832	0.00
0.229	0.00	0.912	1.26	3.63	1.16	14.5	2.04	57.5	2.80	229	0.00	912	0.00
0.251	0.00	1.00	1.28	3.98	1.21	15.8	2.18	63.1	2.46	251	0.00	1000	
0.275	0.00	1.10	1.18	4.37	1.23	17.4	2.34	69.2	2.09	275	0.00		
0.302	0.00	1.20	1.07	4.79	1.26	19.1	2.56	75.9	1.52	302	0.00		
0.331	0.00	1.32	0.94	5.25	1.31	20.9	2.84	83.2	1.20	331	0.00		
0.363	0.00	1.45	0.79	5.75	1.35	22.9	3.05	91.2	0.90	363	0.00		

6240

Particle Size Analysis

ALS Metallurgy

Measurement Details

Operator Name alkmm.metlab
Project and Test Number KM6240-10
Sample Name Bulk Regrind Discharge

Measurement Details

Analysis Date Time 10/29/2020 1:19:50 PM
Measurement Date Time 10/29/2020 1:19:50 PM
Result Source Measurement

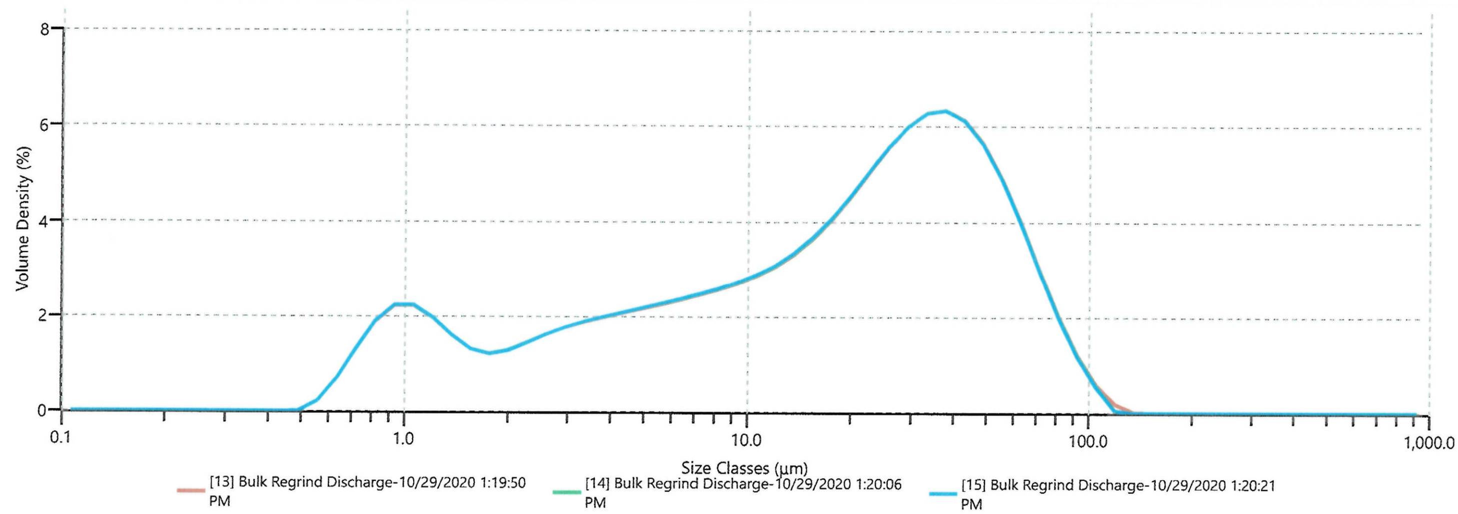
Analysis

Particle Name Silica SiO2
Particle Refractive Index 1.457
Particle Absorption Index 0.100
Dispersant Name Water
Dispersant Refractive Index 1.330
Scattering Model Mie
Analysis Model General Purpose
Weighted Residual 0.58 %
Laser Obscuration 16.98 %

Result

Concentration 0.0149 %
Span 2.866
Uniformity 0.917
Dv (10) 1.42 µm
Dv (50) 19.5 µm
Dv (80) 43.4 µm
Dv (90) 57.4 µm
Dv (98) 83.9 µm

Frequency (compatible)



Result

Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In
0.100	0.00	0.398	0.00	1.58	0.75	6.31	1.44	25.1	3.37	100	0.34	398	0.00
0.110	0.00	0.437	0.00	1.74	0.74	6.92	1.48	27.5	3.61	110	0.14	437	0.00
0.120	0.00	0.479	0.01	1.91	0.78	7.59	1.54	30.2	3.73	120	0.06	479	0.00
0.132	0.00	0.525	0.12	2.09	0.86	8.32	1.59	33.1	3.80	132	0.00	525	0.00
0.145	0.00	0.575	0.31	2.29	0.92	9.12	1.64	36.3	3.83	145	0.00	575	0.00
0.158	0.00	0.631	0.51	2.51	0.99	10.0	1.72	39.8	3.72	158	0.00	631	0.00
0.174	0.00	0.692	0.80	2.75	1.07	11.0	1.81	43.7	3.55	174	0.00	692	0.00
0.191	0.00	0.759	1.11	3.02	1.12	12.0	1.90	47.9	3.35	191	0.00	759	0.00
0.209	0.00	0.832	1.26	3.31	1.15	13.2	1.99	52.5	2.97	209	0.00	832	0.00
0.229	0.00	0.912	1.36	3.63	1.20	14.5	2.19	57.5	2.55	229	0.00	912	0.00
0.251	0.00	1.00	1.36	3.98	1.24	15.8	2.34	63.1	2.20	251	0.00	1000	
0.275	0.00	1.10	1.24	4.37	1.27	17.4	2.50	69.2	1.81	275	0.00		
0.302	0.00	1.20	1.12	4.79	1.31	19.1	2.73	75.9	1.24	302	0.00		
0.331	0.00	1.32	0.97	5.25	1.36	20.9	2.99	83.2	0.93	331	0.00		
0.363	0.00	1.45	0.80	5.75	1.40	22.9	3.18	91.2	0.64	363	0.00		

6240

Particle Size Analysis

ALS Metallurgy

Measurement Details

Operator Name alkmm.metlab

Project and Test Number KM6240-11

Sample Name Bulk Regrind Discharge

Measurement Details

Analysis Date Time 11/3/2020 2:29:23 PM

Measurement Date Time 11/3/2020 2:29:23 PM

Result Source Measurement

Analysis

Particle Name Silica SiO2

Particle Refractive Index 1.457

Particle Absorption Index 0.100

Dispersant Name Water

Dispersant Refractive Index 1.330

Scattering Model Mie

Analysis Model General Purpose

Weighted Residual 0.51 %

Laser Obscuration 18.89 %

Result

Concentration 0.0165 %

Span 2.673

Uniformity 0.851

Dv (10) 1.56 μm

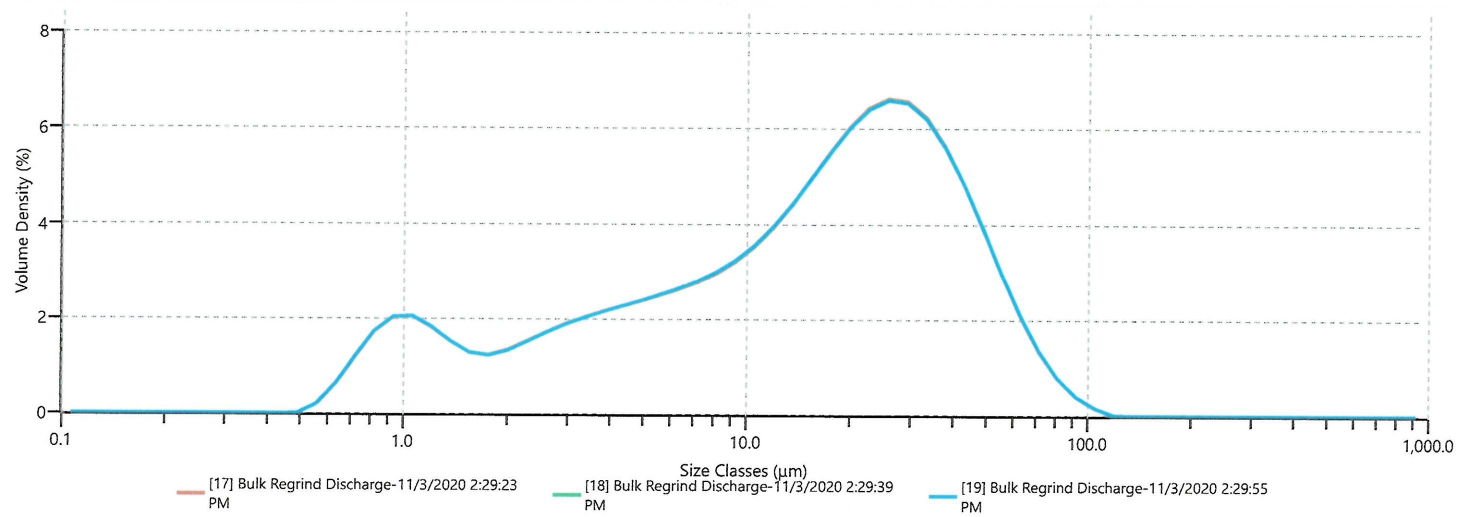
Dv (50) 16.3 μm

Dv (80) 34.0 μm

Dv (90) 45.2 μm

Dv (98) 68.5 μm

Frequency (compatible)



Result

Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In
0.100	0.00	0.398	0.00	1.58	0.76	6.31	1.61	25.1	4.00	100	0.09	398	0.00
0.110	0.00	0.437	0.00	1.74	0.75	6.92	1.68	27.5	3.96	110	0.02	437	0.00
0.120	0.00	0.479	0.00	1.91	0.81	7.59	1.78	30.2	3.83	120	0.00	479	0.00
0.132	0.00	0.525	0.11	2.09	0.90	8.32	1.87	33.1	3.66	132	0.00	525	0.00
0.145	0.00	0.575	0.28	2.29	0.97	9.12	1.97	36.3	3.41	145	0.00	575	0.00
0.158	0.00	0.631	0.47	2.51	1.04	10.0	2.13	39.8	2.97	158	0.00	631	0.00
0.174	0.00	0.692	0.73	2.75	1.14	11.0	2.32	43.7	2.63	174	0.00	692	0.00
0.191	0.00	0.759	1.01	3.02	1.20	12.0	2.49	47.9	2.29	191	0.00	759	0.00
0.209	0.00	0.832	1.14	3.31	1.25	13.2	2.67	52.5	1.79	209	0.00	832	0.00
0.229	0.00	0.912	1.24	3.63	1.30	14.5	3.00	57.5	1.39	229	0.00	912	0.00
0.251	0.00	1.00	1.25	3.98	1.36	15.8	3.20	63.1	1.09	251	0.00	1000	
0.275	0.00	1.10	1.15	4.37	1.40	17.4	3.41	69.2	0.80	275	0.00		
0.302	0.00	1.20	1.05	4.79	1.44	19.1	3.65	75.9	0.47	302	0.00		
0.331	0.00	1.32	0.92	5.25	1.51	20.9	3.84	83.2	0.32	331	0.00		
0.363	0.00	1.45	0.78	5.75	1.56	22.9	3.93	91.2	0.20	363	0.00		

6240

Particle Size Analysis

ALS Metallurgy

Measurement Details

Operator Name	alkmm.metlab
Project and Test Number	KM6240-12
Sample Name	Bulk Regrind Discharge

Measurement Details

Analysis Date Time	11/9/2020 9:15:41 AM
Measurement Date Time	11/9/2020 9:15:41 AM
Result Source	Measurement

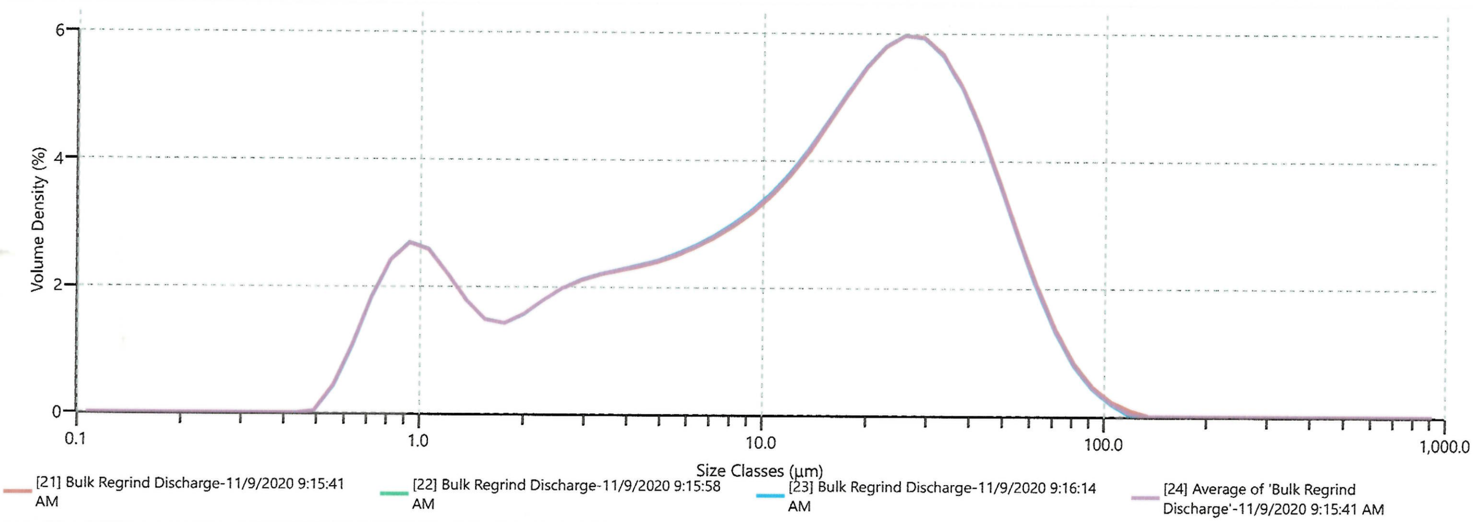
Analysis

Particle Name	Silica SiO2
Particle Refractive Index	1.457
Particle Absorption Index	0.100
Dispersant Name	Water
Dispersant Refractive Index	1.330
Scattering Model	Mie
Analysis Model	General Purpose
Weighted Residual	0.59 %
Laser Obscuration	28.55 %

Result

Concentration	0.0229 %
Span	3.046
Uniformity	0.983
Dv (10)	1.18 µm
Dv (50)	14.4 µm
Dv (80)	33.2 µm
Dv (90)	45.0 µm
Dv (98)	70.3 µm

Frequency (compatible)



Result

Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In
0.100	0.00	0.398	0.00	1.58	0.86	6.31	1.61	25.1	3.60	100	0.13	398	0.00
0.110	0.00	0.437	0.00	1.74	0.87	6.92	1.68	27.5	3.59	110	0.07	437	0.00
0.120	0.00	0.479	0.01	1.91	0.94	7.59	1.78	30.2	3.48	120	0.03	479	0.00
0.132	0.00	0.525	0.25	2.09	1.05	8.32	1.85	33.1	3.34	132	0.00	525	0.00
0.145	0.00	0.575	0.51	2.29	1.12	9.12	1.94	36.3	3.13	145	0.00	575	0.00
0.158	0.00	0.631	0.77	2.51	1.19	10.0	2.07	39.8	2.75	158	0.00	631	0.00
0.174	0.00	0.692	1.11	2.75	1.28	11.0	2.22	43.7	2.46	174	0.00	692	0.00
0.191	0.00	0.759	1.43	3.02	1.31	12.0	2.35	47.9	2.16	191	0.00	759	0.00
0.209	0.00	0.832	1.56	3.31	1.34	13.2	2.50	52.5	1.71	209	0.00	832	0.00
0.229	0.00	0.912	1.63	3.63	1.37	14.5	2.76	57.5	1.35	229	0.00	912	0.00
0.251	0.00	1.00	1.57	3.98	1.40	15.8	2.93	63.1	1.08	251	0.00	1000	
0.275	0.00	1.10	1.40	4.37	1.42	17.4	3.09	69.2	0.81	275	0.00		
0.302	0.00	1.20	1.25	4.79	1.45	19.1	3.29	75.9	0.50	302	0.00		
0.331	0.00	1.32	1.06	5.25	1.51	20.9	3.46	83.2	0.36	331	0.00		
0.363	0.00	1.45	0.89	5.75	1.56	22.9	3.54	91.2	0.24	363	0.00		

APPENDIX IV - KM6240

COMMINUTION DATA

TABLE IV-1A
BOND BALL GRINDABILITY TEST
KM6240 East Ridge Composite 2

Weight of 700 ml Sample : 1557.4 g

1/3.5 of Sample Weight : 445.0 g

Aperture Test Sieve : 106µm

Percent Undersize : 20.5%

Cycle	Weight of New Feed	Number of Revolutions	Weight of Undersize			
			Product	Feed	Net Product	Net/Rev
1	1557.4	100	439.3	318.9	120.4	1.20
2	439.3	295	535.9	90.0	445.9	1.51
3	535.9	222	452.9	109.7	343.2	1.55
4	452.9	228	442.6	92.7	349.9	1.54
5	442.6	230	442.4	90.6	351.8	1.53
6	442.4	232	448.8	90.6	358.2	1.54

BOND WORK INDEX FORMULA

$$Wi = (44.5 \times 1.102) / (Pi^{.23} \times Gpb^{.82} \times (10/\sqrt{P} - 10/\sqrt{F}))$$

Pi = Sieve Size Tested.	106 µm
Gbp = Net undersize produced per revolution of mill.	1.54 g
P = 80% Passing size of test product.	80 µm
F = 80% Passing size of test feed.	2352 µm

BOND BALL WORK INDEX (Wi) 12.9 kW-hr/tonne

TABLE IV-1B
BOND BALL SCREEN ANALYSIS
KM6240 East Ridge Composite 2

Particle Size		Feed to Cycle 1			Equilibrium Cycle Undersize		
mesh	µm	Weight (g) Retained	Weight % Retained	Cumulative % Passing	Weight (g) Retained	Weight % Retained	Cumulative % Passing
6 Mesh	3360	2.80	0.51	99.5	-	-	-
7 Mesh	2800	38.70	7.04	92.4	-	-	-
8 Mesh	2360	67.50	12.29	80.2	-	-	-
9 Mesh	2000	41.80	7.61	72.6	-	-	-
10 Mesh	1700	51.20	9.32	63.2	-	-	-
12 Mesh	1400	43.70	7.95	55.3	-	-	-
14 Mesh	1180	27.70	5.04	50.2	-	-	-
20 Mesh	850	44.60	8.12	42.1	-	-	-
28 Mesh	600	33.60	6.12	36.0	-	-	-
35 Mesh	425	23.60	4.30	31.7	-	-	-
48 Mesh	300	20.30	3.69	28.0	-	-	-
65 Mesh	212	14.70	2.68	25.3	-	-	-
100 Mesh	150	13.90	2.53	22.8	-	-	-
150 Mesh	106	12.80	2.33	20.5	0.10	0.09	99.9
170 Mesh	90	-	-	-	13.60	12.25	87.7
200 Mesh	75	-	-	-	12.70	11.44	76.2
270 Mesh	53	-	-	-	16.70	15.05	61.2
325 Mesh	45	-	-	-	8.30	7.48	53.7
400 Mesh	38	-	-	-	7.20	6.49	47.2
TOTAL		549.4	100.00	**	111.0	100.00	**

K80 = 2352µm **K80 = 80µm**

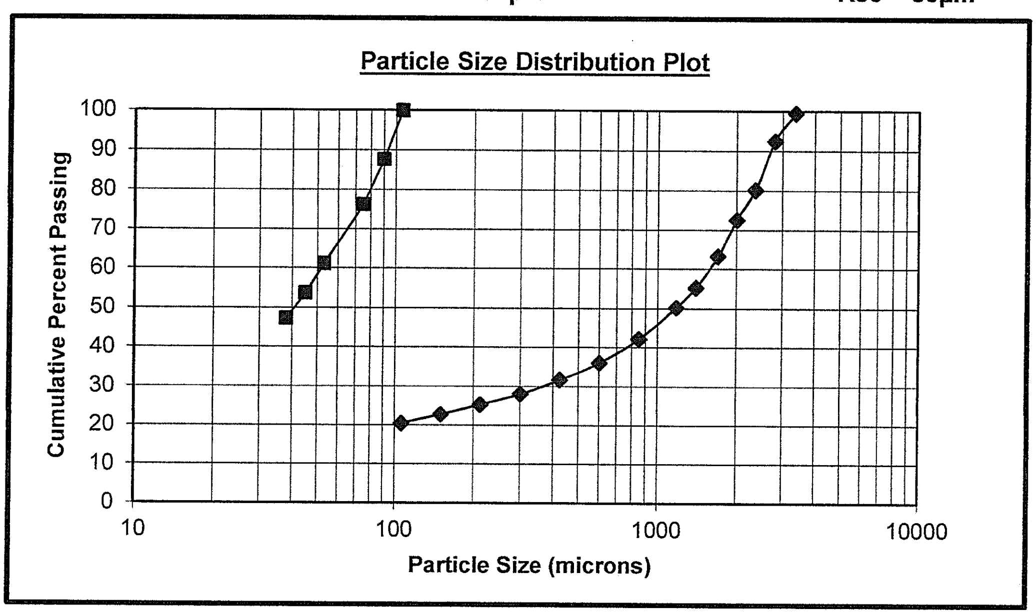


TABLE IV-2A
BOND BALL GRINDABILITY TEST
KM6240 Heino Surface Composite

Weight of 700 ml Sample :	1610.3 g	Aperture Test Sieve :	106μm
1/3.5 of Sample Weight :	460.1 g	Percent Undersize :	24.1%

Cycle	Weight of New Feed	Number of Revolutions	Weight of Undersize			
			Product	Feed	Net Product	Net/Rev
1	1610.3	100	538.2	388.7	149.5	1.49
2	538.2	221	607.1	129.9	477.2	2.16
3	607.1	145	477.4	146.6	330.8	2.28
4	477.4	151	460.3	115.2	345.1	2.28
5	460.3	153	457.0	111.1	345.9	2.26
6	457.0	155	462.0	110.3	351.7	2.27

BOND WORK INDEX FORMULA

Wi = (44.5 x 1.102) / (Pi^.23 x Gpb^.82 x (10/√P - 10/√F))

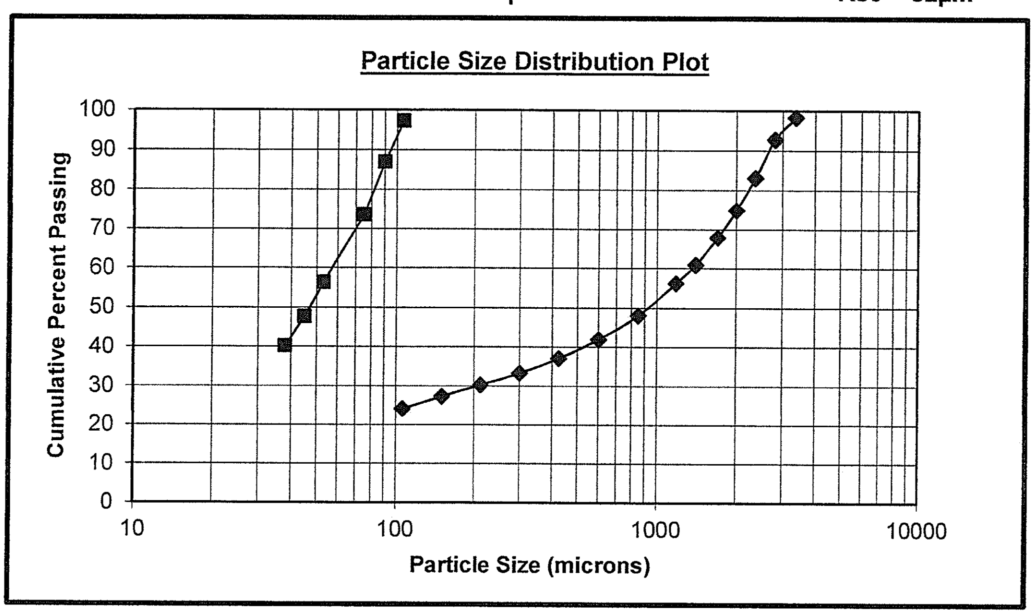
Pi = Sieve Size Tested.	106 μm
Gbp = Net undersize produced per revolution of mill.	2.27 g
P = 80% Passing size of test product.	82 μm
F = 80% Passing size of test feed.	2224 μm

BOND BALL WORK INDEX (Wi) 9.6 kW-hr/tonne

TABLE IV-2B
BOND BALL SCREEN ANALYSIS
KM6240 Heino Surface Composite

Particle Size		Feed to Cycle 1			Equilibrium Cycle Undersize		
mesh	µm	Weight (g) Retained	Weight % Retained	Cumulative % Passing	Weight (g) Retained	Weight % Retained	Cumulative % Passing
6 Mesh	3360	9.50	1.68	98.3	-	-	-
7 Mesh	2800	31.70	5.59	92.7	-	-	-
8 Mesh	2360	54.90	9.69	83.0	-	-	-
9 Mesh	2000	46.50	8.21	74.8	-	-	-
10 Mesh	1700	39.40	6.95	67.9	-	-	-
12 Mesh	1400	39.40	6.95	60.9	-	-	-
14 Mesh	1180	26.30	4.64	56.3	-	-	-
20 Mesh	850	46.70	8.24	48.1	-	-	-
28 Mesh	600	34.60	6.11	41.9	-	-	-
35 Mesh	425	27.20	4.80	37.1	-	-	-
48 Mesh	300	21.60	3.81	33.3	-	-	-
65 Mesh	212	17.30	3.05	30.3	-	-	-
100 Mesh	150	16.70	2.95	27.3	-	-	-
150 Mesh	106	18.10	3.19	24.1	3.30	2.70	97.3
170 Mesh	90	-	-	-	12.60	10.31	87.0
200 Mesh	75	-	-	-	16.40	13.42	73.6
270 Mesh	53	-	-	-	21.10	17.27	56.3
325 Mesh	45	-	-	-	10.60	8.67	47.6
400 Mesh	38	-	-	-	9.10	7.45	40.2
TOTAL		566.7	100.00	**	122.2	100.00	**

K80 = 2224µm **K80 = 82µm**



APPENDIX V - KM6240

SPECIAL DATA

INDEX

TABLE V-1
REPLICATE HEAD ASSAY DATA

Composite	Assay - percent or g/tonne					
	Pb	Zn	Fe	S	Au	Ag
Heino Surface Comp Hd 1	0.19	0.36	7.50	3.85	20.7	17
Heino Surface Comp Hd 1 Dup	-	-	-	-	23.4	-
East Ridge Comp Hd 1	0.13	0.37	6.70	3.78	1.97	12
East Ridge Comp Hd 1 Dup	-	-	-	-	1.90	-
East Ridge Comp 2 Hd 1	0.08	1.06	11.5	7.49	1.14	4
East Ridge Comp 2 Hd 1 Dup	-	-	-	-	1.10	-

Note: Au and Ag assays are displayed in g/tonne; other assays are displayed in percent.

TABLE V-2A
STATISTICAL ANALYSIS OF HEAD ASSAYS
East Ridge Composite

Test	Assay - percent or g/tonne					
	Pb	Zn	Fe	S	Ag	Au
1	0.12	0.39	6.8	3.92	12	2.10
3	0.11	0.37	6.8	3.81	12	2.09
5	0.12	0.35	6.7	3.74	12	2.37
Calculated Head	**0.12**	**0.37**	**6.8**	**3.82**	**12**	**2.18**
Measured Head	0.13	0.37	6.7	3.78	12	1.94

TABLE V-2B
STATISTICAL ANALYSIS OF HEAD ASSAYS
Heino Surface Composite

Test	Assay - percent or g/tonne					
	Pb	Zn	Fe	S	Ag	Au
2	0.18	0.36	7.0	3.72	20	28.8
4	0.19	0.35	6.9	3.80	20	19.2
6	0.20	0.35	7.0	3.73	21	20.8
7	0.20	0.36	6.8	3.73	18	22.4
8	0.19	0.35	6.6	3.76	19	30.3
9	0.19	0.40	6.8	3.74	19	38.8
10	0.19	0.36	6.7	3.74	19	31.0
11	0.19	0.36	6.7	3.74	18	28.5
12	0.19	0.36	8.4	3.69	18	26.9
Calculated Head	**0.19**	**0.36**	**7.0**	**3.74**	**19**	**27.4**
Measured Head	0.19	0.36	7.5	3.85	17	22.0

TABLE V-3
SCREENED METALLIC GOLD ASSAYS - MET COMPS

Composite	Assay Cut	Weight g	Au Assay g/tonne
Heino Surface Composite	+106µm Fraction	27.0	63.8
	Assay Cut #1 -106µm Fraction	44.0	14.7
	Assay Cut #2 -106µm Fraction	43.7	14.4
	Remainder -106µm Fraction	375.7	14.6
	Total	490.4	17.3
East Ridge Composite	+106µm Fraction	18.5	11.2
	Assay Cut #1 -106µm Fraction	37.0	2.21
	Assay Cut #2 -106µm Fraction	34.0	2.26
	Remainder -106µm Fraction	413.6	2.23
	-106	484.6	2.23
	Total	503.1	2.57
East Ridge Composite 2	+106µm Fraction	41.1	0.95
	Assay Cut #1 -106µm Fraction	29.8	0.95
	Assay Cut #2 -106µm Fraction	30.9	1.06
	Remainder -106µm Fraction	383.1	1.01
	Total	484.9	1.00

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 3-OCT-2020
Account: KRL

CERTIFICATE VA20211811

Project: KM6240
P.O. No.: A2774
This report is for 2 Pulp samples submitted to our lab in Vancouver, BC, Canada on 22-SEP-2020.
The following have access to data associated with this certificate:

ALS METALLURGY BRENDA TREMBLAY	SIMONE BAWTREE	PETER MEHRFERT

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
DISP-01	Disposal of all sample fractions

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61a	High Grade Four Acid ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 3-OCT-2020
Account: KRL

Project: KM6240

CERTIFICATE OF ANALYSIS VA20211811

Sample Description	WEI-21	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
Method	WEI-21	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
Analyte	Recvd Wt.	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K
Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%
LOD	0.02	1	0.05	50	50	10	20	0.05	10	10	10	10	0.05	50	0.1
KM6240 East Ridge Comp	0.06	11	5.77	1850	1230	<10	<20	3.22	70	20	70	220	6.80	<50	3.6
KM6240 Heino Surface Comp	0.06	17	5.44	680	1630	<10	<20	6.81	40	30	280	420	8.66	<50	3.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 3-OCT-2020
Account: KRL

Project: KM6240

CERTIFICATE OF ANALYSIS VA20211811

Method	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
Analyte	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
Units	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
Sample Description / LOD	50	0.05	10	10	0.05	10	50	20	0.05	50	10	10	50	0.05	50
KM6240 East Ridge Comp	<50	1.24	1800	10	1.06	30	1070	1200	3.02	<50	10	280	<50	0.31	<50
KM6240 Heino Surface Comp	<50	3.24	5850	10	0.71	100	1800	1780	3.51	<50	30	280	<50	0.39	<50

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 3-OCT-2020
Account: KRL

Project: KM6240

CERTIFICATE OF ANALYSIS VA20211811

Sample Description	Method Analyte Units LOD	ME-ICP61a U ppm 50	ME-ICP61a V ppm 10	ME-ICP61a W ppm 50	ME-ICP61a Zn ppm 20
KM6240 East Ridge Comp		<50	180	<50	4000
KM6240 Heino Surface Comp		<50	230	<50	3750

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 3-OCT-2020
Account: KRL

Project: KM6240

CERTIFICATE OF ANALYSIS VA20211811

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	DISP-01	LOG-24	ME-ICP61a	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 29-OCT-2020
Account: KRL

CERTIFICATE VA20240012

This report is for 1 Pulp sample submitted to our lab in Vancouver, BC, Canada on 20-OCT-2020.

The following have access to data associated with this certificate:

ALS METALLURGY	DAVID ROULSTON	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
DISP-01	Disposal of all sample fractions

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61a	High Grade Four Acid ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 29-OCT-2020
Account: KRL

CERTIFICATE OF ANALYSIS VA20240012

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP61a Ag ppm 1	ME-ICP61a Al % 0.05	ME-ICP61a As ppm 50	ME-ICP61a Ba ppm 50	ME-ICP61a Be ppm 10	ME-ICP61a Bi ppm 20	ME-ICP61a Ca % 0.05	ME-ICP61a Cd ppm 10	ME-ICP61a Co ppm 10	ME-ICP61a Cr ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Fe % 0.05	ME-ICP61a Ga ppm 50	ME-ICP61a K % 0.1
6240 East Ridge Comp 2		0.04	9	6.50	220	770	<10	<20	4.15	180	30	130	570	12.65	<50	3.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 29-OCT-2020
Account: KRL

CERTIFICATE OF ANALYSIS VA20240012

Sample Description	Method Analyte Units LOD	ME-ICP61a La ppm 50	ME-ICP61a Mg % 0.05	ME-ICP61a Mn ppm 10	ME-ICP61a Mo ppm 10	ME-ICP61a Na % 0.05	ME-ICP61a Ni ppm 10	ME-ICP61a P ppm 50	ME-ICP61a Pb ppm 20	ME-ICP61a S % 0.05	ME-ICP61a Sb ppm 50	ME-ICP61a Sc ppm 10	ME-ICP61a Sr ppm 10	ME-ICP61a Th ppm 50	ME-ICP61a Ti % 0.05	ME-ICP61a Tl ppm 50
6240 East Ridge Comp 2		<50	2.08	2640	<10	0.53	40	1070	590	7.32	<50	20	380	<50	0.38	<50

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 29-OCT-2020
Account: KRL

CERTIFICATE OF ANALYSIS VA20240012

Sample Description / Method / Analyte / Units / LOD	ME-ICP61a U ppm 50	ME-ICP61a V ppm 10	ME-ICP61a W ppm 50	ME-ICP61a Zn ppm 20
6240 East Ridge Comp 2	<50	220	<50	11550

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 29-OCT-2020
Account: KRL

CERTIFICATE OF ANALYSIS VA20240012

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	DISP-01	LOG-24	ME-ICP61a	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

CERTIFICATE VA20277403

Project: Tillicum
P.O. No.: 2890
This report is for 2 Pulp samples submitted to our lab in Vancouver, BC, Canada on 25-NOV-2020.
The following have access to data associated with this certificate:

ALS METALLURGY	KIMBERLY ROULSTON	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
DISP-01	Disposal of all sample fractions

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
OA-ELE07	Paste pH	
S-CAL06	Sufide Sulfur (calculated)	LECO
S-GRA06	Sulfate Sulfur-carbonate leach	WST-SEQ
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	WST-SEQ
ME-MS61c	4-Acid ICP-MS for Concentrates	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (IR Spectroscopy)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS61c Ag ppm 0.1	ME-MS61c Al % 0.02	ME-MS61c As ppm 2	ME-MS61c Ba ppm 50	ME-MS61c Be ppm 0.5	ME-MS61c Bi ppm 0.1	ME-MS61c Ca % 0.05	ME-MS61c Cd ppm 0.2	ME-MS61c Ce ppm 0.1	ME-MS61c Co ppm 1	ME-MS61c Cr ppm 10	ME-MS61c Cs ppm 0.5	ME-MS61c Cu ppm 2	ME-MS61c Fe % 0.02
Bulk Con IV+V Comp		0.04	303	0.72	3390	220	<0.5	62.7	0.68	785	4.0	275	190	0.8	10000	37.4
Bulk Ro Tl IV+V Comp		0.20														

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

Sample Description	Method / Analyte / Units / LOD	ME-MS61c Ga ppm 0.5	ME-MS61c Ge ppm 0.5	ME-MS61c Hf ppm 1	ME-MS61c In ppm 0.05	ME-MS61c K % 0.02	ME-MS61c La ppm 5	ME-MS61c Li ppm 2	ME-MS61c Mg % 0.02	ME-MS61c Mn ppm 10	ME-MS61c Mo ppm 0.5	ME-MS61c Na % 0.02	ME-MS61c Nb ppm 1	ME-MS61c Ni ppm 2	ME-MS61c P ppm 100	ME-MS61c Pb ppm 5
Bulk Con IV+V Comp		2.5	0.7	<1	0.93	0.35	<5	3	0.26	1340	88.9	0.09	1	904	300	33100
Bulk Ro Tl IV+V Comp																

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

Sample Description	Method Analyte Units LOD	ME-MS61c Rb ppm 1	ME-MS61c Re ppm 0.02	ME-MS61c S % 0.05	ME-MS61c Sb ppm 0.5	ME-MS61c Sc ppm 1	ME-MS61c Se ppm 10	ME-MS61c Sn ppm 2	ME-MS61c Sr ppm 2	ME-MS61c Ta ppm 0.5	ME-MS61c Te ppm 0.5	ME-MS61c Th ppm 2	ME-MS61c Ti % 0.01	ME-MS61c Tl ppm 0.2	ME-MS61c U ppm 1	ME-MS61c V ppm 5
Bulk Con IV+V Comp		13	0.02	>10.0	181.5	4	160	<2	35	<0.5	5.8	<2	0.06	0.8	<1	23
Bulk Ro Tl IV+V Comp																

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221   Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

Sample Description	Method Analyte Units LOD	ME-MS61c W ppm 1	ME-MS61c Y ppm 1	ME-MS61c Zn ppm 20	ME-MS61c Zr ppm 5	OA-VOL08 MPA tCaCO3/1Kt 0.3	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NNP tCaCO3/1Kt 1	OA-VOL08 NP tCaCO3/1Kt 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-GRA06a S % 0.01	S-CAL06 S % 0.01	C-GAS05 C % 0.05
Bulk Con IV+V Comp		4	3	67500	<5							38.1				
Bulk Ro TI IV+V Comp						25.0	2	-7	18	5.9	0.72	0.80	0.04	0.08	0.76	0.10

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

Sample Description	Method Analyte Units LOD	C-GAS05 CO2 % 0.2
Bulk Con IV+V Comp		
Bulk Ro Tl IV+V Comp		0.4

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: ALS METALLURGY, DIV OF ALS CANADA LTD
2957 BOWERS PL
KAMLOOPS BC V1S 1W5

Finalized Date: 7-DEC-2020
Account: KRL

Project: Tillicum

CERTIFICATE OF ANALYSIS VA20277403

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	C-GAS05	DISP-01	LOG-24	ME-MS61c
	OA-ELE07	OA-VOL08	S-CAL06	S-GRA06
	S-GRA06a	S-IR08	WEI-21	

APPENDIX VI - KM6240

MINERALOGICAL DATA

TABLE 1A
MINERAL COMPOSITION OF TILLICUM SAMPLES
KM6240

Minerals	East Ridge Comp	Heino Surface Comp	East Ridge Comp 2
Copper Sulphides	0.1	0.1	0.3
Sphalerite	0.7	0.6	2.0
Galena	0.2	0.2	0.1
Pyrite	0.3	1.5	5.4
Pyrrhotite	8.5	5.0	7.2
Arsenopyrite	0.3	<0.1	0.5
Iron Oxides	<0.1	0.8	1.4
Feldspars	47.1	37.9	42.0
Quartz	19.5	7.0	12.7
Micas	9.8	3.4	6.3
Amphibole/Pyroxene	5.3	34.3	11.1
Chlorite	4.3	3.6	6.3
Calcite	1.1	0.4	<0.1
Titanium Minerals	1.1	2.0	2.1
Apatite	0.4	1.0	0.4
Others	1.2	2.1	2.1
Total	100	100	100

Notes: 1) Copper Sulphides includes Chalcopyrite, Bornite and Chalcocite/Covellite.
2) Iron Oxides includes Limonite/Goethite, Hematite and Magnetite.
3) Feldspars includes K-Feldspar, Calcium Plagioclase and Feldspar Albite (Na Feldspar).
4) Micas includes Biotite/Phlogopite and Muscovite.
5) Titanium Minerals includes Sphene (Titanite) and trace amount of Rutile/Anatase.
6) Others includes Calcium Sulphate, Zircon, Epidote and unresolved mineral species.
7) A Particle Mineral Analysis was used for the data.
8) All values are expressed as a percent.
9) Measurement was scanned on the QEMSCAN ®.

TABLE 1B

% SULPHUR BEARING MINERAL OF TOTAL SULPHUR

KM6240

Mineral	East Ridge Comp	Heino Surface Comp	East Ridge Comp 2
Copper Sulphides	0.6	1.3	1.2
Sphalerite	4.0	4.1	6.5
Galena	0.5	0.8	0.2
Pyrite	3.8	24.0	41.2
Pyrrhotite	89.5	69.5	49.6
Arsenopyrite	1.5	0.2	1.4
Sulphate Minerals	<0.1	0.1	<0.1
Total	100	100	100

Note 1) Copper Sulphides includes Chalcopyrite, Bornite and Chalcocite/Covellite.
2) Sulphate Minerals includes Calcium Sulphate and Barite.

TABLE 1C
CHEMICAL COMPOSITION OF TILLICUM SAMPLES
KM6240

Element	Assay Methods	East Ridge Comp	Heino Surface Comp	East Ridge Comp 2
Fe	QEMSCAN	6.84	7.25	10.7
	Chemical	6.70	7.50	11.5
Pb	QEMSCAN	0.15	0.17	0.08
	Chemical	0.13	0.19	0.08
S	QEMSCAN	4.17	3.37	6.95
	Chemical	3.78	3.85	7.49
Zn	QEMSCAN	0.42	0.35	1.14
	Chemical	0.37	0.36	1.06

APPENDIX J - PHOTOS

Tillicum Project core storage at 2,020 m elevation. 1988 diamond drill holes (East Ridge Zone) split core placed for sampling metallurgical sample and re-logging (see Fig 9 for location).

Heino 2,130 m elevation adit (sloughed in) looking S. Rock chip sample 301-306 (including Vancouver Petrographic sample 303, & metallurgical sample 'Heino Surface Comp') taken from area in lower right portion of photo (see Fig 7-9)

Heino 2,130 m elevation adit 4 meter sample interval metallurgical sample 'Heino Surface Comp' looking SW (see Fig 7-9). Blue paint markings @ 50 cm intervals

East Ridge Zone (B Band) 1,970 m elevation outcrop 4 meter sample interval metallurgical sample 'East Ridge Comp 2' looking SE (see Fig 5)

Grizzly N Zone small circular lake approximately 200 m SW of well mineralized ridge where fault splays, flexures and larger sulphide occurrences suggest there may be disseminated deposit types present. This small lake may be underlain by a breccia deposit type. 1970 m elev

Silver Queen mineralized ridge (looking NE), foliation trends 040 degrees, dipping NW at -50 degrees. Grab sample from dump pile assayed 11.1% Pb, 18.0% Zn, 1.08 g/t Au, 2,590 g/t Ag.