ASSESSMENT REPORT
ON
GEOLOGICAL WORK
ON THE FOLLOWING CLAIM

CLONE 1 331439

EVENT # 3138958

Located

19 KM SOUTHEAST OF
STEWART, BRITISH COLUMBIA
SKEENA MINING DIVISION

55 degrees 48 minutes latitude
129 degrees 47 minutes longitude

N.T.S. 103P/13W

PROJECT PERIOD Sept. 5, 1998 to March 23, 1999

ON BEHALF OF
TEUTON RESOURCES CORP.
VANCOUVER, B.C.

REPORT BY

D. Cremonese, P. Eng.
509-675 W. Hastings
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{INCORPORATING A GEOLOGICAL REPORT
by ROSS SHERLOCK, PH.D., P.GEOL.
Steffen Robertson & Kirsten(Canada) Inc.}

Date: December 9, 1999

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1. INTRODUCTION

A. Property, Location, Access and Physiography

The Clone property is located about 19km southeast of Stewart, British Columbia. Nearest road is a logging road running east up the Marmot River from tidewater in the Portland Canal to a point about 9km northwest of the property. Present access to the property is by helicopter from the base at Stewart (Vancouver Island Helicopters).

The Clone 1 and surrounding claims are situated southeast of Treble Mountain at the head of Sutton Glacier. The main area of interest is a roughly 4km square nunatak with much of the southern sections only recently exposed by rapidly retreating ice (the southern ice boundary is up to 200m further south in places than that depicted on government topographic and claim maps). Elevations at the south end of the nunatak rise from about 1100 metres at the base to about 1734 metres. Most of the nunatak can be traversed safely on foot although local areas contain occasional bluffs. There is no forest cover on the property. Vegetation consists of alpine grasses and heather growing in patches along the talus, moraine and outcrop.

The majority of the 1998 work was done on the main Clone gold and gold-cobalt structures located within the Clone 1 claim at the eastern end of the nunatak.

Climate is relatively severe, particularly at higher elevations.

B. Status of Property

Relevant claim information is summarized below:

Name	Tenure No.	No. of Units
Clone 1	331439	4

Claim locations are shown on Fig. 2 after government N.T.S. maps. The claims are owned 50/50 by Teuton Resources Corp. and Minvita Enterprises Ltd. of Vancouver, British Columbia. Teuton Resources

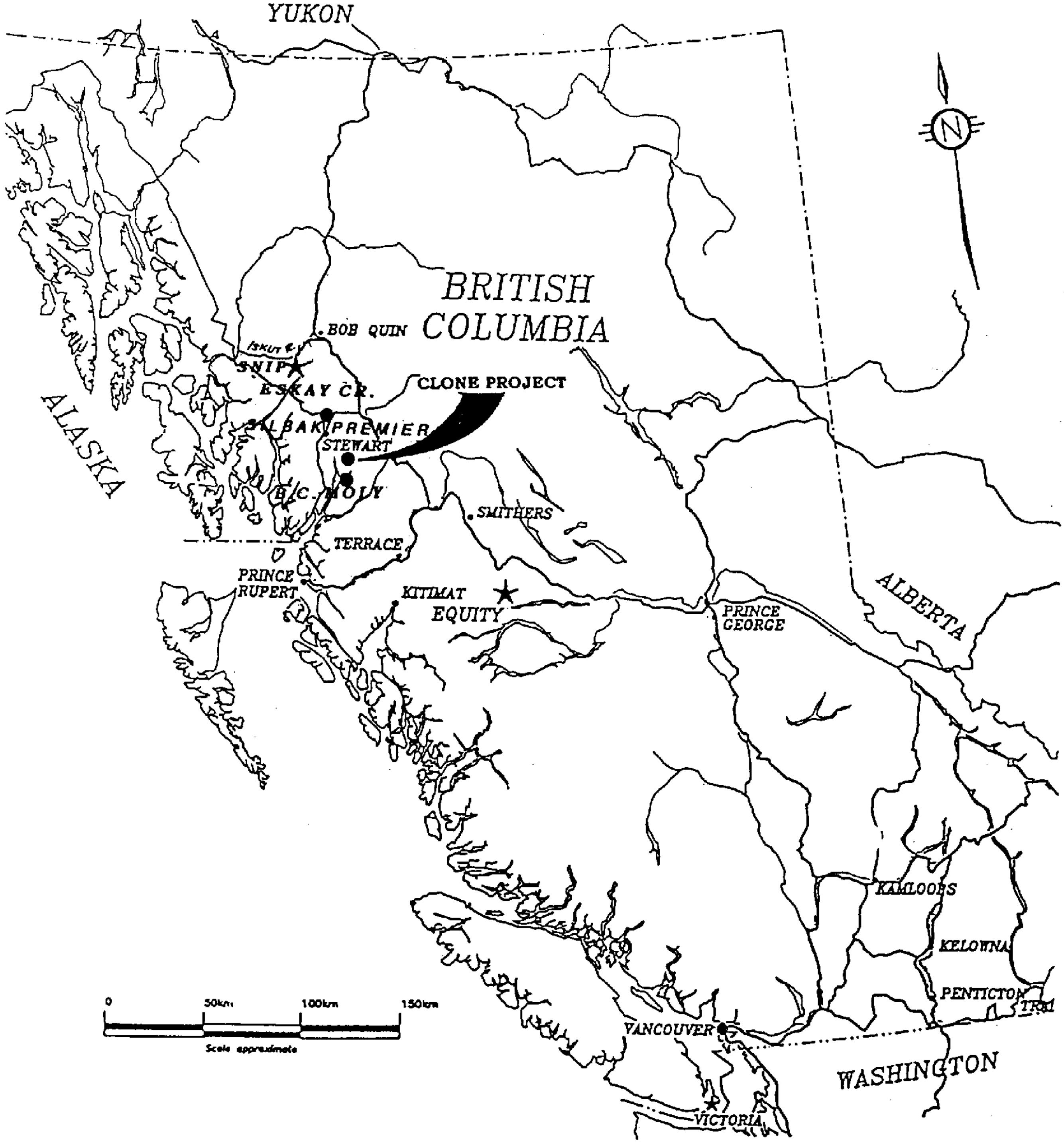
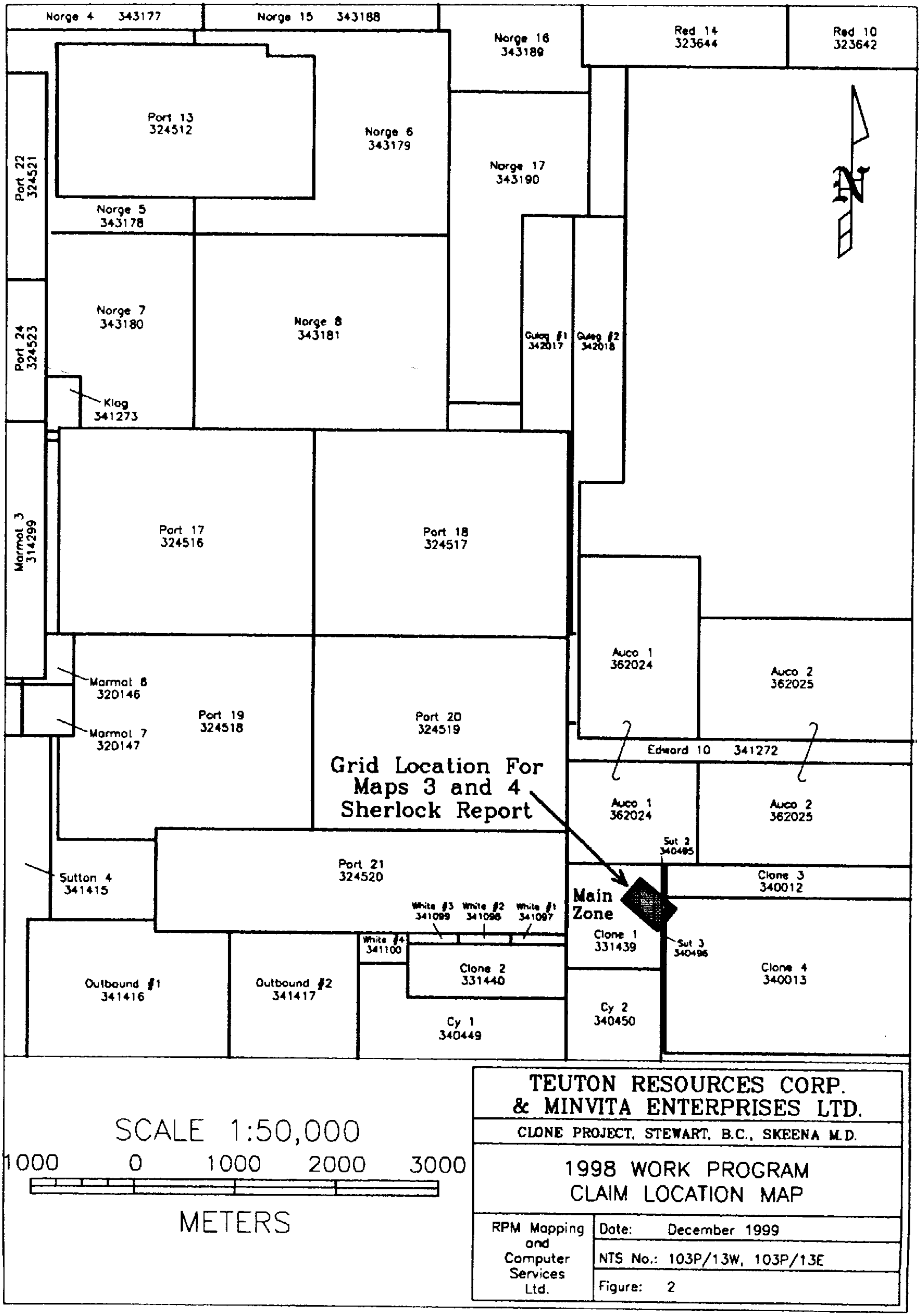


FIGURE 1

PROPERTY LOCATION

CLONE PROJECT


Norge 4 343177
Norge 15 343188
Norge 16 343189
Red 14 323644
Red 10 323642
Port 13 324512
Norge 6 343179
Norge 17 343190
Port 22 324521
Norge 5 343178
N
Norge 7 343180
Norge 8 343181
Port 24 324523
Guleg #1 342017
Guleg #2 342018
Klag 341273
Marmot 3 314299
Port 17 324516
Port 18 324517
Auco 1 362024
Auco 2 362025
Marmot 8 320146
Port 19 324518
Port 20 324519
Marmot 7 320147
Edward 10 341272
Grid Location For Maps 3 and 4 Sherlock Report
Auco 1 362024
Auco 2 362025
Sut 2 340495
Port 21 324520
Sutton 4 341415
Clone 3 340012
Main Zone
White #3 341099
White #2 341098
White #1 341097
White #4 341100
Clone 1 331439
Sut 3 340496
Clone 4 340013
Clone 2 331440
Outbound #1 341416
Outbound #2 341417
Cy 2 340450
Cy 1 340449
SCALE 1:50,000
1000 0 1000 2000 3000
METERS
TEUTON RESOURCES CORP. & MINVITA ENTERPRISES LTD.
CLONE PROJECT, STEWART, B.C., SKEENA M.D.
1998 WORK PROGRAM
CLAIM LOCATION MAP
RPM Mapping and Computer Services Ltd.
Date: December 1999
NTS No.: 103P/13W, 103P/13E
Figure: 2

Corp. is the operator.

C. History

Exploration for metals began in the Stewart region about 1898 after the discovery of mineralized float by a party of placer miners. Sites which could be easily reached from Stewart were the first to be explored among which was the lower Marmot River area. This early phase of exploration culminated in 1910 when both Stewart and the neighbouring town of Hyder, Alaska boasted a population of around 10,000. Another boom period began in the early 1920's after the discovery of the very rich Premier gold-silver mine in the Salmon River area, northwest of Stewart.

Although a number of gold and silver prospects were sporadically worked in the Marmot River region up to the early 1930's, only the Prosperity-Porter Idaho mine (at the head of Kate Ryan Creek, a tributary of the Marmot River) saw limited production. The prospect closest to the Clone claims is the old Ficklin-Harder located at the head of the Marmot River on the southern flank of Treble Mountain. It was explored by a few tunnels attempting to intersect high-grade quartz-sulfide mineralization intermittently exposed on surface. At this time, the area covered by the Clone property was probably mostly under snow and ice and hence unavailable for exploration by the oldtimers.

From 1940 to 1979 there was little activity in the region due to lacklustre precious metal prices. However when silver and gold prices skyrocketed in the early 1980's, many of the old properties in the area were re-examined by both small and large exploration companies. Discovery by Bond Gold Canada of auriferous mineralization at Red Mountain, north of the Clone property, rekindled interest in the Cambria Icefield area in the mid-1990's. A reconnaissance effort by Teuton Resources personnel in the region surrounding Red Mountain culminated in the discovery of unusual gold and gold-cobalt bearing shear structures on the Clone property in the latter half of the 1995 field season. This led to a much larger program including property-wide prospecting, mapping, trenching, geophysical surveys and diamond drilling during 1996 and 1997, details of which are on file in assessment reports filed with the British Columbia Ministry of Energy Mines and Petroleum Resources (see References).

D. References

1. ALLDRICK, D.J.(1984); Geological Setting of the Precious Metals Deposits in the Stewart Area, Paper 84-1, Geological Fieldwork 1983", B.C.M.E.M.P.R.

2. ALLDRICK, D.J.(1985); "Stratigraphy and Petrology of the Stewart Mining Camp (104B/1E)", p. 316, Paper 85-1, Geological Fieldwork 1984, B.C.M.E.M.P.R.

3. GREIG, C.J., ET AL (1994); "Geology of the Cambria Icefield: regional setting for Red Mountain gold deposit, northwestern British Columbia", p. 45, Current Research 1994-A, Cordillera and Pacific Margin, Geological Survey of Canada.

4. GROVE, E.W. (1971): Bulletin 58, Geology and Mineral Deposits of the Stewart Area. B.C.M.E.M.P.R.

5. GROVE, E.W. (1982): Unuk River, Salmon River, Anyox Map Areas. Ministry of Energy, Mines and Petroleum Resources, B.C.

6. GROVE, E.W. (1987): Geology and Mineral Deposits of the Unuk River-Salmon River-Anyox Area, Bulletin 63, BCMEMPR

7. KRUCHKOWSKI, E. (1996); Assessment Report on Geochemical Program—Clone 1 Claim, on file with BCMEMPR.

8. KRUCHKOWSKI, E. (1998); Assessment Report on Geological, Geochemical and Geophysical and Diamond Drilling Work on the Clone Property, on file with BCMEMPR.

E. Summary of Work Done.

The 1999 work on the Clone property consisted chiefly of a geological study of the main gold and gold-cobalt bearing shear zones located within the Clone 1 claim. This study was undertaken under contract by Ross Sherlock, Ph.D., P.Geol. of Steffen, Robertson and Kirsten (Canada), Inc. Dr. Sherlock was accompanied during the field examination in September of 1998 by the author, geologist E.R. Kruchkowski and geological assistant Merle Moorman.

Field personnel were taken in to the property by helicopter from Stewart. The large diamond drill camp from the previous seasons' work programs was refurbished and used as a base of operations. The author and Mssrs. Kruchkowski and Moorman assisted Dr. Sherlock in locating structures, trench and drill sites and diamond drill core locations from the $2.6 million 1996 and 1997 field programs. Some time was also spent fixing up camp and in general reclamation.

2. TECHNICAL DATA AND INTERPRETATION

A. Regional Geology

The Stewart Complex as defined by Grove (1971, 1982) is an economically important, roughly northwest-trending belt of mainly Triassic to Jurassic age sedimentary, volcanic and metamorphic rocks lying between the Coast Plutonic Complex and the Bowser Basin.

More than 600 mineral deposits, at least 70 of which have shown some production, have been discovered within the boundaries of this region. Famous historical producers include the Premier, Granduc and Anyox mines. At the present time the Eskay Creek mine is successfully in production, one of Canada's richest precious metal discoveries ever.

B. Property Geology

The appended report by Ross Sherlock, Ph.D., P.Geol., (cf. Appendix I), contains all of the technical data and observations arising from the 1998 work program on the Clone 1 claim (see Map Folder for maps included in the Sherlock report).

Location for the main zone area relative to claim boundaries is shown on Fig., 2, Claims Map. The indexed area corresponds to the grid dimensions on Maps 3 and 4, Sherlock Report.

C. Conclusions

The author agrees with the observations and conclusions of Dr. Sherlock in the Executive Summary of the report entitled "Geology of the Clone Project, Stewart Region, NW British Columbia, Canada" - Appendix I).

APPENDIX I - GEOLOGICAL REPORT, CLONE PROJECT, STEWART REGION, NW BRITISH COLUMBIA

BY ROSS SHERLOCK, PH.D., P.GEOL,
STEFFEN ROBERTSON & KIRSTEN

TEUTON RESOURCES CORP.

Geology of the Clone Project, Stewart Region, NW British Columbia Canada

4CT004.00

Geology of the Clone Project, Stewart Region, NW British Columbia Canada

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January, 1999

Executive Summary

Gold mineralization at the Clone property is hosted in well defined brittle-ductile shear zones in late Triassic volcanic-sedimentary strata. The shear zones range from 20 cm to 3 m wide and can be traced for over 400 m along strike. Mineralization occurred early in the development of the shears and has been disrupted and deformed by continued post-mineralization deformation. Precious metal mineralization is localized in massive-semimassive iron oxides and lesser sulfides. The iron oxide facies ranges from hematite-specularite to massive magnetite. The massive sulfides are pyrite-pyrrohittie-arsenopyrite±chalcopyite. The distribution of the oxide and sulfide facies is related to buffering of the hydrothermal fluids by oxidized or reduced host lithologies.

The S_1 fabric has an average orientation of 136/82° and high grade ore shoots have an average plunge of 5° to the north. Overprinting the S_1 fabrics is a set of brittle D_2 faults (S_2) with a sericite-pyrite alteration assemblage. These structures have a variable orientation and mappable offsets of lithologic contacts and the S_1 fabrics. The result of the overprinting brittle features is to form a number of shear zone panels that are bounded by latter D_2 structures. The latest structure recognized is a thrust fault (D_3), exposed in the Camp Gully. The thrust dips to the SE and juxtaposes older, hangingwall rocks and younger footwall rocks. The Clone shear is localized in the hangingwall of the thrust and is probably truncated by the thrust at depth.

The geology of the mineralized zone as mapped has been projected onto vertical sectioins spaced at 25 m to better define the 3-D geometry of the shear zone and its associated mineralization. This will form the basis for a resource model.

The airborne magnetic data has been reprocessed, plotted and interpreted at 1:25,000 scale. The basis for this interpretation to facilitate the comparison of features seen at Clone with other areas covered by the magnetic data. On the basis of this comparison two prospective areas have been identified. The highest priority is the Sutton zone, which may have a dilatational structural setting. The second is immediately south of the nunatak which shows similar magnetic features as the Clone zone.

Further work should include a resource estimation based on the current level of drilling. This will provide a benchmark from which to evaluate further work.

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This report, **4CT004.00,** "Geology of the Clone Project, Stewart Region, NW British Columbia Canada", has been prepared by:

STEFFEN, ROBERTSON AND KIRSTEN (CANADA) INC.

Ross Sherlock,
Senior Geologist, Ph.D., P.Geo.

1. Background and Brief

Teuton Resources Corporation (Teuton) commissioned SRK to undertake a structural study of the Clone project in northwestern British Columbia. Fieldwork was conducted between September 9 and 21 inclusive. During the course of the fieldwork it was recommended that SRK compile all the drill hole and trench data in a GEMCOM database in order to interpret current sections. As this was beyond the initial scope of work, it was scheduled between other projects, with the goal of being completed by the end of 1998. A draft report, along with sections and maps was submitted to Teuton in January 1999, for comments and a final report delivered in March 1999.

2. Program Objectives and Work Program

The objective of this program was to undertake a detailed evaluation of the controls on mineralization within the Clone property and to generate a robust structural model which can be used for prospect scale targeting and to direct future drilling.

This included:

- Examination and synthesis of existing data sets.
- Detailed trench mapping, focusing on the structural framework of mineralization.
- Relogging of drill core and orienting the core where possible with data from trench mapping to construct detailed cross-sections and level plans.
- Construction of a structural model which will be applied to identify and prioritize targets.
- Preparation of a report with diagrams, interpreted solid geology cross sections and level plans with recommendations.
- Interpretation of the regional magnetic data and geology, with target generation.

3. Project Team

The work was performed by Ross Sherlock with geologic input from Mark O'Dea and Mike Michaud and database assistance by David Carr. Personnel onsite during the course of the field work were Dino Cremonese, Ed Kruchkowski and Merl Moorman.

4. Introduction

The Clone property is situated about 20 km southwest of Stewart British Columbia. Access to the property is by a 20 minute helicopter flight from Stewart, although due to poor weather conditions access is unpredictable. The property is immediately south of Treble Mountain at the head of the Sutton and Kshwan glaciers on a ~ 4 km^2 nunatak within the Cambrian ice field.

5. Regional Geology

The Stewart district is near the western margin of the Stikine terrane part of the Intermontain belt. Stikinia is the largest and metallogenically most prolific terrane in the Canadian Cordillera. Stikinia generally comprises three stratigraphic groups, all of which are recognized in the Stewart region: (1) Middle and Upper Triassic mafic volcanics and clastic rocks and cherts of Stuhini group; (2) Lower and Middle Jurassic volcanic and clastic rocks of the Hazelton group; and (3) Upper Jurassic mudstones and sandstones of the Bowser Lake group (Anderson, 1993). The stratagraphic sequence has been deformed into non-cylindrical northwesterly trending syncline-anticlines pairs, the axial planes of which have been cut by easterly dipping thrusts (Greig et al., 1994).

Intrusive phases in the region include Late Triassic calc-alkaline intrusives, coeval with Stuhini volcanic rocks, Early to Middle Jurassic intrusives that are variable in composition and roughly coeval with the Hazelton group volcanics. Also present are Eocene age intrusives, part of the Coast Plutonic suite.

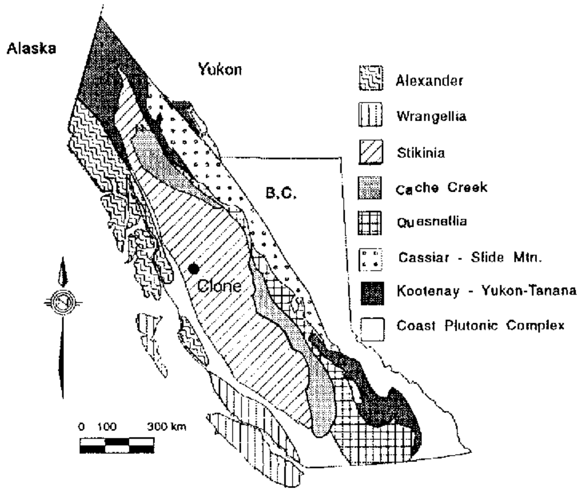


Figure 1. Location map for the Clone project, over a BC terrane map.

Of regional economic significance are the Early Jurassic Texas Creek granodiorite and related, mainly alkaline, stocks and dykes that are associated with Au-Ag (Cu,Mo) veins at Silbak-Premier, Big Missouri, Red Mountain, Johnny Mountain, Snip, and Sulphurets (Anderson, 1993, Greig et al., 1994 and Rhys et al., 1995). The Eocene age intrusives are also associated with economic mineralization; such as the Hyder pluton and associated Au, Ag, Pb, and Zn vein deposits including the Prosperity-Porter Idaho, Silverado and Indian mines (Alldrick, 1993).

6. Nunatak Geology

The overall geology (Figures 2 & 3, Map 1 & 2) of the nunatak was mapped by Homestake during the 1996 field season and was not addressed during the course of this investigation. The following is summarized by Kaip (Homestake report).

The Clone nunatak is underlain by a homoclinal sequence of volcanic and sedimentary strata which strikes SE and youngs to the SW. From NE to SW the sequence includes:

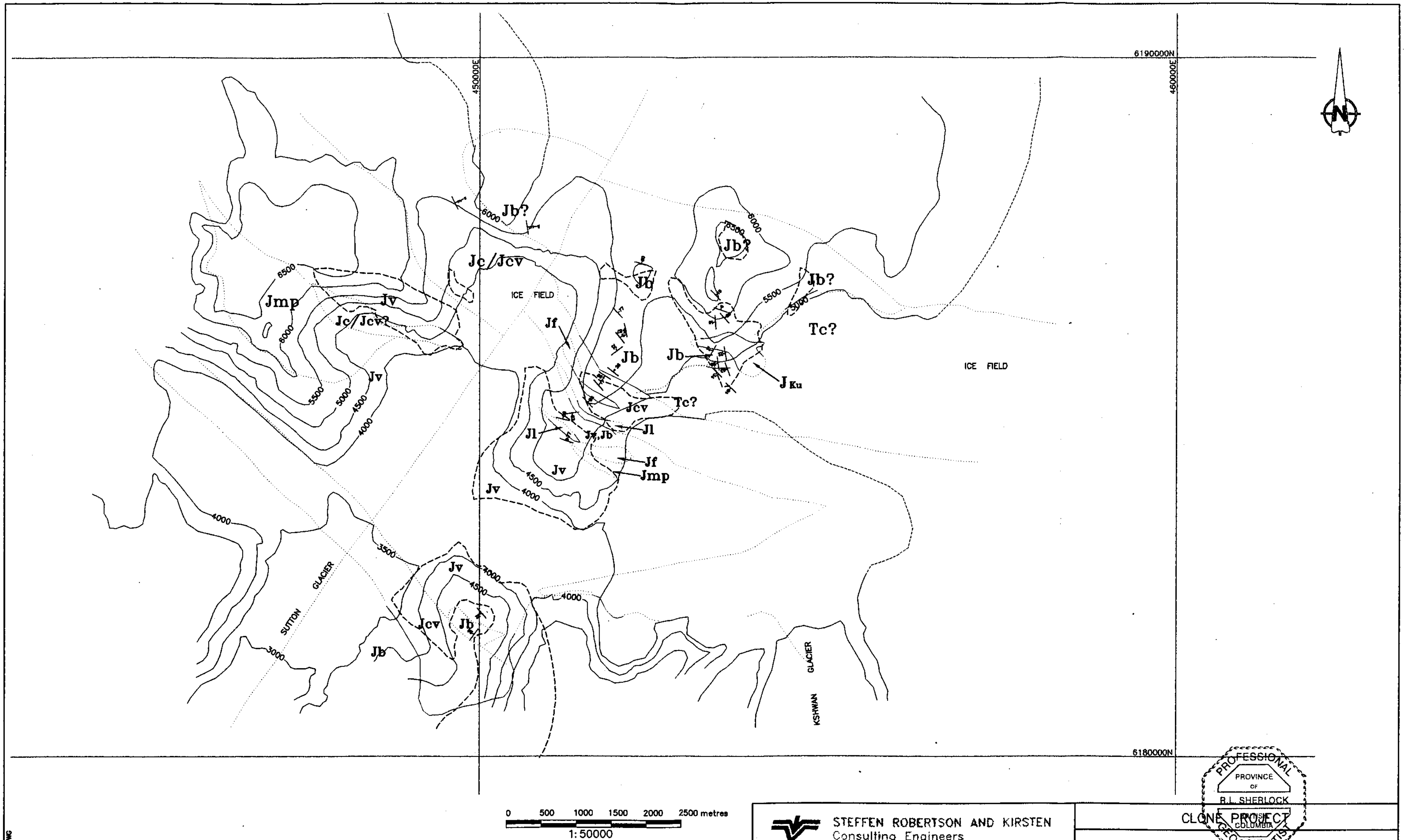
- Dominantly sedimentary sequence with lesser intercalated andesite volcanics cut by a large dioritic to gabbroic intrusion.
- Hetrolithic sequence including a basal maroon volcanic breccia overlain by basaltic to andesitic breccias and siltstones and intruded by a series of hornblende and biotite porphyritic intrusives
- Dominantly volcanic package composed of mafic flows, sills and breccias.

The sequence mapped as part of the Lower to Middle Jurassic Hazelton Group by Greig et al., (1994) and was considered by Homestake to be part of the Pliensbachian Betty Creek formation.

Figure 2. Regional geology showing the Clone area. From Greig et al., (1994)

Hazelton Group
Jb pyroxene phyric volcanic rocks
Jc undivided, well bedded epiclastic rocks
Jcv undivided epiclastic and subordinate volcanic rocks
Jmp maroon colored pyroclastic rocks
Jl limestone
Jf felsic volcanics

Tc Stuhini Group clastic sediments



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STEFFEN ROBERTSON AND KIRSTEN
Consulting Engineers

TEUTON–CLONE

CLONE PROJECT

CLONE REGIONAL GEOLOGY
from Greig et al (1994)

PROJECT NO.	DATE	APPROVED	
1CT004.00	JAN. 1999		Figure 2

PROFESSIONAL
PROVINCE OF
R.L. SHERLOCK
BRITISH COLUMBIA
GEOSCIENTIST

Figure 3. Geology of the Clone Nunatak. Modified from Homestake.

Dani Alldrick of the British Columbia Geological Survey had one sample of "fine-grained granodiorite sill" dated by U-Pb techniques. This rock is a massive to weakly foliated, fine grained, weakly porphyritic, hornblende granodiorite, located "within a few metres of" grid line 24+00N / 17+00E. The sample locality occurs in the footwall of the "Camp Thrust" providing a minimum age of the host strata. An age estimate of 201.2 ± 0.3 Ma is based on two concordant titanite samples (Alldrick, person. comm. 1998). As the U-Pb date is from an intrusive body it provides a minimum age constraint on the strata in the footwall of the Camp thrust. Since the hangingwall rocks of the Camp thrust are older then the footwall the age of the mineralized hosts are greater than 201.2 Ma. The previously inferred Pliensbachian Betty Creek formation for the strata at Clone has an age range of 195-187 Ma, which is inconsistent with the above age. A minimum age of 201 Ma for the strata indicates early Triassic, probably Stuhini Group.

7. Lead Isotopes

Mineral deposits in the Stewart area are unusual in that they tend to have two distinct and different origins despite similar appearances and host lithologies. One of the techniques to distinguish if the deposit is part of the Tertiary (young) or Jurassic (old) suite is to analyze the lead isotopic ratios of the mineralization. In the Stewart camp, the Tertiary and Jurassic deposits have distinct isotopic ratios. Three samples of galena were collected by Dani Alldrick, from the Clone area, and analyzed at the University of British Columbia. The results are somewhat contradictory in that two of the samples plot in the Tertiary cluster and one in the Jurassic cluster.

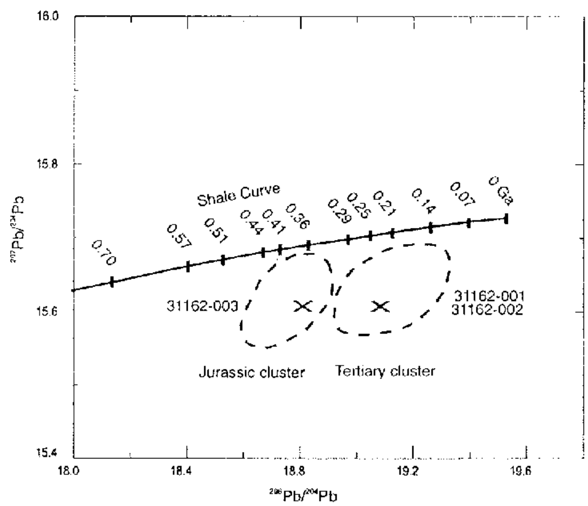


Figure 4 $^{207/204}Pb$ - $^{206/204}Pb$ diagram showing the three Clone samples and the Jurassic and Tertiary clusters from the Stewart area Alldrick (1993).

31162-001: Sample was collected by Ed Kruchkowski. Large sawn brick of near-massive, foliated fine to medium grained crystalline galena. Sample was collected from "the trench immediately above the AW Zone".
31162-002: Sample collected by Alldrick. Medium grained galena in a small pod of sulphides located in a shear zone which cuts through a thin lens of carbonate (limestone) rock very near the contact of an intrusive dike (consequently this galena may be related to the age of 1. the dike or 2. The fault) Location: near grid picket 24N+17E.
31162-003: Sample collected by Alldrick from Trench # 199. Fine to medium grained galena within an crystalline aggregate of mixed sulphides, collected from within the hematite-cemented shear zone. This sample should be representative of the age of the hematite-hosted (shear hosted) mineralization.

Both sample 1 and 2 (described above) are enigmatic in that they do not represent samples from the main shear zone at Clone and are likely related to weak mineralization during late faulting or intrusions. Sample number 31162-003 likely represents the age of the shear zone as it was taken from the S-Zone. Although not definitive, it does support an early age of the mineralization and is consistent with the geology of the property.

8. Deposit Scale Geology

The strata that hosts precious metal mineralization at Clone is generally NW striking and subvertical (Figure 5, Map 3). Graded beds, rarely seen in the clastic sediments, indicate that the sequence youngs to the SW.

Mega-Breccia

The mega-breccia is the oldest sequence mapped in the zone. The sequence is a hornblende-plagioclase porphyritic volcanic conglomerate. The conglomerate is clast supported, unsorted and poorly bedded, with clast sizes that range from pebbles to boulders. The conglomerate is generally monolithic, but other fragments including granitoid, felsic volcanic and massive hematite (± malachite stained) make up less than 1% of the fragments. The matrix, where seen, has a similar composition, hornblende-plagioclase porphyritic, but often with heavy hematite disseminations. The lower portion of the unit has a matrix dominated by heavily disseminated hematite, whereas the upper portions has a green matrix of similar composition to the larger clasts with only minor hematite. The transition between the hematite matrix and the green matrix conglomerate is gradational occurring over several meters, but the matrix to the conglomerate is never devoid of hematite. Often fragments in the red matrix conglomerate show well developed reaction rims with concentrations of hematite occurring around the clast margins.

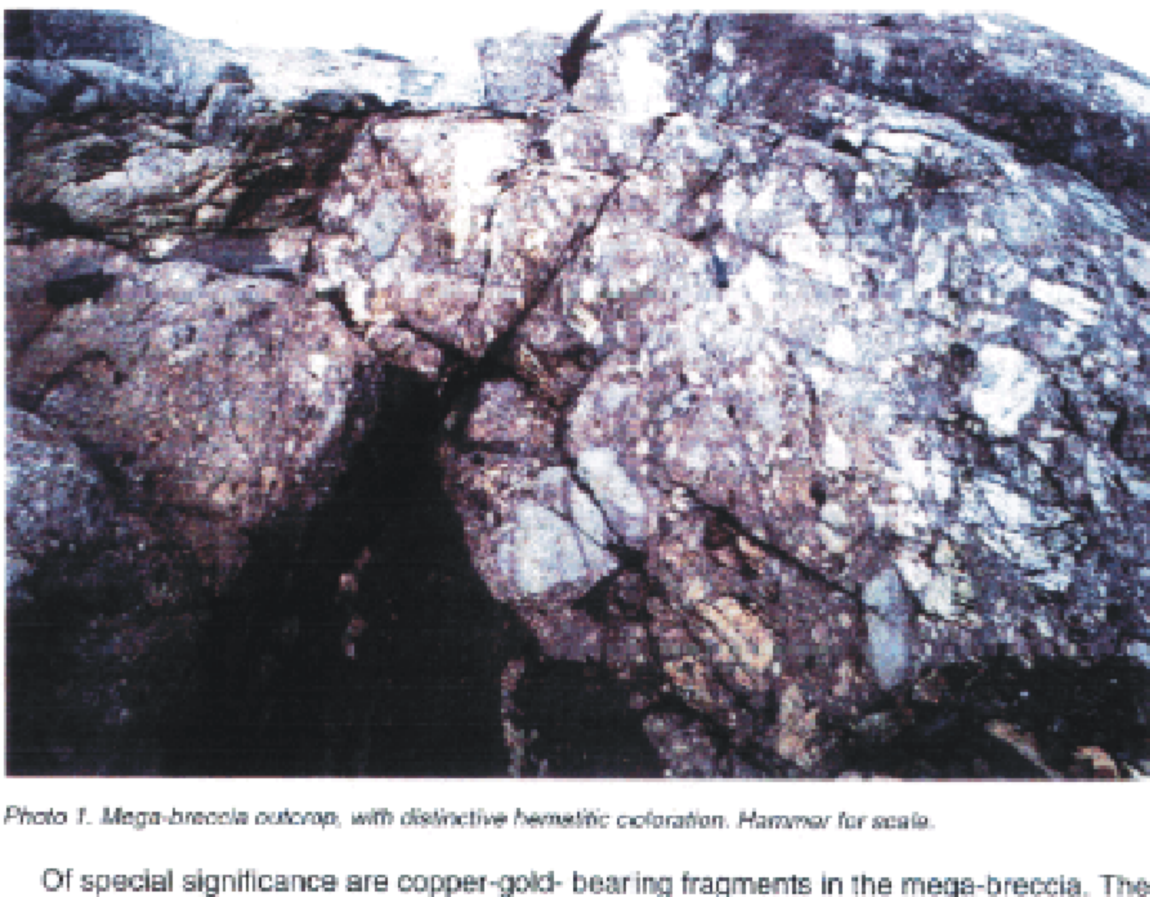


Photo 1. Mega-breccia outcrop, with distinctive hematitic coloration. Hammer for scale.

Of special significance are copper-gold- bearing fragments in the mega-breccia. These fragments contain disseminated bornite-chalcopyrite and pyrite. The source of the copper is unknown as it appears to have been incorporated into the fragments before sedimentary transport. The presence of these fragments may indicate local porphyry-Cu-Au style mineralization.

The origin of the iron oxide is almost certainly sedimentary and is likely the result of oxidation of ferrous iron (reduced: $Fe(OH)_2$) present in hornblende, chlorite and other silicates to ferric iron (oxidized: $Fe(OH)_3$) such as hematite. This is a common diagenetic event and likely reflects the availability of oxygenated seawater in the porosity of the volcanic conglomerate. The transition from the dominantly red matrix conglomerate to the overlying green (normal) matrix of the conglomerate may be the result of a deepening of the depositional environment and the more reduced nature of the seawater. This may be indicating a sequence of rocks that were deposited in a progressively deeper marine environment. This inference is supported by the top of the sequence being dominated by mudstones.

Hornblende ± Biotite ± Plagioclase Porphyry

An intrusive or thick extrusive mafic body separates the mega-breccia unit from the overlying sediments (described below). The contact between the hornblende porphyry and the volcanic sediments is the focus of the main shear zone. The unit is typically massive with ~10% hornblende phenocrysts, locally up to 5% biotite and up to 10% plagioclase phenocrysts. The unit is extensively brecciated in the southern portion of the map sheet, mainly at its basal contact. The brecciation is best described as an autobreccia with irregular angular to rounded fragments, monolithic, clast supported with no evidence of reworking. This may be the basal contact of a flow or sill and was likely related to emplacement of the unit. The fragments are often emphasized by hematitic concentrations around the fragment margins. No bed forms were recognized.

Volcanic sandstones-mudstones

The hornblende porphyry is overlain by a fine-grained volcaniclastic sequence. The sequence is often bedded and grain sizes range from pebble to mud and the matrix is often crystal rich. The unit has hornblende ± plagioclase phenocrysts and lesser hematite discolorations in the matrix. Frequent irregular mafic intrusions are hosted in this sequence with similar phenocryst assemblages. The intrusions are highly irregular and may show brecciated margins suggesting intrusion into unlithified sediments.

Upper Sedimentary Sequence

The highest stratigraphic unit identified is a sequence of black mudstones, siltstones and limey siliclastics. This unit is strongly foliated at its base and is interbedded and structurally interleaved with volcanic sandstones. Limestones within this sequence are often highly disrupted and recrystalized.

Late diabase dykes cross-cut all lithologies and structural fabrics and are presumably Eocene in age.

Alteration

Throughout the main Clone Zone all the strata have been affected by a pervasive potassium feldspar alteration. This has bleached the strata and obscured many of the primary textures. This alteration is not obviously related to the shear hosted mineralization and may be an unrelated early metasomatic event.

Directly related to the shear zone hosted mineralization is a strong chlorite-iron oxide/sulfide with lesser sericite alteration assemblage occurring as a halo around the shear zones. The occurrence of iron oxides or sulfides in the alteration assemblage is interpreted to be a function of buffering by the host lithologies and is elaborated upon below. The relationship between the ubiquitous potassium feldspar alteration and the chloritic alteration is uncertain.

9. Mineralization

The mineralization at Clone is characterized by high-grade gold and lesser silver-cobalt with accessory copper-arsenic. Mineralization occurs as both sulfide and oxide facies. The oxide facies is from the "H-Zone", which is a series of shears located on the eastern side of the zone, closest to the mega-breccia and associated oxidized sediments. The sulfide facies, "S-Zone", is also shear hosted located west of the H-Zone and in some cases the S and H zones are seen to merge together along strike and with depth.

H-Zone

Oxide mineralization is typically associated with quartz-hematite-potassium feldspar-sericite-chlorite alteration within discrete shear zones. Hematite occurs as pervasive staining and disseminations within the host lithologies and also as specularite veinlets that cross-cut the shears. The distinction between hematite introduced during the mineralizing event and the hematite present in the host lithologies as part of the overall volcanic-sedimentary environment is problematic. There is a large amount of hematite discoloration within the host lithologies and occasional massive hematite clasts or replacements that are diagenetic in origin. The precious metal mineralization is spatially associated with massive to semi-massive hematite or more rarely magnetite, likely ferric iron introduced by the hydrothermal system. The gold occurs as fine disseminations, most abundant in the quartz-potassium feldspar-rich portions of the shears. These zones are distinctive in that they are paler in color and distinctive from the massive iron oxides or in the specularite veinlets.

S-Zone

Sulfide mineralization is shear hosted and typically massive to semimassive pyrite, arsenopyrite with rare chalcopyrite, magnetite and hematite. Alteration associated with the S-Zone is typically chlorite occurring as the immediate selvages to the shear. The S-Zone tends to be more pody then the H with discontinuous pods of sulfides within the shear zones.

Controls on H- or S-Zone Mineralogy

The structural geometry of the S- and H-Zones are very similar and appear to have formed under the same structural conditions. In several instances oxide and sulfide facies mineralization can be seen to merge without any clear overprinting relationships.

The oxide facies is hosted in the rocks closest to the mega-breccia, which are highly oxidized. The oxidation of the strata is interpreted as diagenetic, pre-dating the shear formation. Fluids channeled in structures, cutting these lithologies, would be buffered by the oxide minerals and transported iron would be oxidized forming the hematite and magnetite zones. The sulfide facies mineralization is hosted in unoxidized rocks with the iron contained in silicates as reduced ferrous iron. Fluids interacting with these lithologies would also be buffered by the wall rocks and iron, transported or reacted with, would be reduced forming iron sulfides.

The shear zones in the Clone property with the variable mineralogy is reflecting the oxidation state of the host rocks and buffering of the hydrothermal fluids by these lithologies. Fluids in the oxidized assemblages will form iron-oxides and fluids in the reduced (normal) host lithologies will be reduced. The transition between hematite and sulfide zones is the result of a complex interplay between the hydrothermal fluids, the residence time of these fluids and the availability of host lithologies to buffer the fluids.

Figure 5. Detailed geology of the Clone Zone. See map #3, for details. Intensity of form lines and alteration stippling corresponds to the intensity of deformation and alteration respectively.

Cobalt

The Clone property is somewhat unusual in the occurrence of cobalt mineralization. Erytherite (cobalt bloom $Co_3(AsO_4)_2$-$8H_2O$) occurs locally, likely as a secondary cobalt mineral. Primary cobalt minerals have not been identified. The significance of cobalt mineralization is unclear. It may simply be a source rock effect, locally derived from mafic volcanic rocks during the main mineralized shear.

10. Structural Geology

During the course of this study, all mapping and core logging focused on the structural framework and its relationship to mineralization. Three distinct structural events (D_1 to D_3) were recognized and are described below.

D_1

The main mineralizing event, also the earliest event recognized, is the development of a brittle-ductile shear zone. This event is characterized by a strong penetrative foliation (S_1) that intensifies towards the center of the shear, and a weak to moderately developed shallowly plunging mineral lineation. D_1 structures are usually mapped as discrete shear zones, generally with widths of less than 3 meters. Asymmetric fabrics and rotated clasts indicate a sinistral shear sense and the average S_1 orientation is 136/82°. The S_1 fabrics have been plotted (Figure 6) with different symbols corresponding to different grade-width classes. Based on this distribution there is no clear preferential orientation corresponding to high or low grades.

The high grade portions of the S_1 shears, as defined by channel and trench sampling, are massive to semimassive oxide or sulfides often with small quartz-potassium feldspar veins. These high grade portions of the shears are often narrow (<20 cm) and discontinuous. They have been deformed within the shear zone. The S_1 fabric wraps around mineralized pods and have a well defined linear geometry with an average trend of 317° and plunge of 05°. The orientation of the disrupted quartz-potassium feldspar-hematite veins are the same as the elongation lineations seen peripheral to the shear zones. The geometry of the high grade portions of the shear is significant in that it mimics what is seen on a larger scale having the same orientation as the ore shoots with a shallow northerly plunge.

Both brittle and ductile deformation styles characterize the shear zone at Clone. The co-spatial development of ductile deformation fabrics, brecciation and veining all attest to a complex history of plastic deformation accompanied by episodic periods of brittle failure. The S_1 zones pinch and swell along strike and anastamose leaving packages of relatively low-strain rocks. This geometry is seen both in plan view and in vertical sections. Alteration within the shear zone is chlorite dominated and generally extends for several meters as a halo around the shear. The S_1 fabrics are best developed along lithologic contacts where they reach their maximum width (± 5 m) and can be traced continuously for ~300 meters.

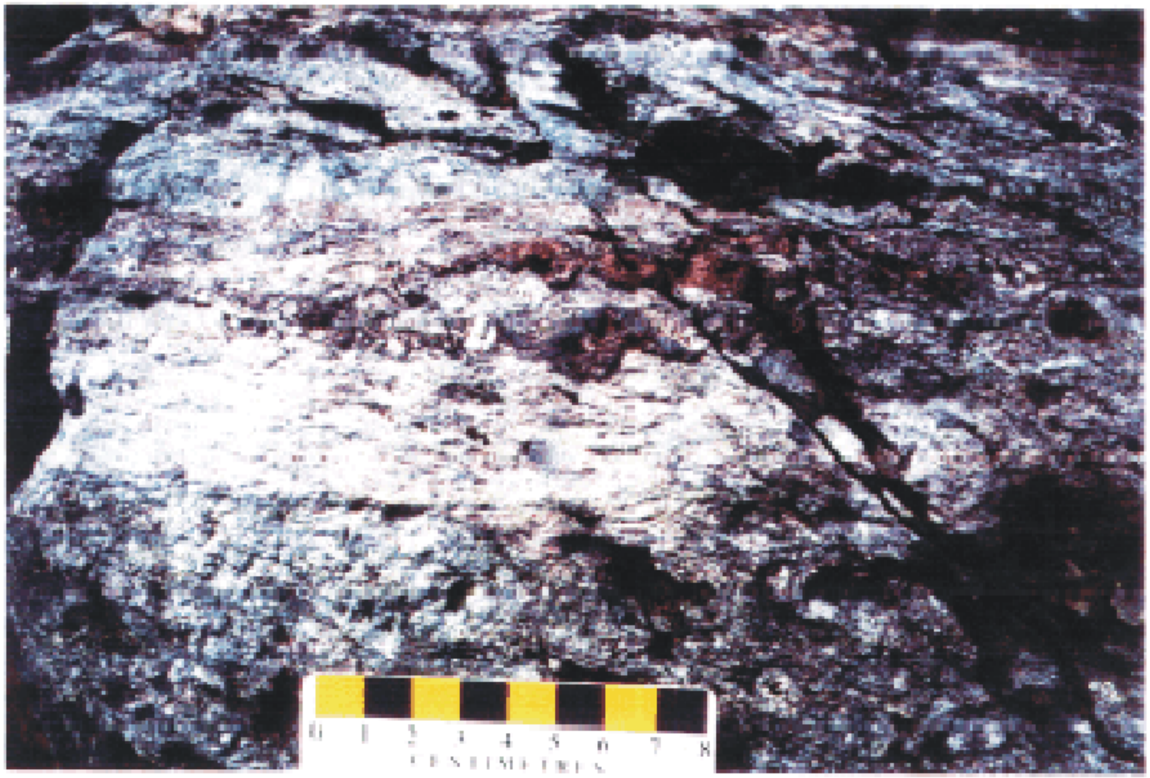


Photo 2. Well developed S_1 shear fabric at TR-5. Shows increased strain towards center of zone marked by grain size reduction. Rotated winged fragment, indicates a sinistral offset.

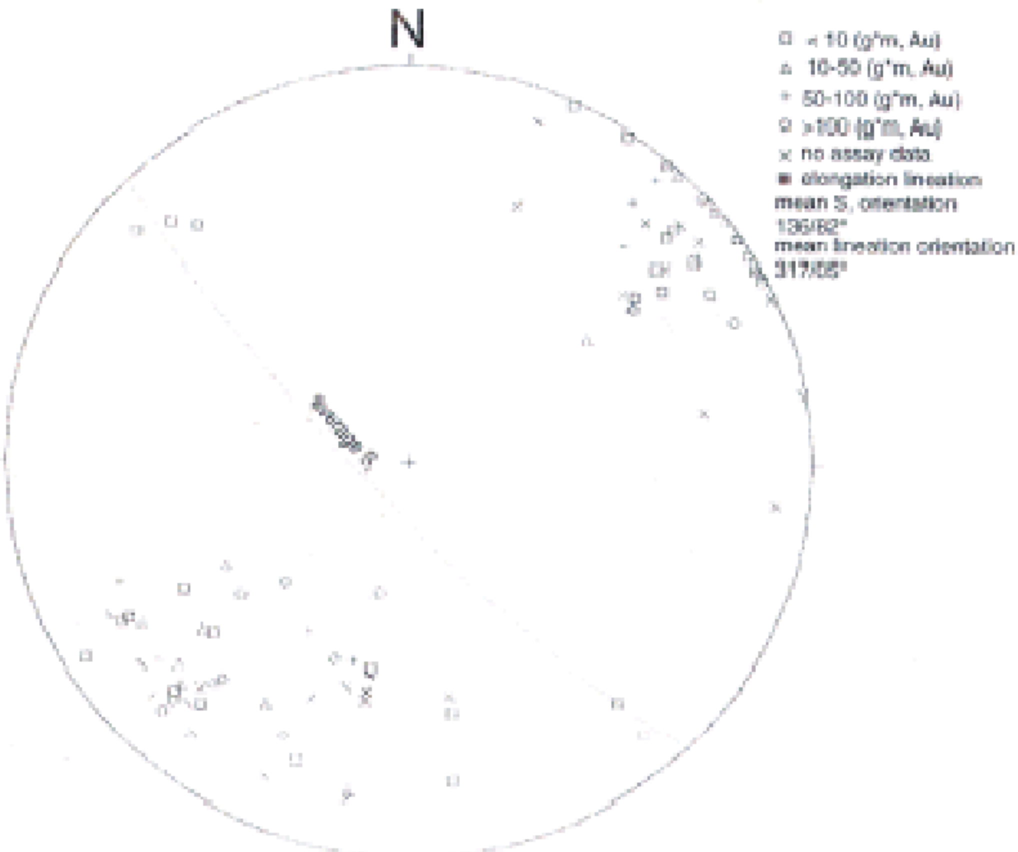


Figure 6. Equal-area plot of poles to S_1 fabrics separated according to the grade from corresponding trenches.

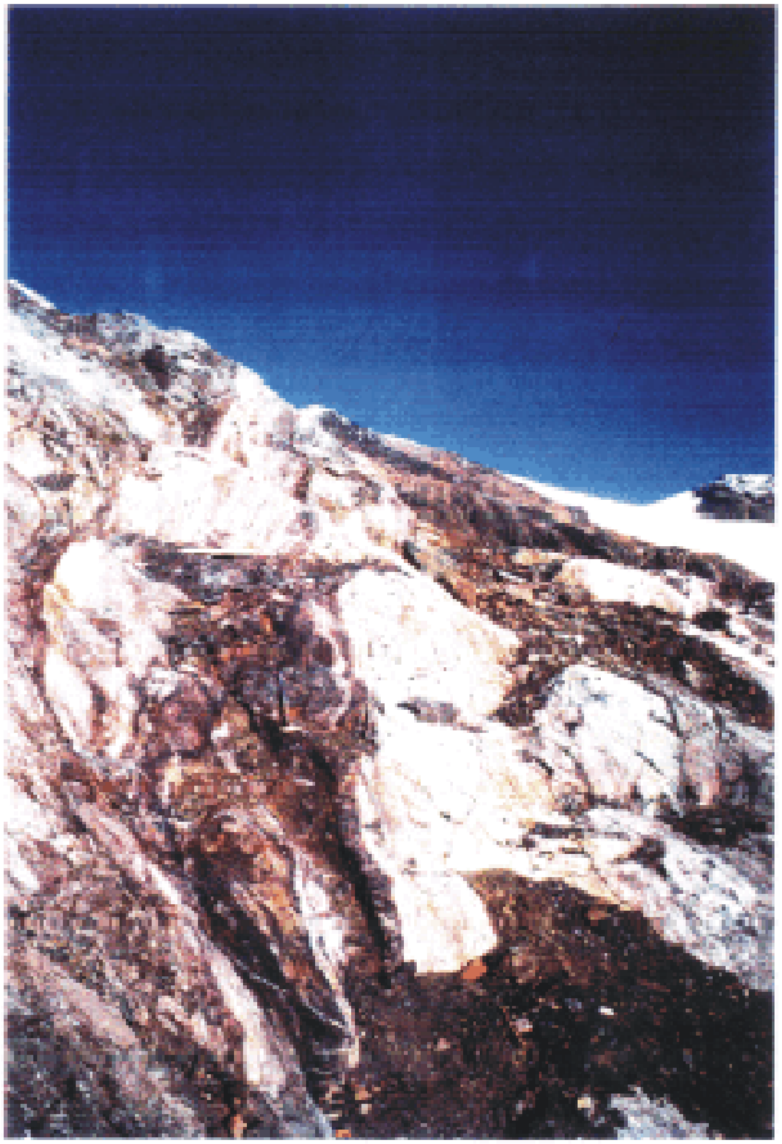


Photo 3. Well defined shear zone at TR-11 with the mega-breccia in background.

Photo 4. Detail of shear zone at TR-11. Margins of shear are bleached K-spar altered with well developed pseudo-breccia textures. Also shown is a quartz-FeOx veins at the margin of the shear zone. These veins carry the bulk of the high grade mineralization.

Photo 5. Trench 4 showing a large scale quartz-FeOx vein that has been disrupted and attenuated. The fragment has a shallow northerly plunge, similar to the orientation of the volcanic clasts (see below).

Photo 6. Stretched volcanic clasts, in shear zone, showing a shallow northerly plunge, oblique to the plan of the photograph.

D_2

The S_1 shear fabrics are cut by discrete D_2 brittle faults which have a localized S_2 fabric. D_2 faults typically have well defined margins, strong slickensides on surfaces, and comprise zones of sericite-chlorite-pyrite alteration assemblages and are typically less than 50 cm across. These features cross-cut lithologies and generally show a mappable offsets of lithologic contacts as well as S_1 fabrics. There is no mineralization associated with these structures. Although there is a lot of variation ion the orientation of the S_2 surfaces they tend to be oriented ~ENE-WSW and dip to the north. Slickensides plot on the surfaces and tend to plunge off to the NE.

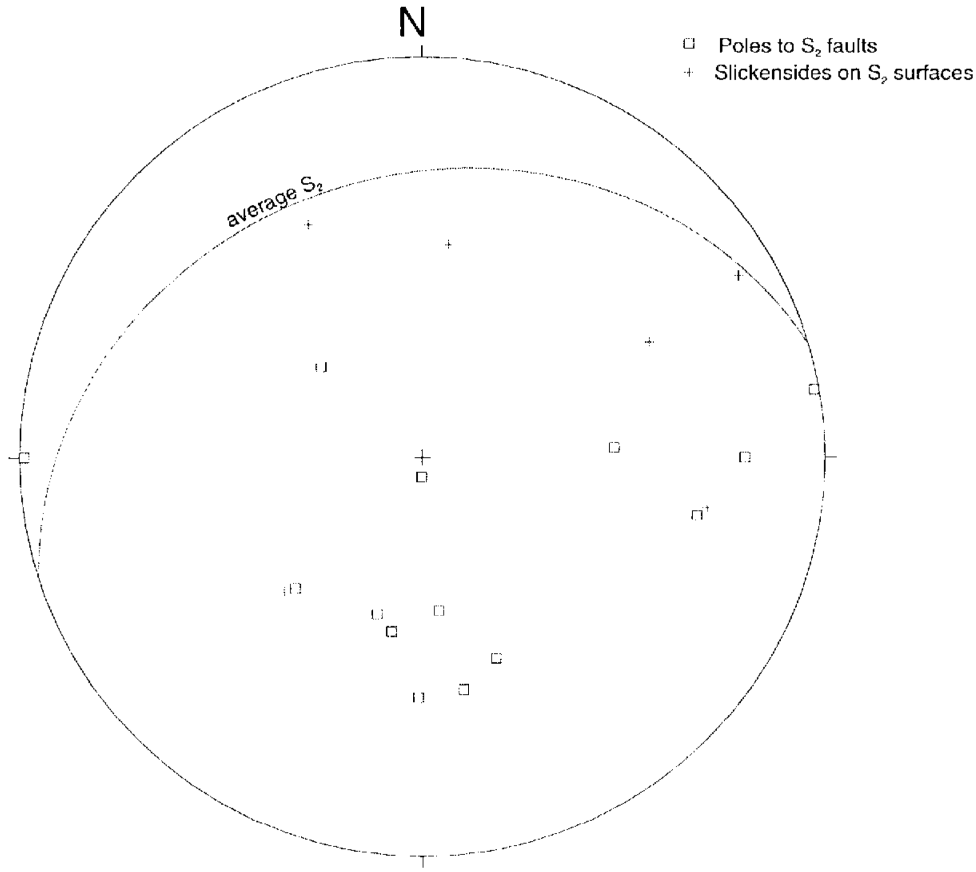


Figure 7. Equal-area plot of poles to S_2 fabrics along with slickensides on the S_2 surfaces.

D_3

Evidence for a third deformation event is only seen in the Camp Gully or in drill core and is marked by discrete gouge zones with localized S_3 fabrics and a sericitic-chlorite alteration assemblage. The timing relationship between D_2 and D_3 is uncertain. Where observed, the hangingwall has a series of small asymmetric west verging folds with FA at 294/10°. The geometry of these folds suggests that the movement of the structure was top to the west making the Camp Gully fault a thrust. This geometry suggests that the Clone shear zone is hosted in older hangingwall rocks thrust over younger rocks to the west.

Photo 7. West-verging thrusts in immediate hangingwall of camp thrust fault

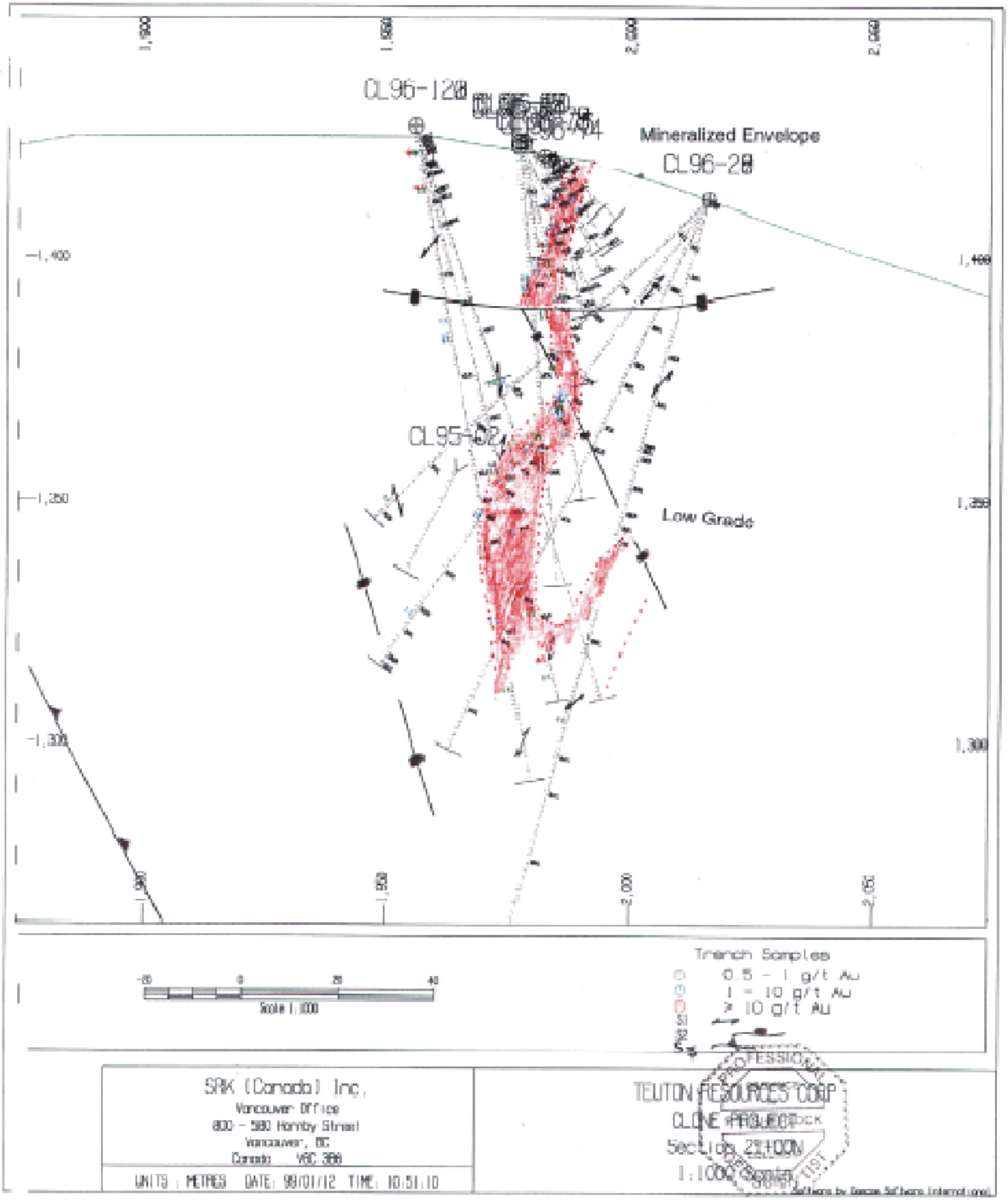
11. 3-D Modeling

The drill hole and trench assays were compiled into a GEMCOM data base allowing for sections and level plans to be created with accurate projection of drill holes. Drill holes and trench samples are shown along with geology on Map 4. Between section 22+00N and 18+25N sections were produced on 25 meter intervals, orthogonal to the strike of the D_1 shears. All drill holes were projected onto the sections at 12.5 meter area of influence north and south of the section. Plotted on the drill holes were assays (> 0.5 g/t gold) and lithologies. Also plotted on the sections are trench assays and surface topography. The trench samples, and drill collars, often plot above or below the surface topography, since the trench samples are surveyed and the surface topography is taken from the 1:50,000 topography maps. The trench samples and drill collars should be taken as the true surface and the topographic surface should be taken as the generally trend of the topography.

Based on the surface mapping and core logging, the geologic framework has been projected onto the sections and a coherent model of the mineralization produced around this structural framework. Sections with the highest density of drilling were interpreted first, with that information extrapolated to intervening sections with less drill information.

The sections outline one or more mineralized envelopes that define the shear zones. These zones are projected from the surface based on the geometry of the shear zones. Core-axis angles are taken from the logs and plotted on the sections (not a true section) and used to define the geometry of the shear zones and later cross-cutting faults.

Figure 8. Section 21+00N with interpreted geology



CL96-12B
Mineralized Envelope
CL96-28
CL95-02
Low Grade
Trench Samples
0.5 - 1 g/t Au
1 - 10 g/t Au
> 10 g/t Au
Scale 1:1000
SRK (Canada) Inc.
Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada
UNITS : METRES DATE: 98/01/12 TIME: 10:51:10
TEUTON RESOURCES CORP
CLONE PROJECT
Section 21+00N
1:1000 Scale

Figure 8

The overall geometry of the shears (S_1 fabric) are characterized by a series (2-3) of subparallel anastamosing shear zones which are typically steeply dipping with variable sulfide-oxide mineralogy. The shears have been cross-cut and disrupted by a series of brittle faults (S_2 fabric). The resulting geometry is a series of D_1 shear panels bounded by brittle faults. Section 21+00N (Figure 8) is an excellent example of this with the three D_1 zones bounded by a series of D_2 brittle structures that truncate mineralization. The geometry of the shears within each panel is well defined and predictable; however, between panels the geometry can be quite variable. The bounding brittle faults have a variable orientation and offset. Some of the faults are well mapped on the surface and in the sections and have little to no offset on the scale of these sections. Other faults truncate mineralization and the faulted continuation is not known.

The Camp Gully thrust (D_3) is seen in several of the deeper drill holes. This separates the volcanic-sedimentary sequence, in the hangingwall, from a massive gabbroic sequence in the footwall. Often there is minor/sporadic mineralization at or near the thrust associated with the mudstones. This mineralization is difficult to project over any significant distance.

In longitudinal section the mineralization has a reasonably well defined rake. One long section, 19+85E, was produced approximately in the plane of the main oxidized shear zone. The section used only 7.5 meter projection on either side, which limits the plotted data. The down hole assays form a series of linear zones, plunging at 5 – 10° to the north. This is consistent with the geometry of the high grade portions of the shears seen in outcrop, and also with the elongation of volcanic fragments. Many of the drill holes went under the ore shoots which are plunging shallowly to the north.

Further Work and Additional Targets

As seen in the long section (19+85E) there are several areas, particularly deep, that are open down plunge. These represent good drill targets. However, before any recommendations for further drilling in the main Clone zone can be made, the project will be taken to a resource model. To do this the shear zone (mineralized envelopes) will be digitized into a 3-dimensional block model and grade extrapolated into the blocks. This will allow a rigorous grade tonnage curve to be created. Following the resource model, a drill program will be recommended to test for zones that are currently open and also to upgrade inferred or indicated resource material to indicated or measured. This will provide the best value for any following drill programs.

12. Geochemistry

Based on initial trench sampling where high grade (> 0.5 opt) samples were common, drill results have been somewhat disappointing. The perception is that the trench samples have a much higher grade then assays from drill core. To investigate this potential problem preliminary statistics were made of the drill hole and trench assays.

Probability plots for DDH and trench assays are very consistent between 3.2 and 10 ppm gold, corresponding to approximately the fifty and the eighty percentile respectively. For the higher grade assays (>10 ppm, Au) the trench assays tend to be somewhat higher with the 95 percentile having a value of about 80 ppm gold from the trench assays compared to 31.6 ppm gold for the drill hole assays. There is some indication that the trench assays are higher for the high grade assays which may be reflecting a bias of more selectivity during trench sampling.

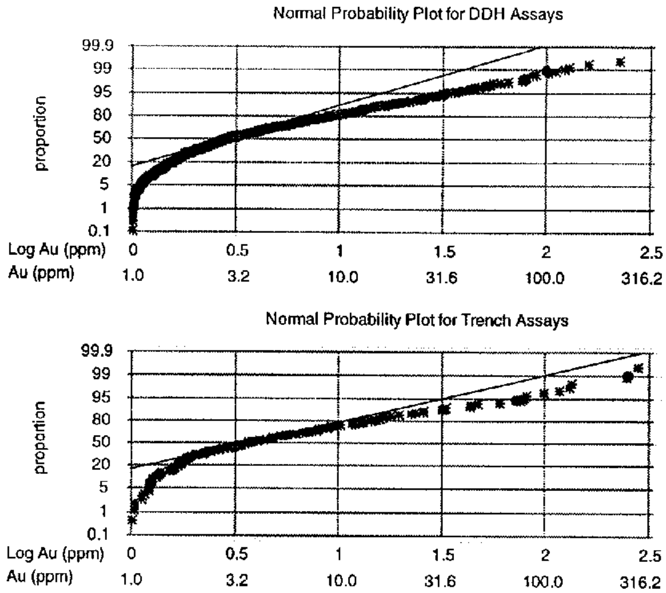


Figure 9. Normal probability plots for trench and drill hole assay data.

13. Regional Targets

A helicopter magnetic survey was flown over the Clone area during the 1996 field season. The details (line height and spacing) of the survey are unknown. The data was acquired from Homestake and reprocessed with ER-Mapper. Several images of this data were produced and overlain with the regional geology map of Greig et al., (1994) (Figure 2, 10 & 11; Maps 1, 5 & 6).

On the magnetics image several sets of linear features are recognized. The dominate feature is a strong NW trending linear, seen at the Clone zone and at the Sutton and Treble zones. These linears are also the same orientation as the main D_1 shear at Clone. The NW linears have a lithologic control and are reflecting different rock units and their different magnetic susceptibility.

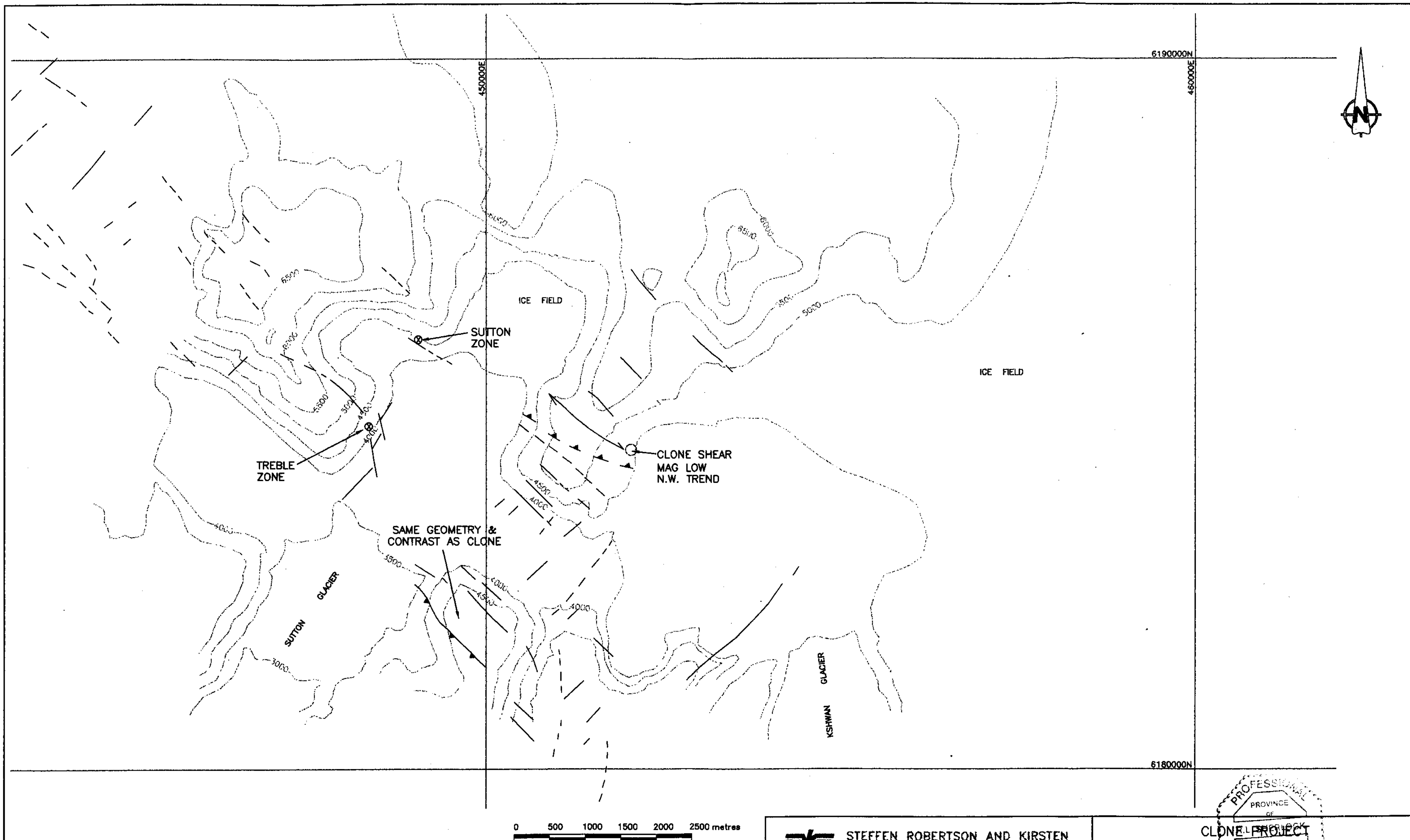
Overprinting these NW linears are NE linears best developed at the Treble zone and south of Clone. These NE linears tend to offset the NW features and may be later faults or they may be jogs in the NW linears. These may be the equivalent of the D_2 faults seen at Clone.

The Clone shear zone itself has a very subdued magnetic signature. Enlarging and reprocessing the area directly over the Clone shear, failed to bring out any details. There appears to be simply no magnetic contrast over the Clone shear. Any magnetite associated with mineralization at Clone was volumetrically too small to have an effect on the airborne magnetic data.

Mineralization at Clone is characterized by a regional break in magnetics from a magnetic high, to the west and a large magnetic low over the shear zones. The magnetic contrast is the Camp gully thrust fault. NW trending magnetic linears, representing a combination of lithologic and structural trends are also well developed at the Clone site. Using these patterns outlined above there are two areas covered by the regional magnetics that warrant follow-up. This should involve regional scale mapping and prospecting to better define targets.

Figure 10. Color-draped TMI image of the Airborne magnetic data. Reprocessed and imaged with ER-Mapper. Sun azimuth 45° and Sun angle 60°.

Figure 11. Magnetic linears and exploration targets over topographic base, from Greig et al., (1994)



STEFFEN ROBERTSON AND KIRSTEN
Consulting Engineers

TEUTON-CLONE

CLONE PROJECT

MAGNETIC LINEARS

PROJECT NO.	DATE	APPROVED	
1CT004.00	JAN. 1999		Figure 11

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA

FILE REF: LINEARS.DWG

The highest priority is Treble zone. Here the NW trending linear are offset by a series of NE trending lines. These may be offsets or they may be fault jogs. If they are fault jogs, and the displacement on the NW linears is dextral then they are dilatational settings and may be prospective.

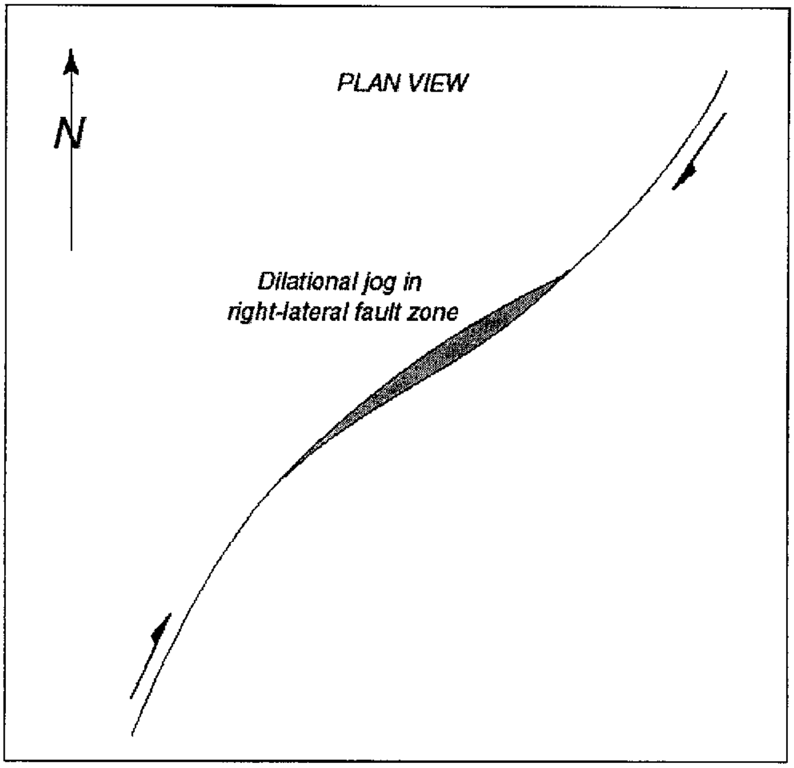


Figure 11. Possible dilatational setting, based on the geometry of the magnetic linears seen at the Treble zone.

A second area that warrants follow-up is the zones immediately south of the Clone nunatak. This area has a very sharp contrast in the magnetic data, similar to Clone and may represent a similar thrust fault. Also present are similar NW trending linears. This may be an analogous structural setting as the Clone zone.

14. Summary

Mineralization at the Clone property is hosted in well defined brittle-ductile shear zones in late Triassic volcanic-sedimentary strata. The shear zones range from 20 centimeters to 3 meters wide and can be traced for over 400 meters along strike. Mineralization is early in the development of the shears and has been disrupted and deformed by continued deformation.

Precious metal mineralization is localized in massive-semimassive iron oxides or sulfides. The iron oxide facies ranges from hematite-specularite to massive magnetite. The massive sulfides are pyrite-pyrrohittie-arsenopyrite±chalcopyite. The distinction between oxide and sulfide facies likely reflects buffering of the hydrothermal fluids and the oxidized or reduced nature of the host lithologies.

The S_1 fabric has an average orientation of 136/82° and ore shoots have an average plunge of 5°. Overprinting the S_1 fabrics is a set of brittle faults (D_2) with a sericite-pyrite assemblage. These structures have a variable orientation and mappable offsets. The result of the overprinting brittle features is to form a number of shear zone panels bounded by latter D_2 structures.

The youngest structure recognized is a large thrust fault, exposed in the Camp gully. The thrust dips to the SE and has displaced older hangingwall rocks over younger footwall rocks. This suggests that the Clone shear is localized in the hangingwall of a thrust and is probably truncated by the thrust at depth.

The geology of the zone as mapped has been projected onto sections produced at 25 meter intervals. This will form the basis for a resource model.

The airborne magnetic has been reprocessed, imaged and interpreted at 1:25,000 scale. The basis for this interpretation is comparison of features seen at Clone with other areas covered by the magnetic data. Two areas are outlined that warrant follow-up, on the basis of this comparison. The highest priority is the Sutton zone, which may have a dilatational structural setting. The second is immediately south of the nunatak which shows similar geometry of magnetic linears and contrast as the Clone zone.

It is recommended that a resource model be made from the current level of information. This will provide a bench mark to judge if additional work is justified based on the potential size ands grade of a resource that may be defined on the property. Further work prospective and mapping the magnetic targets is recommended.

15. Comparisons with other deposits in the Stewart Region (from Alldrick, 1993)

Some of the major gold-silver deposits in the Stewart area are summarized below, from Alldrick (1993) and Rhys et al. (1995). Deposits in the Stewart area are generally quartz-carbonate veins with based metal sulfides and associated precious metals, fairly typical of epithermal environments. Red Mountain is somewhat different being large tabular zones of alteration and sulfides, with precious metals at a the transition between pyrite and pyrrhotite. These obviously are sharply different to the style of mineralization seen at Clone.

Mineralization at Clone is more of a brittle-ductile shear zone that has localized mineralization. This is style of mineralization is unique in the Stewart area and is typically at a greater crustal depth and higher temperatures-pressures. A better analogy for Clone are deposits of the Bridge River Camp, Timmins Ontario or other lode gold systems most common in Archean aged rocks. Other significant deposits in the Stewart camp are described below to provide a framework to compare with the Clone property.

Silbak Premier

The most prolific deposit in the Stewart camp is the Silbak Premier mine. The Silbak Premier deposits are hosted in the Upper Andesite member of the Unuk River formation, dominantly dark green foliated tuffs. Sedimentary features are generally obscured by a strong chloritic alteration and a penetrative fabric. Intruded into the sequence is the Premier Porphyry a potassium feldspar megacrystic, plagioclase-amphibole porphyry. The Premier Porphyry is spatially associated with ore zones. Historic production at Silbak Premier has been from 18 separate shoots generally from veins and mineralized breccias. Mineralogy is dominantly pyrite-sphalerite and galena with sulfosalts. Lead isotopic signatures at Silbak Premier are consistent with a Jurassic age for the mineralization.

Past production at Silbak Premier is 4.2 million tonnes at 13 g/t gold and 274 g/t silver, between 1919 and 1953 from underground operations. In 1988 a small open pit was in operation on the property, where about 1 million tonnes of ore were mined at a grade of 2.27 g/t gold and 67 g/t silver.

Alldrick (1993) describes a hematitic ductile shear zone at Premier, outcropping north of the mine workings and intersected in drilling in the glory hole area. This shear zone may be analogous to the Clone property, however, its relationship to mineralization at Silbak Premier is unknown.

Scottie Gold Mines

Mineralization at Scottie Gold is associated with vein networks within subparallel shear systems. The veins are hosted in andesitic volcanic rocks near the margins of a hornblende granodiorite intrusive stock. The veins are generally massive pyrrhotite with minor quartz-calcite-pyrite-sphalerite-galena. The veins are generally fairly small with widths of ± 5 meters, and strike lengths and depth extents of > 100 meters. Production from Scottie Gold, between 1981 and 1985 was 197,500 tonnes with a grade of 16.5 g/t gold and 16 g/t silver. Lead isotopes of Scottie Gold are consistent with a Jurassic age of the mineralization.

Big Missouri Area

Mineralization in the Big Missouri area are hosted in the Upper Andesite member of the Unuk River formation. There are 25 deposits and prospects within a 2.5 km radius of the Big Missouri mine, five are early Tertiary in age and the remainder Jurassic as defined by their lead isotopic signature. The deposits are north striking veins with a shallow westerly dip. The largest of the vein systems, at the Big Missouri mine had a strike length of 120 meters, a down dip length of 700 meters and a width of at least 5 meters. The veins are quartz-carbonate veins with variable amounts of sulfides, generally pyrite and sphalerite with lesser galena, chalcopyrite and sulfosalts. Production from the Big Missouri mine was 768,943 tonnes at 2.37 g/t gold and 2.13 g/t silver.

Red Mountain (summarized from Rhys et al. 1995)

Gold-silver mineralization at Red Mountain (1992 resource 2.5 Million tonnes at 12.8 g/t gold and 38,1 g/t silver), occurs within a folded sequence of Middle to Late Triassic sedimentary rocks, Early Jurassic volcaniclastic rocks and Early Jurassic intrusives.

The Goldslide intrusion is polyphase and consists of: irregular bodies of medium grained hornblende monzodiorite; hornblende-biotite +/- quartz porphyritic monzodiorite (197.1 +/- 1.9 Ma); and biotite porphyritic hornblende monzodiorite sills. Contact breccias of the intrusions are common and geologic relations suggest that the intrusions are the subvolcanic equivalents to the overlying intrusive phases.

Hydrothermal alteration is pervasive throughout all pre-Tertiary rocks. Several shallow dipping alteration zones are developed above a prophylitic quartz-molybdenum stockwork zone including; sericite-quartz-pyrite (pyrite dominated), chlorite-k-feldspar-sericite-titanite with disseminated and veined pyrrhotite alteration (pyrrhotite dominated), and k-feldspar-pyrite-titanite-actinolite alteration with brown-black tourmaline veins. Mineralization (>0.3 g/t gold) is developed at the transition from pyrite-pyrrhotite dominated alteration over a broad region (> 1km2) with high grade portions (3 to 20 g/t gold) developed in a 5 to 29 meter thick semi-tabular pyrite-pyrrhotite stockwork with intense sericite alteration surrounding disseminated sphalerite + pyrrhotite.

A genetic model, proposed by Rhys et al (1995) suggests that mineralization formed in a subvolcanic environment at the top of the Goldslide intrusion and at he base of the early Jurassic volcanic pile. The alteration and metal zoning is consistent with many porphyry systems and mineralization is likely controlled by redox reactions with the transition between pyrite and pyrrhotite.

Prosperity/Porter Idaho Mine

High grade silver-lead-zinc veins occur at the Prosperity and Porter Idaho veins, southeast of Stewart. These deposits based on their lead isotope signature are Tertiary in age. Mineralization is hosted in andesitic to dacitic volcanic rocks intruded by the Hyder Batholith. Mineralization is a set of veins within a set of subparallel brittle faults. Mineralization is typically massive galena and sphalerite with lesser pyrite-quartz and sulfosalts.

Historic production from the Prosperity/Porter Idaho was 27,000 tones at 1 g/t gold and 0.27% Ag (2,293 g/t) and 5.1% lead in 1922. A geologic resources on the property in 1989 was 826,000 tonnes at 668 g/t silver and 5% combined lead-zinc.

16. References

Anderson, R.G., 1993. A Mesozoic stratigraphic and plutonic framework for northwestern Stikinia (Iskut River Area), northwestern British Columbia, Canada. In Mesozoic Paleogeography of the Western United States. Edited by G. Dunne and K. McDougall., Society of Economic Paleontologiosts and Mineralogists, Volume II, Pacific Section.

Alldrick, D.J. (1993) Geology and metallogeny of the Stewart mining camp, northwestern British Columbia. British Columbia Energy Mines and Petroleum Resources. Mineral Deposits Division, Bulletin 85, 105 p.

Greig, C.J., Anderson, R.G., Daubeny, P.H., and Bull, K.F. (1994) Geology of the Cambrian Icefield area: Stewart (103P/13), Bear River (104A/4) and parts of Meziadin Lake (104A/3) and Part of Paw Lake (103P/14) map areas, northwestern British Columbia; Geological Survey of Canada, Open File 2931.

Rhys, D.A., Sieb, M., Frostad, S.R., Swanson, C.L., Prefontaine, M.A., Mortensen, J.K., and Smit, H.Q. (1995) Geology and setting of the Red Mountain gold-silver deposits, northwestern British Columbia. In Porphyry Deposits of the Northwestern Cordillera of North America, CIM Special Volume 46. Pp. 811-828.

STEFFEN ROBERTSON AND KIRSTEN (CANADA) INC.
Suite 800, 580 Hornby Street, Vancouver, B.C. Canada V6C 3B6
Phone: (604) 681-4196 Fax: (604) 687-5532

CERTIFICATE

I, Ross Lawrence Sherlock, residing at 2645 Rhum and Eigg Drive, Garabaldi Highlands, Squamish, British Columbia do certify that:

1. I am employed by SRK Consulting Engineers and Scientists, as Senior Geologist, with an office at 580 Hornby Street, suite 800 Vancouver BC.
2. I am a graduate of McMaster University (H.B.Sc. 1986), Lakehead University (M.Sc. 1989) and the University of Waterloo (Ph.D. 1993).
3. I have practiced my profession continuously since graduation (1986) employed by various companies and research organizations.
4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
5. I have no direct interest in Teuton Resources Corp, or Minvita Enterprises Ltd. or any of their properties.
6. This report is based on a brief field visit and review of reports.
7. I consent to the use of this report in a Prospectus or statement of material facts.

PROFESSIONAL PROVINCE OF R.L. SHERLOCK BRITISH COLUMBIA GEOSCIENTIST

December 8, 1999
Vancouver BC

Ross Sherlock, Ph.D., P.Geo.

APPENDIX II - WORK COST STATEMENT

Steffen, Robertson and Kirsten (Canada), Consulting Contract

Ross Sherlock, Ph.D. (Field time)	
115 hrs @ $75/hr.	$8,625
Expenses (Travel, etc.)	643
Ross Sherlock, Ph.D. (Office time-structural study)	
133 hrs @ $75/hr.	$9,975
Rachel Browne (CAD Drafting)	
65 hrs @ $45/hr.	2,925
David Carr, Senior Technician	
2 hrs @ $85/hr.	170
Reprographics and Communication Expenses	263
Teuton Field Personnel--Period Sept. 7 to Sept. 25 1998:	
E. R. Kruchkowski, Geologist	
9 days @ $300/day	2,700
M. Moorman, Assistant	
9 days @ $225/day	2,025
D. Cremonese, P.Eng.	
4 days @ $400/day	1,600
Helicopter - VIH (Vancouver Island Helicopters)	
Crew mob, supplies, de-mob	
VIH: 4.9 hrs. @ $899.15/hr.	4,406
Camp Support costs	
31 days @ $75/man-day	2,325
Teuton Field crew/mob-demob (prorated)	820
Miscellaneous (radios, field supplies, equipment)	295
Report Costs	
Report preparation	
D. Cremonese, P.Eng., 1 day @ $400/day	400
TOTAL.........	**$37,172***

*Although Dr. Sherlock's fieldwork was almost entirely confined to the main zones on the Clone 1 claim, his report also encompasses other portions of the Clone property, outside the Clone 1 claim.

In the author's opinion, this would not amount to more than 10% of the work done. Accordingly, 90% of the $37,172 or $33,455 can be applied to Statement of Exploration #3138958 (any balance remaining should be included in the PAC account of Teuton Resources Corp. if permissible)

APPENDIX III - CERTIFICATE

I, Dino M. Cremonese, do hereby certify that:

1. I am a mineral property consultant with an office at Suite 509-675 W. Hastings, Vancouver, B.C.

2. I am a graduate of the University of British Columbia (B.A.Sc. in metallurgical engineering, 1972, and L.L.B., 1979).

3. I am a Professional Engineer registered with the Association of Professional Engineers of the Province of British Columbia as a resident member, #13876.

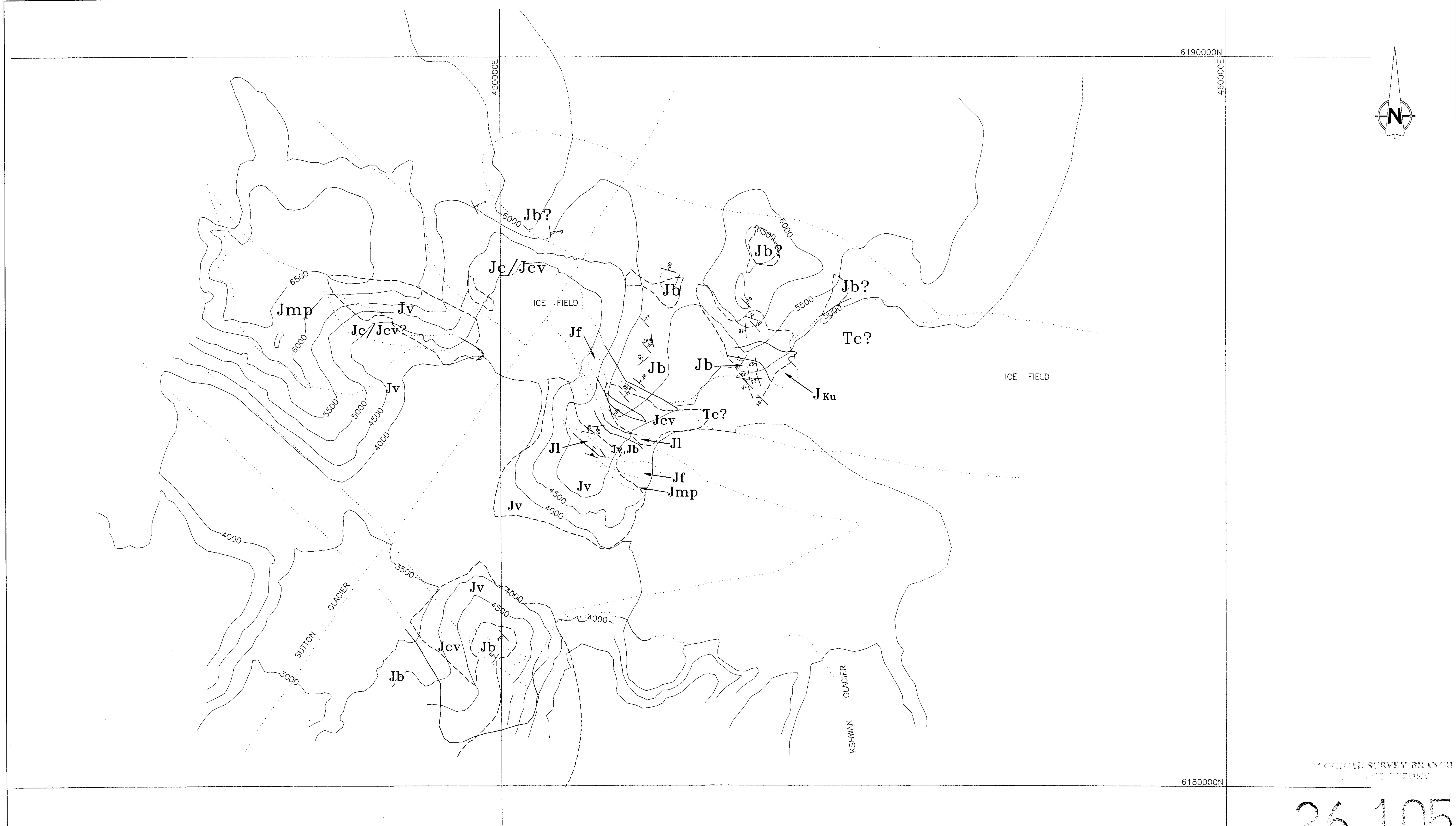
4. I have practised my profession since 1979.

5. This report is based upon fieldwork carried out on the Clone 1 claim in September of 1998, led by senior geologist, Dr. Ross Sherlock. Dr. Sherlock's appended report encompasses all of the important technical data and observations for the 1998 work.

6. I am a principal of Teuton Resources Corp. and Minvita Enterprises Ltd., owner of the Clone 1 and surrounding claims (Clone property). This report was prepared solely for satisfying assessment work requirements in accordance with government regulations.

Dated at Vancouver, B.C. this 9th day of December, 1999.

D. Cremonese, P.Eng.



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STEFFEN ROBERTSON AND KIRSTEN
Consulting Engineers

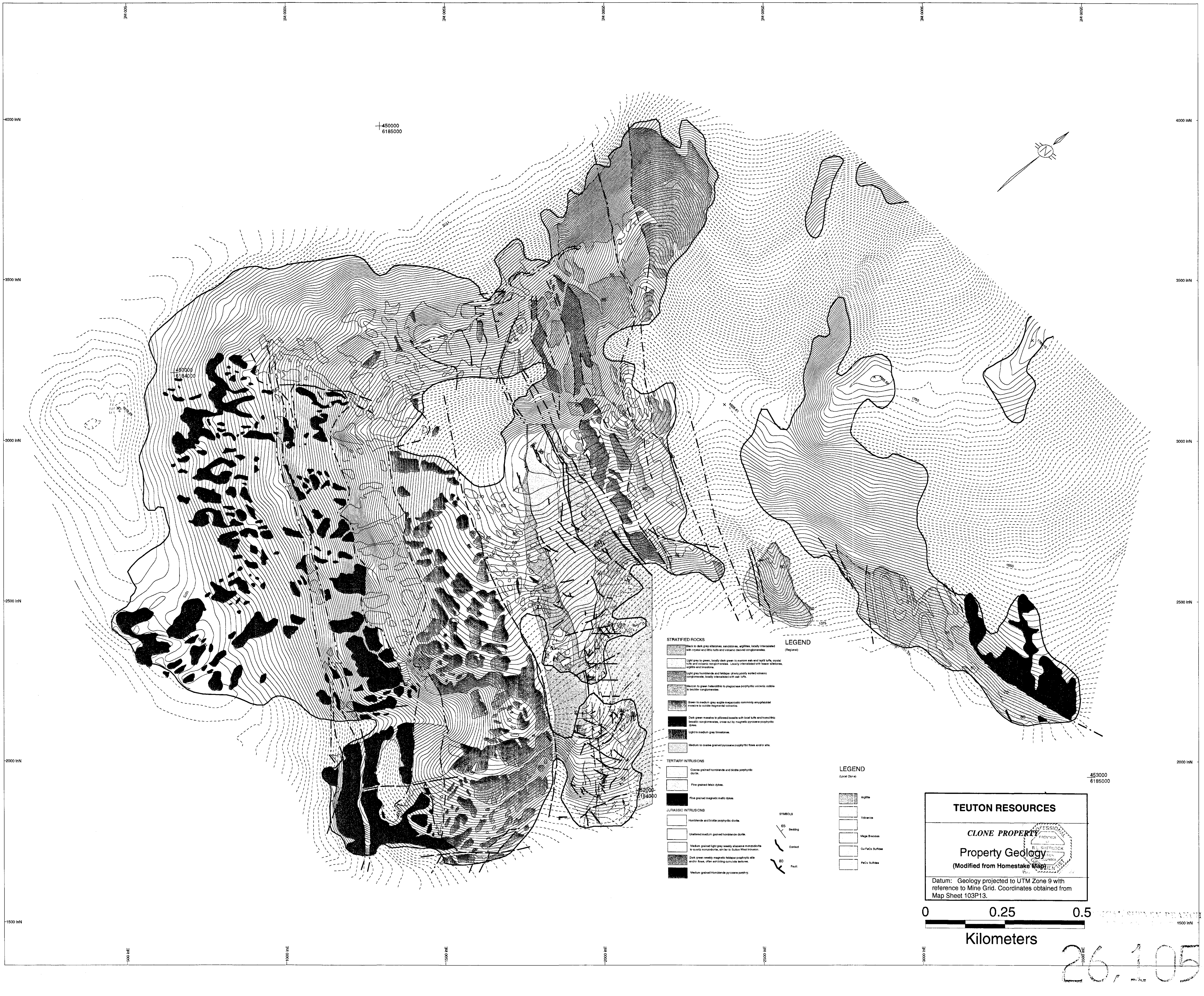
TEUTON—CLONE

CLONE PROJECT

CLONE REGIONAL GEOLOGY
from Greg et al (1994)

PROJECT NO.	DATE	APPROVED	MAP NO.
1CT004.00	JAN. 1999		1

FILE REF: GEOLOGY.DWG



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6185000
450000
6184000
452000
6184000
453000
6185000
4000 lnN
3500 lnN
3000 lnN
2500 lnN
2000 lnN
1500 lnN
500 lnE
1000 lnE
1500 lnE
2000 lnE
2500 lnE
3000 lnE
3500 lnE
1375
STRATIFIED ROCKS
Black to dark grey siltstones, sandstones, argillites, locally intercalated with crystal and lithic tuffs and volcanic derived conglomerates.
Light grey to green, locally dark green to maroon ash and lapilli tuffs, crystal tuffs and volcanic conglomerates. Locally intercalated with lesser siltstones, argillite and limestone.
Light grey hornblende and feldspar pheric poorly sorted volcanic conglomerate, locally intercalated with ash tuffs.
Maroon to green heterolithic to plagioclase porphyritic volcanic cobble to boulder conglomerates.
Green to medium grey augite megacrystic commonly amygdaloidal massive to cobble fragmental volcanics.
Dark green massive to pillowed basalts with local tuffs and homolithic basaltic conglomerates, cross-cut by magnetic pyroxene porphyritic dykes.
Light to medium grey limestones.
Medium to coarse grained pyroxene porphyritic flows and/or sills.
TERTIARY INTRUSIONS
Coarse grained hornblende and biotite porphyritic diorite.
Fine grained felsic dykes.
Fine grained magnetic mafic dykes.
JURASSIC INTRUSIONS
Hornblende and biotite porphyritic diorite.
Unaltered medium grained hornblende diorite.
Medium grained light grey weakly silaceous monzodiorite to quartz monzodiorite, similar to Sutton West intrusion.
Dark green weakly magnetic feldspar prophryitc sills and/or flows, often exhibiting cumulate textures.
Medium grained Hornblende pyroxene porphry.
LEGEND
(Regional)
SYMBOLS
65
Bedding
Contact
80
Fault
LEGEND
(Local Clone)
Argillite
Volcanics
Mega Breccias
Cu-FeOx Sulfides
FeOx Sulfides
TEUTON RESOURCES
CLONE PROPERTY
Property Geology
(Modified from Homestake Map)
Datum: Geology projected to UTM Zone 9 with reference to Mine Grid. Coordinates obtained from Map Sheet 103P13.
0
0.25
0.5
Kilometers
PROFESSIONAL
PROVINCE
R.L. SHERLOCK
COLUMBIA
26,105

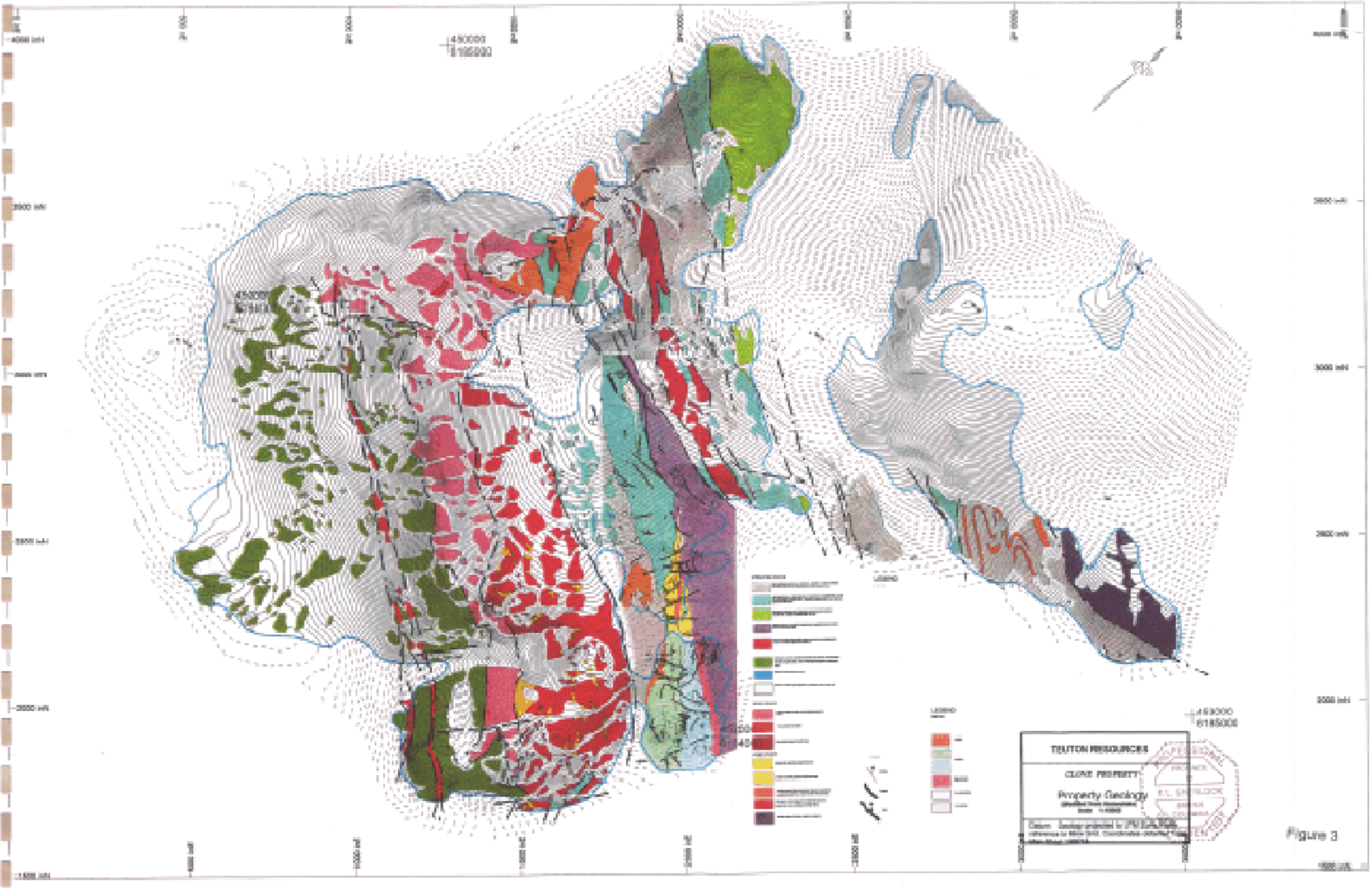
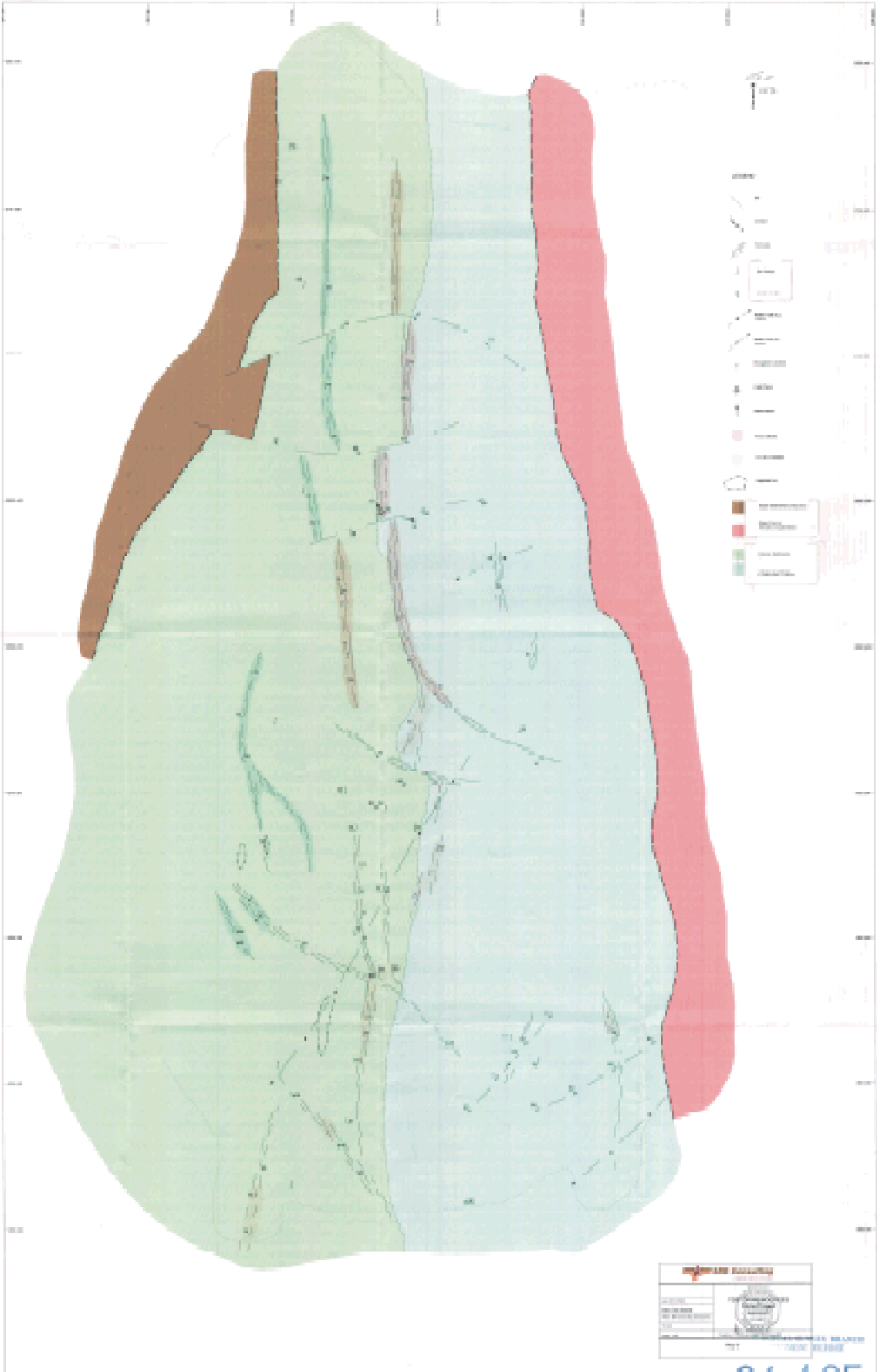
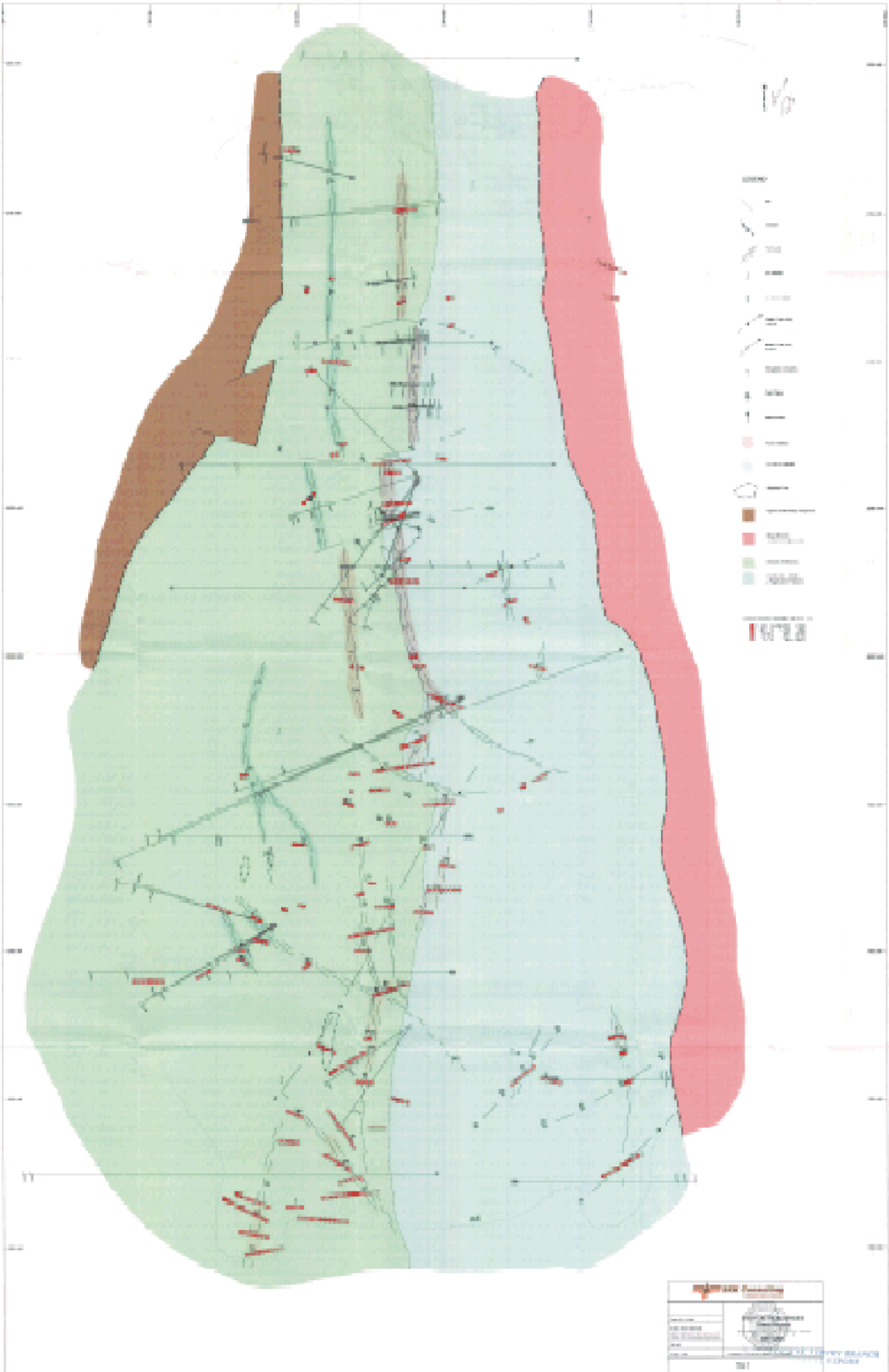


Figure 3



26,105



26,105

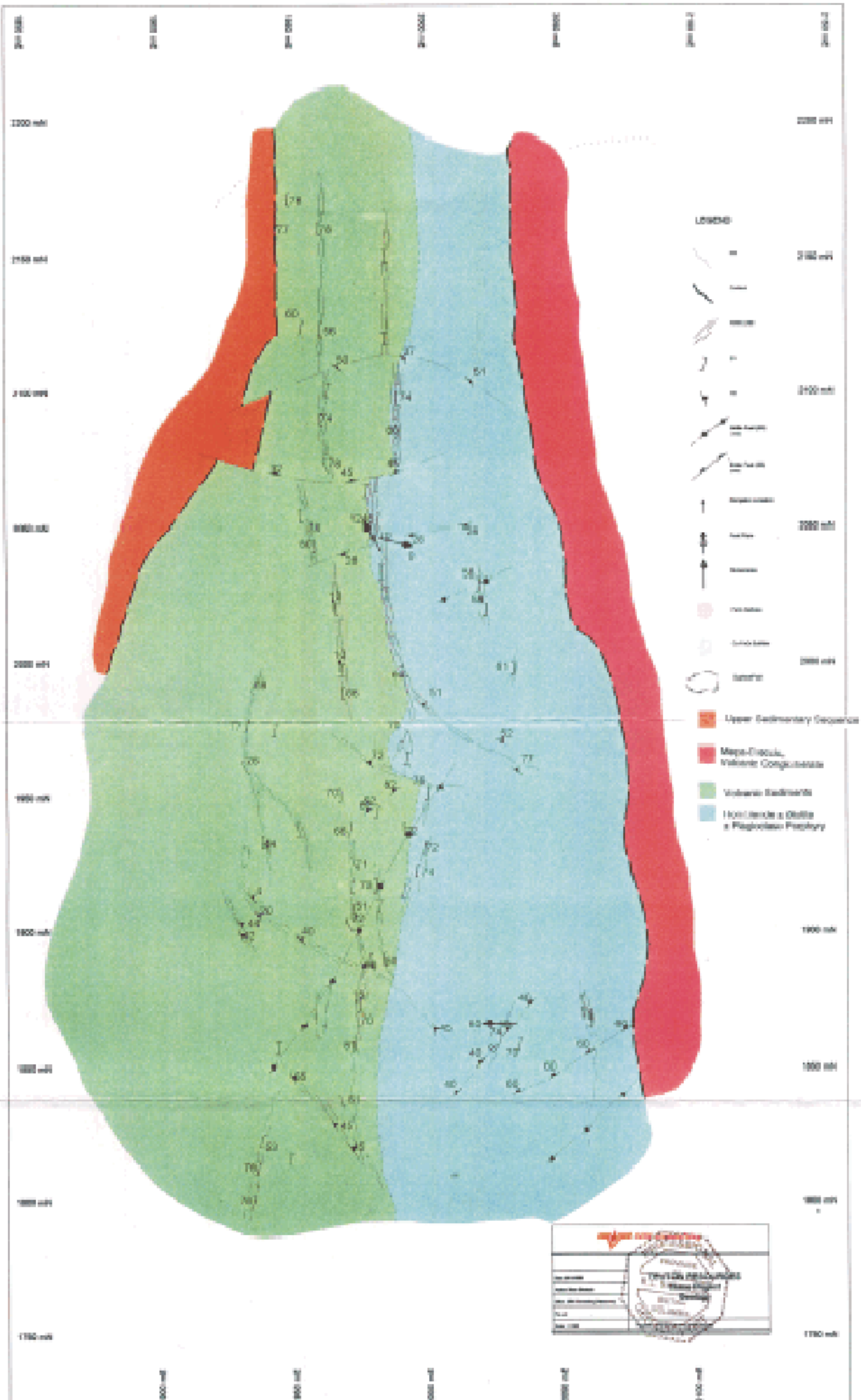
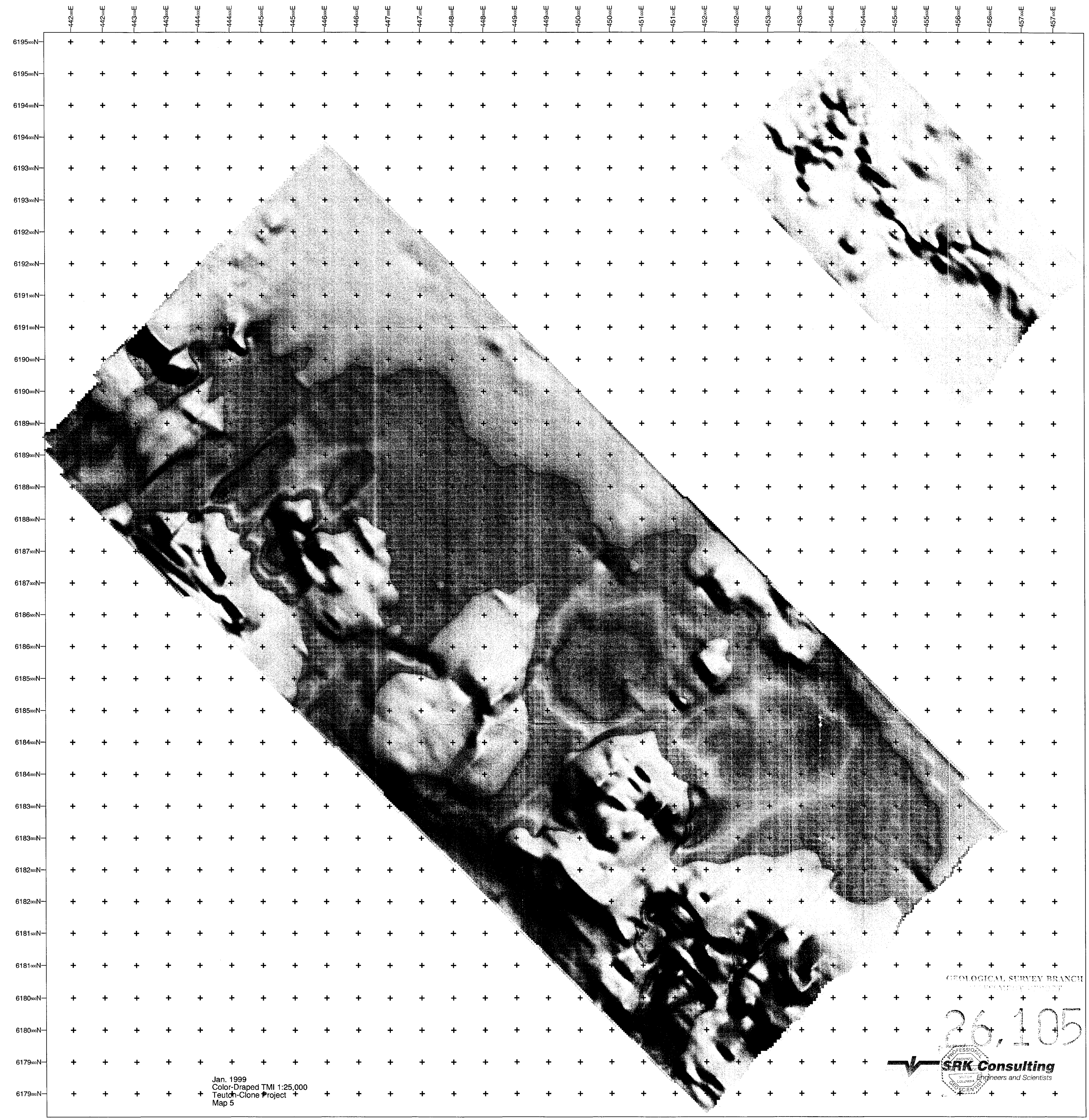


Figure 5


442000E
442500E
443000E
443500E
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444500E
445000E
445500E
446000E
446500E
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448000E
448500E
449000E
449500E
450000E
450500E
451000E
451500E
452000E
452500E
453000E
453500E
454000E
454500E
455000E
455500E
456000E
456500E
457000E
457500E
6195500N
6195000N
6194500N
6194000N
6193500N
6193000N
6192500N
6192000N
6191500N
6191000N
6190500N
6190000N
6189500N
6189000N
6188500N
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6187000N
6186500N
6186000N
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6184000N
6183500N
6183000N
6182500N
6182000N
6181500N
6181000N
6180500N
6180000N
6179500N
6179000N
Jan. 1999
Color-Draped TMI 1:25,000
Teuton-Clone Project
Map 5
GEOLOGICAL SURVEY BRANCH
26,105
PROFESSIONAL
PROVINCE
BRITISH COLUMBIA
GEOSCIENTIST
SRK Consulting
Engineers and Scientists

0 250 500 750 1000 1250 metres

1:25000

STEFFEN ROBERTSON AND KIRSTEN
Consulting Engineers

TEUTON—CLONE

CLONE PROJECT

MAGNETIC LINEARS

PROJECT NO.	DATE	APPROVED	MAP NO.
1CT004.00	JAN. 1999		6

26,105

FILE REF: LINEARS.DWG

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,105

SRK (Canada) Inc.
Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

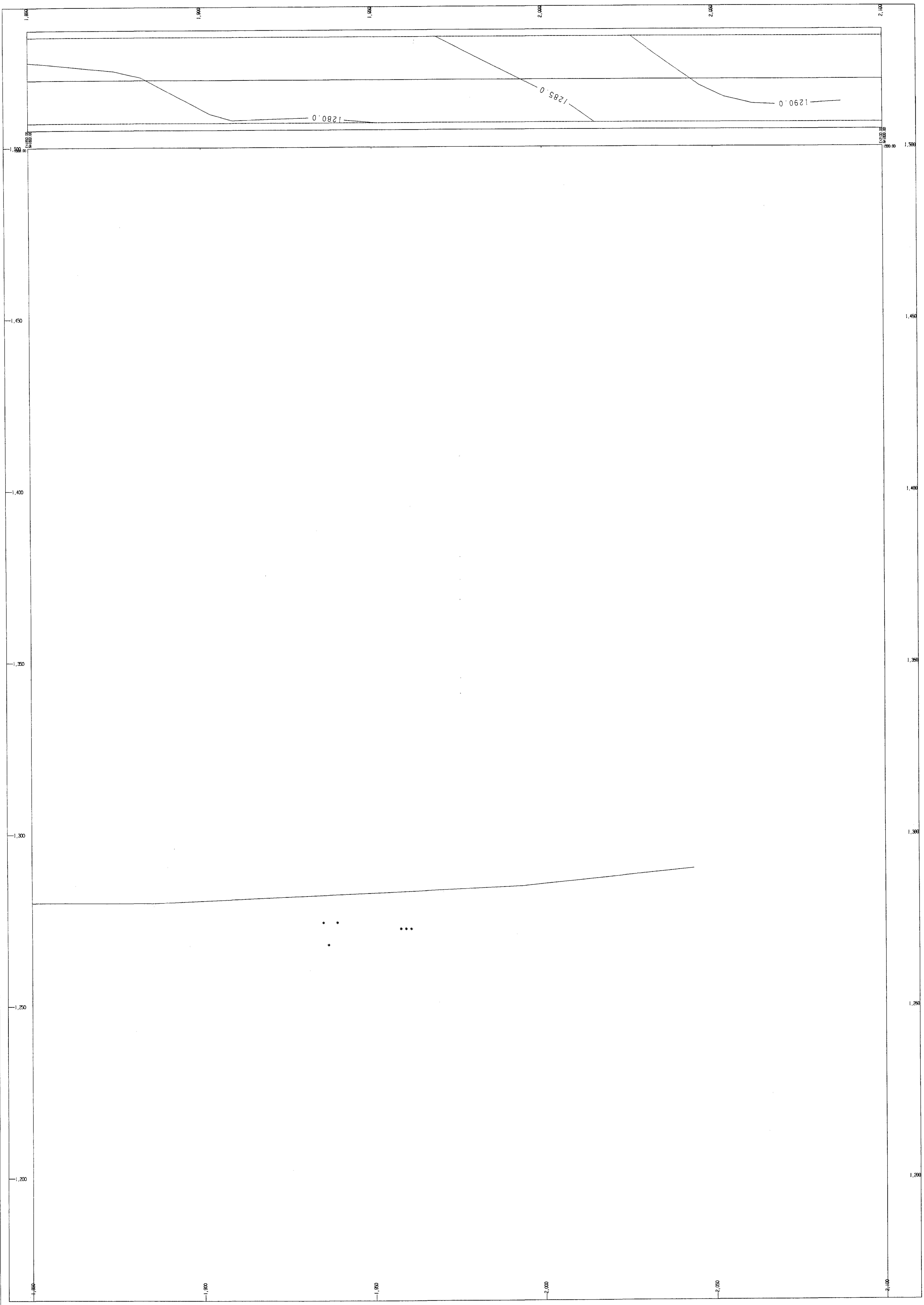
UNITS : METRES DATE: 98/11/23 TIME: 10:57:31

TEUTON Clone Project
Section 20+00E Lane Section
1:250 scale

PROFESSIONAL GEOSCIENTIST

Software by Gemcom Software International

2100N
2050N
2000N
1400
1400
1350
1350
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
26,105
TEUTON CLONE PROJECT
SECTION 20+00E LONG SECTION
1:250 SCALE
OVERLAY



Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au
- S1
- S2
- S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:33:55

DRAWN BY : RS

SRK (Canada) Inc.

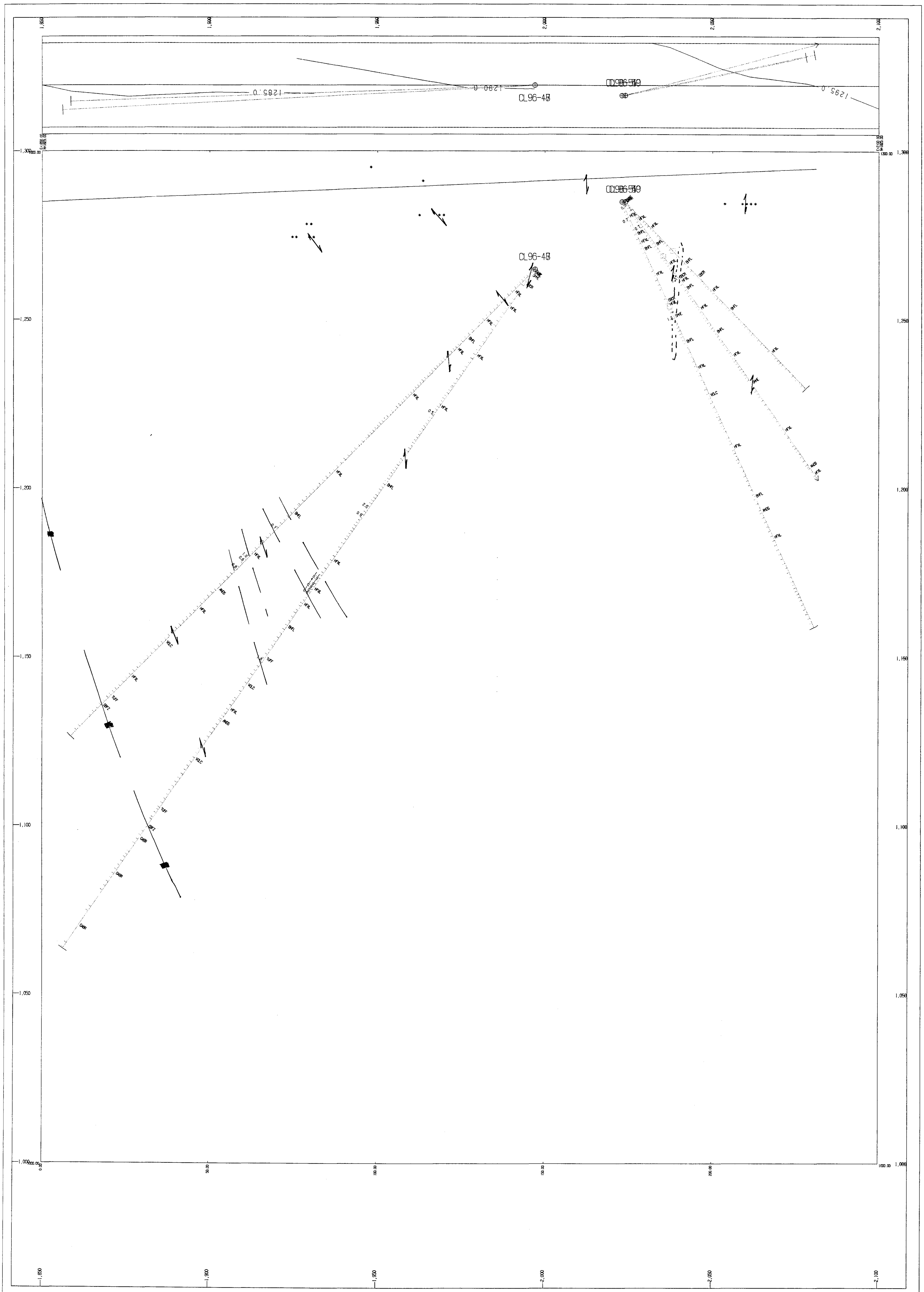
TEUTON RESOURCES CORP.

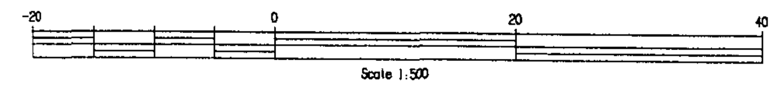
CLONE PROJECT

Section 18+00N

1:500 Scale

Software by Gemcom Software International





Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au
- S1
- S2
- S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:32:26

DRAWN BY : RS

SRK (Canada) Inc.

TEUTON RESOURCES CORP.

CLONE PROJECT

Section 18+25N

1:500 Scale

26,105

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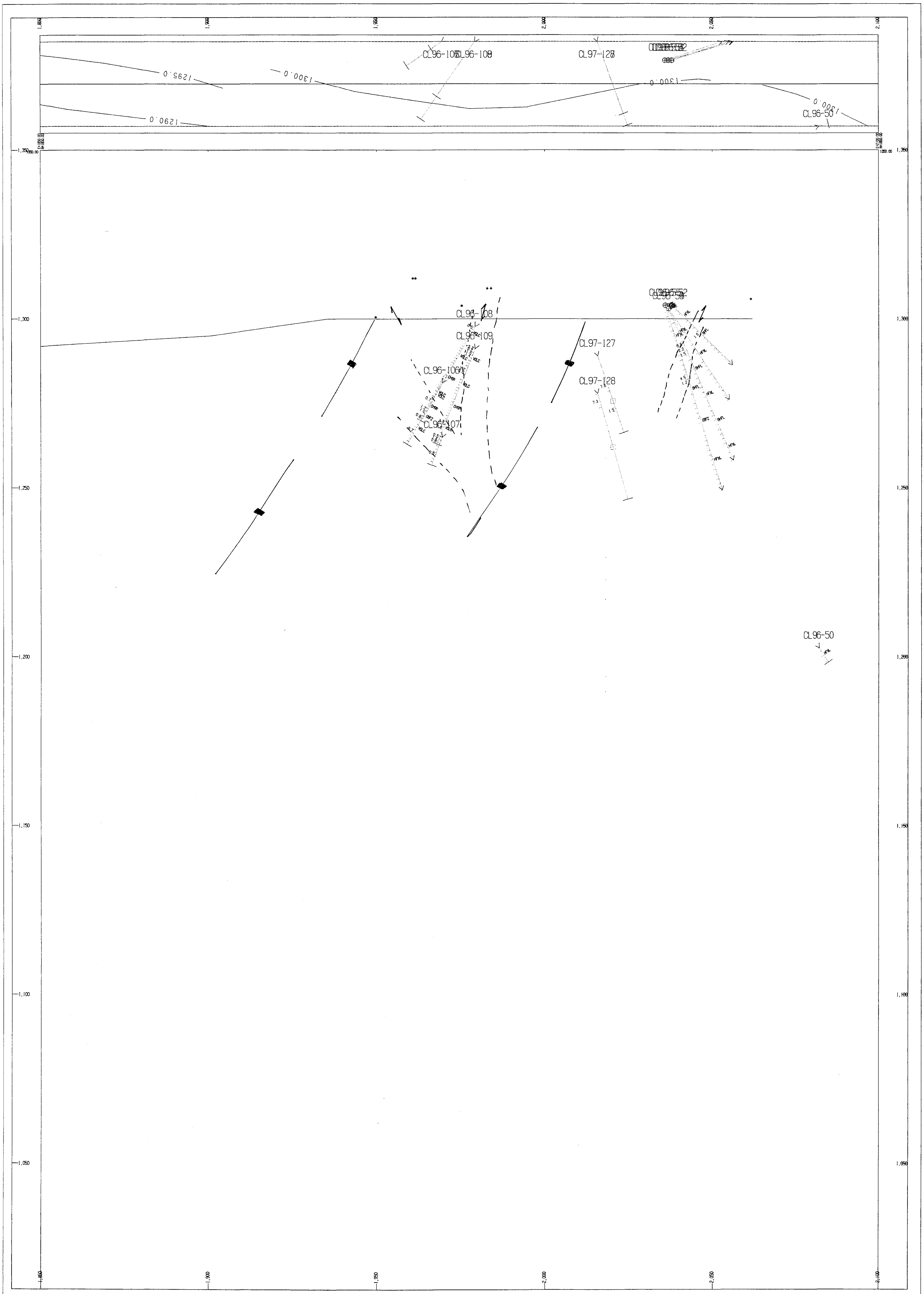

Trench Samples
- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:31:15
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CLONE PROJECT
Section 18+50N
1:500 Scale

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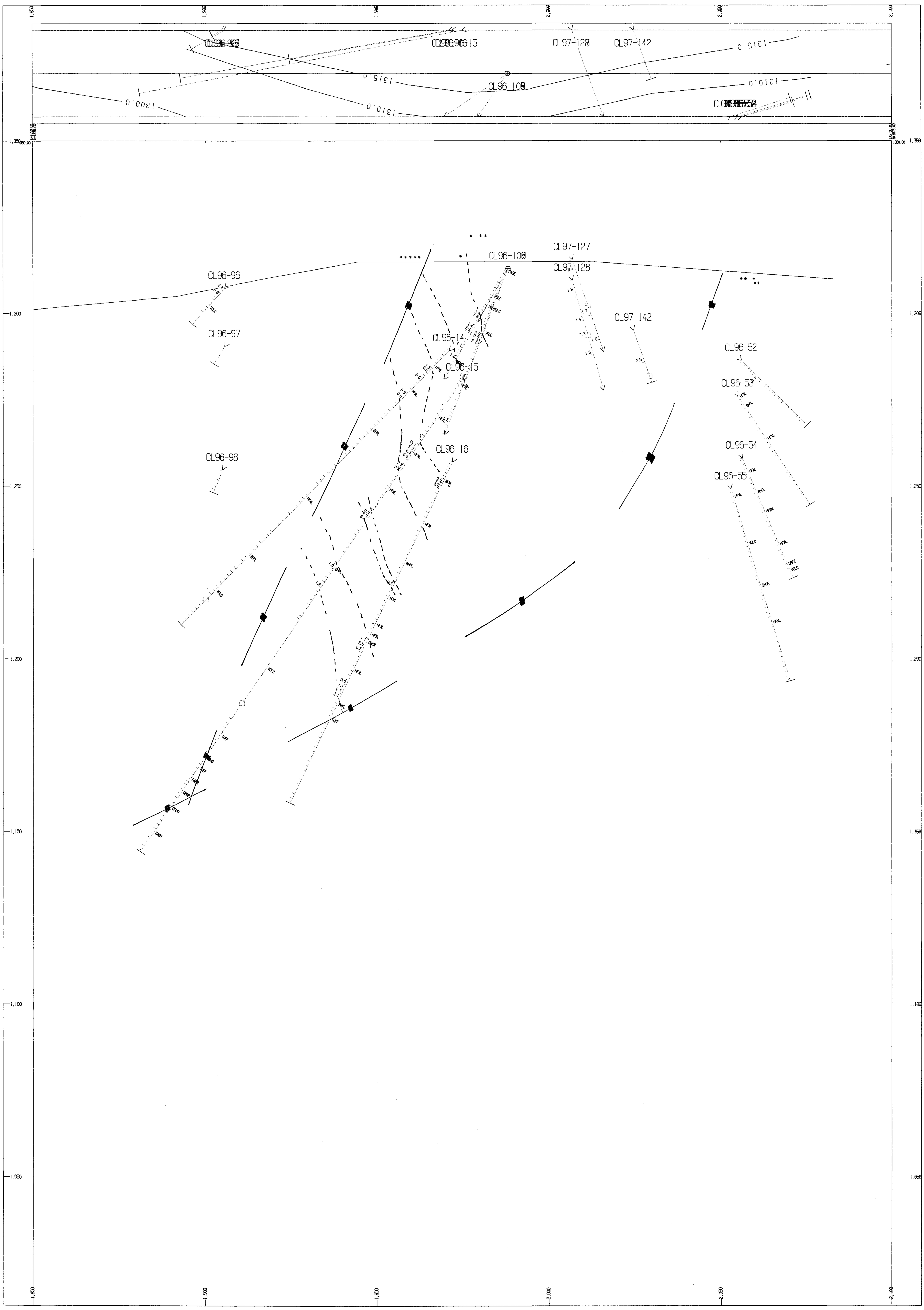
GEOLOGICAL SURVEY BRANCH

26,105



Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:30:00

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CLONE PROJECT

Section 18+75N

1:500 Scale

26,105

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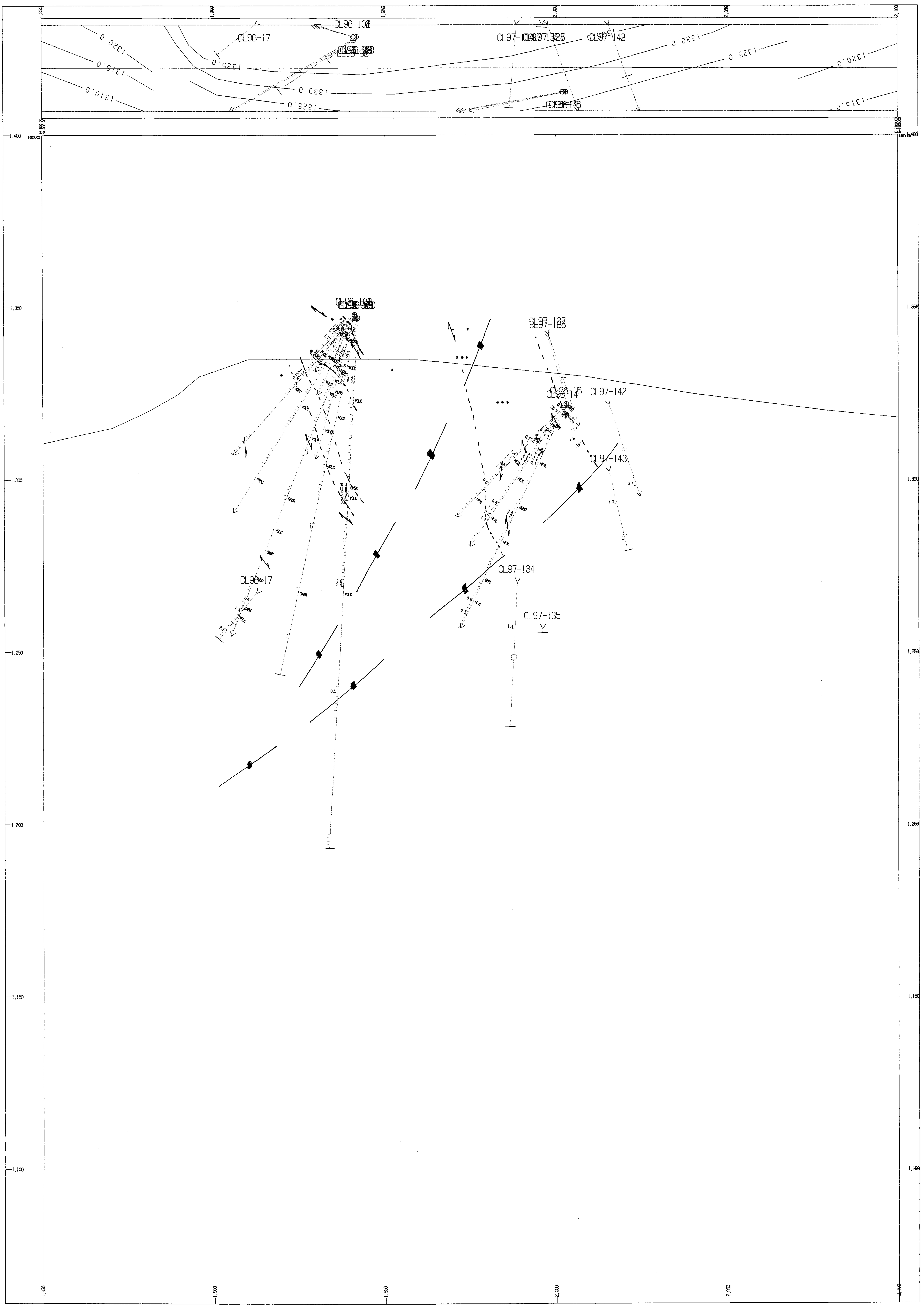

Trench Samples

0.5 – 1 g/t Au
1 – 10 g/t Au
> 10 g/t Au
S1
S2
S3

Scale 1:500

Vancouver Office
800 – 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:28:42

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CLONE PROJECT
Section 19+00N
1:500 Scale

Software by Gemcom Software International

-20 0 20 40

Scale 1:500

Trench Samples

0.5 - 1 g/t Au

1 - 10 g/t Au

> 10 g/t Au

S1

S2

S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 98/01/11 TIME: 15:27:32

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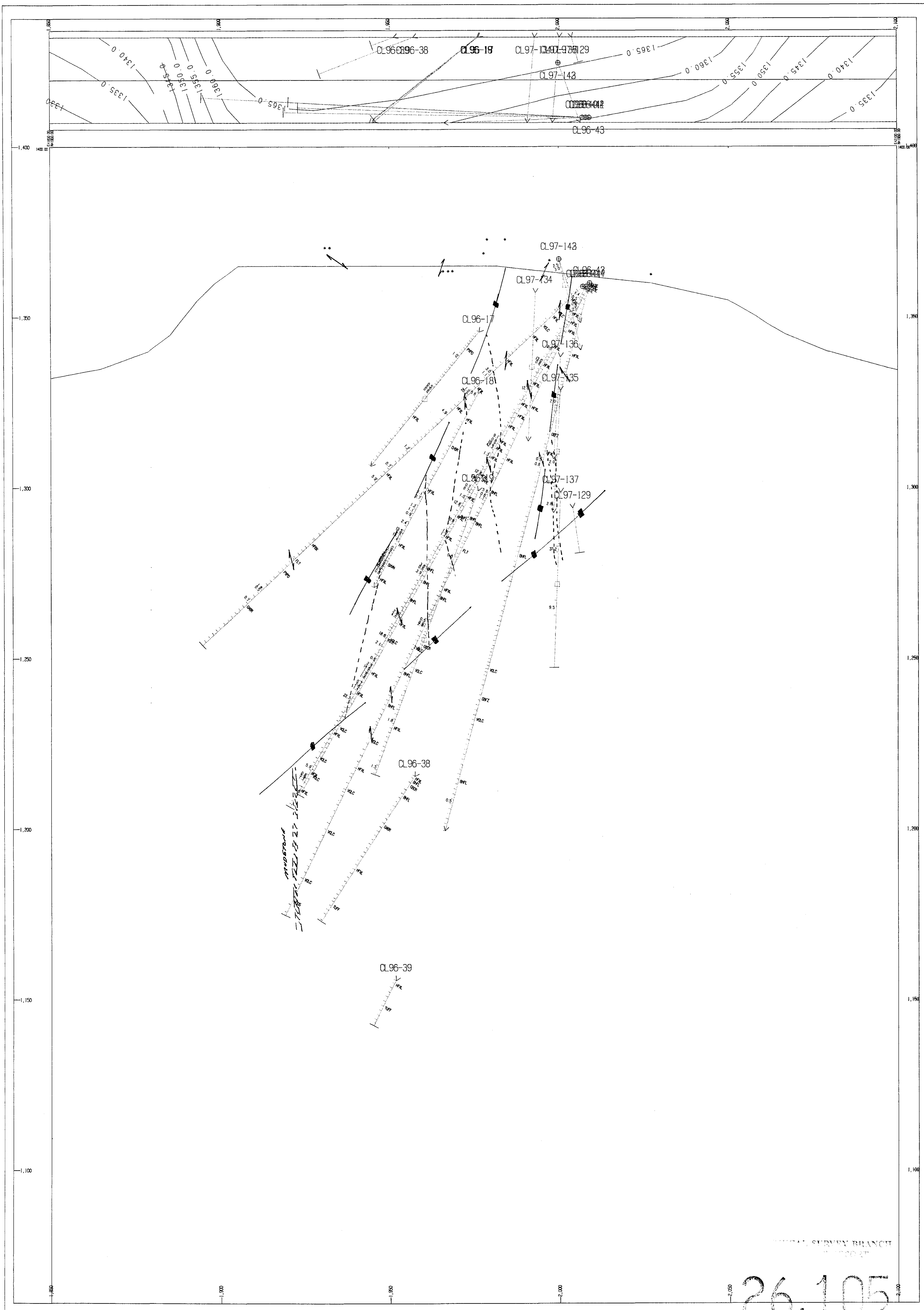
CLONE PROJECT

Section 19+25N

1:500 Scale



26,105

Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:26:20
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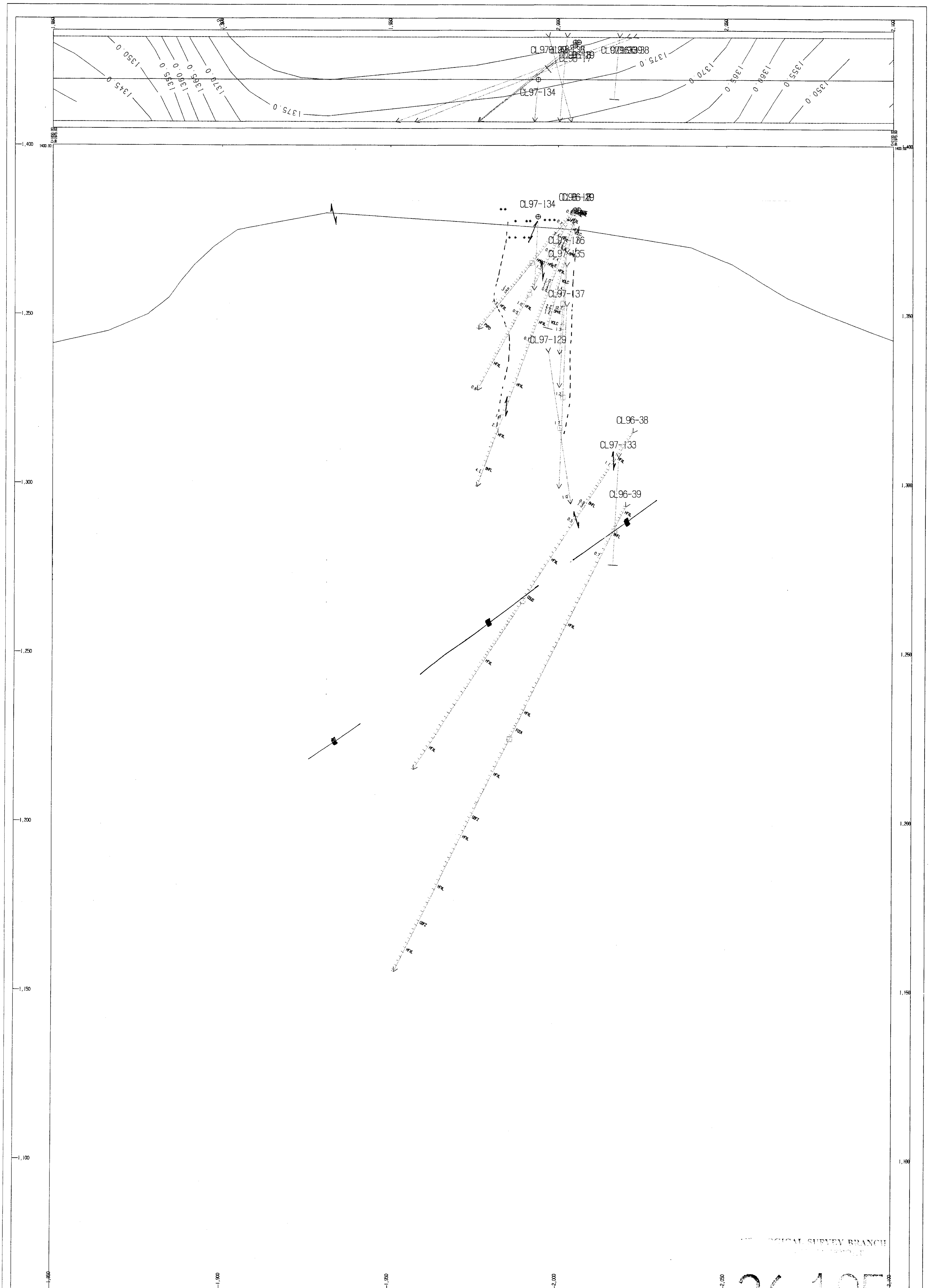
TEUTON RESOURCES CORP.
CLONE PROJECT
Section 19+50N
1:500 Scale



Trench Samples

0.5 - 1 g/t Au
1 - 10 g/t Au
> 10 g/t Au
S1
S2
S3

-20 0 20 40
Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:25:12

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TEUTON RESOURCES CORP.

CLONE PROJECT

Section 19+75N

1:500 Scale

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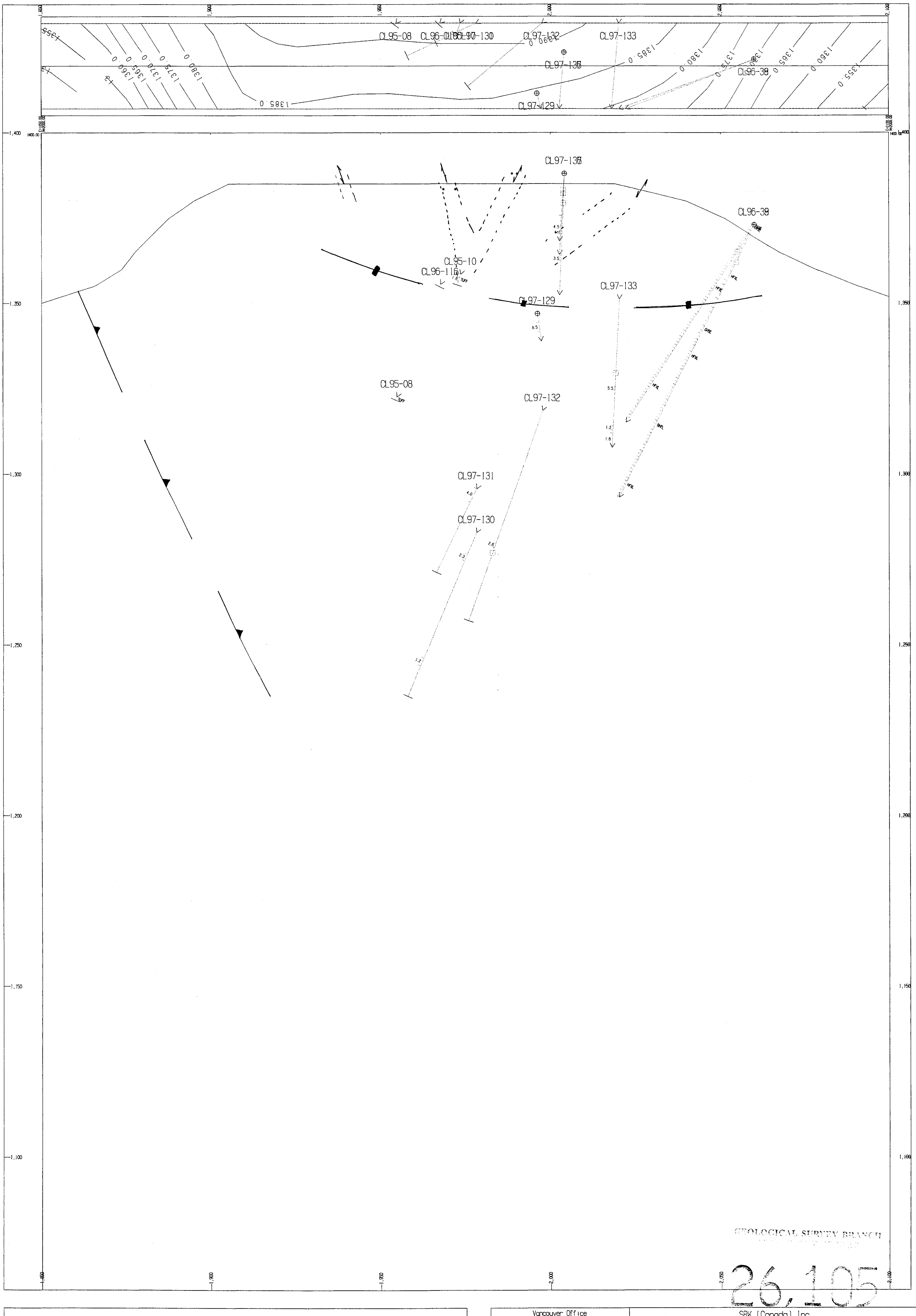

Trench Samples
0.5 - 1 g/t Au
1 - 10 g/t Au
> 10 g/t Au
S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6
UNITS: METRES DATE: 99/01/11 TIME: 15:24:04
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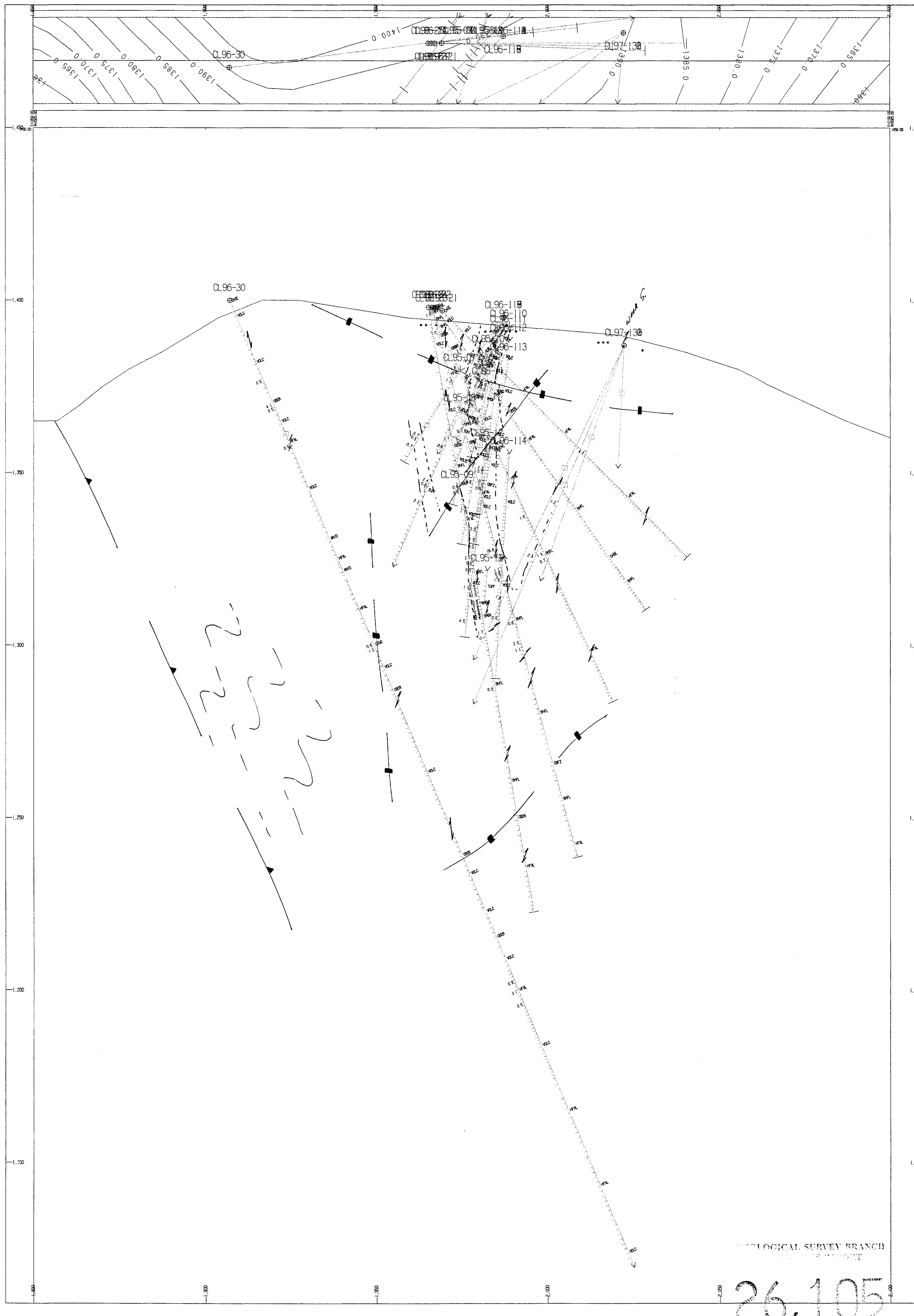
TEUTON RESOURCES CORP.
CLONE PROJECT
Section 20+00N
1:500 Scale



Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1

S2

S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 14:51:37

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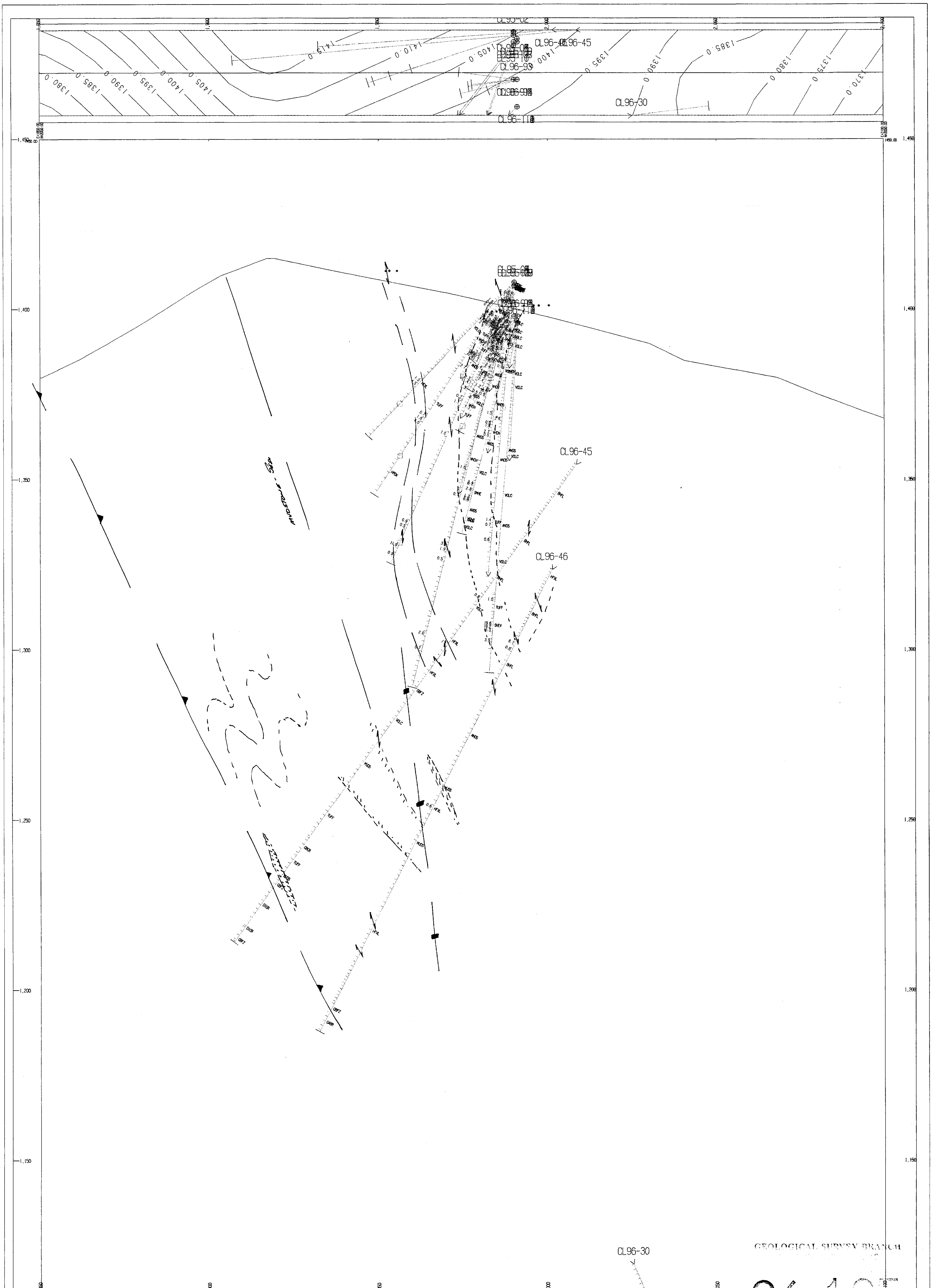
Section 20+25N

1:500 Scale

Software by Gemcom Software International



Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 14:55:08

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SRK (Canada) Inc.

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Section 20+50N

1:500 Scale

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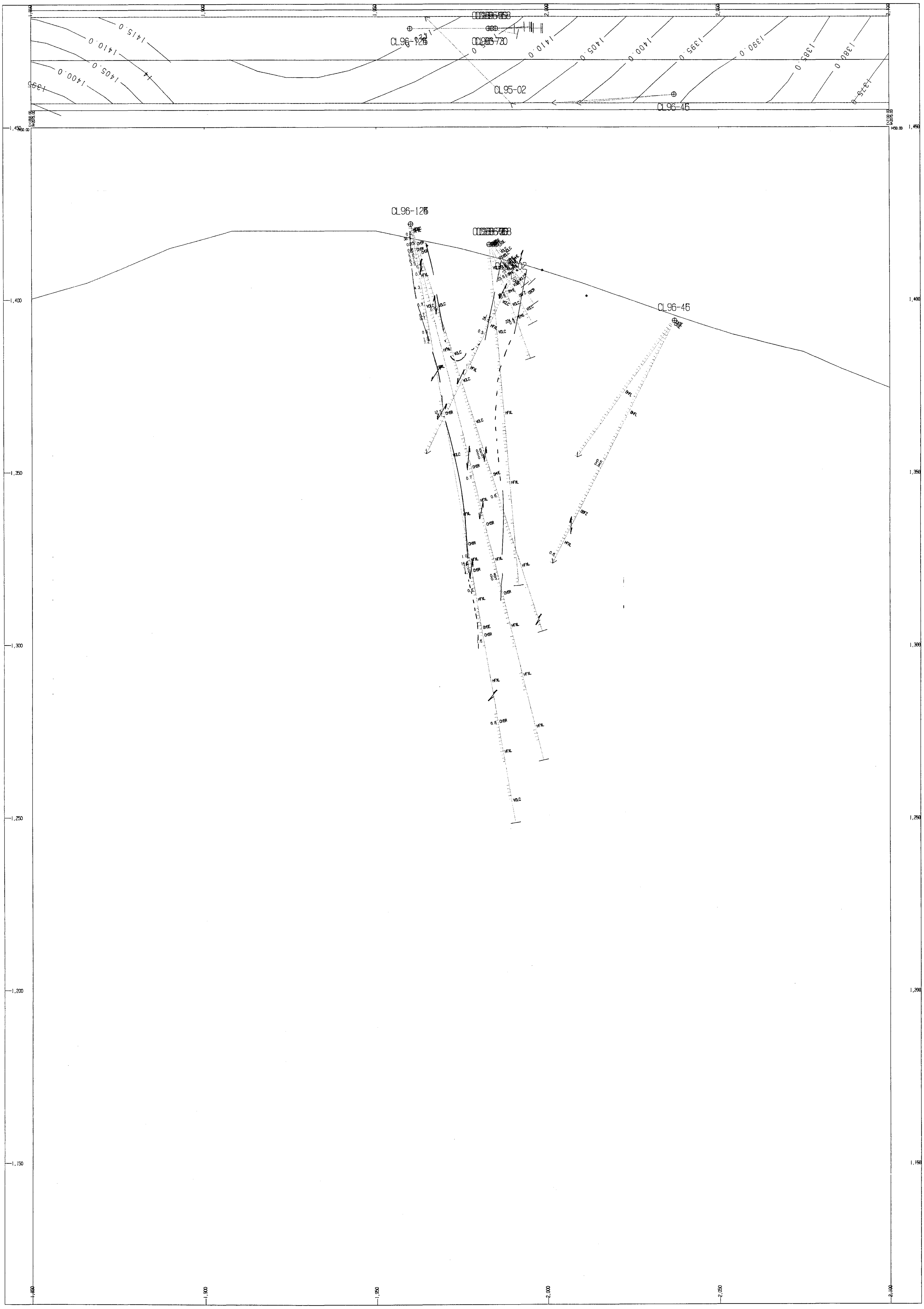


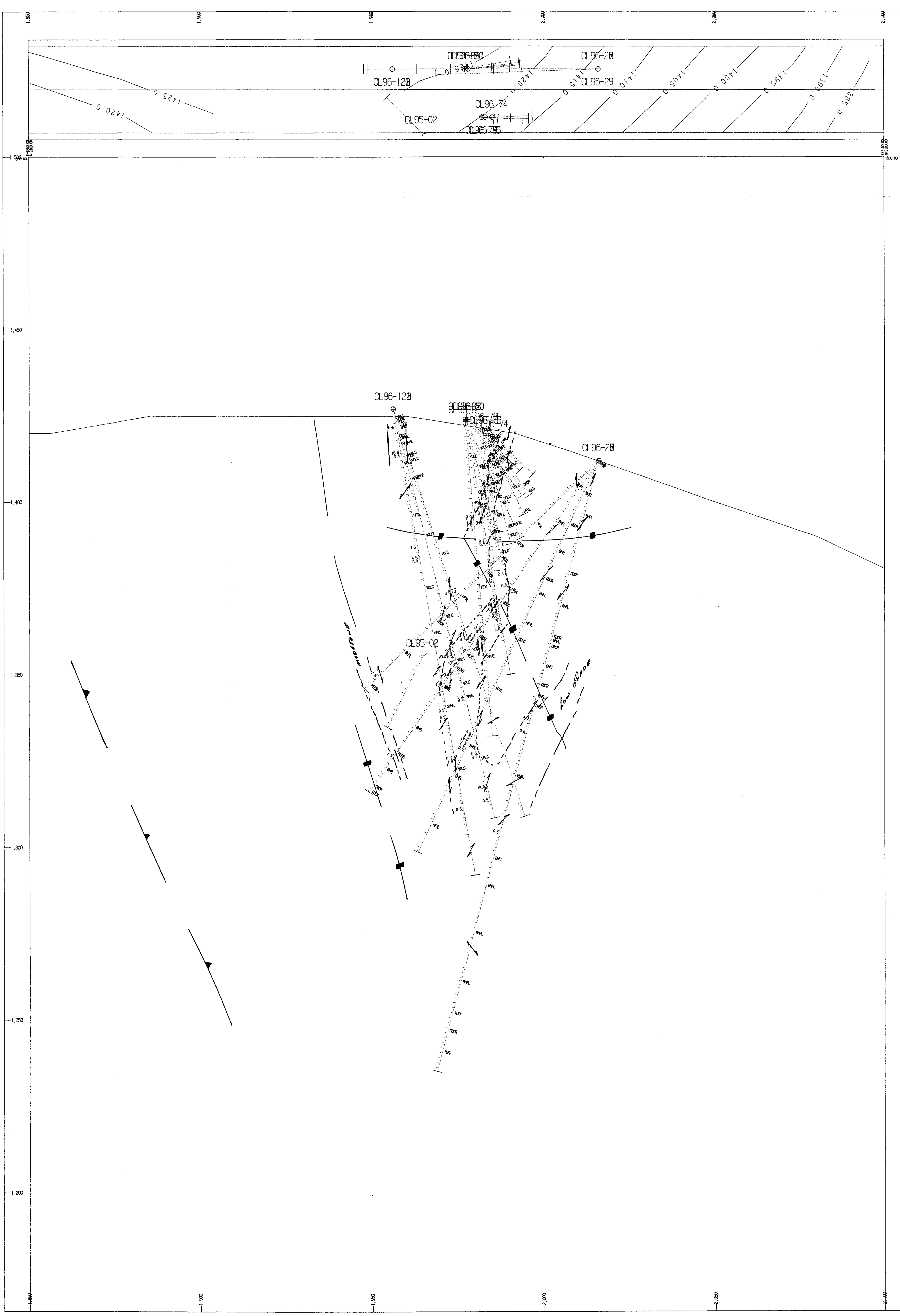
Scale 1:500

Trench Samples

- 0.5 – 1 g/t Au
- 1 – 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Vancouver Office 800 – 580 Hornby Street Vancouver, BC Canada V6C 3B6	SRK (Canada) Inc.
UNITS : METRES DATE: 99/01/11 TIME: 14:57:08	TEUTON RESOURCES CORP.
DRAWN BY : RS	CLONE PROJECT Section 20+75N 1:500 Scale



Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 14:59:35

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TEUTON RESOURCES CORP.

CLONE PROJECT

Section 21+00N

1:500 Scale

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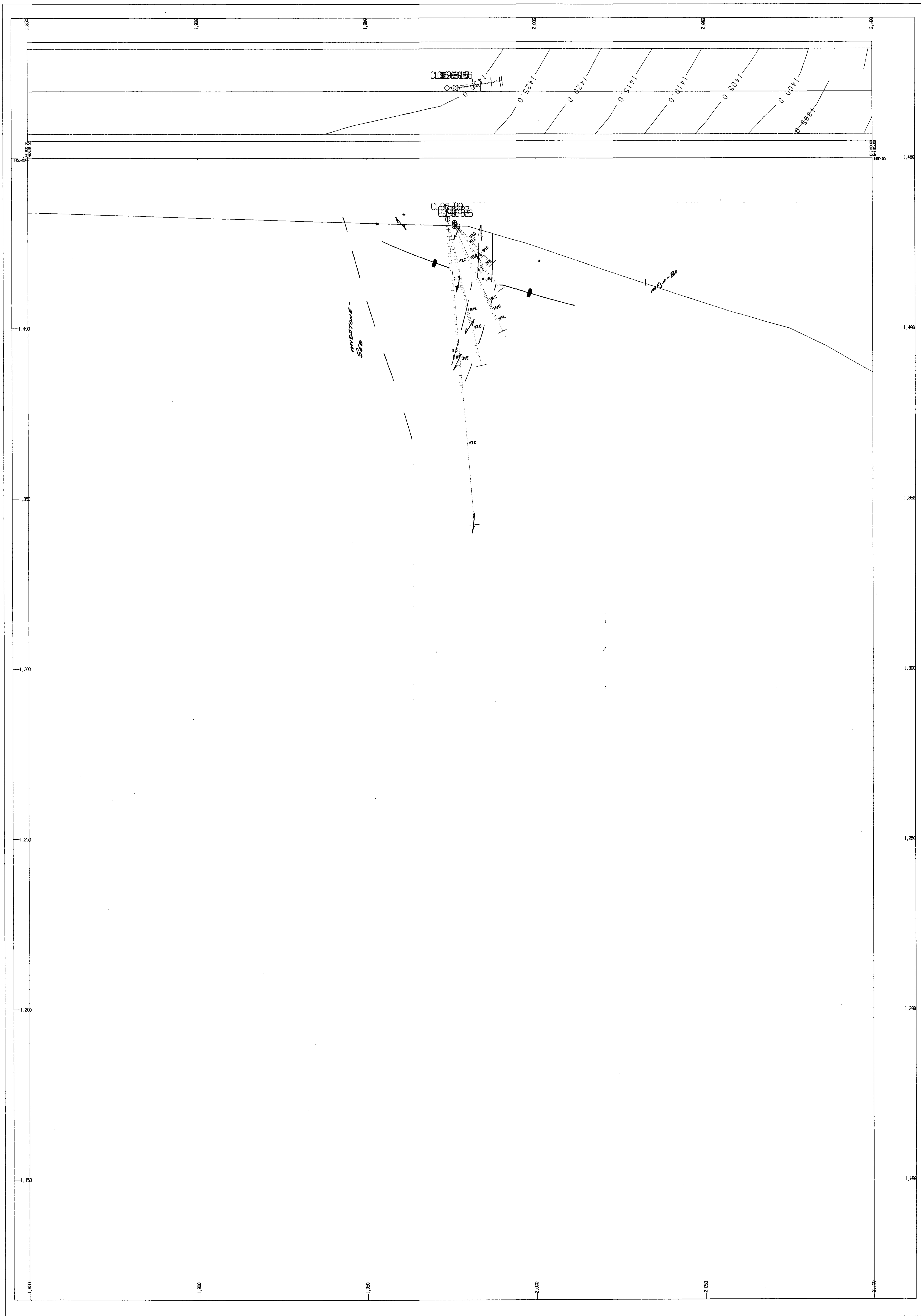
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,105



Trench Samples
- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:01:44

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TEUTON RESOURCES CORP.

CLONE PROJECT

Section 21+25N

1:500 Scale

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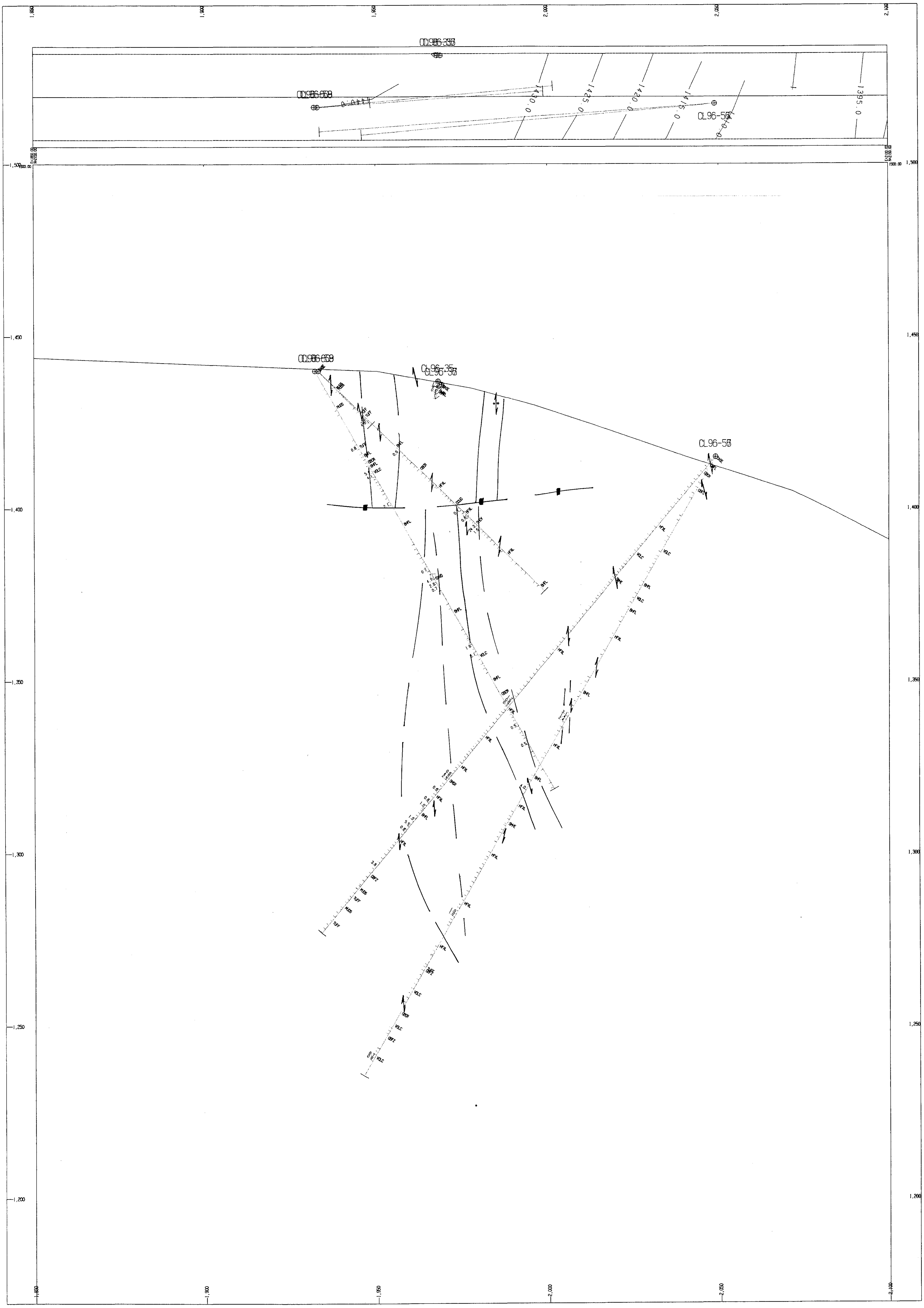
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,105



Trench Samples
0.5 - 1 g/t Au
1 - 10 g/t Au
> 10 g/t Au
S1
S2
S3

Scale 1:500

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:03:28

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CLONE PROJECT

Section 21+50N

1:500 Scale

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,105

PROFESSIONAL GEOSCIENTIST R.L. SHERLOCK

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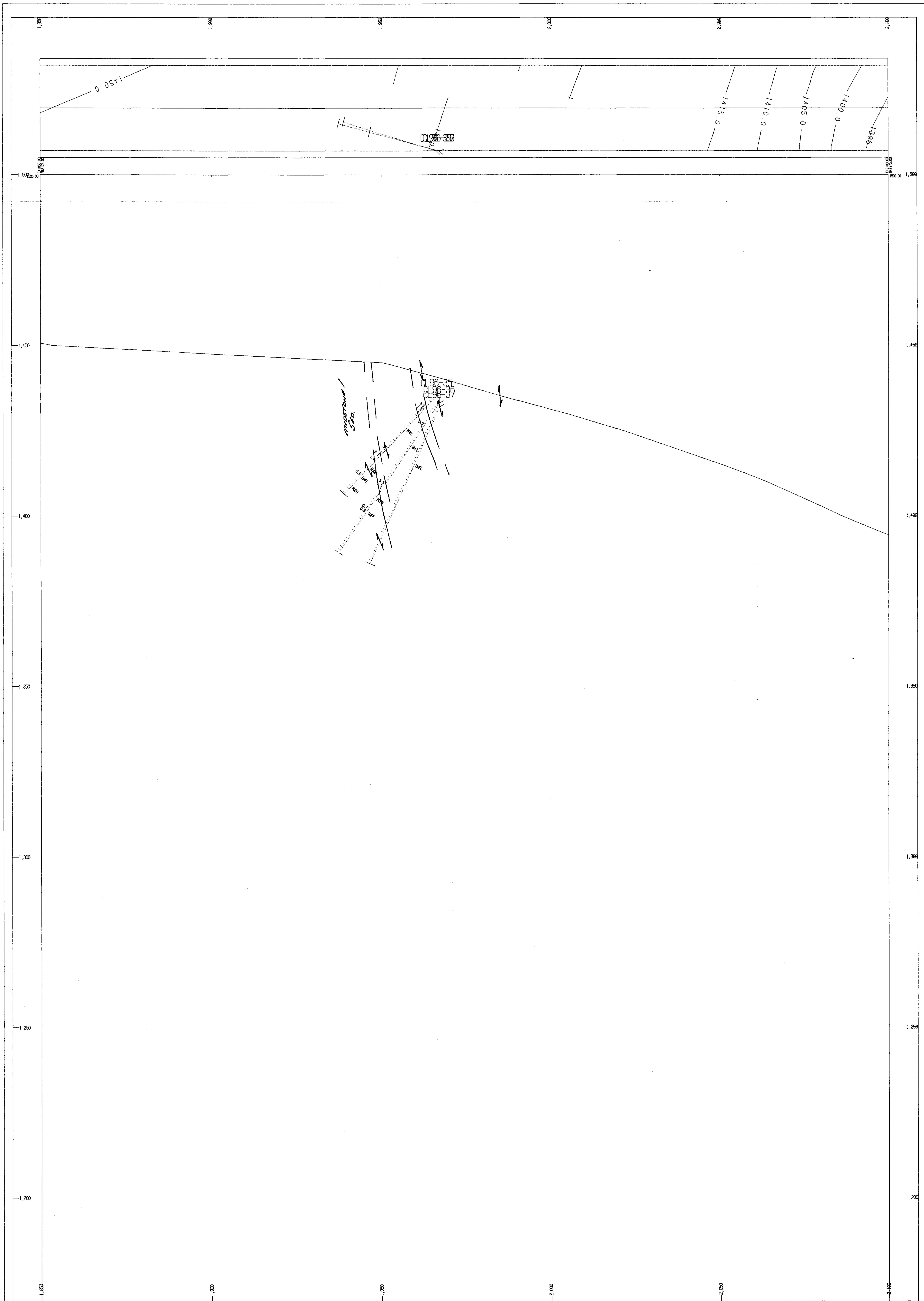

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Scale 1:500

Trench Samples

0.5 - 1 g/t Au
1 - 10 g/t Au
> 10 g/t Au
S1
S2
S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:04:30

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SRK (Canada) Inc.

TEUTON RESOURCES CORP.

CLONE PROJECT

Section 21+75N

1:500 Scale

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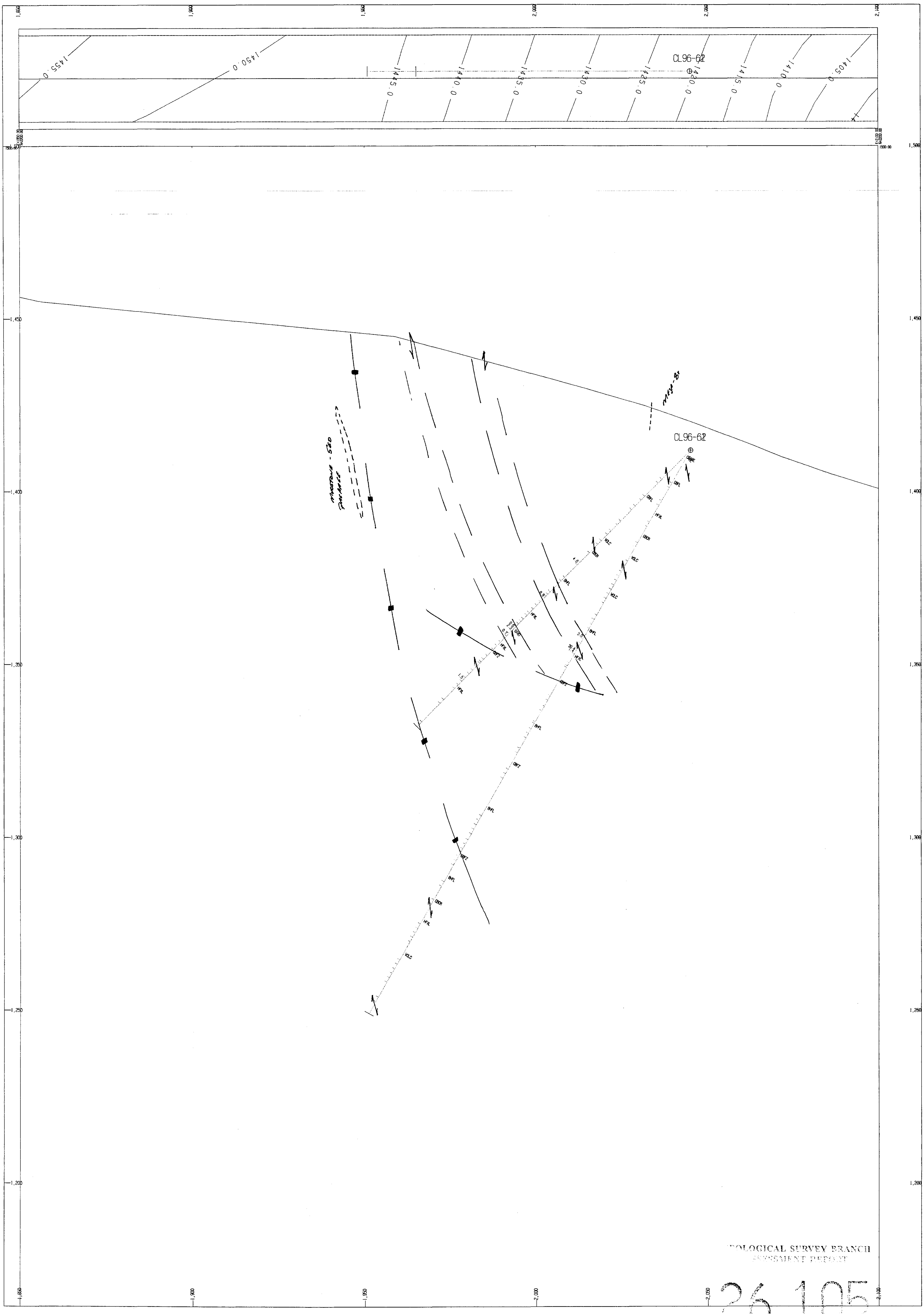

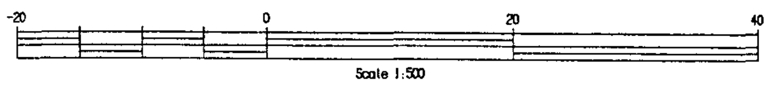

Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/11 TIME: 15:05:47

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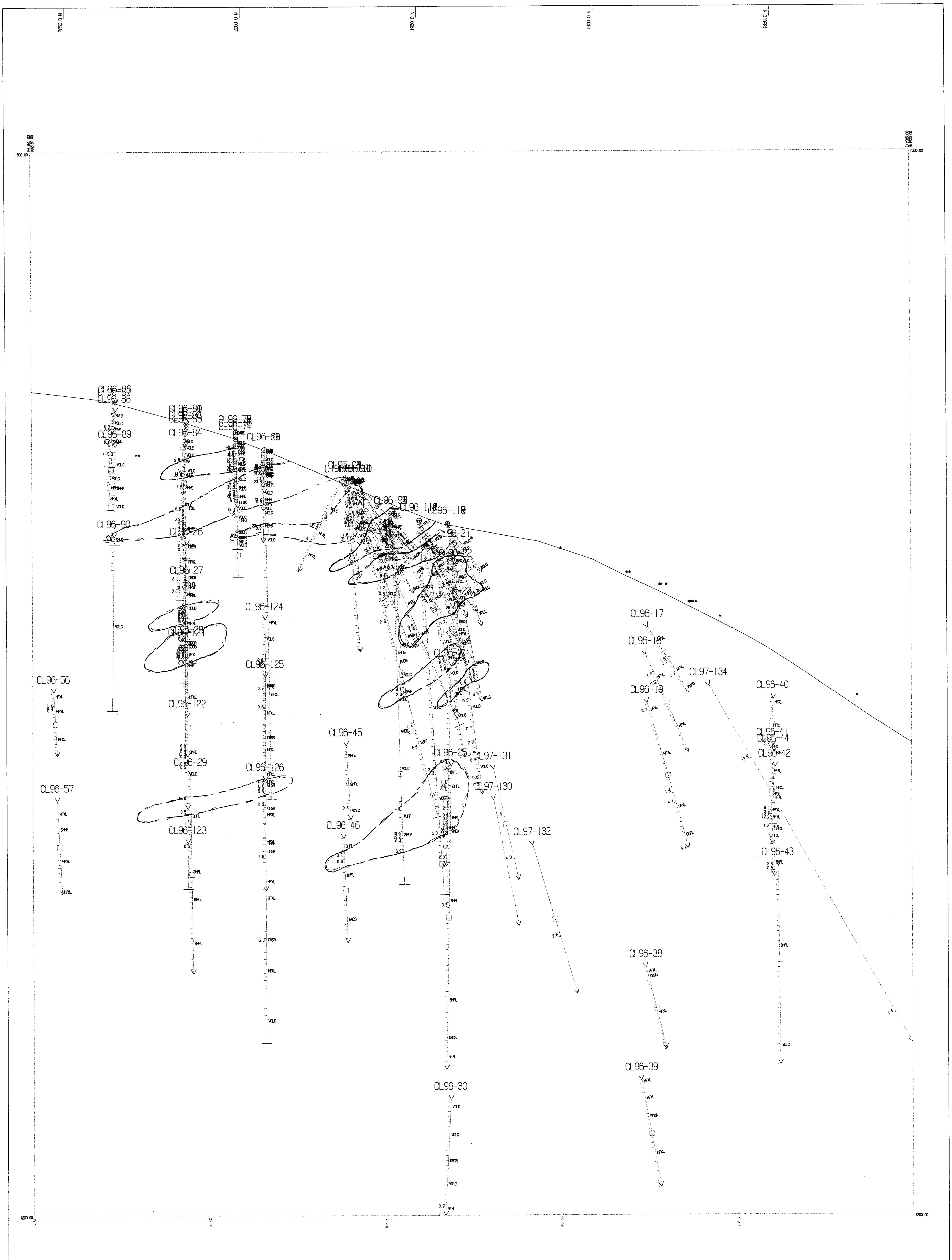
TEUTON RESOURCES CORP.

CLONE PROJECT

Section 22+00N

1:500 Scale

Software by Gemcom Software International



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Trench Samples

- 0.5 - 1 g/t Au
- 1 - 10 g/t Au
- > 10 g/t Au

S1
S2
S3

Vancouver Office
800 - 580 Hornby Street
Vancouver, BC
Canada V6C 3B6

UNITS : METRES DATE: 99/01/12 TIME: 10:07:08

DRAWN BY : RS

SRK (Canada) Inc.

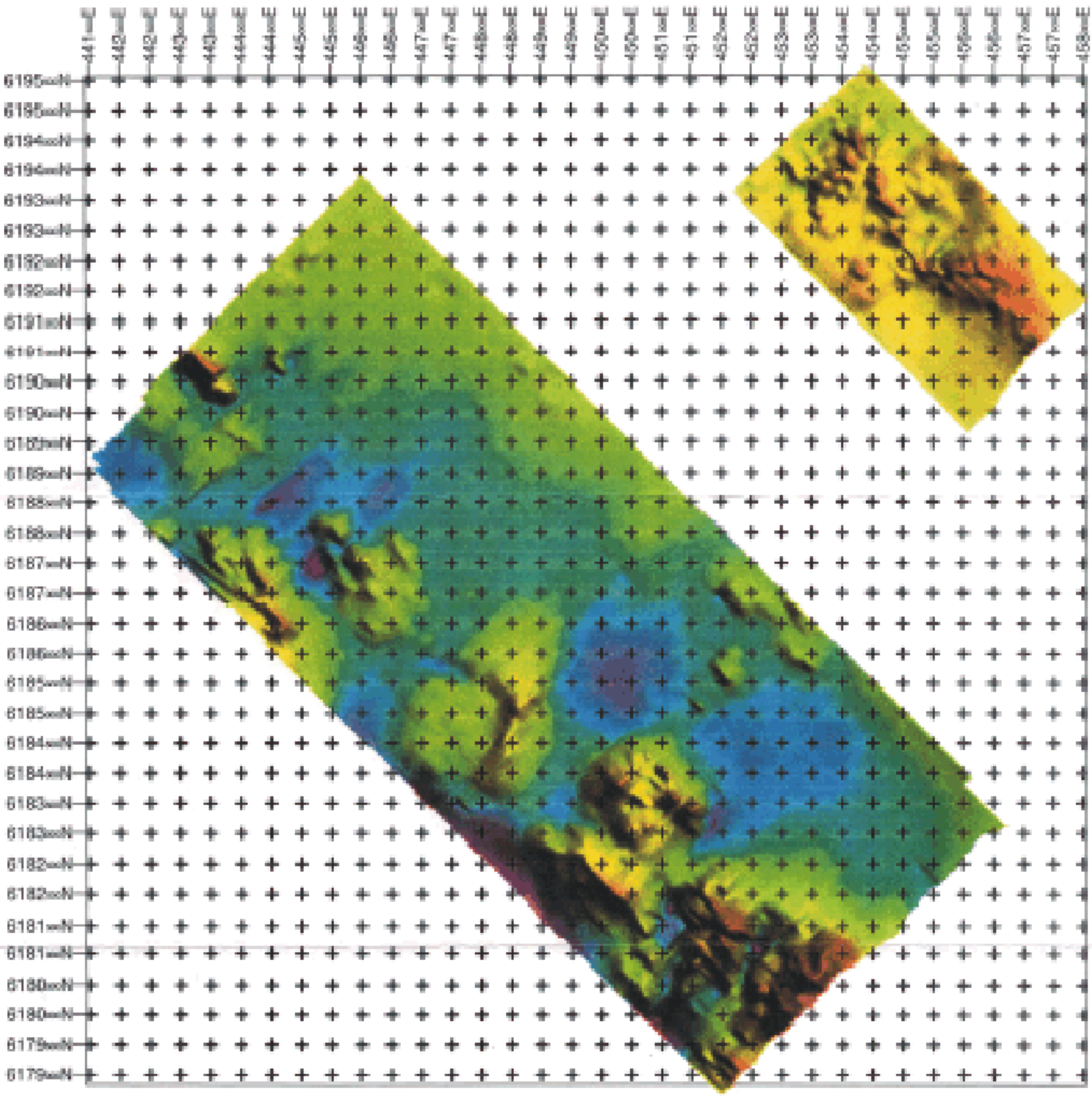
TEUTON RESOURCES CORP

CLONE PROJECT

Longitudinal Section 1985E

1:500 Scale

Software by Gemcom Software International



Jan. 1999
Color-Draped TMI
Teuton-Clone Project

Figure 10