

REPORT ON THE 1996 DELTA WEST PROJECT,

DELTA PEAK AREA:

STAKING, STREAM GEOCHEMISTRY, ROCK GEOCHEMISTRY, & GEOLOGY

SKEENA MINING DIVISION

NORTHWESTERN BRITISH COLUMBIA

FOX 30-40 CLAIMS

LATITUDE 56° 37'NORTH

LONGITUDE 129° 39'WEST

NTS 104 A/12

BY

DAVID R. KENNEDY

NOVEMBER, 1996

GEOLOGICAL SURVEY BRANCH

#### SUMMARY:

### DELTA WEST PROJECT

The Delta West Project was carried out partially in June, July, August, and September, 1996 as weather and field conditions permitted with compilation and report writing in October and November, 1996. The work comprised claim staking (11 mineral claims totalling 208 claim units) and reconnaissance stream sediment sampling (52 samples), reconnaissance rock chip sampling (58 samples) and reconnaissance geological mapping. The project area covers a part of the western margin of the Oweegee Dome which is postulated to be underlain by prospective Hazelton Group rocks.

The project area is located in the Stewart Gold Camp about 75 km north of Meziadin Junction in Northwestern British Columbia. The project area is centred on NTS Map Sheet 104A/12 at latitude 56° 37'N, longitude 129° 39'W and covers approximately 52 square kms.

The field program was carried out in conjunction with the activities of prospecting partner, David E. Molloy (see separate Molloy report). Mr. Molloy assisted in the claim staking and carried out the soil sampling program concurrently with the activities described in this report. An application has been filed to fund the majority of the approximately \$10,900 expenditure under the 1996 Prospector's Assistance Program of British Columbia.

The main exploration target was gold and polymetallic mineralization most likely structurally controlled, sulfidized zones associated with hydrothermally altered, pyroclastic and intermediate to felsic intrusive rocks. Relevant models include Marc Zone type mineralization (auriferous pyrite and sphalerite in plunging oreshoots in structurally controlled zones in and in proximity to a porphyritic diorite intrusion) located on Barrick's Red Mountain Property; and, the Silbak-Premier en echelon ore bodies hosted by Unuk River Formation andesites and comagmatic porphyritic dacite sills and dykes and controlled by northwesterly and northeasterly trending structures and their intersections.

The majority of rather sparse outcrops are found along the Stewart-Cassiar Highway (Highway 37) and generally comprise northwest trending, steeply dipping Bowser Lake Group sediments ranging from fine grained black mudstones and siltstones to medium grained, grey sandstones that are often sheared and weakly to strongly liomonitized. Mafic to intermediate volcanic rocks showing varying degrees of propylitic alteration also occur, most often on the eastern side of the project area that was evaluated.

Stream sediment sampling and rock sampling was carried out mainly along claim lines, the cutting of which was often limited by topography. All of the 52 stream sediment samples collected and all of the 58 rock chip samples collected were submitted to Chemex Labs in Vancouver and subjected to gold analysis (fire assay-AA finish) and 32 element ICP analysis in the hopes of delineating gold bearing drainages and/or areas of anomalous polymetallic mineralization.

Contrary to the postulated prospective gold environment, only 2 of the stream sediment samples returned moderately anomalous values of 35 and 25 ppb gold, while the remainder of the samples returned values of less than 5 ppb gold. Interestingly both values flank Zone 2 polymetallic signatures (one to the west and one to the east) as determined in the soil sampling program carried out by Mr. Molloy. These values are regarded as very significant in view of the high stream velocities encountered during the survey. The author is aware of streams which regularly produce gold anomalies in low water conditions but in which no gold can be detected after high water "flushes out" the drainage.

Zinc, copper, silver, cadmium and barium were determined as potentially useful pathfinder elements in the soil sampling program and were carefully scrutinized to determine if similar patterns existed in the stream sediment and rock chip samples. Zinc values in the stream sediments ranged from 54 to 262 ppm and averaged 148 ppm. Seven values exceeded an arbitrarily selected value of 200 ppm. Copper values ranged from 26 to 86 ppm and averaged 45 ppm. Silver values ranged from less than 0.2 ppm to 0.6 ppm, the majority of the samples returning less than 0.2 ppm Ag. Cadmium values ranged from less than 0.5 to 3 ppm with only two values exceeding 2 ppm. Barium values ranged from 80 to 490 ppm and averaged 244 ppm Ba. In general there is a moderate multi-element signature evident in the stream sediment population.

It is interesting to note that some of the highest zinc values, sometimes associated with elevated barium values, cluster in the north west corner of the property in the general areas of soil anomalies as determined by Mr. Molloy. This is an area of very limited sampling.

Much less exposed bedrock was found than anticipated when the program was planned. Some of the mapping and sampling is based on float samples rather than bedrock as noted in the sample description table. All of the 58 rock samples returned gold values of less than 5 ppb. Zinc values ranged from 22 to 232 ppm and averaged 95 ppm Zn. Only three values exceeded an arbitrarily selected threshold of 150 ppm Zn. Copper values ranged from 3 to 83 ppm with an average of 32 ppm Cu. Silver values in rock ranged from less than 2 ppm to 0.6 ppm Ag. The vast majority of samples returned less than 0.2 ppm Ag. All of the cadmium values were less than 0.5 ppm, save one value of 0.5 ppm Cd. Barium values ranged from 70 to 540 ppm and averaged 187 ppm Ba.

There appears to be virtually no multi-element signature in the rock chip samples while a multi-element signature is discernable in the stream sediment and soil samples. This may in part be due to the sample distribution, the soil samples being taken in a more systematic way while the rock samples depended on the availability of outcrop or float. There is however correlation between higher values of zinc and barium and the location of anomalous zones as determined by the soil sample survey.

The property is deserving of further work including additional soil survey lines, IP and magnetometer surveys to evaluate the current soil anomalies and additional stream and rock chip sampling to evaluate the portions of the property not currently covered.

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### REPORT ON THE 1996 DELTA WEST PROJECT:

#### SKEENA MINING DIVISION

#### NORTHWESTERN BRITISH COLUMBIA

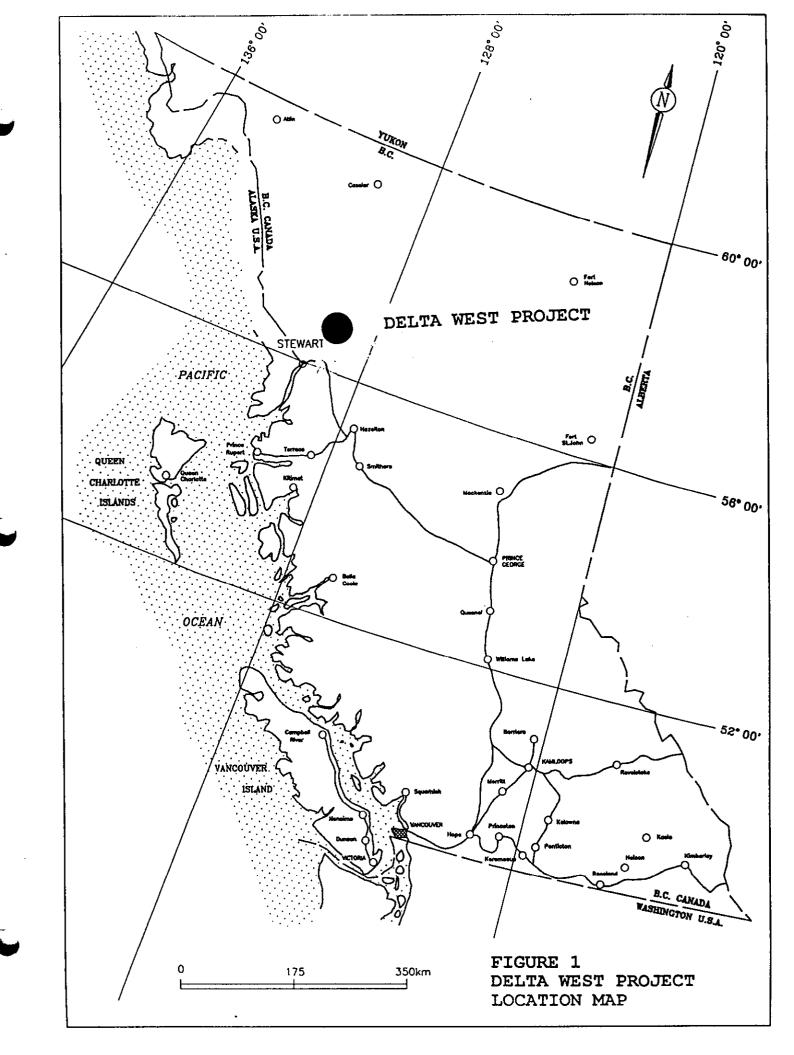
#### 1. INTRODUCTION:

This report describes the results of claim staking (11 mineral claims totalling 208 claim units), reconnaissance stream sediment sampling (52 samples), reconnaissance rock chip sampling (58 samples) and reconnaissance geological mapping carried out over a portion of the Delta West Project. The project area is located on the eastern edge of the Stewart Gold Camp, approximately 80 km northeast of Stewart in northwestern British Columbia (Figure 1). The area is located on part of the western flank of the Oweegee Dome which is postulated to be underlain by prospective Hazelton Group rocks.

The rationale for the program includes the copper and gold mineralization reported on Cominco's Delta 1 and 2 mineral claims located about 3 km east of the Delta west project area (Lee, 1990; Hamilton, 1991; Maps 1A, B); a historical report describing widespread gold and copper values apparently on the Old Claims (Map 1A) located just west of the project area (British Columbia Minister of Mines, 1929); and the presence of favourable Hazelton Group volcanic rocks mapped by the Geological Survey of Canada (Greig, Evenchick, 1993) on the flanks of the Oweegee Dome (Map 3). The Hazelton Group rocks host most of the significant gold deposits in the Stewart Camp and only minor historical exploration has ever been carried out in the Delta West Project Area.

The original project as outlined in the Application for Funding to the Prospector's Assistance Program contemplated the author participating in the claim staking and carrying out geological mapping and rock chip sampling of outcrops. The program was modified with consent from the director of the program: in view of the paucity of outcrops, D. Molloy, the prospecting partner, relinquished the stream sediment sampling portion of the project and this was assumed by the author.

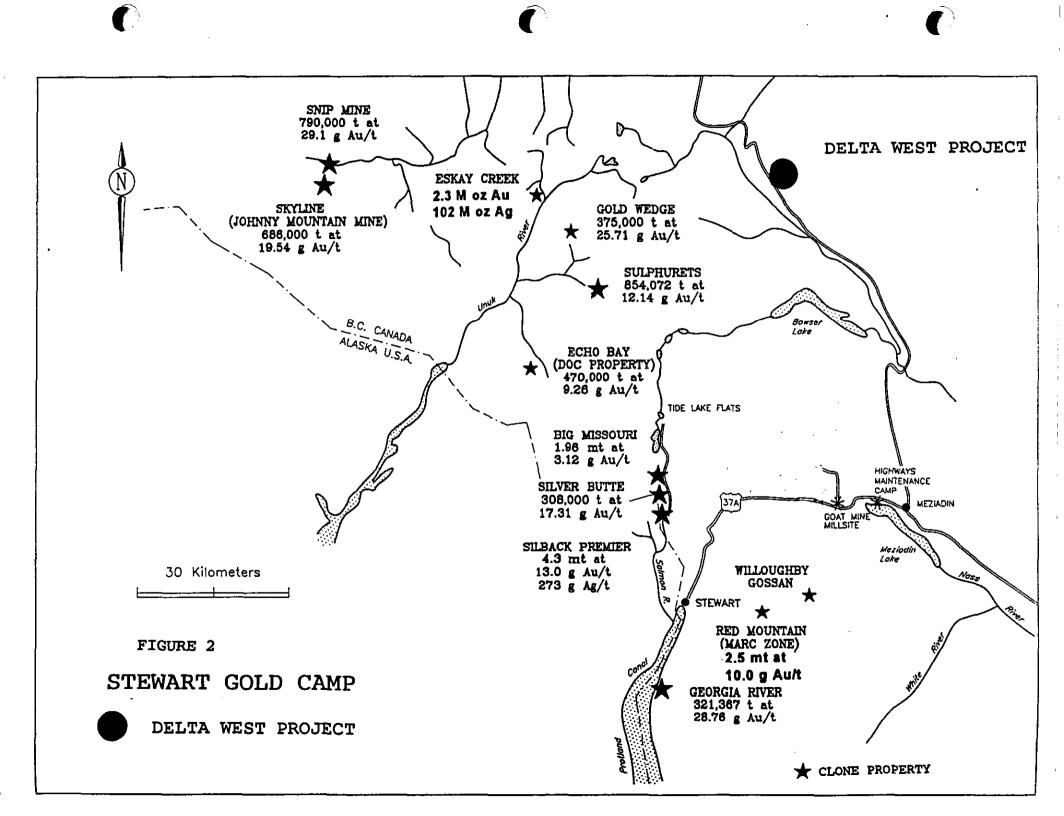
The exploration target on the Delta West Property is gold and polymetallic mineralization most likely associated with structurally controlled, sulfidized zones and volcanogenic massive sulfides. Relevant models include the Marc Zone type mineralization (auriferous pyrite and sphalerite), located on Lac Mineral's Red Mountain property; and the Eskay Creek volcanogenic massive sulfide deposit.



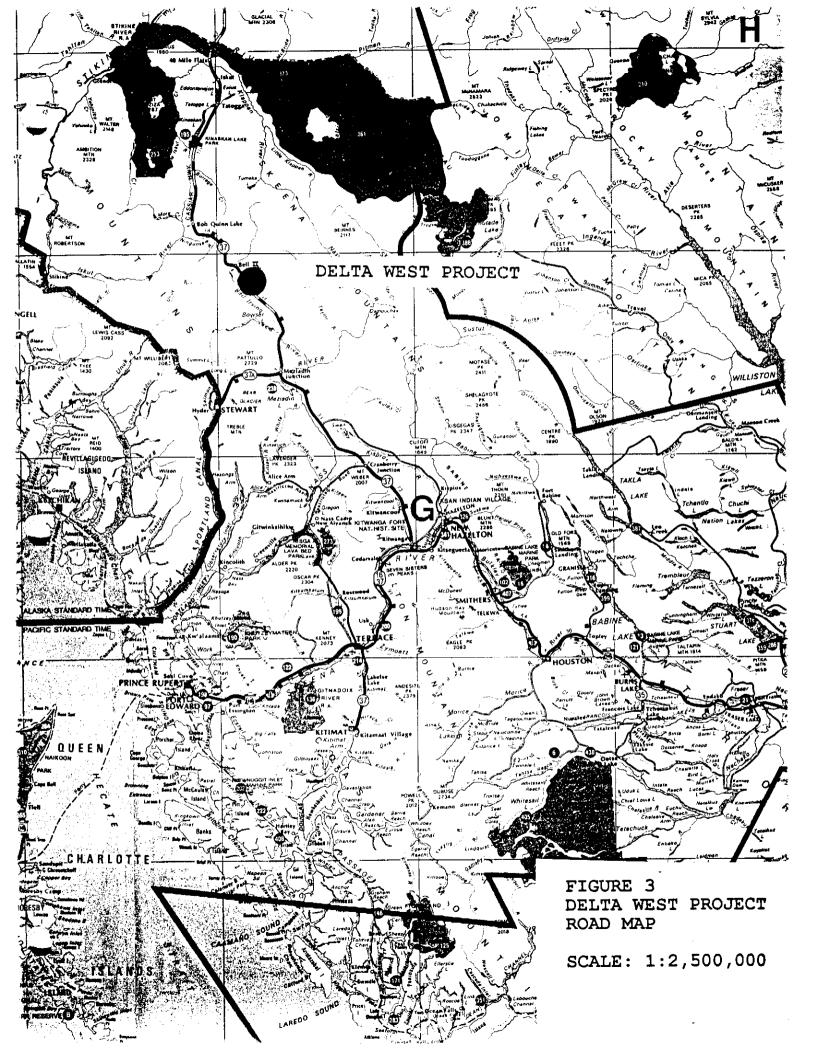
#### 2. LOCATION AND ACCESS:

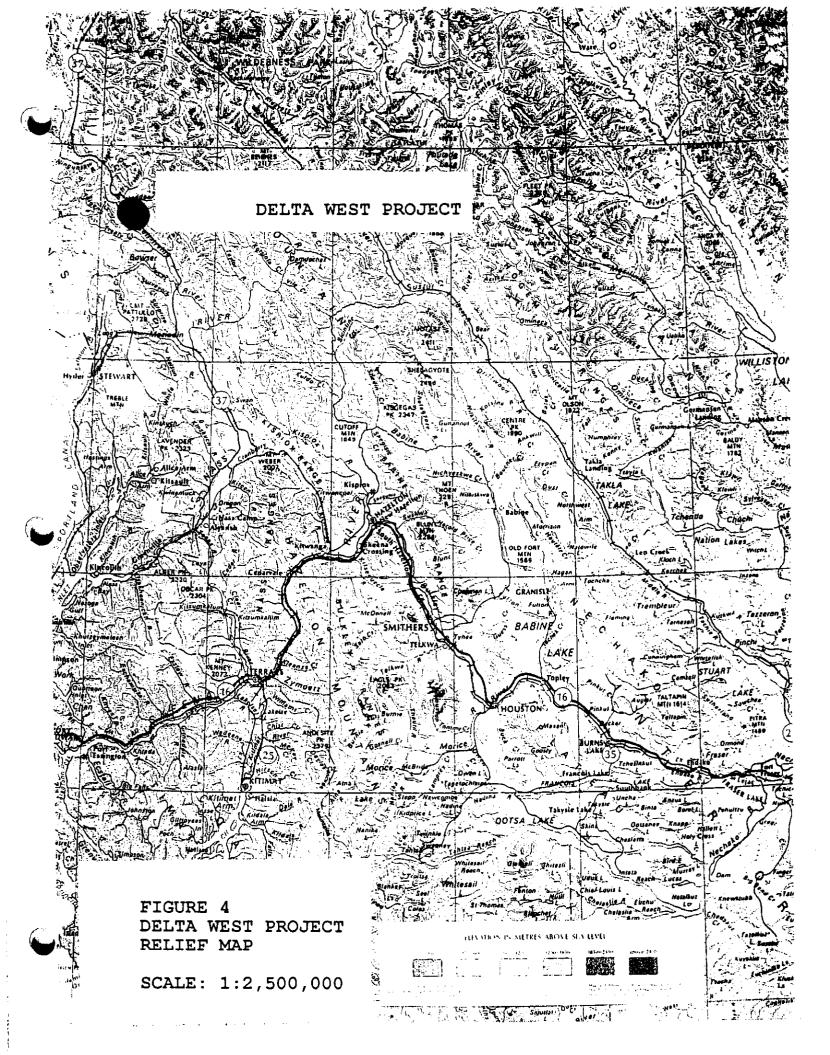
The Delta West Project is situated in the Delta Peak Area of the Skeena Mining Division at the eastern margin of the Stewart Gold Camp, about 80 km northeast of the town of Stewart, B.C. (Figure 2); and, about 75 km north of Meziadin Junction, B.C. on Highway 37 (Figure 3). The Delta West Project is centred on NTS Map Sheet 104A/12, at latitude 56° 37'N, longitude 129° 39'W (Map 2).

The Stewart-Cassiar Highway (Highway 37) trends generally northwest on the west side of the project area and provides excellent access. Much of the timber in the vicinity of the highway has been clear cut and a number of old lumber roads provide some additional, interior access. Accommodation and fuel can be obtained at Meziadin Junction or at Bell 2 (Figure 3). Gravel pits in close proximity to the highway and to the main streams draining the area provide excellent campsites.



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### 3. TOPOGRAPHY, DRAINAGE, CLIMATE, WILDLIFE & VEGETATION:

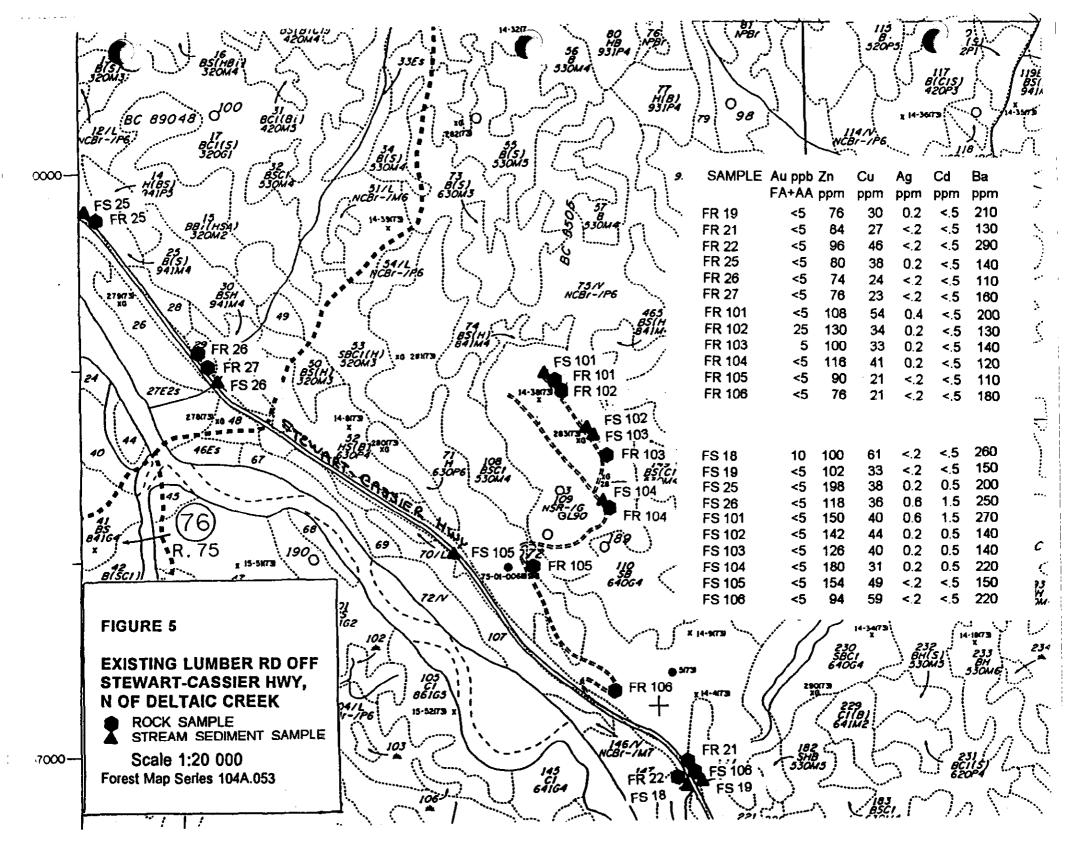
The Delta West Project is located within the Boundary Ranges of the northern British Columbia Coast Mountains (Figure 4). The general area is characterized by the Bell-Irving River valley and the fairly rugged mountainous terrain to the east ranging from about 500 to 1600 metres above sea level (Map 2). Delta Peak, to the east of the Project, and Oweegee Peak, 1 km north of Delta Peak, are both over 2200 m in elevation and dominate the topography, both are partially glacier covered. The mountain terrain is incised with young, deep valleys that trend northeast and drain the area to the southwest, generally into the Bell-Irving River that parallels the Stewart-Cassiar Highway (Map 2).

The field exploration season usually extends from June to October. Snowfalls are heavy and can deposit several meters in a 24 hour period. Recorded mean annual snowfalls in the area (Figure 2) range from 520 cm at Stewart (sea level) to 1,500 cm at Bear Pass (460 m elevation) to 2,250 cm at Tide Lake Flats (915 m elevation). In 1996, winter snow cover prevailed in most areas of the Stewart Camp at elevations over 1200 m almost to the end of July. Summers are characterized by long hours of daylight and pleasant temperatures. However, the proximity to the ocean and relatively high mountains make for highly changeable and unpredictable weather. The summer of 1996 was generally characterized by cold temperatures and fog and rain that, along with snow cover, tended to hinder exploration activities in the camp.

Wildlife in the area of the property mainly consists of mountain goats, foxes, grizzly bears, black bears, wolves, marmots, martins, and ptarmigan.

About 90% of the project area is situated below the treeline. Parts of the area immediately to the east and west of the Stewart-Cassiar Highway have been lumbered via clear cutting (Figure 5). Vegetation in the Project Area ranges from coastal rain forest including mature western hemlock, sitka spruce, fir, tag alders and cottonwood, with ferns, devil's club and moss as ground cover, to subalpine spruce thickets with heather and alpine meadows. Above treeline, at approximately 1,300 m, bare rock, talus slopes and glaciers with occasional islands of alpine meadow prevail.

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#### 4. EXPLORATION HISTORY:

The Stewart area was prospected mainly for visible gold in quartz veins at the close of the 19th century but very little of this work was documented.

The Camp, after more recent discoveries that include Snip, Eskay Creek and Red Mountain (Figure 2), continues to be regarded as elephant country in which low cost discoveries can be made. For example, the Red Mountain deposit was discovered in 1989 on the first day of activities and more recent discoveries in the Stewart Camp such as the Teuton/Minvita Clone deposit were made in relatively short periods of time.

Some regional historical activities were reported apparently on the Old claims, in the 1920's. As referenced in the Annual Columbia 1929. the British Minister of Mines. of Report Consolidated Mining and Smelting Company of Canada carried out work on the north side of Treaty Creek about 58 km from the confluence of the Bell-Irving River with the Nass River. According to the Report the company indicates that "the values are scattered over a large mineralized area and appear to be mainly in gold, silver, and copper, although sufficient work has not been done to form a criterion of the possible value of the property".

Indigo Mines funded an Aerodat helicopterborne magnetometer and VLF-EM survey in 1991 that covered the area of Oweegee Dome. Apparently the company was wound up in 1992 and its ground position lapsed. There is no indication that the survey, the magnetic portion of which was useful in outlining Hazelton Formation rocks and structure, was followed-up on the ground.

In the 1990's, Cominco apparently carried out regional geochemical surveys in the area before staking the Delta 1 and 2 mineral claims that cover a large colour anomaly (Lee, 1990; Hamilton, 1991). Cominco initiated reconnaissance surveys in 1990 and 1991 that delineated very anomalous gold and copper values in rock, stream sediment and talus samples. No additional work was recommended and detailed follow-up was never carried out.

Geofine carried out the Phase 1A reconnaissance program on the Fox 1-26 claims surrounding the Delta claims (Molloy, 1993) for Barrick Gold in August 1993. The program focused on the evaluation of colour anomalies hosted by or in the vicinity of prospective geology. Although a number of the gossan zones (Skowill, Porphyry) failed to return encouraging assay results, the Deltaic Zone and surrounding areas are deemed to constitute a high priority gold target.

Based on the positive analytical results obtained from the Geofine and Cominco programs, the Deltaic Zone mineralization was

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interpreted to trend northeast over an apparent intermittent strike length of 3 km and have an apparent intermittent width of over 1 km. The Deltaic Zone remains open for expansion and detailed evaluation, and had never been drill tested.

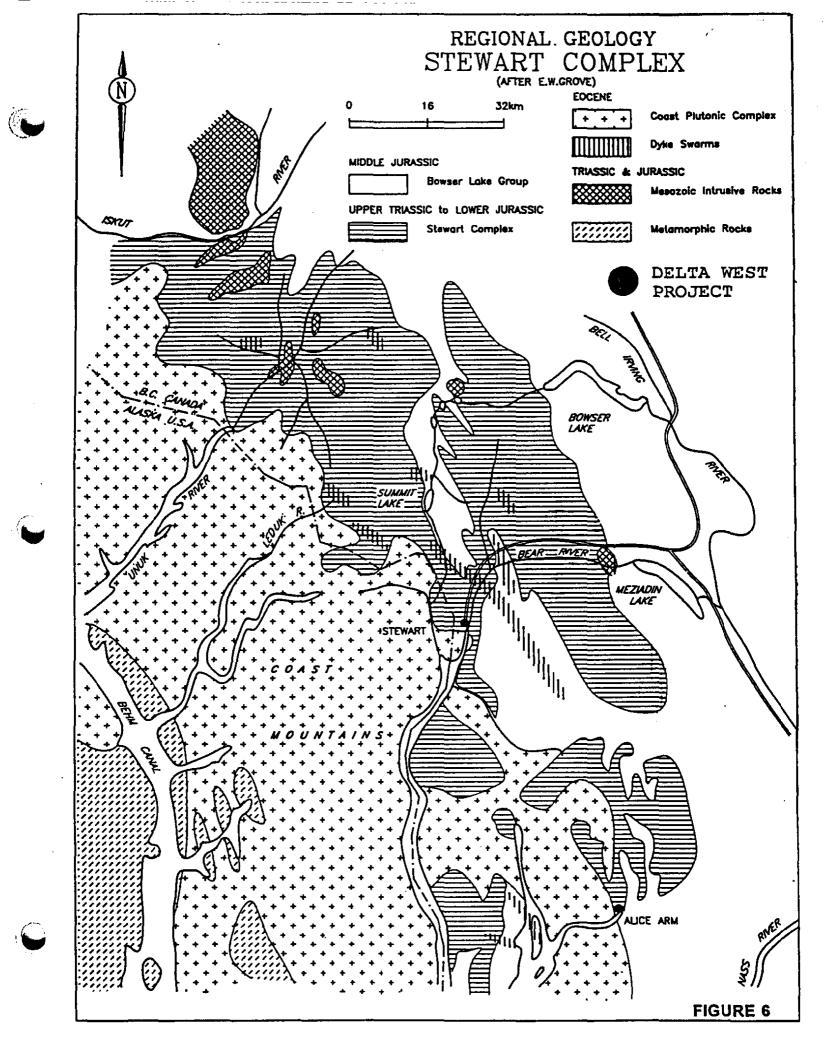
As a follow-up to the 1993 Phase 1A program, Geofine carried out a 1993, Phase 1B program that was funded by Barrick Gold (Molloy, 1993A). The program was carried out on the Deltaic Grid on Delta and Fox 15 and 25 claims and comprised IP and magnetometer surveying, as well as soil geochemical surveys completed on grid lines totalling about 7.3 km. The follow-up program successfully delineated a number of weak - strong IP chargeability anomalies with coincident gold and copper geochemical anomalies. The most prominent targets are often haloed by geochemical zinc soil anomalies. The polymetallic geochemical signatures are similar to those that are associated with most gold deposits in the Stewart Camp.

#### 5. **REGIONAL GEOLOGY**:

The Delta West property is situated on the eastern margin of a broad, north-northwest trending volcanogenic-plutonic belt consisting of the Upper Triassic Stuhini Group and the Upper Triassic to Lower Middle Jurassic Hazelton Group. This belt has been termed the "Stewart Complex" (Figure 6) by Grove (1986) and forms part of the Stikinia Terrane. The Stikinia Terrane together with the Cache Creek and Quesnel Terranes constitute the Intermontane Superterrane which was accreted to North America in Middle Jurassic time (Monger et al 1982). To the west the Stewart Complex is bordered by the Coast Plutonic Complex. Sedimentary rocks of the Middle to Upper Jurassic Bowser Lake Group overlay the Stewart Complex in the east.

The Jurassic stratigraphy was established by Grove (1986) during regional mapping conducted from 1964 to 1968. Formational subdivisions have been and are currently being modified and refined as regional work continues most notably by the Geological Survey Branch of the British Columbia Ministry of Energy Mines and Petroleum Resources (Alldrick 1984, 1985, 1989) and the Geological Survey of Canada (Anderson 1989, Anderson and Thorkelson 1990). The sedimentological, structural, and stratigraphic framework of the area is being established with some degree of precision.

The Hazelton Group represents an evolving (alkalic/calalkalic) island arc complex, capped by a thick turbidite succession (Bowser Lake Group; Figure 6). Grove (1986) divided the Hazelton into four litho-stratigraphic units (time intervals defined by Alldrick 1987):



- 1. The Upper Triassic to Lower Jurassic Unuk River Formation (Norian to Pliensbachian)
- 2. The Middle Jurassic Betty Creek Formation (Pliensbachian to Toarcian)
- 3. The Middle Jurassic Salmon River Formation (Toarcian to Bajocian)
- 4. The Middle to Upper Jurassic Nass Formation (Bathonian to Oxfordian Kimmeridigian)

Alldrick assigned formational status (Mt. Dillworth Formation) to a Toarcian rhyolite unit (Monitor Rhyolite) overlying the Betty Creek formation. Rocks of the Salmon River Formation are transitional between the mostly volcanic Hazelton Group and the wholly sedimentary Bowser Lake Group and are presently regarded as the uppermost formation of the Hazelton or the basal formation of the Bowser Lake Group.

The Unuk River Formation, a thick sequence of andesitic flows and tuffs with minor interbedded sedimentary rocks, hosts a number of major gold deposits in the Stewart area (Figure 2). The unit is unconformably overlain by heterogeneous maroon to green, epiclastic volcanic conglomerates, breccias, greywackes and finer grained clastic rocks of the Betty Creek Formation. Felsic tuffs and tuff breccias characterize the Mt. Dillworth Formation (Figure 7A). This formation represents the climactic and penultimate volcanic event of the Hazelton Group volcanism and forms an important regional marker horizon. The overlying Salmon River Formation has been subdivided in the Iskut area into an Upper Lower Jurassic and a Lower Middle Jurassic member (Anderson and Thorkelson 1990). The upper member has been further subdivided into three north trending facies belts: the eastern Troy Ridge facies (starved basin), the medial Eskay Creek facies (volcanic arc).

Sediments of the Bowser Lake Group rest unconformably on the Hazelton Group rocks. They include shales, argillites, silt and mudstones, greywackes and conglomerates. The contact between the Bowser Lake Group and Hazelton Group passes between Strohn Creek in the north and White River in the south. The contact appears to be a thrust zone with Bowser Lake Group sediment "slices" occurring within and overlying the Hazelton Group pyroclastics to the west.

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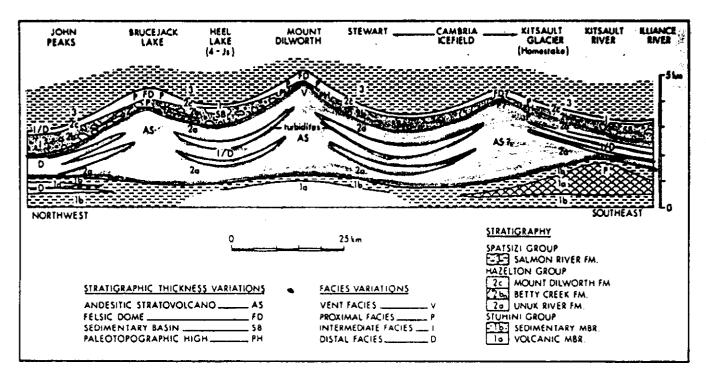


Figure 1-27-4. North-south schematic reconstruction through the Stewart complex.

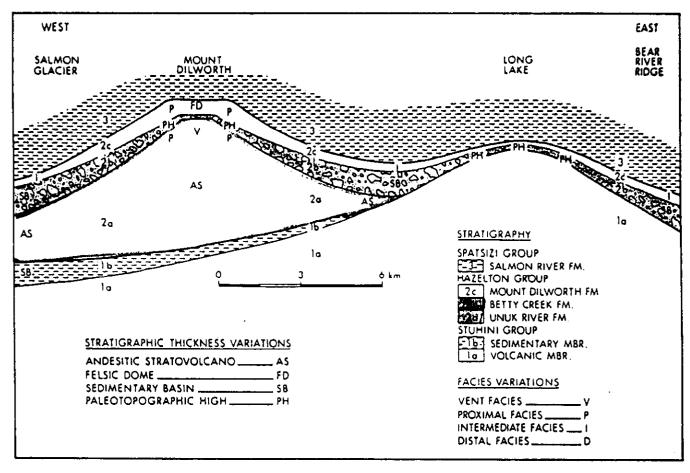
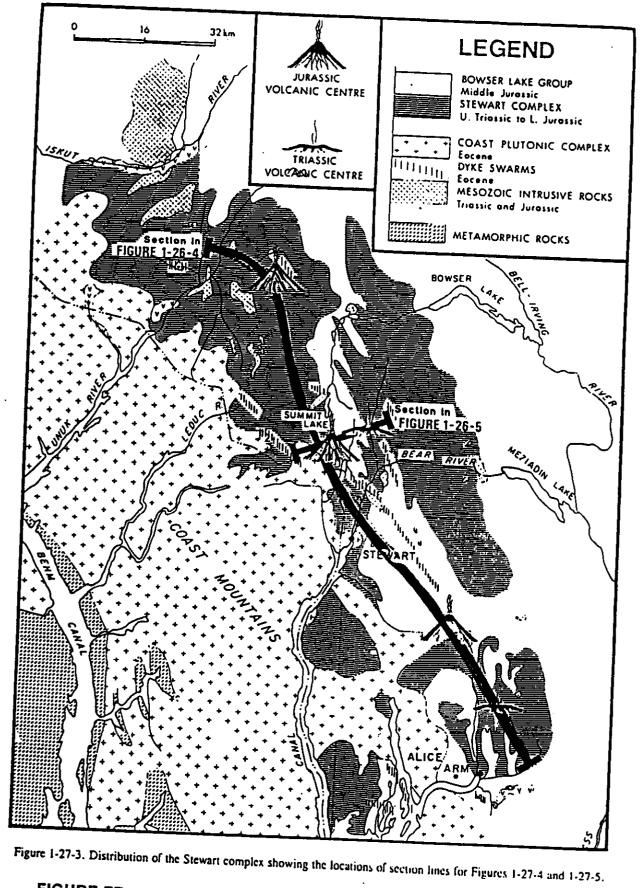


Figure 1-27-5. West-east schematic reconstruction through the Stewart complex.

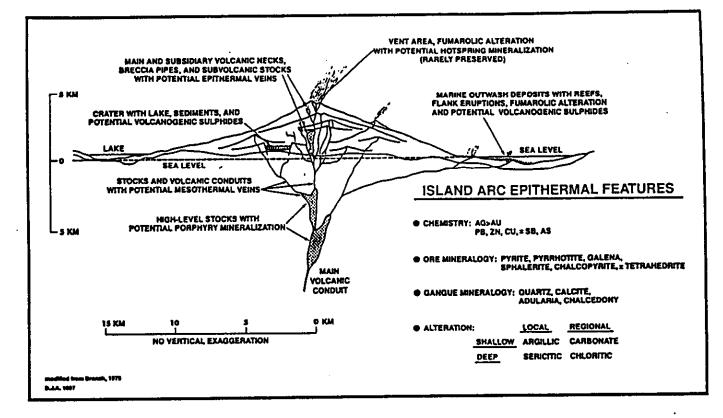
FIGURE 7A DILWORTH FORMATION IN STEWART COMPLEX STRATIGRAPHY Two main intrusive episodes occur in the Stewart area: a Lower Jurassic suite of diorite to granodiorite porphyries (Texas Creek Suite) that are comagmatic with extrusive rocks of the Hazelton Group; and, an Upper Cretaceous to Early Tertiary intrusive complex (Coast Plutonic Complex and satellite intrusions). The early Jurassic suite is characterized by the occurrence of coarse hornblende, orthoclase and plagioclase phenocrysts and locally potassium feldspar megacrysts. The Eocene Hyder quartz-monzonite, comprising a main batholith, several smaller plugs and a widespread dike phase, represents the Coast Plutonic Complex.

Middle Cretaceous regional metamorphism (Alldrick et al. 1987) is predominantly of the lower greenschist facies. This metamorphic event seems to be related to compression and concomitant crustal thickening at the Intermontane - Insular superterrane boundary (Rubin et al. 1990). Biotite hornfels zones are associated with a majority of the quartz monzonite and granodiorite stocks.



# **FIGURE 7B**

STEWART VOLCANIC BELT



Distribution of ore deposits within a stratovolcano (modified from Branch, 1976).

## **FIGURE 8**

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# MINERALIZATION TYPES STEWART CAMP

## 6. REGIONAL MINERALIZATION AND EXPLORATION ACTIVITIES:

The Stewart Complex is the setting for the Stewart (Silbak-Premier, Silver Butte, Big Missouri, Red Mountain, Clone), Iskut (Snip, Johnny Mountain, Eskay Creek), Sulphurets, and Kitsault (Alice Arm) gold/silver mining camps (Figure 2). Mesothermal to epithermal, depth persistent gold-silver veins form one of the most significant types of economic deposit. There appears to be a spatial as well as a temporal association of gold deposits to Lower Jurassic calc-alkaline intrusions and volcanic centres(Figures 7A, 7B). These intrusions are often characterized by 1-2 cm sized, potassium feldspar megacrysts and correspond to the top of the Unuk River Formation.

The most prominent example of this type of mineralization is the historic Silbak-Premiere gold-silver Mine which has produced 56,000 kg gold and 1,281,400 kg silver in its original lifetime from 1918 to 1976. The mine was reopened by Westmin in 1988 with reserves quoted as 5.9 million tonnes grading 2.16 g Au/t and 80.23 g Ag/t (Randall 1988). Mining was terminated in 1996 but the plant is still used for custom milling.

The ore is hosted by Unuk River Formation andesites and comagmatic Texas Creek porphyritic dacite sills and dykes. The ore bodies comprise a series of en echelon lenses which are developed over a strike length of 1800 metres and through a vertical range of 600 m (Grove 1986, McDonald 1988). The mineralization is controlled by northwesterly and northeasterly trending structures and their intersections but also occurs locally concordant with andesitic flows and breccias.

Two main vein types occur: silica-rich, low-sulfide precious metal veins and sulfide-rich base metal veins. The precious metal veins are more prominent in the upper levels of the deposit and contain polybasite, pyrargyrite, argentiferous tetrahedrite, native silver, electrum, and argentite. Combined sulfides of pyrite, sphalerite, chalcopyrite and galena are generally less than 5%. The base metal veins crosscut the precious metal veins and increase in abundance with depth. They contain 25 to 45% combined pyrite, sphalerite, chalcopyrite and galena with minor amounts of pyrrhotite, argentiferous tetrahedrite, native silver, electrum and arsenopyrite.

Quartz is the main gangue mineral, with lesser amounts of adularia being present. The calcite. barite, and some mineralization is associated with strong silicification, feldspathization, and pyritization. A temperature range of 250 to 260 degrees C has been determined for the deposition of the base and precious metals (McDonald 1990).

Middle Eocene silver-lead-zinc veins are characterized by high silver to gold ratios and by spatial association with molybdenum and/or tungsten occurrences. They are structurally controlled and lie within north, northwest, and east trending faults. This mineralization has been less significant in economic terms.

Porphyry molybdenum deposits are associated with Tertiary Alice Arm Intrusions, a belt of quartz-monzonite intrusions parallel to the eastern margin of the Coast Plutonic Complex. An example of this type of deposit is the B.C. Molybdenum Mine at Lime Creek.

Recent exploration in the Stewart Mining Camp has resulted in the discovery of a number of exciting new deposits. Cominco's Snip Mine commenced production in January of 1991 with reserves of 790,000 tonnes grading 29.1 grams gold per tonne. Production is scheduled at 90,000 ounces per year.

Tenajon Resources Corp. milled 102,500 tonnes with a recovered grade of 8.88 g Au/t. The ore was mined from the Silver Butte property (Figure 2) and processed at Westmin's Premier mill between July 9, 1991 and November 14, 1991 as a joint venture between Tenajon and Westmin.

The Eskay Creek gold-silver mine was constructed in 1994. Proven and probable reserves are currently estimated at about 2 million ounces of gold and 104 million ounces of silver. The mine is producing at a rate of 280 ounces per day with concentrates being trucked to Stewart for shipment to smelters in Japan and Quebec.

The Eskay Creek 21A Deposit is hosted within Contact Unit carbonaceous mudstone and breccia, as well as the underlying rhyolite breccia. Two styles of mineralization are present. The first is a visually striking assemblage of disseminated to nearmassive stibnite and realgar within the Contact Unit. The second style occurs in the adjacent footwall rhyolite, and features a stockwork-style quartz-muscovite-chlorite breccia mineralized with sphalerite, tetrahedrite and pyrite. Highest gold and silver values are obtained where the Contact Unit is thickest and the immediately underlying rhyolite breccia is highly fractured and altered. Drilling has outlined a zone approximately 280 m long, up to 100 m wide and of variable thickness but averaging 10 m.

The Eskay Creek 21B Deposit is approximately 900 m long, from 60 to 200 m wide and locally in excess of 40 m thick. Contact Unit mineralization comprises a continuous stratiform sheet of banded high grade gold and silver bearing base metal sulfide layers, from 2 to 12 m thick. Mineralization appears to be bedding-parallel. Sulfide minerals present include sphalerite, tetrahedrite, boulangerite, bornite plus minor galena and pyrite. Gold and silver is associated with electrum, which occurs as abundant grains associated with sphalerite. Peripheral and footwall to the banded sulfide mineralization are areas of microfracture, veinlet hosted, disseminated tetrahedrite, pyrite and minor boulangerite mineralization.

Barrick's Red Mountain (formerly Bond Gold's and Lac Minerals') project (Figure 2) is currently being vigorously explored by Royal Oak. According to the August 5, 1996 Northern Miner, Royal Oak's strategy for 1996 is to expand minable reserves by 500,000 ounces to 1.3 million ounces gold through surface and underground drilling of the down plunge extensions of the deposit. The existing decline is being extended 330 m. The company is looking at putting the deposit into production in the fourth quarter of 1999 at a production rate of 150,000 ounces of gold per year. Cash costs are expected to be in the range of \$150 per ounce.

The Marc Zone and its northerly extension the AV Zone occur as irregularly shaped sulfide lenses associated with the brecciated contact of the Goldslide Intrusion. The mineralization consists of densely disseminated to massive pyrite and/or pyrite stringers and amounts of associated pyrrhotite veinlets and variable and sphalerite as well chalcopyrite, arsenopyrite, galena, as tetrahedrite and various tellurides. Several phases of mineralization and deformation are indicated by the presence of different generations of pyrite and breccia fragments consisting of pyrite. High grade gold values are usually associated with the semi-massive, coarse-grained pyrite aggregates, but also with stockwork pyrite stringers and veinlets. Gold occurs as native gold, electrum and as tellurides.

The Willoughby Project (Figure 2) is located about 6 km east of Red Mountain and was initially drilled by Bond Gold in 1989. Seven structurally hosted zones of gold mineralization were intersected with varying amounts of copper, lead and zinc. Camnor and Giant Gold Mines are carrying out a \$1.3 M, 1996 program of surface and underground drilling concentrated on the North and Wilby Zones. In 1995, drilling on the North and Wilby Zones had returned up to 2.3 m grading 382.91 g gold/t and, 13 m grading 13.37 g gold/t, respectively. Geochemical sampling has recently located a 150 by 150 m, very strong gold soil anomaly between the North and Wilby Zones that remains open in three directions. The gold mineralization is associated with massive and semi-massive pyrite/pyrrhotite lenses and hosted by Hazelton Group volcaniclastic and intrusive rocks.

On the Clone Property located south of Red Mountain, Teuton Resources and Minvita Enterprises continue their pursuit of two sub-parallel shear zones up to 1.5 km in length that host high grade gold veins and stockworks. To date, the companies have announced the completion of 64 diamond drill holes and 140 trenches. As emphasized by the Teuton/Minvita August 29, 1996 press release, plunging ore shoot morphologies can be difficult

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exploration targets: "results strongly suggest that the mineralization at Clone occurs in plunging shoots having an unknown size and orientation". Exploration continues with Homestake Canada Inc. and Prime Resources Group Inc. having a first right of refusal on any future financing. The latter companies are also technical advisors to Teuton and Minvita on the Clone Property.

## 7. DELTA PROJECT AREA GEOLOGY:

The Delta West Project is postulated to cover a tectonic window in which Jurassic Hazelton Group and Paleozoic Stikine Assemblage rocks have been exposed by the uplift of broad anticlinal features known as the Oweegee and Ritchie Domes and by the erosion of Upper Jurassic sediments of the Bowser Basin.

The evolution of geological thinking with regard to the project area is described in the 1993, Phase 1B program report (Molloy, 1993A). This report was filed for assessment credit on the adjoining Fox claims. The results of the Geological Survey of Canada's mapping activities are summarized on Map 3.

As indicated on Map 3, the west margin of the Oweegee Dome is dominated by rocks of the Jurassic Hazelton Group: intermediate to mafic plagioclase-pyroxene lapilli tuff-breccia, lapilli, ash and dust tuffs; intermediate and felsic flows and derived debris flows; tuffaceous arkose, siltstone and mudstone; and, conglomerate and sandstone. The rocks are interpreted to extend west to within 300 m to 1 km of the east side of the Stewart-Cassiar Highway. Further to the west, the Hazelton Group is overlain by the Upper Jurassic Bowser Lake Group sediments including silty mudstones, fine grained sandstone and arkose.

The main components of the structural fabric trend northwest and northeast. Older faults (pre-Bowser Lake Group) according to Greig (1991) are mainly characterized by northwest dips which place Permian limestone on Stuhini Group rocks, and a steeply south dipping fault which juxtaposes the Stuhini Group with Hazelton Group rocks.

## 8. 1996 DELTA WEST PROJECT:

The field portion of the Delta West Project was carried out partially in June, July, August, and September, 1996 as weather and field conditions allowed. Project expenditures total approximately \$10,900 and are summarized in Table 1B along with a description of daily activities (Table 1A). British Columbia Prospector's Assistance funding of approximately \$ 7,300 has been allocated to the project.

The Delta West Project as described in this report consisted of 4 main components:

- A. CLAIM STAKING
- B. GEOCHEMICAL STREAM SEDIMENT SURVEY
- C. GEOCHEMICAL ROCK CHIP SURVEY
- D. GEOLOGICAL MAPPING

#### 8.A. CLAIM STAKING:

The staking of 11 mineral claims (Fox 30-40) comprising 208 units was the main focus of the first third of the project. The claims are shown on Mineral Titles Map 1A. The claims are summarized in Table 2 and are registered in the name of David R. Kennedy. A Notice of Work (Appendix 1) was granted on July 2, 1996 Approval Number SMI-96-0101533-200).

TABLE 1A

A. SUMMARY OF PROSPECTING ACTIVITY

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	REPORTS (d		5119111	
	Project Area	Date	Prospecting Days	Work Preformed
	Delta West	June 17/96	· · · p · - · · · · · · · · · · · ·	procure equipment, pack, reservations
•	Delta West	June 18/96	1	travel Vancouver-Smithers-Meziadin
- 3	Delta West	June 19/96	1	claim staking
-	Delta West	June 20/96	1	claim staking
	Delta West	June 21/96	1	claim staking
	Delta West	June 22/96	1	claim staking
	Delta West	June 23/96	1	claim staking
	Delta West	June 24/96	1	run sample lines/map
	Delta West	June 25/96	1	run sample lines/map
10	Delta West	June 26/96	1	rain out /Stewart for supplies
11	Delta West	June 27/96	1	claim staking
	Delta West	June 28/96	1	rain/road sampling
13	Deita West	June 29/96	1	claim staking
14	Delta West	June 30/96	1	claim staking
15	Delta West	July 1/96	1	claim staking
16	Delta West	July 2/96	1	rain out/record claims/work permit
17	Delta West	July 3/96	1	run sample lines/map
18	Delta West	July 4/96	1	run sample lines/map/rained out
19	Delta West	July 5/96	1	run sample lines/map
20	Delta West	July 6/96	1.5	run sample lines/map/helper data plot
21	Delta West	July 7/96	1.5	run sample lines/map/helper data entry
22	Delta West	July 9/96	1	run sample lines/map/rained out
23	Delta West	July 11/96	1	log samples/data plot
24	Delta West	July 12/96	1	data plot
25	Deita West	July 22/96	1	log/pack samples
26	Delta West	August 27/96	; 1	run sample lines/map/rained out
27	Delta West	August 28/96	5 1	run sample lines/map/rained out
28	Delta West	August 29/96		run sample lines/map
	Delta West	Sept 1/96	1	run sample lines/map/log samples
	Delta West	Sept 2/96	1	log/pack samples
	Delta West	Oct 26/96	1	report/maps
	Delta West	Nov 1/96	1	report/maps
	Delta West	Nov 4/96	1	report/maps
-	Deita West	Nov 5/96	1	report
	Delta West	Nov 12/96		report
	Delta West	Nov 13/96		report
39	Delta West	Nov 14/96		report
Total	40 days total		34	"prospecting days"

	date	T EXPENDITURES	amount	% of total		
	QUIE	item	inc. GST			
Travel	June 18/96	truck rental	553.73	50.00		
		truck insurance	90.00			
	June 24/96		23.00			
	June 26/96	-	10.00			
	June 28/96	-	14.50			
	July 2/96	gas	22.16			
	July 5/96	mileage	75.00			
	July 5/96	gas	15.65			
	July 8/96	gas	20.00			
	Aug 28/96	*	16.00	50.00		
			840.04		840.04	
Analyses	Sept 19/96	Chemex 19631624	125.19	100.00		
•	•	Chemex 19631661	742.24			
		Chemex 19631625	167.78			
		Chemex 19631660	972.59	100.00		
			2007.80		2007.80	
Equipment	Oct 26/96	Comp/GPS rental 21 days	112.35	50.00		
Rentals/	June 16/96	Bug/Bear Spray, Bags, Flag	200.00	50.00		
Supplies	June 18/96	claim maps, tags	17.12	50.00		
		contour base map	89.86	50.00		
		copies base map	30.00			-
		flagging, bug spray	23.63			
		reproduction	15.24			
	Nov 13/96	reproduction	41.99	100.00		
		reproduction estimate	250.00	100.00		
		copy report	50.00	100.00		
			830.19		830.19	
Accomodation/ Food	project	food and accomodation	1855.44	100.00	1855.44	to ⊴
		40 days @ 107 inc GST	4280.00	100.00	4280.00	<b>-</b>
Salary	project	to days which include	7200.00	100.00	4200.00	
Salary Claim recording	• •	claim recording	960.00		960.00	

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10853.47 784.45

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### TABLE 2

## LIST OF NEW CLAIMS:

NAME:	TAG:	UNITS:	STAKING DATE:
FOX 30	233413	20	JUNE 21, 1996
FOX 31	233414	20	JUNE 21, 1996
FOX 32	233415	16	JUNE 29, 1996
FOX 33	233416	20	JUNE 24, 1996
FOX 34	233417	20	JUNE 24, 1996
FOX 35	233160	16	JULY 03, 1996
FOX 36	233422	16	JUNE 24, 1996
FOX 37	233403	20	JULY 01, 1996
FOX 38	233402	20	JUNE 30, 1996
FOX 39	233402	20	JUNE 29, 1996
FOX 40	233421	20	JUNE 29, 1996

TOTALS: 11 CLAIMS

208 UNITS

#### 8.B. GEOCHEMICAL STREAM SEDIMENT SURVEY

Stream sediment sampling was carried out mainly along claim lines, the cutting of which was often limited by topography. All of the 52 stream sediment samples collected were submitted to Chemex Labs in Vancouver and subjected to gold analysis (fire assay-AA finish) and 32 element ICP analysis in the hopes of delineating gold bearing drainages and/or areas of anomalous polymetallic mineralization.

Stream sediment samples were collected along the soil sample lines where ever a drainage was noted. An effort was made to collect fine sediment without organics but this was not always possible. Sample locations and analytical results for the stream sediment samples (FS series) are shown on Map 4 and Figure 5. The extent of sampling was limited by the steep topographical conditions that terminated the running of most of the claim lines. Work was also hampered by the unusual 1996 weather conditions: The persistence of snow accumulations at higher elevations and generally wet weather that resulted in swollen streams (essentially spring run off conditions persisting throughout the summer) and often difficult traverse conditions.

Descriptions of the stream sediment samples are presented as Appendix 2, the certificates of analysis for the stream sediment samples are presented as Appendix 3. Contrary to the postulated prospective gold environment, only 2 of the stream sediment samples returned moderately anomalous values of 35 and 25 ppb gold, while the remainder of the samples returned values of less than 5 ppb gold. Interestingly both values flank Zone 2 polymetallic signatures (one to the west and one to the east) as determined in the soil sampling program carried out by Mr. Molloy. These values are regarded as very significant in view of the high stream velocities encountered during the survey. The author is aware of streams which regularly produce gold anomalies in low water conditions but in which no gold can be detected after high water "flushes out" the drainage.

Zinc, copper, silver, cadmium and barium were determined as potentially useful pathfinder elements in the soil sampling program and were carefully scrutinized to determine if similar patterns existed in the stream sediment and rock chip samples. Zinc values in the stream sediments ranged from 54 to 262 ppm and averaged 148 ppm. Seven values exceeded an arbitrarily selected value of 200 ppm. Copper values ranged from 26 to 86 ppm and averaged 45 ppm. Silver values ranged from less than 0.2 ppm to 0.6 ppm, the majority of the samples returning less than 0.2 ppm Ag. Cadmium values ranged from less than 0.5 to 3 ppm with only two values exceeding 2 ppm. Barium values ranged from 80 to 490 ppm and averaged 244 ppm Ba. In general there is a moderate multi-element signature evident in the stream sediment population.

It is interesting to note that some of the highest zinc values, sometimes associated with elevated barium values, cluster in the north west corner of the property in the general areas of Zone 5 and Zone 3 soil anomalies. This is an area of very limited sampling.

The area around Zone 2 soil anomaly has virtually no zinc signature in stream sediment samples but it does have an association with some of the highest barium values found in the streams. Mapping in this general area revealed the presence of volcanic rocks as opposed to the more prevalent sediments.

Stream sampling on the south east portion of the property produced a cluster of streams with elevated zinc and generally moderately elevated barium. This cluster also includes the highest rock barium value of 540 ppm. There is a good correlation with the location of the Zone 4 soil geochemical anomaly.

## 8.C. GEOCHEMICAL ROCK CHIP SURVEY

Rock chip sampling was carried out mainly along claim lines, the cutting of which was often limited by topography. All of the 58 rock chip samples collected were submitted to Chemex Labs in Vancouver and subjected to gold analysis (fire assay-AA finish) and 32 element ICP analysis in the hopes of delineating gold bearing outcrops and/or areas of anomalous polymetallic mineralization. The results of the survey are displayed in Map 4 and Figure 5.

Much less exposed bedrock was found than anticipated when the program was planned. Some of the mapping and sampling is based on float samples rather than bedrock as noted in the sample description table (Appendix 4). All of the 58 rock samples returned gold values of less than 5 ppb with the exception of sample FR 102 which ran 25 ppb gold. This sample was taken along an old lumber road on the southern portion of the project area (Figure 5).

Zinc values ranged from 22 to 232 ppm and averaged 95 ppm Zn. Only three values exceeded an arbitrarily selected threshold of 150 ppm Zn. Copper values ranged from 3 to 83 ppm with an average of 32 ppm Cu. Silver values in rock ranged from less than 2 ppm to 0.6 ppm Ag. The vast majority of samples returned less than 0.2 ppm Ag. All of the cadmium values were less than 0.5 ppm, save one value of 0.5 ppm Cd. Barium values ranged from 70 to 540 ppm and averaged 187 ppm Ba.

The two highest zinc values (230 and 232 ppm respectively) occur in outcrops located on the Stewart Cassiar highway. Barium values, though reaching a maximum of 540 ppm Ba, do not correlate with the higher zinc values and no multi-element signatures are apparent.

The 540 ppm barium value is situated precisely on the Zone 4 soil geochemical anomaly. Zone 2 as interpreted from the soil data has a number of elevated zinc and barium values though not together in the same samples. Zone 3 is associated with elevated barium values in rock.

#### 8.D. GEOLOGICAL MAPPING

The mapping component (Map 5) of the program was hindered by an extreme lack of outcrop. The major creeks were impossible to traverse due to high water conditions which persisted throughout the summer as snow melt continued well into August. Steep topographical conditions prevented traverses which potentially could have located bedrock on the south west facing slopes. The Bell-Irving River Valley where traversing was possible contains sand and gravel deposits of probable glacial/fluvial origin with only minor outcrop even along old logging roads. Most of the outcrop located near the Stewart Cassiar Highway is sediment ranging from mudstone through siltstone to sandstone, often with inclusions of one size fraction within another. Colours range from dark grey to medium grey, occasionally dark blue to browns and orange where oxidized. The sediments are generally not resistant to erosion and contribute to the lack of outcrop.

A number of fine grained to very fine grained volcanic rocks ranging in composition from mafic to felsic and occasionally pyroclastics were also observed particularly in the vicinity of Fox 30, 31, 33 and 36. Some of the samples contain quartz veining, quartz carbonate, and barite. Possible tourmaline (FR 11, FR 15) was also noted occasionally. A few of the outcrops are gossanous. The volcanics apparently correlate with zinc and polymetallic mineralization as evidenced by the soil sampling carried out by Mr. Molloy, see separate report. It is surmised that these volcanic rocks are members of the Lower Hazelton Formation and appear in windows through the overlying Bowser Lake Group sediments.

Greig and Evenchick mapped (Map 3) the area for the Geological Survey of Canada in 1993. Most of the project area at lower the Bell-Irving River Valley was mapped as elevation within Middle(?) and Upper Jurassic Bowser Lake Group sediments (JBa) consisting of arkosic volcanic litharenite turbidite lithofacies; thin and medium bedded, fine to medium grained, poorly sorted arkosic litharenite with interbedded silty mudstone. Greig and also mapped Lower Middle Jurassic Hazelton Group Evenchick (LMJSs) consisting of thin bedded siliceous silty sediments mudstone, clay-altered dust tuff(?), discontinuous limestone lenses, Lower Jurassic (LJHr) felsic lapilli tuff-breccia, ash and ash dust (believed to be a Mt. Dilworth equivalent), Lower Jurassic Group coarse sediments and pyroclastics (LJHc) comprised of boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli tuff-breccia, lapilli, ash and dust tuff, tuffaceous arkose and mudstone. Also mapped were Lower Jurassic (LJHv) volcanics consisting of intermediate to mafic plagioclasepyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone. Also noted within the project area were Upper Triassic (UTSa) Stuhini Group plagioclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; and minor limestone. The GSC mapping is supported by the author's work.

#### 9. RECOMMENDATIONS:

Further stream sediment sampling is recommended particularly on the more easterly portions of the property not yet sampled. The author notes and the GSC mapping confirms that the Bowser Lake Group sediments thin and finally disappear as the eastern portions of the project are approached. The Hazelton Group rocks are regarded as one of the most prospective rock units in British Columbia and stream sediment sampling is regarded as one of the best tools to locate mineralized drainage basins. Sampling should be timed to low water conditions so that the various drainages can be walked.

In conjunction with the stream sediment sampling rock chip sampling and mapping should be carried out in the various drainages. High water conditions prevented the walking of the stream courses in the present program but should not be insurmountable in a more normal weather year.

#### 10. CONCLUSIONS:

An 11 unit 208 unit property has been staked to cover a prospective area underlain by Hazelton Group volcanics and pyroclastics and by Bowser Lake Group sediments apparently of limited thickness overlying Hazelton Group rocks.

Stream sediment sampling and rock chip sampling was carried out mostly on the western portion of the project area due to topographical, weather and high water levels in streams. The stream sediment sampling program produced two anomalous gold values located on the flanks of the widest (Zone 2) multi-element geochemical soil anomaly discovered in Mr. Molloy's work. The sample (FS 08; 35 ppb Au) is located downslope from The Zone 2 soil anomaly referenced in the Molloy report and could suggest a gold component to this zone. The other sample (FS 42B; 25 ppb Au) is located up stream from the Zone 2 zinc/multi-element anomaly and is suggestive of another zone to the east. Values at this level should be considered significant in the high water velocities encountered during the survey. There is a moderate multi-element signature (zinc and barium) in the stream sediment sample population.

Rock chip sampling produced one anomalous gold value of 25 ppb Au near the upper reaches of a lumber road in the southern portion of the project area. The sample was characterized by a soft black fibrous mineral (sooty goethite?). The survey failed to locate any obvious multi-element anomalous areas though elevated values in both zinc and barium were detected and often these correlated with soil geochemical anomalies as outlined in Mr. Molloy's report. The geologic mapping confirmed the presence of favourable Hazelton Group volcanics and pyroclastics and Hazelton Group covered by thin Bowser Lake Group sediments as evidenced by the "windows" which expose the Hazelton volcanics. The Hazelton sequence is host to many mineral deposits and several mining operations. The property is deserving of further work including additional soil survey lines, IP and magnetometer surveys to evaluate the current soil anomalies and additional stream and rock chip sampling to evaluate the portions of the property not currently covered.

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### 12. STATEMENT OF QUALIFICATIONS:

I, David Roy Kennedy, of North Vancouver, British Columbia, hereby certify that:

- 1. I am an independent Geologist, president of Ailsa Exploration Consultants Ltd., and I am associated with Geofine Exploration Consultants Ltd. but act in the role of independent contractor.
- 2. I am a graduate of Acadia University, Wolfville, Nova Scotia having obtained the degree B.Sc. with a major in Geology (1970).
- 3. I have practised my profession in mineral exploration continuously for the past 26 years including 6 years as a consultant, 10 years with St. Joe Canada Inc./Bond Gold Canada Inc./LAC Minerals Ltd. as Exploration Manager, Western Canada and 9 years with the consulting firm Flanagan McAdam & Co. in the capacity of operations manager, Chibougamau, Quebec.
- 4. I am a "Professional Geoscientist" as defined by the Association of Professional Engineers and Geoscientists, Province of British Columbia. Registration # 20811.
- 5. I am a member of the B.C. and Yukon Chamber of Mines.

6. I have carried out the field program as described herein and prepared this report titled "Report on the 1996 Delta West Project, Staking, Stream Geochemistry, Rock Geochemistry and Geology; Delta Peak Area:, Skeena Mining Division, Northwestern British Columbia". I have referenced the technical data available in the BCMEMPR assessment work files as well as other sources listed in the References.

Dated at North Vancouver, this 16th day of November, 1996.

OFESSIO PROVINCE D.B. KENNED B.Sc. 5 Professional Geoscientist David Ŕ. Kennedy, NSHO: und co**c**nea D'S' KENNED

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APPENDIX 1

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Province of British Columbia

Ministry of Employment and Investment Energy and Minerals Division Bag 5000 Smithers British Columbia VOJ 2N0 Telephone: (604) 847-7383 Fax: (604) 847-7603

File No. 14675-20

Mine No. 0101533

July 3, 1996

D. Kennedy, 5596 Nuthatch Place, North Vancouver, B.C. V7R 4R8

Dear D. Kennedy:



### RE: Fox (Fox 30 to 40 inclusive) Mineral Property Skeena Mining Division

Your Notice of Work dated July 2, 1996, on the above mineral property has been received and reviewed pursuant to Section 10 of the Mines Act.

Since the proposed disturbance is minimal reclamation bonding will not be required at this time.

You are authorized to proceed with the proposed program under Approval number SMI-96-0101533-200.

This number will be required when recording a Statement of Exploration and Development with the Mineral Titles Branch to maintain title.

This approval applies only to the requirements under Section 10 of the Mines Act. Other legislation may be applicable to the operation and the necessary approvals under that legislation are required to be attained by the permittee.

Please find enclosed a Notice of Completion of Work Form which must be completed by your company. This is a requirement under Section 6.1.6 of the Health, Safety & Reclamation Code for Mines in British Columbia. Your completed work program form should include a set of photographs showing the condition of your work sites prior to commencing work and at the completion of your work program. Please include a description of the photographs. These photos will assist in evaluating the reclamation work.

For future programs, please review the enclosed Implementation of the Forest Practices Code pamphlet, particularly the section entitled "Information Requirements for Permits".

Yours truly,

A.J. (Jill) Pardoe, P.Geo., Inspector of Mines Northwest Region

AJP:emb

APPENDIX 2

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### A. STREAM SEDIMENT SURVEYS:

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CLAIM:	LOCATION CL. LINE:	: Cl. Post:	DIR.:	DIST (M):	STREAM S NUMBER:	ediment s/ Name:		gr. size:	COMP.:	DRAINAGE:	COMMENTS:
	N OF LCP	LCP 30, 31, 32	N	50	) FS1	SAND	GRY	FI-CO	FRAGS VOL, QTZ, OXI SIL	D MAT, GLACIER CREEK	NEAR N BANK
	N OF LCP	LCP 30, 31, 32	N	93:	5 FS2	ORG MUCI	(BLK	FI	ORG	SM CRK DRAINS BP	
F 30	E-W SOIL L		SE ON RD	ABOUT 400 M	FS3 L FORK	AS FS2				SMALL CRK	LEFT FORK
F 30	E-W SOIL L		SE ON RD	ABOUT 400 M	FS4 R FORK	AS FS2					
FOX 31/33	EW	LCP PT AT RD	W FR 2E PT	88 W	5 FS5	ORG MUCI	CBLK	FI	ORG	TRIB TO GC	
FOX33/34	NORTH	LCP33/34	ε	21(	) FSG	SD GRAV	BRN	FLCO	SIL, VOL SD	SMALL CRK	
FOX33/34	NORTH	LCP33/34	E	68(	) FS7	AS FS5				SMALL CRK	
FOX33/34	NORTH	LCP33/34	E	1340	) FS8	AS FS5				SMALL CRK	
FOX33/34	NORTH	LCP33/34	E	174	5 FS9	org/SD	BRN	SIL-CO	org, wh qtz, gry vol, some cl	SMALL CRK	
FOX33/34	NORTH	LCP33/34	E	165(	) FS10	CL-SD-GR/	ABRN	CL-PEBS	CL, GRY GRN VOL, WH QTZ LIM TUFF	SMALL CRK	
FOX33/34	NORTH	LCP33/34	E	162	5 FS11	CL-SD	BRN	CL-CO	CL, VOL SD	S FLOW SMALL CRK	
FOX 33	W		S TO SKOV	<b>170</b> 0	) FS12	SD	BLK	FI-MED	M VOL, WH QTZ, SIL	SKOWILL CRK	CRK IN FLOOD SAMPLE FROM IS.
F30/33	NEW EW LINE	2200E	W TO RD		FS13	ORG MUCH	KBLK	FI-MED	ORG	SMALL CRK	
F30/31	NEW N LIN	E 300 M N	N	ABOUT	FS14	CL-SD	BLK-BRN	FI-CO	ORG, CL, SD, PEBS	PURE CRK	

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CLAIM:	LOCATION CL. LINE:	: CL. POST:	DIR.:	DIST (N		STREAM SI NUMBER:	EDIMENT SA NAME:	MPLES: COLOUR :	gr. size:	COMP.:	DRAINAGE: COMMENTS:
		INT 4		2	600					MVOL	
F30/31	NEW N LIN	E 300 M N INT 4	N	ABOUT 2	850	FS15	SD-GRAV	GRY-BLK	F-PEBS	SD, M VOL PEBS, MIN	ORG PURE CRK
F30/33	NEW	LCP30	W TO RD	1	580	FS16	ORG MUCK	BLK	FI-MED	ORG	SMALL CRK
250M N SW CORN F33	N-S		N TO SKOW CK		250	FS17	SD	BRN/BLK	FI-CO	FRAGS WH QTZ, BK SI GRG-GRN VOL	ESKOWALLLCRK
NONE	15 M DOW ON RD	INSTREAM F	ROM BRIDG	SE		FS18	SD	BLK	FI-CO	FRAGS WH QTZ, BK SI GRG-GRN VOL	EDELTAIC CRK
NONE		ELTAIC CRK BRIDGE, 1	ABOUT	OF RD		FS19	CL-SD	GRY/BLK	CL-CO	OXID MAT, BLK SEDS,	WH QTZ TRIB TO DELTAIC FLOWS 160 DEG
APPROX 4 SKOWALL	DOMISOFR CKR	D TO CC SC	NUTH OF			FS20	CL-SD- ORG	BRN	CL-CO	CL, ORG-ROOTS, MUC	K, FRAGS ARG SMALL CRK FLOWS 240
800 M S O	FGLACIER	CRK ON RD				FS21	SD	BRN	FI-CO	FRAGS WH QTZ, BK SI GRG-GRN VOL, OXID I	
2.45 KM S	OF GLACIE	R CRK				FS22	SD	BRN	SIL-FI	SIL, SD	FLOODED CK FLOWS 220 DEG SMALL BR CREEK - W BR FLOWS 300 DEG
	•					FS23	SD-GRAV	BRN	FI-PEBS	OXID MAT, BLK SED, G MIN ORG	RTZ, RT BR FLOWS 270
2.70 KM S	OF GLACIE	R CK ON RD	)			FS24	AS F22				SMALL CRK FLOWS 235 DEG
4.3 KM S (	OF GLACIER	CK ON RD				FS25	SD	BRN	SIL-FI	SIL, SD, ORGS	SMALL CRK FLOWS 252 DEG
5.4 KM S	OF GLACIE	R CK ON RD				FS26	org Muck	BRN	SIL, CL	SIL, CL, ROOTS	SMALL CK FLOWS 240 DEG
F32/39	NS- W39 E32	LCP39, 40	s to rd		425	FS27	SD-GRAV	GRY-BLK	FI-PEBS	20% SED PEBS, 10 %	ORGS
F32/39	NS- W39	LCP39, 40	S TO RD		925	FS28	SD	BRN	FI-SIL	SIL, SD, CL 10%	CK IN FLOOD FLOWS 210 DEG

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A. STREAM SEDIMENT SURVEYS:

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CLAIM:	LOCATION CL. LINE:	I: CL. POST:	DIR.:	DIST (M):	NUMBER:	SEDIMENT S NAME:		GR. SIZE:	COMP.:	DRAINAGE	:	COMMENTS:
	E32											
F32/39	NS- W39 E32	LCP39, 40	S TO RD	8;	60 FS29	AS FS29				BR OF FS2	9 CRK FLOW	IS 265
F32/39	NS- W39 E32	LCP39, 40	S TO RD	97	'0 FS30	CL-SD	BRN	CL-FI	CL, SD	BR OF FS2	9 CRK FLOW	/S 250
F32/39	NS- W39 E32	LCP39, 40	S TO RD	103	15 FS31	SD	GRY	SI-FI	SI, SD	CK FLOWS	207	
F39	NS	AT 4S PT	RE	500 M S OF RD	FS32	SD-GRAV	BRN	FI-CO	SD, MIN ORG, FRAGS BLK SED	FLOWS 240	)	
F39	W ON EW CL L	TO RD	W TO RD		0 FS33 D OF LINE	CL-SD-GR	ABRN	CL-PEBS	CL, 10% org (twigs) 25% ang frags - oxid ma well sheared sed, min wi		5	
F37/38	W-NS	LCP37,38	S TO COR	РТ 14	FS34 15	SD-GRAV	BRN	SIL-PEBS	SIL, SD, PEBS	SMICKR FLOWS 270	)	
F37/38	W-NS	LCP37,38	S TO COR	рт 50	FS35 10	SD	GRY	Fl	SD, MIN ORG, FEW PE		FLOWS 260	
F37/38	W-NS	LCP37,38	S TO COR	PT 130	FS <b>36</b> 10	ORG	BLK	FI-CO	ORGS-TWIGS, ROOTS	SMALL CK	FLOWS 215	
F37/38	S-EW	SW CORN	W TO COR	. PT 54	FS37 0	ORG MUC	KBLK	CL-CO	CL, SIL, SD, ORG	SM CK	FLOWS 200	DEG
F37/38	S-EW	SW CORN	W TO COR	PT 15	FS38 0	ORG MUC	KBLK	CL-CO	CL, SIL, SD, ORG	SM CK	FLOWS 170	DEG NOT MUCH SED
F34	N-S	2NF34	S	124	0 FS 39	ORG MUCI	KBLK	CL-CO	CL, SIL, ORG	SM CK	FLOWS 260	DEG NOT MUCH SED
F36	N-S	2NF36	S TO LCP 36		0 FS40	SD	BRN	FI-CO	CL 75%, 25% PEBS OF MAT, GRY/GRY VOL, S BLK SEDS, MIN SILT	OME PLATY	FLOWS 250	DEG
F38	N-S	2NF36	S TO LCP 36	-	0 FS41	SD-GRAV	BRN	FI-PEBS	SD, 35% PEBS- ANG, 1 OXID MAT, GRY/GRN V	ism CKR 'Ol,		DEG AT FR48 LOC -RHY FRAG
F36	N-S	2NF38	S TO LCP	39	0 FS42	ORG MUCI	KBLK	FI-CO	WH QTZ, PLATY SEDS ORGS	SM CK/SPR		

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i i A. STREAM SEDIMENT SURVEYS:

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					STREAM S	EDIMENT SA	MPLES:				
	LOCATION: CL. LINE:		DIR.:	DIST (M):	NUMBER:	NAME:	COLOUR :	GR. SIZE:	COMP.:	DRAINAGE	COMMENTS:
			36								FLOWS 220 DEG IN MIXED FOR, AT FR47 LOC, SIL VOL
F36 I	N-S	2NF36	S TO LCP 38	-	F\$42A	SD-GRAV	BRN	FI-PEBS	40% PEBS - 80% OXID 20% GRN/GRY VOL, M WH QTZ; 55% FI SD, 59	IN	FLOWS 170 DEG EDGE CC
F32 I	E-W	4E4SF32	E FR BI R	33	FS43	ORG	BLK	FI	ORG		FLOWS 210 DEG
F32 f	E-W	600 M S OF LCP 30,		0	FS44	CL-SD	GRY	CL-FI	CL, SD	UN CK	FLOWS 330AT BIR MAT FIR FOR
DCSIDECRI	N END OF R	D			FS101	ORG MUCH	(BLK	CL-FI	CL, SILT, ORG	SM CRK	SW
DCSIDECRI	n end of r	D		415 M FR F503	FS102	SILT/SD	BRN	SILT-FI	SI, SD	SM CRK	SE
DCSIDECRH	N END OF R	D		535 M FR FS 102	F\$103	CL/SD	BRN	CL-FI	CL, SD	SM CRK	SE
DCSIDECRH	n end of r	D		1055 M FR F505 AT W1, R10		SILT/SD	BRN	FI-CO	SILT/SD	SM CRK BELOW PD	

APPENDIX 3

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# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 5175 Timbertea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Comments: ATTN:DAVID KENNEDY

CERTI	FICATE	A9631661			ANALYTICAL P	ROCEDURES	5	
- GEOFINE	EXPLORATION CC	DNSULTANTS LTD.	CHEMEX	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION	upper Limit
	tted to our lab as printed on 1	) in Vancouver, BC. 9-SEP-96.	983 2118 2119 2120 2121 2122 2123 2123 2124	46 46 46 46 46 46 46 46	Au ppb: Fuse 30 g sample Ag ppm: 32 element, soil & rock Al %: 32 element, soil & rock As ppm: 32 element, soil & rock Ba ppm: 32 element, soil & rock Be ppm: 32 element, soil & rock Bi ppm: 32 element, soil & rock Ca %: 32 element, soil & rock	YA-AAS ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES	5 0.2 0.01 2 10 0.5 2 0.01	10000 100.0 15.00 10000 10000 100.0 10000 15.00
SA	MPLE PREP	ARATION	2125	46	Cd ppm: 32 element, soil & rock Co ppm: 32 element, soil & rock	ICP-ARS ICP-ARS	0.5	100.0
IEX NUMBE	R ES	DESCRIPTION	2127 2128 2150 2130 2131	46 46 46 46 46	Cr ppm: 32 element, soll & rock Cu ppm: 32 element, soll & rock Fe %: 32 element, soll & rock Ga ppm: 32 element, soll & rock Hg ppm: 32 element, soll & rock	ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES	1 1 0.01 10 1	10000 10000 15.00 10000 10000
201 46 202 46 229 46	Dry, sieve save reject ICP - AQ Di		2132 2151 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145	46 46 46 46 46 46 46 46 46 46 46 46	K %: 32 element, soil & rock La ppm: 32 element, soil & rock Mg %: 32 element, soil & rock Mn ppm: 32 element, soil & rock No ppm: 32 element, soil & rock Na %: 32 element, soil & rock Ni ppm: 32 element, soil & rock P ppm: 32 element, soil & rock Sb ppm: 32 element, soil & rock Sc ppm: 32 element, soil & rock Sr ppm: 32 element, soil & rock Ti %: 32 element, soil & rock Ti %: 32 element, soil & rock	ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES	0.01 10 0.01 5 1 0.01 1 2 2 1 1 0.01 10	$     10.00      10000      15.00      10000      5.00      10000      10000      10000      10000      10000      5.00      10000 \\     5.00 \\     5.00 \\     5.0$
<ul> <li>metals</li> <li>ents for</li> <li>stion is ;</li> </ul>	t ICP package i in soil and which the nit possibly incomp r, Ga, K, La, M	rock samples. ric-aqua regia lete are: Al,	2146 2147 2148 2149	46 46 46 46	U ppm: 32 element, soil & rock V ppm: 32 element, soil & rock W ppm: 32 element, soil & rock Zn ppm: 32 element, soil & rock	ICP-ARS ICP-ARS ICP-ARS ICP-ARS	10 1 10 2	10000 10000 10000 10000

A9631661

(KIV) - GEOFINE EXPLORA

Project: P.O. # :

Samples submitted to This report was printe

	SAM	PLE PREPARATION
CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201 202 229	46 46 46	Dry, sieve to -80 mesh save reject ICP - AQ Digestion charge
NOTE .	1.	

The 32 element ICP pactrace metals in sod Elements for which t digestion is possibly Ba, Be, Ca, Cr, Ga, K, T1, W.



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# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd.,



To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Page ber :1-A Total Pages :2 Certificate Date: 19-SEP-96 Invoice No. : 19631661 P.O. Number Account KIV

~\*

Mississauga L4W 2S3 Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163 Project :

Comments: ATTN:DAVID KENNEDY

						<u> </u>				CE	RTIFI	CATE	OF A	NAL	YSIS	ļ	<b>\9631</b>	661		
SAMPLE	PREP CODE	Ац ррв Уд+дд	Âg ppu	A1 *	<b>hs</b> Dom	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ pp <b>n</b>	Co pp <b>n</b>	Cr pp <b>n</b>	Cu ppm	Fe %	Ga ppm	Eg ppm	K %	La ppm	Mg %	Мл ррт
FS 01 FS 02 FS 03 FS 04 FS 05	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 5 &lt; 5 &lt; 5 &lt; 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 0.6	3.12 1.41 2.25 1.63 1.41	8 12 12 32 16	80 430 190 270 400	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	1.77 2.32 0.43 1.35 1.52	< 0.5 0.5 < 0.5 0.5 1.5	16 12 15 13 33	25 27 48 21 23	85 26 52 53 44	4.56 2.75 3.34 2.58 3.53	10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.09 0.07 0.11 0.10 0.07	< 10 < 10 < 10 10 10	1.76 0.44 1.04 0.57 0.46	1155 6040 665 1855 >10000
FS 06 FS 07 FS 08 FS 09 FS 10	201 202 201 202 201 202 201 202 201 202 201 202	< 5 35 < 5	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	1.67 1.66 1.63 1.47 1.52	38 14 22 24 20	220 300 270 210 270	0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.53 0.61 0.69 1.02 1.32	1.0 0.5 0.5 0.5 0.5	16 14 12 11 11	21 20 20 20 19	33 33 35 45 35	3.37 3.25 3.10 2.81 2.80	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.11 0.10 0.12 0.08 0.08	10 10 < 10 < 10 < 10	0.58 0.52 0.49 0.48 0.43	2460 1885 1570 1665 2110
FS 11 FS 12 FS 13 FS 14 FS 15	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5 < 5 < 5 < 5	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	1.71 2.28 0.59 1.67 1.73	30 20 18 50 54	200 210 220 260 270	0.5 < 0.5 < 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2	1.11 3.86 2.78 1.04 0.73	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	11 15 4 11 14	20 39 9 14 16	39 62 29 45 39	3.06 4.15 1.07 2.91 3.59	< 10 < 10 < 10 < 10 < 10 < 20	< 1 < 1 < 1 < 1 < 1 < 1	0.09 0.06 0.05 0.08 0.10	10 < 10 10 10 10	0.44 1.85 0.14 0.52 0.59	1000 740 1575 1565 2840
FS 16 FS 17A FS 17B FS 18 FS 19	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5 10 < 5	< 0.2 0.2 0.2 < 0.2 < 0.2	2.18 1.68 2.51 2.47 1.89	14 8 20 12 10	320 490 220 260 150	0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.74 2.35 4.35 1.25 0.37	1.0 3.0 < 0.5 < 0.5 < 0.5	25 15 15 14 12	38 44 41 42 66	42 65 65 61 33	4.05 2.40 4.22 4.03 2.92	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.10 0.05 0.09 0.10 0.12	10 10 < 10 < 10 < 10	0.85 0.75 1.84 1.48 1.10	5480 6590 835 725 890
FS 20 FS 21 FS 22 FS 23 FS 24	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5 < 5 < 5 < 5	< 0.2 < 0.2 < 0.2 0.2 0.2	2.00 2.00 1.37 1.16 1.19	22 24 58 42 20	240 180 190 220 220	< 0.5 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.74 0.50 0.80 0.57 0.46	0.5 0.5 0.5 0.5 0.5	26 21 15 13 16	41 19 15 16 22	40 67 47 39 47	5.23 4.79 4.34 4.01 3.89	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.09 0.09 0.08 0.09 0.09	< 10 < 10 < 10 < 10 < 10 < 10	1.11 0.92 0.57 0.55 0.60	2730 2900 1195 1040 875
FS 25 FS 26 FS 27 FS 28 FS 29	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5 < 5	0.2 0.6 0.2 0.2 0.2	1.91 1.77 1.86 1.63 1.56	12 10 22 70 70	200 250 230 220 230	0.5 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.56 0.51 0.63 1.11 0.87	0.5 1.5 0.5 1.0 0.5	17 24 20 17 17	43 49 20 17 16	38 36 55 49 49	3.41 4.29 3.89 4.84 4.76	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.10 0.12 0.12 0.12 0.12	< 10 10 < 10 < 10 < 10	0.77 0.72 0.56 0.53 0.58	1605 2600 2630 1445 1620
F# 30 F# 31 F# 32 F# 33 F# 34	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5 < 5	< 0.2 0.2 < 0.2 0.2 < 0.2 < 0.2	1.44 1.33 1.27 1.33 1.60	66 46 18 24 26	210 290 130 250 310	0.5 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2	1.04 0.63 0.50 0.63 0.62	1.0 1.0 0.5 1.5 < 0.5	17 15 14 19 16	15 17 26 32 17	48 44 42 48 26	4.70 4.08 3.71 4.05 4.43	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.09 0.11 0.09 0.09 0.10	< 10 < 10 < 10 < 10 < 10 10	0.48 0.54 0.57 0.43 0.54	1470 1430 1100 1850 2990
78 35 78 36 78 37 78 38 78 39	201 202 201 202 201 202 201 202 201 202 201 202	< 5 < 5	< 0.2 < 0.2 0.2 < 0.2 < 0.2	1.77 1.86 1.23 2.12 1.59	22 8 16 28	240 280 110 260 220	0.5 0.5 < 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.56 1.09 1.69 0.61 1.26	1.5 1.5 1.0 0.5 0.5	14 15 16 22 12	27 25 14 34 21	34 35 19 29 38	3.34 2.51 3.66 4.00 2.49	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.11 0.09 0.05 0.07 0.09	< 10 10 10 10	0.63 0.56 0.28 0.81 0.47	1560 2250 3590 5130 1185
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## **Chemex Labs Ltd.** Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8



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Project : Comments: ATTN:DAVID KENNEDY

							<u>_</u>			CE	RTIF	CATE	OF A	NALY	rsis	A9631661
SAMPLE	PREP CODE	Мо ррп	Na X	Ni ppm	P Ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W Ppm	Zn ppm	
75 01 75 02 75 03 75 04 75 05	201 202 201 202 201 202 201 202 201 202 201 202	2 2 2 2 2 2	0.03 0.01 0.01 0.01 0.01 0.01	19 27 60 36 68	850 1370 630 890 970	6 16 16 22 12	2 < 2 < 2 < 2 < 2 < 2 < 2	10 3 7 5 4	68 88 21 56 106	0.29 0.04 0.04 0.04 0.04	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	147 40 70 47 54	< 10 < 10 < 10 < 10 < 10 < 10	66 124 130 144 156	
rs 06 rs 07 rs 08 rs 09 rs 10	201 202 201 202 201 202 201 202 201 202 201 202		<pre>     0.01     0.01     0.01     0.01     0.01     0.01     0.01 </pre>	41 39 29 30 30	700 650 680 <i>660</i> 740	16 12 10 18 18	< 2 2 < 2 < 2 < 2 < 2	5 5 4 4	28 30 36 40 50	0.04 0.03 0.02 0.02 0.01	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	50 47 49 46 49	< 10 < 10 < 10 < 10 < 10 < 10	186 148 122 130 118	
rs 11 rs 12 rs 13 rs 14 rs 14 rs 15	201 202 201 202 201 202 201 202 201 202 201 202	4 1 3 2 3	0.01 0.01 0.01 0.01 0.01 0.01	29 40 11 23 30	810 680 900 780 660	12 14 4 16 18	< 2 < 2 < 2 < 2 < 2 < 2 < 2	5 8 1 5 5	42 34	0.01 0.11 0.05 0.08	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	47 95 16 47 63	< 10 < 10 < 10 < 10 < 10 < 10	120 94 54 116 124	
8 16 8 17) 8 17 8 17 8 18 8 18 8 19	201 202 201 202 201 202 201 202 201 202 201 202	3 3 1 1 1	0.01 0.01 0.01 0.01 0.01	75 81 40 50 78	980 1090 680 670 670	18 14 6 12 12	< 2 2 < 2 < 2 < 2 < 2	6 5 8 6	45 91 79 39 26	0.04 0.01 0.11 0.13 0.04	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	62 40 103 107 52	< 10 < 10 < 10 < 10 < 10 < 10	232 150 100 100 102	
\$ 20 \$ 21 \$ 22 \$ 23 \$ 24	201 202 201 202 201 202 201 202 201 202 201 202	2 - 3 6 4 4	<pre>&lt; 0.01 0.01 0.01 0.01 &lt; 0.01 &lt; 0.01</pre>	57 48 50 48 58	1160 860 830 950 910	14 14 8 10 12	< 2 < 2 < 2 < 2 < 2 < 2	6 7 6 6	35 -	0.04 0.04 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	72 67 46 43 48	< 10 < 10 < 10 < 10 < 10	128 178 184 172 158	
8 25 8 26 8 27 8 28 8 28 8 29	201 202 201 202 201 202 201 202 201 202 201 202	1	<pre>&lt; 0.01 0.01 &lt; 0.01 &lt; 0.01 0.01 0.01</pre>	95 77 78 56 53	760 1880 880 830 900	10 20 14 16 10	< 2 < 2 < 2 < 2 < 2 < 2	5 5 7 7 7	59 42 35 -	<pre>&lt; 0.01 0.01 0.02 &lt; 0.01 &lt; 0.01</pre>	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	51 52 60 50 51	< 10 < 10 < 10 < 10 < 10 < 10	198 118 200 202 196	
8 30 8 31 8 32 8 33 8 34	201 202 201 202 201 202 201 202 201 202 201 202	7 5 3 3 4	0.01 0.01 0.01 0.01 0.01	54 53 53 138 38	830 1020 900 1030 860	12 12 12 14 14	< 2 < 2 < 2 < 2 < 2 < 2	7 7 6 7 5	38 · 37	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	44 48 56 44 52	< 10 < 10 < 10 < 10 < 10 < 10	194 182 130 212 140	
8 35 8 36 8 37 8 38 8 39	201 202 201 202 201 202 201 202 201 202 201 202		0.01 0.01 0.01 0.01 0.01 0.01	44 80 39 78 44	770 1190 2280 930 970	12 10 12 8 12	< 2 < 2 < 2 < 2 < 2 < 2	5 3 3 4 4	31 60 76 33 60	0.03 0.03 0.03 0.04 0.04	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	62 39 24 48 38	< 10 < 10 < 10 < 10 < 10 < 10	202 246 186 262 142	
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SAMPLE

75 40 78 41

FS 423

78 42B

FS 43

F8 44

## **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers Mississauga L4W 2S3 5175 Timberlea Blvd.,

Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163



GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Page ber :2-A Total Pages :2 Certificate Date: 19-SEP-96 Invoice No. : ] P.O. Number : :19631661 Account :KIV

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Project : Comments: ATTN:DAVID KENNEDY

												CE	RTIFI	CATE	OF A	NAL	rsis	1	A9631	661		
PR CO		λu ppb Fλ+λλ		Ag ppa	A1 %	<b>As</b> ppm	Ba ppm	Be ppm	Bi Ppm	Ca %		Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K X	La ppm	Ng X	Mn ppm
201 201 201	202 202 202 202 202 202	< 5 < 5 25	< <	0.2 0.2 0.2 0.2 0.2 0.4	1.66 1.61 0.83 1.60 1.41	52 30 6 36 12	240 300 400 310 380	0.5 0.5 0.5 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	1.24 1.10 4.05 0.93 0.92		0.5 0.5 0.5 0.5 2.0	14 13 6 13 14	12 23 15 17 29	71 42 86 47 35	3.06 3.01 1.31 3.01 3.10	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.11 0.10 0.06 0.10 0.10	10 10 90 10 < 10	0.36 0.52 0.28 0.43 0.63	2430 1725 1925 2160 4610
201	202	< 5	c	0.2	2.14	10	170	< 0.5	< 2	0.52	<	0.5	14	65	41	3.36	< 10	< 1	0.13	< 10	1.33	510

CERTIFICATION Stant Buchler



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# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163



GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

per :2-B es :2 Page Total Pages Certificate Date: 19-SEP-96 Invoice No. : 19631661 Invoice No. : P.O. Number : Account :KIV

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Project : Comments: ATTN:DAVID KENNEDY

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SAMPLE	PREP CODE	Mo ppm	Na 2	Ni ppm	P ppa	Pb ppm	Sb ppm	Sc ppm	Sr pp <b>n</b>	Ti %	Tl ppm	U D	V ppm	W ppm	Zn ppm	
PS 40 PS 41 PS 42A PS 42B PS 43	201 202 201 202 201 202 201 202 201 202 201 202	2	< 0.01 0.01 0.03 < 0.01 0.01	28 32 22 27 97	990 560 1040 840 1110	16 16 8 14 12	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	5 5 5 5 5	37 32 134 36 61	0.02 0.03 0.03 0.02 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	47 53 18 46 46	< 10 < 10 < 10 < 10 < 10 < 10	126 136 82 126 136	
8 44	201 202	1	0.01	80	650	10	< 2	6	28	0.04	< 10	< 10	65	< 10	98	
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# Chemex Labs Ltd.

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To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALÉ RD. UNIONVILLE, ON L3R 438 **\_**\*

212 Brocksbenk Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

Project : Comments: ATTN:DAVID KENNEDY

										CE	RTIF	CATE	OF A	NAL	ISIS	1	19631	624		
Shiplik	PREP	in get Budi	jų pat	11 1	da 954	Be JSm	bber Bo	ei 904	Ca t	Cð 5 <b>96</b>	Co 974	Cr ppn	Ca ppa	Fo X	Ca pypa	Bg P <b>7</b>	X X	La. 998	11 2	ito yper
IV 41 75 101 75 102 75 103 75 104	241 25 241 20 241 20 241 20 241 20 241 20	2 < 5 2 < 5 2 < 5	0.6 0.2 0.2	2.93 2.16 1.62 1.61 1.47	10 12 16 13 16	100 270 140 140 220	< 0.5 0.5 0.5 < 0.5 0.5	< 1 < 2 < 2 < 2 < 3	0.19 0.62 0.18 0.22 0.39	0.5 1.5 0.5 0.5 0.5	52 10 18 19 21	24 29 34 31 32	38 40 44 40 31	4.92 2.72 3.61 3.77 3.54	10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.06 0.09 0.08 0.07 0.07	< 10 < 10 < 10 < 10 < 20	0.81 0.39 0.57 0.51 0.51	1230 3240 1360 3980 1980
FR 105 FS 106 F 500 F 501 F 502	241 20 241 20 241 20 241 20 241 20 241 20		< 0.2 4.4 0,6	1.48 2.40 2.08 2.85 2.82	20 12 18 20 20	150 220 100 100 120	0.5 < 0.5 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	1.13 0.06 0.07	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	20 14 16 10 11	42 43 37 44 39	49 59 48 44 45	4.12 3.75 4.42 5.30 4.81	< 10 < 10 < 10 < 10 < 10	<1 <1 <1 <1 <1 <1	8.09 8.10 8.08 0.07 9.06	< 10 < 10 < 10 < 10 < 10 < 10	0.68 1.45 0.49 0.40 0.45	1250 725 958 690 720
7 503 7 504 7 505 7 506	241 20 241 20 241 20 241 20	12. < 1 13. < 1	0.4 0.6	1.90 2.35 7.63 2.34	24 24 23 16	170 169 80 120	0.5 < 0.5	< 2 < 2 < 2 < 2	0.10	C.5 < 0.5 ∢ 0.5 ∢ 0.5	12 18 19 13	31 37 19 37	52 62 58 41	4.51 4.62 4.79 4.34	< 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1	8.07 6.07 9.66 6.07	< 10 < 10 < 10 < 10	0.31 0.57 0.50 0.51	1515 1710 1415 1055

CERTIFICATION:\_



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212 Bicolabank Are., North Vancauver Billinh Columbia, Canada V7.J 2C1 PHONE: 604-684-0221 FAX: 604-984-0218



### in: 19-SEP-96 Invoice No. :19031624 P.O. Humber : Account :KIY

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Project : Comments: ATTN:DAVID KENNEDY

### **CERTIFICATE OF ANALYSIS** A9631624 THE 11 No 2 Pb 1 Se 렆 **T**I T Ŧ X 24 SALE I CODE ¥ 20m 20 M \$ Different ))**7**2 100 078 ) (m 295 ppa. **ppe PP ppm** 101 A1 243 202 4 < 2.01 . 1150 10 2 15 4.11 < 10 < 2 < 10 156 < 19 104 241 202 1 < 0.01 1500 103 87 6 < 2 Э 0.01 < 10 < 10 47 < 10 150 78 103 78 103 78 104 241 202 3 < 0.01 57 770 8 < 3 6 19 0.91 < 10 < 10 57 < 10 142 241 202 1 < 0.01 -51 770 < 2 S 23 0.61 < 10 < 10 54 < 10 126 241 202 1 < 0.01 74 1060 5 45 6 < 2 9.01 < 10 < 10 48 < 10 180 28 105 241 202 3 < 0.01 820 7 38 < 0.01 93 . < 2 < 10 < 10 51 < 10 154 **Fa** 106 241 202 1 0.01 49 650 6 < 2 9 38 0.13 < 10 < 10 100 < 10 94 7 500 241 202 1 < 0.01 59 640 10 6 < 2 13 < 0.01 57 4 10 < 10 < 10 138 501 241 202 2 < 0.01 48 870 12 < 2 5 13 0.01 < 10 < 10 63 < 10 152 F 502 241 242 1 < 0.01 53 780 8 < 2 17 5 0.01 < 10 < 10 64 < 10 152 r 503 241 202 2 < 0.01 1700 12 39 < 2 5 17 0.03 < 10 < 10 72 < 10 200 504 241 302 1 < 0.01 65 730 12 < 2 6 11 0.02 < 10 < 10 58 178 < 10 505 241 202 2 < 0.01 65 1000 12 12 0.01 58 < 3 6 < 10 < 10 < 10 182 506 241 202 1 < 0.01 51 760 10 < 2 6 14 0.93 65 < 10 < 10 < 10 150

CERTIFICATION & A Jitol /

APPENDIX 4

							<b>I</b>				
	B. GEOLOG	BY SURVEY	S:		ROCK SAL	MPLES:					
	LOCATION					MANES.		00 8175-	: ALT.:	STRUCT	COMMENTS
CLAIM:	CL. LINE:		DIR.:	DIST (M):	NUMBER:	NAME:	COLODA	GR. SIZE.		318001	COMMENTS
F30/33	Soil Line Ew		W FROM F49	190	FR1	M VOL OC	GRY BLK BLEACHED SURF	FI	AND LIM ON FRAC VUGGY CAL MOD SILIC		
F30/33	Soil Line Ew		W FROM F49	500	F <b>R2</b>	M VOL OC	GRN GREY BLEACHED ON SURF		AND: TR HEM, WK SILIC		
F30/33	Soil Line Ew		W FROM F49	1000	FR3	M VOL SH OC	BLU-GRY	FI		RED M, HEM, MANG S DISS PY	UP TO 2-3% S'DISS SULF
FOX 31/33		LCP PT AT RD	W FR 2E PT	1000 E		SILTSONE OC	DK GRY GRN	FI	SILTST: LAM, WK LIM, WK SILIC, CARB; TOUR, MN STA 3-4% PY ON FRAC SUR	24/VERT	
FOX 31/33		LCP PT AT RD	W FR 2E PT	7 <b>8</b> 5 E	FR5	SEDIMENT OC	'GRY GRN BLK	Fl	SILTSONE: WK CARB, WEAT BLEACH SURF, TOUR, THIN L LIM ON LAM, 1% PY		
FOX 31/33		LCP PT AT RD	W FR 2E PT	750 E	FR6	SILSTONE FLOAT	DK GRN GRY	FI	SILTSONE: 3 % PY THIN CO LAM, LIM ON LAM		
FOX 31/33	EW	LCP PT AT RD	W FR 2E PT	605 E	FR7	M VOL FLOAT COMPOSIT	GRN GRY	FI-CO	AND: WK TO STR CARB/QTZ/ ANK STWK; WK STR LIM, DIS PY IN STWK; WK TO MOD SIL	SHEARED	FLOAT OVER 75 M ASSOC WITH HILL
FOX 31/33		LCP PT AT RD	W FR 2E PT	<b>59</b> 0 E	F <b>R8</b>	AS FR7 comp		FI-FRAGS	40% QTZ, 40%BAR MATRIX, BRECC FRAGS		
FOX 31/33		LCP PT AT RD	W FR 2E PT		FR9 EOC	AS FR7 LESS STW	gry-grn Twh	Fì	QTZ CARB STWK WITH VUG 1-2% py in rock and stwk	GY P'topen fr fillir	99
F0X33/34	NORTH	LC <b>P33/34</b>	E	2000	FR10	Diorite? OC	GRY GRN	Fl-CO	M VOL? MIN LI SOME PORPHS WK SI SUGAR TEXTURE		
FOX33/34	NORTH	LCP33/34	E	1250	FR11	QTZ TOUR FLOAT	WH BL	FI	QT VEIN MAT CAW GRAN BLK TOUR STR AND STWK STRONG CARB	NO APPAF	RENT SULF
FOX33/34	NORTH	LCP33/34	E	1200	FR12	SILTSONE FLOAT	DK GRN GRY	F)	SILTST: MOD LAM, WK LIM, N 1% DISS PY	IANG STAIN	
FOX33/34	NORTH	LCP33/34	E	1000	FR13	M VOL OC	DK GRN GRY	VFI	AND: SHEARED, WK LIM, AND WK CARB, SHEARED 1% FINELY DISSPY	HEM ON FR	
F0X33/34	NORTH	LCP33/34	E	500	FR14	M VOL FLQAT	GRY BLK GRN		AND: SHEARED, WK LIM, MANG STAIN; TR PY		
FOX33/34	NORTH	LCP33/34	E	360	FR15 FLT				VEIN MAT TR TOUR; NO CA	RB, NO SULFIDI	E

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	B. GEOLO	gy survey	'S:		ROCK SAI	APLES:						
CLAIM:	LOCATION CL. LINE:	I: CL. POST:	DIR.:	DIST (M):	NUMBER:	NAME:	COLOUR :	GR. SIZE:	COMP	-: ALT.:	STRUCT	COMMENTS
	NEW EW L	. LCP							SOME SPOT CARB; S	SOME EUH P	r	RESEM SKOWALL ZONE
F30/33	NEW NEW EW L	2200E . LCP	W TO RD	2143	FR16	SILTSONE	DK GRN GRY FR; WEATH - C		SILTST	WK LIM, W MAN STAIN TR PY	TELL LAM NON LAMS	
F30/33	NEW NEW EW L	2200E . LCP	W TO RD	2143	FR17	SILTSONE			SILST	LIM, TR P	WELL LAM	
F30/33	NEW NEW EW L	2200E . LCP	W TO RD	2050	FR18	SILTSONE	DK BLU GF FR; WEAT		SILTSTO	NE LIM ON FI 1% DISS		AFRAGS IN SOIL SAMPLE
F30/31	NEW N LIN	NLCP 3100	N	3050	FR19	SILTSTON	EGRY GRN FR; WEAT	FI H - OXIDIZE		OR WK LA	M	ARB, LIM, HEM DISSEM PY
NW DELT	'AIC CK, 100	M LONG OC	;		FR20	SILTSTON	EBLU-GRY 7	FI	SILTSONE7 BLK MATRIX CAV OX INCL	HEM, LIM C	M FRACS	) IN VAR OF DIR
NW DELT	AIC CK, 100	M LONG OC	;		FR21	SILTST <i>I</i> GR WACKE	(BLU-GRY	FI-CO	GRYWACKE (SST) INC IN SILTST?	LIM ON FR		
NW DELT	AIC CK, 100 RD	M LONG OC	;		FR22	SILSTONE	BLU-GRY	FI TO V FI	SILTSTONE CAN FI C	ARB STWK		
400 M S ( SKOWAL	OF RD TO CL L CK	CUT S OF			FR23	SILTSTON	E? BLK	FI	THIN BEDDED ON SH		CL288/48 ALSO 005	MON BOTH SIDES OF HWY
1200 M S	GLACIER C	ĸ			FR24	SILTSTON	edk gry-bi	L FI TO VFI	FILAM		INTENSE AT ALL AN	SHEAR 20N AND ALSO
4.3 KM S		RCK			FR25	SILTSTONI ARG	EBLK	FI	INTERBEDDED SILTS	STONE/ARG		
5.2 KM S	S OF GLACIE	RCK			FR26	SST	MED GRY	FI-CO	MASS SST BUT OCC SUGARY TEXT, CARE			
5.4 KM S	OF GLACIEF	RCK			FR27	SST	MED GRY	со	MASS SST WITH THII INTERBEDS 090/60N		FR, LIM ON	SOME FR
F32/39	NS- W39 E32	LCP39, 40	S TO RD	200	FR28	SILTSTON	EBLK	Fí				
	EW	4S PT	GOING W	TO	FR29	SST OR CO	C					

بالمعاصية متراجا

EW	4S PT	GOING W TO	FR29	SST OR	-			
		RD AND PT	850	VOL	GRY BLK	FI-CO	HEM INCL, SER 7, ARG FRAGS IN	FROM LARGE TALUS SLOPE
		EO	F POST				VOL OR SST	INTERP TO BE NEAR VOL CT

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ROCK SAMPLES:

CLAIM:	LOCATION CL. LINE:	l: CL. POST:	DIR.;	D1ST (M):	NUMBER:	NAME:	COLOUR :	GR. SIZE:	COMP:	ALT.:	STRUCT	COMMENTS
F39	EW	4S PT	GOING WITO	0 90 E OF POS		ARG	BLK	FI	OXID, SHEARED, ANG IN SOIL HOLE	FRAGS	_	FI GR BLK VOL BEDROCK NEAR VOL CONTACT
F39	EW	4S PT	GOING W TO RD AND PT		FR31	SST OR VO CAV BLK FRAGS SE		FI-CO	CO VOL OR CO SST, H AND FRAGS BLK SED-		IFLOAT	
F37/38	W:N-S	LCP AND WIT 38			) FR32	SILTSTON	BLK	FI-CO		LIM	SH/ FINEL)	AT LARGE TALUS SLOPE
F37/38	W <del>N</del> S	LCP AND WIT 38	s to SW Cor Pt	15	) FR33	SILTSTON	EBLK	FI		LIM		
F37/38	W:N-S	LCP AND Wit 38	s to sw Cor Pt	60	) F <b>R33A</b>	SILTSTON	BLK	Fl	THIN LAM SILTSONE	LIM WK CARB	040185N	
F37/38	₩: <del>N</del> -S	LCP AND WIT 38	s to SW Cor Pt	210	) FR34		BLK BLEACHED ION WEATH		SILTS AND INTERBED ALSO FRAGS SST IN S	- •		
F37/38	W:N-S	LCP AND WIT 38	s to sw cor pt	223	) FR35	SILTSONE	BLK	Fł	SILTS, 1 % DISSEM PY THIN LAM	LIM	POS SHEA 015/70W	RED NOTE VARYING INTENSITIES OF SHEARING AND OXIDATION; NOTE ALSO
F37	S:E-W	SW CORN F37	GOING W TO CORN	485	EFR35A	SST	FR:DK BLU W:PALE W		MASSISVE SST	MANG ST HEM ON FR	Ł	CROSS CUTTING SHEARS AS OBSERVED IN OTHER OUTCROPS
F37	150 M W OF SW COR F37		ON RD W O F37	150	MFR36	SST/SILT STONE	GRY-BLK	FI-MED	SILTSONE CAW FI BAN SST AND SILTSTONE WITH FRAGS SST			NOTE SST/SILST SIMILAR RELATIONSHIP ELSEWHERE
F34	N-S	2NF34	S TO RD	I	) FR37	SED FLOAT	FR BLK WEA GRY	FI BRN	SILTSTONE, LIM SURF THIN LAM AND MASS			IN SOIL HOLE, F266
F34	N-S	2NF34	S TO RD	12	5 FR38	AS FR37 IN SOIL HO	DLE F267					
F34	N-S	2NF34	S TO RD		FR39	SED FLOAT	FR BLK WEA GRY	FI BRN	SILTSTONE, LIM SURF THIN LAM AND MASS	POSS VEIN	l	
F34	N-S	2NF34	S TO RD		F <b>R40</b>	SED	BRN-BLK	FI	LIM SILSTONE WITH SOME FI LAM	SPHAL	-	
F34	N-S	2NF34	S TO RD	178	) FR41	SSTOC	BRN-BLK BLEACHED		SST LIM ON LAM, MN STAIN	I		FS

	B. GEOLO	igy survey	'S:		ROCK SAL	MPLES:						
CLAIM:	LOCATIO CL. LINE:	N: CL. POST:	DIR.:	dist (M):	NUMBER:	NAME:	COLOUR :	GR. SIZE:	COMP	: ALT.:	STRUCT	COMMENTS
F34	N-S	2NF34	S TO RD		FR42	SST OC	ON WEATH BRN-BLK		SHEARED SST			DIR?
F36	N-S	2NF36	STOLCP	0	FR43	FEL PYRO CK FLT	ORG/BRN	FIFRAGS	CO FRAGS TO 1 CM, ANG, SUBROUNDED I DK MATRIX			
F36	NS	2NF36	S TO LCP	20	FR44	M VOL AND FLT	DK GRY	FI		CARB ON F AND INTER LIM ON WE	ST	
F36	N-S	2NF36	STOLCP	100	FR45	RHY FLT	BRN ON W CREAM GF ON FRH	RN		LIM, MIN ON FRACS	FRAC	FI GR CUB PY AT F285 LOC
F36	NS	2NF36	S TO LCP	230	FR46	RHY FRAG FLT	BRN ON W CR BRN O	EAT	FRAGS ANG, TO 0.5 C	:LIM		AT FS1 LOC
F36	N-S	2NF36	STOLCP	390	FR47	WELL SIL VOL	DK BLU GF FR, RUSTY BRN ON WEATH		SIL, CARB, LIM	WK CARB, LIM		CON FRAC AT FS42 LOC
F36	N-S	2NF36	S TO LCP	397	FR48	VOL FLT AND	WEATH FR- DK BLI W-ORG/BF		AND	LIM, MIN HEM ON SH SURF, WK ( MOD SIL		URF UN TREE AT F288 LOC
F36	NS	2NF36	STOLCP	750	F <b>R49</b>	QPF FLT	FR-BLU/GF W-RUSTY	RFI	SIL MATRIX WITH PHI OF ANG, WH QTX	ENOS TO 1 M WK LIM	M,	AT F292 LOC
F36	NS	2NF36	STOLCP	875	FR50	PYRO FLT	FR-GRNW W-RUSTY	FI-MED	FRAGS WH QTZ TO 2 SIL, LIM, HEM, MN	(WELL SIL F WKLY LIM, I MN STAIN		
DCSIDE	RD N END		25M		FR101	SILTSTON	E					
DCSIDE	RD N END		210M		FR102	BLK FIBRC	US MINE - (	SOOTY GOO	THITE??			
DCSIDE	RD N END		AS FS104 AT MAIN CR	ĸ	FR103	SED - FI Ff	R AND CO F	R				
DCSIDE	rd n End		1425 FR F5	06	FR104		R AND CO F MED GR GR		/ITH FI, DK GRY INC			
DCSIDER	RD N END		1525 FR FR	104	FR105	CS LIGHT :	SED, BLOCI	Ŷ				

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	B. GEOLOGY SURVEY	'S:		ROCK SAN	IPLES:				
CLAIM:	LOCATION: CL. LINE: CL. POST:	DIR.:	DIST (M):	NUMBER:	NAME:	COLOUR : GR. SIZE:COMP: ALT.:	STRUCT	COMMENTS	
DCSIDERD	) N END	2 <b>8</b> 50 M		FR106		GRITTY REY SED- GREYWACKE? D GRAINS; LIM ON SURF			

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APPENDIX 5



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**Chemex Labs Ltd.** Analytical Chemists \* Geochemists \* Registered Assayers



To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Page Jer :1-A Total Pages :2 Certificate Date: 19-SEP-96 Invoice No. : 19631660 P.O. Number : Account :KIV

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5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163

Project :

Comments: ATTN:DAVID KENNEDY

										CE	RTIF	CATE	OF A	NAL	YSIS	1	<b>\9631</b>	660		
SAMPLE	PREP CODE	ли ppb Гл+лл	) Ag	A1 %	λs ppm	Ba ppm	Be ppn	Bi ppm	Ca %	Cđ ppn	Со ррш	Cr ppn	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
FR 01 FR 02	205 226 205 226 205 226		< 0.2	2.05	10 6	140 330 210	< 0.5 < 0.5 < 0.5	< 2 < 2 < 2	1.72 1.12 0.15	< 0.5 < 0.5 < 0.5	13 10 10	123 165 106	28 24 33	3.40 2.49 3.38	< 10 < 10 < 10	< 1 < 1 < 1	0.16 0.16 0.16	< 10 < 10 < 10	1.20 1.44 1.02	1845 365 720
FR 03 FR 04 FR 05	205 226 205 226 205 226		< 0.2 < 0.2 < 0.2	1.87 1.87 1.56	12 20 26	180 160	< 0.5 < 0.5	< 2 < 2	0.03	< 0.5 < 0.5	15 5	31 36	59 40	4.20 3.91	< 10 < 10 < 10	< 1 < 1	0.21	< 10 10	0.55	17B0 470
FR 06 FR 07 FR 08	205 226 205 226 205 226	< 5 < 5 < 5	0.2 < 0.2 < 0.2	1.25 0.34 0.52	16 6 2	140 110 100	< 0.5 < 0.5 < 0.5	< 2 < 2 < 2	0.04	< 0.5 < 0.5 < 0.5	20 12 7	28 78 139	76 16 10	3.60 2.98 1.92	< 10 < 10 < 10	< 1 < 1 < 1	0.13 0.07 0.06	10 < 10 < 10	0.35 0.07 0.22	955 745 1220
FR 09 FR 10	205 226 205 226	< 5	0.2	0.50 2.35	16 12	100 40	< 0.5 < 0.5	< 2 < 2	0.10	< 0.5 < 0.5	10 10	86 24	31 13	2.00	< 10 10	< 1 < 1	0.09	< 10 10	0.13	660 735
FR 11 FR 12 FR 13 FR 14 FR 15	205 226 205 226 205 226 205 226 205 226 205 226	<pre>&lt; 5 &lt; 5 &lt; 5 &lt; 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.58 1.51 1.88 1.68 0.14	2 8 12 12 < 2	140 440 200 330 40	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	1.35 0.03 0.27 0.23 0.01	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	4 14 17 14 2	185 39 39 88 197	13 49 42 26 16	1.07 3.46 3.40 3.41 0.96	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.06 0.17 0.20 0.13 0.02	< 10 < 10 < 10 < 10 < 10 < 10	0.28 0.64 0.90 0.81 0.02	1725 985 1135 905 600
FR 15 <b>A</b> FR 16 FR 17 FR 18 FR 19	205 226 205 226 205 226 205 226 205 226 205 226	< 5 < 5	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 0.2	0.34 1.46 1.64 1.75 1.71	6 14 12 20 8	30 290 180 280 210	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.47 0.17 0.14 0.21 >15.00	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	1 12 8 18 19	100 32 38 26 7	6 48 48 49 30	0.73 3.52 3.49 3.82 3.28	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	<pre>     0.01     0.22     0.21     0.15     0.01 </pre>	10 < 10 < 10 < 10 30	0.13 0.58 0.72 0.88 0.95	255 960 980 1235 >10000
PR 21 PR 22 PR 23 PR 24 PR 24 PR 25	205 226 205 226 205 226 205 226 205 226 205 226	<pre>&lt; 5 &lt; 5</pre>	< 0.2 < 0.2 0.4 0.2 0.2	1.10 2.51 2.47 1.97 1.55	8 10 22 16 18	130 290 150 170 140	< 0.5 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	2.31 0.34 1.28 1.42 6.79	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	15 15 26 22 9	72 103 53 61 34	27 46 83 83 38	3.24 3.55 4.64 3.62 4.11	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.21 0.20 0.23 0.20 0.13	< 10 < 10 < 10 < 10 < 10 < 10	1.42 1.69 1.48 1.27 2.30	885 770 1775 1190 4790
FR 26 FR 27 FR 28 FR 29 FR 30	205 226 205 226 205 226 205 226 205 226 205 226	<pre>&lt; 5 &lt; 5</pre>	< 0.2 < 0.2 0.2 < 0.2 < 0.2 0.2	0.66 1.97 1.64 1.90 2.17	2 6 26 8 12	110 160 540 190 140	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.63 1.50 0.61 0.95 0.07	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	13 15 10 13 8	87 115 55 124 107	24 23 46 25 44	3.35 3.50 4.13 2.68 4.08	< 10 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.10 0.09 0.31 0.20 0.14	< 10 < 10 < 10 < 10 < 10 < 10	0.91 2.10 0.35 1.35 1.27	455 925 445 390 115
FR 31 FR 32 FR 33 FR 33 FR 33 FR 34	205 226 205 226 205 226 205 226 205 226 205 226		< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.30 1.27 1.72 0.58 1.78	8 10 14 34 6	250 160 200 150 170	0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.31 0.04 0.20 0.03 0.30	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	18 3 6 9 5	167 37 29 29 98	36 16 24 21 25	4.04 2.82 3.51 3.57 2.72	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.13 0.16 0.14 0.15 0.15	< 10 < 10 < 10 < 10 < 10 < 10	1.52 0.48 0.76 0.09 1.08	215 570 825 225 515
FR 35 FR 35A FR 36 FR 37 FR 38	205 226 205 226 205 226 205 226 205 226 205 226	<pre>&lt; 5 &lt; 5</pre>	0.2 < 0.2 0.6 < 0.2 < 0.2 < 0.2	2.31 1.83 2.15 1.84 1.72	28 8 22 18 12	190 150 130 230 160	< 0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.39 0.44 0.45 0.07 0.31	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	10 13 20 21 7	61 103 56 38 51	33 22 54 28 30	4.32 3.22 4.09 3.50 3.19	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.13 0.09 0.16 0.16 0.16	< 10 < 10 < 10 < 10 < 10 10	1.40 1.14 1.20 0.74 0.87	595 1520 1685 2300 1020
L				·														<u> </u>	<u></u>	

CERTIFICATION: 1Stant Buchler



## **Chemex Labs Ltd.** Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163



To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8



Project : Comments: ATTN:DAVID KENNEDY

### A9631660 **CERTIFICATE OF ANALYSIS**

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· · · · ·	CODE		ppm	*	ppa	P PPm	Pb Ppm	Sb ppm	Sc ppm	Sr Ti ppm %	T1 PPE	U ppm	V ppma	N DDm	Zn ppm		
01	205 22		3	0.03	87	500	8	< 2	5	82 0.01	< 10	< 10	53	< 10	80		
	205 22		1	0.02	97	360	4	< 2	6 5	86 < 0.01 18 < 0.01	< 10 < 10	< 10 < 10	46 59	< 10 < 10	86 74		
	205 22 205 22		3	0.02	65 39	420 440	12	< 2 < 2	5	8 < 0.01	< 10	< 10	53 67	< 10	108		
R 05	205 22		3	0.02	13	470	16	2	4	9 < 0.01	< 10	< 10	51	< 10	74		
	205 22		3	0.03	34	510	12	< 2	8	10 < 0.01	< 10	< 10	71	< 10	142		
	205 22		1	0.02	73	440	4	< 2	4	14 < 0.01	< 10	< 10	31 18	< 10 < 10	128 62		
	205 22 205 22		1	0.01 0.03	42 57	350 590	28	< 2 < 2	23	37 < 0.01 8 < 0.01	< 10 < 10	< 10 < 10	23	< 10	84		
R 09 R 10	205 22		2	0.04	4	1540	10	< 2	8	11 0.19	< 10	< 10	151	< 10	114		
											< 10			< 10	70	······································	
R 11	205 22 205 22		< 1	0.01	16 44	180 280	< 2 10	< 2 < 2	1 6	111 < 0.01 12 < 0.01	< 10	< 10 < 10	10 58	< 10	162		
R 12 R 13	205 22		1	0.01	52	270	10	< 2	6	9 0.17	< 10	< 10	42	< 10	86		
R 14	205 22		2	0.03	80	940	10	< 2	5	13 < 0.01	< 10	< 10	50	< 10	82		
	205 22		< 1 <	0.01	16	170	< 2	< 2	< 1	1 < 0.01	< 10	< 10	6	< 10	26		
R 15A	205 22	6	1	0.08	3	190	2	< 2	1	8 0.08	< 10	< 10	19	< 10	36		
	205 22		1	0.01	34	300	14	< 2	6	13 0.22	< 10	< 10	49	< 10	72		
	205 22		1	0.01	30	260	12	< 2	6 6	10 0.19 14 0.19	< 10 < 10	< 10 < 10	47 47	< 10 < 10	60 106		
R 18 R 19	205 22 205 22		1 < 1 <	0.01	48 41	310 1670	16 < 2	< 2 2	8	526 < 0.01	< 10	< 10	61	< 10	76		
R 21	205 22	6	3	0.03	72	680	4	< 2	5	115 < 0.01	< 10	< 10	42	< 10	84	······································	
R 22	205 22		Ĩ	0.01	108	400	6	< 2	6	17 0.10	< 10	< 10	59	< 10	96		
	205 22		5	0.02	97	760	B	< 2	8	90 < 0.01	< 10	< 10	86	< 10	232		
R 24	205 22		4	0.03	80	450	8	< 2 < 2	77	93 < 0.01 428 < 0.01	< 10 < 10	< 10 < 10	67 85	< 10 < 10	230 80		
R 25	205 22	•	1	0.01	32	1450	2										
R 26	205 22		1	0.04	96	500	< 2	< 2	6	28 < 0.01	< 10	< 10	53	< 10	74		
R 27	205 22		1	0.04	84 38	520 3670	2	< 2 < 2	7 8	36 < 0.01 89 < 0.01	< 10 < 10	< 10 < 10	79 104	< 10 < 10	76 120		
	205 22		2	0.03 0.03	38 118	700	12 8	< 2	6	77 < 0.01	< 10	< 10	50	< 10	100		
	205 22		2	0.01	90	550	10	< 2	5	17 < 0.01	< 10	< 10	65	< 10	64		
R 31	205 22	6	4	0.02	194	610	6	< 2	6	39 < 0.01	< 10	< 10	59	< 10	132	<u></u>	
R 32	205 22		< 1	0.03	22	380	10	< 2	3	5 < 0.01	< 10	< 10	33	< 10	50		
	205 22		1	0.01	32	700	12	< 2	5 3	10 0.11 9 < 0.01	< 10 < 10	< 10 < 10	47 38	< 10 < 10	72 86		
R 33A R 34	205 22 205 22		1 2 <	0.01 0.01	19 72	310 570	16 4	< 2 < 2	4	10 0.18	< 10	< 10	45	< 10	60		
R 35	205 22	6	3	0.01	63	1130	10	< 2	5	22 0.15	< 10	< 10		< 10	78	<u> </u>	
R 35A	205 22	6	3	0.02	107	410	6	< 2	4	22 0.06	< 10	< 10	43	< 10	120		
R 36	205 22		2	0.01	67	530	10	< 2	5	34 < 0.01	< 10	< 10	61	< 10	142		
	205 22		23	0.02 0.01	62 50	450 1760	14 10	< 2 < 2	4	7 < 0.01 25 0.01	< 10 < 10	< 10 < 10	48 52	< 10 < 10	74 76		

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SAMPLE

FR 39

FR 40

FR 41

FR 42

FR 43

FR 44

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FR 48

FR 49

FR 50

# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd., Ontario, Canada

Mississauga 14W 253 PHONE: 905-624-2806 FAX: 905-624-6163 To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

ber :2-A Page Total Paties :2 Certificate Date: 19-SEP-96 Invoice No. :19631660 P.O. Number KIV Account

Project :

Comments: ATTN:DAVID KENNEDY

### A9631660 **CERTIFICATE OF ANALYSIS**

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Mg Mn Ċa Cđ Co  $\mathbf{Cr}$ Cu Pe. Ga Εg ĸ La λ1 λя Ba Be Bi PREP λg Au ppb \* ۶. \* ppm ррш CODE × ppm Χ. ррп ppm ppm ppm ppm ppm **F**λ+λλ **DDE** DDM ppm ppm 0.79 615 < 0.5 0.24 < 0.5 6 131 37 2.47 < 10 < 1 0.22 10 205 226 < 5 < 0.2 300 < 2 1.68 10 10 1.19 1015 0.33 < 0.5 11 68 31 3.98 < 10 < 1 0.19 205 226 < 5 < 0.2 2.34 14 290 < 0.5 < 2 29 2.95 < 10 0.19 < 10 0.85 365 1.78 0.10 < 0.5 10 161 < 1 205 226 < 5 < 0.2 10 220 < 0.5 < 2 0.20 < 10 0.55 900 17 143 31 2.44 < 10 < 1 270 < 0.5 < 2 0.11 < 0.5 205 226 < 5 < 0.2 1.36 2 0.04 440 0.81 0.19 10 103 6 < 10 < 1 150 < 0.5 < 2 0.24 < 0.5 1 205 226 < 5 < 0.2 0.43 16 1385 18 23 43 5.34 10 < 1 0.08 < 10 1.94 205 226 < 5 < 0.2 4.76 28 110 0.5 < 2 3.96 < 0.5 440 0.65 180 1.34 < 0.5 4 43 9 2.55 < 10 < 1 0.15 < 10 < 0.5 < 2 205 226 < 5 < 0.2 1.50 < 2 92 0.89 < 10 < 1 0.17 20 0.12 295 70 < 0.5 0.08 < 0.5 < 1 3 < 2 205 226 < 5 < 0.2 0.56 2 6 10 1.03 345 < 0.5 26 12 4.06 < 10 < 1 0.20 240 < 2 0.78 < 0.5 2.33 205 226 < 5 < 0.2 < 2 1.00 350 25 12 3.97 0.18 10 0.77 < 0.5 6 < 10 < 1 240 < 0.5 < 2 205 226 < 5 < 0.2 2.25 2 520 25 2.43 < 10 < 1 0.23 < 10 0.73 < 0.5 153 205 226 < 5 < 0.2 1.45 10 300 < 0.5 < 2 0.61 12 42 8 3.32 < 10 < 1 0.27 10 0.90 1245 1.48 0.5 8 205 226 < 5 < 0.2 2.01 42 140 0.5 < 2

CERTIFICATION: 1 such Buchler



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## Chemex Labs Ltd. Analytical Chemists \* Geochemists \* Registered Assayers

PHONE: 905-624-2806 FAX: 905-624-6163

Mississauga

L4W 2\$3

5175 Timberlea Blvd.,

Ontario, Canada



To: GEOFINE EXPLORATION CONSULTANTS LTD.

**CERTIFICATE OF ANALYSIS** 

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8



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A9631660

UNIONVILL L3R 4J8 Project :

Comments: ATTN:DAVID KENNEDY

### PREP Мо Ma Ni P ₽Ъ Sb Sc Sr Tİ Tl υ Y M Zπ SAMPLE CODE **PDR** x ppm \* ppm ppm **DDB DDE PP** ppm ppm ppa ppm ppa 205 226 0.04 62 1050 22 < 0.01 < 10 < 10 52 < 10 70 2 6 < 2 4 205 226 27 0.01 102 4 0.01 46 1980 B < 2 5 < 10 < 10 49 < 10 205 226 78 78 3 0.03 690 ß < 2 4 20 < 0.01< 10 < 10 52 < 10 205 226 105 16 < 0.01 136 1 0.03 590 ß < 2 5 < 10 < 10 43 < 10 205 226 1 0.03 6 140 2 < 2 1 10 < 0.01< 10 < 10 6 < 10 22 205 226 0.03 5 1110 < 2 9 45 0.23 < 10 < 10 143 < 10 106 1 10 205 226 1 0.04 3 120 8 < 2 5 39 < 0.01 < 10 < 10 13 < 10 48 205 226 < 2 38 < 1 0.03 1 120 8 5 < 0.01 < 10 < 10 6 < 10 < 1 205 226 < 10 84 < 1 0.02 3 400 8 < 2 6 24 0.02 < 10 < 10 16 205 226 < 1 0.02 3 390 6 < 2 6 24 0.02 < 10 < 10 16 < 10 82 < 10 205 226 2 86 < 2 5 48 < 0.01 < 10 37 160 0.03 560 8 < 10 205 226 5 1000 4 < 10 < 10 200 < 1 14 < 2 31 0.04 < 10 47 0.03

CERTIFICATION: 15 TENSICOLON



## **Chemex Labs Ltd.** Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163



Jo: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Page :1-A - API Total P :1 Certificate Date: 19-SEP-96 Invoice No. : 19631625 P.O. Number : Account :KIV

**\_**\*

Project : Comments: ATTN:DAVID KENNEDY

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SAMPLE	PREP CODE	Au ppb RUSH	λg ppa	۸1 م	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ ppm	Co ppm	Cr ppm	Cu ppma	Fe %	Ga ppm	Hg ppm	К <b>%</b>	La ppm	Ng X	Mn ppm
FR 101 FR 102 FR 103 FR 104 FR 105	255 226 255 226 255 226 255 226 255 226	25 5 < 5	0.4 0.2 0.2 0.2 < 0.2 < 0.2	2,98 1.69 2.38 3.00 2.82	22 12 12 10 6	200 130 140 120 110	0.5 < 0.5 < 0.5 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.03 0.63 1.28	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	12 14 16 23 17	67 93 212 117 145	54 34 33 41 21	4.57 3.94 3.71 4.02 4.12	< 10 < 10 < 10 10 10	< 1 < 1 < 1 < 1 < 1 < 1	0.26 0.20 0.14 0.08 0.10	< 10 < 10 < 10 < 10 < 10 < 10	1.39 0.42 1.87 2.40 2.52	380 535 915 705 405
FR 106 IR-1	255 226	< 5 < 5	< 0.2	2.48	622	180 100	< 0.5 < 0.5	< 2 < 2	0.63	< 0.5 < 0.5	15 16	133 45	21 52	3.39 4.94	10	< 1 < 1	0.08	< 10 < 10	2.42 1.82	330 980

CERTIFICATION: Marth Suchles



## Chemex Labs Ltd. Analytical Chemists \* Geochemists \* Registered Assayers

5175 Timberlea Blvd., Mississauga Ontario, Canada L4W 2S3 PHONE: 905-624-2806 FAX: 905-624-6163



fo: GEOFINE EXPLORATION CONSULTANTS LTD.

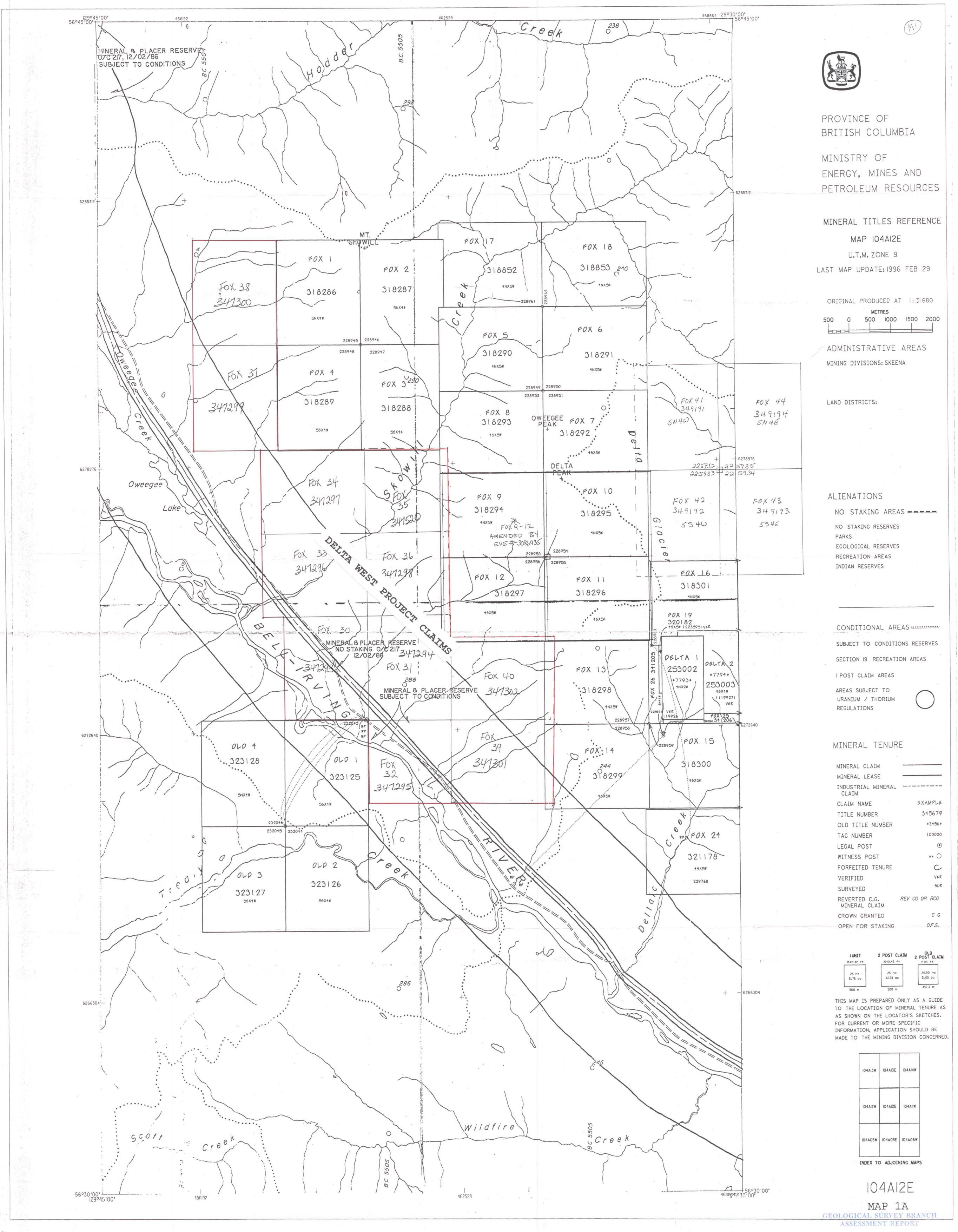
49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8



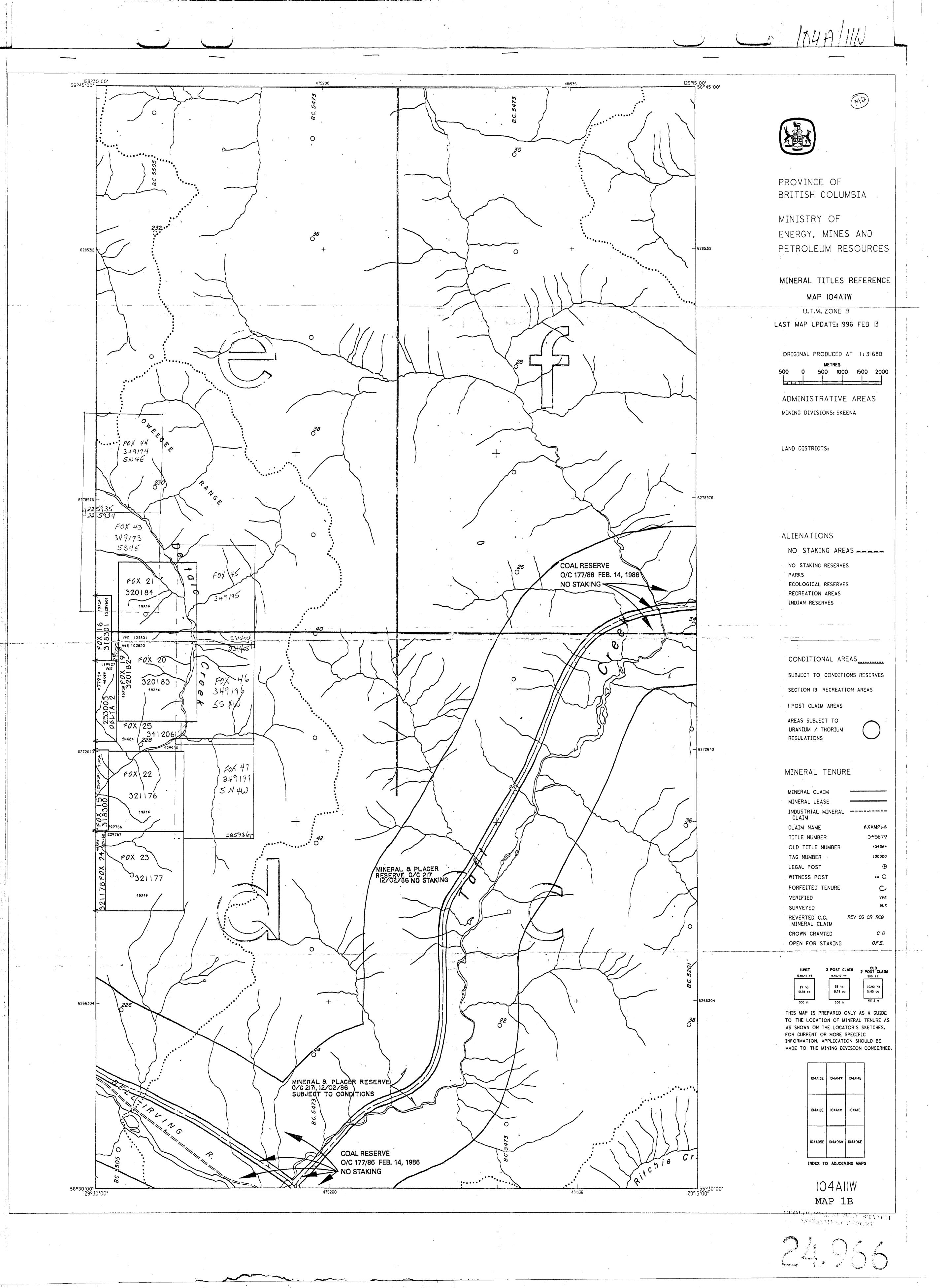
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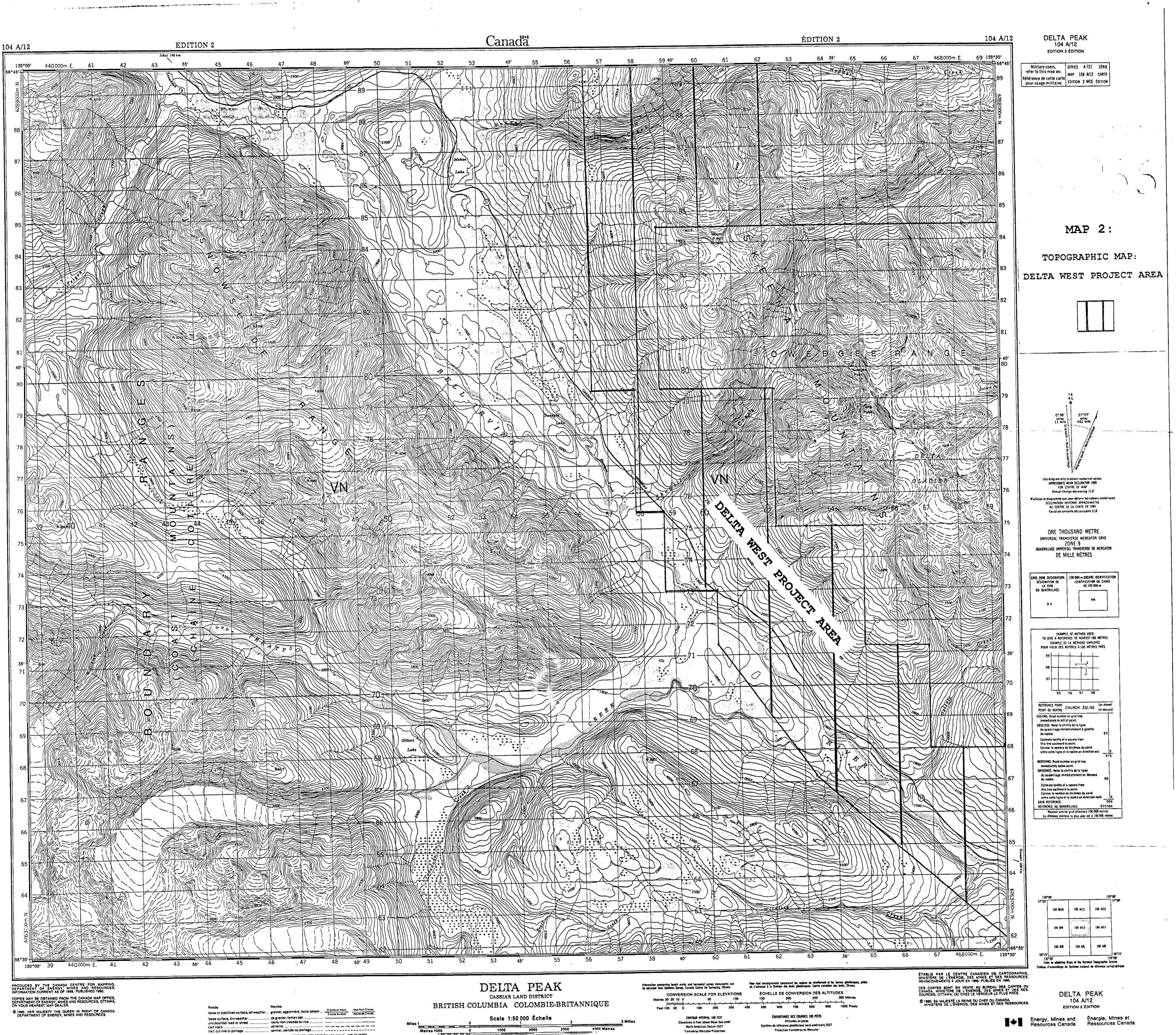
Project : Comments: ATTN:DAVID KENNEDY

											CE	RTIF	CATE	OF A	NALY	(SIS	A9631625	
SAMPLE		e P De	Мо ррш	Na ¥	Ni ppm	P PPm	Pb ppm	SD ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
FR 101 FR 102 FR 103 FR 104 FR 105	255 255 255	226 226 226 226 226 226	111	0.01 0.01 0.02	66 57 179 81 71	990 370 810 450 740	10 10 10 8 6	2 < 2 < 2 < 2 < 2 < 2	6 5 8 11 7	10 · 60 · 25	<pre>       0.01       0.01       0.01       0.24       0.01       0.24 </pre>	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	77 42 56 128 95	< 10 < 10 < 10 < 10 < 10 < 10	108 130 100 116 90		
FR 106 IR-1 ·	255	226	< 1	0.03	64 11	680 1020	6 6	< 2 < 2	10 9	21 35	0.22 0.29	< 10 < 10	< 10 < 10	88 153	< 10 < 10	76 96		









FOR COMPLETE AFFRENCE SEE REVERSE SIDE POUR LINE LISTE COMPLETE AT THE AU VERSO

Miles 1 0 Metres 1000 0

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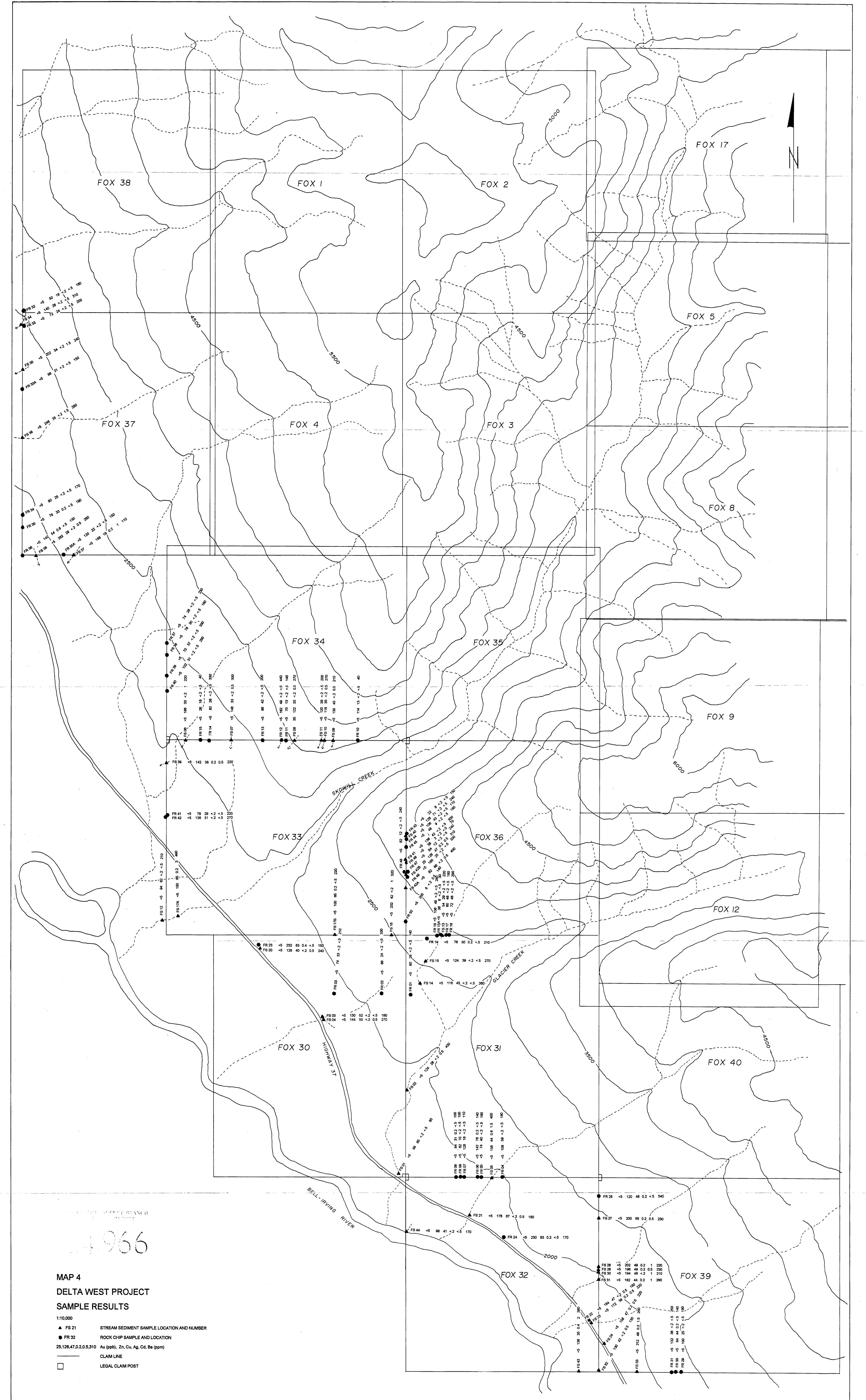
Elevalians in Feet above Mean Sea Level North American Datum 1927 Transverse Mercator Projection

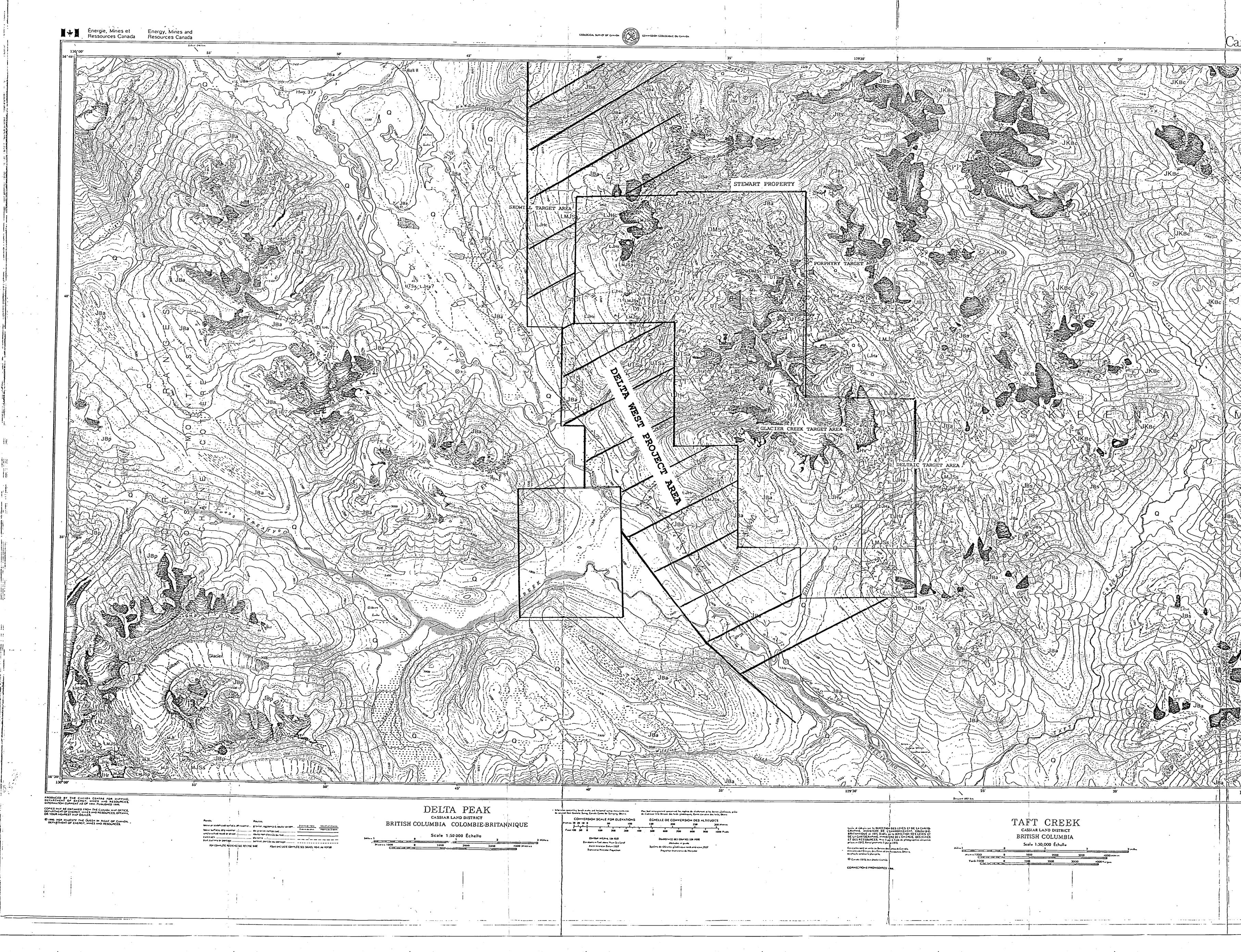
Attitudes en pieds Système de référence géodésique nord-américain,1927 Projection fransversa de Mercator

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(MS)
GEOLOGY OF OWEEGEE DOME
DELTA PEAK (104A/12) AND TAFT CREEK (104A/11W) MAP AREAS, NORTHWESTERN BRITISH COLUMBIA
C.J. GREIG and C.A. EVENCHICK
(with contributions by M.H.Gunning, B.D.Ricketts and S.P.Porter)
Scale 1:50,000
QUATERNARY
Q thick drift: colluvium, alluvium, till.
STRATIFIED ROCKS
MIDDLE(?) AND UPPER JURASSIC TO LOWER CRETACEOUS(?)
BOWSER LAKE GROUP JKBc chert litharenite lithofacies: fine to medium grained, moderately well sorted chert litharenite, interrhedded sith muddense common bively apprives rare about public excelorer at
interrbedded silty mudstone, common bivalve coquinas, rare chert pebble conglomerate.
BOWSER LAKE GROUP JBs silty mudstone lithofacies: bioturbated silty mudstone with regularly interbedded, buff
weathering, Fe-carbonate cemented fine grained sandstone.
JBa arkosic volcanic litharenite turbidite litholacies; thin and medium bedded, fine to medium grained, poorly sorted arkosic litharenite with interbedded silty mudstone.
JBp pyritic silty mudstone lithofacies; pyritic, siliceous, tuffaceous silty mudstone, fine to medium grained lithic arkose.
LOWER AND HIDDLE JURASSIC
HAZELTON GROUP SALMON RIVER FORMATION
LMJSs thin bedded siliceous silty mudstone, day-altered dust tuff(?), discontinuous limestone lenses.
LMJSb any adalaidal aillaw basalt basalt aillaw brania, tuit bransis and debris flow bransis
amygdaloidal pillow basalt, basalt pillow breccia, tuif-breccia and debris flow breccia.
LMJSr rhyodacite lapilli tuff-breccia; locally welded.
LMJS fossiliferous limy, coarse grained arkose; polymict peoble, boulder and cobole conglomerate.
LMJSp
pyrtic sity shale and mudstone.
LMJS undivided Spatsizi Group
LOWER JURASSIC HAZELTON GROUP
<b>LJHr</b> felsic lapilli tuff-breccia, ash and dust tuff. $D = \frac{1}{2} \frac$
LJHc boulder and cobble conglomerate, peooly sandstone; well-stratified, green and marcon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.
LJHv lapilli tuit-breccia, lapilli, ash and dust tuit, flows; derived debris flows, arkose and siltstone:
LJHa thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and
associated debris flows. UPPER TRIASSIC
STUHINI GROUP plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.
PALEOZOIC
STIKINE ASSEMBLAGE
PSI medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.
DEVONIAN AND MISSISSIPPIAN DMSv malic to intermediate plagiclase-pyroxene phyric tapilli tuff, tapilli tuff, breccia, and flows;
DMSv maile to intermediate plagiciase-pyroxene phyric rapilit tuit, rapilit tuit, oreccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and rhyodacite lapilli tuff-breccia.
INTRUSIVE ROCKS
MIDDLE JURASSIC OR YOUNGER
pyroxene diorite sills.
- MAP SYMBOLS Limit of thick Quaternary drift.
Geologic contact: defined, approximate, inferred.
Thrust or reverse fault, defined, approximate, inferred; teeth on upthrown side.
High angle fault, defined, approximate, inferred; ball on downthrown side.
stimated: vg=very gente(<10°), g=gente (10°-30°), m=moderate(30°-50°).
s=steep(50°-70°), vs=very steep(>70°).
Bedding formlines.
Cleavage: inclined, vertical.
Minor foid axis, plunge.
Anticline, overturned anticline, trace of axial surface: defined, approximate; errow indicates vergence direction.
Syncline, overturned syncline, trace of axial surface: defined, approximate; arrow indicates vergence direction.
MAP 3
GEOLOGY – GENERAL PROJECT AREA

