# BRITISH COLUMBIA PROSPECTORS ASSISTANCE PROGRAM MINISTRY OF ENERGY AND MINES GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR: 1998/99 , REPORT #: PAP 98-42 NAME: DAVID MOLLOY

## BRITISH COLUMBIA PROSPECTORS ASSISTANCE PROGRAM PROSPECTING REPORT FORM

Name: David E. Molloy

/ ~

No. 10

Days:	Project	Prospecting	Other	Total		
Project Area:	Completed?	Days	Days	Days		
Delta West Project Area	Yes, as field con- ditions allowed	30	8	38		

### **PROSPECTING ASSISTANTS:**

Janine Calder, B.Sc., geologist. David R. Kennedy, B.Sc., geologist

CLAIMS STAKE DURING/AFTER PROSPECTING ACTIVITY: None

Project Area: Claim Names: No. of Units

**OPTION AGREEMENTS:** None to date

## BRITISH COLUMBIA PROSPECTORS ASSISTANCE PROGRAM PROSPECTING REPORT FORM

#### **B. TECHNICAL REPORT:**

NAME: David E. Molloy

**PROJECT AREA:** Delta West Project Area

LOCATION OF PROJECT AREA: NTS: 104 A/12 Lat 56 deg, 36'; Long 129 deg, 38'

#### DESCRIPTION OF LOCATION AND ACCESS:

The Delta West Project is situated in the Delta Peak Area of the Skeena Mining Division about 80 km northeast of the town of Stewart, B.C.; and, about 70 km north of Meziadin Junction, B. C.

The Stewart-Cassiar Hwy trends generally northwest on the west side of the project area and provides excellent access. Much of the ground in the vicinity of the highway has been clear cut and a number of old lumber roads provide some additional, interior access.

MAIN COMMODITIES SEARCHED FOR: gold, copper

KNOWN MINERAL OCCURRENCES IN PROJECT AREA: none

#### WORK PERFORMED:

3. GEOCHEMICAL (type and no. of samples): 32 element ICP on 219 soil, 20 rock samples; gold analysis (FA-AA) on one rock sample and five soil samples.

7. OTHER (specify): The 1997 Delta West reconnaissance grid was restored in the large clear cut (L14N to L50N) to cover the Hwy, Central and East Zones. Fill-in L20N, 24N, and 28N and step out L31N and 32N were installed from the Stewart-Cassiar Hwy to the eastern limit of the clear cut.

Prospecting was carried out to examine areas of angular float and subcrop boulders and 32 representative samples of generally well altered rock were collected.

The 10 km horizontal loop EM survey was carried out on seven grid lines (L14N, L20N, L22N, L24N, L26N, L28N AND L30N) with a MAX-MIN I-10 Electromagnetic System.

#### SIGNIFICANT RESULTS:

COMMODITIES: Zinc, copper, cadmium, barium soil anomalies. CLAIM NAME: Fox 30-34

LOCATION (shown on Maps 5-9): area of interest centered at about Lat 56°, 37.5', Long 129°, 39.8'; Elevation: approx. 534 m.

**BEST ASSAYS/SAMPLE TYPE:** best assays constitute consecutive soil samples with anomalous zinc contents, and with copper haloes: e.g., east side, Central Zone, infill L31N - zinc values at 25 m spacing: 346, 456, 422, 544, 384 ppm; e.g., East Zone, infill L24N, zinc values at 25 m spacing: 436, 446, 456, 418, 422 ppm; and, e.g., Hwy Zone, infill L28N, zinc values at 25 m spacing: 340, 348, 558, 302, 344 ppm.

#### DESCRIPTION OF MINERALIZATION, HOST ROCKS, ANOMALIES:

#### MINERALIZATION:

The postulated target mineralization is buried and has yet to be discovered by diamond drilling.

#### HOST ROCKS:

The sparse outcrops located during the 1998 program comprise mainly black shale and mudstone . The rocks have platy cleavage, trend northwest, have near vertical dips and display varying degrees of limonitization. The main evidence as to specific types of overburdened covered bedrock lithologies is often apparently provided, at many locations, by the dominance of a particular type of angular float and/or subcrop. Based on this evidence, the most pervasive rock type underlying the grid is interpreted to be altered crystal tuff and tuff breccia. Breccia fragments ranging up to over 30 cm are often found in a silicified crystal tuff matrix. The rocks are usually strongly altered (hematized, limonitized, manganese stained, silicified, and chloritized with or without chlorite/calcite/quartz stockworks) and show varying degrees of sulfidization (usually vuggy pyrite). The rock type is considered important, particularly when hematized, since it is the main host rock of gold and copper mineralization on the Todd Creek Property and on the Deltaic Grid, east of the Delta West Grid.

The next most pervasive, apparent bedrock types are: fine grained, silicified mafic volcanic rock of andesitic composition, often with quartz and white calcite fracture fillings; sediments (shale, mudstone, sandstone), often hematized and forming linear ridges; bleached rhyolite and dacite, often hematized and sulfidized with disseminated pyrite; and, minor intrusive rocks of dioritic

composition. The latter rock type is usually well pyritized and has variable magnetite content.

It is further postulated that the Hwy Zone is apparently associated mainly with altered tuff and tuff breccia; the Central Zone with altered mafic volcanics, tuff breccia and some mudstone and shaly sediments; and, the Rhyolite Zone with dacite and rhyolite. The rock types host the gold/copper mineralization on the Deltaic Grid, approximately 8 km to the east, and most of the important deposits in the Stewart Camp.

#### SOIL GEOCHEMICAL ANOMALIES:

Contouring of the integrated zinc, copper, cadmium and barium soil (using thresholds of 250, 40, anomalies 1 and 250 ppm, respectively) reflects element zoning and correlations that are characteristic of important copper and gold mineralization in the Stewart Camp. For example, as outlined by the 400 ppm zinc contour, linear to anastomosing zinc zones are found within the previously interpreted Hwy, Central, East and Rhyolite Zones. The contoured zones have strike lengths up to 1.8 km, and apparent strike lengths up to over 3.6 km. The zones also show considerable thickening e.q., near L26N, the 400 ppm zinc contour of the Central Zone is about 250 m wide and averages 477 ppm zinc.

As outlined by the 40 ppm copper soil contour, anomalous copper zones have the same morphology and considerable strike extents as the zinc zones. However, the copper zones generally display, as is often the case for soil geochemistry over zoned copper-gold deposits in the Stewart Camp, a flanking relationship to the zinc soil anomalies. The most prominent copper zone is associated with the Rhyolite Zone on the east side of the grid. There, the 40 ppm copper anomaly has an average width of about 250 m (e.g., averaging 72 ppm over 250 m on L18N) and remains open to the east, southeast and northwest.

Barium, as outlined by the 250 ppm contour, and cadmium as outlined by the 1 ppm contour, generally display the same considerable strike extends as zinc and copper. Barium and cadmium anomalies show some good correlation with zinc but have more specificity and apparent linearity than anomalous zinc. The strongest barium anomaly is located on the eastern edge of the grid, on the Rhyolite Zone, where it shows good correlation with copper, cadmium and zinc The barium and cadmium expression of the postulated anomalies. northwest extension of the Rhyolite Zone, as provided by historical surveys, is particularly intriguing in view of the apparent width and strength of the zones (e.g., barium averaging 1082 ppm over about 200 m on the claim line south of L50N), and their correlation with zinc and some copper values. As indicated by the good correlation of zinc with barium and by the flanking copper

association, the apparent northwestern extension of the Hwy Zone is also a very interesting follow-up target.

As outlined to date, the strongest cadmium soil anomaly is associated with the Central Zone between L24N and L31N. There, the interpreted cadmium soil anomaly is up to 400 m in width, shows good correlation with the strongest part of the Central Zone zinc anomaly, has some direct barium association and has a classical flanking copper association. Immediate drill targets are delineated by the wide, strong IP chargeability anomaly associated with the geochemical anomalies on L26N. The 1997 reconnaissance IP survey was not carried out further to the northwest, but based on the soil geochemistry, the target obviously continues beyond L30N.

Only the initial 1997 soil samples were analyzed for gold and although most did not have any significant gold contents, weak gold values ranging up to 30 ppb were returned from samples on L18N, L22N and L30N, near the originally interpreted east boundary of the Central Zone. The wide IP chargeability and associated zinc and cadmium anomalies on L26N offer a large drill target. Moreover, based on geochemical and geophysical criteria, the eastern section of the Central Zone on most lines is deemed to offer high priority drill targets, including the specific HLEM geophysical anomaly on L30N discussed below.

#### HLEM ANOMALIES:

The MAX-MIN survey was successful in delineating a number of weak to very weak, parallel to sub-parallel HLEM conductors, a number of which, because of their general linearity, strike lengths and interesting correlations with geophysical and geochemical anomalies, are deemed to be of particular interest. The conductors are discussed below:

#### CONDUCTOR A:

The weak conductor trends northwest and has been traced for about 700 m (L30N to L24N). Since it is located at the eastern edge of the survey area, it is not fully delineated on all lines and its dip remains uncertain. The conductor shows some direct correlation with copper, zinc, cadmium and barium, and moderate to strong IP chargeability correlation on L26N - the only line along its strike length that has been surveyed with IP. Host rocks apparently include felsic volcanics, and crystal tuff and crystal tuff breccia.

#### CONDUCTOR B:

The weak conductor parallels Conductor A, has an interpreted strike length of over 1.6 km (L14N to L30N) and a near vertical dip. On L26N and to the northwest, the conductor has direct correlation with copper, cadmium and barium, and a more flanking correlation with zinc soil geochemistry. To the southeast of L26N, the main correlations are flanking for the copper, cadmium and barium, and direct and flanking to some of the strongest zinc geochemistry. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. Host rocks apparently include felsic volcanics, pyroclastic rocks and shaly sediments.

## CONDUCTOR C:

The weak conductor parallels Conductor B, and also has an interpreted strike length of over 1.6 km and a near vertical dip. On L24N and to the northwest, the conductor has direct correlation with copper, and a flanking correlation with cadmium, barium and some of the strongest zinc soil geochemistry. To the southeast of L26N, the conductor has a more direct correlation with zinc and a flanking association with respect to copper, cadmium and barium. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. Host rocks include mainly crystal tuff and crystal tuff breccia and some felsic volcanic rocks.

#### CONDUCTOR D:

The weak conductor parallels Conductor C, and also has an interpreted strike length of over 1.6 km and a near vertical dip. The conductor generally has a flanking association with copper, barium, and cadmium soil geochemistry, with the exception of north of L26N, where it has direct correlation with cadmium. The conductor mainly has a direct association with anomalous zinc soil geochemistry, but a flanking relationship with the higher zinc soil values. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. The central and eastern segments of the conductor trend sub-parallel to topographic linears, which flank it on the east and west, and which are interpreted to be faults.

## CONDUCTOR E:

The weak conductor parallels Conductor D, and has an interpreted strike length of about 800 m (L20N to L28N) and a near vertical dip. The conductor generally has a close flanking to direct association with copper, cadmium, and zinc, and a more direct association with barium soil geochemistry. On lines surveyed with IP, the conductor has strong IP chargeability correlation on L26N. The central portion of the conductor is flanked to the east by an interpreted, sub-parallel fault. The conductor appears to be associated with pyroclastic and mafic volcanic rocks.

## CONDUCTOR F:

The weak conductor parallels Conductor E, and has an interpreted strike length of over 1.6 km and a dip ranging from near vertical

to easterly. The conductor has a close flanking to direct association with barium, a generally direct association with zinc, and some direct association with cadmium soil geochemistry. On lines surveyed with IP, the conductor has strong IP chargeability correlation on L26N. The conductor appears to be associated mainly with crystal tuff, and mafic and felsic volcanic rocks.

## CONDUCTOR G:

The weak conductor parallels Conductors F and E, and has an interpreted strike length of over 1.6 km and a dip ranging from near vertical to easterly. The conductor has a flanking relationship to the east side of the main zinc, copper, cadmium, and barium soil geochemical anomalies of the Hwy Zone. On lines surveyed with IP, the conductor has moderate IP chargeability correlation. The conductor appears to be associated mainly with crystal tuff, and crystal tuff breccia.

## REPORT ON THE 1998 DELTA WEST PROJECT,

Ξ,

DELTA PEAK AREA:

SKEENA MINING DIVISION,

NORTHWESTERN BRITISH COLUMBIA

LATITUDE 56°36' NORTH

LONGITUDE 129°38' WEST

NTS 104 A/12

BY

DAVID E. MOLLOY

DECEMBER, 1998

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#### SUMMARY:

#### **1998 DELTA WEST PROJECT:**

The Delta West Project is located in the Stewart Gold Camp about 70 km north of Meziadin Junction in Northwestern British Columbia. The project is centred on NTS Map Sheet 104A/12 at latitude 56°36'N, longitude 129°38'W and covers 86 square kms. The Delta West Grid straddles the Stewart-Cassiar Hwy and the main focus of the 1998 project, the Central Zone, is located about 500 m east of the Hwy. The Hwy Zone, located west of the Central Zone, and the East Zone, generally contiguous with, and to the east of the Central Zone, were originally secondary targets.

The project was initiated to follow-up weak Aerodat, conventional EM, airborne anomalies associated with subtle, apparently stratabound, soil geochemical anomalies; and, moderate to strong, wide, IP chargeability anomalies, outlined by 1996 and 1997 reconnaissance surveys. The geophysical and geochemical anomalies are correlative with a favourable geological environment initially documented by the GSC in 1993: a generally unexplored window of prospective Hazelton Group rocks on the western flank of the Oweegee Dome.

The project was carried out in September-October and October-November, 1998, as logistics and field conditions allowed. The work comprised the restoration of most of the clear cut portion of the 1997 Delta West Reconnaissance Grid (L14N to L50N); the installation of five fill-in and step out grid lines (L20N, 24N, 28N, 32N, 33N); the collection and ICP analysis of 219 detail and fill-in soil samples; geological mapping of the new grid lines; prospecting, including the collection of 32 rock samples and the ICP analysis of 20 samples, as an attempt to locate mineralization indicative of the source of the Hwy, Central and East Zones' geochemical/geophysical anomalies; and, a 10 km MAX-MIN HLEM survey, in an attempt to locate areas of higher conductivity, within the IP anomalies, which could be the main focus of initial diamond drilling.

The field program was executed by the author (30 field days), with the assistance of prospecting partner, David R. Kennedy (12 field days) for the grid installation and initial geochemical and geological surveys; and, in view of Mr. Kennedy's sudden infirmity, with Janine Calder, (8 field days) for the EM survey and prospecting activities. An application was filed to fund a portion of the approximately \$20,000 of allowable project expenditures under the 1998 Prospector's Assistance Program of British Columbia.

The main exploration target is polymetallic, stratabound mineralization, including copper, lead, zinc, silver and gold. The target mineralization is associated with the favourable, recently delineated Hazelton Group rocks, and includes Eskay Creek type VMS sulfide mineralization. The exploration rationale includes the following parameters: altered Hazelton rocks (including mafic to felsic volcanic and pyroclastic rocks, and interbedded sediments) and associated dioritic intrusions in the Stewart area have potential for hosting substantial polymetallic orebodies; such Au-Cu deposits are often haloed by Zn-Cd-Ag mineralization; the associated polymetallic soil or sediment geochemical signature, the most apparent component of which is often zinc, can effectively identify regional and specific exploration targets, which, when evaluated with appropriate geophysical tools, can often yield priority drill targets.

Substantial glacial-fluvial overburden can significantly dilute the magnitude of the geochemical anomalies associated with buried mineralization; however, subtle but consistent zinc anomalies, when augmented by some copper, cadmium, barium, silver, etc., with or without arsenic and gold, can constitute an important pathfinder signature for the buried mineralization. The zinc soil geochemistry is deemed to be particularly indicative of proximal mineralization, when associated directly with or flanked by copper or copper-gold soil anomalies.

The 1998 program was carried out mainly in a large clear cut on the east side of the Bell-Irving River Valley. The 1998 project area is generally 99% overburden covered and includes glacio-fluvial material which ranges in thickness from a few cm, in the vicinity of the sparse outcrops, to tens of meters in proximity to the river. Fairly well developed soil horizons exist in the previously densely forested areas, where extensive root systems have reworked the original cover.

The results of the 1998 detailed follow-up program, when integrated with the historical data, are deemed to have substantially advanced The 1998 soil geochemical survey was successful in the project. confirming the importance of the historical, reconnaissance exploration targets and the 1997 interpretation of the general morphology of the geochemical/ geophysical zones. While the zones have an apparent strike length of 4 km and remain open for expansion to the northwest, southwest and east, the soil geochemistry of the Hwy, Central and East Zones has now been delineated in some detail over a 1.8 km strike length. Contouring of the integrated zinc, copper, cadmium and barium soil anomalies reflects element zoning and correlations now that are characteristic of important copper and gold mineralization in the Stewart Camp; and thus, when combined with the positive geological and geophysical data, are indicative of priority, apparently stratabound drill targets on the Delta West Property.

The geological survey located only sparse outcrops of mainly shale and mudstone in the center of the grid that are interpreted to be interbeds of the of the Hazelton Group sediments. A number of linear, northwest trending fault valleys were delineated that may control, or have an important role in the genesis of the target mineralization. In many areas, the underlying bedrock types can apparently be ascertained locally via the predominance of a particular type of angular float rock and/or subcrop. Based on this evidence, the main rock types on the 1998 Delta West Grid are: altered tuff and tuff breccia; altered mafic volcanic of andesitic composition; shale and mudstone; altered rhyolite/dacite; and, some altered intrusive rocks of dioritic composition. It is further postulated that the Hwy Zone is apparently associated mainly with altered tuff and tuff breccia; the Central Zone with altered mafic volcanics, tuff breccia and some mudstone and shaly sediments; and, the Rhyolite Zone with dacite and rhyolite. The rock types host the gold/copper mineralization on the Deltaic Grid, located approximately 8 km to the east, and most of the important deposits in the Stewart Camp.

Prospecting activities were carried out to locate further evidence of the source of the soil geochemical anomalies in the altered float and subcrop. Historical surveys had located a variety of altered float rocks, often with anomalous copper contents ranging up to 269 ppm, with generally little anomalous zinc and no gold. However, a float sample of altered tuff breccia located on L14N at 56+85E did contain 95 ppb gold and 252 ppm copper. The weakly pyritized sample is located in an area of a strong chargeability anomaly and correlating copper, zinc and barium soil anomalies.

In 1998, twenty composite samples of angular float rock were analyzed via 32 element ICP. Five of the these samples also have anomalous copper contents. The majority of all the rock samples with anomalous copper contents are located in some proximity to the eastern segment of the Central Zone, thus adding further credibility to the proposed diamond drilling referenced above.

The approximately 10 km MAX-MIN electromagnetic survey was carried out on 7 grid lines and utilized 3 frequencies (880, 3520 and 14080 Hz). The survey was successful in locating a least seven subparallel, weak EM conductors that range up to over 1.6 km in length, and a number of which correlate with the interpreted geochemical and reconnaissance IP anomalies. A number of these geochemical/geophysical targets are now considered high priority drill targets and it is recommended that their drill investigation constitute the next stage of exploration on the Delta West Grid. A two hole, 600 m initial drill test that should total about \$90,000 is recommended. Since the targets are in close proximity to the Stewart-Cassiar Hwy, they can be pursued year round. **A11** the targets are large and remain open for expansion; and, if the drilling is successful, the 1998 program should be expanded to the northeast, northwest and southeast to evaluate additional, readily apparent targets.

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## **REPORT ON 1998 DELTA WEST PROJECT:**

#### SKEENA MINING DIVISION,

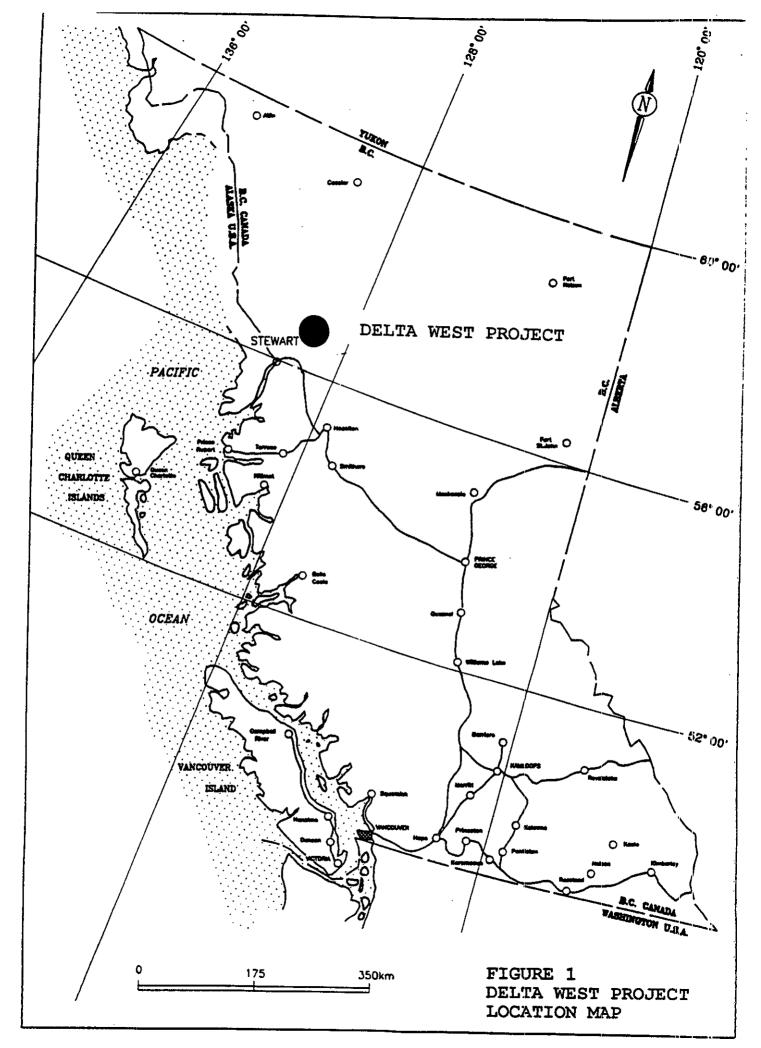
#### NORTHWESTERN BRITISH COLUMBIA

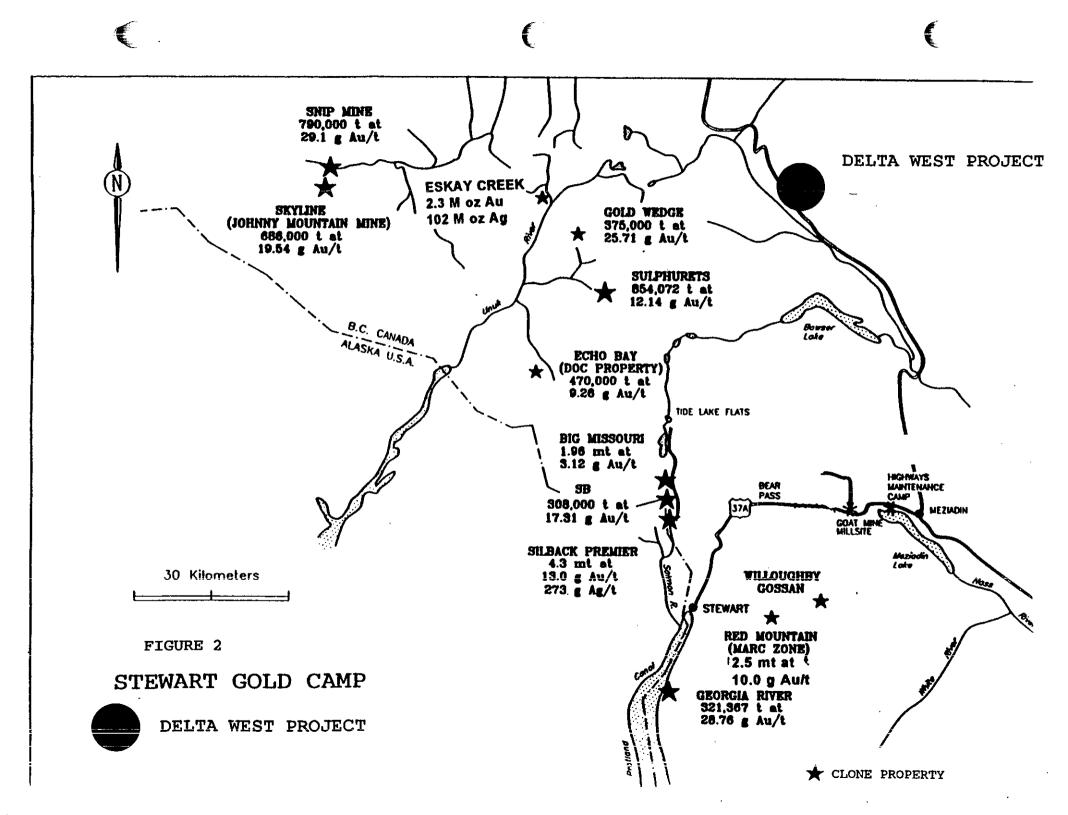
#### 1. INTRODUCTION:

This report describes the results of geological, geochemical, geophysical and prospecting surveys carried out as the 1998 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 B.C. (Figure 1).

The regional rationale for the program includes the copper and gold mineralization reported on the Delta 1 and 2 mineral claims located about 8 km east of the Delta West Project Area (Lee, 1990; Hamilton, 1991; Molloy, 1997; Map 1); a historical report describing widespread gold and copper values apparently on the Old Claims located just west of the project area (British Columbia Minister of Mines, 1929; Map 1); 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 reconnaissance historical exploration has ever been carried out in the Delta West Project Area.

The specific property rationale for the 1998 program entails the results of 1996 and 1997 reconnaissance surveys that delineated zones of zinc, cadmium, barium, and copper soil geochemical anomalies that are generally correlative with reconnaissance IP chargeability anomalies and which have apparently been traced over a 5 km strike length. Such geochemical/geophysical signatures often halo significant gold/copper mineralization in the Stewart Camp. Weak Aerodat airborne EM anomalies and the presence of rhyolitic horizons are further indicative of a prospective environment for a significant orebody, including Eskay Creek VMS type (Figure 2).





### 2. PROPERTY, LOCATION AND ACCESS:

The Delta West Project Area is shown on the claim map appended as Map 1 and the mineral claims are summarized in Table 1. The 18 claims comprise 86 square km and the author, David R. Kennedy, Janine Calder and Graeme Wallace each have a 25% ownership interest.

The Delta West Project is situated in the Delta Peak Area of the Skeena Mining Division about 80 km northeast of the town of Stewart, B.C. (Figure 2); and, about 70 km north of Meziadin Junction, B.C. (Figure 3). The Delta West Project is centred on NTS Map Sheet 104A/12, at latitude 56°36'N, longitude 129°38'W (Map 2).

The Stewart-Cassiar Hwy trends generally northwest on the west side of the project area and provides excellent access. Much of the ground 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 Bell 2 or at Meziadin Junction or Stewart (Figure 3). Gravel pits in close proximity to the highway and to the main streams draining the area provide excellent overnight camp sites.

## 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. The mountain terrain is incised with young, deep valleys that trend northeast and that drain the area to the southwest, generally into the Bell-Irving River that parallels the Stewart-Cassiar Highway (Map 2).

The regional field exploration season usually extends from June through October. However, given the excellent, year round access and the relatively flat terrain of the Bell-Irving Valley, exploration activities can be implemented at most times of the year on the Delta West Grid.

Snowfalls are heavy in the Stewart area and can deposit several meters in a 24 hour period. Recorded mean annual snowfalls in the area 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). Summers are usually characterized by long hours of daylight and pleasant temperatures. However, the proximity to the ocean and relatively high mountains make for highly changeable

Sept. 16, 1998

## TABLE 1

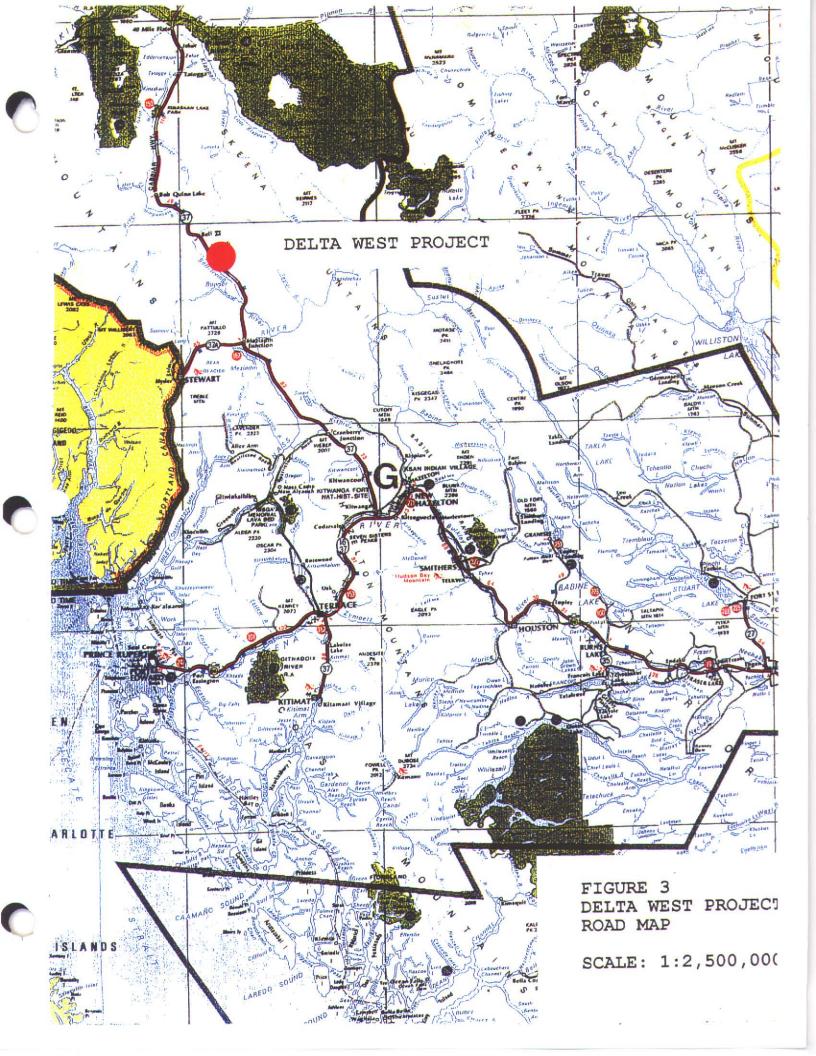
## DELTA WEST PROJECT AREA, FOX/PAT CLAIMS

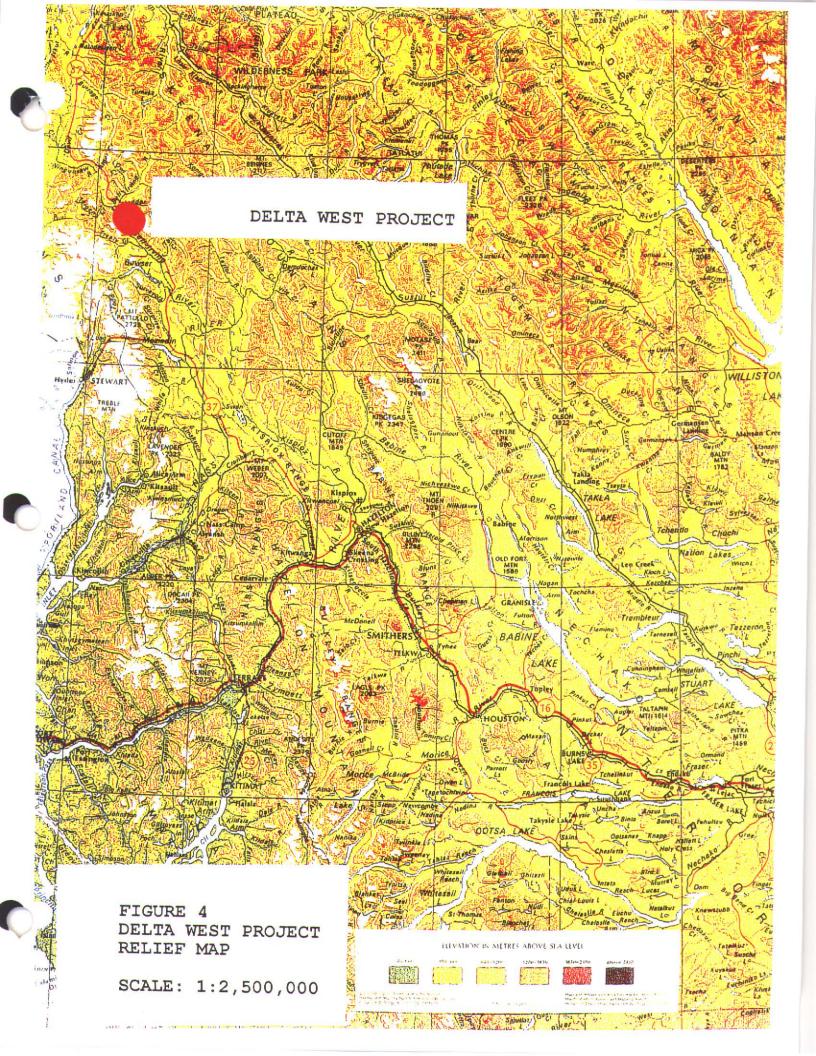
## DELTA PEAK SHEET, 104 A/12

DELTA WEST CLAIMS:

DELTA WEST GLAIMS:							
Claim Name	Tag No.	Rec No.	Units	Ann. Date	Expiry Date		
FOX 30	233413	347293	20	Jun 21/96	Jun 21, 2001		
FOX 31	233414	347294	20	Jun 21/96	Jun 21, 2001		
FOX 32	233415	347295	16	Jun 29/96	Jun 29, 2002		
FOX 33	233416	347296	20	Jun 24/96	Jun 24, 2001		
FOX 34	233417	347297	20	Jun 24/96	Jun 24, 2002		
FOX 35	220160	347520	16	Jul 3/96	Jul 3, 2002		
FOX 36	233422	347298	16	Jun 24/96	Jun 24, 2002		
FOX 37	231403	347299	20	Jul 1/96	Jul 1, 2002		
FOX 38	231402	347300	20	Jun 30/96	Jun 30, 2000		
FOX 39	233420	347301	20	Jun 29/96	Jun 29, 2002		
FOX 40	233421	347302	20	Jun 29/96	Jun 29, 2002		
FOX 48	218272	355296	20	Apr 24/97	Apr 24, 2002		
FOX 49	218273	355297	20	Apr 24/97	Apr 24, 2002		
FOX 50	218274	355298	16	Apr 24/97	Apr 24, 2002		
PAT 50	220187	355292	20	Apr 24/97	Apr 24, 2001		
PAT 51	220188	355293	20	Apr 24/97	Apr 24, 2002		
PAT 52	220189	355294	20	Apr 23/97	Apr 23, 2002		
PAT 53	220190	355295	<u>20</u>	Apr 23/97	Apr 23, 2002		
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weather. September, October and the first half of November, 1998 were generally characterized by warm temperatures (daily values averaging about 12 degrees C), but often by interminable rainfall and fog that hindered program activities. In view of the northwest trending, often boggy linear valleys on the Delta West Grid, the geophysical survey was scheduled for November when such wet spots would be usually frozen. The time frame also coincided with the availability of the rental geophysical equipment.

Wildlife in the area of the Property mainly consists of 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 Stewart-Cassiar Hwy have been lumbered via clear cutting. Vegetation on the Property ranges from coastal rain forest including mature western hemlock, sitka spruce, fir, cottonwood and tag alders, with ferns, devil's club and moss as ground cover, to sub-alpine spruce thickets with heather and alpine meadows.

#### 4. EXPLORATION HISTORY ON AND IN THE VICINITY OF DELTA WEST GRID:

The central area of the Stewart Camp 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 included Snip, Eskay Creek and Red Mountain (Figure 2), continues to be regarded as elephant country in which low cost discoveries can be made.

Some regional historical activities were reported apparently on the on the Old claims (Map 1), in the 1920's. As referenced in the Annual Report of the British Columbia Minister of Mines, 1929, 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 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 the 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 Claims (Map 1) 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 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 were deemed to constitute a high priority gold target.

Based on the positive analytical results obtained from the Geofine and Cominco initial exploration programs, the Deltaic Zone mineralization was 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 could extend southeast onto the Delta West Grid.

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 the Delta 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 haloed by zinc soil anomalies. The polymetallic geochemical signatures are similar to those that are associated with most gold deposits in the Stewart Camp.

In 1996 the author and prospecting partner, David Kennedy, completed a B.C. Prospectors Assistance Program on claim lines in the Delta West Area (Molloy, 1996; Kennedy, 1996). A number of interesting soil geochemical anomalies were defined, with some of the most important zinc anomalies having direct silver, cadmium and barium correlation. Others have some cadmium and/or silver correlation, with anomalous copper association. Using these criteria, five northwest trending, anomalous zinc zones were initially interpreted from the reconnaissance soil survey.

In 1997, Cordal Resources funded an Aerodat airborne conventional EM and magnetic survey that located a number of weak EM anomalies in the vicinity of the Delta West soil geochemical anomalies (Molloy, 1997). The reconnaissance Delta West Grid was installed and covered a 3.2 km strike length of the target area, with minimum line spacing of 400 m. Based on soil geochemical surveys and some IP surveying, 4 zones of interest were interpreted: the Hwy, Central, East and Rhyolite Zones. The Central Zone was deemed a high priority follow-up target in view of its zinc and IP signature. For example, on L26N zinc values in the Central Zone average 381 ppm over 400 m, and are mainly associated with a strong IP anomaly. On L22N and L30N, the Central Zone zinc anomaly averages 368 ppm over 375 m, and 364 ppm over 350 m, respectively.

The 1998 Delta West Project was initiated to locate and prioritize drill targets via detailed soil geochemical, geological and HLEM geophysical surveys and prospecting on the Hwy, Central and East Zones.

#### 5. REGIONAL GEOLOGY:

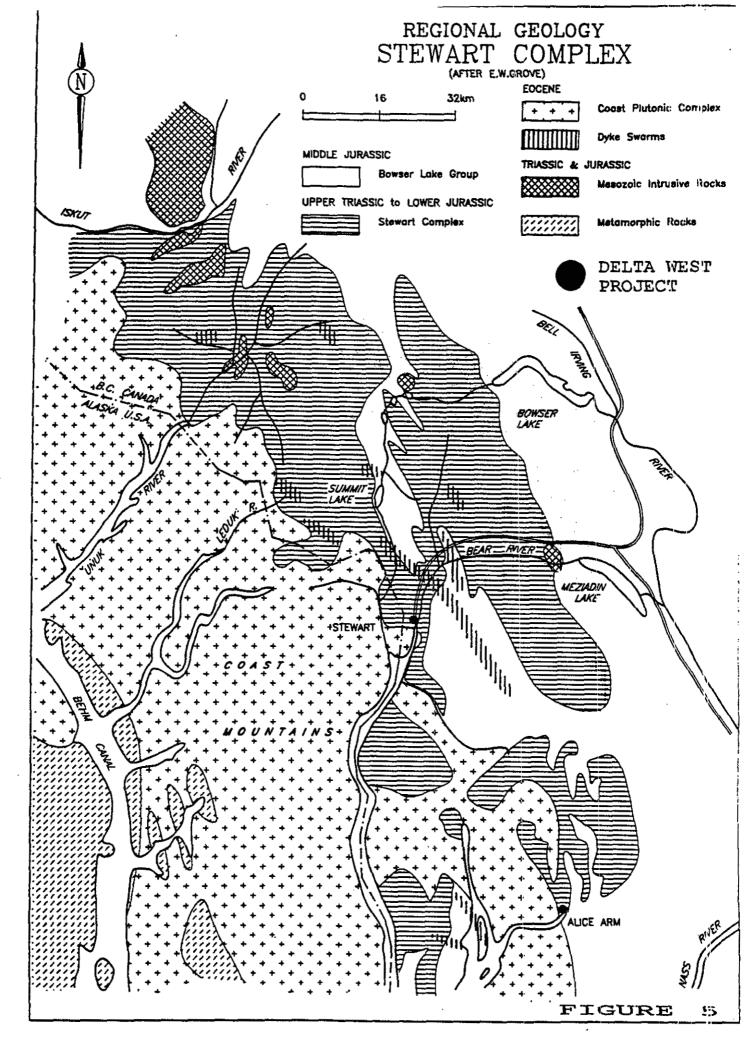
The Delta West project area is situated on the eastern margin of a trending volcanogenic-plutonic broad, north-northwest belt consisting of the Upper Triassic Stuhini Group and the Upper Triassic to Lower Middle Jurassic Hazelton Group. This belt has been termed the "Stewart Complex" (Figure 5) by Grove (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/cal-alkalic) island arc complex, capped by a thick turbidite succession (Bowser Lake Group; Figure 5). 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. Dilworth Formation) to a Toarcian rhyolite unit (Monitor Rhyolite) overlying the Betty Creek formation. Rocks of the Salmon River Formation are transitional



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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 marcon to green, epiclastic volcanic conglomerates, breccias, greywackes and finer grained clastic rocks of the Betty Creek Formation. Felsic flows, tuffs and tuff breccias characterize the Mt. Dilworth Formation (Figure This formation represents the climactic and penultimate 6A). 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 The upper member has been further subdivided Thorkelson 1990). into three north trending facies belts: the eastern Troy Ridge facies (starved basin), the medial Eskay Creek facies (back-arc basin) and the western Snippaker Mountain facies (volcanic arc).

Sediments of the Bowser Lake Group rest unconformably on the Hazelton Group rocks and were originally thought to underlie most of the Delta West project area. 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 pyroclastic rocks to the west.

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.

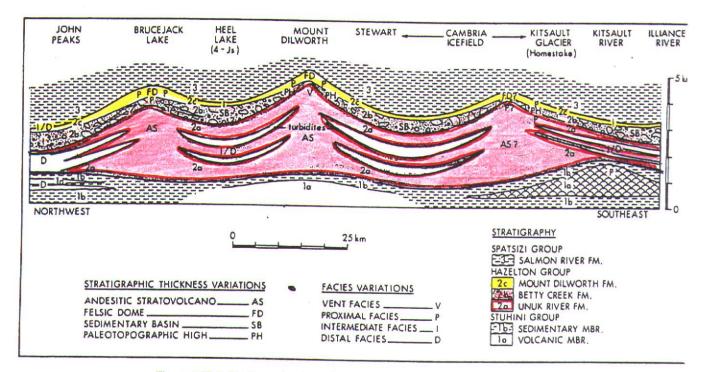


Figure 1-27-4. North-south schematic reconstruction through the Stewart complex.

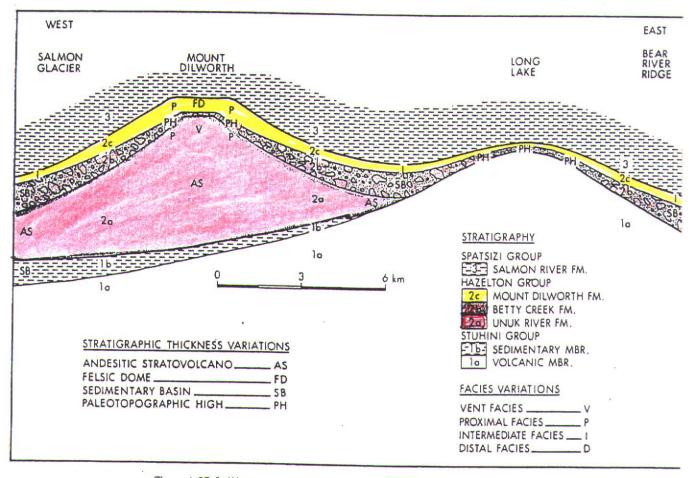


Figure 1-27-5. West-cust schematic reconstruction through the Stewart complex.

FIGURE 6A DILWORTH FORMATION IN STEWART COMPLEX STRATIGRAPHY

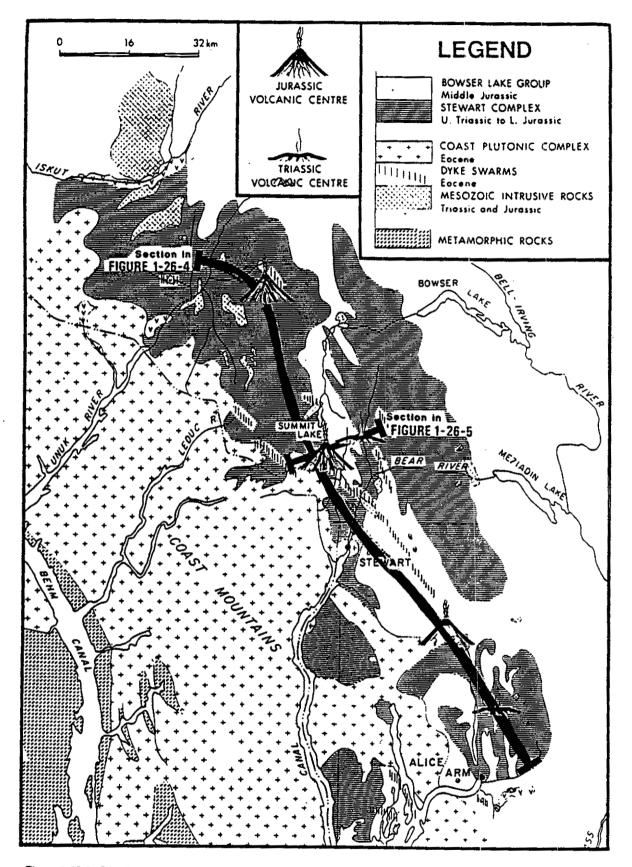
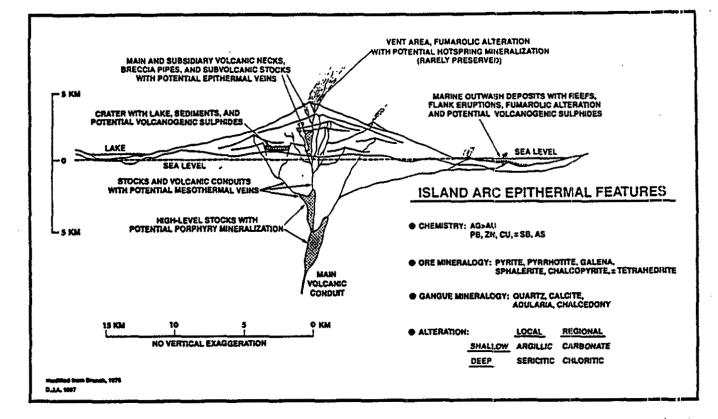


Figure 1-27-3. Distribution of the Stewart complex showing the locations of section lines for Figures 1-27-4 and 1-27-5.

## FIGURE 6B

STEWART VOLCANIC BELT



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

## FIGURE 6C

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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), 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 calcalkaline intrusions and volcanic centres (Figures 6A, 6B). 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-Premier 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 They contain 25 to 45% combined pyrite, sphalerite, with depth. 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 calcite, barite, and some adularia being present. The 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.

Relatively 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 g Au/t.

The Eskay Creek gold-silver mine was constructed in 1994. Current reserves at Eskay Creek comprise about 1.2 million tons containing 2.28 million ounces of gold and 101.8 million ounces of silver. 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 near massive 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. minerals present sphalerite, Sulfide include 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 minor and boulangerite mineralization.

Royal Oak's Red Mountain deposit (Figure 2) is on hold after the company's decision to concentrate its current efforts on putting the Kemiss deposit in production in 1998. In 1996, prior to spending about \$8.5 M on Red Mountain, the company indicated it was 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 were expected to be in the range of \$150 per ounce.

The Marc Zone and its northerly extension, the AV Zone, occur as sulfide lenses or cylinders associated with a structural junction and the brecciated contact of the Goldslide Intrusion. The mineralization consists of densely disseminated to massive pyrite and/or pyrite stringers and veinlets and variable amounts of associated pyrrhotite and sphalerite as well as chalcopyrite, arsenopyrite, 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 Minerals carried 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. Camnor terminated work on the project in 1997.

In 1995, on the Clone Property located south of Red Mountain, Teuton Resources and Minvita Enterprises discovered and explored two sub-parallel shear zones up to 1.5 km in length that host high grade gold veins and stockworks. Extensive work that was carried out in 1996 apparently failed to yield consistent results.

#### 7. DELTA WEST PROJECT GEOLOGY:

The Delta West Project Area is postulated to cover a tectonic window in which Jurassic Hazelton Group and Palaeozoic 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). 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 Lower 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. These rocks, as mapped via 1996 and 1997 reconnaissance activities (Map 4), are interpreted to extend west to within 300 m of the east side of the Stewart-Cassiar

Hwy. Further to the west, the Hazelton Group is overlain by the Upper Jurassic Bowser Lake Group sediments including silty mudstones, fined grained sandstone and arkose. Hazelton Group rocks exposed on the east side of the Delta West Grid include rhyolitic to dacitic units.

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. 1998 DELTA WEST PROJECT:

The Delta West Project, after approval from the B.C. Prospectors Assistance Program, was initiated in the field on September 24, 1998. Original plans to initiate the program on September 13 were terminated by the Air Canada labour disruption. During the first phase of the program (September 24-October 5), the historic reconnaissance grid base line and grid lines (L14N-L50N) in the large clear cut were restored and five fill-in lines and step-out lines (L20N, L24N, L28, L31, L32) were installed. Initial fill-in and step-out soil geochemical and geological surveys were also initiated. This work was completed by the author and prospecting partner David R. Kennedy.

A decision to complete the program during a second phase (October 26-November 13) was based on the availability of the HLEM geophysical rental equipment; the fact that November weather would probably freeze boggy areas on the grid lines that were flooded by persistent rain during the first phase activities; and, a sudden malady experienced by D. Kennedy. However, mild temperatures and incessant rainfall in late October added more water to topographic lows on the grid and negated the possibility of carrying out HLEM surveys on L50N and L18N. The geochemical survey and prospecting were completed by the author; and the geophysical survey was executed by the author and Janine Calder, geologist, of Mississauga, Ontario.

A total of 50 man field days were utilized. Allowable project expenditures total \$19,865.68 and are summarized in Table 2. A description of daily activities is provided in Table 3. A British Columbia Prospectors Assistance Program grant of approximately \$7500 has been allocated to the project.

The Delta West Project as described in this report consists of 5 main components:

- A. 1997 GRID RESTORATION AND EXPANSION
- B. SOIL GEOCHEMICAL SURVEY
- C. GEOLOGICAL MAPPING
- D. PROSPECTING
- E. HLEM GEOPHYSICAL SURVEY

#### 8.A. 1997 GRID RESTORATION AND EXPANSION:

The 1997 Delta West reconnaissance grid was restored in the large clear cut (L14N to L50N) to cover the Hwy, Central and East Zones (Map 4). Fill-in L20N, 24N, and 28N and step out L31N and 32N were installed from the Stewart-Cassiar Hwy to the eastern limit of the clear cut (Map 4). The attempt to restore existing lines and extend new lines farther to the east beyond the clear cut was negated by the areas of entangled deadfall (burnt trees) on the edge of the cut, and a water filled swamp valley on the edge of the forest. Mature trees were also prone to the recent wind storms and significant cutting would be required to restore the historic lines and install new lines to the east of the clear cut. The western grid restoration and expansion was hampered by abnormal water conditions on low ground west of the Stewart-Cassiar Hwy.

## 8.B. SOIL GEOCHEMICAL SURVEY:

The geochemical program included the collection of 219 soil samples generally taken at a 25 m spacing on new lines and, at various fill-in intervals on L30N and L50N. The majority of the samples collected represent B horizon material obtained from pits dug 10 to 50 cm with a boniknocker - a modified grubhoe. Banks and overturned tree roots also were utilized as sample sources where conditions required. The samples are described in Table 4 and sample locations are shown on Map 4, where they have been integrated with historical work. The project was hampered by persistent rainfall that flooded boggy areas often associated with northwest trending linear faults.

The soil samples were subject to 32 element ICP analysis at Chemex Labs Ltd. in Vancouver. The certified analytical sheets are provided in Appendix 1. The zinc, copper, cadmium and barium values, along with the historical values, are shown in Table 4 and on Maps 5-8. The 1998 soil geochemical survey was successful in confirming the importance of the historical, reconnaissance exploration targets and the 1997 interpretation of the general morphology of the geochemical/geophysical Hwy, Central, East and Rhyolite Zones. While the integrated data base suggests that the zones have an apparent strike length of about 4 km and remain open for expansion to the northwest, southwest and east, the soil geochemistry of the Hwy, Central and East Zones has now been delineated in some detail over a 1.8 km strike length.

The lack of stronger zinc and other element analyses is attributed to the masking affect of the deep overburden cover. The magnitude of the signature is, however, considered significant when referenced to other such environments and their haloing signatures e.g., those associated with important mineralization on the Todd Creek Property (Molloy, 1998) and the Deltaic Grid (Molloy, 1997).

Contouring of the integrated zinc, copper, cadmium and barium soil anomalies (using thresholds of 250, 40, 1 and 250 ppm, Maps 5-8, respectively) reflects element zoning and correlations that are characteristic of important copper and gold mineralization in the Stewart Camp. For example, as outlined by the 400 ppm zinc contour (Map 5), linear to anastomosing zinc zones are found within the previously interpreted Hwy, Central, East and Rhyolite Zones. The contoured zones have strike lengths up to 1.8 km, and apparent strike lengths up to over 3.6 km. The zones also show considerable thickening e.g., near L26N, the 400 ppm zinc contour of the Central Zone is about 250 m wide and averages 477 ppm zinc.

As outlined by the 40 ppm copper soil contour (Map 6), anomalous copper zones have the same morphology and considerable strike extents as the zinc zones. However, the copper zones generally display, as is often the case for soil geochemistry over zoned copper-gold deposits in the Stewart Camp, a flanking relationship to the zinc soil anomalies. The most prominent copper zone is associated with the Rhyolite Zone on the east side of the grid. There, the 40 ppm copper anomaly has an average width of about 250 m (e.g., averaging 72 ppm over 250 m on L18N) and remains open to the east, southeast and northwest.

Barium, as outlined by the 250 ppm contour (Map 8), and cadmium as outlined by the 1 ppm contour (Map 7), generally display the same considerable strike extents as zinc and copper. Barium and cadmium anomalies show some good correlation with zinc but have more specificity and apparent linearity than anomalous zinc. The strongest barium anomaly is located on the eastern edge of the grid on the Rhyolite Zone, where it shows good correlation with copper, cadmium and zinc anomalies. The barium and cadmium expression of the postulated northwest extension of the Rhyolite Zone, as provided by historical surveys, is particularly intriguing in view of the apparent width and strength of the zones (e.g., barium averaging 1082 ppm over about 200 m on the claim line south

TABLE 4 DELTA WEST PROPERTY 1998 SOIL SAMPLE DESCRIPTIONS

SAMPLE NO. LOCATION	DEPTH HORIZON DEVELOPMENT	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
598762 L50N 54+75E	30 cm B horz good	o-brn slt 75%, cl 20%, org 5%	good to W CC	bedded mudstn o/c @ 55+35E, sparse ang he oxid bx, lim sed frags	tro	27 <b>2</b>	50	210	0.5
598763 L50N 54+25E	20 cm B horz-ST good	gry-bm sit 70%, cl 15%, org 5% 10% hetro frag sed (ang sh)	good to W CC	NA		238	40	230	0.5
598764 L50N 51+75E	str sed	brn org muck org muck 50%, slt 30%, cl 10%, 10% fi hetro sd	in a low str flow 180 deg	NA		176	38 18	230 780	۱ 2.5
598765 L50N 50+75E	15 cm ABC horz poor	brn/bl sit 30%, cl 20%, org 30% 20% hetro frags, sed (mudstn or sh) with Mn on fract; cl-pebs	good to W CC	NA		450			
598766 L50N 50+20E	25 cm B horz well	buff bm slt 30%, cl 60%, 10% ang oxid sed frags, minor org; cl-pebs	good to W edge of CC	NA		162	29	200	0.5
598767 L50N 49+50E	50 cm-tree B horz well	gry sit 20%, cl 60%, org 10%, 10% ang hem hetro frags (sed?); cl-pebs	good to W edge of CC	NA		160	31	110	<.5
86919 L20, 50+2	5E 20 cm B horiz-ST good	o-brn sit 45%, sd 45%, 10% hetro frags & min org, mainly tuff	good to E	tuff bx		318	24	210	0.5
86920 L32, 56+2	5E 25 cm B horiz-ST well	o-brn slt 60%, sd 30%, org 10%, minor hetro frags, slt-pebs incl oxid lim frags; well oxid	good to W edge of CC & deadfall	sparse tuff		448	20	230	2.5

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## 1998 SOIL SAMPLE DESCRIPTIONS

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86921 L32, 56+00E	25 cm B horiz-tree well	o-brn slt 60%, sd 30%, org 10%, minor hetro frags, slt-pebs incl oxid lim frags; well oxid	good to W edge of CC & deadfall	sparse tuff		390	21	390	2
86922 L32, 55+75E	25 cm B horiz well	brn slt 60%, sd 30%, org 10%, minor hetro frags, slt-pebs incl oxid lim frags; well oxid	good to W	NA		466	23	410	2
86923 L32, 55+50E	25 cm B horiz-tree well	brn slt 70%, sd 20%, minor org	good to W CC	sparse hem bx		172	30	170	0.5
86924 L32, 55+25E	bank	brn slt 70%, sd 20%, minor org	good to W o/c 175 deg/vert	sh o/c, hetro bldrs & oxid bx as 460271		194	41	110	0.5
86925 L32, 54+40E	tree B horiz well	o-brn-red slt 30%, sd 60%, 10% oxid frags, vol & sh, some ??? slt-pebs; well oxid	good to SE CC	hetro ang bidrs, smail-ig		466	26	270	0.5
86926 L32, 54+25E	50 cm -tree B horiz well	o-bm sit 60%, sd 30%, 10% hetro frags, sh & vol, sit-pebs; well oxid	fair to W CC	NA		298	<b>41</b>	250	0.5
86927 L32, 54+00E	bank	o/bm-bm sit 60%, sd 30%, 10% hetro frags, sh & vol, sit-pebs; well oxid	good to W CC	hetro fit		218	66	240	0.5
86928 L32, 53+75E	20 cm 8 horiz-ST	o/bm-bm sit 60%, sd 30%, 10% hetro frags, sh & tuff, sit-pebs; well oxid	good to W CC	tuff bx, micro seds, ang bldrs		328	18	150	0.5
86929 L32, 53+50E	15 cm B horiz-ST well	brn sit 50%, sd 40%, 10% hetro frags, oxid tuff, sit-pebs	?? to SW CC	tuff & oxid tuff		286	17	180	1

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86930 L32, 53+25E	20 cm B horiz-ST well	o-bm sit 70%, sd 20%, 10% ang hetro frags, mainly seds; sit-pebs	cc	sparse hetro frags		382	29	230	<.5
86931 L32, 53+00E	20 cm B horiz-ST weil	o-bm sit 70%, sd 20%, 10% ang hetro frags, mainly seds; sit-pebs	сс	sparse hetro frags		238	32	230	0.5
86932 L32, 52+75E	20 cm B horiz well	błk sit 80%, sd 20%,	good to SE CC	sparse hetro		220	26	210	0.5
86933 L32, 52+50E	15 cm B horiz-ST well	o-bm sit 80%, org 10%, 10% hetro frags well oxid	good to E CC	bx tuff		220	24	150	<.5
86934 L32, 52+25E	40 cm B horiz - tree well	o-brn sit 45%, sd 45%, 10% hetro frags, small, ang, well oxid	good to E CC	sparse hetro frags		270	27	220	0.5
86935 L32, 52+00E	15 cm B horiz	o-bm-pk sit 60%, sd 40%, minor hetro frags	good to W CC	hetro frags, some hem		204	14	140	0.5
86936 L32, 51+75E	20 cm B horiz -ST well	bm sit 40%, sd 30%, 30% grav, ang-subrd sed & vol, sit-pebs	good to W CC	hetro pebs		444	18	320	2
86937 L32, 51+50E	15 cm B horiz	brn-pk sit 60%, sd 40%, minor hetro frags vol, sit-pebs	good to W CC	NA		370	21	360	2

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86938 L32, 51+25E	15 cm B horiz	brn-pk slt 60%, sd 40%, minor hetro frags vol, slt-pebs	good to W CC	NA		272	23	250	<.5
86939 L32, 51+00E	20 cm B horiz -ST well	bm sit 45%, sd 45%, 10% hetro frags	cc	hetro sparse		390	16	280	2
86940 L32, 50+75E	20 cm B horiz well	o-brn sit 40%, sd 40%, ci 20%	good to E CC	NA		408	17	290	0.5
86941 L32, 50+50E	20 cm B horiz well	o-bm slt 40%, sd 40%, cl 20%	good to E CC	NA		262	19	200	0.5
86942 L32, 50+25E	20 cm B horiz	bm-pk slt 70%, sd 20%, 10% org & ang sed, slt-pebs	good to W CC	NA		316	17	150	0.5
86943 L32, 50+00E	20 cm B horiz well	o-bm slt 45%, sd 45%, 10% hetro frags, ang oxid seds, minor vol & minor org	CC at BLine	NA		352	22	320	1
630967 L30N 51+75E	20 cm B horz	o-brn; sit 50%, sd 40%, 10% rd hetro frags	good to N; CC	ang tuff & sed bldr	Fill-in	176	23	100	0.5
630968 L30N 52+25E	25 cm B horz	o-brn; slt 50%, sd 40%, 10% rd hetro sed frags	good to NE; CC	ang sed bldr	Fill-in	200	21	140	<.5
630969 L30N 52+75E	25 cm bank	brn; slt 40%, sd 30%, 10% org, 20% hetro frags of sil, oxid vol, sub-ang, min veins hem/oxid	good to NE; CC	hetro bldrs incl oxid vol		204	65	310	0.5

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## 1998 SOIL SAMPLE DESCRIPTIONS

SAMPLE NO.	LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
630970	L30N 53+25E	bank transport?	brn; slt 20%, sd 20%, 10% hetro frags	good CC	sit mainly small sed frags, minor vol gouge & ang bx up to 1 m acros	SS	230	44	270	0.5
630971	L30N 53+75E	20 cm B horz	brn; sit 50%, sd 45%, 5% rd hetro frags	good CC	sub ang fel vol & bx frags & fit	at rk samp 460251 sil bx	370	36	250	0.5
630972	L30N 54+25E	40 cm B horz	brn; slt 60%, sd 30%, 5% hetro frags	good CC	lg ang bx fit to 1m, with frags to 10 cm	linear valley @ 340 deg, at 54+60E on L31 trends 160 deg thru L30	356	32	260	1
630973	54+75E	20 cm B horz	brn; slt 85%, sd 5%, 10% frags	good CC	lg ang to sub rd bx, fi, earthy matrix, well sil	linear valley @ 340 deg, at 54+60E on L31 trends 160 deg thru L30	422	35	190	3
630974	L30N 55+25E	20 cm B horz?	gry-bik; sit 60%, sd 25%, 15% cl	good to SW CC	slaty fit		342	50	380	5
630975	L30N 56+00E	15 cm B horz	gry-blk; slt 65%, sd 25%, 5% org, 5% hetro frags	good to SW CC	NA		266	16	160	2
630976	L30N 56+25E	bank B horz?	gry-bik; slt 50%, sd 45%, 5% hetro frags	good to SW CC	hetro fit	fill-in	244	38	340	2.5
630977	L30N 56+50E	bank B horz?	brn sit 50%, sd 45%, 5% hetro frags	good to SW CC	hetro fit	fill-in	178	34	230	1
630978	L30N 57+00E	15 cm AB horz	blk sit 70%, cl 20%, 10% org	fair CC	NA	fill-in	72	52	140	1
630979	L30N 57+50E	20 cm AB horz well	gry-brn sit 60%, sd 30%, 5% org, 5% ang frags some vol, shale	good to SW CC	vol & shale fit	fill-in	144	66	80	0.5

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**1998 SOIL SAMPLE DESCRIPTIONS** 

SAMPLE NO.	LOCATION	Depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
630980	L30N 58+50E	12 cm B horz	brn sd 60%, slt 25%, 15% hetro frags vol, shale	good to SW CC	hem bx with fel frags	fiil-in	390	43	330	0.5
630981	L30N 59+00E	root 8 horiz	brn-o/brn sd 45%, slt 45%, 10% hetro frags	good to SW CC	hetro fit	fill-in	288	31	210	<.5
630982	L30N 59+50E	root	brn-o/brn sd 45%, sit 45%, 10% shale frags	good to SW CC	shale fit	fill-in	258	92	180	<.5
630983	L30N 60+00E	25 cm B horiz	yøl-brn sit 80%, sci 15%, 5% hetro frags	good to SW CC	ang fit of fel vol & sil tuff	fill-in	188	20	110	0.5
630984	L31N 54+75E	20 cm B horiz	bm sit 45%, sd 45%, 10% hetro frags	good to SW	hetro frags	linear valley @ 54+60E, trends 340 deg	252	52	240	0.5
630985	L31N 54+50E	Bank B horiz	o-bm sit 30%, sd 60%, 5% org 5% hetro frags	good to SW	lg ang tuff bx frags	S side of valley	290	41	260	1
630986	L31N 54+25E	25 cm B horiz	o-brn sit 30%, sd 60%, 5% org 5% hetro frags	good to SW CC	lg ang tuff bx frags		358	17	190	<.5
630987	L31N 54+00E	15 cm B horiz	o-brn sit 70%, cl 20%, 10% hetro frags, well oxid	good to SW CC	fair abund mod oxid bx		270	16	180	1
630988	L31N 53+75E	25 cm B horiz well	o-brn sit 60%, cl 30%, 10% oxid ang frags	good to SW CC	fair abund mod oxid bx		456	20	330	1.5
630989	L31N 53+50E	tree root	o-brn slt 60%, cl 30%, 10% oxid ang frags	good to SW CC	fair abund mod oxid bx		388	26	190	1.5

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO.	LOCATION	DEPTH HORIZON DEVELOPMENT	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn <del>p</del> pm	Cu ppm	Ba ppm	Cd ppm
630990	L31N 53+25E	bank	o-brn sit 60%, cl 30%, 10% oxid ang frags	good to SW CC	fair abund mod oxid bx		196	18	130	0.5
630991	L31N 53+00E	25 cm B horiz	o-bm slt 40%, sd 50%, 10% hetro pebs	good to SW CC	bx fit to 1 m with vning of carb, qtz fine st see sample 460253	wk	242	36	170	<.5
630992	L31N 47+50E	15 cm B horiz	gry-blk slt 30%, sd 60%, 5% org, 5% ang sed frags	fair	tag alders		108	54	130	<.5
630993	L31N 47+75E	25 cm B horiz	gry-blk slt 30%, sd 60%, 5% org, 5% ang sed frags	fair	tag alders		124	59	150	<.5
630994	L31N 48+00E	20 cm B horiz	gry-blk slt 40%, sd 35%, 20% cl, 5% org & shale pebs, cl-fi	fair	tag alders		194	66	170	0.5
630995	L31N 48+25E	30 cm B horiz fair	gry-brn slt 60%, sd 35%, 5% ang sed frags	good to W	tag alders & poplar		136	55	170	<.5
630996	L31N 48+50E	30 cm B horiz	brn sd 80%, 20% hetro ang oxid, grn & rd pebs	good to W CC	fault @ 48+40E trends 330 deg		164	52	160	0.5
630997	L31N 48+75E	25 cm B horiz wełl	o-brn sit 60%, sd 30%, 10% hetro ang & oxid frags	good to W CC	hetro bldr		366	19	300	1.5
630998	L31N 49+05E	bank, 25 cm B horiz well	blk slt 60%, sd 30%, 10% hetro ang & oxid frags	good to W CC	rd sed & vol bldr		160	61	180	0.5
630999	L31N 49+25E	25 cm B horiz well	o-bm sit 60%, sd 10%, 30% hetro vol & sed frags	good to W CC	hetro bldr increase in tuff		278	18	190	<.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOC	HOR	izon c	COMPOSITION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS		Cu opm	Ba ppm	Cd ppm
631000 L31N 49+5		riz s 3		good to W CC	NA		370	22	180	0.5
600381 L31N 49+7		rîz s 3		good to W CC	sed & some voi		380	24	240	0.5
600382 L31N 50+0		riz s		good to W CC	sed & some vol		264	22.	260	0.5
600383 L31N 50+2		riz s		good to W CC	sst & frags		222	31	210	0.5
600384 L31N 50+5		riz s			hetro frags (tuff), minor seds		288	26	200	1.5
600385 L31N 50+7		riz s		good to W CC	NA		278	28	210	1
600386 L31N 51+0		riz s 1		good to W CC	NA		218	13	280	2
600387 L31N 51+2		: 5			hetro frags 50% sed, 50% tuff		428	18	200	0.5
600388 L31N 51+5		s			hetro frags 50% sed, 50% tuff		418	24	180	0.5

## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO.	LOCATION	Depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
600389	L31N 51+75E	20 cm bank	o-pk/brn slt 45%, sd 45%, 10% minor org & hetro well oxid frags	good to E CC	sparse hetro frags sitstn & vol		318	27	140	<.5
600390	L31N 52+00E	25 cm B horiz	o-brn sit 40%, sd 40%, cl 10%, 10% grn-gry hetro frags, oxid vol & seds	good to E CC	some hetro frags		264	25	110	0.5
600391	L31N 52+25E	20 cm B horiz	o-brn slt 45%, sd 45%, 10% oxid hetro frags, mainly seds	good to E CC	NA		396	24	150	0.5
600392	L31N 52+50E	25-30 cm B horiz	o-bm sit 70%, sd 20%, 10% oxid vol & sed frags	good to E CC	NA		252	25	120	0.5
600393	L31N 52+75E	25 cm B horiz	o-bm sit 70%, sd 20%, 10% ang-rd sed & tuff frags	good to W CC	57+70 E linear valley trends @ 330-335 deg		352	18	210	0.5
600394	L31N 58+25E	35 cm B horiz well	brn slt 75%, sd 15%, 10% org & hetro frags, minor hem tuff	good to W burn & deadfall	NA		382	46	270	2
600395	L31N 58+00E	20 cm B horiz	brn sit 75%, sd 15%, 10% org & hetro frags, minor hem tuff	good to W burn & deadfall	hetro tuff, vol & shale		366	21	360	1.5
600396	L31N 57+75E	20 cm B horiz	o-bm sit 65%, sd 30%, 5% hetro frags & shale, minor oxid vol	good to W burn & deadfali	NA		668	37	420	3.5
600397	L31N 57+50E	20 cm B horiz	o-brn slt 65%, sd 30%, 5% hetro frags & shale, minor oxid vol	good to W burn & deadfall	ang chi tuff fit		224	31	180	0.5

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO.	LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm j	Cu ppm	Ba ppm	Cd ppm
600398	L31N 57+25E	25 cm AB horiz	gry-blk slt 40%, sd 20%, cl 30%, 10% org & minor ang sed frags <sup>a</sup>	good to E CC	shale bidrs, oxid		252	27	230	1.5
600399	L31N 57+00E	15 cm B horiz well	o-brn slt 65%, sd 30%, 5% hetro frags, mainly shale some minor ?	good to W CC	ang, bx, hem fit.		228	16	210	0.5
600400	L31N 56+75E	20 cm B horiz	o-bm sit 45%, sd 45%, 10% hetro frags, well oxid	good to W CC	dirty tuff, some hem		224	21	180	0.5
598938	L31N 56+50E	20 cm B horiz	o-brn sit 45%, sd 45%, 10% hetro frags	good to W CC	tuff bx fit, sub ang with dk matrix; 30% with xtals to 1 m		384	30	200	0.5
598939	L31N 56+25E	25 cm C horiz well oxid	brn sit 60%, sd 35%, 5% frags oxid tuff, shale	good to W CC	vol & micro tuff bx		544	40	360	0.5
598940	L31N 56+00E	root	brn-bik sit 60%, sd 30%, 10% hetro frags	good to W CC	tuff fit		422	48	310	1.5
598941	L31N 55+75E	20 cm B horiz well	brn sit 45%, sd 45%, 10% hetro frags, ang tuff & micro bx & org	good to W CC	hetro frags, micro bx, tuff, seds		456	25	480	2
598942	L31N 55+50E	18 cm B horiz	o-brn slt 40%, sd 50%, 5% org & shale	good to W CC	grey tuff		346	31	380	1.5
598943	L31N 55+25E	bank	brn slt 30%, sd 60%, 10% org & hetro frags	good to W CC	rd & sub rd hetro frags, vol, tuff & bx		212	51	160	0.5
598944	L31N 55+00E	25 cm AB horiz	gry-brn sit 60%, org 40%	poor tags-str bed flows 330 deg	NA		138	42	240	1.5

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO.	LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
598945	L28N 59+75E	25 cm B horiz well	o-brn sit 45%, sd 45%, 10% hetro frags, well oxid	good to E edge CC	lg sub rd bx bldr minor rd sed		264	19	230	0.5
598946	L28N 59+50E	20 cm B horiz well	o-bm cl 30%, sit 50%, sd 10%, 10% hetro frags, mainly chi mv, well oxid	good to W CC	tuff bldr, hem, sil, bx see rock samp 460254		176	27	220	<.5
598947	L28N 59+25E	25 cm B horiz well	o-brn ci 30%, sit 50%, sd 10%, 10% hetro frags, mainly chl mv, well oxid	good to SW CC			146	27	160	<.5
598948	L28N 59+00E	25 cm B horiz well	o-bm sit 60%, 35% sd, org 5%,	good to W CC	sil or rhy frags		274	50	260	1
598949	L28N 58+75E	25 cm B horiz	brn sit 70%, 10% sd, org 10%, 10% shale frags	good to W CC	NA		188	29	210	0.5
598950	L28N 58+50E	35 cm AB horiz	gry-blk cl 25%, sit 75%	20	NA		150	47	230	0.5
598951	L28N 58+25E	20 cm AB horiz	gry-błk sit 40%, sd 50%, 10% sit-fi org	good to W CC	NA		174	52	1 <del>5</del> 0	1
598952	L28N 58+00E	25 cm B horiz well	gry-blk cl 30%, sit 60%, minor hetro frags cl-pebs	good to W CC	NA		202	41	410	2.5
598953	L28N 57+75E	20 cm AB horiz	o/brn-blk sit 50%, org 50%, minor frags & sit	good to W CC	oxid tuff bx		50	40	140	0.5
598954	L28N 57+50E	tree root B horiz well	brn sit 60%, sd 30%, minor org & frags inc! slt	good to W CC	hetro sed & vol frags		120	39	140	<.5

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
598955 L28N 57+25E	25 cm B horiz well	brn-o/bm sit 60%, sd 30%, org 5%, 5% cl	good to W CC	NA		320	23	200	0.5
598956 L28N 57+00E	tree root 8 horiz	brn sit 20%, sd 70%, 10% hetro frags, fi-co vol	good to W CC	NA		136	39	110	<.5
598957 L28N 56+75E	35 cm AB horiz fair-good	brn cl 30%, sit 60%, 10% org & frags bx tuff	good to W CC	hetro frags		386	67	220	3
598958 L28N 56+50E	20 cm bank	bm slt 45%, sd 45%, 10% ang shale & oxid pebs	good to W CC	NA		304	111	140	<.5
598959 L28N 56+25E	30 cm B horiz well	gry-bik sit 65%, sd 35%, 10% org & fi sed	good to W CC	NA		318	66	210	0.5
86801 L28N 56+00E	25 cm B horiz well	bm slt 70%, sd 25%, 10% frags, mainly rd-ang tuff, minor shale	good to W CC	lg bx bldrs, lim, ang-sub	rd	358	39	190	1.5
86802 L28N 55+75E	30 cm B horiz very well	brn sit 60%, sd 25%, org 5%, 10% oxid hetro frags, shale & minor tuff	good to W CC	sparse incl minor rhy fit		538	30	440	5.5
86803 L28N 55+50E	bank 9 horiz well	bm sit 45%, sd 45%, 10% hetro frags, stt-co vol minor shale	good to W CC	NA		236	39	230	1.5
86804 L28N 55+25E	30 cm B horiz well	o-brn sit 70%, sd 20%, 10% ang-sub rd tuff frags	good to W CC	minor frags hem tuff		178	31	120	0.5
86805 L28N 55+00E	30 cm B horiz well	brn-o/brn sit 40%, sci 40%, 10% oxid vol pebs	good to W CC	tuff bx, ubiquitous oxid, carb vning, hem, frags to 30 cm. see sample 46	0255	294	30	180	1

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO.	LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86806	L28N 54+75E	25 cm B horiz well	o-brn sit 45%, sd 45%, 10% hetro frags, slt-pebs	good to W CC	hetro bldrs - tuff bx- oxid vol		584	30	360	3
86807	L28N 54+50E	35 cm B horiz well	o-bm sit 90%, 10% hetro frags sh & tuff, sit-pebs, well oxid	good to W CC	NA		182	32	130	0.5
86808	L28N 54+25E	35 cm B horiz poor-well	brn sit 90%, 10% hetro frags sh & tuff, sit-pebs, weli oxid	good to E	NA		350	19	370	3
86809	L28N 54+00E	bank	brn sit 90%, pebs 5%, 10% hetro frags, sed & tuff, well oxid	good to E	NA		420	21	300	2
86810	L28N 53+75E	20 cm B horiz	brn sit 70%, sd 20%, 10% hetro frags, sed & vol, sit-pebs	good to W		near creek	172	50	220	0.5
86811	L28N 53+50E	root	brn sit 60%, sd 30%, 10% oxid søds	E to creek	shale well bedded 170/15W well lim, hem	near creek	314	63	180	<.5
86812	L28N 47+75E	35 cm B horiz well	o-brn sit 70%, sd 20%, 10% ang sed frags, stt-co	good to W tag alders	NA		236	65	210	1.5
86813	L28N 48+00E	25 cm B horiz well	bm sit 45%, sd 45%, 10% ang hetro frags, mainly shale	good to W start CC	NA		340	29	270	1
86814	L28N 48+25E	30 cm AB horiz poor	gry-brn sit 70%, sd 20%, 10% sit-fi org	good to W CC	NA		348	32	410	3

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**1998 SOIL SAMPLE DESCRIPTIONS** 

SAMPLE NO. LOCATION	DEPTH HORIZON DEVELOPMENT	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86815 L28N 48+50E	25 cm B horiz	pk-o/brn sit 50%, cl 20%, sd 20%, 10% hetro frags, some oxid, mainly seds; well oxid	good to W CC	NA		558	22	400	4.5
86816 L28N 48+85E	15 cm B horiz well	bm-gry sit 45%, sd 45%, 10% org	good to W CC	seds & hetro frags		302	30	290	1
86817 L28N 49+00E	25 cm B horiz well	brn slt 45%, sd 45%, 10% hetro frags, minor org, seds & vol pebs, slt-pebs	good to W CC	hetro bldrs of tuff & seds	3	394	27	220	0.5
86818 L28, <b>49+25E</b>	25 cm B horiz good	brn sit 45%, sd 45%, 10% hetro frags incl sed, vol & ang sh frags	good to W CC	shale fit, min vol		210	24	230	1.5
86819 L28, 49+50E	25 cm B horiz good	o-brn slt 45%, sd 45%, 10% hetro frags, mainly seds, slt-pebs	good to W CC	hetro bidr		240	27	170	<.5
86820 L28, 49+75E	25 cm B horiz good	brn slt 45%, sd 45%, 10% hetro frags, mainly seds, slt-pebs	good to W CC	hetro bldr sub rd bx & sed		228	21	230	0.5
86821 L28, 50+00E	25 cm B horiz-ST good	brn st 60%, sd 30%, 10% org & hetro frags, st-pebs	good to É CC	mainly ang seds		328	20	380	1.5
86822 L28, 50+25E	25 cm B horiz-ST good	brn slt 60%, sd 30%, 10% org & hetro frags, slt-pebs	good to W CC	NA		198	21	330	1.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86823 L28, 50+50E	25 cm B horiz-ST good	o-brn sit 60%, sd 30%, 10% org & hetro frags, sit-pebs	good to W CC	sm hetro pebs		384	19	230	<.5
86824 L28, 50+75E	25 cm B horiz good	o-brn ci 20%, slt 40%, sd 30%, 10% hetro pebs & org	good to E CC	sparse bx		206	18	160	<.5
86825 L28, 51+00E	25 cm B horiz good	o-brn slt 45%, sd 45%, 10% hetro frags mainly seds, well oxid	good to W CC	hetro bldrs		260	27	180	<.5
86826 L28, 51+25E	25 cm B horiz good	o-bm sit 45%, sd 45%, 10% hetro frags mainly seds	good to W CC	minor hetro fit		206	16	230	0.5
86827 L28, 51+50E	30 cm B horiz-ST	o-brn slt 30%, sd 60%, 10% hetro frags; 50% seds, 50% micro tuff	good to E CC	bx - increase in frags to 5 cm		196	15	220	<.5
86828 L28, 51+75E	20 cm bank	o-brn sit 70%, sd 20%, 10% hetro frags; tuff, minor org	good to E CC	hetro bx & sh bx, frags s increase, minor bx tuff	izə	306	28	200	0.5
86829 L28, 52+00E	25 cm B horiz-ST	brn sit 45%, sd 45%, 10% hetro frags, sit-pebs	good to E CC	NA		210	33	160	0.5
86830 L28, 52+25E	20 cm AB horiz good	bik-o/bm-gry sit 70%, sci 20%, 10% org & roots, sit-fi	fair to E CC	NA		70	12	90	0.5
86831 L28, 52+50E	35 cm B horiz good	bik-o/brn-gry sit 70%, sd 20%, 10% org & roots, sit-fi	fair to SE CC	NA		146	14	180	0.5
86832 L28, 52+75E	40 cm B horiz-ST	brn sit 40%, sd 40%, 20% grav	good to W CC	NA		412	21	270	2.5

## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86833 L28, 53+00E	25 cm B horiz root	brn sit 40%, sd 40%, 20% grav	good to W CC	ang tuff bidrs as rk samp 460258		226	24	290	0.5
86834 L28, 53+25E	35 cm B horiz-ST good	o-brn sit 40%, sd 40%, 20% grav, hetro frags-oxid bx	good to W CC	abundant bx with frags to 1 cm		262	32	260	<.5
86835 L24, 48+50E	35 cm B horiz-ST good	bm slt 40%, sd 40%, 20% grav & well oxid hetro pebs, slt-pebs	good to W tag alders	NA		418	47	240	3.5
86836 L24, 48+75E	35 cm B horiz very well-ST	brn slt 40%, sd 40%, 20% grav & hetro pebs with with lg ang tuff; slt-pebs	good to W tag alders	NA		298	46	200	3
86837 L24, 49+00E	20 cm AB horiz-ST	bik-brn sit 40%, sd 40%, 20% gr pebs, minor sd & org, tuff in hole	good to W CC	NA		378	37	160	2
86838 L24, 49+25E	20 cm B horiz-ST good	brn slt 45%, sd 45%, 20% ang-sub rd tuff frags, lim slt -pebs	good to W CC	abund tuff & co bx, ang to sub rd		470	38	250	2
86839 L24, 49+50E	25 cm B horiz-ST	bm ci 20%, slt 35%, sd 35%, 10% hetro frags, ang seds & vol & ig bx bldr	good to W CC	bx tuff fit		284	40	160	<.5
86840 L24, 49+75E	35 cm B horiz good	brn cl 20%, slt 35%, sd 35%, 10% hetro frags, ang seds & vol & lg bx bldr	good to W CC	bx tuff flt		392	21	260	0.5
86841 L24, 50+00E	30 cm B horiz-ST good	yel/brn-o/brn sit 45%, sd 45%, 10% hetro frags, well oxid mat, mainly tuff & min org	good to W CC	bx tuff fit & seds, well oxid & carb stwk		374	26	160	0.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86842 L24, 50+25E	30 cm B horiz-ST good	brn slt 45%, sd 45%, 10% hetro frags, well oxid mat, mainly tuff & min org	good to W CC	bx tuff fit & seds, well oxid & carb stwk		546	18	290	2
86843 L24, 50+50E	30 cm B horiz-ST good	pk-brn-o sit 45%, sci 45%, 10% hetro frags & org; tuff & seds; sit-pebs; well oxid	good to W CC	sparse tuff		296	21	210	<.5
86844 L24, 50+75E	20 cm B horiz-ST good	brn sit 45%, sd 45%, 10% hetro frags & org; tuff & seds; well oxid	good to W CC	sparse hetro fit & minor seds		274	17	200	<.5
86845 L24, 51+00E	15 cm B horiz-ST good	o-brn-pk sit 40%, sd 50%, 10% hetro frags, oxid vol & tuff; well oxid	good to W CC	sparse hetro fit		362	29	190	<.5
86846 L24, 51+25E	20 cm B horiz-ST good	brn ci 20%, sit 40%, sd 30%, 10% ang hetro frags & org; well oxid	good to W CC	sparse hetro fit		304	25	350	<.5
86847 L24, 51+50E	20 cm B horiz-ST good	bm cl 20%, sit 40%, sd 30%, 10% ang hetro frags, mainly seds well oxid	good to W CC	sparse hetro fit		342	18	360	<.5
86848 L24, 51+75E	20 cm B horiz-ST good	brn cl 20%, slt 30%, sd 35%, 15% oxid ang-rd hetro frags, cl-pebs	good to W CC	more hem & qv in bx		316	21	210	<.5
86849 L24, 52+00E	25 cm B horiz-ST good	brn sit 45%, sd 45%, 10% org & hetro frags-tuff, seds, ang-sub rd, sit-pebs	good to W CC	hetro tuff bx, sed		398	19	320	0.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86850 L24, 52+25E	20 cm B horiz well	brn ci 10%, slt 40%, sd 40%, minor ang tuff, hem; cl-pebs	good to W CC	NA		320	16	250	0.5
86851 L24, 52+50E	25 cm B horiz good	o/bm-pk sit 60%, sd 30%, 10% hetro frags, sed-vol well oxid	good to W CC	hem seds		282	22	160	<.5
86852 L24, 52+75E	25 cm B horiz-ST good	brn sit 45%, sd 45%, 10% ang frags mainly sh, sit-pebs	good to W CC	sh sed @ 336@85 deg W well fractt		346	32	320	0.5
86853 L24, 53+00E	25 cm B horiz-ST good	brn sd 60%, grav 40%, ang sh	good to NE CC	sh o/c to S & ig-subrd bx fit		244	67	370	<.5
86854 L24, 53+25E	20 cm AB horiz	gry-brn sd 55%, grav 40%, org 5%	good to NW CC	rd bx & seds		250	50	260	0.5
86855 L24, 53+50E	50 cm B horiz bank-well	o-bm slt 40%, sd 50%, 10% hetro frags,	good to W CC	vol-sed pebs		306	42	140	<.5
86856 L24, 53+75E	20 cm B horiz-ST	brn-o/brn sit 45%, sd 45%, 10% hetro frags, vol & org	good to W CC	tuff bx bldr, rd-sub ang, some seds		492	29	260	1
86857 L24, 59+25E	20 cm B horiz good	bm cl 20%, sit, 40%, sd 30%, 10% hetro frags & org, frags sed & org, cl-pebs	good to E CC edge	NA		162	21	190	0.5
86858 L24, 59+00E	20 cm B horiz good	brn cl 20%, sit, 40%, sd 30%, 10% hetro frags & org, frags sed & org, cl-pebs	good to E CC	NA		224	36	260	<.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86859 L24, 58+75E	20 cm B horiz well	brn cl 20%, slt, 40%, sd 30%, 10% hetro frags & min org, ang frags sed & tuff	good to W CC	NA		288	41	130	<.5
86860 L24, 58+50E	20 cm B horiz-ST fair	brn sit 45%, sd 45%, 10% hetró frags & minor org, sed & tuff frags	good to W CC	rd bx & tuff bldr		422	21	360	<.5
86861 L24, 58+25E	20 cm B horiz-ST fair	gry-blk sit 45%, sd 45%, 10% hetro frags, ang bx, sit-pebs, min org	good to W CC	sub rd hetro tuff bx		418	26	240	0.5
86868 L24, 58+00E	25 cm AB horiz-ST fair	gry-bik sit 70%, sd 15%, 15% org, ang frags, well oxid sit-pebs	good to W CC	NA		456	24	440	2.5
86869 L24, 57+75E	20 cm AB horiz-ST fair	gry-blk sit 70%, sd 15%, 15% org, ang frags, well oxid sit-pebs	good to W CC	NA		446	24	460	2
86870 L24, 57+50E	20 cm AB horiz-ST fair	gry-blk cl 30%, slt 30%, sd 30%, 10% hetro frags, ang pebs of seds & tuff; cl-pebs	good to W CC	NA		434	49	390	2
86871 L24,57+25E	root 8 horiz	brn cl 45%, slt 45%, sd 10%, cl-co	good to W CC	NA		146	53	110	<.5
86872 L24, 57+00E	25 cm AB horiz-ST fair	brn sit 30%, sd 60%, 10% ang-rd hetro frags, 50% oxid with lim, hem & ?	good to W CC	seds, sh		208	75	230	<.5
86873 L24, 56+75E	bank B horiz good	brn slt 45%, sd 45%, 10% org, min hetro frags, rd sh & tuff	good to W CC	hetro bldr		244	59	230	<.5

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86874 L24, 56+50E	bank B horiz good	yel-brn cl 10%, slt 40%, sd 40%, org 5%, 5% hetro frags	good to W CC	NA		316	48	220	0.5
86875 L24, 56+25E	25 cm B horiz-ST good	bm slt 45%, sd 45%, org 5%, 5% hetro frags of ang sh & sub rd tuff, well oxid	good to W	NA		244	34	160	<.5
86876 L24, 56+00E	25 cm A horiz poor	brn⊷o org, sh & roots	good to W CC	NA		148	111	230	1
86877 L24, 55+75E	25 cm B horiz-ST good	o-bm slt 45%, sd 45%, 10% hetro frags, slt-pebs well oxid	good to W CC	hetro bldrs		222	34	170	0.5
86878 L24, 55+50E	25 cm B horiz-ST good	o-brn sit 45%, sd 45%, 10% hetro frags, sit-pebs	good to W CC	NA		422	23	430	3.5
86879 L24, 55+25E	25 cm B horiz good	yel/brn-o/brn stt 30%, sd 30%, cl 30%, 10% hetro oxid frags, cl-pebs weli oxid	good to W CC	NA		200	25	220	0.5
86880 L24, 54+95E	25 cm B horiz good	or-brn cl 30%, slt 30%, sd 30%, 10% org & hetro frags, small & rd, well oxid; cl-co	cc	NA		178	29	160	0.5
86881 L24, 54+75E	20 cm B horiz good	o/bm-yel/bm slt 60%, sd 30%, 10% hetro frags & orgs, slt-co well oxid pebs	cc	NA		332	29	160	<.5
86882 L24, 54+50E	25 cm B horiz-ST good	o/brn-yel/brn slt 60%, sd 30%, 10% hetro frags & orgs, slt-co well oxid pebs	good to W CC	sil, hem vuggy tuff, rhy; sh o/c in vicini	ty	310	26	160	<.5

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Table 4

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## **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	Depth Horizon Development	CÓLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Си ppm	Ba ppm	Cd ppm
86883 L24, 54+25E	15 cm B horiz-ST good	org/brn slt 45%, sd 45%, 10% ang frags; slt-co	good to W CC	sh o/c		280	19	170	0.5
86884 L24, 54+00E	20 cm B horiz good	yel/bm ci 30%, slt 30%, sd 30%, 10% hetro frags; cl-pebs	good to W CC	ang sed fit, rd bx		190	47	160	0.5
86885 L20, 48+75E	25 cm B horiz well	brn sit 45%, sd 45%, 10% hetro frags of micro tuff & seds, sit-pebs	good to W	NA	rd at 48+60E	394	15	420	4
86886 L20, 48+95E	25 cm B horiz good	brn-yel/pk sit 45%, sd 45%, org 5%, 5% hetro frags of micro tuff & seds, sit-pebs	good to E CC	ang micro bx with ?		354	23	180	2
86887 L20, 49+25E	30 cm AB horiz good	gry-blk slt 70%, sd 20%, 10% org & micro hetro frags	good to E CC	NA		306	22	460	2.5
86888 L20, 49+50E	30 cm B horiz-ST	brn sit 45%, sd 40%, org 5%, 10% hetro ang frags of seds & tuff, sit-pebs	good to W CC	NA		334	24	210	1
86889 L20, 49+75E	25 cm B horiz-ST good	brn cl 10%, sit 40%, sd 40%, 10% ang hetro frags, sit-pebs	good to E CC	rd tuff, sed & bx fit		450	20	360	1.5
86890 L20, 50+00E	20 cm B horiz good	o-brn slt 70%, sci 20%, 10% ang, oxid hetro frags of seds, tuff & sh; oxid, lim, hem	good to W CC	hetro bldrs		246	19	230	0.5
86891 L20, 58+50E	15 cm B horiz-ST	yel-brn sit 60%, sd 30%, 10% hetro frags of oxid sh, sit-pebs	good to E CC	sh bldrs, min tuff sh o/c @ 320 deg/vert		212	48	170	<.5

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Table 4

#### **1998 SOIL SAMPLE DESCRIPTIONS**

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SAMPLE NO. LOCATION	DEPTH HORIZON DEVELOPMENT	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cd ppm
86892 L20, 58+25E	20 cm B horiz good	yel-brn slt 45%, sd 45%, 10% min org & ang sh well	good to E CC	sparse tuff & sh		274	29	140	<.5
86893 L20, 58+00E	10 cm B horiz poor	o-brn sit 60%, sd 30%, org 5%, 5% ang frags mainly sh	good to W CC	hetro bldr sh o/c @ 310 deg/vert @ 57+95E		204	14	110	0.5
86894 L20, 57+85E	root B horiz good	o-brn slt 70%, sd 20%, '10% org & hetro frags, well oxid	good to W CC	sh, some tuff		304	33	160	<.5
86895 L20, 57+55E	20 cm B horiz bank	o-brn slt 70%, sd 20%, 10% org & hetro frags, well oxid	good to W CC	sh o/c 15 m to S		288	42	140	<.5
86896 L20, 57+00E	20 cm B horiz good	o-brn slt 70%, sd 20%, 10% org & hetro frags, well oxid	good to W CC	NA		448	26	210	<.5
86897 L20, 56+75E	20 cm B horiz bank	brn slt 80%, sd 10%, 10% hetro frags, min org; slt-pebs	good to W CC	oxid sh & rd tuff		410	23	250	0.5
86898 L20, 56+50E	20 cm B horiz good	o-brn slt 60%, sd 30%, 10% hetro frags, min org; slt-pebs; well oxid	good to W CC	hetro bldr		324	25	180	<.5
86899 L20, 56+25E	20 cm B horiz good	brn slt 40%, sd 50%, 10% hetro frags,oxid sh & tuff slt-pebs	good to E CC	NA		324	19	190	<.5
86900 L20, 56+00E	25 cm B horiz good	o-brn sit 60%, sd 30%, 10% hetro frags, ang sh & well oxid vol	good to W CC	hetro bidr		412	25	180	<.5

#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86901 L20, 55+75E	25 cm B horiz-ST good	o-brn sit 60%, sd 30%, 10% hetro frags, sub-ang sh & well oxid vol	good to W CC	hetro błdr		354	23	210	0.5
86902 L20, 55+50E	25 cm B horiz good	brn sit 70%, sd 20%, 10% hetro frags; sit-pebs	good to W CC	tuff, some seds		250	29	210	1
86903 L20, 55+25E	25 cm B horiz good	o/brn slt 70%, sd 20%, 10% hetro frags; slt-pebs	good to W CC	hetro tuff		252	20	250	1.5
86904 L20, 55+00E	20 cm B horiz-ST good	bm sit 40%, sd 50%, 10% hetro frags, ang seds & hem tuff	good to W CC	fi tuff, some hem		374	24	210	1
86905 L20, 54+75E	15 cm B horiz bank	o/brn sit 80%, sd 20%, min frags & org; slt-fi well	good to W CC	micro tuff, sil		134	34	120	<.5
86906 L20, 54+00E	30 cm AB horiz good	brn-bik org 30%, slt 50%, cl 10%, 10% hetro frags, ang sh & well oxid vol	good to W CC	NA		378	18	350	17.5
86907 L20, 53+75E	20 cm B horiz-ST good	o-brn ci 10%, sit 40%, sd 40%, 10% org & hetro frags, oxid & ang: ci-co	good to W CC	sparse tuff		256	14	340	3.5
86908 L20, 53+50E	15 cm B horiz-ST fair	bm-o slt 33%, sd 33%, 33% grav, hetro pebs- micro tuff & seds	good to W CC	hetro bidrs & pebs		338	21	170	1.5
86909 L20, 53+25E	25 cm B horiz-ST good	bm-o slt 33%, sd 33%, 33% grav, hetro pebs- micro tuff & seds	goodito E CC	hetro tuff in sample hole & area		288	13	160	1.5

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#### **1998 SOIL SAMPLE DESCRIPTIONS**

SAMPLE NO. LOCATION	depth Horizon Development	COLOUR; COMPOSITION ALTERATION	DRAINAGE & DIRECTION; VEGETATION	GEOLOGY	COMMENTS	Zn ppm	Cu ppm	Ba ppm	Cđ ppm
86910 L20, 53+00E	15 cm B horiz-ST good	o/bm-pk slt 60%, sd 30%, 10% hetro frags of tuff & seds, frags well oxid	good to W CC	hetro tuff & seds, mainly hem tuff		250	18	120	<.5
86911 L20, 52+80E	20 cm B horiz-bank good	brn sit 70%, sd 20%, 10% org & hetro frags	good to W CC	hetro frags		186	62	190	<.5
86912 L20, 52+00E	20 cm B horiz good	brn-o sit 33%, sd 33%, 33% grav, hetro pebs- tuff, min sh; well oxid	cc	mainly tuff		264	27	130	<.5
86913 L20, 51+75E	20 cm B horiz-ST good	o-brn sit 30%, sd 60%, 10% hetro pebs, well oxid, hem tuff, some ang sh	good to E CC	mainly tuff, min sh		174	18	110	0.5
86914 L20, 51+50E	25 cm B horiz-ST good	o-brn sit 30%, sd 60%, 10% hetro pebs, well oxid, hem tuff, some ang sh	good to W CC	mainly tuff, min sh		<b>172</b>	18	140	0.5
86915 L20, 51+25E	25 cm B horiz-ST good	o-bm sit 30%, sd 60%, 10% hetro pebs, well oxid, hem tuff, some ang sh	good to W CC	mainly tuff, min sh		310	18	220	1
86916 L20, 51+00E	20 cm B horiz-ST good	pk-brn sit 45%, sd 45%, 10% co hetro frags, more tuff then seds	good to W CC	tuff & seds		348	22	370	0.5
86917 L20, 50+75E	20 cm B horiz-ST good	o-brn sit 60%, sd 30%, 10% hetro frags & org; sit-pebs	good to W CC	sub-rei tuff & bx		140	52	120	<.5
86918 L20, 50+50E	20 cm B horiz-ST good	brn sit 60%, sd 30%, 10% hetro frags & more org; sit-pebs	good to W CC	tuff bldrs		422	21	270	1

of L50N), and their correlation with zinc and some copper values. As indicated by the good correlation of zinc with barium and by the flanking copper association, the apparent northwestern extension of the Hwy Zone is also a very interesting follow-up target.

outlined to date, the strongest cadmium soil anomaly is As associated with the Central Zone between L24N and L31N. There, the interpreted cadmium soil anomaly is up to 400 m in width, shows good correlation with the strongest part of the Central Zone zinc anomaly, has some direct barium association and has a classical copper association. Immediate drill targets are flanking delineated by the wide, strong IP chargeability anomaly associated with the geochemical anomalies on L26N. The 1997 reconnaissance IP survey was not carried out further to the northwest, but based on the soil geochemistry, the target obviously continues beyond L30N.

Only the initial 1997 soil samples were analyzed for gold and although most did not have any significant gold contents, weak gold values ranging up to 30 ppb were returned from samples on L18N, L22N and L30N, near the originally interpreted east boundary of the Central Zone. The wide IP chargeability and associated zinc and cadmium anomalies on L26N offer a large drill target. Moreover, based on geochemical and geophysical criteria, the eastern section of the Central Zone on most lines is deemed to offer high priority drill targets, including the specific HLEM geophysical anomaly on L30N discussed below.

The Hwy Zone has a strong, anomalous zinc soil signature (soil values up to 800 ppm zinc, with correlating barium, cadmium and silver anomalies), and a flanking copper association on its west side. At L14N, the zone trends northwest on the west side of the highway and at L28N, it swings back across the highway. Based on the geochemical and IP chargeability criteria, the Hwy Zone offers interesting drill targets north of and under the Stewart-Cassiar Hwy between L20N and L28N.

Based on geochemical and geophysical parameters discussed above, the Rhyolite Zone offers an interesting, initial drill target at about 62+00E on L14N. The geochemical expression of the Rhyolite Zone remains open to the east and it remains a particularly intriguing target in view of the felsic lithologies, the positive magnetic association that may reflect dioritic intrusive rocks, and its overall similarity to the gold and copper targets on the Deltaic Grid, located a few km to the east.

#### 8.C. GEOLOGICAL SURVEYS:

The results of the geological survey are integrated with the historical geological reconnaissance information on Map 9. The geological survey confirmed that the grid is 99% overburden covered. The overburden generally consists of an A horizon with

variable thickness that increases substantially in areas of low ground; an often well developed B horizon showing various degrees of oxidation, including spectacular pink, yellow and orange hues; a stoney C horizon that is readily apparent in proximity to outcrop and in subcrop areas; and, some extensive, underlying sand and gravel deposits, particularly on the west side of the Stewart-Cassiar Hwy in proximity to the Bell-Irving River. There, a gravel deposit is currently being developed by B.C. highway crews - no geochemical soil anomalies are located in that area.

The sparse outcrops located during the 1998 program comprise mainly black shale and mudstone . The rocks have platy cleavage, trend northwest, have near vertical dips and display varying degrees of The main evidence as to specific types of limonitization. bedrock lithologies is often overburden covered apparently provided, at many locations, by the dominance of a particular type of angular float and/or subcrop. Based on this evidence, the most pervasive rock type underlying the grid is interpreted to be altered crystal tuff and tuff breccia. Breccia fragments ranging up to over 30 cm are often found in a silicified crystal tuff The rocks are usually strongly altered (hematized, matrix. limonitized, manganese stained, silicified, and chloritized with or without chlorite/calcite/quartz stockworks) and show varying degrees of sulfidization (usually vuggy pyrite). The rock type is considered important, particularly when hematized, since it is the main host rock of gold and copper mineralization on the Todd Creek Property and on the Deltaic Grid, east of the Delta West Grid.

The next most pervasive, apparent bedrock types are: fine grained, silicified mafic volcanic rock of andesitic composition, often with quartz and white calcite fracture fillings; sediments (shale, mudstone, sandstone), often hematized and forming liner ridges; bleached rhyolite and dacite, often hematized and sulfidized with disseminated pyrite; and, minor intrusive rocks of dioritic composition. The latter rock type is usually well pyritized and has variable magnetite content.

It is further postulated that the Hwy Zone is apparently associated mainly with altered tuff and tuff breccia; the Central Zone with altered mafic volcanics, tuff breccia and some mudstone and shaly sediments; and, the Rhyolite Zone with dacite and rhyolite. The rock types host the gold/copper mineralization on the Deltaic Grid, approximately 8 km to the east, and most of the important deposits in the Stewart Camp.

A number of linear, northwest trending fault valleys were delineated that may control or have an important role in the genesis of the target mineralization. The prominent positive magnetic anomaly associated with the felsic volcanic rocks on the eastern margin of the reconnaissance Delta West Grid may reflect dioritic intrusions. If so, this geological setting is similar to that of the Deltaic Grid to the east where interesting gold/copper mineralization is associated with altered felsic pyroclastic rocks intruded by pyritized diorite. Carbonatized mudstone occurs as interbeds in the mineralization. Gold/copper mineralization at the Red Mountain deposit located near Stewart, is also associated with Jurassic, dioritic intrusions.

#### 8.D. PROSPECTING SURVEYS:

Prospecting activities were concentrated on locating the possible source of the geochemical and geophysical anomalies. Historical surveys had located a variety of altered float rocks, often with anomalous copper contents ranging up to 269 ppm, with generally little anomalous zinc and no gold. However, a float sample of altered tuff breccia located on L14N at 56+85E did contain 95 ppb gold and 252 ppm copper. The weakly pyritized sample is located in an area of a strong chargeability anomaly and correlating copper, zinc and barium soil anomalies.

Prospecting was carried out in November after the frost had destroyed much of the grassy ground cover. Areas of angular float and subcrop boulders were examined and 32 representative samples of generally well altered rock were collected. Twenty composite samples (Map 9, Table 5) were subjected to 32 element ICP analysis and 1 sample (460256) was assayed by FA-AA for gold (Table 5, Appendix 2). Most of these samples comprise altered tuff and tuff breccia that show various degrees of hematization and Other samples collected include pyritized diorite silicification. and weakly sulfidized, hematized rhyolite.

Five of the 1998 samples also have anomalous copper contents. The majority of all the rock samples with anomalous copper contents are located in some proximity to the eastern segment of the Central Zone, thus adding further credibility to the proposed diamond drilling referenced in Section 8B.

#### 8.E. HLEM GEOPHYSICAL SURVEY:

The 10 km horizontal loop EM survey was carried out on seven grid lines (L14N, L2ON, L22N, L24N, L26N, L28N AND L3ON) with a MAX-MIN I-10 Electromagnetic System. The survey was carried out mainly in the clear cut, as entangled dead fall and wind fall on the east edge of the clear cut negated further advancement. Flooded bogs on L50N, L18N and on the west side of the Stewart-Cassiar Hwy further mitigated the additional surveying.

The equipment was rented from Apex Parametrics Limited of Uxbridge Ontario and the system specifications are shown in Table 6. The Delta West HLEM survey utilized 3 frequencies (880, 3520, 14080) and a 100 m coil separation. In-phase and quadrature components of the secondary magnetic field, in percent of primary field, were taken at 25 m intervals and slope corrections were made at each station using an inclinometer. Profiles of the in-phase and quadrature are shown on Figures 7A-7G, and the locations of the interpreted, weak conductors are also shown on Maps 5-8.

The survey was successful in delineating a number of weak to very weak, parallel to subparallel HLEM conductors, a number of which, because of their general linearity, strike lengths and interesting correlations with geophysical and geochemical anomalies, are deemed to be of particular interest. The conductors are discussed below:

#### CONDUCTOR A:

The weak conductor trends northwest and has been traced for about 700 m (L30N to L24N). Since it is located at the eastern edge of the survey area, it is not fully delineated on all lines and its dip remains uncertain. The conductor shows some direct correlation with copper, zinc, cadmium and barium soil geochemistry, and moderate to strong IP chargeability correlation on L26N - the only line along its strike length that has been surveyed with IP. Host rocks apparently include felsic volcanics, and crystal tuff and crystal tuff breccia.

#### CONDUCTOR B:

The weak conductor parallels Conductor A, has an interpreted strike length of over 1.6 km (L14N to L30N) and a near vertical dip. On L26N and to the northwest, the conductor has direct correlation with copper, cadmium and barium, and a more flanking correlation with zinc soil geochemistry. To the southeast of L26N, the main correlations are flanking for the copper, cadmium and barium, and direct and flanking to some of the strongest zinc geochemistry. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. Host rocks apparently include felsic volcanics, pyroclastic rocks and shaly sediments.

#### CONDUCTOR C:

The weak conductor parallels Conductor B, and also has an interpreted strike length of over 1.6 km and a near vertical dip. On L24N and to the northwest, the conductor has direct correlation with copper, and a flanking correlation with cadmium, barium and some of the strongest zinc soil geochemistry. To the southeast of L26N, the conductor has a more direct correlation with zinc and a flanking association with respect to copper, cadmium and barium. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. Host rocks include mainly crystal tuff and crystal tuff breccia and some felsic volcanic rocks. TABLE 5

# FLOAT AND SUBCROP ROCK SAMPLES DELTA WEST PROJECT AREA

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SAMPLE NO., LOC TYPE:	NAME, COLOUR:	DESCRIPTION:	g/t	SELECT Ag ppm	ED ANA Cu ppm	LYSES Zn ppm	As ppm	Cd ppm	Ba ppm
460251 L30, 53+75E ANG FLT	ALT TUFF BX W: GRN- OBRN FR: GRN GR	MOD SIL, HEM, LIM FRAGS TO 20 CM MIN OXID VUG REM PY		<.2	55	106	16	0.5	<b>50</b>
460252 L31, 54+75E ANG FLT	SIL VOL W: GRN-BRN FR: GRN	MOD CHL, SIL, CW QTZ VN, TR PY, CAL ON FR FI GR -APH		<.2	23	114	62	0.5	90
460253 L31N, 53+00E ANG FLT UP TO 1M	ALT ANDESITE W:OR-B-GR FR:GRN-GR	FINE STWK CARB, QTZ FI GR, SIL, MOD LIM MN AND CARB ON FR AND JNTS 2-3% DISSEM PY IN VNS AND MATRIX		<.2	49	90	2	<.5	30
460254 L28, 59+00E ANG FLT	ALT RHYOLITE W: OB-PK-BUFF BRN FR: GR BLK	WELL LIM, SOME HEM FI-APH, LOC EARTHY AND VUGGY, NUM FRS 1% PY		<.2	7	38	2	<.5	100
460255 L28, 59+50E ANG FLT	ALT CT W: YEL BRW FR: DK B GR	80% FI GR, SIL MATRIX 20% XLS 1-3 MM WH QTZ, MIN QTZ VEINGIN WELL LIM, 1% PY IN ISOLATED PATCHES		<.2	6	48	6	<.5	50
460256 L28, 55+00E ANG FLT	PY DIORITE W: OB FR: GRN GR	FI-CO GR, SUGARY, EARTHY WK - STR MAG 5-7% DISSEM PY WELL LIM ON SURFACE	<.005	<.2	• <b>, 79</b> ∙	88	<2	<.5	50

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SAMPLE	NAME,	DESCRIPTION:		SELECT	ED ANA	LYSES			
NO., LOC TYPE:	COLOUR:		Au g/t	Ag ppm	Cu ppm	Zn ppm	As ppm	Cd ppm	Ba ppm
460257 L28, 55+00E ANG FLT	ALT ANDESITE W:OB-WH-BRW FR: GRN GRY WH	FI , MOD SIL, WELL FR, INTENSE QTZ, CARB STWK WELL LIM ON FR, 1% DISSEM PY		<.2	119	74	10	<.5	60
460258 L28, 53+10E ANG FLT	ALT TUFF B X W: OB FR: GR GRN	FI SIL MATRIX WITH FRAGS TO 5CM, UP TO 2% FI DISSEM PY, VUGGY, LIM ON FR, SOME QTZ/CARB VN		<.2	8	84	22	<.5	90
460259 L 24, 49+35E ANG FLT	ALT TUFF BX W:OB GRN BLK F: GRY GRN WH	HET FRAGS TO 25 MM IN SIL, FI - APH MATRIX, LENSES CARB TO 3 CM, VUGGY, WELL LIM ON FR SURF NO VISIBLE SULF, BUT OXID VUGS	_	<.2	10	146	12	<.5	90
460260 L 24, 49+35E ANG FLT	ALT XL TUFF W:OB BLK F: GRY GRN	MICRO QTX XLS IN SIL MATRIX WELL LIM, MOD MN, CHL WH CAL, QTZ LENSES TO VN UP TO 15 CM, VUGGY - SULF REMS?	not subm	itted					
460261 L 24, 49+35E ANG FLT	ALT XL TUFF W:OB F: GRY GRN PK	MICRO QTX XLS IN SIL MATRIX WELL LIM, MOD HEM EUH VUGS - 2-3% REM PY EARY TO VUGGY, PORPH TEXT MIN QTZ VN TO 10 CM AND WK STWK		<.2	3	42	12	<.5	40
460262 L 24, 49+75E ANG FLT	ALT XL TUFF W:BRN, PK, WH F: GRY BLK WH OB	MICRO QTX XLS TO .5 MM IN SIL APH MATRIX, PATCHES CARB, MOD STR HEM ON FRS, SOME EARTHY VUGGY TEXT, LOC MN STAIN, AND VN WITH HEM		<.2	4	28	<2	<.5	90
460263 L 24, 50+20 ANG FLT	RHY OF SIL TUFF W: PK TO OB F: GRY TO WH	HEM, LIM, CHL ON FRS WELL SIL, APH TO VUGGY TEXT, POSS 2-3% REM SULF AS EUH VUGS		<.2	3	8	8	<.5	120
460264 L 24, 50+25 ANG FLT	RHY OR SIL TUFF W: PK TO OB F: GRY PK WH	WELL HEM, MOD LIM, MN, CW QV AND STRINGERS, SOME VUGGY PY, APH SIL MATRIX, SOME MICR XLS, LOCAL PATCHES CAL WITH HEM COAT		<.2	4	44	2	<.5	40

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SAMPLE NO., LOC TYPE:	NAME, COLOUR:	DESCRIPTION:	S Au g/t	ELECT Ag ppm	ED ANA Cu ppm	LYSES Zn ppm	As ppm	Cd ppm	Ba ppm
460265 L 24, 52+50E ANG FLT	ALT TUFF BX W: PK OB WH F: GRY GRN PK	MIN XLS TO .3 CM IN SIL APH MATRIX WELL FR, HEM LIM ON FR WELL LIM, HEM; SOME DISSEM PY TO .5 CM, MOST SULF IN MATRIX	_	<.2	7	64	26	<.5	30
460266 L 24, 52+50E ANG FLT	RHYOLITE W: PK OB WH GRY BLK F: PK WH	PK WH FLOW BANDING, WELL SIL, HEM, MN STAIN, 2-3 % DISSEM PY ON FRS AND OXID VUGS; APH SIL MATRIX		<.2	3	22	16	, <.5	40
460267 L 24, 53+75E ANG FLT	ALT TUFF BX W: PK OB F: GRY PK WH	FRAGS TO 5 CM IN FI CHL, CARB MATRIX XLS TO 0.2 CM, WELL HEM MATRIX, CW BLEBS AND STWK OF CARB STR SIL, VUGGY ON SURFACE		<.2	37	114	142	<.5	110
460268 L 20, 56+85E ANG FLT	ALT XL TUFF W: PK OB F: GRY PK WH YEL	XLS TO .5 CM IN SIL MATRIX DISSEM AND PATCHES HEM, JAR AND AL, OXID VUGS, SOME LIM COAT, DISSEM PY, ASPY, 2-3%,		<.2	1	12	<2	<.5	120
460269 L 20, 53+25E ANG FLT	ALT XL TUFF W: PK OB F: GRY PK BLK	XLS TO .3 CM IN SIL HEM MATRIX DISSEM AND PATCHES HEM, JAR SULF EUH VUGS	_	<.2	3	42	14	<.5	50
460270 L 20, 53+00E ANG FLT	ALT XL TUFF W: PK WH F: GRY WH PK	XLS TO 0.1 CM IN SIL, APH HEM MATRIX SOME LIM, QTZ VN TO 2 CM, VUGGY, EARTHY, JAR, AL ON FRS		<.2	1	16	8	<.5	90
460271 L 32, 55+25E ANG FLT	ALT TUFF BX W: OB BUFF WH F: GRY GRN	70% BX FRAGS TO 4 CM IN FI GR SIL MATRIX,, MATRIX AND FRAGS MICRO TUFF - QTZ WH QTZ XLS; WELL LIM ON W, LOC VUGGY, EARTHY PATCHES OF CARB 1% DISSEM PY, LOC 2-3%		<.2	50	86	24	<.5	200
598761 L20, 50+50E ANG FL	ALT TUFF BX W: OB BUFF WH PK BLK F: GRY GRN WH PK BLK	WELL DEVEL STW MN, QTZ	not subm	itted					

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SAMPLE	NAME,	DESCRIPTION:	SELECTED ANALYSES						
NO., LOC TYPE:	COLOUR:		Au	Ag	Cu	Zn	As	Cd	Ba
			g/t	ppm	ppm	ppm	ppm	ppm	ppm
598768 L20, 50+50E ANG FL	RHYOLITE W: PK OB WH GRY BLK F: PK WH	WELL SIL, VUGGY, SULF REMS TO 2% WELL HEM, SOME MN APH TEXT, LIM AND HEM ON FRS	not submitted						

TABLE 6

**MAXMIN I-10 EM SYSTEM** 

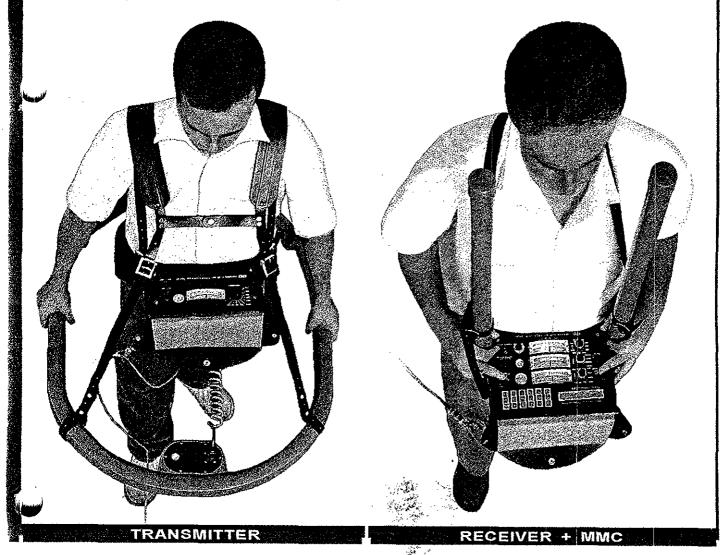
Designed for geoengineering applications and groundwater and mineral exploration, continuing and expanding the concepts of the earlier and highly popular MaxMin models.

Frequency span is extended to ten octavely spaced frequencies from 110 to 56320 Hz, with increased range and number of coil separations. These and other developments result in greater performance, with more applications and enhanced interpretation.

Advanced spheric and powerline interference rejection is still further improved, resulting in faster and more accurate surveys, particularly at the larger coil separations.

MaxMin Computer or MMC, which is described in a separate data sheet, is offered for digital data processing, display, storage and transfer. The MMC displays and stores the inphase and quadrature readings, their standard deviations, and the corresponding apparent ground conductivity values. Rough terrain surveys are also simplified with the MMC.

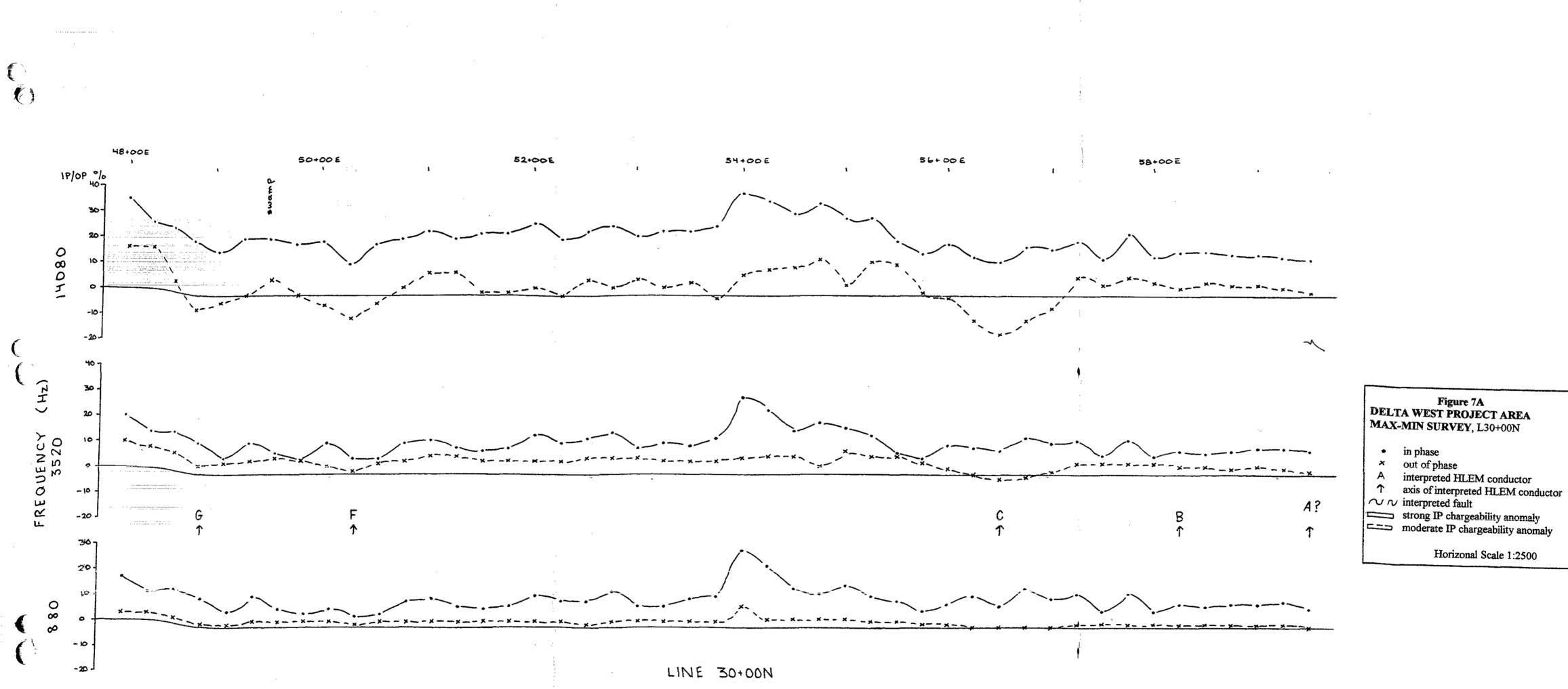
Data interpretation and presentation programs are available for layered earth parametric soundings and discrete conductor surveys done with MaxMin EM.



# MAXMIN I-10 ELECTROMAGNETIC SYSTEM SPECIFICATIONS:

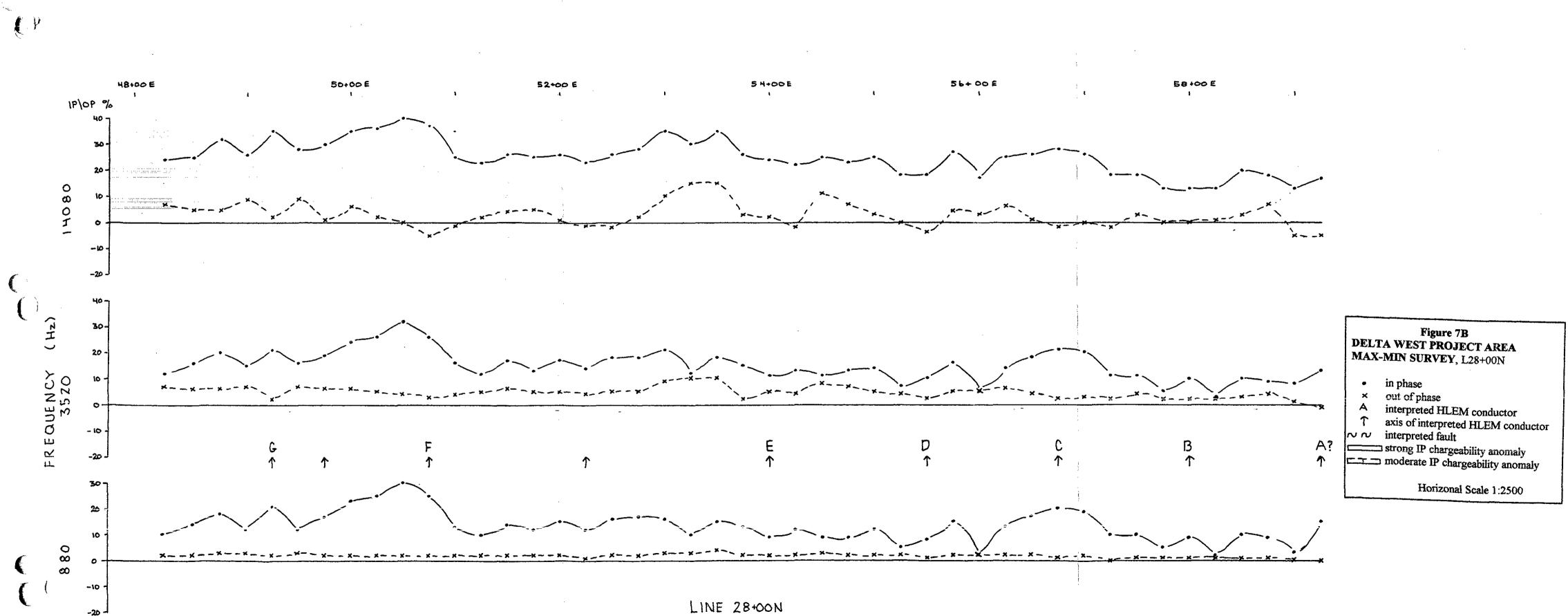
FREQUENCIES:	110, 220, 440, 880, 1760, 3520, 7040, 14080, 28160 and 56320 Hz.	SURVEY DEPTH PENETRATION:	From surface down to 1.5 times coil separation for large horizontal target and 0.75 times coil separation for large vertical target, values typical.
COIL SEPARATIONS:	SET NO. 1: 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (the standard set). SET NO. 2: 10, 20, 40, 60, 80, 100, 120, 160, 200, 240 and 320 metres (selected with grid switch in	REFERENCE CABLE:	Lightweight unshielded 4/2 conductor tefion cable for maximum operating temperature range and for minimum pulling friction.
	receiver). SET NO. 3: 50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 and 1600 feet ( selected with grid switch in receiver).	INTERCOM:	Voice communication link provided for operators via the reference cable.
	·	TEMP. RANGE:	Minus 30 to plus 60 degrees Celsius, operating.
TRANSMITTER DIPOLE MOMENTS:	110 Hz:         200 Atm²         3520 Hz:         80 Atm²           220 Hz:         190 Atm²         7040 Hz:         40 Atm²           440 Hz:         170 Atm²         14080 Hz:         20 Atm²           880 Hz:         140 Atm²         28160 Hz:         10 Atm²           1760 Hz:         110 Atm²         56320 Hz:         5 Atm²	RECEIVER BATTERIES:	Four standard 9 V - 0.6 Ah alkaline batteries. Life 25 hours continuous duty, less in cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).
MODES OF OPERATION:	MAX 1: Horizontal loop or slingram - transmitter and receiver coil planes horizontal and coplanar. MAX 2: Vertical coplanar loop mode transmitter and receiver coil planes vertical and coplanar. MIN 1: Perpendicular mode 1 - transmitter coil plane horizontal and receiver coil plane vertical.	TRANSMITTER BATTERIES:	Standard rechargeable gel-type lead-acid 6 V $\cdot$ 28 Ah batteries (4 x 6 V - 7.2 Ah) in nylon belt pack. Optionally rechargeable long life 6 V - 28 Ah nickel-cadmium batteries (20 x 1.2 V - 7 Ah) with ni-cad chargers - best choice for cold climates.
	MIN 2: Perpendicular mode 2 - transmitter coil plane vertical and receiver coil plane horizontal.	TRANSMITTER BATTERY CHARGERS:	Lead acid battery charger: 7.3 V @ 2.8 A, Ni-cad battery charger: 2.8 A @ 8 V nominal output. Operation from 110 - 120 and 220 - 240 VAC, 50 -
PARAMETERS MEASURED:	In-phase and quadrature componets of the secondary magnetic field, in % of primary field.		60 Hz, and 12 - 15 VDC supplies.
READOUTS:	Analog direct edgewise meter readouts for in- phase, quadrature and tilt. Additional digital LCD	RECEIVER WEIGHT:	8 Kg carrying weight (including the two ferrite cored antenna colls), 9 Kg with MMC computer.
	readouts provided in the optional MMC computer. Interfacing and controls are provided for ready		16 Kg carrying weight.
RANGES OF	plug-in of the MMC. Switch activated analog in-phase and quadrature	SHIPPING WEIGHT:	60 Kg plus weight of reference cables at 3 Kg per 100 metre, plus optional items if any. Shipped in two aluminum lined field <i>I</i> shipping cases.
READOUTS:	scales: $0 \pm 4$ %, $0 \pm 20$ % and $0 \pm 100$ %, and digital $0 \pm 199.9$ % autorange with optional MMC. Analog tilt $0 \pm 75$ % and $0 \pm 99$ % grade with MMC.	STANDARD SPARES:	Spare transmitter battery pack, spare transmitter battery charger, two spare transmitter retracilie connecting cords, spare set of receiver batteries.
RESOLUTION:	Analog in-phase and quadrature 0.1 to 1 % of primary field, depending on scale used, digital 0.01 % with autoranging MMC; tilt 1 % grade.	OPTIONS AND ACCESSORIES,	MMC, MaxMin Computer option     Data interpretation and presentation programs     Deformed cables, lengths on required
REPEATABILITY:	0.01 to 1 % of primary field, typical, depending on frequency, coil separation and conditions.	PLEASE SPECIFY:	<ul> <li>Reference cables, lengths as required</li> <li>Reference cable extension adapter</li> <li>Handheld inclinometer for rough terrain</li> <li>Receiver extended life lithium batteries</li> </ul>
SIGNAL FILTERING:	Powerline comb filter, continuous spheric noise clipping, autoadjusting time constant, and more.		<ul> <li>Transmitter ni-cad battery &amp; charger option</li> <li>Minimal, regular or extended spare parts kit</li> </ul>
WARNING LIGHTS:	Receiver signal and reference warning lights to indicate potential error conditions.		Specifications subject to changes without notification 93 - 10 - 05

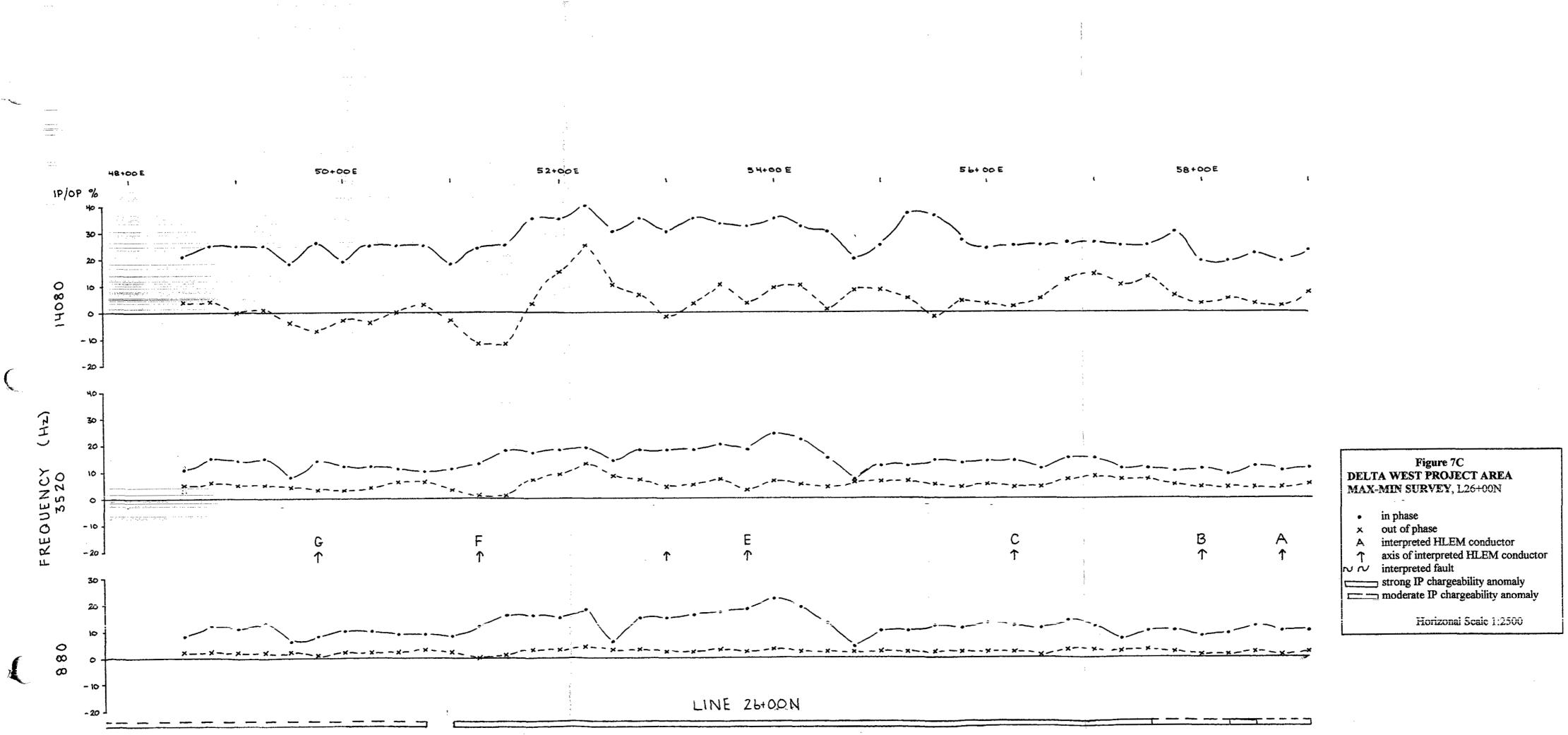
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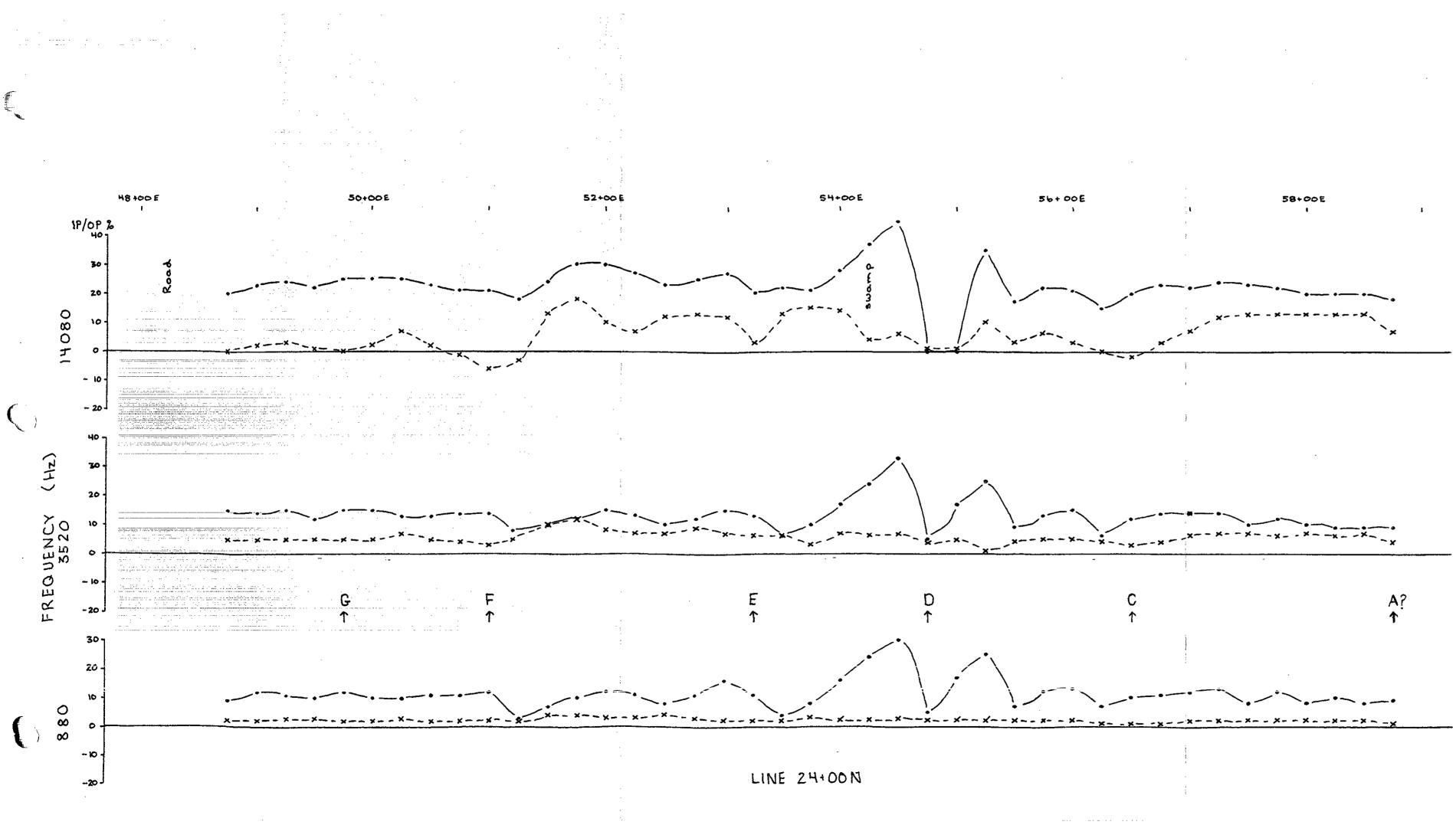


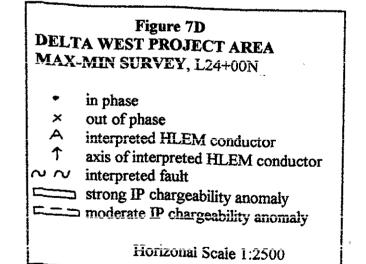
- Figure 7A DELTA WEST PROJECT AREA MAX-MIN SURVEY, L30+00N

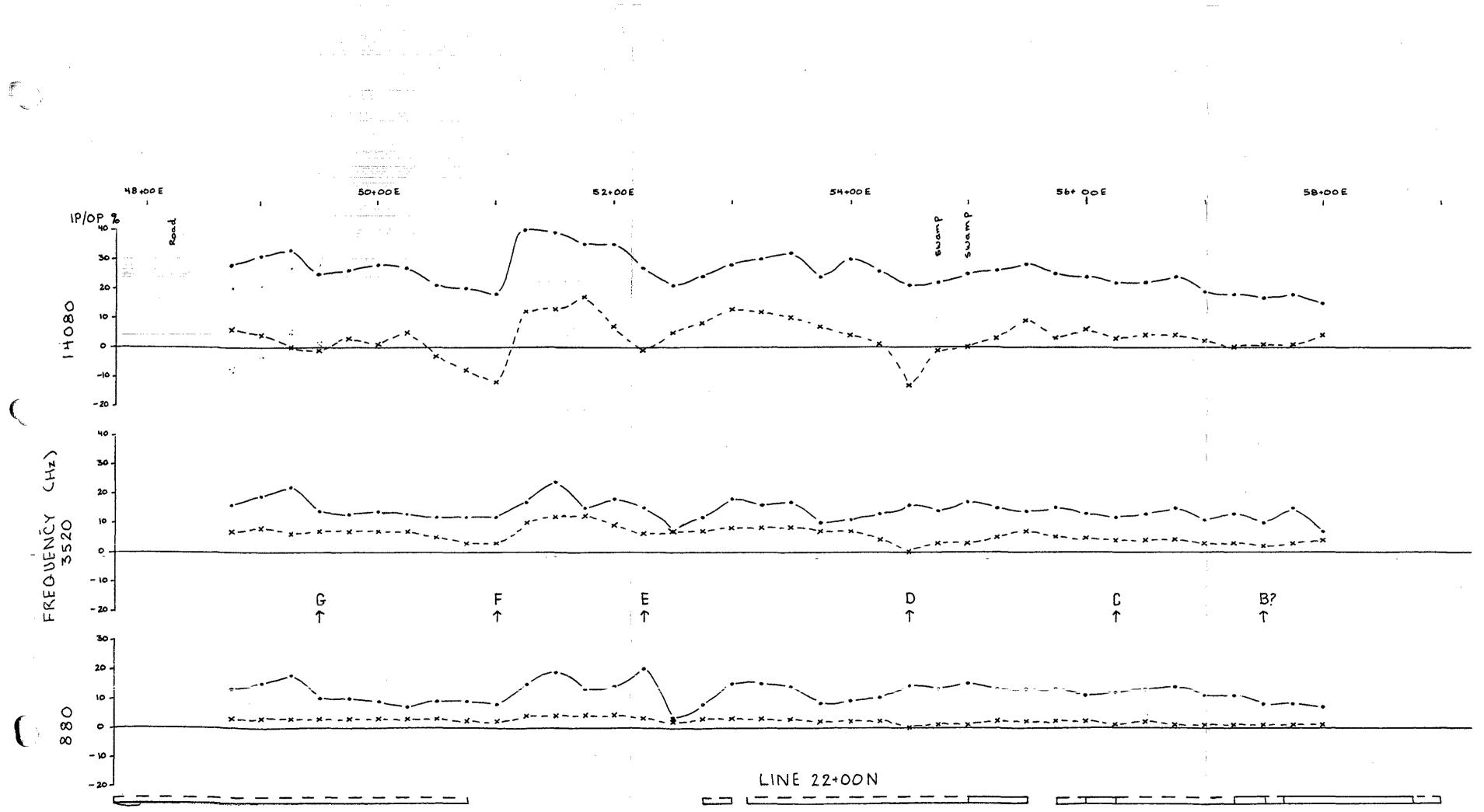
Horizonal Scale 1:2500

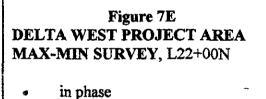


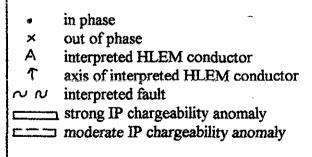




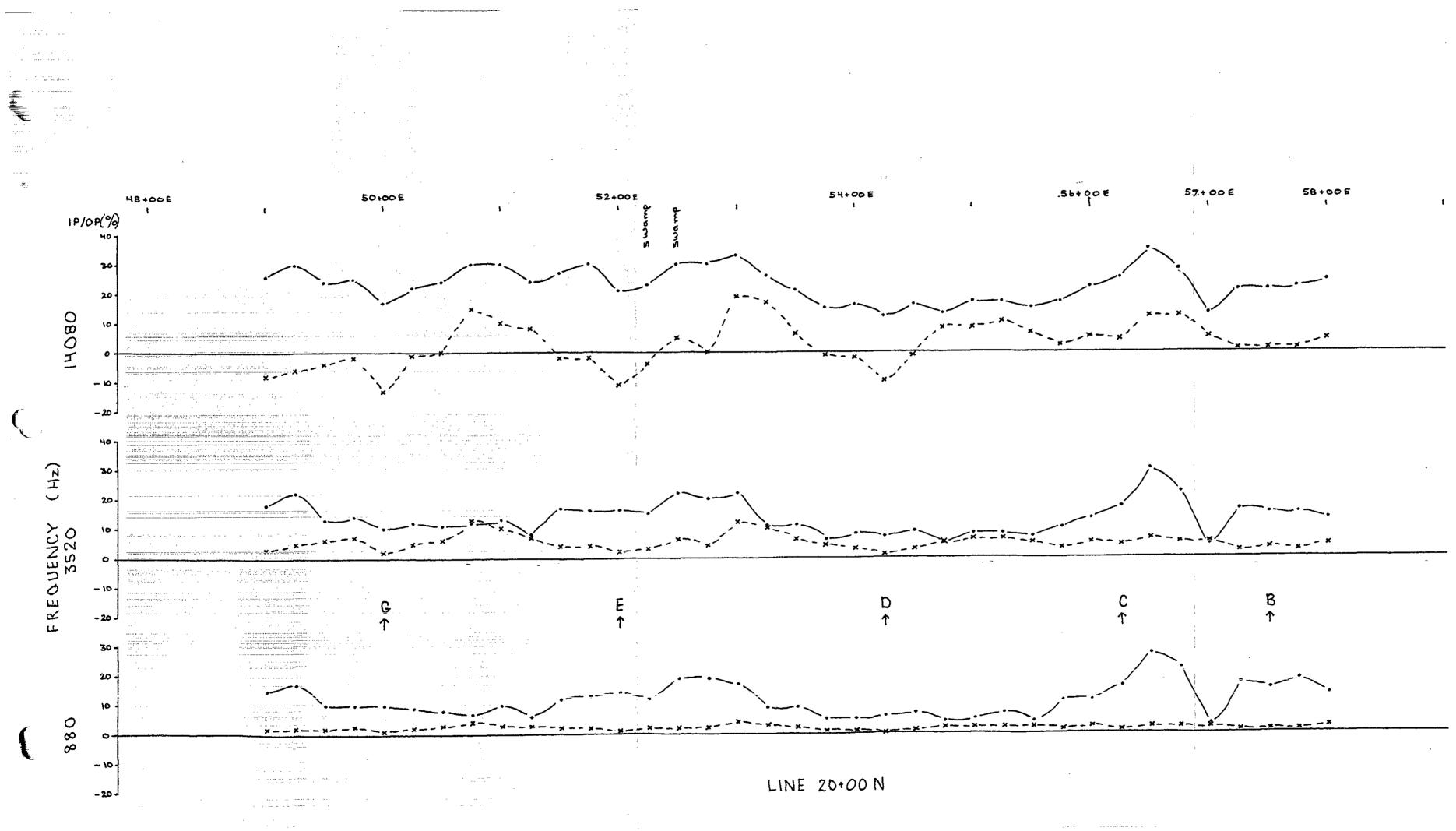




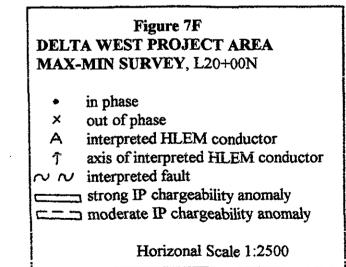


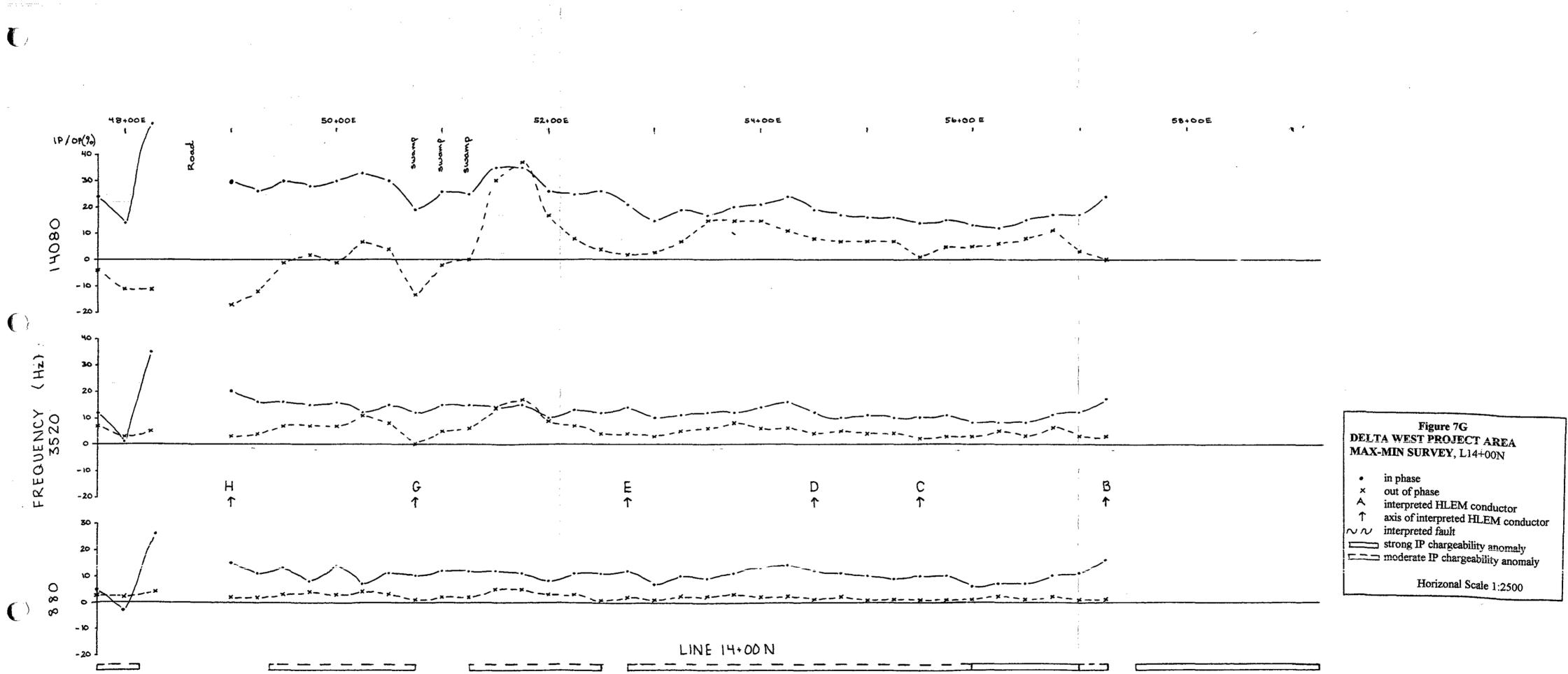


Horizonal Scale 1:2500









#### CONDUCTOR D:

The weak conductor parallels Conductor C, and also has an interpreted strike length of over 1.6 km and a near vertical dip. The conductor generally has a flanking association with copper, barium, and cadmium soil geochemistry, with the exception of north of L26N, where it has direct correlation with cadmium. The conductor mainly has a direct association with anomalous zinc soil geochemistry, but a flanking relationship with the higher zinc soil values. On lines surveyed with IP, the conductor has moderate to strong IP chargeability correlation. The central and eastern segments of the conductor trend subparallel to topographic linears, which flank it on the east and west, and which are interpreted to be faults.

#### CONDUCTOR E:

The weak conductor parallels Conductor D, and has an interpreted strike length of about 800 m (L20N to L28N) and a near vertical dip. The conductor generally has a closely flanking to direct association with copper, cadmium, and zinc, and a more direct association with barium soil geochemistry. On lines surveyed with IP, the conductor has strong IP chargeability correlation on L26N. The central portion of the conductor is flanked to the east by an interpreted, subparallel fault. The conductor appears to be associated with pyroclastic and mafic volcanic rocks.

#### CONDUCTOR F:

The weak conductor parallels Conductor E, and has an interpreted strike length of over 1.6 km and a dip ranging from near vertical to easterly. The conductor has a closely flanking to direct association with barium, a generally direct association with zinc, and some direct association with cadmium soil geochemistry. On lines surveyed with IP, the conductor has strong IP chargeability correlation on L26N. The conductor appears to be associated mainly with crystal tuff, and mafic and felsic volcanic rocks.

#### CONDUCTOR G:

The weak conductor parallels Conductors F and E, and has an interpreted strike length of over 1.6 km and a dip ranging from near vertical to easterly. The conductor has a flanking relationship on the east side of the main zinc, copper, cadmium, and barium soil geochemical anomalies of the Hwy Zone. On lines surveyed with IP, the conductor has moderate IP chargeability correlation. The conductor appears to be associated mainly with crystal tuff, and crystal tuff breccia.

#### 9. CONCLUSIONS:

The Delta West Project is deemed to offer a very large, prospective target area for the discovery of substantial, possibly stratabound polymetallic deposits located in close proximity to, and under the Stewart-Cassiar Hwy. The geological environment is mainly overburden covered, but as interpreted by the GSC and the author, includes the same favourable Hazelton volcanic and sedimentary rocks and structural attributes that host the most important deposits of the Stewart Camp, including the Eskay Creek deposit.

The promising exploration environment also includes a northwest trending structural fabric, and a northwest trending, anastomosing fabric of zinc, copper, cadmium and barium soil geochemical anomalies that signature many of the most important gold/copper deposits of the Stewart Camp. The geochemical anomalies also display an intricate zoning that is further characteristic of such deposits. Based on reconnaissance IP surveying, broad drill to strong chargeability targets are delineated by moderate anomalies. Based on the detailed HLEM surveying, it is concluded that Aerodat airborne conventional EM anomalies delineated in 1997 have bedrock sources, and that a number of the HLEM conductors with positive geochemical and geological associations offer high priority, initial drill targets in proximity to the Stewart-Cassiar Hwy.

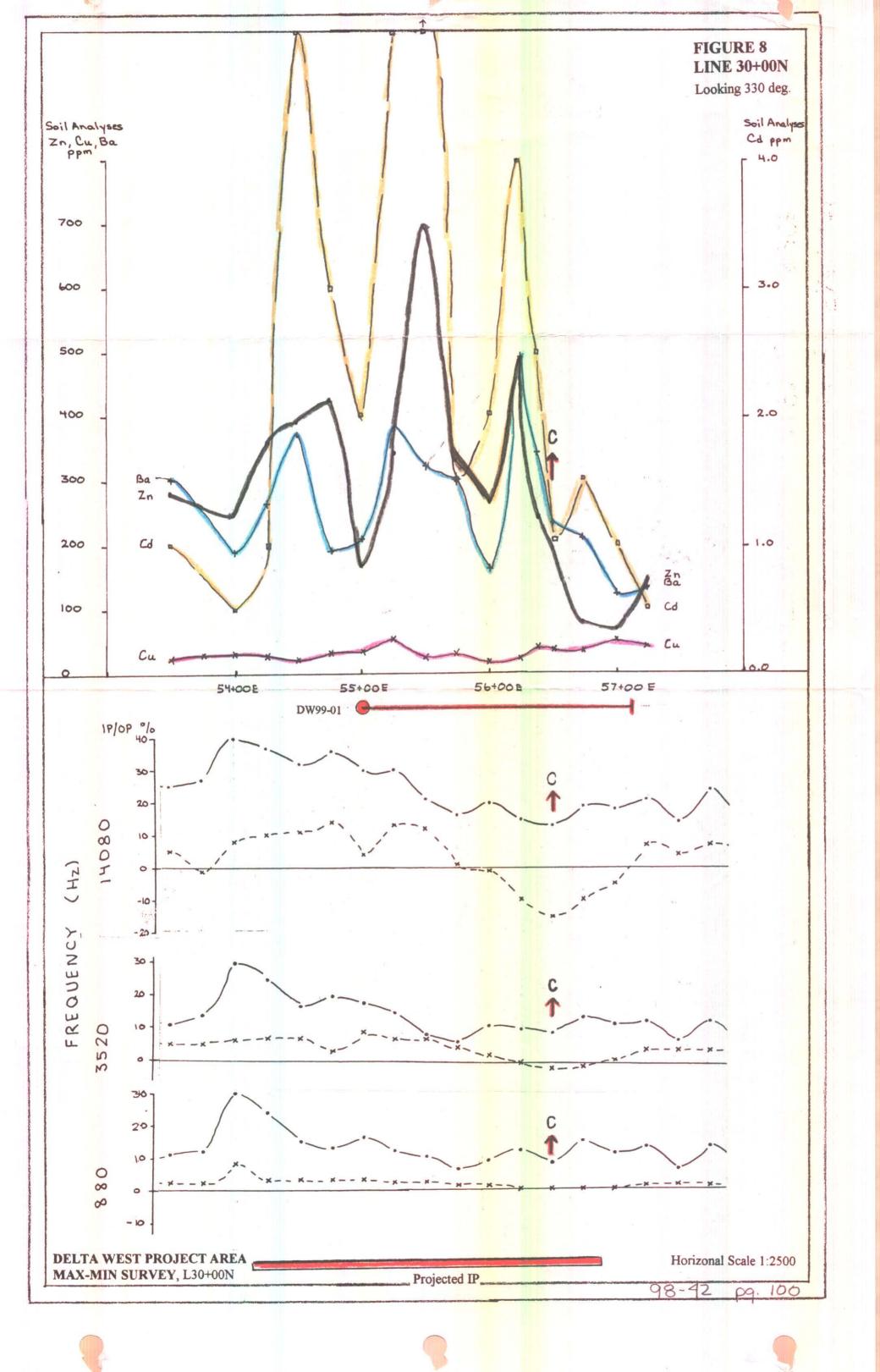
#### **10. RECOMMENDATIONS:**

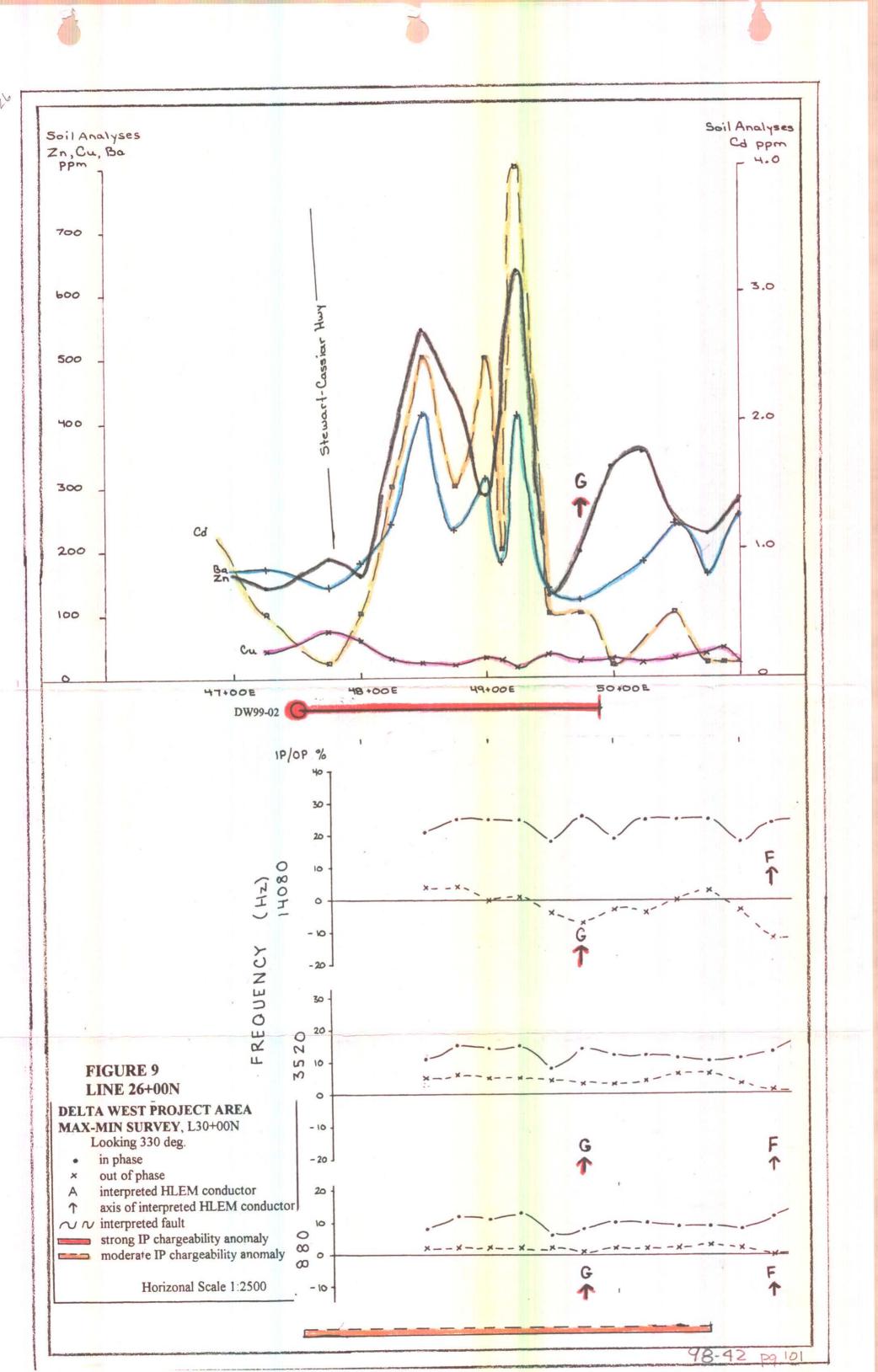
It is recommended that initially, at least 2 of the priority drill targets (Figures 8, 9) delineated to date be evaluated with approximately 600 m of diamond drilling in the next phase of exploration. Based on the project rationale that has been used successfully on the Deltaic Grid located about 8 km to the east, and elsewhere in the camp, each of these drill targets has a number of attributes that include an associated, moderate to strong IP chargeability anomaly or projected anomaly; an HLEM anomaly that may represent greater concentrations of sulfides, or a controlling or mineralizing structure; anomalous zinc soil geochemistry with direct or closely flanking anomalous copper, barium and cadmium correlation; and, prospective geology. Based on these criteria, the following drill holes are proposed:

HOLE NO., FIGURE	TARGET:	LOCATION:	AZIMUTH, DIP:	Length:
DW99-01, 8.	CENTRAL ZONE GEOCHEM, PRO- JECTED IP, C HLEM ZONE		60°, -45°	300 M
DW99-02, 9.		L26+00N, 47+50E	60°, -45°	300 M

Since the proposed holes are in proximity to the Stewart-Cassiar Hwy, the drill program could be carried out at any time during the year. For example, the proposed collar of DW99-01 is located about 40 m west of the Hwy and the hole would be drilled under the Hwy, subject to government permitting.

If the drilling is successful, it is recommended that in 1999, in addition to carrying out detailed and step out drilling on the Hwy and Central Zones, the 1998 type surveys be expanded on recut and new grid lines to the northeast, the northwest and southeast of the 1998 grid. All the targets remain open for expansion, and the Rhyolite Zone requires detailed evaluation, particularly to the east of all current and historical work.





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#### STATEMENT OF QUALIFICATIONS:

I, David E. Molloy, of the Town of Unionville, of the Regional Municipality of York, Ontario, hereby certify that:

12.

- i. I am a resident of Ontario at 49 Normandale Road, Unionville, Ontario, L3R 4J8.
- ii. I am a graduate of McMaster University, in the City of Hamilton, Ontario, with a B.A. in Philosophy (1968); I am a graduate of the University of Waterloo, in the City of Waterloo, Ontario, with a B.Sc. in Earth Science (1972);
- iii. I have practised my profession in mineral exploration continuously for the past 26 years including 11 years with St. Joe Canada Inc./Bond Gold Canada Inc./LAC Minerals Ltd. as Regional Geologist, Exploration Manager and as Senior Vice President, Canadian Exploration; and, 8 years with Beth-Canada Mining Company as a Regional Geologist;
- iv. I am a Fellow of The Geological Association of Canada;
- v. I am a Member of the Canadian Institute of Mining and Metallurgy; of the Prospectors and Developers' Association; of the Association of Exploration Geochemists; of the B.C. & Yukon Chamber of Mines; and, of the Association of Geoscientists of Ontario.
- vi. I have supervised the field program and the preparation of this report titled "Report On The 1998 Delta West Project, 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.
- vii. The recommendations herein are solely the responsibility of the author.

David & Molloy

David E. Molloy, B.A., B.Sc., F.G.A.C.

Dated at Unionville, Ontario, this 15th day of December, 1998.

**APPENDIX** 1



Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

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Pa tumber :1-A Total Pages :4 Certificate Date: 17-NOV-199 Invoice No. :19835584 P.O. Number : Account :KIV

Project : Comments: ATTN: DAVID MOLLOY

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SAMPLE	PREP CODE	Ag ppm	A1 %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
86801 86803 86805 86807 86809	201 202 201 202 201 202 201 202 201 202 201 202	0.6 0.2 < 0.2 0.2 0.2	1.84 2.12 2.05 2.33 1.91	14 12 18 30 6	190 230 180 130 300	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.36 0.35 0.49 0.51 0.70	1.5 1.5 1.0 0.5 2.0	19 16 20 12 14	32 35 37 35 32	39 39 30 32 21	4.70 3.90 4.32 6.38 3.76	< 10 < 10 < 10 < 10 < 10 < 10	1 < 1 < 1 < 1 < 1	0.06 0.08 0.07 0.05 0.11	< 10 < 10 < 10 < 10 < 10 < 10	0.36 0.75 0.60 0.30 0.50	2580 1515 2040 700 2240	1 1 3 < 1
86811 86813 86815 86817 86819	201 202 201 202 201 202 201 202 201 202 201 202 201 202	1.0 0.2 0.2 0.4 < 0.2	3.71 2.43 2.22 2.47 2.75	26 10 14 18 10	180 270 400 220 170	0.5 < 0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.18 0.46 0.47 0.73 0.14	< 0.5 1.0 4.5 0.5 < 0.5	25 14 14 15 10	72 44 44 41 49	63 29 22 27 27	5.77 4.26 4.41 4.28 4.62	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.07 0.08 0.12 0.06 0.06	< 10 < 10 < 10 < 10 < 10 < 10	0.84 0.81 0.64 0.65 0.83	1055 1210 935 985 345	1 < 1 1 < 1 < 1
86821 86823 86825 86827 86829	201 202 201 202 201 202 201 202 201 202 201 202	0.2 0.2 0.2 0.2 0.2	1.99 2.52 3.51 1.86 2.21	10 20 2 < 2 4	380 230 180 220 160	< 0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.42 0.18 0.10 0.15 0.19	1.5 < 0.5 < 0.5 < 0.5 < 0.5	20 15 14 14 13	37 47 57 34 42	20 19 27 15 33	4.52 4.64 5.04 4.21 4.38	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 1	0.08 0.07 0.07 0.07 0.06	< 10 < 10 < 10 < 10 < 10 < 10	0.54 0.69 0.88 0.43 0.64	1975 1135 475 1560 680	1 < 1 < 1 < 1 < 1
86831 86833 86835 86836 86836 86837	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 < 0.2 < 0.2 < 0.2	1.43 1.62 1.89 1.62 1.73	< 2 14 20 22 10	180 290 240 200 160	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	1.00 0.82 1.16 0.41 0.92	0.5 0.5 3.5 3.0 2.0	6 15 23 30 19	22 27 33 31 30	14 24 47 46 37	3.07 3.77 4.23 4.77 4.40	< 10 < 10 < 10 < 10 < 10 < 10	< 1 1 < 1 1 < 1	0.03 0.08 0.05 0.06 0.06	< 10 < 10 < 10 < 10 < 10 < 10	0.36 0.45 0.73 0.56 0.39	395 2100 2150 3270 2040	1 1 < 1 1 1
86838 86839 86840 86841 86842	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 0.2 0.2 0.2	2.56 2.78 2.29 2.75 1.94	26 14 12 10 8	250 160 260 160 290	0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.34 0.45 0.48 0.25 0.27	2.0 < 0.5 0.5 0.5 2.0	23 14 17 19 20	42 40 35 41 36	38 40 21 26 18	4.99 5.82 4.78 5.82 4.76	< 10 < 10 < 10 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.08 0.08 0.10 0.06 0.09	< 10 < 10 < 10 < 10 < 10 < 10	0.64 0.78 0.54 0.65 0.44	2440 1000 2060 1015 2670	1 1 1 < 1 < 1
86843 86844 86845 86846 36947	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 0.2 0.2 < 0.2 < 0.2 < 0.2	2.58 2.22 3.63 2.87 2.45	14 10 6 14 8		< 0.5 < 0.5 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.14 0.10 0.12 0.25 0.25	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	14 12 16 12 13	51 41 63 51 48	21 17 29 25 18	4.83 4.25 6.46 5.14 4.46	< 10 < 10 < 10 < 10 < 10 < 10	< 1 1 < 1 < 1 < 1	0.06 0.10 0.08 0.11 0.11	< 10 < 10 < 10 < 10 < 10 < 10	0.70 0.49 0.78 0.70 0.55	975 1195 730 1005 2490	< 1 < 1 < 1 1 < 1
86848 86849 86850 86851 86852	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 0.2 0.2 0.2	2.49 2.08 2.27 2.81 2.27	2 8 12 14 10	320 250 160	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.20 0.16 0.39 0.17 0.26	< 0.5 0.5 0.5 < 0.5 0.5	15 14 11 11 28	43 37 33 40 28	21 19 16 22 32	4.81 4.23 3.98 4.87 4.45	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.07 0.06 0.06 0.06 0.11	< 10 < 10 < 10 < 10 < 10 < 10	0.68 0.52 0.49 0.64 0.33	1215 1635 2460 560 6160	1 < 1 1 < 1 1
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CERTIFICATION:

HavikRichlen



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave.,North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8 Pate .umber :1-B Total Pages :4 Certificate Date: 17-NOV-199 Invoice No. : I 9835584 P.O. Number : Account :KIV

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Project : Comments: ATTN: DAVID MOLLOY

### CERTIFICATE OF ANALYSIS

тi Tl U V W Zn Ni ₽ Pb Sp SC Sr PREP Na % ppm % ppm ppm ppm ppm SAMPLE CODE ppm ppm ppm ppm ppm ppm 358 86801 201 202 < 0.01 33 2280 < 2 2 19 0.03 < 10 < 10 70 < 10 12 236 10 16 0.01 < 10 < 10 59 < 10 201 202 < 0.01 41 1190 2 4 86803 70 < 10 294 < 0.01 12 3 19 0.03 < 10 < 10 201 202 32 810 2 86805 107 < 10 182 20 10 3 36 0.09 < 10 < 10 86807 201 202 < 0.01 810 2 420 < 10 69 < 10 22 0.04 < 10 201 202 < 0.01 23 1750 10 < 2 3 86809 < 10 314 < 10 < 10 55 86811 201 202 < 0.01 99 400 8 6 17 < 0.01 4 70 < 10 340 19 0.01 < 10 < 10 86813 201 202 < 0.01 37 1360 6 4 4 558 25 0.03 < 10 < 10 82 < 10 450 86815 201 202 < 0.01 32 10 < 2 4 62 < 10 394 36 0.02 < 10 < 10 201 202 < 0.01 48 1220 10 < 2 4 86817 73 240 < 10 < 10 < 10 201 202 < 0.01 1790 10 2 5 9 0.01 45 86819 70 328 < 10 201 202 < 0.01 29 1120 12 3 20 0.03 < 10 < 10 86821 < 2 77 < 10 384 86823 201 202 < 0.01 33 1110 8 4 4 10 0.03 < 10 < 10 260 85 < 10 201 202 < 0.01 45 1220 < 2 5 7 0.01 < 10 < 10 86825 6 81 < 10 196 201 202 < 0.01 12 < 2 З 0.04 < 10 < 10 19 1560 9 86827 < 10 64 < 10 210 201 202 < 0.01 38 1420 10 < 2 4 10 0.01 < 10 86829 55 146 < 10 201 202 < 0.01 2 41 0.04 < 10 < 10 15 470 8 2 86831 60 < 10 226 0.03 < 10 < 10 29 86833 201 202 < 0.01 21 820 10 6 3 72 < 10 418 0.03 < 10 < 10 86835 201 202 < 0.01 33 1300 12 2 3 40 298 102 < 10 201 202 < 0.01 30 1090 12 2 4 20 0.08 < 10 < 10 86836 378 201 202 < 0.01 24 830 6 2 3 46 0.07 < 10 < 10 95 < 10 86837 87 < 10 470 < 0.01 5 < 10 < 10 86838 201 202 30 1410 10 < 2 21 0.06 < 10 284 102 86839 201 202 < 0.01 29 2400 10 < 2 3 16 0.03 < 10 < 10 87 < 10 392 86840 201 202 < 0.01 23 2260 10 2 4 18 0.05 < 10 < 10 103 < 10 374 < 10 < 10 86841 201 202 < 0.01 23 2680 10 6 4 11 0.06 83 < 10 546 0.07 < 10 < 10 86842 201 202 < 0.01 20 1700 12 6 3 12 < 0.01 10 4 10 0.01 < 10 < 10 75 < 10 296 86843 201 202 36 1140 < 2 7 0.02 < 10 < 10 78 < 10 274 201 202 < 0.01 23 1950 3 86844 8 2 105 < 10 362 7 0.01 < 10 < 10 201 202 < 0.01 39 3160 8 < 2 6 86845 < 10 < 10 83 < 10 304 201 202 < 0.01 33 3280 13 0.01 8 < 2 5 86846 342 201 202 < 0.01 6 3 15 0.01 < 10 < 10 68 < 10 28 2160 10 \$66847 75 < 10 316 < 10 86848 201 202 < 0.01 29 2500 10 2 3 10 0.02 < 10 < 10 398 201 202 < 0.01 25 1700 10 2 8 0.05 < 10 < 10 66 86849 4 < 10 < 10 70 < 10 320 86850 201 202 < 0.01 17 1510 10 4 3 21 0.04 < 10 < 10 91 < 10 282 12 86851 201 202 < 0.01 23 1130 10 4 4 0.04 < 10 53 346 20 0.01 < 10 < 10 201 202 < 0.01 27 10 2 4 86852 2720 0.07 < 10 < 10 103 < 10 244 201 202 9 34 86853 0.07 42 1670 16 < 2 21 0.05 < 10 < 10 87 < 10 250 86854 201 202 0.01 42 2130 14 2 6 201 202 < 0.01 47 10 6 10 0.04 < 10 < 10 99 < 10 306 86855 1100 2 12 18 0.04 < 10 < 10 80 < 10 492 201 202 < 0.01 39 1540 < 2 4 86856 < 0.01 0.03 < 10 < 10 60 < 10 162 201 202 16 10 < 2 2 9 660 86857





Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave.,North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8 Page umber :2-A Total Pages :4 Certificate Date: 17-NOV-1998 Invoice No. : 19835584 P.O. Number : Account :KIV

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86868	201 202	0.2	1.85	12	440	< 0.5	< 2	0.78	2.5	20	28	24	4.00	< 10	1	0.09	< 10	0.64	2500 5050	1
86870 86871 86872 86873	201 202 201 202 201 202 201 202 201 202	0.2 0.4 < 0.2 < 0.2 0.2	1.60 2.23 2.33 2.87	22 12 20 8 12	460 390 110 230 230	< 0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	1.07 0.45 0.10 0.79 0.30	2.0 2.0 < 0.5 < 0.5 < 0.5	20 24 14 25 18	25 27 32 39 40	24 49 53 75 59	4.13 4.82 4.01 3.99 4.29	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.12 0.09 0.06 0.09 0.06	< 10 < 10 < 10 < 10 < 10	0.39 0.27 0.62 0.91 0.84	3560 3400 960 2640 1320	1 2 < 1 < 1
86874 86875 86876 86877 86878	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 0.8 0.2 0.2	2.78 2.62 1.66 2.96 2.16	20 24 6 14 12	220 160 230 170 430	0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.32 0.36 2.40 0.19 0.21	0.5 < 0.5 1.0 0.5 3.5	18 17 11 12 17	38 39 25 44 34	48 34 111 34 23	4.41 4.95 1.88 5.36 4.73	< 10 < 10 < 10 < 10 < 10 < 10	< 1 2 1 < 1 < 1	0.08 0.08 0.08 0.05 0.05	< 10 < 10 30 < 10 < 10	0.76 0.70 0.35 0.65 0.52	1875 1635 2400 605 2660	1 < 1 < 1 < 1 1
86879 86880 86881 86882 86883	201 202 201 202 201 202 201 202 201 202 201 202	0.2 0.2 0.2 < 0.2 < 0.2	2.18 2.98 3.56 3.20 2.51	6 8 10 12 12	220 160 160 160 170	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.09 0.24 0.07 0.11 0.18	0.5 0.5 < 0.5 < 0.5 0.5	15 9 14 11 11	31 49 44 42 36	25 29 29 26 19	4.25 6.54 5.46 4.50 4.28	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.06 0.03 0.04 0.06 0.05	< 10 < 10 < 10 < 10 < 10 < 10	0.41 0.61 0.66 0.72 0.50	1025 350 595 575 790	3 < 1 < 1 < 1 < 1
36884 36885 36886 36887 36888	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 < 0.2 < 0.2 < 0.2 0.2	2.57 1.20 2.35 1.73 2.76	14 4 8 16 12	160 420 180 460 210	0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.26 0.37 0.28 1.17 0.36	0.5 4.0 2.0 2.5 1.0	16 18 17 17 15	39 23 43 30 45	47 15 23 22 24	4.06 3.21 5.30 3.86 5.76	< 10 < 10 < 10 < 10 < 10 10	1 < 1 < 1 < 1 < 1	0.06 0.10 0.06 0.13 0.09	< 10 < 10 < 10 < 10 < 10 < 10	0.79 0.27 0.77 0.44 0.69	1135 2700 2220 4340 1455	< 1 1 1 < 1 1
16889 16890 16891 16892 16893	201 202 201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 0.2 1.0 0.6	2.46 1.78 2.85 2.97 2.25	10 < 2 4 12 4	360 230 170 140 110	< 0.5 < 0.5 0.5 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.48 0.36 0.06 0.07 0.05	1.5 0.5 < 0.5 < 0.5 0.5	15 12 20 22 14	39 27 31 35 22	20 19 48 29 14	4.68 3.61 4.49 4.27 3.90	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.08 0.10 0.04 0.03 0.03	< 10 < 10 < 10 < 10 < 10 < 10	0.56 0.45 0.64 0.61 0.23	2490 1805 1215 995 1700	< 1 < 1 1 1 < 1
6894 6895 6896 6897 6898	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 0.2 0.4 0.2	3.36 3.15 3.39 2.77 3.00	6 22 2 < 2 2 2		0.5 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.11 0.11 0.21	< 0.5 < 0.5 < 0.5 0.5 < 0.5	12 17 12 13 16	32 44 44 35 37	33 42 26 23 25	4.43 4.78 5.06 4.71 5.52	< 10 < 10 < 10 10 10	< 1 1 < 1 < 1 < 1	0.04 0.04 0.05 0.05 0.05	< 10 < 10 < 10 < 10 < 10 < 10	0.57 0.76 0.62 0.48 0.69	915 855 940 1430 1155	1 < 1 < 1 < 1 < 1
86899 86900 86901 86902 86903	201 202 201 202 201 202 201 202 201 202 201 202	0.2 0.2 0.2 0.2 < 0.2	2.63 3.07 2.42 2.33 1.95	< 2 20 10 4 < 2	180 210 210	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.12 0.16 0.12 0.21 0.12	< 0.5 < 0.5 0.5 1.0 1.5	14 13 13 13 13	39 39 37 36 34	19 25 23 29 20	5.23 5.61 4.49 4.48 3.72	10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.04 0.04 0.05 0.06 0.05	< 10 < 10 < 10 < 10 < 10 < 10	0.62 0.65 0.60 0.65 0.50	1255 890 1010 1140 1210	< 1 < 1 < 1 < 1 < 1 < 1

CERTIFICATION: How Kichel



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: GEOFINE EXPLORATION CONSULTANTS LTD.

**CERTIFICATE OF ANALYSIS** 

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8 Pat umber :2-B Total Pages :4 Certificate Date: 17-NOV-1999 Invoice No. : 19835584 P.O. Number : Account :KIV

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A9835584

Project :

Comments: ATTN: DAVID MOLLOY

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SAMPLE	PREP CODE	Na %	Ni ppm	P PPm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Tİ %	T1 ppm	U mqq	A Mđđ	W ppm	Zn ppm	 
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86869 86870 86871 86872 86873	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01 < 0.01 < 0.01	26 28 47 59 45	1660 1850 350 900 1170	8 20 8 12 12	< 2 2 < 2 6 2	3 3 6 8 5	75 26 9 30 14	0.03 0.04 0.04 0.03 0.02	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	73 99 52 65 79	< 10 < 10 < 10 < 10 < 10 < 10	446 434 146 208 244	
86874 86875 86876 86877 86877 86878	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	47 35 43 33 24	1520 1370 1950 1040 1590	12 12 8 8 14	2 4 < 2 2 2	5 4 3 4 3	19 14 140 13 15	0.02 0.02 0.01 0.03 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	71 86 33 92 72	< 10 < 10 < 10 < 10 < 10 < 10	316 244 148 222 422	
86879 86880 86881 86882 86883	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	22 29 30 34 21	600 330 1760 1420 1260	12 12 10 8 12	2 2 8 < 2 2	3 4 4 5 4	7 29 5 6 13	0.02 0.01 0.03 0.01 0.05	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	66 90 90 79 85	< 10 < 10 < 10 < 10 < 10 < 10	200 178 332 310 280	
86884 86885 86886 86887 86888	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	62 16 30 21 26	760 860 1470 1300 1030	10 10 12 10 10	4 2 < 2 4 6	4 3 4 3 4	13 17 10 50 16	0.03 0.06 0.06 0.03 0.07	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	61 52 97 76 118	< 10 < 10 < 10 < 10 < 10 < 10	190 394 354 306 334	
86889 86890 86891 86892 86893	201 20 201 20 201 20 201 20 201 20 201 20 201 20	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	22 17 59 41 16	1120 1400 580 730 1090	12 8 10 6	2 4 < 2 2 < 2	4 3 6 5 2	26 13 5 4 4	0.07 0.03 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	98 65 58 54 50	< 10 < 10 < 10 < 10 < 10 < 10	450 246 212 274 204	
86894 86895 86896 86897 86898	201 202 201 202 201 202 201 202 201 202 201 202	2 < 0.01 2 < 0.01 2 < 0.01	45 61 43 24 22	800 1880 820 1120 1940	6 6 4 10 8	< 2 2 < 2 2 2 2	4 5 4 5	4 5 9 14 10	0.01 0.02 0.05 0.13 0.08	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	53 61 80 91 118	< 10 < 10 < 10 < 10 < 10 < 10	304 288 448 410 324	
86899 86900 86901 86902 86903	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	22 29 32 33 27	1610 2390 1210 1970 1150	14 12 10 12 8	2 2 2 < 2 < 2 < 2	4 4 4 4	7 11 7 9 7	0.06 0.03 0.03 0.03 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	107 103 85 78 64	< 10 < 10 < 10 < 10 < 10 < 10	324 412 354 250 252	

Harthellon CERTIFICATION



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Project :

Comments: ATTN: DAVID MOLLOY

Pag umber :3-A Total Pages :4 Certificate Date: 17-NOV-1998 Invoice No. : 19835584 P.O. Number : Account :KIV

**CERTIFICATE OF ANALYSIS** A9835584 Mo Mg Mn ĸ La Cu Fe Ga Ħg Bİ Ca Cđ Co Cr A1 PREP As Ba Be λq % pp≞ ppm % ppm % ppm ppm % ppm \* ppm ppm ppm рр≞ SAMPLE CODE ppm ppm ppm ppm 1855 0.54 < 1 0.04 < 10 < 1 < 2 0.12 1.0 19 37 24 4.33 < 10 86904 201 202 < 0.2 2.07 < 2 210 < 0.5 0.73 495 0.03 < 10 1 < 10 < 1 3.03 0.09 < 0.5 14 38 34 4.47 120 0.5 < 2 86905 201 202 0.2 12 4130 0.32 0.10 < 10 1 26 18 3.72 < 10 < 1 < 0.5 0.73 17.5 24 201 202 1.25 < 2 350 < 2 86906 < 0.2 0.25 2790 1 3.38 < 10 < 1 0.08 < 10 17 23 14 1.35 0.32 3.5 86907 201 202 < 0.2 < 2 340 < 0.5 < 2 0.57 1335 < 1 < 10 < 1 0.05 < 10 15 35 21 4.80 1.5 170 0.5 < 2 0.18 86908 201 202 0.2 2.35 10 < 10 0.34 1375 < 1 0.06 4.27 < 10 < 1 0.21 1.5 13 27 13 86909 201 202 < 0.2 1.57 4 160 < 0.5 < 2 0.07 < 10 0.58 485 1 10 38 18 4.33 < 10 < 1 < 2 0.32 < 0.5 86910 201 202 < 0.2 2.31 6 120 < 0.5 < 10 0.08 0.92 1145 1 < 2 0.37 < 0.5 18 46 62 4.32 < 10 < 1 86911 201 202 2.64 8 190 0.5 < 0.2 1125 < 1 0.05 < 10 0.59 0.18 < 0.5 16 38 27 5.65 < 10 < 1 86912 201 202 2.66 < 2 130 < 0.5 < 2 0.6 < 10 0.05 < 10 0.45 715 1 28 18 4.43 < 1 0.15 0.5 10 < 2 86913 201 202 < 0.2 1.97 < 2 110 < 0.5 < 10 < 1 0.07 < 10 0.48 780 < 1 3.69 0.5 10 26 18 140 < 0.5 0.25 86914 201 202 < 0.2 1.83 12 < 2 < 10 0.57 1415 < 1 4.50 < 10 < 1 0.08 18 220 13 35 86915 201 202 < 0.2 2.46 < 2 < 0.5 < 2 0.23 1.0 < 1 < 10 0.52 1315 1 0.10 22 5.09 10 2.73 370 < 0.5 < 2 0.20 0.5 16 36 201 202 0.2 8 86916 < 10 1.06 505 < 1 < 10 0.07 0.28 < 0.5 13 46 52 4.37 < 1 22 120 < 0.5 < 2 201 202 < 0.2 3.14 86917 2580 < 1 < 10 < 10 0.63 18 39 21 4.53 < 1 0.12 2.70 0.35 1.0 201 202 < 0.2 2 270 < 0.5 < 2 86918 < 10 0.09 < 10 0.72 1165 < 1 24 4.84 < 1 42 86919 201 202 2.81 8 210 < 0.5 < 2 0.28 0.5 -14 0.2 0.58 1370 < 1 20 4.64 < 10 < 1 0.08 < 10 38 86920 201 202 0.2 2.48 8 230 < 0.5 < 2 0.16 2.5 17 875 < 1 0.58 48 21 5.20 < 10 < 1 0.12 < 10 13 201 202 0.2 2.89 < 2 390 < 0.5 < 2 0.22 2.0 86921 < 10 0.61 2140 < 1 44 23 4.47 < 10 < 1 0.13 < 0.2 2.53 < 2 410 < 0.5 < 2 0.30 2.0 18 86922 201 202 0.59 880 1 < 10 30 30 3.82 < 10 < 1 0.09 < 2 0.25 0.5 14 201 202 < 0.2 2.34 2 170 < 0.5 86923 3 < 10 0.66 1150 28 41 3.99 < 10 < 1 0.08 0.09 0.5 19 86924 201 202 < 0.2 2.54 12 110 < 0.5 < 2 0.75 1745 < 1 < 10 < 1 0.30 < 10 16 40 26 4.82 270 < 0.5 < 2 0.51 0.5 201 202 < 0.2 3.17 20 86925 0.08 < 10 0.87 1050 1 41 5.86 10 < 1 4.01 0.5 0.5 15 48 201 202 16 250 < 2 0.17 86926 0.2 < 10 0.78 1085 2 0.07 42 66 4.96 < 10 < 1 0.15 0.5 16 86927 201 202 < 0.2 3.57 18 240 0.5 < 2 0.70 855 < 1 0.07 < 10 35 18 4.19 < 10 < 1 16 86928 201 202 < 0.2 2.89 4 150 < 0.5 < 2 0.16 0.5 1 1960 < 10 0.46 17 4.37 < 10 < 1 0.10 < 2 0.10 1.0 14 48 86929 201 202 0.2 2.54 < 2 180 < 0.5 < 1 < 10 0.73 905 0.12 0.14 < 0.5 23 61 29 5.82 10 < 1 < 2 86930 201 202 0.2 3.53 4 230 0.5 815 < 10 0.74 < 1 12 49 32 4.89 < 10 < 1 0.09 < 2 0.12 0.5 86931 201 202 0.2 3.30 < 2 230 < 0.5 < 10 1160 < 1 0.10 0.76 < 2 0.13 0.5 14 48 26 4.24 < 10 < 1 < 0.5 86932 201 202 0.2 2.88 2 210 0.08 < 10 0.65 585 < 1 44 24 4.58 < 10 < 1 6 < 2 0.09 < 0.5 11 2.60 150 < 0.5 86933 201 202 < 0.2 985 1 27 < 1 0.13 < 10 0.68 5.07 < 10 0.15 0.5 19 47 86934 201 202 0.4 2.84 2 220 < 0.5 < 2 < 10 0.40 895 1 < 10 < 1 0.07 14 3.66 201 202 0.2 1.80 6 140 < 0.5 < 2 0.09 0.5 12 33 86935 980 < 10 0.68 < 1 18 4.41 < 10 < 1 0.10 < 0.5 < 2 0.30 2.0 14 41 86936 201 202 < 0.2 2.54 < 2 320 0.77 975 < 1 4.63 < 10 43 21 < 10 < 1 0.17 2.92 360 < 0.5 < 2 0.37 2.0 14 86937 201 202 0.2 4 0.71 715 < 1 < 10 0.14 < 0.5 12 50 23 5.27 10 < 1 0.12 < 2 201 202 < 0.2 3.15 < 2 250 < 0.5 86938 1 0.10 < 10 0.40 1400 33 16 3.89 < 10 < 1 < 2 280 < 2 0.29 2.0 17 201 202 < 0.5 86939 0.2 2.01 < 10 0.57 945 < 1 0.09 < 0.5 0.15 0.5 14 49 17 4.98 10 < 1 < 2 290 < 2 86940 201 202 0.2 3.01 830 < 1 < 10 0.62 5.78 0.14 < 2 0.11 0.5 16 57 19 10 < 1 86941 201 202 0.4 3.15 < 2 200 < 0.5 470 < 1 0.11 < 10 0.82 3.90 150 < 0.5 < 2 0.09 0.5 11 55 17 < 10 < 1 86942 201 202 < 0.2 2.94 < 2 0.15 < 10 0.52 2810 < 1 2 320 < 0.5 < 2 0.21 1.0 16 49 22 4.11 < 10 < 1 201 202 2.44 86943 0.2

Haste ichle CEDTIEICATION



Analytical Chemists \* Geochemists \* Registered Assayers North Vancouver

212 Brooksbank Ave., British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: GEOFINE EXPLORATION CONSULTANTS LTD.

**CERTIFICATE OF ANALYSIS** 

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

umber :3-B Pa Total Pages :4 Certificate Date: 17-NOV-199 Invoice No. : 19835584 P.O. Number : Account KIV

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A9835584

Project : Comments: ATTN: DAVID MOLLOY

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SAMPLE	PREP CODE	Na %	Ni ppm	add Tadd	Pb	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U Egg	V ppm	M Mgg	Zn ppm	
86904 86905 86906 86907 86908	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01 < 0.01	32 50 19 18 24	1090 300 1650 1500 2140	12 8 14 10 8	4 2 6 2 2	3 5 2 1 3	8 7 30 17 8	0.03 0.04 0.03 0.01 0.04	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	73 70 60 48 84	< 10 < 10 < 10 < 10 < 10 < 10	374 134 378 256 338	
86909 86910 86911 86912 86913	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01 < 0.01	15 25 55 25 17	1230 1790 780 2470 1930	14 14 8 10 10	< 2 < 2 2 2 < 2 < 2	2 4 7 4 3	13 14 15 9 7	0.08 0.03 0.03 0.04 0.06	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	87 86 81 109 93	< 10 < 10 < 10 < 10 < 10 < 10	288 250 186 264 174	
86914 86915 86916 86917 86918	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01 < 0.01	18 20 19 44 23	1410 1560 1860 500 2060	12 8 12 6 10	2 4 2 < 2 < 2 < 2	3 4 5 6 4	12 13 13 14 16	0.09 0.07 0.11 0.05 0.06	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	83 100 113 104 102	< 10 < 10 < 10 < 10 < 10 < 10	172 310 348 140 422	
86919 86920 86921 86922 86922 86923	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	25 24 32 34 36	2020 1740 2620 2190 550	12 6 10 10 6	< 2 2 4 < 2 < 2 < 2	5 4 5 4	13 11 11 16 13	0.06 0.05 0.03 0.03 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	113 95 94 76 62	< 10 < 10 < 10 < 10 < 10 < 10	318 448 390 466 172	
86924 86925 86926 86927 86928	201 202 201 202 201 202 201 202 201 202 201 202	0.04 < 0.01 < 0.01	41 28 42 52 23	260 2410 2210 860 780	10 10 10 8 6	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	5 6 6 5	7 25 10 10	0.04 0.06 0.04 0.03 0.07	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	56 95 116 92 97	< 10 < 10 < 10 < 10 < 10 < 10	194 466 298 218 328	
86929 86930 86931 86932 86932 86933	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01</pre>	24 41 40 43 31	1750 2860 1540 1030 1370	8 8 10 8	< 2 2 < 2 2 2 < 2	4 5 5 5 4	9 9 8 8 7	0.04 0.02 0.01 0.04 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	85 105 94 87 89	< 10 < 10 < 10 < 10 < 10 < 10	286 382 238 220 220	
86934 86935 86936 86936 86937 86938	201 202 201 202 201 202 201 202 201 202 201 202	<pre>     &lt; 0.01     &lt; 0.01     &lt; 0.01     &lt; 0.01     &lt; 0.01 </pre>	32 18 32 32 31	2450 710 2050 2390 2040	10 8 8 10 8	4 2 2 4 < 2	5 3 4 4 3	8 7 14 15 11	0.04 0.04 0.02 0.02 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	98 80 80 90 112	< 10 < 10 < 10 < 10 < 10 < 10	270 204 444 370 272	
86939 86940 86941 86942 86943	201 202 201 202 201 202 201 202 201 202 201 202	<pre>&lt; 0.01 &lt; 0.01 &lt; 0.01 &lt; 0.01 </pre>	20 27 29 36 31	1250 2270 3750 1380 1570	10 10 12 8 10	2 2 4 < 2 < 2	3 3 4 5 4	17 10 7 5 11	0.06 0.06 0.03 0.01 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	76 91 110 80 83	< 10 < 10 < 10 < 10 < 10 < 10	390 408 262 316 352	

Harklichle CERTIFICATION:



# Chemex Labs

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Pag. umber :4-A Total Pages :4 Certificate Date: 17-NOV-1998 Invoice No. : 19835584 P.O. Number KIV Account

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Project : Comments: ATTN: DAVID MOLLOY

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SAMPLE	PRE COD	- 1	Ag ppm	A1 %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ mgg	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Eg ppm	K %	La ppm	Mg %	Mn	Mo ppm
598939 598941 598943 598946 598948		202 202 202	0.2 0.6 0.2 0.2 0.6	3.04 2.26 2.53 2.64 2.73	16 6 54 14 16	360 480 160 220 260	0.5 < 0.5 0.5 < 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.17 0.30 0.40 0.08 0.13	0.5 2.0 0.5 < 0.5 1.0	24 22 16 19 23	38 43 42 34 24	40 25 51 27 50	4.58 4.44 4.15 4.62 4.71	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 1 < 1 < 1	0.08 0.16 0.08 0.07 0.11	< 10 < 10 < 10 < 10 < 10	0.78 0.44 0.72 0.48 0.63	3340 4240 1275 1230 2410	1 < 1 2 < 1 < 1 < 1
598950 598952 598954 598956 598958	201 201 201 201 201 201	202 202 202	0.6 0.2 < 0.2 0.4 0.2	1.71 1.44 2.45 2.06 3.32	8 16 18 22 16	230 410 140 110 140	< 0.5 < 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.47 0.99 0.28 0.21 0.29	0.5 2.5 < 0.5 < 0.5 < 0.5	10 14 15 16 37	25 21 32 28 24	47 41 39 39 111	3.78 3.57 3.81 3.64 5.70	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.07 0.11 0.11 0.09 0.10	< 10 < 10 < 10 < 10 < 10 10	0.36 0.21 0.71 0.70 0.78	1385 2810 1245 1040 4910	< 1
600381 600383 600385 600385 600387 600389	201 201 201 201 201	202 202 202 202 202 202 202	0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.99 2.97 2.93 3.23 3.83	2 14 8 < 2 2		0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.17 0.15 0.22 0.08 0.08	0.5 0.5 1.0 0.5 < 0.5	14 16 13 14 15	52 49 47 50 53	24 31 28 18 27	5.30 4.87 4.93 4.71 5.41	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.10 0.10 0.07 0.08 0.08	< 10 < 10 < 10 < 10 < 10 < 10	0.63 0.68 0.75 0.74 0.82	715 1690 910 580 455	1 1 < 1 < 1
600391 600393 600394 600396 600398	201 201 201 201 201	202 202	0.2 0.2 2.0 0.8 2.0	3.72 2.42 2.31 2.45 1.59	8 4 18 16 14	420	< 0.5 0.5 < 0.5 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.05 0.10 0.28 0.46 0.23	0.5 0.5 2.0 3.5 1.5	20 20 21 24 11	61 42 27 32 28	24 18 46 37 27	6.29 5.08 4.58 4.52 3.86	10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 2 < 1	0.10 0.07 0.07 0.11 0.06	< 10 < 10 < 10 < 10 < 10 < 10	0.69 0.38 0.48 0.50 0.26	1600 1850 2420 6120 1335	< 1 < 1 1 1 < 1
600400 630984 630986 630988 630988	201 2 201 2 201 2 201 2	102 102 102	0.2 0.4 < 0.2 0.2 0.2	2.35 2.72 2.90 2.95 2.22	2 12 < 2 16 18	240 190 330	< 0.5 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.14 0.60 0.28 0.17 0.11	0.5 0.5 < 0.5 1.5 0.5	18 17 14 16 10	37 49 46 39 31	21 52 17 20 18	4.18 4.67 3.99 4.75 4.37	< 10 < 10 < 10 < 10 < 10 < 10	< 1 1 < 1 < 1 < 1 < 1	0.09 0.13 0.10 0.06 0.07	< 10 < 10 < 10 < 10 < 10 < 10	0.41 0.93 0.68 0.56 0.40	1420 1305 670 2820 935	< 1 1 < 1 1 3
630993 630995 630997 630999	201 2	02	< 0.2 < 0.2 0.2 0.2	2.50 2.57 2.73 2.72	16 10 12 8	170 300	< 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2	0.22	< 0.5 < 0.5 1.5 < 0.5	17 21 16 14	51 49 47 47	59 55 19 18	4.19 4.24 4.42 4.53	< 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1	0.14 0.13 0.14 0.10	< 10 < 10 < 10 < 10 < 10	1.24 1.18 0.58 0.52	725 930 2030 950	1 2 1 1

CERTIFICATION:

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Analytical Chemists \* Geochemists \* Registered Assayers

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

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

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.mber :4-B Pad Total rages :4 Certificate Date: 17-NOV-1998 Invoice No. P.O. Number Account :19835584 Ξĸιν

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Project : Comments: ATTN: DAVID MOLLOY

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SAMPLE	PRI COI		Na %	Ni ppm	p ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W ppm	Zn ppm	
598939 598941 598943 598946 598948	201 201 201	202 202 202 202 202 202	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	75 35 55 22 53	1610 2210 1120 770 1880	8 10 12 8 8	< 2 < 2 2 < 2 2 2	5 4 5 4 5	11 17 20 10 11	0.01 0.04 0.03 0.04 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	78 76 73 99 77	< 10 < 10 < 10 < 10 < 10 < 10	544 456 212 176 274	
598950 598952 598954 598956 598958	201 201 201 201 201 201	202 202 202 202 202 202	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	35 26 41 42 85	570 590 540 480 610	6 10 8 8 14	2 < 2 2 < 2 6	3 3 6 5 8	24 43 16 12 14	0.05 0.04 0.04 0.04 0.05	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	71 78 63 59 74	< 10 < 10 < 10 < 10 < 10 < 10	150 202 120 136 304	
600381 600383 600385 600387 600389	201 201 201 201 201 201	202	< 0.01 < 0.01	40 39 42 34 40	1520 1430 1500 990 1800	12 8 6 8 4	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	4 5 5 5 6	12 7 14 8 5	0.03 0.01 0.01 0.04 0.03	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	89 90 92 91 103	< 10 < 10 < 10 < 10 < 10 < 10	380 222 278 428 318	
600391 600393 600394 600396 600398	201 201 201	202 202 202 202 202 202	< 0.01 < 0.01	32 22 44 43 19	3460 2770 1660 2530 1080	8 12 10 10 10	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	6 4 3 1	5 6 13 19 16	0.03 0.11 0.02 0.02 0.05	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	115 90 74 68 76	< 10 < 10 < 10 < 10 < 10	396 352 382 668 252	
600400 630984 630986 630988 630988 630990	201	202 202 202	< 0.01 < 0.01	22 56 31 25 17	1700 1700 1270 1820 1320	10 10 4 14 10	2 < 2 2 < 2 4	4 6 4 5 4	8 19 14 9 8	0.03 0.02 0.03 0.07 0.09	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	83 85 85 105 109	< 10 < 10 < 10 < 10 < 10	224 252 358 456 196	
630993 630995 630997 630999	201 201 201 201	202	< 0.01 < 0.01	64 55 30 28	560 710 1610 1090	6 8 8 8	< 2 2 2 < 2 < 2	9 8 4 4	18 19 11 7	0.04 0.03 0.05 0.03	< 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10	78 79 90 94	< 10 < 10 < 10 < 10	124 136 366 278	
			J	-								<u> </u>			CERTIFICAT	MON: Horast Richles



Analytical Chemists \* Geochemists \* Registered Assayers

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

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

lumber :1-A Tom Pages :2 Certificate Date: 20-OCT-19 : 19833251 Invoice No. P.O. Number : έκιν Account

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Project : Comments: ATTN: DAVID E. MOLLOY

			<u>,                                     </u>							CE	RTIFI	CATE	OF A		(SIS		49833	251		
SAMPLE	PREP CODE	Ag ppm	A1 %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
86802 86804 86806 86808 86810	201 202 201 202 201 202 201 202 201 202 201 202	0.4 < 0.2 < 0.2 0.2 0.2 0.2	1.97 2.80 2.45 1.43 2.47	16 26 18 12 24	440 120 360 370 220	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	1.13 0.52 0.38 0.36 0.86	5.5 0.5 3.0 3.0 0.5	22 14 27 19 14	30 42 35 22 40	30 31 30 19 50	3.99 5.77 4.89 3.17 4.46	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.13 0.08 0.10 0.05 0.18	< 10 < 10 < 10 < 10 < 10 < 10	0.51 0.57 0.43 0.21 0.88	3550 570 3550 3790 1115	3 4 1 2 1
86812 86814 86816 86818 86818 86820	201 202 201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.88 1.85 2.32 1.68 2.55	16 12 14 8 12	210 410 290 230 230	0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.87 1.39 0.42 0.25 0.48	1.5 3.0 1.0 1.5 0.5	16 18 15 23 11	50 33 40 36 42	65 32 30 24 21	4.32 3.83 4.01 3.69 4.50	< 10 < 10 < 10 < 10 < 10 < 10	1 < 1 < 1 < 1 < 1 < 1	0.10 0.16 0.14 0.13 0.12	< 10 < 10 < 10 < 10 < 10	0.72 0.56 0.67 0.44 0.65	1325 2220 1225 1955 485	2 1 1 1 1
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# Chemex Labs Ltd.(

Analytical Chemists "Geochemists" Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0216 To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4.18

Project :

je Number : 1-B Jal Pages :2 Certificate Date: 20-OCT-1998 invoice No. : 19833251 P.O. Number : Account : KIV

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Convinents: ATTN DAVID E. MOLLOY

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CERTIFICATION Hartfulle



# Chemex Labs I

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 North Vancouver V7J 2C1 To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

umber :2-A Total Pages :2 Certificate Date: 20-OCT-19 Invoice No. : 19833251 Invoice No. 1 P.O. Number :KIV Account

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Project : Comments: ATTN: DAVID E. MOLLOY

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SAMPLE	PREP CODE		Ag ppm	A1 %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
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CERTIFICATION:



Analytical Chemists \* Geochemists \* Registered Assayers

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

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

umber :2-B Total Pages :2 Certificate Date: 20-OCT-19 Invoice No. ;19833251 P.O. Number : KIV Account

Project : Comments: ATTN: DAVID E. MOLLOY

#### **CERTIFICATE OF ANALYSIS**

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SAMPLE	PREP CODE		Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W ppm	Zn ppm	 		
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CERTIFICATION: Harden



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#### **Chemex Labs L** td.

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

Æ > Number :1 Total Pages :1 Certificate Date: 03-DEC-19 Invoice No. : 19837387 P.O. Number : Account :KIV

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Project : Comments: ATTN: DAVID MOLLOY

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Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: GEOFINE EXPLORATION CONSULTANTS LTD.

49 NORMANDALE RD. UNIONVILLE, ON L3R 4J8

Number :1 λ. ., Pages :1 Certificate Date: 03-DEC-19 :19837386 Invoice No. P.O. Number : Account :KIV

Project : Comments: ATTN: DAVID MOLLOY

#### **CERTIFICATE OF ANALYSIS**

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# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assavers

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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Page Number :1-A Total Pages :1 Certificate Date: 24-NOV-199 Invoice No. :19836359 P.O. Number : KIV Account

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Project : Comments: ATTN: DAVID MOLLOY

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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 MOLLOY

Page Aumber :1-B Total Pages :1 Certificate Date: 24-NOV-199: Invoice No. : I 9836359 P.O. Number : Account :KIV

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**APPENDIX 2** 

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## Chemex Labs

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GEOFINE EXPLORATION CONSULTANTS LTD.

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460256 460257 460258 460259 460261	205 2 205 2 205 2 205 2 205 2 205 2	26 26 26	0.005	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	5.27 4.60 2.20 1.92 0.41	< 2 10 22 12 12	50 60 90 90 40	< 0.5 < 0.5 0.5 0.5 < 0.5	< 2 2 < 2 < 2 < 2 < 2	4.78 3.38 3.89 2.35 0.42	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	24 27 8 7 < 1	54 51 30 21 75	79 119 8 10 3	5.77 5.16 3.59 3.56 0.74	10 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.01 0.02 0.26 0.22 0.12	< 10 < 10 10 10 20	2.29 2.46 1.06 0.80 0.05	820 820 975 880 195
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To: GEOFINE EXPLORATION CONSULTANTS LTD.

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Page Number :1-B Total Pages :1 Certificate Date: 24-NOV-1998 Invoice No. : 19836358 P.O. Number : Account :KIV

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Proje Com TTN: DAVID MOLLOY

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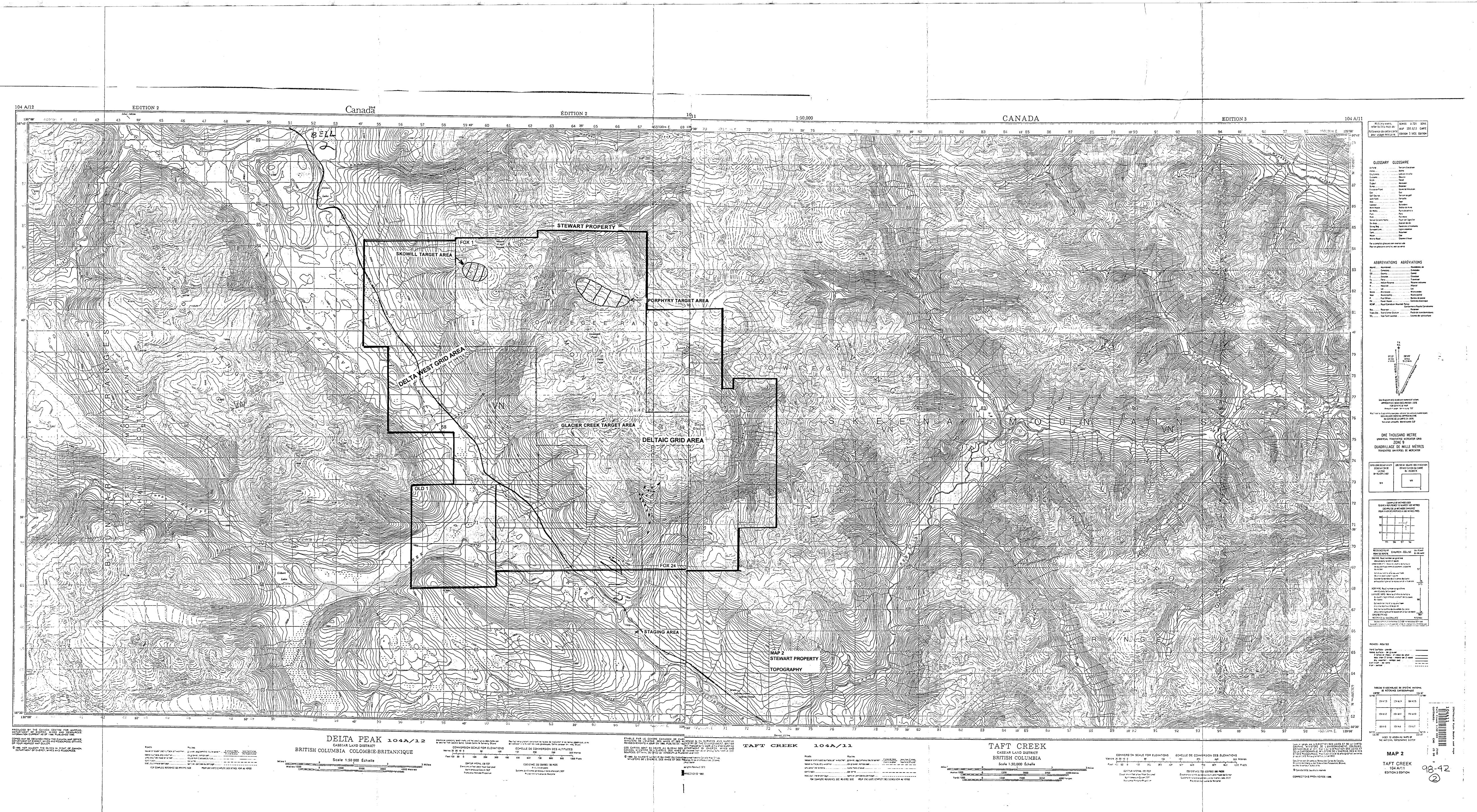
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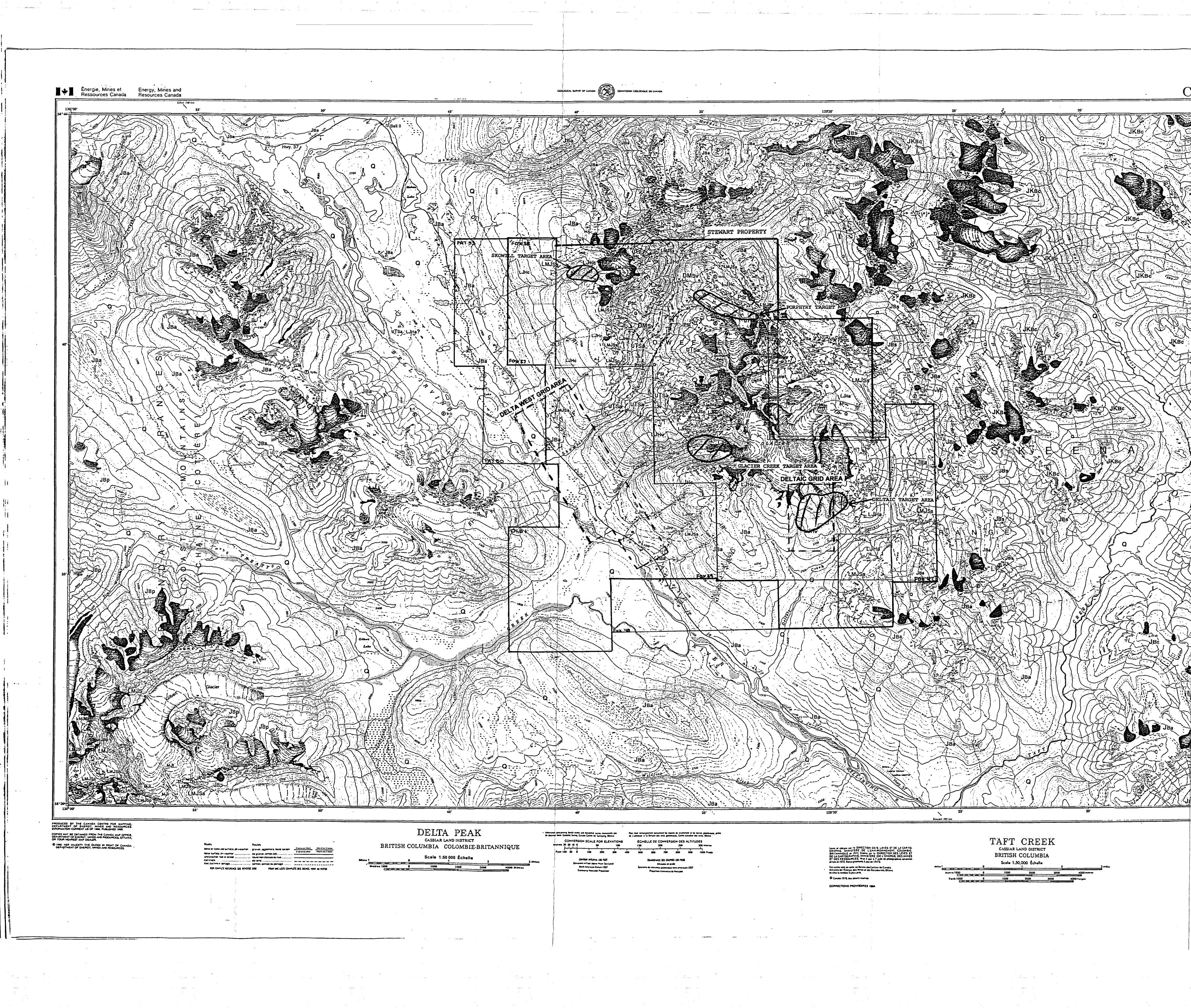
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shinistire de l'Émirgie, des Mines et ans Ressources. Ottave. eu ches le vandeur le plus près.	Marries 1000	0	1000	2000	3000	4000	
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BRITANNIQUE IN 1971 LISON SA IS DIRECTION DES LEVES ET DE LA CARTOGRAPHIE MINISTERE DE L'ENERGIE, DES MINES			BRITISH	COLUMI	BIA		
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LMJSp       pyritic silly shale and mudstone.         LMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf. Dillworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tuffaceous arkose and mudstone.         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to define to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagioclase-pyroxene crystal tuff turbicitie arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tulf, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       DEVONIAN AND MISSISSISPPIAN	Joint Saly State and Industation         LMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Diff.worfth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHV       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHN       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         UTSa       plagicclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       Tellum and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	pythol skill state and mudsibile.         LIMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diff.cc/ft/s         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, fuffaceous arkose and mudstone.         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, fuffaceous arkose and mudstone.         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPEN TRIASSIC       STUHINI GROUP         IUTSa       plagicclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	pynice sity shale and nicusation.         LMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Diff.conft.         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous 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         IUTSa       plagicclase-pyroxene crystal tulf tubidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tulf, tulf-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded m	arrow pythol skip state and micksbuff.         LIMUS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diff worktin         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone;         LJHv       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone;         LJHv       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone;         UHv       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli ash and dust tuff, flows; derived debris flows, arkose and siltstone;         UHv       Intermediate before the lapilli and sh uff tuff-breccia and rare flows; minor limestone lenses.         DPER TRIASSIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         PENDIM AND MISSISSIPPIAN       DEVONION AND MISSISSIPPIAN </th <th>33'       Image: State and industriet         Image: State and industriet       I</th> <th>33       Undivided Spatsizi Group         LIMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit tuff-breccia, ash and dust tuff. Diff(secffs)         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and subordinate plagioclase-hornblende phyric lapilit tuff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to maic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit tuff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirite:         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded</th> <th>237       LMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit huff-breccia, ash and dust huff.       Diff (sec.ft);         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust huff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust huff, tuffaceous arkose and mudstone.         LJHv       intermediate to main plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust huff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal buff tubidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilit and ash uff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PENMIAN       Medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirrite.         DEVONIAN AND MISSISSIPPAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirrite.</th> <th>23       LUMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit full-breccia, ash and dust tuff.       D // ( \scale for for for for for for for for for for</th> <th>23'       Undivided Spatsizi Group         LIMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit tuff-breccia, ash and dust tuff.       Diff. Sciffs         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to main plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff tubcitite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilit and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PS1       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirite.         DEVONIAN AND MISSISSIPPIAN       mediu to intermeristic floridise-coyroxene ohyric lapilit tuff, lapilit tuff-breccia, an</th> <th>as       Individed Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilii tuff-breccia, ash and dust tuff.       Diff workth         LJHr       felsic lapilii tuff-breccia, ash and dust tuff.       Diff workth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tuff, tows; derived debris flows, arkose and siltstone:         LJHv       intermediate to maic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapili luff-breccia, lapili, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional assive:site debris flows.         UPPER TRIASSIC       STUHINI GROUP         IUTsa       plagioclase-pyroxene crystal tuff turbicite arkose and siltstone, plagioclase-pyroxene phyric marc to intermediate lapilii and ash uff, 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 minicite.         DEVONIAN AND MISSISSIPPIAN       medium and block bedded to bancsive bioclastic limestone with chert interlayers; thin-bedded minicite.</th> <th>33       Image: State and industrial industrindustrial industrial indu</th>	33'       Image: State and industriet         Image: State and industriet       I	33       Undivided Spatsizi Group         LIMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit tuff-breccia, ash and dust tuff. Diff(secffs)         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and subordinate plagioclase-hornblende phyric lapilit tuff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to maic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit tuff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirite:         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded	237       LMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit huff-breccia, ash and dust huff.       Diff (sec.ft);         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust huff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust huff, tuffaceous arkose and mudstone.         LJHv       intermediate to main plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust huff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal buff tubidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilit and ash uff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PENMIAN       Medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirrite.         DEVONIAN AND MISSISSIPPAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirrite.	23       LUMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit full-breccia, ash and dust tuff.       D // ( \scale for for for for for for for for for for	23'       Undivided Spatsizi Group         LIMJS       undivided Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilit tuff-breccia, ash and dust tuff.       Diff. Sciffs         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilit and dust tuff, tuffaceous arkose and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to main plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit buff-breccia, lapilit, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff tubcitite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilit and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PS1       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded mirite.         DEVONIAN AND MISSISSIPPIAN       mediu to intermeristic floridise-coyroxene ohyric lapilit tuff, lapilit tuff-breccia, an	as       Individed Spatsizi Group         LOWER JURASSIC       HAZELTON GROUP         LJHr       felsic lapilii tuff-breccia, ash and dust tuff.       Diff workth         LJHr       felsic lapilii tuff-breccia, ash and dust tuff.       Diff workth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tuff, tows; derived debris flows, arkose and siltstone:         LJHv       intermediate to maic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapili luff-breccia, lapili, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional assive:site debris flows.         UPPER TRIASSIC       STUHINI GROUP         IUTsa       plagioclase-pyroxene crystal tuff turbicite arkose and siltstone, plagioclase-pyroxene phyric marc to intermediate lapilii and ash uff, 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 minicite.         DEVONIAN AND MISSISSIPPIAN       medium and block bedded to bancsive bioclastic limestone with chert interlayers; thin-bedded minicite.	33       Image: State and industrial industrindustrial industrial indu
HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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.         UPFER TRIASSIC       STUHINI GROUP         IUTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVOLUM AND MISSISSIPPIAN       DEVOLUM AND MISSISSIPPIAN	HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diff.worth         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debis flows, arkose and siltstone:         LJHV       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debis 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 debis flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Differentiation         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       thick bedded and massive tulfaceous 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         IUTsa       plagicclase-pyroxene crystal tuff tubidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tulf, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	HAZELTON GROUP         LJHr       felsic lapilii tuff-breccia, ash and dust tuff.       Diff worth         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilii and dust tuft, tuffaceous arkose and mudstone.         LJHv       intermediate to maic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilit tuff-breccia, lapili, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       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         IUTSa       plagioclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilii and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous 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         IUTSa       plagicclase-pyroxene crystal buff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash buff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STUKINE ASSEMBLAGE         PERMIAN       PSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONUENT AND UNSCISCIPPIAN       DEVONUENT AND UNSCISCIPPIAN	HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         UTSa       plagioclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diff worth         LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         IUTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium faite bioiclase-pyroxene obvic lapilli tuff-breccia, and flows;	HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHr       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash tuff, tulf-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       malic to intermediate placiclase-pyroxene phyric lapilli tuff-breccia, and flows;	HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHr       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash tuff, tulf-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPAN       malic to intermediate placiclase-pyroxene phyric lapilli tuff-breccia, and flows;	HAZELTON GROUP         LJHr       felsic lapili tulf-breccia, ash and dust tulf.       Diffworth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tulf, tuffaceous arkose and mudstone.         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapili and dust tulf, tuffaceous arkose and mudstone.         LJHr       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapili tuff-breccia, lapili, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapili tuff-breccia, lapili, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapili and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPAN       malic to intermediate placese-pyroxene phyric lapili tuff-breccia, and flows;	HAZELTON GROUP         LJHr       felsic lapilli tulf-breccia, ash and dust tulf.       Diff worth         LJHr       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         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PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded	HAZELTON GROUP         LJHr       felsic lapilli tuff-breccia, ash and dust tuff.       Diffworth         LJHr       boulder and cobble congiomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHr       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornbiende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornbiende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.
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LJHc       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuilf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuilf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows. <i>UPPER TRIASSIC</i> STUHINI GROUP         UTSa       plagioclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       DEVONIAN AND MISSISSIPPIAN	LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuil, tuffaceous arkose and mudstone.         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	LJHC       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuit, tuiffaceous arkose and mudstone.         LJHC       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHV       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         IUTSa       plagicclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	LJHC       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuif, tuffaceous arkose and mudstone.         LJHC       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHV       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         IUTSa       plagicclase-pyroxene crystal tuff tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	LJHC       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuff, tuffaceous arkose and mudstone.         LJHC       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHV       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagioclase-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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       DEVONIAN AND MISSISSIPPIAN	LJHc       boulder and cobbe conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuil, tuffaceous arkase and mudstone.         LJHc       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         UTSa       plagioclase-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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPAN       medium and thick bedded to anosive bioclastic limestone phyric lapilli tuff-breccia, and flows;	LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tulf, tulfaceous arkose and mudstone.         LJHc       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagioclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash tulf, tulf-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       malic to intermediate placelase-pyroxene phyric lapilli tuff-breccia, and flows;	LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuil, tuiffaceous arkose and mudstone.         LJHc       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         UTSa       plagioclase-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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone phyric lapilli tuff-breccia, and flows;	Image: Structure intermediate intermedintermediate intermediate intermediate intermediate intermediate i	LJHc       boulder and cobbe conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuil, tuiffaceous arkose and mudstone.         LJHc       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to malic plagiodase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       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         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	LJHc       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tuil, tuffaceous arkose and mudstone.         LJHc       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to 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         UTSa       plagioclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate place pla	LJHC       boulder and cobble conglomerate, pebbly sandstone; well-stratified, green and maroon ash, lapilli and dust tult, tulfaceous arkose and mudstone.         LJHC       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHW       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tulf-breccia, lapilli, ash and dust tulf, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tulfaceous 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         UTSa       plagioclase-pyroxene crystal tulf turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tulf, tulf-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded         marie to intermediate planciclase-pyroxene phyric lapilli tulf, lapilli tulf-breccia, and flows;
135       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust buff, flows; derived debris flows, arkose and siltstone:         135       LJHW       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         136       UPPER TRIASSIC       STUHINI GROUP         137       plagioclase-pyroxene crystal buff bubidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash buff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC         STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVOLUTION AND MISSISSIPPIAN	135       Intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         135       LJHa       thick bedded and massive buffaceous 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         UTSa       plagicclase-pyroxene crystal buff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	Image: and dust tail, bilindecides ances and subordinate plagioclase-hornblende phyric lapilli biff-breccia, lapilli, ash and dust biff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli biff-breccia, lapilli, ash and dust biff, 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         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	35'       Intermediate to mafic plagiodase-pyroxene and subordinate plagiodase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       intermediate to mafic plagiodase-pyroxene and subordinate plagiodase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, 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         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PSI         PSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	13       Intermediate to malic plagiodase-pyroxene and subordinate plagiodase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHv       Intermediate to malic plagiodase-pyroxene and subordinate plagiodase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive tuffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       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         PERMIAN       PSI         Medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSUSSIPPIAN	Imaginin and dust bit, binaceous anose and subordinate plagioclase-hornblende phyric lapilli biff-breccia, lapilli, ash and dust biff, flows; derived debris flows, arkose and siltstone:         ILJHV       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli biff-breccia, lapilli, ash and dust biff, flows; derived debris flows, arkose and siltstone:         ILJHa       thick bedded and massive biffaceous 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         IUTSa       plagicclase-pyroxene crystal tiff biblicite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash biff, biff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       FSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate planiclase-pyroxene phyric lapilli biff, lapilli tuff-breccia, and flows;	137       Intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         138       LJHv       intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         138       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         UTSa       plagioclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate plainitase-pyroxene phyric lapilli tuff, lapilit tuff-breccia, and flows;	Imaginin and dust bill, billaceous anose and subordinate plagioclase-hornblende phyric lapilli bill-breccia, lapilli, ash and dust bill, flows; derived debris flows, arkose and siltstone:         ILJHV       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli bill-breccia, lapilli, ash and dust bill, flows; derived debris flows, arkose and siltstone:         ILJHa       thick bedded and massive biffaceous 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         IUTSa       plagicclase-pyroxene crystal tiff biblicite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash bill, bifl-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       FSI       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate planiclase-pyroxene phyric lapilli bifl, lapilli tuff-breccia, and flows;	Imaginin and dust bill, billaceous anose use interested         Imaginin and dust bill, billaceous anose use interested         Imaginin and dust bill, billaceous anose use interested         Imaginin and dust bill, billaceous anose use interested         Imaginin and dust bill, billaceous anose use interested         Imaginin and dust bill, ash and dust bill, flows; derived debris flows, arkose and siltstone:         Imaginin and dust bill, ash and dust bill, flows; derived debris flows, arkose and siltstone:         Imaginin and thick bedded and massive bifaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         Imaginin and thick bedded to massive bifaceous arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash bill, bill-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       Tedium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate planiclase-pyroxene phyric lapilli bill, lapilli bill, lapilli tuff-breccia, and flows;	Imagini and dust tail, bilaceus and so and integration         Imagini and dust tail, bilaceus and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         Imagini and dust tail, bilaceus and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         Imagini and dust tail, bilaceus and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         Imagini and dust tail, bilaceus and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         Imagini and dust tail, bilaceus and subordinate plagioclase-hornblende phyric lapilli tuff-breccia, lapilli, ash and dust tuff, flows; derived debris flows, arkose and siltstone:         Imagini and dust tail, ash and dust tuff, flows; derived debris flows; arkose and siltstone:         Imagini and dust tail, ash and dust tuff, flows; derived debris flows; arkose and siltstone:         Imagini and tubic debris flows.         Imagini and tubic bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         Imagini and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         Imagin tubic tuff biotermediate placelase-pyroxene phyric lapilli tuff	33'       Intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust buff, flows; derived debris flows, arkose and siltstone:         LJHv       Intermediate to malic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust buff, flows; derived debris flows, arkose and siltstone:         LJHa       thick bedded and massive buffaceous arkose and siltstone with abundant syn-depositional soft-sediment deformation structures; malic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagioclase-pyroxene crystal buff turbidite arkose and siltstone, plagioclase-pyroxene phyric malic to intermediate lapilli and ash buff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       malic to intermediate plagioclase-pyroxene ohyric lapilli buff, lapilli tuff-breccia, and flows;	135       Intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust buff, flows; derived debris flows, arkose and siltstone:         136       LJHv       intermediate to mafic plagioclase-pyroxene and subordinate plagioclase-hornblende phyric lapilli buff-breccia, lapilli, ash and dust buff, flows; derived debris flows, arkose and siltstone:         137       LJHa       thick bedded and massive buffaceous 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         UTSa       plagioclase-pyroxene crystal tuff bubidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash buff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       mafic to intermediate placiclase-pyroxene phyric lapilli tuff-breccia, and flows;
35'       Soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC         STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapili and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC         STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN	soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows. UPPER TRIASSIC STUHINI GROUP UTSa plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses. PALEOZOIC STIKINE ASSEMBLAGE PERMIAN PSI medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	-35*       LUTra       soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       PSI         medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	Image: Soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC         STUHINI GROUP         Image: UTSa         plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC         STIKINE ASSEMBLAGE         PERMIAN         PSI         medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.	-35*       Soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         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DEVONIAN AND MISSISSIPPIAN         mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows;	Lorral       soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows.         UPPER TRIASSIC       STUHINI GROUP         UTSa       plagicclase-pyroxene crystal tuff turbidite arkose and siltstone, plagioclase-pyroxene phyric mafic to intermediate lapilli and ash tuff, tuff-breccia and rare flows; minor limestone lenses.         PALEOZOIC       STIKINE ASSEMBLAGE         PERMIAN       Medium and thick bedded to massive bioclastic limestone with chert interlayers; thin-bedded micrite.         DEVONIAN AND MISSISSIPPIAN       DEVONIAN AND MISSISSIPPIAN	soft-sediment deformation structures; mafic to intermediate fragmental volcanic rocks and associated debris flows. 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plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tuit-breccia.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuff-breccia. INTRUSIVE ROCKS	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; rhyolite and rhyodacite lapilli tuff-breccia. INTRUSIVE ROCKS	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and rhyodacite lapilli tuff-breccia. INTRUSIVE ROCKS	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tur-oreccla.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tuit-breccia.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tuit-brecca.	INTRUSIVE ROCKS				
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plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tur-precea.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuff-breccia.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and rhyodacite lapilli tuff-breccia.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuff-breccia.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapill turi-preceda.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuit-breccia.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite laplil tur-brecca.		INTRUSIVE ROCKS	INTRUSIVE ROCKS	INTRUSIVE ROCKS	INTRUSIVE ROCKS
plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilit tur-precea.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuff-breccia.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and rhyodacite lapilli tuff-breccia.	DMSV mafic to intermediate plagiclase-pyroxene phyric lapilli tuff, lapilli tuff-breccia, and flows; plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuff-breccia.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapill turi-preceda.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite lapilli tuit-breccia.	plagioclase phyric amygdaloidal andesite(?) flows; myolite and myodacite laplil tur-brecca.		INTRUSIVE ROCKS	INTRUSIVE ROCKS	INTRUSIVE ROCKS	INTRUSIVE ROCKS
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