APPENDIX 1: ROCK SAMPLE RECORD SHEETS

to accompany

1990 SUMMARY REPORT

on the

UNUK RIVER PROJECT
(Unuk, Coul, Icey, Knip, Bou and Irv Claim Groups)

SKEENA MINING DIVISION
NTS 104B/9 & 104B/10
56°35' Lat., 130°20' Long.

Operator:
GRANGES INC.
2300 - 885 WEST GEORGIA STREET
VANCOUVER, B.C.
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DECEMBER 20, 1990

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SUMMARY

The 1990 Unuk River Project field season involved exploration activities for the second year of a three year program proposed to fulfill the terms of an agreement between the property joint optioners, Springer Resources Ltd. (75%) and Cove Energy Corporation (25%) and the optionee, Granges Inc. A total of $1,072,997.30 was expended.

Work concentrated on priority target areas established in the 1989 program in the Zone 1 Area (covered by claims Unuk 14 and Unuk 26), the "R" Grid (Coul 1) and the Beedee Zone (claims Unuk 18 and Unuk 19), as well as the development of new targets in the U2 Grid Area (claims Unuk 11 and Unuk 12).

Exploration in the **Zone 1 Area** included remapping and sampling, IP survey over priority targets selected from pre-existing geochemical and geological data, followed by diamond drilling (13 holes @ 2698 m). Only trace gold values were encountered in drilling the sheared felsic-sedimentary contact north of 1200N. Anomalous gold values up to 7.91 g/t across 0.4 m were encountered in diamond drilling of the Cliff Zone between 700N and 1200N. Anomalous gold values up to 3.77 g/t Au across 1.00 m were returned in drilling the AP structure north along strike of the collar of drill hole AP-4 (drilled in 1989). Continued work, including diamond drilling, is recommended for the AP Zone and Cliff Zone structures in 1991.

Remapping of the **"R" grid** verified favourable "Eskay Creek" stratigraphy. Targets were established from geological, geochemical and geophysical data. Diamond drilling (3 holes at 656.6 m) yielded discouraging results. Since favourable rock types are encountered within and north of the Creek Zone, a re-examination of this portion of the stratigraphy of the "R" grid is recommended.

Mapping and resampling in the **Beedee Zone Area** have indicated that gold mineralization is located in narrow contact aureoles peripheral to what are likely altered mafic dikes. The area may have potential if a larger dike with a larger contact aureole or a close-spaced dike swarm can be located.

From five target areas produced in preliminary exploration of the U2 grid area in 1990, three have been selected for continued exploration in 1991. These include:

1) **Bruno's Showing** (gold values of up to 15.7 g/t in breccia veins in close proximity to a major airborne magnetic/resistivity anomaly).

2) **U2 North Zone** (low gold values associated with arsenopyrite occur in a structural and stratigraphic setting similar to the Zone 1/AP Zone area).

3) **Stibnite Showing** (low gold values associated with arsenopyrite and stibnite mineralization in a structure which has been traced along strike for 150 m).

In addition to the recommended exploration in the Zone 1, "R" grid, Beedee Zone and U2 grid areas, a re-examination of the Coul 2 claim geology is recommended in light of substantial Eskay Creek type mineralization being traced by American Fibre Corporation to within 2.0 km of the north boundary of the claim.

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1990 SUMMARY OF FIELD ACTIVITIES

UNUK RIVER PROJECT

1. INTRODUCTION

The area encompassed by the report comprises a 33-claim group known as the Unuk Claim Group, a 4-claim group known as the Coul Claim Group, the 2-claim Knip Group, a 3-claim group known as the Bou Claim Group and the single claim Irv **(Figure 2)**. The property comprises 683 recorded units or approximately 17,075 hectares. The claims are recorded as follows:

5211	COUL 1	5236	UNUK 18
5212	COUL 2	5237	UNUK 19
5213	COUL 3	5238	UNUK 8
5214	COUL 4	5239	UNUK 16
5217	BOU 1	5240	UNUK 17
5218	BOU 2	5241	UNUK 13
5219	BOU 3	5242	UNUK 14
5220	KNIP 1	5243	UNUK 15
5221	KNIP 2	5245	UNUK 21
5222	IRV	5246	UNUK 22
5223	ICEY 1	5247	UNUK 23
5224	ICEY 2	5248	UNUK 24
5225	UNUK 1	5249	UNUK 25
5226	UNUK 2	6397	UNUK 26
5227	UNUK 11	6398	UNUK 44
5228	UNUK 12	6479	UNUK 28
5229	UNUK 3	6480	UNUK 29
5230	UNUK 4	6481	UNUK 30
5231	UNUK 9	6482	UNUK 34
5232	UNUK 10	6483	UNUK 36
5233	UNUK 5	6484	UNUK 37
5234	UNUK 6	8088	UNUK 50
5235	UNUK 7		

During the 1990 field season, work was performed on the following claims: Coul 1 (5211), Unuk 11 (5227), Unuk 12 (5228), Unuk 18 (5236), Unuk 19 (5237), Unuk 13 (5241), Unuk 14 (5242), Unuk 15 (5243) and Unuk 26 (6397). Work completed on Unuk 14, 15 and 26 prior to September 10, 1990, was previously reported in Assessment Report Number 20390 ("Geological, Geochemical, Geophysical and Diamond Drilling Report on the Unuk "C" Claim Group" by B.E. Gaboury, September 20, 1990). Therefore, it should be noted that the Statement of Expenditures accompanying this report does not include the value of work accepted for assessment in Report 20390.

Malcolm Bell, Clive Ashworth, Ashworth Explorations Ltd., and Granges Inc. (Unuk 50) are the registered owners of the claims. The claims are held by Granges Inc. under option from Springer Resources Ltd. (75%) and Cove Resources Corporation (25%). The scope of this report is to present past work carried out on the property, outline areas of work in the 1990 field season, present results of 1990 field activities and finally recommend additional work required for the 1991 field season. Models utilized include epigene gold mineralization of the Brucejack or Premier deposits for structural features such as the AP Zone and Beedee Zone, and the epithermal/syngenetic Calpine model for stratigraphy encountered in the "R" grid area.

2. LOCATION AND ACCESS

The claims are all located in the Skeena Mining Division, approximately 1000km north of the city of Vancouver and 65km north of Stewart, B.C. on NTS map sheets 104 B/9 and 104 B/10, as shown in **Figures 1 and 2.**

Access to the area is gained by helicopter from Bell II on the Stewart-Cassiar Highway approximately 50km to the east.

The property is characterized by steep vegetation-covered slopes up to 1220m (4000 ft) elevation and alpine conditions with ice fields and glaciers at higher elevations. Elevations, on the property, vary from 244m (800 ft.) at camp to about 2286 m (7500 ft.) at the top of the Beedee Zone area.

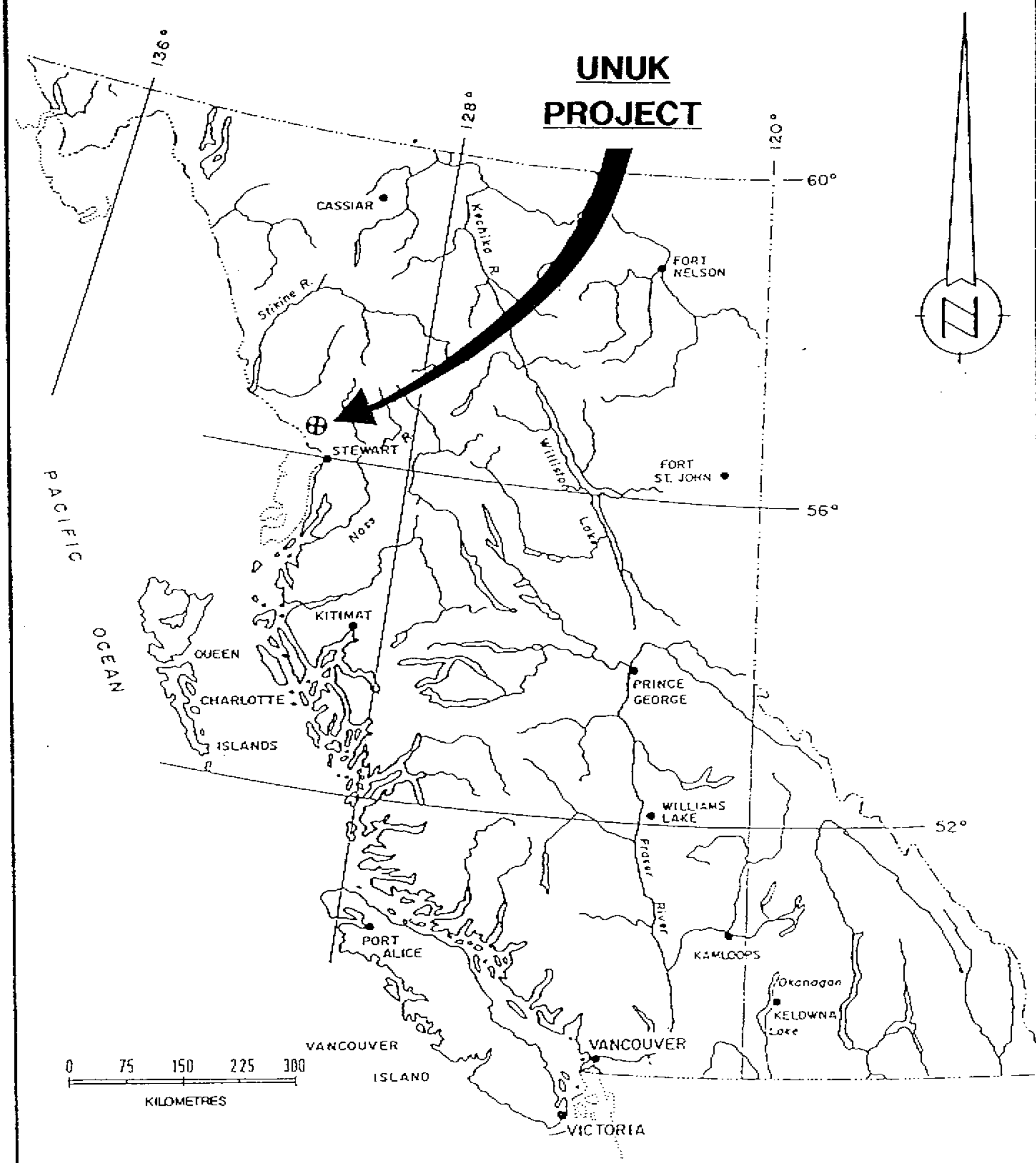
3. REGIONAL GEOLOGY AND MINERALIZATION

The project area is located within Stikinia along the western margin of the Intermontane tectonic belt. It is underlain by a thick volcano-sedimentary succession of Upper Triassic to Middle Jurassic age which is overlain by marine basin sediments of Middle to Upper Jurassic age **(Figure 3)**.

Northeast of John Peaks a sequence of upper Triassic Stuhini Group and Lower Jurassic Hazelton Group sediments and volcanics is exposed. These units are further subdivided into three sequences which reflect increasing volcanism as time progresses:

1) an older shelf sequence represented by thin-bedded siltstones, immature fine-grained wackes, impure limestones and andesitic tuffs;

2) a crudely layered sequence of andesitic tuffs and flows with minor limestone lenses;



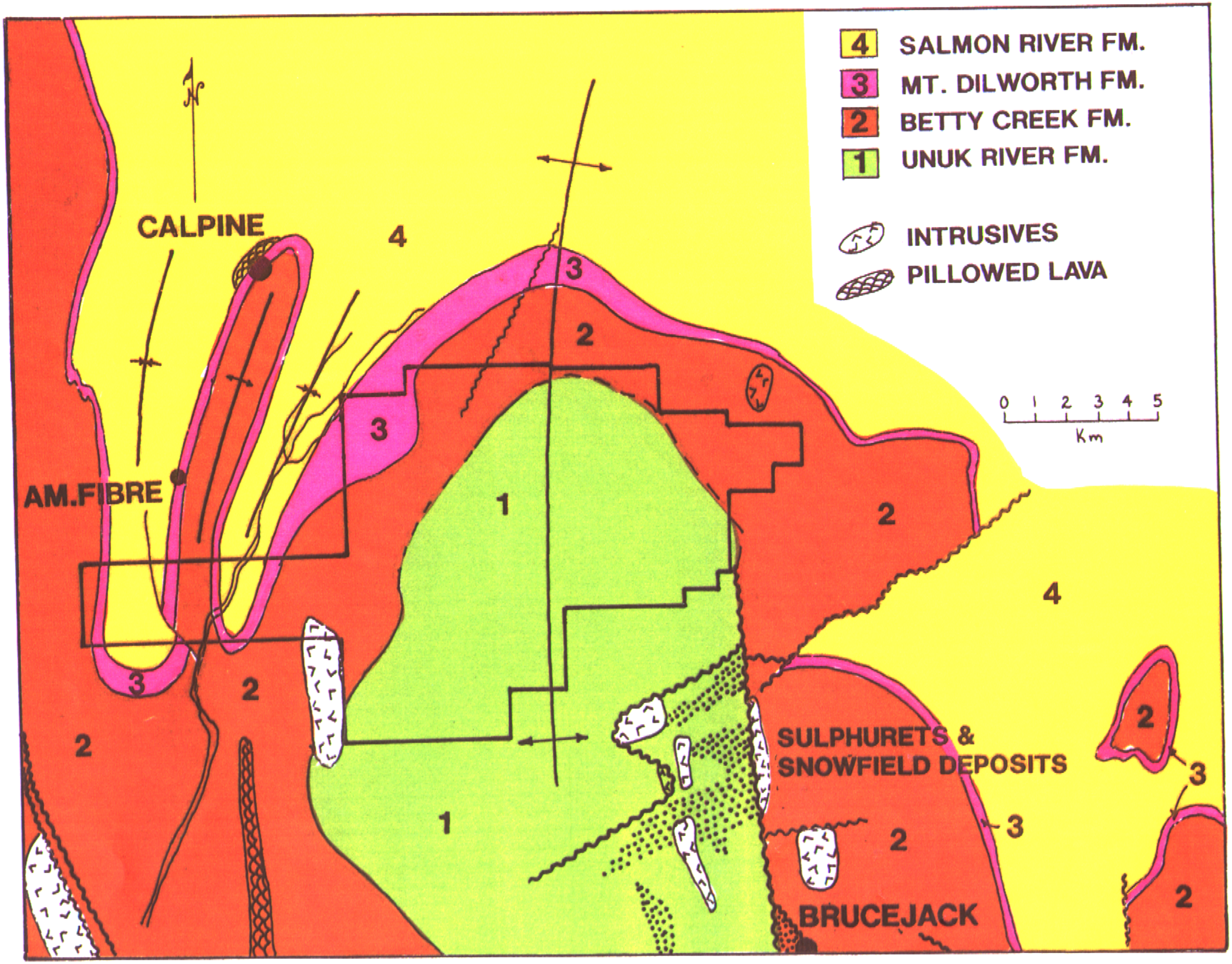
PROJECT LOCATION MAP

GRANGES INC.

UNUK OPTION

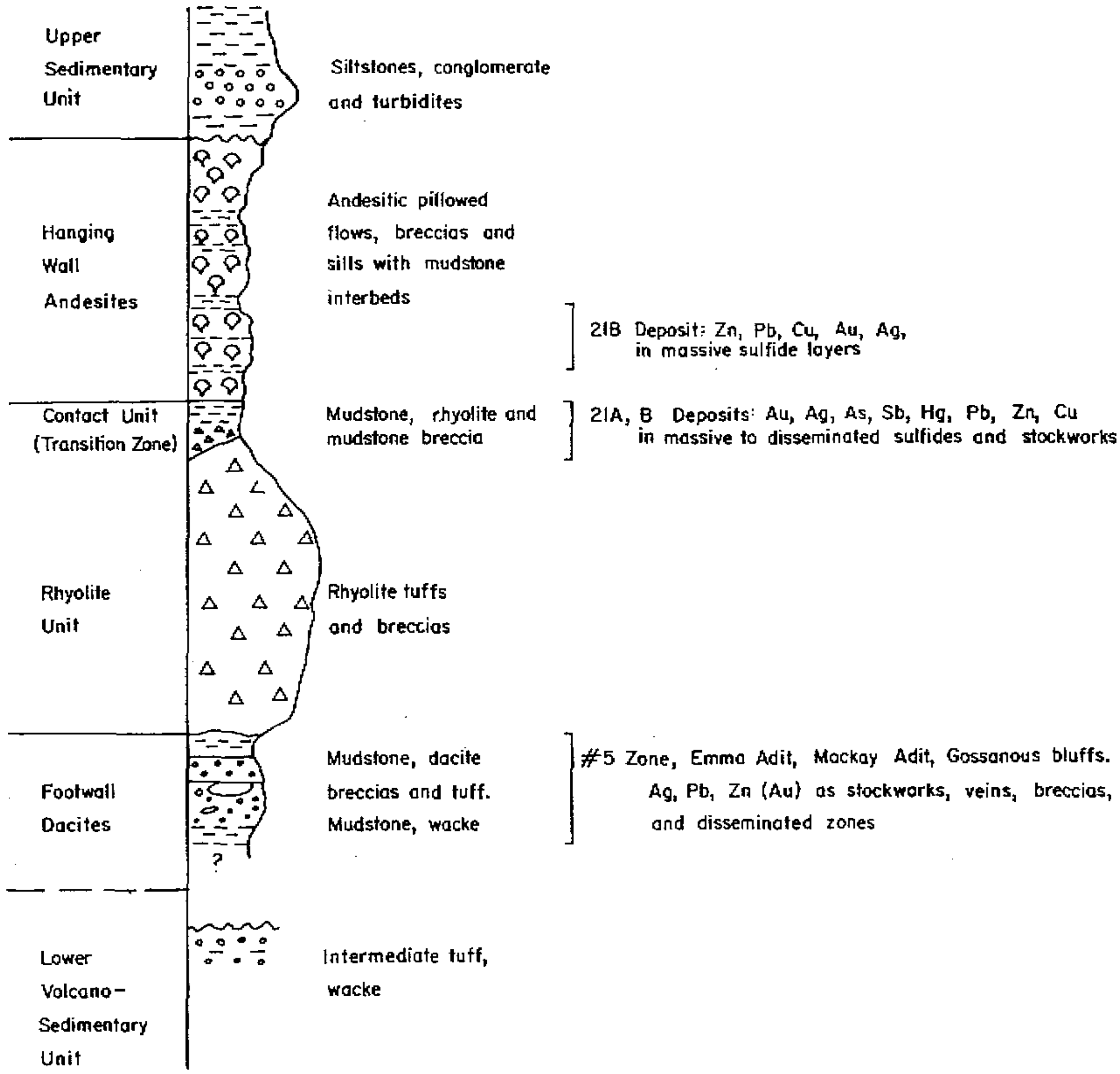
SKEENA MINING DIVISION, B. C.

FIGURE: **1**



REGIONAL GEOLOGY

FIG. 3a



Eskay Creek Stratigraphy (modified after Britton et al, 1989)

FIG. 3b

3) an overlying sequence of green-grey and purple andesitic to dacitic pyroclastics locally distinguished by coarse (up to 1 cm diameter) hornblende phenocrysts (Betty Creek Formation).

Lower Jurassic volcanism terminated with a thin but regionally extensive blanket of felsic pyroclastics known as the Mt. Dilworth Formation. Characteristic of this formation are variably welded tuffs, flowbanded rhyolites, bedded ash tuffs and dacitic lapilli tuffs.

Middle Jurassic Salmon River Formation rocks outcrop along the Unuk River valley and on the Prout Plateau. These consist of a thick sequence of thinly bedded turbiditic siltstones and fine sandstones correlative with the Spatsizi Group. Basal Salmon River Formation sediments, due to the coexistence of belemnite and Weyla fossils, are determined to be of Toarcian age.

Sedimentary and volcanic rocks of the project area have been cut by a variety of plutons representing at least four intrusive episodes spanning late Triassic to Tertiary time.

Major structural features apparent in the Unuk River area are north-trending folds and a major normal fault known as the Harrymel Creek Fault. A number of lesser normal faults which repeat stratigraphy are recognized at the toe of Bruce Glacier (Anderson, 1989), and there has been speculation that more such features exist in the area. The Mt. Dilworth Formation has been interpreted to be tightly folded through an anticline-syncline pair between Unuk River and Harrymel Creek and then more broadly folded through an anticline over the Unuk Claim Group. Some B.C. Department of Mines (BCDM) personnel have suggested that the tight folding west of the Unuk River may be re-interpreted as repetition of stratigraphy through faulting (Britton, personal communication, 1990).

Metamorphism has been determined to be lower greenschist facies of Cretaceous age characterized by conversion of clay minerals to white mica, saussuritization of plagioclase and chloritization of mafic minerals. Metamorphic grades may rise to lower amphibolite facies in contact aureoles peripheral to intrusives of the Coast Plutonic Complex.

3.1 Target Types

Two important target types exist in the project area.

a. Gold mineralization at the Calpine or Eskay Creek deposit occurs as broadly stratabound mineralization in the 21A and 21B deposits. These are within the Contact Zone (a series of mudstones, rhyolites and tuffaceous mudstone breccias). Cross-cutting mineralization is also recognized as stockworks underlying the 21A and 21B deposits. This includes disseminated fissure vein gold-silver-lead-zinc mineralization with variable sericite-silica alteration and minor antimony, and arsenic mineralization within the rhyolites and disseminated sulfides in veins and shears in the footwall dacites. Associated metallic sulfides of the 21A deposit include stibnite, native gold, native silver, native arsenic, mercury, wurtzite, cinnabar, arsenopyrite, tetrahedrite, realgar, amalgam, aktashite, orpiment, sphalerite, galena and pyrite. Current reserve estimates (Dec. 1990) at the 21B zone Eskay Creek are 4,360,000 tons grading 0.77 oz/t gold and 29.12 oz/t silver (proven and probable).

b. The second gold target type is dominantly structurally rather than stratigraphically related. Original interest in the project area focused on the Brucejack deposit (Lyman, 1988; Adamec, 1988). Numerous intrusives plus volcanics and sediments of middle Jurassic age are cut by north to northwest trending faults. Intensely altered zones with sericite, K-feldspar, silica, carbonate and chlorite accompany these faults. Mineralization styles include low grade disseminations, epithermal stockworks and veins. Gold values are associated with pyrite, chalcopyrite, molybdenite, ruby silver, galena, stephanite, cerargyrite, electrum, native gold, tetrahedrite, friebergite, argentite, sphalerite and bornite. Combined reserves for the Peninsula and West Zones are estimated to approach one million tonnes grading about 10 g/t gold and 800 g/t silver. Intrusives similar to the Premier Porphyry (mineralizer at Brucejack) occur in the Beedee Zone area. Also, the AP zone is a structural feature with an alteration assemblage similar to that at the Brucejack Deposit.

Figure 3b is a stratigraphic column illustrating the position of gold, silver and base metal mineralization within felsic to intermediate volcanics and related sediments of lower to middle Jurassic age.

A correlation of general stratigraphy and specific units (like tuffaceous mudstone breccias) recognized in the Creek Zone (Gaboury, 1990) suggests some similarity between the "R" grid area and the Eskay Creek deposit.

4. PREVIOUS WORK AND RESULTS

The claims discussed in this report were staked in 1986 and 1987 on behalf of Malcolm Bell, Clive Ashworth and Ashworth Explorations Ltd.

Initial work in 1986 involved an airborne VLF-Mag survey commissioned by Hi-Tec Resource Management Limited, followed by a four day follow-up examination of the property geology by J.P. Sorbara and Associates. In September and October of 1987 Hi-Tec Resource Management Limited conducted a two phase reconnaissance exploration program (totalling 28 days) to look for precious metal mineralization similar to that found in the Brucejack Lake area. Hi-Tec carried out a similar program in September 1988 (16 days) to follow up the results of the previous year and to outline other areas of interest on which to focus future exploration efforts.

These preliminary reconnaissance-style investigations defined six areas of interest.

5. 1989 WORK PROGRAM

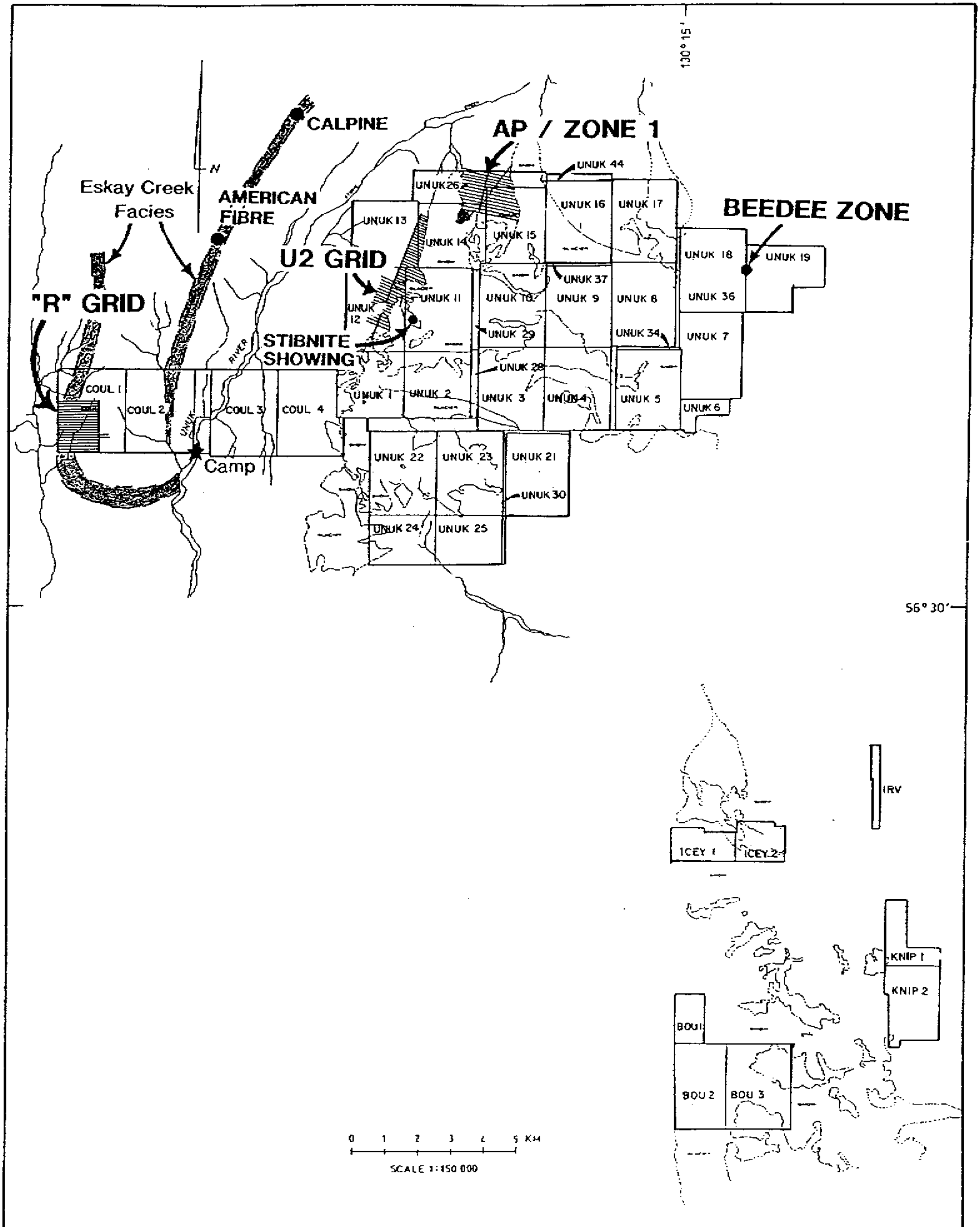
In keeping with the option agreement negotiated between Granges Inc. and Springer Resources/Cove Resources, a field camp was established in late June 1989 and an exploration program of geological mapping, geochemical and geophysical surveying and diamond drilling was conducted under the supervision of B.E. Gaboury, geologist for Granges Inc. This work is described in Gaboury, 1990.

Surface exploration activities in 1989 were initially divided between detailed work in the six areas of interest established from previous work and reconnaissance traverses in other areas (as yet unexplored) geared toward developing new targets.

Reconnaissance contour traverses involved 1:10,000 scale geological mapping, prospecting and collection of "B" horizon soil samples at 100 m intervals plus silt samples from any active streams encountered.

Detailed work on the "R" grid, "J" grid, Zone 1/AP Zone and Zone 2 areas **(Figure 4)** involved establishing surveyed control grids and collection of "B" horizon soil samples at 50 m intervals along wing lines. Ground based VLF-Mag surveys were carried out over the Zone 1 grid and the "R" grid. Follow-up work in the Beedee Zone involved more closely spaced reconnaissance traverses in an attempt to locate the source of highly anomalous soils collected by Hi-Tec Resource Management Ltd.

The last four weeks of the program involved 911 m of preliminary diamond drilling on the south end of the Zone 1 area (AP Zone) and the "Creek Zone" of the "R" grid. A total of $1,030,606.00 was expended.



AREAS OF INTEREST

FIG. 4

6. RESULTS OF 1989 FIELD SEASON ACTIVITIES

6.1 AP Zone/Zone 1 Trench Areas

Two areas of interest, containing gold mineralization were outlined in 1989 activities on the **Zone 1** area **(Figure 4)**. The **AP Zone**, found in a follow-up of a 3160 ppb Au hosted by tuffaceous mudstones and brecciated welded tuffs was traced on surface with trenching. The zone is characterized by galena-sphalerite-pyrite-arsenopyrite-(chalcopyrite) mineralization associated with shearing, brecciation, silicification, kaolinization, talc alteration, sericitization, carbonatization and possible albitization, hosted by felsic volcanic rocks of the Betty Creek (and possibly Mt. Dilworth) Formation. Although values of up to 56.5 g/t Au and 32 g/t Ag across 0.5 m were returned from chip sampling in surface trenches, considerably less favourable results were returned from similar mineralization and alteration encountered in subsequent diamond drilling (5 holes totalling 567 m). Best results were 1.5 g/t gold across 0.5 m.

The second area of interest in the Zone 1 area is underlain by mineralized coarse volcaniclastic rocks known as the **Zone 1 Trench Area.** Extensive trenching in this area returned gold values of up to 1.68 g/t but control for mineralization remained enigmatic until 1990.

6.2 Cliff Zone

The **Cliff Zone** is a mineralized structure visible at the base of the cliffs between 600N and 1200N on the Zone 1 grid. Sampling in 1989 produced anomalous gold geochemical values ranging up to 1400 ppb. The zone also includes auriferous cross-cutting veins between 100N and 1200N and 100W. Anomalous soil geochemical values returned from the base of cliffs to the north, and a 10.3 g/t gold grab sample collected at 1800N/100E suggested that the zone extended north to the property boundary.

6.3 "R" Grid

Calpine-like stratigraphy consisting of a rhyolite-argillite sequence bounded to the west by andesites and to the east by dacites was recognized to exist in the **"R" Grid** area. Mapping/prospecting located mineralization in the **Creek Zone** (between lines 100 N and 200 N from 550 W to 750 W) which returned values of up to 7.33 g/t Au and 20 g/t Ag in grab samples of variably sheared pyrite-arsenopyrite mineralized siltstones and tuffaceous mudstones. Diamond drilling (3 holes totalling 344.43 m) returned best values of 1.77 g/t Au.

6.4 Beedee Zone

The source of gold mineralization in the **Beedee Zone** did not become clear until late in the 1989 field season when siliceous base metal bearing breccia veins were discovered immediately above the soil anomalies outlined by earlier traverses. Values of up to 5.57 g/t Au were returned from grab samples collected. The area was of particular interest, being along strike of the Brucejack Lineament and containing numerous intrusive dikes and sills of material very similar in appearance to the Premier Porphyry, which is ubiquitous in the Brucejack deposit area.

6.5 "J" Grid

Preliminary grid mapping and soil sampling in 1989 in the **"J" Grid** area failed to repeat soil anomalies outlined by earlier workers or develop any favourable geological targets for gold mineralization.

6.6 Zone 2

Activities in the **Zone 2** area returned values, in grab samples, of up to 2.7 g/t Au from pyrite mineralized E-W trending fractures in dacitic volcanic rocks to the ESE of the Tarn Lake. Also, arsenopyrite mineralized fractures near the base of a felsic volcanic sequence 2 km to the north, very similar to the felsic volcanic sequence encountered in the AP Zone/Zone 1 area, returned values of up to 1.57 g/t Au in grab samples. Late in the 1989 field season, prospecting at the toe of a N-S trend icelobe south of the Tarn Lake led to the discovery of an angular "boulder" of massive sulfides carrying 1.4 g/t Au, 80 g/t Ag, 1.8% Pb, 0.17% Cu and > 10% Zn. The source was not located before inclement weather prevented further prospecting.

6.7 Other Areas

In addition to the higher priority targets, discussed above, several less significant target areas were outlined by the reconnaissance mapping activities. These are discussed in the 1989 summary of field activities.

7. 1990 EXPLORATION PROGRAM AND RESULTS

7.1 Zone 1/AP Zone Area

7.1.1 Work Completed

On June 22, 1990, under the supervision of B.E. Gaboury, geologist for Granges Inc., the Unuk River Camp was re-activated and two days later work commenced in the Zone 1/AP area. Activities completed during the 1990 field season in this area included:

1) Re-establishment of pre-existing Zone 1 and AP Zone grids, and fill-in B horizon soil or talus slide fine soil sampling where warranted.

2) Re-mapping of the Zone 1 grid plus more detailed prospecting and rock sampling in areas of interest outlined 1n 1989.

3) IP survey over areas of interest (determined from 1989 field season).

4) 13 hole diamond drill program.

Re-establishment of the Zone 1 grid was accomplished primarily by Granges Inc. personnel with some minor line-cutting by Gordon Clark and Associates (2 man days) in preparation for IP surveying. In conjunction with the Zone 1/AP Zone re-mapping program from June 24 to August 19, 1990, 169 rock samples and 6 soil samples were collected and submitted for analysis. In addition, 50 rock samples were collected and submitted for whole rock geochemical analysis. One hundred and nine diamond drill core samples were taken from previously unsampled portions of 1989 drill holes for geochemical analysis. Diamond drilling was carried out by J.T. Thomas Ltd., of Smithers, B.C.

Soil and rock samples collected were submitted to Acme Analytical Laboratories of Vancouver for 30-element ICP analysis, geochemical fire assay for gold and flameless AA for mercury. Fifty rock samples collected for whole rock analysis were submitted to Chemex Laboratories of North Vancouver. **Appendix 1** is a list of rock samples (with descriptions) collected in conjunction with the mapping/prospecting activities. **Appendix 2** includes Certificates of Analyses for rock and soil samples collected, and **Appendix 3** is a list including rocks collected for whole rock analysis plus descriptions and analyses. Analytical methods are included with the individual certificates of analysis in **Appendix 2**.

IP surveying over areas of interest outlined in the 1989 field program was carried out by Peter Walcott and Associates of Vancouver, B.C. utilizing a Huntec 7.5 kw transmitter-generator and a BRGM Elrec 6 receiver in a pole-dipole array. A total of 80 man-days (16 survey days) was utilized in producing 9.175 km of IP pseudosections over the AP Zone and Zone 1 areas. Helicopter support for the survey totalled 11.6 hrs. A separate report was completed on this data (Walcott, 1990) and included as **Appendix 5**, but relevant results will be discussed as they apply.

7.1.2 Zone 1 Trench Area - Geology, Geochemistry and Geophysics

Remapping of the Zone 1 grid **(Figure 5a)** has provided a great deal of insight into the nature of the AP structure and its relationship with other major regional structural features. The Zone 1 area is characterized by a series of rhyolitic to dacitic flow rocks and associated coarse fragmental volcanic rocks, variably welded dacitic ash flow tuffs and a thick overlying crudely to nonbedded heterolithic pyroclastic breccia with occasional intercalations of fine bedded tuff or debris flow (blackish argillaceous matrix as opposed to the more sericitic tuffaceous matrix of the pyroclastic breccia). The nature of these rocks suggests near-vent facies volcanism. The volcanic sequence is cross-cut by a swarm of "felsic" to andesitic dikes which are commonly vesicular and produce peripheral brecciation, hydrothermal alteration and sulfide mineralization (pyrite, sphalerite, galena and arsenopyrite) of the host rock. In addition to these cross-cutting dikes are larger diabase bodies located in the northwest corner and the north central portion of the Zone 1 grid and in the AP Zone area itself (the AP Zone is noted for its multitude of cross-cutting, anastomosing diabase dikes comprising 10-15% of the area - Gaboury, 1990). The large diabase body in the NW Zone 1 area is characteristically black, aphanitic and magnetic but occasionally contains brecciated, pyritic, greenish altered sections usually at the edges of the intrusive or along fractures. The altered sections have been found, through thin section analysis and whole rock analysis to be a silicified, chloritized and carbonatized mafic rock. Similar alteration is observed in the AP diabase as well as the smaller sill-like diabase unit which occurs in the north central portion of the Zone 1 grid. An extreme case of this type of alteration is observed in the "felsic" dike swarm in the Zone 1 trench area. These dikes, as well as undergoing alteration themselves, have brecciated, silicified and introduced sulfide mineralization into the host pyroclastic breccias.

Two North-South tie lines were IP surveyed (lines 800 W and 600 W). Although the sulfide mineralization is detected on 800 W as a moderately strong chargeability high, it cannot be traced through to tie line 600 W. A 1989 soil anomaly of up to 145 ppb Au occurs on a west-facing slope above the Zone 1 trenches (which tested sulfide mineralization related to a swarm of the E-W trending "felsic" dikes). The anomaly is located down slope to the west of the southeast contact of the large diabase body with the coarse pyroclastic breccia, and indicates several anomalous areas of high chargeability. One anomaly to the east of the 1989 soil anomaly is visible as a strongly gossanous pyritic contact zone at least 5-10 m thick.

7.1.3 Cliff Zone - Geology, Geochemistry and Geophysics

Soil anomalies in eastern portions of the **Zone 1 West** area are recognized as being spatially related to the sheared contact of the felsic volcanic sequence to the west (identified as very likely being the Mt. Dilworth Fm.) and a dominantly sedimentary sequence fitting the BCDM's current description of portions of the Betty Creek Formation.

Shearing at the felsic volcanic - sedimentary contact appears to be at very shallow angles (possibly a sheared bedding plane contact) and in many places a dominantly dip slip motion is indicated. The AP structure has been traced with IP from a Z-type flexure around 1350 N on the AP grid to the Cliff Zone at 700 N/275 W on the Zone 1 grid, a distance of approximately 500 metres **(Figure 5b)**. The AP diabase (as traced by 1989 ground magnetic survey) appears to have deformed the AP structure (folded to the east as indicated by IP data) and was likely instrumental in producing the gold-poor ankerite-galena-sphalerite veins such as "Don's Vein" (Gaboury, 1990) in addition to the abundant near flat-lying tensional quartz veinlets which occur in trenches 1 and 10 in the AP Zone area.

The only apparent difference between the Cliff Zone and the AP Zone is that the AP Zone is observed to cross-cut stratigraphy while the Cliff Zone appears to crudely follow a lithologic contact. It is possible that the Cliff Zone is the major structure and that the AP Zone is a splay from it. Another such splay structure appears to originate from the main structure at 1200 N/250 W and extends southwestward at Az 225 towards "Red Knob", where gold levels in soil reach 420 ppb. This shows up as a weak chargeability high and a minor inflection in the resistivity on the IP pseudosection for line 900 N; it was intersected early in DDH AP-9.

IP has indicated that a continuous traceable zone of broad chargeability highs (which may have coincident resistivity lows or flanking resistivity highs) corresponds with the soil geochemical anomalies outlined in 1989 (Gaboury, 1990). This in turn approximately correlates with the sheared base of the felsic volcanics outlined by 1990 mapping **(Figure 5a)**.

Where exposed, the Cliff Zone (at the base of the cliffs between lines 700 N and 100 N) has been found to carry consistently elevated gold values of up to approximately 1400 ppb (Gaboury, 1990). Between lines 1100 N and 1300 N the zone appears to be sinistrally drag-folded so as to produce an apparent displacement of about 200 metres to the west. This interpretation is supported by IP data. Smaller scale sinistral drag folds with steep northwesterly plunges are observed in ash flow tuffs around 100 N/250 W. Sinistral drag-folding is also observed to overprint diabase dikes in this area. Slickenside evidence, as well as plunges of small-scale drag folds, in this area, indicate an almost horizontal stress field.

The sequence of structural deformation events leading to what is today observed would then be as follows:

1) Development of a shear structure with dominantly dipslip displacement (Cliff Zone at sheared felsic volcanic-sedimentary contact) plus splay structures (AP structure and "Red Knob" structure).

2) Emplacement of diabase dikes and larger diabase intrusive bodies with resultant deformation of pre-existing AP Zone and development of ankeritic veins (eg. Don's Vein).

3) Re-activation of shear zones by a horizontal dextral stress field producing sinistral drag folding and northwest trending siliceous auriferous veins such as those observed in the cliff between lines 1100 N and 1200 N.

Judging by the higher gold values observed in the northwest trending siliceous veins, it would appear that the later reactivation of the shear zone could have played an important role in the concentration of gold in the tensional regime created within the sinistrally drag-folded portions of the structure.

The correlation of IP, geochemical and geological evidence suggested that drilling of the Zone 1 structure was warranted. Results of this drilling are described in Section 7.1.6.

7.1.4 <u>AP Zone - IP Survey</u>

A preliminary pilot IP survey over the AP Zone, a structure known to have appreciable metallic sulfide content, was carried out early in the 1990 field season **(Figure 5b)** as a guide to assess the potential of any IP targets subsequently outlined elsewhere on the property. A continuously traceable zone of high chargeability and low resistivity was followed through a dextral fold to the immediate south of the AP diabase body and behind the collar of diamond drill holes AP-1 and AP-4. Since weak mineralization was detected in the top of AP-4, this IP anomaly represented a priority exploration target. Diamond drill targets were selected from the strongest portion of the IP anomaly. Results of the drilling are described in Section 7.1.6.

7.1.5 Zone 1 East - Geology

A monotonous but structurally complex series of andesitic fragmental volcanics and argillitic to psammitic sediments were mapped on the Zone 1 East grid **(Figure 6)**. No significant gold mineralization was detected in rock samples collected on this position of the Zone 1 grid.

7.1.6 Zone 1/AP Zone 1 - 1990 Diamond Drilling

Thirteen diamond drill holes totalling 2415 m were completed on the AP Zone/Zone 1 area between August 20 and September 21, 1990. Results are summarized in **Table 1**. Collar locations are depicted in **Figure 5a**. Diamond drill logs are included in **Appendix 4** and diamond drill sections in **Figure 14**. All core is stored on the property at the Unuk camp.

7.1.6.1 Discussion of 1990 Diamond Drilling

Targets drilled in holes AP-6, AP-7, AP-8, AP-9, AP-10, AP-11, AP-12 and AP-16 confirmed the presence of a fault structure at the base of the felsic volcanics encountered on surface in the Zone 1 area. Shearing encountered in the argillaceous and sandy sediments underlying tuff breccias, flow banded rhyolites, lapilli tuffs and variably welded ash tuffs of the felsic volcanic sequence is either steeply east or west dipping. Generally, only trace elevated gold values were encountered, associated with pyrite and trace arsenopyrite mineralization. Core recoveries were in excess of 90% but drilling was difficult and some holes (eg. AP-6) had to be abandoned before reaching their target depths. Despite use of drilling additives (Quiktrol, etc.) and considerable care, the broken felsic volcanics proved to be excessively abrasive to thin-wall diamond drilling equipment.

The highest gold values encountered in drilling the Cliff Zone structure was in holes AP-7 and AP-12 targeted to test the cross veins observed on surface between lines 1100N and 1200N. The gold values (up to 7.908 g/t) are found to be associated with arsenopyrite, sphalerite and galena mineralization in carbonate veins in tuffaceous mudstone. This is directly analogous to what is observed on surface.

Drilling of the AP structure (drill holes AP-13, AP-14, AP-15, AP-17, and AP-18) has confirmed the presence of a major cross-cutting steeply dipping fault structure hosted

TABLE 1: SUMMARY OF DIAMOND DRILLING COMPLETED IN THE AP ZONE/ZONE 1 AREA IN 1990

DDH No.	Location	Angle/ Direction (wrt true N)	Final Depth (m)	Mineralization Encountered from - to	description
AP-6	1350N/88.5W	-45°/Az 302	300.84	No significant mineralization.	
AP-7	738N/195W	-45°/Az 314	197.21	86.70-87.90	1.097 g/t Au & 2.0 g/t Ag across 1.2 m (true width ≈ 0.75 m).
AP-8	1175N/321W	-55°/Az 080	306.91	217.45-218.03	0.83 g/t Au & 2.2 g/t Ag across 0.58 m (true width ≈ 0.33 m).
AP-9	1117N/258W (Zone 1)	-50°/Az 080	238.05	48.40-48.90	3.24 g/t Au across 0.5 m (true width ≈ .32 m).
				219.05-220.05	2.04 g/t Au & 7.4 g/t Ag across 1.0 m in silicified argillite (true width ≈ 0.64 m).
AP-10	1600N/075W (Zone 1)	-45°/Az 282	198.12	No significant mineralization.	
AP-11	1600N/003W (Zone 1)	-45°/Az 282	141.12	40.16-40.82	0.46 g/t Au across 0.66 m in altered diabase contact (true width ≈ 0.47 m).
AP-12	1240N/094W (Zone 1)	-45°/Az 210	138.68	58.70-59.10	7.91 g/t Au, 148.6 g/t Ag, 0.65% Zn & 0.33% Pb across 0.40 m in carbonatized tuffaceous mudstone (true width ≈ 0.28 m).
AP-13	1503N/948E (AP Zone)	-45°/Az 165	35.66	No significant mineralization, hole abandoned.	

TABLE 1 (Cont'd.)

DDH No.	Location	Angle/ Direction (wrt true N)	Final Depth (m)	Mineralization Encountered from - to	description
AP-14	1503N/948E	-50°/Az 165	243.8	166.20-172.20	0.79 g/t Au, 28.2 g/t Ag, 0.07% Cu, 2.62% Zn and 0.90% Pb across 6.0 m in brecciated welded tuff (includes a 1.5 m interval carrying; 2.07 g/t Au, 54.4 g/t Ag, 0.03% Cu, 4.12% Zn, & 1.05% Pb). True width ≈ 3.86 m).
AP-15	1503N/948E (AP Zone)	-58°/Az 165	264.26	No significant mineralization encountered.	
AP-16	905N/456W	-45°/Az 134	190.2	Broken, silicified welded tuff encountered between 68.0-80.0 m appears to correspond to "Red Knob" structure, no significant mineralization encountered.	
AP-17	1502N/1020E (AP Zone)	-47°/Az 134	86.6	Hole abandoned in shear.	
				62.30-64.30	1.25 g/t Au, 20.7 g/t Ag, 0.035% Cu, 1.087% Zn & 0.9% Pb across 2.0 m in brecciated welded tuff (true width ≈ 1.36 m).
				70.10-71.10	3.77 g/t Au, 6.6 g/t Ag, 0.46% Zn & 0.53% Pb across 1.0 m in brecciated welded tuff true width ≈ 0.68 m).
AP-18	1502N/1020E (AP Zone)	-59°/Az 134	93.0	76.55-77.55	1.19 g/t Au and 2.5 g/t Ag across 1.0 m (true width ≈ 0.52 m).
				88.5-91.40	2.63 g/t Au and 19.09 g/t Ag across 1.85 m (true width ≈ 0.95 m).

by welded tuffs, tuffaceous mudstones and argillaceous sediments. Gold values of up to 3.77 g/t plus associated silver, lead, zinc and copper values have been encountered in this structure accompanied by intense silicification, mild to moderate sericitization and kaolinization, and occasional chlorite alteration. Drilling was extremely difficult and over some intervals core recovery fell to less than 50% within the structure.

In addition to testing the Cliff Zone structure, diamond drillhole AP-9 probed the Red Knob structure which can be observed on surface between 700N and 900N and between 300W and 400W. Hole AP-9 intersected an upper zone (16.9-20.0 m downhole) of shearing, silicification and sulfide mineralization with anomalous gold values (up to 177 ppb). In addition, gold values of up to 3236 ppb were intersected in tuffaceous mudstones between 48.40-49.90 m. Between 219.05-220.05 m downhole, moderately sericitized tuffaceous mudstones carry 2.04 g/t Au across a 1.0 m interval. Diamond drill hole AP-16 was drilled to test the Red Knob structure below the soil anomaly. Fracturing and chlorite alteration similar to that observed on surface and in the upper zone in AP-9 was observed, but no significant gold mineralization was intersected. Core angles observed for fracturing and quartz veining were frequently less than 45° (occasionally $\leq$ 10°).

7.2 "R" Grid Area

7.2.1 Work Completed

Field activities in the "R" grid area in 1990 included:

1) Refurbishment and extension of "R" grid.
2) Soil sampling over grid extensions and tie-in of former grid to new grid **(Figure 8a)**.
3) Mapping and prospecting of entire "R" grid.
4) IP surveying of priority areas **(Figure 8b)**.
5) Diamond drilling; 3 holes totalling 655.5 m.

Refurbishment of the "R" grid commenced June 26th and a total of 10.0 km of line extensions plus new lines were added by the end of July. The grid currently extends from the south boundary (Coul 1, line 500 S) to 900 N and from 0 W to the west claim boundary between 1200 W and 1300 W.

The refurbished portion of the grid has been remapped and 1989 soil sample locations tied into the refurbished grid. The 1990 soil geochemical data plus anomalies outlined by 1989 activities are presented in **Figure 8a**. Samples were collected with a grubhoe from B soil horizon where developed, or from talus slide fines. Between August 4 and

August 16, a total of 13 survey days (65 man-days utilizing 9.9 hrs of helicopter support) of IP was carried out, covering 6.8 line km of higher priority target area selected from pre-existing geological and geochemical data. IP results are summarized in **Figure 8b.**

7.2.2 <u>"R" Grid Area - Geology, Geochemistry and Geophysics</u>

A series of generally east-dipping rhyolitic to dacitic volcanic rocks with minor thin argillaceous interbeds has been mapped within the anomalous soil area outlined by 1989 field activities. These are bounded to the west and northwest by propylitically altered andesitic volcanic rocks and to the east by a sequence of dacites, argillites, siltstones and occasional coarse epiclastic rocks **(Figure 7).**

Remapping of the refurbished "R" grid and mapping of the "R" grid extensions led to a better resolution of the rhyolite and argillite units in the felsic volcanic-sedimentary sequence which is believed to be, in part, the same time stratigraphic unit and depositional environment as that hosting the Eskay Creek Deposit. The sequence consists of at least two major argillite units and two major rhyolite units. Strata appear to be striking NNE and inclined steeply to the west in areas north and west of the Creek Zone (site of drilling in 1989), and inclined less than or equal to 55 degrees to the east in areas to the south of the Creek Zone. The sequence is bounded to the west by andesites including massive flows and feldspar phyric tuffs; and to the east by dacites which include dacitic feldspar phyric tuffs, andesitic to dacitic tuffs, andesite breccias, crystal-rich dacitic ash flow tuffs, and minor conglomerates, greywackes and argillites.

An altered andesite (chloritized, silicified and pyrite mineralized) or magnesium-metasomatized rhyolite has been traced as a moderately strong NNE trending chargeability anomaly **(Figure 8b)** in correlation with geological mapping. No significant gold geochemical anomaly exists in soils collected over this area (highest value = 16 ppb Au) but there is a patchy overlying arsenic soil anomaly. This altered unit, in close proximity to the western edge of the felsic-sedimentary sequence, may represent the hanging-wall andesite which occurs to the immediate west of the ore-bearing Transition Zone in the Eskay Creek Deposit.

Further to the south, on lines 100 S, 200 S, 300 S and 400 S, a weak chargeability anomaly can be traced along the eastern edge of the rhyolite-argillite sequence. Similarly, a weak chargeability response is found associated with the western edge of the sequence. Corresponding gold and arsenic geochemical signatures (up to 58 ppb Au and up to

201 ppm As) occur in soils over these IP anomalies **(Figures 8a and 8b)**.

A weak chargeability response was found to occur over the Creek Zone which was drilled in 1989. The anomaly is centred to the east of DDH R-1 and indicated dips in this area are to the east **(Figure 8b)**.

7.2.3 <u>"R" Grid - 1990 Diamond Drilling Program</u>

Between September 22 and September 28, 1990 three diamond drill holes totalling 655.6 m were completed on the "R" grid in order to test IP/geochemical/geological targets outlined earlier in the field season. These are summarized in **Table 2**. Drill hole collars are depicted in **Figure 7**. Diamond drill logs are included in **Appendix 4** and diamond drill sections in **Figure 15**. All core is stored on the property at the Unuk camp. Diamond drill hole R-4 was targeted to test the IP and a weak geochemical anomaly associated with the altered andesite unit located immediately west of the favourable rhyolite-argillite sequence. Diamond drill holes R-5 and R-6 were targeted to test the two parallel IP/geochemical anomalies to the south of the Creek Zone.

TABLE 2: SUMMARY OF DIAMOND DRILLING COMPLETED ON THE "R" GRID IN 1990

Hole No.	Location	Angle/ Direction	Final Depth (m)	Mineralization Encountered from - to	description
R-4	100S/890W	-50°/Az 266	221.6	No significant mineralization.	
R-5	378S/730W	-53°/Az 266	273.4	No significant mineralization.	
R-6	176.5S/761W	-45°/Az 246	160.63	No significant mineralization.	

7.2.3.1 <u>Discussion of 1990 Diamond Drilling</u>

Diamond drilling on the "R" grid was considerably easier than in the Zone 1 area and core recoveries are usually excellent. Diamond drill hole R-4, collared in altered andesite, was drilled to test a strong IP conductor to the west of the rhyolite-argillite sequence mapped earlier in the 1990 field season. A thick sequence of graphitic argillites was encountered rather than the "altered rhyolites" which occur in sparse outcrops in this area. No significant gold values were encountered in this hole.

Black argillites, siltstones and minor felsic to intermediate tuffaceous horizons were encountered by drill holes R-5 and R-6. As in drill hole R-4, less felsic volcanic material was intersected than was indicated by surface mapping; further discussion of this observation will be made in section 8.4. Stratigraphy appears to dip from 30 to >80° to the east as indicated by surface measurements. Again, no significant gold values were encountered in drill holes R-5 and R-6.

None of the 1990 drill holes encountered tuffaceous mudstones. The tuffaceous mudstones in the Creek Zone, drilled in 1989, are host to gold mineralization associated with arsenopyrite. They were mapped on surface between lines 0 and 600N in 1989.

7.3 U2 Grid Area

7.3.1 Location

The **U2 grid** area is centred on Tarn Lake which occurs to the west of the Zone 2 area covered in the 1989 field season **(Figure 4)**. It is located on claims Unuk 11 and Unuk 12 at an elevation of 1070 m to 1860 m, and encompasses the areas sampled in 1989. The grid covers the felsic volcanic sequence (hosting gold mineralization of up to 1.57 g/t) which bears great resemblance to rocks of the Zone 1 area (2 km to the south), and the area including the Tarn Lake and pillowed andesites (where a massive sulfide boulder containing 1.4 g/t Au, 80 g/t Ag, 1.8% Pb, 0.17% Cu and > 10% Zn was discovered late in 1989).

7.3.2 Work Completed

Activities completed during the 1990 field season in the U2 grid area included:

1) Establishment of a compass/topofill picket grid.
2) B horizon soils or talus slide fines grid sampling.
3) Preliminary grid mapping and prospecting in priority areas established from soil sampling and 1989 prospecting results.
4) Minor IP surveying over 1989 Aerodat airborne resistivity/magnetics anomalies.

A 4 km long picketed baseline was established at a bearing of Az 020 true north through the east edge of the Tarn Lake below and to the west of the Zone 2 area. Compass/topofill section lines were established in conjunction with grid soil sampling and preliminary prospecting.

Over the period from August 17 to August 21, 2.4 line km of IP were carried out over the two Az 150 bearing airborne anomalies outlined by the 1989 Aerodat Survey.

7.3.3 Soil Geochemistry

Soil sampling of the U2 grid was completed August 23rd and mapping and prospecting were initiated immediately thereafter. Along with 1989 airborne geophysical data and 1989 reconnaissance geological/geochemical work, available soil results from the 1990 program were utilized to prioritize prospecting/mapping areas. Rock and soil geochemical data are presented in **Figure 9**. Background soil gold values in the U2 grid area appear to be of the order of <10 ppb. The following anomalous areas with $\geq$ 40 ppb Au in soil were selected for more detailed follow-up mapping and prospecting:

1) 2500N/2150E to 2600N/2100E to 2700N/1975E to 2800N/1950E (trend of anomaly ~ Az 150 to Az 160).

2) 2900N/2550E (trend of anomaly ~ Az 155).

3) 1900N/2275E to 2000N/2275E and 2200N/2250E (anomaly trends along the west edge of a ~N-S trending ice lobe).

7.3.4 Geophysics

The focus of activities in the Zone 2 area (Gaboury, 1990) in 1990 was two parallel airborne resistivity lows. One with an accompanying intense magnetic low signature, which trends roughly Az 150, is located for the most part under the N-S trending ice lobe. The second is located almost due north of the Zone 2 area, immediately north of an E-W trending ice lobe which extends toward the Tarn Lake **(Figure 9)**.

Three short lines of IP over the southernmost airborne anomaly outlined the following features:

Line 2800N/1750E to 1875E:	broad resistivity low and chargeability high
Line 2700N/1700E to 1850E:	chargeability high
/1750E to 1800E:	resistivity low (W dip ?)
/2100E to 2350E:	broad chargeability high; chargeability contrast at 2350E
/2250E to 2350E:	sharp resistivity contrast; metal factor peak at 2325E to 2375E

Line 2600N/1750E to 2250E:	broad chargeability high; peaks at 1775E
/1800E to 1850E:	resistivity low
/2025E :	resistivity low

Airborne and IP data suggest that a major NW-SE structural feature exists under the N-S trending icelobe.

One IP line across the northern edge of the north airborne anomaly indicated a broad chargeability high from 1625N to 1925N with a resistivity low from 1875N to 1925N.

7.3.5 Geology

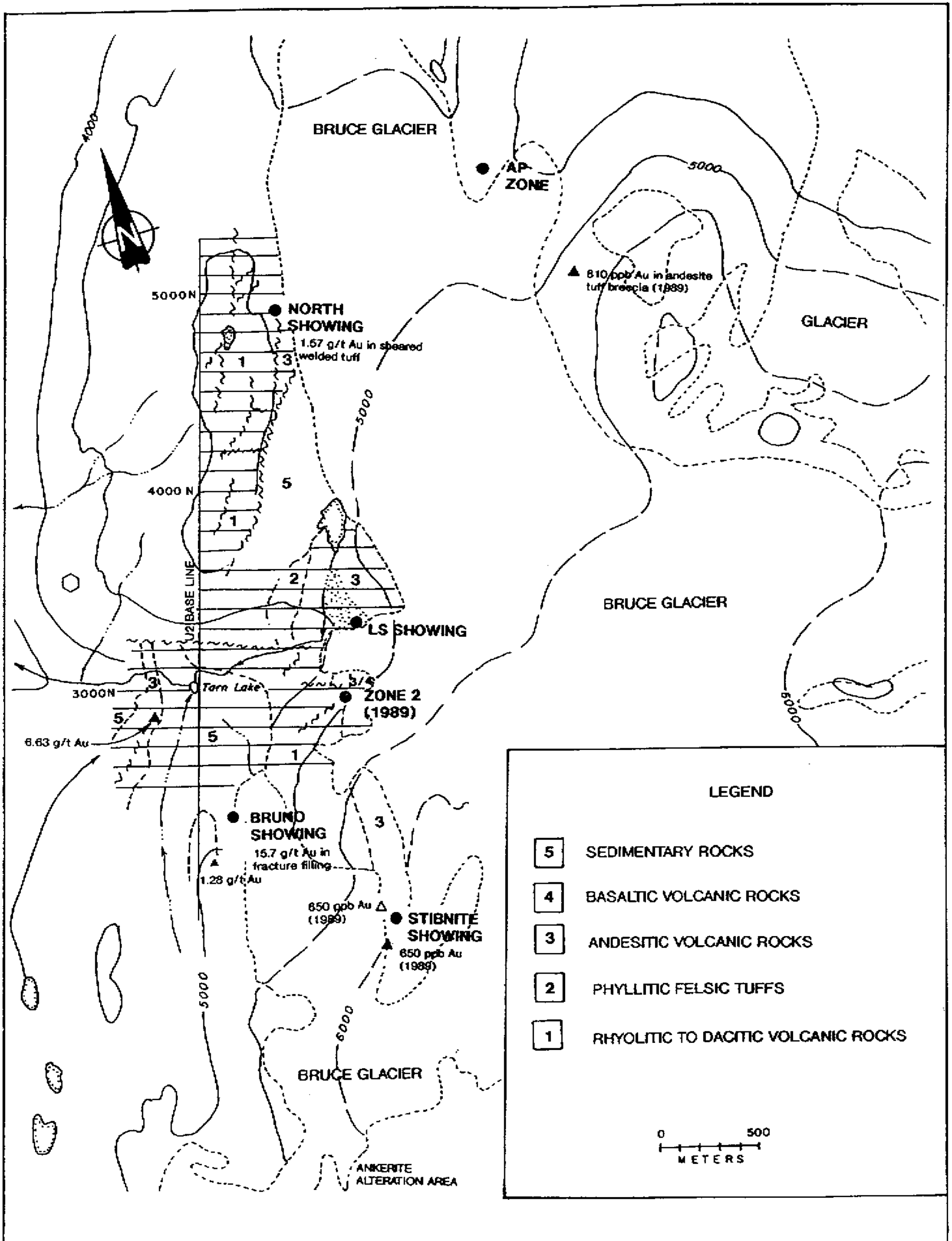
The following is a description of areas of interest outlined in 1990 in the U2 grid area. Their general locations are depicted in **Figure 10**. **Figures 11 a,b,c** are more detailed geological maps of the U2 grid at 1:2000 scale.

The U2 grid is underlain by a sequence of coarse andesitic fragmental volcanics (described in BCDM mapping as Stuhini Group) overlain to the west by a sedimentary sequence including conglomerates, pillow andesites, siltstones, fossilferous greywackes and minor tuffs which is in turn overlain to the west by a felsic volcanic sequence (which includes flowbanded and spherulitic rhyolites, variably welded tuffs and tuff breccias).

7.3.5.1 Bruno's Showing

To the south of the Tarn Lake, east-west trending breccia veins occur within north-south trending tuffaceous dacites and andesites along the western edge of a north-south trending ice lobe which separates the dacitic volcanic rocks of Zone 2 to the east from pillowed hornblende-porphyritic andesites, agglomerates and greywackes to the west. In addition to the breccia veins, the area contains abundant shallow west-dipping tensional quartz veins. Magnetic and resistivity data from Aerodat's 1989 survey suggest a very strong resistivity and magnetic low trending approximately north 45 degrees west across the ice lobe. A massive lead-zinc sulphide boulder was discovered late in 1989 at the base of the ice lobe. It was found to carry 0.4% Cu, >1.5% Pb, >10% Zn, >90 g/t Ag and 1.5-2.0 g/t Au. It is possible that its source is related to this cross-structure.

Mapping in 1990 has outlined a wedge of sedimentary rocks of flysch association including argillites, conglomerates, volcanic mudstones and arenaceous tuffaceous sedimentary rocks **(Figure 11c)**. These rocks appear to trend about Az 020 and dip about 45 degrees to the east. Portions of this sequence are sheared and brecciated, containing



U2 GRID – AREAS OF INTEREST

FIG. 10

abundant quartz-carbonate-sulfide mineralization (includes pyrite as well as traces of sphalerite, galena and chalcopyrite). Slickensides on sheared bedding planes indicate dip slip motion with the eastern block upthrown with respect to the western block. The pillowed andesites, agglomerates and finer grained related tuffaceous rocks which occur to the south and west appear to be in fault contact with the sedimentary wedge (this fault contact is observed in one location where pillowed andesites are separated from the sedimentary sequence by a thin shear trending about Az 120). This trend is semi-parallel to the trend of narrow sphalerite rich breccia veins carrying up to 15.7 g/t Au, which can be found to the south along the western edge of the N-S trending ice lobe. One such vein has been found to reach a width of about 30 cm and is traceable for about 50 m to the edge of the ice. In addition to these east-west mineralized veins, several N-S trending zones of shearing and brecciation can be observed at the toe of the ice lobe.

A grab sample, collected in carbonate-altered greywacke (located at 2850N/1775E) along strike of the southern airborne resistivity anomaly **(Figure 11b)** in 1990, has returned 6663 ppb Au and 5.6 ppm Ag. This altered auriferous zone may be related to the auriferous breccia veins of Bruno's showing.

7.3.5.2 U2 North Zone

To the north of the Tarn Lake, in the vicinity of 5100N/2200E, is a resistant, slightly gossanous ridge of felsic volcanic rocks very similar to those of Zone 1. These include flow-banded rhyolites, spherulitic rhyolites, dacitic to rhyolitic ash-flow tuffs (variable degrees of welding), and numerous fine ash to coarse polymictic pyroclastic tuffs. Not only are these rocks lithologically similar to those of Zone 1, they are also similar in their sheared contact to the sedimentary rocks (of the Unuk River Formation?). A further analogy to Zone 1 is the auriferous nature of the sheared felsic volcanic-sedimentary contact (up to 1.57 g/t obtained in grab samples collected in 1989). Similarly north-plunging drag folds are observed in the more felsic volcanic members on the east side of the west-dipping sequence. However, in a preliminary overview of the area, these appear to be dextral and more shallow north plunging.

During the 1990 field season, tuffaceous and argillaceous sedimentary rocks have been mapped and resampled **(Figure 11a)**. Up to 388 ppb Au was detected in brecciated welded tuffs containing arsenopyrite mineralization. Results verified anomalous gold, silver and arsenic levels detected in 1989. Mapping of an extensive zone of fracturing was initiated but additional sampling and mapping are required.

7.3.5.3 Stibnite Showing

Disseminated to massive stibnite ± tetrahedrite-tennantite has been traced approximately 150 m along strike to the north, associated with fracturing and carbonate alteration **(Figure 11d)**. Antimony values up to 19,454 ppm have been returned but gold values are only slightly anomalous (up to 231 ppb Au). Chip sampling across a felsic dike in the area returned values of 1.847 g/t Au and 5.4 g/t Ag across 0.5 m. The elevated gold in this sample was correlated with high arsenic rather than antimony.

7.3.5.4 LS Showing

Mapping and prospecting in August 1990 has led to a re-investigation of a zone of limonitic and carbonate alteration with generally flat-lying quartz-carbonate-sulfide veins known as the LS showing **(Figure 11c)**. The general trend of this zone is about Az 150 to Az 160 degrees and appears to be associated with shearing within a series of felsic, sericitic, tuffaceous sediments. It also appears to correspond with the weaker more northerly airborne resistivity anomaly mentioned earlier in section 7.3.4. Alteration, degree of quartz veining and amount of chalcopyrite mineralization appear to intensify southeastward toward the northern flank of the E-W ice lobe, and subsequently diminish to nothing toward the northwest. A zone of quartz veining up to 1.5 m wide, associated with shearing within the coarse andesitic fragmental, has been discovered within the area of limonitic alteration. It is found to carry appreciable chalcopyrite, galena and sphalerite mineralization and has been traced along strike for ~ 150 m. Only sporadic low gold values were returned from chip sampling of this structure.

7.3.5.5 Tarn Lake Area

East-west trending shearing containing sparse sphalerite-chalcopyrite-galena mineralization has been mapped and sampled in 1990 to the east of Tarn Lake **(Figure 11c)**. The structure cross-cuts a roughly north-south trending series of felsic and intermediate volcanic rocks. Preliminary sampling, however, has not indicated any significant associated gold mineralization. The zone, up to 20.0 metres wide, has been traced along strike for about 200 metres.

7.4 Beedee Zone

Preliminary prospecting of the Beedee Zone indicated that the auriferous brecciated argillites sampled late in the 1989 field season are related to E-W trending non-porphyritic "felsic" dikes cutting across a series of argillites, calcareous siltstones and arenites near the base of Beedee Ridge **(Figure 12)**. Dikes are similar to those in Zone 1 and are likely of altered mafic composition. This zone of brecciation and sulfide mineralization occurs immediately upslope of gold-anomalous soils collected in 1988 and 1989. Initial rock grab-sampling was carried out to verify the results and make a preliminary assessment of continuity of gold mineralization. Mapping and further prospecting of the area of interest, as well as detailed chip sampling, were carried out in early September. Sporadic values up to 5.1 g/t Au were returned from sampling of sulfide mineralized brecciation which occurs peripheral to these E-W trending "felsic" dikes. The zone of mineralization did not exceed a width of ~ 0.5 m.

7.5 South Claim Groups (Knip, Irv, Bou and Icey Groups)

Due to the difficult nature of access and the lower priority of targets developed in the South Claim groups in 1989, no work was carried out in these areas during the 1990 field season.

8. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

8.1 AP Zone

A moderately strong, continuous zone of brecciation, silicification, carbonatization and lead-zinc-(gold)-(silver)-(arsenic) mineralization extends over 300 m along strike from trenches with massive sulfide mineralization at surface, along the eastern edge of the Bruce Glacier, to the intersections in diamond drill holes AP-17 and AP-18 on section 1500N of the AP grid. The zone is clearly indicated by a strong broad IP response of coincident high chargeability and low resistivity. The IP indicates that the zone extends further to the north but appears to diminish in intensity north of section 1650N (AP Grid). It also indicates that the AP structure melds with the Cliff Zone structure which was tested by diamond drill hole AP-7.

Gold values returned from 1990 drilling of the AP Zone structure do not exceed 3.77 g/t, and appear to generally correlate with high arsenic values and often the visual presence of arsenopyrite. The highest gold values obtained on surface along the AP structure are those encountered in the 1989 chip sampling of Trench 12 on section 1193N. A true width interval containing 6.27 g/t Au, 43.4 g/t Ag plus Pb, Zn and Cu values was sampled across 1.5 m. The zone, beyond this point, appears to trend southwest under the ice. Due to technical difficulties presented by the presence of glacial ice, this portion of the structure was not drill tested.

In order of decreasing priority, two diamond drill holes are recommended to complete the evaluation of gold potential associated with the AP structure:

1) Collar location 600N/375W (Zone 1 co-ords), -45°/Az 155; a 150 m drill hole to test the 400 m gap between AP-7 and AP-17, and AP-18. Gold values up to 3.77 g/t have been encountered in these holes and IP data suggests the structure is still quite strong across this untested gap.

2) Collar location 225N/730W, -45°/Az 160; a 100 m drill hole to test the AP structure beneath trench 12 (Gaboury, 1990). This hole would pass through the footwall to test the extension of the surface mineralization at depth. (Diamond drill holes R-5 and R-6 were targeted to test the two parallel IP/geochemical anomalies to the south of the Creek Zone).

8.2 Zone 1 Trench Area (Zone 1 Grid)

A diamond drill hole collared at 1300N/705W was originally proposed in 1990 to test a wide zone of sulfide mineralization at the contact of a large altered diabase body with the extensive coarse heterolithic tuff breccia of the west Zone 1 area. There is a coincident IP response and gold-silver-arsenic geochemical expression associated with this contact.

The mineralization encountered at 1800N/100E in 1989 (10.3 g/t Au) is of a similar type of contact zone, but is not as intense as that observed in the vicinity of the Zone 1 trenches. Sulfide mineralization associated with the diabase contact in the Zone 1 trench area has not been drill tested.

It is recommended that the originally proposed hole at 1300N/705W be completed (collar location 1300N/705W, -50°/Az 282 for 150 m).

8.3 Cliff Zone (Zone 1 Grid)

The Cliff zone sampled in 1989 was drill tested in 1990 by DDH AP-7 and returned a core width intercept of 1.097 g/t Au and 2.0 g/t Ag across 1.2 m (true width ~ 0.75 m). The same structure was also tested by holes AP-9 and AP-12 on section 1150N. Hole AP-9 returned a value of 2.04 g/t Au and 7.4 g/t Ag across 1.0 m (true width ~ 0.64 m) while AP-12 intersected 7.91 g/t Au and 148.6 g/t Ag across 0.4 m (true width ~ 0.28 m). The structure was traced geologically, geochemically and geophysically northward, through a flexure around section 1200N, to the north boundary of the property. Drill testing of the structure north of section 1200 N did not return favourable results and so further work in this area is not warranted. However, an untested gap of approximately 400 m exists between the intercepts of AP-7 and AP-9.

Three holes are recommended as follows:

1) One 200 m diamond drill hole, collared at 950N/100W, -45°/Az 305, to test the 400 m gap between AP-7 and AP-9.

2) A 150 m somewhat lower priority diamond drill hole collared at 1425N/300W, -45°/Az 102 to test the still untested sheared felsic-sedimentary contact. Thickening of argillites, the wide zone of shearing and the subparallel orientation of the welded tuff/coarse pyroclastic tuff breccia and the northeast diabase body indicates possible continuity of an AP/Cliff Zone structure in this area.

3) One 85 m diamond drill hole collared at 900N/330W, -45° Az 282 to scissor drill hole AP-16 (since core angles in AP-16 indicate that the Red Knob structure may dip to the east here).

   In addition, a proposed contingency of 165 m of diamond drilling is recommended for Zone 1 targets.

8.4 "R" Grid

In 1990, coincident IP and soil geochemical stratigraphic targets were tested by three diamond drill holes to the south of the Creek Zone drill tested in 1989. In addition to failing to intersect an auriferous horizon these holes did not intersect appreciable felsic volcanic horizons or the tuffaceous mudstones such as those hosting gold mineralization on surface in the Creek Zone. Tuffaceous mudstones, which are the important basal members of the mineralized Transition Zone at Eskay Creek, have been mapped at, and north of, the Creek Zone on the "R" grid.

The "R" grid area remains a priority target. It possesses the same stratigraphy and stratigraphic succession (i.e. indicating that the favourable horizon encountered on the "R" grid is on the same fold limb) as the Eskay Creek Deposit to the north. Subsequent work should focus on the area between the Creek Zone drilled in 1989 and the furthest northerly traced extent of the tuffaceous mudstone on line 600N. More detailed sampling (including trenching) is recommended to evaluate gold-bearing potential in the tuffaceous mudstones and rhyolite breccias in this area. The possibility exists that the tuffaceous mudstones encountered between 0N (the Creek Zone) and 600N represent a former submarine scour channel. If the orientation of this channel was dictated by the same northerly plunges observed at Eskay Creek, the 1989 drill holes may have been targeted under

8.6 U2 Grid Area

Only a preliminary investigation of areas of interest developed from geochemical anomalies developed in 1989 and from the 1990 soil sampling prospecting program was completed. Three of the areas of interest discussed earlier in section 7.3.5 of this report warrant further, more detailed, follow-up by mapping and sampling (including surface trenching).

8.6.1 A Discussion of Gold Potential in the U2 Grid Area

D. Alldrick (1985), in his discussion of the upper Andesitic sequence of the Unuk River formation, indicates that this sequence of andesitic lavas and volcaniclastic rocks are host to many base and precious metal-rich sulfide deposits. These are generally quartz-carbonate vein systems where the veins enclose fragments of wallrock, chalcedonic quartz and sulfides (breccia veins?). Gold/silver ratios generally lie in the range of 100:1 to 3:1. Deposits falling in this category include Big Missouri, Consolidated Silver Butte Prospect, Silbak, Indian Mine and East Gold Mine. The extensive alteration zone and quartz-carbonate ladder vein systems of the LS and Bruno's showings as well as the Stibnite Showing area may bear some resemblance to this type of deposit. In an earlier paper D. Alldrick describes, in more detail, the mineralization at the Scottie Gold Mine (Alldrick, 1984). Two features shared with the LS and Bruno's showings of the U2 grid are:

1) Veins trending Az 110.

2) Occurrence of parallel veins with pyrrhotite and pyrrhotite-pyrite with associated base metal sulfide mineralization.

Although the andesitic fragmental volcanics hosting the Stibnite Showing appear to very likely be members of the Unuk River Formation V, (Alldrick 1988), the pillowed andesites, crystal tuffs and heterolithic volcanic conglomerates of Bruno's showing bear more resemblance to the Hanging Wall Andesites of the Eskay Creek Facies.

Observed similarities between stratigraphy on the U2 Grid and Eskay Creek Hanging Wall Andesite Sequence:

1) Occurrence of pyrobitumen in some sedimentary members.

2) Well developed pillowed andesites.

3) Occurrence of tuffaceous mudstone composed of felsic volcanic chips and blocks in a mudstone matrix.

4) Occurrence of belemnites and Weyla pelecypods in cobbles in U2 grid conglomerate in the Bruno's showing area indicates we are dealing with the Lower Salmon River Formation.

J.M. Britton et al (1989) suggest that the thick sequences of pillowed andesites which occur near Divelbliss Creek, Mt. Madge and Mt. Shirley have been correlated by the GSC with the Bajocian Salmon River Formation. The pillowed andesites of the U2 grid area appear to be along strike of those of Mt. Madge to the south. This correlation with the Eskay Creek Facies coupled with the repeated occurrences of massive sulfide mineralization carrying up to 15.7 g/t Au make this area a high priority for detailed follow-up and eventual diamond drilling.

Due to ore grade gold-silver-zinc values detected in surface sampling in the Bruno's Showing area plus the nearby strong geophysical anomaly, this area is a first priority target for the U2 grid area. The North U2 area is next in priority to Bruno's Showing. Based on identical stratigraphy and similar structure and nature of mineralization, an AP structure-type target is anticipated. Utilizing the concept of repetition of stratigraphy through high angle reverse faults, such as reported by Anderson, 1989 **(Figure 13)**, illustrates how the AP structure can be repeated in the north U2 grid area.

8.6.2 Recommendations for Continued Exploration of U2 Grid Targets

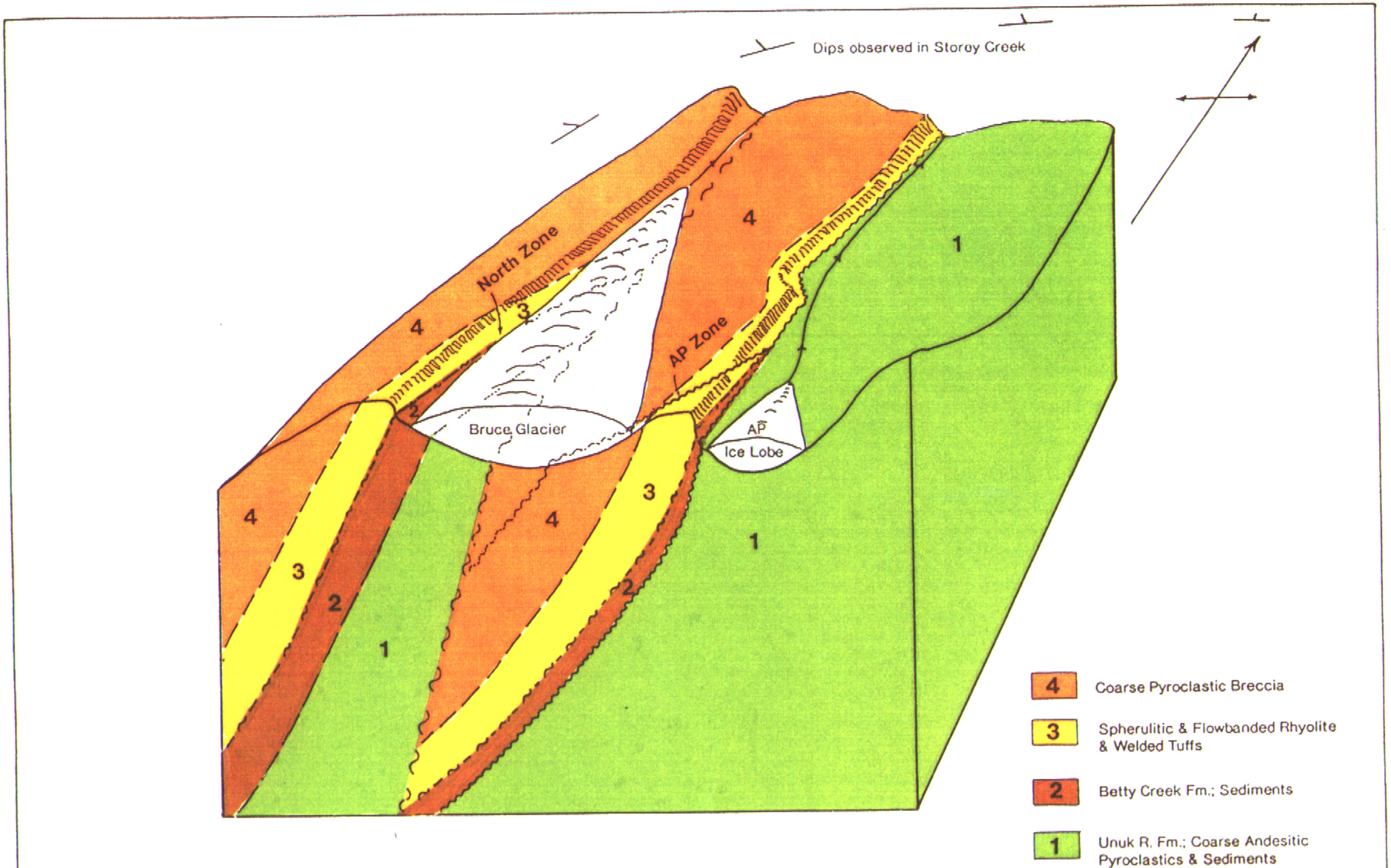
Following, in order of decreasing priority, are recommendations for U2 grid areas of interest:

8.6.2.1 Bruno's Showing

1) Continued prospecting and mapping.
2) Trenching of sphalerite-mineralized breccia veins (10 days @ $800/day).
3) IP over selected areas (3 km @ $2,000/km).
4) Contingency of 500 m of diamond drilling, is proposed for all U2 grid targets.

8.6.2.2 North U2 Grid

1) Continued prospecting and mapping.
2) Trenching of arsenopyrite mineralized sheared welded tuffs (5 days @ $800/day).
3) IP over sulfide mineralized structures (utilizing AP structure model) (3 km @ $2,000/km).
4) Portion of 500 m diamond drilling contingency recommended for U2 grid targets.



NORTH U2 GRID – BLOCK DIAGRAM

FIG. 13

8.6.2.3 Stibnite Showing

1) More detailed surface evaluation of the stibnite-bearing structure along the entire exposed strike length.
2) Trenching of gold-anomalous portions of structure as well as gold-bearing dike sampled in 1990 (5 days @ $800/day).
3) Additional prospecting and mapping of zones of ankeritic alteration observed along strike to the south.

8.6.2.4 LS Showing and Tarn Lake Area

Apart from continued mapping and prospecting of the U2 grid, no additional work is proposed for the LS showing area.

8.7 Beedee Zone

Trenching across the auriferous sulfide-mineralized breccia zones peripheral to the East-West trending "felsic" dikes of the Beedee Zone is recommended. High gold levels in soils collected higher up Beedee ridge indicate that more of these auriferous zones exist. Completion of a 1:2000 scale topographic map of the Beedee zone from air photos, flown late in 1990 will provide required control for additional, more detailed mapping of this area.

8.8 Coul 4

Anomalous stream sediments were collected in 1989 near the foot of John's Peaks on the Coul 4 claim (traverse #10). Graphitic argillites were encountered in some stream beds but outcrop exposure is sparse. The BCDM in their latest investigation of this area propose that the pillowed andesites of the lower Salmon River Formation are along strike of this area. This is the same stratigraphic unit which caps the Eskay Creek deposit. Since pillowed andesites were also encountered along regional strike of this area to the north on the U2 grid, more detailed follow-up prospecting and mapping are suggested.

9. STATEMENT OF 1990 EXPENDITURES

Expenses incurred on Unuk 14, 15 and 26 and subsequently reported in Assessment Report Number 20390: "Geological, Geochemical, Geophysical and Diamond Drilling Report" by B.E. Gaboury, September 20, 1990, are omitted from this Statement of Expenditures.

Geologists Wages (266 man days)	$ 71,908.02
Unuk River Field Camp Costs	110,690.77
Communication (B.C. Tel, courier, postage)	16,810.45
Transportation (Helicopter, 359 Hrs.)	268,259.48
Mob - Demob (crew and gear to Bell 2)	12,490.15
Line Cutting (10 km) Gordon Clark and Associates Ltd.	22,070.91
Geophysical Survey - IP (11.70 km on Unuk 11, 12, 14 and Coul 1) Peter E. Walcott & Associates Ltd.	25,789.25
Diamond Drilling (655.62 m in AP-13 to AP-18 on Unuk 14 913.52 m in R-4 to R-6 on Coul 1) J.T. Thomas Diamond Drilling Ltd.	106,497.53
Geochemical Analyses & Petrographic Work	28,044.60
Drafting and Report Writing	18,977.09
Office Overhead	68,153.82
Total	$749,692.07

CERTIFICATE OF QUALIFICATIONS

I, Bernard E. Gaboury of Nanaimo, British Columbia do hereby certify that;

(1) I am a project geologist for Granges Inc. with offices at 2300, 885 West Georgia Street, Vancouver, B.C., V6C 3E8.

(2) I am a graduate of University of Manitoba, Winnipeg, Manitoba, with a BSc(Hons) degree in Physical Chemistry and an MSc degree in Geology.

(3) That I have practised geology for twelve years.

(4) I have been a member in good standing of the Association of Professional Engineers Province of Manitoba since 1983.

(5) I personally supervised the field work carried out on the Unuk River Project in 1990.

Dated at Vancouver, B.C. this 14th day of January, 1991.

Bernard E. Gaboury
BSc Hons, MSc, P. Eng.

CERTIFICATE OF QUALIFICATIONS

I Arthur John O'Donnell, of Delta, British Columbia do hereby certify that:

1) I am Exploration Manager for Granges Inc. with office at 2300-885 West Georgia Street, Vancouver, B.C., V6C 3E8.

2) I am a graduate of Saint Francis Xavier University, Antigonish, N.S. with a BSc degree in geology. I also took an extra year of geology at Dalhousie University, Halifax, N.S.

3) That I have practised my profession for thirty years.

4) I have been a member in good standing of the Association of Professional Engineers of the Province of Ontario since 1970 and the Association of Professional Engineers Province of Manitoba since 1980.

Dated at Vancouver, B.C. this 24th day of May 1989.

A. J. O'Donnell, P.Eng.

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APPENDIX 3

Whole Rock Lithogeochemical Data

Sample Number	Description	Location	Sample Number	Al2O3	BaO	CaO	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	TiO2	LOI
WR 1	pillowed andesite	1 km SSW of tarn lake in Zone 2 area	WR 1	14.50	0.15	6.38	10.71	6.04	5.25	0.16	1.83	0.58	49.94	0.74	2.06
WR 2	flowbanded rhyolite	1390 N/200 W - Zone 1 grid	WR 2	11.19	0.22	0.16	1.34	6.10	0.40	0.03	0.29	0.01	78.86	0.16	1.54
WR 3	felsic dike	1380 N/330 W - Zone 1 grid	WR 3	14.26	0.02	6.53	10.33	2.25	4.60	0.23	2.48	0.33	43.87	1.40	11.90
WR 4	felsic dike	1205 N/340 W - Zone 1 grid	WR 4	14.05	0.09	3.29	11.15	3.85	3.45	0.13	2.04	0.40	52.55	1.44	6.40
WR 5	felsic dike	1420 N/230 W - Zone 1 grid	WR 5	9.77	0.01	0.01	1.39	0.73	0.24	0.04	3.95	0.01	84.63	0.14	0.93
WR 6	welded ash flow tuff	1330 N/280 W - Zone 1 grid	WR 6	13.62	0.14	0.43	4.40	4.87	0.47	0.12	3.86	0.01	68.85	0.33	2.21
WR 7	coarse pyroclastic flow	1419 N/297 W - Zone 1 grid	WR 7	10.72	0.13	8.84	12.08	2.83	4.35	0.35	1.60	0.39	42.31	0.96	14.50
WR 8	coarse pyroclastic flow	1440 N/265 W - Zone 1 grid	WR 8	15.47	0.17	1.49	8.10	4.64	1.46	0.11	1.98	0.37	57.35	1.29	5.23
WR 9	aphanitic rhyolite flow, [illegible]	055 N/635 W - "R" grid	WR 9	11.29	0.25	0.01	0.79	7.91	0.16	0.01	0.39	0.02	79.05	0.24	0.75
WR 10	aphanitic dacite,<5% plag phenocrysts	012 N/592 W - "R" grid	WR 10	15.24	0.05	3.97	7.71	1.94	2.80	0.05	5.40	0.51	54.33	0.98	7.81
WR 11	dacite tuff, 5-10% pumice fragments	965 N/423 W - Zone 1 grid	WR 11	11.78	0.02	3.19	9.72	1.57	1.47	0.15	1.63	0.35	61.77	1.49	4.83
WR 12	intermediate to felsic dike	975 N/135 W - Zone 1 grid	WR 12	15.56	0.17	5.35	11.18	2.70	2.45	0.18	3.43	0.65	54.92	2.00	2.16
WR 13	silicified felsic ash tuff	220 S/850 W - "R" grid	WR 13	13.11	0.04	9.02	9.50	1.77	4.62	0.15	2.98	0.33	41.17	0.89	13.03
WR 14	foliated coarse felsic pyroclastic	1725 N/880 W - Zone 1 grid	WR 14	11.88	0.14	1.22	4.24	3.50	1.04	0.03	1.35	0.04	72.71	0.13	3.02
WR 15	"andesitic" dike in sediments	925 N/370 W - Zone1 grid	WR 15	14.25	0.23	0.01	5.66	7.77	0.91	0.06	0.87	0.06	67.62	0.55	1.52
WR 16	basaltic andesite flow/flow breccia	620 N/960 E - Zone 1	WR 16	13.56	0.11	8.41	8.82	5.08	6.72	0.01	2.03	0.61	49.20	0.91	2.10
WR 17	diabase dike	DDH AP-1 at 75.5 m.	WR 17	14.44	0.16	5.81	11.22	3.06	3.06	0.21	2.92	0.65	54.69	2.00	2.13
WR 18	diabase dike	1650 N/525 W - Zone 1 grid	WR 18	14.31	0.18	4.43	10.68	2.90	2.15	0.20	3.04	0.63	55.52	1.82	2.42
WR 19	rhyolite	930 N/850 W - Zone 1 grid	WR 19	14.34	0.16	0.01	4.60	5.12	0.55	0.03	2.14	0.07	68.25	0.46	2.68
WR 20	altered diabase	1770 N/600 W - Zone 1 grid	WR 20	14.60	0.18	4.86	9.95	2.79	2.34	0.19	3.11	0.43	55.43	1.42	2.55
WR 21	altered diabase	1500 N/850 W - Zone 1 grid	WR 21	13.65	0.26	0.62	3.81	3.28	0.51	0.06	3.51	0.01	70.66	0.34	2.84
WR 22	altered diabase	1500 N/800 W Zone 1 grid	WR 22	14.73	0.12	2.83	9.12	1.70	2.38	0.12	4.82	0.56	57.60	1.39	3.76
WR 23	altered diabase	1600 N735 W - Zone 1 grid	WR 23	14.63	0.18	4.07	10.17	2.83	2.56	0.16	3.30	0.48	56.54	1.27	3.48
WR 24	altered diabase	1685N/645W - Zone 1 grid	WR 24	13.52	0.17	4.77	8.04	3.35	2.38	0.17	3.02	0.40	56.58	1.02	5.65
WR 25	diabase	1500N/800W - Zone 1 grid	WR 25	14.20	0.20	5.15	10.72	2.82	2.22	0.20	3.17	0.50	54.84	1.35	4.29
WR 26	altered diabase	1710N/600W - Zone 1 grid	WR 26	16.68	0.15	3.86	7.21	1.99	3.02	0.13	6.02	0.64	53.80	1.58	4.66
WR 27	diabase	1650N/645W - Zone 1 grid	WR 27	15.48	0.23	2.97	10.06	3.05	1.58	0.19	4.24	0.58	57.18	1.50	2.14
WR 28	rhyolite autobreccia	1200N/285W - Zone 1 grid	WR 28	14.44	0.28	2.61	8.16	4.50	1.82	0.14	1.97	0.42	60.25	1.06	3.94
WR 29	intermed (-) felsic dike	1000N/200W - Zone 1 grid	WR 29	11.90	0.12	0.29	1.86	6.82	0.41	0.03	1.34	0.01	75.13	0.16	0.90
WR 30	mafic dike	1300N/600W - Zone1 grid	WR 30	14.33	0.22	4.94	11.24	2.39	2.65	0.19	3.20	0.61	53.05	1.50	4.98
WR 31	felsic dike	1380N/540W - Zone 1 grid	WR 31	15.42	0.15	2.12	8.90	3.09	1.93	0.09	4.09	0.89	57.01	2.23	3.31
WR 32	Premier "2 feldspar" porphyry	Mitchell Glacier area	WR 32	16.72	0.29	3.54	5.35	3.10	2.59	0.21	4.59	0.45	58.79	0.84	2.27
WR 33	Feldspar porphyry	Beedee ridge (near saddle)	WR 33	16.56	0.77	4.94	7.75	3.14	3.55	0.18	3.32	0.48	51.69	0.82	5.08
WR 34	granodiorite	unit 5e, ridge S.E. of A.P. Zone	WR 34	12.11	0.12	10.46	10.34	2.54	10.31	0.18	2.33	0.62	44.76	1.08	2.93
WR 35	diabase dike	1680N/570E - Zone 1 grid	WR 35	13.65	0.13	4.78	13.33	1.21	2.63	0.22	3.95	0.56	55.05	2.66	1.40
WR 36	andesitic dike	1305N/700E - Zone 1 grid	WR 36	13.97	0.13	2.75	13.48	2.51	2.33	0.15	2.77	0.55	49.37	2.43	8.55
WR 37	diabase dike with epidote stringers	1700N/600E - Zone 1 grid	WR 37	12.42	0.08	5.37	12.14	0.26	2.59	0.17	4.60	0.43	54.94	2.46	3.56
WR 38	dacite flowrock	080N/1020W-"R" grid	WR 38										0.00		
WR 39	rhyolite flow	100N/925W-"R" grid	WR 39										0.00		
WR 40	qtz-chl. schist	DDH AP-1 @ 53m	WR 40	10.93	0.24	2.34	2.87	3.66	0.38	0.08	2.48	0.17	72.62	0.23	3.04
WR 41	andesite tuff breccia	DDH AP-1 @ 62m	WR 41	13.59	0.17	3.80	7.81	4.04	1.51	0.18	2.00	0.54	59.48	1.90	4.69
WR 42	dacitic ash tuff	DDH AP-1 @ 24m	WR 42	11.30	0.19	1.68	5.06	4.21	0.73	0.10	1.36	0.15	70.22	0.36	3.77
WR 43	ash flow (lenticular) tuff	DDH AP-4 @ 8.9m	WR 43	13.51	0.24	0.31	3.15	7.80	0.66	0.03	0.22	0.08	70.39	0.44	2.65
WR 44	debris flow (possibly "black tuff")	DDH AP-4 @ 18.3m	WR 44	14.47	0.15	1.53	2.82	4.90	1.25	0.11	0.44	0.12	67.70	0.49	5.41
WR 45	altered dacite	DDH AP-4 @ 26m	WR 45	11.88	0.02	1.31	1.42	7.10	1.26	0.09	0.76	0.05	74.94	0.13	4.16
WR 46	brecciated dacite tuff	DDH R-1 @ 102.3m	WR 46	11.38	0.04	0.19	1.82	7.30	0.52	0.01	0.03	0.02	76.82	0.23	3.23
WR 47	blocky, feldspathic andes. tuff	020N/450W-"R" grid	WR 47	18.59		1.61	7.77	0.91	2.94	0.17	6.29	0.26	57.01	0.72	3.90
WR 48	chloritic, andesitic ash tuff	410N/1050W-"R" grid	WR 48	17.02		8.43	9.12	2.27	2.25	0.21	2.60	0.40	47.94	1.20	8.70
WR 49	quartz phyric dacitic tuff	00N/120W-"R" grid	WR 49	14.54		5.41	3.75	1.50	1.03	0.19	4.73	0.09	61.33	0.39	7.10
WR 50	green dacitic ash-lapilli tuff	360N/050W-"R" grid	WR 50	13.86		7.29	9.27	4.34	5.63	0.22	1.87	0.58	49.03	0.83	7.10
WR 51	feldspathic dacite tuff	400N/070W-"R" grid	WR 51	16.27		0.29	4.10	3.58	1.73	0.12	4.86	0.11	66.96	0.46	2.60
WR 52	cherty rhyolite flow breccia	410N/440W-"R" grid	WR 52	11.32		0.33	2.56	0.35	0.19	0.02	5.95	0.02	77.52	0.19	1.60
WR 53	greenish black rhyolite bx.	358N/050W-"R" grid	WR 53	15.36		9.06	5.27	1.96	2.13	0.10	5.69	0.24	50.01	0.73	9.50
WR 54	calc. amygdal. altered andesite	00N/375W-"R" grid	WR 54	16.63		5.81	9.30	1.33	5.36	0.13	2.57	0.18	47.15	1.21	10.30
WR 55	cherty, flow banded rhyolite	990N/295W - Zone 1 grid	WR 55	12.55		0.65	2.55	4.13	0.27	0.06	3.57	0.06	75.17	0.19	0.90
WR 56	dacitic ash flow tuff	1452N/206W - Zone 1 grid	WR 56	11.42		0.30	1.77	6.13	0.40	0.04	0.22	0.02	77.57	0.15	2.00
WR 57	felsic dike	975N/135E - Zone 1 grid	WR 57	12.64		6.56	10.40	0.76	2.21	0.22	3.07	0.32	54.06	1.75	8.00
WR 58	andesite flow	350N/020W-"R" grid	WR 58	12.86		8.82	10.38	3.64	4.80	0.21	2.35	0.94	49.10	1.03	5.90
WR 59	diabase - green altered	1515N/810W - Zone 1 grid	WR 59										0.00		
WR 60	diabase dike/stock	900N/250W - Zone 1 grid	WR 60										0.00		
WR 61		1170N/875W - Zone 1 grid	WR 61	13.63	0.16	5.92	8.31	3.26	2.10	0.19	2.56	0.54	54.23	1.38	8.27
WR 62		1250N/850W - Zone 1 grid	WR 62	15.04	0.18	5.01	9.62	7.25	2.56	0.34	0.37	0.41	47.94	1.12	11.00
WR 63		1250N/850E - Zone 1 grid	WR 63	8.95	0.12	0.11	14.33	3.66	0.31	0.01	0.12	0.24	64.46	0.61	7.93
WR 64		1250N/875W - Zone 1 grid	WR 64	13.59	0.23	0.14	4.84	5.19	0.15	0.04	0.16	0.24	67.29	1.43	3.00
WR 65		1200N/100W - Zone 1 grid	WR 65	19.36	0.08	0.74	3.68	4.57	1.78	0.05	1.30	0.29	64.25	0.60	4.10
WR 66		1250N/700W - Zone 1 grid	WR 66	13.73	0.17	2.62	10.46	6.77	2.09	0.56	0.44	0.52	51.73	1.56	8.53
WR 67		1690N/625W - Zone 1 grid	WR 67	14.86	0.24	5.66	9.86	2.77	1.39	0.20	3.69	0.76	56.10	1.54	3.92
WR 68		Dike 4 - Zone 1 grid	WR 68	13.33	0.26	0.08	1.39	9.56	0.08	0.01	0.23	0.14	74.25	0.23	1.04
WR 69		255N/560W - "R" grid	WR 69	13.44	0.16	3.18	11.13	4.57	1.50	0.95	2.00	0.48	53.93	1.51	8.00

9. STATEMENT OF 1990 EXPENDITURES

Expenses incurred on Unuk 14, 15 and 26 and subsequently reported in Assessment Report Number 20390: "Geological, Geochemical, Geophysical and Diamond Drilling Report" by B.E. Gaboury, September 20, 1990, are omitted from this Statement of Expenditures.

Geologists Wages (266 man days)	$ 71,908.02
Unuk River Field Camp Costs	110,690.77
Communication (B.C. Tel, courier, postage)	16,810.45
Transportation (Helicopter, 359 Hrs.)	268,259.48
Mob - Demob (crew and gear to Bell 2)	12,490.15
Line Cutting (10 km) Gordon Clark and Associates Ltd.	22,070.91
Geophysical Survey - IP (11.70 km on Unuk 11, 12, 14 and Coul 1) Peter E. Walcott & Associates Ltd.	25,789.25
Diamond Drilling (655.62 m in AP-13 to AP-18 on Unuk 14 913.52 m in R-4 to R-6 on Coul 1) J.T. Thomas Diamond Drilling Ltd.	106,497.53
Geochemical Analyses & Petrographic Work	28,044.60
Drafting and Report Writing	18,977.09
Office Overhead	68,153.82
Total	$749,692.07

GRANGES INC.

SAMPLE RECORD SHEET

DATE: ______

SAMPLER: ______

Project: Unuk River #134 **Grid:** Zone 1 **Type of Sampling:** grab **Type of Analysis:** 30 Element ICP / F.A. Au.

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
1	1105N	112W	grab.	2-4cm wide qtz vn in shed lithic tuff, 15-25% diss py, 10-15% sph, 5% ASPY	3841	390	434	18891	2942	12257	17,000
2	1145N	145W	grab.	sheared lithic tuff w/ 5-10% diss py	861	25	5	14	19	1921	60
3	1170N	145W	grab.	siliceous fractures adj. to shear zone, 1-3% diss py	3273	27.3	46	231	60	2851	5500
4	1170N	155W	grab.	gossanous fractured rhyolite w/ 1-3% diss py.	10738	309	243	3897	1857	25614	6800
5	1100N	075W	grab.		44	10.3	18	250	51	153	460
6	1850N	040E	grab.	sheared, flow banded rhyolite w/ 5-10% diss. py	54	1.1	14	148	18	8	
7	1800N	040E	grab.	sheared, flow banded rhyolite w/ 5-10% diss py	15	0.1	4	25	16	68	
8	890N	330W	grab.	sheared rhyolite (flow band?) in fault/shear 5% diss py	8	0.4	6	55	4	29	
9	950N	277W	grab.	andesitic? dyke 5% -15% diss py in fault/shear	13	5.3	41	512	41	123	
10	960N	275W	grab.	sheared rhyolite 3-5% py in shear w/ minor chlorite	8	5.2	25	547	33	31	
11	1198N	146E	grab.	dyke (andesite?) 10-15% diss. py	11	1.5	16	370	105	19	
12	1300N	010W	grab.	Rhyolite dyke? w/ minor py 1-2%	3	0.1	9	114	5	17	
13	1650N	040W	grab.	flow banded rhyolite 2-4% disseminated Py.	4	0.1	5	35	9	5	
14	1685N	030W	grab.	flow banded rhyolite w/ 2-5% diss py	3	0.1	5	59	14	64	
15	1775N	040W	grab.	flow banded rhyolite, fractured w/ 2-5% py	9	0.1	5	34	19	47	
16	1750N	025E	grab.	flow banded rhyolite? 3-5% diss. py	3	0.1	4	21	22	2	
17	1575N	250W	grab.	flow banded rhyolite? w/ <2% diss py.	6	0.4	6	116	10	12	
18	1400N	525W	grab.	Dyke (? type? of Dyke) x-cutting strat 5-8% diss py	Lost	Sample					
20	1630N	1010W	grab.	qtz-chl-ankerite vein along fault	2	1.1	6	38	259	3	
21	1702N	970W	grab.	qtz-ankerite vein	8	0.1	4	69	6	4	

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ______________

SAMPLER: ______________

Grid: Zone 1   Type of Sampling: ______________   Type of Analysis: ______________

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
22	590N	560W	grab	carbonate cemented brx, dacitic tuff, 3-5% diss py	81	0.6	16	157	4	59	80
23	850N	475W	grab	patchy diss py in massive rhyolite tuff	17	0.6	8	46	12	30	90
24	875N	410W	grab	rhyolitic to dacitic ash tuff, 1-2% diss py	11	0.2	6	106	2	7	80
25	910N	400W	grab	sheared dacitic debris flow, 5-10% py blebs	208	1.6	12	87	23	657	160
26	909N	400W	grab	sheared dacitic debris flow, 10-20% py	160	0.8	12	98	20	25	110
27	925N	370W	grab	flow banded rhyolite, Tr. Py	lost	sample					
28	820N	385W	grab	dacitic ash flow tuff 2-3% py in blebs	71	0.1	7	13	16	86	80
29	690N	335W	grab	sheared ash flow tuff, 1-2% py, minor blebs	2	0.1	13	76	14	8	60
30	700N	250W	grab	1-2m shear zone, Fe-carb brx, 10-20% py	322	1.8	14	492	124	615	190
31	885N	025E	grab	andesitic, carbonate altered dyke rock	4	0.1	12	141	2	14	330
32	885N	027E	grab	less altered, grey-brown weathering andesitic dyke	1	0.1	13	114	2	17	50
33	815N	040E	grab	fault zone brx'd & carbonate infilling, py blebs	31	0.2	15	30	2	69	2400
34	845N	050E	grab	ankerite brx vein, Tr-1% py, minor stwk py	3	0.1	8	145	2	2	100.
36	930N	775W	grab	Rhyolite w/ Tr. py	7	0.1	5	108	2	7	180
37	1300N	700W	grab	Rhyolite Bx? 10-15% py	8	0.1	6	109	11	20	1500
38	1500N	850W	grab	Rhyolite? 2% py	4	0.2	5	191	5	2	180
39	1370N	700W	grab	Rhyolite 5-8% diss. py	7	0.1	6	200	2	5	620
40	1380N	630W	grab	Rhyolite 10% Py w/ minor chloritic alteration	6	0.2	9	107	12	8	730
41	1590N	(A) 535W	grab	Rhyolite 2-3% py	7	0.1	6	164	2	3	180
42	1590N	535W (B)	grab	diabase?, rhyolite?	21	0.1	6	164	2	3	180

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #184 **Grid:** Zone 1 **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
43	1585N	415W	grab	3% diss py, tr po wkly chloritic Rhyolite	2	0.1	6	133	3	5	360
44	1425N	650W	grab.	Rhyolite Bx w/ 1-3% py	4	0.1	4	199	2	4	210
45	1530N	550W	grab.	Rhyolite w/ 1-5% Py, Tr po	3	0.1	12	139	7	2	620
46	1500N	600W	grab.	Rhyolite w/ 1-3% py	3	0.1	6	139	2	2	220
47	1670N	420W	grab.	Rhyolite dyke? 3% py	4	0.1	9	147	11	2	230
48	17+00N	420W	grab.	Rhyolite dyke? w/ Tr. po, 3% py in fractures	6	0.1	11	140	2	7	180
49	1485N	200W	grab.	Tuffs? Rhyolite w/ 3% diss. py	4	0.2	6	83	6	4	130
50	1475N	230W	grab.	Rhyolite tuffs? Tr to 1% py	1	0.4	10	96	20	5	180
51	1380N	280W	grab.	Felsic dyke, (Rhyolite) 1-5% Py	8	0.1	9	176	11	8	780
52	1390N	275W	grab.	Rhyolite w/ ≈ 3% Py	1	0.1	9	144	13	4	540
53	1360N	235W	grab.	Flow banded Rhyolite? 3-5% diss py	10	0.3	9	17	9	20	220
54	1370N	260W	grab.	Rhyolite w/ 3% py, Tr sph	5	0.1	5	336	22	4	840
55	1100N	860E	grab	Quartz vein >10 cm wide	12	.1	18	19	4	58	1200
56	1400N	620E	grab.	Felsic dyke with 15% diss py	5	0.1	7	83	4	13	240
57	1400N	650W	grab.	Rhyolite Bx	lost sample						
58	1530N	475W	grab.	Rhyolite w/ weak chlorite alteration, 3% py	3	0.1	4	108	2	3	130
59	1530N	480W	grab.	Rhyolite w wk chl alt + tr py	lost sample						
60	1710N	600W	grab.	Rhyolite	20	0.1	6	159	2	4	400
61	1400N	700E	grab.	Qtz veining w/ 5% py (Vein ≈ 5-7 cm wide)	3	0.1	56	25	2	9	110
62	1700N	570E	grab.	shear in tuffaceous Rhyolite and graphitic tuffs/seds	10	0.1	23	41	9	2	50

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** Zone 1 grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
63	1580N	600E	grab.	py and pyrobitumen in shear zone w/ qtz	15	0.1	35	142	25	85	710
64	1610N	625E	grab.	py and pyrobitumen in shear zone w/ qtz	12	0.2	34	235	34	210	880
65	1190N	580W	grab.	pyroclastic breccia w/ intense silicification <2% diss py on frac	4	0.3	10	348	9	11	2500
66	1190N	608W	grab.	pyroclastic bx, pervasive fol., silic, mx alt to Fe-oxide	1	0.1	7	128	5	8	380
67	1160N	550W	grab.	pyroclastic bx, pervasive fol., silic, mx alt to Fe-oxide	19	0.1	9	146	7	12	320
68	1800N	030E	grab.	flow banded rhyolite w/ 15-20% diss py	2411	49	14	209	45	821	840
69	1372N	516E	grab		1	0.1	5	78	5	10	760
70	1100N	110W	grab	8 cm width of qtz filled fractures w/ Aspy, py, shp (Tr)	4123	11.7	10	1246	220	16522	350
71	1710N	585W	grab.	altered basalt?, diabase? w/ 5% py	3	0.1	41	71	14	8	230
72	1420N	850W	grab.	altered basalt?, diabase? in contact w/ Rhyo: ±5% py	1	0.1	9	84	24	8	110
73	1750N	810W	grab.	altered diabase w/ 2-5% diss. py	7	0.2	7	72	17	19	230
74	1260N	740W	grab		10	0.3	69	63	12	82	40,000
75	540N	775W	grab		20	0.1	60	74	9	5	80
76	595N	775W	grab		1	0.1	58	75	7	10	70
77	1590N	650W	grab		5	0.1	10	134	2	2	120
78	1450N	730W	grab		6	0.1	33	70	11	4	140
79	930N	850W	grab		7	0.1	5	108	2	2	180
80	1860N	050W	grab		48	1.7	6	104	5	112	60
81	1500N	175W	grab	fracture filling, 2% py in flow banded Rhyolites	54	0.2	4	1	17	144	
82	1400N	215W	grab	pyritic/ Kaolinitized? Rhyolite w/ 2-4% diss py	1.5	1.0	5	4	13	63	90

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** Zone 1 **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
83	1390N	140W	grab.	Rhyolite w/ Kaolinitization?-sericite-limonite 2-3% py	8	0.1	10	31	29	11	
84	1450N	160W	grab	Rhyolite tuff? Sheared w/ 2-3% drusy + cubic py	1	0.2	7	207	35	.2	
85	1475N	020W	grab.	gossanous Rhyolite w/ sericitic/Kaol. Alt, 5-10% py	14	1.0	6	68	26	3	
86	1425N	020W	grab.	1 cm wide fracture 3-5% diss. py	10	1.0	10	15	10	2	
87	1450N	700W	grab	6 cm wide fracture, 5% py	2	0.1	9	59	16	2	
88	1500N	650W	grab.	across 6 cm wide fracture, 2-5% diss. py	1	0.1	6	78	8	6	
89	1185N	073W	grab	10 cm across 4m fracture <5-25% diss. py	41	2.1	1.0	16	20	166	1300
90	1200N	075W	grab	≃ 50 cm within 5m wide shear w/ bleached qtz, ≃5% py	lost	Sample					
91	1050N	105W	grab.	gossanous, fissile argillite	4	.8	28	31	10	21	40
92	1075N	115W	grab.	shear in lithic Rock, andesitic, ≃5% diss py	13	2.7	14	84	47	35	180
93	1800N	525W	grab.	green brecciated diabase w/ black mtx contains diss py	2	0.1	4	145	4	4	200
94	1220N	264W	chip, ~~grab.~~	2m chip across alt. zone on N edge of green-grey dac. pyroclastics	50	2.4	3	16	16	120	310
95	1228N	240W	grab.	H.W. contact of 7-10m wide alt. Zone	40	1.7	4	58	16	118	330
96	1320N	507W	grab	across 3.5m wide zone in dac. ≤ 20% py	4	0.5	8	140	14	23	2400
97	1400N	533W	grab.	bleached dacite w/ 3-5% py, possible felsic dyke	1	0.1	6	6	9	7	730
98	1380N	573W	grab.	~3m wide sericite zone in dacites, ≤ 10% py	1	0.1	4	12	9	6	2300
99	1550N	500W	grab.	dacitic breccia in dk green matrix, 5-10% py	44	0.1	8	143	9	9	370
100	1705N	600W	grab.	strongly silicified dacite/diabase contact 3-5% py	5	0.1	8	30	16	7	560
101	1520N	810W	grab	ankerite Bx zone in diabase 3-5% py	2	0.3	2	34	7	5	1800
102	1420N	852W	grab.	strongly silic. brx w/ concentric alteration rims	6	0.2	10	78	57	229	1200

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ____________

SAMPLER: ____________

Project: Unuk River #134 **Grid:** Zone 1 **Type of Sampling:** ____________ **Type of Analysis:** ____________

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
103	1280N	760W	grab	contact zone in diabase brx'd silic, 10-15 % py	16	0.8	145	159	142	36	15000
104	1000N	800W	grab	qtz-carb brx in float, 1-2% py	1	0.4	74	86	4	4	60
105	1735N	750W	grab	alt'd coarse and./dac. tuff near diabase 3-5% py	1	0.1	5	40	10	9	620
106	1150N	130W	grab	py vn in strongly silf'd dac. tuff breccia, 10-15% py	138	9.4	6	13	178	208	430
107	1125N	125W	grab	strgly silic dac. tuff brx. qtz-carb vn, 10-20% py	1978	71.8	30	325	124	7855	760
108	1550N	220W	grab	rhyolite in contact with diabase, 10% py	1187	64.0	17	72	244	2317	4300
109	1680N	645W	grab	brx'd rhyolite tuff, mottled diss. py	2	0.1	6	229	26	6	430
110	1690N	775W	grab	rhyolite tuff 1-2% py	4	0.1	7	36	12	8	700
111	1625N	780W	grab	fracture filling + diss py in felsic tuff	3	0.1	10	60	16	7	1200
112	1201N	401W	grab	qtz stringers in alt'd <1% py	192	20.2	35	574	547	1227	7100
113	1201N	399W	grab	clay alt'd rhyolite, Tr. gal, Tr. tetra	311	171.0	35	226	590	139	26000
114	1801N	100W	grab	qtz stringers in f. gr. seds, 10-15% py	1625	3.0	10	284	28	4464	
116	R-DG-90-1		grab	strongly silicified, sericitized blocky tuff, 10-20% py	7	0.3	4	7	21	30	920
117	R-KP-90-1		grab	pyroclastic bx w/ pods py, diss py, Tr. Aspy	10	0.2	3	2	15	28	1700
118	1210N	150E	grab	Composite grab across 4m, Ash flow tuff w/ 5% py	64	1.0	36	33	11	107	180
119	1225N	170W	grab	composite grab across 1.5m, and. Ash tuff, sericitized Tr. sph 10% py	15381	22.3	321	1706	2348	9602	8600
120	1223N	170W	grab	sericitized andes. tuff w/ abundant qtz vnlts <5% py	114	0.4	19	210	27	115	360
121	1310N	200W	grab	silicified lapilli tuff w/ up to 10% f.g. py	131	6.9	7	9	41	269	730
122	1185N	875W	grab	graphitic shear w/ silic/carbonate host, qtz vnlts, ≤10% py	8	1.4	30	135	25	30	2000
123	1419N	297W	grab	shed, carbonitized coarse pyroclastic w/ qtz-carb-chl-py lenses	2	0.3	14	834	2	23	1800

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Chuk River #134 **Grid:** Zone 1 **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
124	1415N	300W	grab	shed, carb + seric Alt'd coarse pyroclastic w/ ≤ 10% py	6	2.1	15	25	27	75	1100
125	1405N	330W	grab	shed, ↑carbonatized coarse pyroclastic, Ank bx vns ≤ 1m wide	3	0.2	8	102	8	30	710
				which appear to be // w/ shearing, 5-10% py, Tr. sph?							
126	1205N	345W	chip	1m across sulfide bx vn on F.W. of felsic Dyke	24	3.1	5	29	19	94	660
127	1195N	342W	grab	Ankerite sulfide-bx, H.W. of felsic dyke, 3-5% py	3	0.3	9	38	2	71	930
128	1216N	325W	chip	~1m across sulfide Rich Zone in F.W. of And dyke	65	1.1	5	119	16	221	600
129	1228N	312W	grab	5-10% py plus numerous qtz vnlts in silif, sulfide zone F.W. to dyke	131	4.3	11	340	25	827	1600
130	1395N	350W	grab	carbonate, sericitized coarse pyroclastic along tr. of dyke ≤10% py	3	0.1	10	147	15	27	960
131	1399N	381W	chip	1m chip, sericit, Kaol, fine silic stringers, 5-10% py	14	0.7	6	44	13	44	1200
132	1399N	380W	chip	.3m chip qtz-chl-py vn // to fol (Az 012/80E)	103	2.2	7	5	15	70	3100
133	1399N	379W	chip	2m in alt'd F.W. to qtz-chl-py vn (Above) ≤ 3% py	8	0.3	8	35	23	27	750
134	1368N	432W	grab	up to 20% py in carbonitized/sericitized dac adj. to felsic dyke	40	2.3	10	25	14	109	830
135	1338N	436W	grab	bxed dike w/ Abundant qtz stkwks in med→coarse congl.	98	4.5	12	798	30	13	13000
136	1226N	171W	grab	fol AFT - qtz vns 1-3% diss py	243	1.5	14	144	39	359	150
137	1230N	170W	grab	mineralised pods (py) along 075° frac in AFT	1	0.3	8	73	12	17	180
138	1095N	110W	grab	flow banded Rhy w/ 5% py	61	0.5	8	105	8	165	70
139	1069N	110W	grab	lithic Rk w/ py + aspy Along frac's	24	0.3	6	128	8	22	150
140	1280N	790W	grab	auto brecciated, chl Alt, silic diabase - py encrusting fracs	5	0.2	8	330	24	13	2600
141	1290N	750W	grab.	be diabase - altered to white color in fracs, py mx	5	0.1	8	388	17	15	4900
142	1250N	815E	grab	fault Zone, graphitic argillite, 3-5% py	15	0.1	33	28	11	53	29000

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** Zone 1 **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppb
143	1275N	815E	GRAB	fault, qtz-carb brx vns, tr. cpy, 1-2% py	15	0.1	18.2	76	3	115	80
144	1690N	550E	GRAB	carbonate altered andesite dyke ≤1% cpy, 1-2% py	19	0.1	11	106	8	13	200
145	1230N	150W	GRAB	shed, drag-folded dac. lap. tuff, [illegible] stain ≈5% py	47	0.7	3	247	80	132	
146	1235N	151W	GRAB	Bx'd argillite near felsic contact, 2-4% py, qtz ank vns	1	0.5	2	33	2	5	
147	1235N	152W	GRAB	Ankerite-rich material in Bx'd argillite	1	0.4	2	53	2	6.	
148	1235N	162W	GRAB	bleached altered ash-lapilli tuff w/ 3-5% py, tr aspy	18	0.3	3	247	80	478	
149	1000N	640E	GRAB	Gossanous arg., orange-pink weathering, chert nodules	9	0.2	80	81	29	2415	
150	790N	190E	Grab		219	3.4	15	257	266	277	110

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GRANGES INC

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "R" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
				All "R" grid samples denoted by "CR" prefix on assay sheets.							
	370S	595W	Grab (G)	Rhyo - white, silic, bx'd, 2-3% diss py in blk mtx.	6	.1	2	5	9	54	10
	405S	705W	G	blk silts, argil w/ up to 15% diss. py	25	23	18	18	35	94	120
	510S	760W	G	blk argil + light colored ssd (ash?) 5-10% euhedral py	180	26	24	46	43	309	80
	495S	785W	G	blk argil w/ 3-5% py - arseno (?)	77	24	54	308	106	114	190
	450S	845W	G	Rhy - white, aph w/ <1% diss py	5	0.1	2	32	10	75	5
	710S	440W	G	Dacite tuff, wkly fol w/ 1-2% diss py	5	0.1	13	56	21	28	90
	675S	475W	G	Rhyo - bx'd frac. filled w/ blk py, 1-2% diss py	17	0.5	2	19	10	·	85
	705S	710W	G	Rhyo cut by py stgrs ≃ 3-5% diss py	26	0.2	23	33	15		750
	500S	950W	G	Rhyo w/ argil frags, 1-2% py	223	6.1	71	2524	328	797	9400
	508S	950W	G	contact btwn Rhyo/Argi - both units cont. 1-2% py	44	2.4	65	143	52	1016	390
	900N	290W	G	Andesite, 5% fg. sulfides, calcite stringers							
	900N	390W	G	altered Andesite/dacite, <1% diss sulfide (py) perv. Alt.							
	940N	440W	G	Rhyo, 1-2% diss py, gossanous on frac. surfaces							
	895N	623W	G	Andesite, extremely altered, gossanous, no vis. sulfides							
	030S	060W	G	Silic. xtal rich lithic tuff, 5-10% diss py, carb. Alt	23	0.9	40	64	32	26	180
	315N	510W	G	argil w/ x-cutting carb vnlts, 5-10% ankerite 5% py	93	1.7	24	193	89	307	190
	135N	700W	G	mtx supported, intermediate volc. fragmental rk. 5-10% py, Tr. tt, sph	4	0.2	11	50	31	42	70
	030S	865W	G	ser. alt in dacite tuff, Tr tt, py	7	0.1	8	78	17	42	40
	175N	580W	G	flow banded Rhyolite w/ ≃ 3% py, 1-2% Aspy	31	6.1	37	1681	1446	348	1100

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "R" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	512 S	950W	Grab	qtz vn (≤1cm) w/ wall rk. diss. py in wall rk ≃5-10%	56	1.2	12	30	19	421	230
	513 S	950 W	G	argil w/ finely diss py ≃10-15% as blebs + frac coating	221	2.7	22	32	54	417	330
	412 N	440 W	G	Rhyo flow bx w/ diss. + interstitial py	11	0.1	8	232	6	22	150
	450 N	520W	G	Rhyo flow bx and tuff; limonite; Tr. py	46	0.3	5	55	27	255	100
	020 S	620 W	G	strongly silic cherty Rhyo; 2-3% py	30	0.4	2	51	16	127	50
	00 N	615 W	G	cherty Rhyo, 2-3% py, ≤10% locally							
	030 N	615 W	G	cherty Rhyo, 10-20% py (89-GTR-06)	32	0.6	6	89	31	128	130
	040N	690 W	G	qtz phyric Rhyo, 3-5% diss py, ≤15%							
	005N	735 W	G	Cherty black Rhyo; Altered argil: 5-10% py	41	2.2	67	131	46	737	100
	00 N	840W	G	Andesite flow; 1-2% py	6	0.2	37	139	21	39	70
	030N	950W	G	strgly silf'd Rhyo tuff w/ 3-5% py	71	0.1	5	112	132	600	260
	025N	955W	G	Rhyolite; ≤15% py in blebs or mottled texture	197	1.1	19	785	427	800	560
	025N.	1000W	G	Rhyolite tuff, silicified, 5-10% py.	40	0.3	11	4	49	397	380
	514 S	950W	G	Felsic volc. w/ 10-20% Py	35	2.4	122	185	32	579	210
	534 S	950 W	G	Volc. w/ 3cm band of > 5% py	2	0.1	9	52	13	49	20
	436 S	654 W	G	Altered zone along felsic volc/argil contact	24	0.1	29	89	13	11	50
	220 S	850W	G	silicified volc. ash tuff w/ 2-3% v.f.g. py	3	0.1	41	85	17	20	100
	190 S	850W	G	felsic volc./argil contact ≃1% py	3	0.5	64	78	10	30	90
	432 N	440 W	G	Rhyolite flow bx, 5-10% py, cherty							
	450 N	520 W	G	Rhyolite flow + tuff bx, limonite stained, Tr. py.	46	0.3	5	55	27	255	100

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "R" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	020S	620W	GRAB	strgly silic. Alt'd Rhyo, 2-3% py, up to 10% locally	30	0.4	2	51	16	127	50
	000	615 W	G	silici Rhyo, 2-3% py							
	020N	615 W	G	silic Rhyo 10-20% py	32	0.6	6	89	31	125	150
	040S	690 W	G	Rhyo locally Qtz phyric, 3-5% py							
	000	840 W	G	dacite tuff, 1-2% diss py	6	0.2	37	139	21	39	70
	030N	950 W	G	strgly silic dacite or Rhyo 3-5% diss. py	71	0.1	5	112	132	600	260
	025N	955 W	G	silic dacite up to 10-15% py	197	1.1	19	785	427	800	560
	179	653 W	G	hornfelsed Argillite w/ py bands w/ 20-30% f.g. Py	68	3.3	40	74	49	223	40
	185	640 W	G	Rhyodacitic tuff? or very silic tuffs?, seds? 10-20% locally	10	0.5	19	123	14	38	40
	190	640 W	G	Hornfelsed Argillite/Tuff 1-3% py	29	1.8	72	329	34	153	100
	185	600 W	G	Rhyolitic grey cherty tuff 3% py	13	1.0	16	65	19	103	120
	180	620 W	G	f.g. silic tuffs? (Hornfelsed?)	8	0.6	98	82	12	50	50
	185	602 W	G	Rhyolitic Tuffs? 3-5% py	15	0.4	9	40	17	89	70
	175	650 W	G	Rhyolitic Bx (flow Bx?)	57	3.5	33	43	65	76	100
	290	515 W	G	Rhyolite w/ <2% diss py.							
	025S	1000 W	G	strgly silic dacite/Rhyo 5-10% diss py	40	0.3	11	4	49	397	380
	1850	060	G	flow banded Rhyo, ser., 5-10% diss sulfides							
	500	1065	G	silf'ed Andesites w/ Tr-1% Py	4	0.1	10	63	12	2	20
	500	670	G	silf'ed Andesites w/ Tr-1% Py	6	0.1	21	66	8	10	20
	500	625	G	silf'ed Rhyolites Tuffs ≤1% py	10	0.1	22	119	12	10	20

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "K" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au	Ag	Cu	Zn	Pb	As	Hg
	500 N	685 W	Grab	Cherty blk Rhyolitic? Tuffs w/ 10-20% py	74	22	81	317	56	288	320
	480 N	570 W	G	Rhyolite ≤ 3% diss py	8	0.1	7	140	9	3	20
	480 N	545 W	G	Rhyo → Rhyodac. Tuffs 10-20% py.	22	0.1	5	29	8	88	30
	500 N	440 W	G	Rhyo (Bx?) w/ 5-10% dis py	8	0.1	5	35	17	14	10
	520 N	440 W	G	Rhyo - Rhyodac tuffs w/ Tr. py	5	0.1	3	6	13	17	20
	520 N	345 W	G	Shear Rhyo's Sericite Kaolinite in She. Tr. py	10	0.2	150	95	5	12	30
	110 S	675 W	G	silf'ed Rhyo w/ Tr → 3% py							
	150 S	660 W	G	f.g. cherty tuffs w/ ±10% diss. py	13	0.4	35	85	9	87	80
	160 S	660 W	G	f.g. silicified rhyolite 20-30% diss py	32	0.2	127	157	12	126	40
	157 S	660 W	G	Blk cherty silf'ed tuffs? or hornfelsed Argil?	108	0.2	29	30	88	123	160
	175 S	650 W	G	Cherty Blk Rhyolites or hornfelsed argil?	57	0.5	33	43	65	76	100
	100 S	720 W	G	silf'ed Rhyo flows? 3-5% diss. py	16	0.1	4	13	11	90	50
	150 S	700 W	G	Rhyo flow w/ bx in places	184	0.1	4	49	5	39	20
	230 S	770 W	G	argil bx w/ tr py	304	3.7	16	76	67	174	90
	270 S	760 W	G	Bx'd Rhyo w/ 5-10% diss py.	16	0.4	12	26	13	84	40
	300 S	610 W	G	Hornfelsed? Rhyo/Dac tuffs, silf'ed Tr-2% py	6	0.1	9	5	25	19	40
	245 S	780 W	G	Kaol: Seri. rhyo w/ ≤3% py Tr Cpy	2	0.1	22	48	7	17	20
	260 S	775 W	G	Amygdaloidal? Andesite?/Dac 3% diss py							
	300 S	860 W	G	silf'ed Rhyo 1% py	4	0.1	61	61	9	15	30
	300 S	775 W	G	Bx zone of Argillite? Rhyo contact	41	1.9	32	24	32	133	30

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: # 134 UNUK River Grid: "R" Type of Sampling: grab. Type of Analysis: 32 E. ICP / FA Au.

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	225N	636W	G		60	0.6	10	102	36	62	60
	056N	636W	G		42	1.8	20	55	435	87	240
	00N	600W	G		22	0.3	8	148	79	97	170
	590N	250W	G		517	27.2	87	949	128	3195	1100

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ____________

SAMPLER: ____________

Project: Unuk River #134 **Grid:** "U" GRID **Type of Sampling:** ____________ **Type of Analysis:** ____________

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	2523	1777	grab	Geophysical Anomaly: Argillites / fissile shale	10	0.3	95	70	29	16	560
	2601	1823	grab	——— " ———	4	0.3	78	52	21	16	830
	2582	1840	grab	——— " ———	11	0.1	52	42	21	16	300
	2500	1790	grab	——— " ———	5	0.2	140	112	13	7	400
	2420	1530	grab	Shear zone, infilled carb/qtz w/ 1-2% diss py	8	0.1	59	53	8	5	40
	2615	2255	grab	Py-rich shrd Arg. along a shear (5-10% py)	77	2.5	40	72	36	53	270
	2600	2245	grab	Float Boulder: sph, gn, cpy rich; qtz-carb stgrs	5356	17.9	306	59767	3095	24	49000
	2620	2225	grab	fault gouge w/ py vnlts up to 1cm: sheared graphite	7	0.9	104	81	9	11	240
	2675	2315	grab	fracture infilling w/ 5-10% py in Alt'd Arg.	381	1.9	36	76	45	87	250
	2690	2313	grab	Py rich frac. infilling 5-10% py	5889	5.8	40	175	94	248	850
	2692	2340	grab	Py rich fracture infilling 5-10% py across 10cm	133	4.4	75	48	54	168	660
	2490	2160	grab	Float: sph, gn, cpy; 10-15%, 1-5%, 2-5% respective	895	16.0	532	65036	9512	298	98,000
	2560	2145	grab	Float: sph, gn, cpy	418	15.1	354	60449	5624	41	79,000
	2570	2225 A	chip	across 1m: Altered Arg. w/ 1-3% py, carb-qtz stgrs	1	0.3	10	109	9	9	80
	2570	2225 B	chip	1m: ——— " ———	10	0.5	33	53	11	9	50
	2570	2225 C	chip	0.5m: ——— " ———	22	0.7	52	170	22	22	130
	2570	2225 D	chip	0.5m: ——— " ———	34	1.0	131	114	27	43	90
	2570	2225 E	chip	0.5m: ——— " ———	33	1.3	153	111	58	21	100
	2570	2225 F	chip	0.5m: ——— " ———	16	0.5	31	50	7	14	50
	2390	2169	grab	Ribbon qtz along major fault	1	0.4	15	274	22		280

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ____________

SAMPLER: ____________

Project: Unuk River #134 **Grid:** U-GRID **Type of Sampling:** ____________ **Type of Analysis:** ____________

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	3000 N	1700 E	grab	Float boulder w/ 30-50% py ± marcasite	66	0.1	7	50	2	7	400
	3225	1700	grab	Float boulder: felsic bx w/ 10% py, 1-2% gn, 1-2% sph	115	8.4	96	4262	2493	84	11,000
	2950	2475	grab	Float boulder: highly silic Rhyo w/ 15% py, 1-5% gn, Tr. sph	238	22.8	20	2453	2736	255	6600
	2888	1805	grab	discont. py horizons in contact btwn And. vol + argillites	15	0.1	64	75	18	16	620
	2795	1845	grab	Brecciated And. w/in qtz-carb vns, 2-5% diss py	45	0.1	37	53	10	8	500
	2798	1830	grab	gossanous Argillite w/ Andesite, ≃5% py	42	0.1	28	64	4	10	600
	2700N	1975	grab	float: Rhyo w/ ≃10% py [ ] along frac's.	40	0.3	5	144	15	179	240
	2600	1500	grab	gossanous shear in Andes., silf'ed, 5-10% py.	8	0.7	107	40	17	20	180
	1900	1525	grab	altered And., mod. silf'ed w/ qtz-carb vns, 2-4% py Tr cpy	18	0.6	246	234	139	5	600
	1609	1619	grab	Andesite in fault, gossanous, silf'ed, 5% po Tr py	20	0.1	101	62	5		80
	1608	1622	grab	sericit And. in fault, 5% f.g. euhedral py	26	0.1	70	55	12		160
	2950	2350	grab	Float: Rhyo w/ massive f.g. py band ≃5cm Thick	31	0.9	58	12	88	102	820
	2901	2326	grab	Float: Rhyo bx w/ py vnlts ≃10%	29	4.2	13	624	34	35	710
	2695	2155	grab	Float: Qtz/carb vn w/ 5-10% po, 1-2% cpy, aspy blebs	676	24.8	590	99,999	15,873	165	128,000
	2145	2240	grab	Frac. filling qtz/carb w/ 2-3% gn, 1-5% sph, 1-2% py, 2% cpy	15798	173.9	75145	40345	21,444	38	162,000
	2700	2335	grab	Argillite w/ 5-10% py in blebs + stringers // to bedding	23	1.3	86	75	8	41	110
	2775	1805	grab	intercalated gwke's + Arg.'s w 8-10% py	11	0.1	59	69	3	7	570
	3915	2510	grab	argillite horizon in andesite?, 5% py, Tr po, calcareous alt	3	0.1	35	91	12	8	60
	3915	2511	grab	argillite/Andesite contact, 5-10% py	4	0.2	20	80	17	17	80
	2560	1525	grab	intercalated And. + arg. w/ 1-2% diss py	7	0.2	106	87	11	6	110

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GRANGES INC

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	4975N	2200E	grab	Rhyo shear w/ mod.⇒high chl.+ ser. alt, tr. py.	6	0.1	24	131	10	11	40
	4800	2125	grab	gossanous shear w/ ≃ 1% py	6	0.3	32	112	36	19	80
	4660	2050	grab	wkly gossanous shear in Rhyo AFT ≤ 1% py	5	0.1	12	163	20	9	90
	4520	2130	grab	highly silic AFT, 3-5% py Tr. po	5	0.7	5	43	23	27	1500
	4510	2175	grab	gossanous AFT, 2-5% py, ser. alt.	3	2.3	5	62	21	349	460
	4620	2260	grab	gossanous Rhyo, ≃ 1% py	5	0.4	8	85	22	28	300
	4432	2296	grab	gossanous shear in Rhyo AFT w/ 2-8% py	5	2.1	6	5	18	52	400
	3448	2016	grab	gossanous Rhyo-Dacite flow near fault ≃ 10% py	6	3.4	9	632	42	81	1700
	3200	1720	grab	gossanous Andesite w/ py [ ] in pods.	7	0.2	47	46	15	48	210
	3508	2815	grab	infilled shear zone w/ py vnlts up to 1 cm wide	59	5.4	20	13	10	172	11,000
	2501	1740	grab	Geophysics Anomaly: Argillite / Fissile Shale	4	0.2	52	62	16	6	120
	2506	1739	grab	"	6	0.3	101	103	23	13	320
	2521	1742	grab	"	9	0.3	94	98	28	14	380
	2521	1736	grab	"	12	0.3	75	73	22	8	290
	2549	1737	grab	"	7	0.4	77	85	26	15	500
	2552	1743	grab	"							
	2570	1790	grab	"	7	0.3	75	61	25	14	320
	2575	1802	grab	"	8	0.5	137	112	30	18	600
	2595	1820	grab	"	11	0.4	93	104	34	17	660
	2605	1820	grab	"	11	0.4	86	76	23	18	920

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	2600N	1770E	grab	gossanous Argillite in a gwke sed. pkg. Tr. v.f.g. py	17	0.2	74	61	19	14	210
	2584	1764	grab	gossanous gwke w/ minor Argillite, non-mag, Carb Alt, 2-3% py	19	0.4	56	25	30	19	350
	2520	1770	grab	gossanous Arg w/in gwke/Arg. pkg. v.f.g. diss. py (1-2%)							
	90-T1-	Z2-01	grab	massive silic AFT w/ 2-3% diss py - minor qtz strs	21	0.3	4	87	12	17	110
	90-T2-	Z2-01	grab	highly silic flow banded Rhyo AFT, 10% diss py	61	1.3	15	311	43	64	310
	5050	5000	grab	silic fault breccia w/ 5-10% py, Repeats R-33-1	1183	33	24	776	2983	1005	6600
	90-T2-	Z2-02	grab	same as 90-T2-Z2-01	72	3.9	9	95	68	72	320
	2900	2665	grab	highly silic AFT along fault bx, 3-5% diss. py	175	132	11	828	100	56	3500
	2905	2680	grab	fault bx, AFT in chl. mtx, 3-5% diss py	19	2.9	10	128	16	36	320
	2906	2695	grab								
	2908	2695	grab	(40m) / (45m)	37 / 32	2.3 / 2.1	7 / 4	196 / 189	80 / 27	62 / 54	440 / 180
	2625	2750	grab		94	14.0	15	275	55	171	3800
	5105	2260	grab	intensively silic Rhyo AFT, Tect. bx'd w/ qtz-py strs ±1% Aspy	53	1.4	7	51	11	70	1300
	5095	2245	grab	intensively silic Rhyo, Tect. bx'd, 5-10% py, 1-2% Aspy	388	2.3	7	108	60	552	3500
	5320	2330	grab	Rhyo AFT, closely spaced frac's, hem. staining	23	13.7	10	266	36.	33	2800
	5115	2225	grab	str. silic Rhyo AFT, Rusty weathering 2-3% diss py	368	6.4	9	14	39	639	250
	5175	2280	grab	str. silic Rhyo AFT w/ 1-2% diss py Along EW frac's	16	2.6	10	84	15	43	350
	4900	2175	grab	perv. fol in Rhyo AFT w/ 2-3% diss. py							
	4865	2330	grab	Rhyo AFT w/ stringers + pods py Along 144° frac							
	4215	2290	grab	prom. frac, rhyo - oxidized, no vis. sulfides							

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	3600N	2760E	grab	Qtz, Py, Ankerite frac's in Andesites							
	UR-LS-1-	F2	grab	5-10% dissem Py over width of 15cm, Bx, fault gouge.	3	3	15	298	98	353	
	3375	2650.	grab	Te cpy 3% py in qtz/Ank shear in Andesite. Te To	368	2.1	133	162	23	2248	1600
	3480	2670	grab	Te cpy, 3% Py in Qtz/Ank zone	28	5.1	182	99	31	157	388
	3500	2680	grab	1% py Qtz/Ankerite Rich Shear	4	0.7	160	92	24	8	520
	3300	2750	grab	2% Py Qtz/Ankerite shear	6	0.4	56	24	13	52	1050
	UR-90-BB	-2	grab	Qtz/carb Bx w/ stib, mal, 0.02m wide	72	0.1	50	28	37	147	90
	UR-90-BB-	3	grab	wall Rk w/ f.g. stib or py vnlts + blebs / silic Andesites	34	0.1	66	39	3	47	180
	UR-90-BB-	4	grab	Qtz/carb Bx (0.10m wide) Barren of sx's	166	0.1	21	37	2	214	150
	UR-90-BB-	5	grab	Wall Rk w/ tiny blebs of fg stib needles, diss py	6	0.1	103	51	4	20	410
	UR-90-BB-	6	grab	Massive stib, cinna, tt in qc from T-4	53	0.1	231	77	35	2	210
	UR-90-BB-	7	grab	wall Rk in T-4 w/ F.G. Stib / silic Andesites	602	0.2	133	63	4	605	160
	4475N	2310E	grab	Rhyolite w/ <1% diss. py							
	4495N	2275E	grab	mod. sheared, silic Rhyo AFT <1% diss. py.	5	2.3	8	38	16	86	380
	D-8-LS-	UR-90	grab	F.W. of felsic dyke at stib. showing	116	3.5	100	76	26	237	80
	D-9-LS-	UR-90	grab	Qtz-rich material within dyke near D-8	18	0.8	15	43	12	55	60
	D-10-LS-	UR-90	grab	Qtz vein on H.W. side, felsic dyke 18m. N.E. of D-8-9	145	4.3	18	88	35	305	250
	UR-LS.-	102-90	grab	pyritic shears/frac in foliated Andesitic congl. @ Elev. 5900'	12	0.8	124	10	31	35	510
	UR-LS.-	103-90	grab	Near 24N/ 30E f.g. stib xtals in dyke rk	1801	0.6	83	60	8	2518	150
	5050N	2300E	grab	pyritic (5%) shear silf'd felsic tuffs	44	2.3	7	20	22	60	200

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GRANGES INC

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	3350N	2680E	grab	Shear in Andesitic Congl. w/ Tr. Cpy, Tr. po ; 3% Py	87	2.7	258	85	19	199	170
	3349	2678	grab	Qtz Tension gashes (stwk?) Tr. Cpy, Tr. Po, 5% Py (Ankeritic Alteration in Andes.)	528	2.8	131	31	40	2263	680
	3320	2680	grab	5% Py, Tr. Cpy : Sil'ed shear in Andes. Congl	1	0.1	77	24	3	4	100
	3351	2650	grab	Andes congl. Float w/ qtz carbonate veins, Po, Py	60	3.2	139	65	41	130	800
	3685	2685	grab	Qtz Veins / Ankerite Rich 5m. wide shr Tr. Cpy, gn, Py	1	0.1	134	32	11	4	30
	3425	2900	grab	Qtz Vns / Ankerite Rich Tr. Cpy, gn							
	3420	2890	grab	Qtz Vns / Ank. Tr. Cpy, py in Andesite tuffs?	6	0.7	645	140	8	27	2000
	3425	2815	grab	Qtz filled features within 15m wide shear; Andes congl. ; 2-3% py	12	1.7	165	54	19	57	5400
	3300	2585	grab	Phyllitic Schist w/ massive Py in 3cm wide band (frac.)	88	3.6	11	22	31	139	120
	3412	2825	grab	Qtz, Py, Ank. Fracture Filling	17	0.5	79	27	11	127	6400
	3315	2582	grab	Qtz-CARB Vning in Phyllitic Schists	3	0.8	79	85	13	19	260
	3315	2585	grab	Qtz-CARB Vning in Phyllitic Schists	230	4.0	67	251	105	69	520
	3315	2800	grab	Qtz vning w/ Tr cpy, Po, 2% py	11	0.1	155	71	9	51	280
	3365	2760	grab	Qtz vning in shrd Andesites / Ankerite Py, Tr Cpy	5	0.4	208	66	10	48	200
	(3) 3535	2795	grab	Qtz filled frac 1% Cpy, Tr Py over width of 10cm.	73	0.8	92	96	7	21	150
	3535	2815	grab	Qtz vn over width 10cm Tr Pb, Cpy, Py, Sph.	58	1.4	30190	3870	1478	6	18000
	3535	2800	grab	Qtz vn over width 10cm Tr Pb, Tr. sph, 3% Cpy, 1% Py	5	6.4	5880	1019	4	8	29000
	3460	2760	grab	Py in Qtz filled shear : host - Andes.	9	0.1	112	27	11	192	16000
	3480	2670	grab	Py, Tr cpy, Qtz vns w/ Ank. hosted by Andes	28	5.1	182	99	31	157	388
	3550	2750	grab	Qtz Py feature over 10 cm width in Chl, Andes Congl.	6	0.4	56	24	13	52	1050

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ______
SAMPLER: ______

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** ______ **Type of Analysis:** ______

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	3141-G		chip/5m	CARB Alt'd Argillite	3	0.2	2	36	8	11	50
	3142-G		chip/5m	CARB Alt'd argillite	8	0.3	24	75	23	100	160
	2325N	2200E	GRAB	Qtz/CARB bx Along fault; 5-10% py Along frac	4415	2.8	106	4466	162	18032	11600
	2530	2185	GRAB	Felsic bx w/ 10-15% py in shr.	8	0.4	11	14	6	109	120
	2529	2185	grab	Felsic bx w/ 10-15% py [ ] on frac surfaces	4	0.2	10	14	9	25	150
	2530	2184	GRAB	Alt'd argillite w/ 5-10% py Along shear	8	0.5	57	16	16	42	190
	UR-90-	BB-1	grab	Stibnite, Cinnabar, + Malachite in subcrop Qtz-carb bx	181	0.10	165	39	6	2	180
	D-1-LS	-UR-90	grab	frac. sample (Resample R51/11, felsic dyke @ Elev. 6060'	276	20.2	16	12	59	366	1100
	D-2-LS	-UR-90	grab	Tr. py, sph in Bx frac. in 7m wide zone cut by dyke Elev. 6060	4	0.1	6	2006	6	7	3400
	D-3-LS	-UR-90	grab	Frac. in felsic dyke: Py, Tr. po. frac @ 127° Across dyke	8	0.4	7	109	17	16	110
	D-4-LS	-UR-90	grab	3% py in Felsic dyke	78	2.0	42	176	16	78	300
	D-5-LS	-UR-90	grab	Cpy, Tr. Py + qtz vn from same dyke As D-4	347	1.0	67	19	64	55	100
	D-6-LS	-UR-90	grab	1m wide Felsic dyke; 140°; 3% Py; Elev. 5700'	19	0.3	111	17	20	51	380
	3485N	2535E	grab	shr'd, slightly sil'fed Andesitic congl. 2% py Tr. Cpy	7	0.1	152	82	14	22	130
	3490	2600	grab	Ank Rich zone in And. 2% py Tr. cpy	6	0.1	177	44	4	51	20
	3385	2615	grab	shr'd ankerite/silic zone in And Tr. sph; Tr gn; 3% py	1289	4.0	93	3017	387	1401	4380
	3400	2650	grab	sil'fed, chloritic, Qtz rich zone in congl. 5% py Tr. sph, gn, cpy	308	5.7	101	940	307	1038	1700
	3401	2650	grab	Same As 3400N/2650E	183	7.1	95	1076	548	496	1800
	3400	2675	grab	Qtz-carb vein @ 120° in frac. 2% Po, Tr. Py, Cpy	17	0.1	133	65	8	55	150
	3400	2660	grab	Shear zone Qtz filled: host congl: 3% Py Tr. cpy, Po	33	1.6	141	58	7	90	180

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 Grid: "U" GRID Type of Sampling: Type of Analysis:

SAMPLE NO.	LOCATION	SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppb
	3121-G	chip 0.5m	CARB Altered Arg. w/ Qtz filled extension gashes	20	0.1	47	70	29	118	460
	3122-G		"	7	0.1	40	65	14	124	330
	3123-G		"	3	0.1	4	23	8	11	100
	3124-G		CARB Altered ARG/gwkes	1	0.1	1	18	10	15	70
	3125-G		"	21	0.3	1	17	3	9	40
	3126-G		"	7	0.3	1	16	5	11	50
	3127-G		"	2	0.1	2	18	2	8	40
	3128-G		"	2	0.1	1	15	2	7	40
	3129-G		"	2	0.2	1	16	2	4	30
	3130-G		"	3	0.2	4	20	3	6	40
	3131-G		"	1	0.1	3	21	7	10	60
	3132-G		"	1	0.2	1	14	3	8	50
	3133-G		"	1	0.2	15	35	8	19	80
	3134-G		"	1	0.1	7	28	3	5	50
	3135-G		"	1	0.2	10	34	6	4	70
	3136-G		"	2	0.2	5	22	2	9	60
	3137-G		CARB. Altered ARG.	2	0.1	5	16	4	18	80
	3138-G		"		0.2	3	21	5	19	70
	3139-G		"	9	0.1	2	30	7	21	110
	3140-G	Chip	"	3	0.2	2	36	8	11	50

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ______

SAMPLER: ______

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** ______ **Type of Analysis:** ______

SAMPLE NO.	LOCATION	SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppb
	3101-G	Chip	Shear zone w/ qtz bx; Thru mud supported congl. 0.5m	1	0.1	3	42	15	6	70
	3102-G	↓	"	8	0.1	46	61	16	11	110
	3103-G		"	7	0.2	75	96	7	13	150
	3104-G		"	9	0.2	85	67	10	12	120
	3105-G		"		0.1	75	112	14	14	230
	3106-G		"	4	0.3	102	94	17	26	180
	3107-G		"	6	0.2	42	66	25	13	200
	3108-G		"	5	0.4	70	70	30	14	180
	3109-G		"	2	0.2	47	99	21	6	150
	3110-G		"	5	0.3	99	99	16	22	200
	3111-G		"	6	0.3	76	77	12	26	220
	3112-G		"		0.2	71	89	10	12	170
	3113-G		"		0.2	47	72	12	5	150
	3114-G		"	4	0.1	61	83	19	14	210
	3115-G		"	4	0.2	71	97	24	32	230
	3116-G		"	1	0.1	60	81	9	15	160
	3117-G		Carb altered argillite w/ qtz filled extension gashes	2	0.1	33	74	6	17	130
	3118-G		"	13	0.3	29	80	11	42	210
	3119-G	↓	"	4	0.1	10	32	5	11	120
	3120-G	Chip	"	7	0.1	56	87	24	78	350

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ______________

SAMPLER: ______________

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** ______________ **Type of Analysis:** ______________

SAMPLE NO.	LOCATION	SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	3163 G	chip	0.5 m chip samples near 35N-34N / 26E-28E	5	0.1	94	59	13	4	460
	3164 G			7	0.1	131	74	8	8	230
	3165 G			2	0.1	115	61	8	6	240
	3166 G			41	0.2	103	58	19	45	280
	3167 G			10	0.3	124	55	14	24	500
	3168 G			14	0.1	115	67	13	14	510
	3169 G			15	0.1	109	76	7	11	750
	3170 G			10	0.2	97	68	11	10	600
	3171 G			7	0.1	144	66	5	14	1100
	3172 G			18	0.2	86	52	13	21	1400
	3173 G			4	0.5	118	43	10	14	700
	3174 G			7	0.1	152	30	8	30	1500
	3175 G			10	0.2	139	62	7	12	580
	3176 G			12	0.1	92	65	3	9	300
	3177 G			1	0.1	89	63	2	24	700
	3178 G									
	3179 G		Stib. showing @ 6100', ½ m. chips across 8.5 m wide dyke	81	2.9	65	15	20	214	140
	3180 G			180	2.2	57	27	23	350	110
	3181 G			71	1.5	49	74	12	173	40
	3182 G			1847	5.4	61	80	52	884	160

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GRANGES INC.

SAMPLE RECORD SHEET

DATE: ____________

SAMPLER: ____________

Project: Unuk River **Grid:** "U" Grid **Type of Sampling:** ____________ **Type of Analysis:** ____________

SAMPLE NO.	LOCATION	SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	UR-90-BB-1	grab	stibnite fr. Trench #4 (563234 ppm)	181	0.1	165	39	6	2	180
	3143 G	chip	0.5 m chip samples near 35N–34N / 26E–28E	140	2.6	77	9	9	271	800
	3144 G	↓	↓	17	3.4	60	9	21	64	2800
	3145 G			59	1.4	54	49	10	327	1400
	3146 G			33	3.3	93	34	22	113	2200
	3147 G			32	3.0	93	21	13	148	2400
	3148 G			19	0.7	123	83	19	80	2800
	3149 G			16	0.7	98	96	14	29	1100
	3150 G			21	0.9	187	125	10	21	2100
	3151 G			6	0.1	209	134	3	17	1600
	3152 G			22	0.4	216	80	10	20	500
	3153 G			6	0.1	93	70	5	19	380
	3154 G			12	0.4	97	78	18	33	360
	3155 G			5	0.4	140	51	12	27	1300
	3156 G			3	0.4	86	46	10	23	720
	3157 G			10	0.1	93	60	5	43	430
	3158 G			231	0.3	47	56	5	65	600
	3159 G			18	0.1	93	57	3	23	350
	3160 G			8	0.1	146	57	11	13	330
	3161 G			17	0.1	111	56	3	19	540
	3162 G			12	0.1	118	78	4	7	450

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GRANGES INC.

SAMPLE RECORD SHEET

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SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION	SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppb
	3183G	Chip.	Stib. showing @ 6,100', ½ m chips across 8.5m wide Dyke	30	1.7	111	88	7	68	110
	3184G	Chip		28	1.1	77	97	5	48	70
	3185G	chip		4	0.8	96	84	15	26	60
	3186G	chip		7	0.9	80	86	12	19	40
	3187G	chip		15	1.1	67	96	12	19	60
	3188G	chip		18	1.4	62	61	13	38	50
	3189G	chip		65	1.6	37	101	17	212	110
	3190G	chip		24	0.9	14	136	12	71	50
	3191G	chip		66	1.7	27	172	15	155	180
	3192G	chip		36	1.8	58	118	18	117	60
	3193G	chip		4	1.8	17	129	20	119	60
	3194G	chip		74	3.2	20	169	17	268	330
	3195G	chip		13	1.1	11	166	17	58	40
	UR-90-100	GRAB	W of Stib. showing ≃1000m : <1% diss py in Andes. flow, flow bx'd minor gossan, Ank. Repl.; minor shr's @ 345° (Sb 19454 ppm)	13	0.1	192	69	18	4	
	UR-90-101	GRAB	dyke at edge of glacier ≃200m along strike from Trenches - f.g to aphanitic, highly silf'ed dyke w/ 3-5% diss py + 1-2% po (wkly magnetic)	228	27.3	17	107	12	54	240

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GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: Unuk River #134 **Grid:** "U" Grid **Type of Sampling:** **Type of Analysis:**

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
	2388N	2183E	grab	Highly silic. Rhyo w/ qtz stgrs, 1-5% py	631	0.6	17	352	48	108	480
	2412	2162	grab	Ribbon qtz along SCARP	1	0.1	4	158	57	3	200
	2435	2162	grab	Qtz/CARB BX ACROSS 0-15m Along 0-45m strike	1	0.2	8	118	17	5	120
	2703	1810	grab	gossanous Argillite horizon in ss/gwke pkg.	7	0.3	77	85	19	9	1100
	2690	1760	grab	gossanous ARG. horizon, non-mag, 1-2% py Ank. frac's // bed	6	0.3	233	249	12	9	1200
	2695	1737	grab	gossanous ARG. w/ 1-2% euhedral py, Ank. vns // to bed.	16	0.1	58	88	11	4	450
	2693	1526	grab	str. fol gwke w/ 3-4% py, CARB Alt.	11	0.4	75	107	2	11	320
	2694	1515	grab	gossanous ARG. w/ ≃1% v. fg. py	10	0.1	40	51	24	10	560
	2802	1827	grab	hornfelsed contact of 5c w/ ≥2% py, str. CARB Alt.	38	0.1	70	69	10	8	1050
	2785	1798	grab	gossanous ARG. w/ Tr. py	14	0.4	60	66	26	12	2000
	2724	1820	grab	sill rk?? contains py pods + frags of 5a, minor carb Alt	15	0.1	28	38	14	10	680
	2830	1797	grab	gwke bed in ARG. w/ py pods and Ank. vns // to bedding.	8	0.4	30	35	14	26	580
	2822	1770	grab	gossanous lithic mudstone w/ 5-8% py, wk CARB. Alt	6	0.1	73	59	11	9	1800
	2810	1577	grab	gritty Arg in gwke sequence w/ 5-6% v. f.g. py	13	0.2	56	54	28	9	1200
	2805	1555	grab	gritty ARG. w/ 1-2% v. f.g. py	86	0.3	41	34	35	20	3600
	2860	1548	grab	gossanous Argillite 2-3% py, small calcite vns 160°/45°S	8	0.4	99	66	13	31	4200
	2680	1630	grab	lithic mudstone/AFT w/ Thin Arg beds 10% py	8	0.1	22	16	18	17	570
	2960	1758	grab	matrix supported lithic mudstone w/ Calcite stkwk, 2% py	19	0.4	51	29	11	18	360
	2992	1701	grab	gossanous Andesite, CARB + SER. Alt ≃10% py	4	0.1	98	25	7	22	3800
	2570	8165	grab	1-5% py in fault gauge (shear zone)	16	1.0	54	107	7	70	220

*** Please print using black ball point pen ***

GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: 134 **Grid:** Beedee Zone **Type of Sampling:** Grab (rock) **Type of Analysis:** Au geochem, 30 element ICP

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	Au (ppb)	Ag	Cu	Zn	Pb	As	Hg (ppb)
BDR	1000N	2000E		qtz-carb stgrs in shear trending Az 025/88W	20	.5	34	219	42	150	100
BDR	1345N	2015E		qtz-carb bx w argillite fragments (15cm comp grab)	3	.1	14	30	2	23	20
BDR-90-1				calcite-ankerite veining at contact w felsic dike ; tr py	5	.2	40	53	5	102	60
BDR-90-2				(resample 89-GNR-22) calcite veining in argillites along dike contact	5117	1.6	19	112	21	2234	40
BDR-90-3				calcite-ankerite stgrs along fault-fracture (argillite)	69	.5	48	63	9	119	50
BDR-90-4				sheared argillite cut by random calcite stgrs	32	.3	35	54	8	57	40
BDR-90-5				ankerite-calcite vein 35cm wide (bxed argill. frags in vein)	15	.2	14	23	2	27	10
BDR-90-6				bxed argillite ; 50% ankerite-carbonate alteration.	19	.6	82	200	20	39	160
BDR-90-7				qtz stgrs at South contact of dike ; minor ankerite; 30cm wide	4794	2.1	38	78	19	2745	40
BDR-90-10				same as BDR-90-7 ; 50m along strike to east.	10	.1	12	31	5	5	30
BDR-90-11				calcite/ankerite fracture in limonitic sed ; .5-1.5cm vein	9	.1	38	48	7	40	50
BDR-90-12				calcite stgrs in rusty weathering shear, // to Az 010 fract	671	.1	12	24	2	315	60
BDR-90-25				calcite/ank. veining in greywacke/argill.	3	.2	42	65	18	39	160
BDR-90-26				calcite/ank. veining w argill. frags.							
BDR-90-27				ank. altered argillite near dike contact	6	.1	71	80	9	58	20
BDR-90-28				ank altered argillite/dike contact	1	.1	32	38	5	12	10
BDR-90-29				ank veining in greywackes, veining contains argill. frags	4	2.7	52	416	49	109	150
BDR-90-30				ank-altered greywacke near dike contact.							

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CK/OCT 90

GRANGES INC.

SAMPLE RECORD SHEET

DATE:

SAMPLER:

Project: 134 **Grid:** Unuk 50 Traverse **Type of Sampling:** Rock Grab. **Type of Analysis:** Au geochem / 30 element ICP

SAMPLE NO.	LOCATION		SAMPLE WIDTH/TYPE	DESCRIPTION/COMMENTS	(ppb) Au	Ag	Cu	Zn	Pb	As	Hg ppb
R-1-90-LS				f.g. tuffs - chert rhyolite ; tr py	12	.1	57	22	2	2	20
R-2-90-LS			vein #1	qtz vein in contact with f.g. diorite ; 3% py ; tr cpy, po	3	.1	40	68	3	2	180
R-3-90-LS			vein #1	qtz vein on strike & west of R-2 ; 3%-5% py ; tr cpy, po	11	.1	36	30	6	4	10
R-4-90-LS			vein #1	qtz vein ; 5% py ; tr cpy-bornite ; tr po	8	.1	41	84	110	2	20
R-5-90-LS			vein #2	qtz vein ; 3% py , tr cpy, born, po	22	.1	25	97	18	5	60
R-6-90-LS			vein #3	qtz vein ; tr-1% py ; tr po	43	.1	29	35	4	2	20
R-7-90-LS				greywacke ss , near contact w diabase/diorite intrus. ; tr-1% py, tr po	15	.1	46	59	13	1	10
R-52-1				weakly sheared argillite , qtz veinlets ; 1-2% cpy ; tr sph.	7	9.8	2736	139	99	2	198
R-52-2				float - talus , bxed argillite ; 2-3% py in qtz.	11	.1	83	10	2	2	20
R-51-1				greywacke w 1% py	79	1.2	170	39	10	2	60
R-51-2				black fissile shale w 5% py	17	.3	142	100	19	6	30

CK/OCT.90

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