

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 92.08.15

ASSESSMENT REPORT 21756

MINING DIVISION: Atlin

PROPERTY: Outlaw  
LOCATION: LAT 58 32 00 LONG 132 44 00  
UTM 08 6490107 631972  
NTS 104K10E  
CLAIM(S): Outlaw 1-2  
OPERATOR(S): Chevron Min. Cons. Parklane Res.  
AUTHOR(S): Cann, R.M.; Lehtinen, J.  
REPORT YEAR: 1991, 75 Pages  
KEYWORDS: Triassic, Volcaniclastics, Quartzites, Greywackes, Argillites, Hornfels  
Stockworks, Pyrite

WORK  
DONE: Geological, Geochemical, Physical  
GEOL 200.0 ha  
Map(s) - 2; Scale(s) - 1:1000  
LINE 12.4 km  
SAMP 246 sample(s) ;ME  
SOIL 464 sample(s) ;ME  
Map(s) - 2; Scale(s) - 1:1000  
TREN 238.0 m

RELATED  
REPORTS: 16310  
MINFILE: 104K 053

LOG NO:	OCT 25 1991	RD.
ACTION:		
FILE NO:		

**GEOLOGICAL AND GEOCHEMICAL REPORT**

on the

**OUTLAW CLAIMS**

Trapper Lake Area, British Columbia

<b>SUB-RECORDER RECEIVED</b>
OCT 25 1991
M.R. #..... \$.....
VANCOUVER, B.C.

Atlin Mining Division

N.T.S. 104K/7 and 104K/10

Latitude: 58°30'N; Longitude 132°44'W

for

Glider Developments Inc.  
1100 - 808 W. Hastings St.  
Vancouver, B.C.

by

Azimuth Geological Incorporated  
205 - 470 Granville St.  
Vancouver B.C.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

Robert M. Cann, M.Sc.  
Jim Lehtinen, B.Sc.

**21,756**

October 1991

## TABLE OF CONTENTS

	<b>Page</b>
SUMMARY	1
INTRODUCTION	3
LOCATION, ACCESS AND PHYSIOGRAPHY	3
CLAIM STATUS	5
HISTORY	7
REGIONAL GEOLOGY	9
1991 WORK PROGRAM	12
PROPERTY GEOLOGY	12
MINERALIZATION AND ROCK GEOCHEMISTRY	15
SOIL GEOCHEMISTRY	20
CONCLUSIONS	21
REFERENCES	22
CERTIFICATES	24

### APPENDICES

- A. COSTS INCURRED
- B. ROCK SAMPLE DESCRIPTIONS
- C. ROCK ANALYTICAL RESULTS
- D. SOIL ANALYTICAL RESULTS
- E. ANALYTICAL PROCEDURES

## LIST OF FIGURES

		<b>Page</b>
FIGURE 1	Location Map	4
FIGURE 2	Claim Map	6
FIGURE 3	Regional Geology Map	10
FIGURE 4A	Geology and Rock Geochemistry - East Half	in pocket
FIGURE 4B	Geology and Rock Geochemistry - West Half	in pocket
FIGURE 5A	Soil Geochemistry (Au, Pb) - East Half	in pocket
FIGURE 5B	Soil Geochemistry (Au, Pb) - West Half	in pocket

## LIST OF TABLES

		<b>Page</b>
TABLE 1	Claim Information	5
TABLE 2	Significant rock sample results	16

## SUMMARY

The Outlaw and Inlaw claim groups comprise 170 units and are located in northwestern British Columbia, approximately 80 km northwest of Telegraph Creek and 43 km northwest of the Golden Bear gold mine. Access is by float plane and/or helicopter.

Claims overlie an Upper Triassic volcano-sedimentary sequence which has been intruded by Cretaceous(?) granodiorite stocks and dykes and by Tertiary(?) felsic dykes and sills. Precious metal mineralization is hosted by Upper Triassic strata but is spatially associated with Cretaceous and Tertiary intrusives.

The Outlaw and Inlaw claims were explored from 1981 to 1987 by Chevron Canada Resources Ltd. On the Outlaw claims, wide-spaced soil sampling defined a strong, 2.5 km by 0.5 km gold-arsenic-antimony in soil/talus anomaly. Hand trenching and limited diamond drilling in a clay altered zone within the soil anomaly returned up to 3.55 g/t Au (0.100 oz/t) on surface and up to 8.30 g/t Au (0.242 oz/t) in drill core.

Current work was restricted to the Outlaw 1 and 2 claims and consisted of detailed soil/talus sampling (469 samples), rock sampling (232 samples), hand trenching and geological mapping (1:1,000 scale). Mapping and sampling defined five mineralized zones (Clay, Gossan A, Gossan B, Contact and Skarn) within the grid area, while the detailed soil sampling confirmed the above zones and located one additional, covered zone (Ridge Zone).

The Clay Zone remains as defined by Chevron and consists of east-west trending, shear controlled quartz veins carrying up to 0.668 oz/t gold in selected grab samples. Veins also carry significant lead, antimony, bismuth and arsenic values. Further soil and rock sampling and mapping is required to determine if mineralization continues to the east.

Gossan Zones A and B consist of pyritic stockwork within hornfelsed sediments marginal to granodiorite. Grab samples of pyritic material returned up to 0.060 oz/t gold with variably anomalous copper, silver, zinc, cadmium and arsenic.

The Contact Zone consists of pyrite-quartz stockwork and limonitic shears localized along the sediment-volcanic contact. A grab sample of pyritic andesite breccia returned 0.14 oz/t gold.

The Skarn Zone is not significant in size but consists of semi-massive sphalerite-pyrrhotite running up to 16.4% zinc and 0.09 oz/t gold. Mineralization is localized in limestone and limey sediments marginal to granodiorite.

The Ridge Zone is defined by a strong, 75 m by 200 m gold-silver-lead in soil/talus anomaly which is open to north. The geochemical signature and recessive nature of the area are similar to the Clay Zone. Outcrop in the vicinity of the anomaly is extremely poor and to date the soil anomaly is unexplained. Trenching and/or drilling will be required to further evaluate and test this anomaly.

Work to date has located and partly defined five zones of significant precious metal mineralization. Highest gold grades are found within shear hosted, galena-stibnite(?) -pyrite bearing quartz veins within the Clay Zone. Geochemical signatures and vein characteristics suggest epithermal affinities. Although mineralization is spatially related to felsic dykes and sills and to high-level granodiorite stocks and dykes, the genetic relationship between mineralization and intrusive rocks is not known. Further work is required to evaluate all zones.

## INTRODUCTION

At the request of Prime Equities Inc. (on behalf of Glider Resources Inc.) Azimuth Geological Inc. was contracted to carry out detailed geological and geochemical surveys on the Outlaw and Inlaw claim groups. The property is located in northwestern British Columbia, 43 km northwest of the Golden Bear mine, in an under-explored but geologically attractive area.

Earlier preliminary rock and soil sampling by Chevron Canada and by others had indicated a large epithermal-type precious metal bearing system underlying the claims. Limited diamond drilling in 1987 tested one small section of the system and returned inconclusive results.

Current work was aimed at developing an understanding of the geological setting, of the distribution of the mineralization and at defining potential drill targets.

## LOCATION, ACCESS and PHYSIOGRAPHY

The Outlaw and Inlaw claim groups are located in the extreme northwest corner of British Columbia (Figure 1), 1200 km northwest of Vancouver and 270 km south-southeast of Whitehorse, Yukon Territory (NTS: 104K/7 (Inlaw) and 104K/10 (Outlaw)). Closest supply towns are Telegraph Creek, 80 km to the southeast; Dease Lake, 140 km to the east; and Juneau, Alaska, 100 km to the west-southwest.

Access to the claim area is possible by float-equipped aircraft to Trapper Lake (10 km southeast of Outlaw) or to Tunjony Lake (10 km south of Outlaw). Airstrips for conventional aircraft are located at Tatsamenie Lake (30 km southeast of Outlaw), Muddy Lake (43 km southeast of Outlaw) and Tulsequah (50 km west of Outlaw). Final access would be by helicopter. A private road provides access from Telegraph Creek to the Golden Bear mine-site at Muddy Lake and is available for public use by prior arrangement with Golden Bear Operating Company.

Physiographically, the claims are located in the Tahltan Highland, a moderately rugged transitional zone between the Stikine Plateau and the eastern ranges of the Coast Mountains. Elevations on the Outlaw property vary from 760 m in the southwest corner to 2040 m at the L.C.P. Much of the properties are alpine to sub-alpine in nature with treeline at approximately 1100 m.

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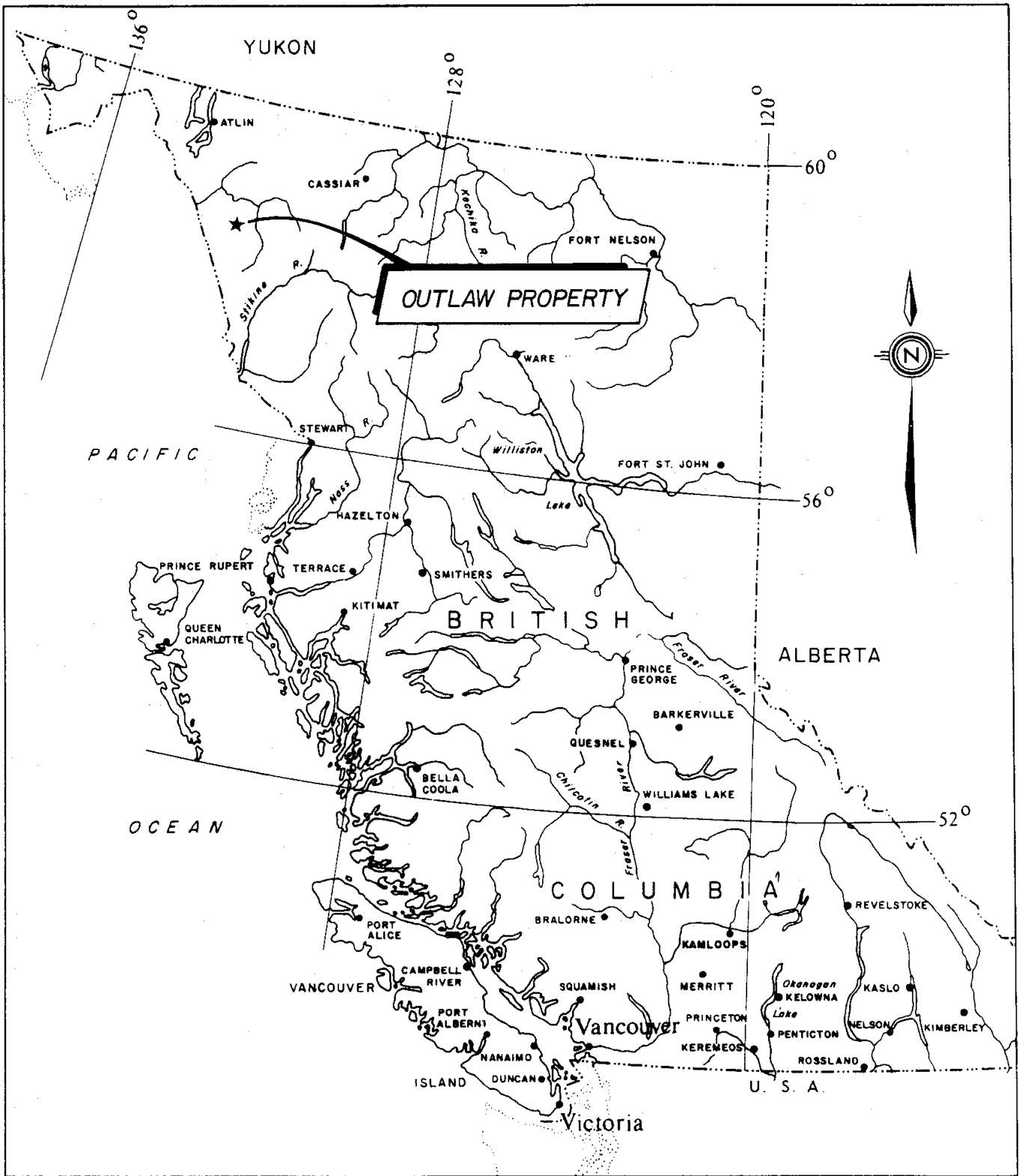
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TO ACCOMPANY REPORT NO. \_\_\_\_\_ BY \_\_\_\_\_

**AZIMUTH GEOLOGICAL INC.**

GLIDER DEVELOPMENTS INC.

**OUTLAW**

**LOCATION MAP**

Date  
OCT., 1991

Scale  
1:7 500 000

N.T.S.  
104K/7,10

Figure No.  
1

## CLAIM STATUS

The Outlaw property consists of nine contiguous modified grid claims totalling 170 units (Figure 2) located in the Atlin Mining Division. Current claim data as shown in public records is compiled below.

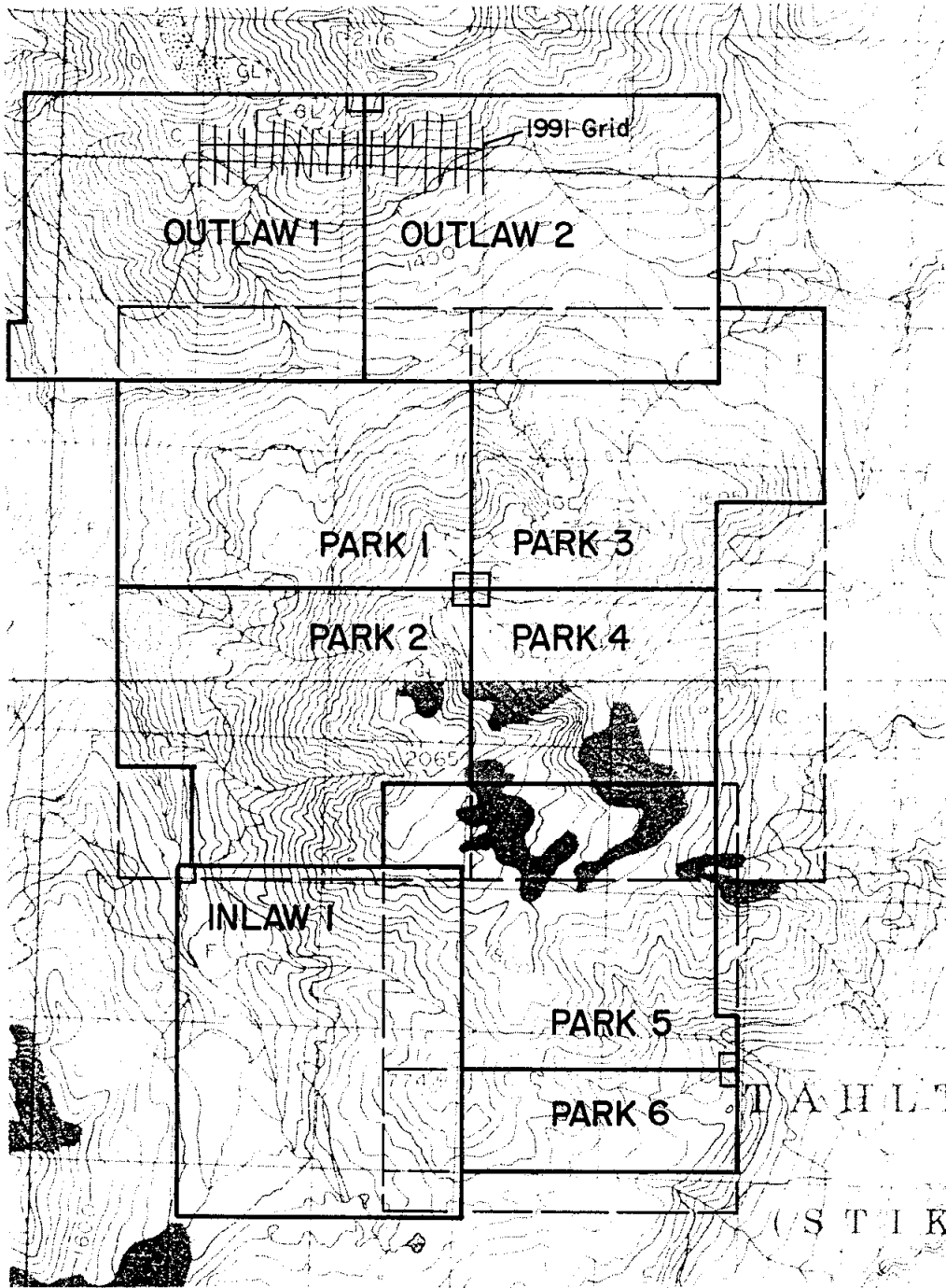
Table 1.

### Claim data.

Claim Name	Record Number	Units	Expiry Date <sup>1</sup>
Outlaw #1	1339	20	July 9, 1997
Outlaw #2	1340	20	July 9, 1997
Inlaw 1	1983	20	August 16, 1995
Park 1	4499	20	March 24, 1994
Park 2	4500	20	March 24, 1994
Park 3	4501	20	March 24, 1994
Park 4	4502	20	March 24, 1994
Park 5	4503	20	March 24, 1994
Park 6	4504	10	March 24, 1994

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1: Assuming acceptance of current submission.



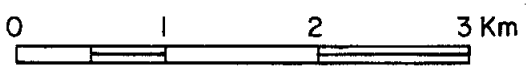
633 000 E

TO ACCOMPANY REPORT NO. \_\_\_\_\_ BY \_\_\_\_\_

**AZIMUTH GEOLOGICAL INC.**

GLIDER DEVELOPMENTS INC.

**OUTLAW  
CLAIM MAP**



Date OCT., 1991	Scale 1:50000	N.T.S. 104K/7,10	Figure No. 2
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## HISTORY

Although no record remains, it is likely that the general area of the Outlaw, Inlaw and Park claims was prospected in the 1920's and 1930's following discovery of the Tulsequah Chief and Polaris Taku deposits, 50 km to the west.

The earliest record of systematic exploration in the region is during the period 1959-1961 when Kennco Explorations (Western) Limited carried out a regional geochemical program for porphyry copper-molybdenum deposits (Barr, 1989). During this period the Thorn epithermal (?) gold prospect, located immediately northwest of Outlaw, was located.

No work is recorded on the claims prior to staking by Chevron; however, Wetherhill (reported in Barr, 1989) noted finding old drill core in the northeast corner of the now lapsed Outlaw #3 claim, 2.5 to 3 km northeast of the current L.C.P. for Outlaw 1 and 2. The Outlaw claims were staked in 1981 by Chevron Canada Resources Ltd. following anomalous results (5,000 to 36,000 ppb Au) in four heavy mineral silt samples (Barr, 1989). The Inlaw claim was staked two years later and the Park claims were added in March 1991. Exploration work since initial staking is detailed below.

### Outlaw Property

In 1982 geological mapping was conducted and a grid (200 m spaced lines) was established on the Outlaw #1 and Outlaw #2 claims and 225 soil/talus samples collected at 100 m intervals. Reconnaissance traverses elsewhere on the property collected an additional 213 soil samples. This work outlined a strong gold-arsenic-antimony anomaly (Barr, 1989).

The following season 208 soil samples and 42 rock samples were collected from a detailed 50 m by 50 m grid established over an intensely clay-altered zone referred to as the "Clay Zone" in the northwest corner of the Outlaw #2 mineral claim. Fifty channel samples were taken from five trenches hand blasted along a quartz vein, located on the eastern margin of the Outlaw #1 mineral claim (Walton, 1984a; Barr, 1989).

In 1984 and 1985 numerous pits were hand dug and five trenches hand blasted in the Clay Zone. Sampling of the pits and trenches returned values in the 2,000 ppb to 3,000 ppb Au range and resulted in a recommendation for drilling (Walton, 1985a and 1985b; Barr, 1989).

Four HQ/NQ diamond drill holes totalling 550 m were completed in 1987 under a joint venture agreement with Dia Met Minerals Ltd. Holes were restricted to a small area of the clay-altered zone and despite poor recovery returned values up to 8.3 g/t Au over 0.95 m (Walton, 1987; Barr, 1989).

In 1988 the property was optioned to Shannon Energy Ltd. who conducted heavy mineral analysis of talus and silt samples (Freeze, 1987; Barr, 1989). This work confirmed previous sampling. Total expenditures on the Outlaw property since 1981 are reported as \$450,000 (Barr, 1989).

### **Inlaw Property**

In 1983 preliminary geological mapping, geochemical surveys and prospecting were completed on the property (Barr, 1989). The following year, approximately 37 line-km of grid was established with 50 m spaced lines. Soil sampling (700 samples) at 50 m spacing defined a strong gold-arsenic-antimony anomaly. Thirty rock samples and eleven channel samples were collected from two hand-blasted trenches (Walton, 1984b; Barr, 1989).

In 1988, as part of a joint venture with Shannon Energy Ltd., 23 silt and 42 talus samples were subject to heavy mineral separation and analysis. Expenditures on the Inlaw property from 1983 to 1988 are estimated at \$50,000 (Barr, 1989).

## REGIONAL GEOLOGY

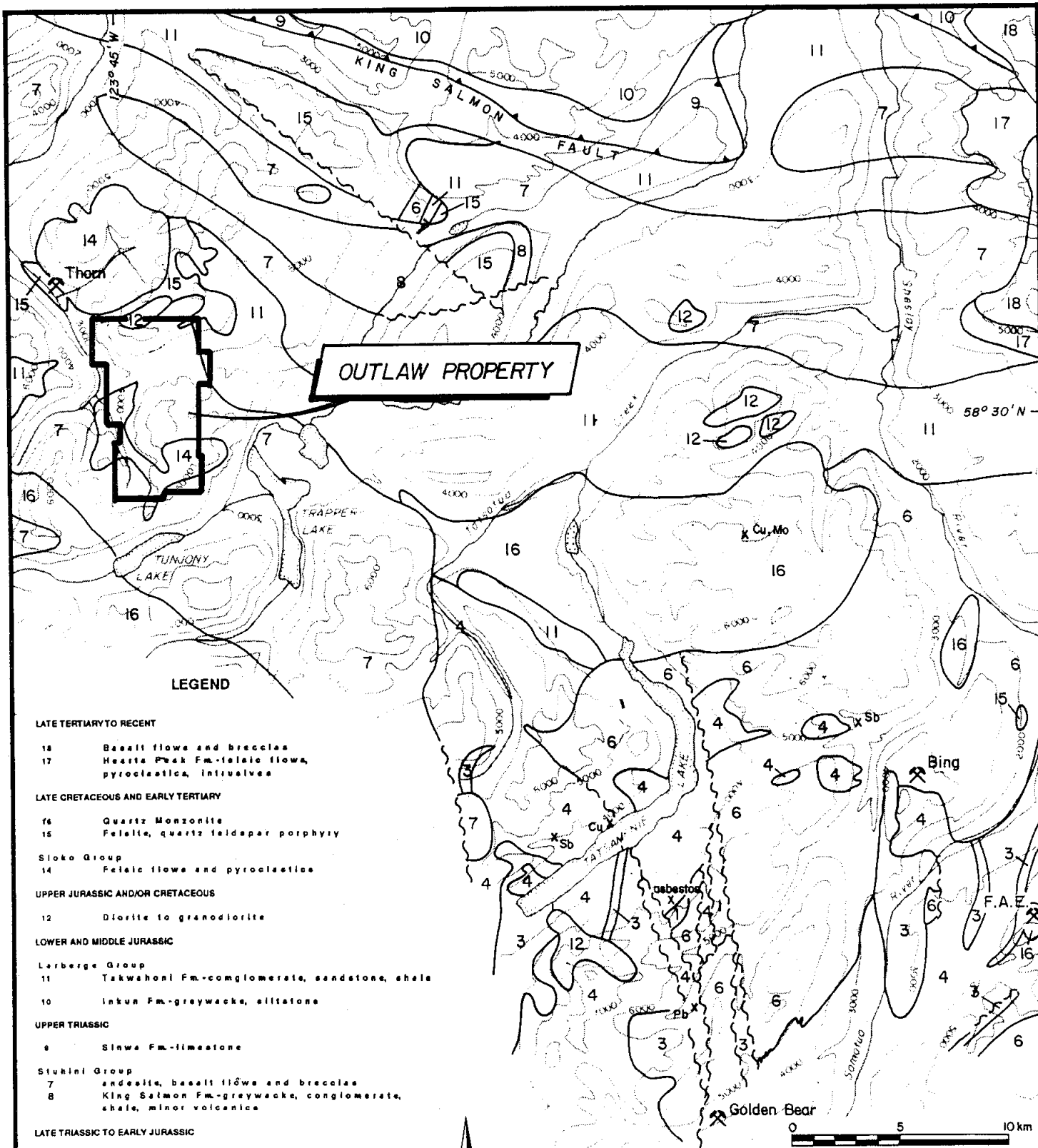
The Tulsequah map-area was most recently mapped by Souther (1971). Regional geology in the Tatsamenie Lake-Trapper Lake area is shown in Figure 3. Oldest rocks in the area are strongly deformed and regionally metamorphosed Permian and Lower Triassic metasediments and metavolcanics (Units 3 and 4) of the Stikine Assemblage (Monger, 1980) which are intruded by Lower or Middle Triassic foliated diorite (Unit 6). These older rocks appear to be restricted to an area between Trapper and Tatsamenie Lakes. Souther (1971) shows Unit 4 underlying the Outlaw claims; however, current work indicates the Outlaw claims are entirely underlain by Upper Triassic strata as shown in Figure 3. Chevron (Walton, 1987) suggested that these rocks are of the Lower to Middle Jurassic Takwahoni Fm. strata.

A major regional unconformity separates older rocks from less deformed Upper Triassic and younger strata. Most widespread of the younger strata are Upper Triassic Stuhini Group basic volcanics and related sediments (Units 7 and 8). In the area of interest these rocks form a southeast-trending syncline enclosing a core of Lower and Middle Jurassic Takwahoni Formation (Laberge Group) sediments and overlying Upper Cretaceous to Tertiary felsic volcanics and related sub-volcanic intrusives of the Sloko Group (Units 11, 14 to 16). Middle Jurassic diorite plugs (Unit 12) commonly intrude Takwahoni and older rocks and often appear to be spatially associated with mineralization in the area.

In the northeast corner of the map-area, Upper Triassic limestone (Sinwa Formation: Unit 9) and Lower Jurassic sediments of the Inklin Formation (Unit 10) have been thrust southwestward along the King Salmon Fault to form the Atlin Horst.

Flat-lying Late Tertiary to Pleistocene volcanics (Units 17 and 18) overlie all units along the east margin of the map-area.

Three structural events have been documented in the area (Schroeter, 1986; Oliver and Hodgson, 1990). The oldest mid-Triassic event is typically represented by tight folds with north-trending axial surfaces. Mid-Jurassic deformation resulted from southwest-verging thrust faults which produced broad northwest-trending folds. Youngest structures are Eocene extension faults of apparent random orientation.



**LEGEND**

- LATE TERTIARY TO RECENT**
- 18 Basalt flows and breccias
  - 17 Heasts Peak Fm.-felsic flows, pyroclastics, intrusives
- LATE CRETACEOUS AND EARLY TERTIARY**
- 16 Quartz Monzonite
  - 15 Felsite, quartz feldspar porphyry
- Sloko Group**
- 14 Felsic flows and pyroclastics
- UPPER JURASSIC AND/OR CRETACEOUS**
- 12 Diorite to granodiorite
- LOWER AND MIDDLE JURASSIC**
- Larberge Group**
- 11 Takwahoni Fm.-conglomerate, sandstone, shale
  - 10 Inkuu Fm.-graywacke, siltstone
- UPPER TRIASSIC**
- 9 Sinwa Fm.-limestone
- Stuhini Group**
- 7 andesite, basalt flows and breccias
  - 8 King Salmon Fm.-graywacke, conglomerate, shale, minor volcanics
- LATE TRIASSIC TO EARLY JURASSIC**
- 6 Isolated diorite
- LOWER TRIASSIC AND EARLIER**
- 4 greenstone, phyllite, tuff
- PERMIAN**
- 3 limestone, dolomitic limestone
- AGE UNKNOWN**
- 1 ultramafica, serpentinite

- fault
- thrust fault
- mineral property
- mineral occurrence

After: Souther, 1971; Schroeter, 1986; Oliver and Hodean, 1990

**AZIMUTH GEOLOGICAL INCORPORATED**

**GLIDER DEVELOPMENTS INC.  
OUTLAW**

**GEOLOGY MAP**

N.T.S.	104 K/7,10	Date	G. Crowe	Date	Oct., 1991
Scale	1 : 250 000	Drawn		Figure	3

Mineralization in the Tulsequah area is dominated by volcanogenic(?) massive sulphide deposits in the Tulsequah district, 50 km west of the Outlaw/Inlaw properties, and by shear-hosted precious metal mineralization at and near the Golden Bear deposit. Copper-lead-zinc-gold-silver mineralization at Tulsequah Chief, Big Bull, and Ericksen-Ashby is associated with a contact between Permian felsic pyroclastic rocks and underlying massive andesitic flows (Gunning, 1988; Nelson and Payne, 1983). Most recent (1989) reserves for Tulsequah Chief are given as 5.26 Mt of 1.6% Cu, 1.31% Pb, 7.03% Zn, 2.74 g/t Au, 100.5 g/t Ag. Recent exploration by Cominco Ltd. and Redfern Resources Ltd. is expected to boost this reserve. Across the Tulsequah River at the nearby Polaris Taku property, Suntac Minerals Corporation report probable plus possible reserves of 803,765 tonnes grading 16.1 g/t Au (March 21, 1990 News Release). Mineralization occurs in an arsenopyrite-bearing quartz-carbonate shear zone cutting Permian(?) sediments and tuffs. Grade and geological setting suggest similarities with the Golden Bear deposit.

The Golden Bear deposit, located 43 km southeast of Outlaw (Figure 3), is being actively mined by Chevron Minerals Ltd. and North American Metals Corp. (Homestake Mining Company) who report (1990 Annual Report) proven plus probable reserves (before mining) of 569,453 tonnes grading 17.60 g/t Au. Mineralization at Golden Bear consists of pyrite-arsenopyrite-scorodite-native gold within a persistent quartz-carbonate altered shear cutting Permian to Lower Triassic(?) limestone and metasediments.

The Thorn property, located immediately northwest of Outlaw (Figure 3), is underlain by Eocene Sloko felsic volcanics intruded by a small quartz-feldspar-porphyry stock (Woodcock, 1987). Gold and silver are associated with both linear, east-west trending, pyrite-arsenopyrite-tetrahedrite-bearing silicified zones and with pods and lenses of pyrite-tetrahedrite-enargite. The property was drilled in 1986 by American Reserve Mining Corporation.



## 1991 WORK PROGRAM

Current work was restricted to the Outlaw 1 and 2 claims and was conducted between June 30 and July 27, 1991 by three geologists and four field assistants. Field work was supported from common camp facilities at Trapper Lake (10 km southeast of Outlaw 1 and 2) where a contract Bell 206B helicopter supplied by Trans North Air was available for claim access.

Field work consisted of establishment of 12.38 km of grid with 100 m spaced lines (some areas at 50 m spacing) and with picketed stations at 25 m intervals. This grid was soil/talus sampled at 25 m intervals (469 samples) and mapped at 1:1,000 scale. During mapping, grab samples were routinely taken of altered and mineralized material. Five trenches totalling 238 m were hand excavated to expose a significant quartz vein and mineralization marginal to feldspar porphyritic and basaltic dykes. These trenches were chip sampled at 2 m or 5 m intervals.

## PROPERTY GEOLOGY

Preliminary geological mapping at 1:10,000 scale was conducted on the Outlaw property in 1982 and 1983 by Chevron Canada (Walton, 1984a; 1987). Current grid mapping at 1:1,000 scale (Figs. 4A and 4B) was completed by Taylor and Cormier in July 1991 and identified five major map units as described below. Unless stated otherwise, lithologic descriptions are based only on observations within the grid. Mapping on the property was locally hindered by the abundance of talus.

### Lithologies

#### 1. Andesitic flows and breccias:

Intermediate, dark green, fine- to medium-grained andesitic tuffs, flow breccias and pillowed basalts occur in the southern portion of the grid. The volcanoclastics often contain 4 mm wide phenocrysts of feldspar and augite. Limestone clasts have been observed in polymictic volcanic breccia. Fine grained varieties are commonly vesicular. Souther (1971) assigned these rocks to the Upper Triassic Stuhini Group.

The volcanics have been regionally chloritized and contain epidote and minor calcite veining with trace to 1% disseminated pyrite. Within 100 metres of the contact with the hornfelsed sediments the volcanoclastics are increasingly more siliceous and pyritic with the pyrite content well above 5% within 30 metres of the contact.

## 2. Argillite, quartzite:

A dominantly sedimentary package consisting of black, grey to green, banded and massive argillites, sandstones, grits, cherts, quartzites and minor limestone conformably(?) overlies the mafic volcanics and outcrops sporadically through talus across a surface width of at least 400 metres. Although Souther (1971) mapped these rocks as Permian and Chevron interpreted them as Jurassic Takwahoni sediments, current work suggests they are more likely Upper Triassic sediments - possibly part of the King Salmon Formation.

Within the sedimentary package is a marker horizon of chert breccia (Unit 2a) containing sub-rounded to sub-angular clasts of grey, black and white chert in a quartz carbonate, sericite matrix. The chert breccia occurs as 4 to 5 metre wide by 10 to 40 metre long lensoid units dipping north at 45 to 65 degrees and offset by late NE trending sinistral faults. Many examples of this occur between lines 8+00 W and 9+00 W to the north of the baseline. Pods of crystalline limestone (Unit 2b) are distinctive and locally host skarn mineralization.

The trend of the bedding (which give the sediments a banded appearance) is generally 115 degrees with an average dip of 48 degrees to the north. At one location near grid location L8+70 W/ 8+77 N, graded bedding within a gritty sandstone indicates the stratigraphy is upright.

The whole package described above has been strongly hornfelsed and has undergone chlorite and sericite alteration. The degree of this "early" alteration is uniform from the northern contact with the granodiorite stock to the southern contact with the volcanoclastics. Gossanous zones and intensely clay altered zones occupy areas in the magnitude of 200 metres square and are thought to be fracture related and will be discussed in more detail under Mineralization.

### 3. Felsic Dykes and Sills

Massive, cream to grey coloured feldspar and quartz rich dykes and sills have been mapped throughout Unit 2. Although variable, feldspar phenocrysts are up to 4mm wide and quartz eyes are locally present. These units have been intensely fractured and altered making identification very difficult: highly siliceous aphanitic varieties resemble quartzites and silica depleted, bleached and gossanous varieties.

The dykes occur as distinct resistant units over a strike length of 1400 metres within 50 metres of the baseline and outcrop though the talus in three main areas:

- (1) between lines 14+00 W and 12+00 W from 0+40 N to 0+50 S.
- (2) between lines 10+00 W and 7+00 W from 0+15 S to 0+75 S.
- (3) between lines 3+00 W and 4+00 W from 0+25 S to 1+60 N.

In areas (1) and (2) the dykes trend 115 degrees, dip north between 48 and 65 degrees and have a surface width of up to 7 metres. The dykes have been cut by near vertical northeast and north trending faults with minor sinistral offsets. Generally the dykes are persistent in an east-west trend from the site of the Chevron drilling in the eastern Clay Zone to the west for 1400 metres.

In area 3, the dykes strike east, northeast and northwest and have been intensely fractured, sheared, faulted, bleached and clay altered. In this area the dykes are generally less resistant than the dykes in the two main areas to the west and intermingle with gossanous metasediments hindering recognition.

### 4. Granodiorite

A fine- to coarse-grained, equigranular biotite hornblende granodiorite stock, of possible Cretaceous age, is in contact with the hornfelsed sediments in the northern portion of the grid. Features such as miarolitic cavities suggest a high level of emplacement. A sharp, irregular intrusive contact occurs between grid stations 10+00 W/ 1+00 N and 14+50 W/ 2+00 N. This contact generally dips to the north at moderate to steep angles. Over much of its length the contact is more likely to be tectonic rather than intrusive, for example at grid location 13+00 W/ 1+25 N, where the sediments are gossanous with over 3% pyrite, the mineralization does not extend into the diorite and no chilled margin or transitional alteration halo is present. In other areas, for example at 11+00 W/ 0+90 N where some minor skarn is present in a limestone lens within the sediment package, the observed granodiorite contact is not as well defined and is very irregular.

## 5. Tertiary Basaltic Dykes

Brown weathering, relatively fresh and unmineralized augite porphyry basalts occur as dykes throughout the property and cut the metasediments, gossanous zones and granodiorite stock. The basaltic dykes are up to 5 metres in width with steep attitudes and trend east, northeast, northwest and north. The basaltic dykes often occur in a close spatial relationship with the felsic dykes, commonly being subparallel and within 5 metres of either the hanging wall or footwall. Basaltic dyke margins are commonly sheared, suggesting the dykes are following pre-existing structures.

In the gossanous, geochemically anomalous zone between line 15+00 W and line 11+50 W, a high density of basaltic dykes occurs in a northeast trending swarm occupying a set of near vertical fractures.

## **MINERALIZATION AND ROCK GEOCHEMISTRY**

Alteration and mineralization on the Outlaw and Inlaw properties is spatially related to Jurassic to Cretaceous granodiorite intrusives and to Cretaceous to Tertiary felsic volcanics and dykes. Many significant gold values also appear to be related to shears - most of which cannot be traced on surface for any distance. The presence of major structures has not been documented on either of the mineral claims, but is suggested by discordant contact relationships and by the preferred orientations of dioritic stocks, of veins and of dykes.

All rock samples and all significant gold, silver and base metal values are plotted on Figures 4A and 4B. For descriptive purposes, discrete zones of mineralization (as labelled on Figures 4A and 4B) are described individually below.

### Clay Zone

The Clay Zone, as defined by Chevron, is an approximately 75 by 200 m, east-west elongate area of strong sericite-clay alteration. Within this alteration are east-west trending quartz-galena-arsenopyrite-pyrite veins which are commonly auriferous.

Highest gold values obtained during current work are from quartz vein float taken from a sloughed Chevron pit near the 1987 drill sites. These samples were 18701 with 15800 ppb gold (0.543 oz/t) and 33 ppm silver and 18702 with >20000 ppb gold (0.668 oz/t) and 26.3 ppm silver (Table 2). Both samples were vuggy and stained yellow with visible disseminated pyrite and galena. These samples were geochemically anomalous in lead, antimony, bismuth.

**TABLE 2**  
**SIGNIFICANT ROCK SAMPLE RESULTS**

Sample No.	ppb Au (oz/ton)	ppm Ag	ppm Cu	ppm Pb	ppm Zn <sup>1</sup>
<b>CLAY ZONE</b>					
18223	1780(0.043)	33.8	-	6192	-
18224	8750(0.123)	8.9	-	-	-
18225	7400(0.262)	11.8	-	562	-
18226	3300	9.2	-	1014	-
18651	2390	41.0	-	3487	-
18655	1910	4.7	-	-	400
18657	2830	54.3	641	7091	-
18701	15800(0.543)	33.0	-	3605	-
18702	>20000(0.668)	26.3	-	1068	-
<b>GOSSAN A</b>					
18962	381	5.2	-	-	8110
18963	690	10.9	-	-	-
18964	1485	9.4	4242	-	-
<b>GOSSAN B</b>					
18720	2050	3.0	-	-	-
18722	268	1.0	-	-	-
18723	848	3.6	-	-	-
<b>CONTACT ZONE</b>					
18214	338	0.5	-	-	-
18215	1300	2.3	-	-	-
18216	329	1.8	-	-	-
18217	331	1.6	-	-	-
18219	4900	1.7	-	-	-
<b>SKARN</b>					
18951	3000(0.073)	48.1	-	-	5.63%
18952	280	20.0	-	401	0.19%
18953	374	69.7	-	609	16.4%
18954	1020(0.034)	46.1	-	8027	0.49%

1: Values less than 500 ppm Cu, 400 ppm Pb, 400 ppm Zn not shown.

Samples taken from Trench L, dug specifically to locate the source of this float, returned similar results. Sample 18224 returned a gold value of 8750 ppb gold ( 0.123oz/t Au ) with 8.9 ppm silver and sample 18225 returned a value of 7400 ppb gold (0.262 oz/t) and 11.8 ppm silver. Both these samples were grabs of a 15 cm wide quartz vein with minor pyrite, striking east-west and dipping approximately 70 degrees north, sitting loosely in 1 metre of clay gouge containing quartz and metasediment fragments. Grab sample 18226 of this clay gouge returned a value of 3300 ppb gold and 9.2 ppm silver. All the above samples were anomalous in lead, antimony, bismuth, and arsenic. Thirteen metres north of these samples at the north end of Trench L, sample 18223 ( a grab of grey hornfels with fine disseminated pyrite and grey sulphides) returned a value of 1780 ppb gold (0.053 oz/t) and 33.8 ppm silver. Sample 18657, located 5 metres northeast of this, returned 2830 ppb gold and 54.3 ppm silver from a grab of silicified hornfels with pyrite and galena. These samples were also anomalous in lead, antimony, bismuth and arsenic.

At location 1+13 W/ 0+04 N ( 100 metres E of the above mentioned samples and still in the clay zone) a grab of black to grey pyritic hornfelsed quartzite, sample 18655, returned a gold value of 1910 ppb.

#### Gossan Zones

Several areas of strongly fractured, pyritic, gossanous hornfels were extensively sampled and all zones returned anomalous gold values. The larger and more significant zones are described below though many "spot" anomalies are present throughout the area mapped (see rock descriptions-Appendix B and Figures 4A and 4B).

Gossan A is a 170 metre wide gossanous zone centered at 12+50 W/ 1+00 N ( DDH 9102-02 drill target), which returned anomalous values in gold, silver, copper, zinc, cadmium and arsenic. For example, sample 18964 (Table 2), a grab sample of fractured, pyritic metasediment returned 1485 ppb gold and 4242 ppm copper.

In Gossan B, centered at 6+75 W/ 1+50 S, grab sample 18720 (location 7+15 W/ 1+40 S) of pyritic, brecciated, fractured metasediment returned a value of 2050 ppb gold. A similar sample 18723 (location 7+00 W/ 1+00 S) returned a value of 848 ppb gold with strongly anomalous arsenic. The mineralization in these samples is related to steeply dipping pyritic fractures, some of which have been sheared, and which strike east-west, northeast-southwest and northwest-southeast.

### Contact Zone

To the south of the Clay Zone, at 1+20 S between locations 3+25 W and 1+00 W, the approximate contact between the hornfelsed sediments and the andesitic volcanoclastics occurs. Within 75 m of the volcanic-sediment, the andesitic tuffs are relatively pyrite rich. Although outcrop along this contact is sparse, the volcanics are exposed in the banks of two north-northwest trending gullies, one passing through 1+20S/ 3+25 W and one through 2+00 S/ 0+80 W.

In the gully to the west, samples 18214, 18215, 18216, and 18217 returned values of gold ranging from 329 ppb to 1300 ppb. All these samples were taken near the volcanic-sediment contact from relatively siliceous sediments cut by iron carbonate/ limonite shears and by local pyritic quartz stockwork. ( see rock descriptions - Appendix B). In the gully to the east at location 2+00 S 0+80 W, a grab sample of pyritic andesitic breccia (18219) returned a value of 4900 ppb gold.

### Skarns adjacent to the Granodiorite.

Selected grab samples of massive sphalerite ( up to 80% ) and pyrrhotite ( up to 20% ) from the skarnified portion of a limestone lens located near 11+10 W/ 0+90 N returned gold values between 3000 ppb and 280 ppb, silver values up to 69.7 ppm, zinc up to 16.40% and lead up to 0.80% (Fig. 4A; Table 2). Cadmium values up to 0.19% are associated with the more zinc rich samples. The limestone pods are approximately 3 to 4 metres across; therefore, it is felt that these results are of limited significance.

### Other Zones

A 170 m long, 0.5 to 1.0 m wide, linear zone of brecciated, quartz veined, hornfelsed metasediment occurs between lines 7+00W and 9+00W, 30 metres south of a sub-parallel felsic dyke or sill. The zone of brecciation strikes east-west and dips 60 degrees north. Trace pyrite occurs in the drusy chalcedonic veinlets forming the stockwork. This zone was extensively sampled every 5 m with 34 one metre wide chip samples (sample series 18666 to 18699 - see Figure 4A). Only two samples returned gold values above 100 ppb.

A similar vein is present to the west between lines 13+00 W and 13+50 W at 0+25 S, 20 metres south of the felsic dyke and adjacent to mafic dykes with marginal shears containing minor pyrite and galena but only low gold values. It is most likely that these two zones are continuous beneath the talus and snow.

In the two narrow gossanous zones near 9+00 W 0+95 S, grab samples 18705, 18706, 18707, 18708 and 18709 returned gold values between 375 ppb and 3900 ppb gold and were anomalous in silver, zinc and cadmium. These samples were taken within the metasediments from 0.2 to 1.0 m wide shears with an average strike of 035 degrees, dipping 70 to 78 degrees north. Along these limonitic shear zones are lenses or pods of massive pyrite. Two main shears are present, with the larger of the two traceable for 50 metres. The sediments are gossanous across a width of 1.5 to 2 metres on either side of the shears.

To test gold distribution across the hornfels, the felsic dyke, the basaltic dyke and the siliceous vein breccia, two trenches (Trenches A and B) were hand excavated between lines 9+00 W and 8+00 W. Continuous chip samples were taken across Trench A and selective grab samples taken in Trench B (Fig 4A). Only 3 samples returned gold values greater than 100 ppb: two from Trench A (18777 and 18778) and one from Trench B (18714). All were taken in recessive gouge zones within 5 metres of basaltic dykes.

Trenches C, D and E were hand excavated to crosscut the contacts between the hornfels and the felsic dykes, possible shear zones and in the case of Trench E to check a basalt dyke/quartz vein contact. In Trench D a grab sample (18744) of a bleached gossanous felsic dyke with disseminated pyrite returned a gold value of 134 ppb and a 1 metre chip sample of pyritic grey hornfels returned a gold value of 242 ppb. A 15 centimetre chip of a northeast trending clay altered yellow gouge zone with some siliceous fragments returned a gold value of 575 ppb.

Near 1+25S. between L13+00W and L14+00W an easterly trending, 0.5 to 2.0 m wide shear zone hosts minor disseminated pyrite, sphalerite, galena, arsenopyrite and chalcopyrite. Sample 18163 from this zone carries 4.95 g/t gold (0.14 oz/t), 205.4 g/t silver (5.96 oz/t), 4.68% lead and 10.15% zinc.



## SOIL GEOCHEMISTRY

The 469 soil samples taken over the grid were geochemically analysed for gold and by ICP for 30 additional elements. In general, there is no soil development on the grid and all samples were of talus-fine material; however, at lower elevations there is locally poor soil development.

Gold and lead results are plotted on Figures 5A and 5B while all results are compiled in Appendix D.

Gold values vary from 5 to 3500 ppb while lead values vary from 2 to 17,758 ppm (1.78%). Although other elements are not plotted, there is a strong positive correlation between lead, silver, arsenic, antimony. Higher gold values (>100 ppb) correlate well with the elements mentioned above but very high gold values (>750 ppb) do not show a strong correlation with other elements and may be due to nugget effects.

Gold anomalies generally lie within the anomaly outlined by Chevron (Cann and Crowe, 1991) but the more detailed current work has resulted in smaller more defined anomalies. Values over 1000 ppb gold are scattered throughout the grid but the largest cluster of higher values is part of an east-west trending anomaly located at the north end of lines 16+00W and 16+50W, close to the irregular contact between metasediments and granodiorite. Although the source of the anomaly is not apparent, it may originate from low grade gold mineralization associated with pyritic hornfelsed sediments marginal to the granodiorite. A similar soil anomaly occurs downslope from Gossan A (Fig. 4B) and from Gossan B (Fig. 4A). A small gold anomaly is centred near L9+00W/1+00S (Fig. 4A) and appears to be related to northeast trending, auriferous shears.

A broad, 250 m wide gold anomaly is centred over the Clay Zone and disperses downslope to merge with an anomaly which is probably related to pyritic volcanics near the Contact Zone.

Very strong lead anomalies are spatially coincident with the gold anomalies associated with the Clay Zone and located at the north end of lines 16+00W and 16+50W. A moderately strong, east-west trending lead anomaly also lies above the sediment-volcanic contact on Fig. 5B. Lead in this area may be derived from easterly trending, galena/sphalerite-bearing shears mapped in this area (Fig. 4B).

## CONCLUSIONS

The Outlaw claims are underlain by a conformable sequence of Upper Triassic andesitic volcanics and overlying sediments. Volcanic and sedimentary strata has been intruded by Cretaceous(?) granodiorite stocks and dykes; Tertiary(?) felsic dykes and sills; and Tertiary basalt dykes. Sediments have been strongly hornfelsed, fractured and pyritized near the granodiorite.

Precious and base metal mineralization occurs in three settings on the property. The first setting is gold-silver-lead-zinc in shears or in sheared quartz veins, commonly in close spatial relationship with felsic and basalt dykes and sills (e.g. Clay Zone). Low precious metal values within the dykes suggests the spatial relationship is due to the dykes following pre-existing structures and is not a genetic relationship. Although mainly confined to the hornfelsed sediments, shear-related mineralization also occurs within the volcanics.

Anomalous gold-silver mineralization also occurs in pyritic stockworks hosted by strongly fractured, hornfelsed sediments near granodiorite bodies (e.g. Gossan A and Gossan B zones). Stockwork mineralization may enclose and include shear related mineralization.

Although areally insignificant, high-grade sphalerite-pyrrhotite skarns occur where limestone or limy sediments are in contact with granodiorite.

Detailed soil/talus sampling over a 2 km by 0.3 km area defined a number of strong gold-silver-lead-zinc-arsenic-antimony anomalies. Most of the anomalies can be related to known mineralized zones; however, at least two anomalies have no known source and should be further evaluated.

## BIBLIOGRAPHY

- Barr, D.A., 1989, Geological Report on the Misty-Nie, Inlaw and Outlaw Properties of Shannon Energy Ltd., Chevron Minerals Ltd., Dia Met Minerals Ltd. and Lightning Creek Mines Ltd. for Shannon Energy Ltd., Unpublished company report.
- Cann, R.M. and Crowe, G.G., 1991, Summary Report on the Outlaw and Inlaw Properties, Unpub. report for Glider Developments Inc.
- Freeze, J.C. 1987, Report on the Northern Gold Project for Lightning Creek Mines Ltd., prepared by Stillwater Enterprises Ltd., May 26, 1987, unpublished report.
- Gunning, M.H., 1988, Tulsequah Chief; in Exploration in British Columbia 1987, B.C. Ministry of Energy, Mines and Petroleum Resources, pp. B78 - B83.
- Monger, J.W.H., 1980, Upper Triassic Stratigraphy, Dease Lake and Tulsequah Map Areas, Northwestern British Columbia; in Current Research, Part B, Geological Survey of Canada, Paper 80-1B, pp. 1-9.
- Nelson, J. and Payne, J.G., 1983, Palaeozoic Volcanic Assemblages and Volcanogenic Massive Sulphide Deposits near Tulsequah, British Columbia, Canadian Journal of Earth Sciences, V. 21, pp. 379-381.
- Oliver, J.L. and Hodgson C.J., 1988, Geology and Mineralization, Bearskin (Muddy) and Tatsamenie Lake District (South Half), Northwestern British Columbia, geological Fieldwork 1988, Ministry of Energy, Mines and Petroleum Resources, Paper 1989-1, pp. 443-453.
- Schroeter, T.G., 1986, Muddy Lake Project, Geological Fieldwork 1985, Ministry of Energy, Mines and Petroleum Resources, Paper 1986-1, pp. 175-189.

Schroeter, T.G., 1987, Golden Bear Project, Geological Fieldwork 1986, Ministry of Energy, Mines and Petroleum Resources, Paper 1987-1, pp. 103-109.

Souther, J.G., 1971, Geology and mineral deposits of Tulsequah map-area, British Columbia (104K), Geol. Surv. Canada Memoir 362.

Walton, G., 1984a, Geological, Geochemical and Physical Work, Outlaw 1-4 Claims, June 1984, B.C.D.M. Assessment Report 12654.

Walton, G., 1984b, Geological, Geochemical Surveys, Inlaw 1 Claim, October 1984, B.C.D.M. Assessment Report 13107.

Walton, G., 1985a, Compilation Report, Geology and Geochemistry, Outlaw 1-4, Inlaw 1 Claims, February, 1985, unpublished report.

Walton, G., 1985b, Physical Work, Outlaw 1-2 Claims, November, 1985, B.C.D.M. Assessment Report.

Walton, G., 1987, Chevron Minerals Ltd., Dia Met Minerals Ltd., Lightning Creek Mine Ltd. Joint Venture, Tats Project, Tatsamenie Lake, British Columbia, 1987 Summary Report, September 1987, unpublished report.

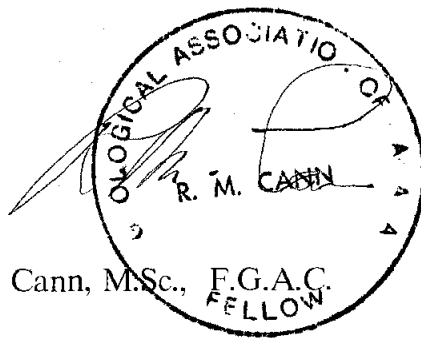
Woodcock, J.R., 1987, Drilling Report on the Thorn Property, B.C.D.M. Assessment Report 15,897.

## CERTIFICATE

I, Robert M. Cann, of 1260 Silverwood Crescent, North Vancouver, British Columbia hereby certify that:

- 1) I am a consulting geologist with offices at 205-470 Granville Street, Vancouver, B.C.
- 2) I hold a degree of Bachelor of Science (Honours) in Geology from the University of British Columbia, 1976.
- 3) I hold a degree of Master of Science in Economic Geology from the University of British Columbia, 1979.
- 4) I have practised my profession continuously since 1979.
- 5) I am a Fellow of the Geological Association of Canada.
- 6) This report is based on work done under my direct supervision.

Dated on this 18th day of October, 1991 at Vancouver, B.C.



Robert M. Cann, M.Sc., F.G.A.C.  
FELLOW

## CERTIFICATE

I, Jim Lehtinen, of the City of Vancouver, British Columbia hereby certify that:

- 1) I am a consulting geologist residing at #302 - 880 West 71st Avenue, Vancouver, B.C.
- 2) I hold a degree of Bachelor of Science in Geology from the University of British Columbia, 1984.
- 3) I have practised my profession continuously since 1984.
- 4) I am a Fellow of the Geological Association of Canada.
- 5) This report is based on work done under my direct supervision.

Dated on this 18th day of October, 1991 at Vancouver, B.C.



Jim Lehtinen, B.Sc., F.G.A.C.

**Appendix A**

**COSTS INCURRED**

**COSTS INCURRED - JUNE 30 TO JULY 27**

Mobilization		\$ 1,466.41
Supervision - R. M. Cann	3.3 @ \$400/day	1,320.00
Field superv. - L. Haynes/J. Lehtinen	12.4 @ \$375/day	4,650.00
Sr. geol. - W. Taylor	18.4 @ \$350/day	6,440.00
Jr. geol. - S. Cormier	20.1 @ \$250/day	5,025.00
Ass't - S. Becherer	11.1 @ \$225/day	2,497.50
Ass't - J. McGregor	10.1 @ \$225/day	2,272.50
Ass't - S. Martin	14.1 @ \$225/day	3,172.50
Ass't - H. Culbert	5.2 @ \$225/day	1,170.00
Food and accom. at Trapper Lk. camp	94.7 @ \$120/manday	11,364.00
Consumable supplies & equip. rental	94.7 @ \$25/manday	2,367.50
Portable radio rentals		90.00
Helicopter (Trans North)	19.53 @ \$750/hr	14,647.50
Analytical		
Soils (Au+30 element ICP)	469 @ \$12	5,628.00
Rocks (Au+30 element ICP)	232 @ \$17	3,944.00
Gold assays	14 @ \$8.50	119.00
Camp Construction - Jemmland (proportional share)		
Labour		3,696.70
Materials		3,539.90
Transportation		3,556.00
Report		
Drafting		500.00
Copying/Reproductions		550.00
Writing		<u>3950.00</u>
<b>TOTAL</b>		<b>\$ 81,966.51</b>



**Appendix B**

**ROCK SAMPLE DESCRIPTIONS**

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

SAMPLE NO.	CLAIM	WIDTH metres	UTM northing	UTM easting	ELEVATION metres	DESCRIPTION
18101	Outlaw 1	Float	0+10N	13+00W		Quartz stockwork in a silicified sediment or volcanic. Rusty, vuggy; similar to lower Qtz. zone.
18102	Outlaw 1	Grab	0+14N	13+95W		Semi-massive to massive pyrite aggregate within gossanous sediments. Hosted in 040 structure.
18103	Outlaw 1	Grab	0+25N	13+91W		Massive pyrite pod hosted in a 40 to 70 cm wide structure oriented at 340.
18104	Outlaw 1	Grab	1+00N	14+20W		Quartz rich rusty, vuggy o/c with minor pyrite.
18105	Outlaw 1	Grab	2+00N	14+50W		Hosted near granodiorite/diorite contact. Minor quartz stockwork in rusty, gossanous o/c.
18106	Outlaw 1	Grab	1+00N	14+60W		Quartz rich subcrop with strong iron stain.
18107	Outlaw 1	Grab	1+75N	14+80W		Orange weathering dark grey sediment. Trace pyrite.
18108	Outlaw 1	Grab	1+50N	13+50W		Rusty breccia at the base of the granodiorite.
18109	Outlaw 1	Grab	0+50N	14+00W		Quartz rich, rusty, vuggy outcrop.
18110	Outlaw 1	Grab	0+10N	13+25W		Siliceous, quartz rich, vuggy, rusty o/c. Disseminated pyrite.
18111	Outlaw 1	Grab	1+25N	13+00W		Intense limonite stain and boxwork near granodiorite.
18112	Outlaw 1	Grab	0+89N	13+12W		10 to 13 cm pyrite vein in a 30 cm shear zone oriented 300. Hosted in the main gossanous zone.
18115	Outlaw 1	Grab	1+00N	18+00W		Clay altered sediments. Limonite on fractures.
18116	Outlaw 1	Grab	0+14S	17+64W		Silicified, coarse grained felsic dyke. Moderate pyrite, limonite stain.
18117	Outlaw 1	Grab	0+70S	17+50W		Sedimentary breccia with carbonate matrix.
18118	Outlaw 1	Float	0+50N	17+00W		Vuggy, rusty +/- scorodite stained float.
18119	Outlaw 1	Grab	0+02S	17+00W		Pod of pyrite in sheared sediments.
18120	Outlaw 1	Grab	0+00N	17+75W		Rusty sheared sediments.
18121	Outlaw 1	Float	0+00N	17+03W		Rusty, drusy quartz.
18122	Outlaw 1	Grab	0+40N	16+60W		Rusty altered sediments.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18123	Outlaw 1	Grab	0+88S	15+27W		Rusty, vuggy quartz in 15cm shear. 050/90.
18124	Outlaw 1	Grab	0+29S	17+39W		Sediment with disseminated pyrite in fractures.
18125	Outlaw 1	Grab	0+22S	17+29W		Grainy textured sediment. Disseminated pyrite.
18126	Outlaw 1	Float	1+00N	17+70W		Altered intrusive with abundant pyrrhotite.
18127	Outlaw 1	Float	1+15N	15+05W		Silicified sediment with limonite and pyrite.
18128	Outlaw 1	Grab	0+50N	15+25W		Strongly fractured sediments. Minor Py & Limonite.
18129	Outlaw 1	Grab	0+25S	15+15W		Green clay altered sediment with strong foliation and fracturing. Limonite stain.
18130	Outlaw 1	Grab	1+10N	11+60W		Dyke or altered sed. with heavy disseminated Py.
18131	Outlaw 1	Grab	0+02N	13+99W		Diorite dyke with heavy pyrite.
18132	Outlaw 1	Grab	0+25N	14+10W		Felsic dyke, rusty.
18133	Outlaw 1	Grab	0+05N	13+00W		Sheared, altered sediment, diss. pyrite.
18134	Outlaw 1	Grab	3+50S	11+30W		Quartz vein hosted in iron carbonate fault breccia trending 300. Pyrite, trace sphalerite.
18135	Outlaw 1	Grab	4+00S	11+00W		3.0 metre zone of iron carbonate breccia and volcanics.
18136	Outlaw 1	Grab	0+75N	17+00W		Banded quartzite with limonite on fractures.
18137	Outlaw 1	Grab	0+80N	17+00W		Strongly fractured quartzite. Limonite.
18138	Outlaw 1	Grab	0+85N	17+00W		Black argillic sediments.
18139	Outlaw 1	Grab	0+90N	17+00W		Black argillic sediments.
18140	Outlaw 1	Grab	0+95N	17+00W		Black argillic sediments.
18147	Outlaw 2	Grab	6489630	631870		Carbonate breccia in sheared volcanics. 330 trend.
18148	Outlaw 2	Grab	6489610	631630		Limonitic sheared(330) volcanics. Minor pyrite.
18149	Outlaw 2	Grab	6489760	632340		Carbonate altered granitic dyke. Diss. pyrite.
18150	Outlaw 2	Grab	6489640	632290		10m felsic dyke, 080. Carbonate stringers, trace py
18156	Outlaw 1	Grab	1+00S	17+70W	1695	Pyrite <1% hosted in siliceous sediments. Oriented 100/20-50s.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18157	Outlaw 1	Grab	0+25S	14+20W	1745	Diorite, med. grey, med. grained. 5% pyrite as blebs and disseminations. Trending approx. 170.
18158	Outlaw 1	Grab	0+25S	14+25S	1745	Contact diorite/sediments. Sediment hosted pyrite, 15% as clusters and aggregates.
18159	Outlaw 1	Grab	0+30S	13+50W	1720	Chert-quartz 2.0m stringer zone. Quartz-carbonate matrix with cherty or silicified fragments. Trace pyrite.
18160	Outlaw 1	Grab	1+30S	13+75W	1660	Shear zone 0.5-2.0m width. variably mineralized. Finely disseminated pyrite, sphalerite, galena, arsenopyrite and trace chalcocite. Trends 080.
18161	Outlaw 1	Grab	1+30S	13+75W	1660	Shear zone . Same as sample 18160. Composite grab sample taken along 70 metres of strike length.
18162	Outlaw 1	Grab	0+25S	13+90W		Diorite dyke. 5-15% disseminated pyrite.
18163	Outlaw 1	Grab	1+26S	13+53W		15cm shear zone off of main shear. 040/44N. Erratic pyrite, sphalerite, galena, arsenopyrite.
18164	Outlaw 1	Grab	1+23S	13+45W	1710	Sheared seds. with pyrite, sphalerite, galena.
18165	Outlaw 1	Grab	3+80S	10+40W	1690	< 1.0m carbonate altered zone with pyrite, and sphalerite.
18175	Outlaw 1	Grab	3+45S	12+70W	1705	Carbonate breccia zone trending 055. Rare fragments of sphalerite, pyrite, arsenopyrite, tetrahedrite.
18176	Outlaw 1	Grab	3+32S	12+95W	1685	Carbonate breccia, 10-15m width. Minor pyrite.
18177	Outlaw 1	Grab	6489600	631300	1485	Carbonate breccia and flood zone. Trending 310/SW. Minor pyrite and sphalerite.
18178	Outlaw 1	Float	6489580	631330	1485	From carbonate/recessive zone. 1-2% pyrite and sphalerite.
18179	Outlaw 1	Grab	6489450	630980	1500	25cm barren quartz-carbonate vein with 75cm quartz stringer footwall. 084/54S.
18200	Outlaw 2	Grab	1+01N	3+68W		Trench C. Bleached gossanous Q.F.P. Pyrite casts.
18201	Outlaw 2	Grab	1+04N	3+68W		Trench C. Black/grey hornfels with pyrite along fractures.
18202	Outlaw 2	Grab	1+29N	4+06W		Gossanous, banded hornfels with pyrite along fractures.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18203	Outlaw 2	Grab	1+68N	3+59W	Clay altered gossanous hornfels.
18204	Outlaw 2	Grab	1+69N	3+51W	Gossanous, bleached Q.F.P. dyke near hornfels and mafic dyke.
18205	Outlaw 2	Grab	0+54N	3+07W	Pyritic hornfels adjacent to Q.F.P. dyke.
18206	Outlaw 2	Grab	2+50S	2+75W	Andesite tuff with disseminated pyrite throughout. Chloritized, magnetic. Strongly jointed at 005/85W.
18207	Outlaw 2	Grab	1+94S	3+07W	Andesite tuff. Disseminated pyrite.
18208	Outlaw 2	Grab	1+52S	3+20W	Gossanous tuff. Clay altered and limonitic.
18209	Outlaw 2	Grab	1+47S	3+21S	Andesite tuff. Abundant pyrite along siliceous fractures.
18210	Outlaw 2	Grab	1+34S	3+22W	Andesite tuff. Abundant pyrite and silica.
18211	Outlaw 2	Grab	1+25S	2+89W	Andesite tuff with trace disseminated pyrite.
18212	Outlaw 2	Grab	1+15S	2+94W	2-3 metre quartz carbonate zone. E-W strike. Ankeritic with trace pyrite.
18213	Outlaw 2	Grab	0+93S	3+09W	"Quartzite" hornfels. minor disseminated pyrite.
18214	Outlaw 2	Grab	0+66S	2+88W	Quartzite, disseminated pyrite.
18215	Outlaw 2	Grab	0+95S	2+55W	15cm shear 080/90. Pyrite in quartz veinlets.
18216	Outlaw 2	Grab	1+24S	3+25W	1.0m quartz vein stockwork in hornfelsed sediments. Pyrite along fractures.
18217	Outlaw 2	Grab	1+16S	3+26W	Siliceous, pyritic shear in hornfels. 050/90.
18218	Outlaw 2	Grab	2+29S	1+83W	Andesite tuff. Pyrite, diss. and in fractures.
18219	Outlaw 2	Grab	1+94S	0+82W	Andesite breccia. Disseminated pyrite.
18220	Outlaw 2	Grab	1+50S	1+00W	Gossanous andesite tuff. Disseminated pyrite.
18221	Outlaw 2	Grab	0+56S	1+92W	Hornfelsed quartzite. Trace pyrite.
18222	Outlaw 2	Grab	0+04N	1+58W	Banded hornfels with trace pyrite.
18223	Outlaw 2	Grab	0+11S	2+13W	Trench 2. Hornfels with pyrite and fine grey sulfides.
18224	Outlaw 2	Grab	0+20S	2+14W	15cm quartz vein with pyrite. 090/70N. Hosted in clay gouge.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18225	Outlaw 2	Grab	0+20S	2+14W	As 18224. Trench L.
18226	Outlaw 2	Grab	0+19S	2+12W	As 18224/18225.
18227	Outlaw 2	Grab	0+40S	9+97W	Vuggy quartz within hornfelsesd unit. Trace pyrite.
18228	Outlaw 1	Grab	0+37N	10+94W	Gossanous hornfelsesd sediment with pyrite in fractures.
18229	Outlaw 2	Grab	0+98N	8+06W	Gossanous pyritic rock near chert-breccia horizon.
18230	Outlaw 2	Grab	0+32N	8+23W	Gossanous, pyritic, magnetic sediments.
18231	Outlaw 2	Grab	0+01S	8+31S	Gossanous, manganese stained argillite. Trench B.
18301	Outlaw 2	Grab	6489680	632420	Rusty felsic dyke. Minor pyrite.
18302	Outlaw 2	Grab	6489560	632380	Iron carbonate shear with felsic dyke(10m). 080/72S
18303	Outlaw 2	Grab	2+28S	2+74W	Highgrade grab sample. Mafic volcanic with pod of sulfides.
18304	Outlaw 2	Grab	1+60S	1+00W	Hornfelsesd sediments with moderate diss. pyrite.
18651	Outlaw 2	Float	0+25S	1+67W	Quartzite with minor pyrite and arsenopyrite.
18652	Outlaw 2	0.35	0+14S	1+09W	35 cm rusty shear zone, 320/70E.
18653	Outlaw 2	Grab	0+15S	1+08W	Clay alterd sediments with intense limonite stain.
18654	Outlaw 2	Grab	0+13S	1+05W	Grey siltstone with moderate stringer and disseminated pyrite.
18655	Outlaw 2	Grab	0+03N	1+12W	Dark grey-black quartzite with moderate to strong pyrite and minor chalcopyrite.
18656	Outlaw 2	Grab	0+57N	1+64W	Clay altered sediments with disseminated iron stain.
18657	Outlaw 2	Grab	0+11S	2+13W	Minor silicification of sandy sediments. Pyrite and minor galena.
18658	Outlaw 2	Grab	0+08S	2+13W	Light gray clay alterd sediments with minor pyrite and galena.
18659	Outlaw 2	Grab	1+70N	3+59W	5 cm, E-W quartz vein in rhyolite porphyry.
18660	Outlaw 2	Grab	0+58S	7+47W	Trench 4. Vuggy, silicified shear in sediments. Quartz stockwork, pyrite and iron oxide. 117/40N.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18661	Outlaw 2	1.0	0+50S	7+99W	Chip sample over shear oriented 087/90. Quartz vein and stockwork. Moderate pyrite.
18662	Outlaw 2	Float	0+56S	7+99W	Rusty, brecciated with quartz matrix and sedimentary clasts.
18663	Outlaw 2	Grab	0+50S	8+70W	Quartz veining in siliceous sediment. Minor pyrite.
18664	Outlaw 2	Grab	0+42S	9+02W	Composite sample of Trench 1. Silicified diorite with minor pyrite. Fracturing at 156/90.
18665	Outlaw 2	Grab	0+75S	9+00W	Fine grained volcanic or sediment. Iron stain and minor arsenopyrite.
18666	Outlaw 2	Chip			Samples 18666 through 18699. All samples were taken over 1.0 metre chip length approximately every 5.0 metres along the E-W quartz vein zone. The zone is located between lines 7+00 and 9+00W, at approx. 0+50S. Location details are provided in a sketch included in this appendix.
18667	"				"
18668	"				"
18668	"				"
18669	"				"
18670	"				"
18671	"				"
18672	"				"
18673	"				"
18674	"				"
18675	"				"
18676	"				"
18677	"				"
18678	"				"
18679	"				"

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18680	"	"	"	"	"
18681	"	"	"	"	"
18682	"	"	"	"	"
18683	"	"	"	"	"
18684	"	"	"	"	"
18685	"	"	"	"	"
18686	"	"	"	"	"
18687	"	"	"	"	"
18688	"	"	"	"	"
18689	"	"	"	"	"
18690	"	"	"	"	"
18691	"	"	"	"	"
18692	"	"	"	"	"
18693	"	"	"	"	"
18694	"	"	"	"	"
18695	"	"	"	"	"
18696	"	"	"	"	"
18697	"	"	"	"	"
18698	"	"	"	"	"
18699	"	"	"	"	"
18700	Outlaw 1	Grab	0+75S	11+50W	Quartz stockwork in silicified sediment or volcanic. Vuggy.
18701	Outlaw 2	Float	0+31S	2+07W	Quartz vein, stained yellow with minor vugs. Pyrite and disseminated galena.
18702	Outlaw 2	Float	0+33S	2+11W	Quartz vein. Pyrite and minor galena.
18703	Outlaw 2	Grab	1+13N	3+37W	Rusty rhyolite porphyry.



## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18704	Outlaw 2	Grab	1+07N	3+71W	Composite grab sample in vuggy rhyolite porphyry. N-S shearing and E-W fractures.
18705	Outlaw 2	Grab	0+78S	9+14W	15 cm shear hosted in 4.0m zone 050/76NW. Rusty siliceous hornfelsed sediments.
18706	Outlaw 2	Grab	1+05S	9+09W	Pyritic sediments along shear at 025/70NW.
18707	Outlaw 2	Grab	1+01S	9+03W	Siliceous, pyritic shears < 1.0m. Shears oriented at 038/75NW, 054/72NW.
18708	Outlaw 2	Grab	0+97S	8+98W	Massive pyrite within conjugate fractures at 040 and 080. Zone 2-3 m width.
18709	Outlaw 2	Grab	0+84S	8+90W	Pyritic shear, 040/90, 3.0 m within sediments.
18710	Outlaw 2	0.9	0+39S	8+08W	Chip sample, Trench B. Rotten sediments and gouge. Limonitic between more competent hornfelsed units.
18711	Outlaw 2	0.5	0+19S	8+21W	Chip sample, Trench B. Rusty limonitic gouge within hornfelsed sediments. Sample lost. No assay values.
18712	Outlaw 2	1.5	0+15S	8+22W	Chip sample, Trench B. Light brown rubbly gouge.
18713	Outlaw 2	1.8	0+13S	8+23W	Chip sample, Trench B. Gray-black graphitic gouge. Basaltic dyke at footwall.
18714	Outlaw 2	0.8	0+11S	8+25W	Chip sample, Trench B. Hornfelsed sediments with minor pyrite. Adjacent to clay gouge zone.
18715	Outlaw 2	2.0	0+07S	8+27W	Chip sample, Trench B. Hornfelsed rubbly sediments with gouge material.
18716	Outlaw 2	Grab	0+02N	8+33W	Trench B. Manganese and limonite stained. Trace Py.
18717	Outlaw 2	Grab	1+50S	6+75W	Siliceous gossanous rock, trace pyrite. Fracture shearing at 048/65-90.
18718	Outlaw 2	Grab	1+44S	6+94W	Pyritic, siliceous, gossanous dark green rock.
18719	Outlaw 2	Grab	1+37S	7+00W	Pyritic, siliceous gossanous material.
18720	Outlaw 2	Grab	1+40S	7+15W	NW-SE fractured, pyritic gossanous rock.
18721	Outlaw 2	Grab	1+65S	7+00W	Siliceous, gossanous rock. Disseminated pyrite. Pyrite related to 035/90 fractures.
18722	Outlaw 2	Grab	1+50S	6+75W	Pyritic gossanous rock.
18723	Outlaw 2	Grab	1+05S	7+29W	Gossanous NW & NE fracture zone.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

					Pyrite in NE fractures.
18728	Outlaw 2	Grab	0+20S	7+53W	Pyrite within banded gossanous sediments.
18729	Outlaw 2	Grab	0+10N	7+54W	Gossanous gritty, cherty sediments and porphyritic dyke. Minor pyrite.
18730	Outlaw 2	Grab	0+25N	7+55W	As above.
18731	Outlaw 2	Grab	0+23N	7+55W	Bleached sediment/gossanous contact trending 115, trace pyrite.
18732	Outlaw 2	Grab	0+25S	7+00W	Manganese stained magnetic rock in seds. Trace py.
18733	Outlaw 2	Grab	0+75S	6+95W	0.5 to 1.0m vuggy quartz vein stockwork. 100/N.
18734	Outlaw 2	Grab	0+80S	6+95W	White bleached limonitic & clay altered quartz vein within hornfelses sediments. Trace pyrite.
18735	Outlaw 2	Grab	1+75S	6+05W	Gossanous zone near sediment/volcanic contact. Disseminated pyrite. Manganese stain. NW/SE fracturing.
18736	Outlaw 2	Grab	1+46S	6+05W	Grey hornfelses cherts. Disseminated pyrite in fractures.
18737	Outlaw 2	1.0	1+17N	3+45W	Trench D, chip sample. Rubbly sediments, limonite, trace pyrite.
18738	Outlaw 2	0.70	1+03N	3+45W	Trench D, chip sample. Pyritic hornfelses unit within rubbly sediments.
18739	Outlaw 2	0.15	1+03N	3+45W	Trench D, chip sample. NE trending clay altered yellow gouge with some siliceous fragments.
18740	Outlaw 2	0.70	1+01N	3+45W	Trench D, chip sample. Gossanous limonite/pyrite.
18741	Outlaw 2	Grab	1+28N	5+03W	Small gossanous zone within sediments. Manganese-limonite stain. Trace pyrite.
18742	Outlaw 2	Grab	0+31N	4+33W	Quartz feldspar porphyry dyke oriented 100. Clay altered, rusty patches.
18743	Outlaw 2	1.0	0+63N	3+44W	Trench D, chip sample, 58.5-59.5m. Pyritic siliceous hornfels.
18744	Outlaw 2	Grab	0+72N	3+45W	Trench D. Quartz feldspar porphyry dyke. Minor disseminated pyrite.
18745	Outlaw 2	Grab	0+74N	3+45W	Trench D. Same as 18744 with increased pyrite.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18746	Outlaw 2	1.0	0+81N	3+45W	Trench D, chip sample 41-42m. Banded hornfels with strongly magnetic bands. Minor pyrite along fractures.
18747	Outlaw 2	Grab	0+93N	3+45W	Black-banded hornfelsed sediments with pyrite along fractures.
18748	Outlaw 2	Grab	1+03N	3+23W	Gossanous dyke. Bleached white, limonitic, transitional to hornfels. Diss.pyrite.
18749	Outlaw 2	Grab	0+88N	3+67W	Quartz feldspar porphyry dyke. Disseminated pyrite.
18750	Outlaw 2	Grab	0+98N	3+68W	Pyritic hornfels adjacent to Q.F.P. dyke.
18751	Outlaw 2	2.0			Trench A, 62-64m.
18752	"	2.0			Trench A, 60-62m.
18753	"	2.0			Trench A, 58-60m.
18754	"	2.0			Trench A, 56-58m.
18755	"	2.0			Trench A, 54-56m.
18756	"	2.0			Trench A, 52-54m.
18757	"	2.0			Trench A, 50-52m.
18758	"	2.0			Trench A, 48-50m.
18759	"	2.0			Trench A, 46-48m.
18760	"	2.0			Trench A, 44-46m.
18761	"	2.0			Trench A, 42-44m.
18762	"	2.0			Trench A, 40-42m.
18763	"	2.0			Trench A, 38-40m.
18764	"	2.0			Trench A, 36-38m.
18765	"	2.0			Trench A, 34-36m.
18766	"	2.0			Trench A, 32-36m.
18767	"	2.0			Trench A, 30-32m.
18768	"	2.0			Trench A, 28-30m.

## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18769	"	2.0			Trench A, 26-28m.
18770	"	2.0			Trench A, 24-26m.
18771	"	2.0			Trench A, 22-24m.
18772	"	2.0			Trench A, 20-22m.
18773	"	2.0			Trench A, 18-20m.
18774	"	2.0			Trench A, 16-18m.
18775	"	2.0			Trench A, 14-16m.
18776	"	2.0			Trench A, 12-14m.
18777	"	2.0			Trench A, 10-12m.
18778	"	2.0			Trench A, 8-10m.
18779	"	1.0			Trench A, 7-8m.
18780	"	1.0			Trench A, 6-7m.
18781	"	2.0			Trench A, 4-6m.
18782	"	2.0			Trench A, 2-4m.
18783	"	1.0			Trench A, 1-2m.
18784	"	1.0			Trench A, 0-1m.
18785	"	2.0			Trench A, 64-66m.
18786	"	2.0			Trench A, 66-68m.
18951	Outlaw 1	Float	O+89N	11+10W	Massive black sphalerite-pyrrhotite skarn. 80% sphalerite, 20% pyrrhotite.
18952	Outlaw 1	Grab	O+89N	11+10W	Massive sphalerite-pyrrhotite lens in Limestone.
18953	Outlaw 1		O+89N	11+10W	Massive sphalerite-pyrrhotite lens in Limestone.
18954	Outlaw 1		O+89N	11+10W	Quartz diorite next to sphalerite-pyrrhotite skarn lens.
18955	Outlaw 2		O+75N	3+50W	Sheared and bleached sediments. Limonitic, quartz and pyrite.

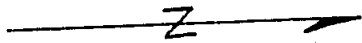
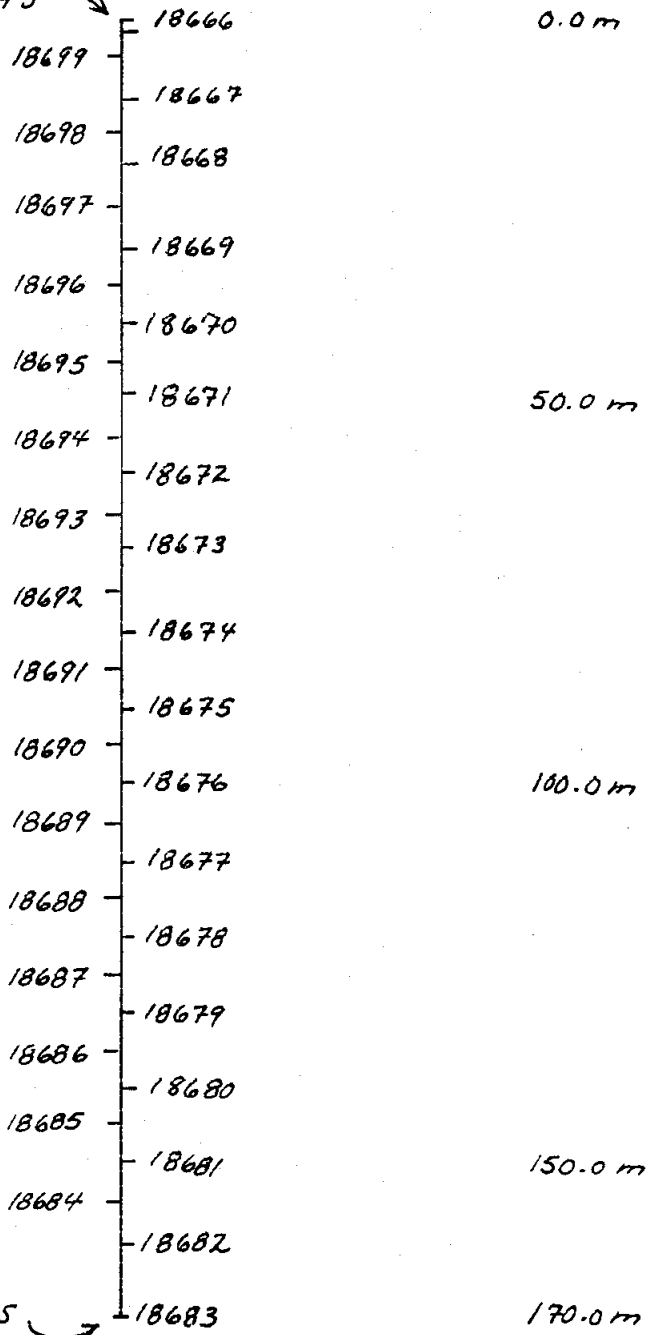
## ROCK DESCRIPTION SHEET

OUTLAW: 9102 (GRIOL)

18962	Outlaw 1	Grab	0+65N	13+65N	Hornfels. 1-2 cm fracture with massive pyrite. Disseminated pyrite. Iron stain.
18963	Outlaw 1	Grab	0+65N	12+65W	Hornfels. 1-5 mm pyrite in fracture fill. Hosted in light grey hornfelsed sediments.
18964	Outlaw 1	Grab	0+75N	12+20W	Hornfels. Pyrite stockwork and blebs in silicified hornfels.

# Quartz Vein Sample Plan

Grid location 9+08W, 0+49S



Grid location 7+38W, 0+60S

0 10 20 30 40 50 m



Scale 1:1000

**Appendix C**

**ROCK ANALYTICAL RESULTS**











COMP: AZIMUTH GEOLOGICAL INC.  
PROJ: INLAW/OUTLAW GRIOL  
ATTN: GREG CROWE/JERRY BLACKWELL

MIN-EN LABS — ICP REPORT  
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
(604)980-5814 OR (604)988-4524

FILE NO: 1S-0258-RJ1+2

DATE: 91/08/06

\* ROCK \* (ACT:F31) PAGE 2 OF 2

SAMPLE NUMBER	AU-FIRE PPB
02-0-18101	392
02-0-18102	94
02-0-18103	64
02-0-18104	58
02-0-18105	1990
02-0-18106	110
02-0-18107	86
02-0-18108	1090
02-0-18109	28
02-0-18110	17
02-0-18111	4160
02-0-18112	232
02-0-18115	23
02-0-18116	2
02-0-18117	54
02-0-18118	51
02-0-18119	16
02-0-18120	5
02-0-18121	57
02-0-18122	2
02-0-18123	64
02-0-18124	3
02-0-18125	9
02-0-18126	47
02-0-18127	11
02-0-18128	1
02-0-18129	5
02-0-18130	13
02-0-18131	9
02-0-18132	4
02-0-18133	64
02-0-18134	52
02-0-18135	86
02-0-18136	17
02-0-18137	4
02-0-18138	2
02-0-18139	3
02-0-18140	141
02-0-18156	1
02-0-18157	3
02-0-18158	2
02-0-18159	39
02-0-18160	158
02-0-18161	832
02-0-18162	29
02-0-18163	4950
02-0-18164	36
02-0-18165	505
02-0-18200	49
02-0-18201	16
02-0-18202	27
02-0-18203	132
02-0-18204	104
02-0-18205	36
02-0-18206	41
02-0-18207	2
02-0-18208	208
02-0-18209	96
02-0-18210	442
02-0-18211	57



COMP: AZIMUTH GEOLOGICAL INC.  
 PROJ: INLAW/OUTLAW GRIOL  
 ATTN: GREG CROWE/JERRY BLACKWELL

MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0258-RJ5  
 DATE: 91/08/06  
 \* ROCK \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-FIRE PPB
02-0-18762	.1	12170	385	6	94	.8	1	2620	.1	22	82	52130	2810	27	850	448	1	100	11	500	9	8	14	1	29	41.4	58	1	1	2	42	2
02-0-18763	.1	15570	740	8	84	.8	1	1260	.1	19	69	103000	2330	33	870	859	1	60	1	730	3	6	13	1	80	47.4	97	1	1	1	35	1
02-0-18764	.1	26850	152	7	123	1.2	2	3010	.1	17	69	56040	3400	77	3110	411	1	150	11	400	3	1	16	1	598	41.7	54	2	1	2	53	15
02-0-18765	.3	19160	146	4	99	1.3	3	2190	.1	11	27	22230	2910	93	1320	190	2	120	11	150	1	1	11	1	322	24.0	19	2	1	3	79	2
02-0-18766	.1	24670	292	5	125	.9	3	2930	.1	17	31	43910	2540	118	1730	331	1	120	12	210	1	1	15	1	623	39.1	39	1	1	3	69	5
02-0-18767	.1	18850	426	4	110	1.6	1	3780	.1	13	46	45300	3120	80	870	580	1	110	14	310	5	3	12	1	44	30.4	55	1	1	2	44	4
02-0-18768	.2	9930	430	1	66	.8	1	4240	.1	9	54	17450	4120	25	380	194	3	110	15	830	7	5	11	1	10	13.7	39	1	1	1	22	6
02-0-18769	.7	7540	4102	1	91	.6	2	5360	.1	4	50	13520	3580	14	480	243	4	90	8	900	12	26	20	1	9	7.4	46	2	1	2	45	2
02-0-18770	.3	5980	146	1	54	.3	1	1880	.1	2	11	3840	1390	20	340	176	9	80	5	30	27	5	8	4	15	3.3	22	2	1	2	60	1
02-0-18771	.5	6530	94	1	173	.3	1	1810	.1	1	5	2920	1050	42	250	51	5	60	3	20	16	3	9	6	10	2.0	19	2	1	3	62	1
02-0-18772	.5	6620	71	1	30	.4	1	2610	.1	2	15	4500	980	30	590	90	7	140	3	60	17	3	11	6	26	4.2	21	2	1	2	58	2
02-0-18773	.5	13220	202	1	294	.8	2	11370	.1	12	75	25390	1520	44	4730	585	1	490	11	1580	10	1	53	1	165	48.4	79	3	1	2	40	1
02-0-18774	.7	17010	868	2	511	1.0	3	13950	.1	15	101	37590	2830	14	6090	686	1	620	11	2330	13	6	63	1	351	67.4	137	3	1	2	32	25
02-0-18775	.4	9320	3943	1	76	1.6	2	4550	.1	10	283	22030	2280	6	630	211	2	150	10	820	24	17	21	1	11	10.8	111	1	1	2	45	6
02-0-18776	.7	7910	2991	1	79	.7	2	3360	.1	6	111	17420	2870	9	470	128	2	230	5	500	17	16	26	1	13	8.5	144	1	1	1	27	40
02-0-18777	1.3	13150	2688	5	97	.8	3	4170	.1	13	134	40780	3470	18	970	422	1	290	1	340	22	18	29	1	34	30.0	174	1	1	1	17	131
02-0-18778	.7	15130	1854	2	116	.9	2	5140	.1	11	95	40480	2950	29	980	349	2	280	1	520	19	13	31	1	44	34.8	57	1	1	1	16	156
02-0-18779	1.0	40020	126	8	130	1.1	6	10890	.1	16	95	41030	2320	48	8260	448	1	1270	35	580	17	1	64	1	829	73.9	95	4	1	4	93	3
02-0-18780	.1	29340	1801	10	94	.1	1	4100	.1	22	297	187050	1890	72	1780	484	1	140	1	840	5	12	16	1	174	93.3	90	1	1	1	17	2
02-0-18781	.8	30800	65	4	128	.7	6	5930	.1	11	8	44610	3090	98	2300	431	1	220	1	810	8	1	22	1	1172	63.6	57	2	1	1	15	1
02-0-18782	1.1	37600	35	4	142	.9	8	6390	.1	12	17	41480	4310	105	3170	208	1	290	3	620	1	1	26	1	1504	77.9	63	3	1	2	17	2
02-0-18783	.8	29400	224	4	128	.9	3	7750	.1	11	62	32660	2820	44	4920	528	1	450	16	1010	12	1	41	1	311	71.5	97	3	1	3	59	1
02-0-18784	1.0	40650	143	8	181	1.1	5	5830	.1	16	123	46390	3190	76	6110	719	1	360	26	660	6	1	24	1	835	98.0	169	3	1	4	75	2
02-0-18785	.6	8620	464	1	413	.7	2	1370	.1	6	47	19370	3920	4	480	141	5	90	1	100	12	20	10	1	21	8.2	106	1	1	3	78	25
02-0-18786	.2	13570	185	1	139	.8	2	1720	.1	8	22	20280	4680	19	1370	412	2	90	5	130	7	5	8	1	41	17.9	125	1	1	2	51	2
18956	7.4	4330	13756	2	208	.5	1	12820	13.6	19	172	44960	2670	1	7460	769	2	60	6	1040	299	86	30	1	38	82.1	1165	2	1	8	182	2650
18957	10.9	9370	2401	4	37	.3	1	6170	.5	32	133	84930	3120	6	4830	276	1	100	1	2180	135	66	39	1	35	93.5	269	1	1	3	54	1600
18958	51.3	9490	4539	5	39	.3	1	6150	46.5	33	491	87030	3190	5	6360	1132	1	80	1	2180	8483	65	60	1	39	137.2	2909	1	1	4	69	10200
18959	6.1	2610	137	2	491	.7	1	60390	11.1	39	123	41730	1340	1	45960	1295	1	50	229	140	2336	7	143	1	7	49.0	1109	1	1	6	179	1060

Note: INLAW Samples

COMP: AZIMUTH GEOLOGICAL  
 PROJ: INLAW/OUTLAW PO GRIOL  
 ATTN: G.CROWE/J.BLACKWELL

MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0300-RJ1  
 DATE: 91/08/08  
 \* ROCK \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-FIRE PPB
18147	.1	14950	84	13	60	1.4	2	57620	.1	42	181	61710	2400	15	14290	1453	1	40	111	1290	15	3	31	1	25	126.0	85	1	1	10	206	2
18148	.1	7710	30	10	83	.7	2	66930	.1	23	123	57210	850	10	29250	1607	1	40	15	690	8	18	59	1	23	146.6	63	1	1	4	59	1
18149	1.2	4830	17	6	1785	.6	2	57420	.1	4	145	23260	900	37	16630	834	3	40	1	350	24	5	64	3	6	11.3	25	2	1	2	31	1
18150	1.3	5940	56	6	184	.7	1	31080	.1	4	36	16400	1740	49	9800	656	8	50	4	360	43	6	34	6	5	10.2	31	3	1	2	47	3
18175	8.3	2450	14308	9	30	.6	6	73370	125.7	14	303	62810	1130	4	40750	1952	1	20	1	210	509	63	77	1	11	33.0	8099	1	1	1	29	1000
18176	1.6	1770	2114	7	208	.6	2	80680	.1	7	71	46970	940	2	49790	2384	1	20	1	60	104	19	101	1	12	21.3	456	1	1	1	34	231
18177	5.2	2400	223	6	384	.6	2	79040	.1	12	417	42230	1060	4	44370	2453	1	40	16	200	654	120	87	1	10	33.8	280	1	1	2	54	46
18178	1.9	3050	639	6	65	.4	3	68500	.1	17	147	48120	690	10	39490	7384	1	50	20	280	218	53	91	1	11	63.9	218	1	1	3	49	86
18179	1.0	3700	77	6	57	.4	1	11110	.1	13	116	32750	1310	4	2060	1023	9	10	1	280	28	43	7	1	15	44.1	117	1	1	4	86	1
18223	33.8	11860	14439	5	362	.6	19	7180	.1	15	414	28640	4610	12	8070	544	8	1000	30	1050	6192	4184	29	6	785	52.3	136	2	2	8	179	1780
18224	8.9	1410	390	2	44	.1	22	1450	.1	1	49	5900	950	1	350	46	9	30	3	160	410	226	3	1	13	2.8	29	1	1	6	160	8750
18225	11.8	3110	589	3	130	.2	33	2130	.1	2	115	8120	2010	2	430	57	6	30	6	330	562	267	16	1	8	4.2	46	1	1	8	207	7400
18226	9.2	6210	1011	4	334	.4	25	3450	.1	2	155	11450	3620	3	680	30	4	60	7	430	1014	310	44	2	4	6.9	83	1	1	2	48	3300
18227	1.2	4750	233	3	99	.4	2	2650	.1	1	17	5190	1740	15	280	38	19	160	3	50	54	14	16	9	3	1.8	24	2	1	3	85	38
18228	1.0	31940	162	7	56	.9	2	3080	.1	8	100	56190	1580	29	14120	759	1	430	3	650	57	22	18	1	41	69.9	90	1	1	4	66	27
18229	.5	10870	415	10	25	.2	1	640	.1	27	305	136920	730	33	2740	147	1	40	58	190	5	4	1	1	72	41.2	55	1	1	4	100	1650
18230	.1	35510	1	16	17	.1	1	7050	.1	28	536	178090	400	6	8990	2217	1	300	1	630	1	1	10	1	616	26.1	59	1	1	2	62	39
18231	.1	77980	1	24	9	.1	1	5630	.1	28	533	220900	290	91	6930	1413	1	600	1	1390	1	1	30	1	1914	82.8	70	1	1	1	58	7
18301	.1	7930	50	7	8	1.0	2	57180	.1	39	171	56150	990	12	24370	1185	1	30	66	820	14	53	53	1	42	218.6	59	1	1	6	89	2
18302	.9	4920	27	6	114	.7	2	57220	.1	13	69	31610	2590	3	16160	963	1	20	1	320	11	5	65	1	17	63.1	35	2	1	2	23	1
18303	1.3	42230	67	14	22	.5	6	6940	.1	23	713	95180	7710	116	21540	695	1	1070	1	460	13	2	13	1	1654	163.5	170	1	1	4	44	1294
18304	.8	23130	124	8	39	.4	11	12520	.1	24	196	60440	4470	39	23920	376	1	840	3	840	4	34	15	1	2385	214.0	55	1	1	6	66	12
18960	1.0	7620	18	3	35	.7	5	8070	.1	6	25	20140	1490	20	6150	458	12	340	3	610	24	3	10	11	154	35.1	61	3	1	4	67	1
18961	2.6	21360	145	7	501	1.3	5	3490	92.3	12	194	27950	2580	52	6520	142	3	100	62	880	30	24	17	3	87	31.7	3571	3	1	3	79	140
18962	5.2	29830	235	14	47	.9	2	2030	173.8	81	619	115860	3490	28	12650	174	1	90	54	530	63	11	10	1	196	58.4	8110	1	1	1	76	381

COMP: AZIMUTH GEOLOGICAL  
 PROJ: METLA P.O. GAKME  
 ATTN: G.CROWE/J.BLACKWELL

MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0301-RJ1  
 DATE: 91/08/08  
 \* ROCK \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-FIRE PPB
18963	10.9	29280	698	9	72	.4	1	4330	.1	45	349	98330	6140	34	14450	82	1	70	35	400	402	50	13	1	215	67.5	194	1	1	4	84	690
18964	9.4	19540	1097	10	38	.1	1	3470	.1	70	4242	162830	1190	18	9790	242	1	40	35	520	101	1	6	1	148	41.2	286	1	1	3	81	1485

*Note: Outlaw Samples*





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VANCOUVER OFFICE:  
705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (604) 988-4524  
FAX (604) 980-9621

SMITHERS LAB.:  
3176 TATLOW ROAD  
SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3005

Assay Certificate

1S-0145-RA1

Company: AZIMUTH GEOLOGICAL  
Project: INLAW/OUTLAW  
Attn: G. CROWE/J. BLACKWELL

Date: JUL-22-91

- Copy 1. AZIMUTH GEOLOGICAL, VANCOUVER, B.C.  
2. PRIME EXPLORATIONS, VANCOUVER, B.C.  
3. AZIMUTH GEOLOGICAL, C/O MIN-EN LABS.

We hereby certify the following Assay of samples submitted JUL-17-91 by TED MURARO.

Sample Number	AU g/tonne	AU oz/ton
18651	2.76	.081
18655	2.57	.075
18657	3.20	.093
18701	18.60	.543
18702	22.90	.668
18951	2.51	.073
18954	1.16	.034

Certified by

MIN-EN LABORATORIES



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705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-6814 OR (604) 988-4524  
FAX (604) 980-9621

SMITHERS LAB.:  
3178 TATLOW ROAD  
SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3005

*Assay Certificate*

1S-0188-RA1

Company: AZIMUTH GEOLOGICAL  
Project: INLAW/OUTLAW PD GRIOL  
Attn: G. CROWE

Date: JUL-26-91

Copy 1. AZIMUTH GEOLOGICAL, VANCOUVER, B.C.  
2. AZIMUTH GEOLOGICAL, C/O MIN-EN LABS.

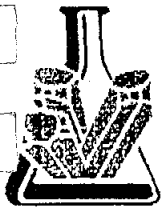
We hereby certify the following Assay of 1 ROCK samples submitted JUL-22-91 by TED MURARO.

Sample Number	AU g/tonne	AU oz/ton
18705	4.12	.120

RECEIVED JUL 31 1991

Certified by

MIN-EN LABORATORIES



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LABORATORIES**  
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**VANCOUVER OFFICE:**

705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE: (604) 980-5814 OR (604) 988-4524  
FAX (604) 980-9821

**SMITHERS LAB.:**

3178 TATLOW ROAD  
SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3005

*Assay Certificate*

IS-0258-RA1

Company: AZIMUTH GEOLOGICAL INC.  
Project: INLAW/OUTLAW GRIDL  
Attn: GREG CROWE/JERRY BLACKWELL

Date: AUG-06-91  
Copy 1. PRIME EXPLORATION, VANCOUVER, B.C.

We hereby certify the following Assay of 11 ROCK samples  
submitted JUL-29-91 by TED MURARO.

Sample Number	AU g/tonne	AU oz/ton
02-0-18105	1.90	.055
02-0-18108	1.40	.041
02-0-18111	3.40	.099
02-0-18163	5.00	.146
02-0-18215	1.38	.040
02-0-18219	5.05	.147
02-0-18720	2.06	.060
18956	4.62	.135
18957	1.05	.031
18958	12.67	.370
18959	1.06	.031

Certified by \_\_\_\_\_



**MIN-EN LABORATORIES**  
 (DIVISION OF ASSAYERS CORP.)

**SPECIALISTS IN MINERAL ENVIRONMENTS**  
 CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**  
 705 WEST 15TH STREET  
 NORTH VANCOUVER, B.C. CANADA V7M 1T2  
 TELEPHONE (604) 880-5514 OR (604) 988-4524  
 FAX (604) 880-9821

**SMITHERS LAB.:**  
 3176 TATLOW ROAD  
 SMITHERS, B.C. CANADA V0J 2N0  
 TELEPHONE (604) 847-3004  
 FAX (604) 847-3005

*Assay Certificate*

1S-0300-RA1

Company: AZIMUTH GEOLOGICAL  
 Project: INLAW/OUTLAW PD GRID  
 Attn: G. CROWE/J. BLACKWELL

Date: AUG-08-91

- Copy 1. AZIMUTH GEOLOGICAL, VANCOUVER, B.C.  
 2. PRIME EXPLORATION, VANCOUVER, B.C.  
 3. AZIMUTH GEOLOGICAL, C/O MIN-EN LABS.

We hereby certify the following Assay of 6 ROCK samples submitted AUG-02-91 by TED MURARO.

Sample Number	AU g/tonne	AU oz/ton
18175	1.00	.029
18223	1.80	.053
18224	4.22	.123
18225	9.98	.262
18226	3.82	.111
18229	1.68	.049

Certified by \_\_\_\_\_

MIN-EN LABORATORIES

**Appendix D**

**SOIL ANALYTICAL RESULTS**



























COMP: AZIMUTH GEOLOGICAL  
 PROJ: INLAW/OUTLAW P.O. GRIOL  
 ATTN: G.CROWE/J.BLACKWELL

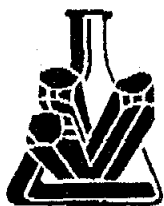
MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0266-SJ3  
 DATE: 91/08/06  
 \* SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CJ PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-WET PPB
L1+50W 1+25S	1.5	9770	413	13	93	.5	3	430	.1	6	50	26610	2080	11	970	93	1	50	11	610	130	53	15	1	26	20.5	44	1	1	1	15	260
L1+50W 1+50S	1.0	15890	661	9	197	.8	2	1430	.1	8	60	38360	3520	17	2050	189	1	110	9	650	130	65	28	2	57	36.1	66	1	1	1	23	400
L1+50W 1+75S	1.4	15290	673	7	143	.9	2	5460	.1	7	86	27880	2580	27	2580	135	1	80	19	550	216	94	29	2	67	34.4	98	2	1	1	24	580
L1+50W 2+00S	.9	14910	585	7	135	.8	3	5550	.1	7	68	27950	2470	24	2310	137	1	80	19	530	153	77	25	2	63	32.5	89	1	1	1	22	410
L1+50W 2+25S	.7	18170	448	6	132	.8	1	5840	.1	8	54	31020	2560	25	2990	213	1	110	13	760	145	64	20	2	78	47.7	91	1	1	1	26	140
L1+50W 2+50S	.3	28580	356	8	133	1.1	4	2720	.1	15	67	41910	1540	26	6950	713	1	110	30	1200	53	24	13	1	376	80.1	115	1	1	2	33	50
L1+50W 2+75S	.1	21930	484	6	94	1.0	1	1890	.1	16	64	35630	2000	30	4000	579	1	1490	36	780	43	16	17	2	126	45.6	79	2	1	2	31	100
L1+50W 3+00S	.2	23240	325	5	131	.9	1	3240	.1	9	42	32300	1270	25	3820	532	2	1510	22	1800	43	11	20	1	143	60.1	89	2	1	2	32	60
L0+50W 1+50N	.3	45080	177	14	182	1.3	6	11330	.1	31	128	58710	2770	61	26770	1802	1	180	88	580	12	1	173	1	492	106.7	293	1	1	2	42	40
L0+50W 1+25N	.5	48850	528	14	229	1.2	4	12690	.1	60	150	68440	3310	45	24770	2675	1	250	91	790	25	46	153	1	624	102.9	203	1	1	2	38	110
L0+50W 1+00N	.1	52510	489	13	222	1.7	2	8740	.1	40	158	68870	3170	59	25660	3023	1	90	114	900	28	31	55	1	396	119.7	226	1	1	3	56	95
L0+50W 0+75N	.1	41300	422	11	161	1.2	2	8590	.1	29	138	61640	2410	51	20770	1458	1	120	85	840	16	25	82	1	466	104.1	194	1	1	2	43	120
L0+50W 0+50N	.1	40610	505	11	158	1.1	1	7370	.1	28	136	61050	2510	43	17300	1370	1	120	70	850	25	28	77	1	447	94.2	181	1	1	2	38	130
L0+50W 0+25N	.1	29560	411	7	145	1.3	1	5870	.1	22	95	46170	2440	35	10210	956	1	100	61	670	24	18	52	2	178	67.0	134	2	1	2	34	140
L0+50W 0+00	.1	28380	528	6	138	1.3	1	6980	.1	16	87	42120	2160	32	8120	698	1	80	54	910	33	25	51	1	104	60.1	115	1	1	2	33	100
L0+50W 0+25S	.1	11360	3517	5	353	1.0	1	4930	.1	20	202	66730	3930	20	2090	852	3	120	33	820	121	513	77	1	32	66.3	202	1	1	1	22	330
L0+50W 0+50S	2.1	13610	2972	4	266	1.2	1	5140	.1	16	124	42370	2710	24	3000	1058	1	1500	46	660	418	207	46	1	48	37.4	163	1	1	1	20	230
L0+50W 0+75S	2.2	11280	2513	4	273	.9	1	4260	.1	15	123	40050	2500	23	2430	911	5	2090	42	480	295	185	42	2	51	31.6	187	1	1	1	19	200
L0+50W 1+00S	2.4	12490	3110	4	289	.9	1	4830	.1	14	138	43210	2930	24	2340	794	4	2150	35	710	381	230	45	1	45	35.0	207	1	1	1	19	210
L0+50W 1+25S	1.9	8290	1851	3	218	.9	1	4220	.1	13	101	34460	2640	16	1190	533	2	2210	31	490	344	201	38	2	23	21.9	129	1	1	1	14	280
L0+50W 1+50S	2.4	14470	1504	4	241	.8	3	5570	.1	12	97	34250	3560	25	1960	560	1	1370	33	710	497	290	46	1	27	30.3	141	1	1	1	21	250
L0+50W 1+75S	7.0	15530	1636	4	210	1.0	1	3020	.1	10	103	36810	3070	25	1880	510	2	1360	29	990	556	270	39	1	30	33.7	139	1	1	1	23	170
L0+50W 2+00S	3.6	13450	1423	4	219	1.0	1	3160	.1	13	110	41040	3960	22	1970	419	1	1950	33	620	521	292	44	2	45	35.1	114	1	1	1	23	400
L0+50W 2+25S	1.2	15340	609	4	161	.9	1	4100	.1	10	66	35540	3320	23	2290	231	1	2160	25	650	151	80	29	2	60	34.2	77	1	1	1	23	240
L0+50W 2+50S	1.3	18620	658	5	142	1.1	1	5870	.1	9	61	37180	2590	29	3190	138	1	1150	19	600	176	74	23	2	63	43.3	84	2	1	1	28	230
L0+50W 2+75S	.9	13100	555	4	140	1.0	1	3950	.1	11	77	35010	2980	24	2010	253	1	1870	27	480	134	80	25	2	55	29.4	64	1	1	1	21	220
L0+50W 3+00S	1.5	14620	710	4	151	.8	1	3590	.1	9	66	36620	3420	20	2100	250	1	2490	16	820	259	119	27	1	43	34.2	89	1	1	1	23	240

**Appendix E**

**ANALYTICAL PROCEDURES**



**MINERAL  
• ENVIRONMENTS  
LABORATORIES**

Division of Assayers Corp. Ltd.

ANALYTICAL PRECEDURE REPORT FOR ASSESSMENT WORK:

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PROCEDURE FOR WET GOLD GEOCHEMICAL ANALYSIS  
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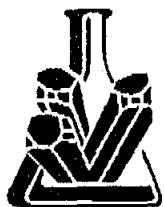
Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

5.00 grams of sample is weighed into porcelain crucibles and cindered @ 800 C for 3 hours. Samples are then transferred to beakers and digested using aqua regia, diluted to volume and mixed.

Further oxidation and treatment of 75% of the above solution is then extracted for gold by Methyl Iso-butyl Ketone.

The MIBK solutions are analyzed on an atomic absorption spectrometer using a suitable standard set.



**MINERAL  
• ENVIRONMENTS  
LABORATORIES**

Division of Assayers Corp. Ltd.

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ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

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PROCEDURE FOR TRACE ELEMENT ICP  
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Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu,  
Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb,  
Sr, Th, U, V, Zn, Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

0.50 gram of the sample is digested for 2 hours with an aqua regia mixture. After cooling samples are diluted to standard volume.

The solutions are analyzed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers.



- LEGEND**
- LITHOLOGIES**
- TERTIARY(?)**
- 5 Basaltic dykes: fresh augite porphyry basalt
- CRETACEOUS(?)**
- 4 Granodiorite: equigranular, biotite hornblende granodiorite
- Sloko Group(?)
- 3 Felsic dykes/sills: cream to grey feldspar +/- quartz porphyritic felsic dykes and sills.
- UPPER THASSIC**
- 2 Argillite, quartzite: black grey and green massive to well bedded argillite, quartzite, minor limestone. Commonly strongly hornfelsed.
- 1 Andesite flows and breccia: dark green tuffs, breccias, pillowed flows.
- ABBREVIATIONS**
- AS Arsenopyrite  
 CB Carbonate  
 CB(Fe) Carbonate(iron)  
 GN Galena  
 PO Pyrrhotite  
 PY Pyrite  
 QZ Quartz  
 SP Sphalerite  
 TT Tetrahedrite
- SYMBOLS**
- ROCK SAMPLE OUTCROP  
 □ ROCK SAMPLE FLOAT  
 — SOIL GEOCHEM LINE WITH STATIONS  
 — GEOLOGICAL CONTACT  
 30° BEDDING ATTITUDE  
 50° JOINTING  
 30° FOLIATION  
 SHEARFAULT  
 GOSSAN  
 OUTCROP OR AREA OF OUTCROP  
 TRENCH  
 1987 DIAMOND DRILL HOLE  
 18208 90, 2.4  
 C=361 SAMPLE NO. GOLD (ppb), SILVER (ppm)  
 ALL Cu, Pb & Zn values in ppm

**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**

**21,756**

Map Sheet Index  
 W/2 E/2

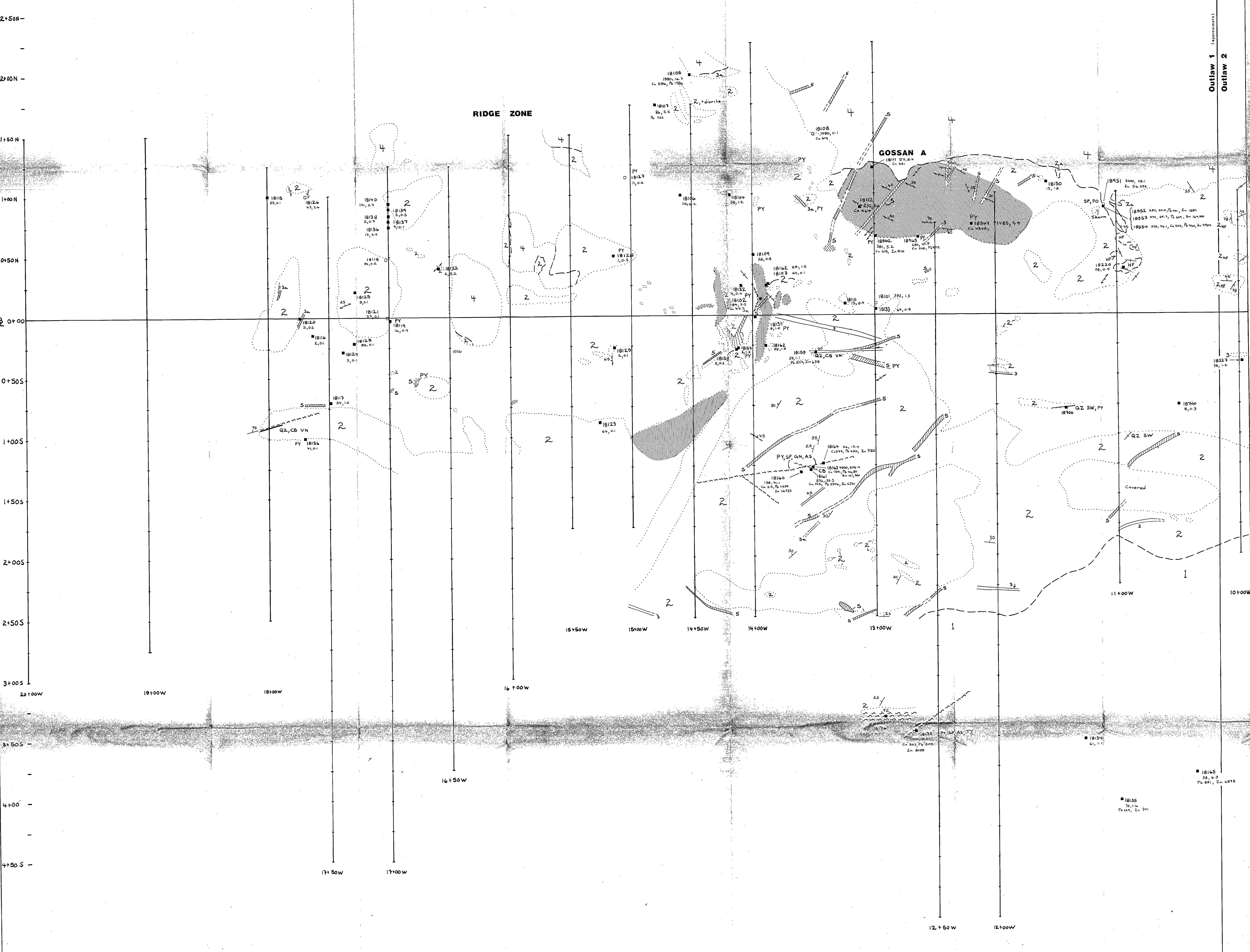
25 0 20 40 80  
 METRES

**GLIDER DEVELOPMENTS INC.**

**OUTLAW - EAST HALF**  
**GEOLOGY &**  
**SAMPLE LOCATIONS**  
 BRITISH COLUMBIA

**AZIMUTH GEOLOGICAL INCORPORATED**

DRAWN: J.J.E.	MINING DIV.: ATLIN	FIGURE
N.T.S.: 104 K/10	SCALE: 1:1000	4a
DATE: OCT., 1991	REVISED:	



- LEGEND**
- LITHOLOGIES**
- TERTIARY(?)
  - 5 Basaltic dykes: fresh augite porphyry basalt
  - CRETACEOUS(?)
  - 4 Granodiorite: equigranular, biotite hornblende granodiorite
  - Sloko Group(?)
  - 3 Felsic dykes/sills: cream to grey feldspar +/- quartz porphyritic felsic dykes and sills.
  - UPPER TRIASSIC
  - Stuhini Group(?)
  - 2 Argillite, quartzite: black grey and green massive to well bedded argillite, quartzite, minor limestone. Commonly strongly hornfelsed.
  - 1 Andesite flows and breccias: dark green tuffs, breccias, pillowed flows.
- ABBREVIATIONS**
- AS Arsenopyrite
  - CS Carbonate
  - CB(Fe) Carbonate(Iron)
  - GN Galena
  - PC Pyrrhotite
  - PY Pyrite
  - QZ Quartz
  - SP Sphalerite
  - TT Tetrahedrite
  - VN Ven
  - SW Stockwork
  - HF Hornfels
- SYMBOLS**
- ROCK SAMPLE OUTCROP
  - ROCK SAMPLE FLOAT
  - SOIL GEOCHEM LINE WITH STATIONS
  - - - GEOLOGICAL CONTACT
  - 45° BEDDING ATTITUDE
  - 50° JOINTING
  - 30° FOLIATION
  - 30° SHEAR/FAULT
  - GOSSAN
  - OUTCROP OR AREA OF OUTCROP
  - TRENCH
  - 1987 DIAMOND DRILL HOLE
- 18208 90, 2.4  
Cu 361
- SAMPLE NO. GOLD (ppb), SILVER (ppm)  
ALL Cu, Pb & Zn values in ppm

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**21,756**

Map Sheet Index

W/2	E/2
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25 0 20 40 80  
METRES

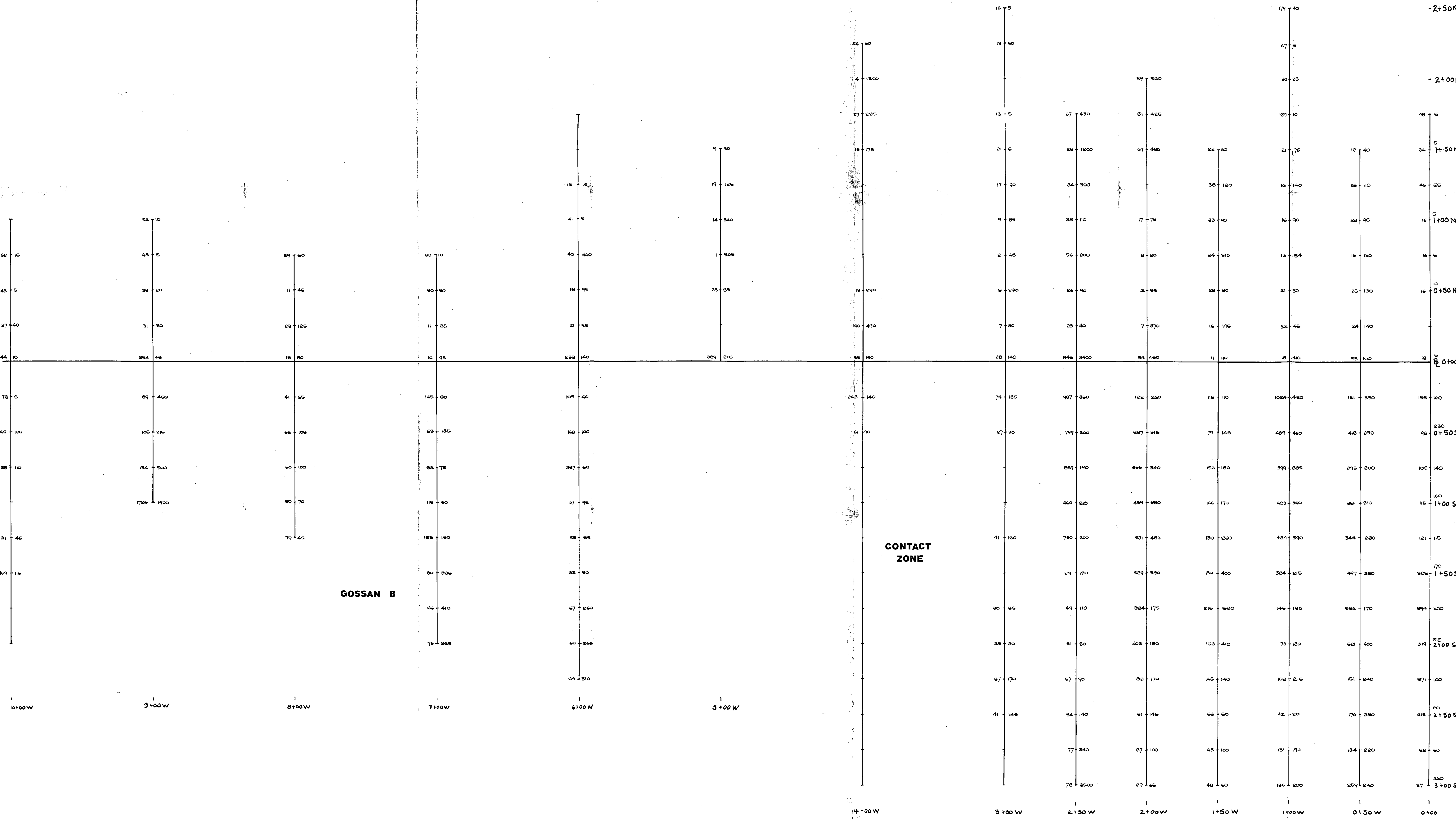
**GLIDER DEVELOPMENTS INC.**

**OUTLAW - WEST HALF  
GEOLOGY &  
SAMPLE LOCATIONS**

BRITISH COLUMBIA

**AZIMUTH GEOLOGICAL INCORPORATED**

DRAWN: J.J.E.	MINING DIV.: ATLIN	FIGURE
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DATE: OCT., 1991	REVISED:	

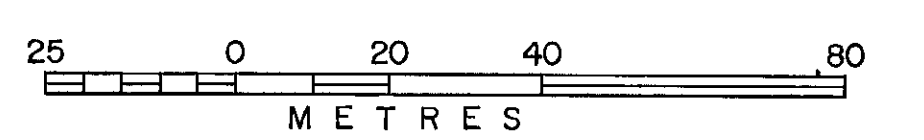
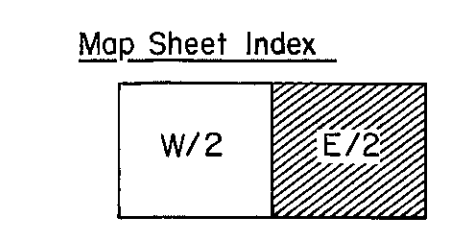
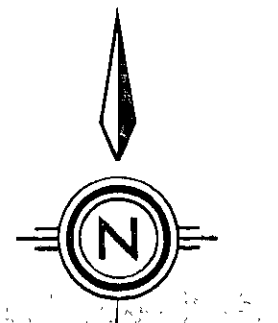
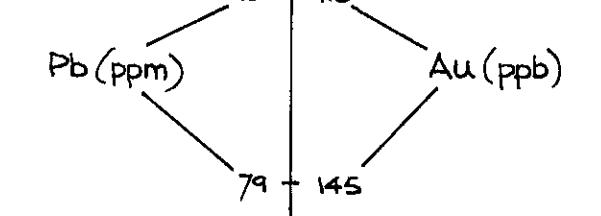


GOSSAN B

CONTACT ZONE

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

21,756

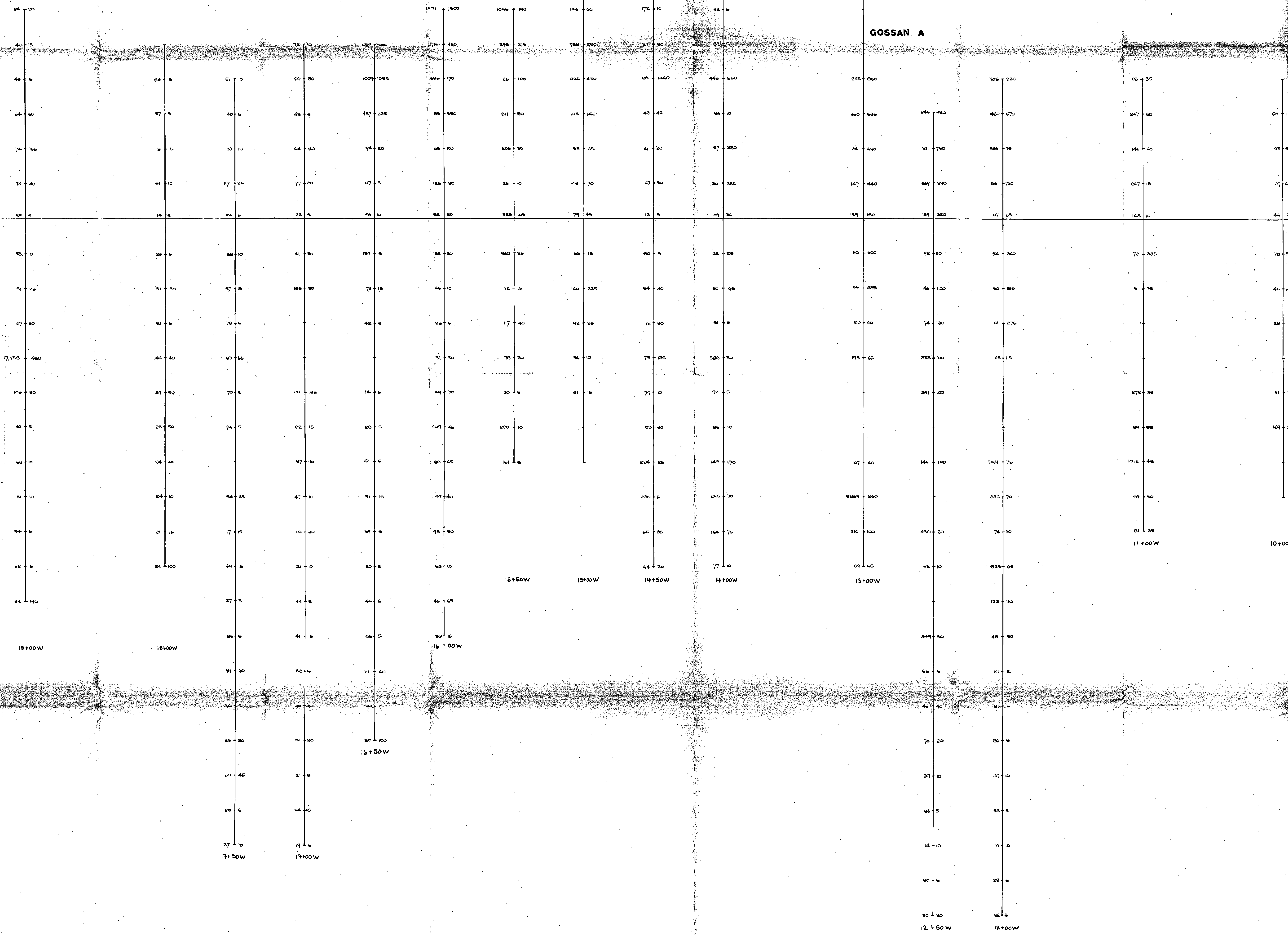


GLIDER DEVELOPMENTS INC.		
OUTLAW - EAST HALF		
SOIL GEOCHEMISTRY		
BRITISH COLUMBIA		
AZIMUTH GEOLOGICAL INCORPORATED		
DRAWN: J.J.E.	MINING DIV.: AT/LIN	FIGURE
N.T.S.: 1:1000	SCALE: 1:1000	5a
DATE: OCT., 1991	REVISED:	

2+50N -  
 2+00N -  
 1+50N -  
 1+00N -  
 0+50N -  
 0+00 -  
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 1+00S -  
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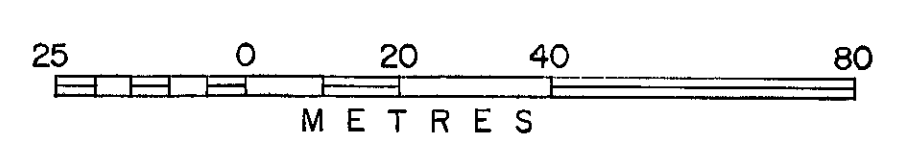
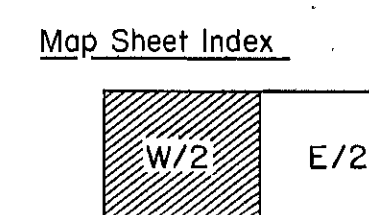
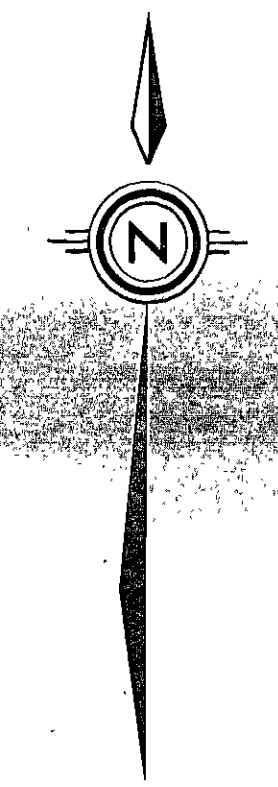
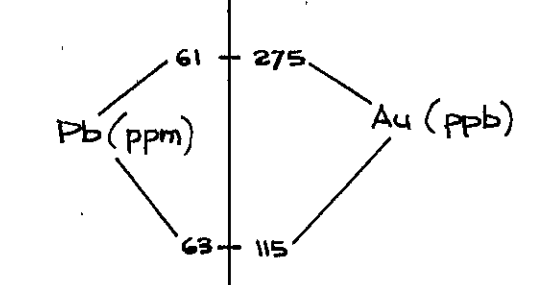
**RIDGE ZONE**

**GOSSAN A**



**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

**21,756**



GLIDER DEVELOPMENTS INC.		
OUTLAW - WEST HALF		
SOIL GEOCHEMISTRY		
BRITISH COLUMBIA		
AZIMUTH GEOLOGICAL INCORPORATED		
DRAWN: J.J.E.	MINING DIV.: ATLIN	FIGURE
N.T.S.: 104K/10	SCALE: 1:1000	<b>5b</b>
DATE: OCT., 1991	REVISED:	