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**GEOLOGICAL ASSESSMENT REPORT**

on the

**TUZEX MINERAL CLAIM**

**FILMED**

Alberni Mining Division

NTS 092C087

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**24,159**

Vancouver, B.C.  
November 20, 1995

Sookochoff Consultants Inc.  
Laurence Sookochoff, PEng

*Sookochoff Consultants Inc.*

# Geological Assessment Report

on the

## Tuzex Mineral Claim

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## **Geological Assessment Report**

**on the**

### **Tuzex Mineral Claim**

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#### **Introduction**

A lineament array analysis utilizing aerial photographs was completed on the Tuzex Claim Group to assist in the interpretation of future exploration results.

The information for this report was obtained from publications as set out in the Selected Reference section of this report. A personal property examination was not completed.

#### **Property**

The Property consists of one located grid-unit claim. Particulars are as follows.

| <b>Claim</b> | <b>Units</b> | <b>Tenure No.</b> | <b>Expiry Date</b> |
|--------------|--------------|-------------------|--------------------|
| Tuzex        | 16           | 319260            | July 19, 1996      |

Any legal aspects to this claim group is beyond the scope of this report.

### Location and Access

The Tuzex claim is located proximal to the Nitinat River, 45 kilometres west-northwest of the town of Lake Cowichan, and 40 kilometres south of Port Alberni, which is on the west coast of Vancouver Island.

Access from Lake Cowichan, which is at the south end of Cowichan Lake, is northwestward via a paved road to Youbou thence by graveled road to the north end of Cowichan Lake and Nitinat, thence westward to the Nitinat River and west-southwest to the Tuzex claim. The road kilometres are approximately 50. Access within the Tuzex claim is provided by a network of logging roads.

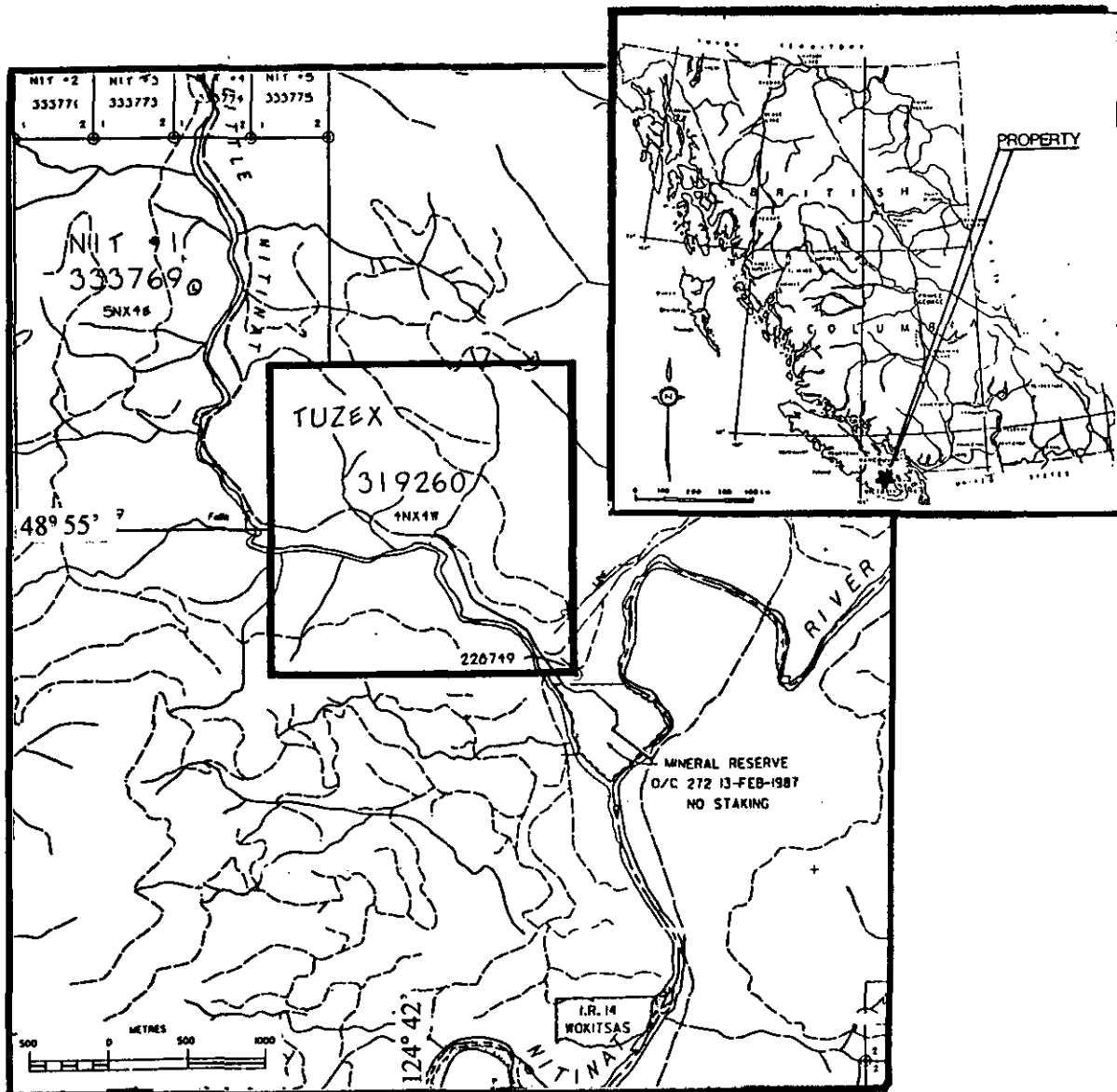


Figure 2. Location and Claim Map. (Ministry of Energy, Mines and Petroleum Resources Map 092C087 used as a base map) Showing the location of the Tuzex claim.

## Physiography

The Tuzex claim is bisected by the Little Nitinat River valley at an elevation of 200m a.m.s.l. and covers moderate to steep slopes reaching an elevation of 1000 metres. The area has been the site of intensive logging and abounds with second growth conifers.

## Climate

The climate is typical of the west coast with a high precipitation which falls primarily as rain during the winter months. In the summer months rainy periods are shorter and less frequent than in the winter. The total precipitation varies from year to year, but could be 500 centimetres per year. Although the climate in the area is typically mild, unseasonal snow precipitation may occur as early as November.

## Local Resources

Most services and supplies for exploration would be available from either Port Alberni on the west coast, or from Nanaimo on the east coast, of Vancouver Island. These two centres could also be the source of adequate labour resources and skills for the development and/or the production stages of a viable mining operation.

Port facilities are available at Port Alberni for concentrate shipment overseas.

## History

The history of the general area is significant from the producing property of Westmin Resources at the southwest side of Buttle Lake, 100 km northwest of the Tuzex claim. The mineral showings of the Westmin-Myra and other productive ore zones were originally staked in 1917 after the removal of the Strathcona Park Reserve. The Paramount Mining Company acquired title to about forty mineral claims on Myra and Price Creeks and performed extensive exploration and development of mineral zones which, with additional exploration and development by others on the claims, resulted in the production from the Myra deposit. Production commenced in 1972 and to January 01, 1989 the Myra Falls operation, which included ore from other deposits on the property, processed 9,170,609 tonnes of ore. Production at the Westmin project is continuing to this day.

Mining activity in the area was revived in the late 1970's with the increase in precious metal prices and the discovery of base-precious metal massive sulphide deposits in the Sicker Group of rocks. A staking rush developed on Vancouver Island resulting in the coverage of a belt, including the favorable Sicker Group, of over 150 kilometres long and 15 kilometres wide. The area covered, stretched northwest from Duncan to the Westmin Resources Ltd. mining operation at Buttle Lake. As a result of the increased exploration activity, numerous "new" mineral showings were discovered, with some developed to varying degrees.

The history of the Tuzex claim area stems from the 1860's when placer mining was active at the headwaters of China creek, Nitinat River and Franklin River. Lode mining was initiated in the 1890's when gold bearing quartz veins were located and staked on Mineral creek, at the headwaters of McQuillan creek, in the Soloman Basin, and at the headwaters of China creek. Mining activity lasted to 1900 during which time a stamp mill was in operation on Mineral creek. Mining was reactivated in 1933 to 1944, a period during which several properties produced a small tonnage of high grade ore.

The Tuzex claim was previously staked as the Tuzex and was one of three contiguous claims explored by Wellington-Young Resources Inc. in 1989. The exploration work was limited to the Tuzex claim and consisted of a soil survey as this was where most of the mineralization was reportedly observed. The results of the survey indicated three anomalous areas where elevated values of five elements were found to generally coincide. One of the anomalous zones reportedly enclosed sulfide mineralization exposed along a logging road cut.

### General Geology

The general Property area occurs within the Insular Belt, the westernmost major tectonic subdivision of the Canadian Cordillera and is dominated by volcanics of the Bonanza Group (Ijb) Karmutsen volcanics and related rocks of the Vancouver Group (muTRk), and the Island Intrusives (Jg).

According to Muller (1977), the Insular Belt (Island Mountains) contains a middle Paleozoic and a Jurassic volcanic-plutonic complex, both apparently underlain by gneiss-migmatite terrains and overlain respectively by Permo-Pennsylvanian and Cretaceous clastic sediments. A thick shield of Upper Triassic basalt (Karmutsen Formation), overlain by carbonate-clastic sediments separates these two in space and time.

The structure of the Island is almost entirely dominated by steep faults. Only the flysch-type Pennsylvanian and Jura-Cretaceous sediments and associated thin-bedded tuffs show isoclinal shear folding. Faulting and rifting probably occurred during the outflow of Karmutsen lavas in Late Triassic time, establishing the northerly and westerly directed fault systems affecting Sicker and Vancouver Group rocks (Muller 1977).

The dominant structures in the area are reportedly north and northwest trending high angle faults with local smaller scale east-west trending extensional faults.

### Property Geology and Mineralization

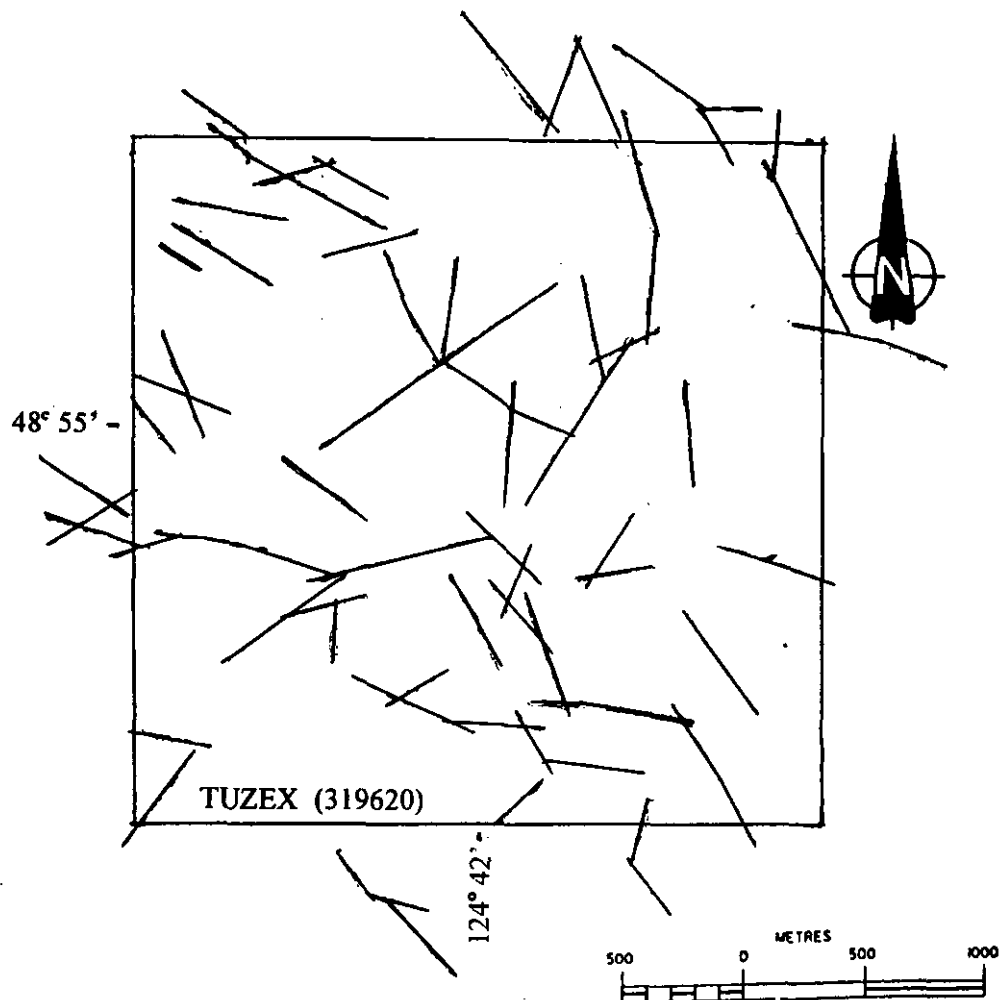
Open File 463 (Muller, 1977) indicates that the Tuzex claim is underlain by volcanics of the Bonanza Group (Ijb) in the south and the Island Intrusives (Jg) in the north.

Verzosa (1990) reports that dacites and other volcanics were located on the Property particularly along the main haulage road. A number of mineralized shear zones, up to 15 metres wide, characterized by heavy clay alteration and gossan occur in the volcanics. The zones commonly carry abundant disseminations and stringers of pyrite and to a lesser extent, sphalerite, chalcopyrite and minor galena disseminated within narrow bands within the mineralized zones.

## 1995 Exploration Program

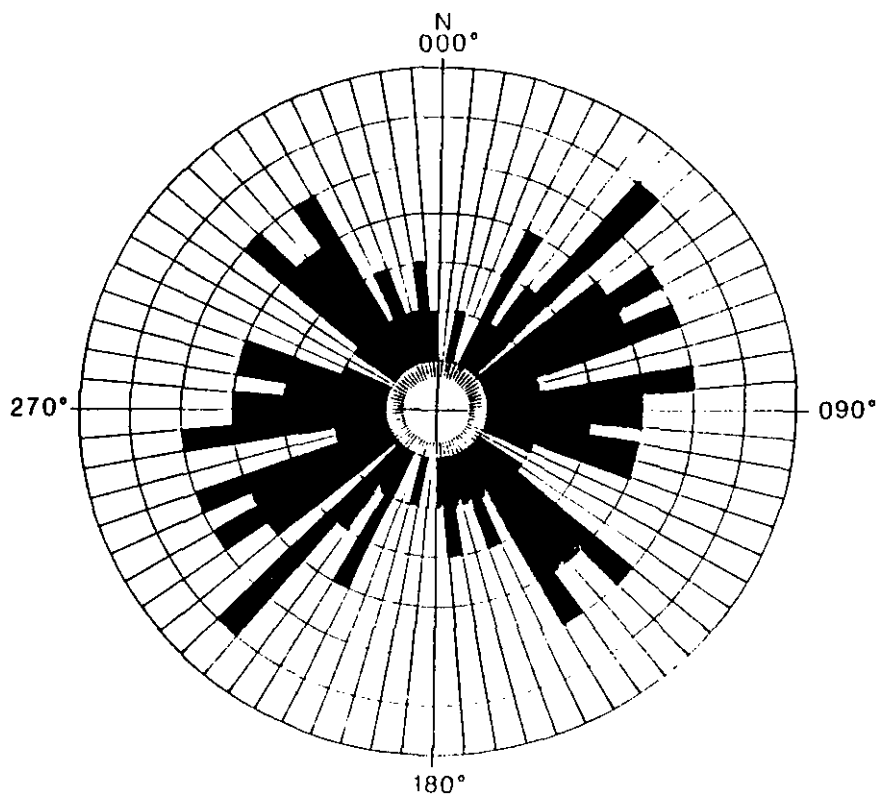
The 1995 work consisted of the completion of a lineament array analysis of the Tuzex claim.

Commonly, lineaments represent the trends of fault zones or the trends of the major, or the minor, structures. Knowledge of the structural pattern could be important in the interpretation of the significance of anomalous exploration results.



**Figure 2.** Lineaments on the Tuzex Mineral Claim as determined from aerial photographs.

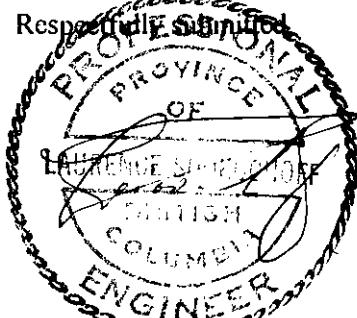
Aerial photographs 30BC 80082 No's 228 & 229, at a mean scale of 1:18000 were utilized for the Analysis which was accomplished by a stereographic projection viewing of the photographs and marking the indicated lineaments on an overlay. A total of 70 lineaments were observed, marked, compiled into a five degree class interval, and plotted on a rose diagram as indicated on the accompanying Figure 3.



**Figure 3.** Rose diagram showing the azimuthal structural trend of the 70 lineaments on the Tuzex mineral claim as determined from aerial photographs.

### Conclusions

In interpreting the results of the Analysis, it appears that there is a specific northwesterly structural trend at between 310 and 330 degrees with a more general northeasterly to southeasterly trend at between 025 and 110 degrees. This analysis coincides with the structural trend as indicated by Muller (O.F. 463) and as reported on in the General Geology section of this report.



Laurence Sookchoff, P. Eng.

November 20, 1995  
Vancouver, B.C.



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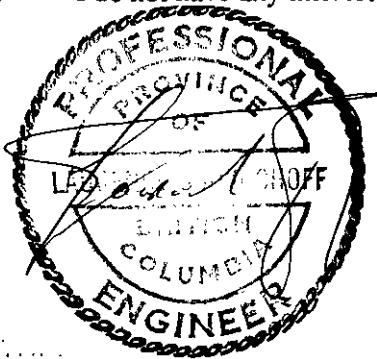
## Certificate

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with offices at Suite 1027, The Standard Building, 510 West Hastings Street, Vancouver, BC V6B 1L8.

I, Laurence Sookochoff, further certify that:

- 1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2) I have been practicing my profession for the past twenty-seven years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) Information for this report was obtained from sources as cited under the Selected References section of this report. A personal examination of the Tuzex mineral claim. was not carried out.
- 5) I do not have any interest in the Tuzex mineral claim.



Laurence Sookochoff, P. Eng.

Vancouver, BC  
November 20, 1995

**Tuzex Claim Group  
Statement of Costs**

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Geological:

|                          |             |
|--------------------------|-------------|
| Lineament array analysis | \$ 1,100.00 |
| Photographs              | 27.63       |
| Report, xerox, printing  | 500.00      |
|                          | <hr/>       |
|                          | \$ 1,627.63 |
|                          | <hr/> <hr/> |