

VANCOUVER, B.C.

# DANCING STAR RESOURCES LTD.

# GEOLOGICAL ASSESSMENT REPORT (LINEAMENT ARRAY ANALYSIS)

on the

SED MINERAL CLAIM

**Kamloops Mining Division** 

NTS M092I047

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

Vancouver, B.C. May 29, 2003



# Geological Assessment Report on the SED Mineral Claim

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### Geological Assessment Report on the SED Mineral Claim

#### **SUMMARY**

Dancing Star Resources Ltd. owns the 20 unit SED mineral claim located 25 kilometres east of the productive Highland Valley copper-moly porphyry deposits where mineralization was first discovered in 1899. After numerous companies, including some majors, were unsuccessful in their Highland Valley exploration endeavors, dedicated mining men like Spud Huestis and Egil Lorntzen perservered in exploration and were rewarded with a producing mine from the claims that they had staked eight years and 18 years earlier.

The SED claim is underlain by Nicola volcanic rocks which host small granitic plugs and sills. Exploration carried out in the immediate area of the SED claim since 1972 resulted in the delineation of two correlative anomalous zones of mineralization. The northeast trending "west central zone", located adjacent to the SED claim, is open to the southeast, and trending into the SED claim, based on the anomalous IP results. Mineralization in the zones is reported as up to 700 ppb gold in the soil and up to 7,500 ppb gold in grab samples. Percussion drill results from the testing of the two zones by Texada Mines in 1972 are not available.

Airborne magnetic maps indicate the SED claim to cover a broad magnetic low flanked by sharply increasing magnetic gradients on three sides. The claim is at the intersection of two major structures as indicated by prominent topographical features. Significant controlling structures to the orebodies in the Guichon batholith of the Highland Valley the Afton orebody in the Iron Mask batholith were critical in their genesis.

Ground magnetometer survey results reportedly were interpreted that the broad airborne magnetic low could be a near surface intrusive.

The results of the Lineament Array Analysis indicated three areas of cross structures which would be prime areas for the location of structurally controlled potentially economic mineral zones.

#### INTRODUCTION

A lineament array analysis was completed on the Dancing Girl Resources Ltd. 20 unit SED claim. The purpose of the structural analysis was to fulfill assessment requirements for one year and to determine the structural control potential for economic mineral zones in this specific area.

Information for this report was obtained from sources as cited under Selected References and from the writers' completion of the Lineament Array Analysis as reported on herein.

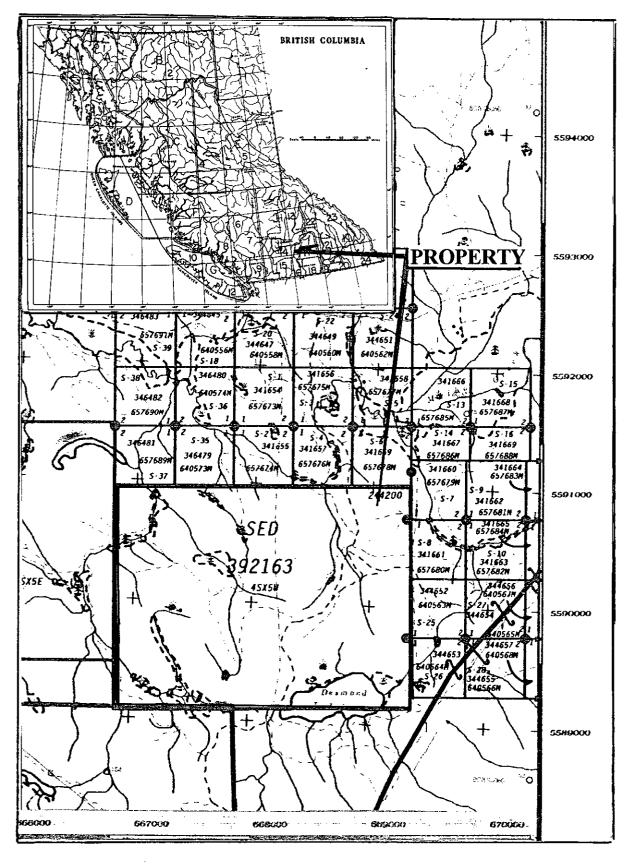


Figure 1. Location & Claim Map. (Claim Map is Ministry of Energy, Mines & Petroleum Resources Map M092I047)

#### PROPERTY DESCRIPTION & LOCATION

The property consists of one claim comprised of 20 units. Particulars are as follows:

Claim Name	Tenure No	Expiry Date
SED (20 units)	392163	February 17, 2004

The property is located between Desmond Lake to the south and the Logan Lake-Kamloops highway to the north, NTS 08207E in the Kamloops Mining Division. The major copper-moly porphyry deposits of the Highland Valley are 20 to 25 km west of the property and the formerly productive Afton deposit is 30 km to the northeast.

# ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

Access to the property is from the No.5 highway to a junction with the Logan Lake highway near Walloper Lake. The Logan Lake highway is taken for approximately seven km westward to the Summit Lake road. The northern boundary of the property is within two km south along the Summit Lake road and passes through the eastern portion of the claim.

The property occupies an area characterized by gently sloping hills with elevations ranging from 1,215 to 1,350 metres above sea level. Open meadows alternate with a dense forest of pine, fir and spruce, with very little or no underbrush. The area has a continental climate characterized by cold winters and hot summers. The property is situated within the B.C. dry belt.

Logan Lake, 20 km west of the property which provides the infrastructure for the Highland Valley mine, or Kamloops an historic mining centre 30 km northeast of the property, could be a source of experienced and reliable exploration and mining personnel and a supply for most mining related equipment. Kamloops is serviced daily by commercial airline and is a hub for road and rail transportation. Vancouver, a port city on the southwest corner of, and the largest city in the Province of British Columbia, is four hours distant by road and less than one hour by air from Kamloops.

Sufficient water for all phases of the exploration program could be available from many steams and ponds within the confines of the property.

#### **HISTORY** -Regional

The Kamloops area has been explored for mineral resources since the late 19th century originating with the discovery of gold in Tulameen some 100 km south of Kamloops. Numerous pits, shafts, trenches and adits mark exploration northward to and beyond Kamloops. The exploration resulted in the development and subsequent production from three major mineral deposits: the Similkameen Copper mine at Princeton; the Craigmont mine at Merritt; and the Afton mine at Kamloops.

Current and former porphyry copper mining in the area stemmed from the discovery of copper mineralization in the Highland Valley area in 1899. The following historical account is summarized from a publication entitled, "The Discoverers".

#### HISTORY -- Regional (cont'd)

From the first discovery of mineralization in the Highland Valley area in 1899, exploration was not revived until 1915. Eight years later, the B.C. Department of Mines completed four drill holes on the Snowshoe claim group, which included the Iona, Jersey, and Guernsy claims. Between 1919 and 1921 numerous surface pits were dug on the Iona claim and a 250 foot adit was driven to explore a large area of disseminated copper mineralization. Exploration work again ceased, and twenty years later Ventures Limited drilled 2,300 feet on the Iona claim and a 420 foot hole beneath the molybdenite shaft on the Jersey claim. A decade later, Newmont Mining Corporation carried out a small amount of trenching on the Iona and the Jersey claims.

It was not until 1954 that Spud Huestis and associates formed a syndicate, staked about a hundred claims and the Bethlehem Copper Corporation Limited came into being. Subsequently, a partnership was formed with Sumitomo, additional exploration and development followed, and by the end of 1962, the Bethlehem mine was in production.

Another "Explorer", Egil Lorntzsen, commenced exploration in the Highland Valley in 1954 and because of his perseverance in prospecting and exploration, "discovered" the Lornex porphyry copper deposit. Lornex was brought into production by Rio Algom Mines in 1972 and at that time was the largest base metal mining operation in Canada, as well as the most modern and efficient.

Additional significant porphyry deposits were discovered and put into production. These productive deposits included the Highmont, which mill was the fourth such mill in the Highland Valley, and the Valley Copper deposit, the largest deposit of the Highland Valley. The Highland Valley had now become one of the world's largest and most prolific copper – "moly" producing areas in the world.

At Afton, copper mineralization in the area has been known of from at least since 1898 when the 100 metre Pothook shaft and several pits and trenches were excavated. This shaft was located approximately 1,067 metres southeast of the presently known Afton ore-body.

In 1949 a prospector named Alex Berglund staked eight claims near the Pothook shaft and called them "Afton" which means "afternoon" in Swedish. Since then the property and its surroundings were investigated by Kennecot Copper Corporation in 1952, Graham Bousquet Gold Mines Limited in 1956-57, Noranda Mines, Limited in 1958, and New Jersey Zinc Exploration Company (Canada) Ltd. During this period an appreciable amount of diamond drilling, geological, geophysical, and geochemical surveys were done on the property, but mostly in the vicinity of the Pothook shaft.

In 1964, C.F. Millar, a geological engineer, persuaded Colonial Mines Ltd. to do percussion drilling near the Pothook shaft. This program was short lived and in 1965 Mr. Millar formed a private syndicate to continue exploration near the Pothook and on some newly staked claims close to the Trans Canada Highway. Between 1965 and `1967 this syndicate did a considerable amount of percussion drilling and a fairly extensive induced polarization survey. In 1967 a consultant's report recommended a diamond drill program, part of which was completed by 1970. As a result of this drilling, one hole intersected 250 feet of 0.41% copper in a zone of strong magnetite veining and of several old pits in which magnetite and minor copper mineralization is visible. The diamond drill program was suspended incomplete and Duval Corporation was given the right of first refusal in exchange for an engineering report which recommended further diamond drilling. In 1970-71 the property was optioned by Quintana Minerals Corporation which relinquished the option in the summer of 1971 after having drilled several unsuccessful percussion holes over a large part of the property.

#### HISTORY -Regional (cont'd)

At this point the property reverted back to Afton Mines Ltd. Which, under the direction of C.F. Millar, in September 1971 began a new series of percussion holes in the vicinity of the 250 foot drill hole which intersected 0.41% copper; the only hole to that date that had shown any significant mineralization. Subsequent drilling to June, 1972 had indicated an ore-body estimated to contain 31,600,000 tons of 1.06% copper, 0.58 ppm gold and 4.19 ppm silver. Teck Corporation achieved production from the Afton ore-body, commencing in 1976 and ceasing in 1983.

In respect to his perseverance in the exploration of the Afton property which resulted in production, Millar stated that, "One characteristic every good mining man should have is persistence." (Vancouver Sun, April, 1973).

Teck abandoned their lease in 1999 whereupon DRC Resources acquired the ground and initiated a diamond drill program in and peripheral to the Afton pit. The results of this drill program have reportedly returned encouraging results.

#### **HISTORY** -Local

Historical exploration adjacent to, or on, the ground covered by the SED mineral claim is as follows:

1972 – Texada Mines Ltd. completed a magnetometer survey, a soil geochemical survey, and 1,400 feet of percussion drilling (AR 4,041) on the Plug claims which subsequently lapsed and now is ground covered in part by the northeast corner of the SED mineral claim. The surveys covered a small portion of the property adjacent to the SED mineral claim. The results of the surveys outlined four geochemical anomalies and one magnetometer anomaly.

The prime geochemical anomalies were isolated one station anomalies with values of just over 100 ppm copper. They were designated as the "B"anomaly, located within 50 metre of the northern boundary of the SED mineral claim, and the "A" anomaly located next to Meadow Creek and within 1,000 metres east of the eastern boundary of the SED mineral claim. Muti-station magnetic highs are correlative with the copper anomalous zones. There is no reported information on the results of the percussion drilling.

1972 – Texada Mines Ltd. completed an Induced Potential survey which resulted in the determination of a chargeability anomaly, SP anomaly and a resistivity low correlative with the "B" soil anomaly and sub-correlative with the "A" anomaly.

Percussion drill holes are indicated on the Texada maps, however, there is no information as to their results. The drill holes appear to have tested the correlative "B" and "A" anomalous zones. One drill hole designated as P-72-6 is located on the "B" anomaly at the boundary of the SED mineral claim. The "B" correlative anomaly is indicated to extend for 250 metres into the SED mineral claim.

1982 – Visa Resources Ltd. completed a reconnaissance program of geological mapping, geochemical soil sampling and initial ground magnetic survey over an area that included all the ground of the SED mineral claim. On the accompanying maps to his report, Cukor outlines some trenches, which are indicated to be located on the Texada correlative anomaly "B". These trenches are also indicated to be located in part on the SED mineral claim. Cukor (1982) concludes that the broad, airborne magnetic low could be easily interpreted as being caused by a small granitic intrusion underlying the Nicola Volcanic rather close to the surface and he states that additional work is warranted.

#### HISTORY - Local (cont'd)

1983 – Visa Resources Ltd. completed a localized magnetometer survey adjacent to the south of Desmond Lake (AR 11,296). Cukor (1983) reports that the results of the survey were inconclusive

1985-1988 — Western Resources Technologies Inc. completed geological, geochemical and geophysical surveys on the WRT group of mineral claims located adjacent to the north of the SED mineral claim and ground now covered by the SED mineral claim. Work was carried out over two localized areas designated as the Rhyolite grid, and the Meadow Creek grid which the SED mineral claim covers a southern portion thereof. The Meadow Creek grid also includes the West Central and the South Central Plug showings which are the renamed Texada "B" correlative anomaly (West Central Plug showing) and the Texada "A" anomaly (South Central Plug showing).

1992 – G.F. Crooker completed a geophysical survey on the JB 1 to 12 Claims, which were staked to cover the former Texada correlative anomalous zones "A" and "B" and which were also recently designated as the South Central Plug showing and the South Central Plug showing within the Meadow Creek zone. The surveys were localized on the two zones of the Meadow Creek grid. Crooker reports (AR 22,346) that the results of the magnetometer survey indicated a potential expression of a buried intrusive body. The VLF-EM survey results were inconclusive.

#### **GEOLOGICAL SETTING**

Regionally, the property is situated within the Quesnel Trough, a 30 to 60 km wide belt of Lower Mesozoic volcanic and related strata enclosed between older rocks and much invaded by batholiths and lesser intrusions (Campbell and Tipper, 1970). The southern part is the well-known Nicola belt, continuing nearly 200 km to its termination at the U.S. border. The Nicola belt is enveloped by the Guichon Creek Batholith, host to the major porphyry copper mines of the Highland Valley, to the west, the Wild Horse Batholith to the east, and the Iron Mask Batholith, host to the former Afton Mine, to the north northeast.

The Guichon Batholith is comprised of varying phases of intrusive with the ore-bodies of the Highland Valley not restricted to any one phase. The Bethlehem Copper JA deposit occured in and adjacent to a quartz plagioclase aplite stock which intruded rocks of the Guichon variety and Bethlehem phase of the Guichon Creek Batholith. The largest deposit of the camp, the Valley Copper deposit, is entirely in quartz monzonite of the Bethsaida phase and is west of the Lornex fault.

The Lornex and the Valley Copper ore-bodies in the Highland Valley are located at the low edge of an airborne magnetic high. The magnetic high traces the Highland Valley and the Lornex fault systems and clearly indicates the fault pattern of the system and the ore-bodies occurring within a magnetic low due to the supergene and dynamic related destruction of magnetite.

The ore-deposits of the Highland Valley are structurally controlled. Movements on the Lornex and Highland Valley faults occurred simultaneously and alternatively in the final phases of intrusion of the Guichon Batholith. The fault planes provided the openings for the admission and deposition of mineral and igneous matter.

#### GEOLOGICAL SETTING (cont'd)

In the vicinity of Afton, the Iron Mask district is part of a major structure extending northwestward across the general northerly trend of the Nicola belt. This cross structure is less than 10 km wide and about 35 km long. To the northwest, the structure is largely obscured by later stratified rocks of an adjoining basin. To the southeast, it contains two related plutons formerly believed to be a single connected body named the Iron Mask batholith. The Afton deposit lies on the northwestern edge of the Iron Mask Batholith, an area which is known to be the locus of much faulting. The area of the deposit, and especially the western half, is strongly faulted.

The Iron Mask Batholith lies lengthwise in a major cross structure of the Quesnel Trough and is emplaced in contemporaneous volcanic rocks of the Upper Triassic Nicola Group. Control of the cross-structure by long-active, deep-seated faults is evidenced by the manner of emplacement of plutons and by the development of adjacent sedimentary and volcanic basins of Eocene or possibly much earlier age. Hypogene alteration has no recognized pattern and it includes potassic, saussuritic and phyllic varieties. Supergene alteration is characterized by rock disintegration and abundant earthy hematite with limonite. Faults, although numerous, mostly defy correlation and cause only minor disruption of the deposit. However, the western end of the deposit is terminated by a fault. Geochemical and geophysical surveys fail to distinguish the orebody clearly from widespread subeconomic mineralization

The Batholith comprises successively emplaced units, all apparently of late Triassic age and ranging in composition from basic to moderately alkalic. The Iron Mask and Pothook units are the oldest on geological evidence and consist chiefly of diorite and gabbro. Succeeding units of finer-grained, more porphyritic rocks are emplaced mainly along northwestern and western linear structure that frame and dissect the pluton. Thus, picrite basalt forms steep, lenticular bodies that are poorly exposed, commonly possess sheared, scrpentinized margins, and are generally found within 300 m of most prospects in the district.

The Afton ore-body lies apparently at the intersection of structures considered to reflect deep seated faults that were active intermittently from the late Triassic (Carr, 1976).

The Afton ore-body occurs in late-phase plutonic rocks which include latite porphyry and related breccias and is at the northwestern extremity of the Iron Mask Batholith. The ore-body occupies the northwestern tip of a zone of abundant magnetite veining developed along the longitudinal axis of the Iron Mask Batholith. An extensive pyrite halo lies south and west of the Afton ore-zone, overlapping slightly onto its southwestern sector.

The Afton ore-body is located precisely at the west-northwestern end of a conspicuous positive airborne magnetic anomaly, 1,000 metres long, that reflects unusual amounts of disseminated and vein magnetite. The anomaly terminates at the ore-body due to supergene destruction of magnetite.

#### **GEOLOGY: Adjacent Properties**

According to the Minfile reports the Plug occurrence, within the Meadow Creek zone adjacent to the SED claim, is underlain by the Nicola Group volcanic rocks which are cut by small granitic plugs and sills. Sparse outcroppings of Nicola Group rocks along Meadow Creek consist of altered andesite, lapilli tuff, amygdoidal basalt and minor lenses of limy sediments which strike east to southeast and dip steeply to the north.

#### **GEOLOGY: SED Mineral Claim**

The SED claim is entirely underlain by two subdivisions of the Nicola volcanic rocks (Figure 2.), the boundary bisecting the property from the southeast to the northwest. In the northeast is unit UTN5 which is comprised of an augite porphyry, augite-plagioclase porphyry volcaniclastic breccia and tuff with interbedded argillite. In the southwest is unit UTN4 which is comprised of a pillowed basic flow.

The SED claim is located at the intersection of two topographically indicated structures; the structures being the northeasterly trending structure of the Meadow Creek valley and the northwesterly trending Melba Creek valley structures.

In 1982 Visa Resources Ltd. completed a reconnaissance exploration program of geological mapping, geochemical soil sampling and initial ground magnetic survey over an area that included all the ground of the SED mineral claim. On the accompanying maps to his report, Cukor outlines some trenches, which are indicated to be located on the Texada correlative anomaly "B". These trenches are also indicated to be located in part on the SED mineral claim. Cukor (1982) concludes that the broad, airborne magnetic low could be easily interpreted as being caused by a small granitic intrusion underlying the Nicola Volcanic rather close to the surface and he states that additional work is warranted.

The SED claim covers a broad magnetic low with sharply increasing magnetometer values on three of the claim boundaries.

#### **MINERALIZATION: Adjacent Properties**

In a 1972 exploration program by Texada Mines Ltd. (AR 4,041) on the Plug claims which subsequently lapsed and now is ground covered in part by the northeast corner of the SED mineral claim, the results of the surveys outlined four geochemical anomalies and one magnetometer anomaly.

#### **MINERALIZATION: SED Mineral Claim**

There is no known mineralization on the SED mineral claim, however, the mineral zones of the west central Plug zone, as indicated by the trenches on Cukor's (1982) map accompanying his report, may extend into the SED claim. Crooker (1992) reports that the mineralization of the west central Plug zone is of weak to moderate to carbonate-quartz-mariposite alteration over several hundred metres, with a grab sample yielding gold values of 7,500 ppb (0.282 oz/t) and 67.5 ppm silver respectively. Several soil samples taken from the same trench as the anomalous rock sample gave 70 and 150 ppb gold. Two grab samples of carbonate-quartz-mariposite schist with galena and sphalerite from the south central zone yielded 605 and 482 ppb gold and 165.1 and 258.4 ppm silver.

#### LINEAMENT ARRAY ANALYSIS

A lineament array analysis was completed on the SED mineral claim to determine a potential structural mineral controlling pattern to potential mineralization within the general area. The structural pattern could also provide information on the stress source thus indicating the location of potentially mineralized sub surface intrusives.

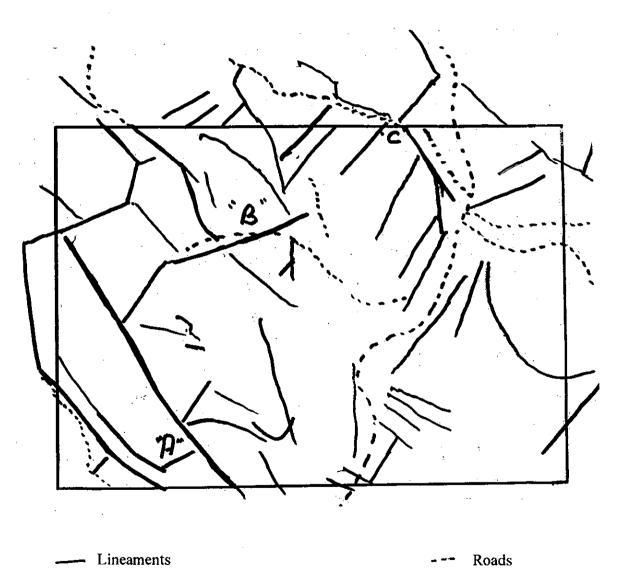


Figure 2. Lineaments on and peripheral to the SED mineral claim as determined from air photographs.

Air photographs 30BCC00029 No's 130-131 at a mean scale of approximately 1:30,000 were utilized for the lineament array analysis. The analysis was accomplished using a stereographic projection viewing of the air photographs and marking the lineaments on an overlay. A total of 59 lineaments were marked, compiled into a 5° class interval and plotted on a rose diagram as indicated on Figure 3.

#### LINEAMENT ARRAY ANALYSIS (cont'd)

The results of the lineament array analysis indicated a conjugate fault system with directions of 025° to 050° and 310° to 330°. The 310° to 330° fault set is indicated topographically by the northwesterly trending Meadow Creek river system which the northeastern portion of the SED mineral claim covers. The second major indicated structural direction, at 025° to 050° is not as obvious, as the topographical lineaments are characterized by discontinuous or localized depressions. Due to the subdued topography, the associated structures to the two major structures is not clearly defined, however, are indicated by the northerly trending structures.

Major structural intersections are indicated as lineaments on the overlay and are the site of water filled depressions. The more significant cross faulting localities are designated as "A", "B", and "C" on Figure 2.

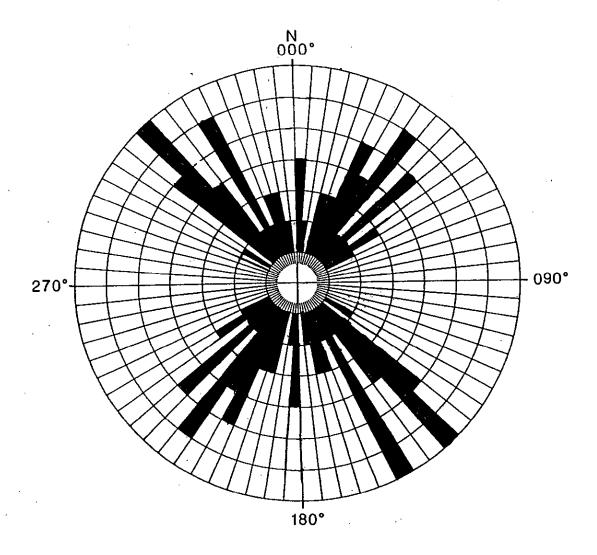


Figure 3. Rose diagram showing the 59 lineament plots as determined on the SED mineral claim.

## **CONCLUSIONS**

The results of the Lineament Array Analysis indicated three prime areas for exploration in the search for potentially economic mineral deposits associated with intrusives.



Vancouver, BC May 19, 2003

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- Geology, Exploration and Mining in British Columbia 1972 pgs 165, 183, 209-220.

#### **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 604-1176 Burnaby Street, Vancouver, BC V6E 1P1.

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 thirty-seven years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) The information for this report is based on information as itemized in the Selected Reference section of this report and from the completion of the Lineament Array Analysis as reported on herein.



## **Statement of Costs**

Lineament Array Analysis

\$ 2,000.00