

BC Geological Survey
Assessment Report
32253

BALTO RESOURCES LTD.

(Owner & Operator)

GEOPHYSICAL ASSESSMENT REPORT

(Event Number 4829051)

on the

SED MINERAL CLAIM

(Tenure 392163)

Kamloops Mining Division
NTS 092I.047

Centre of Work
5590150N, 678800E

AUTHOR & CONSULTANT

Laurence Sookochoff, PEng
Sookochoff Consultants Inc.

TABLE of CONTENTS

	page
Summary -----	3.
Introduction -----	3.
Property Description & Location -----	4.
Accessibility, Climate, Local Resources, Infrastructure Physiography & Water History -----	5.
Geology: SED Mineral Claim -----	6.
Mineralization – SED Mineral Claim -----	8.
2010 VLF-EM Survey -----	8.
Interpretation -----	9.
Statement of Costs -----	13.
Selected References -----	14.
Certificate -----	15.
Illustrations	
Figure 1 Location Map -----	16.
Figure 2 Claim Location -----	4.
Figure 3 Physiography -----	5.
Figure 4 Claim & Index Map -----	7.
Figure 5 VLF-EM Raw Data -----	9.
Figure 6. VLF-EM Fraser Filtered Raw Data -----	11.
Figure 7. VLF-EM Fraser Filtered Data Contoured -----	12.
Appendices	
Appendix I VLF-EM Survey Results: Raw Data -----	13.
	17.

SUMMARY

Balto 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.

The SED claim is underlain by Nicola volcanic rocks which host small granitic plugs and sills within the area. 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. These two zones were percussion drill-hole tested by Texada Mines in 1972. Results are unavailable.

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. Localized exploration programs completed by, or under the supervision of, the author, have resulted in the delineation of anomalous areas that may localize potentially economic mineralization.

The 2010 VLF-EM survey was successful in delineating two prime northwesterly trending anomalous zones, or indicated structures, A, and BC. with cross-cutting northeasterly indicated structures resulting in two locations of indicated intersections. These locations would be prime areas to explore for surficial geological indications of potentially sub-surface economic mineral zones. A third prime exploration area is indicated midway along the western boundary where the 2009 VLF-EM survey results combined with the 2010 VLF-EM survey results indicate a cross structure.

INTRODUCTION

During October and November 2010 an exploration program comprised of localized VLF-EM survey was completed on the SED mineral claim of Balto Resources Ltd. The exploration program was a continuation of the geochemical, geophysical, and geological programs completed by Dancing Star Resources Ltd., and Alcor Resources Ltd. (Names progressively changed to Balto Resources Ltd.) since 2003 which reported results are referenced in the Selected Reference section of this report.

Information for this report was obtained from sources as cited under Selected References, from exploration work as reported on herein, from work the writer has performed on the Property, and from the writer’s completion of the 2010 VLF-EM survey..

Figure 1. Location Map
From MapPlace)



PROPERTY DESCRIPTION & LOCATION

The property consists of one 20 unit claim covering an area of 500 hectares. Particulars are as follows:

Tenure Number	Type	Claim Name	Good Until*	Area (ha)
392163	Mineral	SED	20120217	500

Total Area: 500 ha

*Upon the approval of this assessment report.

The SED claim is registered in the name of the writer and held in trust by the writer for Balto Resources Ltd.

The property is located between Desmond Lake to the south and the Logan Lake-Kamloops highway to the north, within NTS 090I.047 in the Kamloops Mining Division. The major copper-molybdenum 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 & WATER

Access

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

*Figure 2. Claim Location
(from MapPlace & Google)*



Climate & Local Resources

The property is within the B.C. dry belt which experiences a continental climate characterized by cold winters and hot summers. Logan Lake is 20 km west of the property and provides the infrastructure for the Highland Valley mine. Kamloops an historic mining centre 30 km northeast of the property, provided the infrastructure for the Afton Mine. Any of these centres could be a source of experienced and reliable exploration and mining personnel and a supply for most mining related equipment.

Infrastructure

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.

Physiography

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.

Water

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

HISTORY

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 metres 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. Multi-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.

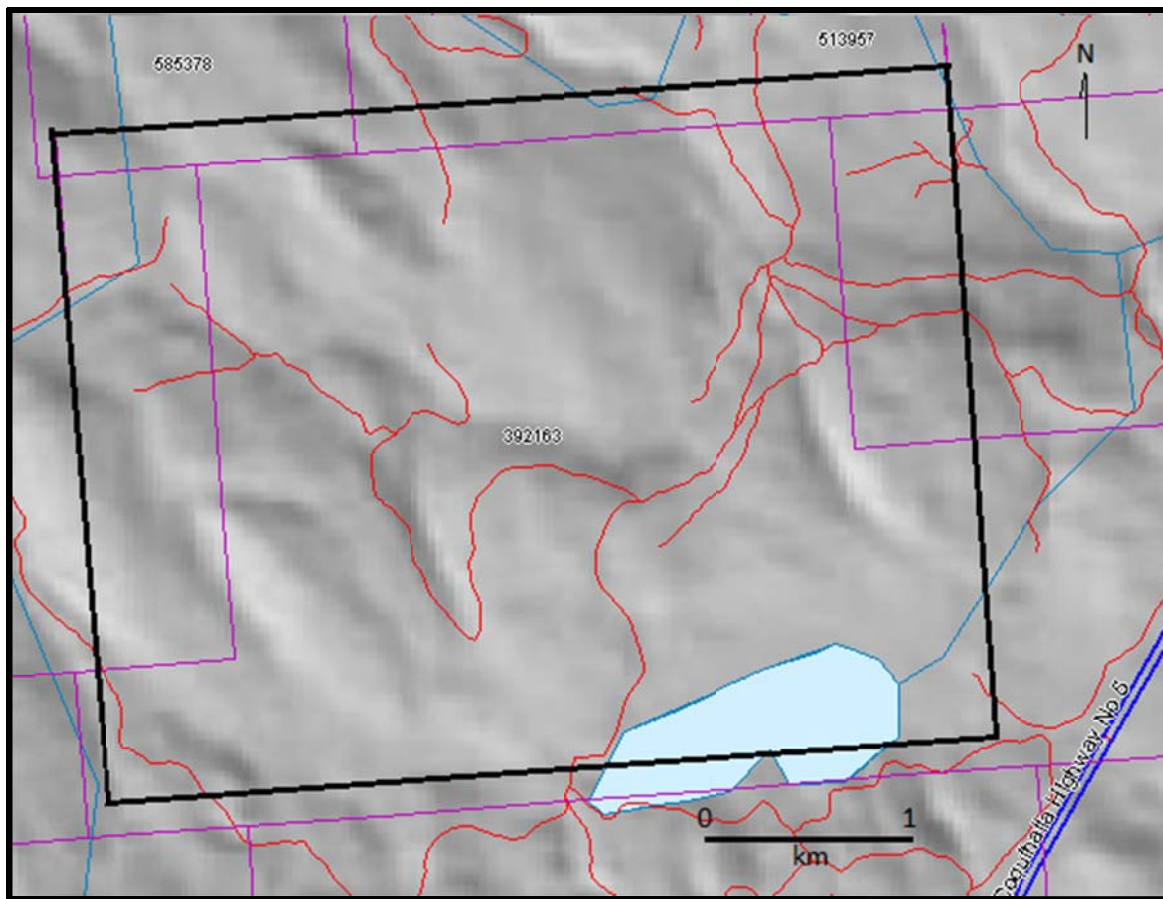
1982 – Visa Resources Ltd. completed a reconnaissance program of geological mapping, geochemical soil sampling and initial ground magnetic surveys over an area that included all the ground of the SED mineral claim. On the accompanying maps to his report, Cukor outlines some trenches, which are indicated 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 reported that additional work is warranted.

HISTORY (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 on 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).

Figure 3. **Physiography**
(from MapPlace)

**HISTORY (cont'd)**

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.

HISTORY (*cont'd*)

2003-2005 – Geophysical, geochemical, and geological surveys were completed on the SED claim by Dancing Star Resources Ltd.

2006-2009– Localized geophysical surveys were completed on the SED claim by Alcor Resources Ltd. (Name change from Dancing Star Resources Ltd.) and Balto Resources Ltd. (Name change from Alcor Resources Ltd.).

GEOLOGY: SED mineral claim

The SED claim is entirely underlain by two subdivisions of the Nicola volcanic rocks, 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 volcanoclastic 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; 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. He concludes that additional work on the ground is warranted.

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

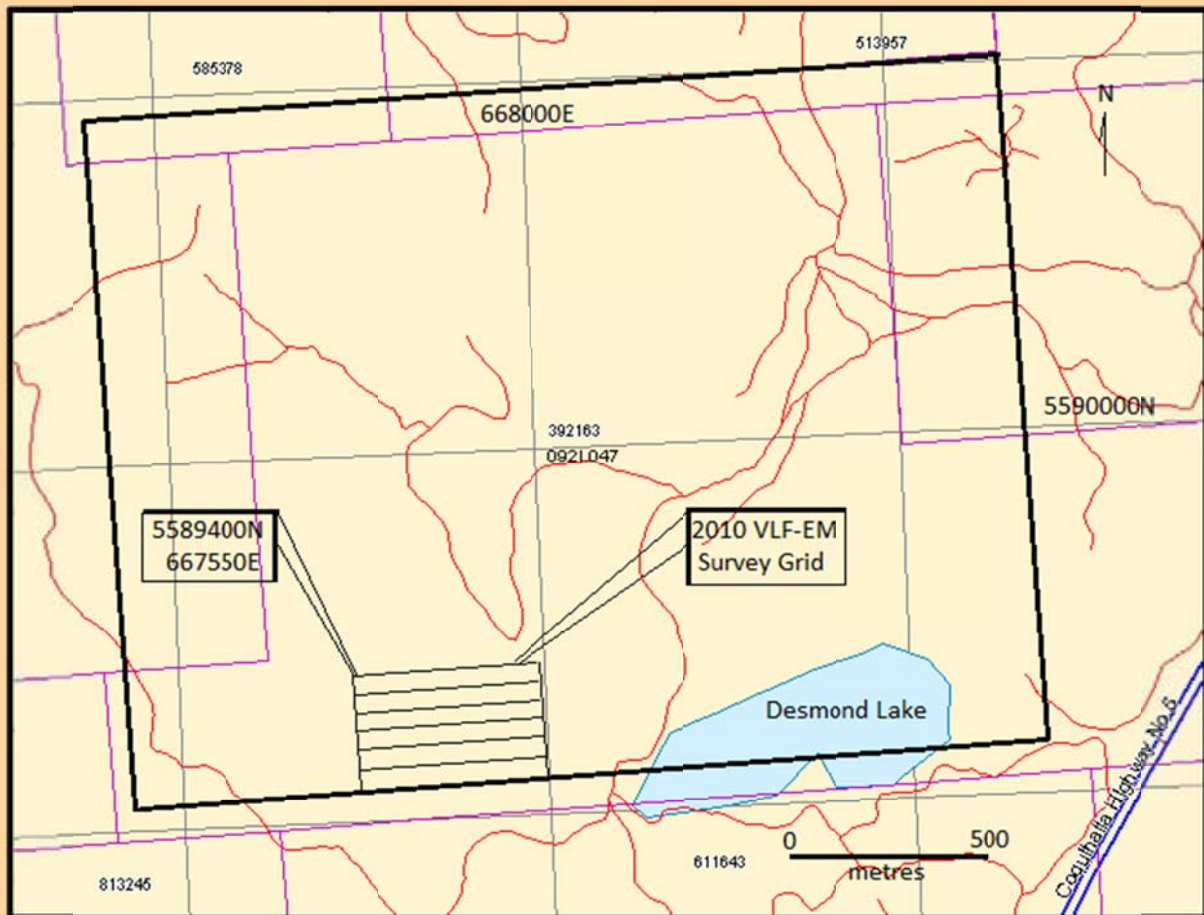
MINERALIZATION: SED mineral claim

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 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.

2010 VLF-EM SURVEY

From October 31, 2010 to November 1, 2010 Balto Resources Ltd. caused a completion of a localized VLF-EM survey exploration on the SED mineral claim. The area selected for the survey was adjacent and to the east of the 2009 VLF-EM survey. The purpose of the survey was to test the area for potential mineral controlling structures and to delineate the eastern trend of the open ended 2009 indicated structure.

*Figure 4. Claim & Index Map
(Base Map: From MapPlace)*



(a) Instrumentation

The VLF-EM survey was carried out with a VLF-EM receiver, Model 27, manufactured by Sabre Electronics Ltd. of Burnaby, British Columbia. This instrument is designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for this survey is transmitted at 24.8 kHz from Seattle (Jim Creek), Washington.

2010 VLF-EM SURVEY (cont'd)**b) Theory**

In all electromagnetic prospecting, a transmitter induces an alternating magnetic field (called the primary field) by having a strong alternating current move through a coil of wire. This primary field travels through any medium and if a conductive mass such as a sulphide body is present, the primary field induces a secondary alternating current in the conductor, and this current in turn induces a secondary magnetic field. The receiver picks up the primary field and, if a conductor is present, the secondary field distorts the primary field. The fields are expressed as a vector, which has two components, the "in-phase" (or real) component and the "out-of-phase" (or quadrature) component. For the VLF-EM receiver, the tilt angle in degrees of the distorted electromagnetic field with a conductor is measured from that which it would have been if the field was not distorted with a conductor. Since the fields lose strength proportionally with the distance they travel, a distant conductor has less of an effect than a close conductor. Also, the lower the frequency of the primary field, the further the field can travel and therefore the greater the depth penetration.

The VLF-EM uses a frequency range from 13 to 30 kHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is more susceptible to clay beds, electrolyte-filled fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up. Consequently, the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. (In places it can be used instead of IP). However, its susceptibility to lower conductive bodies result in a number of anomalies, many of them difficult to explain and thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

(c) Survey Procedure

A 300 metre north base-line was established by a GPS unit from UTM 667550E 5589100N located in the southwestern portion of the SED claim (Tenure 392163) and adjacent and east of the 2009 VLF-EM survey (AR 31,582). VLF-EM readings were taken at 25 metre intervals along seven east-west 450 metre lines extending east from the base line. The survey stations were established according to the UTM coordinates East and North with the station numbers plotted as the last four digits of the UTM East coordinate, and the last four digits of the UTM North coordinate. Thus, the initial GPS station at UTM 667550E, 5589100N is designated as 7550E, 9100N on the maps. The field data is presented in Figure 5, Figure 6, and in Appendix I.

(d) Compilation of Data

The data was transferred to an Excel spreadsheet, thence to a Surfer 8 program which was utilized to plot maps from the VLF-EM data. Three maps were created; VLF-EM Raw Data (Figure 5), Fraser Filtered Raw Data (Figure 6), and contoured Fraser Filtered Data (Figure 7).

Figure 5. VLF-EM Raw Data

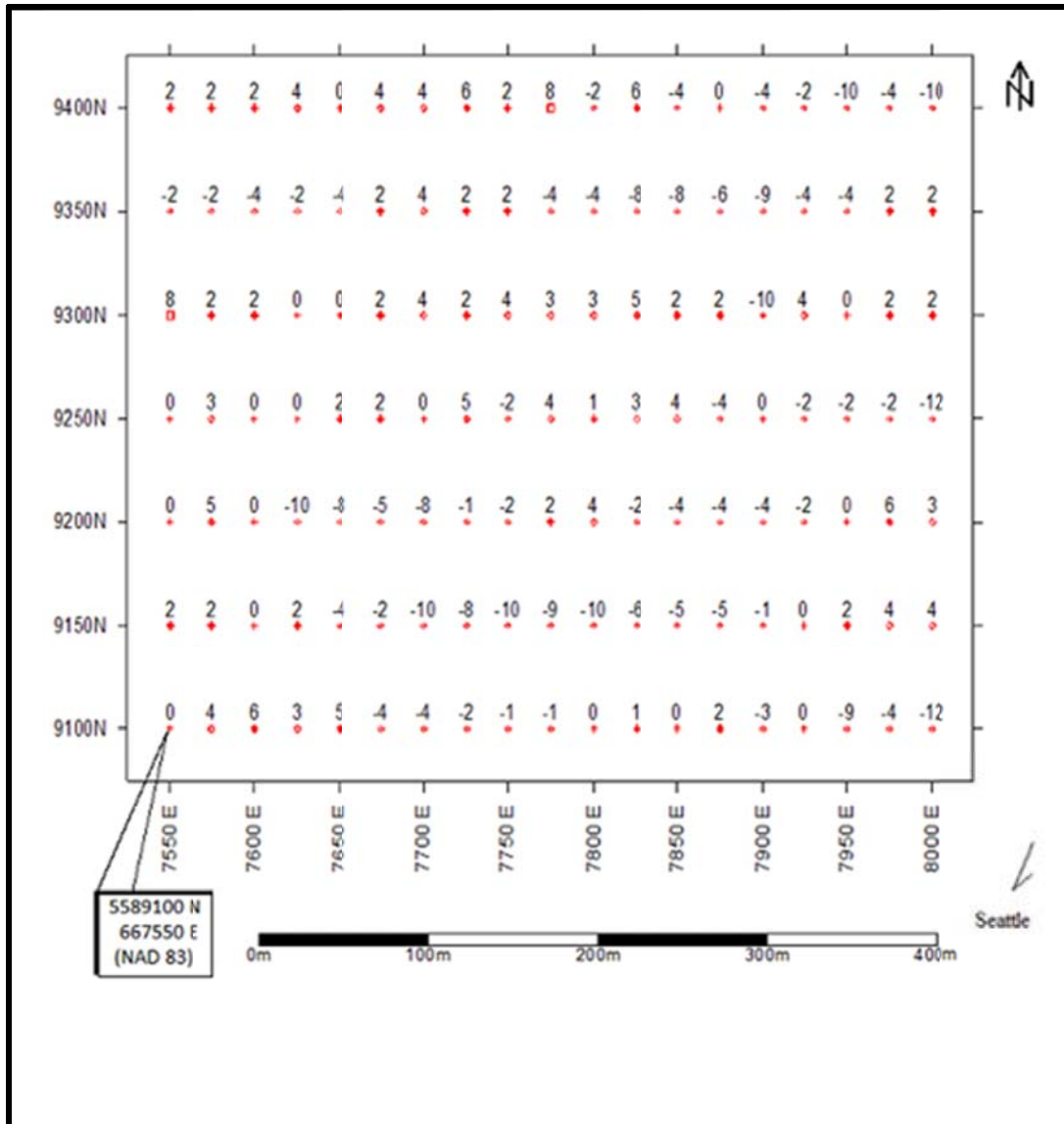
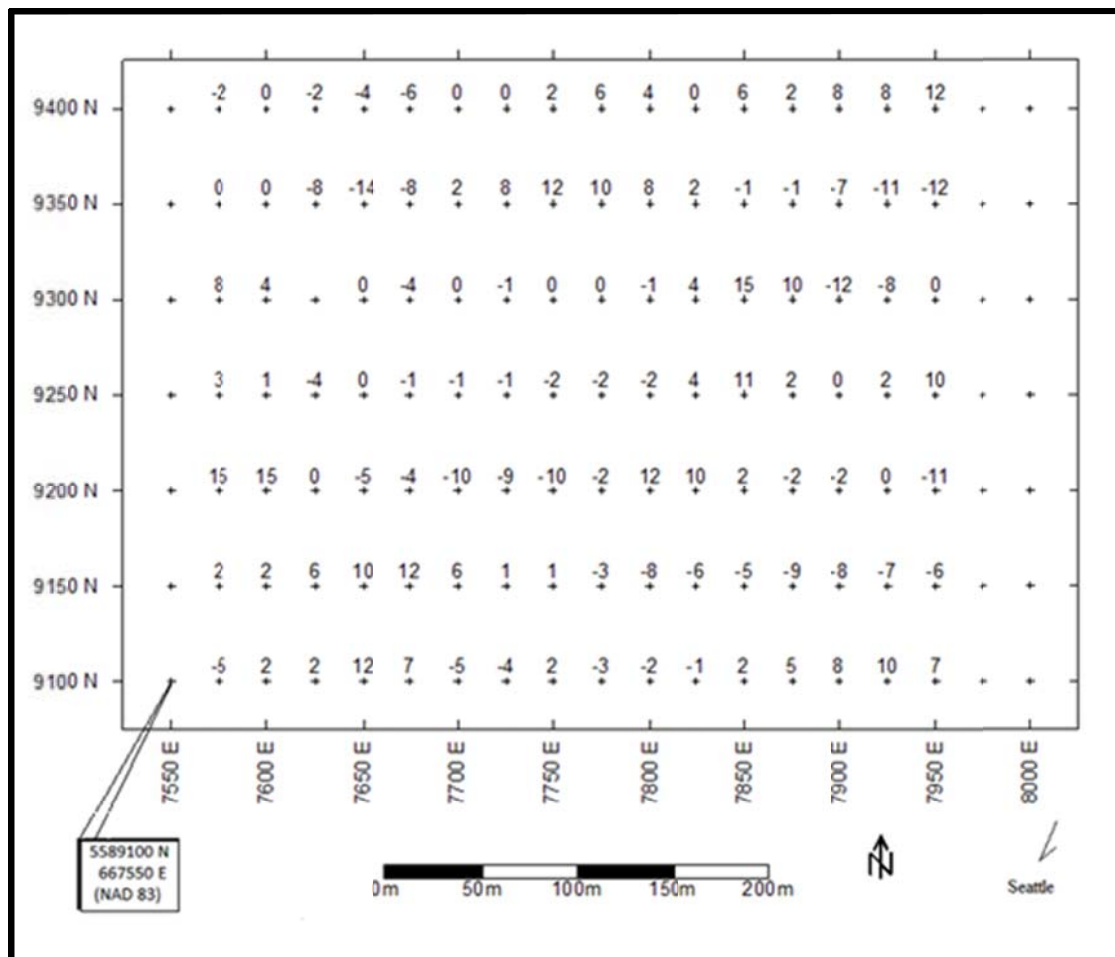


Figure 6. VLF-EM Fraser Filtered Data



e) Results (Figure 6)

Two prime northwesterly trending anomalous zones, A, and BC, were delineated as indicated in Figure 7. A description of the zones is as follows:

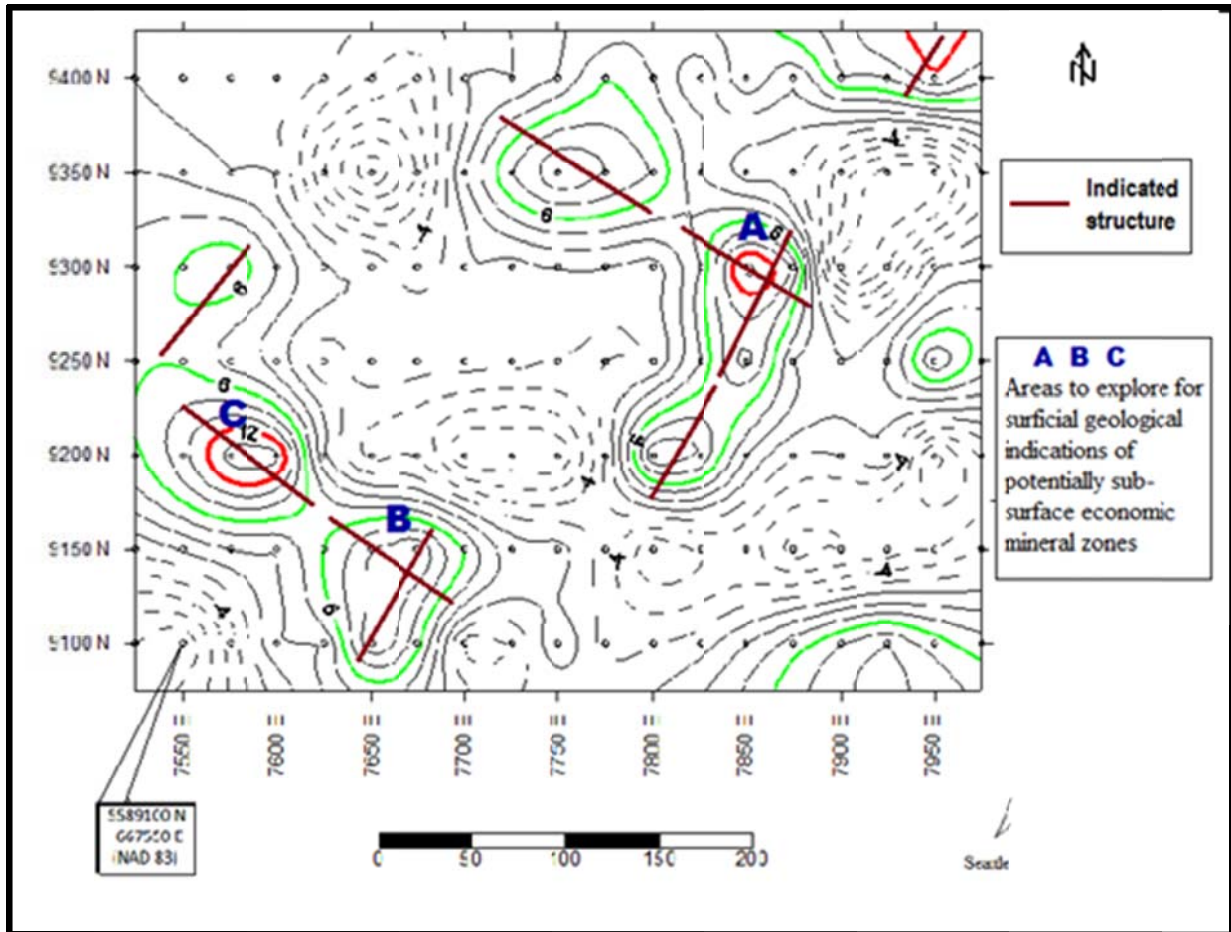
Anomaly A:

- 200 metre prime open-ended, northwesterly trending, with an intersecting north-northeast 150 metre trending anomalies;
- a significant northeast anomalous intersection at **A** or at: 9300N, 7850E;
- the northeast anomaly appears discontinuous and en echelon with the northeastern sector open to the northeast and the southwestern sector closed to the southwest;

Anomaly BC:

- 200 metre moderate to strong northwest trending anomaly closed to the southeast and open to the northwest;
- An indicated intersection with a sector of the northeast anomaly at location B or 7660E, 5140N;
- At the northwest open ended boundary, an indicated intersection with a 50 metre northeast trending anomaly which is the northeast extension of an anomaly of the 2009 VLF-EM survey. This projected intersection would be generally located at 7525E, 9240N.

Figure 7. Contoured VLF-EM Data



INTERPRETATION

The 2010 VLF-EM survey was successful in delineating three potential cross-structural locations which would be prime exploration areas to search for geological and/or mineralogical indications of potentially deep-seated economic mineral zones.

Respectfully submitted
Sookochoff Consultants Inc.



Laurence Sookochoff, PEng.

STATEMENT OF COSTS

The fieldwork on the SED Claim was carried out between October 31, 2010 and November 1, 2010 to the value as follows:

Laurence Sookochoff: 2 days @ \$800. -----	\$ 1,600.00
VLF Rental: 3 days @ \$ 80.00 -----	240.00
Room & board: 2 days @ \$150.00 -----	300.00
Results, compilation, & maps -----	800.00
Report -----	<u>2,750.00</u>
	\$ 5,690.00
	=====

SELECTED REFERENCES

- Cochrane, D.R.** et al – Geophysical Report on an Induced Polarization Survey of the Plug Claims on behalf of Texada Mines Ltd. October 24, 1972. AR 4,041.
- Crooker, G.F.** – Geological, Geochemical and Geophysical Report on the WRT 1 to 6 and 9 to 15 Claims for Western Resource Technologies Inc. November, 1988. AR 18,048.
- Crooker, G.F.** – Geological, Geochemical and Geophysical Report on the WRT 1 to 15 Claims for Western Resource Technologies Inc. March, 1998. AR 17,337
- Cukor, V.** Report on Geochemical, Geophysical and Geological Reconnaissance for Visa Resources Ltd. May, 1982. AR 10,551.
- Report on Ground Magnetic Survey for Visa Resources Ltd. June, 1983. AR 11,296.
- DeLeen, J.** et al – Magnetometer and Geochemical Report on the Plug Claims on behalf of Texada Mines Ltd. December 8, 1972. AR 4,041.
- Hollister, V.F.** – Geology of the Porphyry Copper Deposits of the Western Hemisphere. Society of Mining Engineers of The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. New York, New York. 1978.
- La Rue, J.P.** – Assessment Report on Geophysical Survey on the DES Claims for C. Boitard. November 15, 1987. AR 17,070.
- Sookochoff, L.** – Geological Assessment Report (Lineament Array Analysis) on the SED Mineral Claim for Dancing Star Resources Ltd. March 29, 2006. AR 27,156.
- Sookochoff, L.** – Geochemical Assessment Report on the SED Mineral Claim for Dancing Star Resources Ltd. January 22, 2004. AR 27,329.
- Sookochoff, L.** – Geophysical Assessment Report on the SED Mineral Claim for Dancing Star Resources Ltd. March 23, 2005. AR 27,725.
- Sookochoff, L.** – Geophysical Assessment Report on the SED Mineral Claim for Alcor Resources Ltd. May 18, 2006. AR 28,396.
- Sookochoff, L.** – Geophysical Assessment Report on the SED Mineral Claim for Alcor Resources Ltd. June 13, 2007. AR 29,193.
- 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. and state 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 forty-five 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 geophysical data obtained from the 2010 VLF-EM survey completed by the writer on the DES mineral claim.



Laurence Sookochoff, P. Eng.

Vancouver, BC

Appendix I

VLF-EM RAW DATA

Balto Resources Ltd.
2010 VLF-EM Raw Data

E	N	VLF-EM	FF	E	N	VLF-EM	FF
7550	9100	0	-12	7550	9200	0	
7575	9100	4	-5	7575	9200	5	15
7600	9100	6	2	7600	9200	0	15
7625	9100	3	2	7625	9200	-10	0
7650	9100	5	12	7650	9200	-8	-5
7675	9100	-4	7	7675	9200	-5	-4
7700	9100	-4	-5	7700	9200	-8	-10
7725	9100	-2	-4	7725	9200	-1	-9
7750	9100	-1	2	7750	9200	-2	-10
7775	9100	-1	-3	7775	9200	2	-2
7800	9100	0	-2	7800	9200	4	12
7825	9100	1	-1	7825	9200	-2	10
7850	9100	0	2	7850	9200	-4	2
7875	9100	2	5	7875	9200	-4	-2
7900	9100	-3	8	7900	9200	-4	-2
7925	9100	0	10	7925	9200	-2	0
7950	9100	-9	7	7950	9200	0	-11
7975	9100	-4		7975	9200	6	
8000	9100	-12		8000	9200	3	
7550	9150	2		7550	9250	0	
7575	9150	2	2	7575	9250	3	3
7600	9150	0	2	7600	9250	0	1
7625	9150	2	6	7625	9250	0	-4
7650	9150	-4	10	7650	9250	2	0
7675	9150	-2	12	7675	9250	2	-1
7700	9150	-10	6	7700	9250	0	-1
7725	9150	-8	1	7725	9250	5	-1
7750	9150	-10	1	7750	9250	-2	-2
7775	9150	-9	-3	7775	9250	4	-2
7800	9150	-10	-8	7800	9250	1	-2
7825	9150	-6	-6	7825	9250	3	4
7850	9150	-5	-5	7850	9250	4	11
7875	9150	-5	-9	7875	9250	-4	2
7900	9150	-1	-8	7900	9250	0	0
7925	9150	0	-7	7925	9250	-2	2
7950	9150	2	-6	7950	9250	-2	10
7975	9150	4		7975	9250	-2	
8000	9150	4		8000	9250	-12	

Balto Resources Ltd.
2010 VLF-EM Raw Data

E	N	VLF-EM	FF	E	N	VLF-EM	FF
7550	9300	8		7550	9400	2	
7575	9300	2	8	7575	9400	2	-2
7600	9300	2	4	7600	9400	2	0
7625	9300	0		7625	9400	4	-2
7650	9300	0	0	7650	9400	0	-4
7675	9300	2	-4	7675	9400	4	-6
7700	9300	4	0	7700	9400	4	0
7725	9300	2	-1	7725	9400	6	0
7750	9300	4	0	7750	9400	2	2
7775	9300	3	0	7775	9400	8	6
7800	9300	3	-1	7800	9400	-2	4
7825	9300	5	4	7825	9400	6	0
7850	9300	2	15	7850	9400	-4	6
7875	9300	2	10	7875	9400	0	2
7900	9300	-10	-12	7900	9400	-4	8
7925	9300	4	-8	7925	9400	-2	8
7950	9300	0	0	7950	9400	-10	12
7975	9300	2		7975	9400	-4	
8000	9300	2		8000	9400	-10	
7550	9350	-2					
7575	9350	-2	0				
7600	9350	-4	0				
7625	9350	-2	-8				
7650	9350	-4	-14				
7675	9350	2	-8				
7700	9350	4	2				
7725	9350	2	8				
7750	9350	2	12				
7775	9350	-4	10				
7800	9350	-4	8				
7825	9350	-8	2				
7850	9350	-8	-1				
7875	9350	-6	-1				
7900	9350	-9	-7				
7925	9350	-4	-11				
7950	9350	-4	-12				
7975	9350	2					
8000	9350	2					