

KEYSTONE COPPER – ZINC -SILVER -GOLD PROJECT

(Besshi type Cu-Zn-Ag +/- Au-Co-Ni VMS)

Goldstream Mine Model

The Keystone property is underlain by the same metasedimentary and metavolcanic rocks of the Lardeau Group that hosts the past producing Goldstream Mine.

The Goldstream Besshi Cu-Zn massive sulphide deposit was discovered in 1972. In 1975 Noranda Exploration Co. Ltd. optioned the property and later the same year outlined a deposit of 3.175 mt grading 4.49% Cu and 3.24% Zn and 20g/t Ag.

The past producing Goldstream mine is located 30 Km north of the Keystone project in similar stratigraphy.

*Other VMS prospects in the Lardeau Group near the Goldstream Mine include the Upper and lower **Keystone**, Plus the **King**, (On Property) plus the Standard and Montgomery prospects.*

The King Massive Sulphide showing is within the property and consists of a conformable layer of massive sulphides within quartz-chlorite schist. The layer strikes 090 degrees and dips between 0 and 30 degrees to the south. Sulphide mineralization includes massive pyrrhotite, pyrite with chalcopyrite and sphalerite.

The metavolcanic and metasedimentary units of the Lardeau Group have excellent potential for hosting volcanogenic massive sulphides (VMS) with significant nickel-cobalt (\pm copper-zinc) content.

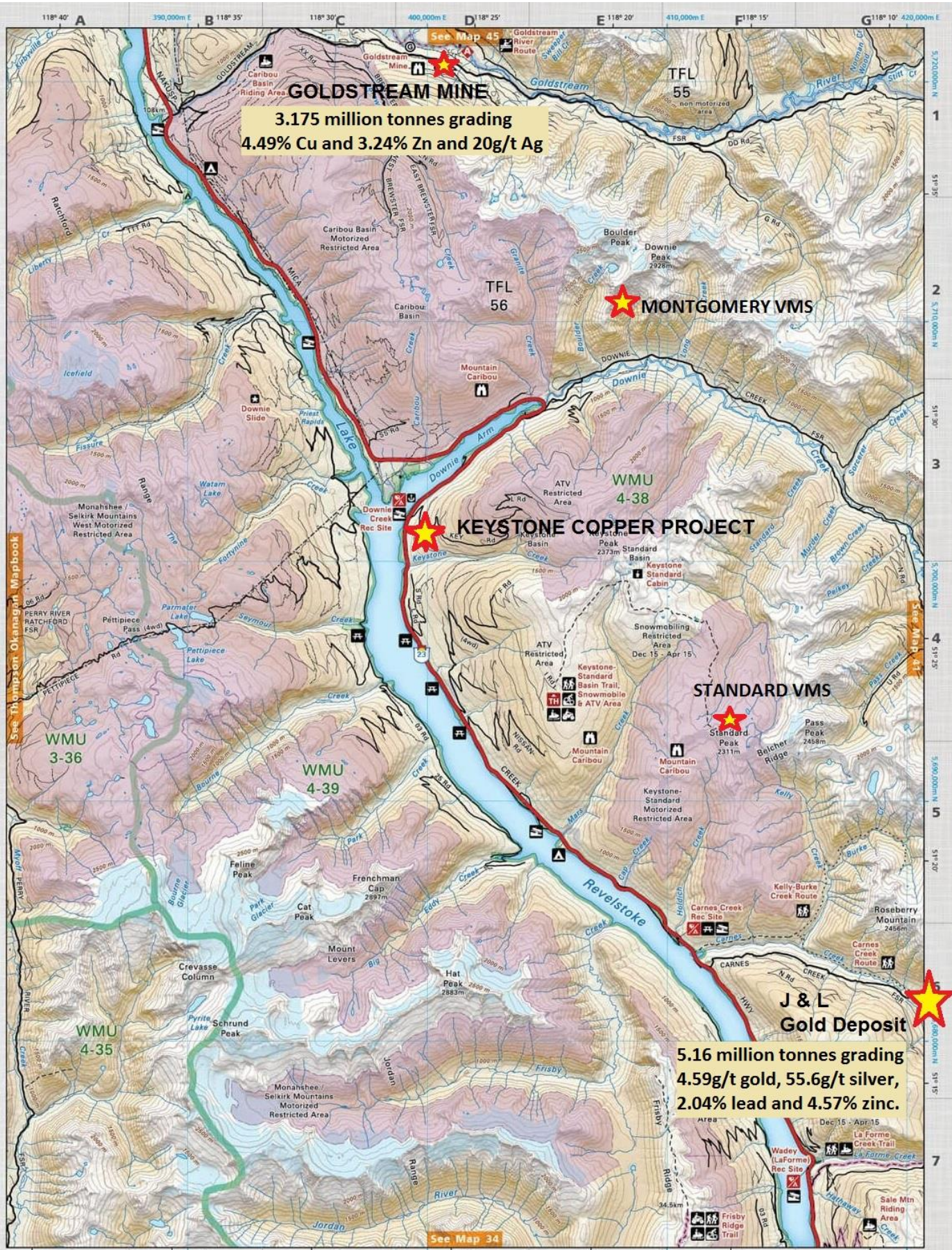
These deposits have relatively small footprints and the other known VMS occurrences in the belt were either discovered in areas of good rock exposure, at high elevations, (Montgomery) & (Standard) or by chance during construction of forestry roads (Goldstream). The heavily vegetated low-elevation regions are under-explored, and few previous workers recognized or tested the potential for nickel-cobalt mineralization.

As a class, these VMS type of deposits represents a significant source of the world's copper, zinc, [lead](#), [gold](#) and [silver](#) ores, with [cobalt](#), [tin](#), [barium](#), [selenium](#), [manganese](#), [cadmium](#), [indium](#), [bismuth](#), [tellurium](#), [gallium](#) and [germanium](#) as co- or by-products.

Further exploration is warranted to re-test these massive sulphide zones for these other minerals. Plus, further define and delineate priority targets to trench or drill test.

Besshi-type deposits are characterized by conformable, stratiform, blanket-like sheets of massive pyrrhotite and/or pyrite with variable contents of chalcopyrite, minor sphalerite, and rare galena. Copper is the principal economic metal, and there is often subordinate zinc, cobalt, silver, and/or gold.

The huge Windy Craggy Cu-Co-Au massive sulfide deposit in Northern BC is an example of the world's largest Besshi type VMS deposit.



GOLDSTREAM MINE
3.175 million tonnes grading
4.49% Cu and 3.24% Zn and 20g/t Ag

MONTGOMERY VMS

KEYSTONE COPPER PROJECT

STANDARD VMS

J & L Gold Deposit

5.16 million tonnes grading
4.59g/t gold, 55.6g/t silver,
2.04% lead and 4.57% zinc.

See Thompson Okanagan Mapbook

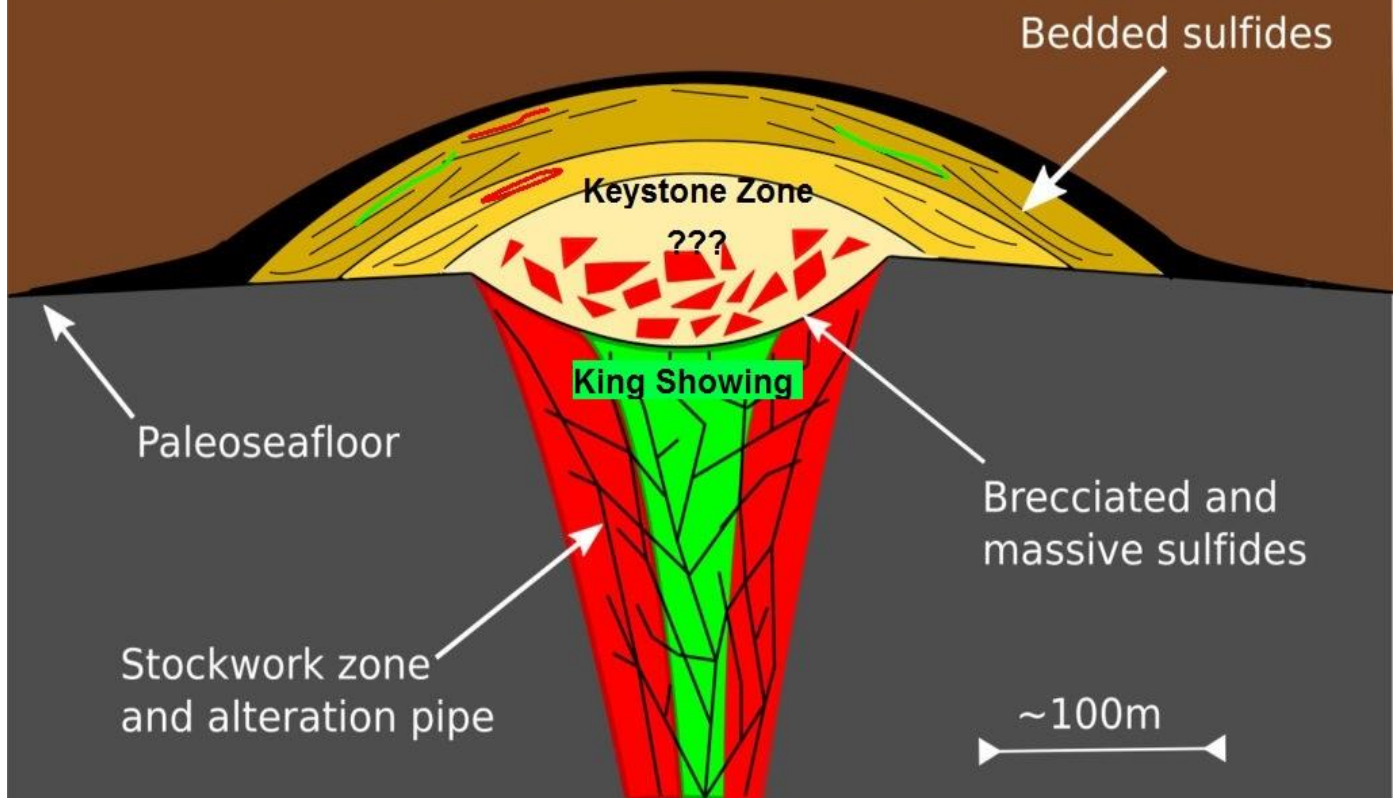
See Map 41





See Map 34

Dec 15 - Apr 15
La Forme Creek Trail
Wadey (LaForme) Rec Site

Sale Mtn Riding Area

SIMPLIFIED VMS MODEL FOR KEYSTONE PROJECT



	Younger volcanic or igneous rock		Chloritic alteration with chalcopryite stringers/veins
	Older volcanic rock (Na-depleted)		Sericitic alteration with disseminated pyrite
	Keystone Rocks Cu-Rich sulphides (Cpy-Py-Po)		Fe/Zn-Rich sulphides (Py-Sp-Gn)
	Zn/Pb-Rich sulphides (Sp-Gn-Py-Ba)		SiO ₂ -rich exhalite (tuffite)

The Goldstream mine and mill operated during the period of 1983-84 and 1991-96, yielding 78.3 million kilograms of copper, 8.0 million kilograms of zinc and 26.3 million grams of silver from 2.2 million tonnes of ore at an average grade of 4.3% copper, 3.0% zinc and 12 grams/tonne silver.

Showings and Targets in the Lower Keystone Area

Target 1 is in the southwest-central part of the grid area and consists of a coincident multi-element base metal (Cu, Zn, Pb, Ag, Mn, Fe, Mo) soil geochemical anomaly extending northeasterly some 900m and is up to 125m wide. This anomaly is coincident with a VLF-EM conductive zones. Values are up to 13653ppm Zn. Copper values up to 540.6ppm Cu and lead values up to 3172ppm. Coincident with the anomalous base metal values are anomalous values in Ag, Mn, Fe and MO. Coincident with the multi-element soil geochemical anomaly is a conductive zone extending the full length of the anomaly.

Target 2 is in the northwestern part of the property and is known as the Lower Key road Showings. The target consists of a Cu-Zn soil anomaly and angular massive sulphide float boulders containing up to 58223 ppm Zn and 985 ppm Cu

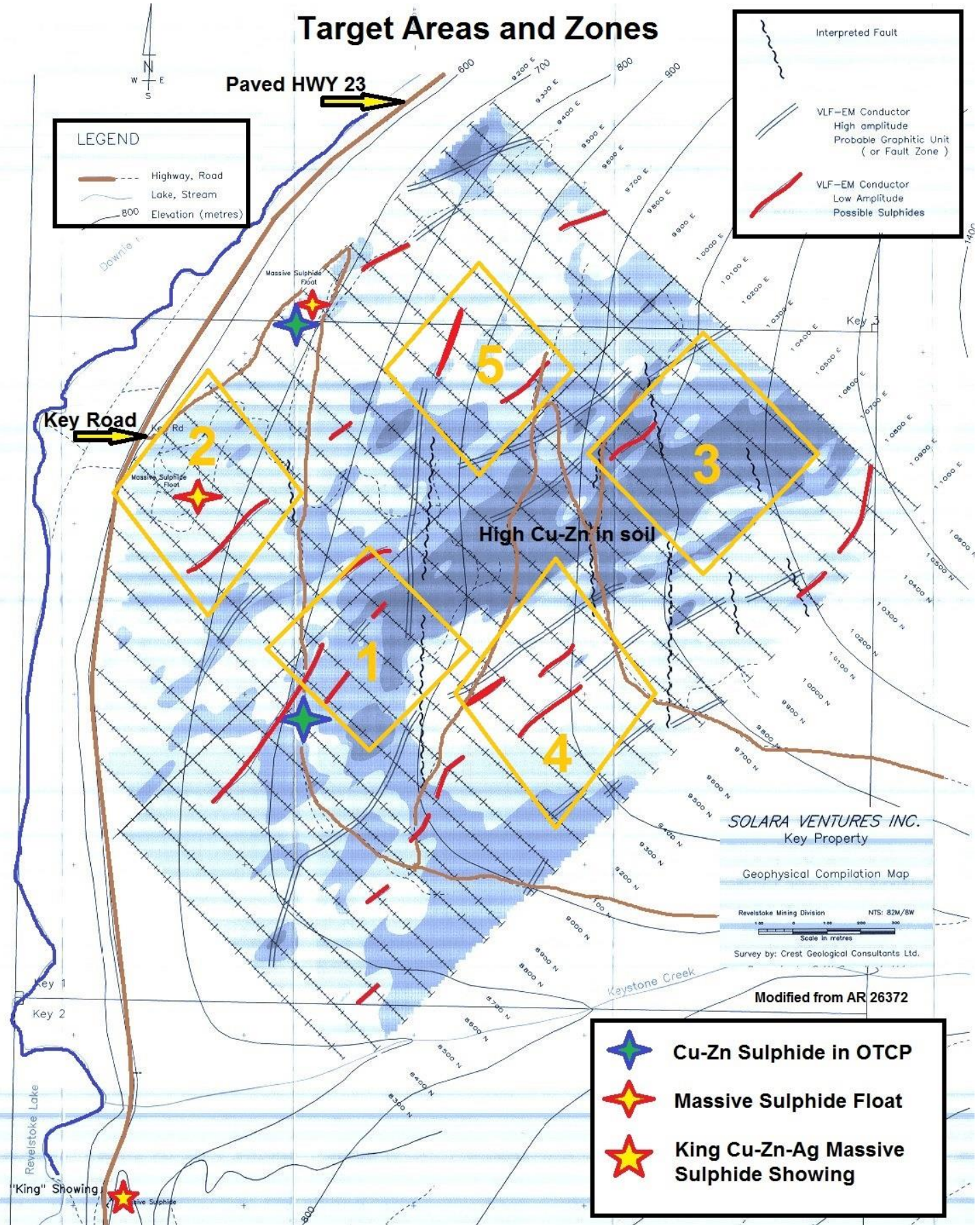
This is a small intense soil anomaly, anomalous in Zn (859.9 ppm Zn) and moderately anomalous in Cu (1785 ppm Cu). The anomaly extends from L92N, 93+50E to L 93N, 93+50E and could be the surface expression and continuation of mineralization intersected during the 1989 and 1990 drilling campaign.

Target 3 occurs in the central part of the grid and consists of anomalous Zn. Pb and Cu in soils extending some 400m to the northeast, this anomaly is underlain by siliceous quartz sericite schist and dark banded quartz graphite-biotite schist. The soil anomaly consists of anomalous Zn (up to 845.8ppm), Pb (731.2ppm), and Cu (179ppm). The anomalies are underlain by siliceous quartz sericite schist and dark banded quartz graphite-biotite schist. Coincident with the soil geochemical anomaly is a strong conductive zone.

Target 4 is in the east-central part of the grid. This area is underlain by dark banded quartz graphite-biotite schist and chlorite schist. Strong conductive zones are coincident with the target as well as moderately anomalous Cu and Zn values in soils. The anomaly contains moderately anomalous Cu values up to 224.7ppm and Zn up to 250.2ppm. The anomaly is underlain by banded quartz graphite-biotite schist and quartz chlorite schist (**similar rock types host the Goldstream deposit**) and is coincident with a strong conductive zone.

Target 5 is in the north-central part of the grid and extends some 400m to the northeast and is up to 150m wide. The target consists of anomalous Zn and Cu in soils with coincident spot highs in Pb. This anomaly is also coincident with a moderately strong VLF-EM conductive zone. The anomaly consists of coincident Zn (up to 1285.8ppm), Cu (up to 484.2ppm) and spot Pb (up to 65.95ppm). This anomaly is coincident with a moderately strong conductive zone. **No explanation was ever discovered for this target.**

Target Areas and Zones



LOWER KEYSTONE AREA



GEOPHYSICAL SURVEYS

A total of 435km of magnetometer and VW-EM surveying was completed at 12.5m stations along grid lines spaced 100 m apart. The purpose of the magnetometer and VLF-EM surveying was to aid in geological mapping and structural interpretation in areas of overburden cover.

A complete interpretation of the geophysical data is described by T. Perot of SJV Geophysics Ltd., Delta, B.C.

Magnetic contouring reveals three magnetic regimes. It is dominated by a strong magnetic high (>57050 nT) extending northeasterly along the southeastern trend.

BRECCIATED MASSIVE SULPHIDE SUB-CROP - SEPT. 2021 – Po-Py-Cpy-Sph-Ga

(1.2% Zn – 2.16% Pb – 78.3 gpt Co – 12.25 gpt Ag)

The magnetic high is rimmed to the north and west by a 200 m wide magnetic low (<56.900 nT). The remainder of the survey area is underlain by intermediate magnetic intensities that exhibit a gradual gradient that decreases from west to east. The entire survey grid is punctuated with both positive and negative, high amplitude magnetic spikes, typically 1 to 3 stations across.

The strong magnetic high coincides with the Upper Key Package volcanic sequence which is comprised of quartz biotite schist, chlorite schist and biotite-hornblende schist. Results from a 2-D modeling study (Pezzot, 2000;) across this magnetic feature suggests that a weakly magnetic source (1% to 2% magnetite equivalent) may form a buried, wedge shaped body that thickens to the southeast.

The bottom of this unit dips at a moderate angle (- 45° to the southeast, implying that any surface targets to the northwest could plunge beneath it and should be considered open down dip. Any surface targets coincident with this magnetic zone can be expected to have a limited depth extent. This magnetic unit is cut by several northerly trending faults. The southern section of the unit (south of L97N) exhibits a much sharper magnetic gradient along its' northwestern edge than is seen to the north.

Modeling suggests that the northern portion of the body could be comprised of several zones of higher magnetic material, stacked and offset by southeasterly dipping thrust faults.

The band of low magnetic susceptibility that rims the high to the north and west coincides with a band of Upper Key Package pelitic rocks which are considered the favourable environment for the target mineralization.

The high amplitude magnetic spikes may be related to localized areas of near surface, pyrrhotite mineralization. Line to line correlation of these responses are unclear. Geological information suggests this mineralisation may accumulate in narrow, heavily deformed bands such as fold hinges. There are several areas, most noticeably at the northwest ends of the lines, where weak (50nT to 70nT) magnetic highs form circular to elliptical features, some 100 m to 150m across.

This area is underlain by Lower Key Package pelitic rocks. Five subtle magnetic highs are interpreted as fold hinges, in the manner proposed by comparison to the Goldstream Deposit Model.

Three of the subtle magnetic anomalies suggest folds with a trend axis-oriented NW-SE, parallel to the survey lines.

One of the subtle magnetic anomalies has been drill tested and intersected two massive sulphide horizons grading up to 8869.8ppm Zn and 421.5 ppm Cu over 2.1 m.

This suggests that another similar (**untested**) magnetic feature located 150m to the southwest may also contain significant massive sulphide mineralization.



VLF - EM

There are numerous conductivity type responses evident in the VLF-EM data, both in the in phase and field strength components. Most form NE-SW striking lineation's

The conductors can be divided into two classes, based on peak-to-peak amplitude of the in-phase component response. Several of the high amplitude responses correlate to geologically mapped graphitic phyllites and graphitic schist units.

Lower amplitude conductors are more likely related to massive sulphide sources.

The quadrature component profiles exhibit a reverse polarity from the in-phase component Over many of the conductors, most notably in the northern and eastern portions of the grid. This suggests the presence of a conductive or mineralised overburden in these areas.

North-south orientated faulting is clearly evident as discontinuities and offsets of both magnetic and VLF-EM trends thought out the property.

PROPERTY GEOLOGY

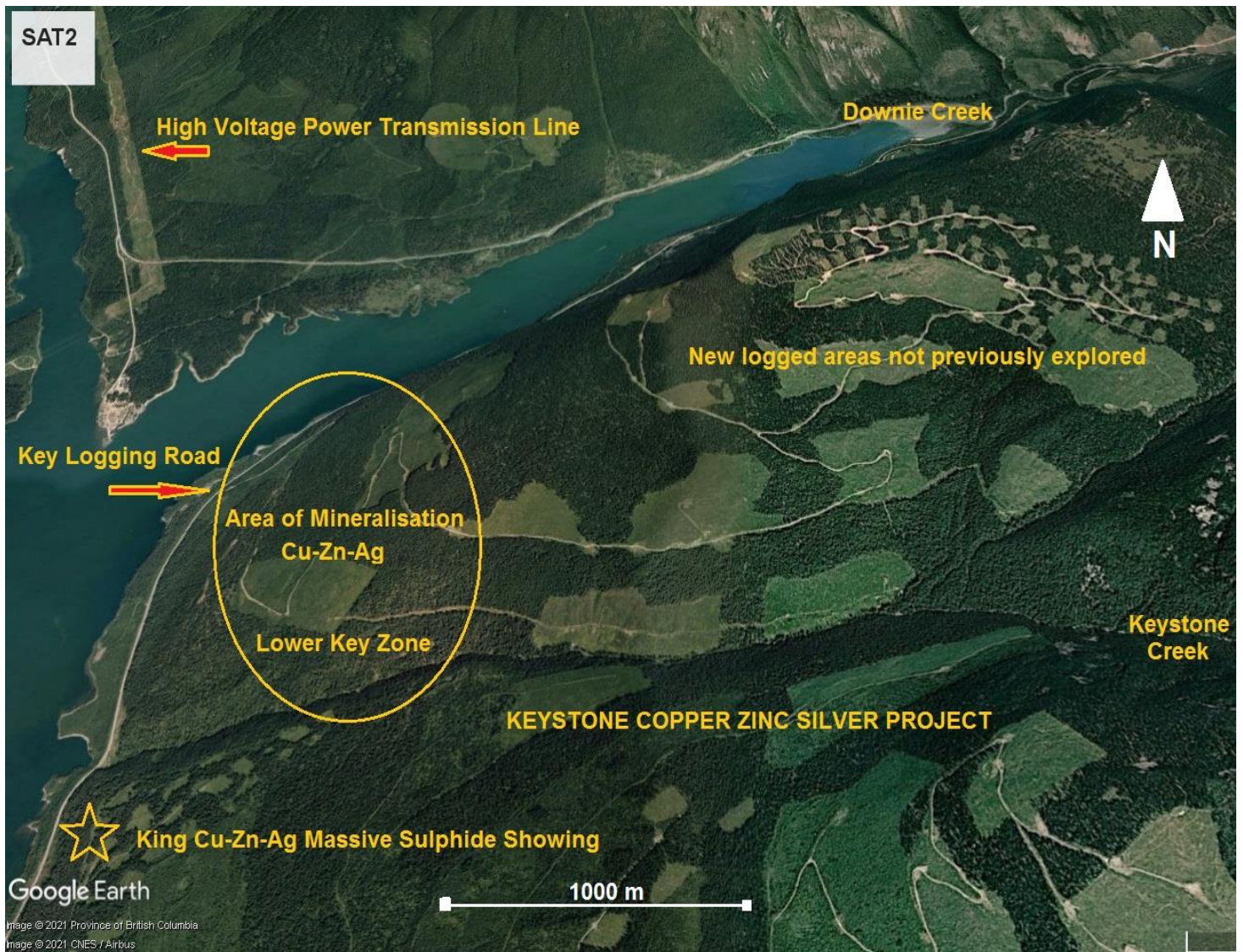
The Key property is underlain by isoclinally folded metasedimentary and meta volcanic rocks of the Selkirk Allochthon correlative with the Lardeau Group (Index Formation) which hosts the Goldstream Cu-Zn-Ag deposit. These rocks are part of a broad northwest trending antiformal arch above the Downie Creek quartz monzonite stock.

Structurally the Key property suite of rocks is part of the 'Holdich Domain', Gibson, 1989 and Wild, 1990, a sub-slice of the Goldstream allochthon bounded by the gently east dipping Columbia River Fault and above by a major tectonic slide at the base of the 'Roseberry Domain'.

Rocks on the property can be divided into three Lithological packages
The structurally lowest slice, the Lower Key Package consists of metamorphosed, moderately calcareous pelitic rocks with minor marble, quartzite and quartz pebble conglomerate.

Structurally overlying the lower pelitic units is the Middle Key Package an elastic sequence of rocks consisting of micaceous quartz, quartz sericite/chlorite phyllite and intercalated quartz biotite-chlorite schist and quartzite.
The middle and upper Key Packages appear to be separated by a layer parallel graphitic shear zone.

The Lower Key Package is composed of meta sediments structurally overlain by metavolcanics units. In the extreme northern part off of the claims, just south of Downie Reach is a medium to coarse grained, leucocratic quartz-hornblende-biotite gneiss believed to be a border phase of the Downie Creek stock.



Detailed mapping and prospecting are required covering the defined target areas. Line cutting and Max-Min surveying is required to define conductive zones indicative of massive sulphide's within the Target areas. Diamond drilling of specially defined Targets will follow completion of the above surveys.

The grid should also be extended to the southwest to cover the King Showing to aid in answering the question as to where the surface trace of the mineralized horizons trends up the ridge.

Based on the encouraging results from the Key property to date, a further exploration program of detailed mapping / prospecting, max-min surveying and core drilling is recommended to further define and test this massive sulphide prospect.

Craig Payne P. Geo - Crest Geological Consultants AR 26372

Upper Keystone

The UPPER Keystone area is underlain by quartzites, phyllites and schists of probable Lower Paleozoic Lardeau Group and isolated inliers of the Badshot limestone. Showings on the property consist of con-formable replacements in limestone and discordant fault-controlled vein type occurrences with a quartz gangue.

The main showing has been exposed by trenching to reveal a band approximately 1 metre by 15 metres of replaced limestone. Mineralization consists dominantly of pyrrhotite, sphalerite, galena, pyrite and minor chalcopyrite.

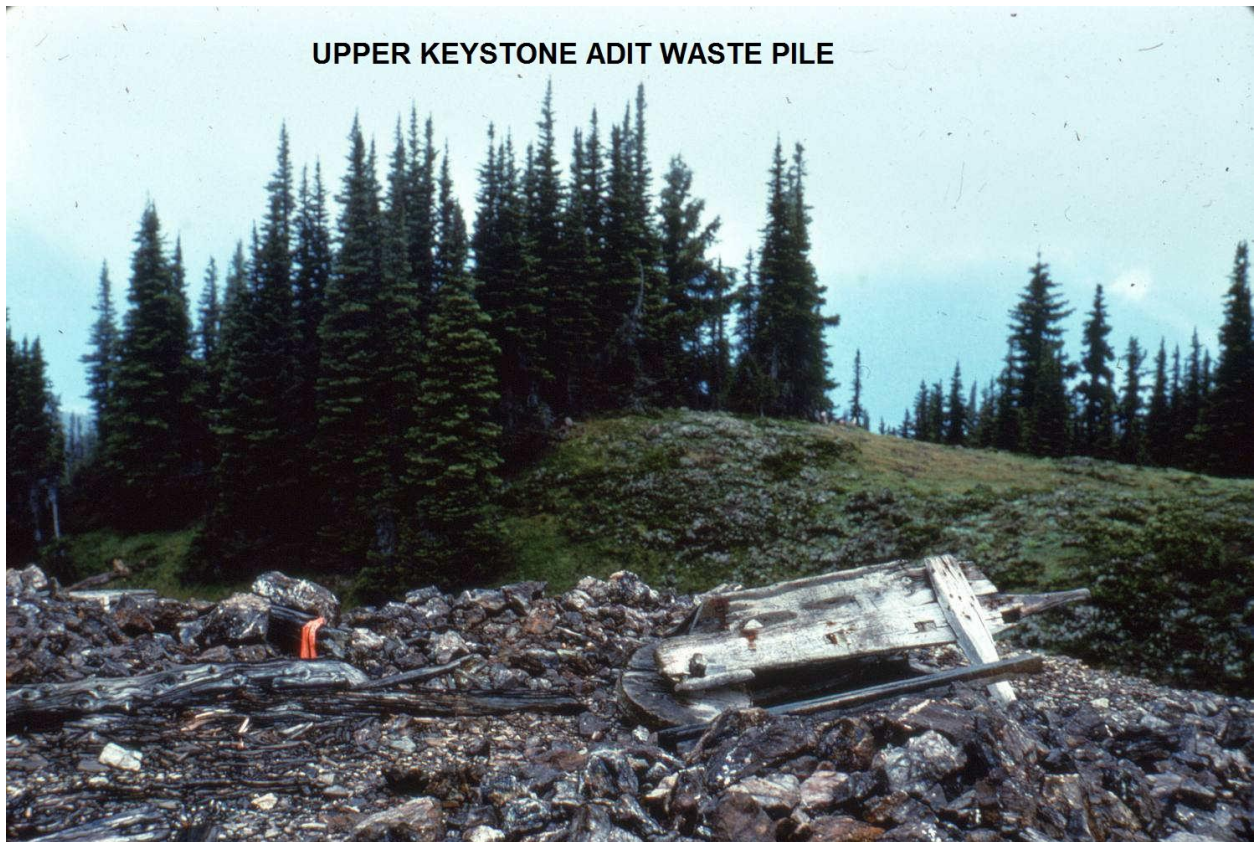
A one metre sample assay yielded 1.0 per cent lead, 0.25 per cent zinc, 0.27 per cent copper, **2.0 grams per tonne gold**, and 17.8 grams per tonne silver (Assessment Report 6235).

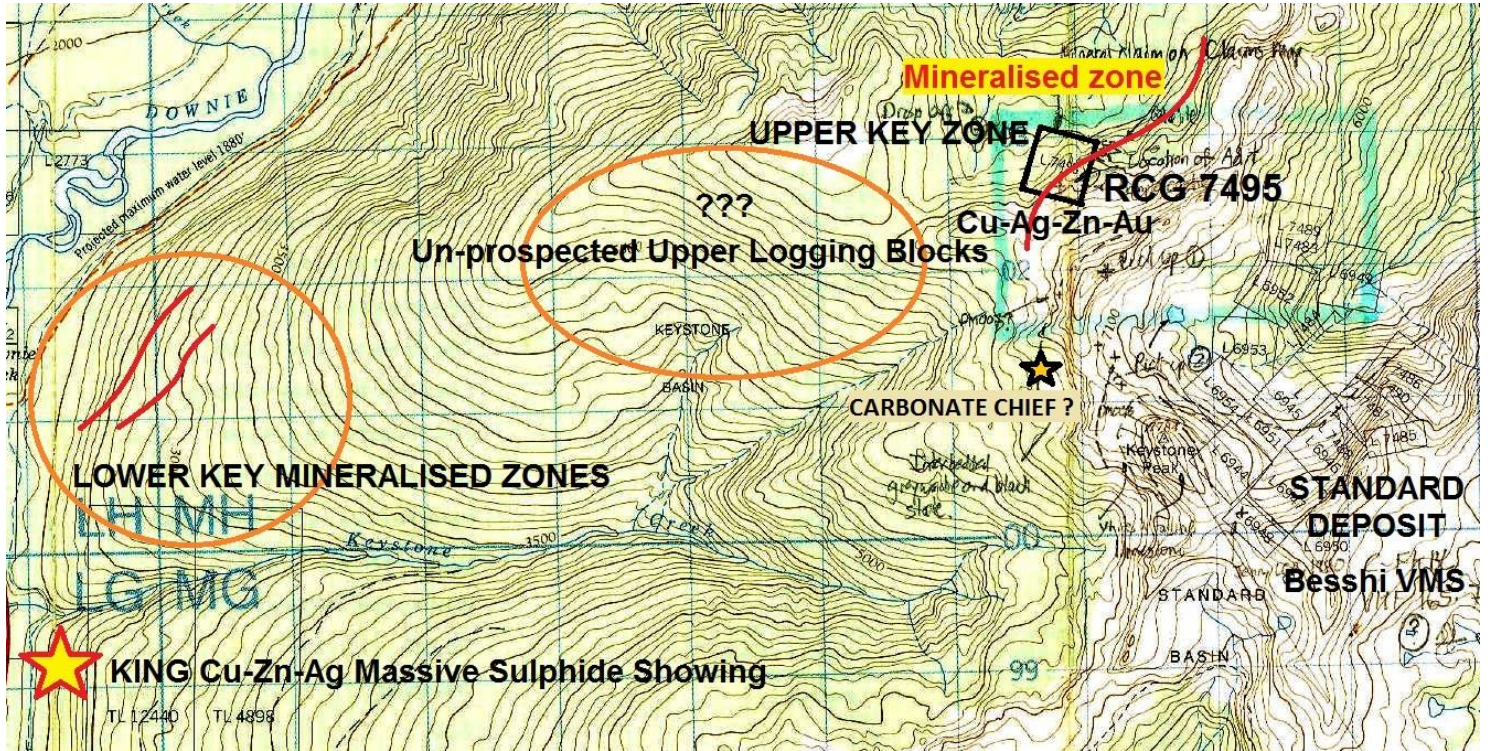
A second trench, 400 metres northwest of the main showing, exposes a crosscutting mineralized quartz vein within quartz-chlorite- sericite phyllite.

The vein contains coarse grained pyrite and minor sphalerite and galena.

A lead-zinc-silver showing, 650 metres south of the main showing, occurs in limestone. A grab sample assayed 0.31 per cent lead, 0.2 per cent zinc and 6 grams per tonne silver (Assessment Report 10768). Another showing, 700 metres northeast of the main showing, consists of a quartz vein with pyrrhotite, sphalerite and galena.

A grab sample yielded 0.48 per cent lead, 0.15 per cent zinc and 26 grams per tonne silver. The surface of these showings is heavily oxidized and leached, so higher grades may be expected from fresh mineralisation exposures.





FOR FURTHER INFORMATION

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