

MINERAL TITLES BRANCH  
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VANCOUVER, B.C.

**GEOLOGICAL EXPLORATION OF  
THE ALPINE 2000 GROUP**

**Nelson/Slocan Mining Divisions, B.C.**

**NTS 82F064 & 074**

**UTM 5504000N, 482000E**

**Prepared by:**

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**TERA EX GEOLOGICAL**

**for:**

**MATOVICH MINING**

**LTD.**

**September 2000**

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## SUMMARY

**Tera Ex Mining** was retained by **Allen Matovich** to conduct a short exploration program on the Alpine 2000 Group which is situated at the head of Sitkum Creek in the Nelson, and Slocan Mining Divisions.

The work program included; geological reconnaissance mapping, a very short SP Geophysical profile survey along a road, prospecting, and rock sampling at various showings/workings in the area. A bit of time was spent at the old Alpine Mine to familiarise the author with the style of mineralisation which prevails in the general area, and to also learn something about the structural, and other controls on mineralisation.

The property is underlain by Quartz Monzonites of the mid Jurassic Nelson Batholith. Gold Silver mineralisation typically occurs in white translucent quartz veins, with galena, sphalerite, and lesser pyrite. Vein mineralisation on the property is typically enveloped by an alteration package that is often several meters wide, which comprises silicification sausseritization, and also sericitization. Post-ore kersanite lamprophyre dykes were noted to occur at the mine site, and elsewhere on the property.

A total of 11 rock samples were collected during the course of the work on the property, and three discrete areas of previously known and reported mineralisation were visited, namely the King Salomon (Minfile 082FNW257), the Golden Crown, and an area on the Alpine Mine Access road where a sample was reported to have been taken during Cove Energy's work in the area in 1987. The property appears to have merit and a certain amount of "blue sky" exists on all these exploration targets. Also, it does appear from the author's cursory examination of the data made available to him that there is a great deal of further exploration potential on the Alpine vein itself, and that the possibility of increasing the contained resource reported in that structure is considerable.

Based on the positive results of the work performed on the claim group area a range of follow-up exploratory activities are suggested for the property.

## **INTRODUCTION**

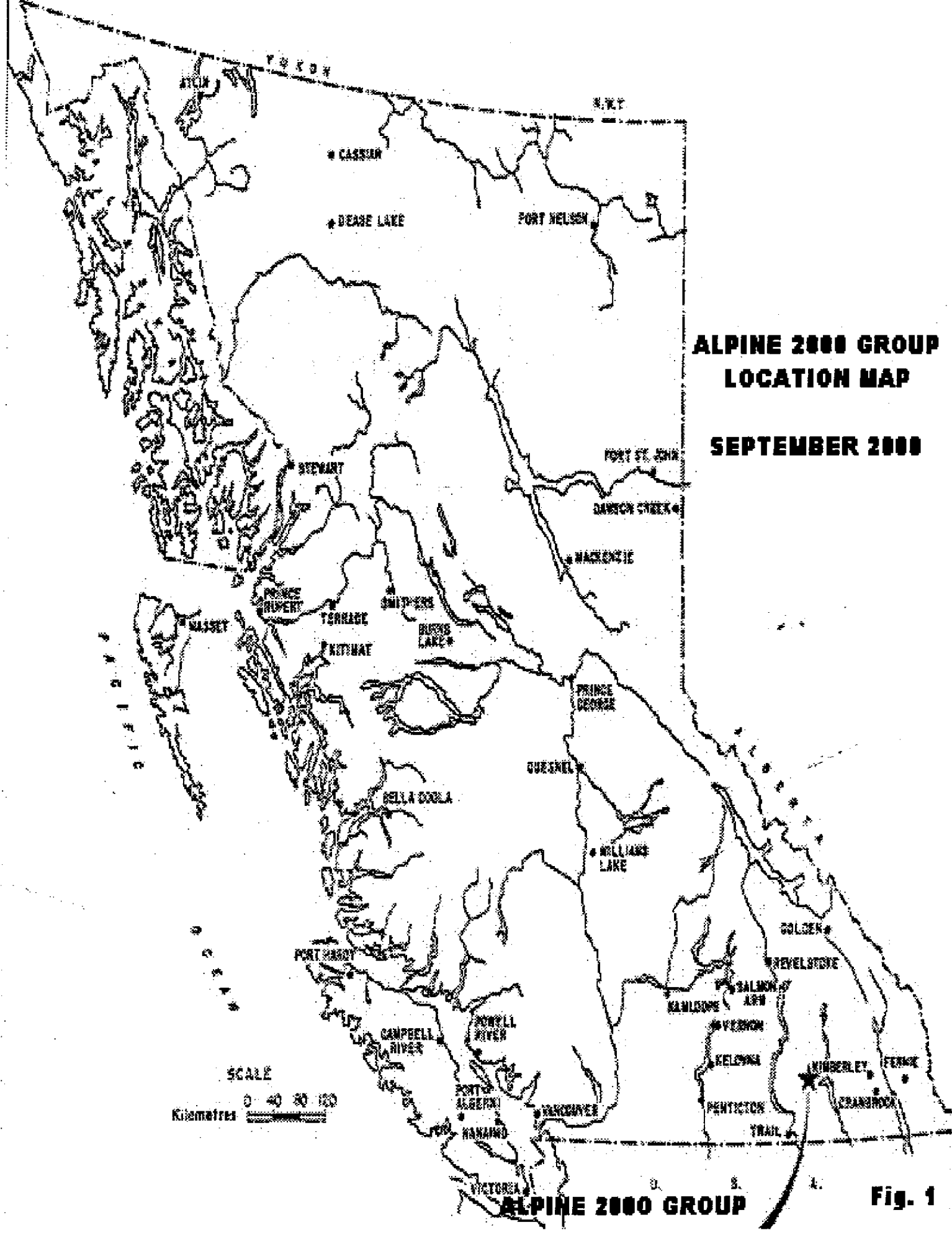
Tera Ex Geological was retained by Allen Matovich of Matovich Mining Ltd. to conduct a short exploration program on the Alpine 2000 group in the Sitkum Creek area, Nelson/Slocan Mining Division B.C. To that end a total of 14 man days were spent in the area, between August 18<sup>th</sup> and September 6<sup>th</sup> 2000.

Originally the focus of work was to be on the Alpine Vein proper, and the immediate vicinity of the mine, but it was realised that some work would be necessary to make the underground workings safe. It was decided that a general look at the exploration opportunities on the property would be the best approach at this time. This report details the results of the field exploration program, and makes recommendations for further work on the property.

## **LOCATION, ACCESS AND PHYSIOGRAPHY**

The property is roughly centered at UTM coordinates 5504000 north, and 482000 east, and is approximately 20 kilometres North of the city of Nelson, and is depicted on NTS topographical map sheet 82 F/11 (see Figure 1).

Access to the property can be gained by driving east on highway #3A approximately 12 kilometers from Nelson to Granger Road, which then turns into Alpine Road which follows Sitkum Creek up to it's termination at the Alpine Mine site. This road is only maintained by forestry on a casual basis up to approximately the 12 kilometer mark. There is no guarantee this portion of the road, and especially the non-maintained next 4 kilometers will be passable at any given time, although checking with the B.C. Forest Service may help in determining if any work has been done on the road, or is being planned. Alternatively the property can be accessed by helicopter from Nelson, where a couple of machines are based on a year round basis. On a larger program it would be most cost effective to hire contractors to open, and maintain the access road. Access to the northern sections of the claim group, which were not visited during the course of this work, is achieved by driving



**ALPINE 2000 GROUP  
LOCATION MAP  
SEPTEMBER 2000**

SCALE  
0 40 80 120  
Kilometres

**ALPINE 2000 GROUP**

**Fig. 1**

up Lemon Creek approximately 16 kilometers from highway 6 at the village of Lemon Creek, and then taking several kilometers of logging/mining road into the area. The old "go devil" road to the King Salomon Mine, which leaves the Alpine road at a point (~5502238N and 0481972E) several hundred meters north of the old mill site, is still in good walking shape, and with a bit of work could be passable using ATV's.

The property is located within the Kokanee Range, of the Selkirk Mountains of the Columbia Mountain physiographic region (Holland 1966). Elevations on the property range from approximately 1675 meters ASL in the northern portions of the claim group, to a high of over 2347 meters at the top of Mount Cornfield. The uppermost portions of the property can be characterized as alpine, with only the occasional stunted spruce, balsam, or pine tree, the dominant vegetation being typically various berry bushes, and grasses. The portions of the claims below 6500 feet in elevation are typical of the subalpine type vegetation seen locally, with widely spaced balsam, and spruce trees predominating, while the forest floor is typically vegetated with salal, and berry bushes. Topographically the area is predominately quite steep with slopes normally being in the 35 - 45° range

The property lies within the Wet Interior Bioclimatic zone, and the area can be characterized as one in which short rainy summer conditions are the norm, and a great deal of snow falls, and accumulates during the prolonged winters. In a typical year the property would be free of all snow by late June, and the first snows that will accumulate occur in mid to late October.

## **PROPERTY**

As shown in Figure 2, the Alpine 2000 group consists of 15 crown granted claims, and three Modified grid four post claims, and six two post claims for a total of 69 units.





**TABLE I - MINERAL CLAIMS**  
**ALPINE 2000 GROUP**  
**NELSON & SLOCAN MINING DIVISIONS, B.C.**

<b>CLAIM</b>	<b>TENURE NUMBER</b>	<b>OWNERSHIP</b>	<b>UNITS</b>	<b>GOOD TO DATE</b>	<b>NEW EXPIRY DATE *</b>
KING SALOMON	371738	ALLEN MATOVICH	8	Sept19, 2000	Sept 19, 2002
ALPINE 2	371739	ALLEN MATOVICH	20	Sept 14 , 2000	Sept 14, 2002
ALPINE 1	371740	ALLEN MATOVICH	20	Sept 14, 2000	Sept 14, 2002
CB 1	371741	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
CB 2	371742	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
CB 3	371743	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
CB 4	371744	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
CB 5	371745	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
CB 6	371746	ALLEN MATOVICH	1	Sept 18, 2000	Sept 18, 2002
L2215	NA	ALLEN MATOVICH	1	NA	NA
L2216	"	ALLEN MATOVICH	1	"	"
L2879	"	ALLEN MATOVICH	1	"	"
L2880	"	ALLEN MATOVICH	1	"	"
L2881	"	ALLEN MATOVICH	1	"	"
L2882	"	ALLEN MATOVICH	1	"	"
L2883	"	ALLEN MATOVICH	1	"	"
L14922	"	ALLEN MATOVICH	1	"	"
L14924	"	ALLEN MATOVICH	1	"	"
L14928	"	ALLEN MATOVICH	1	"	"
L15002	"	ALLEN MATOVICH	1	"	"
L15003	"	ALLEN MATOVICH	1	"	"
L15004	"	ALLEN MATOVICH	1	"	"
L15005	"	ALLEN MATOVICH	1	"	"
L15006	"	ALLEN MATOVICH	1	"	"

- After acceptance of this assessment report as satisfying the work requirement

## HISTORY

The General area has seen a great deal of mining activity in the past the vast majority of the work having been conducted in the vicinity of the Alpine Mine proper. The claims in this area date back to 1896 or earlier, and no work of any substantive nature had been reported until 1918, when a number of open cuts and a 55 meter adit was driven on the Noonday group. This group was comprised of four claims, the Noonday, Climax, Margaret, and Pearl Fraction, which were all held by J. Radcliffe, and J.S. Johnson of Nelson.

By 1927 the Alpine group of four claims (Swiss, Highland Chief, Berne, and Kootenay Pass) had changed ownership from C. Faas, H. Clever & Associates, to E. Harrop & Associates. By this time the workings on the group consisted of two adits, although it is uncertain whether this includes the adit previously driven on the Noonday claim. Sometime around 1936 the property was acquired by The Alpine Syndicate, who built the present road to the property, while in 1937 the No. 10 adit, which is the lower most, and most developed level, was commenced. Alpine Gold Limited acquired the property in 1938, and also acquired the Swiss, Alpine, Washington Fr., Oregon Fr., and Idaho claims. At this time the Basin, Meadow, and Sitkum claims (Lots 14922, 14928, 14929), located at elevations of 1675 to 1980 meters on Sitkum Creek, and southeasterly of the minesite, were acquired by the company for a millsite. Alpine Gold also extended the No. 10 level adit a further 80 meters, in that year. By 1940 a 50 ton per day mill was operating at the millsite, and was connected to the minesite by tramline. The mine and mill operated sporadically until 1948. In total the workings to this date comprised over 1646 meters of drifts, crosscuts, and raises. Approximately 366 meters of diamond drilling was conducted in 1947. The property was estimated to still contain reserves, after the cessation of activity (Minfile), of 90,720 tons at 19.5 grams per tonne gold.

The property lay dormant until 1987, when Cove Energy Corporation optioned the property and subsequently did a deal with Granges Exploration Ltd. An aggressive exploration program was implemented, which included construction of sections of new access road, dump sampling, cross cutting on the No. 10 level to provide underground drill stations, and diamond drilling. At the end of this program it was estimated that 190,500 tonnes of

proven reserves existed grading 13.7 grams gold per tonne (Minfile). At this time also, some surficial drilling was conducted on targets other than the main Alpine vein, in the general area of the mine.

In 1989, Cominco Ltd. acquired an option from Cove, and conducted a diamond drill program northwest of the minesite in the Alpine Basin. The drilling program was designed to test the downdip extension of the Alpine vein, and was successful, intersecting the vein in previously unknown territory. In all the company drilled 1745 meters of BQ core in 12 holes.

In total approximately 16,810 tonnes of recorded production was taken from the Alpine mine between 1915 to 1988. This ore contained 222,044 grams of silver, 356,360 grams of gold, 49,329 kilograms of lead and 17,167 kilograms of zinc. Overall grades of the material produced to date are; 13.21 gm/t Ag, 21.2 gm/t Au, 2.93 kg/t Pb, and 1.02 kg/t Zn

Nothing of any significance is written about the King Solomon claim (Lot 14628) until 1939 when the Ministry of Mines reported that a "go devil" road was constructed and 19 tons of ore was produced using hand steel only. The ore contained 13 ounces of gold, and 17 ounces of silver.

Likewise nothing of any interest is reported to have occurred on the Gold Crown claim until 1939 when it was operated by a lessor, who produced 3 tons of ore which contained 2 ounces of gold, and silver each, from various open cuts on the property.

The first mention of the Gold Blow showing comes from Hodges (1897) wherein he mentions that there is a four foot vein on the Black Prince group of three claims which carries galena, with high gold values. He goes on to state that there is a twenty-foot shaft on the property with a 50 foot crosscut. No further mention of the property exists in the public realm, but Denny (1988) reported having heard quite a bit of hearsay regarding shipments of ore at various times by different parties. Denny's report also contains an excerpt from a report he apparently had seen at one point by a Ronald Campbell-Johnston

from 1929 wherein he states that there are two veins on the property, both of which are greater than 4 feet wide, and which locally carry high-grade Gold and Silver values.

Mention is made in Denny's (1988) report of the Lone Dutchman showing in the general area of the Alpine, and the King Salomon, but the author could find no information relating to this area, although it may coincide with a vein which is indicated by Brown (1988) as existing on the ridge which runs from the King Salomon to the Alpine.

## **REGIONAL GEOLOGY**

The Kokanee Range is located west of the collision boundary between ancestral North America, to the east, and the pericratonic Kootenay terrane and the accreted terranes of the Slide Mountain back-arc oceanic basin, and Quesnellia island arc to the west. The Kootenay terrane comprises the Cambro-Ordovician Lardeau Group and the Carboniferous Milford Group and represents an off-shelf margin facies, comprised of sedimentary and volcanic rocks, which were deposited in an environment of episodic rifting, and compression. Permian Kaslo Group Tholeiitic basalts in the Slide Mountain terrane were formed in an oceanic basin, marginal to ancestral North America. Unconformably overlying the Kaslo Group are the Upper Triassic Slocan Group argillites and sandstones which were deposited to the west of the Slide Mountain terrane in a back arc basin to the Quesnellia island arc.

By Early Jurassic time all of the aforementioned allochthonous terranes had combined to form the Intermontane Superterrane, which subsequently collided with ancestral North America during the Middle Jurassic. The eastward subduction of the Cache Creek oceanic basin underneath Quesnellia during the Middle Jurassic, produced the large granodioritic, intrusives which are common in the region. Upper Proterozoic rocks were buried to depths of more than 20 km in less than 10 million years due to this collision. At the cessation of subduction these rocks were then subjected to slow uplift and cooling until latest Cretaceous time, and rapid uplift and cooling during the early Tertiary. The Kokanee Range is bounded on the west by the Valhalla metamorphic core complex, uplifted during

**ALPINE 2000 GROUP  
REGIONAL GEOLOGY MAP**

scale 1:50,000  
September 2000  
from Brown et al 1988

Fig. 3

**LEGEND**

- Tertiary?
- Ta - Andesite & Basalt Dykes
- Mid Jurassic
- N2 - Postassium feldspar porphyritic granite
- N4 - Biotite granite to granodiorite
- N5 - Quartz Monzonite

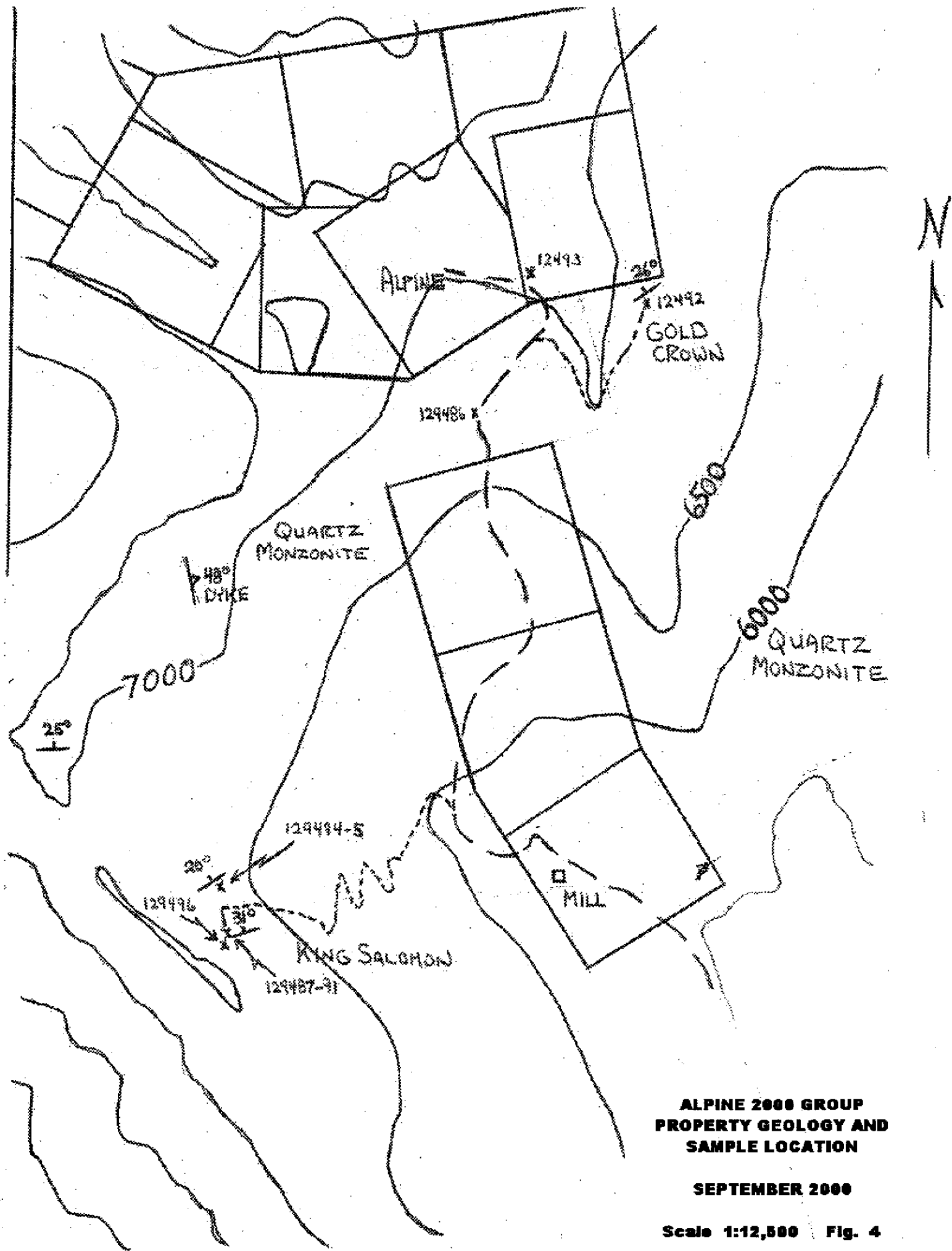


the Eocene from its original middle crustal position as a result of normal displacement along the low-angle, east dipping Slocan Lake Fault. The Slocan Lake Fault separates the footwall Valhalla metamorphic core complex from the hangingwall Nelson batholith and rocks of the Slocan Group (Beaudoin et al 1991).

## **PROPERTY GEOLOGY AND MINERALIZATION**

The host lithology in the claim area is predominately a quartz monzonite, with some mineralogic, and textural variation occurring locally. The quartz monzonite, is cut locally by pegmatitic quartz and potassium feldspar-rich dykes, and most notably by post-ore, kersantite lamprophyre dykes. Late normal faulting was noted to occur locally, with the predominant orientation appearing to be to the northwest.

At the Alpine Minesite the alpine vein proper is hosted in quartz monzonite of the Nelson Batholith, in a discrete shear zone striking approximately  $70^{\circ}$  Az, dipping in the order of 30 degrees to the north. Apparently the vein can be traced for over 400 meters on surface. The vein pinches to a width of 0.5 meters, and swells to 2.1 meters locally, and overall averages 1.1 meters in width. While vein contacts are typically sharp, and variably sericitized, and chloritized, the vein has been seen to anastomose, with altered wallrock being encapsulated between narrow branches of the vein. Pre-mineralization aplite and pegmatite dykes are common. Post-mineralisation kersantitic lamprophyre dykes are less abundant, which range to 4.8 metres in width and strike between  $310^{\circ}$  and  $010^{\circ}$  Az with east and west dips. The late normal faults noted above offset all dykes, and veins with displacements of up to 6 meters. Mineralisation varies from massive to disseminated and stringer-type electrum, unidentified silver minerals, pyrite and lesser galena, sphalerite and tetrahedrite hosted in a quartz and minor calcite gangue. The quartz vein is limonitic weathering, highly jointed and fractured and sometimes brecciated. Vein textures are massive crystalline, ribboned, or banded and vuggy. Quartz is variably milky, white, grey and colourless suggesting episodic deposition. Vein characteristics of the King Salomon mine are quite similar to those of the Alpine vein.



**ALPINE 2000 GROUP  
PROPERTY GEOLOGY AND  
SAMPLE LOCATION**

**SEPTEMBER 2000**

**Scale 1:12,500 Fig. 4**

Beaudoin et al (1992) determined by utilising K – Ar, and  $^{40}\text{Ar}/^{39}\text{Ar}$  analyses that the Kokanee Group veins, of which the Alpine vein is a member, are Eocene in age. Additionally Beaudoin et al (1991) determined that the Pb mineralisation present in this group of deposits most likely was scavenged from an upper crustal source by convecting meteoric fluids, while the Sandon Group, and Ainsworth and Bluebell groups combined the above source, and Pb leached from deeper sources, and carried upwards along faults which intersected the Slocan Lake Fault at depth.

## **WORK PROGRAM**

Fieldwork was conducted between the dates of August 18th, and Sept 07<sup>th</sup> 2000 by Geologist Tom Lewis, under the direction of Terrence Smithson of Tera Ex Geological. A good part of the first day was spent gaining, and upgrading vehicular access to the property. It was hoped that it would be possible to work underground, and the original focus of this investigation was to be spent on the Alpine vein proper, looking at wallrock mineralisation, but after an underground inspection by Mr. Smithson it was determined that the 10<sup>th</sup> level workings were unsafe, and it was then decided to spend time looking at the other exploration targets in the claim area.

During the course of the field work a total of 11 rock samples were taken from the Road Bend area, the Gold Crown vein, and the King Salomon Vein. An attempt was made to follow the King Salomon vein laterally on surface with only limited success, while the Gold Crown vein was traced from the original showing which at the time of this investigation was outside of the property boundaries, to a pit adjacent to the Alpine Mine Road, and in an area some 100 meters to the North from the 10<sup>th</sup> level portal.

Prospecting, and geological mapping were undertaken on the access road immediately below the old mine site, in an effort to detect previously known, but previously unreported (Al Matovich personal communication – Cove Energy Sample #24604 January 27, 1989)





mineralisation which was uncovered during road building activities in the late 1980's. As this sample purportedly ran 1.226 oz/ton, 11 oz/ton Ag, 2.98% Pb, and 3.28% Zn, it was felt that it was an interesting target to follow up. A short Short-Wire type SP profile was also run up the road in this area to see if any noticeable SP effect is associated with the mineralisation reported at this location. A survey was undertaken on Aug 31st to locate the King Salomon portal in relation to the Alpine workings, but due to poor visibility caused by inclement weather conditions on the appointed day, a determination of the distance could not be made using transit & prism.

## DISCUSSION OF RESULTS

The SP survey detected two slightly anomalous zones along the road bed in the general area where Mr. Matovich recalls taking sample #24604. Mr Matovich recalls that there were two discreet areas of mineralisation, and the more southerly of the two anomalies occurs within 10 meters of one location he remembered mineralisation occurring. Prospecting, sampling, and mapping in this area did not uncover any mineralisation, but it was noted that a broad envelope of alteration similar to that of the Alpine vein does occur in the country rock here.

The Gold Crown vein was sampled at the pit to the northeast of the Alpine Mine, and at the original showing (129492 & 129493), and both of these samples contained appreciable amounts of Gold. The only orientation taken on this vein was in the area where limited mining was undertaken in 1938, and 1939, and which returned a strike of 56° Az and dip of 26° North, which is roughly similar to that of the Alpine Vein.

The King Salomon vein could not be followed to the north, but a broad area of alteration, with thin veins, and pegmatitic type veins was noted to occur in this area, and is in all likelihood the extension of the King Salomon mineralisation. A couple of samples (129495, and 129496) were taken in this area but did not prove to be particularly anomalous. The King Salomon vein was followed to the south from the showing for

approximately 75 meters, and was lost in a package of altered country rock. Sample 129496 from the vein in this area was quite interesting, returning 21.9 gm/t Ag, 1.33% Pb, and .26% Zn. The vein sample from the dump, and from the vein proper were both highly anomalous in precious, and base metals content. The orientation taken on the vein at the mouth of the old adit here returned a result of 72° Az and a dip of 31° North, while orientations on the vein above this point returned results of 24° Az, and 26° Az, and dips of 40° and 46° to the North.

Base & precious metals ratios indicate that if the mineralization (reported previously, but not seen during the course of these investigations) in the Road Bend area is in place that it possibly represents a different style of mineralization, or may be reflective of mineral zonation as a function of depth of emplacement.

## CONCLUSIONS

1. The mesothermal veins in the area are incredibly persistent, and tend to pinch & swell, anastomose, bifurcate, and appear to be stacked, or shingled.
2. The Vein which is exposed immediately to the northeast of the Alpine Mine, and across the previously recognized fault is the same system as the Gold Crown vein.
2. A very limited portion of the King Salomon vein is exposed on surface, but alteration associated with the vein continues in both directions.
3. Using base/precious metals ratios on an intuitive basis it appears that the mineralisation reportedly uncovered in the "Road Bend" area is different from the other three areas investigated. It is possible this is due to mineral zonation due to depth of emplacement, but it could also reflect a different style, or phase of mineralisation.

## RECOMMENDATIONS

The property merits further work, both on previously known vein occurrences, and also in an effort to discover new, previously undetected, mineralisation. The following recommendations are made for the efficient and orderly exploration of the property:

1. The area of the Gold Crown showing should be acquired by staking (done prior to the submittal of this report).
2. All available data in the area should be compiled and re-interpreted.
3. Following compilation and prioritisation of targets, a field program should be undertaken, comprised of property scale geological mapping, soil geochemistry, general prospecting and rock sampling. Only after further review of all historical data, and the new data generated, should a drilling/trenching program be contemplated. During this program it would be most cost effective to excavate the area of the Road Bend showing to further examine the properties of the mineralisation purported to exist there, before further drilling is attempted here.

**TABLE II - PROJECT COSTS \***

T Lewis Fieldwork - 7 Days X \$405; Aug 18, 30, 31 & Sept 01-4 <sup>th</sup> - Research/Report Writing/Drafting etc. 3.5 Days X \$405 Aug 21 <sup>st</sup> , Sept 05, 06, & 07 <sup>th</sup>	\$4,252.50
T Smithson – supervisor – travel/field 3 X \$500 Aug 30, 31 <sup>st</sup> & Sept 01 <sup>st</sup>	\$1,500.00
Al Matovich – prospector 2 X \$300; Aug 18 <sup>th</sup> , & Aug 31 <sup>st</sup>	\$600.00
A. Stevens – geo technician 4 X \$125 Sept 01 <sup>st</sup> – 04 <sup>th</sup>	\$500.00
Accommodation, Meals – T Smithson Aug 30, 31 <sup>st</sup> , & Sept 01 <sup>st</sup>	\$120.00
Food, Camp Supplies - T Lewis/A Stevens Aug 30 – Sept 04 <sup>th</sup>	\$168.72
Chainsaw rental 1.5 X \$20 August 18 <sup>th</sup> & 30 <sup>th</sup>	\$30.00
Assaying 11 samples by 32 element ICP	\$189.50
Transport – Truck Rental - T Lewis 7 X \$70 Aug 18 <sup>th</sup> , 30, thru Sept 04 <sup>th</sup> - T Smithson 3 X \$70 Aug 30 <sup>th</sup> thru Sept 01 <sup>st</sup>	\$630.00
Fuel/Oil	\$374.72
Shipping/Postage	\$35
Phone/Fax	\$30
Topcon survey instrument rental 3 X \$ 33.33 – Aug 30 <sup>th</sup> thru Sept 01 <sup>st</sup>	\$100.00
Field Supplies	\$36.14
Miscellaneous	\$19.66
<b>TOTAL COSTS</b>	<b>\$8,586.21</b>

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Appendix A

ROCK SAMPLE DESCRIPTIONS

**129486** – Road Bend Zone – sheared Monzonite, w/Qtz (<1cm) stringers ~ 2 cm spacing w/coarse pyrite

**129487** – King Salomon Mine – Portal – rough chip H/W 40 cm width – sil w/ very hem weathering, tr MnO, tr dis vfn grd sulph – vuggy & local sucrosic text.

**129488** – King Salomon Mine – Portal – rough chip Vein 29 cm width – wh trans qtz faint banding – local patches fine to med grd py & gal, < 1% Sulphides

**129489** – King Salomon Mine – Portal – rough chip F/W 40 cm width – mod sil monz, qtz, fldsp, tr bio, sucrosic texture, w/ some qtz vltis – tr med grd Gal, poss v fn grd grd sulphides – hem weathering w/ some perv hem

**129490** – King Salomon Mine – Dump – Grab – banded qtz, sl vuggy, w/ ~ 1% patchy med grained Gal

**129491** – King Salomon Mine – Dump – Lower Portal – Grab – Wh trans qtz – patches <1% med grd gal – hem weathering – tr MnO

**129492** – Gold Crown – Pit Grab – coarse xstalline vuggy wh trans qtz - <1% sub to euhedral med grd py – hem weathering – tr MnO

**129493** – Gold Crown Extention (Alpine Mine Area) – Pit - Random Grab – bull qtz, locally vuggy, w/ <1% med coarse py, hem weathering – tr MnO, local tr patchy med grd Gal

**129494** – King Salomon Extention to north – pegm w/abdt qtz – 40 – 50% Fldspr, tr Bio, loc patches chlor alt - < 1% dis fn grd sulphides

**129495** – King Salomon Extention to north – as 129494

**129496** – King Salomon Extention to south – qtz vein – grab – wh trans local pink/red hem & lim stained - ~ 1% crse patchy gal w/ tr coarse cubic py – tr sericite

Appendix B

ALPINE – SP SURVEY RESULTS  
ROAD BEND ZONE

LOCATION	POT	READING PLUS INVERSE POT DIFFERENCE. (P.D. = 0)	TRANSPOSED READING @ NEG POT	FINAL VALUE
140	-	0	-	-
130	+	-6.1	+(-6.1)	-6.1
120	-	-5.5	-(-5.5)	.6
110	+	35.7	+(35.7)	34.4
100	-	26.6	-(26.6)	8.4
90	+	4.7	+(4.7)	13.1
80	-	29.8	-(29.8)	-16.7
70	+	42.9	+(42.9)	26.2
60	-	12	-(12)	14.2
50	+	0	+(0)	14.2
40	-	17.4	-(17.4)	-3.2
30	+	15.2	+(15.2)	12
20	-	3.8	-(-3.8)	8.2
10	+	11.3	+(11.3)	19.5
0	-	6.5	-(-6.5)	13

GEOCHEMICAL ANALYSIS CERTIFICATE

Matovich, Al PROJECT ALPINE 2000 File # A003736

P.O. Box 110, Montrose BC V0G 1P0 Submitted by: Tom Lewis



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
129486	<2	98	30	473	1.1	53	13	1527	14.91	5	13	<4	9	29	2.2	<5	<5	161	1.42	.662	34	107	2.85	398	2.00	6.55	.07	5.09	16	44	31	55	338	5	34	
129487	4	6	189	176	<.5	4	<2	198	2.31	<5	27	<4	43	137	.6	<5	<5	8	.08	.011	26	12	.14	778	.08	6.67	1.26	4.22	<4	20	5	3	18	3	2	
129488	5	5	2634	246	4.5	2	<2	45	.59	<5	<10	<4	<2	2	7.6	<5	<5	<2	.01	.003	<2	12	.01	11	.01	.18	.01	.13	10	<2	<2	<2	<2	<1	<1	
129489	4	3	134	93	<.5	4	<2	86	1.33	<5	19	<4	29	194	<.4	<5	<5	3	.35	.005	11	10	.04	572	.06	6.61	2.55	4.08	<4	19	4	6	31	3	2	
129490	4	3	4457	917	8.5	2	<2	33	.40	<5	<10	4	<2	3	34.0	<5	<5	<2	<.01	<.002	<2	10	.01	18	<.01	.33	.02	.21	8	<2	<2	<2	<2	<1	<1	
129491	4	3	915	22	1.4	6	<2	27	.43	<5	<10	<4	<2	<2	.4	<5	<5	<2	<.01	<.002	<2	10	.02	27	<.01	.43	.01	.24	<4	<2	<2	<2	<2	<1	<1	
129492	5	2	70	32	4.4	2	<2	30	.62	6	<10	4	<2	4	<.4	<5	<5	<2	<.01	<.002	<2	10	.02	43	<.01	.59	.01	.36	8	2	<2	<2	<2	<1	<1	
129493	5	2	198	18	2.0	6	<2	50	1.58	<5	<10	<4	4	33	<.4	<5	<5	6	.06	.026	8	22	.13	222	.04	2.61	.17	1.42	11	2	2	2	7	3	2	
RE 129493	5	2	204	19	3.9	6	<2	49	1.64	<5	<10	6	4	35	<.4	<5	<5	6	.06	.026	10	19	.13	229	.04	2.70	.18	1.48	11	2	2	2	7	3	2	
129494	3	<2	38	22	<.5	<2	<2	827	.58	<5	19	<4	14	54	<.4	<5	<5	<2	.65	<.002	5	11	.02	68	.02	6.33	3.57	2.78	4	17	2	30	60	5	2	
129495	3	2	32	26	<.5	5	<2	141	.59	<5	<10	<4	5	60	<.4	<5	<5	<2	.17	<.002	2	7	.05	149	.02	6.99	2.74	4.41	<4	4	3	7	24	3	1	
129496	4	2	13301	2557	21.9	2	<2	34	.78	<5	<10	<4	<2	4	108.4	6	12	<2	<.01	<.002	<2	16	.01	16	<.01	.25	.02	.17	82	<2	<2	<2	<2	<1	<1	
STANDARD CT3	27	65	39	181	5.7	39	13	996	4.38	55	26	<4	26	246	21.9	22	23	135	1.63	.099	28	268	.94	1048	.39	7.11	1.92	2.03	25	44	19	13	15	5	12	
STANDARD G-2	<2	2	22	52	<.5	7	4	792	2.66	<5	<10	<4	7	849	<.4	<5	<5	56	2.97	.094	28	75	.74	1049	.25	8.36	2.81	3.24	<4	8	2	15	19	3	8	

GROUP 1E - 0.25 GM SAMPLE DIGESTED WITH HClO4-HNO3-HCl-HF TO 10 ML. UPPER LIMITS - AG, AU, W = 200 PPM; MO, CO, CD, SB, BI, TH & U = 4,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. DIGESTION IS PARTIAL FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS.  
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 25 2000 DATE REPORT MAILED: *Sept 28/00* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE

Matovich, Al PROJECT ALPINE 2000 File # A003736

P.O. Box 110, Montrose BC V0G 1P0 Submitted by: Tom Lewis



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
129486	<2	98	30	473	1.1	53	13	1527	14.91	5	13	<4	9	29	2.2	<5	<5	161	1.42	.662	34	107	2.85	398	2.00	6.55	.07	5.09	16	44	31	55	338	5	34	
129487	4	6	189	176	<.5	4	<2	198	2.31	<5	27	<4	43	137	.6	<5	<5	8	.08	.011	26	12	.14	778	.08	6.67	1.26	4.22	<4	20	5	3	18	3	2	
129488	5	5	2634	246	4.5	2	<2	45	.59	<5	<10	<4	<2	2	7.6	<5	<5	<2	.01	.003	<2	12	.01	11	.01	.18	.01	.13	10	<2	<2	<2	<2	<1	<1	
129489	4	3	134	93	<.5	4	<2	86	1.33	<5	19	<4	29	194	<.4	<5	<5	3	.35	.005	11	10	.04	572	.06	6.61	2.55	4.08	<4	19	4	6	31	3	2	
129490	4	3	4457	917	8.5	2	<2	33	.40	<5	<10	4	<2	3	34.0	<5	<5	<2	<.01	<.002	<2	10	.01	18	<.01	.33	.02	.21	8	<2	<2	<2	<2	<1	<1	
129491	4	3	915	22	1.4	6	<2	27	.43	<5	<10	<4	<2	<2	.4	<5	<5	<2	<.01	<.002	<2	10	.02	27	<.01	.43	.01	.24	<4	<2	<2	<2	<2	<1	<1	
129492	5	2	70	32	4.4	2	<2	30	.62	6	<10	4	<2	4	<.4	<5	<5	<2	<.01	<.002	<2	10	.02	43	<.01	.59	.01	.36	8	2	<2	<2	<2	<1	<1	
129493	5	2	198	18	2.0	6	<2	50	1.58	<5	<10	<4	4	33	<.4	<5	<5	6	.06	.026	8	22	.13	222	.04	2.61	.17	1.42	11	2	2	2	7	3	2	
RE 129493	5	2	204	19	3.9	6	<2	49	1.64	<5	<10	6	4	35	<.4	<5	<5	6	.06	.026	10	19	.13	229	.04	2.70	.18	1.48	11	2	2	2	7	3	2	
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129495	3	2	32	26	<.5	5	<2	141	.59	<5	<10	<4	5	60	<.4	<5	<5	<2	.17	<.002	2	7	.05	149	.02	6.99	2.74	4.41	<4	4	3	7	24	3	1	
129496	4	2	13301	2557	21.9	2	<2	34	.78	<5	<10	<4	<2	4	108.4	6	12	<2	<.01	<.002	<2	16	.01	16	<.01	.25	.02	.17	82	<2	<2	<2	<2	<1	<1	
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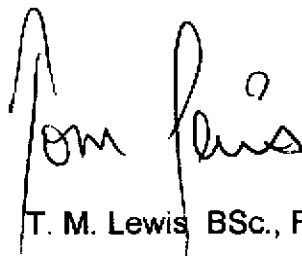
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## STATEMENT OF QUALIFICATIONS

I, **THOMAS M. LEWIS**, Geologist, resident of #43- 891 Montevista Drive Rossland, in the Province of British Columbia, hereby certify that:

- 1) I am a contract geologist working on behalf of Tera Ex Geological
- 2) I received a Bachelor of Science degree in Geology from Brandon University, Brandon Manitoba in 1989, and a diploma in Petroleum and Mineral Land Management from Mount Royal College, Calgary, Alberta in 1986.
- 3) Since 1987, I have been involved with numerous mineral exploration programs throughout Canada, Mexico, and other countries, and have been involved in Oil & Gas exploration, and to a lesser extent, mineral exploration since 1975.
- 4) This report is based on a review of reports, documents, maps, other technical data, and on field work personally carried out during August, and September 2000.
- 5) I, nor Tera Ex Mining hold no direct or indirect interest in the property, nor in any securities of Matovich Mining Industries Ltd., or in any associated companies, nor do I expect to receive any.

A handwritten signature in black ink, appearing to read 'Tom Lewis', with a stylized flourish at the end.

T. M. Lewis BSc., FGAC

September 09, 2000