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# PROSPECTING AND GEOCHEMICAL REPORT <br> LooseLeg and LeadLeg Mineral Claims <br> Lewis Creek Area and Tracey Creek Area, <br> Fort Steele Mining Division <br> TRIM 82G/072 <br> Lat.: $4948^{\prime} \mathrm{N}$; Long. 115 36’ E 

Owner: Darlene Lavoie<br>2290 DeWolfe Ave, Kimberley, B.C. V1A 1P5

By : G.Rodgers, P.Eng. and C. Kennedy

(i)

## Summary

Rock geochemistry gave strong encouragement to further work. High gold values occur in quartz veining within a broad area of northwest trending structural disturbance which is on trend with the Estella structure. The Kootenay King Quartzite unit lies untested within the claim block and is anomalous in lead and zinc. The opportunity exists for a bedded massive sulphide deposit and / or a low-grade Cu -Au deposit such as at Spar Lake,Mt..

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### 1.0 INTRODUCTION

### 1.10 LOCATION AND ACCESS

The Loose-Leg property is located 30 km northeast of Cranbrook B.C. in the Fort Steele Mining Division. The property lies a short distance southeast of Lazy Lake at approximate UTM coordinates 5518000 North and 600000East (NTS 082G082 and 082G072). The property is accessed by the Lewis Creek secondary road from Wasa and the Lewis-Estella logging road. Most of the property is accessible by foot..

### 1.20 HISTORY

This area has been held under tenure by mining companies and individuals throughout the past 100 years. The LooseLeg claim covers many reverted crown grants many of which contain old workings \&/or showings. Cominco Ltd. has most recently held the ground and did some UTEm and drilled one hole which failed to locate the Sullivan Horizon.

### 1.30 PROPERTY

The following table lists the claims that comprise the Property.
Record\# NAME Map\# DATE of EXPIRY \#of units

| 379858 | LooseLeg | 82G/072 | 2003.08 .22 | 20 |
| :--- | :--- | :--- | :--- | ---: |
| 391016 | LeadLeg | $82 \mathrm{G} / 072$ | 2003.11 .14 | 16 |
| 391017 | LeadLeg2 | $82 \mathrm{G} / 072$ | 2003.11 .13 | 1 |
| 391018 | LeadLeg3 | $82 \mathrm{G} / 072$ | 2003.11 .13 | 1 |
|  |  | total \# of units $=$ | 38 |  |

### 1.40 PHYSIOGRAPHY

The LooseLeg Property is located in the Rocky Mountain Range. Elevation ranges from 1600 to 2500 meters, topography varies from gentle and moderate wooded slopes to steep rocky slopes. The climate is moderate with temperature extremes ranging from 35 to -40 degrees Celsius. Snow coverage is from early November to early June. Forests on the property are composed of pine, fir, larch, and balsam. Some areas of the claim block have been clear-cut logged and are in various stages of regeneration.

### 2.0 GEOLOGY

The LooseLeg property is underlain by rocks of the Middle and Lower Aldridge Formation and below that of the Fort Steele Formation of the Belt Purcell Supergroup. The Belt Purcell Supergroup is composed of mostly fine-grained clastic and carbonate rocks of up to 11 km in depth. The Middle Aldridge Formation consists predominantly of quartzites and siltstones with turbiditic characteristics. Beds are often 30 cm or more wide. Black argillite, thin bedded siltstones, fine to medium grained quartzites, are common. A black mud package defines the Lower-Middle Aldridge contact in the LeadLeg claim vicinity. The Lower Aldridge is characteristically thinner bedded and rusty weathering with a higher component of pyrite and pyrrhotite. The Fort Steele Formation consists chiefly of clean bedded and cross-bedded sandstone with minor black shale. It represents the higher energy basin margin fluvial-deltaic sediments sourcing from the east. Fine grained turbidites are confined mostly to the deeper water Aldridge Formation.

The property has a number of Pre-Cambrian intrusions in the form of gabbro dykes and sills. Many of these cluster around a growth fault in Tracey Creek (NW corner of claim block)

The PreCambrian east-west Kimberley fault is thought to splay out in the vicinity of the claim block.

The Estella and Kootenay King Mines are both located within Middle Aldridge sediments and have produced lead-zinc ore similar to that at the Sullivan Mine (located 30 km west).



Figure 2.--Regional geology map of the Purcell Supergroup, Southeastern British Columbia.




### 3.0 PROSPECTING

Prospectors focused on gold and as a result spent most of their time on the ground closest to Lewis Creek and the old crown grants. Prospecting at the top of Tracey Creek however did locate a new tourmalinite body hitherto unknown despite Cominco's previous coverage of the area. This large outcrop consists of massive black tourmaline within chloritic and sericitic altered sediments that exibit soft deformation and fragmental characteristics. It is anomalous in lead and zinc. The Sullivan Horizon was tested for by Cominco drilling one hole north of the Estella Mine but has never been identified within that structural block. There is conjecture that the Estella orebody is a deformed bed within PreCambrian Aldridge sedimentscoincident with a NW structural break old enough to have also localized a pink granodiorite intrusion. This horizon also hosts the Kootenay King orebody within the Kootenay King Quartzite package. Surface tourmalinized vents are an indication of an active sedimentary exhalative venting. The Kootenay King Quartzite lies within the LooseLeg claim block, and is highly anomalous in lead and zinc and remains to this day untested by diamond drilling..

### 4.0 GEOCHEMISTRY

Figure 4 shows rock sample locations. A total of 40 rock samples were chipped from bedrock using sledge-hammers. Samples were sent to ACME Laboratories Ltd. in Vancouver for geochemical analysis. After drying, crushing and splitting, a 0.5 gm sample was leached by aqua-regia for one hour, then analyzed by ICP-ES. Gold was done "ignition by acid leached" and analyzed by ICP. Sampling was concentrated at the north End of the claim block where the crown grants used to lie. Most favourable prospecting covered the northwest trending erosional stream gulley channels. Old workings explored quartz veins that had minor amounts of lead and copper were found.

Most samples taken gave anomalous values for gold.
The following is a description of the rock samples; LL1 - Altered, brecciated quartz, etc, some narrow veining with limonite. LL2 - same as 1

LL101 - punky limonite material.
LL102 - same as 101 , not as limonitic, more of a brecciated argillite.
LL103 - limonitic breccia with fragments of quartz veining, some limonitic cube casts, malachite stain and cerrusite crystals.
LL104 - Quartz vein 4 cm wide in NW shear zone, some weak limonite with malachite staining on fractures.
LL105 - NW trending quartz veins in quartzite breccia, limonite, pyrite and rare galena.
LL106 - Narrow 1 cm quartz vein, rare limonite and galena.
LL107 - Phyllitic sericite rich siltstone, yellow colour, disseminated limonite and ptrite.
LL108 - Limonite rich narrow quartz vein in brecciated quartz zone.
LL109 - Narrow 8 cm wide breccia "pipe" zone with carbonate and weak malachite stain.
LL110 - Felsite? Along contact of brecciated quartzite, limonitic with weak malachite stain.
LL111 -2.0 cm wide quartz vein in NW structural zone, limonitic with rare galena.
LL112 - Swarm over 0.5 m of flat lying narrow quartz veins, some limonite.
LL1 13 - NW fracture zone, narrow quartz veins, some limonite.
LL114 - same as 113.
LL115 - Narrow quartz vein, bedding parallel with limonite and ptrite.
LL116 - Narrow quartz veins, limonitic in a grey siltstone.
LL117-4.0 cm bedding parallel quartz vein with limonite and galena.
LL118 - Narrow limonite rich quartz vein in pinkish quartzite.
LL119 - Altered vuggy fractured quartzite with patches of limonite.
LL120 - Glassy narrow quartz gash veins with limonite and pyrite.
LL121 - Quartz vein material with vugs, carbonate, limonite, malachite and chalcopyrite.
LL122 - same as 121.
LL123 - Crush zone in NW shear, 4 cm wide with abundant limonite.
LL124 - Narrow NW trending quartz vein with limonite, chalcopyrite and grey material.
LL125-NE shear zone with pink dolomite sediment, silicified in patches, limonite.
LL126 - Quartz float with black graphitic argillite clasts, rare limonite and galena.
LL127 - Narrow bedding paralle quartz vein in dolomitic siltstone with weak azurite, malachite stain with oyrite and limonite.
LL128 - Narrow 4 cm bedding parallel quartz vein with galena.
LL129-Limonite rich fractures in siltstone, NW fracture pattern.
LL130 - Sheared, crushed material in NW structural zone, limonite and manganese.
LL131 - Quartz vein material with abundant limonite, graphitic black chips.
LL132 - Gossan material (cemented), almost outcrop.

### 5.0 RESULTS AND CONCLUSIONS

A total of 41 rock chip samples were taken during 2002 from bedrock on the LooseLeg and LeadLeg claims. Rock sample descriptions are given in section 4.0, geochemical results are included as appendix I and sample locations are shown in fig. 4. Copper and lead are found throughout the property. As with gold, the higher concentrations of copper and lead seem to follw the NW trending structures (monst of which contain old workings). This is particularily noted in sample numbers LL115-LL1. 17, LL20-LL25, LL127-LL130.

Prospectors focused on gold and as a result spent most of their time on the ground closest to Lewis Creek and the old crown grants. Prospecting at the top of Tracey Creek however did locate a new tourmalinite body hitherto unknown despite Cominco's previous coverage of the area. This large outcrop consists of massive black tourmaline within chloritic and sericitic altered sediments that exibit soft deformation and fragmental characteristics. It is anomalous in lead and zinc. The Sullivan Horizon was tested for by Cominco drilling one hole north of the Estella Mine but has never been identified within that structural block. There is conjecture that the Estella orebody is a deformed bed within PreCambrian Aldridge sediments coincident with a NW structural break old enough to have also localized a pink granodiorite intrusion. This horizon also hosts the Kootenay King orebody within the Kootenay King Quartzite package. Surface tourmalinized vents are an indication of an active sedimentary exhalative venting. The Kootenay King Quartzite lies within the LooseLeg claim block, and is highly anomalous in lead and zinc (Cominco did broad based soil sampling which indicated values as high as 2000 ppm Pb ) and it remains to this day untested by diamond drilling.

Highest gold values coorelate with NW trending shear / breccia zones, the presence of narrow quartz veins and accessory minerals such as lead or copper. This property is rich in showings of copper and gold. Potential exists for a Spar Lake type of copper deposit within the Fort Steele Formation with copper advancing along solution fronts. There is only one drill hole known of on the claim block and that was a failed vertical Sullivan test. Gold concentration seems to occur at the top of the Fort Steele Formation and gold is concentrated within shear zones and carried within quartz veinlets.

The initial sampling has provided encouragement and a model for future work. The northwest trending structural zones are on strike with the Estella massive sulphide vein to the southeast (The Estella vein strikes NW). Soil sampling should be done away from the gulleys as very little information is available for these overburden covered areas the and more rock sampling should be done in the area of the old workings.

The other feature high-lighted by the geochemistry is the wide zone of brecciation in the quartzite units. These are large and offer a large target for drilling as they are anomalous in gold and base metals (as shown by sample \#'s 1-4, 9-19, 6-7 and 105-111). A more intensive rock geochem program should be undertaken within the areas of the quartzite breccias and more rock sampling should be done in the area of the old workings.

### 6.0 RECOMMENDATIONS

Geological mapping at $1: 10,000$ scale should be done asap. Small soil sampling grids should be done over areas of interest with any gold value over 50 ppb to be followed up on by trenching as well as over the Kootenay King Quartzite unit on the west side of the LooseLeg claim. The claims are $90 \%$ overburden covered therefore a large budget for soil sampling, excavator work and diamond drilling is recommended. Detailed geological mapping of known gold bearing areas should be completed and a drill program would be justified to :

1) Test across the NW trending shears.
2) Test the Fort Steele Formation for copper and gold near its contact with the overlying Aldridge Formation or solution fronts similar to the Spar Lake model.
3) In conjunction with geological mapping, a drill hole in the upper Tracey Creek area may intersect a sedimentary exhalative ore deposit within the Kootenay King Quartzite unit or at the Estella horizon (if Estella is indeed a deformed bed) or along the Estell NW structure. Indications are that the Estella contains PreCambrian lead and represents a re-activating feeder zone or bedded sulphide deposit at or near the Sullivan Time equivalent.

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### 7.0 STATEMENT OF COSTS

## Prospecting Services:

Craig Kennedy \& Sean Kennedy (10 man days @ \$300./day) . 3000.
Supervision / mapping / sampling (Glen Rodgers,P.Eng.
...... 2 days @ $\$ 400 . /$ day . . . . $\$ 800$.
$4 \times 4$ truck (10 days @ $\$ 50 . /$ day) . . . . \$ 500.
Assaying (Acme Labs) . . . . . \$ 950.
Report writing (G.Rodgers.... day) . . . . \$ 400.
Office and Field supplies (bags, flagging, copying, etc.) . .\$ 150 .

$$
\text { TOTAL }=\$ 5,800 .
$$

Certified as a true approximation of costs incurred,


### 8.0 STATEMENT OF QUALIFICATIONS

## Authors Qualifications

As co-author of this report, I , Craig Kennedy certify that:

1. I am an independent prospector residing at \#2290 DeWolfe Avenue, Kimberely, BC.
2. I have been actively prospecting in the East Kootenay district of $B C$ for the past 25 years, and have made my living solely by prospecting for the past 10 years.
3. I have been employed as a professional prospector by junior mineral exploration companies.
4. I own and maintain mineral claims in BC, and have optioned claims to exploration companies.


As co-author of this report, I Glen Rodgers certify that;

1. I am a graduate (1977) of the University of Manitoba with a BSc. Degree in Geological Engineering.
2. I have practiced my profession continually since graduation by working for mining and mineral exploration companies throughout North America.
3. I have authored this report for myself and for Greg Ewonus and do not expect to receive shares in any mining company as a result of writing this report


Appendix I


GROUP $10-0.50$ GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
UPPER LIMITS - AG, AU, $H G, H=100 \mathrm{PPM}$; MO, $\mathrm{CO}, \mathrm{CD}, \mathrm{SB}, \mathrm{BI}, \mathrm{TH}, \mathrm{U} \& \mathrm{~B}=2,000 \mathrm{PPM} ; \mathrm{CU}, \mathrm{PB}, \mathrm{ZN}, \mathrm{NI}, \mathrm{MN}, \mathrm{AS}, \mathrm{V}, \mathrm{LA}, \mathrm{CR}=10,000 \mathrm{PPM}$.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS $>1 \%$, AG $>30 \mathrm{PPM} \& \mathrm{AU}>1000 \mathrm{PPB}$

- SAMPLE TYPE: ROCK R150 60C

AU* IGNITION BY ACID LEACHED, ANALYZE BY ICP-MS. ( 10 gm )
Samples beginning. 'RE' are Reruns and 'RRE' are Reject Reruns.
DATE RECEIVED: OCT 262001 DATE REPORT MAILED: NOV $2 / 01$

group 1d - 0.50 gm Sample leached with $3 \mathrm{ML} 2-2-2$ hCl-hno3-h2o at 95 deg. C for one hour, diluted to 10 ML, analysed by icp-es.
GRPER LIMITS - AG, AU, HG, $W=100$ PPM; MO, CO, CD, SB, BI, TH, U \& B = 2,000 PPM; CU, PB, $Z N, N I, M N, A S, V, L A, C R=10,000 P P M$.
UPPER LIMITS - AG, AU, HG,

- SAMPLE TYPE: ROCK R150 60C

AU* IGNITION BY ACID LEACHED, ANALYZE BY ICP-MS. ( 10 gm$) \mathrm{g}$
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



