BC Geological Survey Assessment Report 30944

# TECHNICAL REPORT ON GEOLOGICAL WORK, PROSPECTING AND PREPARATORY SURVEYS

## KENNEDY LAKE PROJECT GUPPY TARGET AREA

NTS MAPSHEET 92F013

UTM Location: 5446000N and 323000E NAD 83 Zone 10

Owner: Kennedy Lake Syndicate

1124 – 470 Granville St.

Vancouver, B.C., V6C-1V5

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## TABLE OF CONTENTS

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| Summary   | 3  |
|---|----|
| Property Location and Access  | 7  |
| Table 2: List of Claims   | 8  |
| History of Property   | 11 |
| Property Geology  | 12 |
| Geochemical surveys and rock sampling completed by Kerr Addison         | 13 |
| Copy of Figure 12 from Assessment Report No.16473                       | 14 |
| Details of 2008 Assessment Work completed by the Kennedy Lake Syndicate | 15 |
| Conclusions and Recommendations   | 15 |
| Statement of Costs  | 16 |
| References  | 17 |
| Certificate of Author   | 18 |

### LIST OF FIGURES

| Figure 1:  | Project Location Map  | 5  |
|------------|---|----|
| Figure 2:  | Regional geology Map  | 6  |
| Figure 3:  | Project Location Map Showing Minfile Locations                    | 9  |
| Figure 3A: | Index Map Showing Historic Claim Boundaries and Large Format Maps | 10 |

## LARGE FORMAT FIGURES

| Figure 4: | Project Geological Map from ARIS NO.16473 Showing Mineral Tenures  |
|-----------|--|
| Figure 5: | Detail Geology Map Showing Guppy Zone and Location of 2008 Samples |

#### Summary

The Kennedy Lake Claim Group consists of an irregular shaped claim block comprising nine contiguous mineral claims (totaling 737.3 ha.) that straddle the Kennedy River, immediately north of Kennedy Lake on Vancouver Island. The claim group covers essentially the same ground as was covered by a previous claim group referred to as the Westering Property.

Regional geological maps published by the BC Ministry of Energy and Mines (BCMEM) show that the claim area is mainly underlain by Upper Triassic to Jurassic aged Vancouver Group volcanic rocks. According to Mueller and Carson, 1969, Vancouver Group rocks in the Kennedy River area are moderately folded and crosscut by northwest, north and north-east trending faults.

Historic exploration work in the Kennedy River area was reportedly focused on narrow, high grade, gold bearing quartz veins such as those at the Rose Marie and Leora Prospects (located within the northeast corner of the subject claim group). According Ministry of Mines Annual reports production from the Rose Marie and Leora veins is reported as 436 tons grading 0.71 oz/ton (22.1 g/t).

In 1987 Kerr Addison Mines Limited optioned the Westering Property (claim area now covered by the subject claims) and carried out a program of detailed mapping and sampling to evaluate a series of northeast trending, gold bearing, sheeted vein zones extending northeast across the Westering Property and continuing onto the former "Tommy Property" (located immediately northeast of the Westering Claims). The details of the sampling program carried out by Kerr Addison are well documented in Assessment Report 16,473.

According to Kerr Addison and the BCMEM Minfile database several areas of sheeted vein type mineralization have been identified including the North Zone, The Bridge Zone and the Guppy Zone within the former Westering Property and additional areas such as the Tommy Zone have been identified to the northeast of the claim area. However, this technical report is restricted to an evaluation of the technical data related to Minfile No.092F392: referred to as the Guppy Showing.

The Guppy Showing reportedly consists of an area 200 meters wide and 800 meters long that is mineralized with narrow, northeast trending gold bearing quartz veinlets. The zone was reportedly identified by soil sampling and reportedly showed anomalous values up to 1,990 ppb (Assessment Report No.16473).

According to Kerr Addison systematic sampling of a 16.6 meter wide section of a well mineralized area of outcrop within the Guppy Zone returned an average grade of 0.7 grams per ton. Kerr Addison recommended further sampling to expand the areas of known mineralization and to define drill targets however there is no published record of any additional exploration work on this zone. To show the known areas of mineralization relative to current claim boundaries the geological maps and technical drawings compiled by Kerr Addison showing current claim boundaries are attached as Figure 4 and 5.

In reviewing the technical report prepared by Kerr Addison the Kennedy Lake Syndicate identified an important characteristic of the mineralization associated with the Guppy Zone. The systematic sampling that was carried out by Kerr Addison consisted of cutting narrow, three meter long channels in bedrock perpendicular to the strike of the veins and segregating the quartz material and the wall rock andesites into separate samples for assay.

Whereas other areas of sheeted quartz veining (such as the North Zone) returned negligible results from wall rock assays the western 12 meters of the Guppy Zone returned four consecutive wall rock assays including 885 ppb, 1800 ppb, 185 ppb and 540 ppb in addition to gold values in the vein material ranging from 6,110 ppb gold to 12,253 ppb gold (0.394 oz/ton gold). By weighting the average vein material and wall rock assays for the western 12 meter section of the Guppy Zone this section would average 1.2 g/t gold which is definitely within the threshold required for bulk tonnage gold deposits . The observation that the wall rock andesites at the Guppy Showing contain significant gold concentrations may indicate that there are localized areas of higher grade mineralization or areas of mineral zonation within the Kennedy Lake area .

Considering that the Guppy Zone appears to exhibit significantly more wall rock mineralization than any of the other prospects it was determined that this zone may have potential for significant mineralization at depth. In some epithermal systems the extent of silicification and pyritization can increase with depth and if this occurs within several hundred meters of surface it may be possible to identify higher priority areas using 3D IP surveys which are a relatively new and reportedly highly effective approach in IP surveying. Prior to completing 3D IP surveys it is important to clearly understand the mode of occurrence of the metallic minerals (sulfides) which are associated the target mineralization.

Between November 1 and December 15, 2008 the Kennedy Lake Syndicate completed a geological compilation for the Kennedy Lake Property, compiled a GIS database for the project area and completed a prospecting trip to collect samples for petrographic work from within the Guppy Zone. A total of 12 vein and wallrock samples from outcrop and float within the Guppy Zone were collected. Sample UTM locations and field descriptions are included as Table 2.





#### **Property Location and Access**

As of the date of this technical report the Kennedy Lake Property consists of 9 mineral tenures comprising 737.3 hectares.

The project area is approximately 30 kilometers east of the community of Ucluelet. Access is by way of Highway 4 west from Port Alberni and this highway transects the central part of the property along the east side of the Kennedy River.

Table 1 lists the claims which comprise the present Kennedy Lake property. Figure 3 and Figure 3A shows the outline of the former Westering Property that was the subject of the 1987 option agreement with Kerr Addison Mines.

To access the Guppy Showing there is a bridge spanning the Kennedy River in the south central part of the claim area which connects with a series of logging roads that provide access to the southwestern (Guppy Showing) and the northwestern parts of the claim area.

The lower parts of the Kennedy River valley is dense second growth and the upper valley slopes are covered by first growth fir and cedar.

The Guppy Showing is located in an area of modest relief at an elevation of approximately 100 meters roughly 200 meters northwest of an old shaft and dump that contains extensive mineralized material.

## Table 1: List of mineral tenures

| Tenure Number      | Claim Name | Owner  | Tenure Type | Map Number | lssue Date | Good To Date | Status | Area (ha) |
|--------------------|------------|--------|-------------|------------|------------|--------------|--------|-----------|
| 565598             |            | 127981 | Mineral     | 092F013    | 20070905   | 2010/jun/20  | Good   | 84.24     |
| 564455             |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 84.28     |
| 564456             |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 42.13     |
| 564457             |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 21.07     |
| 564458             |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 42.13     |
| 56445 <del>9</del> |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 21.06     |
| 564460             |            | 127981 | Mineral     | 092F013    | 20070811   | 2010/jun/20  | Good   | 21.07     |
| 573141             |            | 127981 | Mineral     | 092F013    | 20081212   | 2010/jun/20  | Good   | 168.5     |
| 573142             |            | 127981 | Mineral     | 092F013    | 20080105   | 2010/jun/20  | Good   | 252.8     |

737.28





Property History

According to Kerr Addison the general area that hosts the Guppy Showing has undergone several periods of exploration. Historically the earliest exploration work (including limited underground development work) was done between 1900 and 1930 on the Rose Marie and to a much lesser extent on a narrow quartz vein located approximately 20 meters southeast of the Guppy prospect.

According to the BCMEM Minfile database and Assessment Report No.16473 several areas of sheeted vein type mineralization have been identified including the North Zone, The River zone and the Guppy Zone within the former Westering Property and additional areas such as the Tommy Zone have been identified to the northeast of the claim area.

The Guppy Showing reportedly consists of an area 200 meters wide and 800 meters long that is mineralized with narrow, northeast trending gold bearing quartz veinlets. The zone was reportedly identified by soil sampling and reportedly showed anomalous values up to 1,990 ppb.

Kerr Addison systematically sampled all of the known areas mineralization within the Westering Claims and reportedly identified a 16.6 meter wide section of a well mineralized area of outcrop within the Guppy Zone returned an average grade of 0.7 grams per ton.

Kerr Addison recommended further sampling to expand the areas of known mineralization and to define drill targets however there is no published record of any additional exploration work on this zone. To show the known areas of mineralization relative to current claim boundaries the geological maps and technical drawings compiled by Kerr Addison showing current claim boundaries are attached as Appendix 2.

#### **Property Geology and Mineralization**

Regional geological maps published by the BC Ministry of Energy and Mines (BCMEM) show that the Kennedy Lake claim area is mainly underlain by Upper Triassic to Jurassic aged Vancouver Group volcanic rocks consisting mainly of fine grained andesitic flows of the Karmutsen Formation. According to Mueller and Carson, 1969, Vancouver Group rocks in the Kennedy River area are moderately folded and crosscut by northwest, north and north-east trending faults. Two periods of intrusive activity are recognized. During the Jurassic quartz diorites and granodiorites were emplaced. During the Tertiary Period quartz diorite, quartz monzonite and porphyritic dacite were emplaced along with related rhyolitic to dacitic tuffs and breccias.

According to Kerr Addison the area west of Kennedy River exhibits a wide band of andesitic tuffs that dip steeply west suggesting the presence of a west dipping homoclinal sequence of flows and tuffaceous rocks. At the north edge of the property massive dacites and dacitic lapilli tuffs (of probable Tertiary Age) have been mapped in an area of pronounced sheeted quartz veining associated with extensive silicification. Of significance is the dating of structures and the sheeted quartz vein mineralization (on the former Westering claims) based on the presence of north east striking quartz veinlets developed within the lapilli tuffs.

Northeasterly striking, steeply dipping joints are widespread throughout the area mapped by Kerr Addison. The joints are often dilated and infilled with auriferous quartz veinlets and locally occur in swarms sufficiently dense to constitue zones of possible economic significance. Three zones (within the former Westering property) were recognized including the North Zone, the Bridge Zone and the Guppy Zone and these areas are described in detail in Assessment Report No.16743.

According to Kerr Addison systematic sampling of a 16.6 meter wide section of a well mineralized area of outcrop within the Guppy Zone returned an average grade of 0.7 grams per ton. Kerr Addison recommended further sampling to expand the areas of known mineralization and to define drill targets however there is no published record of any additional exploration work on this zone.

Considering that the Guppy Zone appears to exhibit significantly more wall rock mineralization than any of the other prospects it was determined that this zone may have potential for significant mineralization at depth. In some epithermal systems the extent of silicification and pyritization can increase with depth and if this occurs within several hundred meters of surface it may be possible to identify higher priority areas using 3D IP surveys which are a relatively new and reportedly highly effective approach in IP surveying. Prior to completing 3D IP surveys it is important to clearly understand the mode of occurrence of the metallic minerals (sulfides) which are associated the target mineralization.

Geochemical Sampling completed by Kerr Addison in the Guppy Showing area

During 1987 Kerr Addison Mines completed wide spaced soil geochemical surveys and detailed rock sampling at three zones of sheeted vein type mineralization referred to as the North Zone, the Bridge Zone and the Guppy Zone.

Soil samples were collected along 200 meter spaced, northwest oriented lines with samples spaced at 25 meter intervals along the lines. Samples reportedly comprised some "B" horizon samples and some "A" horizon samples where no "B" horizon was developed. Results reportedly included scattered anomalous but no well defined anomalous areas. It is interesting that the report also notes that the Guppy Zone was identified by geochemical surveys prior to Kerr Addison optioning the property.

Rock sampling was limited to detailed sampling of three main areas, the North Zone, the Bridge Zone and the Guppy Zone. According to Kerr Addison only the Guppy Zone returned significant results.

At the Guppy Zone five composite vein and wall rock samples were collected across 16.6 meters. Sample were chipped from a ten centimeter wide channel across the mineralized outcrop with quartz vein material selectively placed into separate sample bags and assayed separately from the wall rock (andesite).

A copy of Figure 12 from the technical report prepared by Kerr Addison is included in this section to illustrate the sampling method and the style of mineralization.



#### Assessment Work Completed by the Kennedy Lake Syndicate in 2008

The assessment work carried out by the Kennedy Lake Syndicate between November 1 and December 15, 2008 consisted of compiling a GIS database for the project area including TRIM and BC Map Place databases, geo-referencing the geological maps prepared by Kerr Addison Mines in Assessment Report 16,473, and, collection of a series of 12 rock samples from within mineralized zones and from adjacent un-mineralized material from the area referred to as the Guppy Zone for follow-up petrographic study to determine the likely electrical response of both mineralized and un-mineralized material.

Considering that the Guppy Zone appears to exhibit significantly more wall rock mineralization than any of the other prospects it was determined that this zone may have potential for significant mineralization at depth. In some epithermal systems the extent of silicification and pyritization can increase with depth and if this occurs within several hundred meters of surface it may be possible to identify higher priority areas using 3D IP surveys which are a relatively new and reportedly highly effective approach in IP surveying. Prior to completing 3D IP surveys it is important to clearly understand the mode of occurrence of the metallic minerals (sulfides) which are associated the target mineralization.

To show the known areas of mineralization and the location of the samples collected in 2008 relative to current claims the geological maps and technical drawings compiled by Kerr Addison (showing current claim boundaries) are attached as Figure 4 and 5. Figure 3A is an index map that shows the parts of the current claim group covered by the large format figures.

#### **Conclusion and Recommendations**

Based on the geological work and computer modeling carried out during 2008 it is recommended that the Kennedy Lake Syndicate complete a detailed thin section petrographic analysis of the 12 samples that were collected with specific emphasis on identifying the type of sulfide minerals present, mode of occurrence and total sulfide content of both the mineralized and un-mineralized samples.

Once sulfide mineral content and connectivity is determined a geophysical model that predicts the likely response from larger, buried zones of mineralization similar to the Guppy Zone.

Statement of Costs

Kennedy Lake Project assessment charges for the period November 1 to December 15, 2008

Geological consulting fees and charges (including office charges) Project supervision, research and review of technical data, travel to Port Alberni and to the Guppy Showing, preparation of technical report C. von Einsiedel: 3.5 days charged at \$500 per day \$ 1,750.00 GIS database management, Map Info technician (including computer and Map Info charges) Charges for preparation of basic GIS database for locator maps, geo-referencing detailed location maps and geological maps, digitizing former Westering claim boundary Dorian Leslie technical mapping services: 11 hours charged at \$65 per hour \$ 715.00 Travel expense, ferry charges, fuel, motorhome rental allowance (pro-rated) 350.00 \$ GPS, satellite telephone rental, sampling supplies Ś 50.00 Report preparation and printing charges, large format drawings etc. -large format printing (6 copies at 6 square feet = 36 square feet at \$4.00 \$ 144.00 -report printing and collating 100.00 Total charges applied for assessment credit: \$ 3,109.00

16

References

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Assessment Report No.16473: Potter, R., Geological Mapping and Geochemical Survey of the westering Claim Group for Kerr Addison Mines Ltd., November 15, 1987.

BC Online Database: Minfile and mapplace.bc.ca

## **CERTIFICATE OF QUALIFICATION**

I, Carl von Einsiedel, 8888 Shook Rd., Mission, British Columbia, V2V-7N1, hereby certify that:

- 1) 1 am a consulting geologist with an office at 1124-470 Granville Street, Vancouver, British Columbia, V6C 1V5
- 2) I am a graduate of Carleton University in Ottawa, Ontario, Canada in 1987 with a BSc. in Geology. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia. I have practiced my profession as a geologist throughout the world continuously since 1987.
- 3) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Policy 43-101.
- 4) As of the date of this certificate, to my the best of my qualified knowledge, information and belief, this technical report contains all the scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 2nd day of July, 2009

Carl von Einsiedel, P.Geo.



