## LVER QUEEN (Nadina,

B.C. - Gold-Silver, Base-Metal, Epithermal/Transitional Deposit

#### **PROPERTY/INFRASTRUCTURE**

- 17 Crown Grants plus 6 located claims totaling 108 units 100% owned by New Nadina
- NTS 93L02E Minfile No: 93L001
- 36 km south of Houston, B.C. (on maintained road to Huckleberry Mine)
- 29 km south west of the Equity Silver Mine
- Access to adjacent high voltage power line

#### **HISTORY**

- <u>1912</u>: Claims staked on silver rich base-metal veins in Wrinch Canyon.
- Surface and underground development concentrated on vein targets within the microdiorite intrusive, near the area of the discovery.

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- <u>1967</u>: Exploration initiated in the gossans, south of the microdiorite. Discovered a huge alteration aureole in felsic volcanics containing intense argillic alteration, including pervasive pyrite.
- <u>1972-1973</u>: 180,000 tonnes of diluted ore was milled @ 450 tonnes/day, yielding 108,205 grams Au and 15,044,428 grams Ag.
- <u>1986 1989</u>: Pacific Houston (under option) conducted extensive underground development within the microdiorite. It became insolvent in 1988, after spending \$9 million. Near the end of their operation, (1988) drilling vein extensions in felsic volcanics to the south and west edges of the microdiorite intrusive encountered spectacular (e.g. up to 400 opt Ag 1 oz Au) gold-silver assays. A comprehensive study of mineralogy and geology was undertaken by the University of British Columbia during this period. Reference 1) "Mineralogic Variation Observed at the Silver Queen Mine"

by Hood, Leitch & Sinclair (Geological Fieldwork 1990, Paper 1991-1) 2) Tip Top Hill Volcanics, Leitch, Hood, Cheng & Sinclair (G.S.C. contribution 46991)

- <u>1990-1994</u>: Property recovered by New Nadina.
- During the past several years, a large part of the exploration data has been archived, digitized, and reviewed.. Recent programs have superficially explored the intense alteration peripheral to the microdiorite.

#### **TARGET/MODEL**

- Gold-silver, base metal epithermal vein deposit; disseminated to massive sulphide veins, 'transitional' deposit, similar to Equity Silver mine of Placer Dome, located 29 km to the northeast. (Reference: Equity Silver paper Economic Geology, vol. 79, 1984, pp. 947-968). Equity Silver (1980-1994) ~32m tonnes yielded 66.8 million ozs Ag, 91,458 tons Cu, and 513,262 oz Au. [Note: Equity is BC's 5<sup>th</sup> largest gold and the largest silver producer.]
- Recent compilation, drilling and underground programs have identified a large horseshoe-shaped area wrapping around the microdiorite complex hosting all of the better precious metal occurrences. The area contains a volcaniclastic-filled basin of steeply-dipping mineralized porous rocks. Mudstones and interbedded breccias are intruded by rhyolite in the basin or caldera. A 7-tonne high grade float boulder has been found in the area of high illite alteration. This altered zone is mainly covered by deep overburden. This area is regarded as a prime target for bulk-tonnage precious metal deposits.
- Credits in gallium, germanium and indium, as well as lead and copper.
- Geology, rock alteration studies, geophysics and structural studies "indicate the property is situated within a ring structure, possibly developed around an intrusion at depth which acts as a source for mineralizing fluids." (Dr. G Millar 1998).

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### SILVER QUEEN (Nadına) B.C. - Gold-Silver, Base-Metal, Epithermal/Transitional Deposit

- "The intrusion (microdiorite) is part of a much larger regional body within which the Silver Queen and Equity Silver deposits both sit close to the margin." (Dawson 1985).
- The faults associated with the ring structure have created dilational zones or openings in the south and west areas, which host the recently discovered high-grade gold and silver base-metal occurrences.

#### **GEOLOGIC SETTING**

- Silver gold polymetallic veins in Tertiary felsic volcanics and intrusions with disseminated silver occurrences in volcanic sandstone and breccias.
- 40 known veins; 12 have significant width and grade. Deep drilling demonstrates veins extend to more than 425m below surface. Grades improve with depth.
- Veins 1 2m wide dip steeply widths up to 6m. Competent hanging and footwall to ore shoots.
- Mineralization over 4 km north-south, 3 km east-west and still open.
- Underground mine development (765m decline) with good access.
- Outested hydrothermal breccias interbedded with volcanic sediments (carbonaceous mudstones, breccias and interbedded rhyolite intrusions). Caldera located to the south of the microdiorite. These steeply dipping zones are 15 30m in width and over 305m in length alteration studies of zone show illite alteration similar to known mineralization. Alteration studies show clay alteration is kaolin and sericite, becoming strong illite alteration in the structurally-controlled altered zones.
- The major veins are vein faults striking north-south and dipping 65° east. The veins average over 1.22m in width and are mineralized over a km along strike and open to the south and depth. Banded rhodochrosite and sphalerite occurs in the north discovery area phasing to massive pyrite, sphalerite, siliciceous Au Ag ores to the south.

#### MINERALOGY:

- a) ORE: sphalerite, chalcopyrite, galena, tetrahedrite, electrum, tennantite, pyragerite and proustite.
- b) GANGUE: modochrosite, quartz, pyrite, barite.

#### **RESERVES**

- CAMP VEIN DRILL INFERRED RESERVES
  - 205,000Tonnes @ 1 g/t Au, 829 g/t Ag and 4% Zn
- No 3 VEIN DEFINED \*
  - South End: 365,000 tonnes @ 8.3 g/t Au, 400 g/t Ag and 7.6% Zn.

Central / North End: 400,000 tonnes @ 2.95 g/t Au, 164 g/t Ag and 5.43% Zn

\* Drilled on 30m centers drift and stopes on upper levels.

Decline below south end 76m below drift.

#### **FURTHER INFORMATION**

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-Review of extensive property data available at Greenwood, BC., drill cores at mine site. Archival data and cores from 1967 - present - mine workings accessible - decline flooded. -A. J. Sinclair, The University of British Columbia (604) 822 3763

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# CENTRAL BC REGIONAL PROJECT LOCATION





Figure 2-4-1. Map of Silver Queen mine showing locations of geologic contacts (Leitch *et al.*, 1990) and major mineralized structures. Legend: 1=polymictic basal conglomerate; 2=crystal tuff; 3=medium to coarse tuff-breccia; 4=feldspar-porphyritic andesite; 5=microdiorite.

Inset: Location of Silver Queen mine.

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186

