

Silver Chalice Project

Avalon Development Corporation Summary Report 2012

The Silver Chalice gold-silver property is located 345 air miles northwest of Anchorage and 330 air miles west southwest of Fairbanks, Alaska. The project is covered by 31 State of Alaska mining claims covering 4,960 acres of land. Next Gen Metals Inc. acquired an exploration and purchase option agreement on all claims comprising the Silver Chalice project in late 2009. There currently are no other active mining claims in the Silver Chalice project area. Access to the property is via helicopter or boat on the Yukon River. There has been no past lode mining on the project and there currently are no NI-43-101 compliant resources on the Silver Chalice project.

Previous exploration on the Silver Chalice prospect (then known as the Kaiyah prospect) between 1997 and 2002 includes work by Alaska Department of Natural Resources and fieldwork by North Star Exploration in 1998 and 1999. The U.S. Geological Survey published a geology map of the Nulato Quadrangle (1:250,000 scale) in 2000 based on field surveys conducted from 1954 through 1985. North Star Exploration continued work on the prospect through 2002 including limited drilling (2,777 feet, 5 holes), with total expenditures of \$645,227. Anglo Alaska Gold Corporation, a private Alaska-domiciled entity, acquired the project in and conducted limited sampling and field review on behalf of Next Gen Metals in 2009, expending approximately \$125,000.



The Silver Chalice project is located on the northwestern edge of the Kuskokwim Minerals Belt (KMB) of southwestern Alaska. The KMB roughly parallels the Kuskokwim Mountains which form a broad northeast-trending belt of accordant rounded ridges and broad sediment filled lowlands with locally rugged, glaciated igneous-cored massifs. The KMB covers an area approximately 550 km long by 350 km wide.

The Silver Chalice epithermal gold-silver prospect occurs immediately east of the eastern margin of the Poison Creek Caldera in west-central Alaska. Country rocks consist of Cretaceous flysch units including lithic sandstone, siltstone and shale. The Poison Creek caldera consists of bimodal Eocene to Paleocene volcanic units that range from andesite to rhyolite in composition. The epithermal veins at Silver Chalice appear to be intimately associated with this volcanic activity. The dominant structures of the area are the bounding circular faults outlining the Poison Creek Caldera, which are well outlined by the two half-circular drainage patterns of Poison

Creek and Stink Creek. The origin of these names is uncertain but is suspected to be related to sulfur and metals naturally draining from the mineralized hydrothermal system.

Gold-silver bearing polyphase quartz veins are associated with northeast and northwest structures that radiate from the caldera margin. The epithermal veins are hosted within a zone of outer propylitic alteration and an inner zone of weak to moderate argillic alteration. Weak silicification is also noted in the country rocks adjacent to the veins. Average Ag: Au ratio is approximately 40:1. Rock chip samples from surface rubble-crops and boulder trains collected in 1997 – 2002 return values up to 10 grams of gold per tonne and 462 grams of silver per tonne. Rock chip samples from surface rubble-crops collected in 2009 return values up to 12.85 grams of gold per tonne and 61.9 grams of silver per tonne (Table 1).

Table 1: Significant rock geochemistry from the 2009 Silver Chalice program.

| Sample # | Rock Unit | Au_ppb | Ag_ppm | As_ppm | Cu_ppm | Sb_ppm |
|----------|----------------|--------|--------|--------|--------|--------|
| 633449 | Quartz | 12850 | 4.6 | 355 | 18 | 69 |
| 633452 | Quartz | 3670 | 2 | 1420 | 43 | 196 |
| 503609 | Quartz | 2020 | 16.2 | 3930 | 132 | 169 |
| 633394 | Wacke | 1855 | 3.4 | 2410 | 67 | 140 |
| 633398 | Quartz | 1245 | 47.3 | 684 | 72 | 87 |
| 503624 | Quartz Breccia | 988 | 61.9 | 3540 | 331 | 142 |
| 633451 | Quartz | 865 | 1.4 | 316 | 20 | 37 |
| 633391 | Quartz | 737 | 52.6 | 3140 | 285 | 117 |
| 503613 | Quartz Breccia | 643 | 126 | 941 | 156 | 132 |
| 633396 | Quartz Breccia | 563 | 6.2 | 1440 | 26 | 62 |

The main Silver Chalice vein is up to 25 feet in true width in two drill holes and the south vein is 27 feet true width in one drill hole. Significant drilling results are presented in Table 2. The veins exhibit evidence of multiple episodes of fracture and infilling resulting in banded quartz and chalcedony, along with drusy quartz and coxcomb quartz textures. Gossan zones and silica-limonite boxworks occur within the banded veins and along the margins of the veins. Some of these features have silicified selvages of up to 0.5 inches in width. Relict sulfides are rare to absent.

Fluid inclusion analysis suggest that if the hydrothermal fluids contained significant amounts of gold and silver, it is likely that gold-silver mineralization precipitated at boiling levels somewhere else in the epithermal system. The presence of sporadic high grade gold and silver mineralization in surface exposures suggests there may be potential for ore-grade gold and silver mineralization below surface exposures in the discovery area. Potential for epithermal gold-silver mineralization also exists in the broader altered areas adjacent to the exposed veins and in the covered areas along strike of the veins. Little or no exploration has been conducted elsewhere within or adjacent to the Poison Creek Caldera and potential for additional mineralization may exist in these areas.

Table 2: Significant drill intercepts, Silver Chalice prospect.

| Hole # | From (ft) | To (ft) | Interval (ft) | Est. true width (ft) | Au (ppb) | Ag (ppm) |
|-----------|-----------|---------|---------------|----------------------|----------|----------|
| KAI-00-01 | 15 | 20 | 5 | 3.3 | 360 | 0.7 |
| | 26.9 | 27.9 | 1 | 0.66 | 509 | 8.1 |
| KAI-00-02 | 397 | 402 | 5 | 3.3 | 561 | 3.6 |
| | 481.6 | 483.7 | 2.1 | 1.39 | 431 | 1.6 |
| | 510 | 515.5 | 5.5 | 3.63 | 161 | 1.9 |
| | 309.1 | 323.6 | 14.5 | 9.57 | trace | 1.0 |
| KAI-00-03 | 443.1 | 482 | 38.8 | 25.61 | 24 | 3.6 |
| KAI-00-04 | 320.6 | 355 | 34.4 | 22.7 | 212 | 4.6 |
| | 337.1 | 339.1 | 2 | 1.32 | 2700 | 20 |
| | 254 | 290.4 | 36.4 | 24.02 | trace | 2.6 |
| | 149 | 164 | 15 | 9.9 | trace | 2.5 |

Based on information from previous exploration programs, the Silver Chalice prospect is believed to be an epithermal silver-gold occurrence, however, whether the project represents a low-sulfidation state deposit or a high sulfidation state deposit remains uncertain. Limited trace element, fluid inclusion and petrologic evidence suggest it can be classified as a volcanic-hosted low-sulfidation epithermal gold-silver system. However, evidence of alunite alteration suggests the Silver Chalice prospect has affinities with high-sulfidation state epithermal deposits. Additional petrologic and geochemical work will be required to determine which type of epithermal occurrence Silver Chalice best represents.

Potential exists for significant grade-tonnage accumulations of volcanic-related epithermal gold-silver mineralization. Next Gen Metals is seeking a joint venture partner to assist in future exploration and development on the project.

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