



Occurrence Details

Occurrence Number: 115I 134

Occurrence Name: Orloff-King

Occurrence Type: Hard-rock

Status: Deposit

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General Information

Primary Commodities: copper, gold, silver

Deposit Type(s): Epithermal Au-Ag-Cu: High Sulphidation

Location(s): 62°4'4.23" N - -137°9'46.71" W

NTS Mapsheet(s): 115I03

Location Comments: Location provided by Rockhaven Resources 2019

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

First staked as fringe claims around the Brown-McDade property in 1943-1944. In 1946-1948, the Nansen area was explored by Conwest Exploration Company Ltd. During this period, claims were held nearby by Yukon Range Exploration Ltd (Conwest, Frobisher, & Nova-co Exploration Ltd), Nansen Yukon Mines Ltd. and Colery Yukon Mines Ltd.

Re-staked in June 1958 as Dome cl (73537) and in July 1959 as Joanne cl (74285), which were optioned in 1962 by Mount Nansen Explorers Syndicate (Conwest, Faraday Uranium Mines Ltd, Kerr Addison Gold Mines Ltd, Newmont Mining Corporation of Canada Ltd, Noranda Exploration Company Ltd, J. Rankin, Rio Tinto Cananda Exploration Ltd and, later, Central Patricia Gold Mines Ltd.). In 1963, Mount Nansen Mines Ltd. was formed by the syndicate.

Peso Silver Mines Ltd. acquired control of Mount Nansen Mines Ltd. in 1964. Nansen conducted a feasibility study in 1983 and sold the property in 1984 to BYG Natural Resources Inc.

Chevron Canada Resources Ltd. optioned the property from BYG in June 1985 and explored with two trenches in 1985; trenching in 1986; and thirteen trenches in 1987. BYG entered into a sub-option agreement with Chevron in 1988 and explored with 5 holes totaling 158.8 m.

In 1995, BYG continued exploration and development work on their Mount Nansen Project. Prospecting was undertaken at the Orloff-King occurrence. In April 1996, BYG received their Class A water licence which allowed them to begin mining operations. Mining began on the oxidized portion of the Brown-McDade zone (MINFILE occurrence 115I 064).

In February 1999, BYG announced plans to temporarily shut down the Mount Nansen Mine. In March 1999, BYG was placed in receivership and the Nansen mine became a Type II Minesite. In 2004, the court appointed receiver PricewaterhouseCoopers to manage the mines' assets. In 2007, the receiver sold 199 periphery claims to #101073531 Saskatchewan Corp., which included the Orloff-King zone.

In 2009, 101073531 Saskatchewan Corp. flew a regional airborne and magnetic survey that included the Orloff-King occurrence. A 43-101 technical report by Middleton, 2009, summarizes the Mount Nansen and Tawa properties.

Guinness Exploration Inc. optioned the claims in 2010 and explored the Orloff-King occurrence with 10 trenches totaling 1061 m. In 2011, Ansell Capital Corp. optioned the claims from Guinness Exploration and completed four diamond drill holes (607.46 m) and one trench (49.3 m). In 2013, Ansell Capital Corp. performed two lines of IP ground geophysics over the occurrence.

Regional & Property Geology

The occurrence is located in the Dawson Range within Yukon-Tanana Terrane (YTT). The rocks of the YTT in this region consist of Early Mississippian metamorphic rocks separated into meta-sedimentary and meta-igneous suites (Stroshein, 1998). The meta-sedimentary suite consists of micaceous quartz-feldspar gneiss, schist and quartzite of the Nasina Assemblage. The meta-igneous package is comprised of biotite-hornblende feldspar gneiss and coarse-grained granodiorite orthogneiss with lesser amphibolite.

Four rock types dominate the geology surrounding the occurrence and are comprised of:

1. Paleozoic metamorphic Yukon-Tanana gneiss, quartzite, and amphibolite to the south;
2. Triassic to Jurassic metamorphosed alkali-feldspar-rich plutonic suites;
3. Mid-Cretaceous Mount Nansen Suite andesite, felsic lapilli tuffs, basaltic to latite volcanic rocks; and quartz feldspar porphyry, dacite, latite, and quartz monzonite porphyritic hypabyssal rocks; and
4. Mid-Cretaceous Whitehorse granodiorite.

Mineralization & Results

The Orloff-King occurrence was discovered in 1986 by Chevron Exploration and is located approximately 1 km northeast of the Webber zone (MINFILE occurrence 115I 065). The occurrence consists of quartz veins and limonitic fractures that dip 45° to the southwest (AR 092701) in weak to moderately magnetite-enriched andesite, andesitic flows and flow breccias tested over a 280 m strike length. Mineralization is present as grains of pyrite and galena noted within narrow sulphide breccias zones during diamond drilling.

Trenching in 1986 and 1987 by Chevron Exploration traced the zone over a 250 m strike length. Assays from the trenches averaged 0.050 oz/ton Au and 1.85 oz/ton Ag across 11.5 m.

2010 trenching by Guinness focused on un-finished trenches to the northwest of known mineralization with peak grades of 7.05 g/t Au and 34.7 g/t Ag over 0.7 m.

Drilling in 2011 by Ansell Capital at the Orloff-King Zone intersected Ag, Pb and Zn mineralization in narrow sulphide breccias zones. Assays from drilling returned up to 1.73 g/t Au and 30.55 g/t Ag over 1.9 m and 4.39 g/t Au and 1.3 g/t Ag over 0.3 m in DDH-11-267, as well as 1.36 g/t Au and 48.69 g/t Ag over 0.55 m in DDH-11-268. Trenching results from 2011 also returned elevated gold and silver values with assays of up to 0.227 g/t Au and 8.8 g/t Ag over 6.0 m.

Work History

| Date | Work Type | Comment |
|----------|--------------|---------|
| 3/1/2023 | Geochemistry | |

| | | |
|------------|---------------------|--|
| 3/1/2023 | Geochemistry | |
| 3/1/2023 | Ground Geophysics | |
| 12/13/2013 | Ground Geophysics | |
| 12/13/2011 | Drilling | Four holes totaling 607.46 m. |
| 12/13/2011 | Trenching | One trench totaling 49.3 m. |
| 12/13/2010 | Trenching | Ten trenches totaling 1061 m. |
| 12/13/2009 | Airborne Geophysics | And EM. |
| 12/13/2009 | Studies | Middleton, 2009, technical report. |
| 12/13/1998 | Drilling | One hole totaling 123 m. |
| 12/13/1995 | Other | |
| 12/13/1989 | Studies | |
| 12/13/1988 | Drilling | Five holes totaling 158.8 m. |
| 12/13/1987 | Trenching | Thirteen trenches. |
| 12/13/1986 | Trenching | Two trenches were partially completed. |
| 12/13/1985 | Trenching | Two trenches. |

Assessment Reports that overlap occurrence

| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
|------------------------|------|---|--|---------------|----------------|
| 095861 | 2011 | Assessment Report on the 2011 Trenching and Diamond Drilling Program | Diamond - Drilling, Soil - Geochemistry, Bedrock Mapping - Geology, Backhoe - Trenching | 22 | 3607.93 |
| 095315 | 2010 | Assessment Report on the 2010 Trenching and Diamond Drilling Program Charlotte Property | Reclamation - Development, Surface, Diamond - Drilling, Soil - Geochemistry, Surveying - Other, Mechanical - Trenching | 14 | 1452 |
| 095089 | 2009 | Report on a Geophysical Survey on the Mount Nansen Property and the Tawa Property | Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics | | |
| 092701 | 1989 | Report on the Geology and Mineral Inventory of the Mt. Nansen and Tawa Properties With Assessment of the Economic Potential for Open Pit Mining of Oxidized Mineralization in the Brown-McDade Zone | Data Compilation - Pre-existing Data, Resource Estimate - Studies | | |
| 062230 | 1966 | Preliminary Feasibility Report Development and Mining Operations at the Mount Nansen Properties | Pre-feasibility - Studies | | |
| 092505 | 1959 | Dickson Gold Option, Carmacks, Yukon Terr. Billy Claim Group | Diamond - Drilling, Drill Core - Geochemistry, Drill Cuttings - Geochemistry, Mechanical - Trenching | 8 | 122.83 |
| 060738 | 1959 | Report on the Reconnaissance Electromagnetic Survey in the Nansen Creek Area, Yukon Territory - Silver Standard Group, Brown McDade Group | EM - Ground Geophysics | | |
| 019091 | 1958 | Geology of Nansen Creek Area Claims Silver Standard Mines Ltd. | Bedrock Mapping - Geology | | |
| 092059 | 1958 | Report on Geology of Nansen Creek Area Claims | Detailed Bedrock Mapping - Geology | | |

Related References

| Number | Title | Page(s) | Reference Type | Document Type |
|----------------------------------|--|---------|--|---------------------|
| YEG1997 Andersen | Geology of the Flex gold-silver vein system, Mount Nansen area, Yukon | | Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division | Annual Report Paper |
| YEG1998 20 | A summary report on the geology of the Brown-McDade gold-silver deposit, Mount Nansen mine area, Yukon | | Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division | Annual Report Paper |
| YEG1997 14 | Geology and mineral deposits of the Mount Nansen camp, Yukon | | Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division | Annual Report Paper |
| 13-060 | Summary Report of the 2013 Geophysical Work and Mineralogical Study on the Charlotte Property | | Yukon Government: Energy, Mines and Resources | YMEP Report |

Resource/Reserve

| Year | Zone | Type | Commodity | Grade | Tonnage | Amount | Reported Amount | 43-101 Compliant | Cut-off |
|------|------------------------|---------------------|-----------|--------|---------|--------|-----------------|------------------|---------|
| 1989 | Orloff-King (Open Pit) | Historical Estimate | silver | 52 g/t | 84,584 | | No | No | Unknown |

Calculation made using uncut assays and assumed 1.52 m minimum mining width and a 1.37 g/t Au cutoff.; Assessment Report #092701 by W.D. Eaton and A.R. Archer.

| | | | | | | | | | |
|------|------------------------|---------------------|------|----------|--------|--|----|----|---------|
| 1989 | Orloff-King (Open Pit) | Historical Estimate | gold | 2.06 g/t | 84,854 | | No | No | Unknown |
|------|------------------------|---------------------|------|----------|--------|--|----|----|---------|

| Drill core at YGS core library | | | | | |
|--------------------------------|--------------|--------------|-----------|--------|------|
| Number | Property | Year Drilled | Core Size | Photos | Data |
| DDH 88-88 | Mount Nansen | 1988 | HQ | 0 | 0 |