



Occurrence Details

Occurrence Number: 115P 033

Occurrence Name: Highet

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 6/15/2025 4:27:49 PM

General Information

Secondary Commodities: antimony, arsenic, bismuth, copper, gold, silver, tungsten

Aliases: Scheelite Dome Project

Deposit Type(s): Plutonic Related Au

Location(s): 63°46'4" N - 136°4'55" W

NTS Mapsheet(s): 115P16

Location Comments: 1 Kilometres

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

Staked as the Ben cl (YA39400) in Mar/79 by Cominco Ltd, which explored with mapping and geochem surveys later in the year.

Kennecott Canada Inc restaked the showing within a large block of SC cl 1-150 (YB42504) between March and Sept/94. During the 1994 field season Kennecott carried out prospecting, reconnaissance geological mapping and silt, soil and rock sampling on SC cl 1-80. Between May and Aug/95 Kennecott added SC cl 293-533 (YB44537) to the south, west and east side. Between August and Sep/95 the company drilled 8 diamond drill holes (1 035 m) on various SC claims located along Highet Creek.

In Mar/95 D. Klippert tied on DCK cl 1-48 (YB44019) north of the SC claims.

In Jan/96 Kennecott completed an airborne geophysical survey over the entire Scheelite Dome property. During the summer of 1997 Kennecott carried out geological mapping, prospecting, excavator trenching and a reverse circulation drill program consisting of 13 holes totaling 1 052 m.

In Nov/97 Kennecott granted La Teko Resources Ltd an option to earn a 100% interest in the Scheelite Dome property in return for spending \$800 000.00 on exploration by 2001.

Kennecott reserved a 49% back-in right or a 2% net smelter return royalty for itself and the original property owner (R. Riepe) continued to hold a 2% net smelter return royalty on the property.

In 1998 La Teko carried out a multi-phase exploration program consisting of reconnaissance soil geochemistry and prospecting followed by induced polarization and resistivity surveys and further grid based soil sampling followed by a seven hole diamond drill program (1 268m).

In Feb/99 Le Teko was acquired by Kinross Gold Corp. Kinross subsequently transferred the Scheelite Dome property to Copper Ridge Explorations Ltd which carried out a multidisciplinary work program involving, structural mapping, additional soil sampling and geophysical programs followed by a 13 hole, 1 357m diamond drill program. At the end of 1999 Copper Ridge earned 100% interest in the property, however Kennecott retained a 49% back-in right or a 2% net smelter return. The original vendor also holds a 2% net smelter return.

Capsule Geology

The Scheelite Dome area is underlain by the Yusezyu Formation, a Late Proterozoic siliciclastic unit of the Upper Proterozoic to Lower Cambrian Hyland Group. The metasedimentary rocks include a strongly foliated muscovite-chlorite phyllites, quartzofeldspathic and micaceous psammities (¿quartzite¿), and gritty psammities that locally form massive outcrops. Rare marble and calc-silicate layers are best developed in the northwest portion of the property in the vicinity of the Cominco Zone, located on the north side of the Scheelite Dome Stock, although pods and boudins of marble and limy psammite can be found throughout the property.

The property is located on the south-dipping limb of the southwesterly striking McQuesten Antiform within the Tombstone Strain Zone. This package of rocks lies above the northeasterly vergent Tombstone Thrust. Fold and thrust deformation is believed to have occurred in Late Jurassic or Early Cretaceous times. A strong, northeasterly striking, moderately southeast dipping foliation affects the metasedimentary rocks and is the most prominent ductile fabric on the property. Small-scale isoclinal folds and crenulations are common.

The regional foliation is crosscut by three sets of moderately to steeply dipping fault and joint structures that strike east-west, northwest-southeast and north-south, respectively. The east-west and northwest-southeast structures host mineralization and therefore have received the most attention. The north-south structures are only rarely mineralized, have normal down-to-the-west displacement and appear to truncate and offset east-west structures. All of the structures form topographic lineaments.

The above structures were formed either during development of the McQueston Antiform or as a result of faulting accompanying igneous emplacement. Alternatively the structures may be extensional features related to a short-lived period of regional north-south extension coeval with Tombstone suite magmatism.

Following Jurassic-Cretaceous deformation, the Yusezyu Formation was intruded by metaluminous and reduced I-type granitic intrusions of the 94-90 million year Tombstone Plutonic Suite. The Scheelite Dome stock and others are massive, salt and pepper gray, medium grained quartz-, biotite- and hornblende bearing granite with local feldspar megacrysts. Contact metamorphic aureoles containing biotites and andalusite surround the intrusions.

Thin, medium to fine grained felsic to intermediate dykes and sills, commonly quartz and/or feldspar porphyries, and narrow lamprophyre dykes are common and are probably part of the Tombstone Plutonic Suite. The dykes preferentially intrude the east-west structures (Hulstein et al, 1999).

Four types of bedrock mineralization have been recognized in the Scheelite Dome area:

- 1) structurally controlled metasediment-hosted quartz-sulphide veins;
- 2) skarn;
- 3) Fort Knox-type granite-hosted low sulphide veins;
- 4) replacement-type occurrences.

Skarn, Fort-Knox and replacement type occurrences occur throughout the property. All three types have been known to return economic to spectacular gold grades however their limited extent suggests that their economic potential remains low.

The structurally controlled metasediment-hosted quartz-sulphide veins are found throughout the Scheelite Dome property. The veins commonly contain fine grained tourmaline as well as arsenopyrite, +/- stibnite, +/- galena, +/- pyrite and they vary from breccia veins up to several metres in width occupying major fault zones, to thin quartz veinlets filling joint sets, locally closed spaced and described as sheeted veins. Visible gold found in a number of localities, usually occurs in association with arsenopyrite. Vein-wallrock contacts are sharp with narrow (commonly <1cm wide) selvages defined by bleaching, sulphidation, sericitization, silicification and tourmalinization. However, metasedimentary rocks crosscut by veins are limonite-stained and are commonly weathered to depths of 1¿15 m or more implying the former presence of widely dispersed sulphides.

The Highet occurrence (Bennett on Murphy¿s 1996 map) originally covered an anomalous heavy mineral concentrate from the upper branches of Bennett Creek. Follow-up work located single point silver anomalies up to 10 ppm in the west fork area of Bennett Creek and scattered single point gold anomalies up to 112 ppb throughout the creek drainage.

Kennecott, Murphy and others reported gold bearing quartz veins on the west branch of Bennett Creek. Murphy described the occurrence as underlain by oxidized, veined and fractured Yusezyu Formation phyllite, psammite and grit cut by probably mid-Cretaceous porphyry dykes (Tombstone Plutonic Suite). Veining, fracturing and oxidation occurs in a several km-wide zone extending at least across the width of the Seattle Creek map area. Mineralization consists of at least two sets of sheeted quartz-arsenopyrite veins that are variable anomalous in Au, Bi, As, and Sb. A grab sample collected by Cominco assayed 5.5 g/t Au, 0.03% Cu and 0.02% WO₃. Veins are offset by younger north-striking, down-to-the-west normal faults that locally remobilize (?) quartz-arsenopyrite mineralization. Limy sections of the Yusezyu Formation are locally replaced by arsenopyrite.

Kennecott's early work on the Scheelite Dome property identified geochemical and geophysical anomalous areas on the property. Fine fraction stream sediment sampling carried out by Kennecott returned values as high as 140 ppb Au, while heavy mineral concentrate returned up to 6 560 ppm Au. Rock samples of quartz and arsenopyrite with lessor to trace amounts of stibnite, galea and pyrite returned up to 21.6 g/t Au.

Kennecott and later companies adapted a multidisciplinary work program involving a combination of detailed structural mapping and the concentrated interpretation of geophysical (magnetic, resistivity and IP) and surface-geochemistry data to help guide exploration. Soil sampling outlined a 3 km by 6 km soil geochemistry anomaly with prominent > 40 ppb Au highs. Detailed geophysical programs over the geochemical highs identified northwest-southeast fault zones and adjacent arrays of east-west striking gold-sulphide tension veins. These fault zones represent primary fluid conduits, which are linked hydrothermally by east-west trending tension veins and tension fractures. Areas endowed with a high density of closely spaced NW faults and associated veins have the highest likelihood of hosting economic concentration of Au. Mineralization was also found to occur along reactivated easterly N striking faults.

Five of the eight holes drilled in 1995, in the Hight Creek drainage (Minfile Occurrence #115P 003), by Kennecott returned significant results. The best intersection, hole 95-5 returned 1.20 g/t Au over 4.41 m from a bleached, light grey-green moderately foliated phyllite containing calcite and grey quartz veinlets and moderate amounts of pyrite and arsenopyrite. Hole 95-2 returned 1.03 g/t Au over 3 m from a similar rock unit.

Kennecott's airborne geophysical survey consisted of 1 275 line km of airborne multifrequency electromagnetics, high sensitivity Cesium magnetics, four channel VLF and a video survey. The survey outlined numerous prominent fault structures some of which, although not mineralized themselves, are spatially associated with mineralization. The survey also outlined 18 prominent anomalies, 10 of which are associated with known mineralization or geochemical anomalies. The survey failed to accurately outline most of the intrusive bodies.

Kennecott's 1997 reverse circulation drilling program tested areas within the large gold in soil anomaly located east of the Hawthorne Vein structure (Minfile Occurrence #115P 003). All of the holes intersected mineralization. Selected results include 0.48 g/t Au over 29 m in hole 97-4 which was abandoned at a depth of 29 m and Hole 97-11 which assayed 0.415 g/t Au over its entire 60.1 m length.

In the early phase of Le Teko's 1998 exploration program, the company extended their geochemical sampling program eastwards to cover the eastern portions of the property, including the Bennett Creek area. The sample results were low returning no anomalous arsenic, spotty antimony and only two gold values above detection. These results combined with similarly poor rock sampling results and a structural analysis of the area led the company to curtail further work in the eastern portion of the property, including the immediate area surrounding the occurrence.

La Teko Resources' 1998 diamond drill program was carried out over the same soil anomaly targeted by Kennecott (Minfile Occurrence #115P 003) the previous year. The drilling tested targets selected using a combination of controlling features including gold-in-soil and rock anomalies and chargeability and resistivity anomalies from the 1998 induced polarization survey. The targets were within a strong east-west striking gold mineralization system as outlined by anomalous gold-in-soils and bedrock over an area 4 km by 1.5 km. Mineralization was encountered in all drill holes, with the best intersection from hole 98-12 returning 7.7 m of 3.67 g/t Au. The success of the 1998 program demonstrated the effectiveness of a multidisciplinary approach to exploration.

The 1999 drilling program was successful in continuing to delineate widespread gold mineralization on the property and demonstrating the importance of northwest-striking fault zones (veins). Drill intersections were characterized by correlation with key pathfinder elements including bismuth, arsenic and antimony. Drill intersections also correlate well with areas of strong alteration, fracturing and shearing, and the presence of a large quantity of discordant quartz veining.

Two reconnaissance holes were drilled in 1999 on the Heon zone (this occurrence), located on the west branch of Bennett Creek. The zone shares many of the same characteristic of the Hawthorne-Rudolph area. Both holes intersected altered and mineralized quartzite-rich strata with brittle fracture networks and faulting. The best result (hole 99-26) returned 1060 ppb Au over 0.5 m.

References

COMINCO LTD, Mar/80. Assessment Report #090555 by L.J. Nagy.

COPPER RIDGE EXPLORATIONS INC. News Releases, 11 Jun/99; 5 Oct/99; 25 Oct/99; 8 Nov/99; 16 Nov/99.

COPPER RIDGE EXPLORATIONS INC. Jan/99. Web Site: www.copper-ridge.com

GEOLOGICAL SURVEY OF CANADA, Memoir 234, p. 33-34

GEOLOGICAL SURVEY OF CANADA, Paper 66-31, p. 20-21

GEOLOGICAL SURVEY OF CANADA, Summary Report 1918, p. 14B.

HULSTEIN, R., ZURAN, R., CARLSON, G.G. AND FIELDS, M., 1999. The Scheelite Dome gold project, central Yukon. In: Yukon Exploration and Geology 1998, C.F. Roots and D.S. Emond (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 243-248.

H-6000 HOLDINGS LTD, Dec/92. Assessment Report #093052 by J. Kajszo.

KENNECOTT CANADA INC, Apr/95. Assessment Report #093305 by T. Heah and R. Hulstein.

KENNECOTT CANADA INC, Mar/96. Assessment Report #093382 by R. Hulstein.

KENNECOTT CANADA INC, Oct/96. Assessment Report #093513 by R. Hulstein and R. Zuran.

KENNECOTT CANADA INC, May/98. Assessment Report #093791 by R. Hulstein and R. Zuran.

LA TEKO RESOURCES LTD, Mar/99. Assessment Report #093993 by D. Caulfield.

MAIR, J.L., HART, C.J.R., GOLDFARB, R.J., O'DEA, M. AND HARRIS, S., 2000. Geology and metallogenic signature of gold occurrences at Scheelite Dome, Tombstone gold belt, Yukon. In: Yukon Exploration and Geology 1999, D.S. Emond and L.H. Weston (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 165-176.

MURPHY, D.C. AND HÉON, D., 1996. Geological map of Seattle Creek map area, western Selwyn Basin, Yukon (115P/16). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Geoscience Map 1996-3, scale 1:50 00.

MURPHY, D.C. 1997. Geology of the McQuesten River Region, Northern McQuesten and Mayo Map Areas, Yukon (115P/14, 15, 16; 105M/13, 14). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada Bulletin 6.

NORTHERN MINER, 26 Apr/99; 14 Jun/99; 29 Nov/99.

O'DEA, M., CARLSON, G., HARRIS, S., AND FIELDS, M., 2000. Structural and Metallogenic framework for the Scheelite Dome deposit, Yukon Territory. In: The Tintina Gold Belt: Concepts, Exploration, and Discoveries, Special Volume 2. T.L. Tucker and M.T. Smith (eds.) British Columbia and Yukon chamber of Mines, Cordillera Roundup January 2000.

YUKON MINERAL INVENTORY (YMI), Energy, Mines and Resources Canada.

YUKON MINING AND EXPLORATION OVERVIEW, p. 40.

YUKON EXPLORATION 1985-86, p. 306.

YUKON EXPLORATION & GEOLOGY 1994, p. 9, 11. 1995, p. 13-14, 17-18. 1996, p. 32. 1997, p. 27-28, 37-38. 1998, p. 10-11, 28, 31. 1999, p. 8, 30-31.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 279-280.

Work History

| Date | Work Type | Comment |
|------------|---------------------|--------------------------------|
| 12/31/1999 | Drilling | Thirteen holes, 1,357 m. |
| 12/31/1999 | Geology | |
| 12/31/1999 | Geochemistry | |
| 12/31/1999 | Ground Geophysics | |
| 12/31/1998 | Drilling | Seven holes, 1,268 m. |
| 12/31/1998 | Geochemistry | |
| 12/31/1998 | Ground Geophysics | Also resistivity survey. |
| 12/31/1998 | Other | |
| 12/31/1997 | Geology | |
| 12/31/1997 | Drilling | Thirteen holes, 1,052 m. |
| 12/31/1997 | Trenching | |
| 12/31/1997 | Other | |
| 12/31/1996 | Airborne Geophysics | Also magnetic and VLF surveys. |
| 12/31/1995 | Drilling | Eight holes, 1,035 m. |
| 12/31/1994 | Geochemistry | Also soil and silt sampling. |
| 12/31/1994 | Geology | |
| 12/31/1994 | Other | |
| 12/31/1979 | Geology | |
| 12/31/1979 | Geochemistry | |
| 12/31/1979 | Geochemistry | |

Assessment Reports that overlap occurrence

| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
|------------------------|------|---|---|---------------|----------------|
| 093993 | 1998 | 1998 Geological, Geochemical, Geophysical and Drilling Program on the Scheelite Dome Property | Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, IP - Ground Geophysics | 7 | 1268 |
| 093549 | 1996 | Assessment Report on 1996 Geophysical Work at the SC 1-525 Claims | Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics | | |
| 093305 | 1994 | Assessment Report on 1994 Geological and Geochemical Work at the SC 1-80 Claims | All Weather Road - Development, Surface, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology, Prospecting - Other | | |
| 090555 | 1979 | Geological and Geochemical Report on the Ben Claims 1-80 | Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other | | |