



## Occurrence Details

**Occurrence Number:** 115P 011

**Occurrence Name:** Josephine

**Occurrence Type:** Hard-rock

**Status:** Showing

**Date printed:** 6/15/2025 10:23:59 AM

## General Information

**Secondary Commodities:** gold, tungsten

**Deposit Type(s):** Plutonic Related Au

**Location(s):** 63°52'29" N - -137°0'43" W

**NTS Mapsheet(s):** 115P14

**Location Comments:** 1 Kilometres

**Hand Samples Available:** No

**Last Reviewed:**

### Capsule

#### Work History

Staked as Porcupine, Gold Belt, Whistler, etc cl (6164) in Sep/02 by M. Spisak on the left limit of Josephine Creek, 10 km above the mouth. Spisak drove three adits (4.6, 19.8 and 20.7 m) in 1902-03. The Verlene and Lunden cl (12244) were staked immediately south in Jul/12 and Apr/14.

Restaked as Due cl (79087) in Jul/62 by T. Gergich. Restaked as part of a large block of 762 CC cl (YA53506) in Sep/80 and Aug/81 by Canada Tungsten Mining Corporation Ltd, which carried out property wide geological mapping and geochemical sampling of an area 1 km to the west (Minfile Occurrence #115P 013) in 1981.

Restaked as part of a group of 162 Rye cl (YB5624) in Jun/87 by Gold Rite Mining Corporation, subsequent to optioning the adjoining Rum claims. Gold Rite staked Roll cl 1-48 (YB17773) to the east in Sep/88 and carried out geological mapping, geochemical sampling, VLF-EM and magnetometer surveying, trenching and diamond drilling on the Rum claims (Minfile Occurrence #115P 013) in 1988 before dropping the option.

Ivanhoe Goldfields Ltd optioned all of the Clear Creek claims in late 1992. In Aug/94, First Dynasty Mines Ltd acquired Ivanhoe. In Jun/95 Kennecott Canada Inc optioned the Clear Creek area claims (including the Rye and CC claims) and explored between June and Sep/95 with a reverse circulation drilling program on the Rhosgobel stock (Minfile Occurrence #115P 012) and soil sampling, geological mapping, trenching and road building throughout the claim block. In Nov/95 Kennecott dropped its option. New Millennium Mining Ltd, an wholly owned subsidiary of First Dynasty, took over as operator in 1996.

Newmont Exploration Ltd stake Jo cl 1-70 (YB94499) contiguously to the northeast in Sep/96 and carried out geochemical sampling and geological mapping in 1996 and 1997. In 1998, Newmont entered into an option agreement with New Millennium to acquire their adjoining claim holdings to the south, including the CC, Dum, Rain, Rum, Rye, Sleet, Wet and Wind claims. The company carried out geochemical rock and soil sampling and geological mapping across the northern third and the south-central part of the claim group in Jul/98. This was followed by airborne magnetic and radiometric geophysical surveying of the entire claim group and surrounding areas in Aug/98.

In 1999 Redstar Resources Corporation entered an option agreement with Newmont to acquire an interest in their Clear Creek claim holdings. During June and Jul/99 Redstar carried out geochemical rock and soil sampling surrounding this occurrence and in the south-central portion of the Clear Creek claim group. In Nov/99 the company drilled 2 holes (219.2 m) on Sleet cl 18 (YB04273) near the southern boundary of the claim group and drilled 9 more holes (1 211 m) in this area and carried out geochemical sampling in the western part of the claim group in 2000. Redstar terminated its option agreement on the Clear Creek property in 2002.

#### Capsule Geology

Gold occurs with arsenopyrite along a 300 x 2 700 m shear zone which cuts medium to coarse grained porphyritic granite of mid- Cretaceous age, and hornfelsed quartzite and argillite of the Late Proterozoic to Early Cambrian Hyland Group. The Josephine stock is the most northerly of three adjacent intrusions: the Goldrite claims also covered the Pukelman stock (Minfile Occurrence #115P 013) and part of the Rhosgobel stock (Minfile Occurrence #115P 012). The original Josephine showing consists of two quartz-arsenopyrite-pyrrhotite veins in hornfels near the intrusive contact. Bema obtained values up to 5.14 g/t Au from these veins, and up to 7.63 g/t Au and 0.61% WO<sub>3</sub> from a stockwork of quartz-feldspar-scheelite veinlets.

Soil sampling for Goldrite in 1988 outlined large areas of anomalous gold (>100 ppb Au, frequently >500 ppb) in talus fines. The Contact zone anomaly to the south measures 1 800 m by 1 600 m. The Saddle Zone anomaly to the north measures 2 700 by 300 m. Goldrite found several quartz-sulphide veins containing galena, pyrite, pyrrhotite and stibnite associated with lamprophyre and quartz-porphyry dykes along a fault gully. The veins contained up to 3 719 ppb Au. Disseminated pyrrhotite and pyrite were found in the metasedimentary rocks.

Noranda mapped several phases in the Josephine stock including diorite, megacrystic feldspar-biotite porphyry and a bluish, fine grained margin. In the Saddle Zone area both the stock and metasedimentary rocks contain disseminated arsenopyrite. Grab samples returned average values of 3 to 3.5 g/t Au, and a 1991 trench returned anomalous gold values across 160 m, including 2.11 g/t Au across 24 m which contained a high grade section grading 6.05 g/t across 5 m, suggesting potential for bulk tonnage, low-grade gold deposit.

In the Eiger Zone, located 1 km northeast of the Saddle Zone, quartz-arsenopyrite veins follow parallel shears in diorite. The shears strike 100° and dip steeply south. Assays of these veins returned values as high as 343.5 g/t Au, and a chip sample assayed 4.7 g/t Au across 5 m.

Geochemical results show that the entire property is permeated with arsenic, but that there is a strong correlation between gold and bismuth in the Saddle Zone. A parallel east-west zone of strongly anomalous gold in soil (Contact Zone) cuts across the adjacent Pukelman intrusion, but lacks bismuth. A third parallel zone of anomalous gold bisects the Rhosgobel intrusion, and in this case the gold appears to correlate with tungsten.

Emond and Lynch (1992) noted a strong positive correlation between gold and bismuth, and suggested that bismuth can be used as a pathfinder for gold in this area. A quartz-arsenopyrite vein assayed by Murphy et al in 1993 showed a correlation between gold, tungsten and bismuth, with values of 5 040 ppb Au, 8.1% As, 392 ppm Bi and 0.1% W.

Kennecott carried out geological mapping around the Eiger stock. A float sample of rusty quartz monzonite dyke containing minor quartz veining collected between the Eiger and Saddle stocks returned 355 ppb Au. The bulk of exploration work carried out in 1995 was carried out on other Minfile occurrences located within the Clear Creek claims.

Silt samples from Josephine Creek and some of its larger tributaries returned highly anomalous Au (to 275 ppb) and As (to 410 ppm) geochemistry. A large, weak to moderately anomalous As and Au soil anomaly was outlined 1 km to the northeast of the occurrence (Jo claims), sampling of which returned low grade Au mineralization (0.1 to 0.2 g/t) associated with silicified and brecciated metasediments.

Newmont's sampling confirmed anomalous gold values reported by previous operators and outlined existing areas of anomalous gold and arsenic soil geochemistry. Magnetic data from the airborne survey defined dominant structural trends in the area and partially outlined some of the intrusive stocks. Radiometric data indicates that the Josephine stock, together with the Saddle, Eiger and Pukelman stocks to the west (Minfile Occurrence #115P 013) may be part of a single intrusive body.

#### References

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CANADA TUNGSTEN MINING CORPORATION LTD, Dec/81. Assessment Report #090926 by R.H. Rainbird and D.A. Kelly.

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GEOLOGICAL SURVEY OF CANADA, Memoir 48-25, p. 11.

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KENNECOTT CANADA INC, Feb/96. Assessment Report #093372 by S. Coombes.

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MURPHY, D.C., HÉON, D., AND HUNT, J., 1993a. Geological overview of Clear Creek map area, western Selwyn Basin (NTS 115P/14). In: Yukon Exploration and Geology 1992, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada.

MURPHY, D.C., HÉON, D., AND HUNT, J., 1993b. Geological map of Clear Creek map area, western Selwyn Basin (NTS 115P/14). In: Yukon Exploration and Geology 1992, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1993-1(G), 1:50 000.

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NEWMONT EXPLORATION LTD, Dec/97. Assessment Report #093766 by M.A. Stammers.

NEWMONT EXPLORATION LTD, Oct/98. Assessment Report #093937 by M.A. Stammers.

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REDSTAR RESOURCES CORPORATION, Jan/2000. Assessment Report #094058 by M.A. Stammers.

REDSTAR RESOURCES CORPORATION, Jan/2001. Assessment Report #094165 by S. Weekes and R. Falls.

STEPHENS, J.R., OLIVER, N.H.S., BAKER, T. AND HART, C.J.R., 2000. Structural evolution and controls on gold mineralization at Clear Creek, 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. 151-163.

STERLITE GOLD LIMITED, New Release, 05 Jul/2002.

STRATAGOLD CORPORATION, News Release, 18 Oct/2004.

YUKON EXPLORATION 1988, p. 224-226; 1989, p. 133; 1991, p. 11.

YUKON EXPLORATION AND GEOLOGY 1981, p. 228-229; 1982, p. 216; 1992, p. 2, 4-5; 1994, p. 9; 1995, p. 13-14, 16, 18; 1999, p. 8-9; 2000, p. 16-18.

Work History

Date	Work Type	Comment
12/31/1999	Drilling	Nine holes, 1,211 m.
12/31/1999	Geochemistry	
12/31/1998	Airborne Geophysics	Also magnetic survey.
12/31/1995	Geology	
12/31/1995	Geochemistry	
12/31/1995	Trenching	
12/31/1995	Development, Surface	
12/31/1981	Geology	
12/31/1981	Ground Geophysics	Also VLF and magnetic surveys.
12/31/1980	Geochemistry	
12/31/1962	Geochemistry	Property wide sampling.
12/31/1903	Development, Underground	Work carried out between 1902 and 1903.
12/13/1962	Geology	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
<a href="#">095984</a>	2011	Assessment Report, 2011 Exploration Program, Clear Creek Property	Diamond - Drilling, Diamond - Drilling, Drill Core - Geochemistry, Drill Core - Geochemistry, Soil - Geochemistry, Soil - Geochemistry	36	7258.80
<a href="#">095031</a>	2004	2004 Clear Creek Property-Orthophoto Acquisition and Satellite Imagery Report	Orthophoto - Airphotography, Landsat - Remote Sensing		
<a href="#">094058</a>	1999	1999 Geochemical and Diamond Drilling Assessment Report on the Clear Creek Property	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Line Cutting - Other	2	219.15
<a href="#">093937</a>	1998	Geophysical, Geological and Geochemical Assessment Report on the Clear Creek Property	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Line Cutting - Other		
<a href="#">093766</a>	1997	Geological and Geochemical Assessment Report on the Jo 1-70 Claims	Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Line Cutting - Other		
<a href="#">092748</a>	1988	Geological, Geochemical, Geophysical and Diamond Drilling, 1988 Summary Report on the Rum, Rye & Roll Claims	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, EM - Ground Geophysics, Magnetics - Ground Geophysics, Mechanical - Trenching	8	1236.50
<a href="#">090926</a>	1981	Geological and Geochemical Assessment Report on the C.C. 1-860 (Fractions included), SLUGGO 1-20, Rain 1-30 and BEE 1-14 Claim Groups	Muck - Geochemistry, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Line Cutting - Other, Prospecting - Other		

## Related References

Number	Title	Page(s)	Reference Type	Document Type
<a href="#">ARMC016643</a>	Geology map with legend -115P/14 - Clear Creek		Property File Collection	Geoscience Map (Geological - Bedrock)
<a href="#">ARMC016642</a>	Geochemistry map - 115P/14 - Clear Creek		Property File Collection	Geochemical Map