Occurrence Details

Occurrence Number: 105G 147
Occurrence Name: Tsa Da Glisza
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 4/29/2025 11:52:36 AM

General Information

Primary Commodities: emerald
Secondary Commodities: copper, gold, silver, tungsten
Aliases: Regal Ridge
Deposit Type(s): Gemstone Schist-hosted emerald
Location(s): 61°16'33" N - -130°35'4" W
NTS Mapsheet(s): 105G07
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

The area was first explored in 1978 by Chevron Canada Ltd, which carried out a regional prospecting and stream sediment sampling program. Chevron staked Howdee cl 1-16 (YA45711) 1 km to the southwest in Aug/79 and carried out prospecting, geological mapping and geochemical surveys in 1979-1980.
The area saw renewed exploration interest in the fall of 1995, when Cominco Ltd announced the discovery of the Kudz Ze Kayah deposit (Minfile Occurrence #105G 117) located approximately 30 kms to the north. Between Oct/95 and Feb/96, Expatriate Resources Ltd staked the occurrence within Goal cl 122-319 (YB60658) The company carried out geological mapping, prospecting, soil sampling and hand trenching between 1996 and 1998. All exploration conducted during this time targeted volcanogenic massive sulphide mineralization.
In Aug/98, W. Wengzynowski, a geologist employed by Expatriate Resources Ltd discovered numerous emerald bearing float trains in an 800 by 400 m area. Preliminary exploration that year, resulted in the recovery of approximately 1 kg of green beryl and emerald bearing material from talus and soil. Later examination of the material by a gemologist confirmed that some of the crystals were near gem quality.
The following year Expatriate carried out grid based soil sampling, hand trenching, geological mapping and hand mining programs in an effort to evaluate the size and economic potential of the emerald showing. In Jun/2001 Expatriate optioned 50% of the emerald showing to True North Gems Inc.
True North carried out an evaluation program consisting of mechanical stripping, geological mapping and sampling during the summer of 2001 In Jul/2001 the company staked Yir cl 1-9 (YB93279) and in Sep/2001 staked Meg cl 1-122 (YB93395) to the west to cover favorable stratigraphy.
In Mar/2002 the company purchased Expatriate¿s remaining 50% interest in the property. As part of the agreement, Expatriate retained the right to explore for precious and base metals on the property. During the 2002 field season the company drilled 6 diamond drill holes (400 m) and continued geological mapping, prospecting, excavator trenching and bulk sampling programs.

Capsule Geology

The occurrence lies within the Yukon-Tanana Terrane in the Finlayson Lake area. Recent geological mapping completed by Murphy et al., (2001) of the Yukon Geology Program shows that the occurrence area is predominantly underlain by Devonian to Early Mississippian, metavolcanic and metasedimentary rocks assigned to Murphy's Grass Lakes succession. The oldest exposed rocks in the area are a mafic meta-volcanic unit (unit DF, Fire Lake unit), composed mainly of chloritic phyllite, but also including carbonaceous phyllite and rare muscovite-quartz phyllite of probable felsic meta-volcanic protolith. This unit is intruded by mafic (unit DMi) and ultramafic (unit Dum), meta-plutonic rocks which display characteristics and relationships that suggest they are sills that flowed from comagmatic sills and dykes lying along the trend of thickness changes in unit DF. The Fire Lake unit is overlain to the south, by carbonaceous phyllite, unit DKcp, and felsic meta-volcanic rocks, unit DK, of the Kudz Ze Kayah felsic metavolcanic unit. A large Cretaceous age, granitic stock outcrops to the east and several Eocene age dykes occur to the east and south.
Prospecting and widely spaced claim line soil sampling completed in 1996 by Expatriate, outlined scattered anomalous copper response in the occurrence area, while prospecting discovered the Kel showing (Minfile Occurrence #105G 102), a scheelite and tourmaline bearing shear zone cutting pyrrhotite rich metagabbro and muscovite-tourmaline schist, located approximately 800 m to the east. Follow-up mapping and contour soil sampling in 1998 returned strong copper, tungsten and gold response from the occurrence area and specimens of strongly weathered massive sulphide float returned up to 2.29% copper, 99.8 g/t silver and 1.65 g/t gold. While prospecting in the area, W. Wengzynowski, a geologist employed by Expatriate Resources discovered emerald bearing float in the vicinity of a mineralized shear zone. Further prospecting in 1998 identified emerald in outcrop and float over an area measuring 950 x 350 m. Sampling and processing of subcrop and talus material produced numerous small gem quality emeralds with excellent color and quality. Study of emerald samples recovered from outcrop confirmed that the gemstones represented fragments of much larger crystals, up to 1 cm in diameter and 4 cm in length.
Groat (2000) reported that the emeralds occur where quartz veins cut mafic-rich layers in a shallowly dipping mica-chlorite schist of Murphy's Upper Devonian Fire Lake mafic meta-volcanic unit (unit DF). In the area of the occurrence, the Fire Lake unit comprises meta-basalt of boninitic composition and overlies a thick, laterally tapering slab of variably serpentinized mafic and ultramafic meta-plutonic rocks. Murphy and et al, (2001) interpreted this slab as a comagmatic sill that intruded laterally from feeder dykes localized along a nearby synvolcanic fault. In the occurrence area, the schist is well foliated and dips gently to the north. The strata are isoclinally folded; vergence is to the south and the fold axis plunges to the west approximately 10 degrees. The quartz veins associated with the emerald mineralization are slightly discordant to the bedding planes. At least eight such veins have been found and in most cases the quartz veins are surrounded by a zone of yellow sulfate mineralization and a much more extensive, overlapping mass of fine tourmaline crystals, which locally contain minor amounts of scheelite. Where the quartz veins cut mica-poor chlorite schist there are no sulfate or tourmaline zones and no emeralds (although there may be tourmaline in the quartz veins), implying that mica-poor strata are unreactive with respect to the hydrothermal system. All quartz veins seem contemporaneous and the presence or absence of emeralds is influenced strongly by the geochemistry of the host rock.
The quartz veins seem to be genetically linked to one of the largest bodies of mid-Cretaceous granite in the area, which is exposed east of, and within 600 m of, the emerald mineralization. This pluton is zoned; the outcrop closest to the emerald showing is apparently marginal muscovite granite that grades (over a surprisingly small distance) to a reddish-weathering, biotite-muscovite granite. A preliminary geochemical analysis of the granite shows that it is rich in W and Zr and impoverished in Eu and Lu typical of an evolved S-type granitoid system. The granite is discordant with respect to planar fabrics of the host metamorphic rocks, yet locally weakly foliated, indicating late- to post-kinematic emplacement. The western contact of the granite is observed to be gently west-dipping, underlying the occurrence at a relatively shallow depth. The orientation of the western granite contact and the contact between the Fire Lake unit and the co-magmatic mafic and ultramafic sill are such that the granite likely intrudes through the ultramafic sill at depth.
In 2001, True North Gems employed a Caterpillar 225 track hoe with a 2 cubic metre bucket to develop access trails and dig trenches. In all 7 trenches were completed for a combined length of 220 m. Trenching was focused primarily on Area 4, and the newly discovered Area BG-1 and Area 51. Stripping of Area 4 best revealed the structural controls on mineralization and the geological setting of this particular emerald occurrence. During detailed mapping of the Area 4 exposure, it was observed that vertical joints and shears, which intersected the mineralized schist horizons have also provided conduits for the mineralizing fluids. Emerald mineralization was identified in association with these cross-structures, where it forms as disseminations within the tourmaline pods measuring up to 1 m in diameter and 0.2 m in thickness. Detection of emerald mineralization in the vertical cross structures greatly increases the potential yield of emeralds from this occurrence.

The 2002 exploration program involved selectively mining and separating 120.34 tonnes of emerald-bearing material from seven different zones that was processed on site to yield 65 kg of emerald concentrate. The concentrate was transported to True North's laboratory facility in Vancouver B.C. where the material was further processed. The emerald-bearing material was sorted into three categories: gem quality, near-gem quality and non-gem quality. The most impressive yield was obtained from the newly discovered Southwest zone where a 6.36 t bulk sample yielded 11.59 kg of emerald concentrate. From this 121.42 g of gem quality and 587.33 g of near-gem quality stones were recovered for a yield of 19.09 g/t gem quality and 92.35 g/t near -gem quality emeralds.
Diamond drilling in 2004 on Regal Ridge intersected quartz-tourmaline-scheelite veining with rusty mica-rich alteration of the Fyre Lake chlorite schist at depth. This mineral and alteration assemblage expands the potential for emerald mineralization at depth. Currently, known emerald mineralization extends to 30 metres depth at the Summit Zone. A new surface discovery of emerald mineralization was made at Howdy Ridge, a kilometre from the Summit Zone. Core drilling in the Shadow Zone on Howdy Ridge intersected Fyre Lake schist and both subvertical and shallowly dipping quartz-tourmaline scheelite veins.
In 2004, True North Gems released faceting test results for emeralds they sent to be processed by a Chinese company. A total of 471 grams of emerald rough were used to create 575 calibrated pieces of which 237 were faceted gemstones and the remainder were cabochons and beads. The total weight of the polished goods was 364.15 carats. The overall yield on the material worked was 15.5 per cent by weight.
True North Gems recovered 21.2 kilograms of emerald rough from 582.3 tonnes of material taken from 2004 mini-bulk sampling program at the property. The emerald rough recovered consists of 823.76 grams (4,118.8 carats) of gem, 7,351.75 grams (36,758.75 carats) of near-gem and 13,007.15 grams (65,035.75 carats) of non-gem emerald.

References

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Work History

Date	Work Type	Comment
12/31/2002	Drilling	Number of holes drilled: 6 Amount of work done: 400 METRES
12/31/2002	Geology	
12/31/2002	Trenching	
12/31/2002	Trenching	
12/31/2002	Other	
12/31/2001	Geology	Work directed towards proving up prospect.
12/31/2001	Trenching	
12/31/2001	Trenching	
12/31/1999	Geology	Work directed at emerald showing.
12/31/1999	Geochemistry	Work directed at emerald showing.
12/31/1999	Trenching	Work directed at emerald showing.
12/31/1999	Trenching	Work directed at emerald showing.
12/31/1998	Other	
12/31/1997	Geology	
12/31/1997	Geochemistry	
12/31/1996	Geochemistry	
12/31/1996	Other	
12/31/1979	Geology	

12/31/1979	Other	
12/31/1979	Other	
12/31/1978	Geochemistry	
12/31/1978	Other	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094540	2005	2004-2005 Assessment Report on the Goal Claims	Mill/Concentrator Construction - Development, Surface, Diamond - Drilling, Mechanical - Trenching	54	3503
094909	2003	2003 Report on Field Activities on the Goal Claims, The Regal Ridge Project, Yukon Territory, Canada	Tunnelling - Development, Underground, Diamond - Drilling, Bulk Sample - Lab Work/Physical Studies, Mechanical - Trenching	14	628.68
094410	2002	2002 Report on Field Activities for the Regal Ridge Emerald Project	Diamond - Drilling, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching	4	417.41
094315	2001	2001 Report on Field Activities for the Regal Ridge project of the Goal Net Property	Soil - Geochemistry, Bulk Sample - Lab Work/Physical Studies, Resource Estimate - Studies, Mechanical - Trenching		
094151	1999	Assessment Report Describing Geological Mapping, Prospecting and Soil Geochemistry on Crown "Emerald" Showing of the Goal Net Property	Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other, Hand - Trenching		
094016	1998	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry on the Goal Net Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Backhoe - Trenching		
093788	1997	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry on the Goal Net Property	Rock - Geochemistry, Soil - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching, Hand - Trenching		
093573	1996	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry and Geophysical Surveys on the Goal Net Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
093655	1996	Report on a Combined Helicopter-Borne Electromagnetic and Magnetic Survey, Goal Net, Hat Trick, League, Offside, Power Play, Shutout and Slapshot Properties	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		