Occurrence Details

Occurrence Number: 115O 052
Occurrence Name: Bismark
Occurrence Type: Hard-rock
Status: Anomaly
Date printed: 6/14/2025 9:08:37 PM

General Information

Secondary Commodities: gold, palladium, platinum
Deposit Type(s): Vein Au-Quartz
Location(s): 63°36'3" N - -139°13'4" W
NTS Mapsheet(s): 115O11
Location Comments: 1 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Originally staked as Hoosier Boy cl (4379) (part of the Union Group) in July, 1900. The Dalcouath and Dundinald cl (6542) were staked in the vicinity in Jan/03.
In Aug/2001 T. Morgan et al., staked RMB cl 1-8 (YC20955) 4 km to the southwest. The group mapped and sampled the claims later in the summer.

Capsule Geology

The area is located at the northwest end of the Yukon portion of the Yukon-Tanana terrane. The region is currently being remapped by Ryan and Gordey (2002, 2003) as part of the Ancient Pacific Margin NATMAP Project initiated by the Geological Survey of Canada, Yukon Geological Survey and British Columbia Geological Survey Branch. Although a final report has not yet been released, preliminary results are available.
Geological mapping in the area is hampered by the fact that most of the Stewart River region escaped glaciation. Thus much of the area is covered by a thick soil veneer (~ 1 m), thick gravel and loess deposits in valley bottoms and by thick cover of forest, moss and lichen. The best bedrock exposure is along the main rivers and large creeks and on ridges of high elevation. In addition the rocks have been twice-transposed and have undergone intense metamorphism. Thus it is likely that the geology will change as more information becomes available.
The area is underlain by undivided metasedimentary rocks (unit DMps) including mica-quartz schist and paragneiss of psammitic, semipelitic and rare pelitic origin. Although transposed, they generally preserve primary compositional layering. The unit commonly contains members of micaceous quartzite and rare conglomerate. The metasedimentary rocks are overlain by amphibolite schist and gneiss (unit DMa) that are probably derived from mafic to intermediate volcanic or volcaniclastic rocks. The amphibolite is probably interstratified with the metasedimentary rocks. The sequence is intruded to the east and west by grey gneiss (unit DMt), a unit described as intermediate to mafic orthogneiss derived from intermediate granitoid (tonalite to diorite) sheets and veinlets. The unit is interpreted as subvolcanic intrusions to the volcanic pile(s) represented by the amphibolite unit (unit DMa) with which it is intimately associated, essentially forming a volcanic-plutonic complex. Felsic to intermediate orthogneiss (unit DPg), composed of pink- to orange-weathering granite to granodiorite sheets and veinlets crosscut the diorite and tonalite sheets with which they were transposed.
The area underlying the RBM claims hosts Cretaceous clastic and volcanic rocks that unconformably overlie the rock sequence previously described. The lower part is comprised of clast supported pebble conglomerate unit uKcv) and possibly minor limestone assigned to the Tantalus Formation (?). This is in turn overlain by voluminous basalt and andesite flows assigned to the lower Carmacks Group.
Although the occurrence lies within the felsic gneiss unit, the original claims were probably staked on gold bearing quartz veins which are known to occur in the conglomerate unit. Old aeromagnetic maps identified several small 100 gamma magnetic anomalies nearby.
At the top of the divide separating the head of Montana Creek and Bismark Creek, Morgan et al., (2003) identified a small ultramafic intrusion (?). Bostock¿s 1942 geology map notes the presence of ultramafic rocks in the area but Gordey and Ryan¿s map fails to identify their presence. Various reason can be found for this oversight. One reason could be that the outcrop is located at the very top of the ridge and was small enough to be missed by mappers traversing below the ridge. A more likely reason is that it is a small outcropping intrusion or a small, shallow dipping, high strain lozenge within the metasedimentary or amphibolite rocks that is not large enough to show up on the map. Scattered lozenges and boudins of ultramafic rocks were reported by Ryan and Gordey across the region.
Morgan described the intrusion as being comprised of dark weathering dunite and displaying layered textures of dunite and pyroxenite with some serpentinized zones. The chemical differences in mineralogy have created visually distinct, flat lying linear contrasts in the ridge-top outcrop. Morgan felt that the intrusion might represent a potential Alaska Type ultramafic platinum group elements (PGE) deposit. A regional airborne magnetic survey (Shives, 2001), jointly funded by the Geological Survey of Canada and the Yukon Geology Program identified a magnetic high just east of the intrusion, giving credence to the possibility of an previously unidentified ultramafic intrusion.
A 2 m chip sample collected from a pyroxinite layer grading up into a dunite layer returned 0.11 g/t platinum and 0.08 g/t palladium . A second sample collected on a return trip, from the same spot later in the season returned 65 ppb platinum and 105 ppb palladium.

References

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Work History

Date	Work Type	Comment
12/31/2001	Geochemistry	
12/31/2001	Geochemistry	
12/31/2001	Other	
12/31/1903	Other	
12/31/1900	Other	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096394	2012	Geochemical Report on the Bismark Claims	Rock - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Soil - Geochemistry, Prospecting - Other, Prospecting - Other		