



Occurrence Details

Occurrence Number: 105G 105

Occurrence Name: Whit

Occurrence Type: Hard-rock

Status: Anomaly

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General Information

Secondary Commodities: copper, lead, zinc

Deposit Type(s): Unknown

Location(s): 61°25'22" N - -131°50'8" W

NTS Mapsheet(s): 105G05

Location Comments: .5 Kilometres

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

Staked as Whit cl 1-2 (YA90242) in Sep/85 by D. Halstead, who added Guy cl 1-2 (YA91226) in Aug/86.

In Sep/97, Pathfinder Resources Ltd staked Cry cl 1-162 (YB90121) adjacent to Whit and Guy claims. In the fall of 1997, the company carried out a reconnaissance scale exploration program on the claims followed by an airborne geophysical survey. In Jan/98 Pathfinder Resources staked Far cl 1-18 (YB91116) to the northwest. The claims make up part of the company's larger Starr property which by Sep/98 comprised of a total of 563 various Cry, Lone, Den, Far, Howl, etc cl.

The property was optioned to Petra Resource Corporation in Apr/98, which followed up geochemical and geophysical targets and prominent gossans located on the property. Petra carried out geochemical sampling and prospecting in 1998 and prospecting, geochemical sampling and ground geophysical surveying in 1999. The property reverted to Pathfinder and the claims were subsequently allowed to lapse.

Capsule Geology

The area is located in the Pelly Mountains southwest of the Tintina Trench. The occurrence lies towards the centre of the Pelly Mountains volcanic belt, an arcuate belt of rocks measuring about 80 km long and up to 25 km wide that forms part of the Pelly-Cassiar Platform. In the 1970's several volcanic massive sulphide (VMS) deposits (Minfile Occurrence #105F 012, etc.) were discovered at the northwest end of the belt. After several years, interest in the belt waned, but interest was rekindled by the discovery of the Kudz Ze Kayah (Minfile Occurrence #105G 117) and Wolverine (Minfile Occurrence #105G 072) deposits in time-correlative strata in the Finlayson Lake area located to the east. The discovery of VMS mineralization on the Wolf (Minfile Occurrence #105G 008) property, at the southeast end of the belt, in 1997, triggered a staking rush and re-assessment of the mineral potential throughout the volcanic belt.

Rocks of the Pelly Mountain volcanic belt are considered to be Late Devonian to Early Mississippian. The belt unconformably overlies cliff-forming carbonate and limy siltstone/shale that range from probable mid-Silurian to Middle Devonian age. The volcanic belt is overlain by coarse-grained sandstone and grit, argillite and massive rusty weathering carbonate which have been interpreted as Ordovician Road River and (?) Earn Group-equivalent strata that has been thrust over the volcanic package, however this contact is not directly exposed.

Pathfinder Resources' 1997 exploration program was reconnaissance in nature, thus little detailed mapping was reported. J. Hunt (1998) of the Yukon Geology Program carried out detailed geological mapping at the Wolf property located 20 km to the southeast. Hunt reported that the southeast end on the Pelly Mountain volcanic belt is made up of dominantly felsic volcanoclastic strata which she broke down into lower, middle and upper portions. The Wolf deposit is hosted within the middle portion of the volcanic succession, proximal to a syenite intrusion. Field work by Hunt and others indicates that to the west, towards the centre of the volcanic belt the felsic volcanoclastic component decreases as the number of sills, flows and dykes becomes more numerous, and the amount of intermediate volcanic material increases.

No assessment work has ever been filed for the Whit or Guy claims. Pathfinder Resources staked their claims to explore the mineral potential of the Pelly Mountain volcanic belt. Mapping indicates that the claims (Cry etc.) are underlain by felsic and mafic volcanic flows and tuffs interbedded with mudstones and argillites (probably Hunt's Und1 unit). These rocks appear to be sandwiched on either side by slates to the southwest (probably Hunt's slate unit) and limestone/dolomite (probably Hunt's Lst unit) to the northeast.

Prospecting on the entire Starr property outlined more than 20 gossans of varying intensities 6 of which, occur on or near the Cry claims. Gossan 4, located in a steep creek exposure adjacent to the occurrence location, consists of pyrite-fluorite veins cutting felsic volcanic rocks which have been pervasively quartz-sericite-ankerite-pyrite altered. Pathfinder reported that all rock samples collected from within the gossanous area are anomalous in fluorine, barium and calcium. Gossan 10 (Pyrite Creek showing) located 2.5 km north of the occurrence, is described as a 300 m exposure of ferricrete in a stream bed. The observed mineralization is described as massive fine grained pyrite-quartz stockwork and lenses in predominantly black argillaceous lapilli tuff and trachytic flows overlying a mudstone unit. Several float samples collected from the site returned weakly anomalous values in Ag, As, Cu and Pb with Ba values up to 5%. Initially thought to have some characteristics of stratiform mineralization, further investigation by Petra determined that the pyrite occurs as wide veins near the lithological contact between the tuffs and the flows and that it is probably fault related in nature.

Gossan 20 (Cry grid) located 7 km to the northwest, is a well developed intense gossan that extends roughly 1 km along the face of a north facing cirque. Intense quartz-pyrite-k-feldspar and sericite alteration is pervasive. The company believes that the protolith of these intensely altered rocks is likely trachytic tuffs and siliceous and baritic exhalities. Within the middle of the roughly 50 m thick altered section a 1.2 m thick interval of conformable pyrite is exposed over 3 m of strike length. Rock samples from this interval returned weakly anomalous values for Ag, As, Cu, Mo and Pb. Twenty-five meters upsection from this interval, a thin (< 25 cm thick) horizon of finely laminated massive barite and pyrite occurs within a 15 m thick zone of 5% disseminated pyrite which returned anomalous values for barium, but was not anomalous for any of the other determined elements.

References

GIBSON, A.M., HOLBEK, P.M. AND WILSON, R.G., 1999. The Wolf property - 1998 update: Volcanogenic massive sulphides hosted by rift-related, alkaline, felsic volcanic rocks, Pelly Mountains, 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. 237-242.

HUNT, J.A., 1998. Preliminary geology of the Mount Vermillion area, Pelly-Cassiar Platform, Yukon Territory, 1:25 000 scale map (parts of 105G 5 & 6). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1998-5.

HUNT, J.A., 1999. Preliminary stratigraphy and distribution of Devonian-Mississippian massive sulphide-bearing volcanic rocks in the Mount Vermillion (Wolf) area, Pelly Mountains (105G/5 and 105G/6), southeast Yukon. In: Yukon Exploration and Geology 1998, C.F. Roots and D.S. Emond (eds.), Exploration and Geological Services Division, Indian and Northern Affairs Canada, p.73-89.

HUNT, J.A., 2002. Volcanic-associated massive sulfide (VMS) mineralization in the Yukon-Tanana Terrane and coeval strata of the North American miogeoclinal, in the Yukon and adjacent areas. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Bulletin 12, 107 p.

MINERAL INDUSTRY REPORT 1976, p. 203.

PATHFINDER RESOURCES LTD, News Release, 05 Feb/98; 07 Apr/98.

PATHFINDER RESOURCES LTD, May/98. Assessment Report #093786 by M. Baknes.

PETRA RESOURCE CORPORATION, Mar/99. Assessment Report #093983 by J.S. Weber.

YUKON EXPLORATION & GEOLOGY 1997, p. 20, 37; 1998, p. 19, 28; 1999, p. 22, 30.

YUKON EXPLORATION 1985-86, p. 237.

Work History

Date	Work Type	Comment
12/31/1999	Geochemistry	Also soil sampling.
12/31/1999	Ground Geophysics	Also HLEM survey.
12/31/1999	Other	
12/31/1998	Geochemistry	Also soil and silt sampling.
12/31/1998	Other	
12/31/1997	Geochemistry	Also soil and silt sampling.
12/31/1997	Airborne Geophysics	Also EM survey.
12/31/1997	Other	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094048	1999	Horizontal Loop Electromagnetic and Total Magnetic Field Survey at the Starr Property, Ross River Area	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, EM - Ground Geophysics, Magnetics - Ground Geophysics		
093983	1998	Geological & Geochemical Report on the Starr Property	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Detailed Bedrock Mapping - Geology, Prospecting - Other		