Occurrence Details

Occurrence Number: 105G 092
Occurrence Name: Coope
Occurrence Type: Hard-rock
Status: Anomaly
Date printed: 6/16/2025 10:33:41 AM

General Information

Secondary Commodities: zinc
Deposit Type(s): Unknown
Location(s): 61°25'19" N - -131°41'48" W
NTS Mapsheet(s): 105G05
Location Comments: 1 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Jac cl (YA21453) in Jul/77 following regional stream sediment surveying by Newmont Exploration of Canada Ltd.
Restaked as Den cl 1-206 (YB90283) in Sep/97 by Pathfinder Resources Ltd. In the fall of 1997 the company carried out a reconnaissance scale exploration program followed by an airborne geophysical survey. In Jan/98 Pathfinder staked Red cl 1-16 (YB91079) and Grey cl 1-13 (YB91095) to the east and Pelly cl 1-8 (YB91108) to the northwest. The claims make up part of the company¿s larger Starr property which by Sep/98 comprised 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 southeastern end 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 limey 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.
Newmont Exploration never filed any assessment for the Jac claims, thus the origin of the original occurrence is uncertain. However, given that the company was exploring the felsic volcanics further east, it is likely that the occurrence represented some sort of geochemical anomaly. Pathfinder Resources staked the Den and other claims to explore the mineral potential of the Pelly Mountain volcanic belt.
Since Pathfinder Resources¿ exploration program was reconnaissance in nature and little detailed mapping was reported. J. Hunt (1998) of the Yukon Geology Program carried out detailed geological mapping at the Wolf property located 14 km to the southeast. Hunt reported that the southeast end on the Pelly Mountain volcanic belt is made up of dominantly felsic volcaniclastic 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 volcaniclastic component decreases as the number of sills, flows and dykes becomes more numerous, and the amount of intermediate volcanic material increases.
Pathfinder Resources reported that their claims (Den etc.) were mainly underlain by Pelly Mountain volcanic rocks. The southwest edge of the claim block is generally underlain by slate and tuffaceous slate, etc (probably Hunt¿s slate unit) while the northeast edge is generally underlain by limestone/dolomite (probably Hunt¿s Lst unit). Subsequent mapping by Petra indicates that the central portion of the claims are underlain by felsic and mafic volcanic flows and tuffs interbedded with mudstones and argillites (probably Hunt¿s Und1 unit).
Prospecting and airborne surveying of the entire Starr property outlined more than 20 gossans of varying intensities and a total of 15 electromagnetic conductors. A series of these gossans occurr on the Den claims, covering over 6 km of strike length and extending to the northwest and the southeast from the occurrence location. These gossans are predominantly pyrite within ankerite +/- barite-fluorite altered trachytic tuffs and other fragmentals. One float sample collected near the occurrence and described as a fluorite altered quartz stringer containing 3-5 % pyrite and 1% sphalerite returned 3.6 % Zn.
The Willow Creek showing, located 1.2 km northeast of the occurrence location, consists of pyrite as disseminations, stockwork veining with quartz, barite and carbonate, massive pods of pyrite and zones of pyrite up to 2 m thick and is locally anomalous in Ag (up to 3.4 ppm), Hg (up to 20 ppm), Pb (up to 1 200 ppm) and Zn (up to 5 150 ppm). The showing is hosted in mudstones and tuffaceous mudstones and shales.
Two other areas of significant Zn mineralization, both located within or just below altered trachyte, were discovered on the Willow grid in 1998; the Caribou and East Willow showings, 0.75 km south-southeast and 3.4 km southeast respectively from the original occurrence location. The Caribou showing consists of disseminated and vein sphalerite with pyrite, calcite, quartz, sericite and barite in heterolithic tuff. Single, discreet veins up to 2 cm thick and more diffuse vein zones up to 40 cm were noted. Samples from the showing returned values up to 5.97% Zn and 152 ppm Pb. The Willow East showing consists of sphalerite-pyrite-calcite veins in altered trachyte just below a layer of heterolitihic tuff. Samples from this area returned up to 4.9% Zn, 970 ppm Pb and 2 390 ppm Ba.

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 Devono-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.

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 RESOURCES CORPORATION, Mar/99. Assessment Report #093983 by J.S. Webber.

PETRA RESOURCES CORPORATION, Dec/99. Assessment Report #094048 by J.S. Webber.

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

Work History

Date	Work Type	Comment
12/31/1999	Geochemistry	Also rock sampling.
12/31/1999	Ground Geophysics	Also HLEM survey.
12/31/1999	Other	
12/31/1998	Geology	
12/31/1998	Geochemistry	Also silt and rock sampling.
12/31/1997	Geochemistry	Also rock and soil sampling.
12/31/1997	Airborne Geophysics	Also magnetic survey.
12/31/1997	Other	
12/31/1977	Geochemistry	Regional program.

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		
093786	1997	Geological, geochemical & Geophysical Report on the Starr Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Silt - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Detailed Bedrock Mapping - Geology		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC016575	Geology map - 105G/5 - McNeil Lake		Property File Collection	Geoscience Map (Geological - Bedrock)