

Location/Identification

MINFILE Number:	094E 118	National Mineral Inventory Number:	094E2 Cu5
Name(s):	<u>RAT 1</u> RAT, RAT 1-2, RAT 1-20, KEMESS WEST, DUNCAN, DUNCAN 3-4, RON, RON 11		
Status:	Showing	Mining Division:	Omineca
		Electoral District:	Peace River North
Regions:	British Columbia	Resource District:	Mackenzie Natural Resource District
BCGS Map:	094E007		
NTS Map:	094E02W	UTM Zone:	09 (NAD 83)
Latitude:	57 01 39 N	Northings:	6322626
Longitude:	126 47 09 W	Easting:	634393
Elevation:	1526 metres		
Location Accuracy:	Within 500M		
Comments:	Located on a northwest-facing slope, approximately 750 metres south of the south end of Duncan Lake, about 189 kilometres north-northwest of the community of Germansen Landing (Location map of samples RX040027 and RX040028; Assessment Report 18442).		

Mineral Occurrence

Commodities:	Copper, Gold, Silver, Molybdenum		
Minerals	Significant:	Chalcopyrite	
	Associated:	Pyrite	
	Alteration:	Limonite	
	Alteration Type:	Oxidation	
	Mineralization Age:	Unknown	
Deposit	Character:	Stockwork, Disseminated	
	Classification:	Porphyry	
	Type:	L04: Porphyry Cu +/- Mo +/- Au	

Host Rock

Dominant Host Rock:	Metasedimentary		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Stuhini	-----	-----
Lower Jurassic	-----	-----	Kemess Pluton
Isotopic Age	Dating Method	Material Dated	
-----	-----	-----	
207 +/- 7 Ma	Potassium/Argon	Hornblende	
Lithology:	Cherty Sediment/Sedimentary, Augite Andesite Flow, Quartz Monzonite Porphyry, Quartz Feldspar Porphyry, Andesite		

Geological Setting

Tectonic Belt:	Intermontane	Physiographic Area:	Omineca Mountains
Terrane:	Stikine, Plutonic Rocks		
Metamorphic Type:	Regional		
Grade:	Greenschist, Zeolite		
Comments:	Located in the southwest corner of the Toodoggone Gold Camp.		

Inventory

Ore Zone: SAMPLE
Category: Assay/analysis

Year: 1989
Report On: N
NI 43-101: N

Sample Type: Grab

Commodity	Grade
Silver	7.1000 grams per tonne
Gold	0.3150 grams per tonne
Copper	0.1090 per cent

Comments: One of three samples taken from the quartzose zone.

Reference: Assessment Report 18442.

Ore Zone: SAMPLE
Category: Assay/analysis

Year: 1988
Report On: N
NI 43-101: N

Sample Type: Grab

Commodity	Grade
Silver	1.1 grams per tonne
Gold	0.10 grams per tonne
Copper	0.151 per cent
Molybdenum	0.043 per cent

Comments: Samples (RX040027 and RX040028) of the porphyry.

Reference: Assessment Report 18442.

Capsule Geology

The Rat 1 occurrence is located on a northwest-facing slope, approximately 750 metres south of the south end of Duncan Lake, about 189 kilometres north-northwest of the community of Germansen Landing.

The Toodoggone district lies within the eastern margin of the Intermontane Belt and is underlain by a northwest-trending belt of Paleozoic to Paleogene sediments, volcanics and intrusions covering an area of 90 by 25 kilometres. The basement rocks are Proterozoic metasedimentary equivalents of the Hadrynian Ingenika Group. These rocks are unconformably overlain by volcanic and sedimentary units of the Devonian to Permian Asitka Group, which are in turn overlain by Upper Triassic basaltic to andesitic flows, volcanoclastics and minor limestone of the Stuhini Group. Volcanoclastic rocks of the Lower Jurassic Hazelton Group and rhyolitic to dacitic flows, intrusions and volcanoclastics of the Lower Jurassic Toodoggone Formation (Hazelton Group) overlie the Stuhini Group. Further to the west, nonmarine sediments of the Cretaceous Sustut Group overlie the volcanic strata and form the western margin of the district.

The Early Jurassic Black Lake Suite, of quartz monzonitic to granodioritic composition, has intruded the older strata in the central and eastern parts of the region and forms the eastern margin of the Toodoggone district. Within the district, syenomonzonitic and quartz feldspar porphyritic dikes may be feeders to the Toodoggone Formation.

The dominant structures in the area are steeply dipping faults that define a prominent regional northwest structural fabric trending 140 to 170 degrees. High angle, northeast-striking faults (approximately 060 degrees) appear to truncate and displace northwest-striking faults. Collectively these faults form a boundary for variably rotated and tilted blocks underlain by monoclinical strata.

Locally, the Rat 1 occurrence and most of the surrounding area is underlain by augite andesite flows and minor amounts of cherty sediments of the Stuhini Group. The Kemess pluton, a quartz monzonite porphyry intrusion, crops out to the north of the showing and intrudes Stuhini lithologies. This intrusion is bordered by a quartz feldspar porphyry intrusion and a marginal quartzose zone, which seems to be a hybrid zone between the porphyry and cherty sediments of the Stuhini Group.

Mineralization consists of 1 to 2 per cent disseminated pyrite and trace chalcopyrite with limonite in a stockwork of numerous hairline fractures hosted in the quartzose zone associated with a biotite-quartz-feldspar porphyry and actinolite-rich tactite(?).

In 1988, samples (SC88-1 and SC88-2) from the stockwork zone yielded up to 7.1 grams per tonne silver, 0.1090 per cent copper, 0.0050 per cent zinc, 0.0020 per cent lead and 0.315 gram per tonne gold, whereas samples (RX040027 and RX040028) of the porphyry yielded up to 0.151 per cent

copper, 0.043 per cent molybdenum, 1.1 grams per tonne silver and 0.10 gram per tonne gold (Assessment Report 18442).

The area has been historically explored in conjunction with the nearby Kemess North deposit (094E 021) located 3.9 kilometres north-northeast, and the Kemess South deposit (094E 094) located 3.1 kilometres south-southeast.

In 1968 and 1969, Cominco Ltd. completed programs of soil sampling and geological mapping on the area as the Rat 1-20 claims.

In 1974, Craigmont Mines Ltd. completed a 17.0 line kilometre ground induced polarization survey on the area. In 1977, Cominco Ltd. completed a lone drillhole, totalling 91.0 metres, on the Rat 6 claim.

In 1984, Pacific Ridge Resources Corp. completed a program of soil sampling, geological mapping and ground induced polarization and magnetic surveys on the area as the Ron 11 claim. In 1988, D.L. Cooke prospected and rock sampled the area as the Rat 1-2 claims.

In 1990 and 1991, El Condor Resources Ltd. conducted programs of geological mapping, geochemical sampling and a 201.0 line kilometre induced polarization survey on the area as apart of the Kemess property.

During 2000 through 2011, Northgate Minerals Corporation completed further programs of prospecting, geological mapping, geochemical sampling, ground geophysical surveys and diamond drilling on the Kemess and Kemess East properties.

During 2013 through 2017, AuRico Gold Inc. examined the area as part of the Kemess and Kemess East properties.

Bibliography

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Date Coded:	1992/01/17	Coded By:	Keith J. Mountjoy (KJM)	Field Check:	N
Date Revised:	2021/07/22	Revised By:	George Owsiacki (GO)	Field Check:	N