Ruoppapalo

Alternative Names: Ruoppa
Occurence type: occurrence

Commodity	Rank	Total measure	Total production	Total resource	Importance
gold	1	NA	NA	NA	NA

Easting EUREF: 439545
Northing EUREF: 7548541
Easting YKJ: 3439693
Northing YKJ: 7551695

Discovery year: 1996
Discovered by: Geological Survey of Finland
Province: Kittilä (Au, Cu)
Comments: Discovery by GTK; a regional Au anomaly in till with a set of geophysical anomalies were investigated by percussion drilling into bedrock surface and the mineralisation was detected.

References: 2, 3, 7

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
Comments: Clearly epigenetic, "mesothermal" mineralisation with a distinct structural control

References: 3

Dimension

Expression: exposed
Form: discordant
Shape: NA
Length (m): NA
Width (m): NA
Thickness (m): NA
Depth (m): NA
Area (ha): NA
Dip azim: NA
Dip: NA
Plunge azim: NA
Plunge dip: NA
Orientation method: NA
Dimension comments: A 2 km long zone of anomalous gold

Holder history

Current holder: 358 Exploration Oy
Years: 2023-2027
Holding type: Exploration permit

Previous holders:

Company	Years	Holding type	Comments
358 Exploration Oy	2021	Reservation	NA
Aurion Resources Oy	2014-2016	Reservation	NA

Svenska Platina AB	2004	NA	NA
Geological Survey of Finland	1997-1999	NA	NA

EXPLORATION ACTIVITY

Finex Metals

Years	Activity type	Geologist	Exploration result	Ref
2022	detailed geochemistry	Eetu Jokela	key geological features	2
	"Sampling has defined a 2.2 km long anomalous zone of Au along the contact between granodiorite stock and mafic volcanic rocks. Additionally, multiple new Au anomalous areas were identified with extensive Ionic Leach survey".			

Aurion Resources Oy

Years	Activity type	Geologist	Exploration result	Ref
2015-2015	detailed geology	NA	NA	1
	A total of 81 rock chip samples were collected from outcrop, sub outcrop and angular boulders assaying from nil to 30.7 g/t Au including 21 samples which assayed greater than 1.0 g/t Au; The mineralization comprises narrow mm to <1m wide quartz-carbonate veins with minor sulphides, free gold and bismuth. Mineralization is hosted by felsic dykes, occurring along the margin of an intrusive body.			

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
1998-1998	core drilling	Ilkka Härkönen, Heikki Pankka	NA	3, 7
	3 diamond-drill holes, total 301 m			

1997-1997	excavation	Ilkka Härkönen, Heikki Pankka	NA	3, 7
	8 trenches, results from channel sampling; 4 m @ 2.7 ppm Au (including 1 m @ 6.78 ppm), 1 m @ 3.2 ppm Au			

1995-1998	detailed geophysics	Ilkka Härkönen, Heikki Pankka	NA	3
	a set of ground slingram, VLR and magnetic anomalies.			

1993-1993	core drilling	Ilkka Härkönen, Heikki Pankka	NA	7
	2 diamond-drill holes, total 265 m			

1992-1998	detailed geochemistry	Ilkka Härkönen, Heikki Pankka	NA	3, 7
	investigated by percussion drilling into till cover and bedrock surface			

1990-1997	detailed geology	Ilkka Härkönen, Heikki Pankka	NA	3, 7

1979-1979	regional geophysics	NA	key geological features	3, 7

	Low-altitude airborne magnetic, electromagnetic and radiometric survey

1972-1975	regional geochemistry	NA	NA	3, 7
	Regional till geochemical survey; Au anomaly in till.			

GEOLOGY

Host rock: Albite Hydrotermal rock
Wall rock: Granodiorite, Rock, Mafic tuff

Albite Hydrotermal rock (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 3, 4, 5, 6, 7, 8

Metamorphic description:
Ore minerals:

Mineral	Proportion	Mineral texture
Arsenopyrite	minor	
Gold	present	
	Free native gold associated with carbonate	
Pyrite	major	

Other minerals:

Mineral	Proportion	Mineral texture
Albite	present	
Calcite	present	
Quartz	present	

Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		
Comments: Metamorphic peak during D2, thrusting during D3 was at least partly post-peak, late metamorphic.					

Geological age:

Geological era:	Max age - Minage (Ma):	Inferred age (Ma):	Age of mineralization:		
Paleoproterozoic (2500-1600 Ma)	1914-1914	1914	N		
Comments: Synorogenic, 1914±3 Ma Ruoppapalo granitoid intrusion (the granodiorite) and the related albitites, clearly predate gold mineralisation					
Radiometric age:	**Method:**	**Age:**	**Error (Ma):**	**Mineral:**	**Reference:**
	NA	1914	3		3, 8

Granodiorite (Wall rock)

Rock type: Wall rock
Proportion: minor
Grain size: NA
Color: NA
References: 3, 4, 5, 6, 7, 8

Comments: The occurrence is in the contact of the Ruoppapalo granitoid and mafic tuffitic country rocks of the granitoid.

Metamorphic description:

Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		
Comments: Metamorphic peak during D2, thrusting during D3 was at least partly post-peak, late metamorphic; Plagioclase-quartz-K feldspar-biotite-hornblende.					

Geological age:

Geological era:	Max age - Minage (Ma):	Inferred age (Ma):	Age of mineralization:
Paleoproterozoic (2500-1600 Ma)	1600-2500		N

Rock (Wall rock)

Rock type: Wall rock
Proportion: major

Mafic tuff (Wall rock)

Rock type: Wall rock
Proportion: minor
Grain size: NA
Color: NA
References: 3, 4, 5, 6, 7, 8
Comments: The occurrence is in the contact of the Ruoppapalo granitoid and mafic tuffitic country rocks of the granitoid.

Metamorphic description:

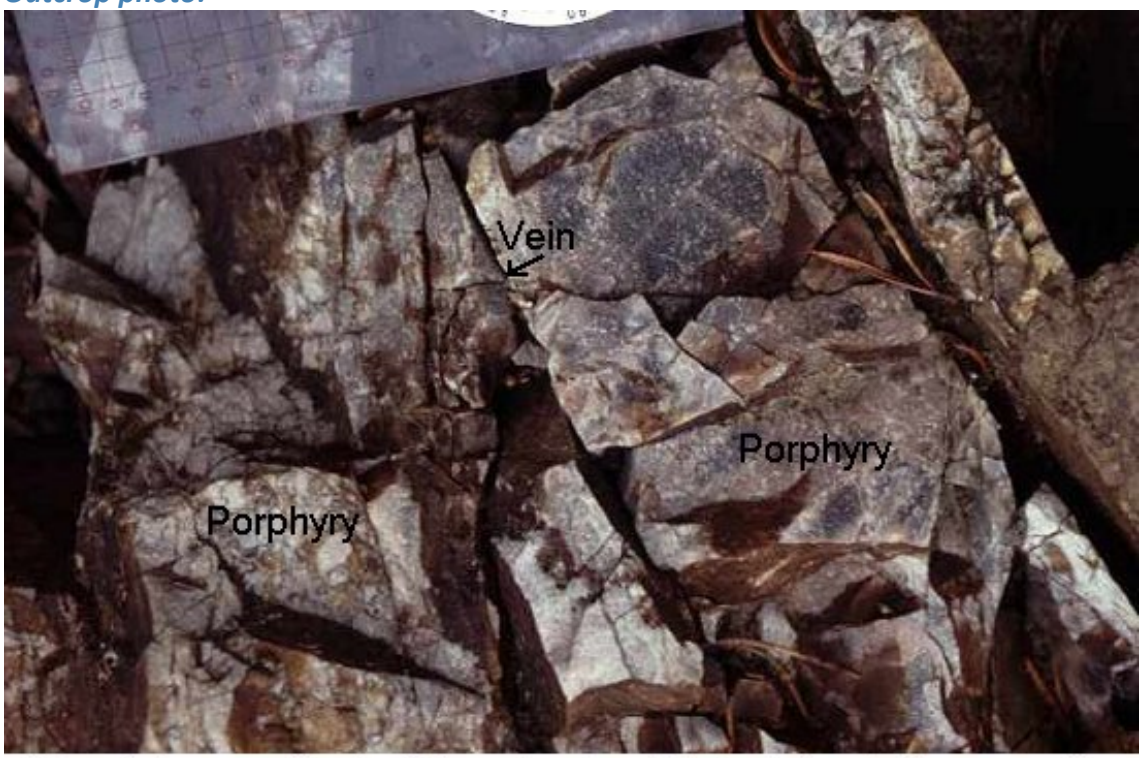
Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		
Comments: Metamorphic peak during D2, thrusting during D3 was at least partly post-peak, late metamorphic.					

Geological age:

Geological era:	Max age - Minage (Ma):	Inferred age (Ma):	Age of mineralization:
Paleoproterozoic (2500-1600 Ma)	1600-2500		N

Figures

Outcrop photo:

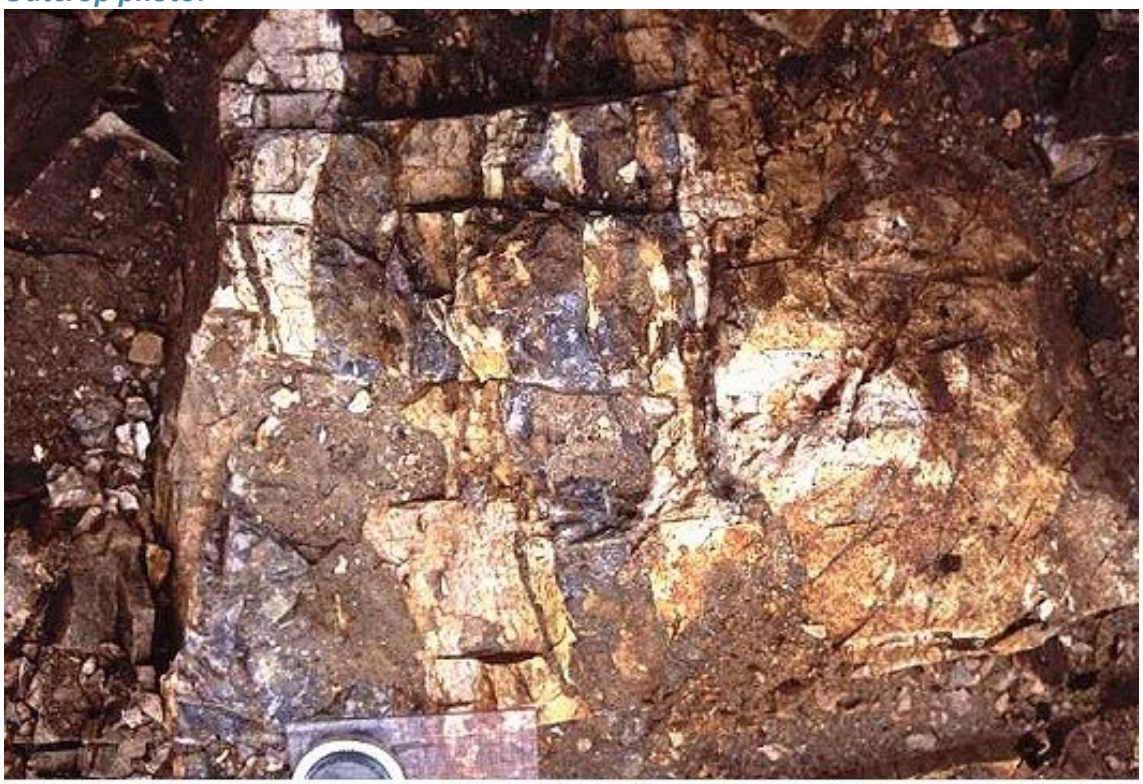


Bleaching enveloping thin veins in a felsic dyke at Ruoppapalo. Compass plate is 11 cm long. Photo Pasi Eilu 17/9/1998.

Trench:

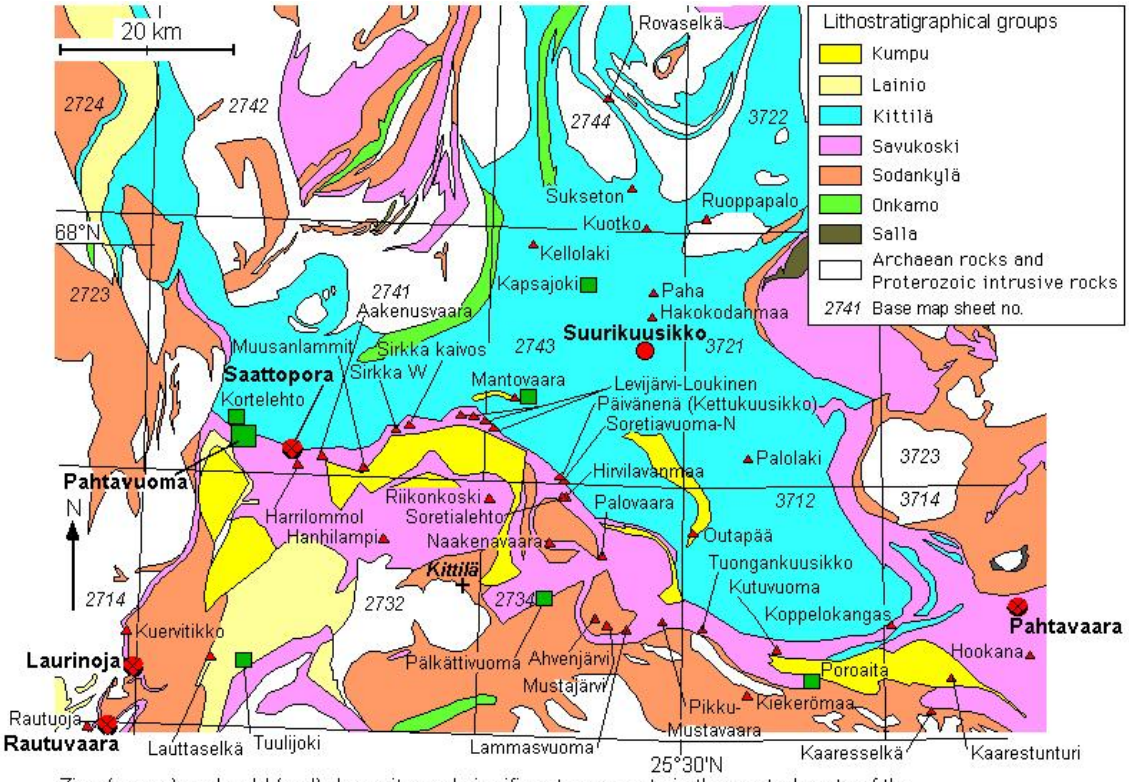
The main exploration trench at Ruoppapalo.
Photo Pasi Eilu, 17/9/1998.

Outcrop photo:



A close-up on auriferous quartz veins in felsic porphyry, Ruoppapalo. Length of the compass plate is 11 cm. Photo Pasi Eilu, 17/9/1998.

Regional geology:



Zinc (green) and gold (red) deposits and significant prospects in the central parts of the Central Lapland greenstone belt. Lithostratigraphy from Lehtonen et al. (1998). Edited by P. Eilu (2007)

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