Vatanen

Occurence type: occurrence

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

Easting EUREF: 318550,3
Northing EUREF: 6816121,391
Easting YKJ: 3318647
Northing YKJ: 6818982

Discovery year: 1987
Discovered by: Geological Survey of Finland
Province: Pirkkala (Au)
Comments: Detection of regional Au-As anomalies in 1986 led to a detailed till geochemical and bedrock mapping which was followed by drilling into local anomalies; final discovery of the deposit by diamond drilling.
References: 5

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
References: 5

Dimension

Expression: exposed
Form: discordant
Shape: NA
Length (m): 500
Width (m): 100
Thickness (m): NA
Depth (m): NA
Area (ha): NA
Dip azim: NA
Dip: NA
Plunge azim: NA
Plunge dip: NA
Orientation method: NA

Holder history

Previous holders:

Company	Years	Holding type	Comments
Geological Survey of Finland	-2001	NA	NA
EMX Finland Oy	2020	Application for reservation	NA

EXPLORATION ACTIVITY

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
2000-2001	excavation	Petri Rosenberg	NA	1, 2, 3, 4, 5

2000-2001	detailed geophysics	Petri Rosenberg	NA	5
	No response by IP.			

2000-2001	core drilling	Petri Rosenberg	NA	5
	Core drilling (reconnaissance drilling): diamond-drill holes, total 504 m.			

2000-2001	detailed geology	Petri Rosenberg	NA	1, 2, 3, 4, 5

2000-2001	regional geochemistry	Petri Rosenberg	NA	1, 2, 3, 4, 5
	Regional and local Au and As anomalies in till envelop the deposit; the extent of the regional Au anomaly is 20x60 km, the extent of the local Au anomaly is about 300x300 m the local As anomaly 200x300 m.			

1987-1989	excavation	Petri Rosenberg.	NA	1, 2, 3, 4, 5

1987-1989	detailed geophysics	Petri Rosenberg.	NA	5
	No response by IP.			

1987-1989	detailed geology	Petri Rosenberg.	NA	1, 2, 3, 4, 5

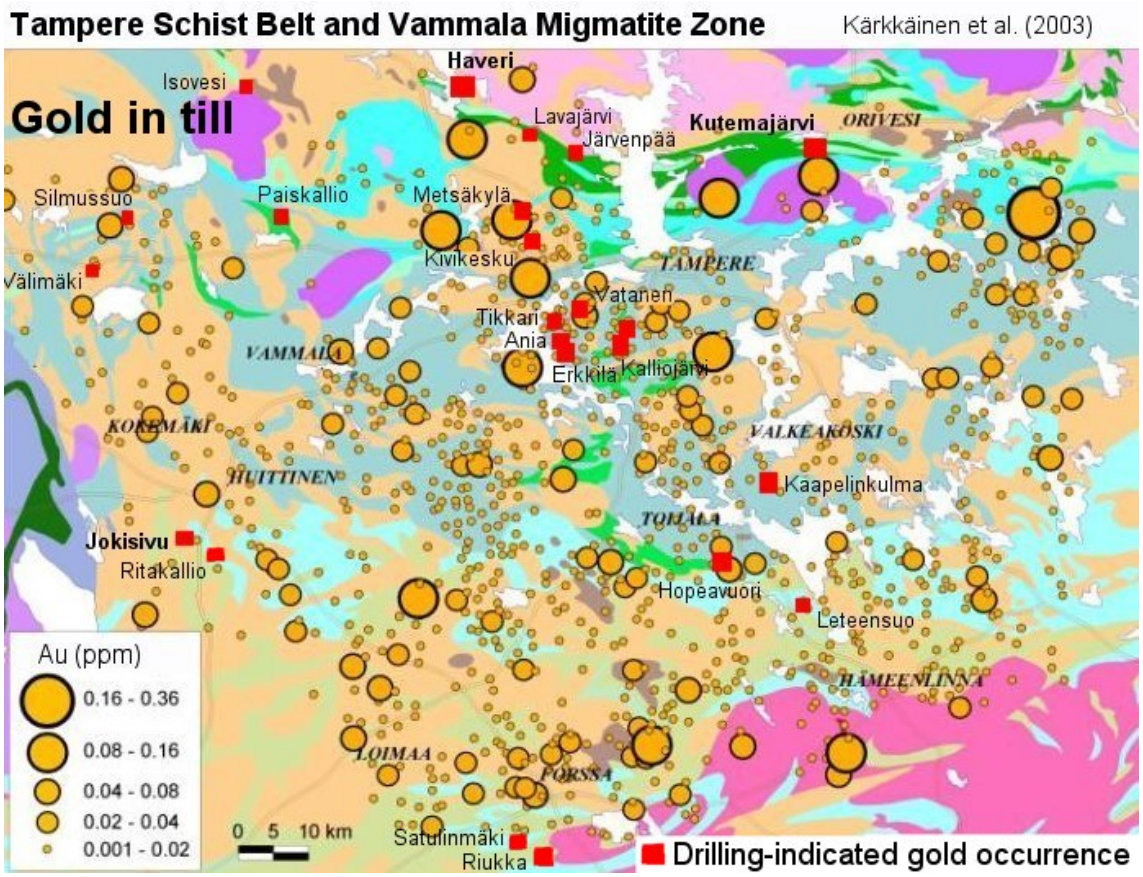
1987-1989	core drilling	Petri Rosenberg.	NA	5
	Core drilling (reconnaissance drilling): diamond-drill holes, total 504 m.			
	Intersections			
	HoleID	NA		
	From-To	NA		
	Length	10m		
	gold	0,5ppm		

1987-1989	regional geochemistry	Petri Rosenberg	NA	1, 2, 3, 4, 5
	Regional and local Au and As anomalies in till envelop the deposit; the extent of the regional Au anomaly is 20x60 km, the extent of the local Au anomaly is about 300x300 m the local As anomaly 200x300 m.			

1985-1985	regional geophysics	NA	key geological features	
	Low-altitude airborne magnetic, electromagnetic and radiometric survey			

Figures

Secondary anomaly:



GEOLOGY

Host rock: Tonalite, Quartz vein, Mica gneiss

Tonalite (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 4, 5
Comments: Sets of quartz veins in a synorogenic dominantly tonalitic to quartz dioritic body that is, possibly, a subvolcanic intrusion.

Ore minerals:

Mineral	Proportion	Mineral texture
Arsenopyrite	major	
Chalcopyrite	minor	
Gold	minor	
	Inclusions in arsenopyrite, free native gold occurs with quartz.	
Löllingite	minor	
Pyrite	minor	
Pyrrhotite	minor	

Alteration:	Distribution:	Degree:	Relation to mineralization:
sulphidation	Disseminated	Weak	NA

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: Plagioclase-hornblende-quartz-biotite ± diopside.					

Geological age:

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

Quartz vein (Host rock)

Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA

References: 3, 4, 5
Comments: Auriferous, arsenopyritic, 0.1-3 cm wide, quartz veins with N, NNW, NW and W trends

Mica gneiss (Host rock)

Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA
References: 5
Comments: She intrusion is surrounded by mica gneisses which predate the intrusion.

Metamorphic description:

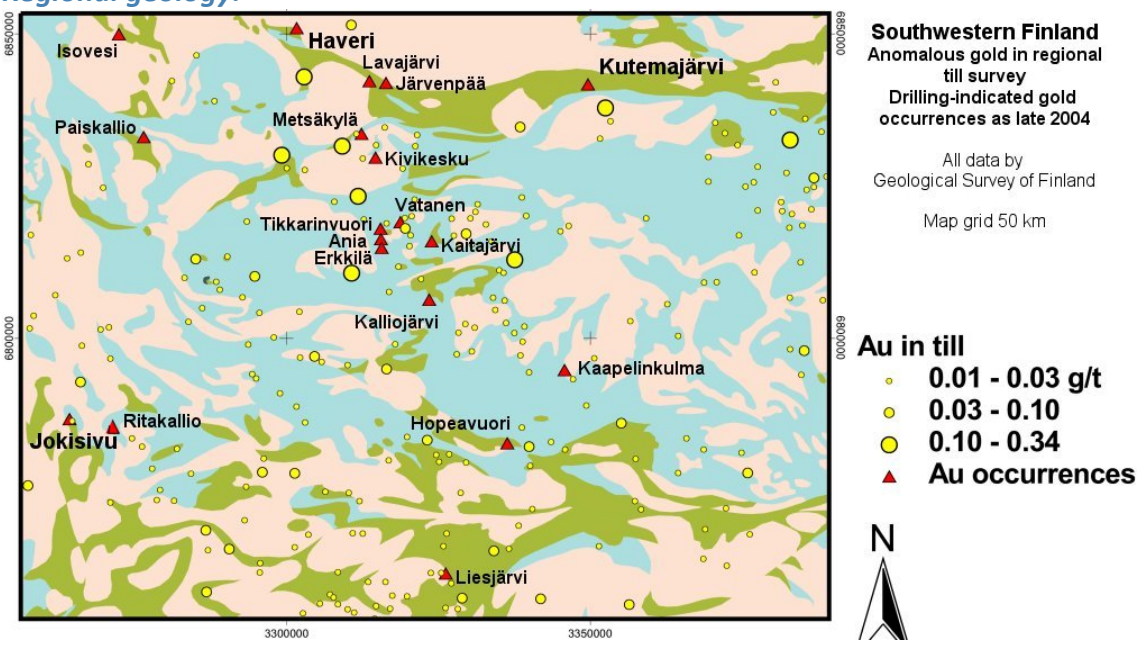
Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		

Geological age:

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

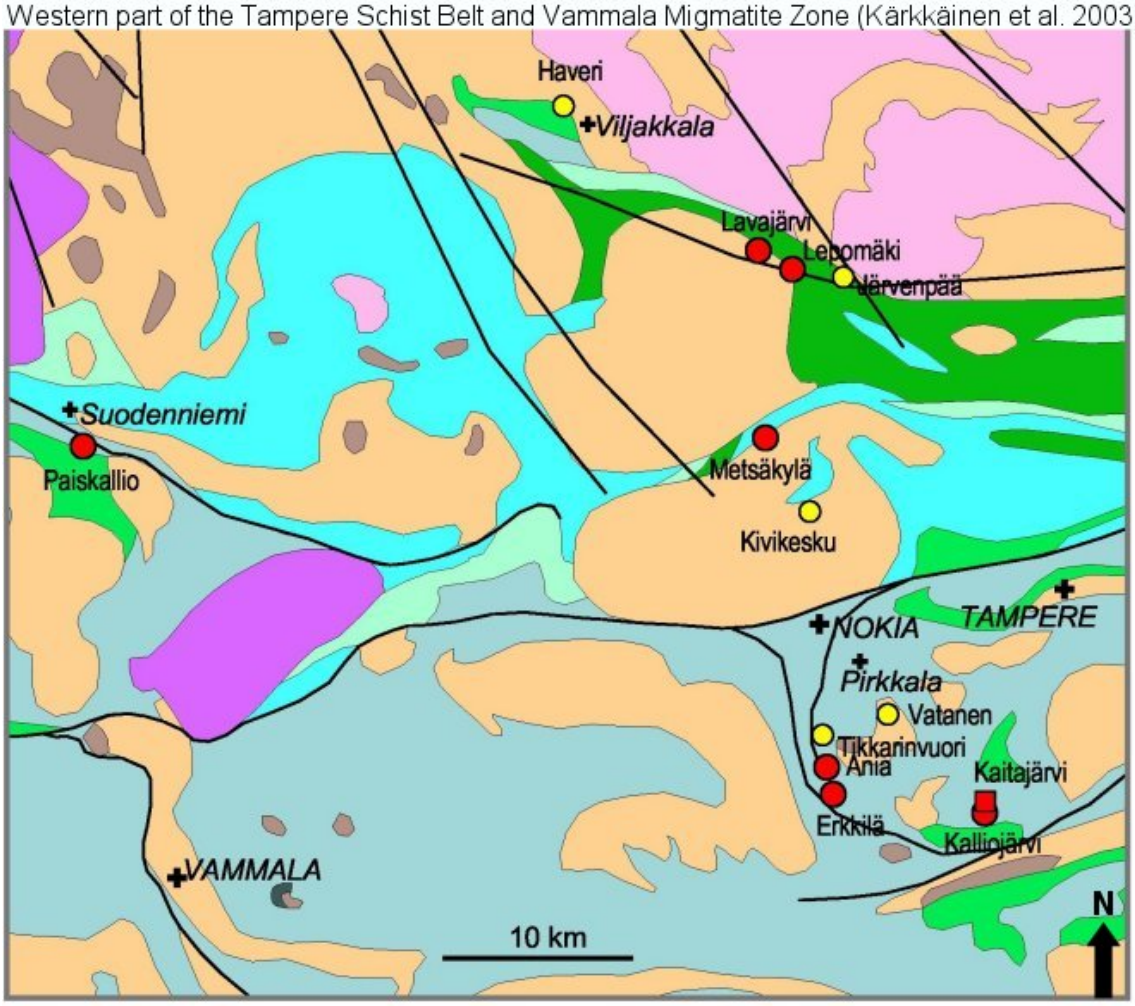
Figures

Regional geology:

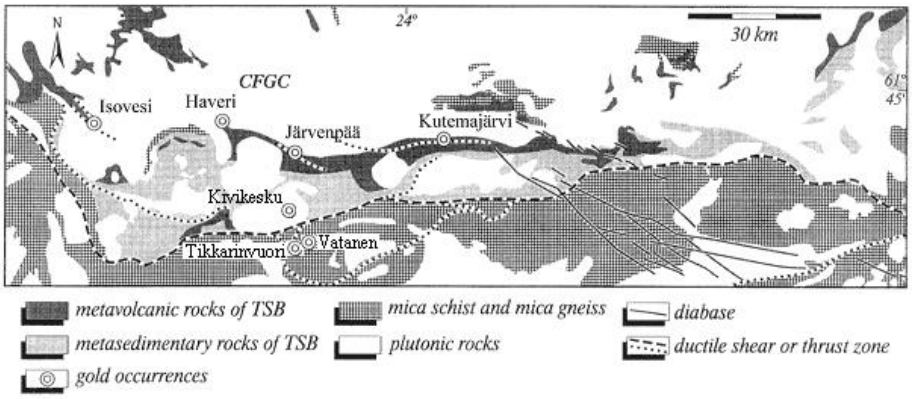


Regional geology:

Western part of the Tampere Schist Belt and Vammala Migmatite Zone (Kärkkäinen et al. 2003)



Regional geology:



Simplified geological map of the Tampere schist belt (TBS; modified after Koistinen, 1994). CFGC = Central Finland Granitoid Complex.

From Poutiainen and Grönholm (1996).
Edited by P.Eilu (1999)

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