Kalliojärvi

Occurence type: occurrence

Commodity	Rank	Total measure	Total production	Total resource	Importance
gold	1	NA	NA	NA	NA
arsenic	4	NA	NA	NA	NA

Easting EUREF: 323574,491
Northing EUREF: 6810889,755
Easting YKJ: 3323673
Northing YKJ: 6813748

Discovery year: 1994
Discovered by: Geological Survey of Finland
Province: Pirkkala (Au)
Comments: Discovered by GTK during 1994-1996. The first indications were anomalous Au values in regional till survey and numerous auriforous boulder and outcrop samples detected by amateur prospectors. A detailed till geochemical and heavy mineral survey followed by ground geohysical survey directed diamond drilling which hit the mineralisation.
References: 1, 2, 4, 6, 10

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
References: 8

Dimension

Expression: exposed
Form: discordant
Shape: NA
Length (m): 250
Width (m): 55
Thickness (m): 3
Depth (m): NA
Area (ha): NA
Dip azim: 180
Dip: 5
Plunge azim: 90
Plunge dip: 5
Orientation method: NA
Dimension comments: About 250 m long, 50-60 m wide, 2-5 m thick, subhorizontal, E-W trending, with a shallow plunge to the E.

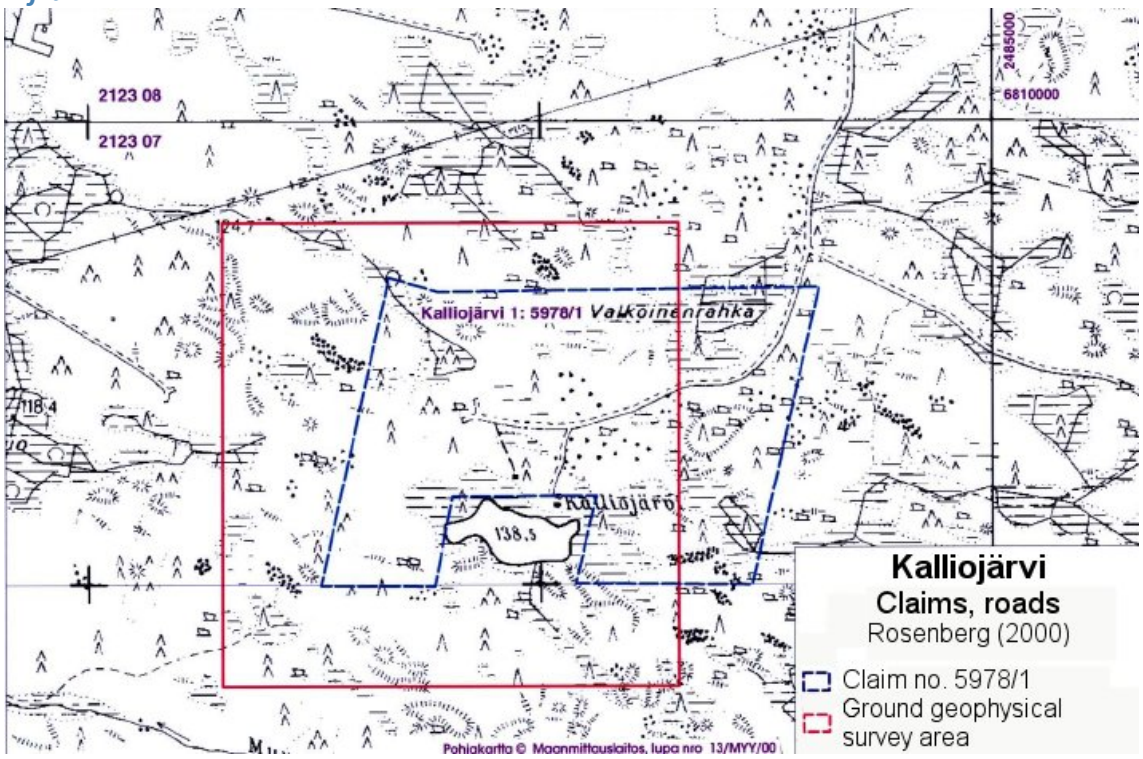
Holder history

Previous holders:

Company	Years	Holding type	Comments
EMX Finland Oy	2020	Application for reservation	NA
Björkdalsgruvan Ab	2004	NA	NA
Geological Survey of Finland	2001-2003	NA	NA
Geological Survey of Finland	1994-1999	NA	NA

Figures

Infra:



EXPLORATION ACTIVITY

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
2001-2001	core drilling	Petri Rosenberg, Tapio Lehto	NA	2, 3
	Eight diamond-drill holes, total 649 m.			
	Intersections			
	HoleID	NA		
	From-To	NA		
	Length	1m		
	gold	1,48ppm		
	HoleID	NA		
	From-To	NA		
	Length	5m		
	gold	0,5ppm		
	arsenic	950ppm		

1994-2001	detailed geochemistry	Petri Rosenberg, Tapio Lehto	NA	3, 8, 9, 10
	A distinct, 100-150 m wide, As-Au anomaly in till, extends at least for 300 m away from the mineralisation in bedrock, and abundant gold nuggets in till, up to 500 nuggets per 10 litre sample. The geochemical anomaly in till is related to the subcropping, eastern, part of the occurrence. Distinct MMI anomalies defined by Au and As above the occurrence.			

1994-2001	detailed geology	Petri Rosenberg, Tapio Lehto	NA	3, 5, 8, 9, 10
	First indications were anomalous Au values in regional till survey and numerous auriforous boulder and outcrop samples.			

1994-1996	core drilling	Petri Rosenberg, Tapio Lehto	NA	2, 8, 9
	Diamond drilling which hit the mineralisation; Core drilling (reconnaissance drilling): 38 diamond-drill holes, total 1814 m.			
	Intersections			
	HoleID	M52/ 2123/-95/R375		
	From-To	NA		
	Length	4,3m		
	gold	7,2ppm		
	HoleID	M52/2123/-95/R375		
	From-To	NA		
	Length	4,8m		
	gold	6,5ppm		
	HoleID	NA		
	From-To	NA		
	Length	1m		
	gold	15,7ppm		
	HoleID	NA		
	From-To	NA		
	Length	3m		
	gold	5,6ppm		

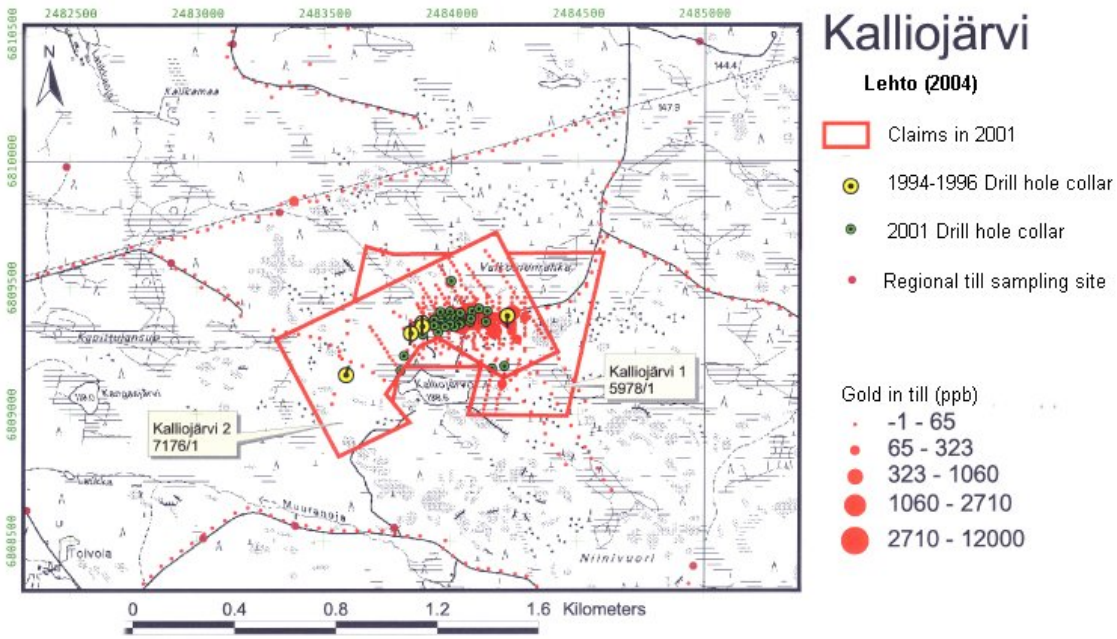
1994-2001	excavation	Petri Rosenberg, Tapio Lehto	NA	3, 5, 8, 9, 10

1994-2001	detailed heavy mineral sampling	Petri Rosenberg, Tapio Lehto	NA	3, 5, 8, 9, 10

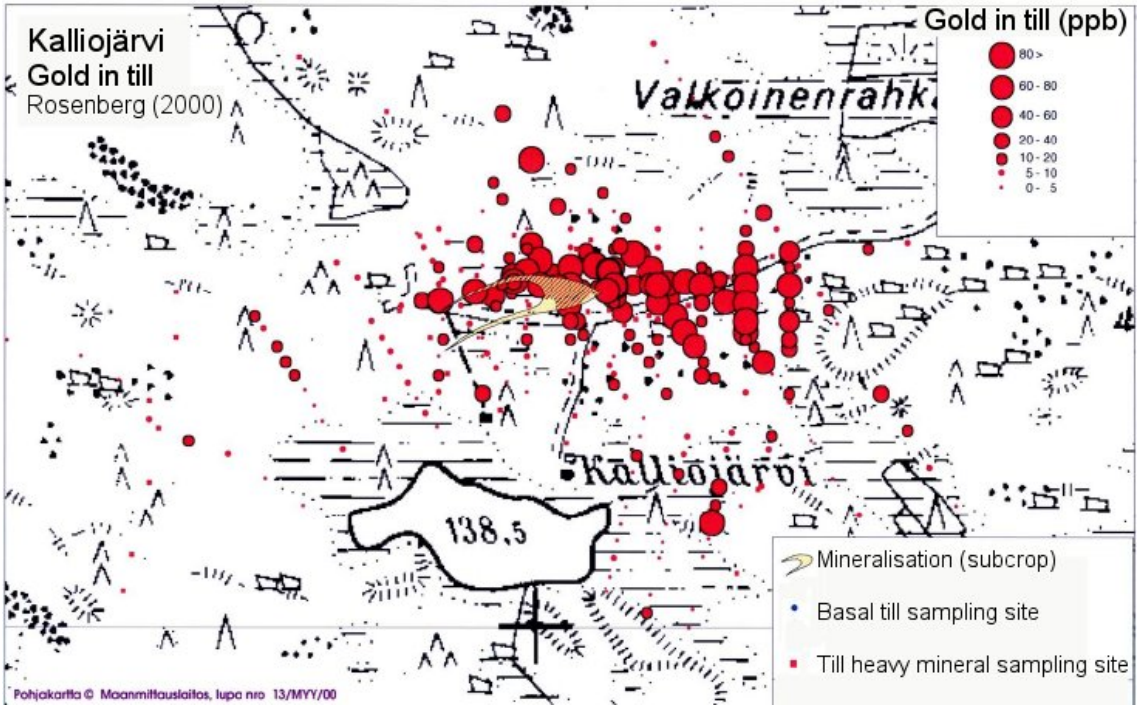
1994-2001	detailed geophysics	Petri Rosenberg, Tapio Lehto	NA	1, 8, 9
	Both gound magnetic and IP anomalies reflect the local structures of the mineralised setting. The strong local IP anomalies are related to a graphitic mica scist and an intensely sheared and sulphidised granitoid both of which appear to be barren on gold.			

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

Figures



Secondary anomaly:



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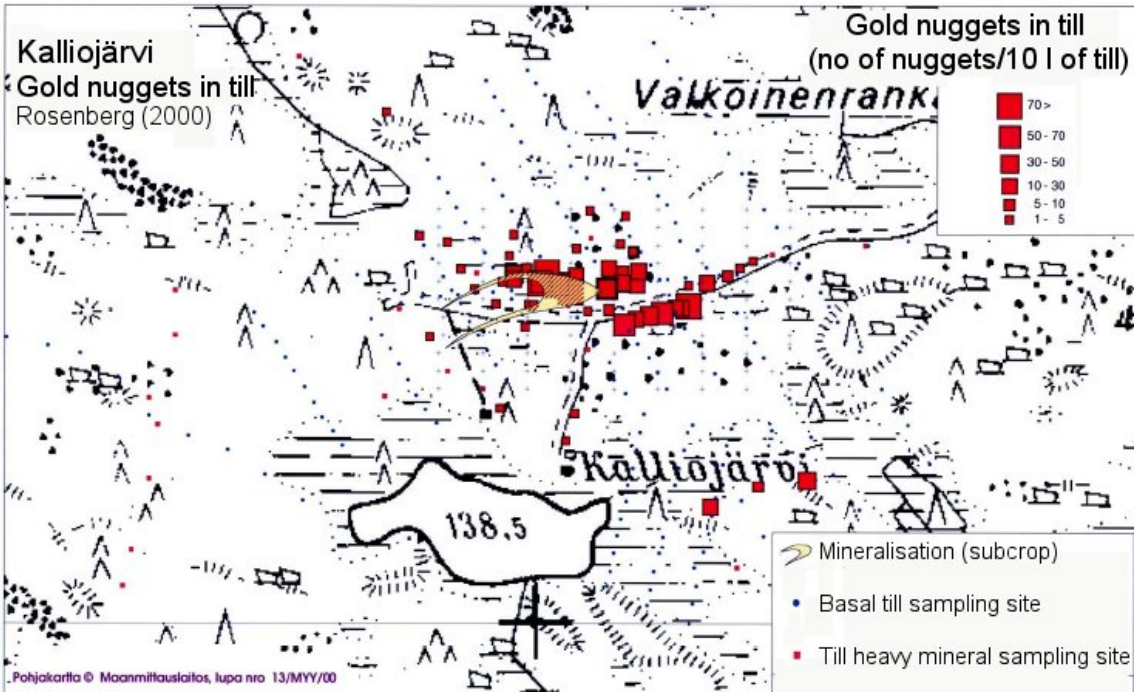


GEOLOGY

Host rock: Garnet-Cordierite Mica gneiss, Quartz vein, Greywacke

Garnet-Cordierite Mica gneiss (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 2, 3, 5, 7, 8, 9
Comments: Silicified(?) shear zones in migmatitised garnet-cordierite mica gneiss.

Ore minerals:

Mineral	Proportion	Mineral texture
Arsenopyrite	major	
Gold	minor	
	Native gold possibly associated with arsenopyrite.	
Pyrite	minor	
Pyrrhotite	minor	

Other minerals:

Mineral	Proportion	Mineral texture
Cordierite	present	
Garnet	present	

Structures
Sheared

Textures
Porphyroblastic

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		

Quartz vein (Host rock)

Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA
References: 1, 8
Comments: Quartz and quartz-haematite veins

Greywacke (Host rock)

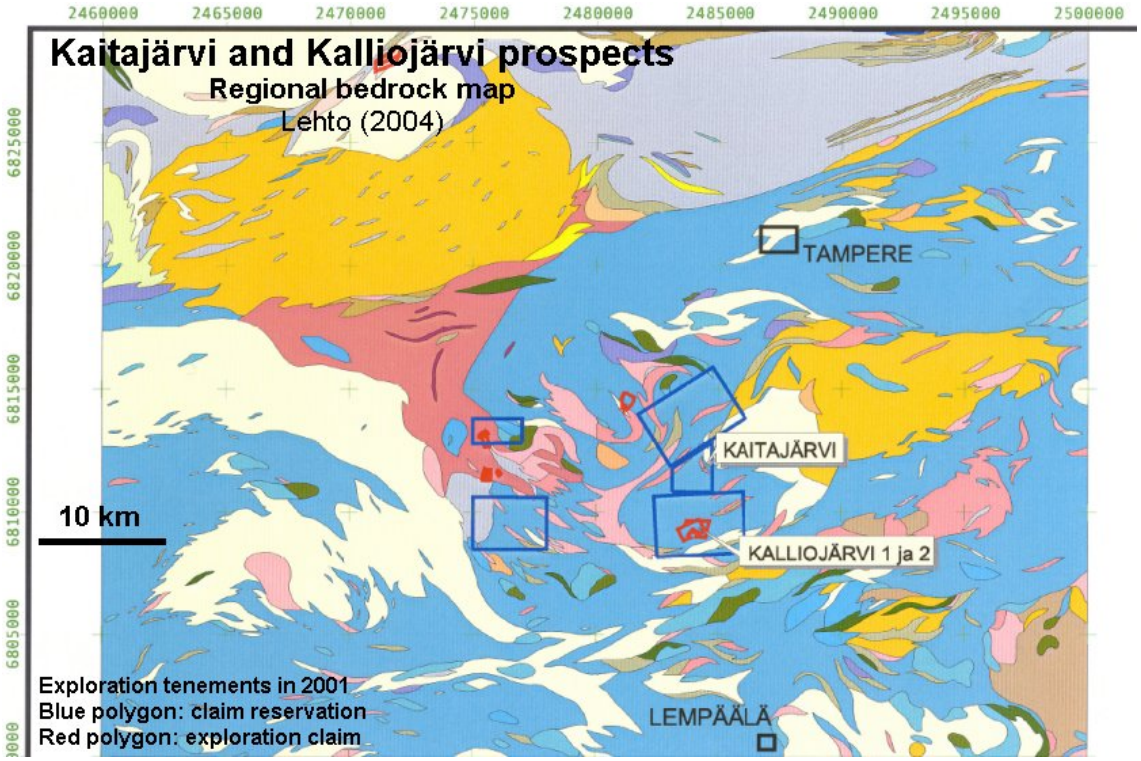
Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 5, 7, 8

Metamorphic description:

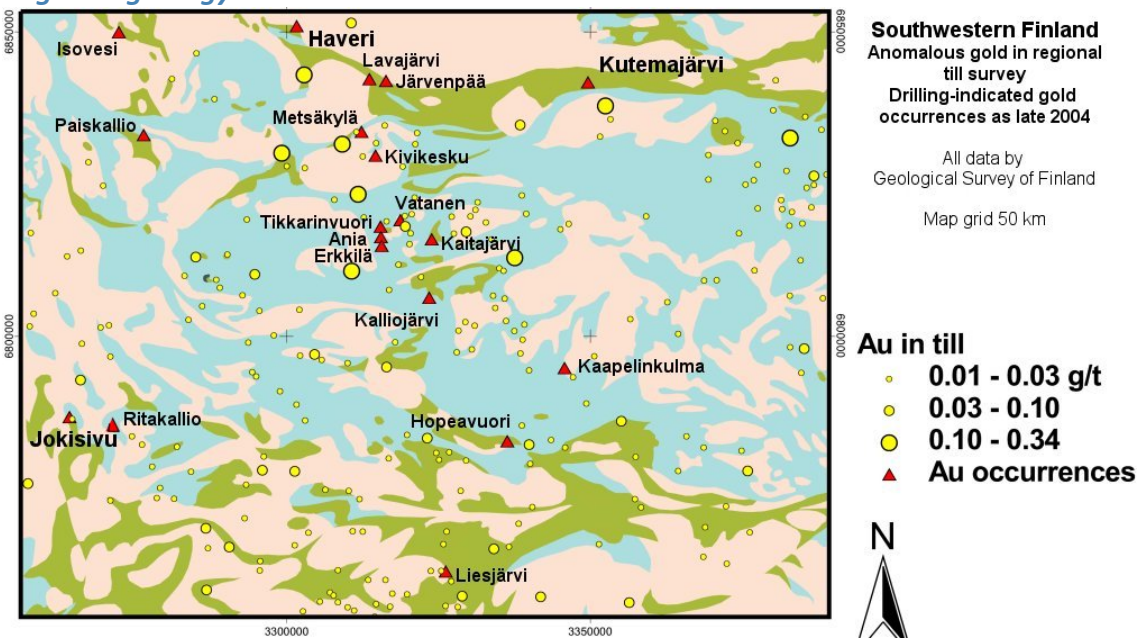
Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		
Comments: Garnet-cordierite.					

Figures

Regional geology:

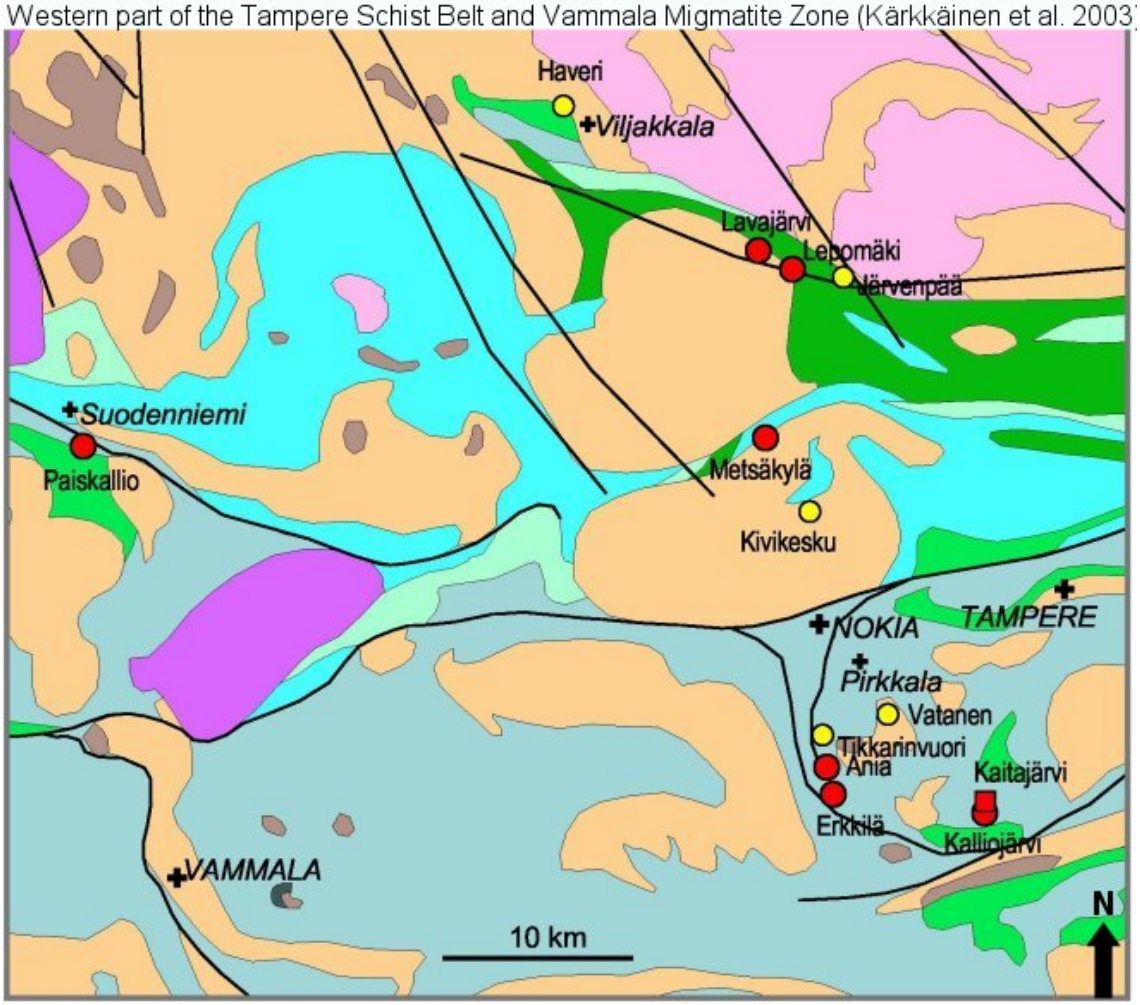


Regional geology:

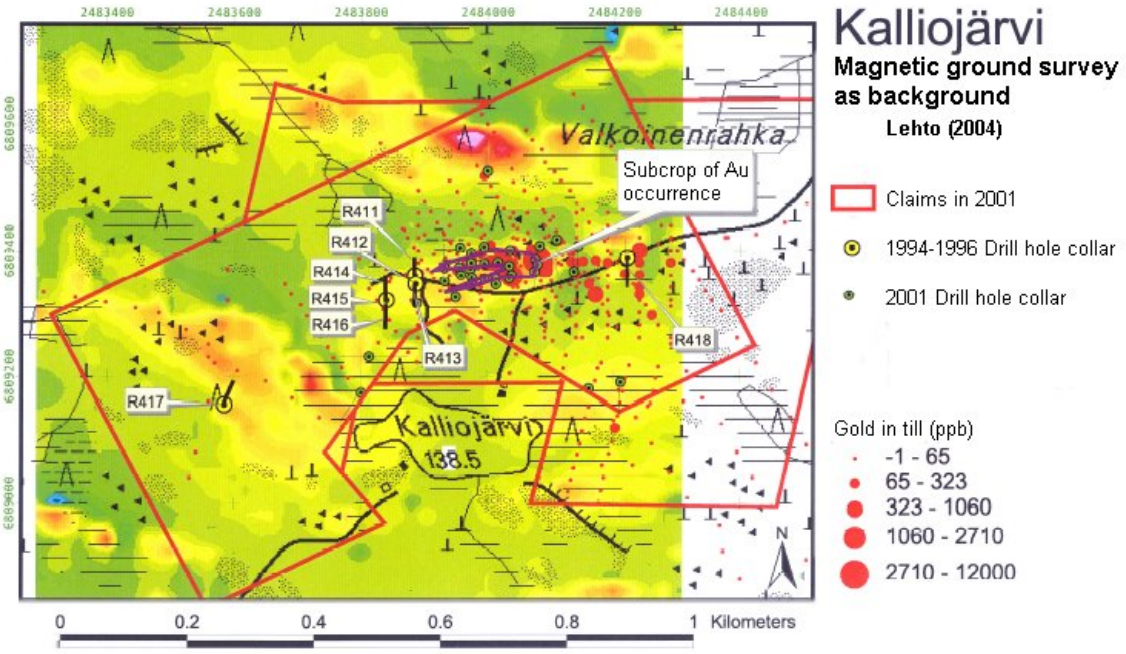


Regional geology:

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



Primary anomaly:



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