Ania

Alternative Names: Pirkkala
Occurence type: occurrence

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

Easting EUREF: 315346,308
Northing EUREF: 6813357,531
Easting YKJ: 3315442
Northing YKJ: 6816217

Discovery year: 2000
Discovered by: Geological Survey of Finland
Province: Pirkkala (Au)
Comments: Discovered by GTK. The first indication was a 10 cm glacial erratic found by an amateur prospector. Diamond drilling in area Au-anomalous in till, in a southern continuation from the Vatanen, Tikkarinvuori and Piiponvuori occurrences led to the discovery.

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
Comments: Siting of gold inclusions in arsenopyrite near loellingite inclusions is typical for mineralisation at near the regional metamorphic peak with gold exsolving from the lollingite lattice with retrograde temperature decrease after the mnineralisation event.
References: 2, 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

Holder history

Previous holders:

Company	Years	Holding type	Comments
EMX Finland Oy	2020	Application for reservation	NA
Geological Survey of Finland	2000	NA	NA

Figures

Ania exploration site in October 2006. Photo from Kärkkäinen et al. (2006).

EXPLORATION ACTIVITY

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
2000-2002	regional geochemistry	N. Kärkkäinen	NA	1, 2, 3

2000-2002	detailed geochemistry	N. Kärkkäinen	NA	2
	Regional NW-trending As anomaly in till.Gold nuggets in till.			

2000-2002	detailed heavy mineral sampling	N. Kärkkäinen	NA	1, 2, 3

2000-2002	regional heavy mineral sampling	N. Kärkkäinen	NA	1, 2, 3

2000-2002	core drilling	N. Kärkkäinen	NA	2, 3
	Core drilling (reconnaissance drilling): 7 diamond-drill holes, total 399 m; Diamond drilling in area Au-anomalous in till, in a southern continuation from the Vatanen, Tikkarinvuori and Piiponvuori occurrences.			
	Intersections			
	HoleID	NA		
	From-To	NA		
	Length	0,8m		
	gold	4,2ppm		
	Comments	*Intersepts in R401 & R402 3,3 - 4,2 ppm*		

2000-2002	excavation	N. Kärkkäinen	NA	1, 2, 3

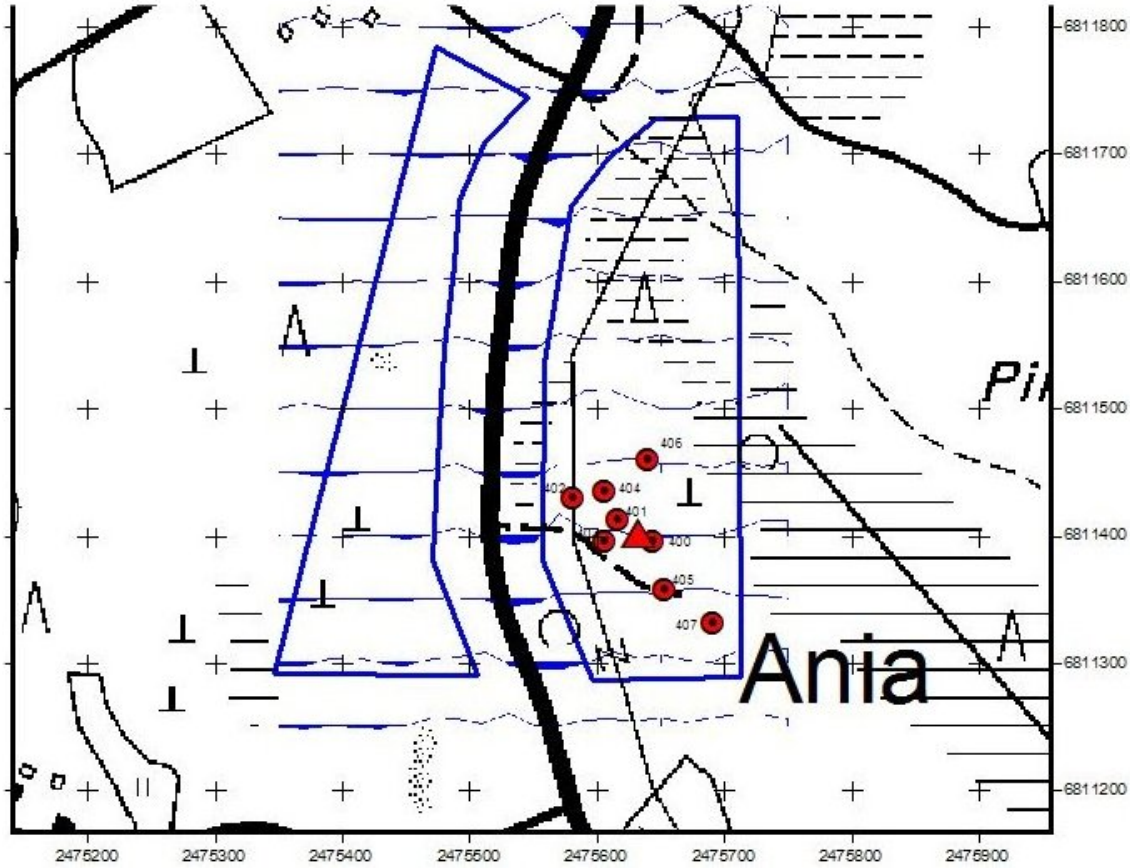
2000-2002	percussion drilling	N. Kärkkäinen	NA	1, 2, 3

2000-2002	detailed geophysics	N. Kärkkäinen	NA	2
	A positive magnetic anomaly with a N-S trend.			

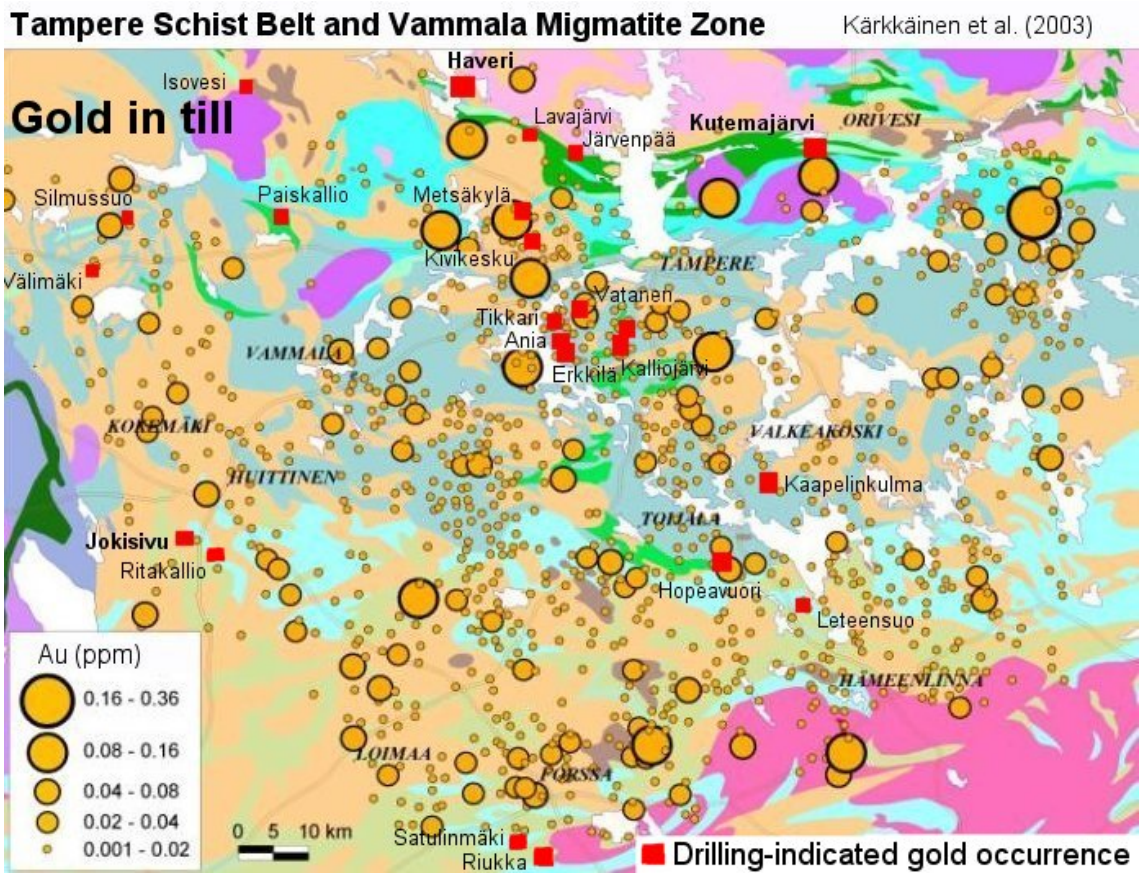
2000-2002	detailed geology	N. Kärkkäinen	NA	1, 2, 3
	The first indication was a 10 cu-m auriferous glacial erratic found by an amateur prospector: a grab sample from this boulder contained 515 ppm Au.			

Figures

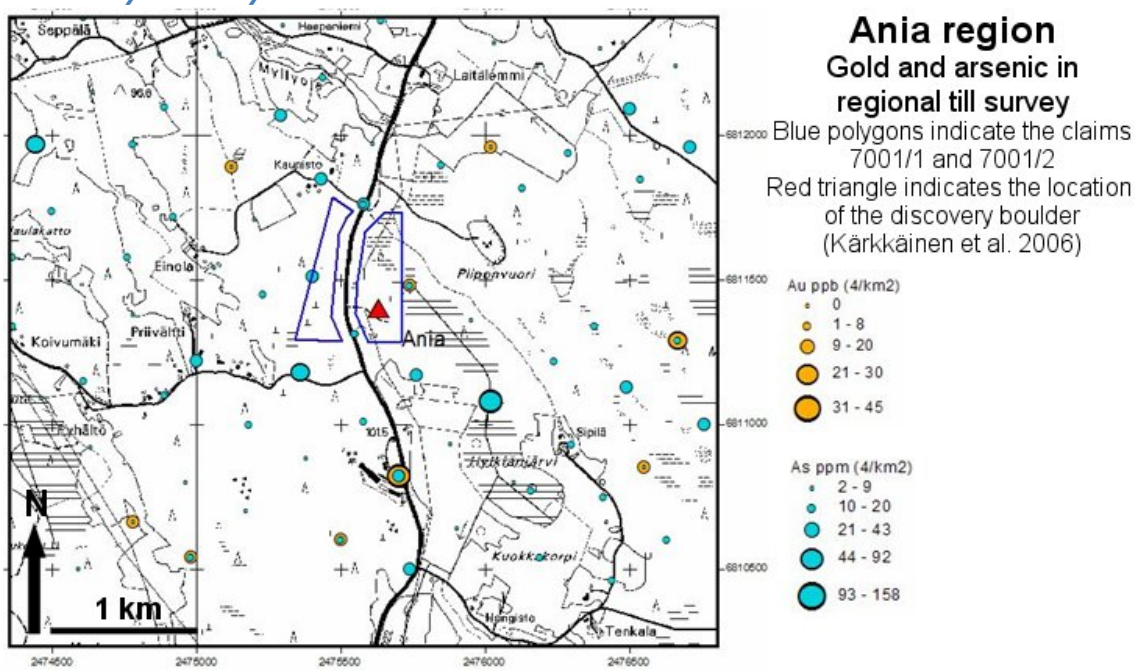
Ania: drill hole collars (circles) and the discovery boulder (triangle) on slingram ground survey map (imaginary component)
Blue polygons indicate the claims 7001/1 and 7001/2 (Kärkkäinen et al. 2006)



Secondary anomaly:



Secondary anomaly:



GEOLOGY

Host rock: Greywacke, Quartz vein, Mica gneiss

Greywacke (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 2, 3

Metamorphic description:
Ore minerals:

Mineral	Proportion	Mineral texture
Arsenopyrite	major	
Bismuth	minor	
Chalcopyrite	minor	
Gold	minor	
	Native gold as free grains in gangue and as inclusions in arsenopyrite; gold inclusions in arsenopyrite around loellingite inclusions in the arsenopyrite.	
Ilmenite	minor	
Löllingite	minor	
Magnetite	minor	
Pyrrhotite	major	
Tellurobismuthite	minor	

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: 2
Comments: Au-rich, 2-15 cm wide, boudinaged quartz veins

Mica gneiss (Host rock)

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

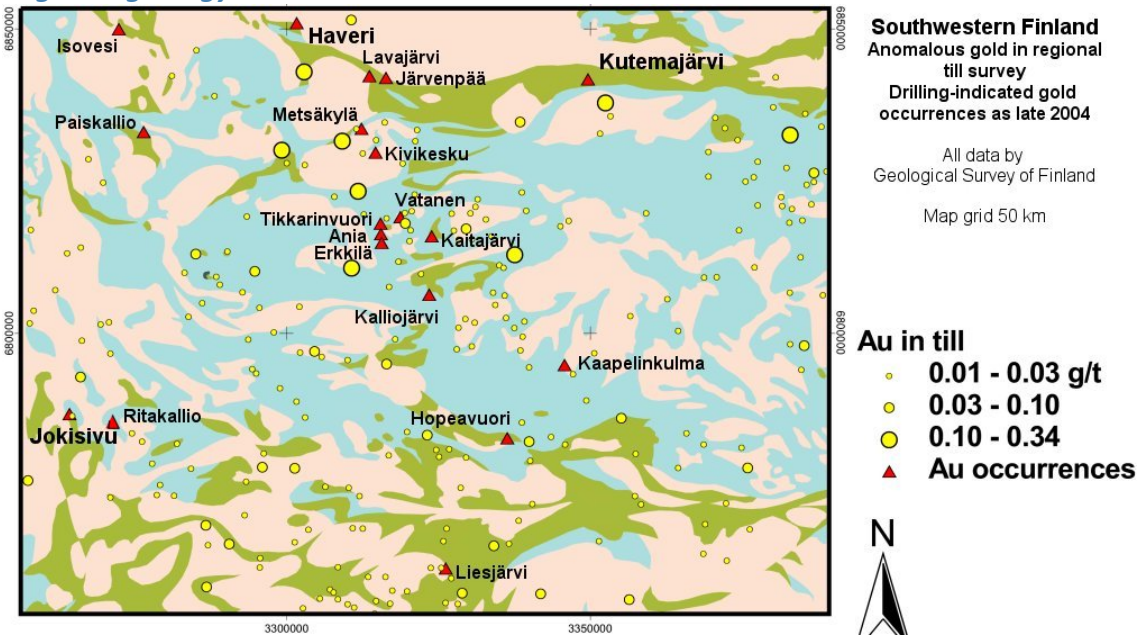
References: 2, 3
Comments: The occurrence is at the contact zone between tonalite and graphitic gneiss.

Metamorphic description:

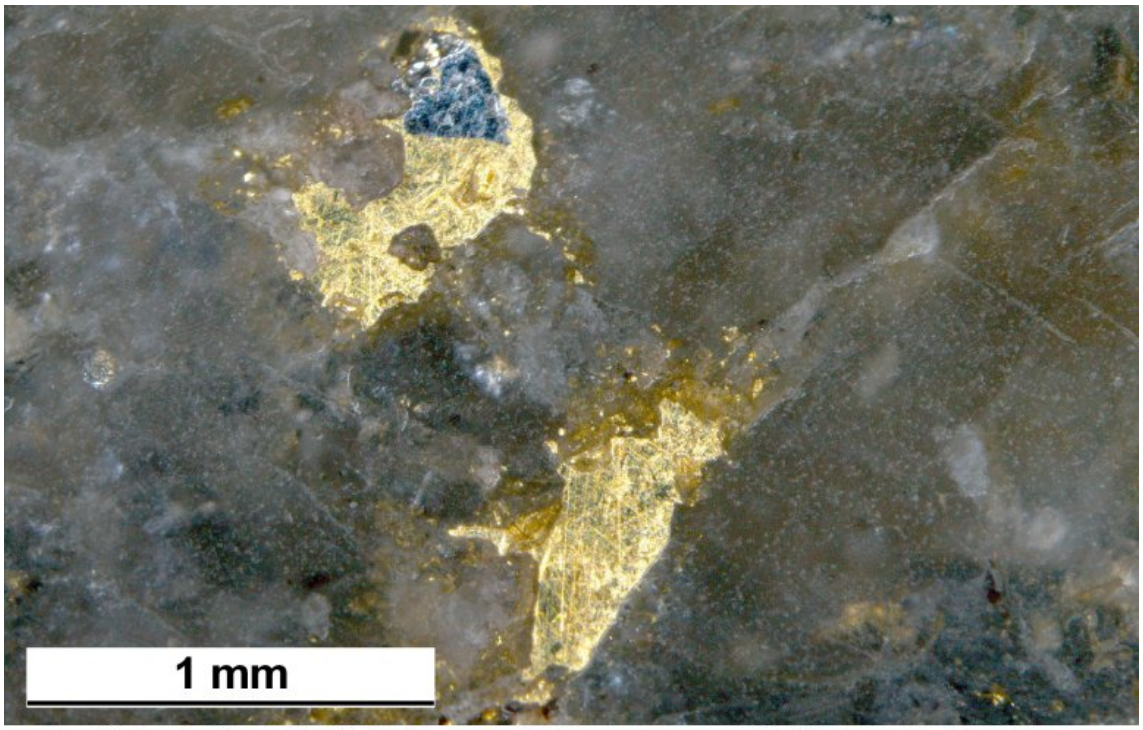
Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	amphibolite metamorphic facies	medium metamorphic grade	NA		

Figures

Regional geology:



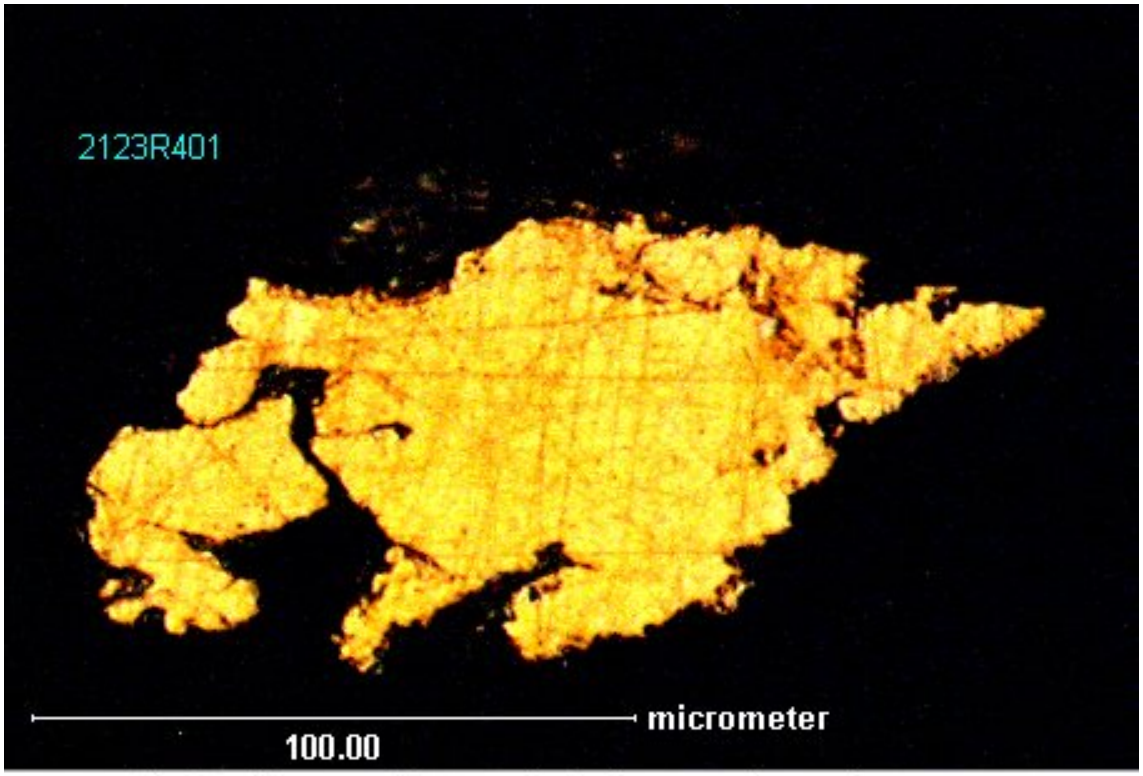
Ania: visible gold (all the bright grains) in quartz vein.
Scale in cm. (Kärkkäinen et al. 2006).



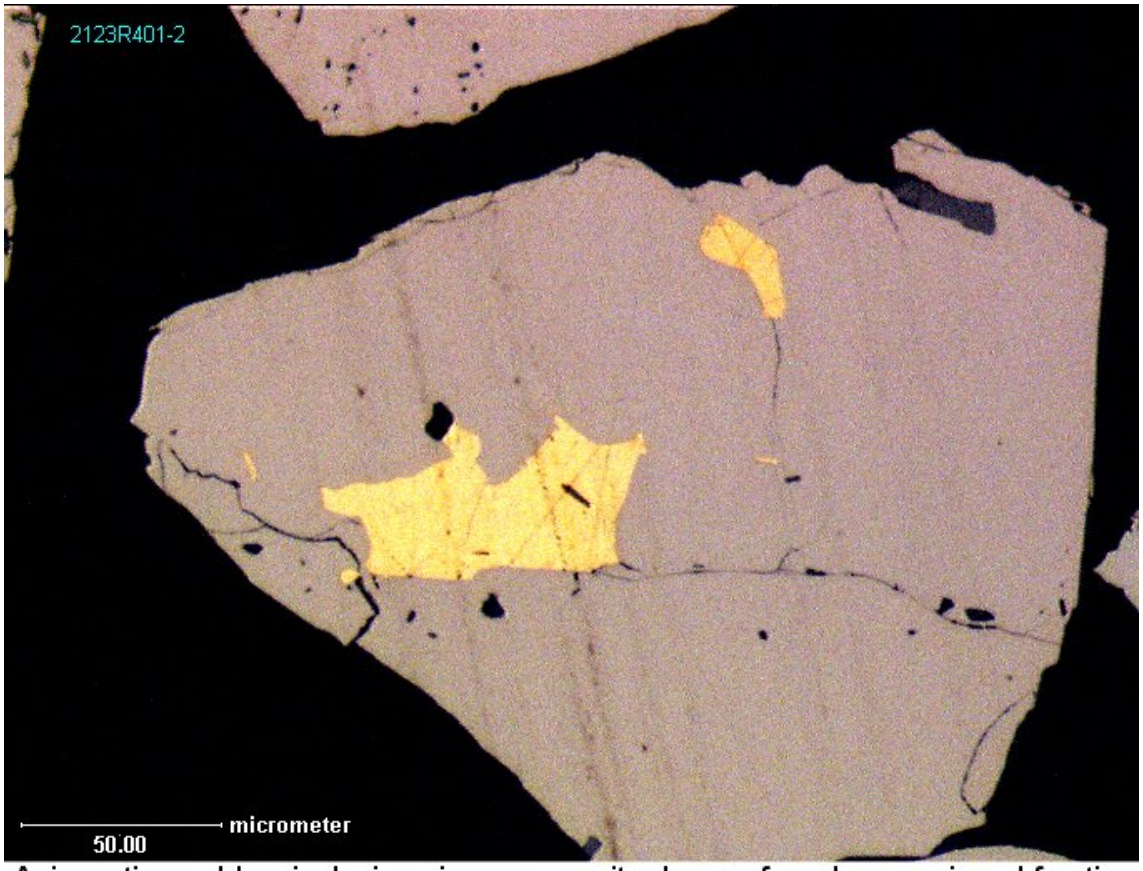
Ania: visible gold (all the bright grains) in quartz vein. (Kärkkäinen et al. 2006).

Vein:

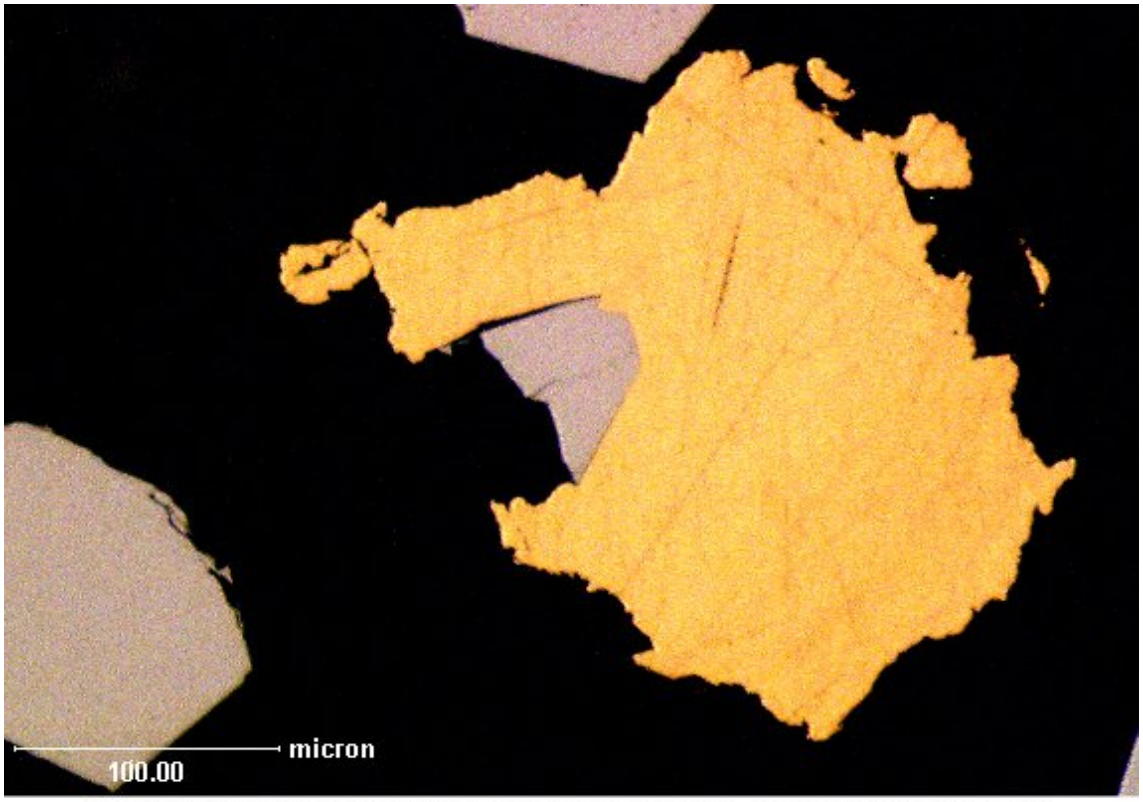
Ania: boudinaged auriferous quartz veins in metagreywacke.
Field of view about 50 cm (Kärkkäinen et al. 2006).



Ania: free native gold. Image from heavy mineral fraction of drill core. (Kärkkäinen et al. 2006).



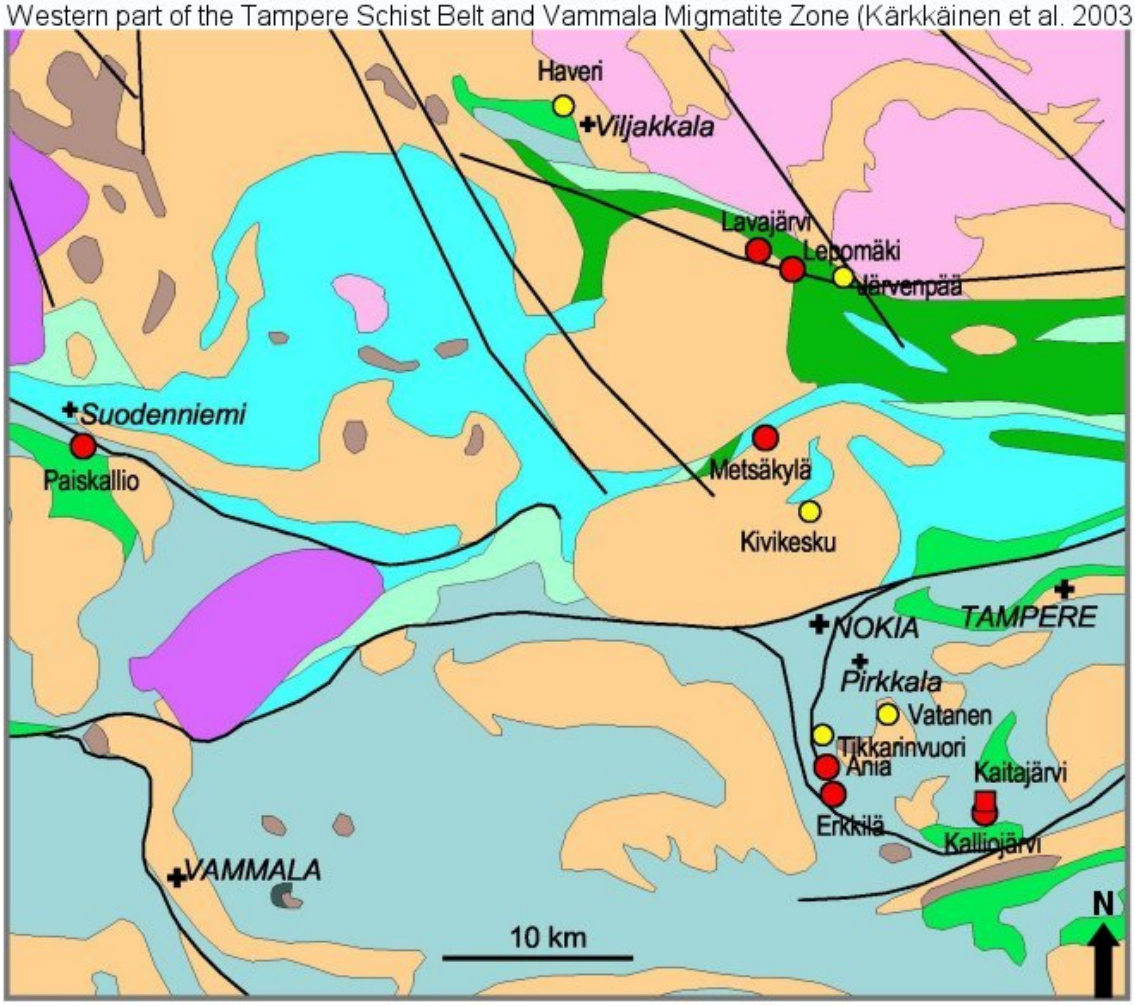
Ania: native gold as inclusions in arsenopyrite. Image from heavy mineral fraction of drill core. (Kärkkäinen et al. 2006).



Ania: gold associated with arsenopyrite. Image from heavy mineral fraction of drill core. (Kärkkäinen et al. 2006).

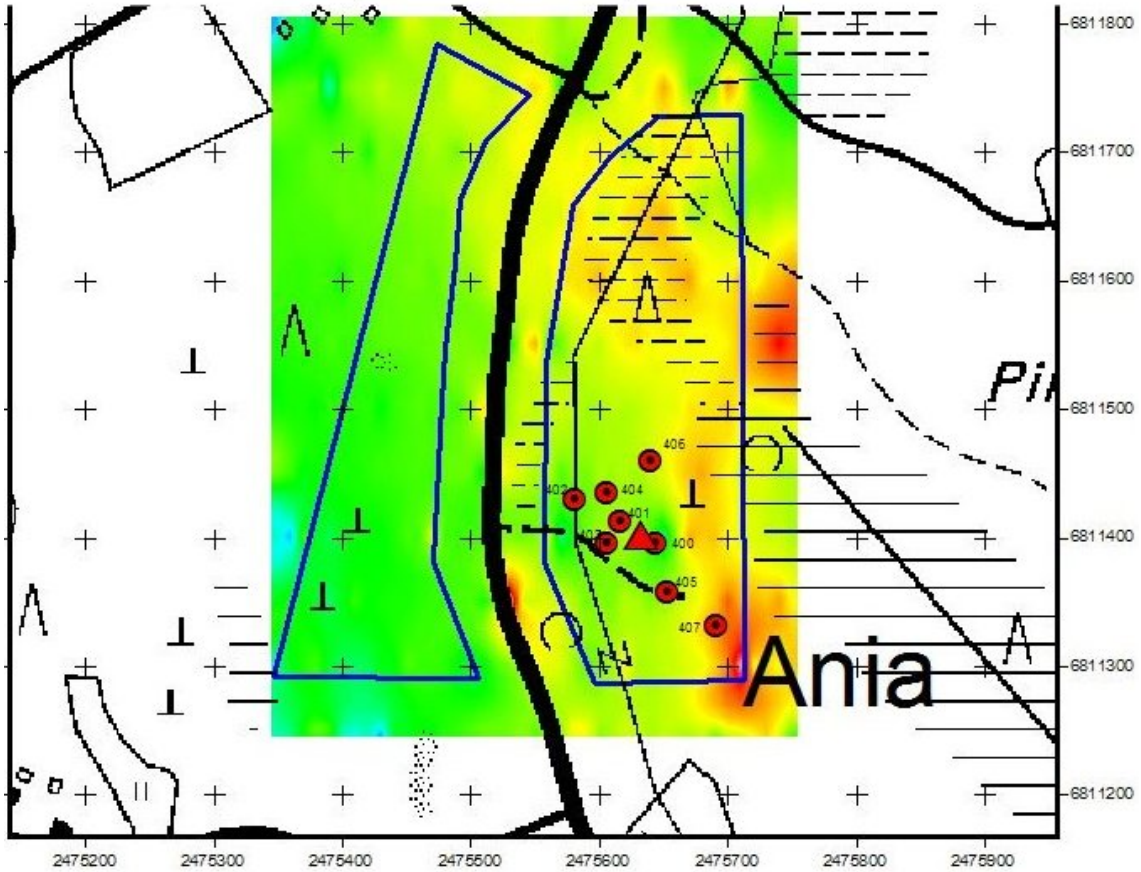
Regional geology:

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



Primary anomaly:

Ania: drill hole collars (circles) and the discovery boulder (triangle) on magnetic ground survey map
(Kärkkäinen et al. 2006)



REFERENCES

1. Kärkkäinen, N. & Lehto, T. 2004. GTK:n kultatutkimukset Etelä- ja Länsi-Suomessa. Vuorimiesyhdistyksen ekskursio 28.9.2004-29.9.2004. 11 s. Geological Survey of Finland, Report M 19/2024/2004/2/10. 11 p. (in Finnish)*http://tupa.gtk.fi/raportti/arkisto/m19_2024_2004_2_10.pdf*

2. Kärkkäinen, N., Huhta, P., Karttunen, K. & Pelkkala, M. 2006. Tutkimustyöselostus Pirkkalan kunnassa valtausalueilla Ania 1 ja Ania 2, (kaivosrekisterinumerot 7001/1 ja 7001/2) suoritetuista malmitutkimuksista. Geological Survey of Finland, Report M06/2123/2006/1/10. 13 p. Appended data CD (in Finnish)*http://tupa.gtk.fi/raportti/valtaus/m06_2123_2006_1_10.pdf*

3. Kärkkäinen, N., Lehto, T., Tiainen, M., Jokinen, T., Nironen, M., Peltonen, P. & Valli, T. 2003. Etelä- ja Länsi-Suomen kaarikompleksi, kullan ja nikkelin etsintä vuosina 1998-2002. Geological Survey of Finland, Report M19/21,12/2003/1/10. 118 p. (in Finnish)
http://tupa.gtk.fi/raportti/arkisto/m19_21_12_2003_1_10.pdf