Naurispuro

Alternative Names: Korkea-Aho
Occurence type: occurrence

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

Easting EUREF: 598092,949
Northing EUREF: 7145987,955
Easting YKJ: 3598305
Northing YKJ: 7148980

Discovery year: 1997
Discovered by: Geological Survey of Finland
Province: Kuhmo (Ni, Ag, Au)
District: Kuhmo (Au)
Comments: Regional Au and As anomalies in till were the first indication; occurrence was discovered by drilling into a combined local Au-As-Te anomaly in till-bedrock interface and ground geophysical anomaly
References: 2, 3, 4, 5

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
References: 3

Dimension

Expression: exposed
Form: NA
Shape: NA
Length (m): NA
Width (m): NA
Thickness (m): NA
Depth (m): NA
Area (ha): NA
Dip azim: 0
Dip: 80
Plunge azim: NA
Plunge dip: NA
Orientation method: NA
Dimension comments: The occurrence comprises narrow subvertical lodes

Holder history

Current holder: Magnus Minerals Oy
Years: 2023
Holding type: Application for exploration permit

Previous holders:

Company	Years	Holding type	Comments
Geological Survey of Finland	NA	NA	NA
Magnus Minerals Oy	2021	Application for reservation	NA

Kuhmo Metals Oy	2010-2011	Claim reservation (old law)	NA
Polar Mining Oy	2003-2006	NA	NA
Kuhmo Metals Oy	2002-2010	Claim (old law)	NA

EXPLORATION ACTIVITY

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
1997-1999	detailed geology	Tapio Halkoaho	identification of an anomalous area	1, 3

1997-1999	core drilling	Tapio Halkoaho	mineral occurrences	1
	Occurrence was discovered by drilling into a combined local Au-As-Te anomaly in till-bedrock interface and ground geophysical anomaly; Five diamond-drill holes, total 355.5 m			

1997-1999	detailed geophysics	Tapio Halkoaho	geophysical anomaly	1, 3
	ground magnetic and slingram survey			

1996-1996	detailed geochemistry	Aimo Hartikainen	geochemical anomaly	1
	Au, As, Ni, Cr, Zn anomalies in till.			

1990-2001	regional geochemistry	Markku Tenhola	geochemical anomaly	
	Greenstone belt-wide till-geochemical survey with 16 damples per one sq.km			

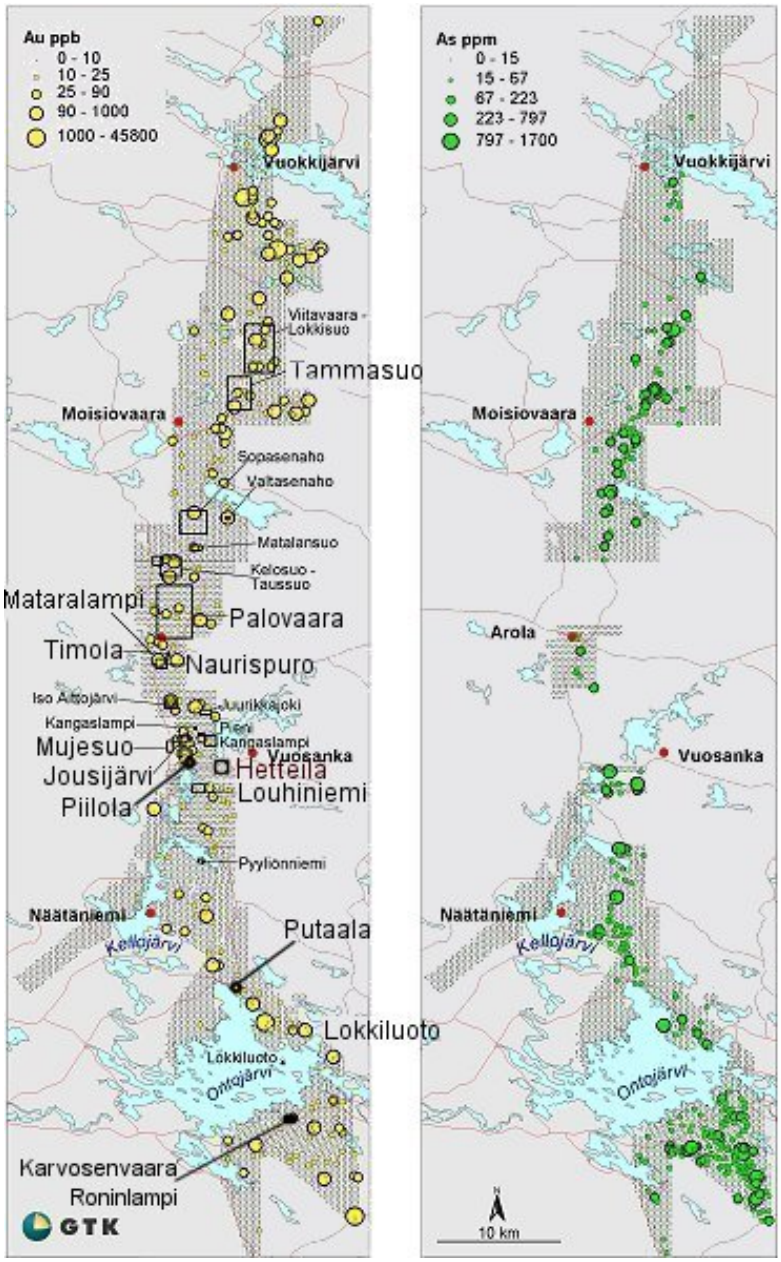
1988-1988	regional geochemistry	Markku Tenhola	geochemical anomaly	1, 3
	Country-wide till-geochemical survey			

1987-1987	regional geophysics	NA	key geological features	
	Low-altitude airborne magnetic, electromagnetic and radiometric survey			

Figures

Kuhmo greenstone belt aeromagnetic image, Au and As in till, and known gold

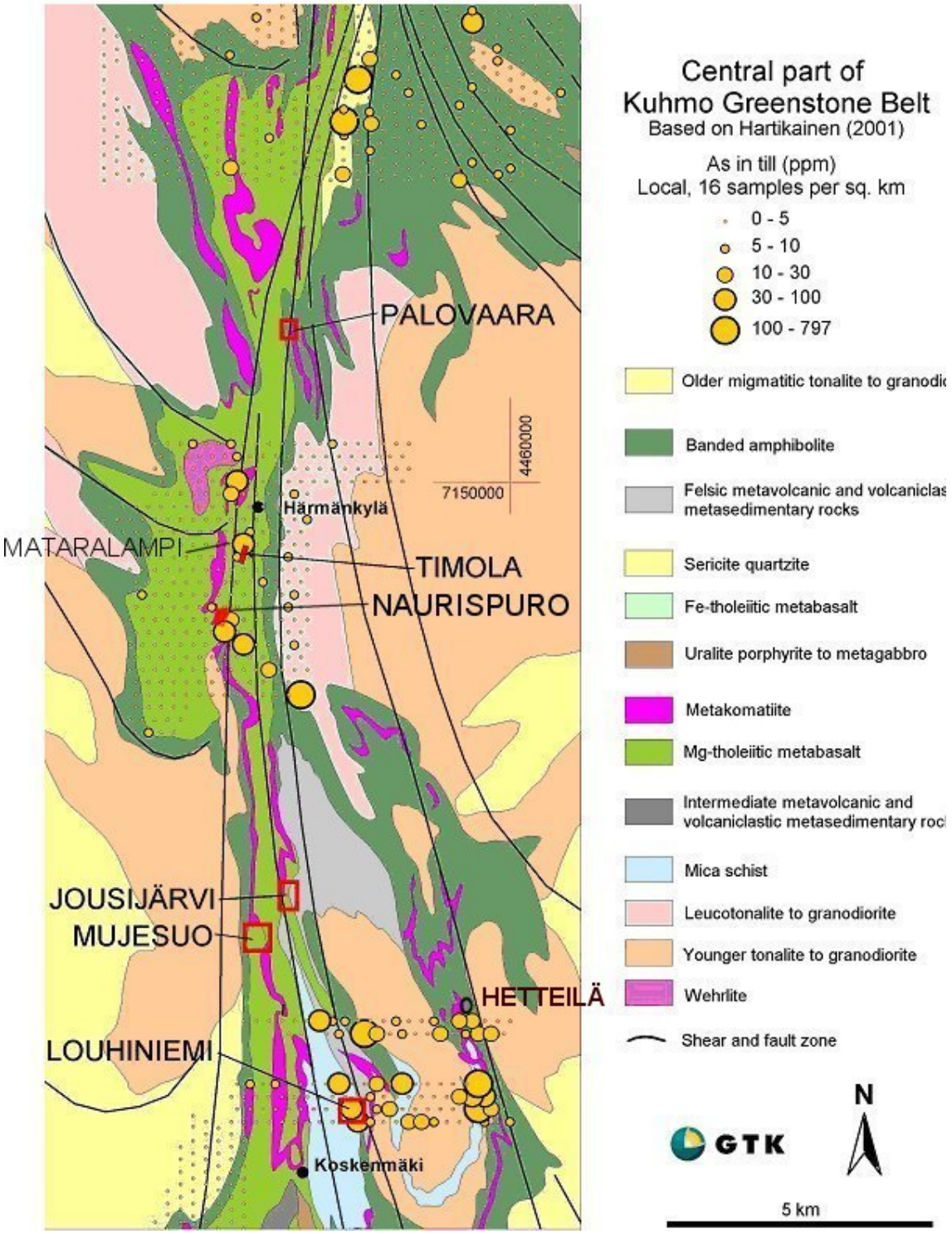
occurrences:



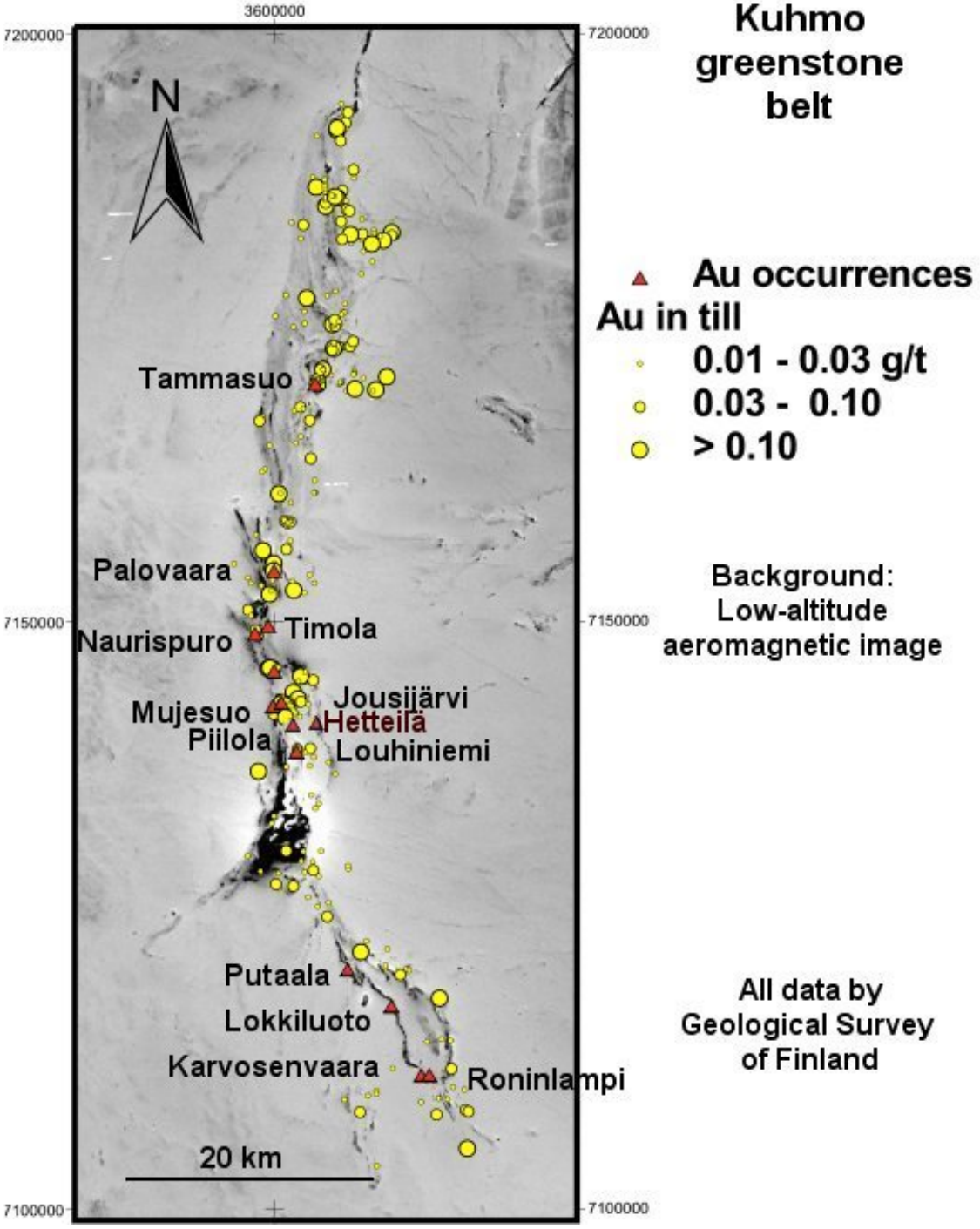
Kuhmo greenstone belt

As (ppm) and Au (ppb) in till
(Luukkonen et al. 2002)

Palovaara-Louhiniemia area geology, gold in basal till, and gold occurrences:



Kuhmo greenstone belt aeromagnetic image, Au in till, and known gold occurrences:



GEOLOGY

Host rock: Komatiite, Basaltic rock

Komatiite (Host rock)

Rock type: Host rock
Proportion: minor
Comments: Typical soapstone mineral assemblage seems to be present

Metamorphic description:

Other minerals:

Mineral	Proportion	Mineral texture
Chlorite	major	
Magnesite	major	
Talc	major	

Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	greenschist metamorphic facies	medium metamorphic grade			
Comments: Upper greenschist facies regional metamorphic peak					

Basaltic rock (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 1, 3
Comments: Located in a N-trending, subvertical sequence dominated by mafic tholeiitic metavolcanic rocks with thin ultramafic (komatiitic?) interlayers

Metamorphic description:

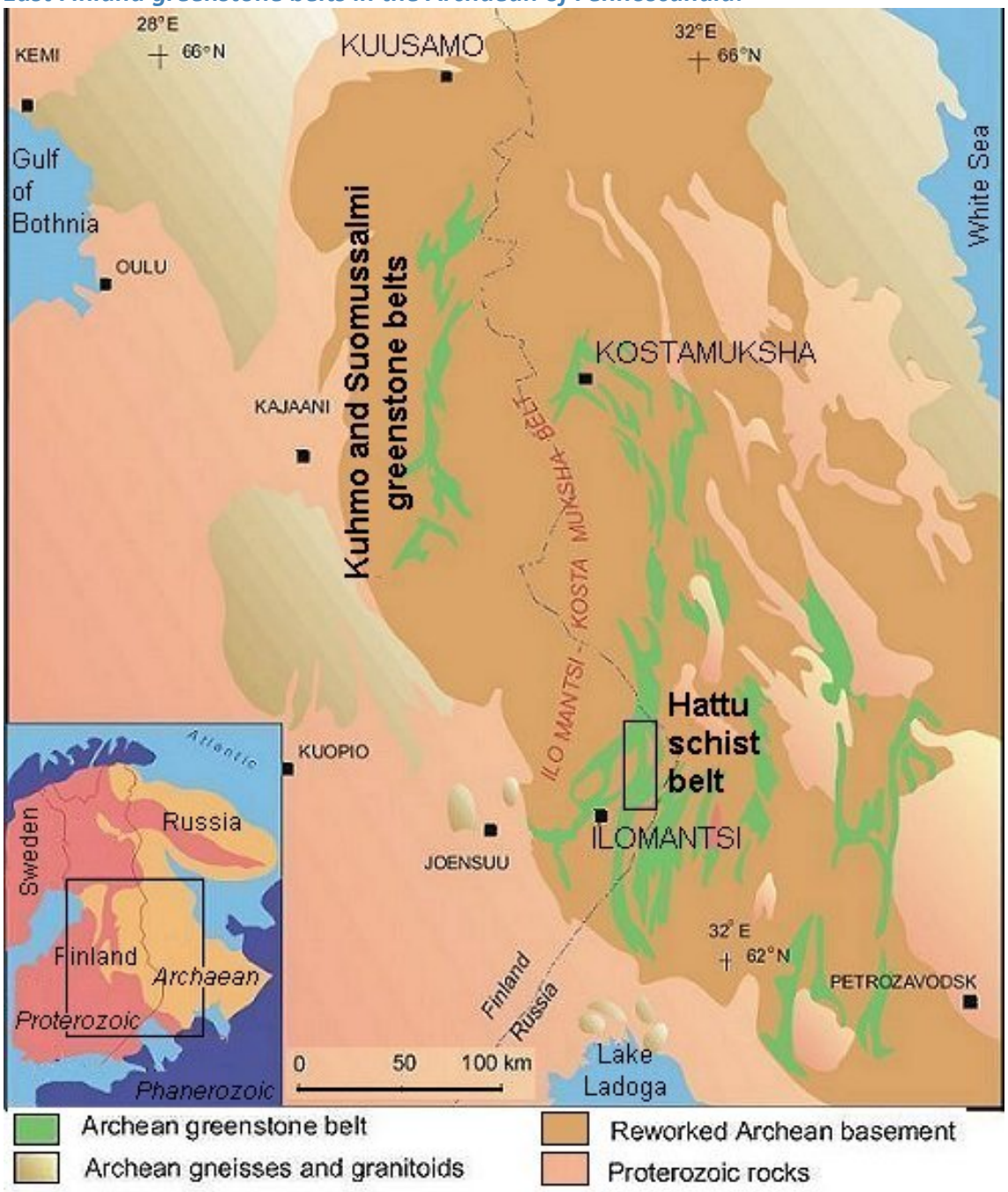
Type:	Facies:	Degree:	Relation to mineralization:	Min P- Max P (kbar)	MIn T- Max T (°C)
Regional	greenschist metamorphic facies	medium metamorphic grade	NA		
Comments: Upper greenschist facies regional metamorphic peak					

Geological age:

Geological era:	Max age - Minage (Ma):	Inferred age (Ma):	Age of mineralization:
Neoarchean (2800-2500 Ma)	2650-2720		N

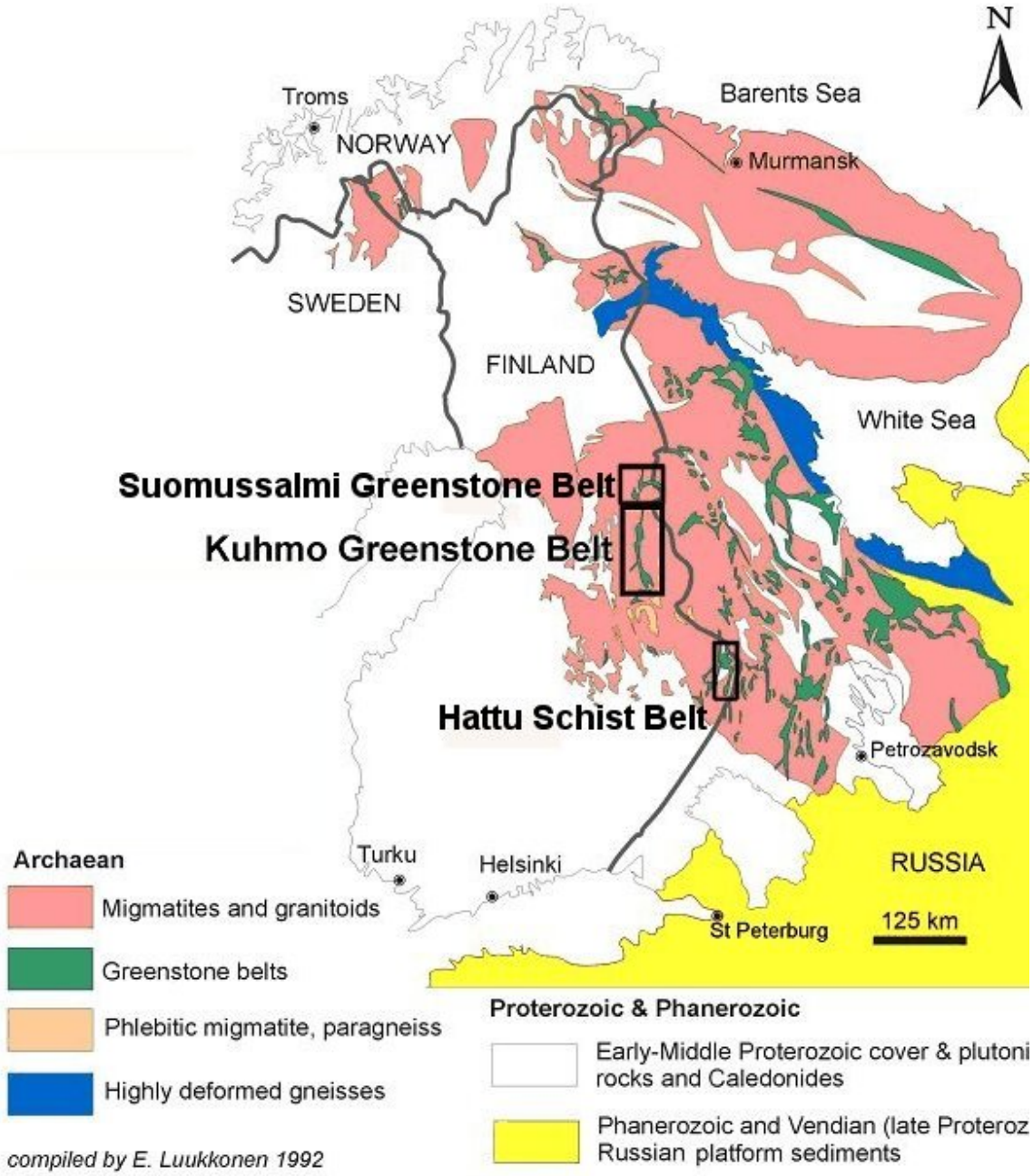
Figures

East Finland greenstone belts in the Archaean of Fennoscandia:

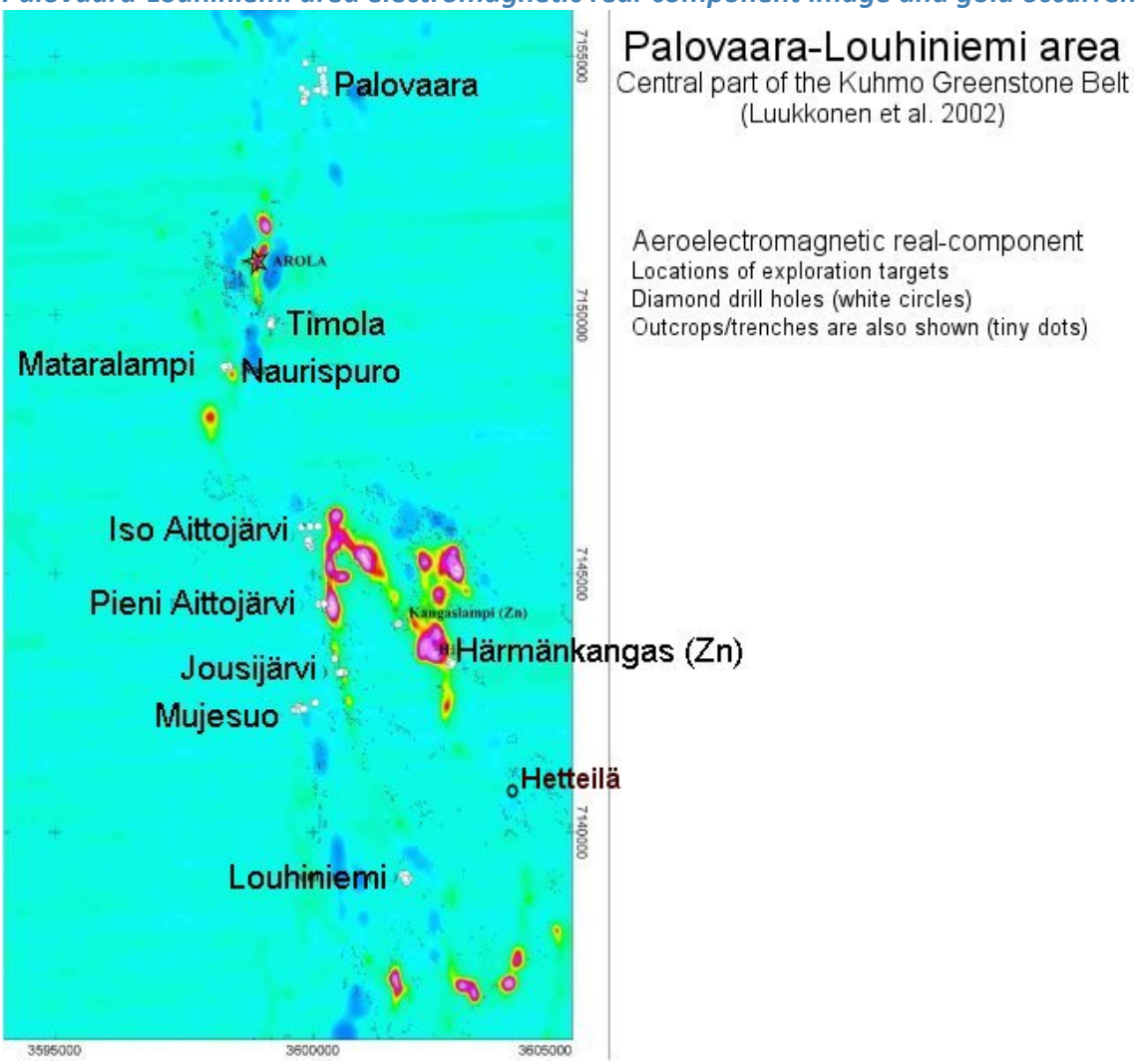


After Sorjonen-Ward (1993); edited by P. Eilu (2000)

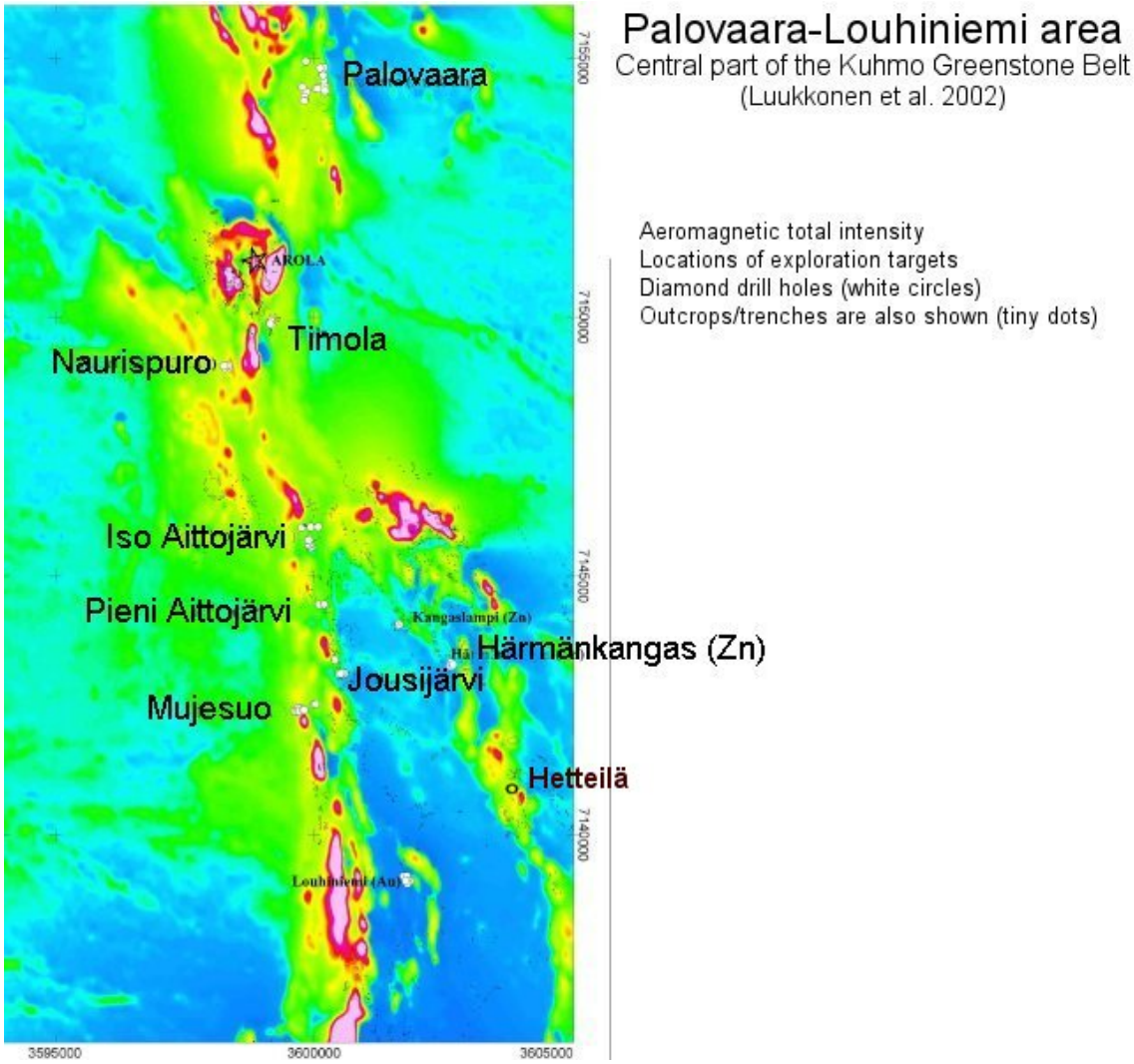
East Finland greenstone belts in the Archaean of Fennoscandia:



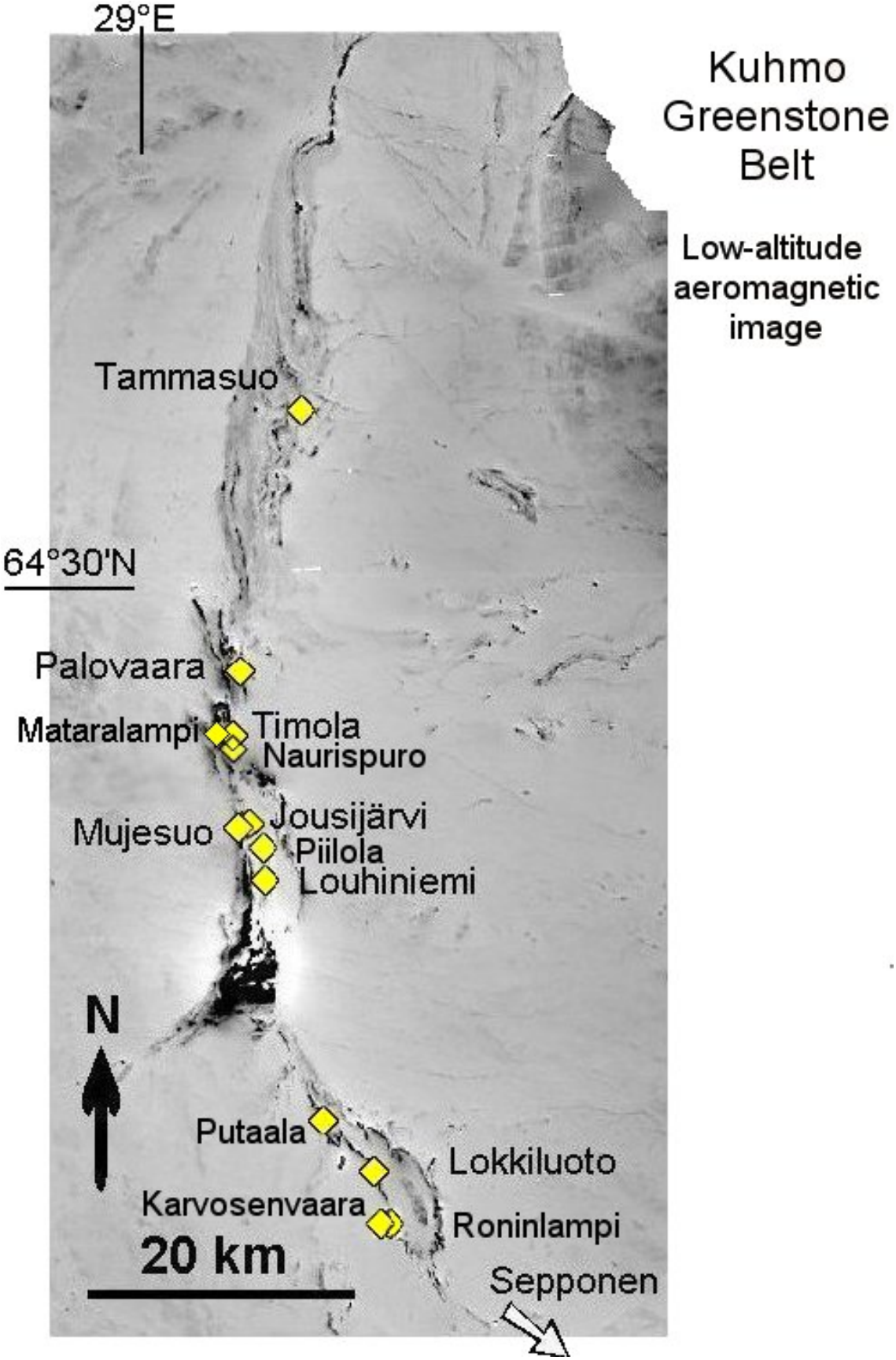
Palovaara-Louhiniemi area electromagnetic real-component image and gold occurrences:



Palovaara-Louhiniemi area aeromagnetic image and gold occurrences:



Kuhmo greenstone belt aeromagnetic image and known gold occurrences:



REFERENCES

1. Halkoaho, T., Niskanen, M.& Tenhola, M. 2001. Turkimustyöselostus Kuhmon kaupungissa valtausalueilla Naurispuro 1 ja 2 (kaivosrekisterinumerot 6503/1 ja 6503/2) suoritetuista kulta- ja nikkelimalmitutkimuksista vuosina 1997-1999. English summary: A research report of gold and nickel exploration concerning the claims of Naurispuro 1 and 2 (Mine Register nos. 6503/1 and 6503/2) in Kuhmo, during 1997-1999. Geological Survey of Finland, Report M06/4412/2001/4/10. 8 p. *http://tupa.gtk.fi/raportti/valtaus/m06_4412_2001_4_10.pdf*

2. Luukkonen, E. 2001. Lentiiran kartta-alueen kallioperä. Summary: Pre-Quaternary rock of the Lentiira map-sheet area. Suomen geologinen kartta 1:100 000. Kallioperäkarttojen selitykset, 4414 + 4432 Lentiira. 68 p.*http://tupa.gtk.fi/kartta/kallioperakartta100/kps_4414_4432.pdf*

3. Luukkonen, E., Halkoaho, T., Hartikainen, A., Heino, T., Niskanen, M., Pietikäinen, K. & Tenhola, M. 2002. Itä-Suomen arkeeiset alueet -hankkeen (12201 ja 210 5000) toiminta vuosina 1992-2001 Suomussalmen, Hyrynsalmen, Kuhmon, Nurmeksen, Rautavaaran, Valtimon, Lieksan, Ilomantsin, Kiihtelysvaaran, Enon, Kontiolahden, Tohmajärven ja Tuupovaaran alueella. Geological Survey of Finland, Report M19/4513/2002/1. 265 p. (in Finnish) *http://tupa.gtk.fi/raportti/arkisto/m19_4513_2002_1.pdf*

4. Luukkonen, E., Pajunen, M. & Poutiainen, M. 1992. Kuhmo-Suomussalmen alueen arkeeisen kallioperän rakenne-evoluutio ja Au-aiheet. In: E. Ekdahl (ed.) Suomen kallioperän kehitys ja raaka-ainevarat. Vuorimiesyhdistys, Sarja B, 51, 11-12. (in Finnish)

5. Sorjonen-Ward, P. & Luukkonen, E.J. 2005. Archean rocks. In: Precambrian Geology of Finland - Key to the Evolution of The Fennoscandian Shield. Elsevier Science B.V., Amsterdam, 19-99.