Tammijärvi

Occurence type: occurrence

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

Easting EUREF: 437055,188
Northing EUREF: 6854424,844

Easting YKJ: 3437200
Northing YKJ: 6857300

Discovery year: 1978
Discovered by: Geological Survey of Finland
References: 2, 3, 4

Mineral deposit type

Group: Metallogenic deposit
Main type: Orogenic (metamorphic hydrothermal)
Comments: Sequence of mineralisation: I) pyrite-chalcopyrite-titanite-ilmenite-rutile during, II) scheelite-arsenopyrite-cassiterite-pyrite, III) pyrrhotite-rutile-chalcopyrite-cobanite-sphalerite-stannite-arsenopyrite-scheelite-herzenbergite, IV) Clausthalite-bismuth-galena-Bi-Ag-Cu sulphosalts-Pb-Bi sulphosalts-argentite-hessite-tellurobismuth-volynskite-chalcopyrite-silver-electrum-pyrrhotite-Bi selenides-cassiterite, and V) supergene alteration.
References: 4

Dimension

Expression: exposed
Form: discordant
Shape: NA
Length (m): 6000
Width (m): 100
Thickness (m): NA
Depth (m): NA

Area (ha): NA
Dip azim: 135
Dip: NA
Plunge azim: NA
Plunge dip: NA
Orientation method: NA

Holder history

Previous holders:

Company	Years	Holding type	Comments
Oy Fennoscandian Resources Ab	2019	Application for reservation	The company is closely related to Beowulf Mining plc
Polar Mining Oy	2004	NA	NA
Geological Survey of Finland	1978-1986	NA	NA
Outokumpu Oy	1950-1960	NA	NA
Geological Survey of Finland	1947-1951	NA	NA

EXPLORATION ACTIVITY

Polar Mining Oy

Years	Activity type	Geologist	Exploration result	Ref
2006-2006	detailed geology	NA	NA	1

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
2001-2001	regional geophysics	NA	key geological features	
	Low-altitude airborne magnetic, electromagnetic and radiometric survey			

1980-1985	core drilling	Marjatta Virkkunen, Boris Lindmark.	NA	2, 3, 4
	25 diamond-drill holes, total approx. 4 km, in profiles 50 m apart across the mineralised zone or across the supposed central part of the mineralised zone.			
	Intersections			
	HoleID	NA		
	From-To	NA		
	Length	6m		
	tungsten	0,92ppm		
	HoleID	NA		
	From-To	NA		
	Length	4,5m		
	gold	0,4ppm		

1978	detailed geology	NA	NA	
	Re-analysing of old erratic boulder samples by GTK revealed anomalous Sn and W concentrations; this led to the discovery of Au- and W-rich ore bodies, by detailed glacial erratic boulder survey.			

Rautaruukki Oy

Years	Activity type	Geologist	Exploration result	Ref
1950-1960	detailed geology	NA	NA	2, 4

Outokumpu Oy

Years	Activity type	Geologist	Exploration result	Ref
1950-1960	detailed geology	NA	NA	4

Rautaruukki Oy

Years	Activity type	Geologist	Exploration result	Ref
1950-1960	regional geophysics	NA	NA	2, 4

Geological Survey of Finland

Years	Activity type	Geologist	Exploration result	Ref
1947-1951	excavation	Marjatta Virkkunen, Boris Lindmark	NA	2, 4
1947-1951	detailed geochemistry	Marjatta Virkkunen, Boris Lindmark	NA	2, 4
1947-1951	core drilling	Marjatta Virkkunen, Boris Lindmark	NA	2, 4
1947-1951	regional geochemistry	Marjatta Virkkunen, Boris Lindmark	NA	2, 4
1947-1951	detailed geology	Marjatta Virkkunen, Boris Lindmark	NA	2, 4
1947-1951	detailed geophysics	Marjatta Virkkunen, Boris Lindmark	NA	2, 3
	A weak IP response for the whole mineralised area.			

GEOLOGY

Host rock: Greywacke, Quartz vein, Intermediate volcanic rock, Mafic volcanic rock

Greywacke (Host rock)

Rock type: Host rock
Proportion: major
Grain size: NA
Color: NA
References: 2, 3, 4, 5
Comments: The metasedimentary host rocks form a part of a dominantly felsic to intermediate sedimentary-volcanic sequence which locally has interbeds(?) of mafic metavolcanic rocks. The gold occurrence is adjacent to an extensive black shale unit.

Ore minerals:

Mineral	Proportion	Mineral texture
Acanthite	minor	
Arsenopyrite	major	
Bismuth	minor	
Cassiterite	minor	
Chalcopyrite	minor	
Clausthalite	minor	
Cubanite	minor	
Electrum	minor	
	Chiefly in electrum which occurs associated with bismuth, some gold is in tellurides.	
Galena	minor	
Herzenbergite	minor	
Hessite	minor	
Ilmenite	minor	
Marcasite	minor	
Pyrite	minor	
Pyrrhotite	minor	
Rutile	minor	
Selenide	minor	
Silver	minor	
Sphalerite	minor	
Stannite	minor	
Tellurobismuthite	minor	
Volynskite	minor	

Other minerals:

Mineral	Proportion	Mineral texture
Quartz	present	
Scheelite	present	
Titanite	present	

Alteration:	Distribution:	Degree:	Relation to mineralization:
sericitic alteration	NA	Strong	Syn
Comments: Synvolcanic epithermal, pre-D1.			

Quartz vein (Host rock)

Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA
References: 2, 3, 4, 5
Comments: Arsenopyrite-bearing, auriferous quartz veins, up to 0.6 m wide, are mostly syn-D1

Intermediate volcanic rock (Host rock)

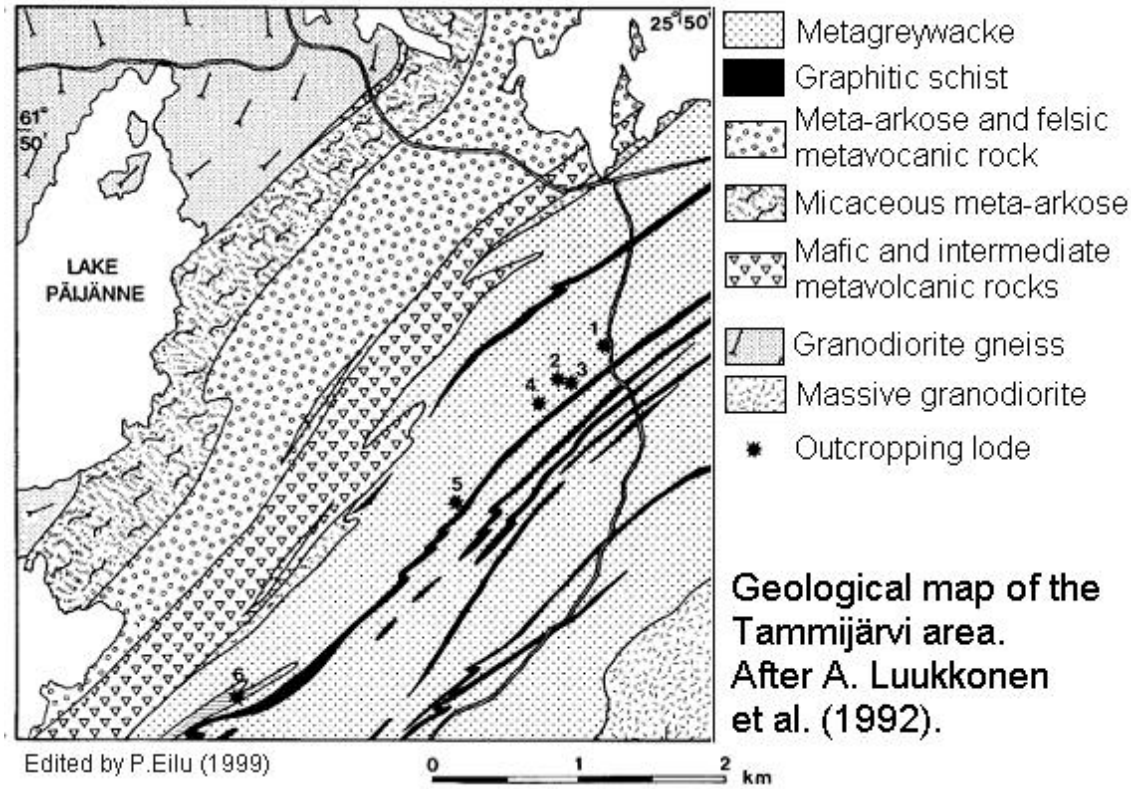
Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA
References: 2, 3, 4, 5

Mafic volcanic rock (Host rock)

Rock type: Host rock
Proportion: minor
Grain size: NA
Color: NA
References: 2, 3, 4, 5
Comments: The metasedimentary host rocks form a part of a dominantly felsic to intermediate sedimentary-volcanic sequence which locally has interbeds(?) of mafic metavolcanic rocks.

Figures

Local geology:



Geological map of the Tammijärvi area. After A. Luukkonen et al. (1992).

Vein:

Auriferous arsenopyrite-quartz in metagreywacke at Tammijärvi. Photo Tero Niiranen.

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