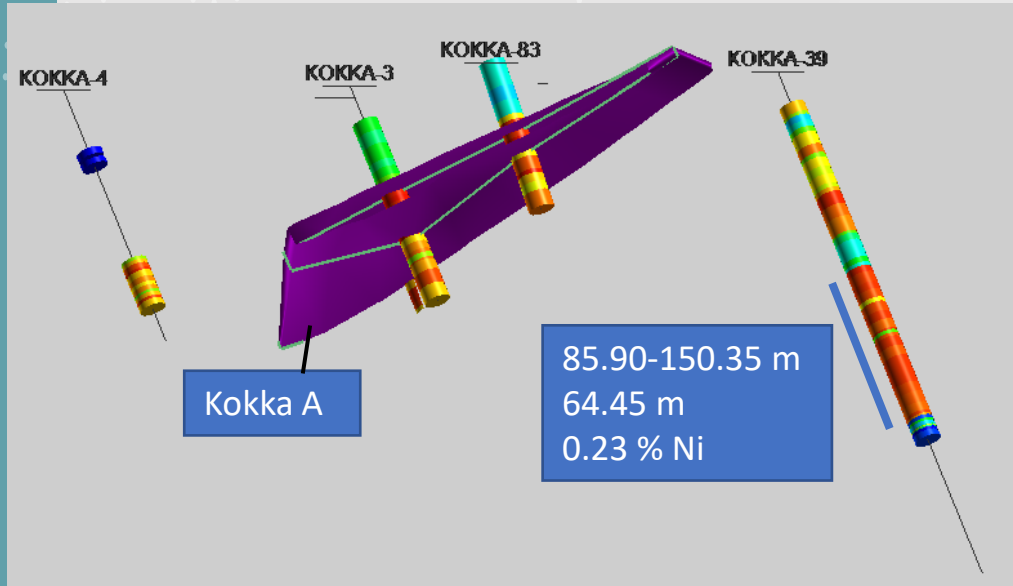
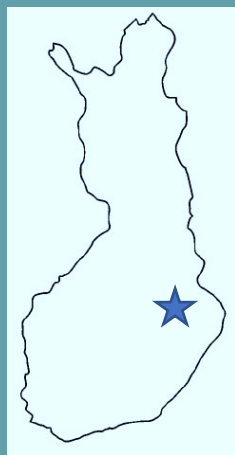
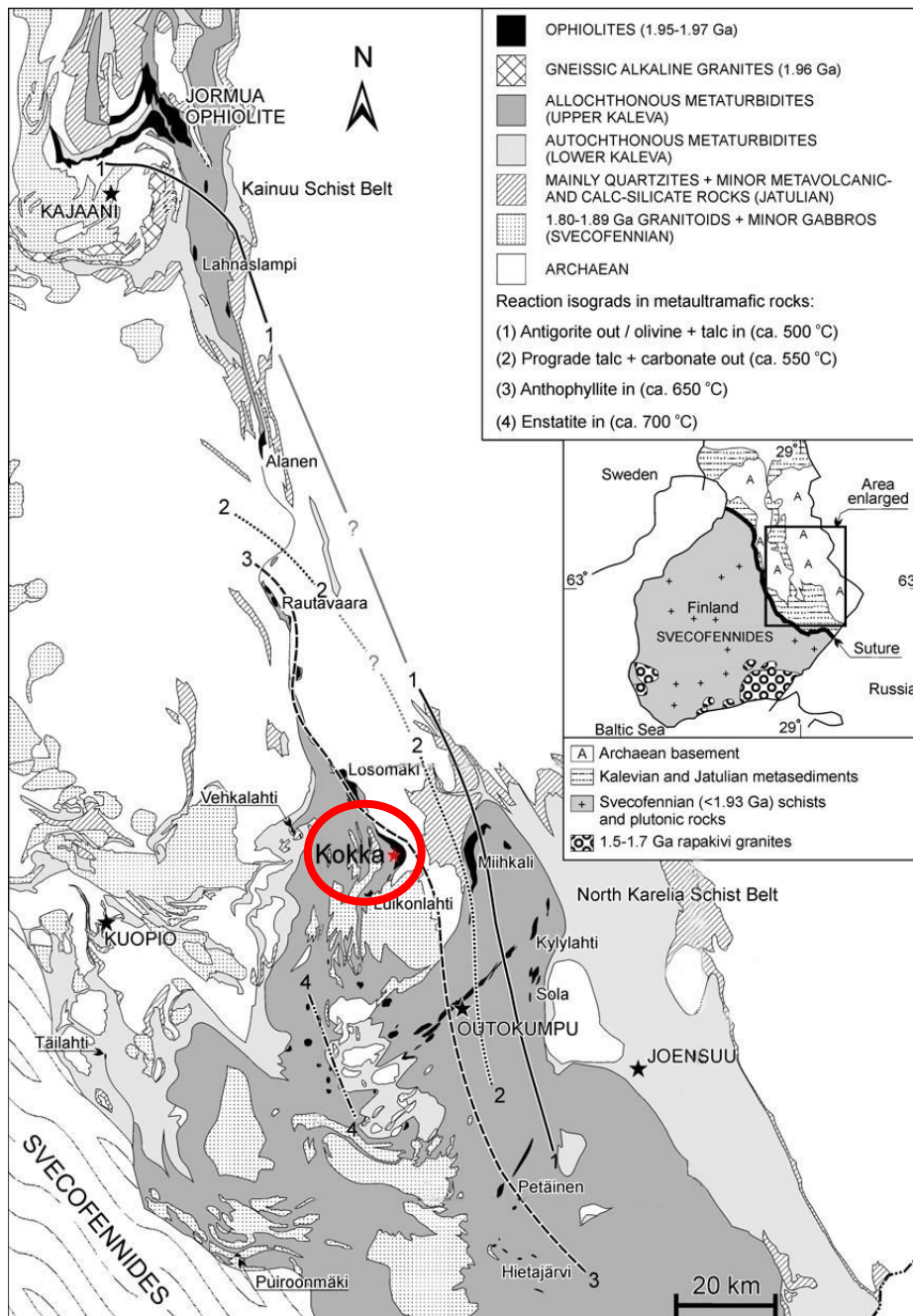


# Nickel-Cobalt Prospect at Kaavi, eastern Finland

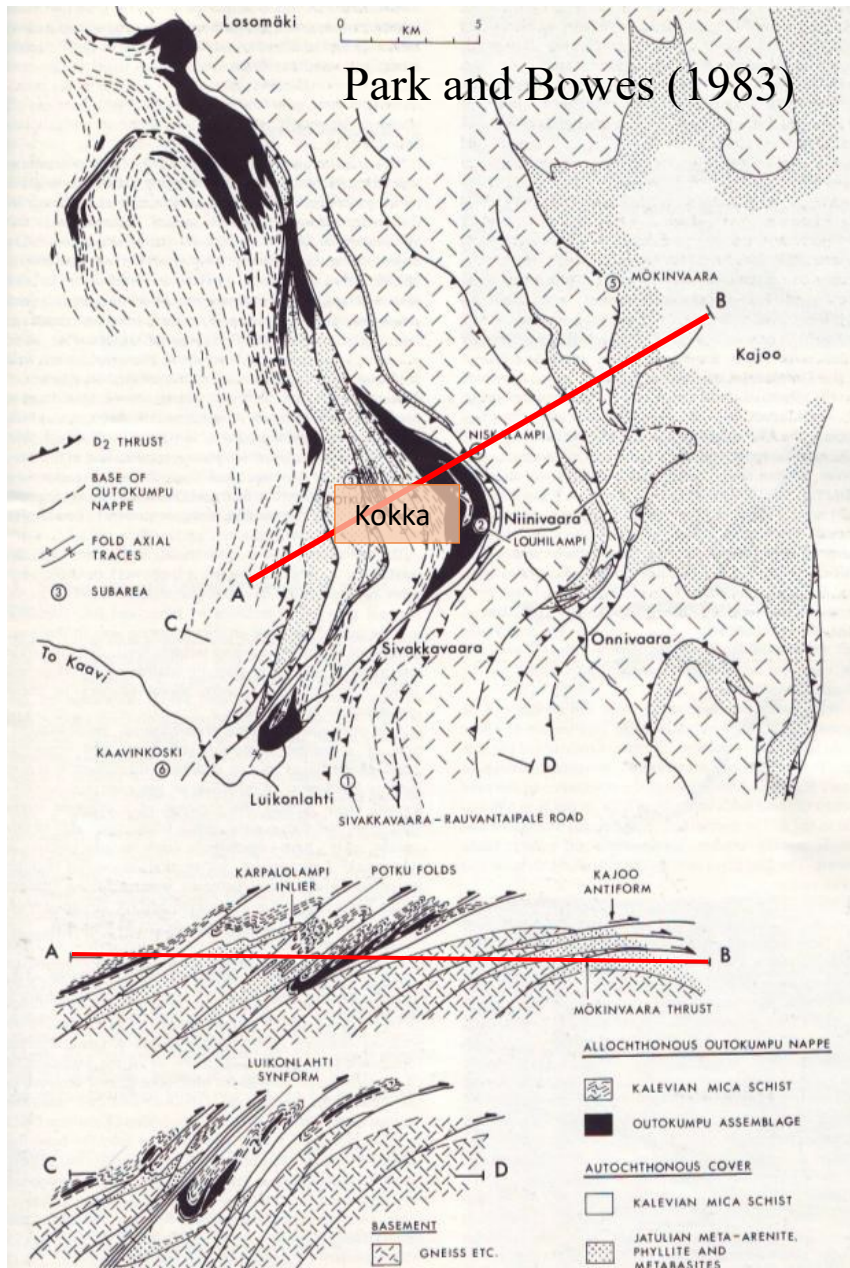
## The Kokka area





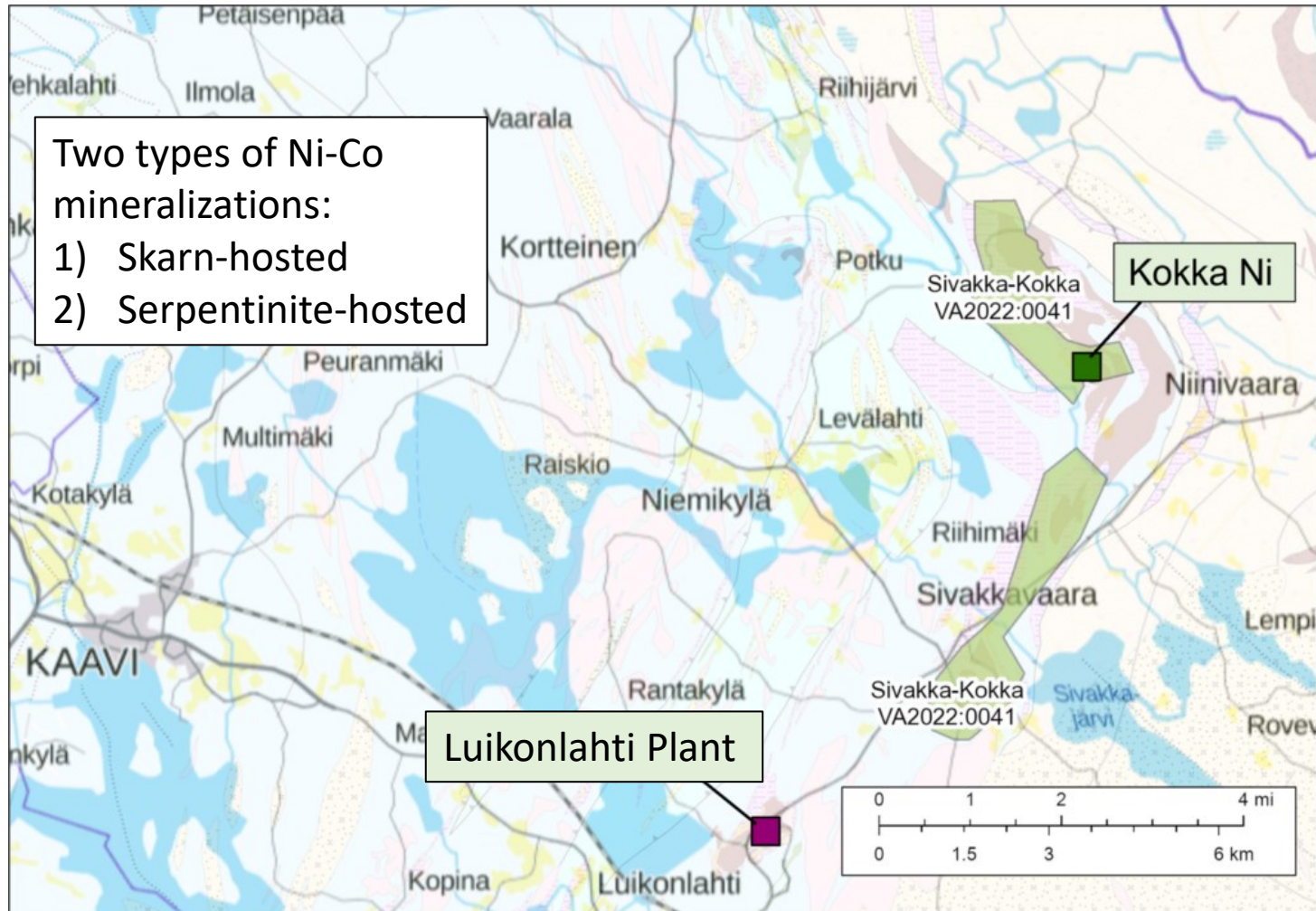
Kokka area belongs into the Outokumpu formation, which hosts the famous Outokumpu-type Cu ores (like Keretti, Vuonos, Luikonlahti and Kyylahti, together with some 56 Mt production @ 2.6 % Cu), but also many Ni-Co deposits, with limited exploration.

## Park and Bowes (1983)



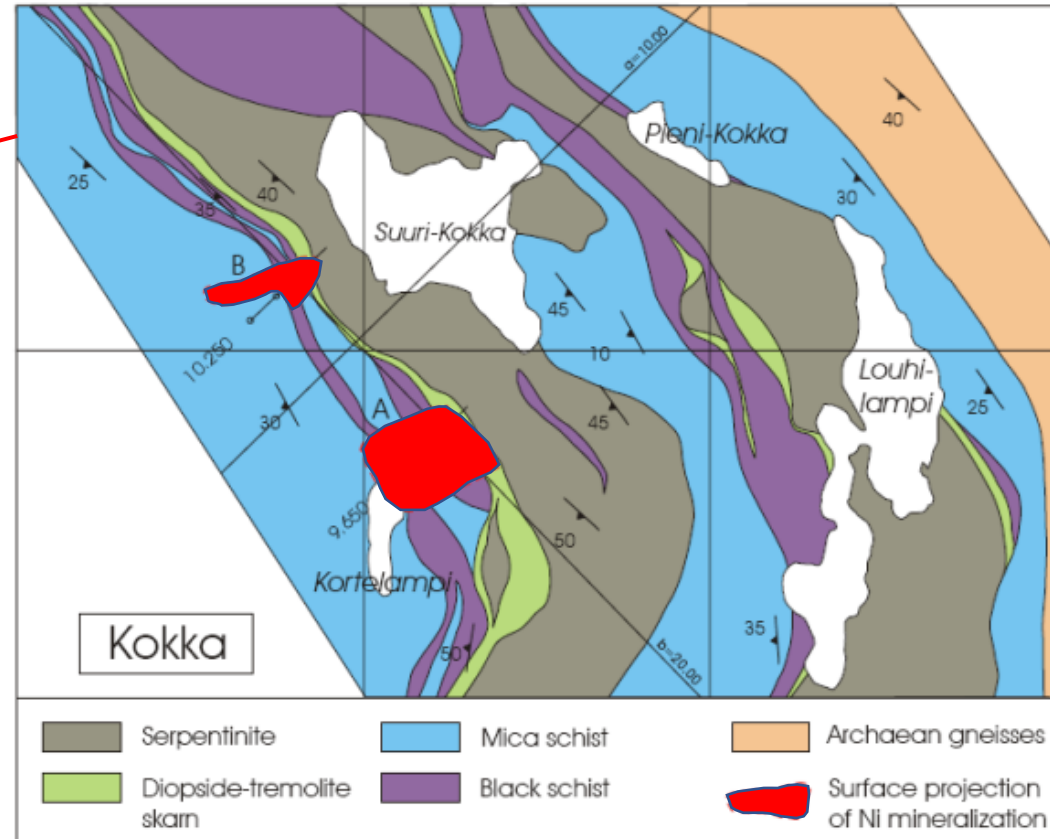
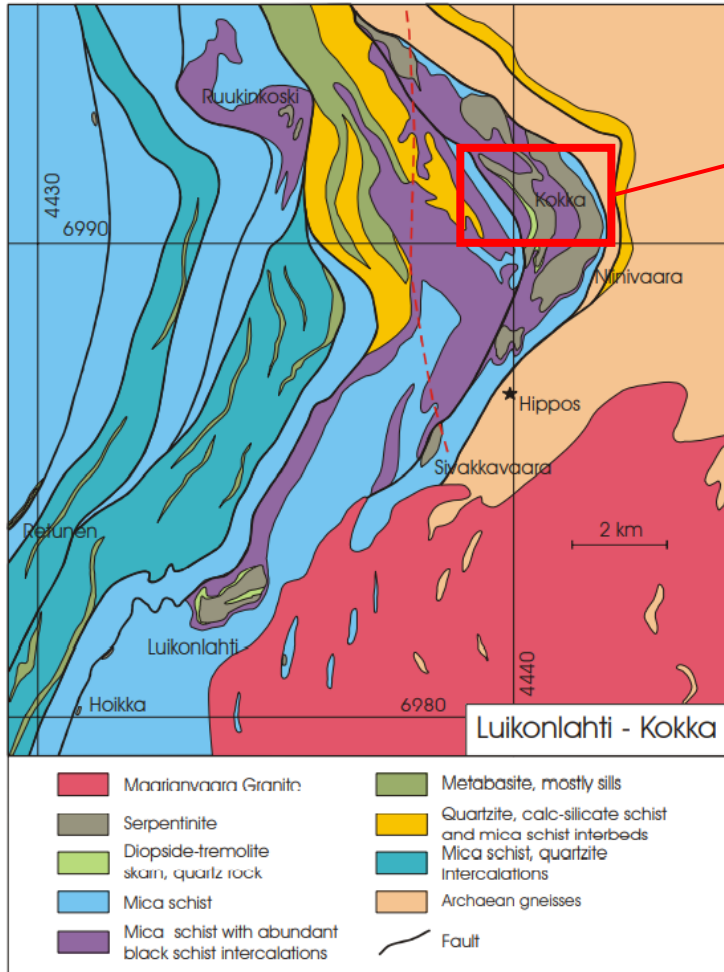
The Outokumpu assemblage lies within an allochthonous nappe complex that was emplaced onto the Karelian Craton margin during the early stages of the Svecofennian Orogeny. In addition, the resulting thrust belt was later folded.

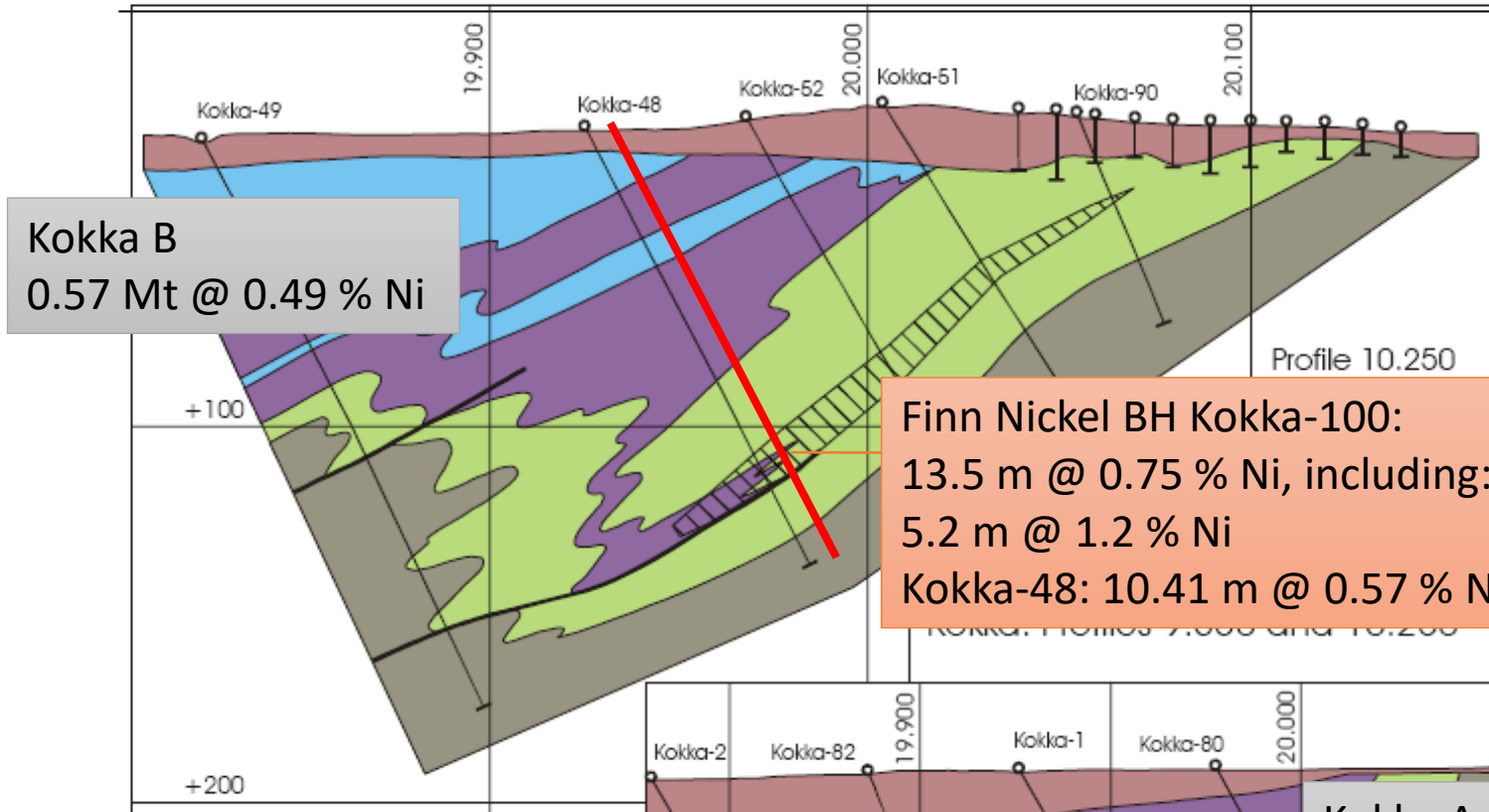
Kokka Ni-Co Prospects locate within the Outokumpu assemblage, and only 5 -15 km NE of the Luikonlahti processing plant, owned by Boliden.








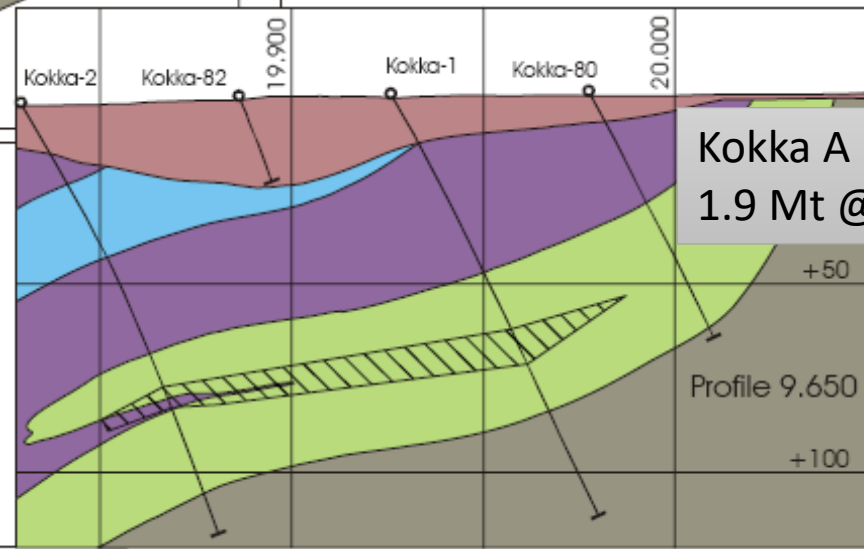
Suomen Malmitutkimus Oy's reservation areas marked by green.

# Skarn-hosted Kokka A and B orebodies (from Geomex report)

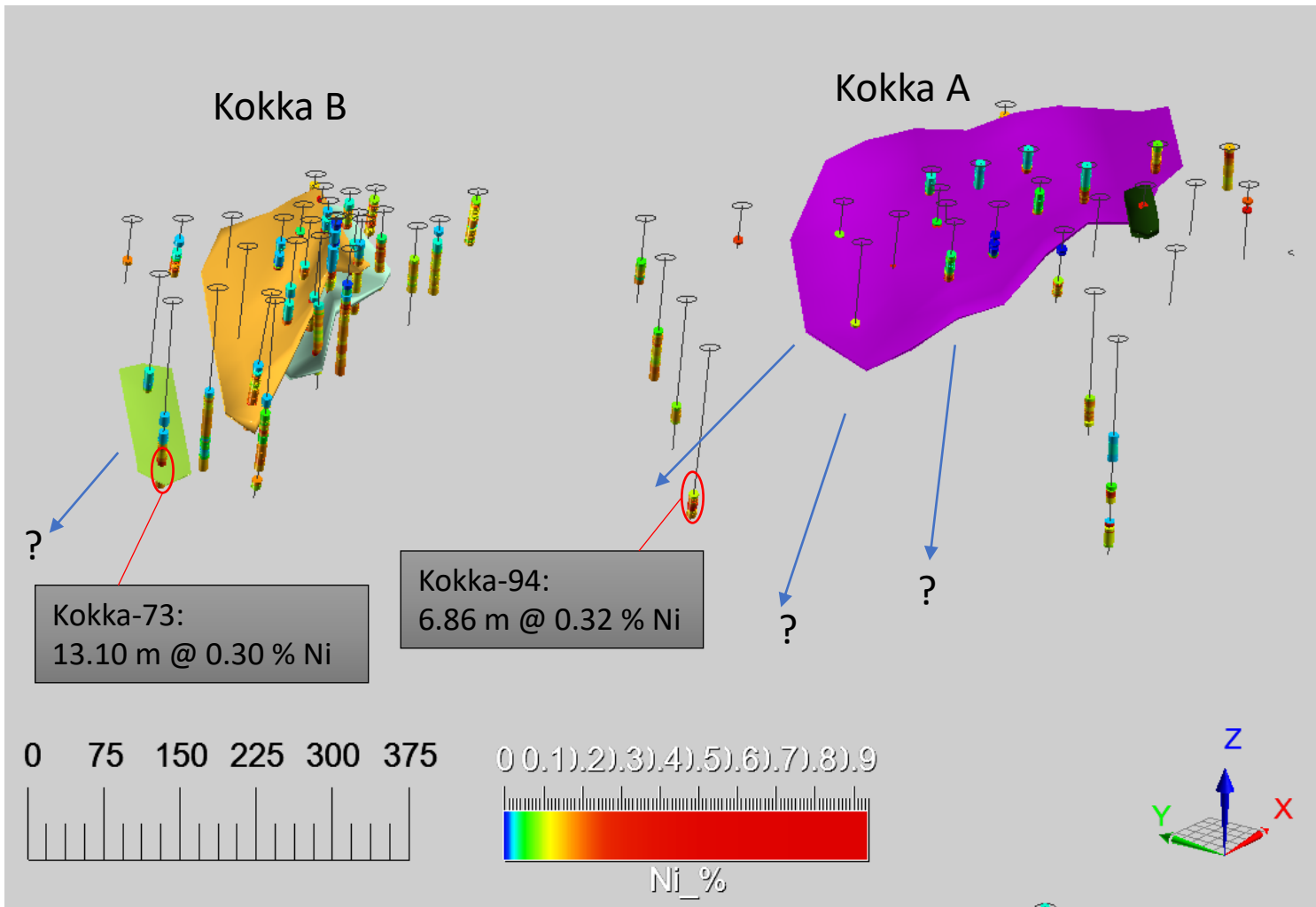




-  Serpentinite
-  Carbonate-skarn rock
-  Black schist
-  Mica schist
-  Ni mineralization (Ni > 0.3 wt.%)



Kokka A and B are open towards SW





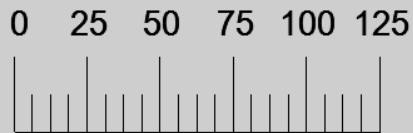
**BH Kokka-101**  
Lamprophyre dykes (red) with elevated REE in the end of the hole

1110 m

1348.30 m

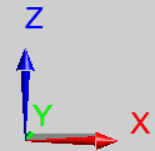
0.4 m  
0.89 % Ni  
0.07 % Co

0.2 % Ni

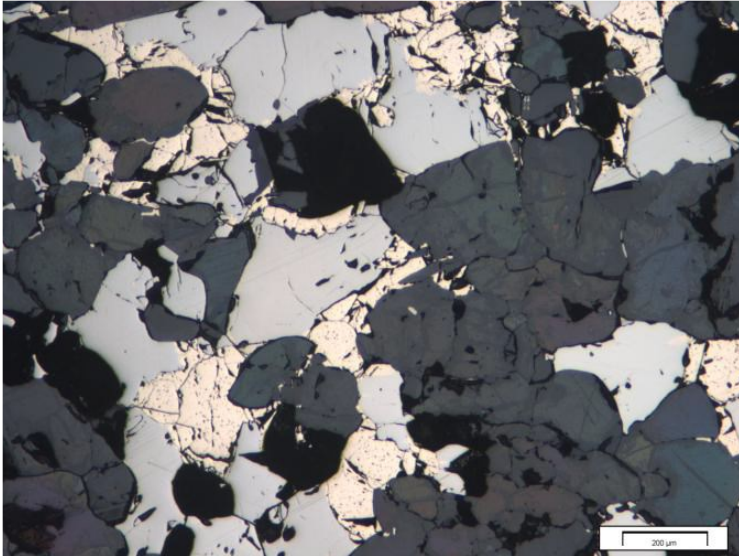


Rock\_name-Lithology\_Kokka\_Boliden-Referenced

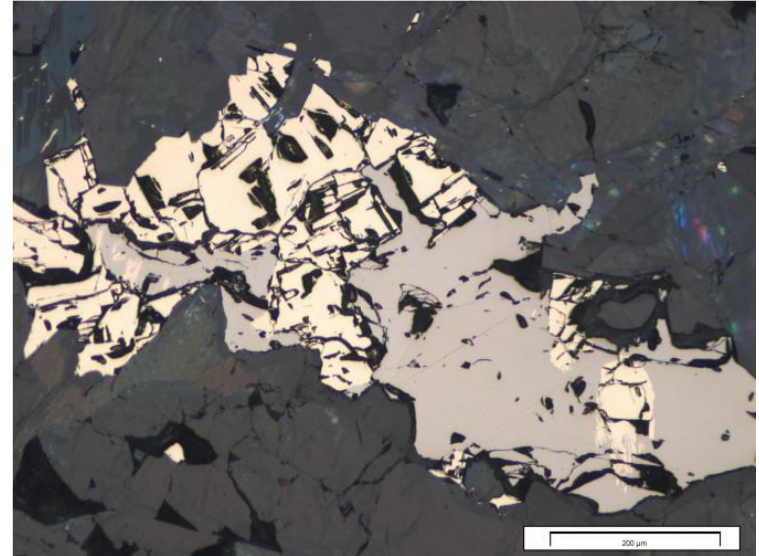
OVB	BS	GRPG	APL	MCAS	QTZVE	CLOSS	DISKA	CHLS
AMPE	TRESKA	SS	SP	OLCRBR	QTZR	SULBS	CRBR	TRECS
LAMPH	TRES	CRB	CSBS	MS	GR	SKA	QTZE	



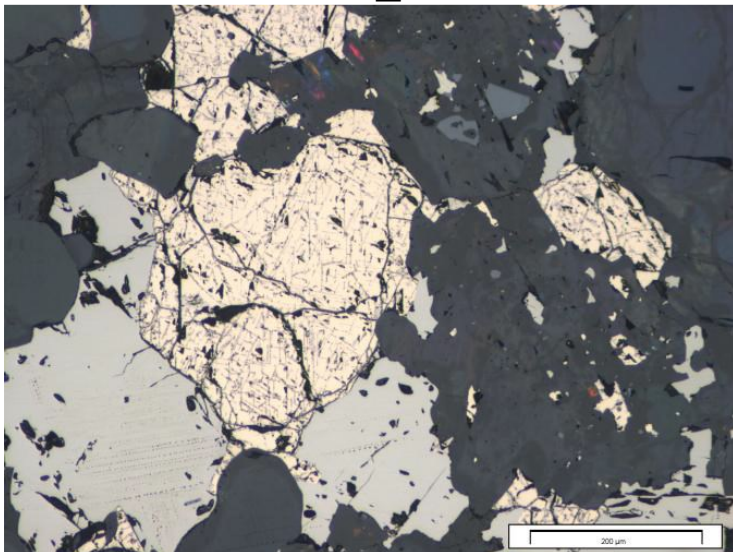
**Kokka-1\_77.36**



**Kokka-1\_69.68**



**Kokka-1\_79.34**



Pyrrhotite-pentlandite  
assemblages in diopside skarn at  
Kokka (from Master's Thesis of  
T.Jokela, 2012)

Nickel in sulfide fraction ~ 8 -10 %  
Flotation tests in 1982 positive

# Kokka serpentinite intercepts

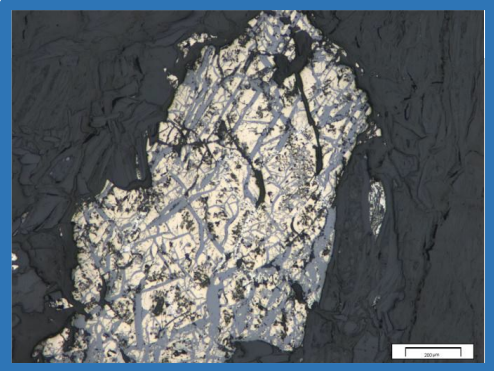
historical data from 1960's and 1970's

true thickness estimated to 70 – 95 % of the intercept length

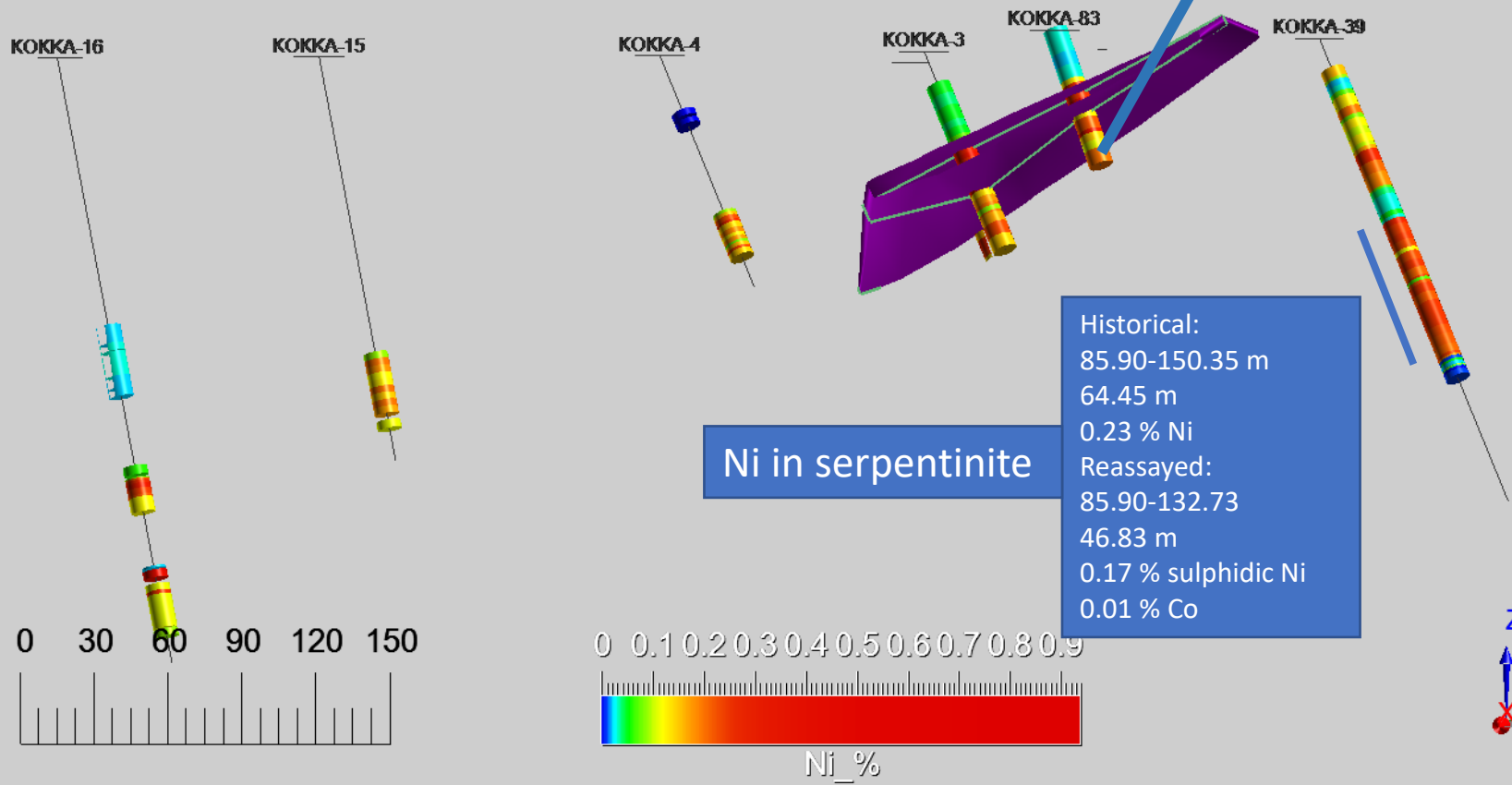
Historical									
Hole_ID	From m	To m	Length m	Ni %	S %	Ni(sf) %			
Kokka-36	83.01	419.61	336.60	0.19					
Kokka-37	25.53	323.62	298.09	0.22					
Kokka-38	7.00	201.42	194.42	0.23	0.44	19.60			
Kokka-39	85.90	150.35	64.45	0.23	0.99	8.71			
Kokka-43	51.83	144.68	92.85	0.19					
Reassayed									
Hole_ID	From m	To m	Length m	Ni_total %	Ni_sulphidic %	Co ppm	S %	Ni(sf) %	
Kokka-39	85.90	132.73	46.83	0.21	0.17	97	0.97	6.56	
Kokka-41	23.82	53.68	29.86	0.21	0.15	98	0.30	7.73	
Kokka-43	51.83	88.13	36.30	0.17	0.15	96	2.10	2.61	
Kokka-43	96.73	146.14	49.41	0.18	0.15	94	2.13	2.67	
Kokka-49	100.05	169.88	69.83	0.18	0.16	86	0.95	6.08	

Ni\_total by ALS-Method ME-OG62, Ni\_sulphidic by ALS-Method Ni-ICP05 (leaching by acids that preferentially break down sulphides), Co and S by ALS-Method ME-ICP41a. Ni(sf) % calculated assuming sulphur content of 37.5 % in sulphide fraction.

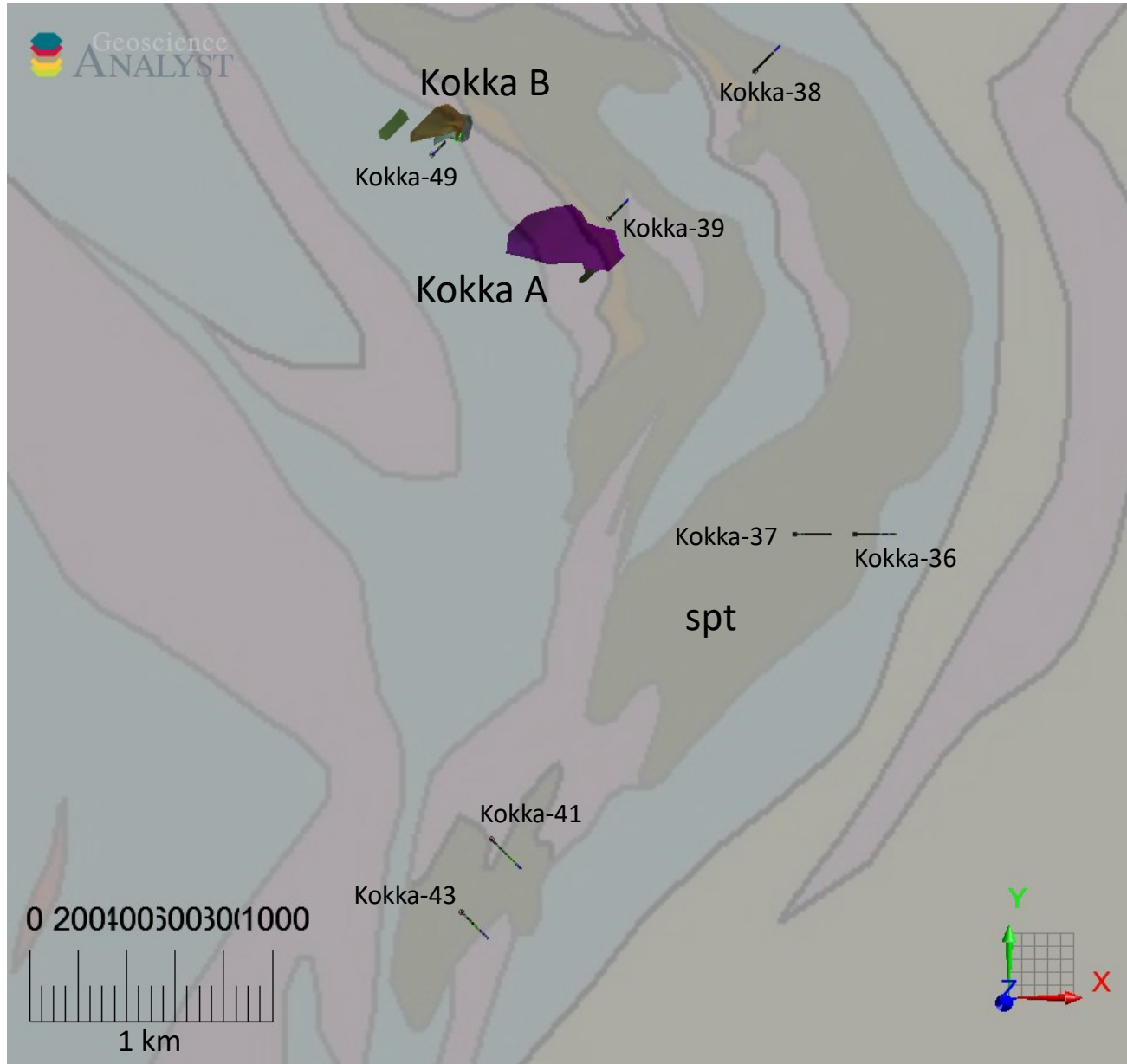
View towards west, 40 m slice

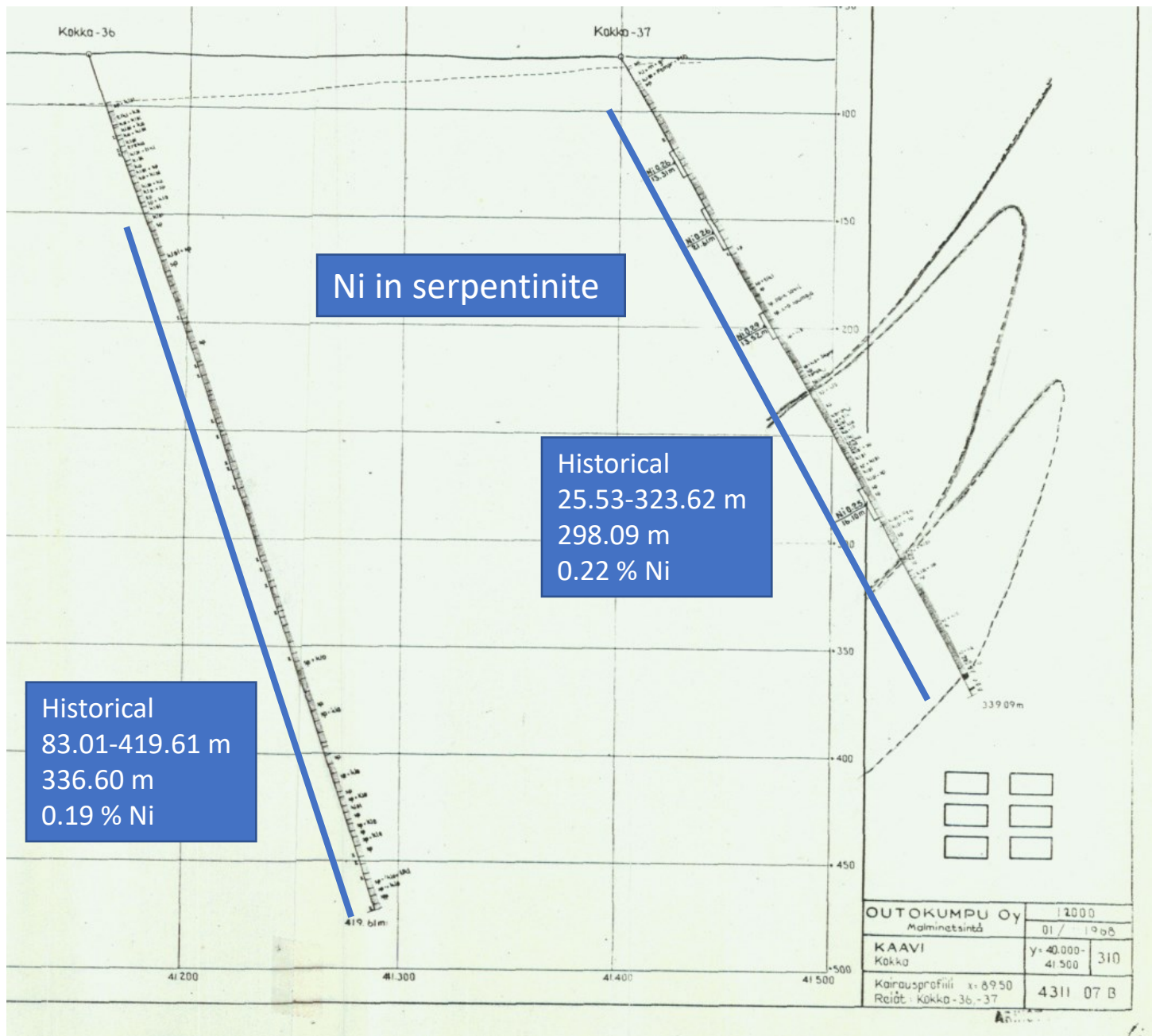


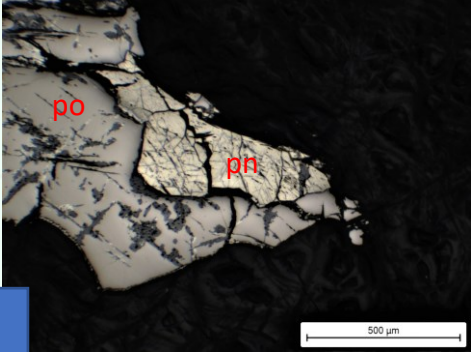
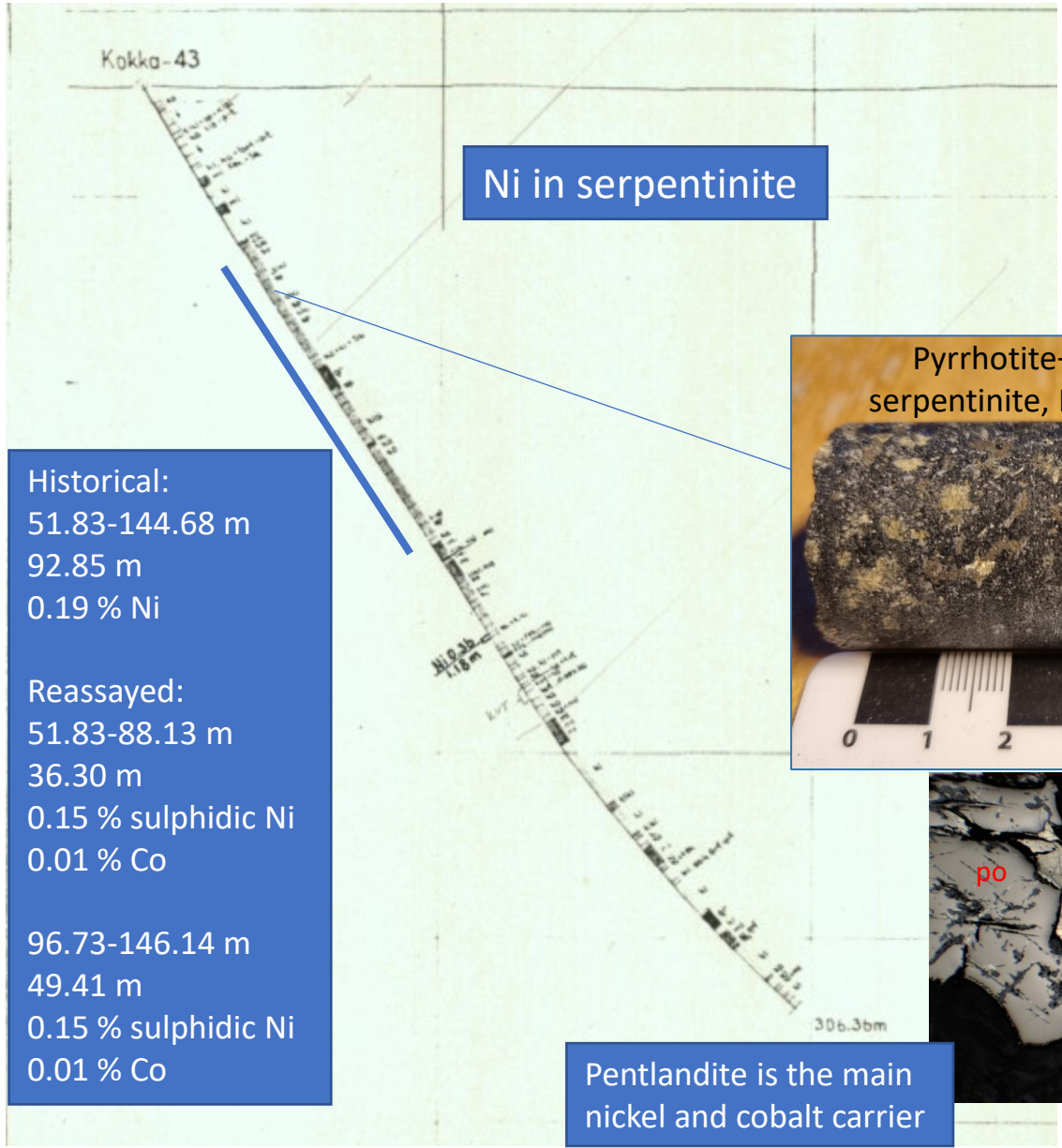
Kokka A orebody



# Kokka serpentinite (spt) intercepts







Pentlandite is the main nickel and cobalt carrier