



**Hautalampi Cu-Ni-Co-mine Project,  
Finland**

3.9.2025

**FINNCOBALT**

[www.finncobalt.com](http://www.finncobalt.com)

*A Eurobattery Minerals Company*

# FinnCobalt

- Junior exploration and mining company
  - Owner of the Hautalampi project - a highly advanced polymetallic mining development project, strategically positioned to supply responsibly sourced nickel, cobalt, and copper to meet the growing demand for battery and electrification industries in Europe.
  - Several copper satellite assets around Outokumpu region.
- A subsidiary of Eurobattery Minerals Ab (EBM) since 2023
  - EBM is listed in Sweden and in Germany
  - Full ownership of the company
- Founded 2016 by three founding “fathers”
  - With proven track record



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# Business Idea

- Develop and mine Hautalampi Co-Ni-Cu mineralization:
  - Produce and upgrade **Co-Ni-concentrate** to battery chemicals by leaching
  - Produce conventional **Cu-concentrate** for smelting
  - **Zero Carbon** – mining and process
- Benefit from previous investment for the project:
  - Sunk cost 15+M€
    - Significant pre-production development completed:
      - Decline 850m and 1,250m
      - Ventilation shaft among others
      - Diamond Core drilling 34+ kilometers



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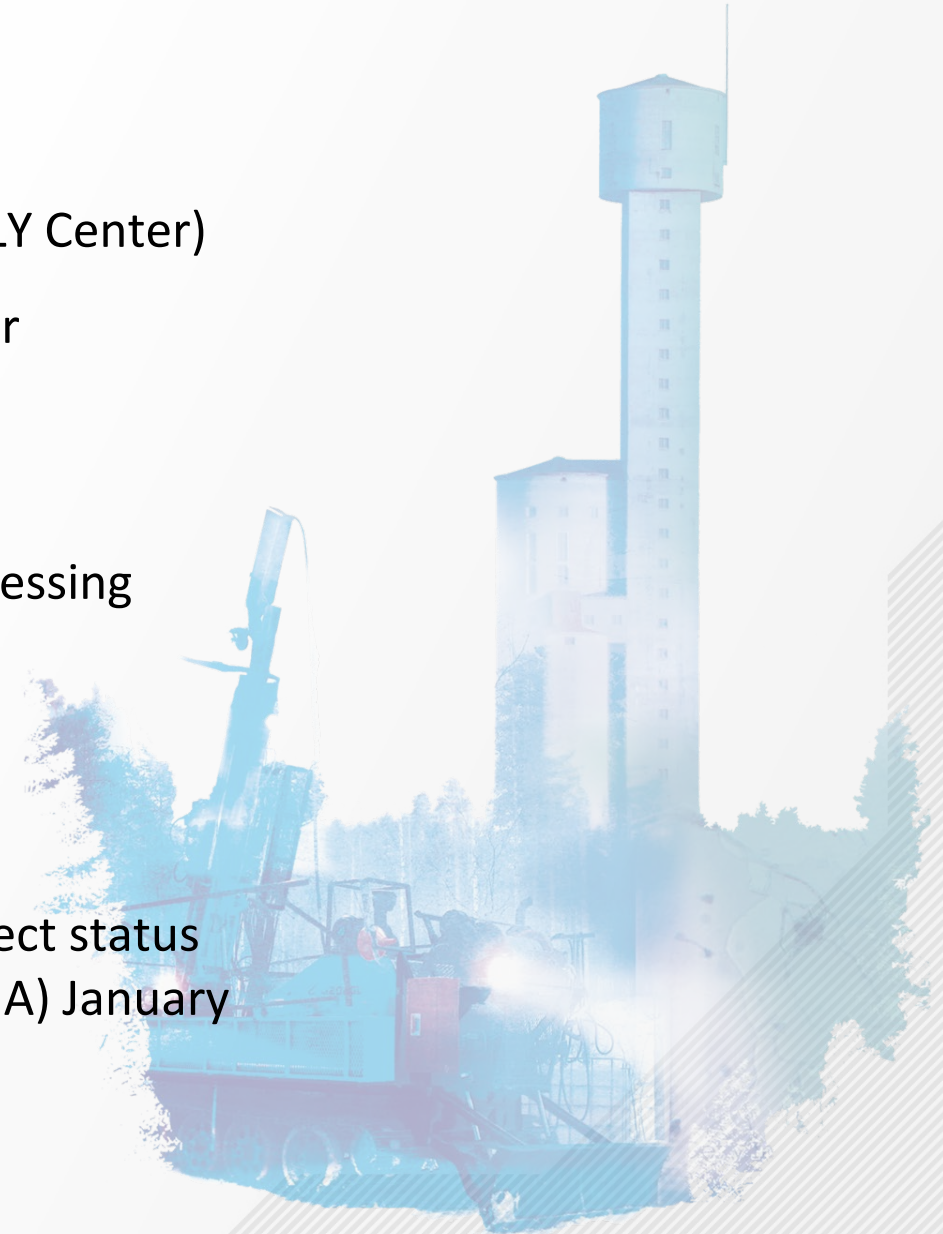
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# Hautalampi project status

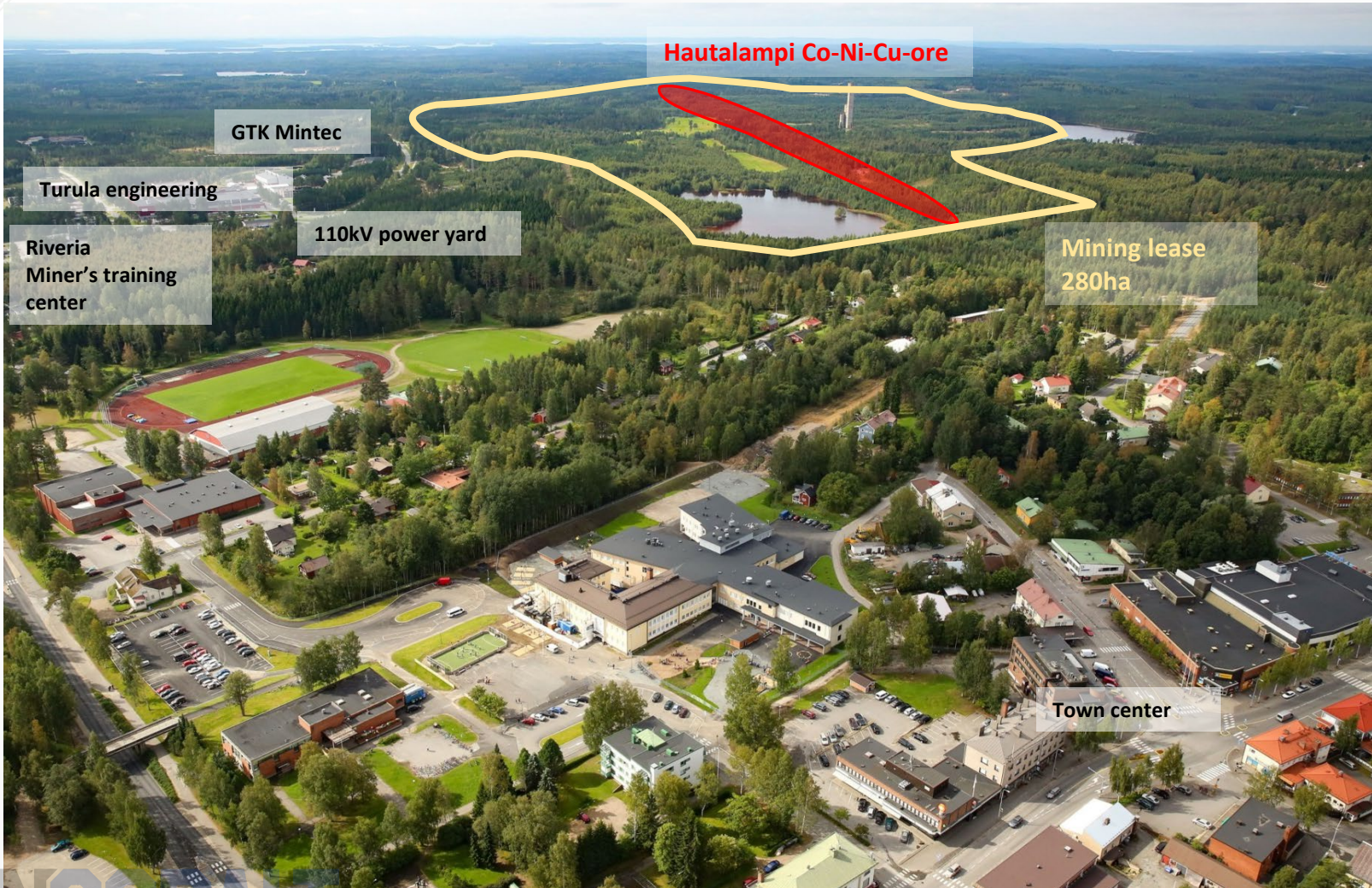
- Prefeasibility Study published 20.3.2023 (AFRY Finland Oy)
- EIA approved and justified conclusion received 18.7.2023 (ELY Center)
- Mining permit K7802 registered in the Finnish mining register 9.6.2023 (TUKES)
- Environmental permit since 2008 for underground mining
- Environmental permit application submitted for on-site processing plant and Tailings Storage Facilities 29.4.2024 (AVI)
  - Supplement submitted 1.7.2025
- Land zoning approved 10.7.2025
- Application to the European Commission for a strategic project status under the European Union's Critical Raw Materials Act (CRMA) January

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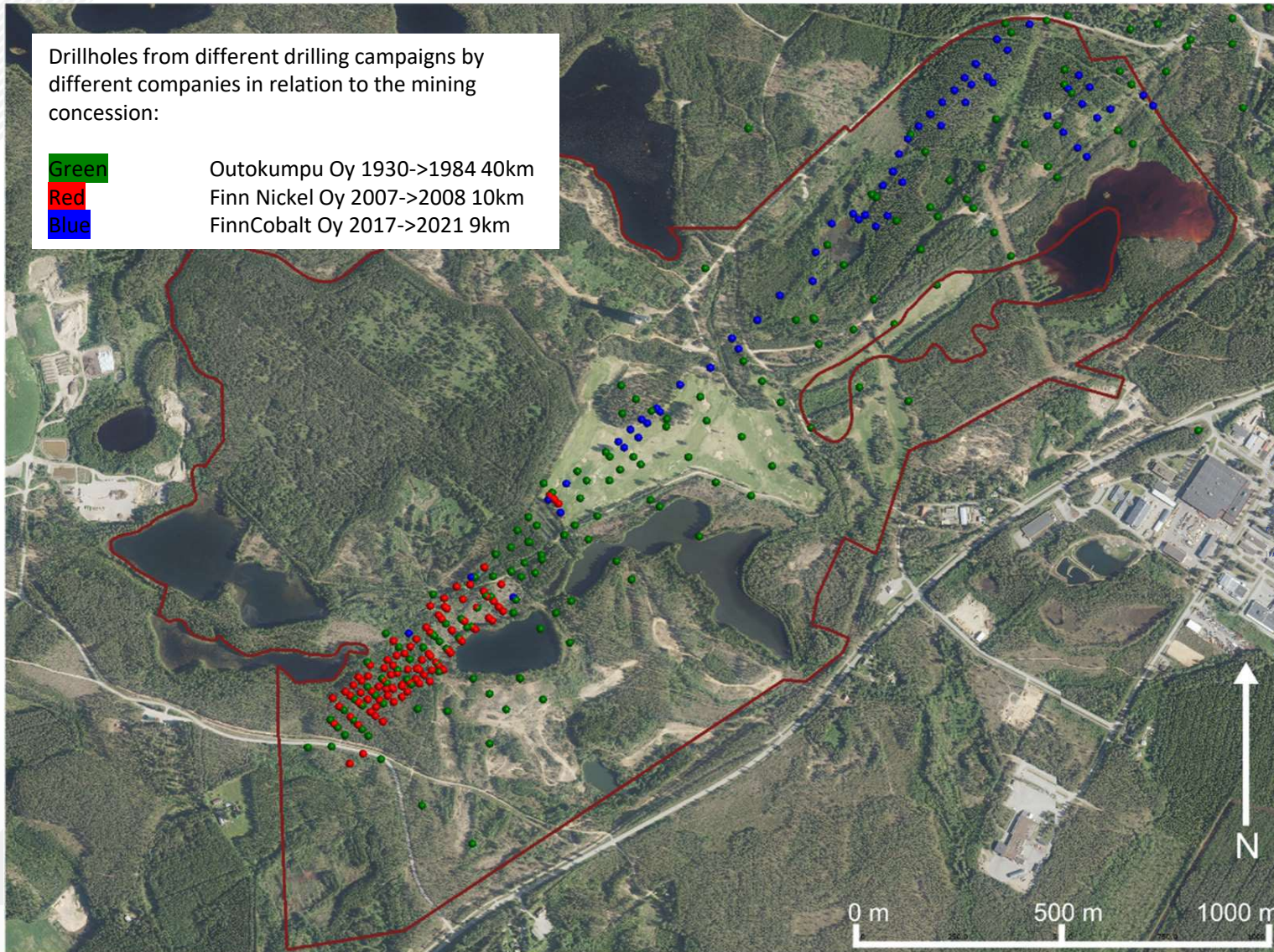


# Outokumpu town and Hautalampi deposit -excellent location for mine development



- A strong local support for mining activities
- The municipality has evolved from a mining town into a prominent industrial machinery manufacturing and research center.

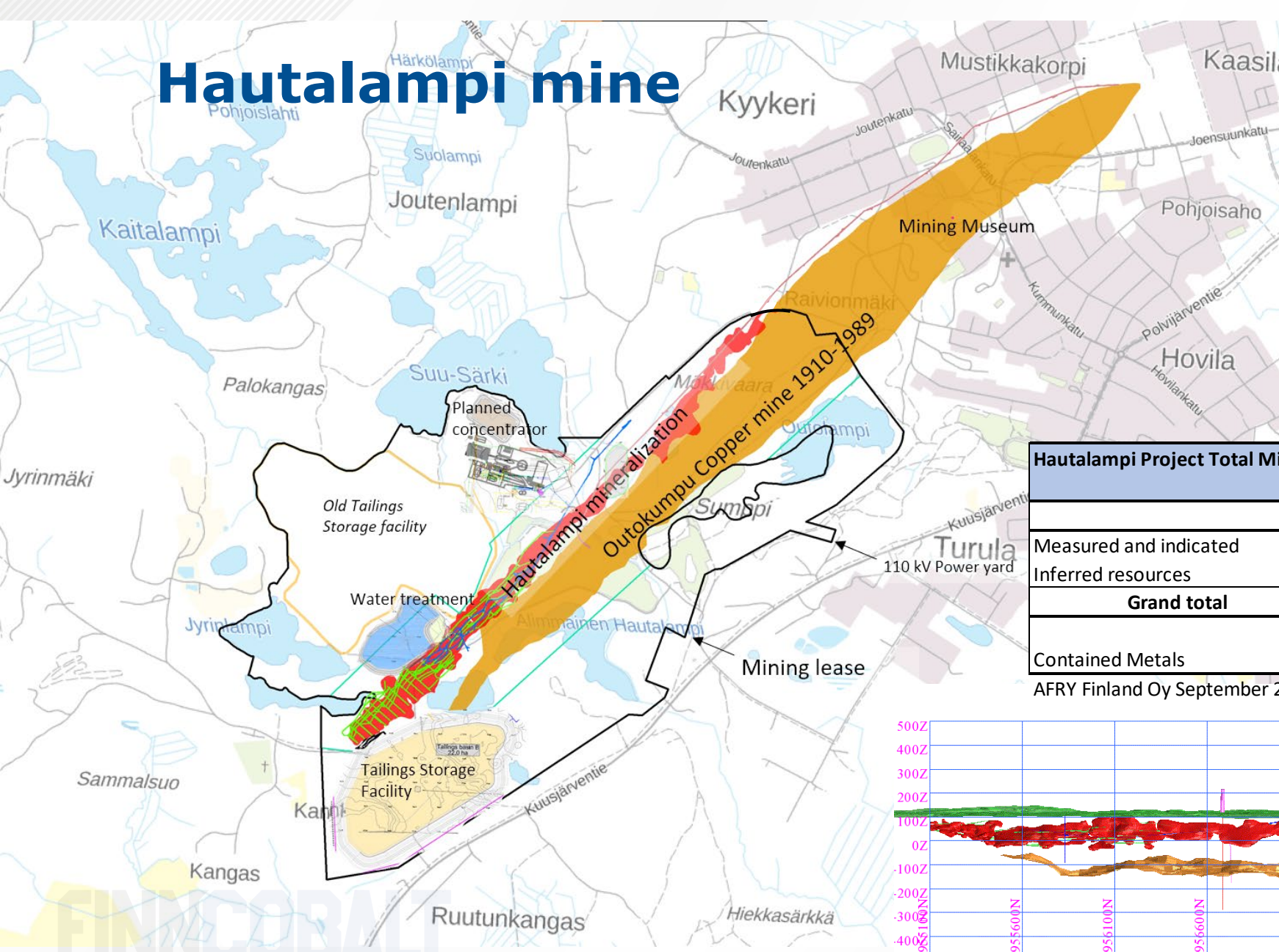
# Hautalampi resource



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# Hautalampi mine

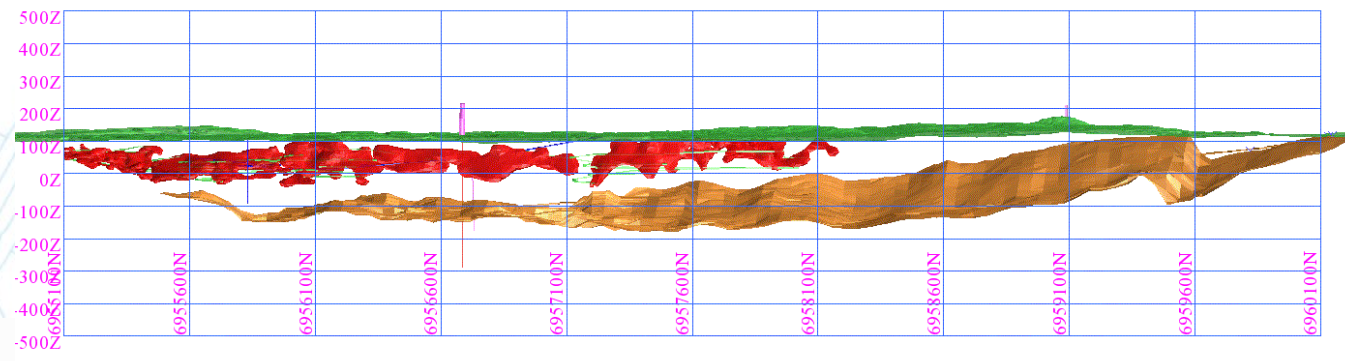


Hautalampi Ore Reserves				
Mineral Resources are inclusive of these Ore Reserves				
	Mt	Ni%	Co%	Cu%
Measured	1.9	0.36 %	0.09 %	0.30 %
Indicated	2.7	0.25 %	0.07 %	0.19 %
<b>Total</b>	<b>4.6</b>	<b>0.30 %</b>	<b>0.08 %</b>	<b>0.24 %</b>
Contained Metals	tonnes	13 700	3 500	11 000

AFRY Finland Oy 7th March 2023 @30€/t NSR Cut-off.

Hautalampi Project Total Mineral Resources						
	Mt	Ni%	Co%	Cu%	Ni Eq %	Cu Eq %
Measured and indicated	9.3	0.28	0.07	0.19	0.57	1.27
Inferred resources	3.4	0.22	0.05	0.13	0.43	0.95
<b>Grand total</b>	<b>12.7</b>	<b>0.26</b>	<b>0.06</b>	<b>0.17</b>	<b>0.53</b>	<b>1.19</b>
Contained Metals	tonnes	33 550	7 840	22 060		

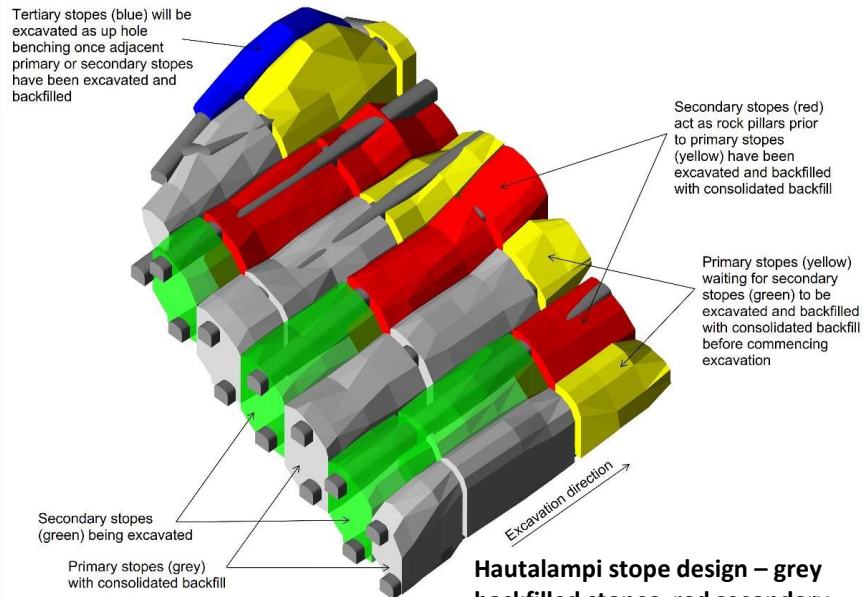
AFRY Finland Oy September 29th, 2022 @ 0.25% NiEq cut-off



# Mine design

## Hautalampi Underground Mine – LHS Longitudinal long-hole stoping

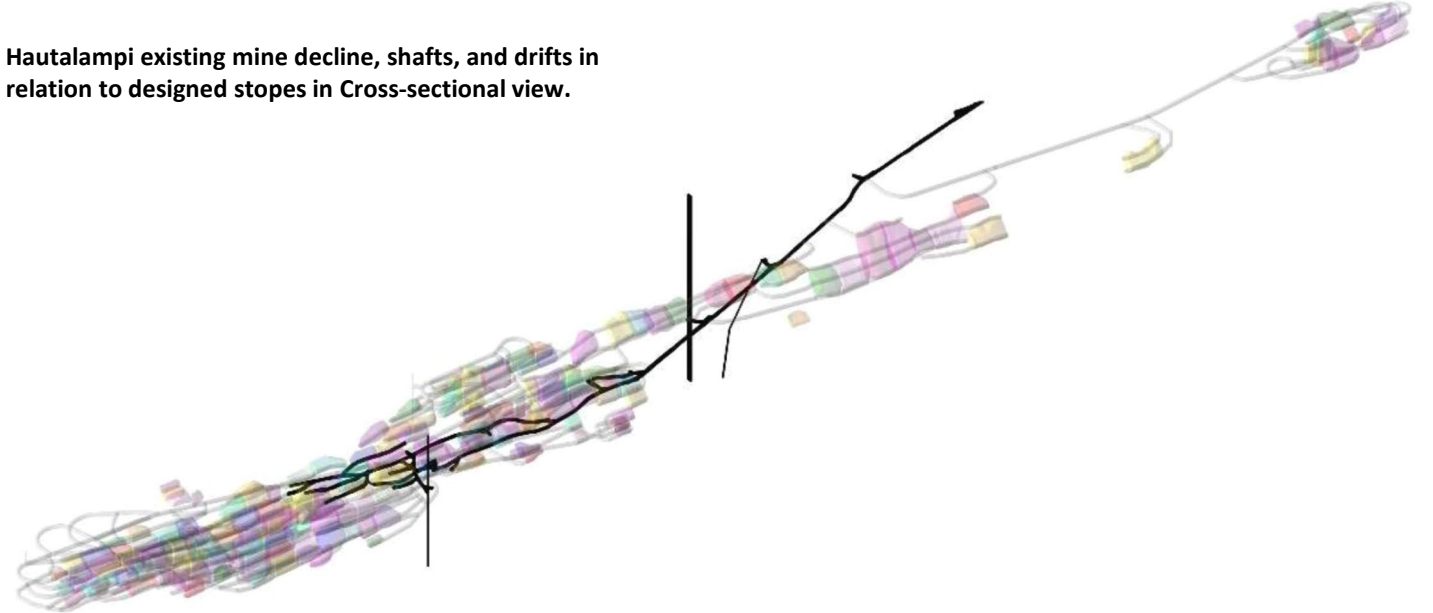
- Longitudinal long-hole stoping – chosen primary mining method.
- LHS follows the strike of the stope is the same as the strike of the orebody. And after mining the stopes will be backfilled with consolidated hydraulic backfill (barren rock + tailings + cement/geopolymer/ash)



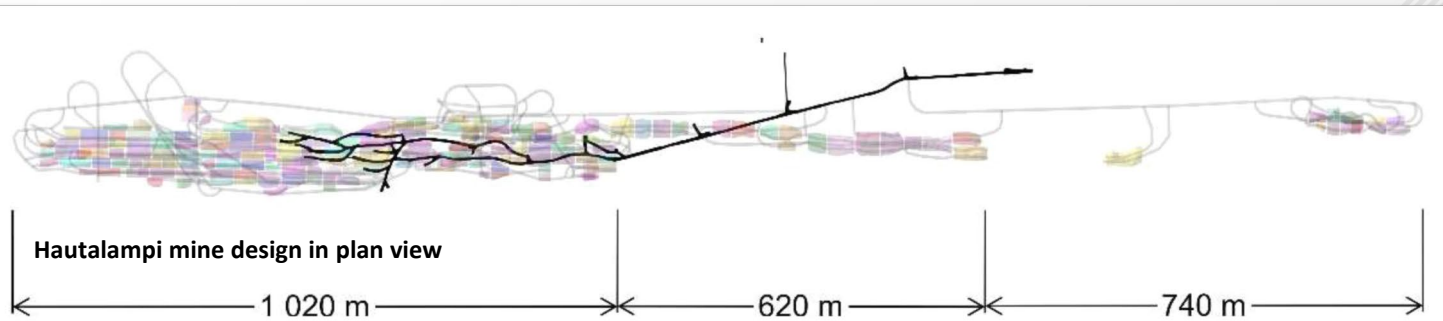
9.4.2020

**Hautalampi stope design – grey backfilled stopes, red secondary stopes, and yellow primary stopes**

Hautalampi existing mine decline, shafts, and drifts in relation to designed stopes in Cross-sectional view.

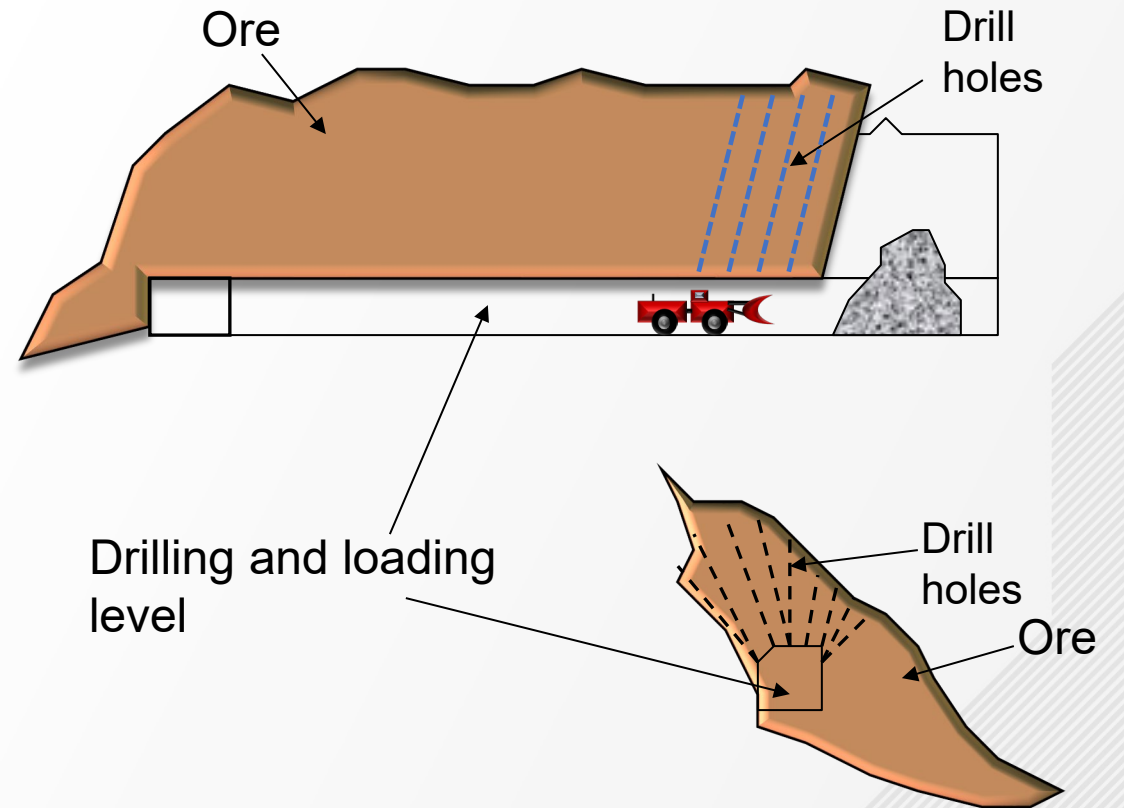
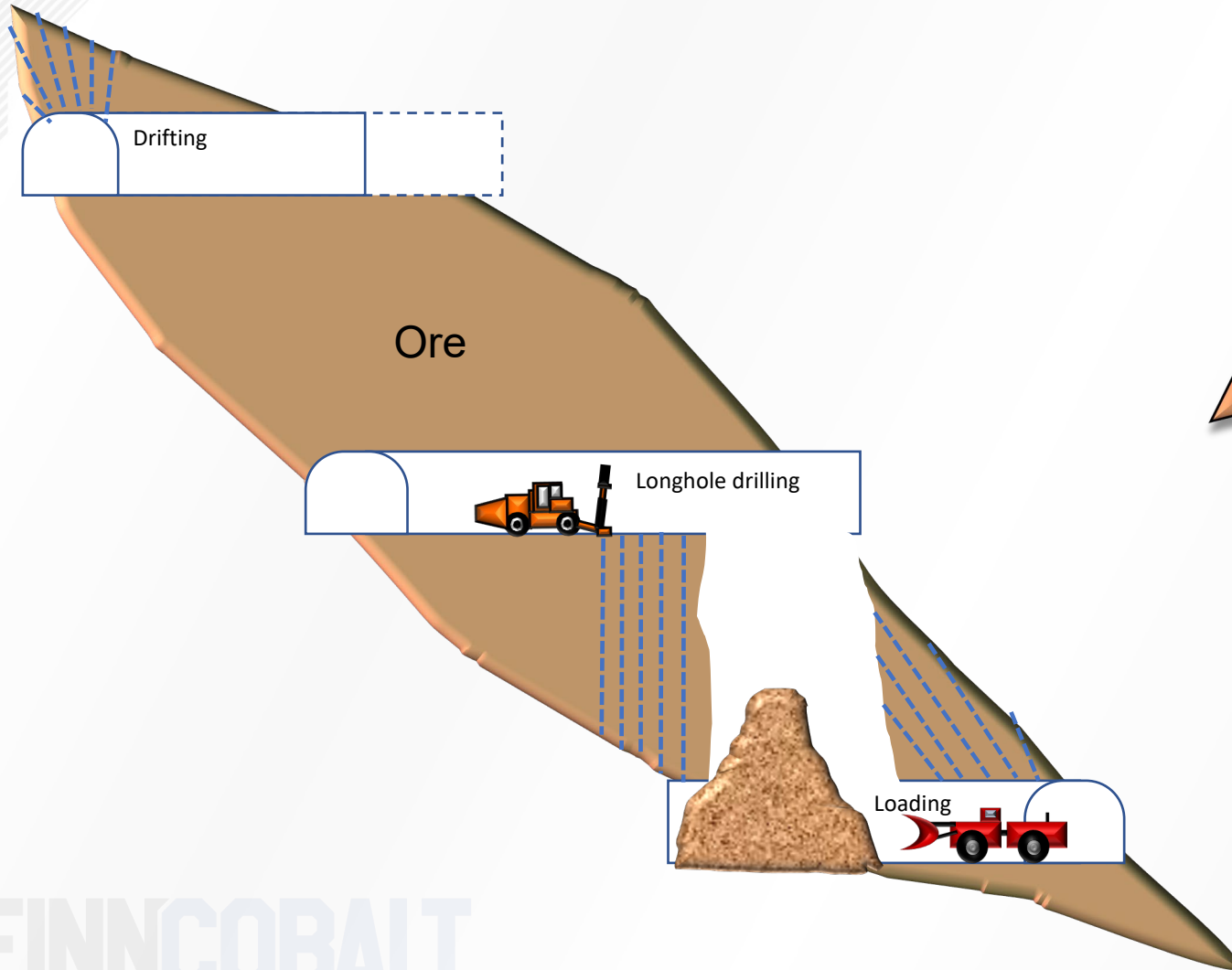


Hautalampi mine design in plan view



# Mine design

## Hautalampi Underground Mine – LHS Longitudinal long-hole stoping and up hole benching



# Pre-feasibility Study 20.3.2023

## Key features of Hautalampi Project

Measured and Indicated Resources JORC 2012  
Ore Reserves

9.33 Mt @ Ni 0.28 %, Co 0.07 %, Cu 0.19 %  
4.56 Mt @ Ni 0.30 %, Co 0.08 %, Cu 0.24 %

Diamond Drilling  
Historical (Outokumpu Oy)  
Finn Nickel Oy  
FinnCobalt Oy

103 dd holes, 11 865 meters  
100 holes, 11 153 meters  
74 holes, 8 381 meters

Capital cost  
Designed plant feed  
Mining Capacity  
Life of Mine  
Headcount  
Tailings  
Backfilling

75 M€ (including 15% contingency)  
500 ktpa  
500 – 800 ktpa  
12+ years  
+150  
450kt/a  
200kt/a tailings +  
16kta (geopolymer/cement/ash)  
100kt/a barren rock from mine

Operating cost

41.16 €/t

Admin  
Mining  
Plant  
Logistics

3.1  
21.55  
15.53  
0.98

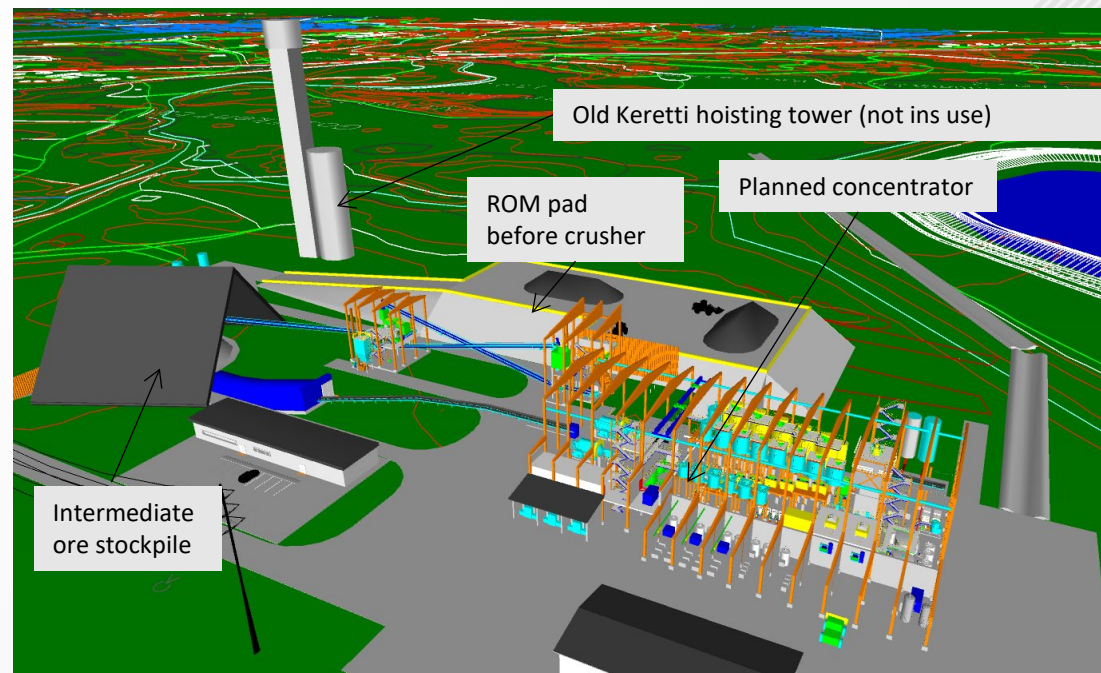
Concentrates (moiture 12%)  
Ni-Co concentrate (nominal capacity)

21000 tpa (wet tonnes)  
Ni: 7 % (Ni recovery 82%)  
Co: 1.93 % (Co recovery 82%)  
5000 tpa (wet tonnes)  
Cu: 26.5 % (Cu recovery 86.5%)

Cu Concentrate (nominal capacity)

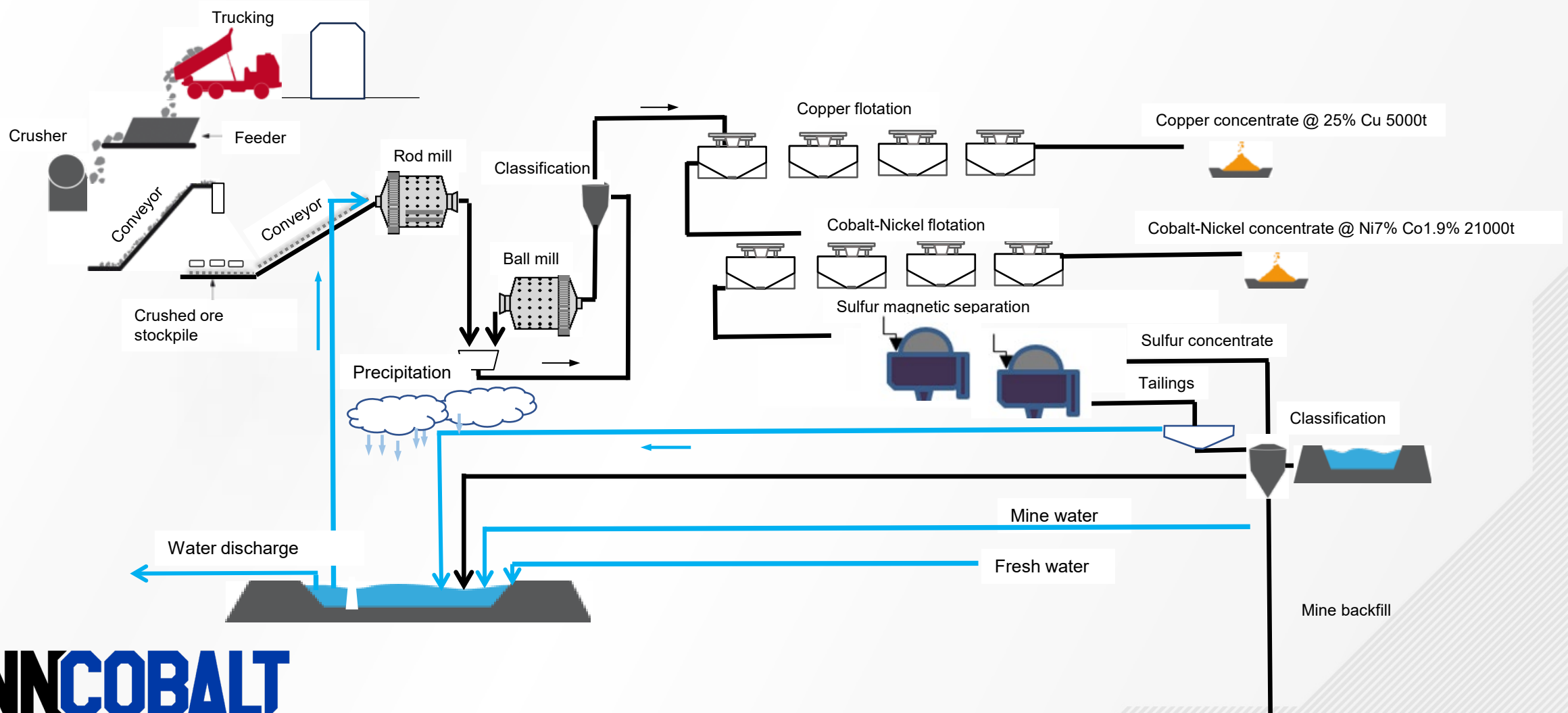
Base Case Economic Return  
(contingency excluded)  
Annual gross revenue  
IRR

NPV @ 5% 58.8 MEUR  
NPV @ 10 % 32.7 MEUR  
30M€  
20.0 %



# Processing

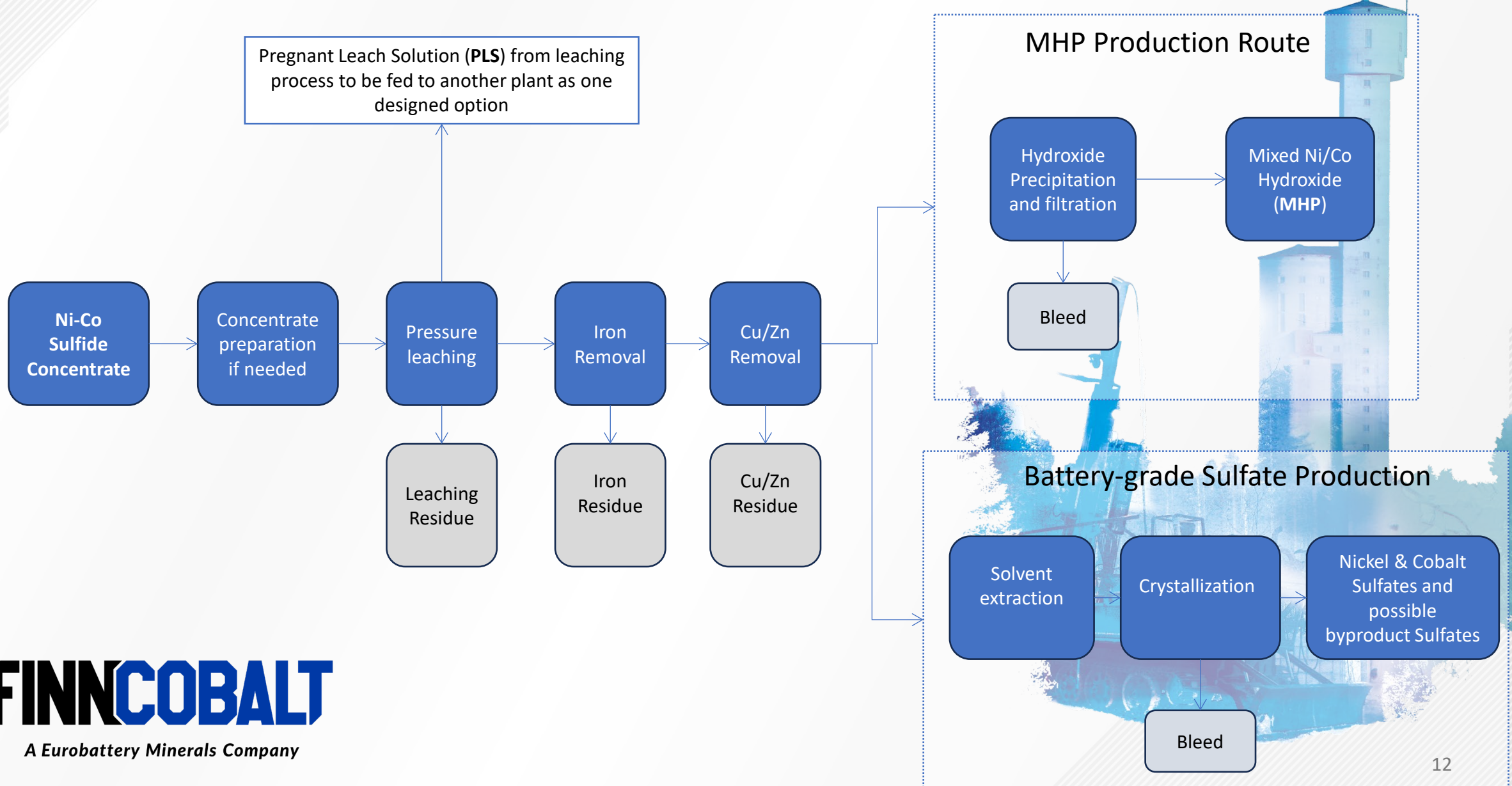
- conventional flotation process to produce Cu- and Ni-Co concentrates



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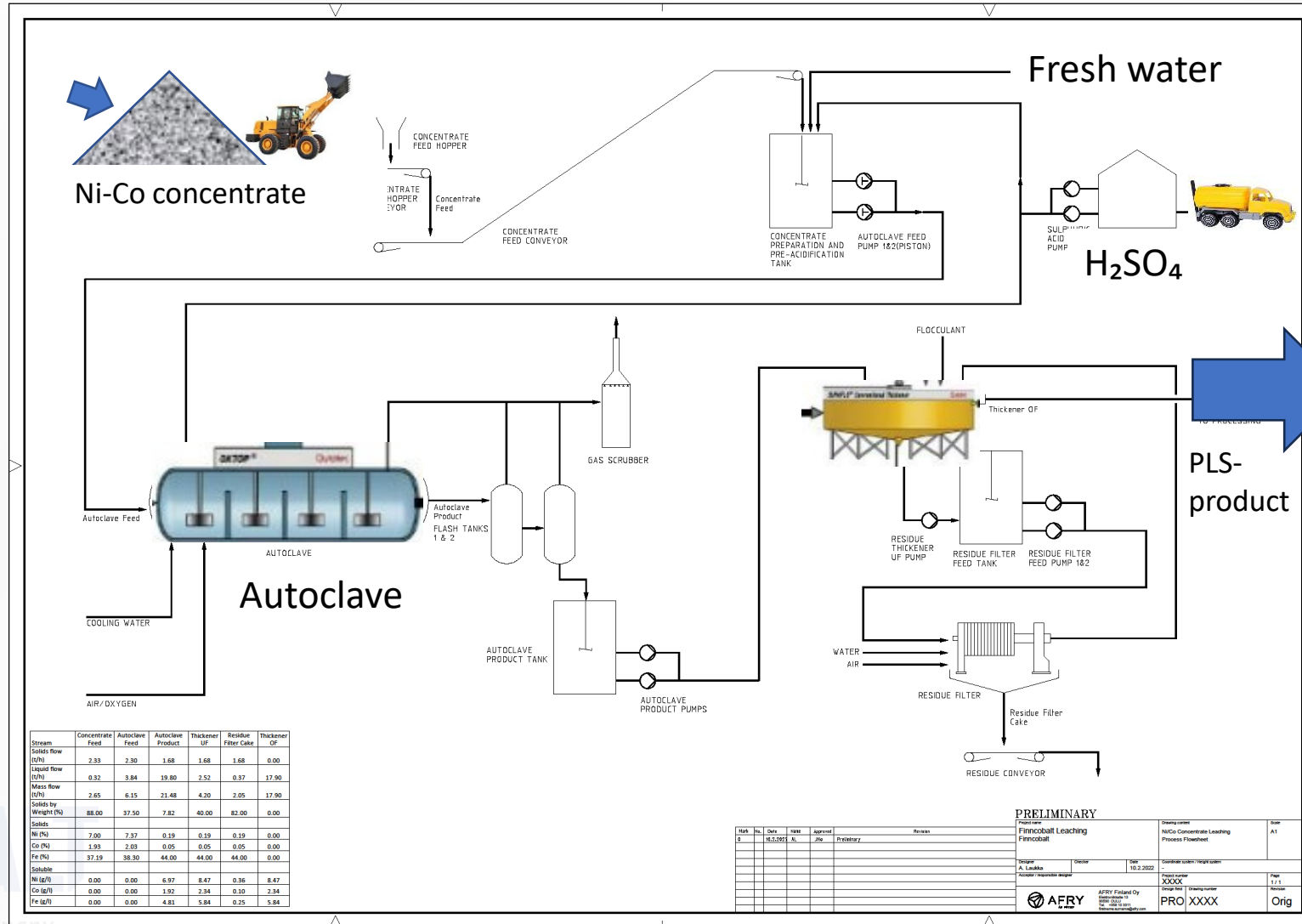
# Battery Chemical Options with Hautalampi Ni-Co Concentrate Hydrometallurgical process



# Ni-Co concentrate leaching battery chemicals

## location open- preferred due to SO4 discharge

Stream	Concentrate Feed
Solids flow (t/h)	2.33
Liquid flow (t/h)	0.32
Mass flow (t/h)	2.65
Solids by Weight (%)	88.00
Solids	
Ni (%)	7.00
Co (%)	1.93
Fe (%)	37.19
Soluble	
Ni (g/l)	0.00
Co (g/l)	0.00
Fe (g/l)	0.00



Stream	Thickener OF
Solids flow (t/h)	0.00
Liquid flow (t/h)	17.90
Mass flow (t/h)	17.90
Solids by Weight (%)	0.00
Solids	
Ni (%)	0.00
Co (%)	0.00
Fe (%)	0.00
Soluble	
Ni (g/l)	8.47
Co (g/l)	2.34
Fe (g/l)	5.84

Stream	Concentrate Feed	Autoclave Feed	Autoclave Product	Thickener UF	Residue Filter Cake	Thickener OF
Solids flow (t/h)	2.33	2.30	1.68	1.68	1.68	0.00
Liquid flow (t/h)	0.32	3.84	19.80	2.52	0.57	17.90
Mass flow (t/h)	2.65	6.15	21.48	4.20	2.05	17.90
Solids by Weight (%)	88.00	37.50	7.82	40.00	82.00	0.00
Solids						
Ni (%)	7.00	7.37	0.19	0.19	0.19	0.00
Co (%)	1.93	2.03	0.05	0.05	0.05	0.00
Fe (%)	37.19	38.30	44.00	44.00	44.00	0.00
Soluble						
Ni (g/l)	0.00	0.00	6.97	8.47	0.35	8.47
Co (g/l)	0.00	0.00	1.93	2.34	0.20	2.34
Fe (g/l)	0.00	0.00	4.81	5.84	0.25	5.84

PRELIMINARY

Process: Finncobalt Leaching

Project: Finncobalt

Author: A. Luukko

Checked: [Signature]

Date: 10.2.2022

Scale: XXXX






Sheet: 1/1

Revision: 1

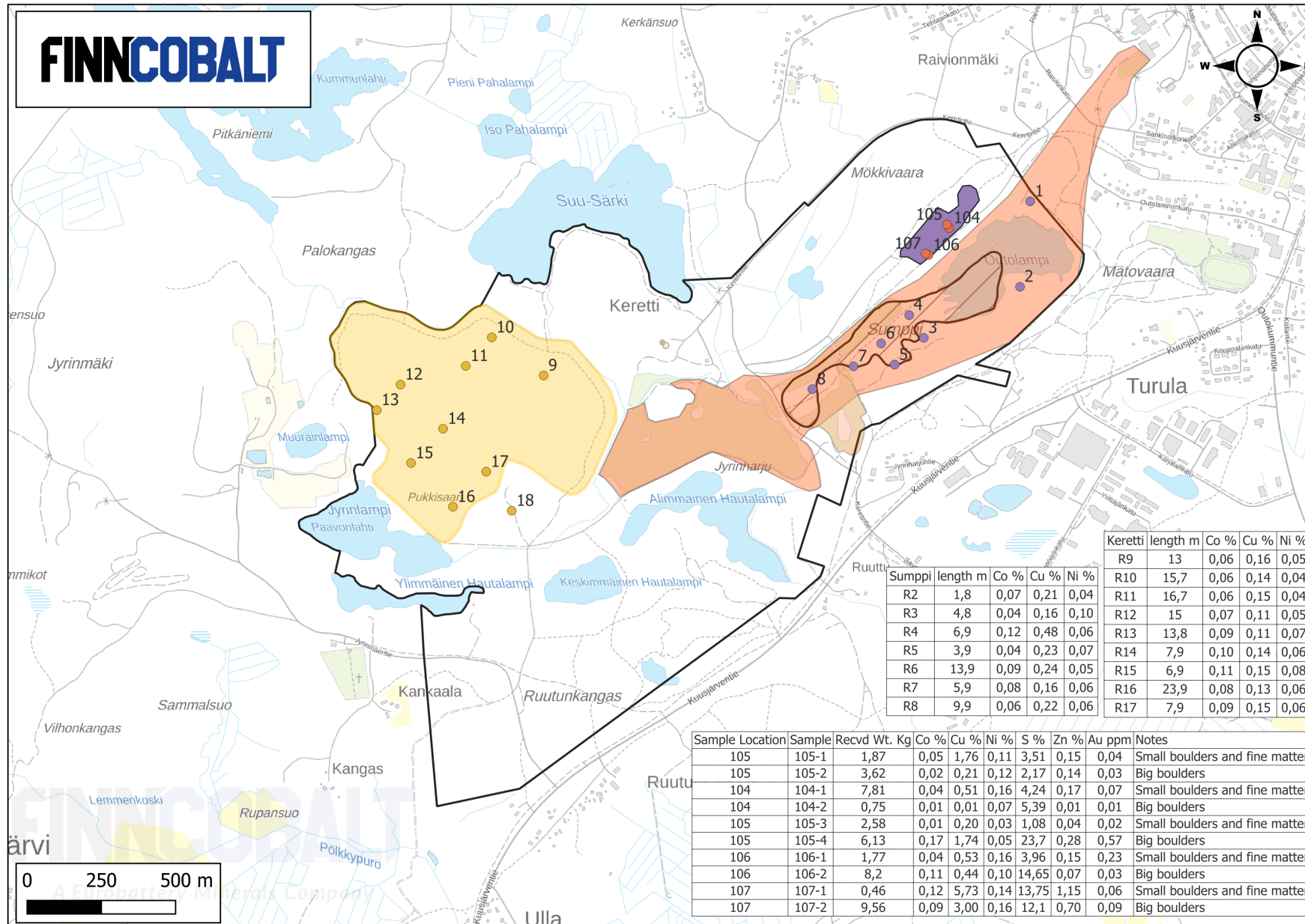
AFRY

# Hautalampi Project timetable

**Table - Hautalampi project development, execution shedule.**

Project task	Year 2025				Year 2026				Year 2027				Year 2028				Year 2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
General operations	[Yellow bar]																			
Definitive feasibility study	[Yellow bar]																			
EPA Process	[Yellow bar]																			
Environmental permit	[Yellow bar]																			
Detailed engineering	[Yellow bar]																			
Investment decision	[Yellow bar]																			
Project execution*	[Yellow bar]																			
Production start	[Yellow bar]																			
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Production start         </div> <div style="text-align: center;">  EPA supplement submission         </div> <div style="text-align: center;">  Investment decision         </div> <div style="text-align: center;">  Permit decision at best         </div> <div style="text-align: center;">  Permit decision latest         </div> </div>																			
EPA appeal effect on project execution	Year 2025				Year 2026				Year 2027				Year 2028				Year 2029			
Possible appeals on EPA	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

# Hautalampi: Circular economy



**Old copper mine tailings**  
 reprocessing – 10 years?  
 Confirmed +11Mt  
 Cu 0.14%,  
 Ni 0.06%  
 Co 0.08%

Low grade material –  
 requires flotation and a  
 novel leaching method  
 Valued today >550M€  
 Research on leaching project  
 on-going

**Old copper mine waste  
 rocks**  
 Volume >250kt  
 Sampling program defined

# Hautalampi ESG

## Sustainability & Environmental Commitment

- Means to **Wasteless mine**
- **Stable, renewable energy source**
- **CO<sub>2</sub>-free concentrate production**
- **Ongoing R&D for carbon sink technology**
- **Solar power plant planned**
- **Circular economy approach tailings**
- Outokumpu town issue with **old waste rock** used in the streets.



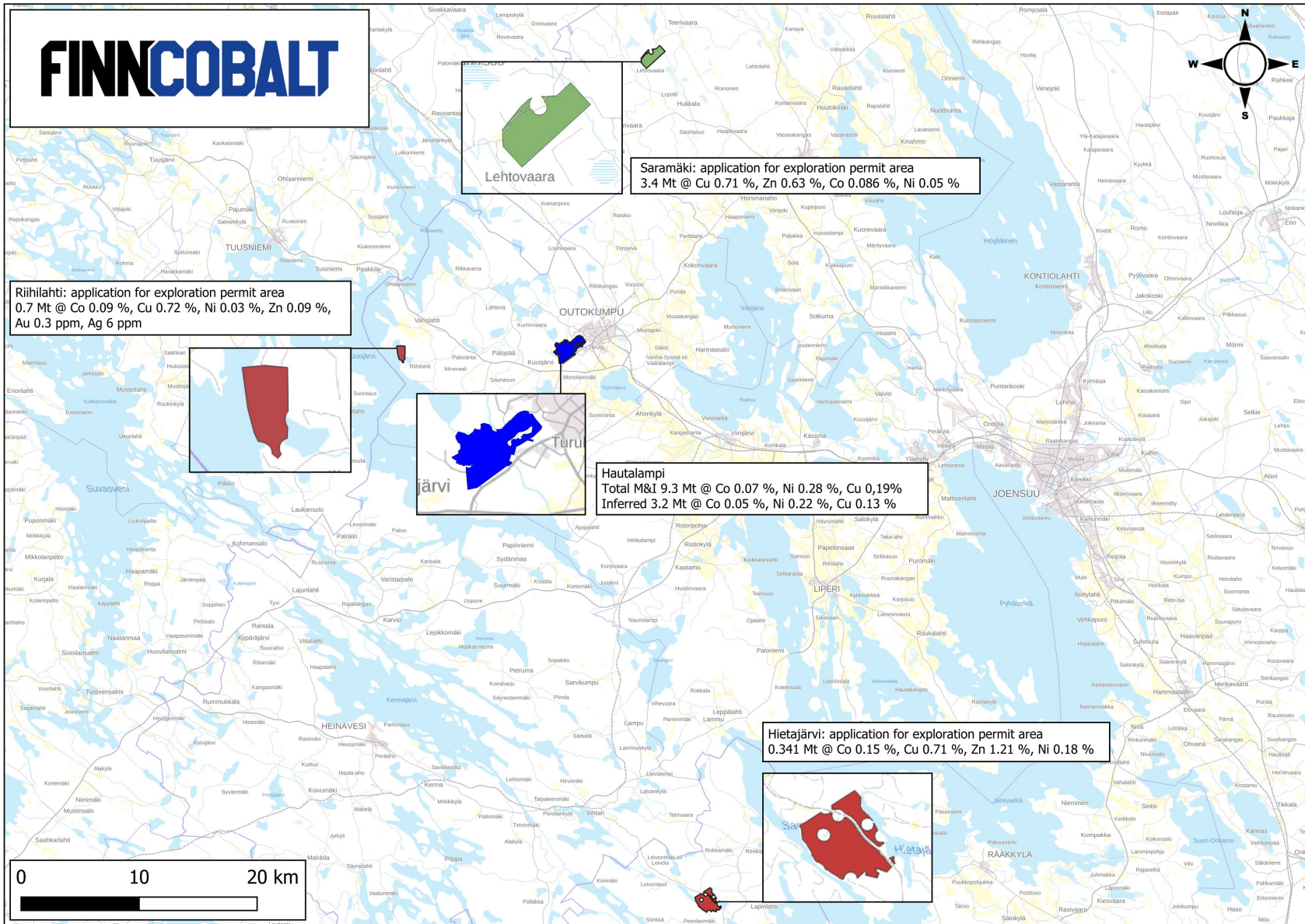
## Ownership & Community Support

- **Full ownership of land & mineral rights**, ensuring operational control.
- **Local, committed management team** with industry expertise.
- **Strong local support** from both residents and city administration: Stakeholder meetings are held in local cafeterias and more formal ones in town city hall.

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# Future: Exploration permits & reservations



**Copper the most critical of them all:**

Saramäki	3.40Mt@0.71% Cu
Riihilahti	0.70Mt@0.72% Cu
Hietajärvi	0.34Mt@0.71% Cu

High exploration potentiality with these exploration areas

EU funded GTK DeepBeat exploration project **Saramäki**.

**Hietajärvi** we have great anomalies and traces to explore more.

**Riihilahti** old satellite mine not commissioned

**+ Hautalampi M+I** 9.30Mt@1.27% Cu Eq%

# Summary

## Infrastructure & Operational Efficiency

- **Excellent infrastructure & services** readily available in the region.
- **Cost-effective underground operations** with stable costs, avoiding market fluctuations.
- **Smartmine** approach with electrified and automated operations – fresh start no investments in combustion technology.

## Resource & Economic Stability

- **Polymetallic deposit (Ni, Co, Cu):** Less sensitivity to metal price variations.
- **JORC-compliant resource assessment (Sept 2022)** confirming reliable estimates.
- **UNFC classification – highest class (CRMA)**, ensuring strong compliance with international resource standards.

## Technical & Processing Advantages

- **Flotation tests completed with excellent results**—no harmful elements detected.

## Sustainability & Environmental Commitment

- Means to **Wasteless mine:** No waste rock after operations in surface ; **40% of tailings used for mine backfilling.** Circularity
- **Stable, renewable energy source** supporting operations.
- **CO<sub>2</sub>-free concentrate production**, minimizing environmental impact.
- **Ongoing R&D for carbon sink technology** in mine backfill.
- **Solar power plant planned** to enhance sustainability.
- **Circular economy approach:** Utilizing old tailings in the area for resource recovery.

## Ownership & Community Support

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