

Hautalampi Cu-Ni-Co-mine Project, Finland

FINNCOBALT

20.12.2023



<https://www.youtube.com/watch?v=dbOR8T12khY>



S:\Outokumpu Area Common\Hautalampi movie 2023

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
- Benefit from previous investment for the project:
 - Sunk cost 15+M€
 - Significant pre-production development completed:
 - Decline 850m and 1,250m other underground development
 - Diamond Core drilling 20+ kilometers

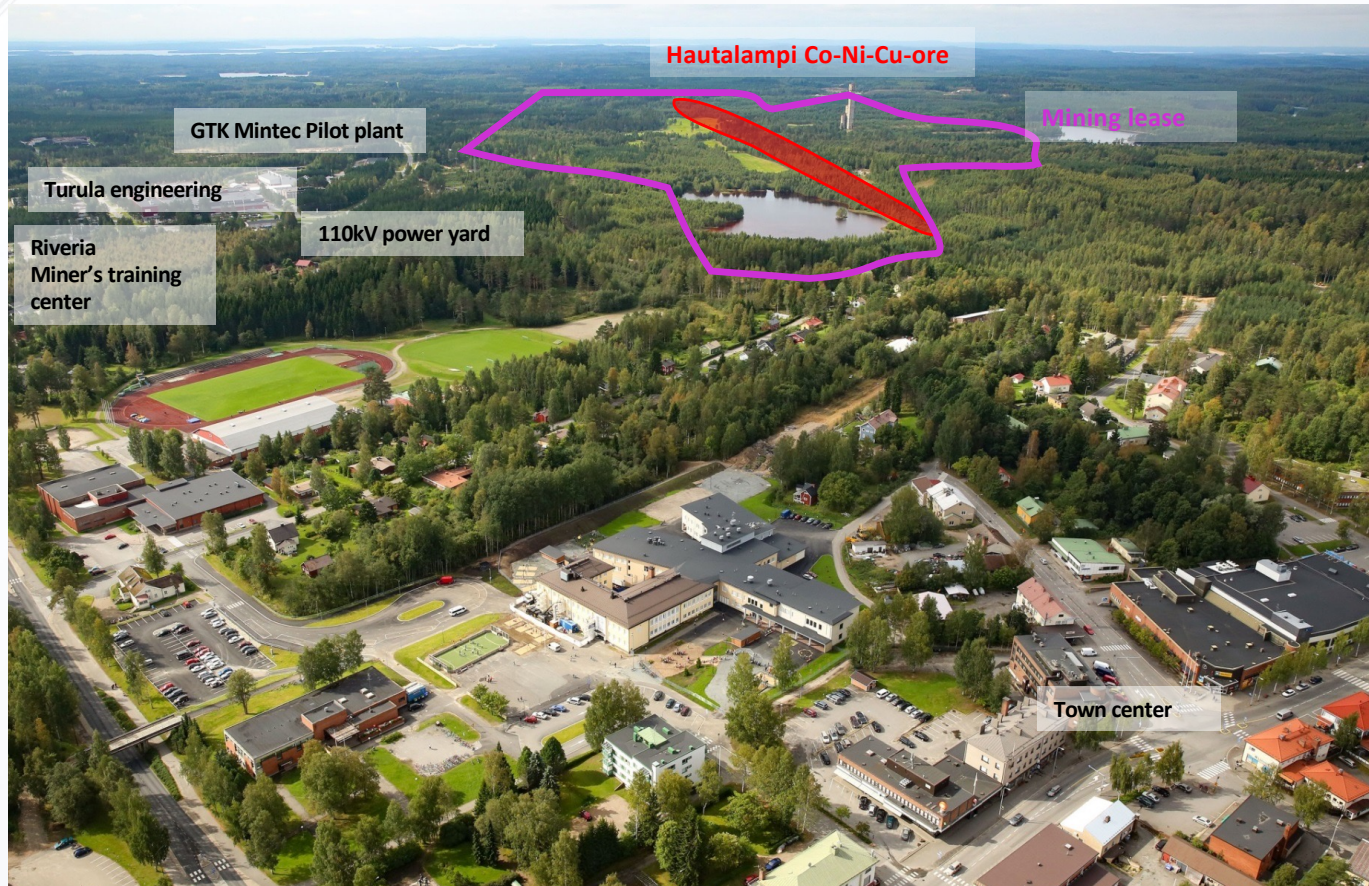


Hautalampi Cobalt-Nickel-Copper- project

- Aiming to produce sustainable and traceable battery raw materials:
 - Ni-Co- concentrate 21ktpa (Co@1,9%/ Ni@7%)
 - High quality Cu-concentrate for smelters 5ktpa (Cu@25%)
- PreFeasibility Study published 20.3.2023 (AFRY Finland Oy)
- Environmental Impact Assessment published 23.3.2023 (Envineer 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 for opening the underground mine in force
- Environmental permitting ongoing for on-site processing plant and Tailings Storage Facilities



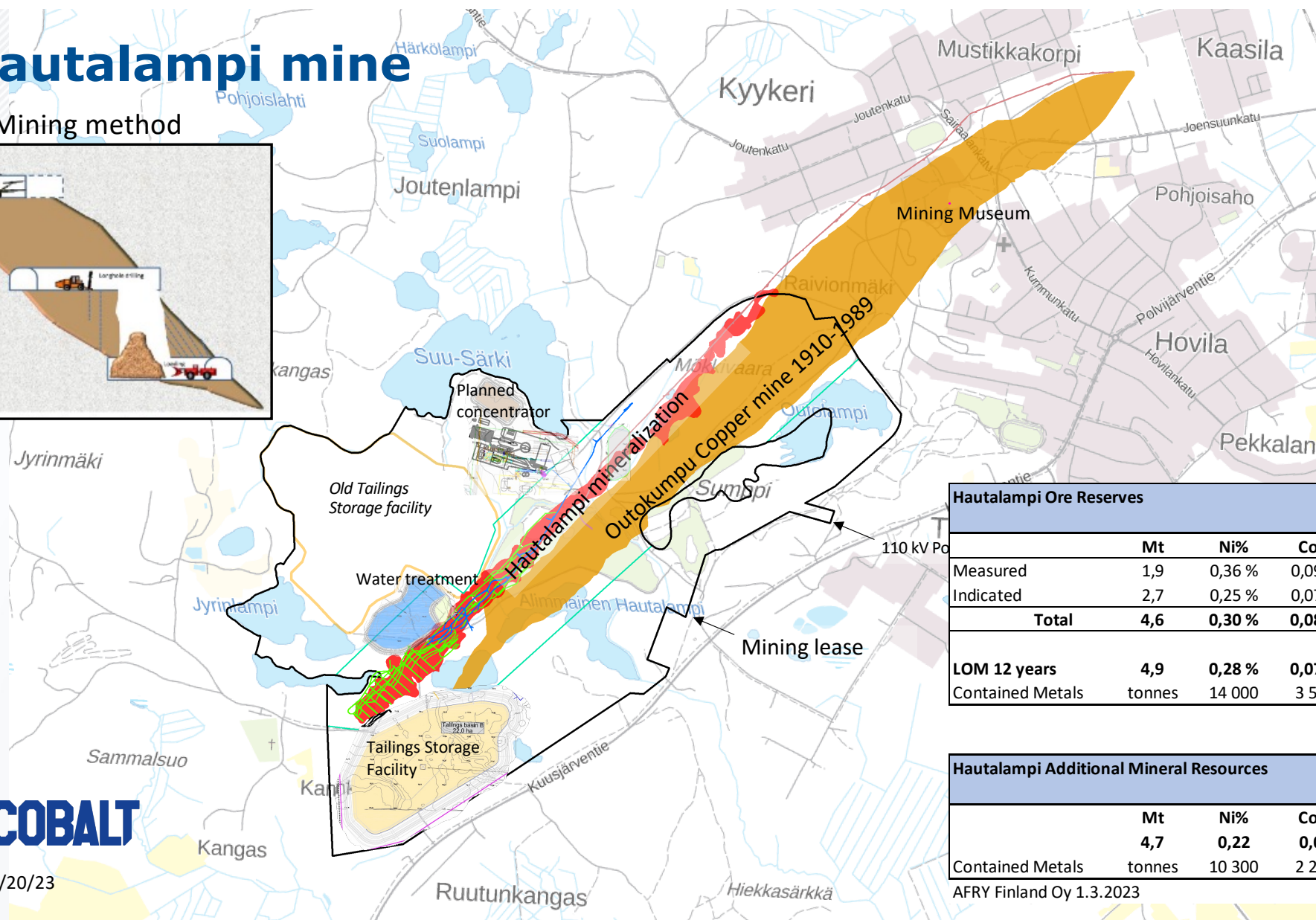
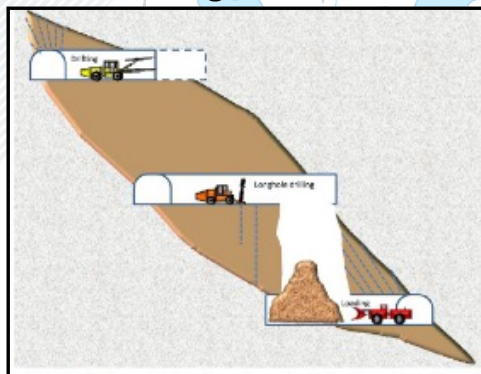
Outokummun town and Hautalampi deposit -excellent location for mine development



- 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 mine

Mining method



Hautalampi Ore Reserves				
	Mt	Ni%	Co%	Cu%
Measured	1,9	0,36 %	0,09 %	0,30 %
Indicated	2,7	0,25 %	0,07 %	0,19 %
Total	4,6	0,30 %	0,08 %	0,24 %
LOM 12 years	4,9	0,28 %	0,07 %	0,22 %
Contained Metals	tonnes	14 000	3 550	11 000

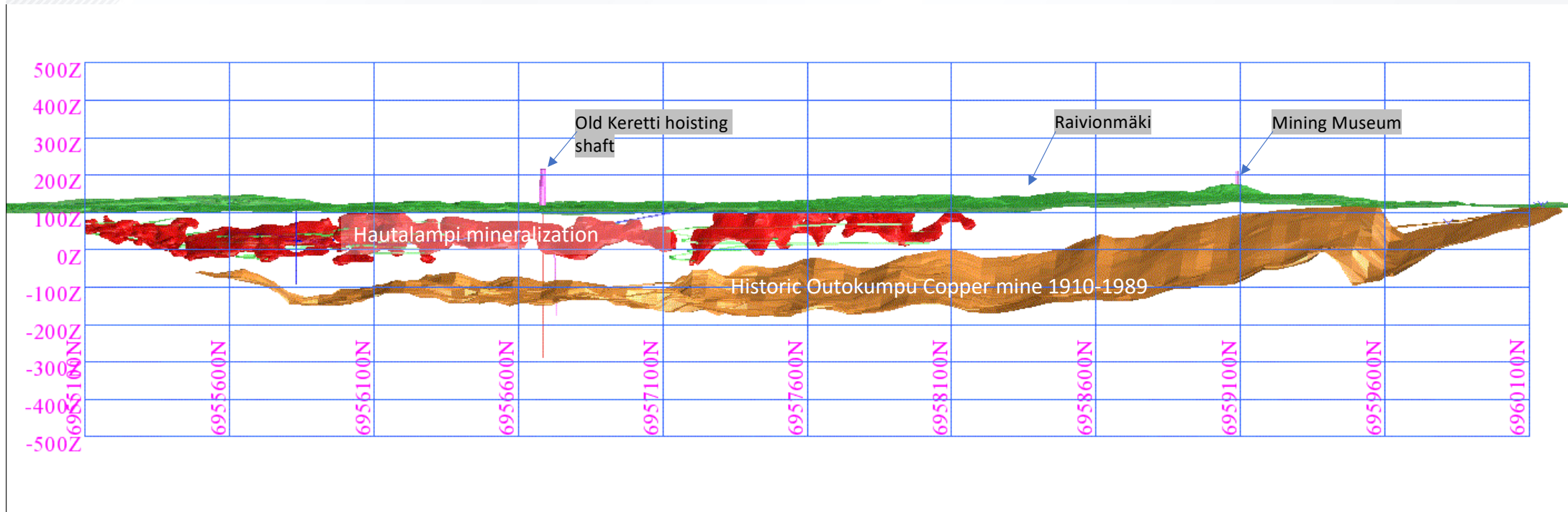
Hautalampi Additional Mineral Resources				
	Mt	Ni%	Co%	Cu%
	4,7	0,22	0,05	0,11
Contained Metals	tonnes	10 300	2 200	5 300

AFRY Finland Oy 1.3.2023

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Outokumpu Copper Minen and Hautalampi deposit - Longitudinal projection



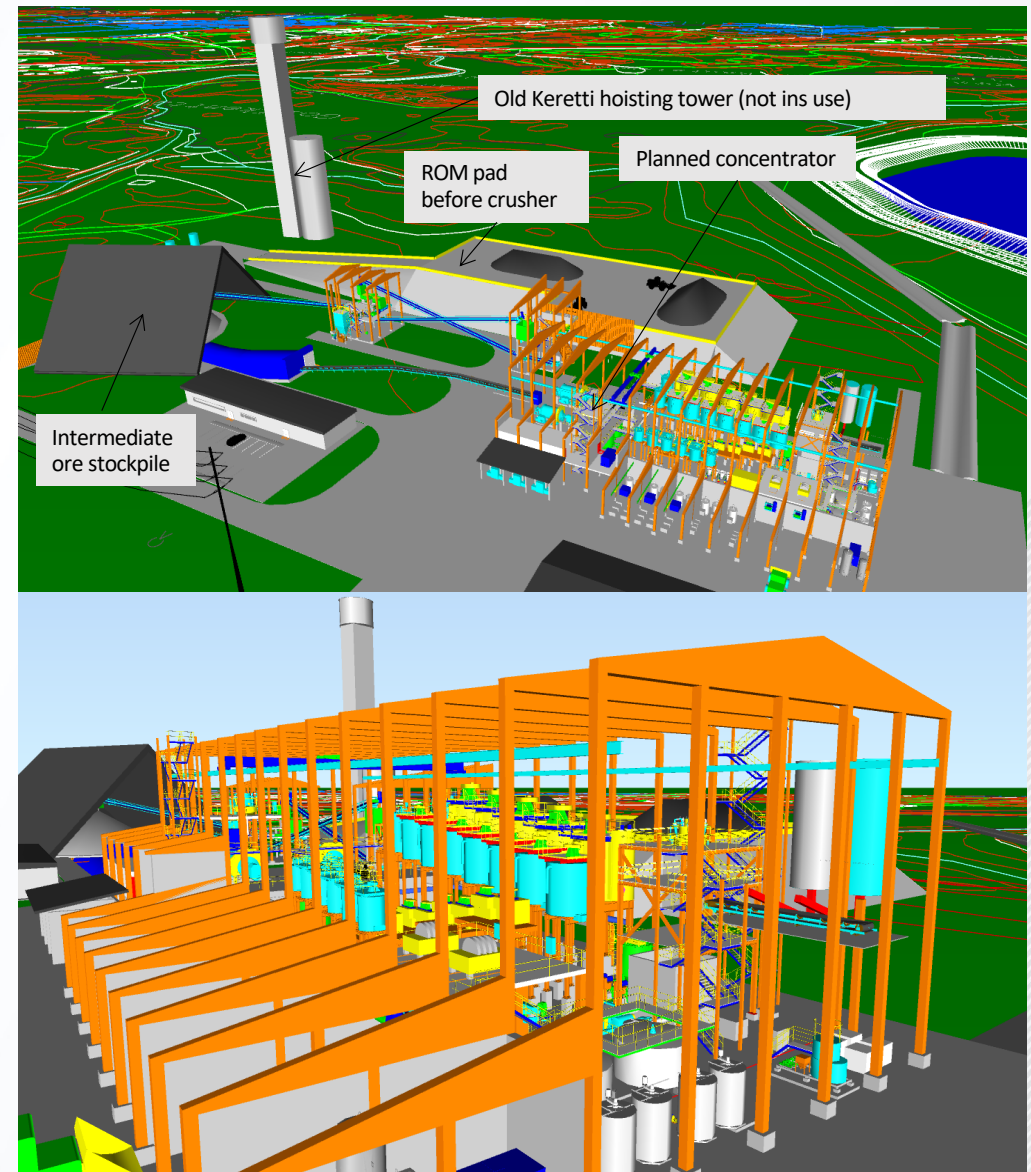
New processing plant 500 000 tpa

Key figures

- 500 000 tpa
- 12+ years mine life
- ~150+ employees
- Utilization 8059 h/a (92 % rate) = 60t/h
- Crushing 4171 h/a (no night time or weekends)
- Concentrates
 - Cu 25% (5000tpa)
 - Co 1,9% /Ni 7% (21 000 tpa)
- Tailings
 - Total tailings 450 000tpa
 - Mine backfill 200000 tpa + 16 000 tpa geopolymers/cement/ash
 - Tailings to the TSF: 220000 tpa

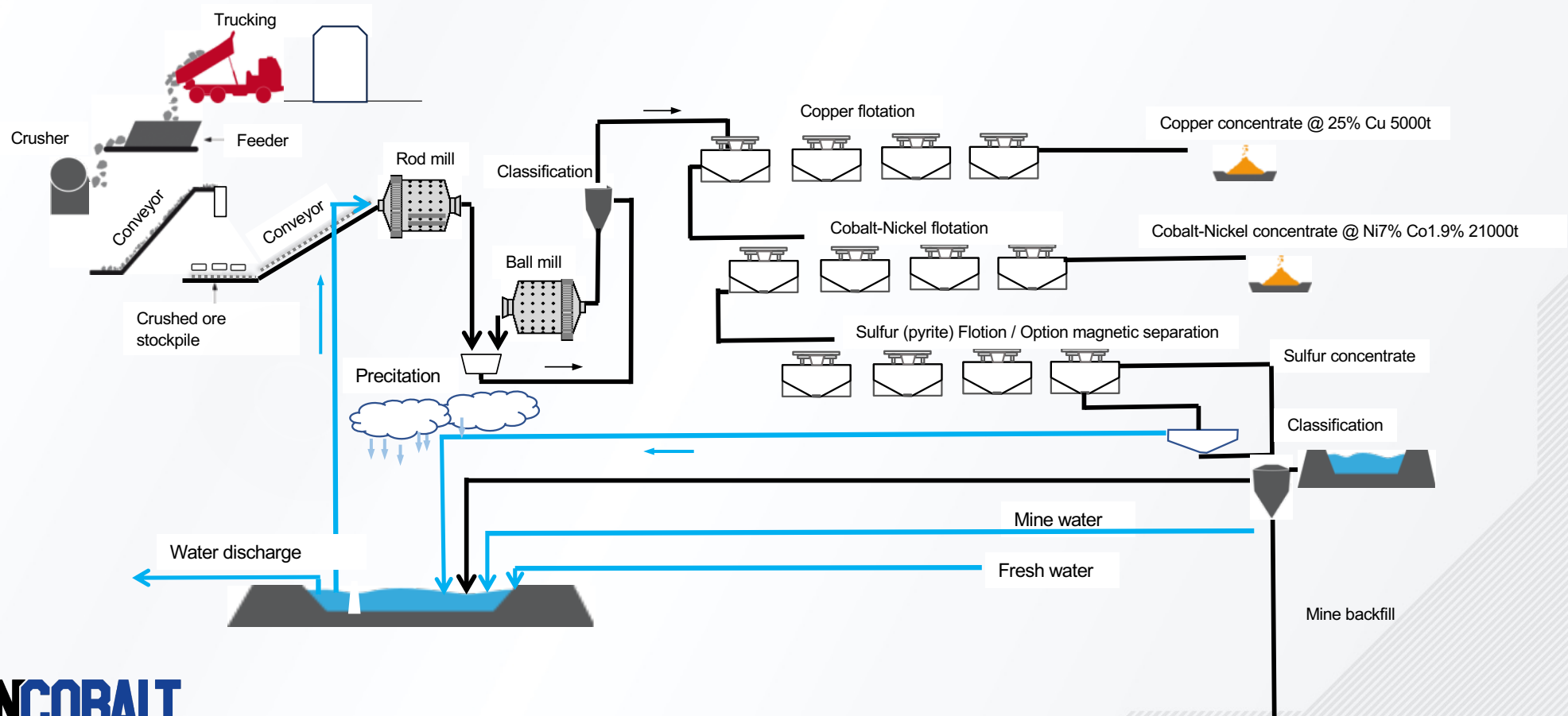
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Processing

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



Pre-feasibility 20.3.2023

CAPEX

Ug-mine	5.5 M€
Processing Plant	24.7 M€
TSF + water treatment	13.8 M€
Site infra	11.6 M€
Total	55.6 M€
Others	6.5 M€
Closure	3 M€
Project base cost	65.1 M€
+contingency	+15%

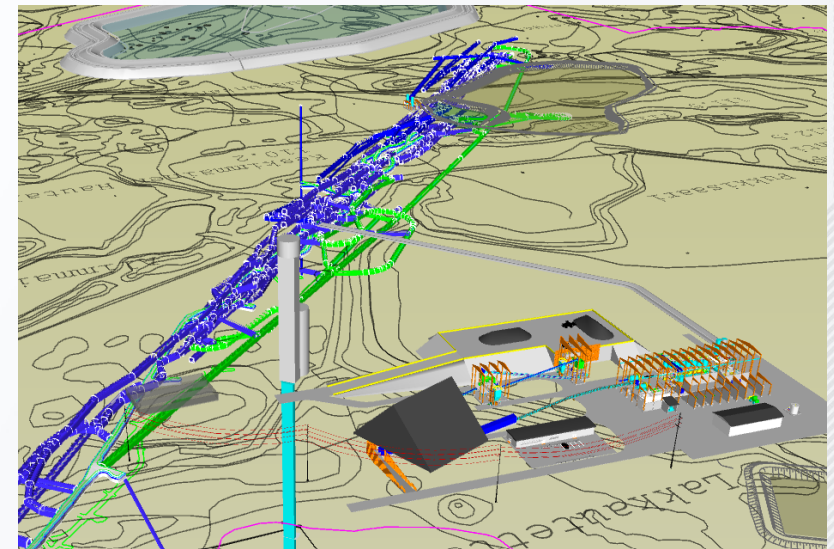
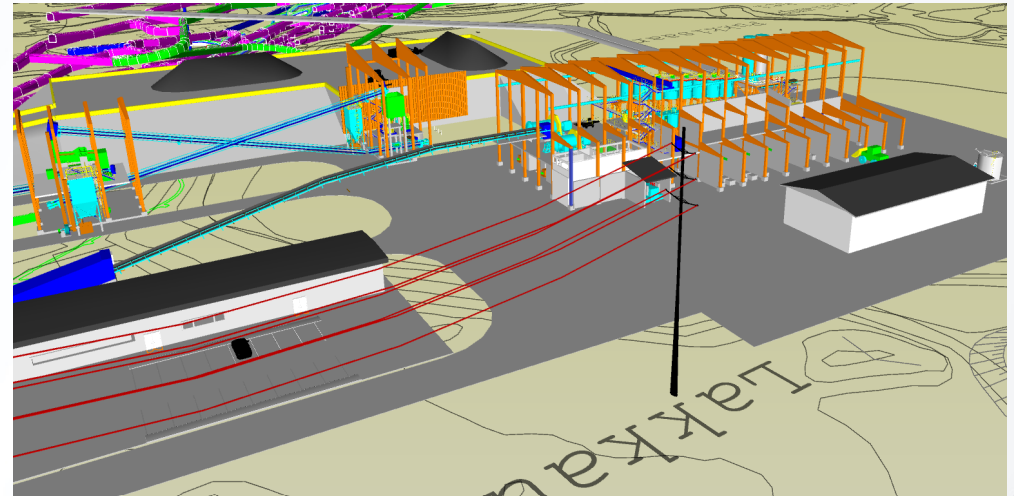
Payback	4.6 years
NPV @ 5%	59 M€
IRR	20%
Annual gross revenue	30M€

OPEX	41.6 €/tonne
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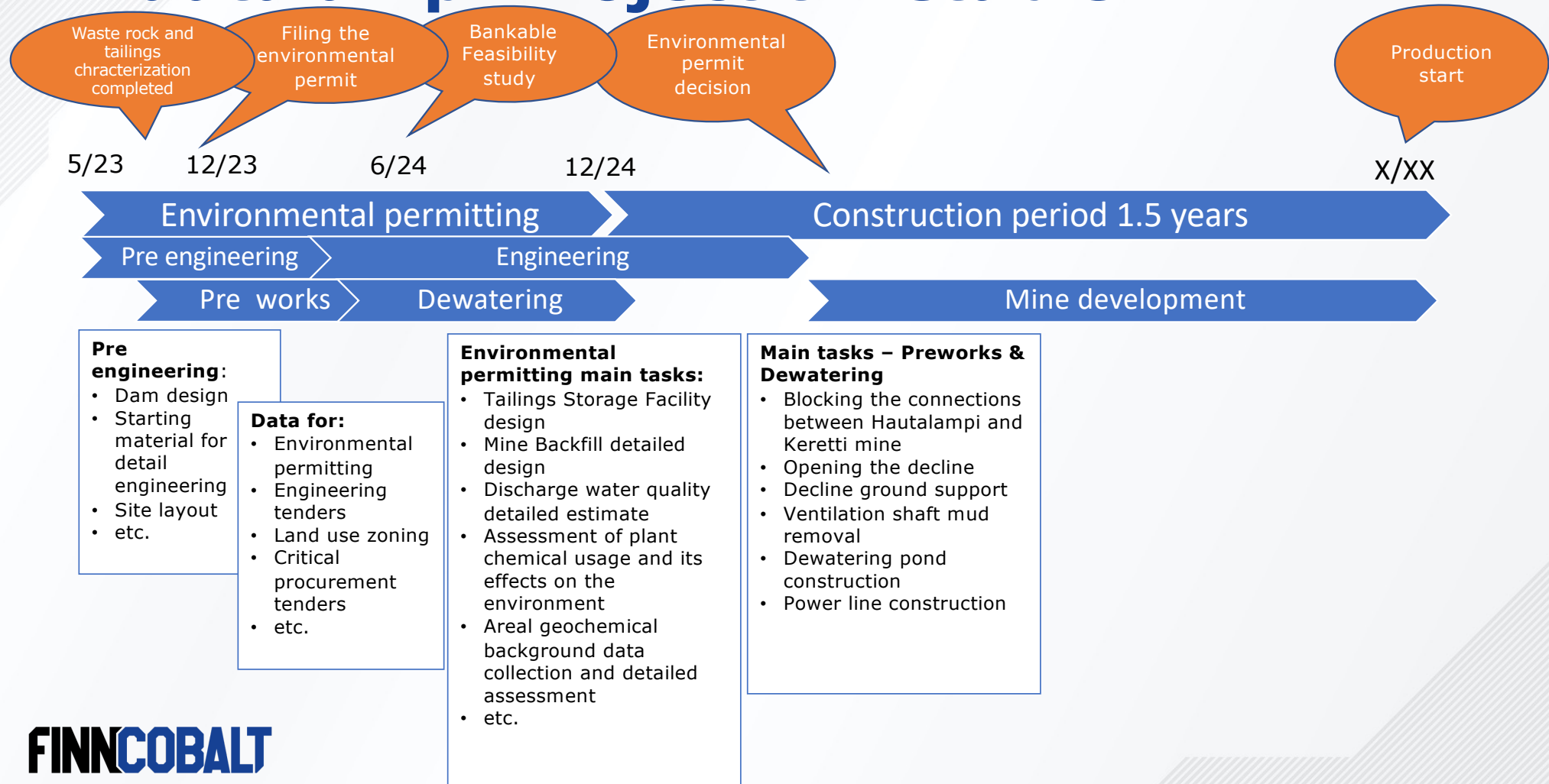
Direct employees	+150 persons
Plant feed	500 000 tpa
LOM (life of mine)	+12 years
Concentrate production	
Cu-conc	25% 5000 tpa
Ni-Co-conc	7%/1,9% 21 000 tpa

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Hautalampi Project timetable



Future:

Exploration permits & reservations

