



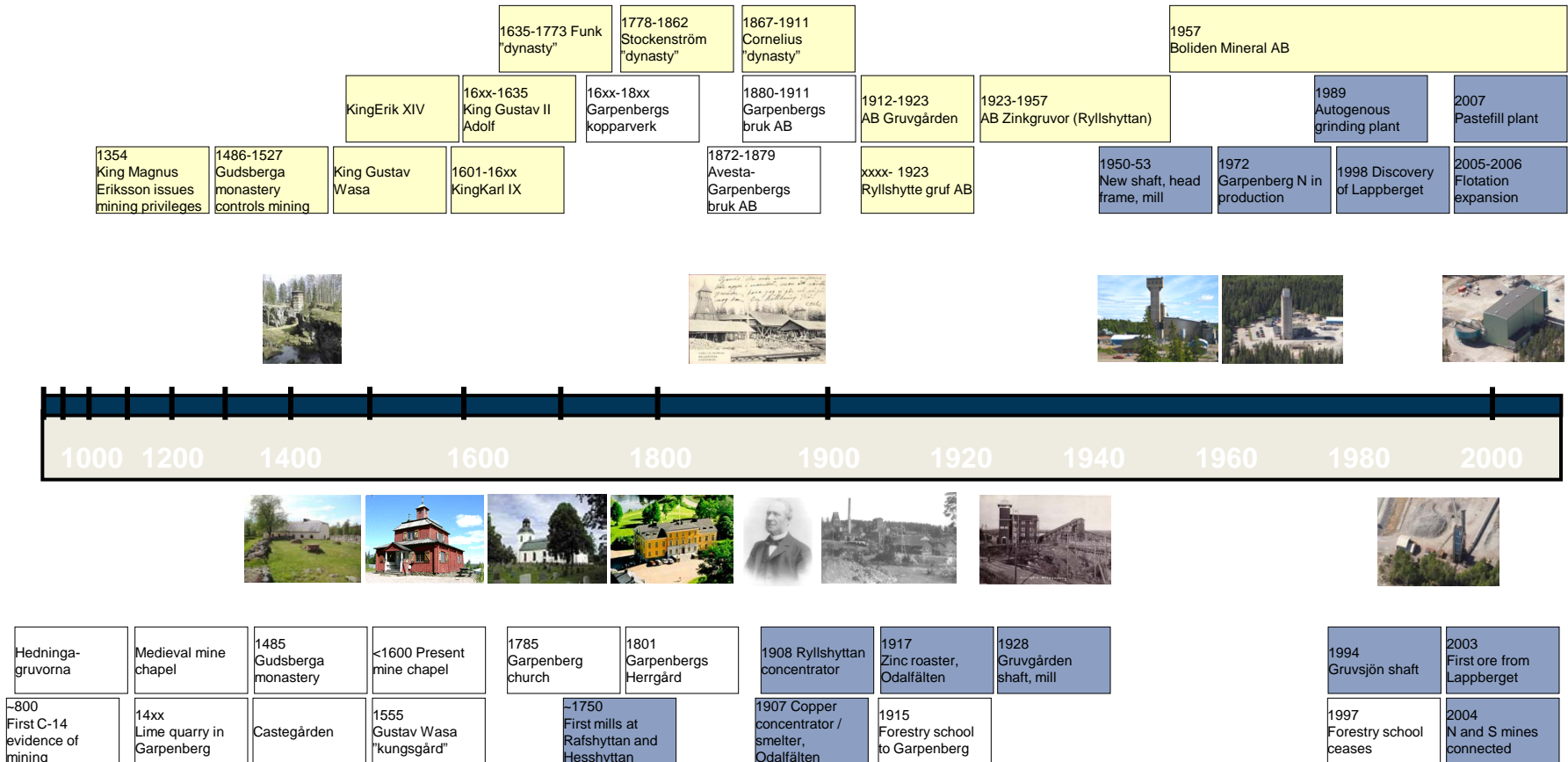
Garpenberg

Capital Markets Day 6 September 2011

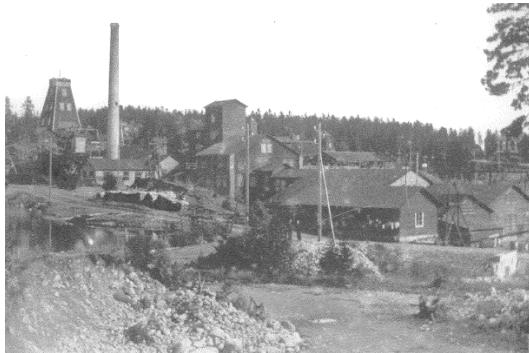
Tom Söderman

Mine Manager, Garpenberg

History of Garpenberg



History of Garpenberg



1908 Ryllshyttan
concentrator



1928
Gruvgården
shaft, mill



1950-53
New shaft, head
frame, mill

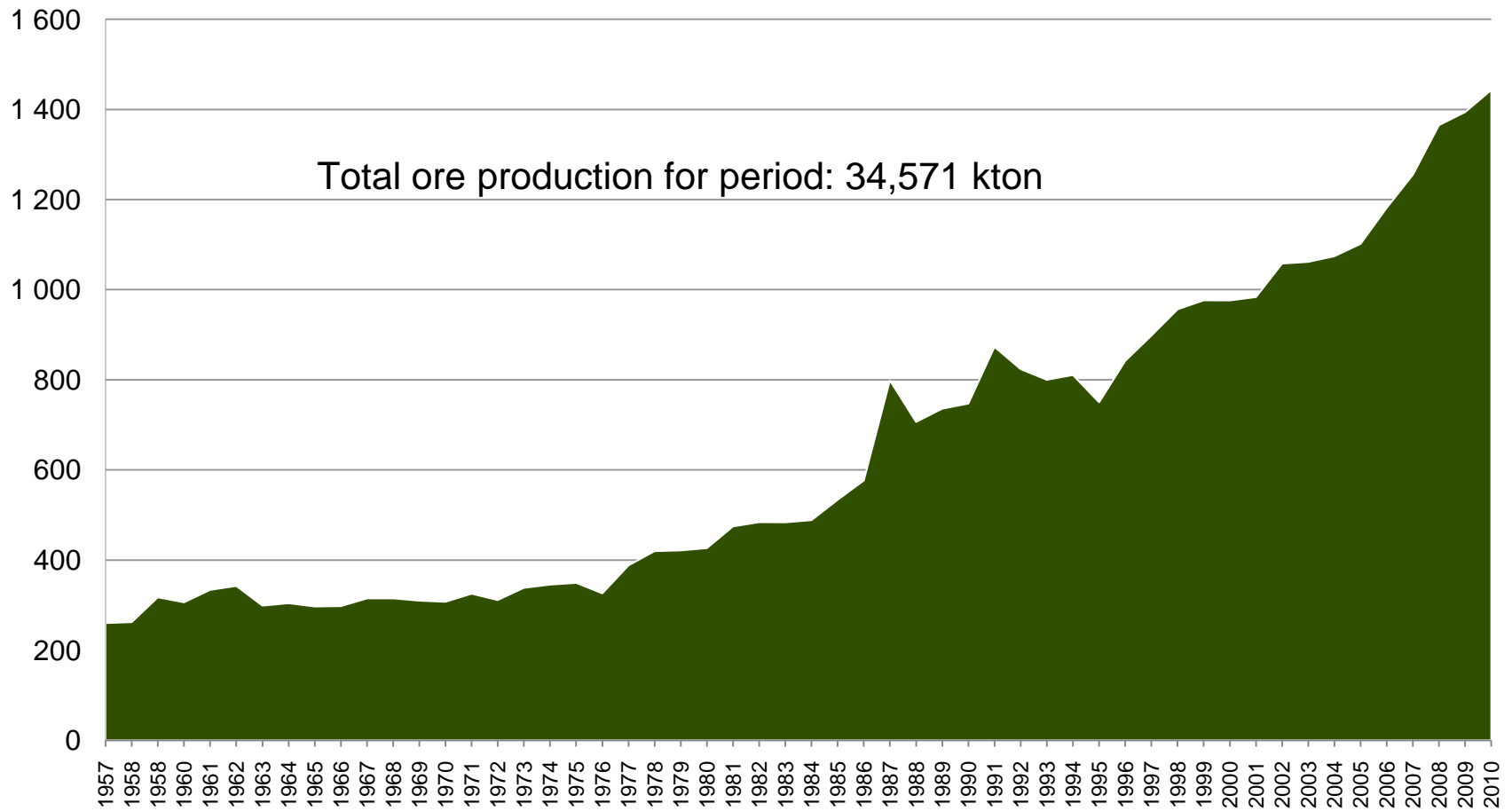
1972
Garpenberg N in
production

1994
Gruvsjön shaft

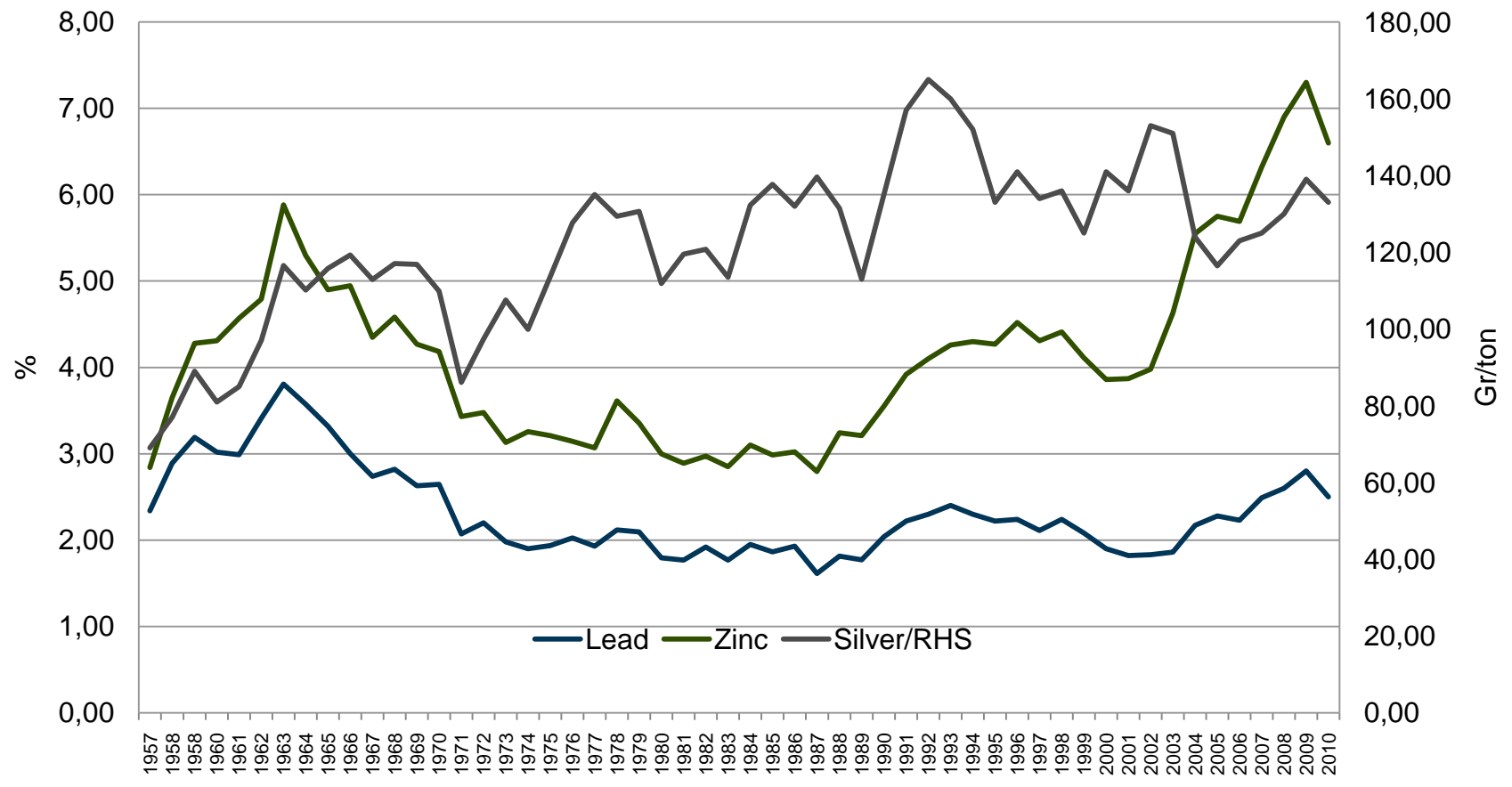
2007
Pastefill plant



Garpenberg – milled ore tonnes 1957-2010



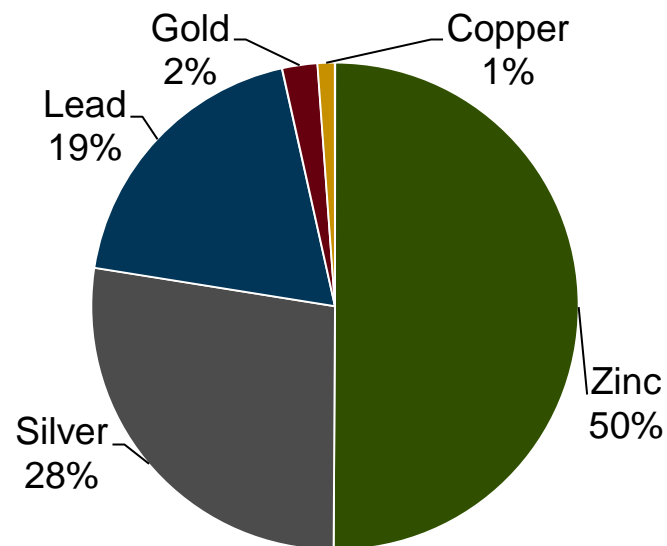
Garpenberg grades 1957-2010



Garpenberg – key figures

Msek	2006	2007	2008	2009	2010
Revenues	1,311	1,710	1,163	1,490	1,902
EBIT	850	1 095	466	793	1,124
Milled ore, kton	1,182	1,255	1,365	1,394	1,443
Metal production*) kton					
Zink	60,992	71,464	83,938	90,079	86,022
Lead	21,099	25,139	28,514	31,371	29,310
Copper	593	682	581	493	517
Silver, kg	108,082	117,798	130,287	139,141	140,138
Gold, kg	269	244	243	214	234

Distribution of payable metal*)



*) Basis average metal prices in 2010:

- Zink 2,159, lead 2,148 and copper 7,539 USD/ton
- Silver 20,19 and gold 1,227 USD/oz

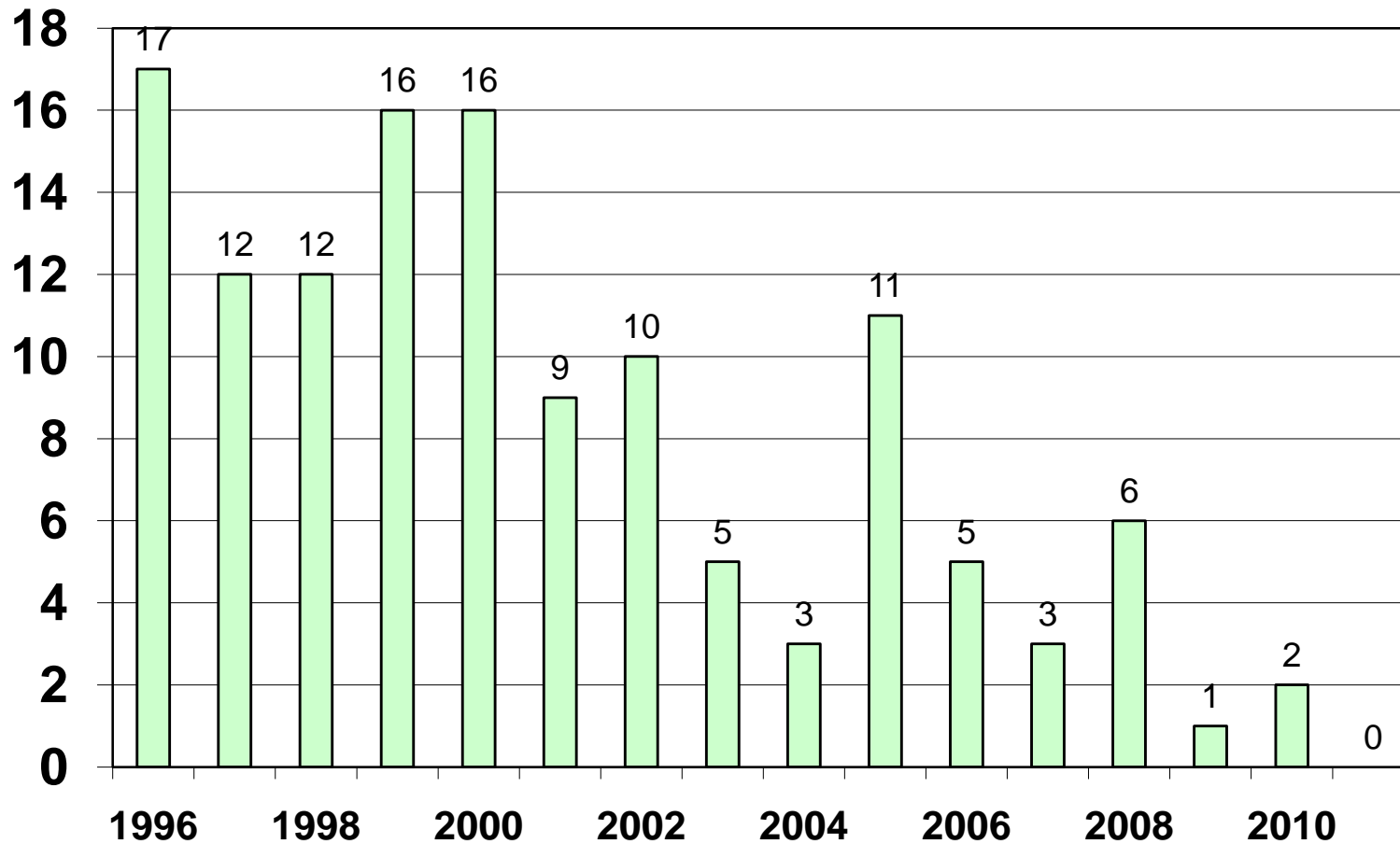
*) Metal in concentrate. 2007-2010 production has exceeded average head grades in ore reserve.

Boliden in Garpenberg

- 310 own employees
- Appr 100 employed by contractors
- Turnover > 1000 MSEK
- Hedemora Community's largest private employer

Safety always first
on the agenda !

LTI 1996 - 2011



Garpenberg – from ore to metals

Mine



Ore

1 400 000 t

Zn 6,5 %

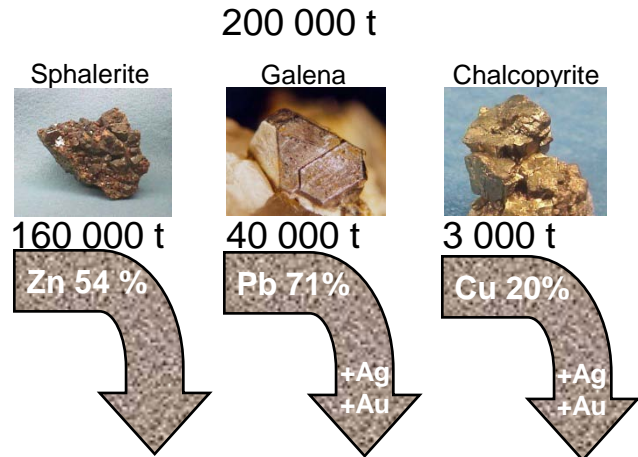
Ag 125 g/t

Pb 2,5 %

Concentrator



Mineral concentrates



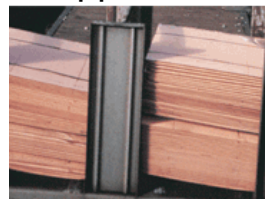
Zinc: 82 000 t Silver: 136 000 kg Lead: 28 000 t



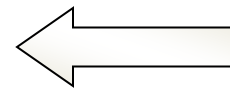
Gold: 230 kg



Copper: 420 t



Metals



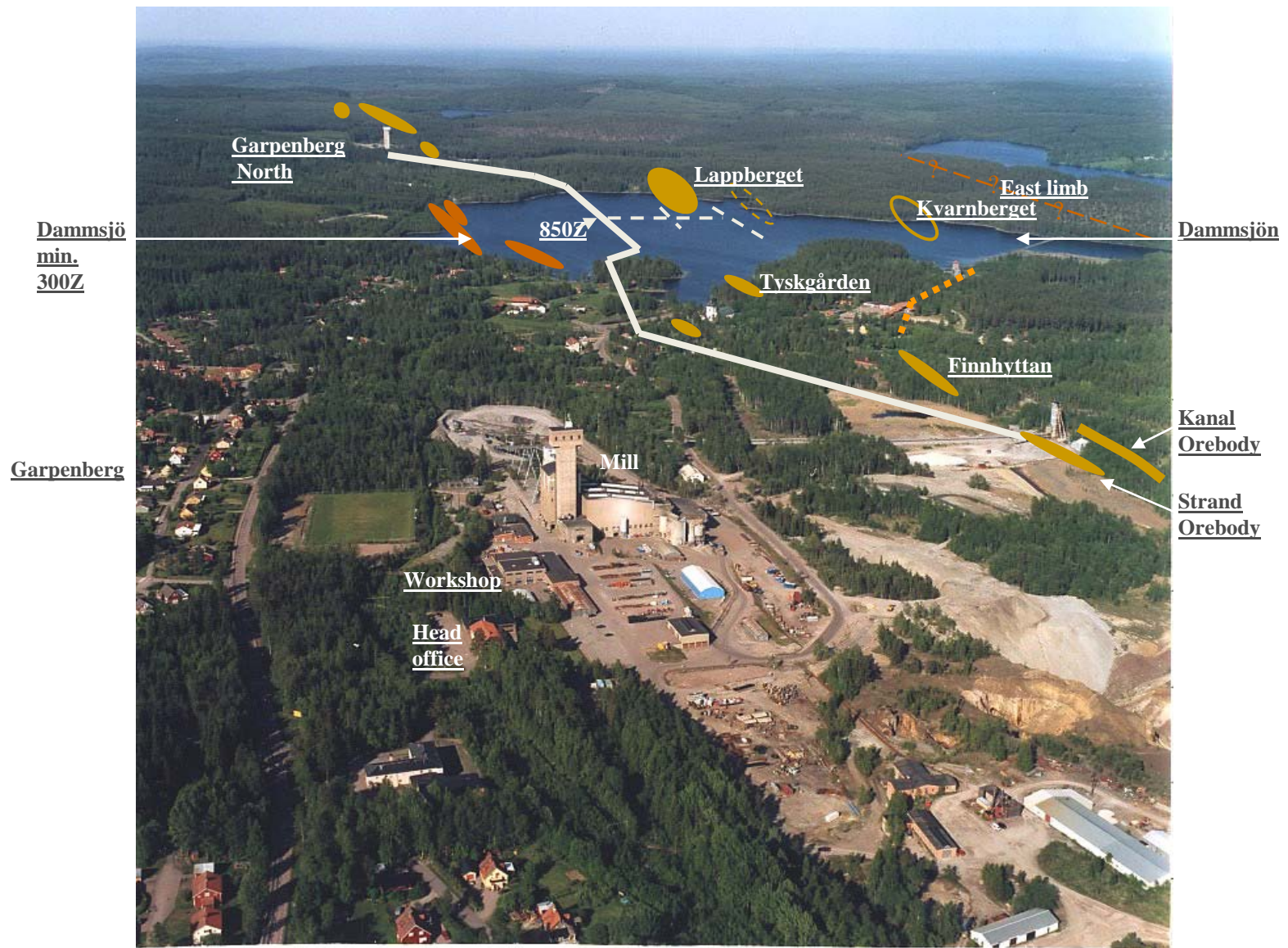
Smelter



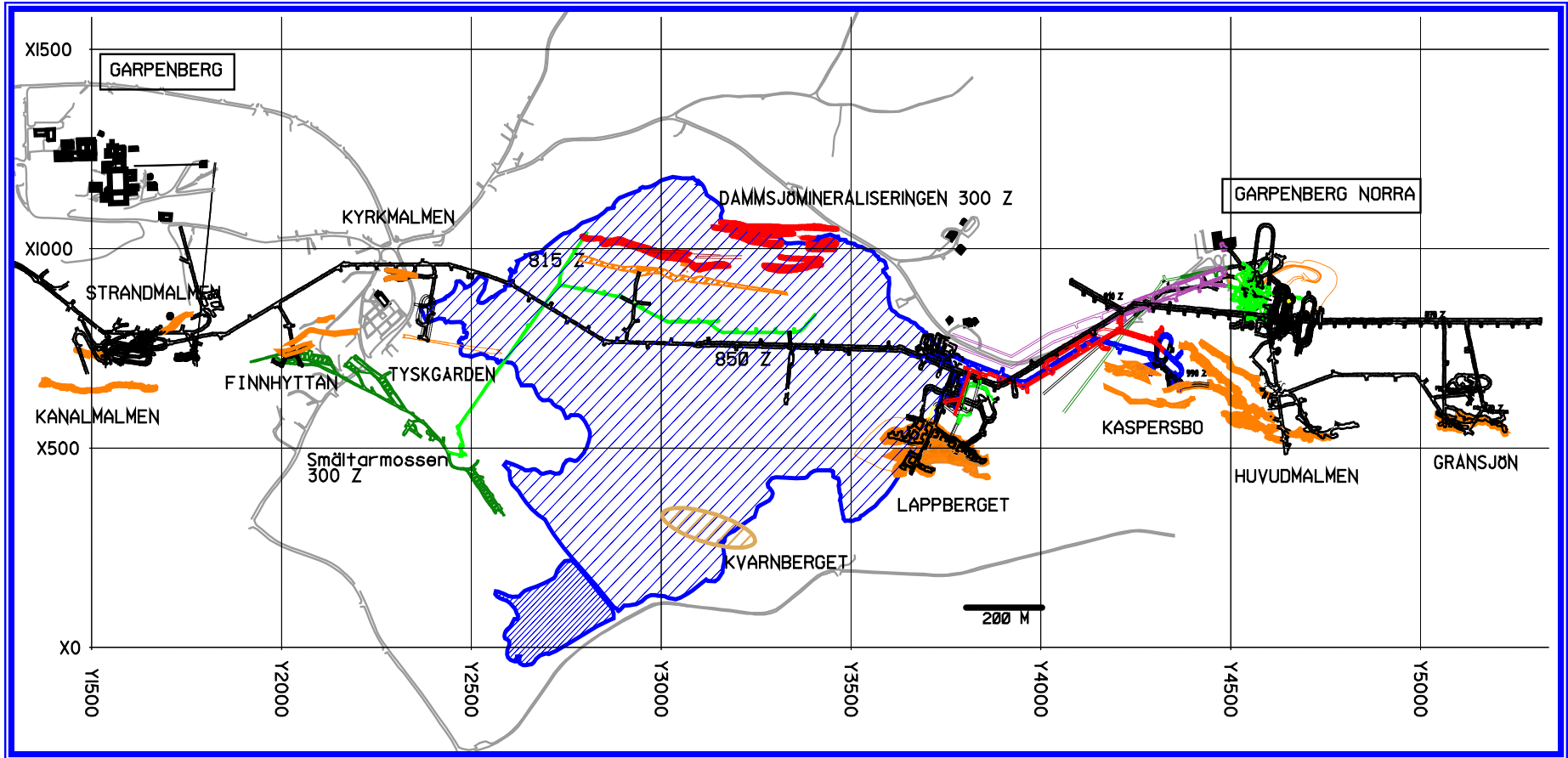
BOLIDEN

Tailings pond - Ryllshyttan

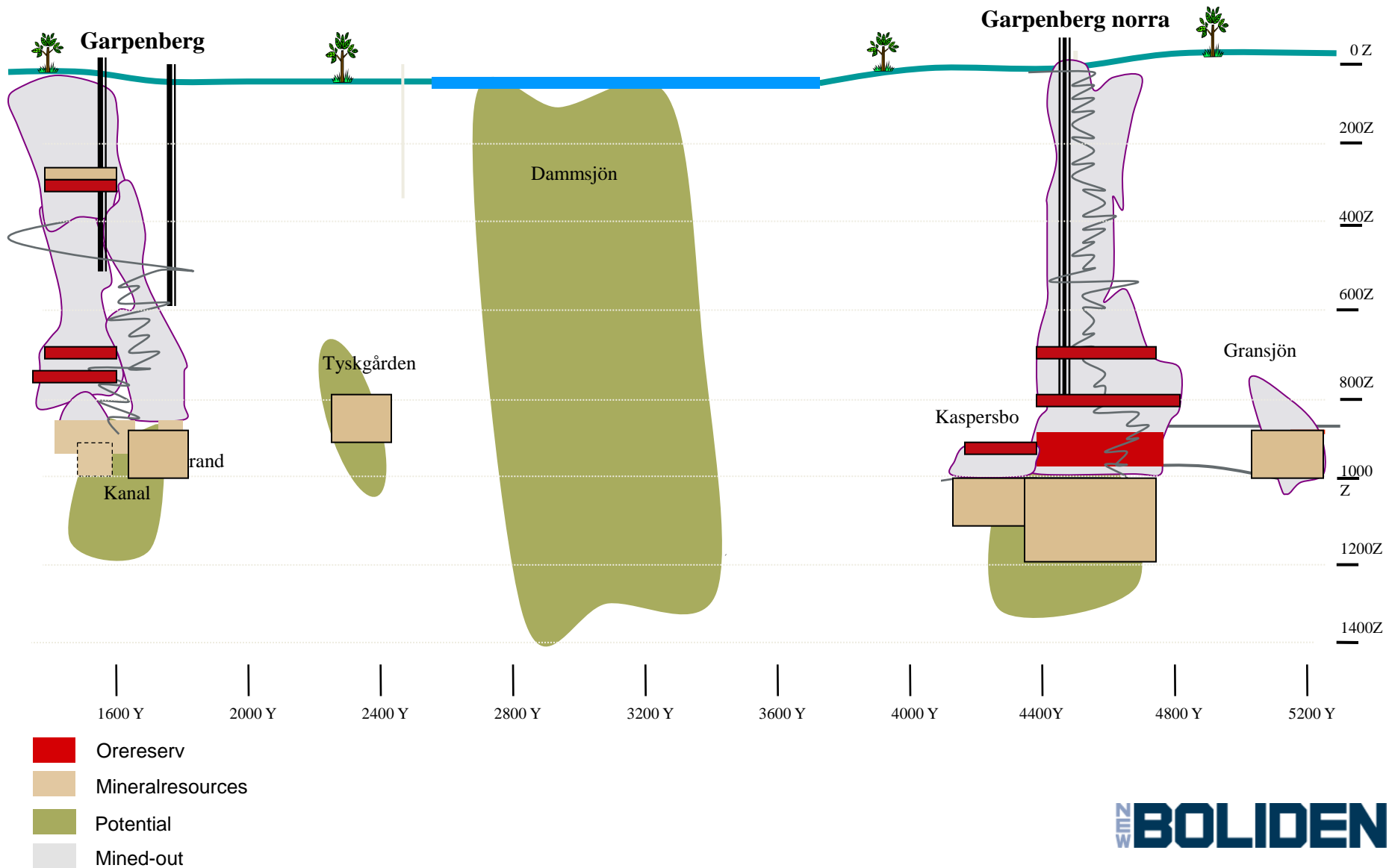




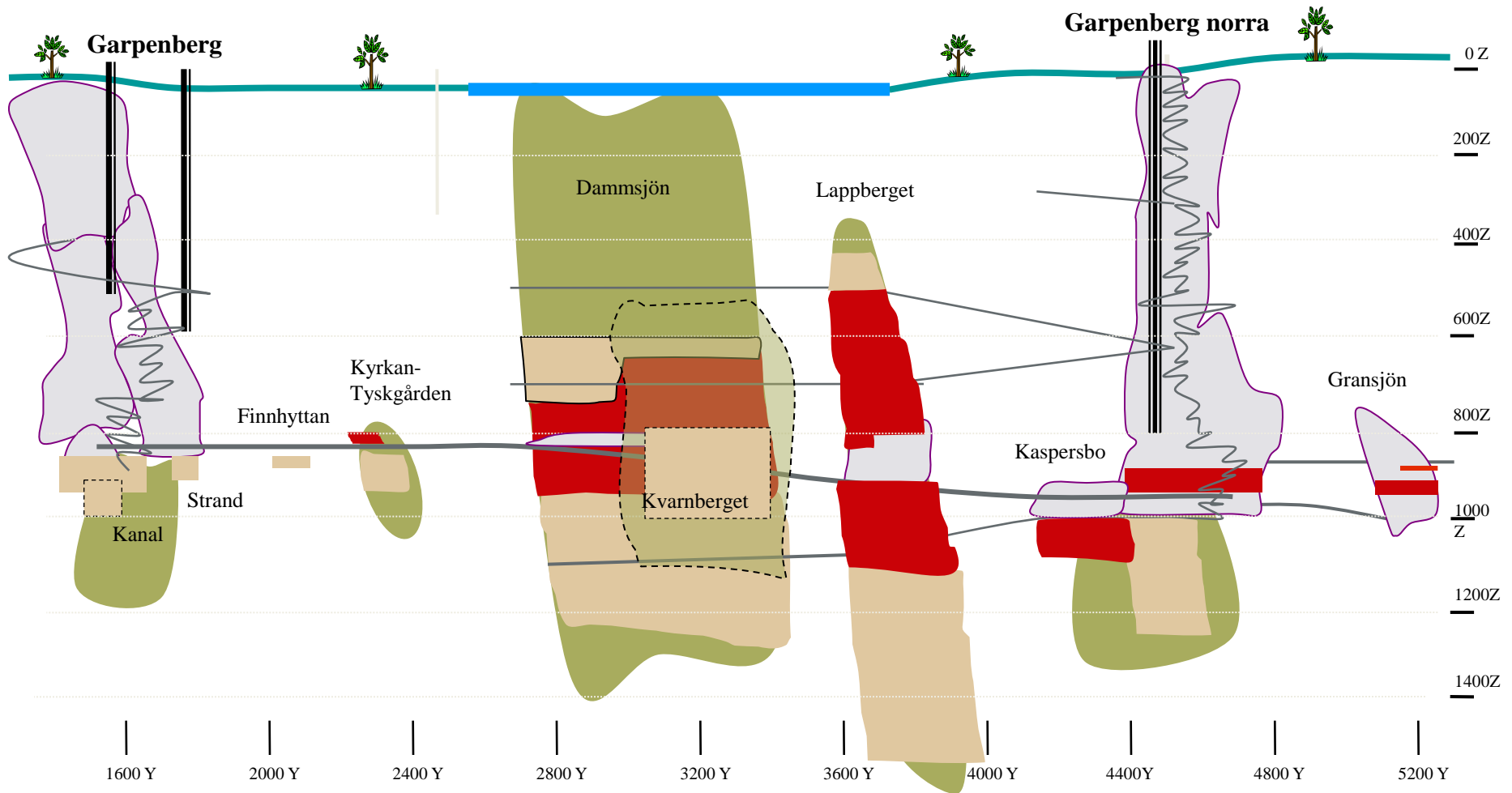
Garpenberg area



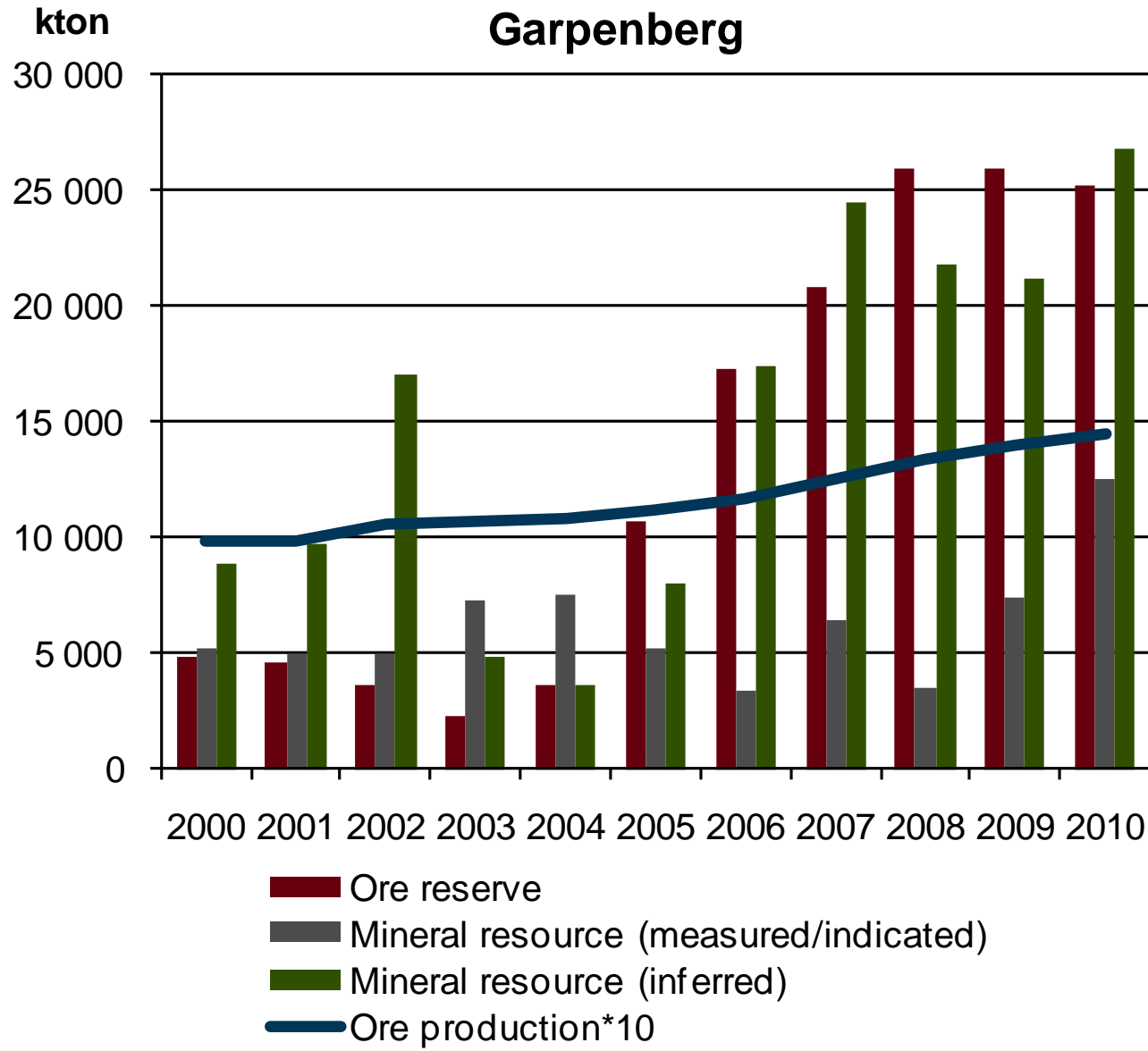
Garpenberg before Lappberget



Garpenberg 1/1 2009



Garpenberg



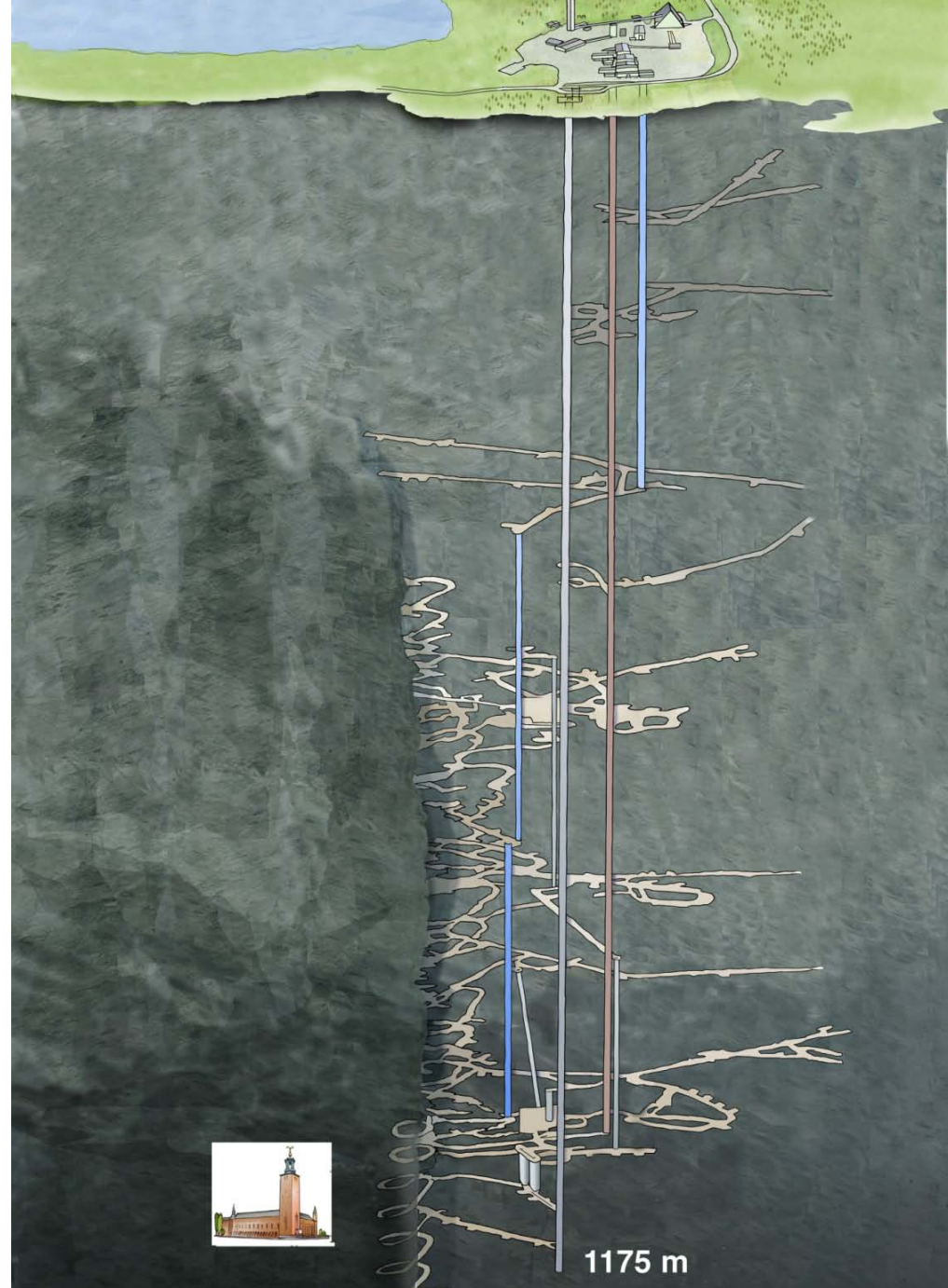


Expansion Garpenberg

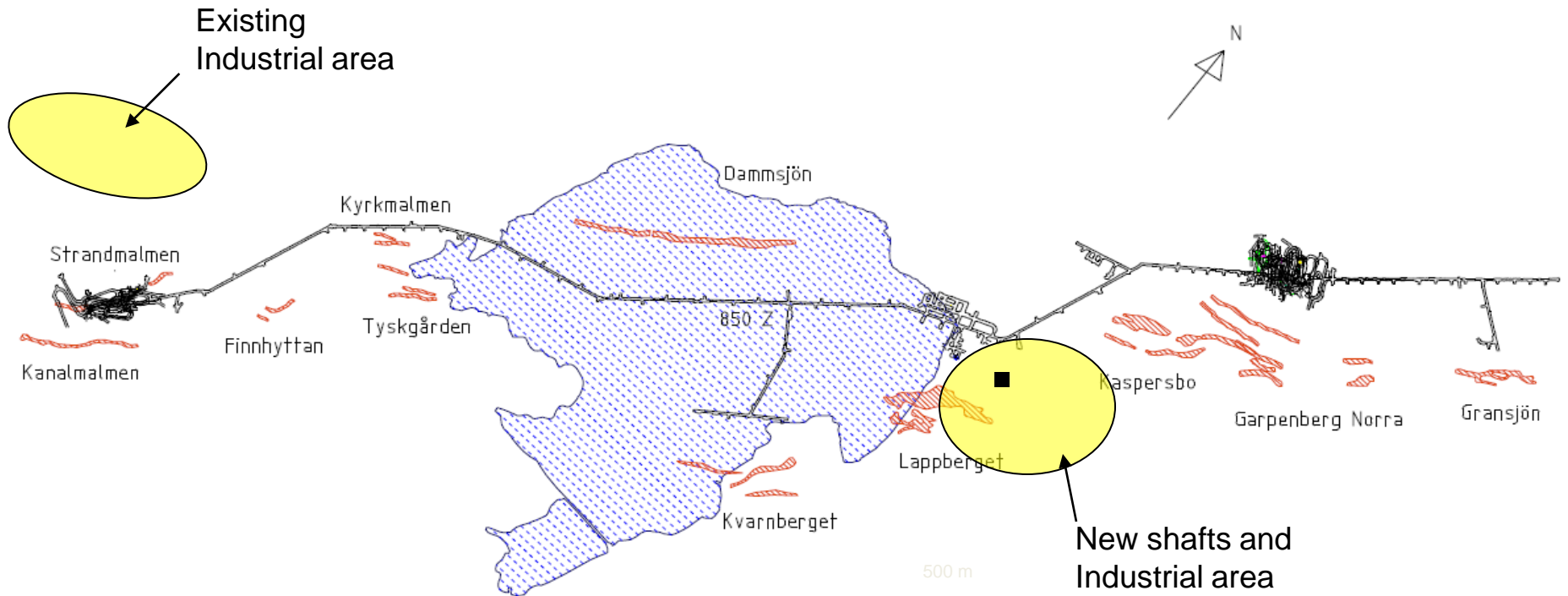
BOLIDEN

Technology and production

- New industrial area
 - New underground facilities
 - New concentrator
 - New infrastructure
- Capacity increase from 1.4 to 2.5 millions tonnes of ore/year
- Production ramp-up from 2 million tonnes/year 2014 to full production at the end of 2015
- Average grades in ore reserve
 - Zinc 5.4 %
 - Lead 2.5 %
 - Silver 142 g/tonne
- Production until 2030
- Good geological potential



Overview Garpenberg mining area



Garpenberg

New shafts and Industrial area

Garpenberg north

Grusjöschaktet

Schakt

Dammsjön

0 Z

Potential
Dammsjön

Lappberget

200Z

400Z

600Z

Kyrkan-Tyskgården

Gransjön

Finnhyttan

Kaspersbo

870 Z

800Z

1000Z

Potential

Potential
Kvarnberget

Potential

1200Z

1400Z

Mined areas



Ore reserve

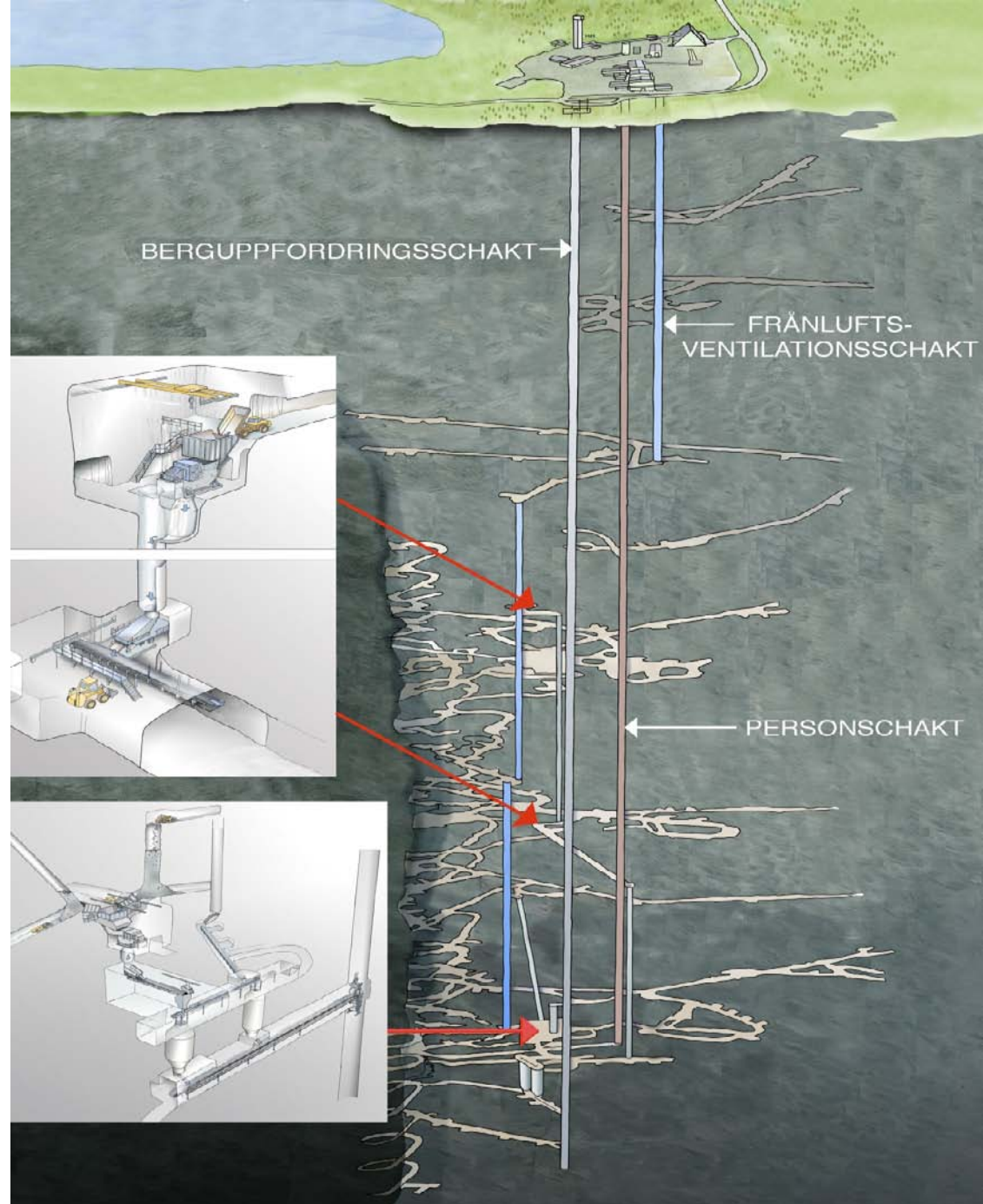


Mineral resources

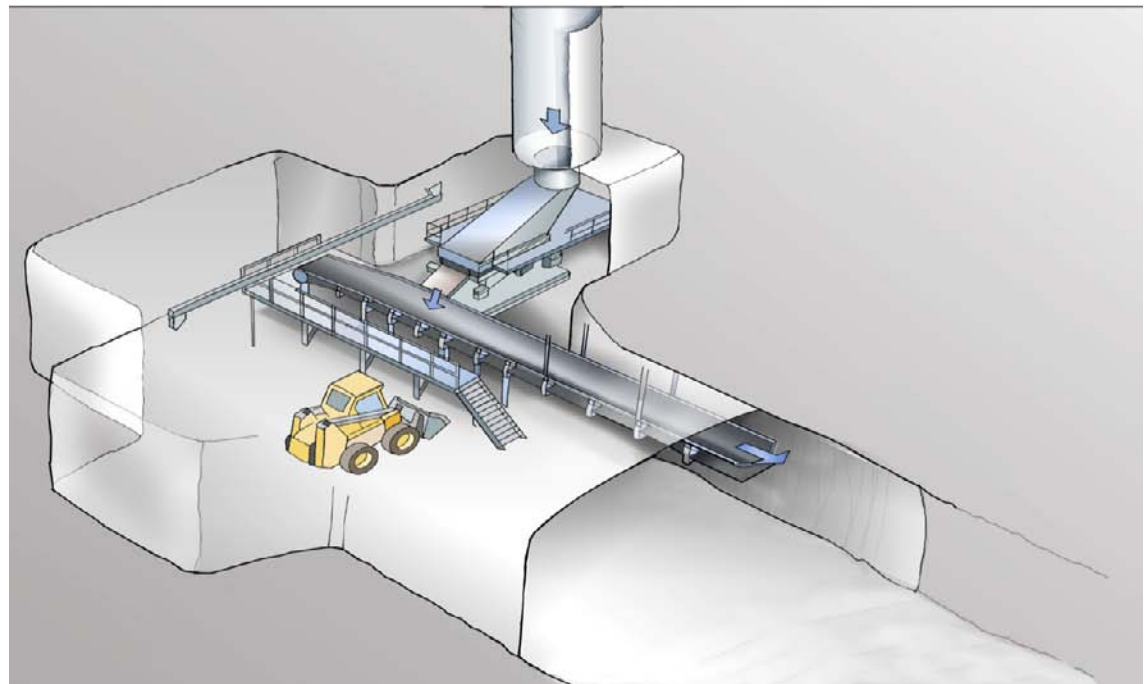
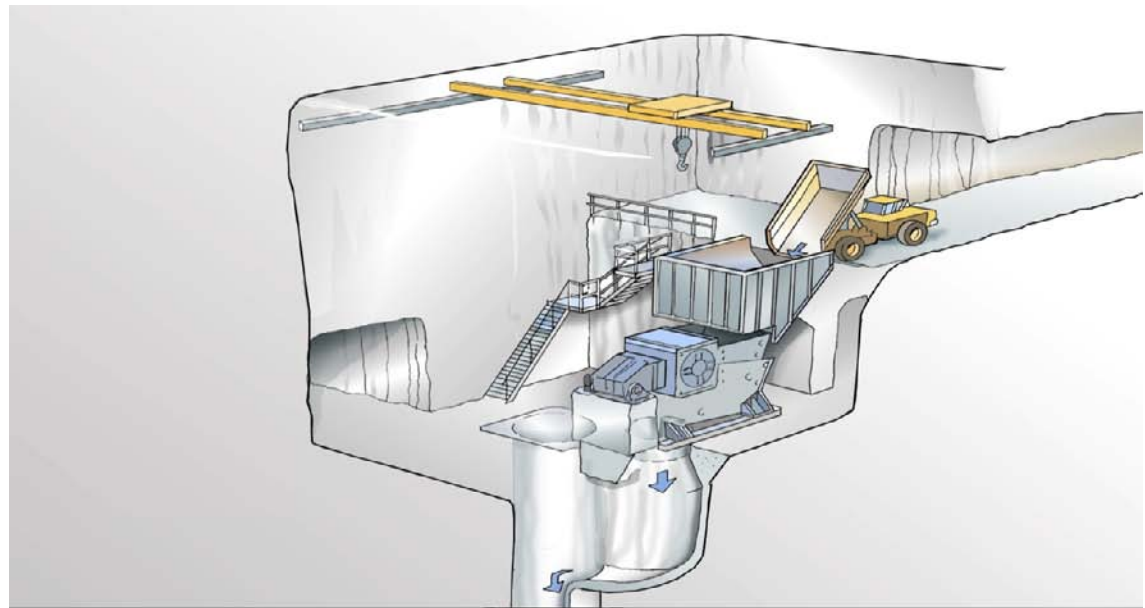


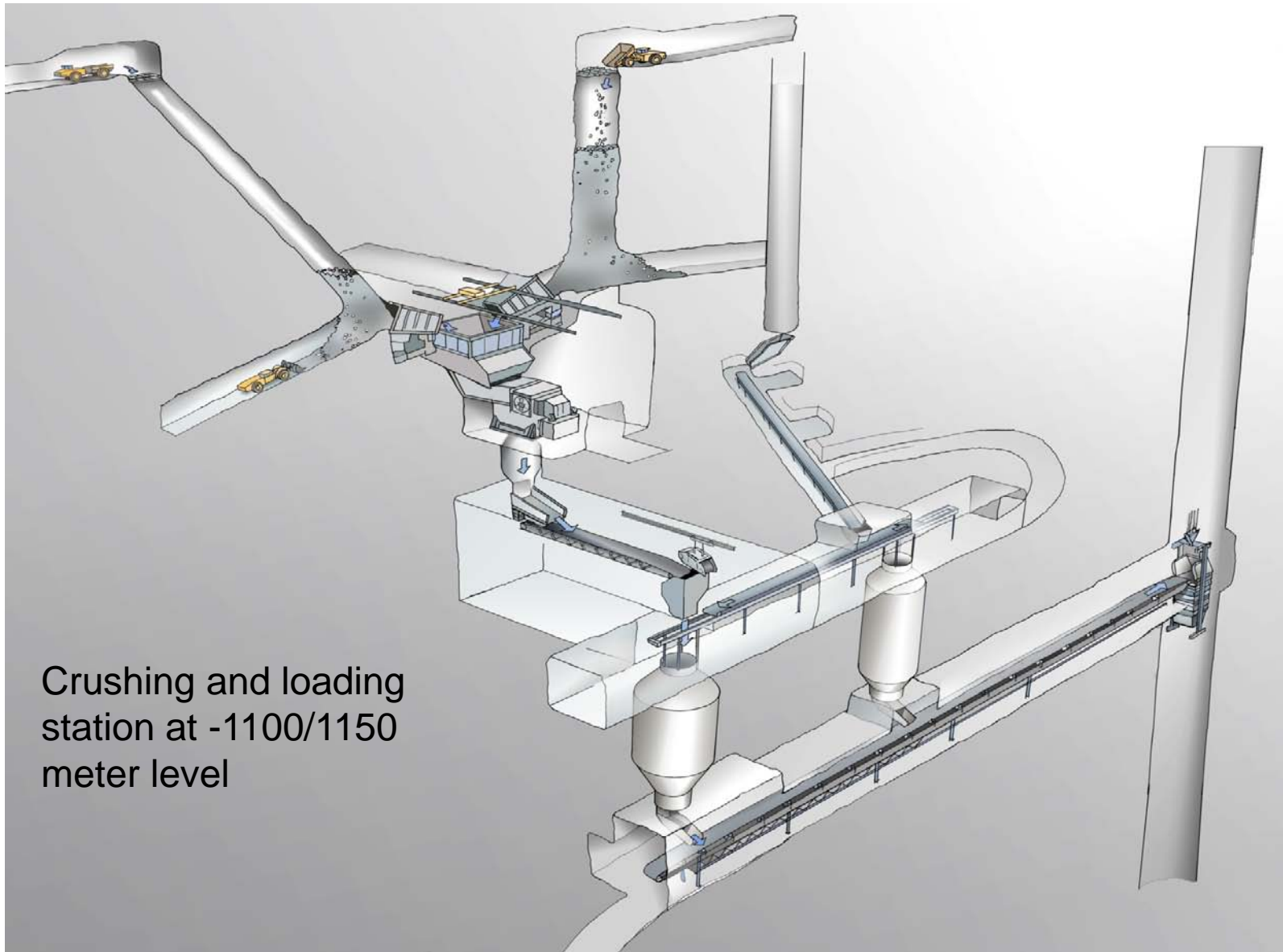
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New shafts and underground facilities



Crushers at -705 and -1 100 meter levels





Crushing and loading
station at -1100/1150
meter level

Financials

- Capex SEK 3,9 billion

Capex per year, MSEK

2011	2012	2013	2014
850	1 600	1 300	250

- Profitable investment with robust financials
- Productivity increases from high levels
- Improved competitive position
- Production cost per tonne of ore decreases by approx. 25 percent

