

Viscaria & Adak Copper Projects
Sweden

# **Avalon Copper Projects**





# Sweden – Low Sovereign Risk

- Constitutional monarchy & parliamentary democracy
- Skilled mining labour force, 99% literacy, English as 2<sup>nd</sup> language
- Copper concentrators and smelters
- Legislation
  - Framework similar to Australia
- Environment
  - Primary liability rests with previous operators in old mining areas i.e. the Government
- Taxation
  - Normal corporate rate of income tax at 28%
  - Nominal 0.2% NSR on production



# Sweden – Exploration Hot-Spot



Anglo American | Blackstone Ventures Inc | Boliden | Dragon Resources Ltd |
Drake Resources Ltd | Aura Energy | Energy Ventures | Eagle Mining |
International Gold Exploration | Kopparberg Mineral | Lappland Goldminers AB |
Lundin Mining Corporation | Mawson Resources Ltd | Nordic Diamonds |
Northland Resources Inc | Tertiary Minerals PLC | Zinifex Ltd | Independence Group

# Economic Geology Northern Sweden

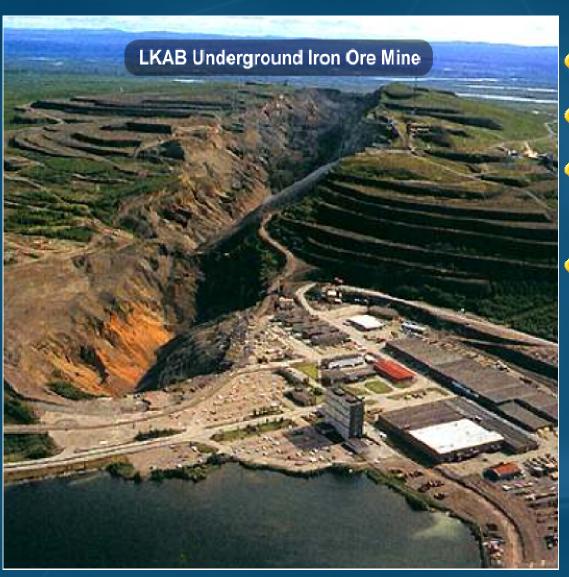


#### Kiruna Region

- Kiruna Iron Mine
  - Underground 1,100Mt @ 48%
     Fe magnetite-apatite
     resource, ore production of
     15Mtpa
- Aitik Copper Mine
  - Open cut, resource
     1,600Mt at 0.3% Cu & 0.2g/t
     Au, mining at 20Mtpa,
     planned 36Mtpa



# Kiruna – The Kalgoorlie of Northern Sweden



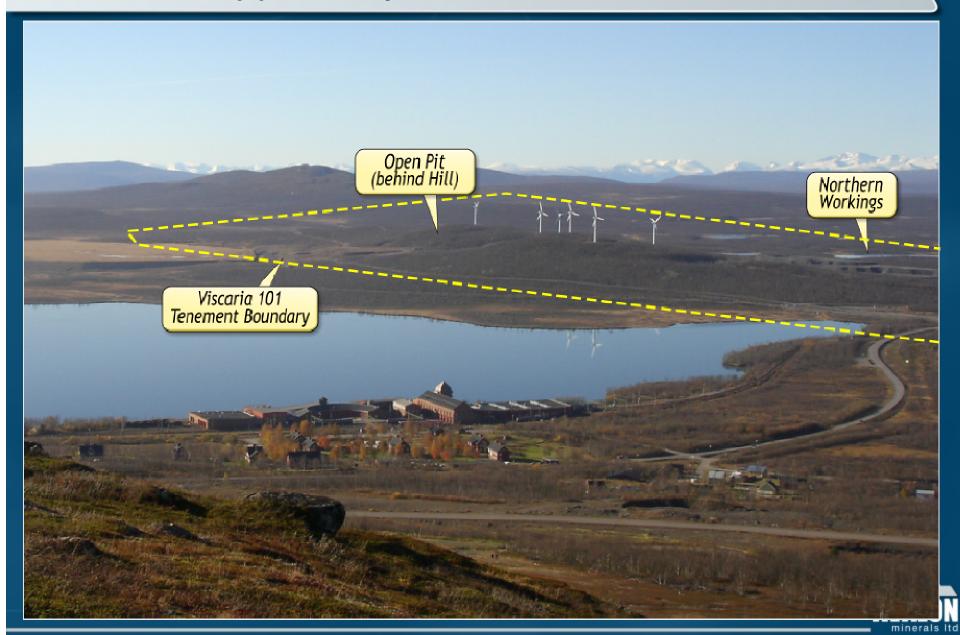
- Population of ~25,000
- Daily rail & air services
- Connected by road and rail to ports
- LKAB iron mine operated for over 100 years15Mtpa of iron ore



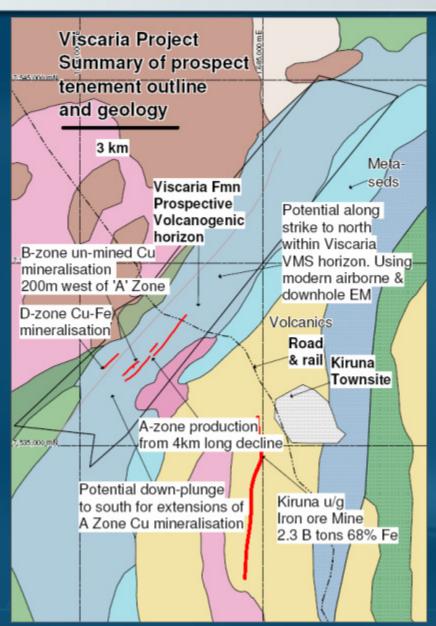
# Kiruna



# Viscaria Copper Project (looking west)



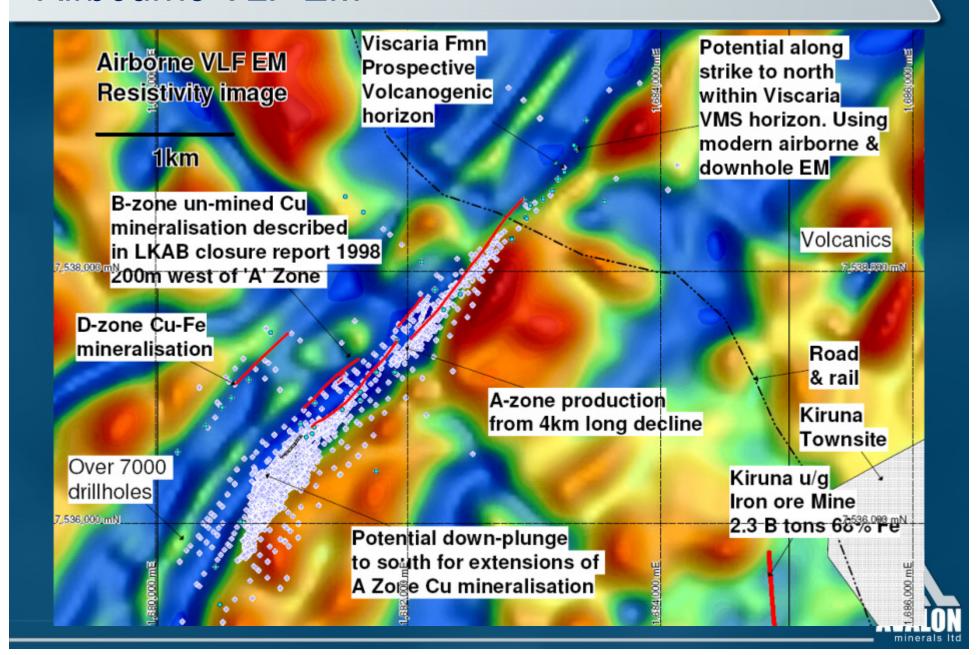
# Viscaria Project Summary Geology



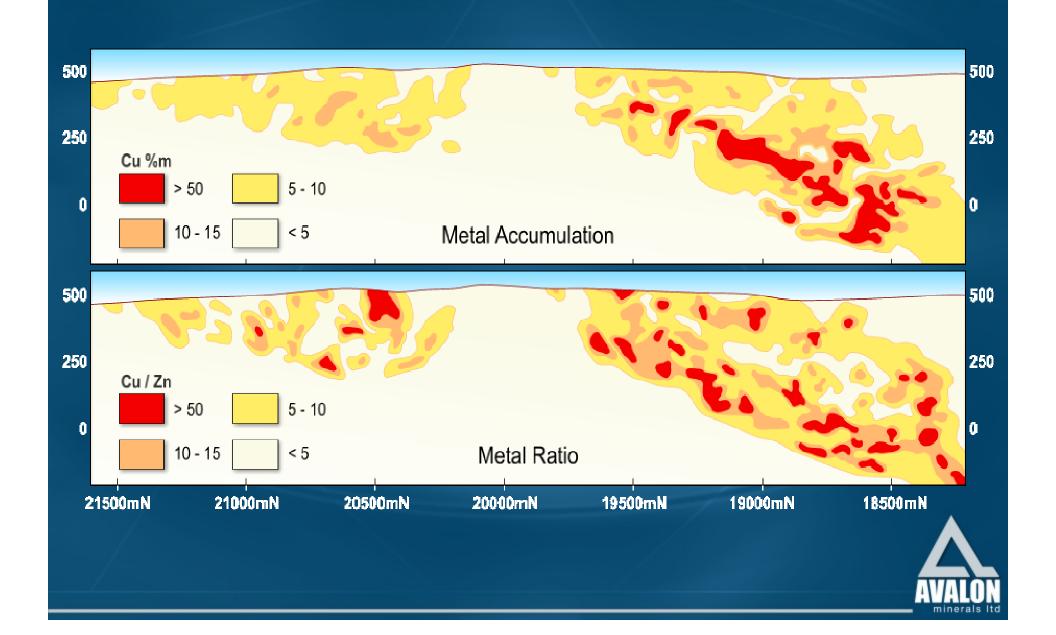
- 4km west of Kiruna
- 50km² tenements (incl application) covers 12km strike of Viscaria Formation, host to VHMS base-metal + gold mineralization
- Operated by Outokumpu from 1982 to 1997
- Mined 12.5 million tonnes grading 2.3% copper and 0.3g/t gold
- Produced 280,000 tonnes of copper in concentrate@ 25% Cu



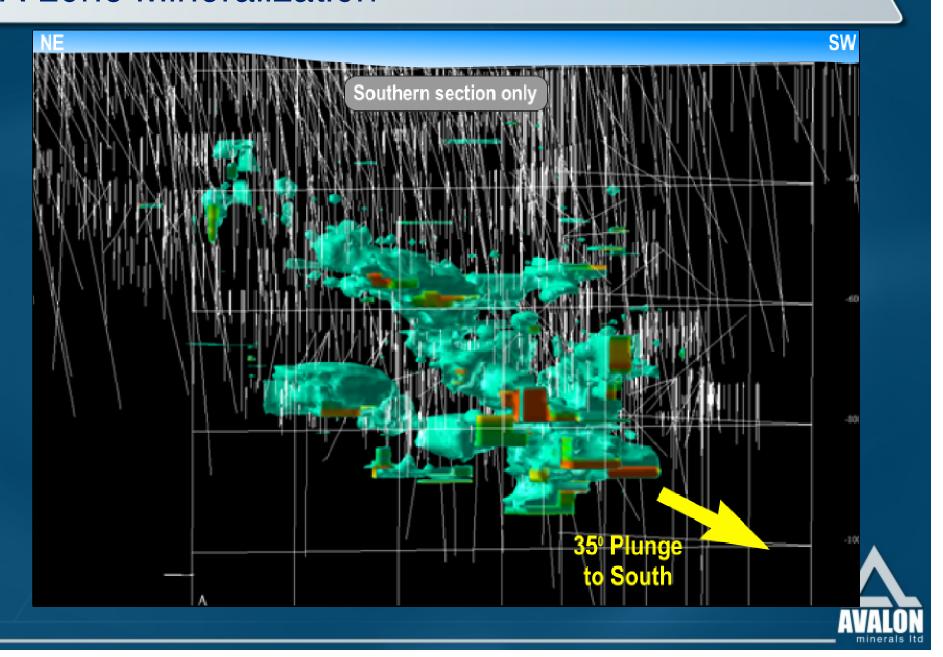
#### Airbourne VLF EM



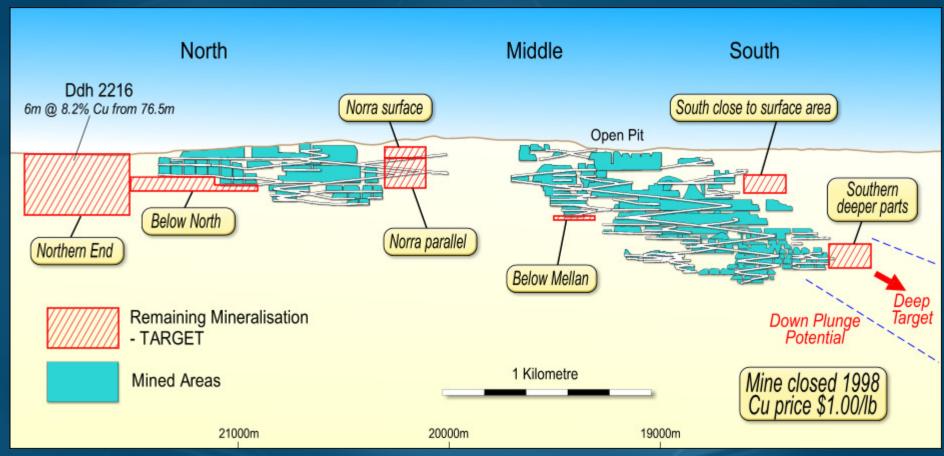
# A-zone Long Projection



#### A-zone Mineralization



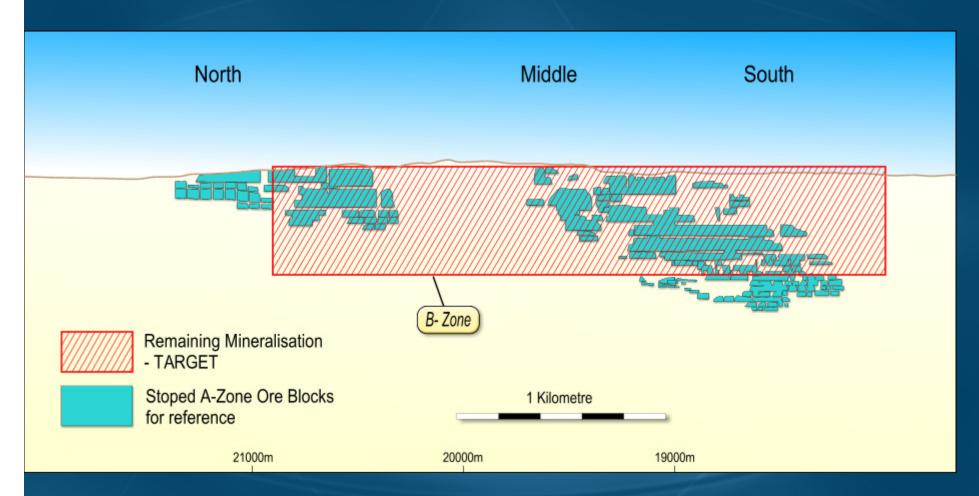
# Remaining A-zone Mineralisation & Development



Mining ceased 1998 due to low Copper prices



#### B-zone 200m across strike from A Zone crosscut into it



Mining ceased 1998 due to low Copper prices



# Regional Exploration

- Regional peat bog sampling
- Prospective zone defined by copper values >200ppm over Viscaria formation volcanics & sediments
- 20km prospective strike length defined
- Regional discoveries 10km south of Viscaria include 34m@ 1.2% Cu and 0.4g/t Au from same stratigraphic horizon
- Interpretation of historical EM and new EM required



# Sweden Exploration Team

- Exploration Manager Geoff Hewlett
- Sweden Geologist Nigel Baker
- Consultant Geologists CSA
- Sweden Consultants Hifab
- Sweden Accountants Ernst & Young



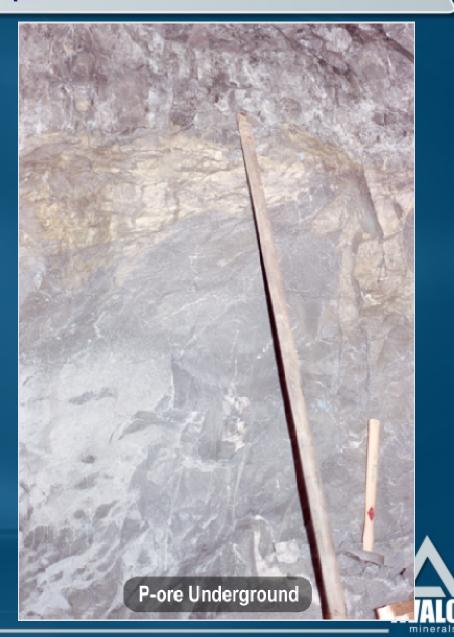
# Viscaria Open Pit (looking northeast)



# A-zone Sulphide Photographs







# Economic Geology Northern Sweden



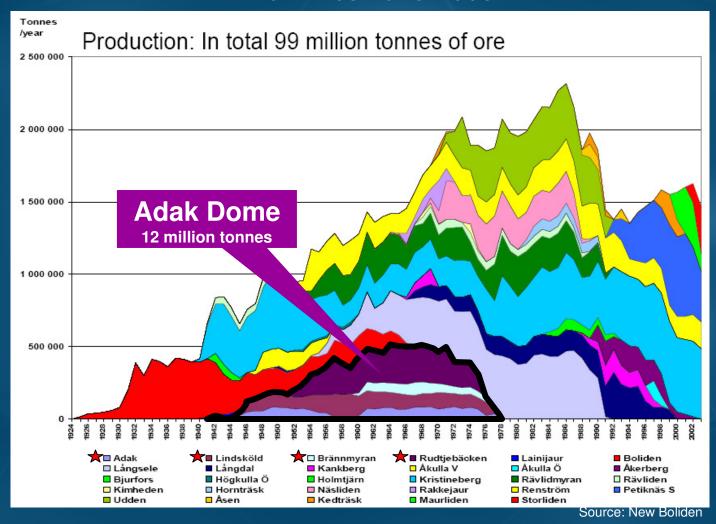
#### Skellefte Volcanic Arc

- Kristinberg
  - VHMS, resource 22Mt @3.6% Zn, 1% Cu, 1.3g/t Au, ore production 0.55Mtpa
- Renström
  - VHMS, resource 9Mt @6.4% Zn, 1.4% Pb, 2.8g/tAu, ore production 0.23Mtpa



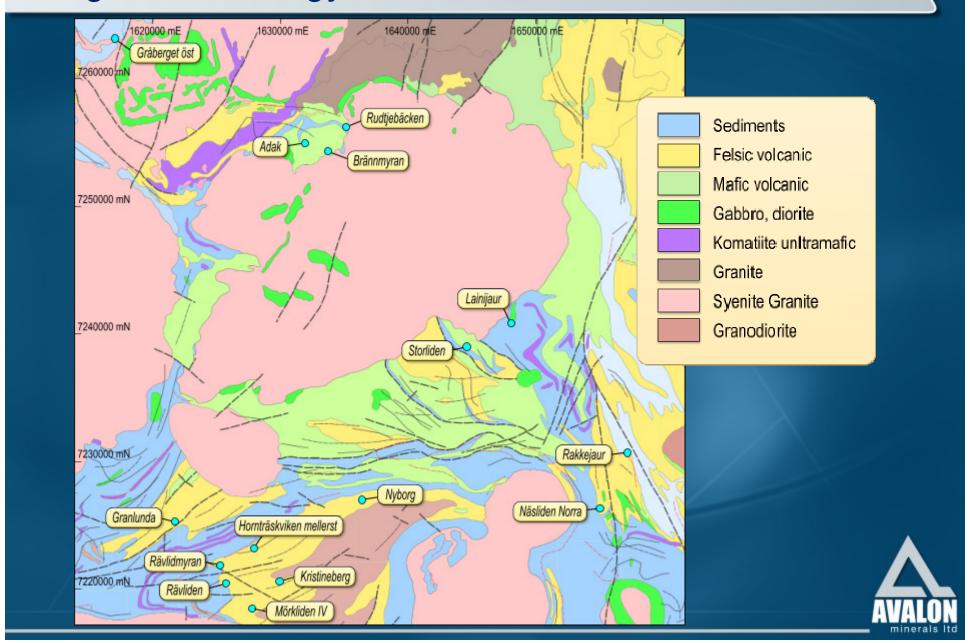
#### Skellefte District - Past Production

#### 29 mines 1925-2003

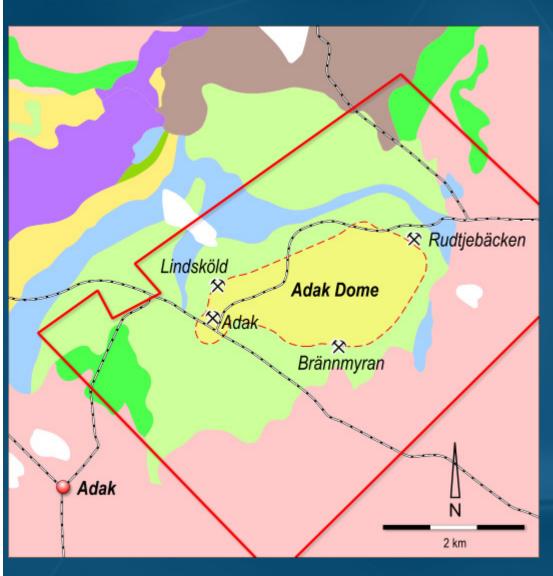




# Regional Geology

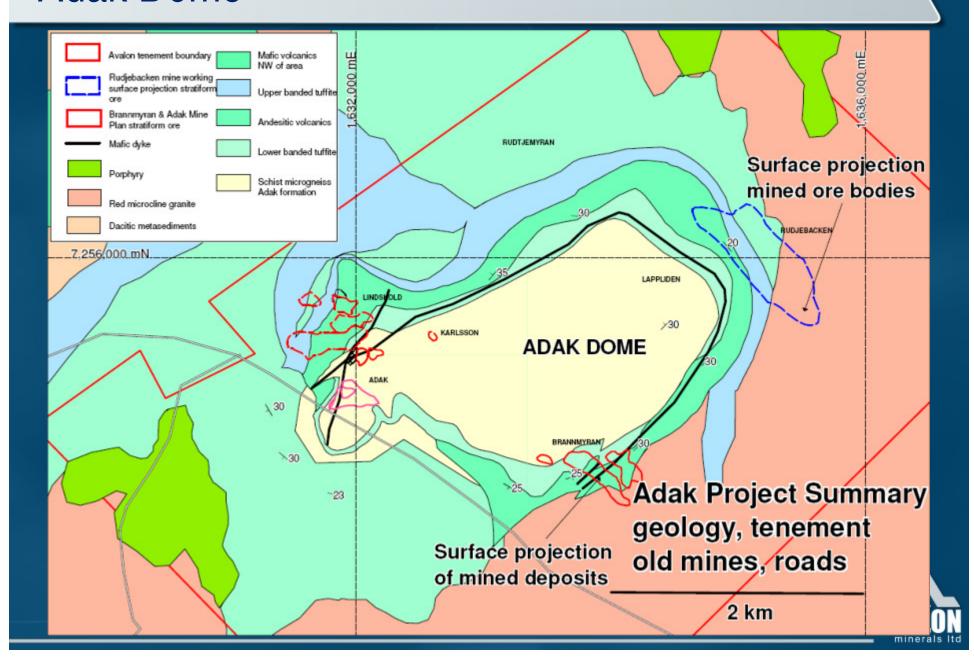


# Adak Project

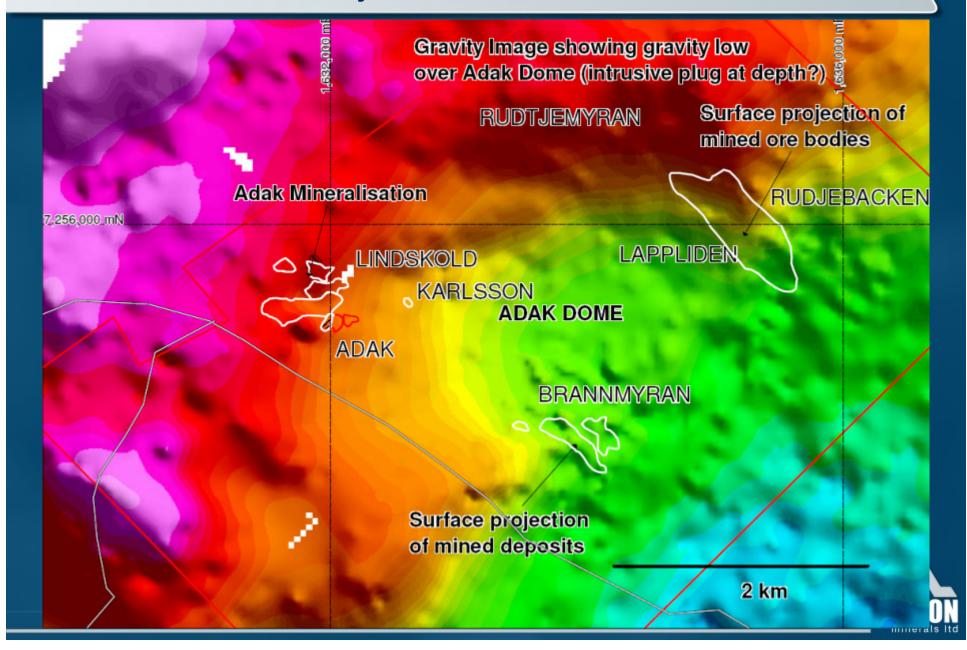


- 20km North West of Malå
- 35km to railway at Slangäs
- 26.5 km² tenement covers Adak Dome
- Operated by Boliden from 1940 to 1977. Adak plant burned down in Jan 1978 and operation closed
- Total production 12.1 million tonnes @ 1.5% copper, plus some gold, silver and zinc credits
- Adak plant produced 0.45Mt of concentrate containing 25% copper

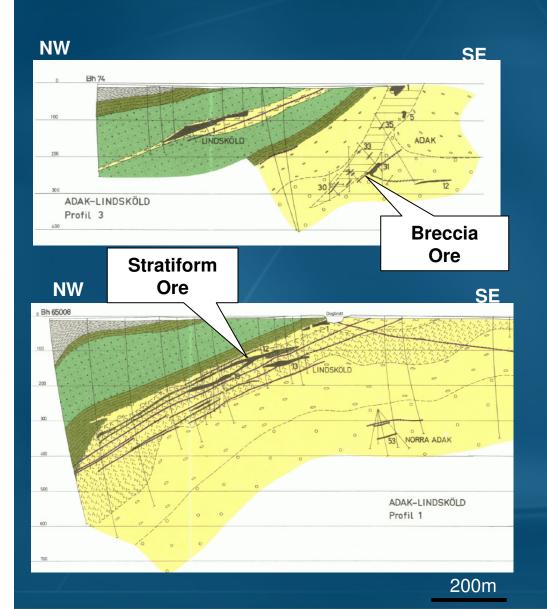
#### **Adak Dome**



# **Adak Dome Gravity**

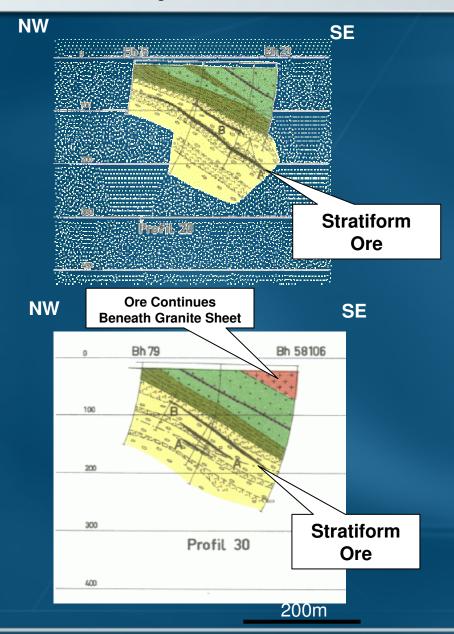


#### Adak-Linsköld Mine



- Located in West quadrant of Adak Dome
- The mine was developed by open cut & underground over an area of 1,200m²
- Mined 6.3Mt @ 1.9% Cu
- Two styles of mineralisation stratiform and breccias

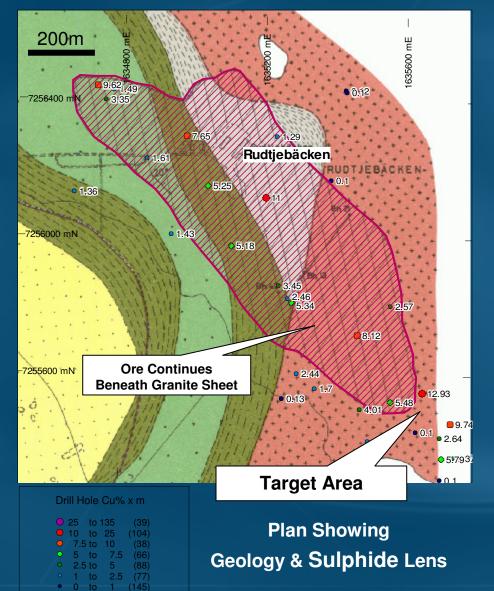
# Brännmyran Mine



- Located in South East quadrant of Adak Dome
- The Brännmyran Mine was developed by underground over an area of 1,200m²
- Comprises two sheets of VHMS ore
- Mined 1.0Mt @ 1.7% Cu,1960 1976



#### Rudtjebäcken Mine



- Located in North quadrant of Adak Dome
- underground with a length of 1km and average thickness of 4-5m
- Dips to North East at 20°
- Comprises a VHMS lens, the SE section is enriched and averages 2.5% Cu
- Mined 4.7Mt @ 0.9% Cu,3% Zn, 0.3g/t Au & 10g/t Ag,1947 1975
- Ore transported to Kristinberg for milling

Note: Drill hole file incomplete, does not show all holes

# Avalon 2008 Program

- Complete review all historical data
- Commence PFS Viscaria
- Conduct EM surveys Viscaria and Adak
- Commence Drilling Viscaria and Adak
- Regional exploration
- Management team build-up

Aim: To become a copper producer in Sweden