



Laver, Exploration update

Capital Markets Day
November 23rd 2012

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Exploration Director

BOLIDEN

It all started with exploration in the early 1920's

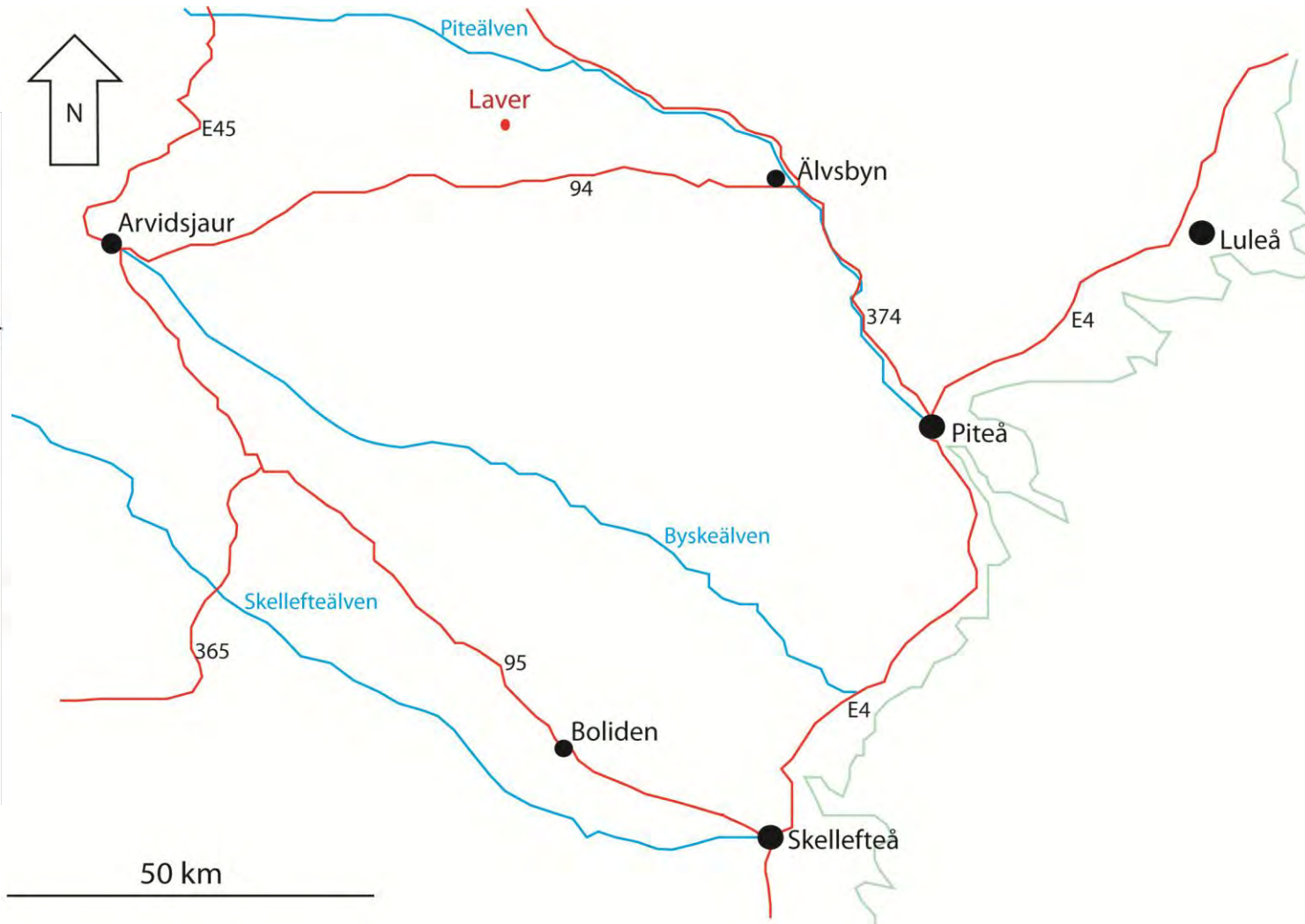
Oscar Falkman (later CEO) and Eric Wesslau (Exploration Manager) somewhere in northern Sweden 1923.



BOLIDEN

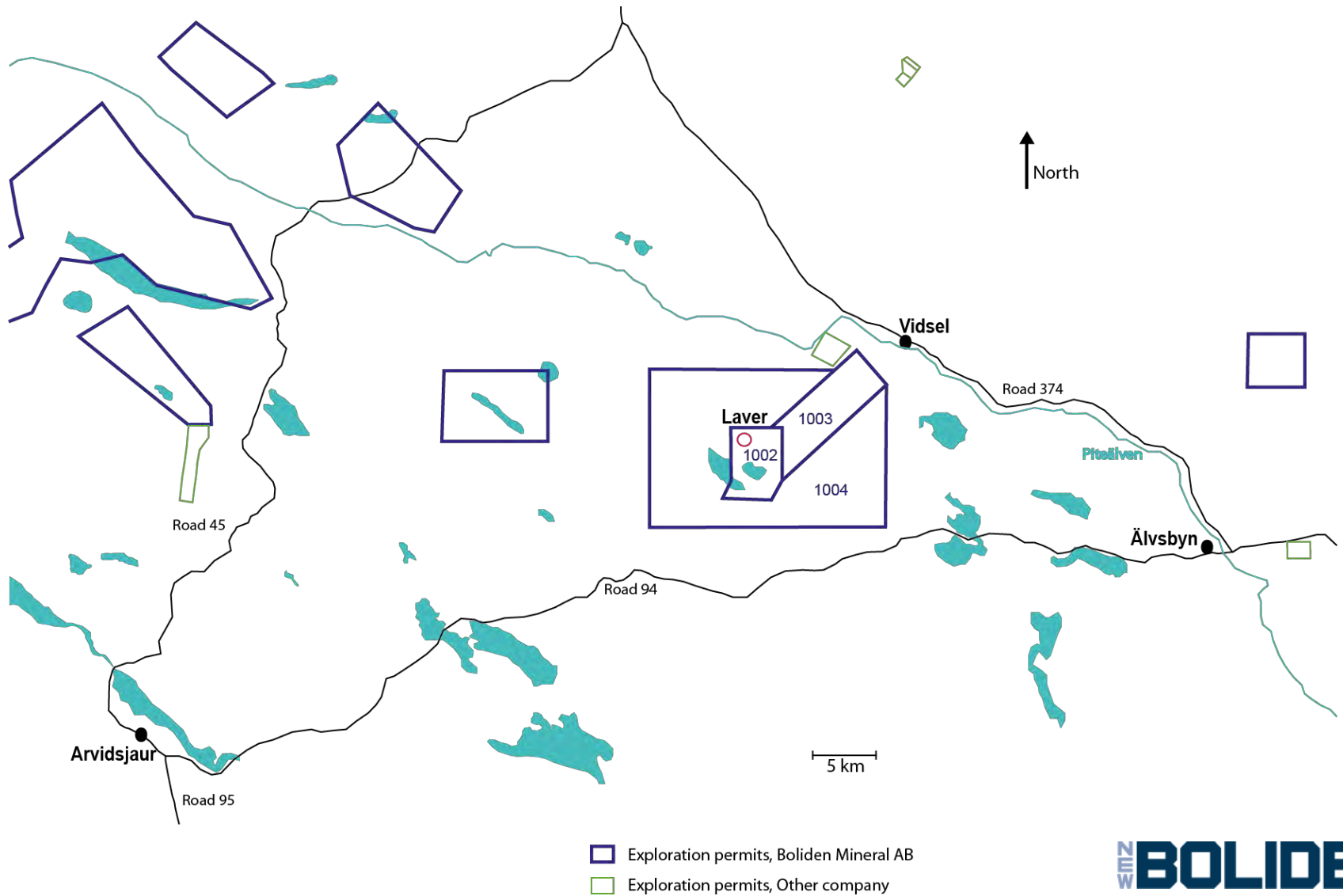
The Laver story

Location



The Laver Story

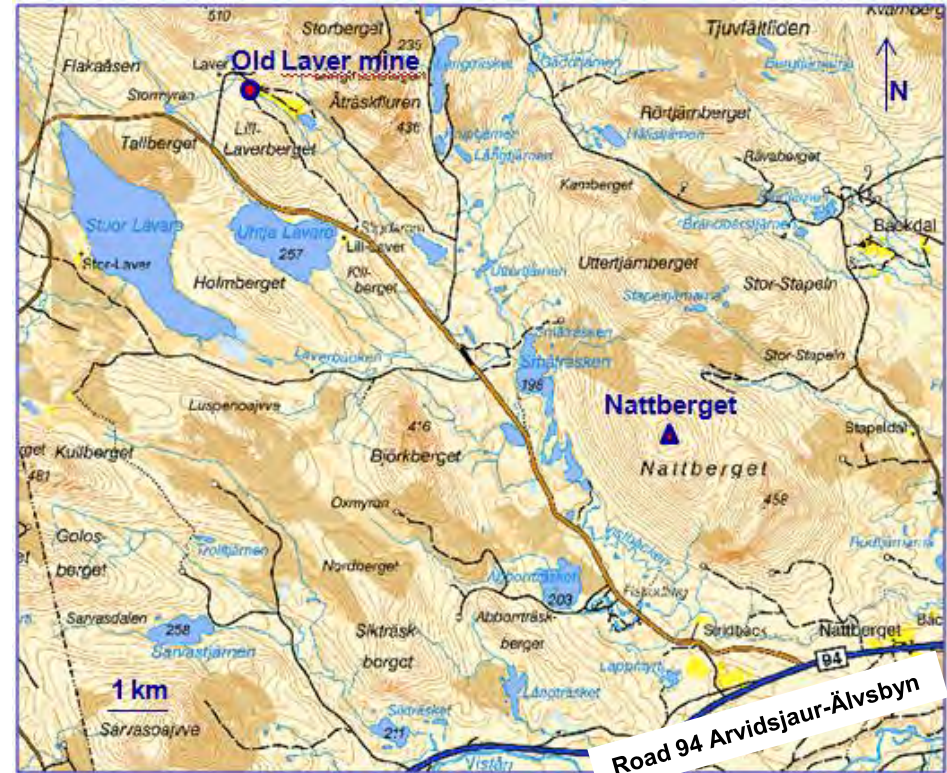
Exploration permits



The Laver Story

Initial Discovery and Development

- 1929
 - A Cu-rich boulder was found about 10 km south east of Laver by Boliden exploration.
- 1930
 - Laver deposit was discovered.
- 1933
 - The company decided to open the Laver Mine
 - The average grade of the Laver deposit was in fact too low but the company needed Cu-conc to recover more gold in the newly built smelter at Rönnskär.



The Laver Story

Historical Production

- Mining was performed in small open pit but primarily underground.
- The Laver mine operated between 1938-1946. The ore consisted of narrow zones with “high” Cu-grade.
- In total 1.3 Mt @ 1.5% Cu, 0.2 g/t Au and 36 g/t Ag was mined.

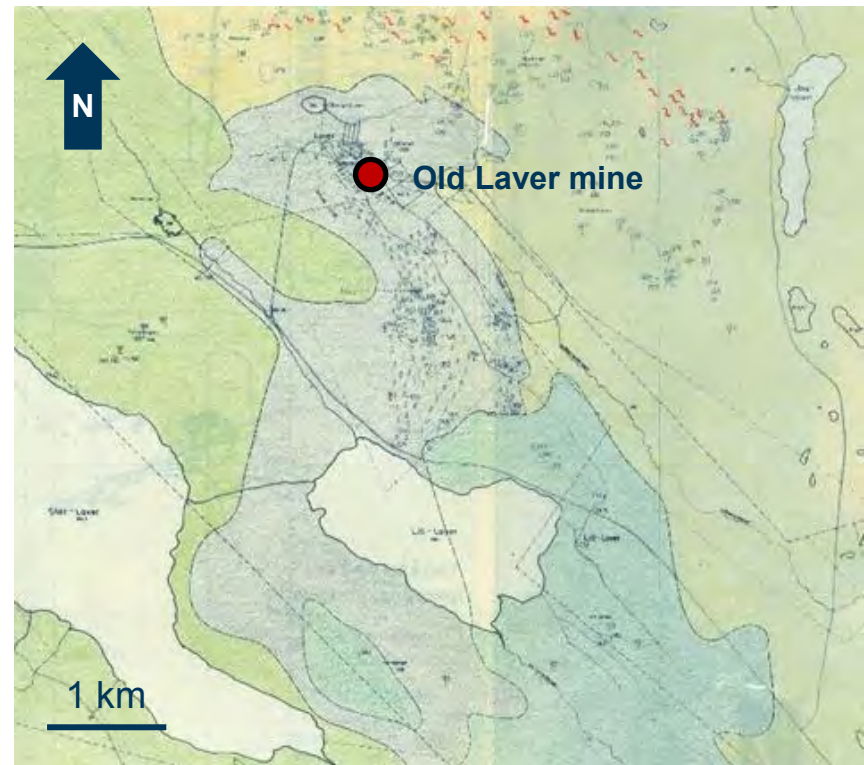


The Laver Story

Exploration restarts

Old mining areas have potential

- 1970-1972
 - Boliden performed a new exploration campaign.
- 1997
 - Boliden was there again...
- End of 1990's
 - Viscaria AB performed some minor exploration.
- 2004-2007
 - Phelps Dodge had the exploration permit, but no work was reported to mine inspector.

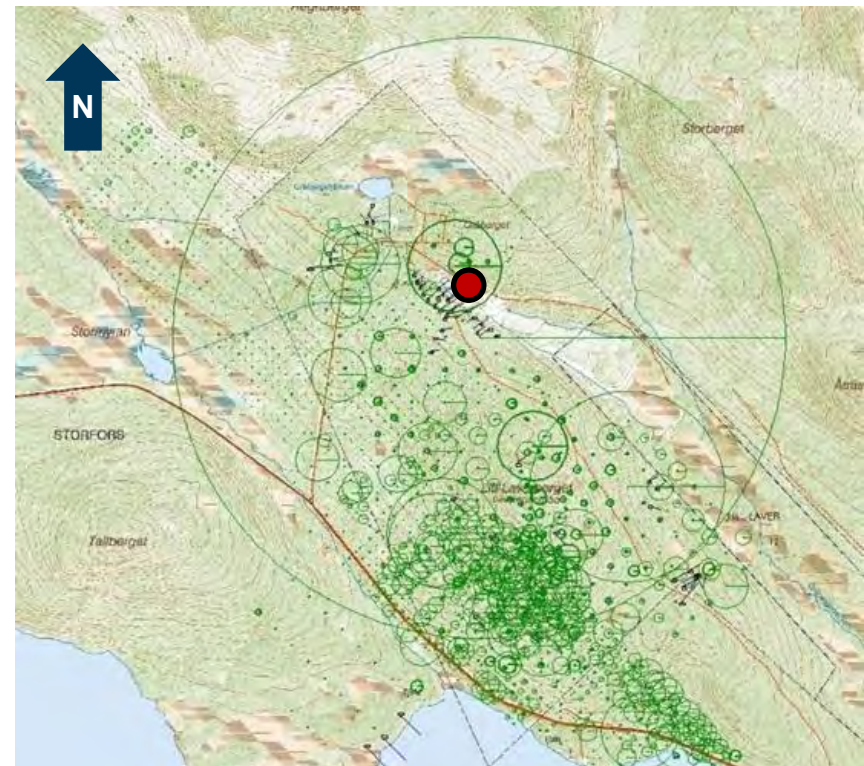


The Laver story

New exploration ideas

Old mining areas have potential...

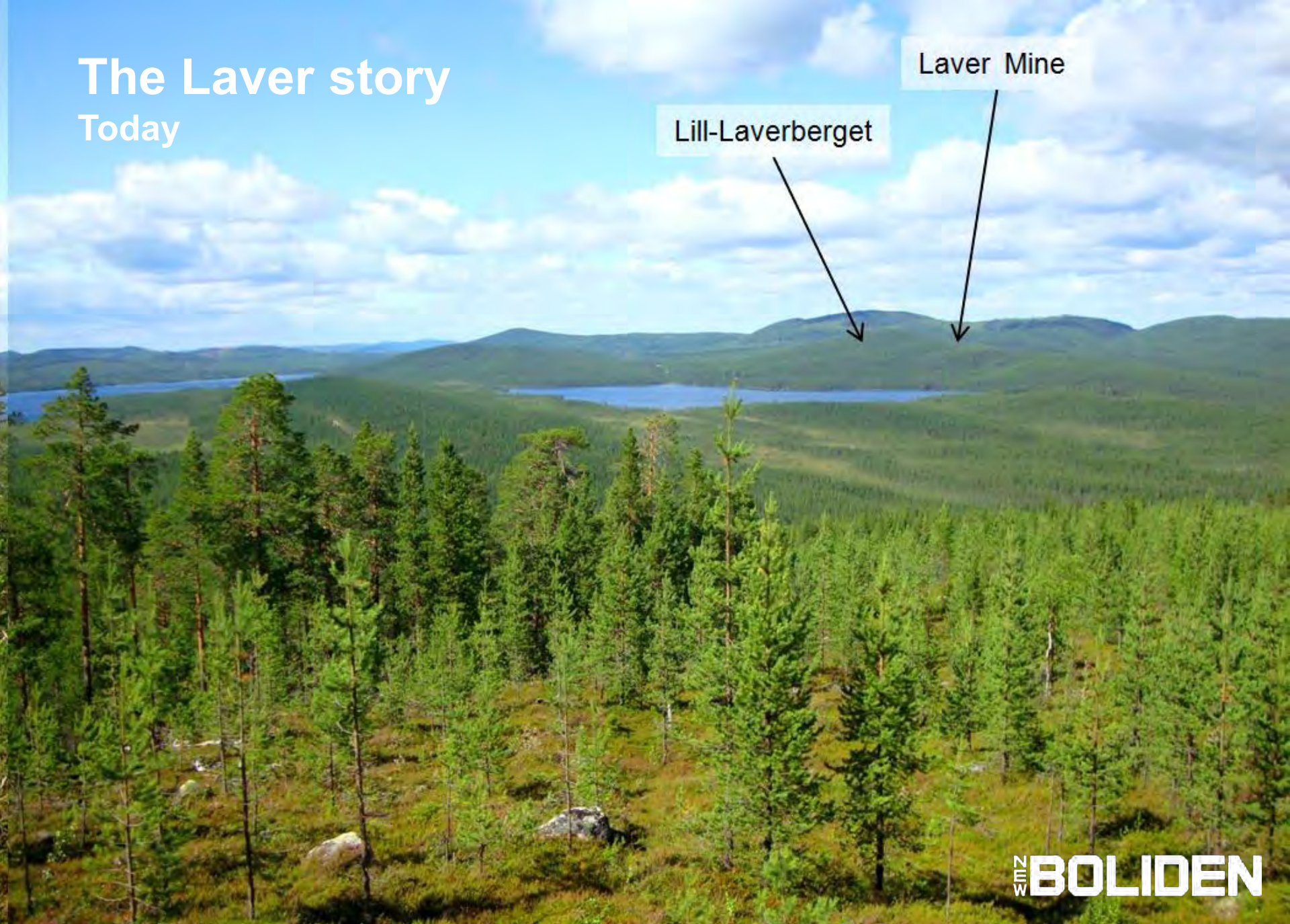
- 2007
 - Boliden New ideas - new potential
 - Earlier exploration campaigns Laver area was known to have anomalous Cu-grades
 - Exploration target was now large volume, low grade, porphyry-style Cu-mineralization (Aitik-type).
 - Exploration right granted in October 2007



○ Cu grades in top bedrock
Archive data from outcrops and rock chip sampling

The Laver story

Today



Lill-Laverberget

Laver Mine

BOLIDEN

The Laver story

Today






- 2008-2012
 - Compilation of data, fieldwork, geophysical surveying and core drilling
- 2009-2012
 - Drilling

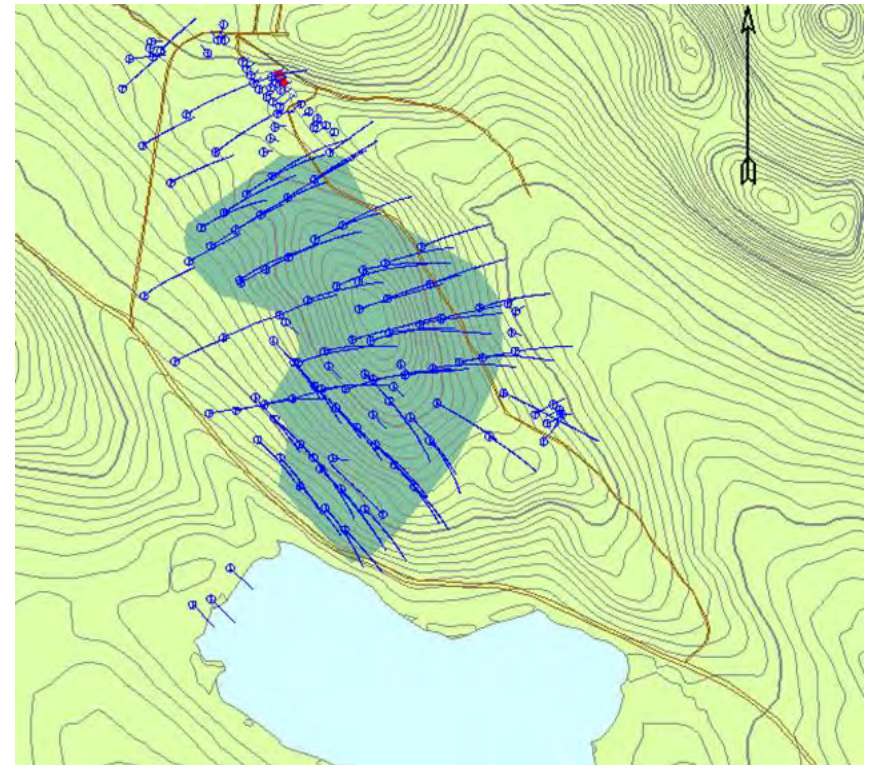
Year	Drilled m	No
2009	4,804	15
2010	5,039	13
2011	6,342	15
2012	18,858	48
Total	35,043	91



The Laver Story

The new Laver discovery

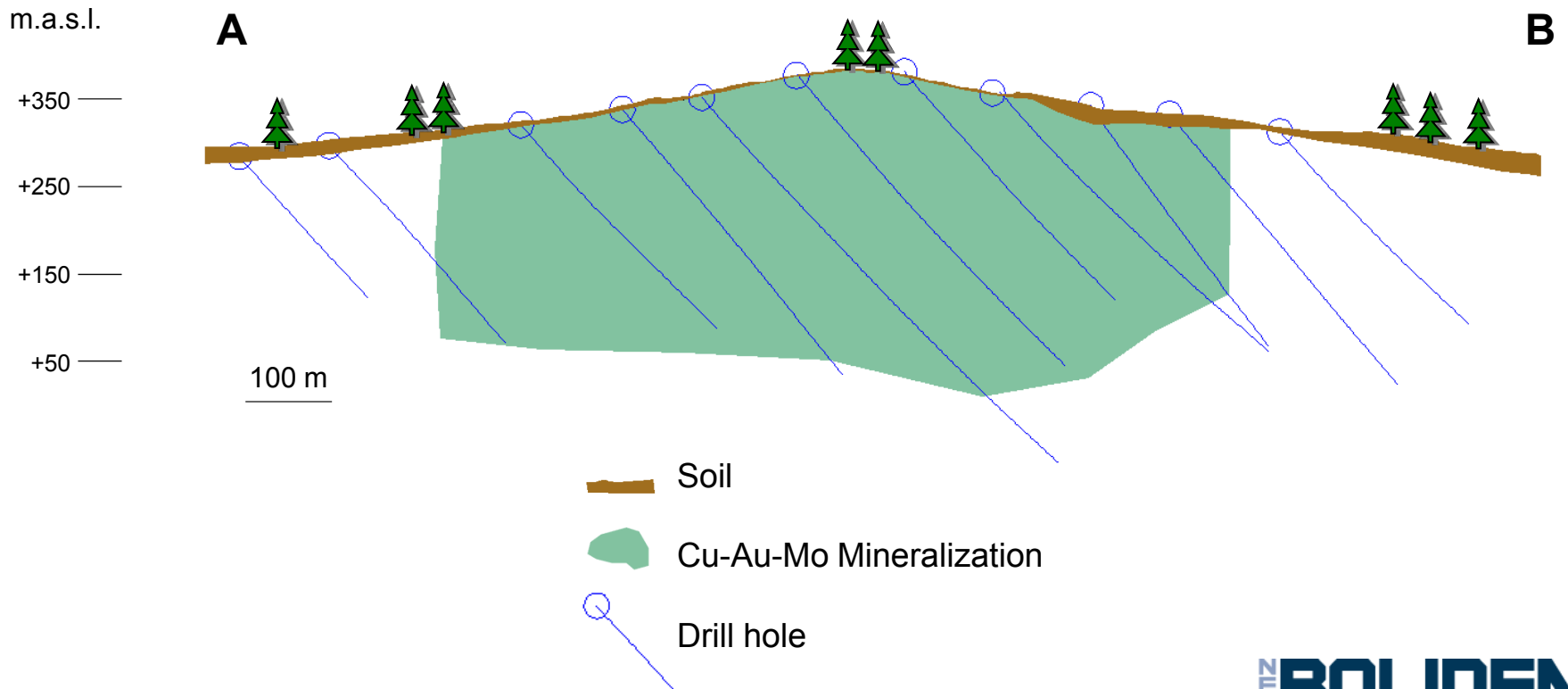
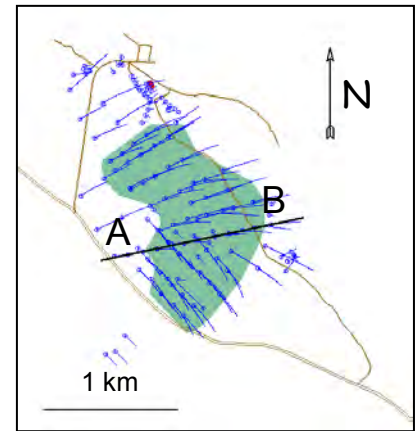
-  Drill hole used for the Mineral Resource estimation
-  Inferred Mineral Resource (Cu-Au-Mo)
-  Old mine
-  Lake
-  Road



The Laver Story

The new Laver discovery

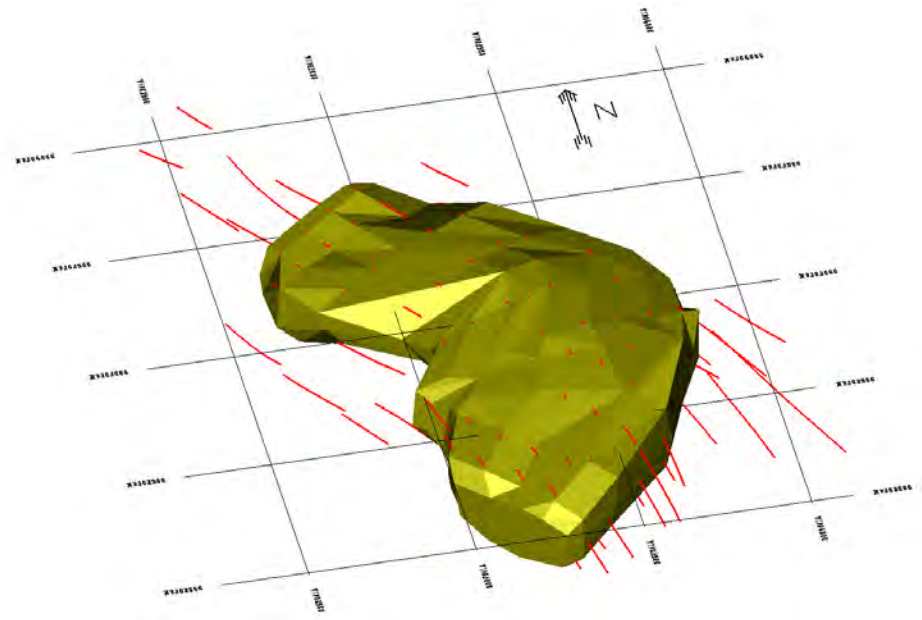
Vertical cross section



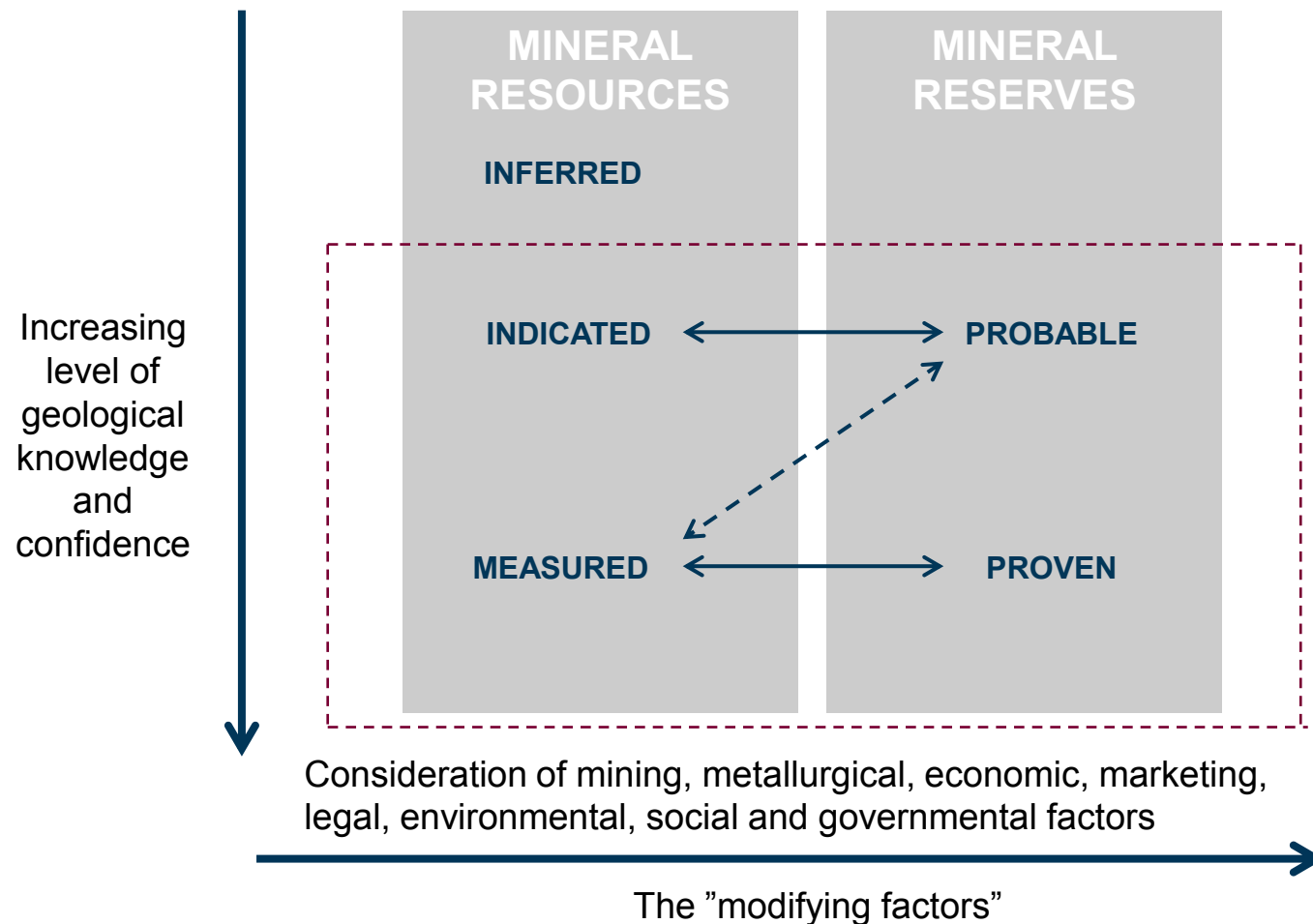
The Laver Story

Mineral Resource Estimation and near future activities

- Exploration results presented May 2012 (Q1 presentation)
- Drilling for Inferred Mineral Resource completed in mid June 2012
- Inferred Mineral Resource estimate presented here
- Mineralization not defined at depth and strike extension
- Conceptual study started autumn 2012



Exploration information



Mineral Resource Defined

Inferred Mineral Resource Nov 2012

	Mt	Cu	Au	Ag	Mo	S
		(%)	(g/t)	(g/t)	(g/t)	(%)
Inferred Mineral Resource	690	0.20	0.12	2.8	35	0.53

Exploration results May 2012

	Mt	Cu	Au	Ag	Mo	S
		(%)	(g/t)	(g/t)	(g/t)	(%)
Exploration results	500- 700	0.15- 0.25	0.10- 0.15			

Metals for modern life



Appendix

Mineral resource (JORC)

A „Mineral Resource“ is a concentration or occurrence of material of intrinsic economic interest in or on the Earth’s crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

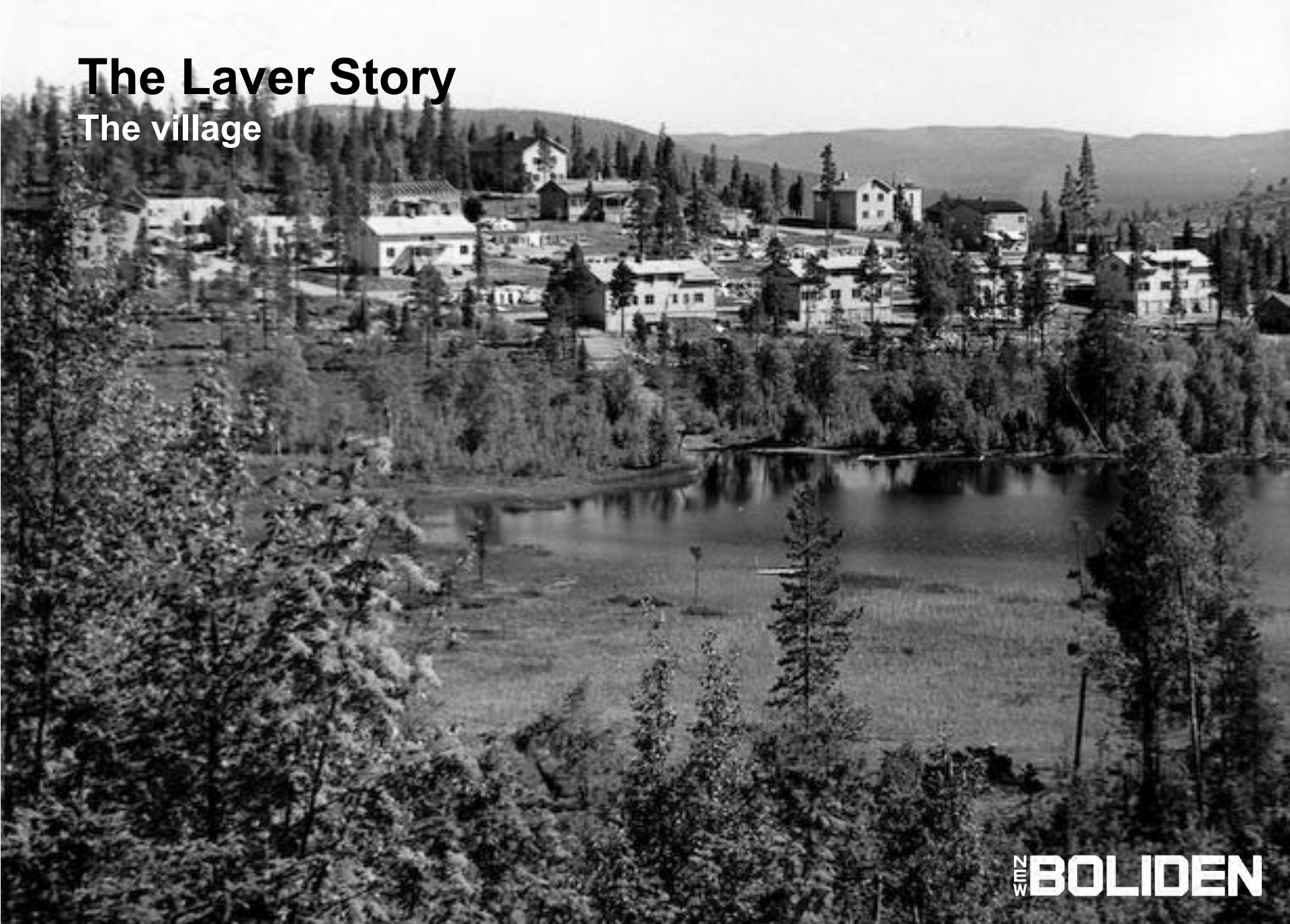
Appendix

Mineral reserve, Ore reserve (JORC)

A „Mineral Reserve“ is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

The Laver Story

The village



WMZ **BOLIDEN**

The Laver Story

The Village

- In 1946, a modern village for staff and their families was built in Laver, inhabiting 242 citizens.
- The village consisted of about 20 houses, school, food store, Community Hall etc.
- The houses were built with, for the time being, very high standard - central water and heating, toilets, electrical stoves, refrigerator and telephone to the village.



The Laver Story

The first mining period stop

- In 1946 Boliden decided to close the Laver mine
- Mining occurred at that time at about 200 m level
- The staff was transferred to other operations.
- The village and industrial buildings were removed to other operations
- In 1947 the whole village was removed and the first mining period in Laver ended.

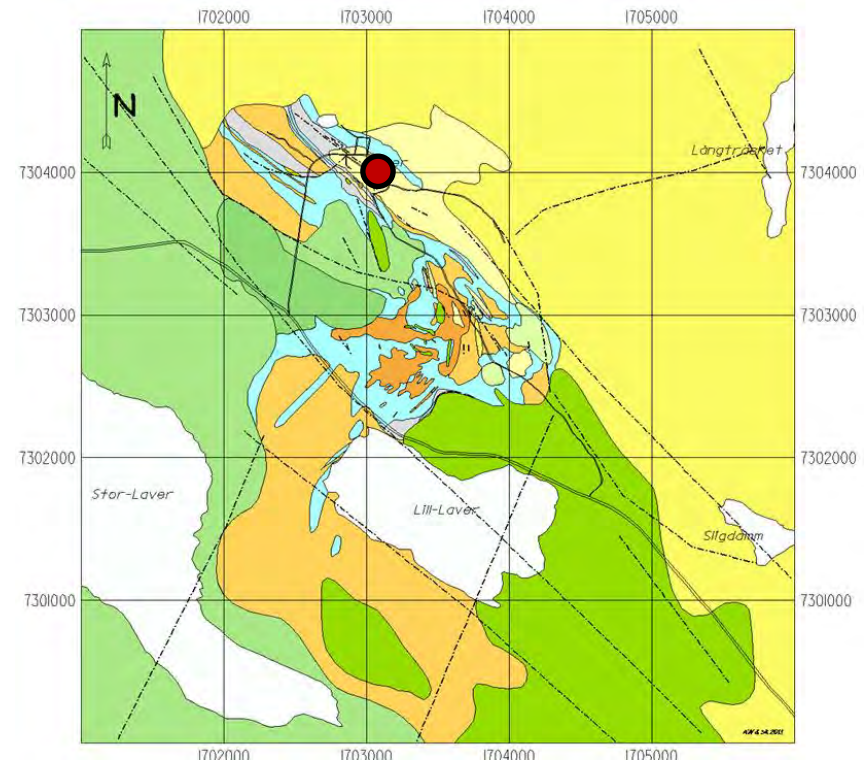


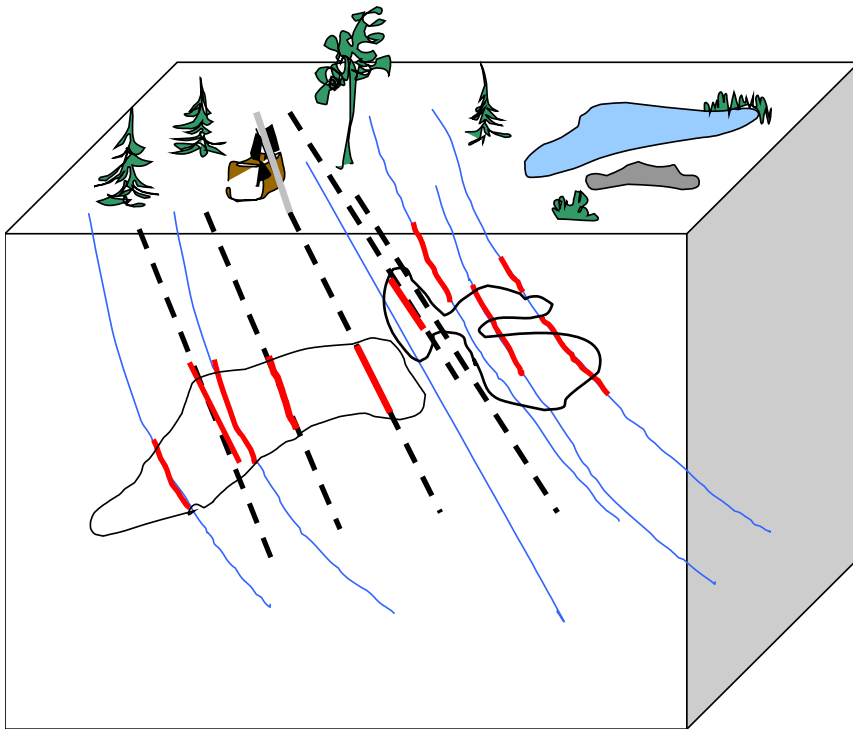
The Laver story

Geology

Rock types and mineralization

- Laver consists mainly of ca 1.9 Ga old volcanic rocks.
- The mineralization comprise mainly of sulphides in dissemination and veins. The main minerals are chalcopyrite, pyrrhotite, pyrite, molybdenite, magnetite and sphalerite.

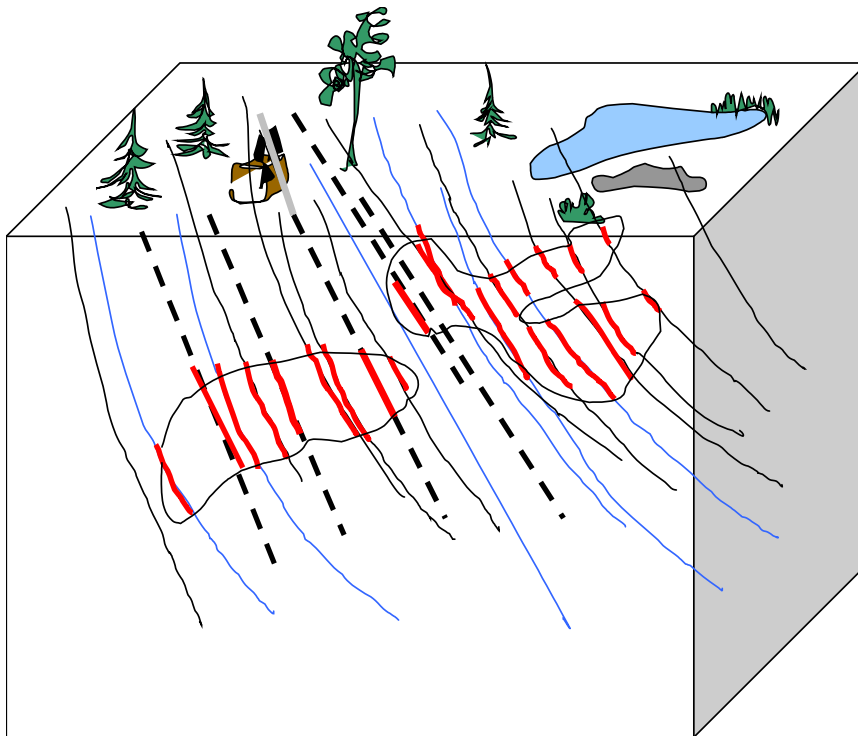




- Continued drilling
- Potential volume and grades can be estimated
- Too spaced drilling to allow interpretation of geological continuity



- *Inferred Mineral Resource*



- Continued drilling
- Geology and grade continuity assumed
- Quantity delineated with reasonable probability
- Design of geology and grade model

- *Indicated Mineral Resource*

