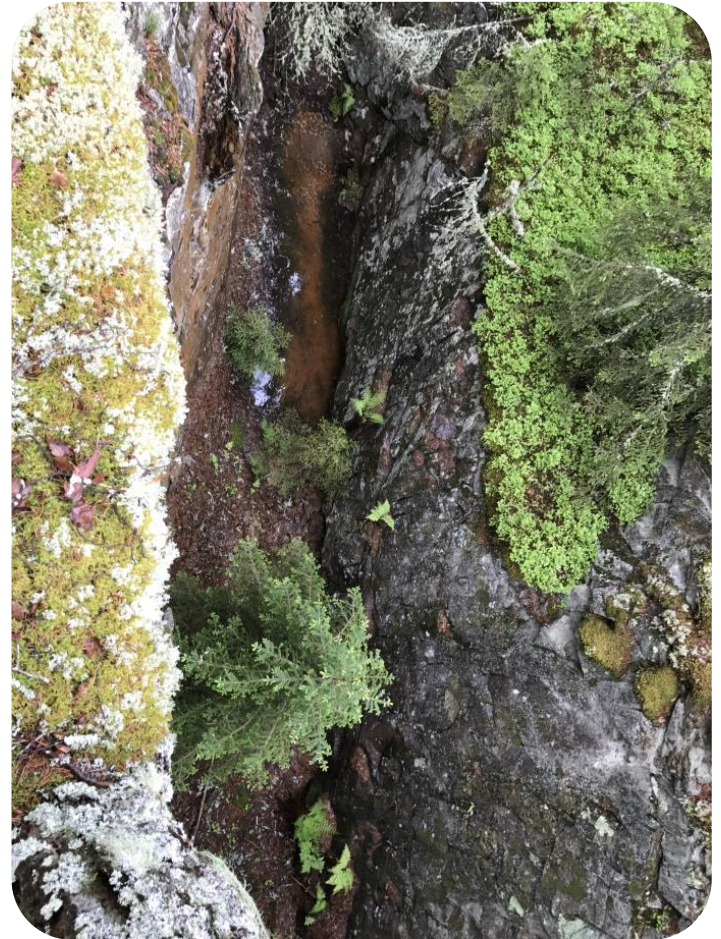


# Berkut Minerals Limited Scandinavian Cobalt

June 2017



**BERKUT**  
MINERALS LIMITED



# Corporate Snapshot



Share Price (12 June 2017) <sup>1</sup>	20.5 cents
Shares on issue <sup>2</sup>	47.3M
Options on issue <sup>3</sup>	10.5M
Market Capitalisation	\$9.7M
Cash position <sup>4</sup>	\$4.3M
Enterprise Value	\$5.4M

<sup>1</sup> As at 12 June 2017

<sup>2</sup> 31.1M tradeable with 16.2M shares subject to escrow

<sup>3</sup> 0.5M options exercisable at 20 cents, 9M at 25 cents and 1M at 30 cents

<sup>4</sup> As at 13 June



**Share Price**

## Neil Inwood

*Managing Director*

- Highly experienced geologist with +22yrs international experience in gold, base metal & specialty metals
- Experience in consulting and venture capital for the last 13yrs
- Previously Executive Geologist Verona Capital, and prior Principal Geologist with the international mining consultancy Coffey Mining
- Geological team leader that established the world-class endowment of the Panda Hill Niobium Project in Tanzania for Cradle Resources

## Justin Tremain

*Non-Executive Chairman*

- Founding MD of Renaissance Minerals (ASX:RNS) in 2010 & has overseen the Cambodian Gold Project since 2012
- +14yrs investment banking experience in the natural resources sector (NM Rothschild & Sons and Investec Bank)
- Extensive experience in the funding of natural resource projects

## Paul Payne

*Non-Executive Director*

- +30yrs experience in mining industry with >10yrs independent consulting across range of commodities & jurisdictions, from high level reviews, to development of exploration strategy to participation in DFS
- Extensive technical experience in evaluation of mineral deposits from early stage exploration to DFS
- Recent exploration includes implementation & management of gold exploration for Dacian Gold in Western Australia, and Rift Valley Resources in Tanzania

## Ben Cairns

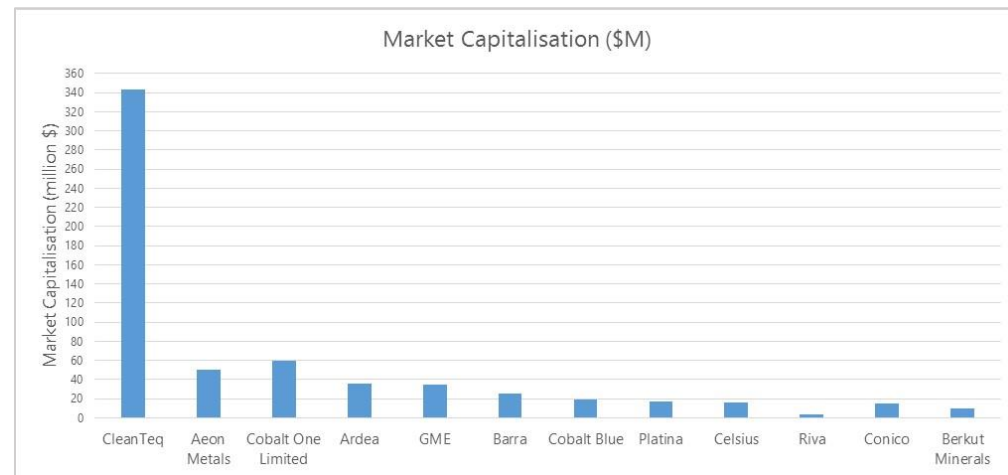
*General Manager Geology*

- Geologist with +17 years' experience with extensive knowledge of Western Australian mineral systems
- Instrumental in advancing several precious metal and bulk commodity projects through exploration, feasibility studies and development into operating mines



# Investment Highlights

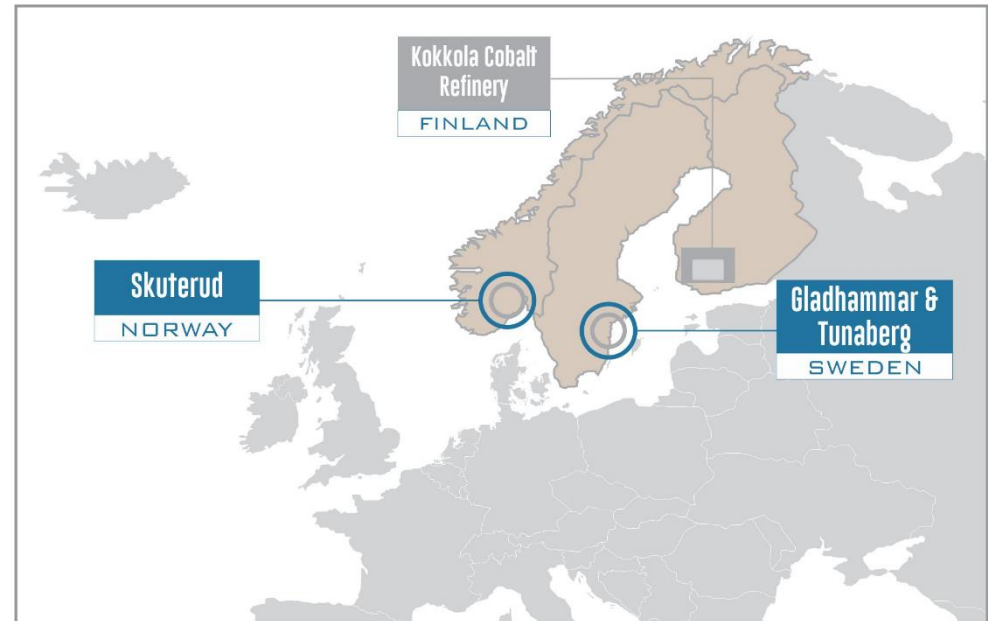
- Exposure to ethical cobalt, an increasingly important strategic metal for lithium-ion batteries
- Cobalt-dominant, brownfields projects in historic cobalt mining districts in Europe
  - Historical mined grades of up to **2% cobalt**
  - Stable mining jurisdictions, serviced by excellent infrastructure and close to Finnish and Norwegian cobalt refineries
- Upside exposure to gold and base metal potential on existing projects
- Strategically located to benefit from the growing electrification of vehicles in the European and global markets
- Tight corporate structure, highly experienced technical team
  - Only 31M tradeable shares
  - Top 20 shareholders hold ~50%
- Well funded - \$4.3M cash
- Low market capitalisation compared to peers: exceptional leverage



# Scandinavian Projects



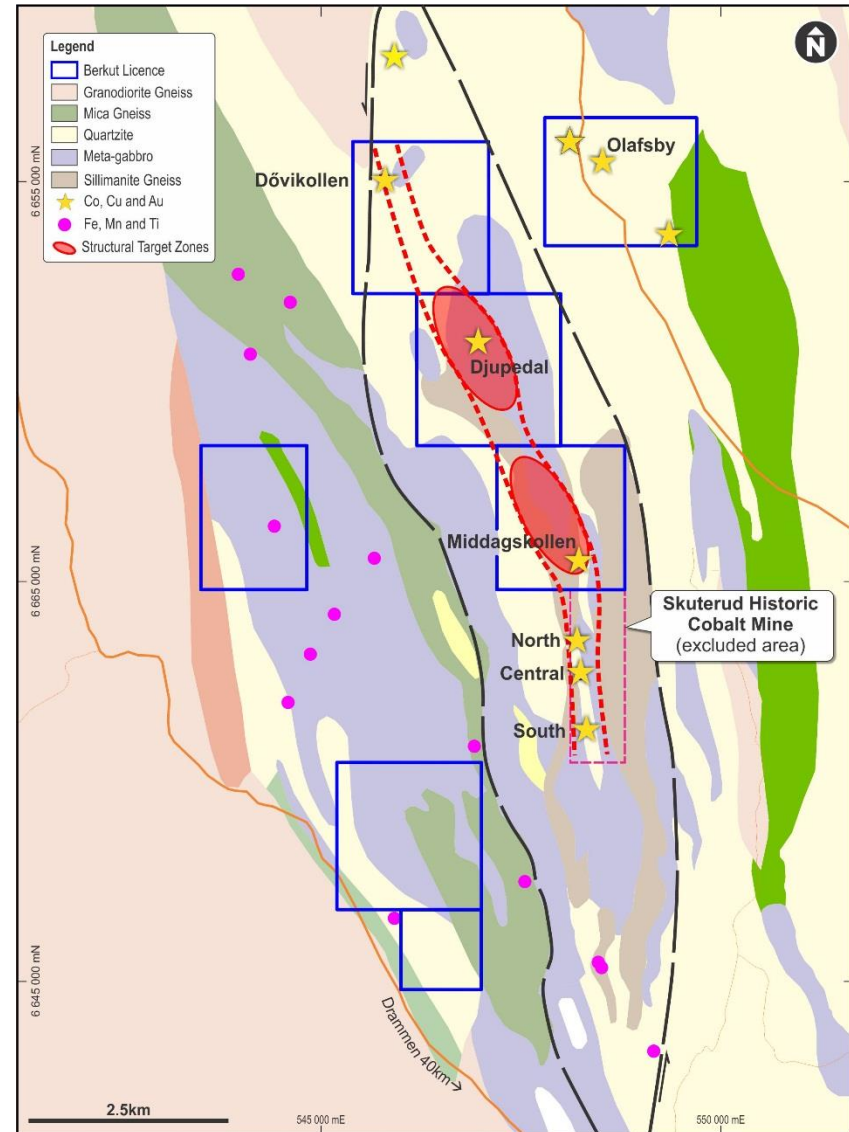
- Granted rights to 100% of three cobalt prospective projects in in Sweden and Norway
  - Skuterud Project, Norway
  - Gladhammar and Tunaberg Projects, Sweden
- Approximately 40km<sup>2</sup> of granted licenses and applications
- Projects are serviced by excellent infrastructure and close to the Kokkola cobalt refinery in Finland and strategic markets in Europe
- Prospective for cobalt dominant deposits, with extensive historic high grade underground cobalt workings, most of which have not been subject to modern day exploration



# Skuterud Project | Norway



- Located approximately 100km from Oslo port in southern Norway
- Seven granted unencumbered licenses that cover the historic Skuterud Cobalt Trend, for 1887 hectares (~19km<sup>2</sup>)
- Skuterud Mine - major source of cobalt in 19<sup>th</sup> century, approximately 574,000t of ore was mined from open pit and underground operations between 1773-1893<sup>1</sup>
- At the time, Skuterud was the World's largest producer of cobalt
- Zoned sulphide "fahlbands" with cobalt, copper and gold.
- Historic workings identified within Project area occurring in three main clusters with a general NNW trend extent of 300m
- Recent Berkut sampling adjacent to workings indicate local grades of 0.5% Co in spoil (average point readings of a handheld XRF analyser)

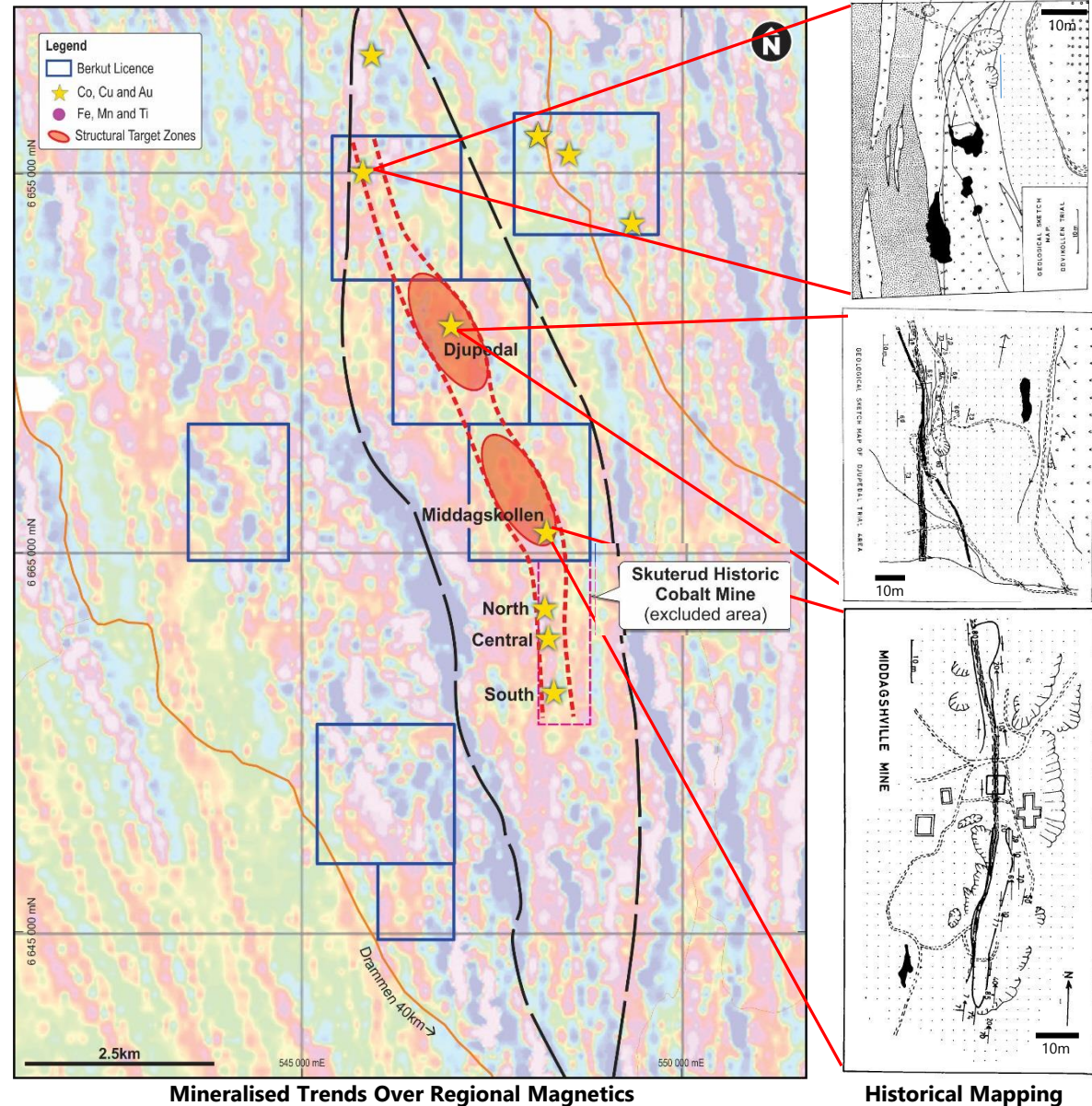


<sup>1</sup>Source: NGU

# Skuterud Project | Geology



- Berkut licences cover over 6km of the Skuterud Cobalt Trend
- Berkut holds the dominant landholding position within the Skuterud Cobalt Trend
- Historic mining has taken place at three locations within Berkut licences at:
  - Middagkollen
  - Djupedal
  - Dovikollen
- Historical mapping and recent field validation indicates presence of several mineralised 'fahlbands' on granted licenses
- Majority of mining sites remain open and untested by modern exploration



Mineralised Trends Over Regional Magnetics

Historical Mapping

# Extensive Historical Workings with Cobalt Mineralisation



Workings at the nearby Skuterud Cobalt Mine – 600m south of Berkut's tenements. Note the two parallel zones of mineralisation

# Gladhammar & Tunaberg Projects | Sweden



- Located in southern Sweden, approximately 200km and 100km respectively south of Stockholm
- Total land position of over 2,000 hectares (20km<sup>2</sup>)
  - 2 granted licences of over 300 hectares
  - New applications of 660 hectares at the Gladhammar Project and 1,100 hectares at the Tunaberg Project
- District contains historic, cobalt-dominant mine workings from 15th to 19th centuries with **mined grades up to 2% cobalt**
- Gladhammar mined for cobalt and copper from 16th to 18th centuries
  - Mineralisation consists mainly of cobaltite, chalcopyrite, pyrite and magnetite
  - Interpreted IOCG mineralisation
- Tunaberg mined for copper from 15th to 18th centuries
  - Mineralisation type is Co-Cu and Cu-Co skarns
  - Hosted by Early Proterozoic metatuffite formation with intercalated skarn-altered marbles
- Both regions remain largely untested by modern exploration methods



# Gladhammar Project - Sweden



- Located in southern Sweden, approximately 200km south of Stockholm
- Major cobalt mine in Sweden from 1777 to 1892
  - Cobalt mineralisation associated with magnetite – high density
    - Co – Fe - Cu – Au zonation
  - **Extremely high reported historic mine grades (682t) of 1.25%-2% cobalt, with 7-12% cobalt 'export ore' (15t) from 1888 to 1891 (end of mine);**
  - Global mined tonnages estimated ~ 35,000t (1777 to 1892) to a depth of 120m
- Cobalt present as part of an interpreted iron oxide-copper gold system
  - Mineralisation present as linnæite, cobaltite, chalcopyrite, pyrite and magnetite. Zoned copper and gold mineralisation also present
  - Potential for high grade gold mineralisation adjacent to the cobalt workings



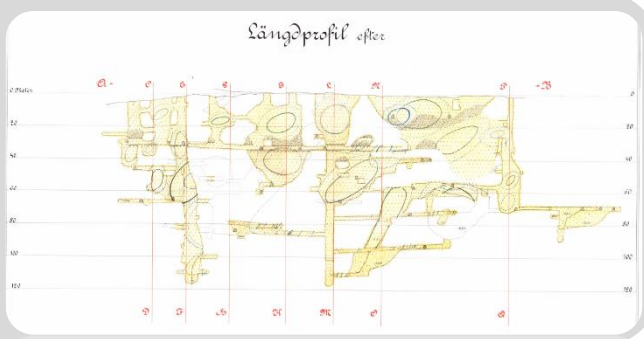
**Gladhammar historic cobalt workings**  
(source: Gunnvall, Gunvall and Aren, 2008)



år.	Jernmalmen.	Cobaltmalmen.
1888	107 tons	6 tons
1889	206 "	2 "
1890	134 "	6 "
1891	233 "	1 "

Under samma tid har jernmalmen i allmänhet varit 1,25 - 2% Kobolt och Cobaltmalmen 7-12%.

**Gladhammar end of mine production– 1888-1891**  
(source: Swedish Geological Survey, 1892)

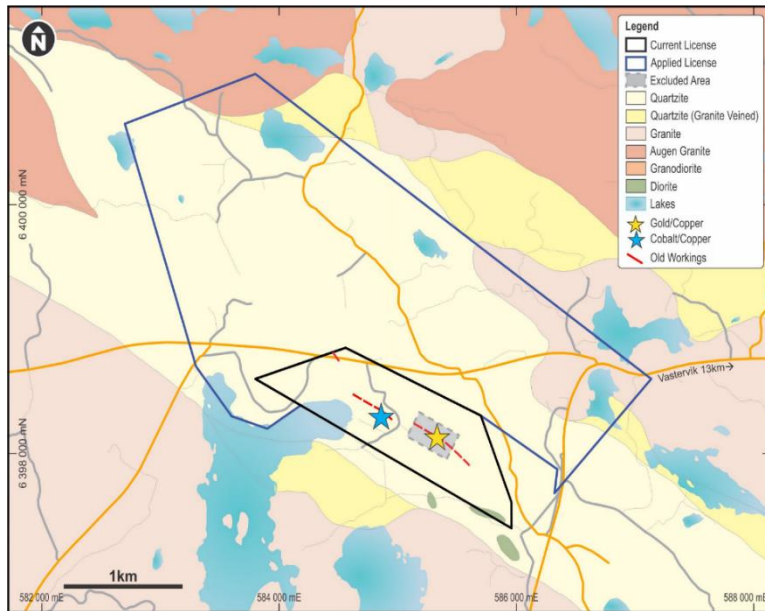


**Gladhammar historical cobalt workings map**  
(source: Swedish Geological Survey)

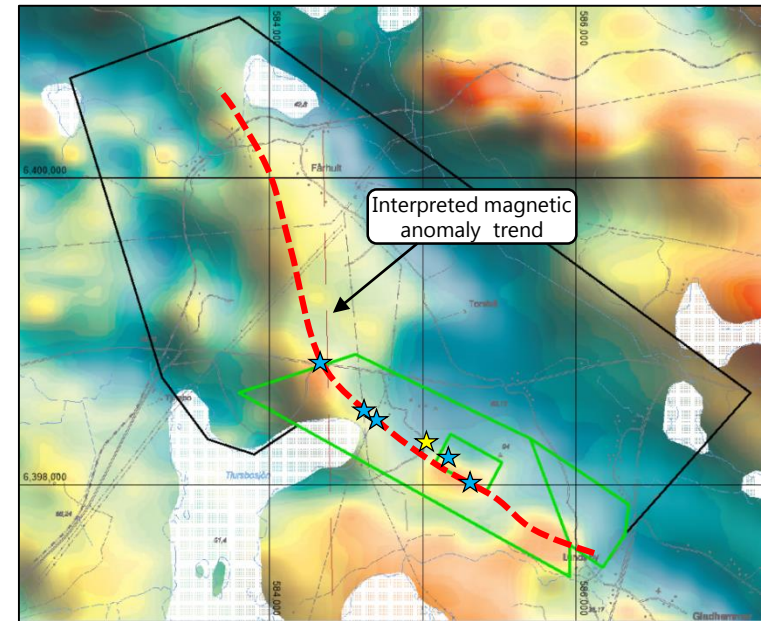


# Gladhammar Project - Exploration

- Granted and recently applied for landholding of 795 hectares
- Mineralisation associated with lateral zonation of cobalt, bismuth, copper gold in quartzite with a strong magnetite association.
- Gold mineralisation structurally controlled.
- **Excellent geological outcrop**
- Prospective magnetic trend continues for ~4.5km
  - Targets identified awaiting field validation
  - Potential for regional repeats of high grade mineralisation associated with magnetic highs
  - Detailed ground-based geophysics and drill testing required to test conceptual targets



Geology Map of the Gladhammar Project



Magnetic Anomaly Map showing cobalt and gold occurrences

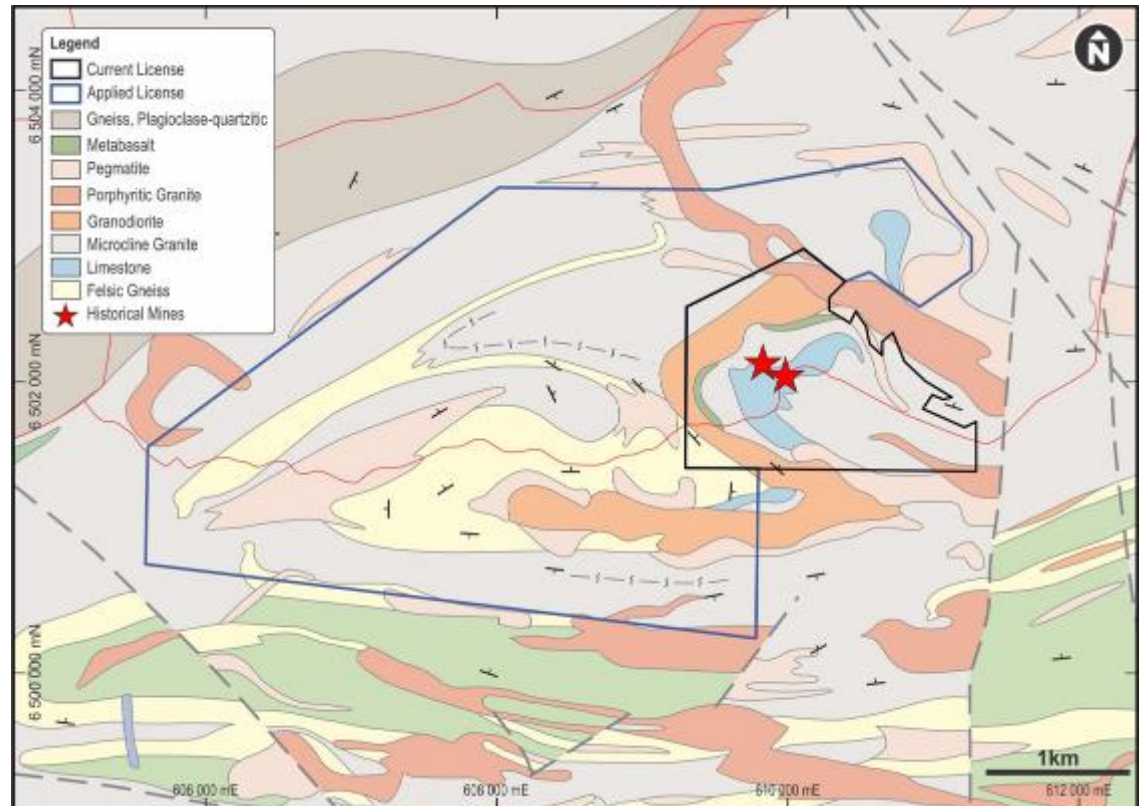
# Gladhammar Workings and Region



# Tunaberg Project | Geology



- Located in southern Sweden, approximately 100km SW of Stockholm
- Historic mining centre; copper mining during the 15th century and cobalt during the 18th century with many historic iron ore mines nearby, the district has a long mining history
- Skarn hosted cobalt mineralisation dominated by cobaltite and oenite
- Metal zonation noted in historic production, central zone of Co-Cu sulphide skarn with peripheral Zn-Pb zone hosted in graphitic slate, metatuffite and marble
- Extensive historic workings will allow for early stage structural interpretation of the ore bodies and zones and provide rapid target generation
- Recent field investigations have located additional historic workings to the west within the recent licence application.



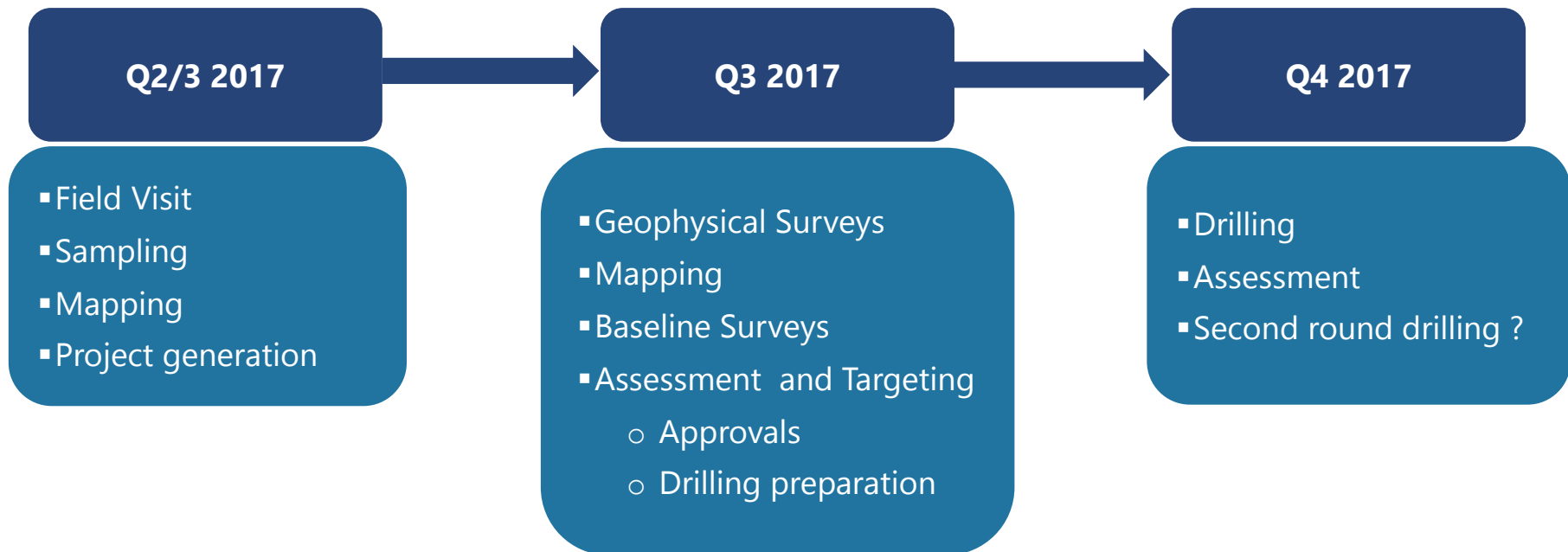
# Tunaberg Workings and Region



# Exploration Timeline - Scandinavia



- 'Boots on ground' field work underway
- Initial exploration on Gladhammar & Tunaberg Projects (Sweden) followed by Skuterud (Norway)
- Wealth of historical data expected to be unlocked through collaboration with the Swedish and Norwegian Geological Surveys and local partners
- Initial work to comprise sampling, mapping and geophysics leading up to drilling





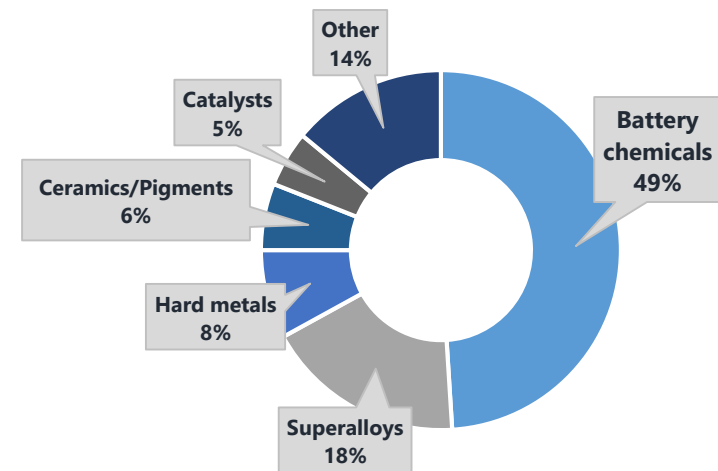
# Why Cobalt?

- Tipped by many analysts to be in short supply for many years to come; mostly produced as a by-product of Cu and Ni, which are both under-performing
- Price pressure due to increased tech demand and supply constraints
  - Relatively low natural background concentration means cobalt is produced traditionally as a by-product of copper and nickel
- In the past decade battery chemicals have developed a clear lead as cobalt's number one consuming market by volume<sup>1</sup>, accounting for approximately 49% of cobalt demand
  - Lithium-ion batteries contain more cobalt than lithium



**Strong potential for price to increase further due to supply shortfall and robust demand growth**

Source: InfoMine.com



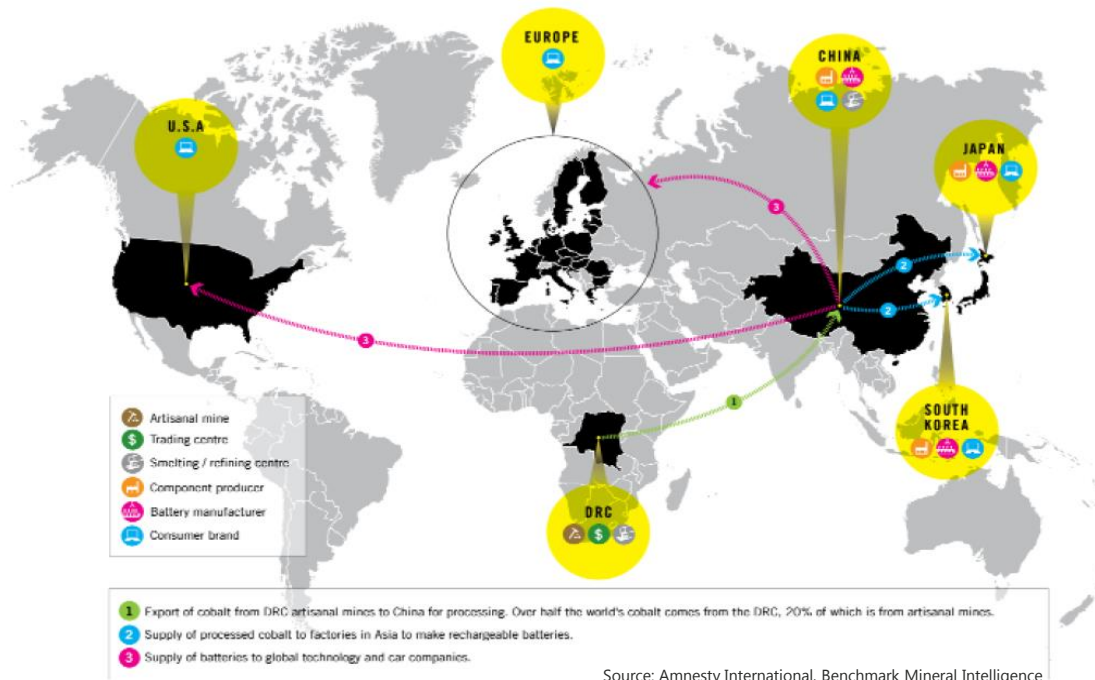
Source: Darton Commodities 2015

<sup>1</sup> Benchmark Mineral Intelligence

# Cobalt Supply



- 60% of cobalt sourced from the Democratic Republic of the Congo
- China is the main refiner of cobalt, buying from ethical and conflict zones, controlling over 40% of the world's refining capacity
- Unethical practices are not compatible with the values of large conglomerates such as Apple, Samsung, BMW, Tesla; cleaning up their supply chain
- Due to changes in supply characteristics more cobalt producers have emerged in Australia, Brazil, Cuba, Russia, Canada with significant cobalt containing nickel and copper deposits entering the market



Where Cobalt is Currently Mined and/or Refined			
Country	Mined	Refined	Approx. Refined Qty
Australia	✓	✓	5,000
Belgium		✓	6,300
Botswana	✓		In Cu & Ni ore/conc
Brazil	✓	✓	1,300
Canada	✓	✓	5,500
China	✓	✓	49,700
Cuba	✓		See Canada
Finland		✓	8,600
France		✓	130
India			100
Japan		✓	4,250
Madagascar	✓	✓	3,500
Morocco	✓	✓	1,700
New Caledonia	✓		See France
Norway		✓	3,100
Russia	✓	✓	2,000
South Africa	✓	✓	1,300
D.R. of Congo	✓	✓	3,300
Uganda		✓	Ceased operations
Zambia	✓	✓	3,000
			<u>~99,000 (tonnes)</u>

Refining can be from newly mined ores or from older slags, by-products and scrap. The definition is that "new" cobalt is produced.

Source: CDI January 2015





# Cobalt - Why Europe?

- Countries in Europe are leading the world in uptake of electric vehicles using lithium-ion batteries
- Electric vehicles totalling 22% of all new vehicle sales in Norway<sup>2</sup>
- Stationary battery storage for home or grid use is also dramatically increasing, as an efficient cathode, cobalt helps store power for longer
- Lithium-ion batteries using Cobalt are already being produced in Europe to meet this demand, and production capacity is growing dramatically.
- In Europe, four battery factories are in production, one in construction and four more planned
- Growing public demand for ethically sourced tech materials is driving producers to seek supply from secure and stable jurisdictions

## Cobalt Fast Facts

- 4kg of Cobalt required for each hybrid car
- 6kg of Cobalt required for each electric car
- 12-13 million hybrid/electric vehicles expected by 2020
- A new battery 'gigafactory' planned by Tesla could on its own lift Cobalt demand by 30,000-35,000t/year



By the Year  
**2020 COBALT**  
use in battery applications is estimated to be greater than the current entire world market for refined cobalt

## Lithium-ion (Li-Ion) battery chemistries

- Lithium Cobalt Oxide, used mostly in handheld electronics (cell phones, laptops and cameras);
- Lithium Nickel Manganese Cobalt Oxide, used mostly power tools, e-bikes and electric/power trains; and
- Lithium Nickel Cobalt Aluminium Oxide, electric vehicles and grid storage

<sup>1</sup> Investing News Network

<sup>2</sup>Source: <http://www.eafo.eu>

# Contact Us

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# Appendix A | Australian Projects



# Appendix B | Cairn Hill Gold Project



- The Cairn Hill Gold Project is centered on a 200km long gold mineralised trend, stretching between Northern Star's Paulsen's Gold Mine and the Mt Olympus Deposit in the highly prospective Ashburton Region, Western Australia
- Modern exploration at Cairn Hill commenced in 1982 and was sporadic through to the late 1990's as part of large regional projects / JV's undertaken by Esso & BHPB.
- Work to date by Berkut has focused on shallow high grade gold mineralisation identified by previous explorers (1999-2007) including:
  - 20m @ 29g/t gold from 30m; and
  - 6m @ 12g/t gold from 142m
- Whilst initial results were encouraging; CHD004 10.5m @ 8.1g/t Au from 30.5m, detailed follow up drilling failed to substantiate the early results
- The company is looking to expand exploration beyond in detail at the regional potential of the project



# Disclaimer and Competent Person



## Disclaimer and Forward Looking Statements

This presentation may contain certain forward looking statements and projections regarding:

- estimated, resources and reserves;
- planned production and operating costs profiles;
- planned capital requirements; and
- planned strategies and corporate objectives.

Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of Berkut Minerals Limited. The forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved.

Berkut Minerals Limited does not make any representations and provides no warranties concerning the accuracy of the projections, and disclaims any obligation to update or revise any forward looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws.

The information relating to the exploration results is extracted from the report 'Skuterud Samples Return High Grade Cobalt to 5,000ppm' created on 15<sup>th</sup> June 2017, 'Historical mined Cobalt grades of up to 2% at Gladhammar' created on 18th May 2015 and "Drilling completed at Cairn Hill following up High Grade Gold" created on 27 February 2017 and is available to view on [www.berkitminerals.com.au](http://www.berkitminerals.com.au). Other than as specified in this announcement and the mentioned announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Exploration Target or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements

## Competent Person

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves for the European cobalt projects is based on information compiled by Mr Neil Inwood, who is a Fellow of the AusIMM. Mr Inwood is a full time employee of Berkut Minerals and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Mr Inwood consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves for the Western Australian tenements is based on information compiled by Ben Cairns, who is a Member of the AIG. Mr Cairns is a full time employee of Berkut Minerals and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Mr Cairns consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears