Vulcan

As fast as we can towards production

The Finnish is just the Start!
Agenda

1. Overview
2. Kylylahti Copper-Cobalt Project
3. Kuhmo Nickel Project
4. Layered Intrusion Exploration - Vanadium, PGE & Nickel
5. Summary
Key Investment Themes

- Mid 2007 - Kylylahti copper-cobalt mine Bankable Feasibility Study
- Late 2007 - underground mine construction to start
- Production from early 2009, life of mine revenue of US$1.5 bn
- Project pipeline - Nickel sulphide resources & targets, vanadium deposits
The Company

- ASX: VCN, listed 2002
- 99.7m shares, 34m options
- Market capitalisation A$27m, cash A$7.5m
- Major shareholders (top 40 hold approx 75%)
  - Cambrian Mining 16.1m (16.1%)
  - Finnish Industry Investment 10.7m (10.7%)
  - Directors 5.5m (5.5%)
  - Sempra Metals 5.3m (5.3%)
  - Macquarie Bank 2.5m (2.5%)
Vulcan’s team - building a mining house in Finland

Barry Eldridge
Chairman

Alistair Cowden
Managing Director

Michael Blakiston
Non-Executive Director

Heikki Solin
Non-Executive Director

Campbell Baird
GM, Operations

Project Manager, Kylylahti

Jarmo Vesanto
Manager, Finland

Nick Walker
Chief Geologist

Seppo Tuovinen
Mining Manager, Finland
Finland is Mining Friendly

- First ranked Euro zone economy
- Government support, no royalties
- Cluster of base metals smelters & refineries
- Vibrant industry of miners, explorers & equipment manufacturers
Kylylahti Copper-Cobalt-Nickel Project

- Background
- Geology & Resources
- Mining & Processing
- Bankable Study
Kylylahti

Background
Outokumpu Copper Camp

- 2 billion lbs Cu, 1m oz Au produced
- 80 year mining history (1914-1995)
- Excellent infrastructure
Local mining culture

Historic Outokumpu Plant 20km from Kylylahti project
Malmikumpu Bar, Outokumpu
Kylylahti History

- Discovered by Outokumpu 1984
- Never developed – prices & change in corporate focus
- Acquired by Vulcan Dec 2004
- Pre-Feasibility Study Nov 2005
- Definitive Feasibility Study Completion mid 2007
Kylylahti
Geology & Resources
Regional Geology
Local Geology

- Mica schist
- Black schist
- Serpentinite
- Talc-carbonate rock
- Carbonate-skarn rock
- Quartz rock

Faults and MS-SMS (surface proj.)
Schematic Cross Section

- Complex polyphase deformation
- Upper Amphibolite facies for 200Ma
- No modern analogue
Altered ultramafic rock: quartz-tremolite-sulphide mylonite
High grade semi-massive sulphide quartz-sulphide gneiss
Large Growing Resource

- 7.45 million tonnes @ 5.5% Cu eq
  - 1.10% Cu
  - 0.22% Co
  - 0.22% Ni
  - 0.40% Zn
  - 0.7 g/t Au

- Contains metal equivalent in value to:
  - 900 million lbs copper
  - US$2.3bn (US$316/t) today’s prices

- Open at depth
Exploration Upside

- Extend high grade down plunge
- Infill the gap
- Wallaby
- 2005 Resource estimate
- Drilled extensions

Historic mines have 3-4km of strike

Long Section

- EM Conductor
- Surface

Scale: 200 m
How Big will Kylylahti be?

Comparison of Three Major Deposits in the Outokumpu Copper Camp

**Keretti Mine**
- 29.2 Mt @ 3.3% copper, 0.8% zinc, 0.25% cobalt and 0.8 g/t gold

**Vuonos Mine**
- 11 Mt @ 2.14% copper, 1.31% zinc, 0.14% cobalt and 0.17% nickel

**Kylylahti Deposit**
- 7.5 Mt @ 1.1% copper, 0.43% zinc, 0.22% cobalt, 0.22% nickel and 0.7 g/t gold
Vulcan now has the tools to explore

Introduced directional drilling & modern downhole geophysics to Finland
Target of 10-15 million tonnes

- Kylylahti extensions (1km plus?)
- Satellite Resources
  - Saramäki, Vuonos & Perttilahti
- Anomalies adjacent to Kylylahti
- Modern exploration technologies
Project Outline

- Underground decline mine, 550,000tpa, 12 year life
- Long hole open stoping with paste fill for tailings disposal
- Conventional Concentrator produces Cu-Au & Ni-Co-Zn concentrates
- Concentrate processing plant produces Ni-Co hydroxide, Zn sulphide
Project Location & Infrastructure

Roaster and Proposed Leach Plant

Kylylahti Minesite

Vuonos Railhead
Process Route

- Crush, grind
  - Flotation circuit
    - Cu-Au Concentrate
    - Co-Ni-Zn Concentrate
      - Roast concentrate
        - Leach residue
          - Nickel-cobalt hydroxide, zinc sulphide
Low impact site, excellent infrastructure

- Construction Materials - Talc Waste Dump
- Water Source - Old Talc Pits
- Power Line
- Logged Area - Plant & Portal Site
## Annual Production (Yrs 1-7)

<table>
<thead>
<tr>
<th>Average metal in concentrate</th>
<th>Value (US$) March 2007 Prices*</th>
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<tbody>
<tr>
<td>Cobalt 1,330 t</td>
<td>$ 89.0 m</td>
</tr>
<tr>
<td>Copper 8,300 t</td>
<td>$ 55.0 m</td>
</tr>
<tr>
<td>Nickel 750 t</td>
<td>$ 36.0 m</td>
</tr>
<tr>
<td>Gold 8,780 oz</td>
<td>$ 5.7 m</td>
</tr>
<tr>
<td>Zinc 1,950 t</td>
<td>$ 6.6 m</td>
</tr>
<tr>
<td></td>
<td><strong>US$193.0 m pa</strong></td>
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* copper US$3.00/lb, cobalt US$30.50/lb, nickel US$22.00/lb, gold US$650/oz, zinc US$1.53/lb
Kylylahti
Bankable Study
Bankable Study by mid 2007
Work Completed

- Compilation of historic drilling, geophysics & metallurgy
- Drilling – 43.5km Outokumpu, 14.5km Vulcan
- Geotechnical studies, mine design & schedules
- Physical, flotation, roasting & leaching testwork
- Process plant design & engineering
- Permitting in final stages
- Vulcan expenditure A$10.5m
Project Timeline

2007
- Definitive Feasibility
- Offtake
- Permitting
- Financing
- Engineering

2008
- Construction

2009
- Production
Offtake & Financing

Copper-gold concentrate
- Letters of Intent with New Boliden & Norddeutchse

Nickel-cobalt hydroxide
- Discussions with European & other refineries underway

Financing
- Discussions with banks, offtakers, partners underway, UK Financial advisor engaged
Cobalt Markets

New generation metal
- ipods, alternative fuels and hybrid cars

Demand forecast to double by 2015
- Market of 50,000tpa growing at 4-5,000tpa, a Ravensthorpe every 4 months

Structural change in market
- Stockpiles gone, Norilsk, OMG & China

Supply growth reliant on Congo & laterites
Finland - Nickel Industry

- Nickel smelter at Harjavalta owned/operated by New Boliden
- Nickel refinery at Harjavalta (Norilsk), cobalt refinery at Kokkola (OMG)
- Hitura nickel mine & mill owned by Belvedere (Toronto)
- Many former producing nickel mines, typically low grade
Kuhmo Nickel Project

- Outcropping massive nickel sulphides first discovered 1964
- Fragmented ownership allowed Vulcan to build a dominant land position
- Under-explored 150km long greenstone belt
Project History

- Nickel sulphide outcrops discovered in 1960’s-1970’s
- Limited exploration
  - Different style from known Finnish deposits
  - Metal prices
  - No large deposits found
- Outokumpu/GTK exploration in 1990’s
  - Discovered Vaara, looked at PGE’s
  - Outokumpu withdrew from mining
- Vulcan 2005
Analogous to Australia

- Abundant targets, under-explored
- 12 drilled Komatiite hosted nickel sulphide occurrences
- 150km long greenstone belt
- Vulcan 95%
- Dominant land position
Vaara Deposit

1.5% Ni outcrop discovered 10 years ago
Identical to Profitable Australian Mines

- 30,000t of nickel metal in shallow Resources indicates a fertile system
- 12 drilled Komatiite hosted nickel sulphide occurrences
- Applying Australian nickel exploration expertise

Up to 3% Ni, 2% Cu, 16 g/t PGE (Vulcan drill core)
Peura-aho deposit
- 6m of massive sulphide drilled 2 weeks ago!

Outcropping 2.5% nickel massive sulphides discovered 1964
Layered Intrusion Exploration - Vanadium, PGE & Nickel

A pipeline of opportunity
Value Drivers - people & projects

- Completion of Definitive Feasibility Study at Kylylahti, funding & offtake
- Growth in resources & reserves from drilling & satellite resources
- Realisation of value from world class nickel project
- Growing appreciation of absence of sovereign risk in country of mining excellence
For more information go to our website

www.vulcanresources.com.au

To view the Competent Persons Report go to

www.vulcanresources.com.au

Investor information / Competent Persons Report

Email: admin@vulcanresources.com.au