



# South Boulder Mines

Managing Director : Lorry Hughes

For personal use only



## World's Shallowest Potash Deposit

Mines and Money - London  
1<sup>st</sup> December 2010

[www.southbouldermines.com.au](http://www.southbouldermines.com.au) (ASX: STB)

Geo Surveys International conducting a ground gravity survey over known mineralisation at the Colluli Potash Project, Eritrea.

# 1. Executive Summary

## SOUTH BOULDER MINES

## PROJECTS

- ASX Listed October 2003 (ASX: STB), (SO3-Ber), (SO3-Fra); and
- Three outstanding projects: potash, nickel and gold.

### Colluli Potash Project, Eritrea.

- World class buried evaporite potash project in Eritrea;
- 4.5km<sup>2</sup> of potash mineralisation identified and growing;
- Potash assays returned up to 44% KCl (28% K<sub>2</sub>O) from 28.68m depth; World's shallowest deposit;
- Exploration target of 300-500Mt @ 21-25% KCl , <100m depth;
- Currently drilling, JORC/43-101 resource in December, scoping study due in March quarter;
- **Initial strategy to define a 1.5Mt p.a open pit operation and produce in 2015 – expect expansion to 3Mt p.a., 7% of world production;**
- **At USD\$400/t potash – potential revenue of ~ \$0.6 – 1.2bn p.a.**

### Duketon Greenstone Belt Projects, Western Australia.

- New Nickel Sulphide Discovery – “Australia’s most exciting greenfields nickel discovery”
- Independence Group earning 70% of nickel upon completion of BFS; and 5.20m @ 9.13% Ni, 1.09% Cu, 0.21% Co and 7.09g/t PGEs (2.20g/t Pt, 1.74g/t Pd, 0.82g/t Rh, 1.79g/t Ru);
- Mining Lease granted on 19<sup>th</sup> of November 2010;
- Currently drilling and conducting scoping study work;
- STB has 100% of Gold Rights on the DNJV and additional tenure in the Duketon Greenstone Belt.



Shallow carnallite mineralisation from COL-001, Colluli Potash Project, Eritrea.



Outstanding Nickel - copper – PGE mineralisation from the Duketon Nickel Project W.A.

## 2. Company Snapshot

### COMPANY DETAILS

Market cap @ \$1.31/share)	\$91.1M
Ordinary Shares	69.6M
Cash/NTA	\$6.0M
Unlisted Options	32.9M
Top 40 Shareholders	62%
Sprott Asset Management	15.6%



Logging potash drill core at Colluli.



COL-004 drill core showing high grade carnallite and kainitite mineralisation.

### BOARD

Terry Grammer (Chairman) + 35 years experience, discovered Cosmos Nickel Deposit and was a founder of Western Areas NL;

Lorry Hughes (Managing Director) + 18 years experience, U, Au, Pb mining and exploration, Aust., SE Asia;

Liam Cornelius (Executive Director) + 18 years experience, Au, Ni, company founder, Aust., SE Asia, Africa;

ERCOSPLAN (Potash Consultant) +50 years experience in planning and execution of projects in the potash and mineral salt industry. World renowned experts.

# 3. Share Price Performance and Activities

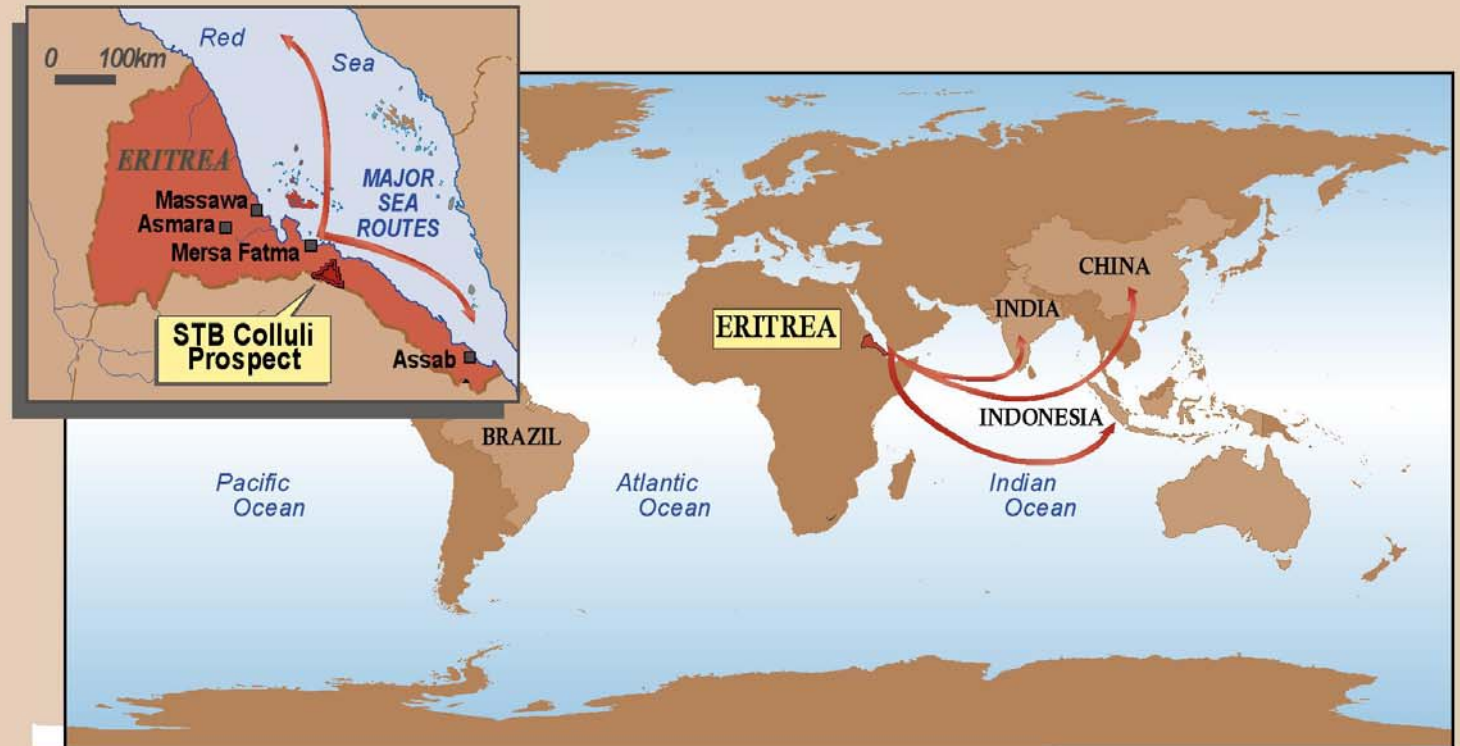


**“A Significant re-rating is expected as we push closer to producer status”**

# 5. Colluli Potash Project Ticks a lot of Boxes

## Colluli Potash Project Ticks a lot of Boxes

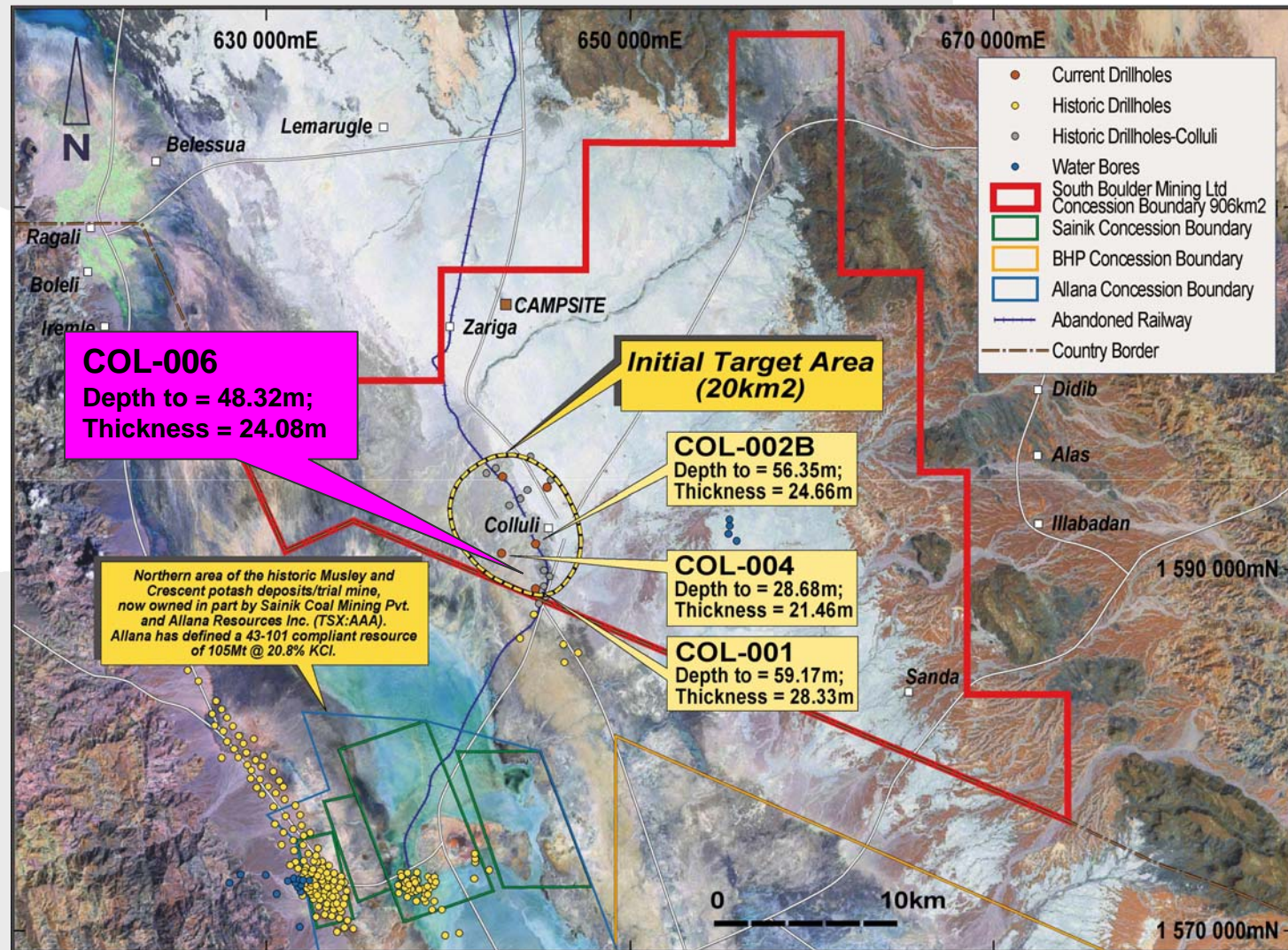
- **Close to port and markets**  
(70km to Mersa Fatma)
- **Size and grade of targets**  
(Massive deposits, huge mine lives)
- **Shallow potash horizons**  
(25 to 400m deep)
- **Underlying demand for Potash**  
(Irreplaceable)
- **Mining methods**  
(Potential for low cost solution to mining)
- **Two products can be produced**  
(KCl and K<sub>2</sub>SO<sub>4</sub>)
- **Solar evaporation**  
(Energy use ~40% of opex at other sites)
- **Geothermal energy**  
(Known hot spots in region)
- **No known significant environmental issues**



✓ **Low cap-ex and op-ex production**

# 5. Colluli Potash Project (CONT'D)

- Scoping study into a world first open cut potash mine is underway;
- This hasn't been done before because there are no deposits with these grades of potash so shallow;
- Potash mineralisation zones average 24.8m thick;
- Houston Formation potash rich layers have been intersected up to 45m thick at Musley, only 15kms from Colluli;
- Exploration target of 300-500Mt @ 21-25% KCl has an in ground value of up to ~ \$40bn at current prices of KCl;
- Sylvite- KCl  
Carnallite –  $\text{KMgCl}_3 \cdot 6(\text{H}_2\text{O})$   
Kainite –  $\text{MgSO}_4\text{KCl} \cdot 3(\text{H}_2\text{O})$



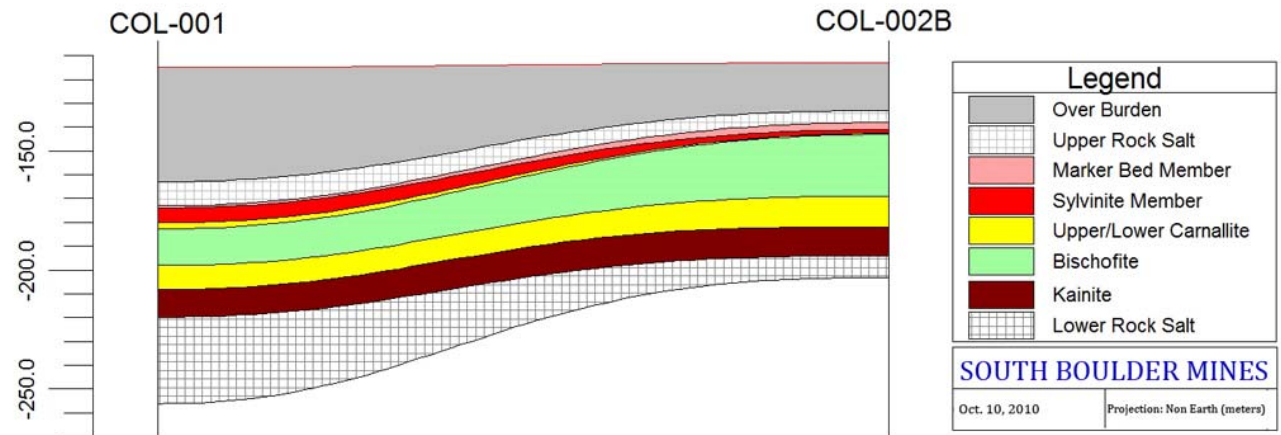
✓ *All ore types have been mined and processed together in the past*

# 6. What is Happening Next

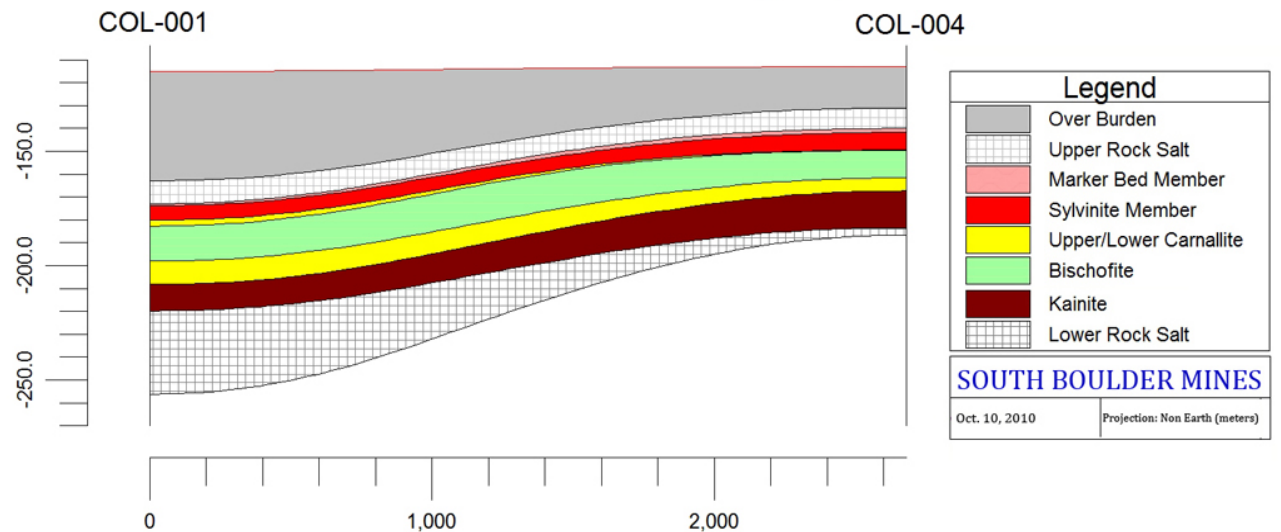
- Continue drilling potash;
- Compile JORC/43-101 compliant resource in December;
- Award Dhole geophysics contract for March quarter;
- Complete scoping study, by mid 2011;
- Award seismic survey for Dec quarter 2011;
- JORC/43-101 resource update;
- Decide on path for full feasibility studies by mid 2011.

**Significant activity**

## COL-001 - COL-002B Stratigraphic Cross-Section



## COL-001 - COL-004 Stratigraphic Cross-Section



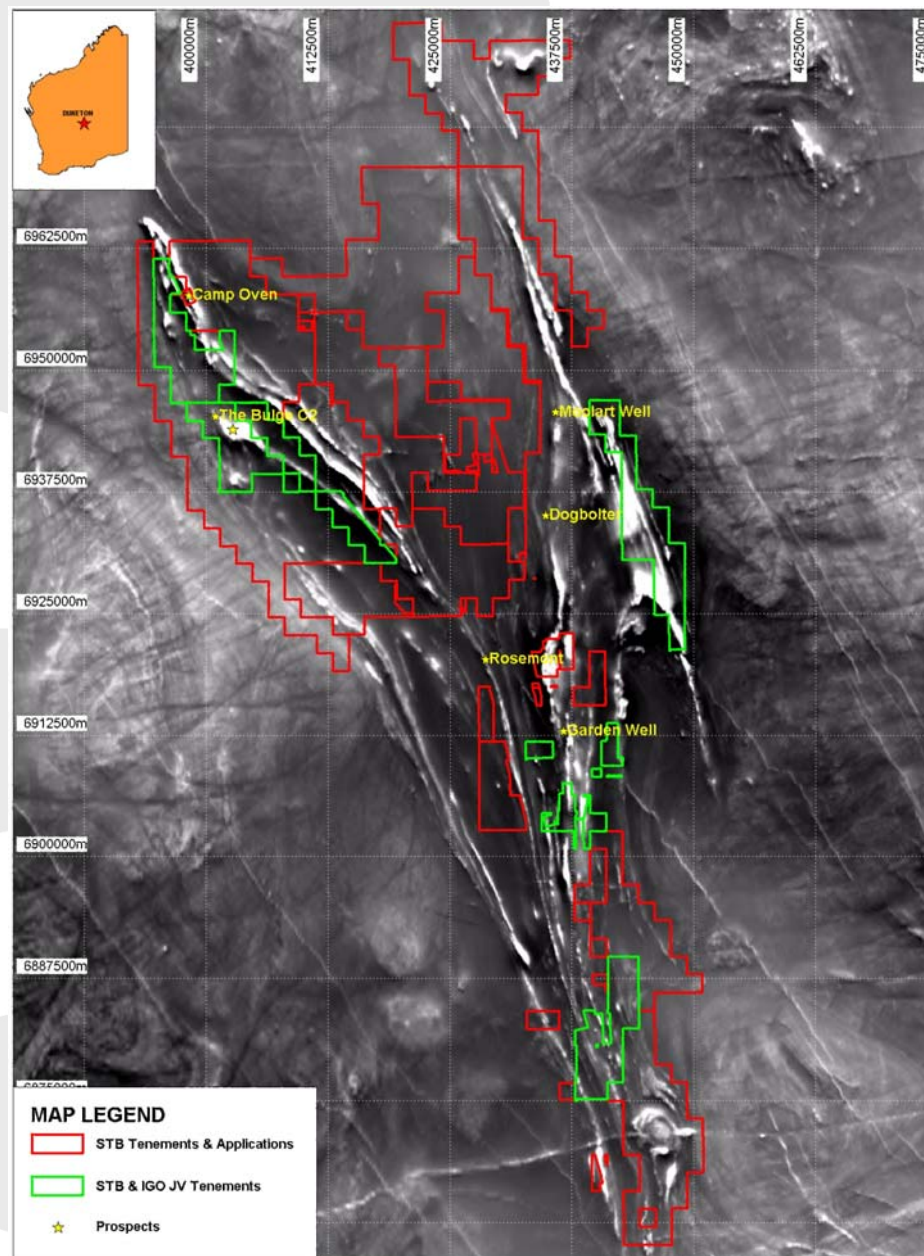
# 8. Duketon Nickel Project

QUALITY  
NICKEL  
ASSETS

ROSIE  
MASSIVE  
SULPHIDES

- Green fields massive Ni-Cu-PGE mineralisation discovery;
  - Hole TBDD098 - 5.20m @ 9.13% Ni, 1.09% Cu, 7.09g/t PGE's (2.20g/t Pt, 1.74g/t Pd, 0.82g/t Rh, 1.79g/t Ru) (TW~3.3m);
  - Hole TBDD087 – 4.55m @ 4.05% Ni, 0.74% Cu, 2.71g/t Pt+Pd (TW~2.4m);
  - Hole TBDD093 - 3.20m @ 3.20% Ni, 0.41% Cu, 2.37g/t Pt+Pd (TW~1.8m) including;
    - 1.68m @ 4.21% Ni, 0.46% Cu;
- Preliminary met work has been highly encouraging;
- Further positive results at C2;
  - 9.70m @ 1.11% within a broader zone of 25.50m @ 0.70% Ni;
  - 50.00m @ 0.92% Ni, 0.04% Cu, 0.08g/t Pt+Pd from 275.0m, including 37.00m @ 1.05% Ni.

**Brand new discovery**





# 8. Duketon Nickel Project (CONT'D)

## MASSIVE NICKEL SULPHIDES FROM ROSIE

**TBDD098 - 5.20m  
Massive Sulphide  
Intercept.**

**Nickel = 9.13%**

**Copper = 1.09%**

**Cobalt = 0.21%**

**PGE's = 7.09g/t**

**Platinum = 2.22g/t**

**Palladium = 1.74g/t**

**Rodium = 0.82g/t**

**Ruthenium = 1.79g/t**

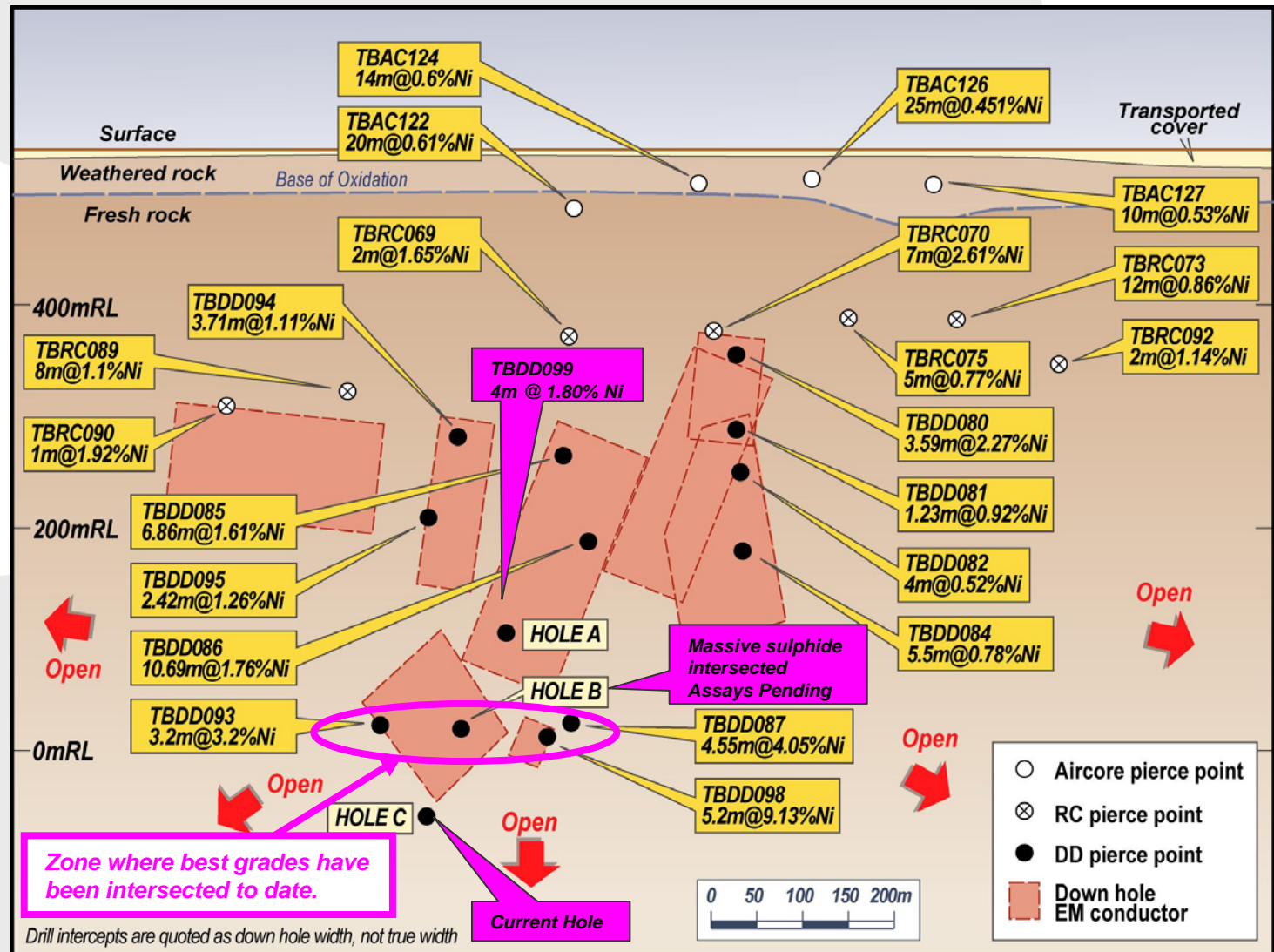
***In ground Value >  
USD\$2,400/t***



# 8. Duketon Nickel Project (CONT'D)

QUALITY NICKEL  
SULPHIDE  
MINERALISATION  
IS OPEN; MUCH  
MORE DRILLING  
IS REQUIRED

MINERALISATION  
CURRENTLY  
INTERSECTED  
OVER 750m  
STRIKE; 400m DIP  
HIGHEST GRADE  
MINERALISATION  
IS CONTINUOUS  
FOR AT LEAST  
250M



Zone where best grades have been intersected to date.

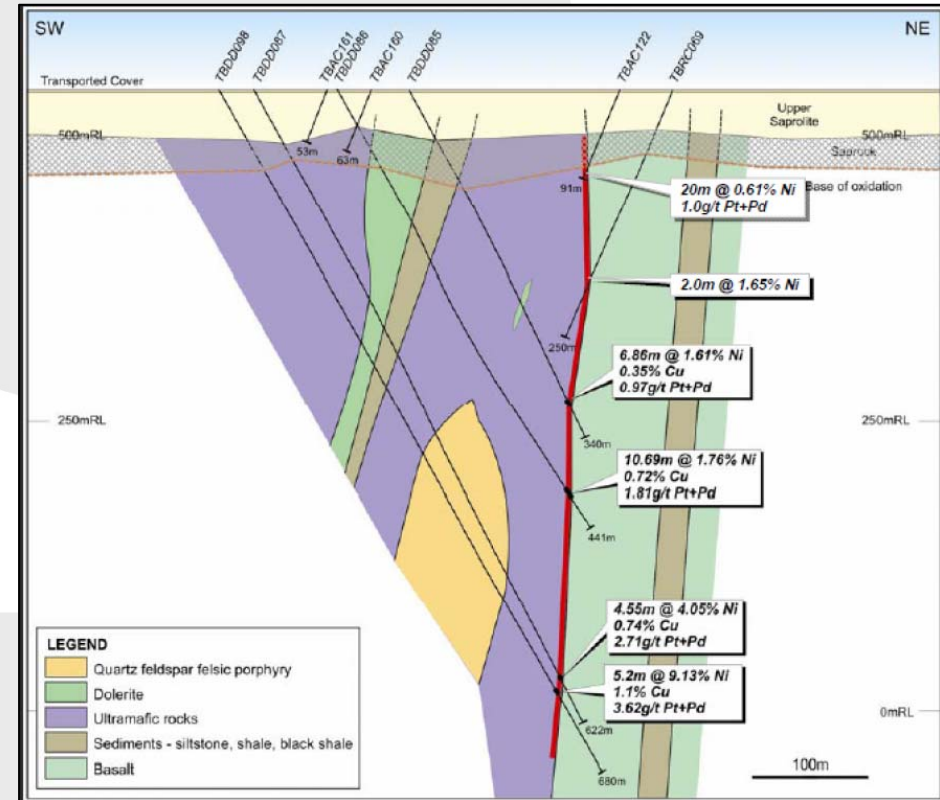
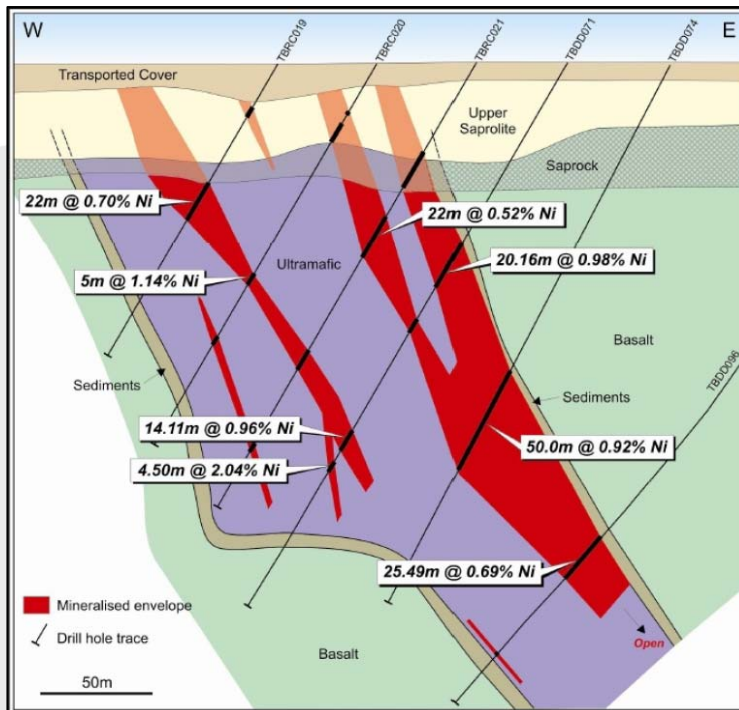
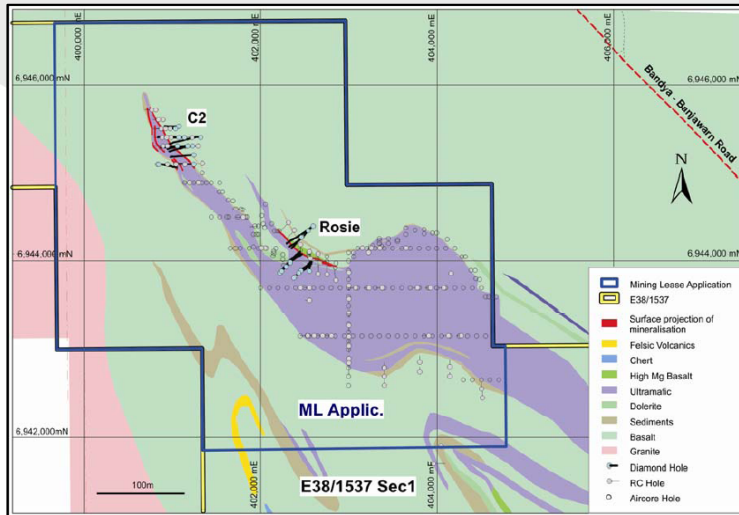
Interpreted DHTEM survey results suggest the strongest mineralisation is between holes TBDD093 and TBDD098; drilling in the area currently.

# 8. Duketon Nickel Project (CONT'D)

For personal use only

QUALITY  
NICKEL  
ASSETS

MINING  
LEASE  
GRANTED



*“The most promising and exciting Greenfields nickel project in Australia”. Terry Grammer.*



## 9. Reasons to Invest

- ✓ South Boulder has recently discovered the world's shallowest potash deposit at Colluli, drilling and scoping study work underway;
- ✓ South Boulder with JV Partner Independence has recently discovered the Rosie and C2 Ni-Cu-PGE deposits, drilling and scoping study work underway;
- ✓ The Colluli project is situated in a prime infrastructure location in an emerging potash province;
- ✓ The potash sector has excellent long term growth drivers and there is a large amount of sector interest. Large multinational resource companies participate in the sector, BHP, Vale, Potash Corp, competitor activity;
- ✓ Increased level of company promotion in key markets that understand the potential of potash, USA, Canada, Europe, Asia;
- ✓ Tight capital structure with 69.6M shares on issue; highly leveraged to success;
- ✓ Well funded with approximately \$6.0M in liquid assets + option conversions;
- ✓ On-going news flow from drilling and scoping study results in coming months.

# CONTACT

**Lorry Hughes** Bsc. MAusIMM  
Managing Director

Mobile 0400 038 439

Int. Mobile +61 400 038 439

Telephone +61 8 6315 1444

Facsimile +61 8 9478 7093

[lorry@southbouldermines.com.au](mailto:lorry@southbouldermines.com.au)

[www.southbouldermines.com.au](http://www.southbouldermines.com.au)

For personal use only

# Disclaimer

## **Forward-Looking Statements**

The following presentation represents South Boulder Mine's best judgement at the time of presentation. This document is in summary form and does not purport to be all inclusive or complete. The contents include forward looking statements prepared on the basis of assumptions which may prove to be incorrect. This presentation should not be relied upon as a recommendation or forecast by South Boulder Mine Limited. No representation or warranty is made as to the accuracy, completeness or reliability of the information.

## **Competent Persons**

Information that relates to Exploration Results including exploration data and geological interpretations is based on information compiled by Lorry Hughes who is a full time employee at South Boulder Mines Ltd. Exploration results from the Duketon Nickel JV has been supplied by Independence Group who are operator of the Duketon Nickel JV. Lorry Hughes is a member of the AusIMM and has experience which is relevant to the style of mineralisation and type of deposits under consideration, and to the activities which is being undertaken to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Lorry Hughes consent to the inclusion in the report of the matters based on his information in the form and context in which it appears. The data, interpretation and diagrams for the Duketon Nickel JV have been provided courtesy of Independence.

## **JORC- Exploration Targets**

It is common practice for a company to comment on and discuss its exploration in terms of target size and type. The information in this presentation relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context. The potential quantity and grade stated or implied is conceptual in nature, since there has been insufficient work completed to define them beyond exploration targets and it is uncertain if further exploration will result in the determination of a Mineral Resource.