



# South Boulder Mines

Managing Director : Lorry Hughes

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The Next Globally  
Significant Potash  
Producer  
Investor Update

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

# 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 Mines 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. Most data, interpretation and diagrams for the Duketon Nickel JV have been provided courtesy of Independence.

Information that relates to Mineral Resource estimates supplied by South Boulder Mines Ltd are done so under supervision by Ercosplan. Dr Henry Rauche and Dr Sebastiaan van der Klauw are co-authors of the JORC and 43-101 compliant resource report. Lorry Hughes is a member in good standing of the Australian Institute of Mining and Metallurgy and Dr.s' Rauche and van der Klauw are members in good standing of the European Federation of Geologists (EurGeol) which is a "Recognised Overseas Professional Organisation" (ROPO). A ROPO is an accredited organization to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserves for submission to the ASX. Mr Hughes, Mr Rauche and Mr van der Klauw are geologists and they have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they have undertaken to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Hughes, Mr Rauche and Mr van der Klauw consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## JORC- Exploration Targets

The Colluli Potash Project has a current JORC/43-101 Compliant Measured, Indicated and Inferred Mineral Resource Estimate of **547.62Mt @ 18.58% KCl (total contained potash of 101.73Mt); Includes 119.21Mt @ 23.14% KCl**. The resource contains 33.39Mt @ 18.56% KCl in the Measured Category, 173.37Mt @ 18.57% KCl in the Indicated Category and 340.86Mt @ 18.58% KCl in the Inferred Category. The current Mineral Resource Estimate is included in the current exploration target of **750Mt – 1.25 billion tonnes @ 18-20% KCl**. The potential quantity and grade of the total current exploration target which includes the current Mineral Resource Estimate is conceptual in nature and there has been insufficient exploration to define a Mineral Resource other than the current Mineral Resource Estimate and it is uncertain if further exploration will result in the determination of a Mineral Resource Estimate other than the current Mineral Resource Estimate.

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 Estimate other than the current Mineral Resource Estimate.

## Quality Control and Quality Assurance

South Boulder Exploration programs follow standard operating and quality assurance procedures to ensure that all sampling techniques and sample results meet international reporting standards. Drill holes are located using GPS coordinates using WGS84 Datum, all mineralisation intervals are downhole and are true width intervals. Assay values are shown above a cut-off of 6% K<sub>2</sub>O. The samples are derived from HQ diamond drill core which in the case of carnallite ores are sealed in heat sealed plastic tubing immediately as it is drilled to preserve the sample. Significant sample intervals are dry quarter cut using a diamond saw and then resealed and double bagged for transport to the laboratory. Halite blanks and duplicate samples are submitted with each hole. Chemical analyses were conducted by Kali-Umwelttechnik GmbH Sondershausen, Germany utilising flame emission spectrometry, atomic absorption spectroscopy and onchromatography. Kali-Umwelttechnik (KUTEC) Sondershausen1 have extensive experience in analysis of salt rock and brine samples and is certified according by DIN EN ISO/IEC 17025 by the Deutsche Akkreditierungssystem Prüfwesen GmbH (DAR). The laboratory follow standard procedures for the analysis of potash salt rocks • chemical analysis (K<sup>+</sup>, Na<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, Cl<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, H<sub>2</sub>O) and X-ray diffraction (XRD) analysis of the same samples as for chemical analysis to determine a qualitative mineral composition, which combined with the chemical analysis gives a quantitative mineral composition.

# 1. Executive Summary

## SOUTH BOULDER MINES

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

## PROJECTS

### Colluli Potash Project, Eritrea.

- World class buried evaporite potash project in Eritrea;
  - JORC/43-101 Resource 548Mt @ 18.6% KCl (102Mt potash) includes 119Mt @ 23% KCl (*all < 100m depth*);
  - >12km<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 0.750-1.25Bt @ 18-20% KCl , (*<100m depth*);
  - New discovery 10kms northwest of Colluli resource;
  - *Initial strategy to consider producing 2 – 10Mt p.a of potash from an open pit operation and produce in 2016/17 (55Mt p.a. is current global production);*
  - *Potential to be the lowest cap-ex and op-ex operation in the world; industry prod<sup>n</sup> costs are ~ USD\$100 – \$250/t;*
- # See disclaimer on preceding page referring to JORC Exploration Targets.

### Duketon Greenstone Belt Projects, Western Australia.

- New Nickel Sulphide Discovery – “Australia’s most exciting greenfields nickel discovery”;
- Independence Group (ASX; IGO) 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.



Diamond drilling at the Colluli Potash Project, Eritrea.



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



## 2. Company Snapshot

### COMPANY DETAILS

Market cap @ \$4.52/share)	\$387M
Ordinary Shares	85.5M
Cash/NTA	\$17.0M
Unlisted Options (\$7.2m)	20.5M
Top 40 Shareholders	65%
Sprott Asset Management	19%

### BOARD

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

Lorry Hughes (Managing Director - Geologist) +19 years experience, K, U, Au, Pb mining and exploration, Aust., SE Asia;

Liam Cornelius (Executive Director - Geologist) +19 years experience, K, Au, Ni, company founder, Aust., SE Asia, Africa;

### POTASH EXPERTISE

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

Dr. Chris Gilchrist (Feasibility Manager) +30 years experience, K, mineral sands, diamonds, 20 years on African projects, processing, power, rail, port and market expertise in potash.



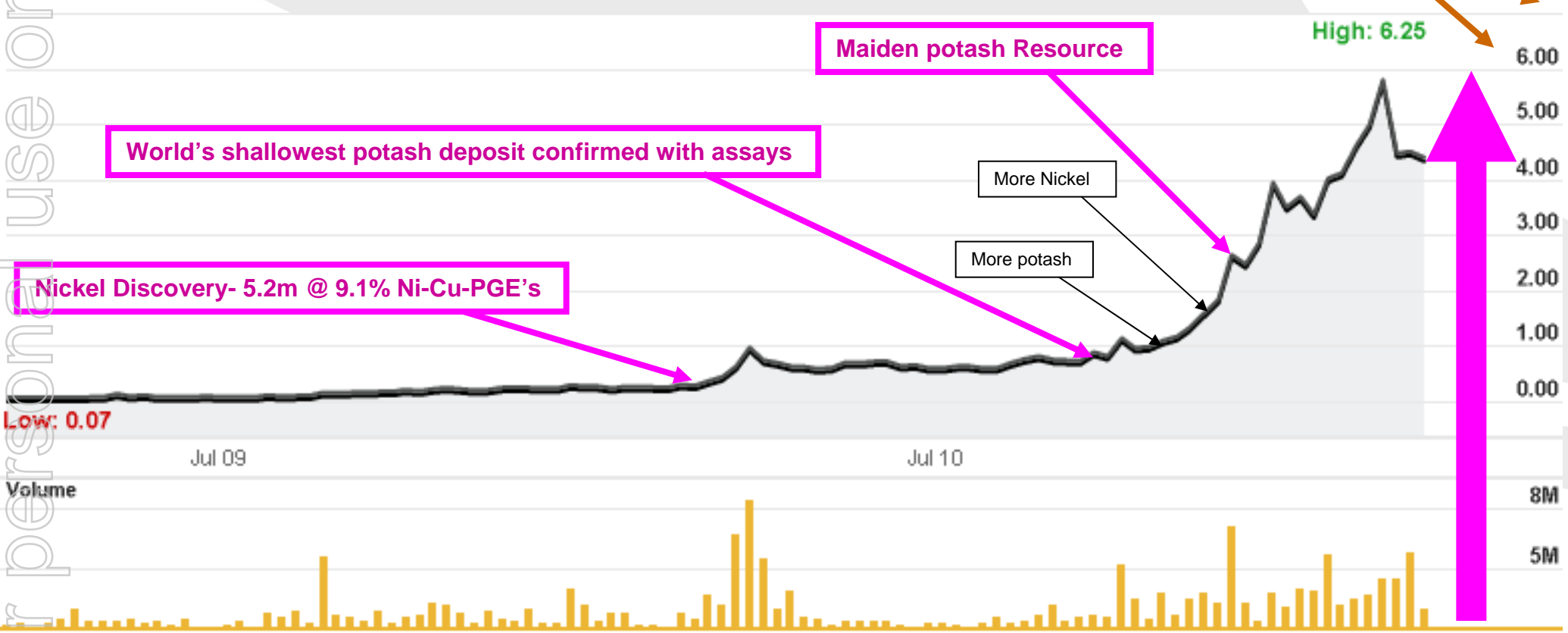
Logging potash drill core at The Colluli Potash Project, Eritrea.



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

# 3. Share Price Performance and Activities

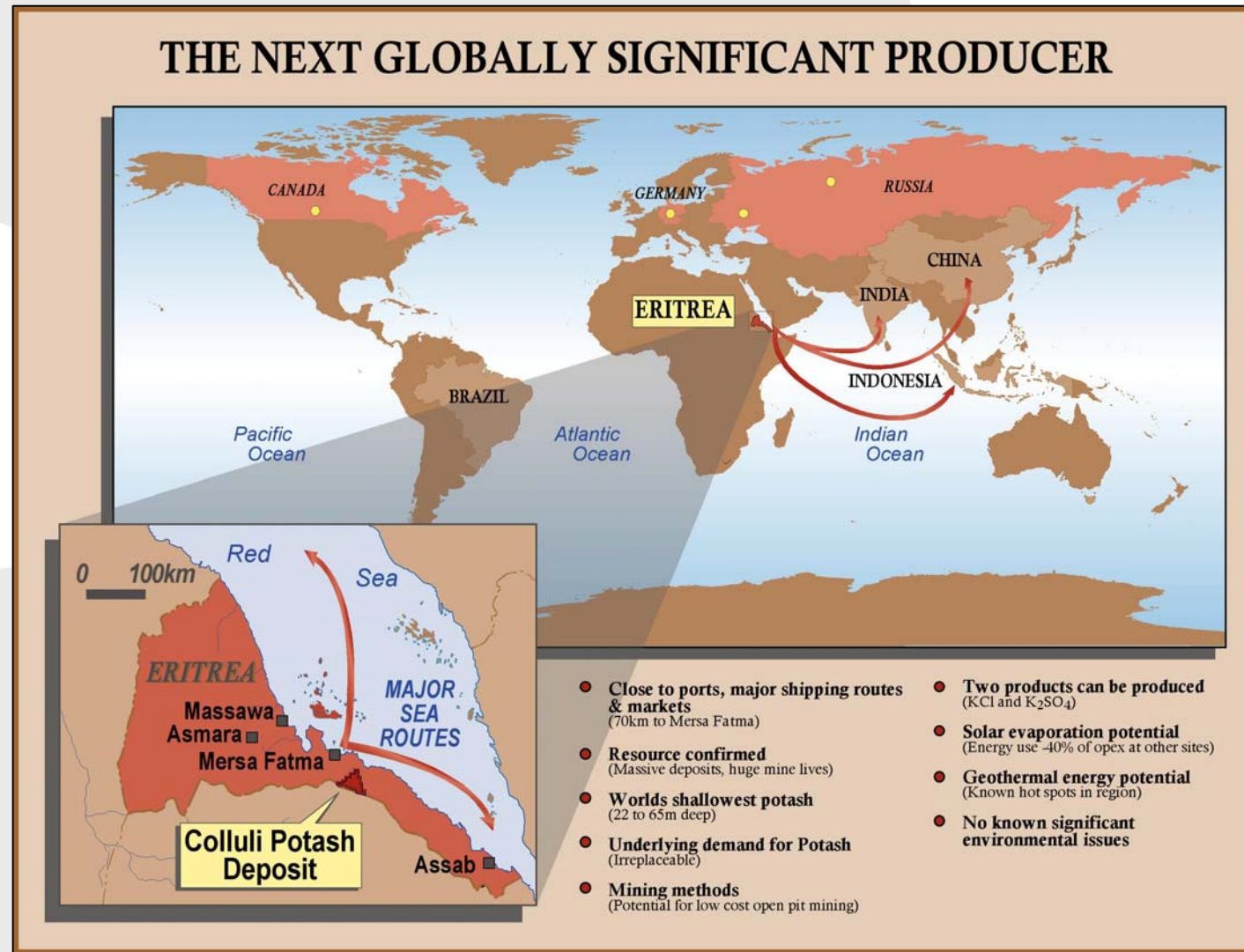
2 Year Chart



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

# 4. Colluli Potash Project

- The project has numerous positive aspects;
- Positive aspects should lead to cheap operating and capital costs particularly the ability to utilise open pit mining;
- Expect operating costs to be in lower 25% of the industry (industry costs are ~ USD\$100 - \$250/t);

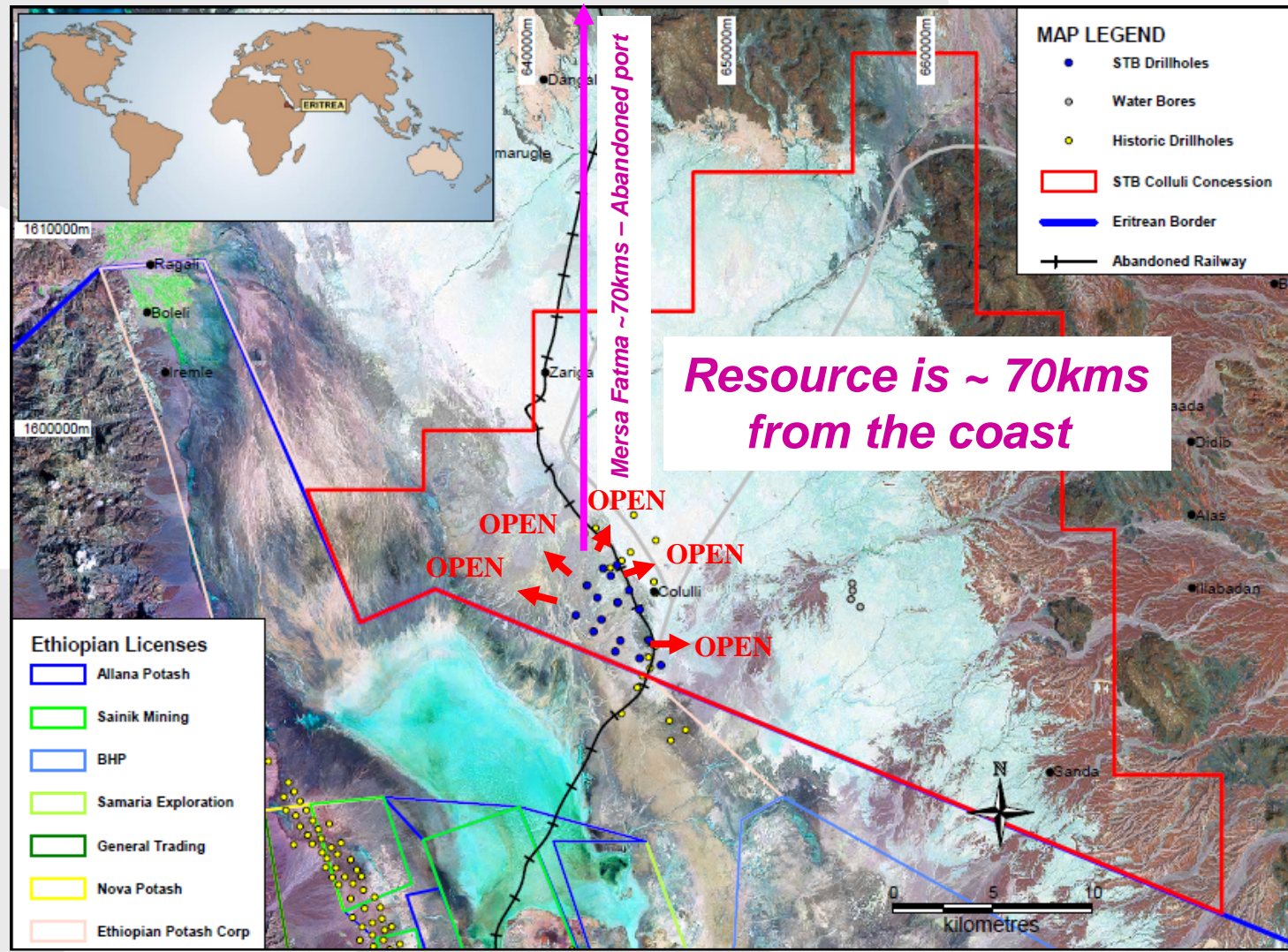


✓ *Low cap-ex and op-ex production.*



# 4. Colluli Potash Project (CONT'D)

- The Colluli Project is a key asset in an emerging world class potash rich basin;
- Scoping study into a world first open cut potash mine is underway and on track for completion by mid-year;
- This hasn't been done before because there are no deposits with these potash minerals so shallow;
- Sylvite- KCl  
Carnallite –  $\text{KMgCl}_3 \cdot 6(\text{H}_2\text{O})$   
Kainite –  $\text{MgSO}_4 \cdot \text{KCl} \cdot 3(\text{H}_2\text{O})$

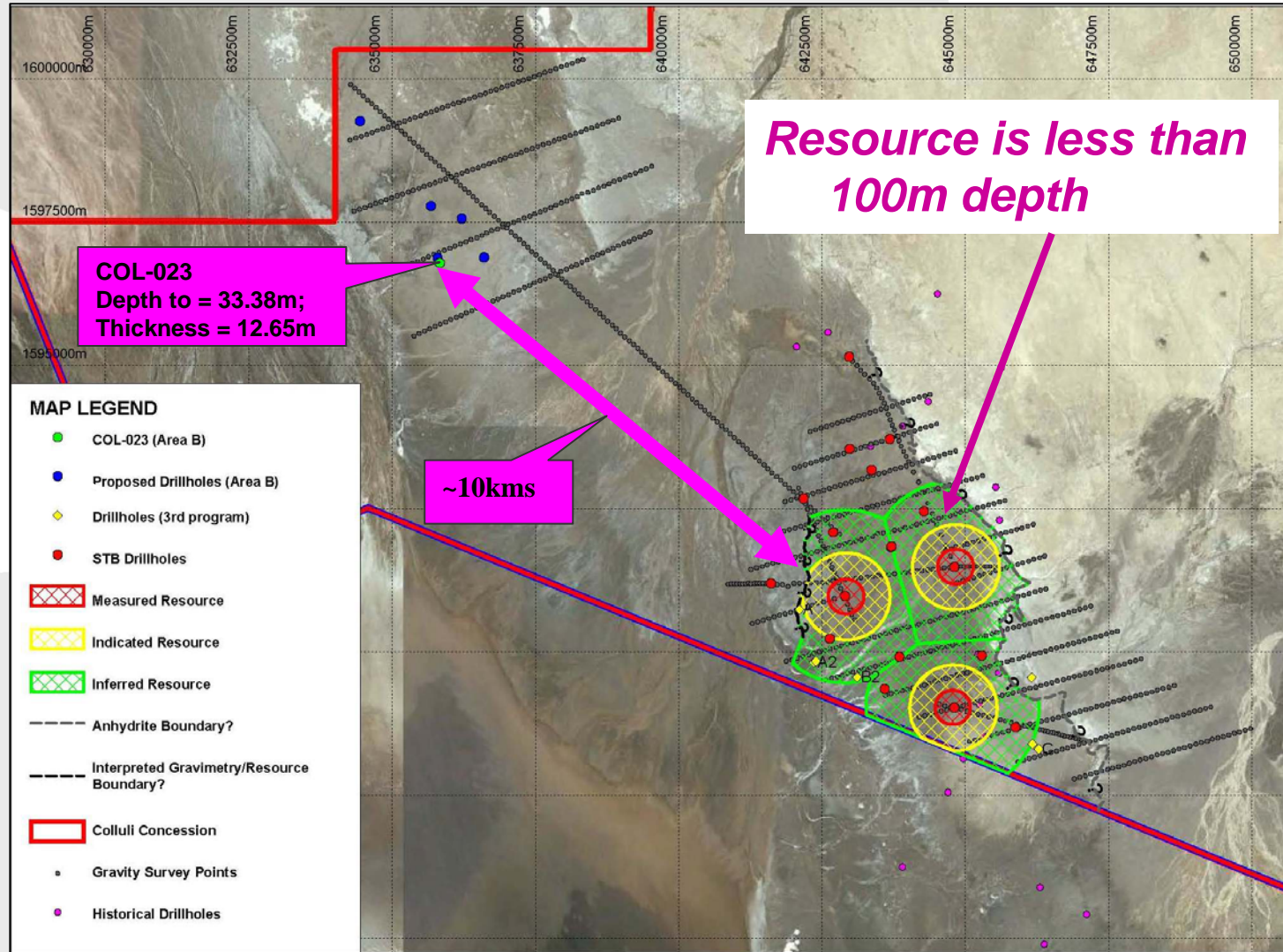


✓ *All ore types have been mined and processed together in the past*



# 4. Colluli Potash Project (CONT'D)

- \* Current resource – 548Mt @ 19% KCl including;
  - ➔ 119Mt @ 23% KCl;
- Mineralisation open and located at depths of 22.2 – 64.8m depth;
- 17 holes drilled to date;
- On receipt of outstanding assays compile updated resource calculation; most ore will report to the Measured and Indicated categories;
- Mining scoping study considering 1-10Mt p.a production;
- Current global production is ~55Mt;
- Drilling has recommenced to complete up to 5,000m this year.



✓ **The Worlds Most Strategic “Greenfields” Potash Resource**



## 4. Colluli Potash Project (CONT'D)

- The total Measured, Indicated and Inferred resource comprises sylvinitic, carnallite and kainite ores of 547.62Mt @ 18.58% KCl with a higher grade portion of sylvinitic and carnallite ores of 119.21Mt @ 23.14% KCl. The total resource by category is shown in the table below. Also see South Boulder's ASX release dated 19<sup>th</sup> January 2011.

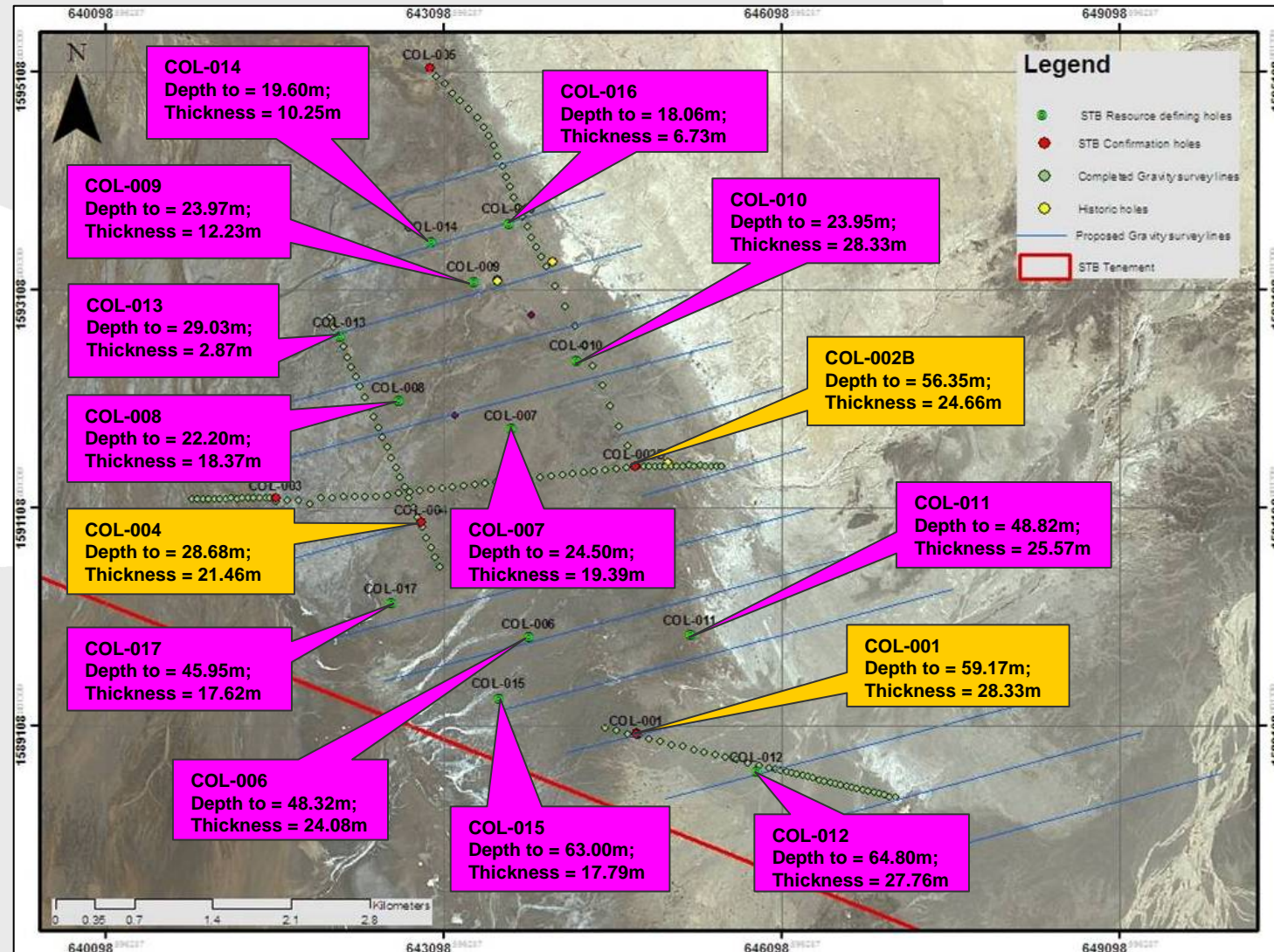
	<b>Tonnes (Mt)</b>	<b>Grade (% KCl)</b>	<b>Mt (Potash)</b>
<b>Total Measured</b>	33.39	18.56	6.20
<b>Total Indicated</b>	173.37	18.57	32.20
<b>Total Inferred</b>	340.86	18.58	63.34
<b>Total Resources</b>	<b>547.62</b>	<b>18.58</b>	<b>101.73</b>

- The recoverable ore reserves from potash resources across the globe is typically low depending on the mining method. South Boulder expects a significantly higher resource to reserve conversion than the industry average.

✓ *Most of the currently drilled area will report to the Measured and Indicated resource categories*

# 5. What is Happening Next

- Currently drilling ~5,000m program;
- Receive assays from holes 006 – 017 expected in March/April;
- Second rig for deeper and met/geotech drilling due onsite in March/April;
- Update to maiden resource expected in May/June;
- Complete scoping study, by mid 2011;
- Decide on path for full feasibility studies by mid 2011.



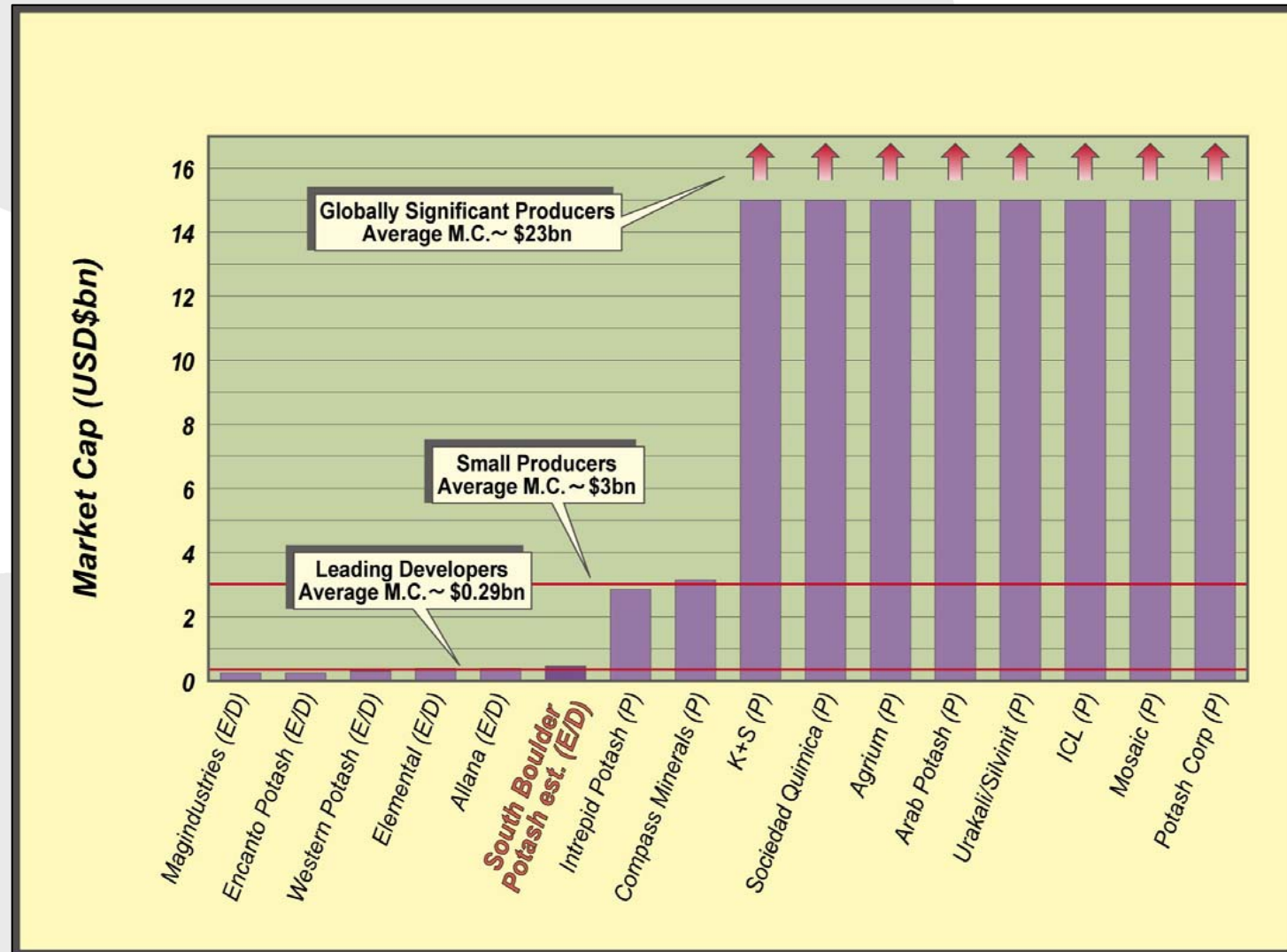
✓ *Significant activity*



# 6. Company Comparison

## KEY DRIVERS

- Engineering scoping studies;
- Increase JORC/43-101 Compliant resources;
- Pre-feasibility studies;
- Feasibility studies;
- Construction;
- Phase 1 production 2016/17;
- Phase 2 production;
- Further expansion.



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

# 7. Duketon Nickel Project

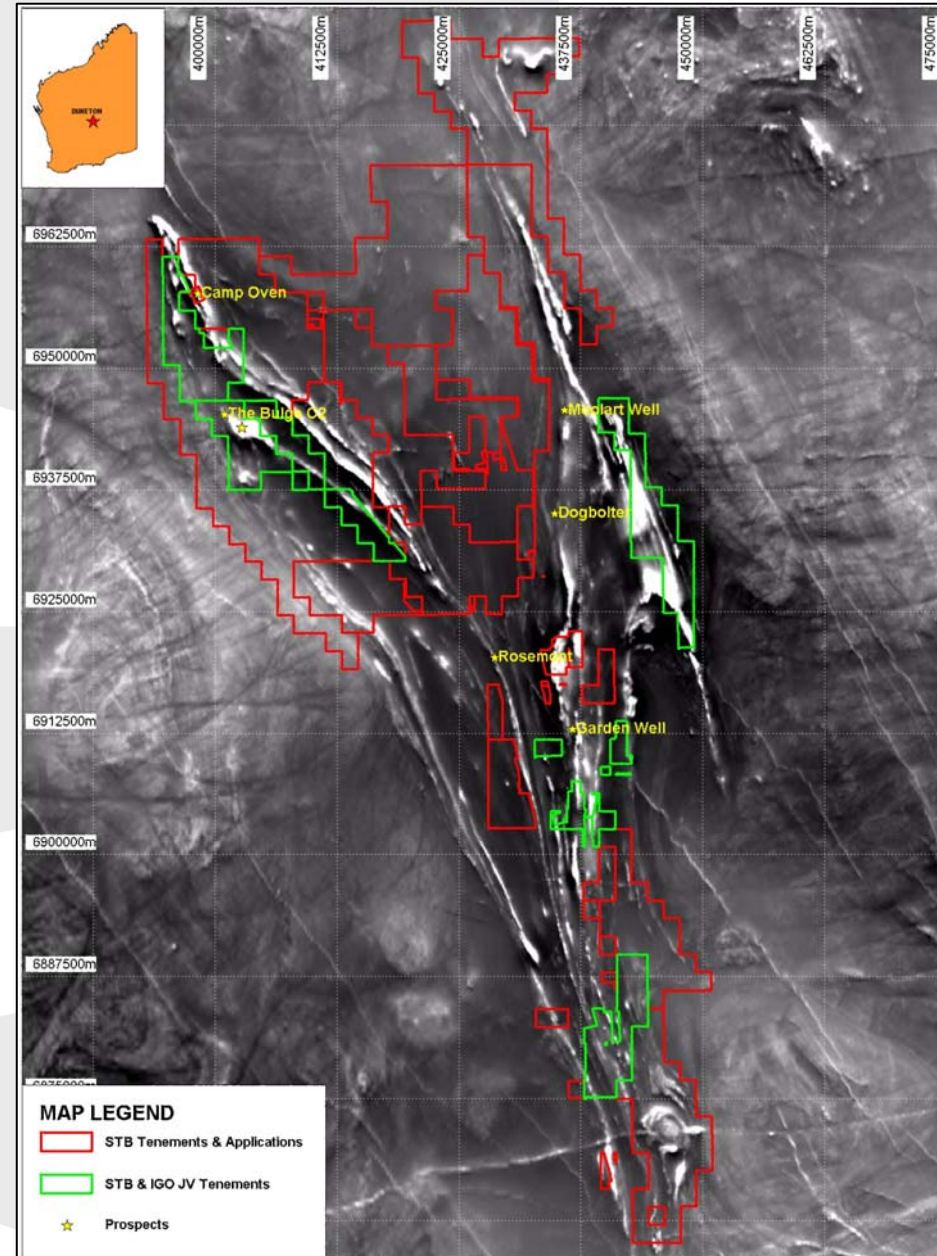
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QUALITY  
NICKEL  
ASSETS

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.

✓ *New discovery*



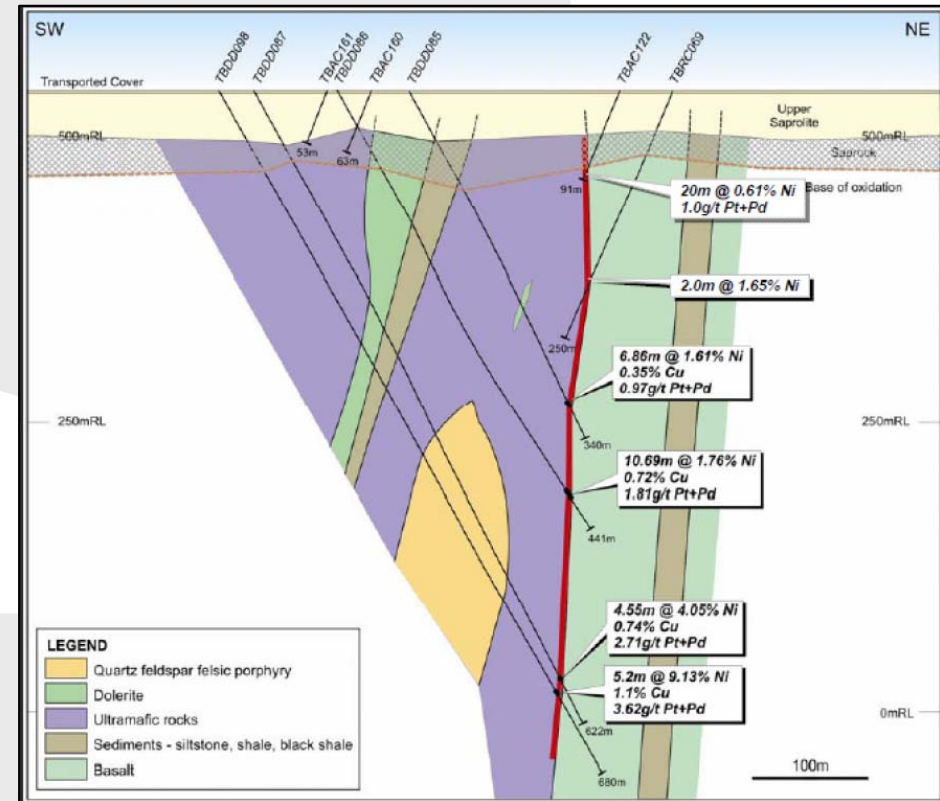
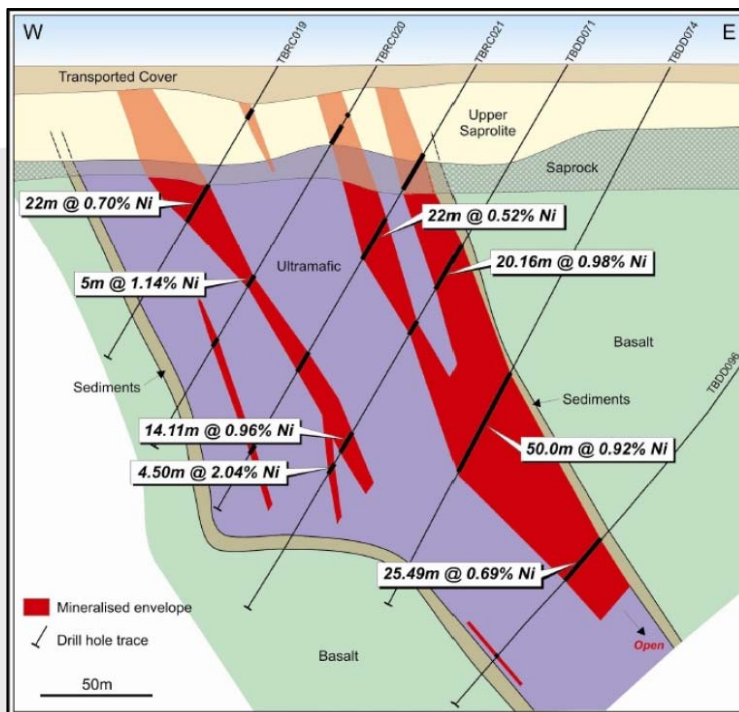
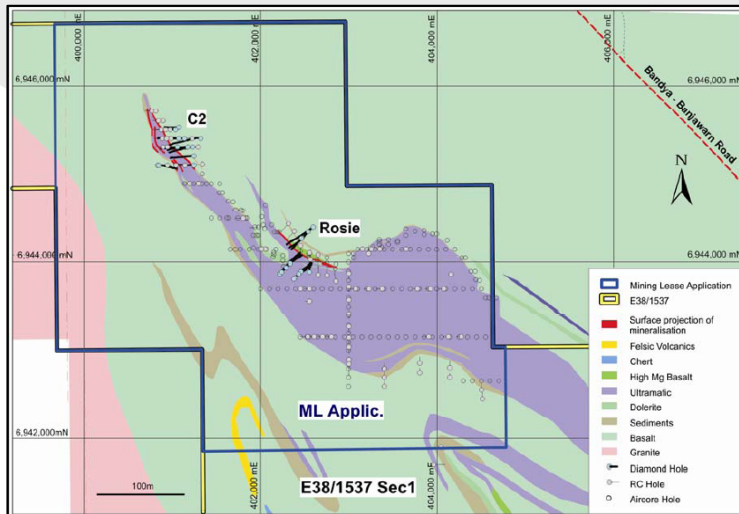


# 7. Duketon Nickel Project (CONT'D)

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QUALITY  
NICKEL  
ASSETS

MINING  
LEASE  
GRANTED



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

## 8. Reasons to Invest

- ✓ South Boulder has recently discovered the world's shallowest potash deposit at Colluli, maiden resource completed, 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 maiden potash resource is highly significant and is growing;
- ✓ The project is situated in a prime infrastructure location in an emerging potash province;
- ✓ The depth and geometry of the deposit suggest that Colluli could host the lowest cap-ex and op-ex mine in the world and become the next globally significant producer;
- ✓ 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, K & S, competitor activity;
- ✓ Tight capital structure with 85.5M shares on issue; highly leveraged to success;
- ✓ Well funded with approximately \$17M in liquid assets + option conversions (\$7.2m);
- ✓ On-going news flow from drilling and scoping study results in coming months.



# CONTACT

**Lorry Hughes** Bsc. MAusIMM  
**Managing Director**

**Telephone +61 8 6315 1444**

**Facsimile +61 8 9478 7093**

**admin@southbouldermine.com.au**

**www.southbouldermine.com.au**

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