



South Boulder Mines

Managing Director : Lorry Hughes

Worlds Shallowest Potash Deposit

Fertilizer Outlook Briefing Melbourne

21st October 2010

www.southbouldermines.com.au (ASX: STB)

General Exploration Drilling Pty Ltd at the Colluli Potash Project, Eritrea.



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1. Executive Summary

SOUTH BOULDER MINES

PROJECTS

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

Colluli Potash Project, Eritrea

- **World class** buried evaporite potash project in Eritrea;
- *Highly significant shallow potash mineralisation has now been intersected in 3 diamond holes defining an approximate area of 4.5km² and growing;*
- **Sylvinite assays up to 44% KCl (28% K₂O) from 33m;**
- **Resource drilling continuing to define up to a target 20km²;**
- *Scoping strategy to define a 1.5Mt p.a operation;*
- *Actively looking to maximise value of the potash assets including a potential in specie distribution to all STB shareholders and the listing of a dedicated potash company either on ASX or international market.*

Duketon Greenstone Belt Projects, Western Australia

- Nickel Sulphide JV with Independence Group (ASX: IGO);
- *New Nickel Sulphide Discovery – “Australia’s most exciting greenfields nickel discovery”*
- 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);**
- **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 @ 0.90c/share)	\$61.0M
Ordinary Shares	67.6M
Cash/NTA	\$5.8M
Unlisted Options	34.9M
Top 40 Shareholders	58.52%

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, Au, U, Pb, potash mining and exploration, Aust., Malaysia, Indon.; Energy Metals Ltd, Magellan Metals Inc., Riotinto, North Limited, Plutonic;

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

Dennis Wilkins (Company Secretary) – +20 years experience with resource companies;

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



South Boulder Drill Crew conducting the second diamond hole at The Colluli Potash Project, Eritrea.



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

3. Eritrea a Mining Friendly Country

FORMATION

- The country gained its independence in 1991;
- UN supervised referendum made it official in 1993;
- Population ~ 5.0 million people; ~80% dependent on subsistence agriculture;

CURRENTLY

- Stable Government:
 - **Previous minister for mines was in place for 12 years.**
- Supportive government for foreign investment in mining and exploration.

MINING REGIME

- Mining code based on Northern Territory, Australia, with royalties of:
 - 5% on precious metals; and
 - 3.5% on base metals and salts.

GOV'T INTEREST

- Corporate tax rate ~ 38%;
- Government 10% free carried contributing interest and;
- After BFS Government has option to purchase an additional 30% equity participation interest at an independently determined price.

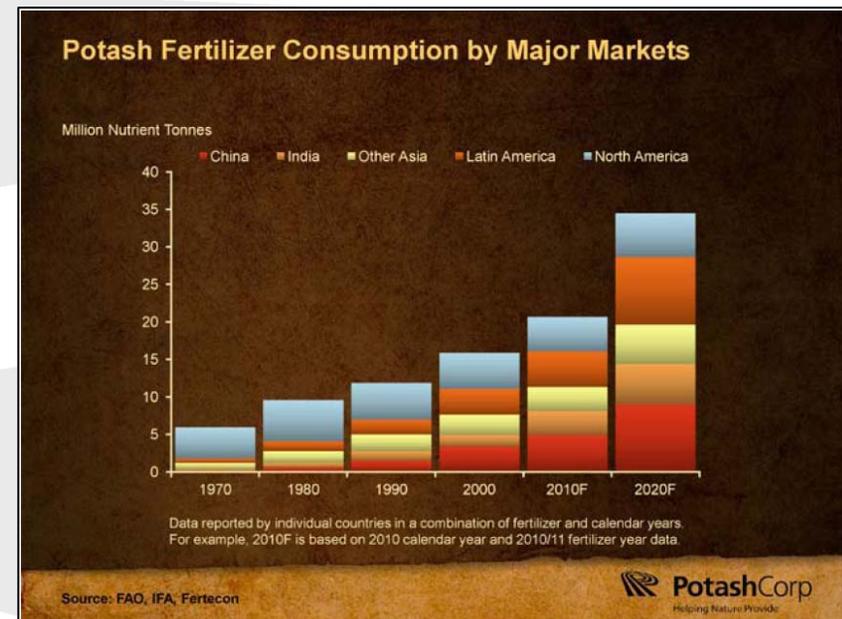


Above; South Boulder crew checking the important drilling mud.
Below; South Boulder Geologist examining some of the first potash core.



4. Potash – Why Potash?

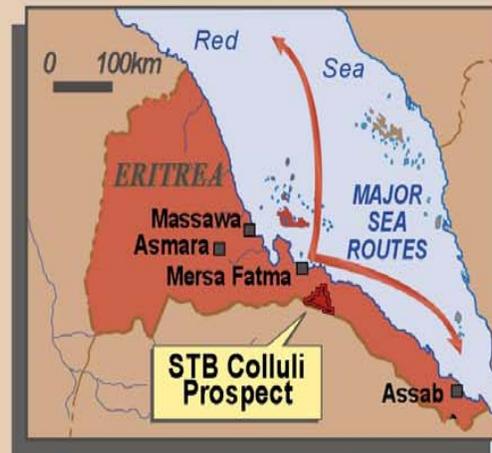
- Large scale, long term projects, strategic asset;
- Rising population and improving diets are driving food consumption growth and potash demand;
- Potash is required to produce more food from a declining per-capita land base;
- Price estimates of USD\$350 – 400/t for 2010 and rising, peak price USD\$1,000/t in 2008;
- Short-term decline in fertilizer use is not sustainable – irreplaceable, reduced use cannot continue without potential consequences for the global food supply;
- **Upshot is the potash market has strong fundamentals for demand growth;**
- Recent deals include BHP offer of USD \$39bn to acquire Potash Corp and Mag Industries (TSX: MAA) option to COMPLANT to purchase 50.1% of the Mengo Potash Project in the ROC for debt financing of US\$1.2b.
- BHP is planning to build the largest potash mine in the world. 8Mt p.a, capital cost USD\$10.5bn;
- **Colluli Project initial potential target to define a 1.5Mt p.a operation, capital cost ~ USD\$0.5-0.75bn and mine life exceeding +30 years.**



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**
(Low cost solution to mining)
- **Solar evaporation**
(Energy use -40% of opex at other sites)
- **Geothermal energy**
(Known hot spots in region)
- **No known significant environmental issues**



✓ **Potential Low Cost Production**

5. Colluli Potash Project (CONT'D)

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Above; Viscosity testing of diamond drilling mud for good recovery of the potash zones.
Below; A typical solution mine well head and distributor. One of the potential mining methods.

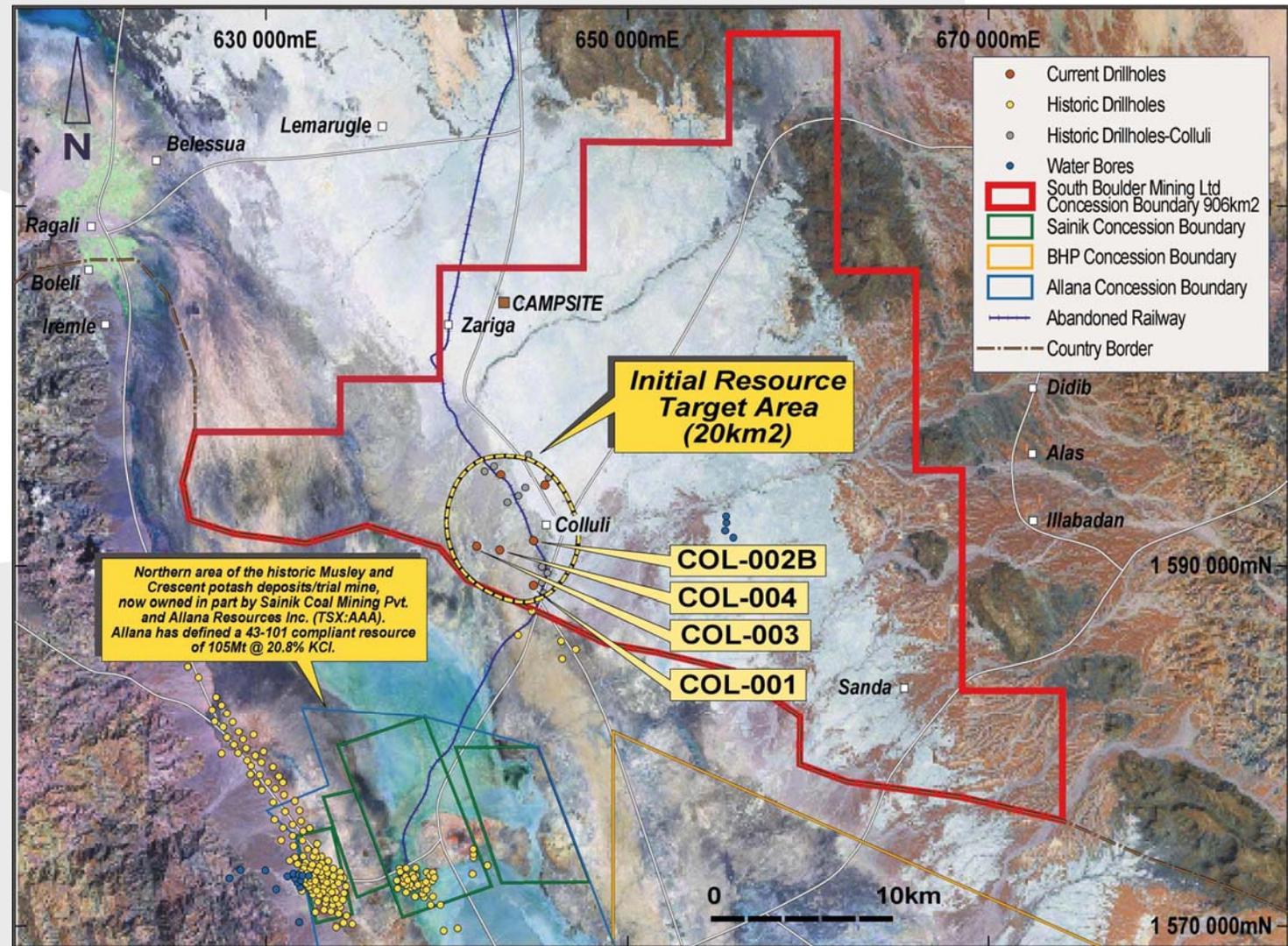


Above; Drill sumps in the salt flat provide a source of drilling water.
Below; Carnallite zone drill hole COL-002B ($\text{KMgCl}_3 \cdot 6(\text{H}_2\text{O})$).



5. Colluli Potash Project (CONT'D)

- Danakil Depression deposits formed by the evaporation of water once the basin was cut off from the Red Sea due to volcanic activity; and
- Houston Formation potash rich layers have been intersected up to 45m thick at Musley, only 15kms from Colluli;
- BHP, Allana Potash Corp., Sainik (Pvt) and other players in the region;
- Sylvite- KCl
Carnallite – $\text{KMgCl}_3 \cdot 6(\text{H}_2\text{O})$
Kainite – $\text{MgSO}_4\text{KCl} \cdot 3(\text{H}_2\text{O})$
- Mineralogy can support the production of **both SOP and MOP.**



5. Colluli Potash Project (CONT'D)

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Above; COL-002B drill core showing the base of a strong carnallite zone from 63.25 – 67.00m.
Below; COL-004 drill core showing strong sylvinite mineralisation part of the interval 3.44m @ 44% KCl (28% K₂O) from 32.96m.



5. Colluli Potash Project (CONT'D)

- COL-001 intersected potash from 59.20 – 65.20m (6.00m) and from 83.20 – 103.40m (20.20m), assays awaited;

- COL-002B intersected potash from 56.56 – 80.50m (23.94m), assays awaited;

COL-004 (Assays)

- 7.72m of Sylvinite @ 25% KCl (16% K₂O) from 28.68m depth;

- Incl. 3.44m of Sylvinite @ 44% KCl (28% K₂O) from 32.96m and;

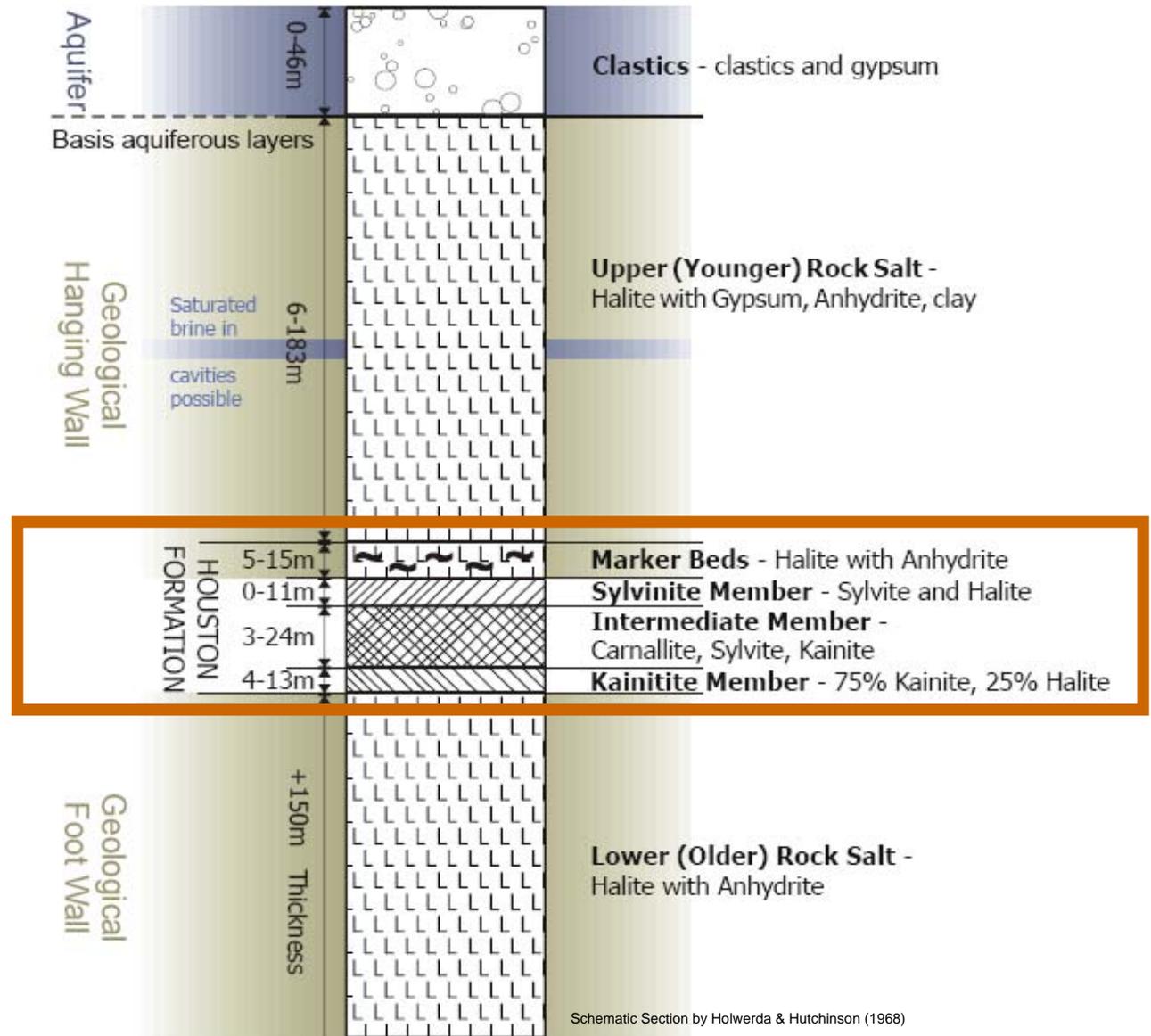
- 14.79m of Carnallite + Kainite @ 16% KCl (10% K₂O) from 48.55m depth;

- Incl. 3.20m of Kainite @ 22% KCl (14% K₂O) from 55.60m;

- Incl. 4.20m of Kainite @ 24% KCl (16% K₂O) from 58.60m.

- Potash has been intersected over an area of ~ 4.5km² and growing (program increased to 10-12 holes);

- Excellent potential for the discovery of additional potash beds at depth as well as near surface potash rich brines.



Schematic Section by Holwerda & Hutchinson (1968)

5. Colluli Potash Project (CONT'D)

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Hole ID/ Member	East (m)	North (m)	Dip	Length (m)	From (m)	To (m)	Description
COL-001	644740	1589024	90	52.00	0.00	52.00	Clastics, overburden
Marker beds				9.20	52.00	59.20	Rock salt with anhydrite (CaSO ₄)
Sylvinitic				6.00	59.20	65.20	Rock salt with sylvite (KCl) locally up to 30% sylvite
Intermediate				2.80	65.20	68.00	Rock salt with carnallite (KMgCl ₃ ·6(H ₂ O))
Intermediate				15.20	68.00	83.20	Bischofite (MgCl ₂ ·6(H ₂ O))
Intermediate				10.10	83.20	93.30	Carnallite, (60-70%) carnallite (KMgCl ₃ ·6(H ₂ O))
Kainitite				10.10	93.30	103.40	Kainitite, kainite (MgSO ₄ ·KCl·3(H ₂ O))
				37.90	103.40	141.30	Rock salt with layers of anhydrite (CaSO ₄) and clay

Above: COL-001 Summary Log
Below: COL-002B Summary Log

Hole ID/ Member	East (m)	North (m)	Dip	Length (m)	From (m)	To (m)	Description
COL-002B	644806	1591484	90	26.00	0.00	26.00	Clastics, overburden
				4.00	26.00	30.00	Rock salt
Intermediate				26.56	30.00	56.56	Bischofite (MgCl ₂ ·6(H ₂ O)) minor carnallite, kieserite (MgSO ₄) and rock salt
Intermediate				11.34	56.56	67.90	Carnallite, (60-70%) carnallite (KMgCl ₃ ·6(H ₂ O))
Kainitite				12.60	67.90	80.50	Kainitite, kainite (MgSO ₄ ·KCl·3(H ₂ O))
				9.60	80.50	90.10	Rock salt with layers of anhydrite (CaSO ₄) and clay

5. Colluli Potash Project (CONT'D)

Hole ID/ Member	East (m)	North (m)	Dip	Length (m)	From (m)	To (m)	Description
COL-004	642900	1590970	90	18.00	0.00	18.00	Clastics, overburden
Upper Rock Salt/Marker Bed				8.96 1.72	18.00 26.96	26.96 28.68	Rock salt Rock Salt with Anhydrite (CaSO ₄)
Sylvinite				7.71	28.68	36.39	Sylvite (KCl) locally 20-60% with rock salt and sulphate
Intermediate				0.19	36.39	36.58	Rock salt with carnallite (KMgCl ₃ .6(H ₂ O))
Intermediate				11.97	36.58	48.55	Bischofitite (MgCl ₂ .6(H ₂ O))
Intermediate				5.70	48.55	54.25	Carnallite, (60-70%) carnallite (KMgCl ₃ .6(H ₂ O))
Kainitite				16.14	54.25	70.39	Kainitite, kainite (MgSO ₄ KCl.3(H ₂ O))
				3.21	70.39	73.60	Rock salt with layers of anhydrite (CaSO ₄) and clay

Above: COL-004 Summary Log

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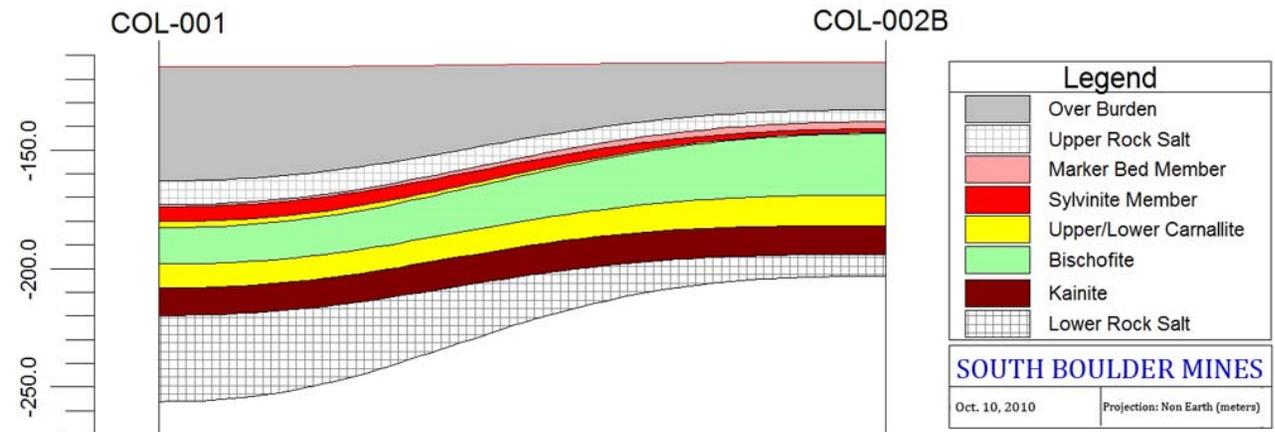
5. Colluli Potash Project (CONT'D)

Colluli ✓	Known Resources X
Near surface buried evaporite potash deposit (<100m deep)	Buried evaporite potash deposits (>270 – 2,000m deep)
Open pit, underground and solution mining methods	Underground or higher cost solution mining methods
Solar evaporation can be utilised (huge potential savings to OP-EX)	Northern hemisphere producers utilise gas fired evaporation
Relatively short time frame to production (3-5 years)	Long time frame to production (7-10 years) Environmental permitting and construction
Very well located w.r.t ports	Very well located or extensive transport routes
No port capacity constraints	No port capacity constraints or port capacity constraints
No established competitors in region	No established competitors or competing with Canpotex for marketing and logistics

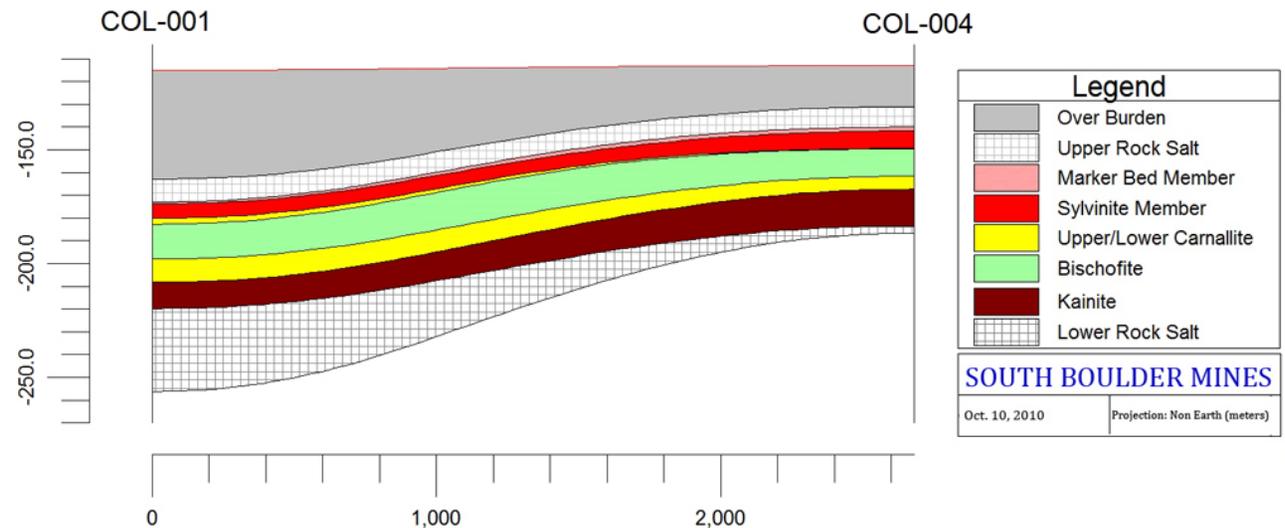
6. What is Happening Next

- Continue drilling potash (up to 10-12 holes);
- Receive assays from outstanding holes in October;
- Compile 43-101 compliant resource by year end;
- Award DHole geophysics contract for early next year;
- Complete scoping study, by mid 2011;
- Award seismic survey for 2011;
- Conduct further resource definition drilling;
- Decide on full feasibility studies by mid 2011.

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



COL-001 - COL-004 Stratigraphic Cross-Section



7. Summary (Potash)

EXPLORATION STRATEGY

- 10-12 hole confirmation HQ diamond drill hole program and gravity survey to be completed November/December 2010;
- Compile 43-101 compliant resource model and commence early stage economic studies by EOY 2010;
- Immediate follow-up exploration and large diameter geotech and metallurgical drilling as part of scoping study through Jan-Feb-Mar 2011;
- Scoping study target to define a 1.0 – 1.5mtpa mining operation with estimated capital cost of USD\$0.5 – 0.75bn, Mar-qtr 2011;
- Decision on full feasibility study by Jun 2011;

POTENTIAL ADVANTAGES

- Key advantages if economic deposit is defined;
 - Shallowest mineralisation;
 - Close to port;
 - Solar evaporation;
 - Geothermal energy;
 - Solution mining potential;
 - MOP and SOP products; and
 - ***Cheap capital and operating costs.***

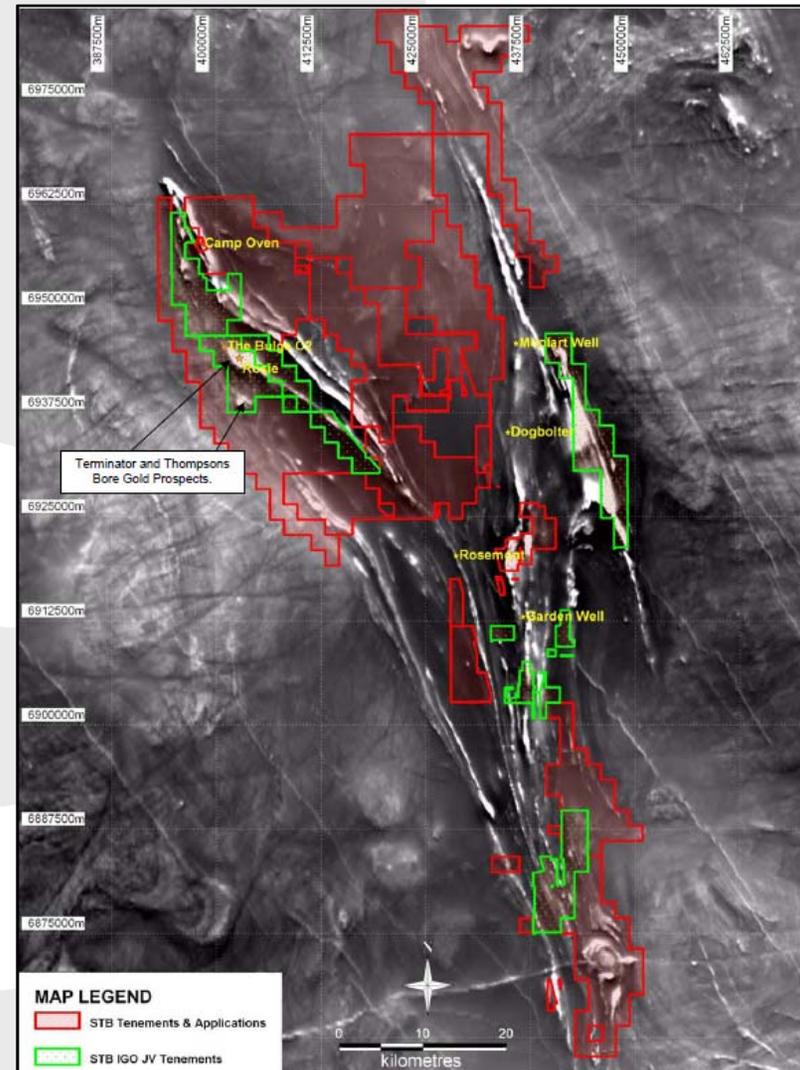


South Boulder drilling crews at the Colluli Potash Project, Eritrea.

8. Duketon Nickel Project

QUALITY NICKEL ASSETS

- Successfully targeted extensions to massive Ni-Cu-PGE mineralisation intersected in TBDD080;
 - **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;**
- Follow-up drilling now, expecting results in coming weeks;
- 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.**



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

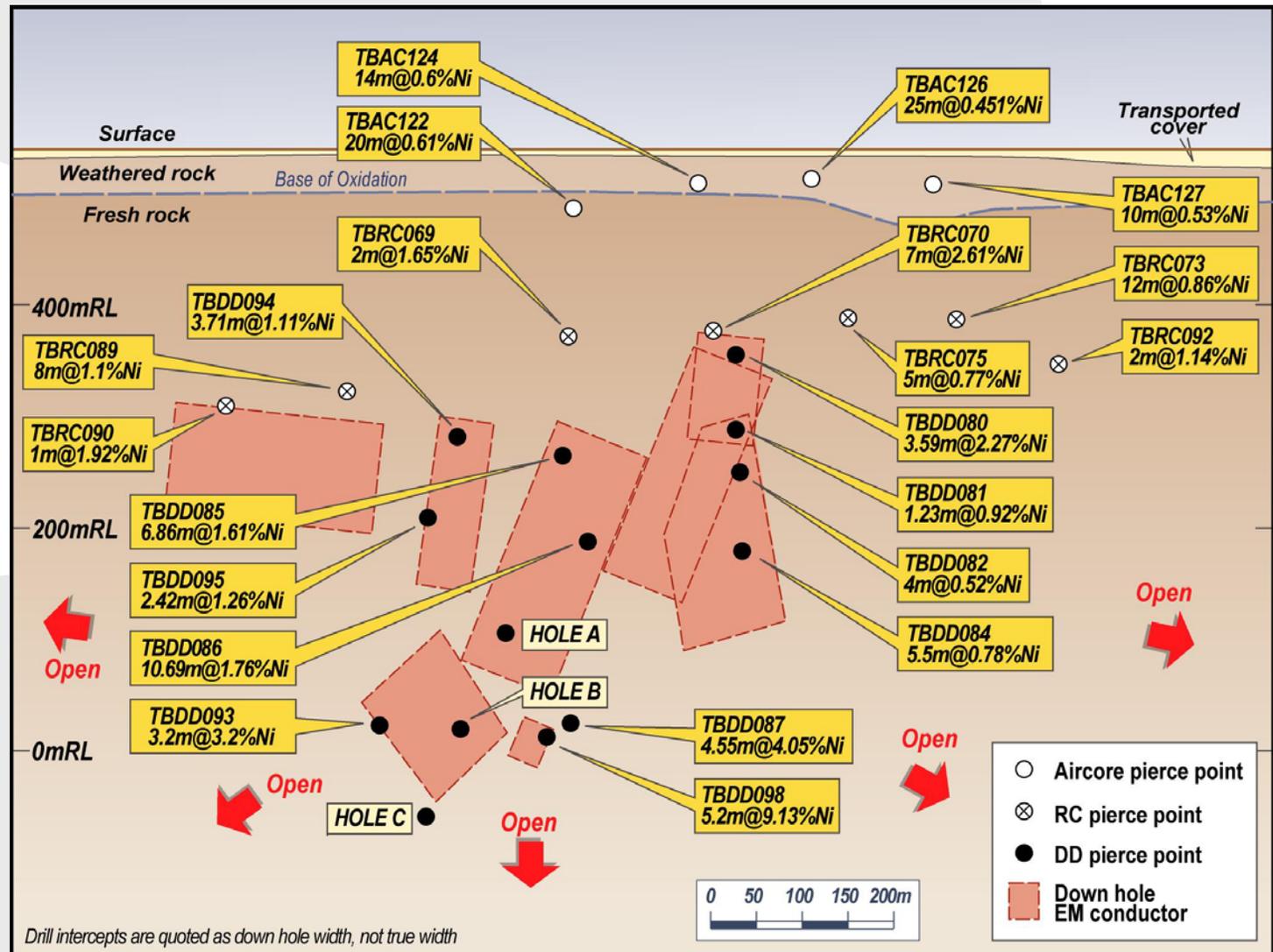
Ruthenium = 1.79g/t



8. Duketon Nickel Project (CONT'D)

QUALITY NICKEL
SULPHIDE
MINERALISATION
IS OPEN

MINERALISATION
CURRENTLY
INTERSECTED
OVER 750m
STRIKE; 400m DIP

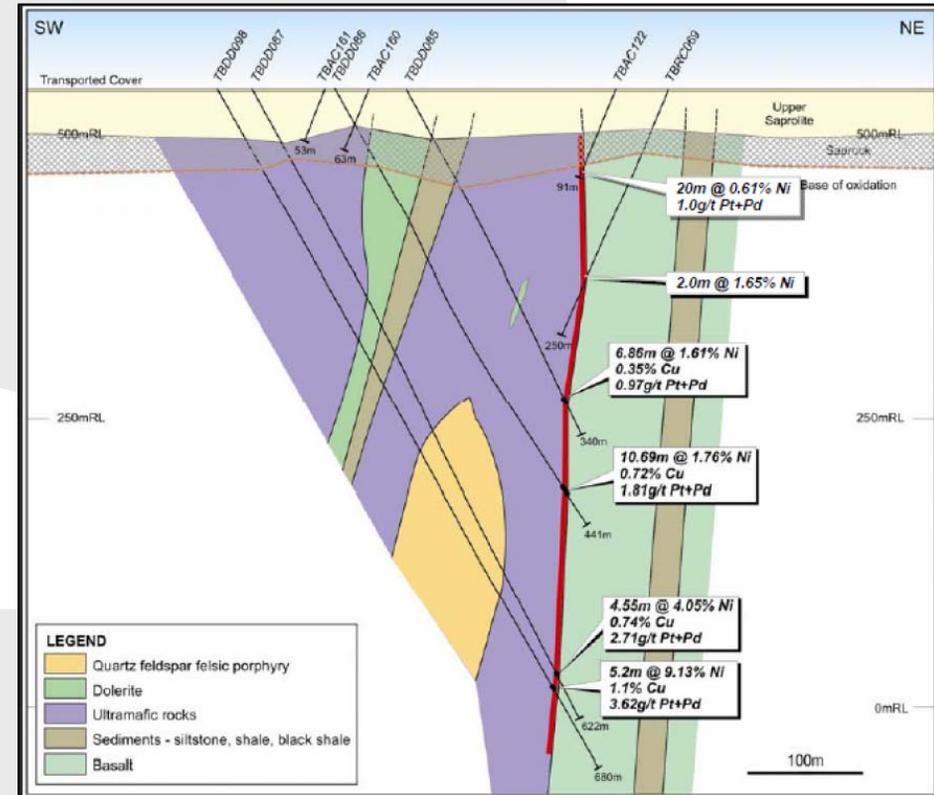
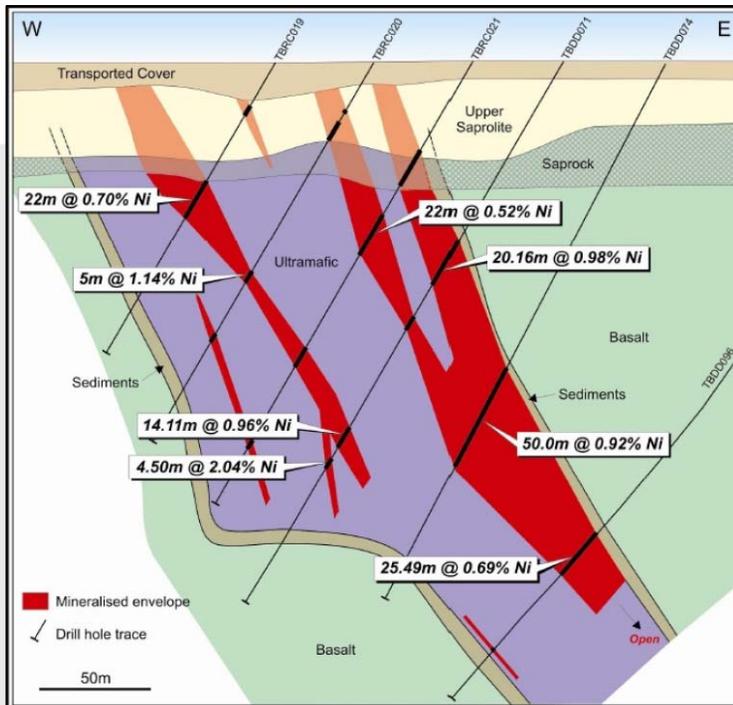
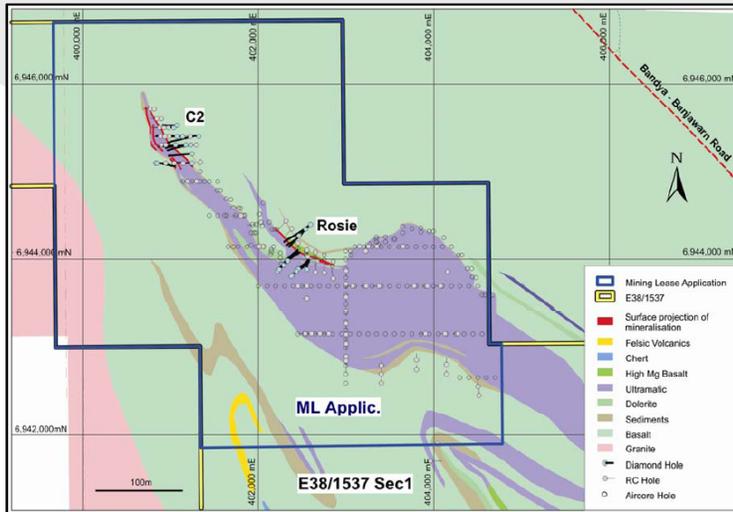


Strong potential for additional high grade intercepts is supported by the interpretation of down-hole transient-electromagnetic (DHTEM) survey results from holes TBDD093 and TBDD098 which suggests that the strongest mineralisation is situated between these holes and continues steeply down plunge to the north west.

8. Duketon Nickel Project (CONT'D)

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QUALITY
NICKEL
ASSETS



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



9. Reasons to Invest

- ✓ South Boulder is a diversified explorer with **recent** significant new greenfield discoveries of potash in Eritrea as well as gold and nickel in Western Australia;
- ✓ The Colluli project is situated in the prime location in an emerging potash province with the potential to define **world class** deposits;
- ✓ The **potash sector** has excellent long term growth drivers and very large global resource companies participate in the sector, BHP, Vale and Potash Corp, competitor activity;
- ✓ The Colluli project is **proximal to major markets and infrastructure (China, India)**;
- ✓ **The Duketon Ni-Cu-PGE Project is set to take off with follow-up drilling underway and the completion of a scoping study over the next 4-6 months;**
- ✓ Tight capital structure with 67.6M shares on issue, **highly leveraged** to success, **expect a market re-rating** as new positive technical information for Colluli and Duketon is provided;
- ✓ Well funded with approximately **\$6.0M** in liquid assets;
- ✓ **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

www.southbouldermines.com.au

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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'.

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 that it is uncertain if further exploration will result in the termination of a Mineral Resource.

JORC- Exploration Targets

This ASX release has been compiled by Lorry Hughes using information on exploration results supplied by South Boulder and in the case of the Duketon Nickel JV, Independence Group who are the operator of the Duketon Nickel JV. Lorry Hughes is a member of the Australian Institute of Mining and Metallurgy. Mr Hughes is a geologist and he has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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". 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.