

31 DECEMBER 2014 QUARTERLY REPORT

HIGHLIGHTS

Exciting New Acquisitions

Boss is continuing its aggressive approach to identifying highly prospective new projects that can be efficiently and effectively explored using low-cost, high-impact, non-invasive technologies.

- **Nottrask Ni/Cu/PGE** license granted for 37km² covering a mafic-ultramafic intrusion in northern Sweden with only limited previous exploration
 - **Grades up to 1.25% Ni and 1.8% Cu**
- Consolidation at Skogtrask Project with granting of additional license, Skogtrask 3
- **Linn Cu/Au/Ag/Pd/Pt Project** – 12 exploration permits covering 104km² of highly prospective ground granted in northern Norway
 - Highly anomalous concentrations of **copper (32%), gold (22.8 – 43.7 g/t), silver (351 – 364 g/t) and palladium (3.0 – 3.5g/t)** from 3 grab samples
- **Lilltrask Ni/Cu Project** – application lodged in Northern Sweden with granting expected in Q1 2015
 - Outcropping mineralisation has **Ni tenors up to 4% and Cu tenors up to 7%**
- **Burkina Faso Gold Projects** – GRY JV progressing well
 - 2 new exploration permits acquired adjacent to Gourma Gold Project
 - 28 soil samples exceeding **1 g/t Au to a peak of 8.53 g/t Au** at Golden Hill

Skogtrask Ni/Cu Project, Sweden

- Relogging of Boss 2 drill core confirms intersection of Graphite bearing pelitic shales at 70m thick
- Assays confirm **average grade of mineralisation is 6.85% C_G** on the representative samples totalling 28m with **assays up to 11.7%**
- Graphite mineralisation represents additional discovery opportunity at Skogtrask where Ni-sulphides and IOCG-type deposits initially targeted
- Revised interpretation of electromagnetic data has revealed significantly higher conductance conductors, considered highly prospective for graphite exploration

Skogtrask Ni/Cu Project, Sweden (Skogtrask 1, 2: Option to acquire 100%; Skogtrask 3:BOE 100%)

During the quarter, the Company announced that it had received assay results for intervals of the graphite mineralisation intersected by drillhole Boss-2 from the Skogtrask Project maiden drill program conducted in July 2014. 28 m of representative samples of the graphitic shales, from a total of 70m visually identified (increased from the original 50m following relogging), were submitted for assay to determine grade in advance of any further testing (Figs. 1 and 2).

Results confirmed an average grade of mineralisation of 6.85% Graphitic Carbon (C_G) with mineralisation up to 11.7%. This has been deemed by Boss' geologists to be representative of the whole interval. True thickness of the graphite-bearing sequence is not known due to the end of hole remaining mineralised with the graphite-bearing unit remaining open at a depth of 310.5m. Analysis of the downhole EM supports this interpretation.

Boss is currently exploring in the Skogtrask area for Ni-Cu sulphides associated with mafic-ultramafic intrusions and Cu-Au-Fe mineralisation of IOCG type. The discovery of the graphite mineralisation represents an additional exploration opportunity for the Company in the license area, allowing Boss to diversify the exploration programmes and increasing the overall prospectivity of the area for discovery of the economically viable mineralisation.

Boss has also successfully increased the project area at Skogtrask by 11.2km² following the successful granting of a third license known as Skogtrask 3. This license is 100% owned by Boss and does not form part of the earn-in agreement.

Nottrask Ni/Cu/PGE Project, Sweden (BOE 100%)

Boss was granted its application for a new 37km² exploration license known as Nottrask in northern Sweden in October 2014. Nottrask is a 10km long x 5km wide "eye" shaped intrusion that has outcropping of massive and breccia nickel (up to 1.25% Ni) and copper (up to 1.82% Cu) sulphides contained in an 80m long gossan exposed on the southern side of the license (Fig. 3). Nottrask is well serviced for infrastructure with the deep water sea port of Lulea only 35km away and the license accessible by bitumen highway roads.

The intrusion hosts Ni-Cu sulphide mineralisation which was initially explored in the early 1980's and in 2000. Past exploration was predominantly focused on the small area around the outcrop of the massive sulphides in the southern 'eye', with the remainder of the license practically untested by modern geophysical methods or by drilling.

During its recently completed due diligence program, Boss identified a new occurrence of Ni/Cu sulphides in the northern 'eye', approximately 5km from the first outcrop where previous mapping and sampling done by Boss identified Ni grades up to 1.25% and Cu grades up to 1.8%. The due diligence program comprised acquisition of data from the Swedish Geological Survey (SGU),



compilation of an exploration database, mapping and geochemical prospecting of the area with an emphasis on the northern 'eye' of the intrusive system.

The new sulphide outcrop indicates that the mineralised system at Nottrask is significantly larger than thought in the past, when exploration efforts were focused on a small area around the historic outcrop. Both sulphide outcrops were found in the norite and gabbro-norite unit close to its contact with overlaying ferro-gabbro unit.

Boss has targeted key areas for future exploration that include the entry points (feeder dikes) to the intrusion. Future programs of work include review of existing geophysical data and development of a quantitative model, undertaking a high resolution airborne magnetic survey, and completing high powered modern TEM to search for conductors along the interpreted contact (Fig 4.).

Boss is also encouraged by the composition of olivine (rock forming mineral) in the Nottrask rocks which is in the range of 55-75 mol% Fo. Recent petrologic and geochemical studies of the ultramafic complexes have shown that economically viable sulphides with Ni tenor 2.75% are formed in the intrusions containing moderately magnesian olivine containing 60mol% Fo. Based on this, the composition of olivine at Nottrask, which often exceeds 60 mol% Fo (up to 75 mol% Fo), is favourable for generating economically viable sulphide mineralisation with Ni tenor greater than 3%.

Lilltrask Ni-Cu Project, Sweden (BOE 100%)

Boss has lodged an application for the Lilltrask Ni/Cu Project in Northern Sweden only 35km from the deep water port, Lulea. A new occurrence of Ni-Cu sulphides has been identified by Boss and an application for three exploration licenses over a 14.9km² prospective area has been submitted. It is expected that the licenses will be granted in quarter 1, 2015.

The Project area is characterised by the presence of norites and gabbro-norites containing disseminated Ni-Cu sulphides. The mafic rocks bearing Ni-Cu mineralisation were found in the boulders and also in one small outcrop located approximately 500m from the bitumen road passing through the licenses (Fig. 5). Assay results have confirmed the outcropping Ni grades are up to 0.6% and Cu grades up to 0.8%. Sulphides are characterised by high metal tenors, with Ni tenor up to 4% and Cu tenor exceeding 7%. This find accords well with the airborne magnetic data showing presence of a strong magnetic anomaly at Lilltrask. The shape and intensity of the magnetic anomaly indicate the presence of a mafic-ultramafic intrusion.

Despite the outcrop of the norites containing disseminated Ni-Cu sulphides, the intrusions were not geologically mapped correctly and are not currently shown on the geological maps published by the Swedish Geological Survey. This clearly shows that the area is poorly studied and



significantly underexplored. Modern electro-magnetic geophysical technologies have not been used in the area for delineating the sulphide mineralisation. Magnetic anomalies have not been investigated and mafic-ultramafic intrusions have never been drilled.

Linn Project, Norway (BOE 100%)

Twelve contiguous exploration permits covering an area of approximately 104km² in the Linnajavri region, northern Norway have been granted to Boss. Known as the Linn Project, the area has recently been mapped and sampled by the government-run Norwegian Geological Survey (NGU) as part of their ongoing programmes. Results revealed ultramafic rocks hosting high grade sulphide mineralisation. In particular, an outcropping of massive chalcopyrite mineralisation approximately 1 metre long and 30 cm thick was discovered in the ultramafic unit exposed in the southern part of the Linn Project (Figs. 6 and 7).

Based on 3 grab samples collected and assayed by NGU, the mineralisation contains highly anomalous concentrations of copper (32%), gold (22.8 – 43.7 g/t), silver (351 – 364 g/t) and palladium (3.0 – 3.5g/t).

Broad scale airborne geophysics were conducted in 1991 with a total of 5,200 profile kilometres flown at a line spacing of 200m. The survey registered total magnetic intensity which was then supplemented by a radiometric survey, including total radiation and separate recordings of potassium, uranium and thorium. No ground based geophysical work or drill programs have been undertaken to date.

The area has not yet been explored for metallic minerals by any commercial entities and Boss is excited to commence ground-based geophysical programs in the New Year.

Liakka Nickel / Copper Project, Finland (Option to acquire 100%)

Approvals are currently being sought for a drill program on the Liakka Nickel/Copper Project to assess the northern extension of both conductive zones identified by the ground geophysics program. All holes will be logged with downhole transient electromagnetics, a technique which is widely used for assessing the geometry and extent of conductive mineralisation and vector toward thicker zones of such mineralisation.

Burkina Faso Gold Assets (BOE 100%, GRY earning up to 80%)

Two new exploration permits have been acquired for the Gourma Gold Project, Burkina Faso. With the addition of the new permits known as Kankandi and Tyabo, the Gourma Project now consists of six contiguous permits covering a total area of 1,321km² easily accessible by existing roads.



The Gourma Gold Project covers an under-explored sequence of structurally thickened Birimian greenstones that host abundant artisanal workings within the strike extensive regional deformation zones. Boss has extended by 30+ strike kilometres its contiguous ground holding along the highly gold anomalous crustal scale Gourma deformation zone, which bounds the western edge of the Fada N'Gourma Greenstone belt. Significantly, the new ground covers a major bend and interpreted rheology contrast which are important factors for large scale gold mineralization. The bed hosts a series of intrusions of different age.

Under the terms of Boss' joint venture agreement with Gryphon Minerals, Gryphon Minerals has elected for these additional permits to form part of the joint venture, allowing Boss to concentrate its funds on its Scandinavian exploration projects.

The key terms of the acquisition agreement with Cluff Mining Burkina SARL are as follows:

- Consideration price of US\$10,000
- 2% net smelter royalty
- Ability for the Joint Venture to acquire the royalty for US\$1,000,000 (including a right of first refusal)

There are several significant gold targets that are currently being geologically reviewed at Gourma by Gryphon Minerals. Work by Gryphon to date includes detailed BLEG stream sampling and selective lateritic lag sampling in areas deemed appropriate. Multi-element drainage and laterite sample assays are presently being reviewed and interpreted. High resolution (50cm) satellite imagery has been shot and processed in-house by Gryphon and used to map artisanal gold workings and to identify areas of outcrop. Field mapping and site visits to the workings commenced during the quarter, along with auger and soil sampling.

At the Golden Hill Project, Gryphon has conducted prospect mapping, rock chip and drainage sampling (50 and 119 samples respectively) and soil sampling (3,506 samples) across seven prioritised areas. The results received during the quarter included **28 soil samples exceeding 1 g/t Au to a peak of 8.53 g/t Au and a further 29 samples between 500-1,000 ppb Au**. The results have confirmed previous work conducted, and also delineated five new prospects, namely Peksou North, Ma West, Didro, Nahirindro and Nabele NE. Follow up activities recommenced late in the quarter including soil, rock chip and auger sampling as Gryphon works towards defining high quality drill ready targets.

BLEG stream sediment sampling has also been completed across the Golden Hill Project, collecting samples at an average density of approximately 1 sample per 5 km². This returned some **highly anomalous results exceeding 100 ppb Au, compared to a background value of around 2 ppb Au**. The tenor of the anomalism is very high adding confidence to the hypothesis that this is significantly mineralised terrain. A review of historical drill data has been undertaken



leading to the identification of additional drill ready targets along strike of significant historical drill intercepts.

Other Opportunities

Boss continues to appraise opportunities which have mineralisation styles which are

1. High margin; and
2. Detectable and mappable by low cost, non-invasive, proven effective technologies.

For further information please contact:

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About Boss Resources Limited

Boss Resources is a well funded junior exploration company with a highly skilled exploration team. Boss recently announced a new strategy to use highly innovative technology and skills to rapidly evaluate projects in highly prospective yet under explored mineralised jurisdictions. Boss is currently exploring a pipeline of highly prospective projects in Scandinavia. The projects have intersected shallow semi-massive sulphide mineralisation in historical drilling and are located close to extensive existing infrastructure allowing low cost rapid evaluation.

Boss has also entered into a joint venture with Gryphon Minerals Ltd whereby Gryphon is sole funding exploration on Boss' highly prospective gold projects in Burkina Faso to a decision to mine. This enables Boss to retain exposure to its gold assets whilst focusing its efforts on its other projects.





Figure 1. Drill core samples of the graphite mineralisation (graphite-bearing pelitic shales) intersected drillhole Boss-2 at the Skogtrask Project, Sweden.

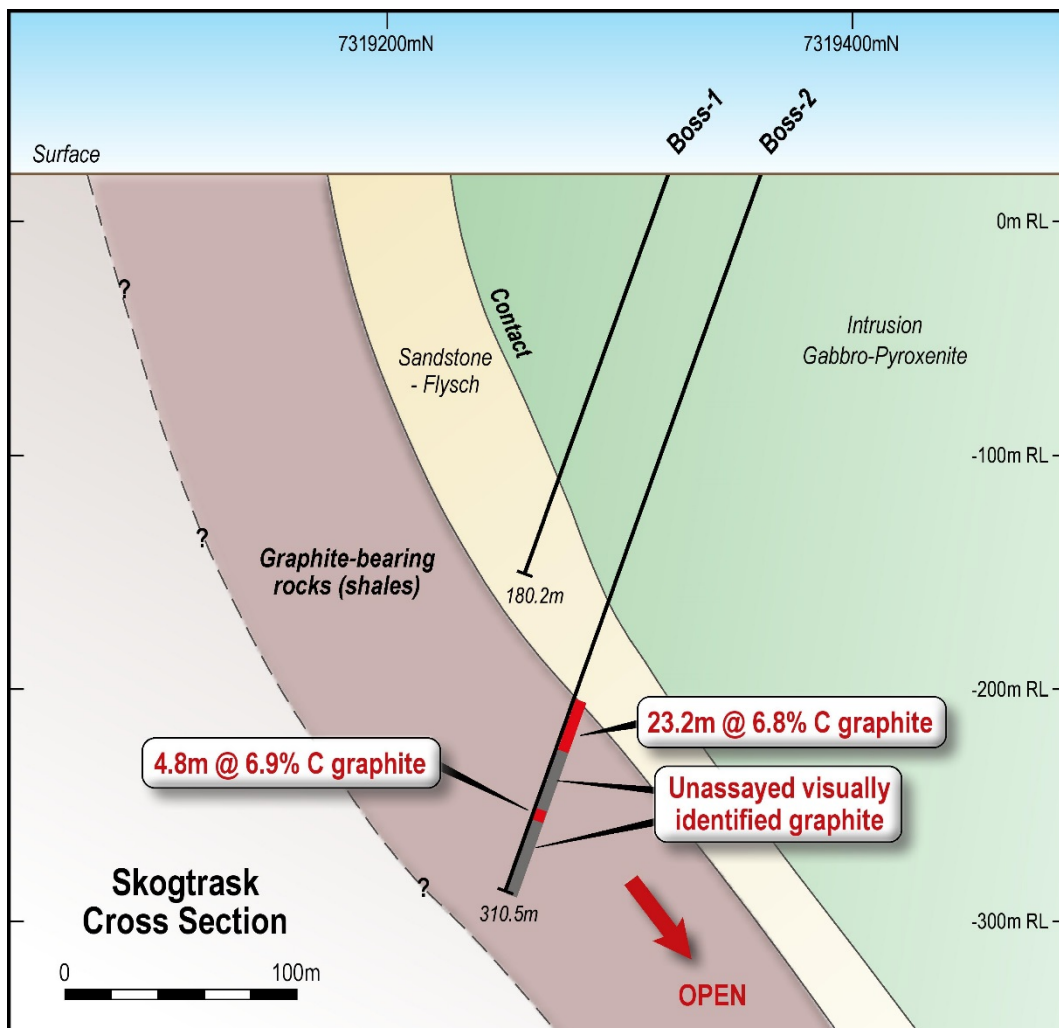


Figure 2. Geological interpretation of the Skogtrask project cross-section showing distribution of the main rock types



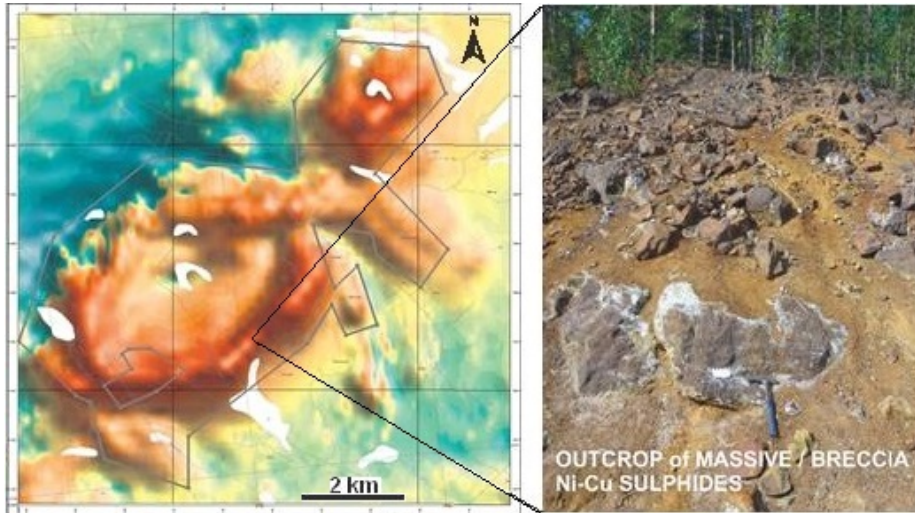


Figure 3. Notrask Project license area and photograph of outcrop of Ni-Cu Sulphides identified in historic exploration in the southern 'eye'.

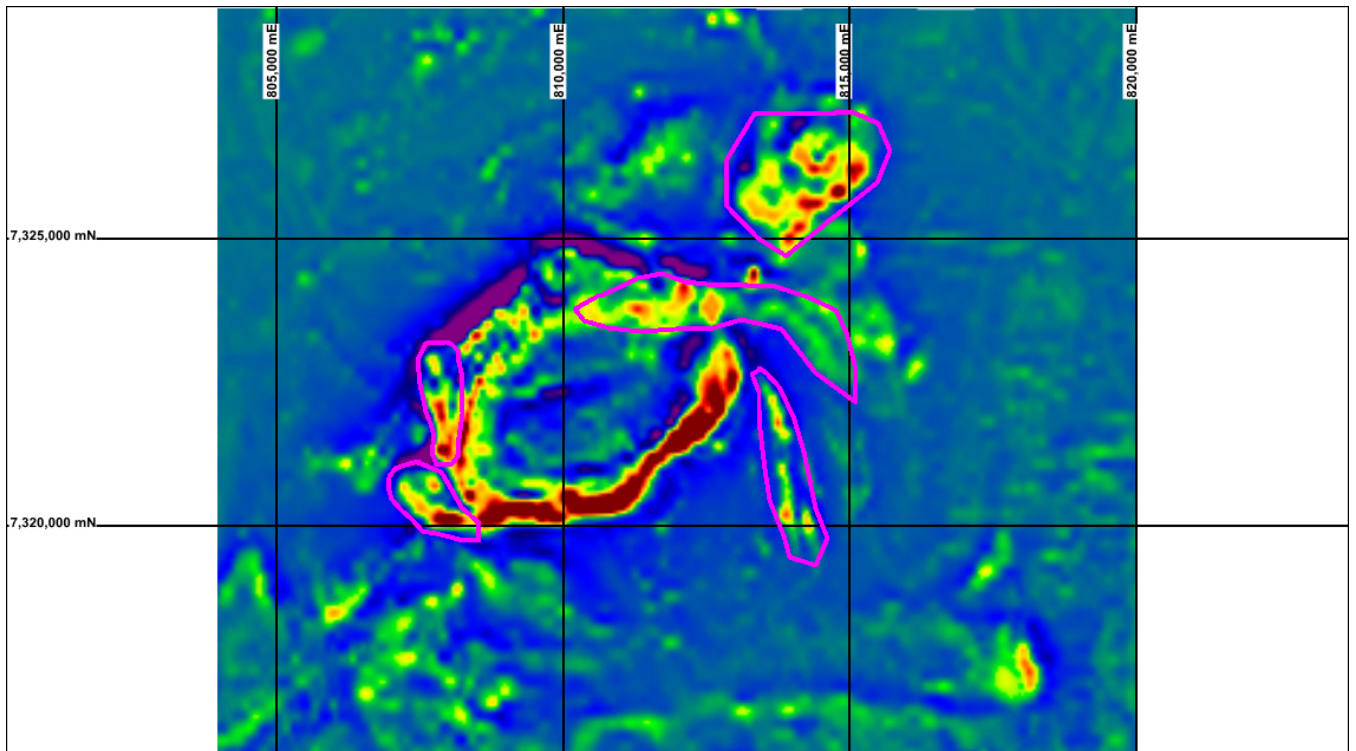


Figure 4: Boss key target areas for future exploration at Notrask Project overlain on SGU aeromagnetic map.



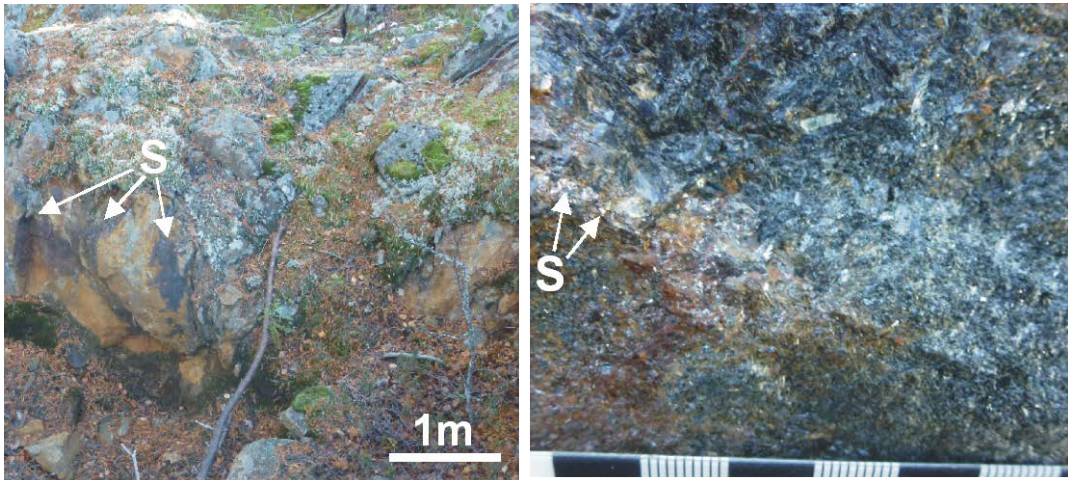


Figure 5. Outcrop of norites containing disseminated Ni-Cu sulphides (denoted as S) in the Lilltrask area.



Figure 6. (a) Outcrop discovered by the NGU; (b) specimen mineralisation (chalcopyrite, steatite) at surface.



Figure 7. Mapping has shown irregular and unevenly distributed surface sulphide enrichments as rusty spots (“sulphide spots”) like the one in ultramafic lava in this photo.



Appendix 1

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 31 December 2014:

SCHEDULE OF MINING TENEMENTS

Name	Country	Licence Number	Interest
Boutouanou	Burkina Faso	2011/11/410	100% (GRY farming in)
Diabatou	Burkina Faso	2011/11/409	100% (GRY farming in)
Tyara	Burkina Faso	2011/11-159	100% (GRY farming in)
Foutouri	Burkina Faso	2011/11-160	100% (GRY farming in)
Baniri	Burkina Faso	2009/09-060	100% (GRY farming in)
Intiedougou	Burkina Faso	2009/09-061	100% (GRY farming in)
Mougue	Burkina Faso	2009/09-062	100% (GRY farming in)
*Kankandi	Burkina Faso	10/142/MCE	100% (GRY farming in)
*Tyabo	Burkina Faso	10/144/MCE	100% (GRY farming in)
Liakka	Finland	Liakka nr.1	Right to earn 100%
Skogtrask	Sweden	Skogtrask nr.1 and 2	Right to earn 100%
*		Skogtrask nr.3	100%
*Notttrask	Sweden	Norrtrask nr.9	100%
**Lilltrask	Sweden	Lilltrask nr1, 2 and 3	Application for 100%
*Linn	Norway	Linn 1 - 12	100%

* These mining tenements were acquired during the quarter.

** These mining tenements were applied for during the quarter and are not yet granted.

The Bassare and Kassougou tenements in Burkina Faso were disposed of during the quarter.

There were no interests in farm-in/farm-out agreements acquired / disposed of during the quarter.



Competent Person's Statements

The information in this report that relates to the Skogtrask Prospect is based on and fairly represents information compiled by Mr Peter Williams, Technical Director of Boss Resources Ltd, who is a member of the Australian Institute of Geoscientists and Dr Marat Abzalov, Executive Director – Geology of Boss Resources, who is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM). Mr Williams and Dr Abzalov have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Williams and Dr Abzalov consent to the inclusion in the report of the matters based on information in the form and context in which it appears. This information has not materially changed since first being reported to the ASX on 17 November 2014.

The information in this report that relates to exploration results for the Lilltrask Project is based on and fairly represents information compiled by Dr Marat Abzalov, Executive Director – Geology of Boss Resources Ltd and Mr Peter Williams, Technical Director of Boss Resources Ltd. Dr Abzalov is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM). Mr Williams is a member of the Australian Institute of Geoscientists. Mr Williams and Dr Abzalov have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Williams and Dr Abzalov consent to the inclusion in the report of the matters based on information in the form and context in which it appears. This information has not materially changed since first being reported to the ASX on 2 December 2014.

The information in this report that relates to exploration results for the Nottrask Project is based on and fairly represents information compiled by Dr Marat Abzalov, Executive Director – Geology of Boss Resources Ltd and Mr Peter Williams, Technical Director of Boss Resources Ltd. Dr Abzalov is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM). Mr Williams is a member of the Australian Institute of Geoscientists. Mr Williams and Dr Abzalov have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Williams and Dr Abzalov consent to the inclusion in the report of the matters based on information in the form and context in which it appears. This information has not materially changed since first being reported to the ASX on 8 July 2014 and 9 October 2014.

The information in this report that relates to exploration results for the Linn Project is based on and fairly represents information compiled by Dr Marat Abzalov, Executive Director – Geology of Boss Resources Ltd and Mr Peter Williams, Technical Director of Boss Resources Ltd. Dr Abzalov is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM). Mr Williams is a member of the Australian Institute of Geoscientists. Mr Williams and Dr Abzalov have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Williams and Dr Abzalov consent to the inclusion in the report of the matters based on information in the form and context in which it appears. This information has not materially changed since first being reported to the ASX on 16 December 2014.

The information in this report that relates to the Company's projects in Burkina Faso is based on and fairly represents information which has been compiled by Mr Sam Brooks who is a member of the Australian Institute of Geoscientists. Mr Brooks has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person, as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Mr Brooks is a full time employee of Gryphon Minerals Ltd, the joint venture partner of Boss Resources Ltd for the Company's Burkina Faso Projects, and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears. This information has not materially changed since first being reported to the ASX on 2 December 2014.