



MATSA

R E S O U R C E S

LIMITED
ABN 48 106 732 487

ASX Announcement

9 October 2013

Symons Hill SHG02 rock samples similar to Nova host rocks

Highlights

- Encouraging results received from petrographic analysis (microscopic examination) of 21 samples from recent aircore drilling at Symons Hill
- Majority of rock samples are mafic granulites which support the potential for associated nickel sulphide mineralisation
- Samples of Olivine rich rock underlying Target SHG02 are described as similar to host rocks at Sirius's Nova-Bollinger deposits
- Detailed follow-up drilling, deep IP to test for disseminated sulfides and deep EM to test for massive sulphides is recommended at SHG02
- Trace copper sulphide minerals at SHG01 support potential for nickel copper mineralisation and is recommended for further drilling/exploration

Matsa Resources Limited ("Matsa" or "the Company" ASX:MAT) advises that petrographic results from 21 less weathered bottom of hole samples from the recent aircore programme have been received. Locations of the drillholes submitted for petrography are shown in Figure 1. The report's summary and conclusions are included as appendix 1.

CORPORATE SUMMARY

Executive Chairman

Paul Poli

Director

Frank Sibbel

Director & Company Secretary

Andrew Chapman

Shares on Issue

144.15 million

Unlisted Options

12.55 million @ \$0.31 - \$0.45

Top 20 shareholders

Hold 48%

Share Price on 8 October 2013

29.5 cents

Market Capitalisation

\$42.52 million

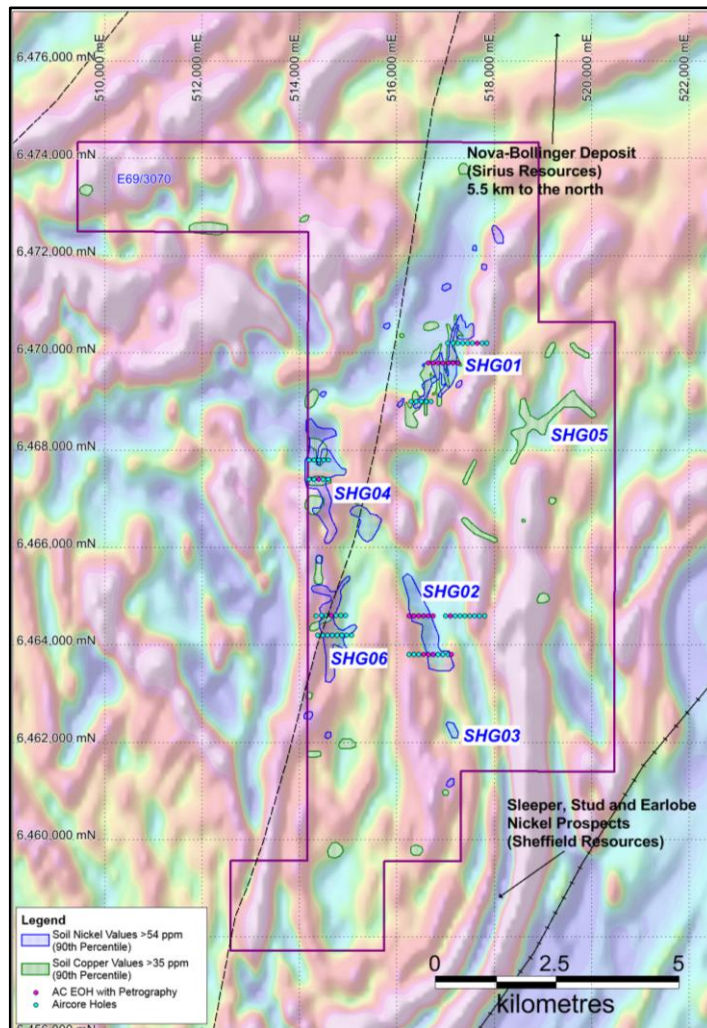


Figure 1: Symons Hill Project - Location of Aircore Drillholes

Key Petrographic Results

Most of the samples examined were confirmed to be mafic to ultramafic granulites which are favourable host lithologies for Ni Cu mineralisation. These results have confirmed Symons Hill’s prospectivity and have provided strong encouragement for Matsa’s ongoing exploration programme.

Petrographic analysis has confirmed that nickel rich basement rocks underlying soil geochemical anomaly SHG02 are olivine bearing mafic granulites. These are interpreted to be directly comparable with the olivine bearing mafic rocks which are host to Sirius’s Nova-Bollinger discoveries.

Petrography also identified trace chalcopyrite (copper sulphide mineral) in mafic granulites underlying SHG01. Matsa is very encouraged by the presence of this copper sulphide mineral which increases the prospectivity for Ni Cu mineralisation.

Petrographic Sampling

As previously announced, objectives for the recent aircore programme included:

- to determine the source of soil geochemical anomalies SHG01, SHG02, SHG04 and SHG06; and
- to characterise basement rocks over and adjacent to key soil nickel targets at Symons Hill which are concealed by soil and weathering products.

Aircore drilling intersected a range of basement granulites and gneisses overlain by deeply weathered saprolite up to 60m thick. The 71 aircore holes intersected a suite of mostly mafic rocks with variable mineralogy, which were visually field-logged as gabbro. A total of 21 samples were selected as being typical of the range of rock types observed during routine logging. The majority of samples were selected from targets SHG01 and SHG02.

Petrographic samples were selected from the last metre of each hole which is typically the interval which has been least affected by weathering and is therefore most suited to mineral identification under the microscope.

It can be seen in Figure 1 that samples comprised two sections from targets SHG02, one section through SHG01 and one hole each in targets SHG04 and SHG06.

Petrographic examination was carried out by a consultant petrographer to characterize and better define the rock type, possible protoliths, alteration style and history, and timing of any alteration or mineralization.

Petrography Results

The summary of the petrographic report is presented in Appendix 1. The majority of the samples analysed were identified as mafic and felsic granulites and gneisses with mineral assemblages indicating low granulite facies metamorphism. None of the samples examined contained significant sulphide minerals. Trace chalcopyrite was observed in hole SHAC014 in target SHG01.

Target SHG02 (Figure 2)

A total of 11 samples were collected over and adjacent to the SHG02 soil Ni anomaly. These holes are highlighted in Figure 2 and it can be seen that samples from 5 holes within the recently announced high nickel zone in basement, were all confirmed as mafic to ultramafic granulites. Olivine bearing samples SHAC065 and SHAC066 were described as altered dunites. These rocks may be from one or more similar layered mafic intrusions to that recorded in ASX announcements by Sirius Resources as hosting the Nova-Bollinger nickel copper deposits.

It was also concluded based on petrographic examination of drillhole SHAC040 that high Ni values up to 0.26% Ni may be explained by the presence of significant interstitial nickel sulphides (pentlandite), however pentlandite was not observed in the small sample examined by the petrographer.

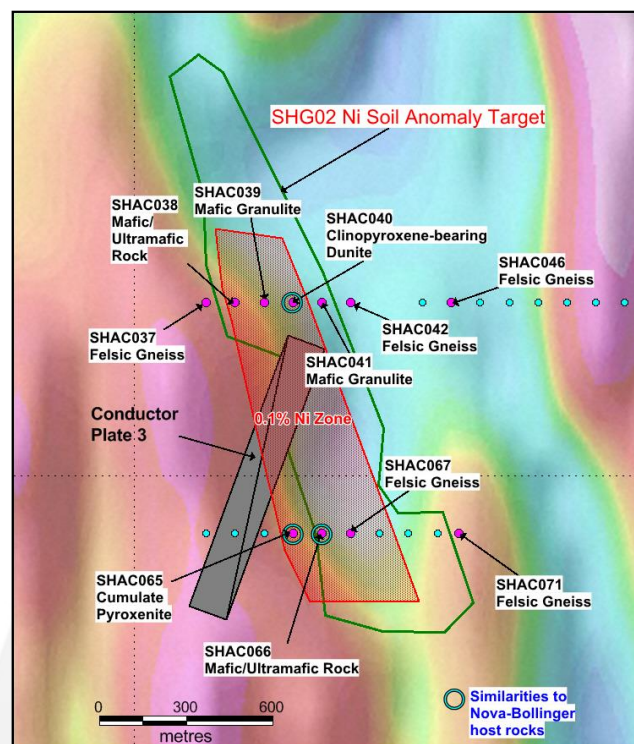


Figure 2: Target SHG02 Summary Petrographic Results

Remaining samples mostly outside the high Ni zone comprised felsic gneisses of which some are interpreted to be of sedimentary origin.

Target SHG01 (Figure 3)

This high priority coincident copper and nickel soil anomaly is located along the margin of a discrete magnetic low feature where it is partially enclosed to the east by a curvilinear magnetic anomaly. As previously announced, the magnetic pattern was interpreted to reflect a mafic intrusion along the Symons Hill Fault.

Petrography over SHG01 (Samples SHAC10 – SHAC16) has confirmed the presence of mafic granulite/gabbro within the magnetic low feature, with one sample (SHAC014) observed to contain trace chalcopyrite.

One petrographic sample (SHAC007) from the curvilinear magnetic anomaly along the eastern margin of SHG01 has identified a highly altered cumulate textured mafic granulite/gabbro containing significant magnetite.

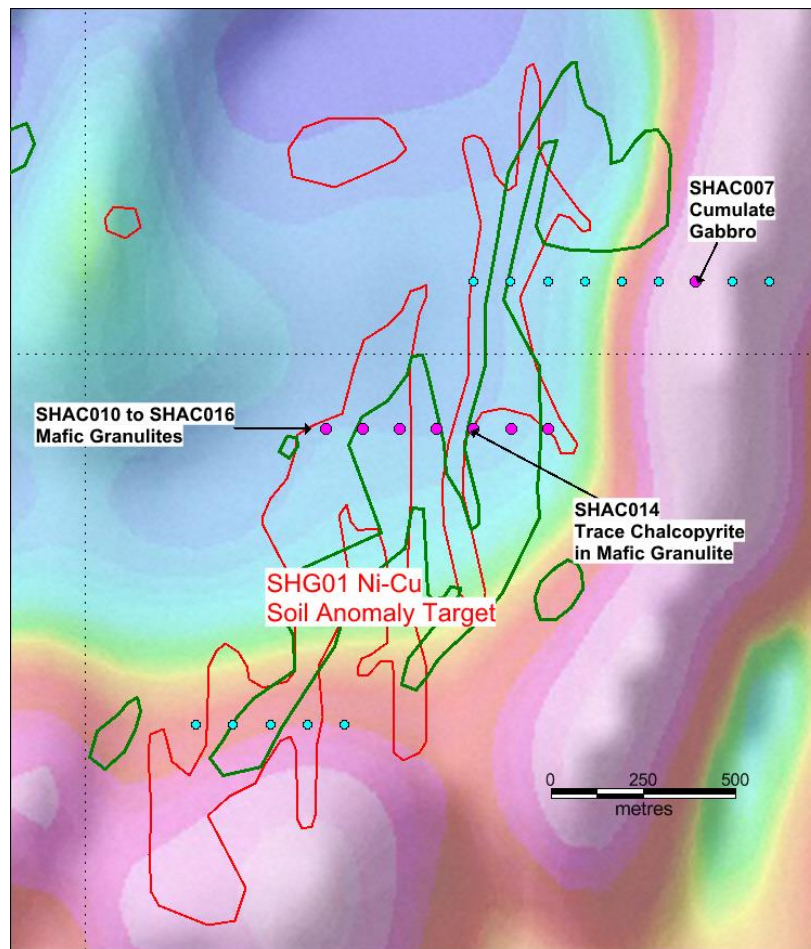


Figure 3: Target SHG01, Summary Petrography Results

For further information, please contact:

Paul Poli
Executive Chairman

Frank Sibbel
Director

Phone +61 8 9230 3555
Fax +61 8 9227 0370
Email reception@matsa.com.au
Web www.matsa.com.au

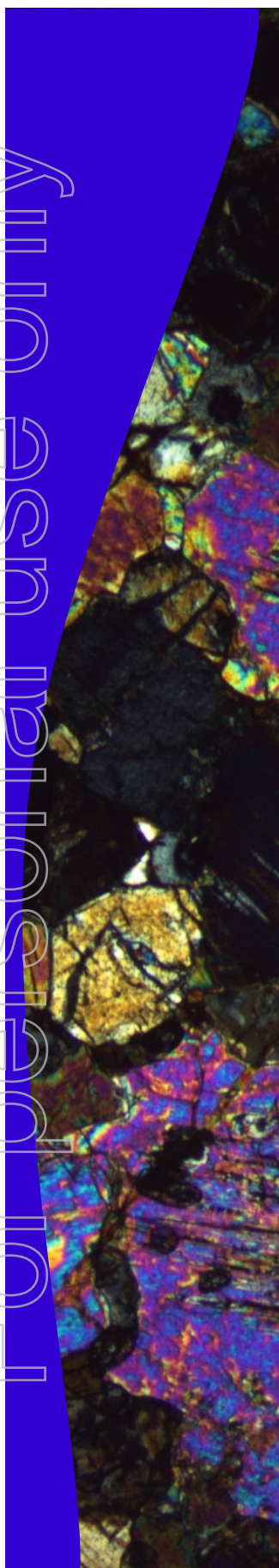
Exploration results

The information in this report that relates to Exploration results, is based on information compiled by David Fielding, who is a Fellow of the Australasian Institute of Mining and Metallurgy. David Fielding is a full time employee of Matsa Resources Limited. David Fielding has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activity which he is 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'. David Fielding consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Petrography results

Petrographic work was done by Dr A Crawford (A&A Crawford Geological Research Consultants, Hobart), who has more than 30 years experience in petrographic descriptions and litho geochemistry of igneous and metamorphic rock. Dr A Crawford has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activity which he is 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'. Dr A Crawford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

For personal use only



PETROGRAPHIC REPORT

21 Rocks from the Symons Hill Project, Fraser Range, Western Australia



for

Matsa Resources (Perth)

(attn. Dave Fielding, Camilo Guarin)

1/10/2013

**Dr Anthony J Crawford
A & A Crawford Geological Research Consultants**

493 Tinderbox Rd, Hobart,
TAS, Australia 7054
Phone: 61-3-62293831
E-mail: PetrographEx@tasmanet.com.au
Mobile 0487186659

PETROGRAPHIC SUMMARY

Introduction

Twenty-one samples of aircore chip samples from drilling on Matsa's Symons Hill prospect in Fraser Range, Western Australia, were submitted for petrographic examination. The aim of this work was to better characterize the rocks with respect to defining their rock type and possible protoliths, alteration style and history, and timing/paragenesis of any mineralization/alteration. No background geological information was provided, but sample assays were made available for all samples. All samples were prepared as unpolished thin sections as none contained more than trace sulfides. Aircore chip offcuts and thin sections were scanned, and scanned images are incorporated with summary descriptions of each sample to provide visual detail on the rocks examined, along with 2-6 microphotographs of each sample

Key rock types and their implications with respect to potential magmatic Ni-Cu mineralization are discussed in the following Petrographic Summary report, and Table 1 provides summary descriptions of all samples.

Volcanic and Volcaniclastic Host Rocks

The majority of rocks examined from the 21 aircore holes are mafic and felsic gneisses with low granulite facies metamorphic assemblages. These include:

Mafic Granulites (holes SHAC007, 010, 011, 012, 013, 014, 015, 016)

These are mainly fine- to medium-grained rocks lacking obvious mineralogical banding or a strong penetrative fabric, composed of plagioclase, hypersthene, magnetite and hornblende, with augite either lacking or present but significantly less abundant than hypersthene. Hornblende occurs as overgrowths on crystal margins of pyroxenes, and varies modally from a minor component, to more than 30modal%. Two sub-groups are represented here, one (holes 007 and 010) with strongly developed symplectite textures within and surrounding pyroxenes, the other lacking the symplectites (holes 11 to 16). The presence or absence of symplectites in mafic granulites with common hypersthene may reflect differences in either wholerock compositions or in metamorphic grade within the low granulite facies. Symplectites typically develop between plagioclase and olivine, but unless it has been totally reacted away, there is no trace of former olivine in any of the mafic granulites. A characteristic feature of these rocks is the typical low granulite facies-generated platy brown rutile exsolution in hypersthene.

The generally quite strongly pleochroic hypersthene in these rocks, the absence of olivine, and the typical Ni assays of <130ppm for all but one sample suggest that these mafic granulites derive from relatively evolved gabbroic rocks, themselves derived from an evolved basaltic magma. The dominance of hypersthene over augite suggests that these magmas had high Si/Mg values, suggesting these magmas had experienced significant crustal interaction.

PETROGRAPHIC SUMMARY

Banded Mafic Granulites (SHAC033, 041)

Two samples, from holes SHAC033 and 041, are fine-grained mafic granulites distinct from the first group of mafic granulites in having well defined compositional (mineralogical) banding.

The rock from hole 033 is a garnet-bearing mafic granulite, whereas the sample from 041 is a low granulite grade two-pyroxene gabbro in which augite is as abundant as hypersthene. The presence of garnet usually reflects a lower SiO₂ and higher total Fe than the other granulites – and the higher Fe of this rock is borne out by the assayed 10.3% Fe, significantly higher than the other mafic granulites. This more Fe-enriched sample presumably reflects an even more evolved tholeiitic parent gabbro, presumably from a mafic layered body.

Other Mafic / Ultramafic Samples (SHAC039, 040 and 065)

The rock examined from hole 039 is a quite low-Mg mafic granulite with a few modal% of interstitial quartz, and less pyroxenes than most of the other mafic granulites. It likely derives from a leucogabbro protolith, also derived from a fractionated, evolved basaltic magma, probably in a layered intrusion.

The sample from hole 040 is a serpentinized dunite, originally dominated by olivine, with a few modal% of diopside. This important sample indicates that SHAC040 intersected a more ultramafic section of the extensive mafic/ultramafic granulites in the Fraser Range. This may have implications for comparisons with the Nova-Bollinger mineralization (see later).

The rock from SHAC065 is a cumulate pyroxenite dominated by augite, but with around 25modal% hypersthene. None of the pyroxenes show the typical rutile exsolution associated with low granulite grade metamorphism as present in the other mafic granulites in this set. However this rock does contain a 2-4mm-wide band composed of plagioclase, and it probably represents part of a layered mafic – ultramafic unit. The. Less likely perhaps, it may represent a later layered mafic – ultramafic intrusive unit emplaced post-granulite grade metamorphism.

On balance of evidence, my prejudice is that this rock is part of the main Fraser Range mafic – ultramafic package, and that the mineralogical banding supports this, with the absence of rutile exsolution possibly reflecting a higher-Mg# (ie. more primitive, magnesian) pyroxene in the protolith pyroxenite cumulate relative to those in the other mafic granulites in this set.

This same sample from SHAC065 shows an assay for Ni of 2590ppm, with 326ppm Cu and 1490ppm Cr. The petrographic diagnosis of the chips studied from this hole in the 48-52m depth interval do not show any evidence that these elements should have such high

PETROGRAPHIC SUMMARY

abundances (Ni in a pyroxenite is expected to be <500ppm, and Cu probably <100ppm). The high Ni and Cu in this rock over the 4m interval assayed may be due to the presence of zones of significant interstitial pentlandite and minor chalcopyrite in rocks from this assay interval (but not present in the chips examined for this study). Alternatively, it may reflect interlayered dunite and pyroxenite through this interval, with the chips examined being solely from the pyroxenite section. The simultaneously high Ni and Cu favours the interstitial sulfides in my opinion, but these are insignificant in the chips examined (using a hand-held LED light in this unpolished slide).

Metasomatically Altered Mafic – Ultramafic Rocks (066) and Strongly Weathered Rocks (038)

The chips examined from drillhole SHAC066 show a siliceous metasomatic rock composed of low-T quartzose intergrowths with almost colloform, banded textures, and little or no trace of the protolith texture and mineralogy. However, the assay over the interval 40-43m, from which these chips were selected, shows 1550ppm Ni and 1470ppm Cr, indicating derivation from a likely ultramafic protolith not sampled by the chips examined from this hole. Strangely, the sample from SHAC067 shows a very similar assay to that from SHAC066, particularly for Ni, Cr, Mn, Mg and Fe, yet the chips assay from the 44-47m interval in 067 are of a felsic granulite like those in holes 042, 046 and 071. Whether this reflects a sample numbering mix-up, or that the assayed interval contained a layer of felsic granulite that provided the chips selected for petrography, remains unknown.

The sample from SHAC038 is an intensely weathered and oxidized regolith sample with effectively no preserved textural or mineralogical evidence to inform about the nature of its protolith.

Felsic Granulites (SHAC037, 042, 046, 067 and 071)

Best represented by the large aircore chip from SHAC046, these rocks are weakly mineralogically banded, fairly fine-grained felsic gneisses dominated by elongate, strained quartz porphyroblasts in a quartzo-feldspathic matrix in which the ratio of albite to Kspar, and feldspars to quartz, vary significantly. These rocks lack alumino-silicate minerals (andalusite, kyanite, sillimanite) and contain sparse khaki biotite as the sole mafic silicate phase. The simple mineralogy is hardly pressure – temperature diagnostic, but the strong banding, and lineation defined by strained quartz, suggest that these rocks may also have undergone low granulite grade metamorphism.

PETROGRAPHIC SUMMARY

The nature of the protoliths of these rocks requires more information, but certainly samples 037 and 042 show significantly more quartz than might be formed from a felsic igneous (granitic) protolith. Such an origin cannot be ruled out for samples 046, 067 and 071.

SUMMARY and IMPLICATIONS FOR EXPLORATION

The samples examined contain almost no sulfides, apart from some minor interstitial chalcopyrite in the chips from SHAC014. Possible interstitial pentlandite and chalcopyrite may have been present in SHAC065, but was not seen in the chips examined.

Cross sections of the Nova-Bollinger deposit released by Sirius Resources in ASX Announcements show the Ni-Cu mineralization to be hosted in a sill-like gabbroic intrusion. I am unaware of any gabbro-hosted Ni (pentlandite) mineralization in which olivine is not a significant phase associated with the sulfides (e.g., Voiseys Bay). On this basis, the occurrence of gabbro-derived mafic granulites, and especially those with olivine noted above, are positive results for exploration for magmatic Ni-Cu sulfides on Matsa's Symons Hill tenement, and encourage further exploration for Nova-Bollinger-type mineralization.

With respect to the drilling done in this first pass aircore program by Matsa, I think the presence of altered olivine-bearing rocks in the area around holes SHAC065 and 066 is worthy of more detailed follow-up drilling, and perhaps deep IP to test for the possible presence of disseminated sulfides, and deep EM to test for more massive sulfides. Similarly, the symplectite-bearing mafic granulites in holes SHAC007 and 010 with 200-275ppm Cu are interesting, and should be the focus of more detailed exploration.

Table 1: Summary petrographic descriptions: Symons Hill Project samples

HOLE ID	Summary Petrographic Descriptions
SHAC007 @36-37m	<i>A weathered and altered low-granulite facies metamorphosed cumulate gabbro with interstitial cusped magnetite and garnet-spinel symplectite rims on some former pyroxenes.</i>
SHAC010 @57-58m	<i>A low granulite facies-metamorphosed, relatively coarse-grained augite-bearing norite (hypersthene gabbro) with strong development of magnetite symplectite in hypersthene and green Al-spinel in broad hornblende rims that have overgrown both the hypersthene and the less abundant augite.</i>
SHAC011 @47-48m	<i>A moderately weathered low granulite facies-metamorphosed norite (hypersthene gabbro) with rutile exsolution in hypersthene crystals, and abundant broad rims of green hornblende on most hypersthene.</i>
SHAC012 @42-43m	<i>A medium-grained, relatively fresh low granulite facies metamorphosed hypersthene gabbro cumulate with hypersthene (~25modal%) crystals that show broad hornblende rims and rutile exsolution, and occasional intercumulus brown phlogopite.</i>
SHAC013 @37-38m	<i>A medium-grained noritic gabbro that underwent low granulite facies metamorphism before retrogressing to low greenschist facies, with actinolite alteration of hypersthene and smectite alteration of green hornblende rims on former hypersthene crystals.</i>
SHAC014 @39-40m	<i>Another medium-grained norite that has suffered low granulite facies metamorphism producing rutile exsolution in hypersthene and hornblende rims on most pyroxene grains, including the occasional (<5modal%) augite crystals. Minor interstitial chalcopyrite is also present.</i>
SHAC015 @38-39m	<i>A low granulite facies metamorphosed norite that contains minor (~5-8modal%) augite, almost qualifying to be classified as a two-pyroxene gabbro. It contains broad hornblende rims around both pyroxenes, and exsolution of rutile and augite in hypersthene grains.</i>
SHAC016 @46-47m	<i>Another fresh, low granulite facies metamorphosed norite (hypersthene gabbro) with hornblende rims on pyroxenes and rutile exsolution in hypersthene.</i>
SHAC029 @52-53m	<i>A probable post-tectonic, quite coarse-grained quartz monzonite with sparse brown biotite, with weak clay/sericite alteration of orthoclase and fresh plagioclase, and significant recrystallization of quartz and feldspars along common brittle fractures.</i>
SHAC033 @43-44m	<i>A foliated, fairly fine-grained and weakly mineralogically banded mafic granulite with the assemblage plagioclase-hypersthene-garnet-biotite-FeTi oxide-biotite-muscovite.</i>
SHAC037 @39-40m	<i>A moderately lineated fine-grained quartz-albite felsic gneiss of likely meta-sedimentary origin. It is not clear whether it experienced the regional low granulite grade metamorphism.</i>
SHAC038 @44-45m	<i>Probably an intensely weathered, oxidized former mafic or ultramafic igneous rock, but mineralogical and textural reconstitution precludes derivation of any more useful information from this regolith sample.</i>
SHAC039 @35-36m	<i>A weathered, low-granulite facies metamorphosed mafic granulite derived from an evolved, quartz-bearing (~2modal%) leucogabbro protolith.</i>
SHAC040 @32-33m	<i>A metasomatically altered former clinopyroxene-bearing dunite that has reacted extensively with granite-derived K- and Si-enriched hydrothermal fluids to form serpentine riddled by complex quartz-muscovite veins and patches.</i>

For personal use only

Table 1: Summary petrographic descriptions: Symons Hill Project samples

HOLE ID	Summary Petrographic Descriptions
SHAC041 @34-35m	<i>These chips are fairly fine-grained compositionally banded mafic granulites derived from a two-pyroxene gabbro, with augite as abundant as hypersthene, and lacking hornblende rims.</i>
SHAC042 @31-32m	<i>A weathered and altered quartz-albite felsic gneiss rock with a metamorphic fabric shown by elongate quartz grains; it may derive from a metasedimentary protolith like that from SHAC037 @ 39m.</i>
SHAC046 @31-32m	<i>A finely banded inequigranular quartz-albite Kspar rock with elongate porphyroblastic quartz, and occasional deep khaki biotite plates as the only mafic silicate phase. The rock may be derived from a felsic igneous protolith.</i>
SHAC065 @51-52m	<i>A cumulate pyroxenite containing dominant augite and around 25-30modal% of hypersthene with sparse interstitial and rimming khaki hornblende. The rock lacks convincing evidence that it has experienced low granulite grade metamorphic recrystallization.</i>
SHAC066 @42-43m	<i>A siliceous metasomatic rock thoroughly replacing a medium-grained mafic or ultramafic rock of which little trace remains apart from vague mm-sized crystal outlines.</i>
SHAC067 @44-47m	<i>A foliated quartz-Kspar-albite felsic gneiss, possibly derived from a felsic igneous protolith.</i>
SHAC071 @28-30m	<i>A felsic to intermediate granulite grade, fine-grained gneiss with the gneissic fabric defined by elongate quartz and weak banding of quartz and feldspars.</i>

For personal use only