ASX and Media Release

16 August 2011

1.8Mt MAIDEN RESOURCE AT YANDANOOKA HMS PROJECT

KEY POINTS

- **Maiden Resource estimated at Yandanooka HMS project: 71.75 million tonnes (Mt) @ 2.6% of heavy mineral (HM) containing 1.84Mt HM (Indicated and Inferred)**
- **Includes 37.5Mt at 3.8% HM containing 1.41Mt HM as an Indicated Resource within a High-Grade core to the deposit.**
- **Yandanooka deposit is at surface, close to existing infrastructure and has a high value mineral assemblage: 11.5% zircon, 6.9% rutile, 10.2% leucoxene, 61.9% ilmenite.**

Bulk minerals explorer Sheffield Resources ("Sheffield") (ASX:SFX) today announced a maiden Resource estimate for its Yandanooka heavy mineral sand (HMS) project in Western Australia's Mid West region of 1.84 million tonnes of contained heavy mineral (71.75Mt @ 2.6% HM in Indicated and Inferred categories), including an Indicated Resource for the high grade core of 1.41Mt of contained heavy mineral (37.5Mt at 3.8% HM). (Table1).

Managing Director, Bruce McQuitty said the Yandanooka Resource is an important milestone which Sheffield intends to build upon.

"*This is a terrific result for our shareholders and a great achievement by Sheffield's exploration team, just eight months after listing," he said.*

"*Yandanooka has many attributes which are favourable for mining - the deposit is at surface, close to established infrastructure, and has a high value mineral assemblage.*"

"*We will now investigate its feasibility for near term development.*"

"*Yandanooka is just one of several heavy mineral sand projects held by Sheffield in the North Perth Basin. Our strategy is to carefully evaluate each project with a view to sequential mining with a mobile plant*."

"*Importantly, Sheffield's maiden HMS resource coincides with strengthening prices in the supply constrained titanium dioxide and zircon markets.*"

Current (at 9/8/2011) FOB Australia price ranges for mineral sands commodities are:

Zircon (standard grade, bulk).....	US$2,200 – 2,400 / tonne
Rutile (min 95% TiO_2, bulk).....	US$1,000 – 1,120 / tonne
Ilmenite (min 54% TiO_2, bulk).....	US$140 – 250 / tonne

Leucoxene (85%-95% TiO_2) prices are generally at a premium to the ilmenite price, trading as high as US$1,450 – 1,550 / tonne for >91% TiO_2 (bagged FOB Australia).
(*Source: Industrial Minerals web site, prices have not been independently verified*).

Sheffield's ongoing resource estimation and scoping study schedule is provided in Table 2.

Table 1: Yandanooka Project – Mineral Resources[1] as at 16 August, 2011, at 0.9% HM Cutoff.

Domain	Mineral Resource Category	Material Million Tonnes*	Bulk Density	HM %	Slimes %	Osize %	In-situ HM Million Tonnes*
HG Core	Indicated	37.50	2.0	3.8	15.8	11.0	1.41
LG Halo	Indicated	23.50	1.9	1.3	12.9	6.8	0.31
	Inferred	10.75	1.9	1.1	12.9	9.0	0.12
	Total	34.25	1.9	1.3	12.9	7.5	0.43
ALL DOMAINS	**Indicated**	**61.00**	**2.0**	**2.8**	**14.7**	**9.4**	**1.72**
	Inferred	**10.75**	**1.9**	**1.1**	**12.9**	**9.0**	**0.12**
	Total	**71.75**	**2.0**	**2.6**	**14.4**	**9.3**	**1.84**

Domain	Mineral Resource Category	In-situ HM Million Tonnes*	Mineral Assemblage (% of HM Tonnes)[1]				
			Zircon	Rutile >95% TiO_2	Leucoxene 85-95% TiO_2	Ilmenite <55-85% TiO_2	Total VHM
HG Core	Indicated	1.41	12.7	6.7	8.1	63.9	91.4
LG Halo	Indicated	0.31	10.1	7.0	12.5	59.8	89.4
	Inferred	0.12	10.1	7.0	12.5	59.8	89.4
	Total	0.43	10.1	7.0	12.5	59.8	89.4
ALL DOMAINS	**Indicated**	**1.72**	**11.7**	**6.8**	**9.8**	**62.3**	**90.6**
	Inferred	**0.12**	**10.1**	**7.0**	**12.5**	**59.8**	**89.4**
	Total	**1.84**	**11.5**	**6.9**	**10.2**	**61.9**	**90.4**

*Tonnes have been rounded to reflect the relative uncertainty of the estimate.
[1] This estimate is classified and reported in a manner compliant with the JORC code and guidelines (JORC, 2004).

About the Yandanooka Deposit

Yandanooka is one of few remaining outcropping HMS deposits in the Mid West. It is situated on cleared freehold land just 2.5km from an existing sealed highway and railway connecting to Geraldton port, approximately 140km to the northwest (Figure 1).

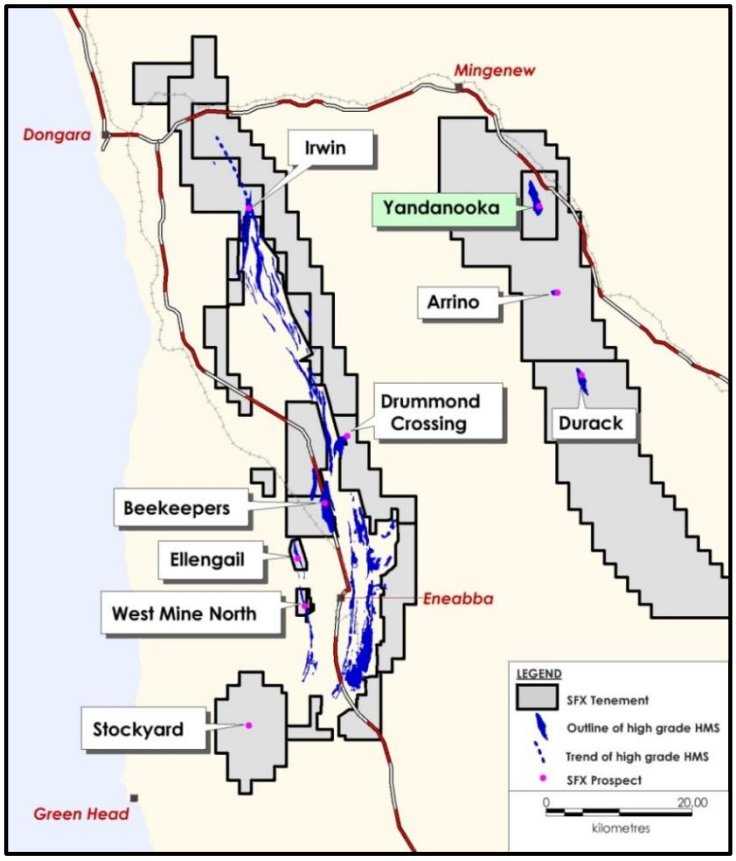

Figure 1: Location of Sheffield's Yandanooka and other HMS Projects in the Eneabba Region

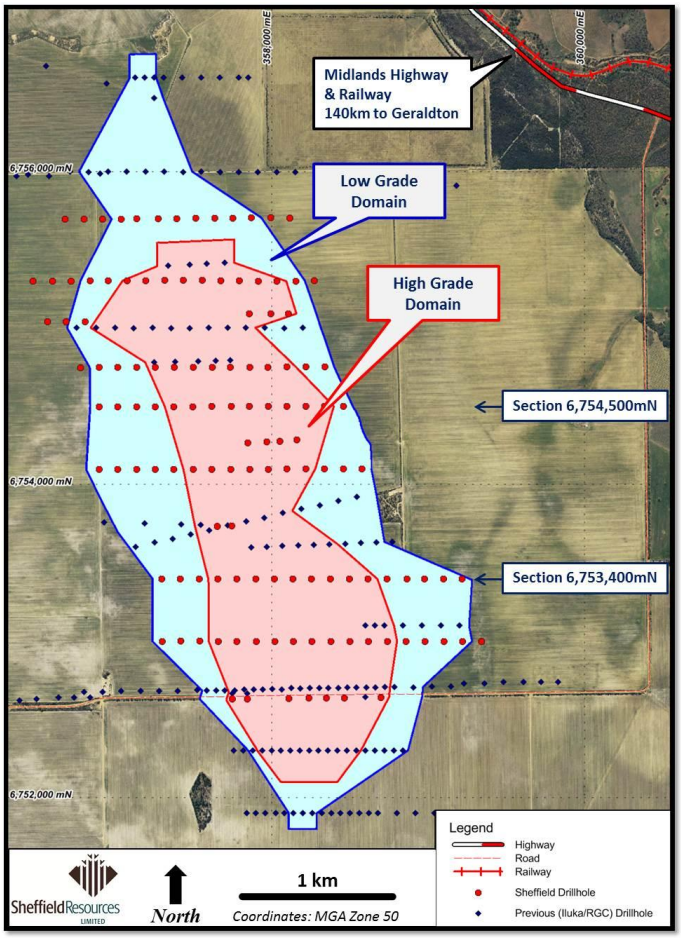

Figure 2: Plan view of the Yandanooka Deposit showing holes collars and resource domain outlines

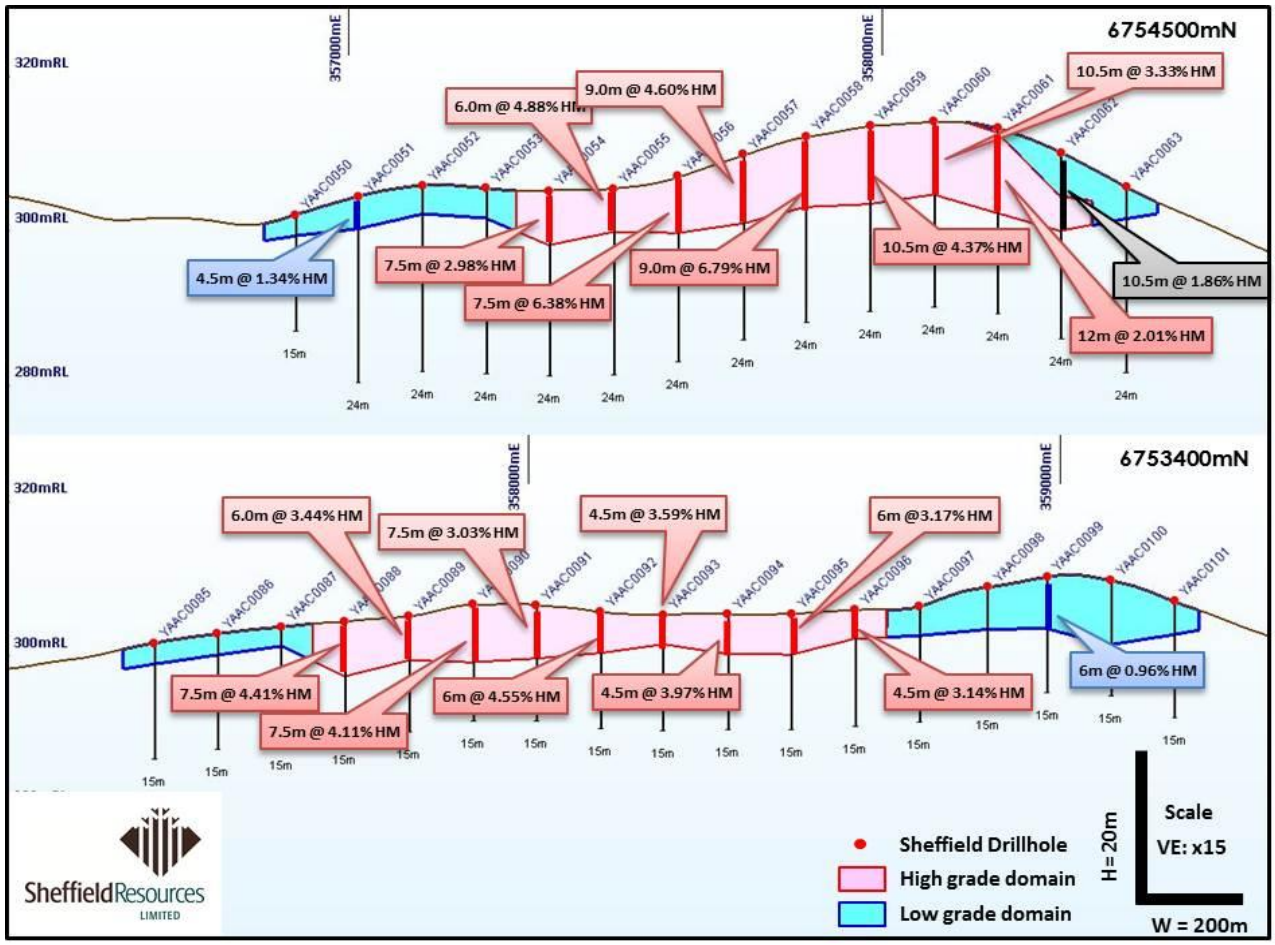

Figure 3: Typical cross-sections, looking north, through the Yandanooka deposit showing resource domain outlines and drill hole intersections

The deposit has a central high-grade (>2% HM) core enveloped by a lower grade (>0.9% HM) halo. The deposit is 5km long by 1.7km wide, between 2m and 20m thick, has minimal overburden and lies above the water table (Figures 2 & 3).

In addition to elevated zircon and rutile content, the heavy mineral assemblage comprises a significant proportion of high-TiO_2 ilmenite and leucoxene. Previous work by Iluka Resources Ltd has determined a TiO_2 content of the ilmenite of 64.7%, based on analysis of 6 composite samples. The high TiO_2 content of the ilmenite indicates potential suitability as feed for chloride process pigment production or synthetic rutile production. Sheffield will conduct further mineral separation studies to gain information on the ilmenite quality.

Yandanooka is interpreted to be a dunal-style HMS deposit situated along an Eocene palaeo-shoreline. Sheffield has secured tenure over 70km of strike of this prospective shoreline which includes known HM occurrences Arrino and Durack (Figure 1).

ENDS

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COMPETENT PERSONS' STATEMENT

[1]The information in this announcement that relates to resource estimation is based on information compiled under the guidance of John Vann. Mr Vann is a Principal of Quantitative Group and acts as a consultant to the Company. Mr Vann is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australasian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity to which they are undertaking to qualify as Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code")'. Mr Vann consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

[2]The information in this announcement that relates to reporting of resource and exploration results is based on information compiled under the guidance of Mark Teakle. Mr Teakle is a consultant to the Company. Mr Teakle is a Member of the Australasian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity to which they are undertaking to qualify as Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code")'. Mr Teakle consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

FORWARD LOOKING AND EXPLORATION TARGET STATEMENTS

Some statements in this announcement regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company's exploration programme, outlook, target sizes and mineralised material estimates. They include statements preceded by words such as "expected", "planned", "target", "scheduled", "intends", "potential", "prospective" and similar expressions.

TABLE 2: SHEFFIELD HMS DRILLING AND RESOURCE ESTIMATION SCHEDULE

Project	Drilling status	Assay timetable	Resource Estimation	Scoping Study
Yandanooka	130 holes completed	Results received (see ASX release 16 May 2011)	Completed (ASX release 16 August 2011)	Commence October 2011
Ellengail	Compilation of historic drilling completed	Not applicable	Commenced, results due early September 2011	Commence October 2011
West Mine North	90 holes completed	Results received (see ASX release 9 August 2011)	Commence August, results due late September 2011	Commence October 2011
McCalls	30 holes completed	Results due August, 2011	Commence August, results due October 2011	Commence October 2011
Irwin	31 holes completed	Results due September, 2011	N/A	N/A
Drummond Crossing	30 holes completed	Results due September 2011	N/A	N/A
Other projects	Rig secured to drill new targets in October /November 2011	N/A	N/A	N/A

Note – these dates are indicative only and remain subject to possible delays arising from laboratory assay and other factors

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (**Sheffield**) is a dynamic exploration company with a bulk minerals focus. The Company's Projects are geared towards the steel industry feed cycle (iron ore and tungsten) and the emerging fillers-ceramics-pigments cycle (talc, zircon, titanium dioxide).

ASX Code – SFX	Market Cap @ 30cps - $17.6m
Issued shares – 58.7m	Cash - $4.1m (approx.)

The Company has over 6,000km^2 of highly prospective tenure, all situated within the state of Western Australia.

HEAVY MINERAL SANDS

Sheffield controls over 5,000km^2 of mineral sands tenure in the established North Perth Basin mineral sands province and the emerging Carnarvon, Eucla and Canning Basin provinces.

Sheffield's North Perth Basin tenement package of over 2,500km^2 contains seven advanced exploration projects: West Mine North, Ellengail, Yandanooka, Durack, Beekeepers, and Irwin which are located near Eneabba and the large McCalls deposit - a former BHP project located near Gingin. These projects are well located close to existing mineral sands operations and to a network of highways and railway lines connecting to Geraldton and Fremantle/Kwinana ports. Sheffield's strategy is, subject to exploration success, to build multiple HMS projects capable of supporting a flexible mobile mining plant.

TALC

Sheffield has 1,152km^2 of tenure over the 175km-long Moora Talc Belt which represents a dominant ground position over a region that has, for the last 50 years, been exclusively controlled by major mining companies.

The Moora Talc Belt includes the large Three Springs mine which is owned by Rio Tinto Limited subsidiary Luzenac Australia Pty Ltd. Three Springs is renowned for producing high purity talc and is a relatively simple "dig-and-deliver" operation.

The existing infrastructure is excellent. A railway and a sealed highway transect the project and connect to Geraldton port approximately 170km to the northwest.

Sheffield's large tenement holding contains numerous talc occurrences and has the potential to become a strategic talc asset. Sheffield therefore represents a unique opportunity for investors to gain exposure to one of the few high-grade talc explorers in the world.

IRON

Sheffield's Pilbara iron ore projects consist of five granted tenements and 7 tenement applications, five of which are subject to ballot with multiple competing parties. Sheffield's strategy is to target hematite mineralisation adjacent to infrastructure in the world class Pilbara iron province and to build up consolidated tenement holdings over time. High grade iron mineralisation has been identified on three of the Company's tenements.

ANNEXURE 1 – TECHNICAL DETAILS

The Yandanooka deposit was previously explored by RGC Ltd during the late 1980s and by Iluka Resources Ltd between 2003 and 2006. Both companies completed broadly spaced drill traverses across the deposit.

Resources were estimated from the results of 346 vertical aircore holes for a total of 5,660m on a drilling pattern of approximately 300m x 120m. The resource drillhole database comprises a mix of historic holes drilled by previous explorers: RGC 102 holes (30%); Iluka Resources 118 holes (34%), and; 126 new holes (36%) drilled by Sheffield in April 2011 (see ASX release by Sheffield dated 16 May 2011).

Of the total resource drillhole database, 70% of the holes have been surveyed either by GPS or RTK-GPS, with RL (height) data determined from a combination of drillhole collar and spot-height data. For the remaining data (RGC holes) the location accuracy is less well known and this has been taken into consideration in the Classification of the Resources.

Heavy Mineral, Slimes and Oversize determinations were by Heavy Liquid Separation techniques. Holes drilled by Sheffield used -53µm and 1mm screen sizes, with static separation in TBE (SG 2.96), representing 60% of the samples database. Holes drilled by Iluka used -53µm and 2mm screen sizes, with static separation in LST (SG 2.85), representing 26% of the samples database. Holes drilled by RGC used -75µm and 2mm screen sizes, with static separation in TBE, representing 14% of the samples database.

Resource domains were based on a combination of grade and geological factors driven by deposit continuity. Bulk Density was determined using an industry-standard formula which assumes density and proportionately accounts for each size and mineral component of the material.

The mineral assemblage of the resource was determined from results of QEMSCAN analysis by Bureau-Veritas, Queensland of 11 Heavy Mineral Concentrate (HMC) composite samples. Of these, three were from the Low Grade Domain and eight were from the High-Grade Domain.

Three of the composites were selected to compare with previous mineral assemblage work by Iluka Resources. QEMSCAN uses observed mass and chemistry to classify minerals according to specific breakpoints, especially with regard to the TiO_2 minerals (rutile >95% TiO_2; leucoxene 85-95% TiO_2; ilmenite <55-85% TiO_2). Sheffield has selected breakpoints for the TiO_2 minerals which most-closely compare with the mineral assemblage defined by Iluka Resources for Yandanooka (average: 13.1% zircon, 2.9% rutile, 59.6% ilmenite (at 64.7% TiO_2) and 11.2% leucoxene) based on six historical composite samples using proprietary in-house mineral separation methods. Particle size for the Yandanooka composites, also estimated by QEMSCAN, ranges from 95 to 125 microns. Sheffield will conduct further mineral separation studies as input to scoping study work scheduled for Q4 2011.

Resource estimation was by Trent Strickland, who is a full time employee of Quantitative Group (QG). QG are an internationally recognised, independent consultancy group specialising in resource evaluation. This estimate was prepared under the supervision of, and with technical review by, John Vann[1] who is a full time employee of QG. John Vann acts as the Competent Person for the resource estimate while Mark Teakle[2] acts as the Competent Person with respect to the reporting of resource and exploration results. Details of the estimation methodology are contained in Annexure 2.

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Training

Sheffield Resources Ltd
14 Prowse Street
West Perth WA 6005

Attention: Mr Bruce McQuitty

15 August 2011

Dear Sir,

Re: Yandanooka Mineral Sands Deposit Resource Estimate

The mineral resource estimate of the Yandanooka Mineral Sands deposit as of the 15th of August 2011 is presented in the attached table (Table 1).

The estimate was prepared by Mr Trent Strickland under the supervision and technical review of Mr John Vann. Trent Strickland is a full time employee of Quantitative Group (QG) and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). John Vann is a Director and Principal Consultant of QG and a Fellow of both the AusIMM and the Australian Institute of Geoscientists (AIG). Mr Vann has over 25 years experience in the minerals industry, including 18 as a consultant Geostatistician, and 10 years as Director of QG. Mr. Vann has sufficient experience to satisfy the requirements to act as the competent person for this estimate as defined in the *2004 Edition of the Australasian Code for Reporting of Mineral Resources and Ore Reserves*. Mr Vann consents to the inclusion in this report of the Yandanooka Mineral Sands resource estimate.

Yours faithfully,

John Vann
Principal Consultant / Director

Quantitative Group
Our Skills On *Your* Team™

Geostatistics
Resources & Reserves
Reconciliation & Grade Control
Audit and Due Diligence
Strategic Mine Planning
Geometallurgical Modelling
Mine Geology
Training

Technical Notes on Mineral Resource Estimation

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	Total	**71.75**	**2.0**	**2.6**	**14.4**	**9.3**	**1.84**

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	Total	**1.84**	**11.5**	**6.9**	**10.2**	**61.9**	**90.4**

*Tonnes have been rounded to reflect the relative uncertainty of the estimate.

[1] The Mineral Assemblage is represented as the percentage of the Heavy Mineral (HM) component of the deposit, as determined by QEMSCAN. TiO_2 minerals defined according to the following ranges: Rutile >95% TiO_2; Leucoxene 85-95% TiO_2; Ilmenite <55-85% TiO_2.

Table 1. Yandanooka resource estimate at a 0.9 HM% cut off.

- A 0.9% heavy mineral (HM) domain was defined to model the low grade mineralisation and a 2.0% HM domain to model the high grade core of mineralisation. HM grade was used along with specific geological considerations to define the domain wire-frames. The validity of these domains was assessed by QG using a variety of measures including statistical analysis and by critically examining the geological interpretation, and they are considered geologically robust in the context of the resource classification applied to the estimate.

- Within the 0.9% HM and 2.0% HM domains exploratory data analysis, including univariate and multivariate analysis and variography were conducted. The domains were found to be statistically sound and robust.

- Estimation was by Ordinary Kriging (OK) and the search employed (or 'neighbourhood') was optimised using Quantitative Kriging Neighbourhood Analysis (QKNA).

- The mineral assemblage results from three Heavy Mineral Concentrate (HMC) composites from within the low grade domain were averaged and assigned to represent the material within this domain. The eight HMC composites representing the high grade domain were assigned to the domain by means of polygonal interpolation.

- The estimate was checked and found to be sound and robust. The estimate was validated by QG as follows:

    - A visual checking of the interpolation results in both plan and section;
    - Global input vs. output statistics were compared, including clustered and declustered composites;
    - Semi-local input vs. output statistics using moving window averages;

- Classification of the Yandanooka resource considered all aspects of the integrity of the estimate, including: data quality, geological interpretation, domaining approach, data distribution and density, modelling spatial continuity and estimation confidence.

- The tonnes and grades of the Yandanooka estimate are reported above a 0.9% HM cut off.