



**AUSTRALIAN BAUXITE LIMITED**

ASX: ABZ

**ASX ANNOUNCEMENT**

29 June 2012

**Binjour Bauxite Resource Increased 46% to 24.5 Million Tonnes**

Company resources grow to 106 million tonnes<sup>1,2,3,4</sup>

- 24.5 million tonnes of thick, gibbsite-rich bauxite resources at Binjour, central QLD
- Based on 517 drill holes into less than 25% of the identified bauxite layer
- Huge bauxite mineralisation - identified bauxite layer extends over entire 44 square kilometre Binjour Plateau (Figure 2)

Emerging bauxite exploration and development company, Australian Bauxite Limited (ABx, ASX Code ABZ) has bauxite tenements totalling more than 8,700 km<sup>2</sup> covering the core of the Eastern Australian Bauxite Province (see Figure 4). ABx considers its Binjour Project located 100kms from Bundaberg Port to be a state significant discovery of a major bauxite province which may well become the company’s flagship project over the next 5 years.

A 3 to 15 metres thick layer of bauxite extends over the entire 44 square kilometre Binjour Plateau (see Figure 2). Parts of this bauxite layer contain silica gel veinlets which in its current form, makes the bauxite grades too silica-rich. However, this material has been shown to be easily removed by washing and the recovered bauxite then meets DSO grade. The large potential of Binjour is just being revealed, however, this resource estimate only includes bauxite that meets DSO grade (see Table 1).

**Table 1: Summary of Bauxite Resources at Binjour, Central QLD**

DSO Bauxite Resources			Sieved at 0.26mm											
Resource category	Tonnes millions	Bauxite Thickness	Al <sub>2</sub> O <sub>3</sub> Avl % 143°	Rx SiO <sub>2</sub> %	Avl/Rx Ratio	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S Ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Yield %	Overburden m	Internal Waste m
Inferred	9.0	3.9 m	38.0	3.8	10.0	43.7	4.5	9.7	22.4	3.6	24.2	59%	8.2 m	0.3 m
Indicated	15.5	5.3 m	39.5	2.6	15.1	44.2	3.1	14.5	23.4	3.7	24.9	62%	9.4 m	0.3 m
<b>TOTAL</b>	<b>24.5</b>	<b>4.8 m</b>	<b>39.0</b>	<b>3.0</b>	<b>12.8</b>	<b>44.1</b>	<b>3.6</b>	<b>12.3</b>	<b>23.1</b>	<b>3.7</b>	<b>24.6</b>	<b>61%</b>	<b>8.9 m</b>	<b>0.3 m</b>

Cut-off grades applied: Minimum 30% available Al<sub>2</sub>O<sub>3</sub>, 2m thickness & 3 data points in 350m search ellipse for each 25m x 25m block. Leach conditions to measure available alumina "Al<sub>2</sub>O<sub>3</sub> Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "Avl/Rx" ratio is (Al<sub>2</sub>O<sub>3</sub> Avl)/(Rx SiO<sub>2</sub>) and "A/S" ratio is Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>. Values above 10 are excellent. Tonnage is for bauxite in-situ. Yield is for screening all samples at 0.26mm. The significant tonnages requiring no upgrade will have 100% yield. Estimate excludes very large tonnages of bauxite containing washable silica gel.

The district’s deposits contain thick zones of premium grade gibbsite-rich bauxite often referred to as “Brown Sugar” bauxite, with good potential for more discoveries. ABx has recently applied for several exploration permits covering the extensions of Binjour Plateau geology.

“Brown Sugar” bauxite is ideal feedstock for sweetener circuits in alumina refineries and will demand a premium price.



**Figure 1: Binjour location**

**AUSTRALIAN BAUXITE LIMITED**

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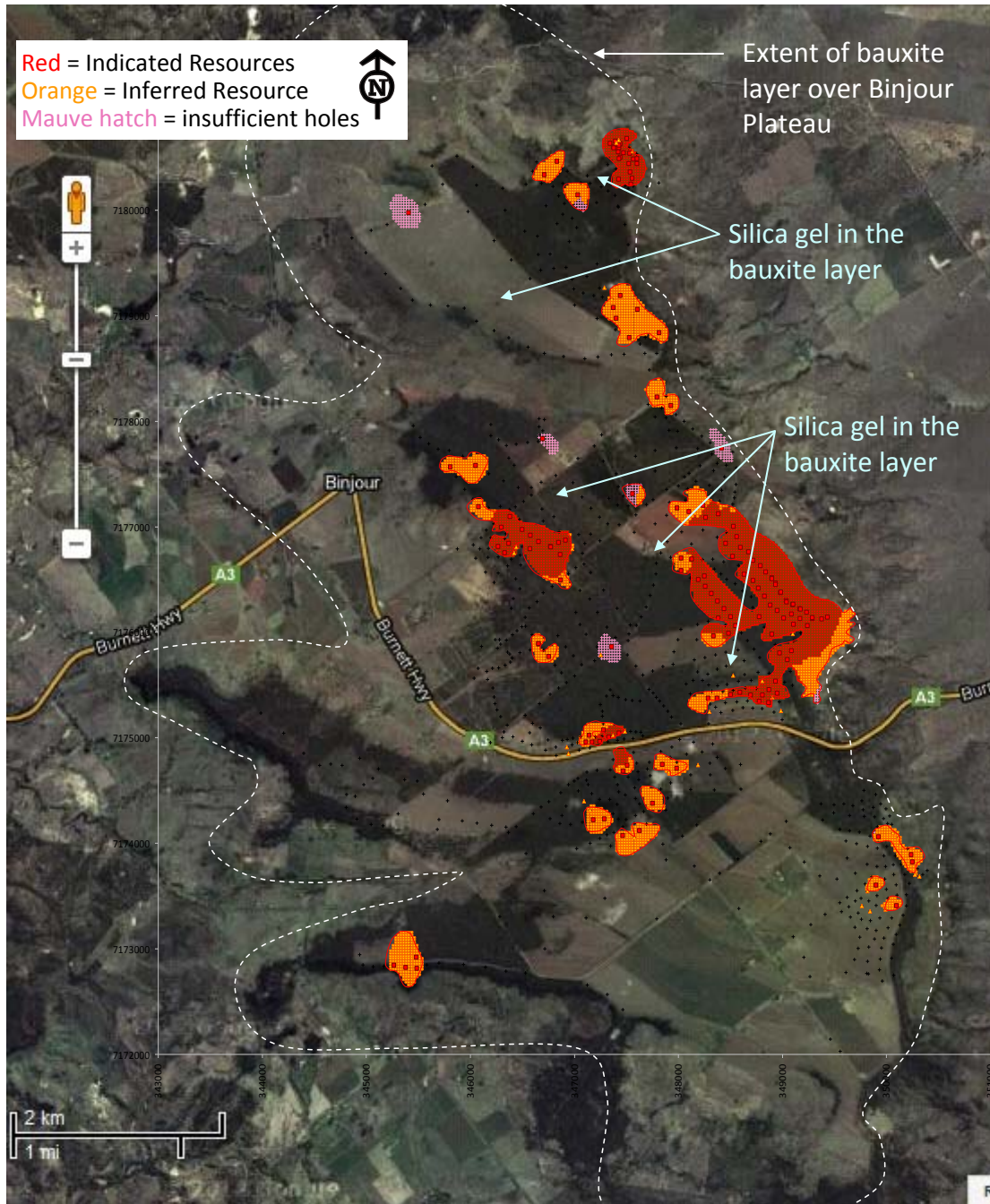
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**Figure 2: Drillholes, Resource Categories & Distribution of Bauxite Types Across Binjour Plateau**  
Red circles are holes with thick DSO Bauxite, Triangles have 1 metre of DSO Bauxite, Crosses mainly have silica gel in bauxite



### Resource Estimation and Deposit Geometry

The Binjour bauxite unit is a distinct and predictable horizontal layer averaging approximately 6 metres in thickness, lying beneath a red mud unit averaging 8 metres in thickness that is free diggable and similar in density to the bauxite layer. The bauxite is high in  $Al_2O_3$  but varies in  $SiO_2$  grade, mainly due to the presence of soft silica gel veinlets on joints and cavities. Only areas of low  $SiO_2$  grade have been included in the estimate of DSO grade bauxite (see definitions).

The known extent of the Binjour bauxite layer is currently 44 square kilometres which is **15** times larger than the **3.0 square kilometres** of DSO bauxite resources estimated herein to contain 24.5 million tonnes.

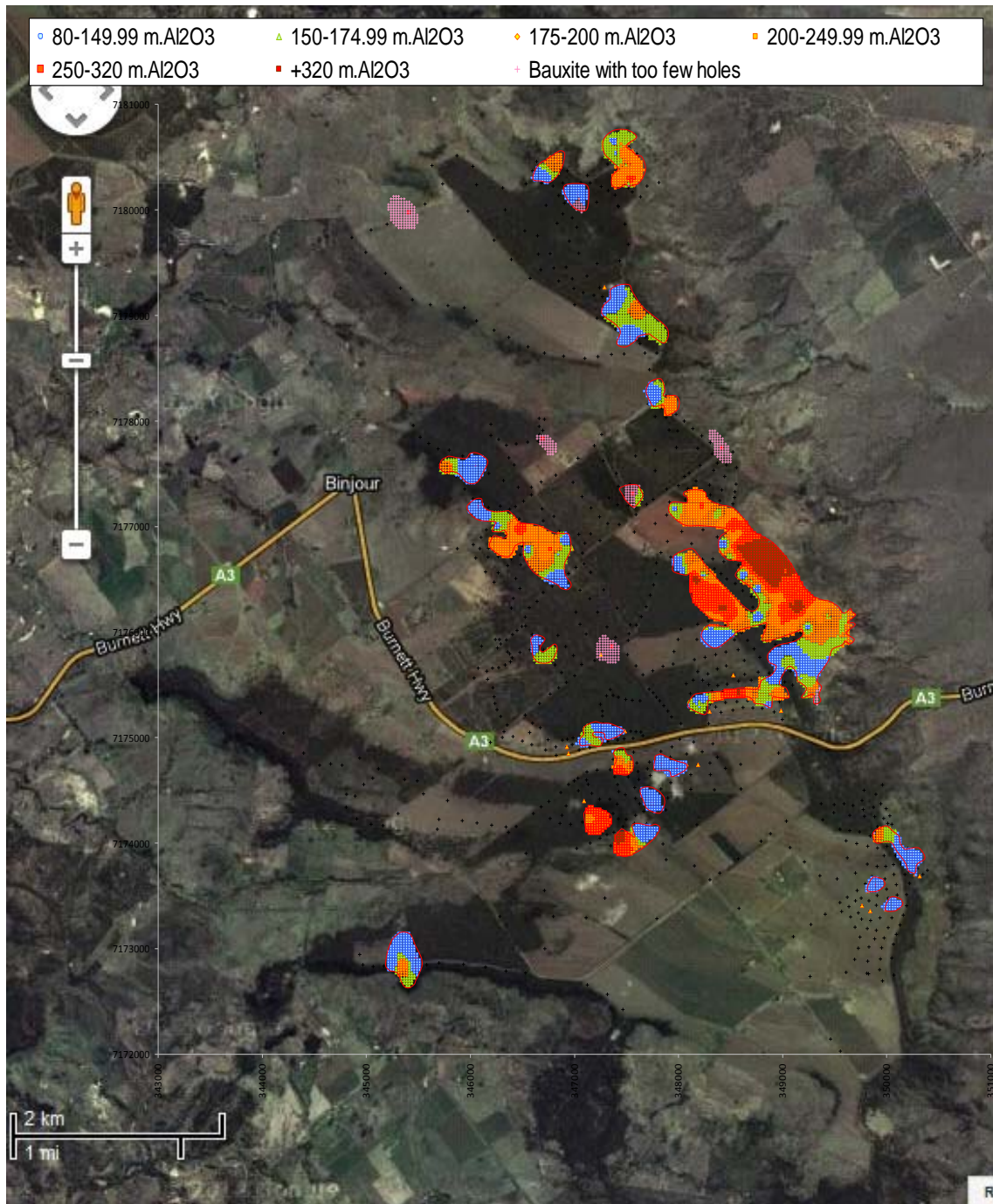


Figure 3: Grade Distribution of DSO Bauxite Resources Across Binjour Plateau. Thickness x Al<sub>2</sub>O<sub>3</sub>

Table 2: High Grade Portion of Bauxite Resources at Binjour, Central QLD

DSO Bauxite Resources			Sieved at 0.26mm											
Resource category	Tonnes millions	Bauxite Thick-ness	Al <sub>2</sub> O <sub>3</sub> Avl % 143°	Rx SiO <sub>2</sub> %	Avl/Rx Ratio	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S Ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Yield %	Over-burden m	Internal Waste m
Inferred	5.0	4.0 m	39.0	2.8	13.9	43.5	3.3	13.0	23.9	3.6	24.4	60%	8.4 m	0.2 m
Indicated	14.5	5.4 m	39.8	2.5	16.1	44.4	2.9	15.3	23.5	3.7	25.0	62%	9.5 m	0.3 m
<b>TOTAL</b>	<b>19.5</b>	<b>5.0 m</b>	<b>39.6</b>	<b>2.6</b>	<b>15.5</b>	<b>44.2</b>	<b>3.0</b>	<b>14.7</b>	<b>23.6</b>	<b>3.7</b>	<b>24.8</b>	<b>61%</b>	<b>9.2 m</b>	<b>0.2 m</b>

Cut-off grades applied: Minimum 30% available Al<sub>2</sub>O<sub>3</sub>, 2m thickness & 3 data points in 350m search ellipse for each 25m x 25m block. Leach conditions to measure available alumina "Al<sub>2</sub>O<sub>3</sub> Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "Avl/Rx" ratio is (Al<sub>2</sub>O<sub>3</sub> Avl)/(Rx SiO<sub>2</sub>) and "A/S" ratio is Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>. Values above 10 are excellent. Tonnage is for bauxite in-situ. Yield is for screening all samples at 0.26mm. The significant tonnages requiring no upgrade will have 100% yield. Estimate excludes very large tonnages of bauxite containing washable silica gel.



### **Metallurgical Results Encouraging: Silica Gel Removal to Expand DSO Bauxite Resources**

In the last 6 months, preliminary metallurgical tests have been conducted by a clay processing engineer who found that the silica gel substance was easily removed by a simple, low-cost washing procedure that may become a proprietary technology. The gel is soft and only loosely adhered to the bauxite, which allows for easy liberation when washed, leaving a recovered bauxite that is low-silica, high alumina DSO Grade Bauxite.

Work is continuing to develop a standard sample preparation protocol for future analysis of the silica gel-bearing bauxite samples by commercial laboratories so that large tracts of the bauxite layer can be included in future resource estimations.

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#### **About Australian Bauxite Limited: ASX Code ABZ**

Australian Bauxite Limited (ABx) holds the core of the newly discovered Eastern Australian Bauxite Province. Its 38 bauxite tenements in Queensland, NSW and Tasmania covering 8,250 km<sup>2</sup> were rigorously selected on 3 principles:

1. good quality bauxite;
2. proximity to infrastructure connected to export ports; and,
3. free of socio-environmental or native title land constraints.

All tenements are 100% owned and free of obligations for processing and third-party royalties. ABx has already discovered many bauxite deposits and new discoveries are still being made as knowledge and expertise grows.

The company's bauxite is high quality and can be processed into alumina at low temperature – the type that is in short-supply globally. **Global resources declared to date total 106.4 million tonnes.** At the company's first drilling prospect in Inverell, northern NSW, a resource of 38.0 million tonnes<sup>1</sup> has been reported from drilling 15% to 20% of the area prospective for bauxite and a resource of 37.9 million tonnes<sup>2</sup> of bauxite has been reported at the Taralga project in southern NSW. A 6.0 million tonnes maiden resource was declared at Guyra<sup>3</sup>. A 24.5 million tonnes<sup>4</sup> resource has been declared at the Binjour Plateau in central QLD, confirming that ABx has discovered a significant bauxite deposit including some bauxite of outstandingly high quality. Australian Bauxite Limited aspires to identify large bauxite resources in the Eastern Australian Bauxite Province, which is emerging as one of the world's best bauxite provinces.

ABx has the potential to create significant bauxite developments in three states - Queensland, New South Wales and Tasmania. Its bauxite deposits are favourably located for direct shipping of bauxite to both local and export customers.

**ABx endorses best practices on agricultural land, strives to leave land and environment better than we find it. We only operate where welcomed.**

**Qualifying statement**

The information in this announcement that relate to Exploration Information are based on information compiled by Jacob Rebek and Ian Levy who are members of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Rebek and Mr Levy are qualified geologists and are directors of Australian Bauxite Limited.

Mr Rebek and Mr Levy have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Resources. Mr Rebek and Mr Levy have consented to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

The information in this announcement that relate to bauxite resource classifications is based on results and interpretations compiled by Ian Levy who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Levy is a qualified geologist and employed as CEO of Australian Bauxite Limited.

Geostatistical block modelling was carried out by independent consultant, Scott McManus using Gemcom mining software. Mr McManus is an experienced resource modelling consultant and a member of the Australian Institute of Geoscientists.

Mr Levy 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 Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Resources. Mr McManus and Mr Levy have consented in writing to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

More detailed explanations regarding resource methodologies are included in the Appendix.

**JORC Compliant Resource Statements**

The following are Joint Ore Reserve Code ("JORC")-compliant Public Reports released to the ASX declaring the JORC resources referred to. These can be viewed on the ASX website and the Company will provide these reports, free of charge on request.

- <sup>1</sup> 08/05/2012 ASX Inverell JORC Resource Update, 38.0 Million Tonnes
- <sup>2</sup> 30/05/2012 ASX Taralga Bauxite Resource Increased 50% to 37.9 Million Tonnes
- <sup>3</sup> 15/08/2011 ASX Maiden Guyra Resource, 6.0 Million Tonnes
- <sup>4</sup> 29/07/2012 ASX Binjour Maiden Resource, 24.5 Million Tonnes

**Direct Shipping Bauxite or "Direct Shipping "Ore"**

All references in this report to direct shipping bauxite or direct shipping ore (DSO) refers to the company's exploration objective of defining or identifying DSO grade mineralisation.

**True Width**

The true-width of the deposit is not known and will be determined by further resource definition drilling.

**Definitions**

DSO bauxite	Bauxite that can be exported directly with minimal processing
Averaging method	Aggregated average grades in the table are length-yield-weighted averages of each metre grades & yields.



Figure 4: ABx Project Locations



## APPENDIX

### RESOURCE ESTIMATE METHOD

**Drilling:** During the second half of 2010 and first half of 2011, reconnaissance drilling and follow-up exploration drilling using slow, low-pressure aircore drilling was done on a semi-random pattern governed by site availability across Binjour EPM 18014 and Binjour Extension EPM 18772 to test grade distribution of the Binjour Bauxite Layer.

On 12 October 2011, a maiden resource estimate totalling 16.8 million tonnes was announced based on 88 holes out of 317 holes that intersected DSO Grade bauxite. At that time, it was recognised that the Binjour Bauxite Layer is extensively distributed over the entire Binjour Bauxite Plateau and in other nearby Plateau which are yet to be drill-tested. Large areas of the bauxite contain a silica gel substance which is easily removed by washing but in raw form, prevents the bauxite being classified as DSO Bauxite for resource estimation.

Exploration drilling continued in the second quarter of 2012 adding a further 200 aircore holes plus 9 stratigraphic diamond core holes to clearly identify the nature of the silica gel contamination and to conduct 9 gravimetric determinations of bulk dry density of the bauxite and overlying red mud unit.

**Bauxite Density Determinations:** averaged 1.9 tonnes per cubic metre for both rock types tested.

For this estimation, DSO bauxite was estimated at a density of 1.9 tonnes per cubic metre.

**Sampling and Laboratory Analysis:** Drill samples were collected at 1 metre intervals from the aircore drillholes and analysed at ALS Laboratories in Brisbane including trihydrate (THA) available alumina (“Al<sub>2</sub>O<sub>3</sub> Avl”) and reactive silica (“Rx SiO<sub>2</sub>”) measurements. Leach conditions to measure available alumina “Al<sub>2</sub>O<sub>3</sub> Avl” and reactive silica “Rx SiO<sub>2</sub>” were 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 minutes.

**Block Modelling Estimation Method:** Estimation was done by geostatistical block modelling of bauxite intercepts, constrained within the interpreted geological boundaries using Gemcom resource estimation software and grade interpolation was done using the inverse distance squared method.

The block size is 25m x 25m and drill spacing within the bauxite zones was typically at 75 to 150 metres spacings. Data interpolation of up to 350 metres was done, based on statistical assessments of continuity. Blocks with between 3 and 9 data points within that 350 metre search ellipse were classified as being the Inferred Resources and the more heavily drilled blocks were classified as Indicated Resources.

Many zones have probably been drilled to sufficient drill-density for classification as Measured Resources but until the sample precision is confirmed by comparisons with diamond drilling and/or pit excavation and careful channel-sampling, Indicated classification will remain the highest classification.

**Resource Conversion:** The tonnages of areas previously classified as Inferred Resources that are now classified as Indicated Resources are not materially different. No Inferred Resource areas have been eliminated from Resources due to subsequent follow-up and infill drilling.