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G-Resources Group Limited 國際資源集團有限公司\* (Incorporated in Bermuda with limited liability) (Stock Code: 1051)

### ANNOUNCEMENT

### G-RESOURCES – MARTABE MINE – MINERAL RESOURCES AND ORE RESERVES STATEMENT AT 31 DECEMBER 2014

### Hong Kong, 2 April 2015

G-Resources Group Limited (HKSE: 1051 – "G-Resources" or the "Company") is pleased to update the market with the 31 December 2014 Mineral Resources and Ore Reserves Statement for the Martabe gold and silver mine in Indonesia.

### HIGHLIGHTS

New Mineral Resources and Ore Reserves were estimated for the Martabe Gold Mine as of 31 December 2014. The key outcomes are:

- Resources and Reserves have been updated as a result of mining depletion in 2014 and some relatively minor changes to the Resource and Reserve estimation process.
- Total resources are now 7.4 million ounces of gold and 70 million ounces of silver.
- Additional Resources were defined at the Uluala Hulu deposit.
- Total Reserves are now 2.68 million ounces of gold and 27.2 million ounces of silver.

### **Mineral Resources**

The total G-Resources Mineral Resource at 31 December 2014 is estimated at 190 million tonnes at 1.2 g/t gold, 11 g/t silver, for contained metal of 7.4 million ounces of gold and 70 million ounces of silver.

The Mineral Resources are provided in Table 1 below, and are reported in accordance with the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Significant changes from the previously stated Mineral Resources are:

- New Mineral Resources were estimated for the Uluala Hulu and Barani deposits.
- The total Mineral Resources were reduced by 0.7 million ounces of gold and 5.6 million ounces of silver.
- The reduction consists of Mining Depletion at the Purnama deposit of 0.4 Million ounces of gold and 5.1 million ounces of silver, and a reduction with the new Mineral Resources at the Barani Deposit of 0.4 million ounces of gold and 0.6 million ounces of silver.
- The Uluala Hulu deposit Mineral Resources increased by 0.1 million ounces of gold and 0.2 million ounces of silver with the new Mineral Resources.

The Explanatory Notes (JORC Table 1 report) for these Mineral Resources are provided in Appendix 1.

### **Ore Reserves**

The total G-Resources Ore Reserves as at 31 December 2014 is 42.2 million tonnes at 2.0 g/t gold and 20 g/t silver for a total metal content of 2.68 million ounces of gold and 27.2 million ounces of silver.

The Ore Reserves estimate is provided in Table 2 below, and is reported in accordance with the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves.

The Explanatory Notes (JORC Table 1 report) for these Ore Reserves are provided in Appendix 2.

The Ore Reserves occur within 3 open pits which contain an associated 64 million tonnes of waste material to be mined, resulting in a total waste material to economic Ore Reserves (W:O) ratio of 1.6 to 1 (tonnes:tonnes). The W:O ratio for Purnama only is 0.9:1 (tonnes:tonnes).

The most notable changes from the previous public Ore Reserves statement (December 2013) for this project is depletion due to mining and processing operations, additions due to modification of the existing Purnama pit design and reduction of economic ore due to short term metal prices, resulting in a higher short term grade cut-off.

### ABOUT MARTABE

The Martabe mine is located on the western side of the Indonesian island of Sumatra in the Province of North Sumatra, in the Batangtoru sub-district (Figure 1). Martabe is established under a sixth generation Contract of Work ("CoW") signed in April 1997. The CoW defines all of the terms, conditions and obligations of both G-Resources and the Government of Indonesia for the life of the CoW.

### Martabe Mine Aerial view.



Martabe, with a resource base of 7.4 million ounces of gold and 70 million ounces of silver, is G-Resources Group's core starter asset. Martabe's operating capacity is to mine and mill the equivalent of 4.5 mtpa ore to produce some 250,000 ounces gold and 2 million ounces silver per annum. Costs are competitive when compared to global gold producers.

G-Resources is seeking to organically grow gold production through continued exploration success on the large and highly prospective CoW area (Figure 2). The Martabe mine enjoys the strong support of the Indonesian Central, Provincial and Local Governments and the nearby communities of Batangtoru.

By Order of the Board G-Resources Group Limited Peter Geoffrey Albert Chief Executive Officer

Hong Kong, 2 April 2015

(In this announcement, "\$" means "US\$")

As at the date of this announcement, the Board comprises:

- (i) Mr. Chiu Tao, Mr. Owen L Hegarty, Mr. Peter Geoffrey Albert, Mr. Ma Xiao, Mr. Wah Wang Kei, Jackie and Mr. Hui Richard Rui as executive directors of the Company; and
- (ii) Dr. Or Ching Fai, Ms. Ma Yin Fan and Mr. Leung Hoi Ying as independent non-executive directors of the Company.

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\* For identification purpose only

### Mineral Resources Table and Competent Person Statement

### TABLE 1: MARTABE MINERAL RESOURCES AS AT 31 DECEMBER 2014

		Tonnes	Gold grade	Silver grade	Containe	d metal
Deposit	Category			-	Gold	Silver
		(Mt)	(g/t Au)	(g/t Ag)	(Moz)	(Moz)
Purnama	Measured	4.3	2.1	38	0.30	5.2
	Indicated	61	1.6	19	3.1	37
	Inferred	29	1.0	12	0.88	11
	Total	93	1.4	18	4.2	53
Mine stockpiles	Measured	2.5	1.1	10	0.09	0.75
	Total	2.5	1.1	10	0.09	0.75
Ramba Joring	Measured	-	-	-	-	-
	Indicated	34	1.0	4	1.1	4.5
	Inferred	4.6	0.8	4	0.1	0.5
	Total	38	1.0	4	1.2	5.0
Barani	Measured	-	-	-	-	-
	Indicated	8.0	1.4	2.1	0.36	0.55
	Inferred	0.23	0.83	1.6	0.01	0.01
	Total	8.3	1.4	2.1	0.37	0.56
Tor Uluala	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Inferred	32	0.9	8	0.9	7.8
	Total	32	0.9	8	0.9	7.8
Horas	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Inferred	16	0.8	2	0.4	0.9
	Total	16	0.8	2	0.4	0.9
Uluala Hulu	Measured	-	-	-	-	-
	Indicated	1.6	2.2	19	0.11	0.98
	Inferred	2.9	0.76	2.9	0.07	0.27
	Total	4.5	1.2	8.6	0.18	1.3
Combined	Total	190	1.2	11	7.4	70

Mineral Resources are inclusive of those Mineral Resources converted to Ore Reserves. The Mineral Resources have been reported in accordance with the JORC Code (Australasian Joint Ore Reserves



Committee (JORC), Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code), 2012 edn, effective December 2012, 44 pp., available <http://www.jorc.org/docs/JORC\_code\_2012.pdf>, viewed 3 June 2014.)

Note on cut-off grade: With the exception of Tor Uluala, all resources are reported using a cut-off grade of 0.5 g/t gold, Tor Uluala is reported using a combined gold and silver cut-off grade, where gold g/t + silver/60 g/t is greater than 0.5 for each estimated resource model block.

Note on mine depletion: This resource statement accounts for depletion due to mining operations until 31 December 2014.

Note on rounding: Figures are rounded to two significant figures. Rounding may result in apparent computational errors or differences.

Note on Barani Mineral Resource: The Barani Mineral Resource is constrained by a \$2,000/oz Au, \$35/oz Ag Whittle optimisation pit and further, to the area south of 166600mN due to the position of the Tailings Storage Facility.

Note on Purnama Mineral Resource: The Purnama Mineral Resource has been depleted to the 31 December 2014 mining surface and is constrained by a \$2,000/oz Au, \$35/oz Ag Whittle optimisation pit.

### Competent Person Compliance Statement:

The information in this report that relates to Mineral Resources is based upon information reviewed and compiled by Maree Angus who is a Member of the Australasian Institute of Mining and Metallurgy. Ms. Angus is a full-time employee of AMC Consultants Pty Ltd and has sufficient experience relevant to the style of mineralization and type of deposit under consideration 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 (JORC Code)". Ms. Angus has consented to the inclusion in the report of the matters based on this information in the form and context in which it appears.

### **Ore Reserves Table and Competent Person Statement**

### TABLE 2: ORE RESERVES TABLE

			Gold	Silver	Contain	ed Metal
Deposit	Category	Tonnes	Grade	Grade	Gold	Silver
		(Mt)	(g/t Au)	(g/t Ag)	(koz)	(koz)
Purnama	Proved	3.5	2.4	41	270	4,700
Purnama	Probable	27.5	2.0	23	1,800	20,700
Barani	Probable	3.5	2.0	2.6	230	300
Ramba Joring	Probable	5.2	1.8	4.4	290	700
Purnama stockpile	Proved	2.5	1.1	9.5	90	750
TOTAL ORE RESERVES	Proved & Probable	42.2	2.0	20	2,680	27,200

Estimations are rounded to the nearest 100,000 tonnes; 2 significant figures Au and Ag grade; 10,000 ounces for Au metal and 50,000 ounces for Ag metal. Errors of rounding may occur.

Ore Reserves for Purnama are estimated using a projected 2015 gold price of \$1,300/oz and silver price of \$20/oz.

Ore Reserves for Barani & Ramba Joring are estimated using a gold price of \$1,433/oz and silver price of \$26.90/oz.

Ore Reserves are based on an expected value calculation to report tonnages above a zero \$/t net expected value. The cut-off to define ore is therefore variable in metal grades, but equates to an average gold cut-off grade of approximately 0.8 to 0.9 g/t Au depending upon the accompanying silver grades.

### Competent Person Compliance Statement:

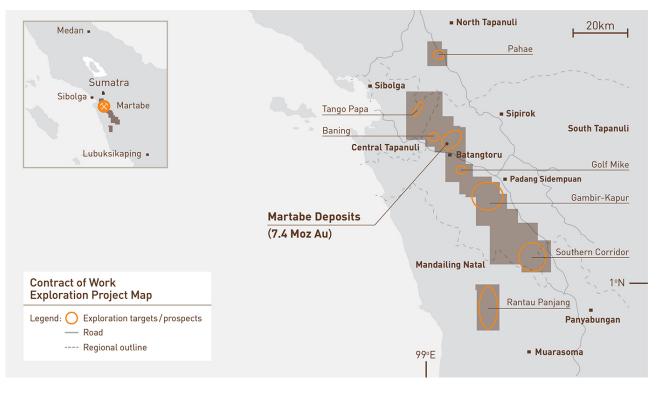
The information in this report that relates to Ore Reserves is based upon information reviewed and compiled by Mr. Julian Poniewierski, who is a Chartered Professional (Mining) and Fellow of the Australasian Institute of Mining and Metallurgy. Mr. Poniewierski is a full-time employee of AMC Consultants Pty Ltd and has sufficient experience relevant to the style of mineralization and type of deposit under consideration 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 (JORC Code)". Mr. Poniewierski has consented to the inclusion in the report of the matters based on this information in the form and context in which it appears.

### Figure 1: Martabe Mine Location.





### Figure 2: Martabe Contract of Work.



## **Appendix 1**

# Mineral Resources Statement as at 31 December 2014 Explanatory Notes



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## **Mineral Resources Statement as at 31 December 2014**

## **Explanatory Notes**

This Mineral Resource Statement incorporates the gold and silver Mineral Resources reported in accordance with the JORC Code at G-Resources' Martabe operation, in North Sumatra Indonesia as at 31 December 2014. The G-Resources Mineral Resources as at 31 December 2014 are estimated to contain 7.4 million ounces of gold and 70 million ounces of silver contained within the Purnama, Barani, Ramba Joring, Horas, Tor Uluala and Uluala Hulu deposits at Martabe.

The G-Resources Mineral Resource Statement as at 31 December 2014 is provided below.

This Mineral Resource statement differs from the 31 December 2013 G-Resources Mineral Resources and Ore Reserves Statement in the following respects:

- New Mineral Resource estimates have been completed for the Barani and Uluala Hulu Deposits.
- A review of the June 2013 Barani Mineral Resource estimate noted that the grade and tonnage of certain blocks in the model had been double counted due to the mathematical procedure used. Subsequently this procedure was modified for the current Mineral Resource Estimate.
- This Mineral Resource Statement accounts for mining depletion at the Purnama Deposit.

These explanatory notes accompany the 31 December 2014 Mineral Resources Statement. These notes address the material information related to the new Mineral Resource estimates completed for the Barani and Uluala Hulu deposits. The data, methods and assumptions used for the other Mineral Resource estimates have not changed since the previous explanatory notes and the reader is referred to these notes which are compliant to the 2004 JORC Code. These explanatory notes meet the guidelines of the "2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (referred to hereafter as JORC Code) in accordance with the regulations of the Hong Kong Stock Exchange (Reference Chapter 18 of the Hong Kong Stock Exchange Listing Rules).

Additional explanatory notes which relate to parts of this Mineral Resources Statement which have not changed since they were last reported are:

- Tor Uluala Mineral Resource Estimate: 2012 Mineral Resource Statement as at August 2012, Explanatory Notes.
- Horas Mineral Resource Estimate: 2011 Mineral Resource Estimate as at October 2011, explanatory notes.
- Ramba Joring Mineral Resource Estimate: Mineral Resource Statement as at 28 October 2012, Explanatory Notes.

#### Mineral Resource table as at 31 December 2014

		Tonnes	Gold grade	Silver grade	Contained	Contained metal	
Deposit	Category	(Mt) (g/t Au) (g/t Ag)		Gold (Moz)	Silver (Moz)		
	Measured	4.3	2.1	38	0.30	5.2	
Purnama	Indicated	61	1.6	19	3.1	37	
Fumania	Inferred	29	1.0	12	0.88	11	
	Total	93	1.4	18	4.2	53	
Mine	Measured	2.5	1.1	10	0.09	0.75	
stockpiles	Total	2.5	1.1	10	0.09	0.75	
	Measured	-	-	_	-	-	
Ramba	Indicated	34	1.0	4	1.1	4.5	
Joring	Inferred	4.6	0.8	4	0.1	0.5	
	Total	38	1.0	4	1.2	5.0	
	Measured	-	-	_	-	-	
Barani	Indicated	8.0	1.4	2.1	0.36	0.55	
Daram	Inferred	0.23	0.83	1.6	0.01	0.01	
	Total	8.3	1.4	2.1	0.37	0.56	
	Measured	-	-	_	-	-	
Tor Uluala	Indicated	-	-	_	-	-	
	Inferred	32	0.9	8	0.9	7.8	
	Total	32	0.9	8	0.9	7.8	
	Measured	-	-	_	-	-	
Horas	Indicated	-	-	_	-	-	
110185	Inferred	16	0.8	2	0.4	0.9	
	Total	16	0.8	2	0.4	0.9	
	Measured	-	-	_	-	-	
Uluala Hulu	Indicated	1.6	2.2	19	0.11	0.98	
	Inferred	2.9	0.76	2.9	0.07	0.27	
	Total	4.5	1.2	8.6	0.18	1.3	
Combined	Total	190	1.2	11	7.4	70	

Mineral Resources are inclusive of those Mineral Resources converted to Ore Reserves. The Mineral Resources have been reported in accordance with the JORC Code (Australasian Joint Ore Reserves Committee (JORC), Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code), 2012 edn, effective December 2012, 44 pp., available <a href="http://www.jorc.org/docs/JORC\_code\_2012.pdf">http://www.jorc.org/docs/JORC\_code\_2012.pdf</a>, viewed 3 June 2014.)



Note on cut-off grade: With the exception of Tor Uluala, all resources are reported using a cut-off grade of 0.5 g/t gold, Tor Uluala is reported using a combined gold and silver cut-off grade, where gold g/t + silver/60 g/t is greater than 0.5 for each estimated resource model block.

Note on rounding: Figures are rounded to the nearest two significant figures. Rounding may result in apparent computational errors or differences.

Note on Barani Mineral Resource: The Barani Mineral Resource is constrained by a \$2,000/oz Au, \$35/oz Ag Whittle optimisation pit and further, to the area south of 166600mN due to the position of the TSF.

Note on Purnama Mineral Resource: The Purnama Mineral Resource has been depleted due to mining operations until to the 31 December 2014 mining surface and is constrained by a \$2,000/oz Au, \$35/oz Ag Whittle optimisation pit.

#### Competent Person Statement:

The information in this report that relates to Mineral Resources is based upon information reviewed and compiled by Maree Angus who is a Member of the Australasian Institute of Mining and Metallurgy. Ms Angus is a full-time employee of AMC Consultants Pty Ltd and has sufficient experience relevant to the style of mineralization and type of deposit under consideration 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 (JORC Code)". Ms Angus has consented to the inclusion in the report of the matters based on this information in the form and context in which it appears.

# 1. Explanatory notes for the Purnama Mineral Resource Statement, 31 December 2014

#### 1.1. General

The 31 December 2014 Purnama Mineral Resource estimate has been updated to account for mining depletion since the last reported Mineral Resource estimate dated 31 December 2013 Purnama Mineral Resource estimate.

Purnama is the largest and first to be mined of a cluster of six mineral deposits at the Martabe Gold Mine. Three of these deposits (Purnama, Barani and Ramba Joring) have published Ore Reserve estimates. A further three deposits (Tor Uluala, Uluala Hulu and Horas) have published Mineral Resource estimates but do not yet have Ore Reserve estimates.

The Martabe Gold Mine is operated by PT Agincourt Resources (PTAR) as a 95% owned subsidiary of G-Resources Group Limited (G-Resources).

#### 1.2. Purpose of this Purnama Mineral Resource estimate

This Mineral Resource estimate takes into account mining depletion of the Mineral Resource during the period 1 January 2014 to 31 December 2014. There are no other changes to the Purnama Mineral Resource estimate. This depletion is not a material change to the Mineral Resource estimate as defined by the JORC Code.

#### 1.3. Estimation of depletion of the Mineral Resource

The limit of mining at 31 December 2014 was obtained by survey pickup of pit workings on this day. This pickup was used to determine the total resource mined. The remaining resource is the Mineral Resource estimate reported in this 31 December 2014 Mineral Resource estimate.

Mine stockpiles are listed as an individual resource in the Mineral Resource estimate.

#### 1.4. Reconciliation of estimates to mine production

Reconciliation of Mine production to the Mineral Resource and Ore Reserve estimates is an important part of assessing the validity of these estimates. Large variations could indicate a potential issue with the estimates. Previously there has not been sufficient reconciliation data to validate the Mineral Resource and Ore Reserve estimates, however with approximately two years operation this can now be reported.

At Purnama the reconciliation has been completed between the Ore Reserve estimate and the mine production for the mining to date. This reconciliation shows 10% higher gold grade, 2% lower silver grade and 6% higher tonnes of ore mined than predicted in the Ore Reserve. Table 1.1 details the year to date mine reconciliation at Purnama.

	Tonnes	Grade Au (g/t)	Grade Ag (g/t)	Au (Oz)	Ag (Oz)
Declared Ore Mined (DOM)	5,094,289	2.2	22.4	360,206	3,671,568
Grade Control (GC)	5,132,442	2.2	20.4	358,000	3,359,465
Ore Reserve (OR)	4,811,301	2.0	22.9	305,104	3,545,569
DOM/GC %	99%	101%	110%	101%	109%
DOM/OR%	106%	112%	98%	118%	104%
GC/OR%	107%	110%	89%	117%	95%

#### Table 1.1 Reconciliation at Purnama - Year to Date: December 2014

Source: Mine reconciliation report at 31 December 2014, supplied by PTAR Mining Geology Department

Because the tonnes mined and gold grade are positive, the reconciliation difference is not seen as a risk to the project economics. It must be noted, though, that reconciliation is historic and does not necessarily indicate a continuing difference in predicted to actual results into the future.

The difference in predicted to mined values reconciliation indicates that additional work is required to improve the Mineral Resource estimate. In order to improve the reconciliation, a major infill and expansion drilling program has commenced with a Reverse Circulation drill rig.

#### 1.5. Additional drilling completed since the previous Mineral Resource

Significant additional drilling has been completed at the Purnama Deposit since the last Mineral Resource Statement. This drilling has shown extensions to the south, east, west and beneath the current Purnama Mineral Resource. As at 31 December 2014 these extensions had not been drilled at sufficient spacing to be classified as a mineral resource, and hence have not been included in this updated Mineral Resource estimate.

### 2. Explanatory notes for the Barani Mineral Resource Statement, 31 December 2014

#### 2.1. General

This 31 December 2014 Barani Mineral Resource estimate is an updated Mineral Resource estimate to replace the 30 June 2013 Barani Mineral Resource estimate. This report meets the guidelines of the JORC Code in accordance with the regulations of the Hong Kong Stock Exchange (Reference Chapter 18 of the Hong Kong Stock Exchange Listing Rules).

Barani is the one of a cluster of six mineral deposits at the Martabe Gold Mine. Three of these deposits (Purnama, Barani and Ramba Joring) have published Ore Reserve estimates. A further three deposits (Tor Uluala, Uluala Hulu and Horas) have published Mineral Resource estimates but do not yet have Ore Reserve estimates.

#### 2.2. Purpose of this Barani Mineral Resource estimate

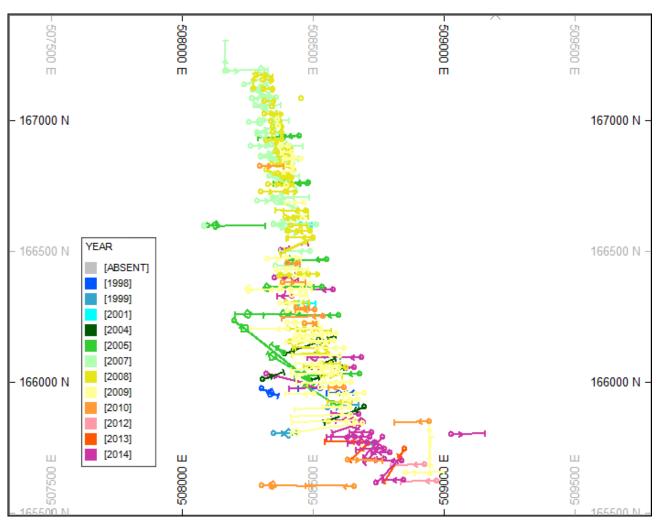
This updated Barani Mineral Resource estimate results from new drilling and subsequent revised geological interpretation and geostatistical analysis.

#### 2.3. Mathematical changes to the grade and tonnage calculation

A review of the June 2013 Barani Mineral Resource estimate noted that the grade and tonnage of certain blocks in the model had been double counted due to the mathematical procedure used. Subsequently this procedure was modified for the current Mineral Resource Estimate.

#### 2.4. Additional drilling completed since the previous Mineral Resource

This Mineral Resource estimate contains 45 additional drillholes (5006.35 metres) completed since the 2009 Mineral Resource estimate (Figure 2.1). This drilling has shown extensions to the south and beneath the current Barani Mineral Resource. Significant intersections in this drilling have been reported in exploration updates up to and including that released on 30 October 2014.



### Figure 2.1 Barani drillhole locations by year drilled

### 3. Location, access, and infrastructure

The Barani deposit is located approximately 1 kilometre southeast of Purnama, immediately south of the Martabe mine tailings storage facility (TSF).

The Martabe Gold Mine is located on the Island of Sumatra in North Sumatra Province (Figure 3.1). Access to the site is by the Trans Sumatra Highway. The village of Batangtoru is close to the mine on the highway, providing a local source of labour.

The mine is adjacent to a high voltage power line operated by the Indonesian Government power company PLN. Freight access to the Martabe Gold Mine is by ship to the port of Sibolga, or by road from the provincial capital of Medan.

The presence of pre-existing services and infrastructure has been important for the economic viability of the Martabe Gold Mine.





### 4. Land tenement status and permitting

The Martabe Gold Mine is located in the Martabe Contract of Work (CoW) area. This "Generation 6" COW was signed in 1997 and provides for a minimum 30 years tenure after production has commenced. Two potential extensions of 10 years each are specified in the CoW.

The CoW covers a total area of 1,639 km<sup>2</sup>. Three relinquishments were made by previous operators, in compliance with the CoW. This has fulfilled the contractual requirement of the CoW and no further relinquishment is necessary until the CoW is terminated.

The Martabe Gold Mine was fully permitted at the time of writing. Under Indonesian laws this includes mine operation permits, water discharge permits for treated mine runoff and process waters, various environmental approvals, and gold and silver bullion export permits amongst other permits and approvals.

### 5. Exploration and ownership history

The Martabe deposits were discovered in 1986 during a regional reconnaissance exploration program conducted by a joint venture between Normandy and Anglo Gold Corporation. A bulk leach extractable gold (BLEG) stream sediment survey located the Martabe cluster of deposits. Three deposits were initially identified, including the Purnama deposit.

Surface exploration work included mapping, rock and soil sampling. Drilling commenced in October 1998 and the potential of the Barani deposit was quickly recognised. Multiple phases of exploration up to delineation drilling were continued throughout several ownership changes. A high level of continuity and work quality has been maintained over the project life.

### 6. Geology

The general geology of the Martabe Region and the district surrounding Martabe is well described by Harlan et al<sup>1</sup> (2005) and Supoto et al<sup>2</sup> (2003). A summary is presented in Sections 6.1 and 6.2.

#### 6.1. Regional geology

The Martabe deposit is located in northern Sumatra to the south west of the major NW-SE trending Sumatra Fault system. This fault system extends the full length of the island of Sumatra, on the western side of the island parallel to the coast. The majority of known metal occurrences on Sumatra are located around this fault system.

The Sumatra Fault represents the main structure along which horizontal movement occurs between the subducting Indo-Australian Plate to the south and the Eurasian plate to the north. The subduction zone is interpreted as a primary locator of metal deposits and forms part of the Banda-Aceh Arc metallogenic province.

The Martabe District forms one of a series of Au (and minor Cu) mineralised camps and prospects extending the length of the COW and beyond. These prospects range from epithermals through intrusive silica breccias, replacement silicification in limestones to deep level magnetite skarns. The major prospects are strongly confined to within 2km of a NW-SE trending corridor that is interpreted as a mineralising structure sub parallel to the main Sumatra Fault (which lies to the NE).

The Martabe deposits are interpreted to be emplaced within an extensional site associated with a jog in the fault system parallel to the Sumatra Fault. The geometry of the extension allows for magma to travel upwards from the subducting plate zone, with the associated emplacement of gold bearing hydrothermal fluids.

#### 6.2. District geology

District geology at Martabe consists of an older basement sequence (the Mesozoic Tapanuli group and the Sibolga Granite), which is unconformably overlain by a Miocene sedimentary and volcanic sequence.

#### 6.3. Deposit geology

The current model for ore formation at Barani is of high sulphidation style epithermal fluids derived from a buried source associated with a volcanic/intrusive centre. The high sulphidation system is interpreted as emplaced at Barani along north-south tending structures in a sequence of phreatomagmatic breccias,

<sup>&</sup>lt;sup>1</sup> Harlan, B, Jones, M, Sutopa, B, and T Hoscke 2005, "Discovery and Characterization of the Martabe Epithermal Gold Deposits, North Sumatra, Indonesia", *Geological Society of Nevada Symposium 2005 - Window to the world*, Geological Society of Nevada.

<sup>&</sup>lt;sup>2</sup> Sutopo, B, Jones, M, and B, Levet 2003, "The Martabe Gold Discovery: A High Sulphidation Epithermal Gold-Silver Deposit, North Sumatra, Indonesia", *NewGenGold 2003 Conference Proceedings*, Louthean Media Pty. Ltd, Perth WA, pp 147-158.

volcanics and sediments. These lie within the Hutumusu Package (A multi-phase breccia intercalated with siltstone and mudstone) and the underlying Barus Formation.

The north-south trending structures can be traced vertically and along strike between drill holes as zones of siliceous alteration and hydrothermal breccia, with generally the highest gold grades in the deposit. These are defined as near vertical, continuous zones of greater than 1 g/t gold intersections in drill holes. Individual zones are 5-20m wide with vertical continuity up to 150m and strike continuity of hundreds of metres.

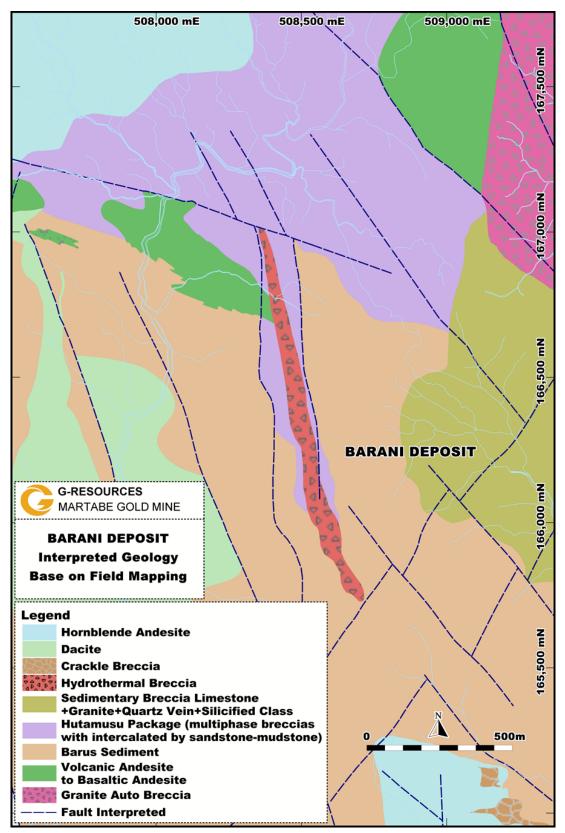
The high grade zones are interpreted as fluid conduits which have concentrated high grade mineralisation and allowed passage of alteration and lower grade mineralisation into the host rock in a broad halo. This halo is recognised as an argillic alteration zone composed of dickite and minor alunite. A wide zone of dispersed veins with 0.1-0.2 g/t gold is recognised in geology and statistics, roughly coincident with the limits of the argillic alteration zone.

Within the argillic halo are a numerous, poorly continuous quartz veins and thin hydrothermal breccias which carry gold grades up to several grams per tonne over several metres width. These gold bearing veins and breccias tend to be concentrated close to the larger high grade zones.

Gold mineralisation at Barani is silver-poor relative to other deposits at Martabe such as Purnama. Gold deportment has been well studied in the oxidised portion of the deposit, where it forms microscopic colloids associated with secondary iron oxides. This is metallurgically simple and has very similar recovery characteristics to the other oxidised portions of the Martabe deposits. The deposit is deeply weathered to depths of greater than 100m in places

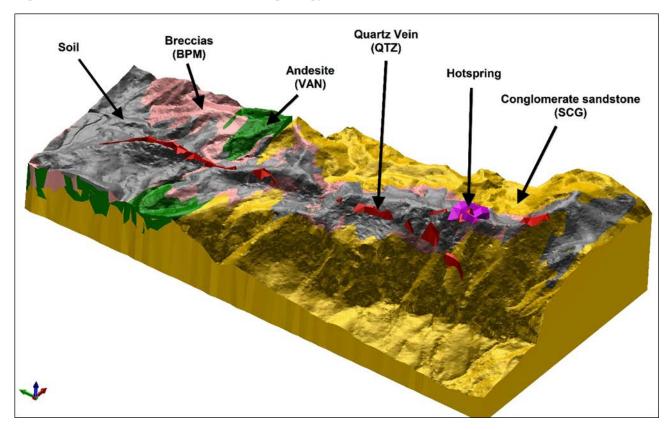
Figure 6.1 below shows the interpreted geology based on compilation of field mapping and drill core data.





Source: PTAR Geology Department

A three dimensional model of the geology at Barani has been constructed by PTAR personnel and is shown in Figure 6.2.



#### Figure 6.2 Barani three dimensional geology model

Note: Quartz Vein and hotspring domain not trimmed to topography

Source: PTAR Geology Department

### 7. Drilling techniques

A total of 277 diamond drill holes for 39581.35 m of core were used for this Barani Mineral Resource estimate. The average hole depth was 142.4m with maximum hole depth being 513.8m.

All of the drilling used for the Mineral Resource estimate was diamond drill core. The majority of core at Barani has been HQ size, with lesser PQ. All drilling is triple tube to minimise sample disturbance and maximise recovery.

### 8. Drillhole spacing

Drilling at Barani is generally spaced on 25 metre spaced section lines. Drillholes on each section line are spaced at approximately 40 metre intervals. Most of the drillholes are inclined at 45 to 60 degrees toward the east, however there are a significant number of drillholes inclined to the west.

A large number of "scissor" intersections are available which provide short range validation of the geological model and geostatistical parameters.

### 9. Drill sample recovery

Drill sample recovery at Barani is dependent on lithology, alteration type and structure. Overall the drill recovery has been very good, averaging 92%. Table 9.1 summarises the drilling recoveries for each lithology at Barani.

#### Table 9.1 Barani drill sample recovery

Lithology	Mean % recovery
Sandstone/Conglomerate (SCG)	97.5
Andesite (VAN)	95.9
Breccia (BPM)	94.3
Quartz (QTZ)	95.9
Hot spring (HOTS)	78.8
Soil (SOIL)	87.6

### 10. Geological logging

All diamond drill holes were logged for geology and geotechnical features.

Geotechnical logging was done by trained technicians under the supervision of geologists. Geotechnical logging includes measurements of drill run length, core recovery, rock quality designation, fracture count, and fracture characteristics.

Geological logging was done by geologists on hand written logging sheets, which were transcribed into the GBIS data entry platform. Logged characteristics include (but are not limited to) assay markup interval, lithology, structure, breccia type, alteration type and intensity, and mineralisation style and intensity.

Geological logging was undertaken by a relatively small team of geologists. The early (pre 2008) drilling was supervised by experienced geologists and logged by a total of 10 to 11 geologists. The 2008 - 2012 drilling campaign was also supervised by experienced geologists and all core was logged by a consistent team of four geologists.

The reproducibility of the geological logging was checked by senior geologists on a routine basis and these checks revealed that a high level of consistency was achieved. The logging geologists were involved in the interpretation process, ensuring that there was consistency between logging and interpretation.

All core was digitally photographed after logging and before cutting and sampling.

### 11. Sampling and assaying

Rigid procedures are in place to ensure high quality of sampling, assaying, and quality control. Sampling and assaying protocols are well documented and diligently managed by site personnel.

#### 11.1. Sample security

Sample security was controlled through supervision of the diamond samples at the drill rigs, security controls in the core shed, and controls on transportation of samples to a commercial assay preparation area off-site.

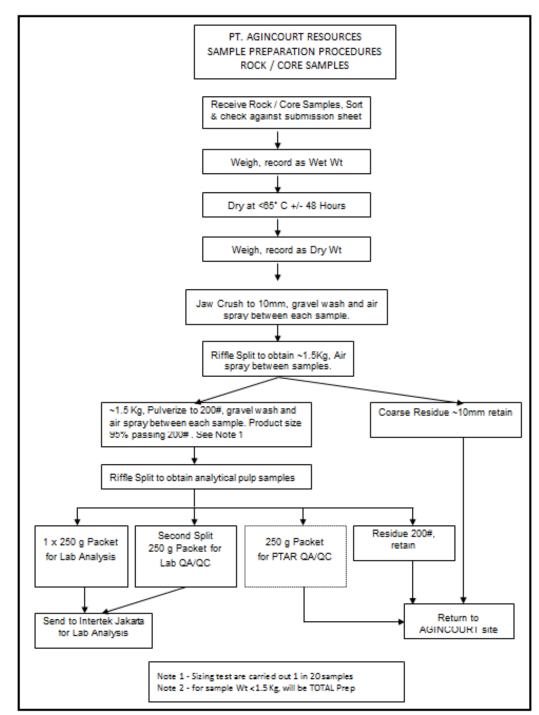
In 2011, security staff at the Martabe Gold Mine completed a review of security related to exploration sample handling. This review did not find significant issues in the security arrangements of core handling. The same procedures are still in place at this time.

#### 11.2. Sub-sampling techniques and sample preparation

Diamond drill core was marked with sampling intervals by geologists according to geological boundaries and pre-determined sampling lengths. The core was generally cut into halves using a diamond saw. A small percentage of core was cut into quarter to enable metallurgical testing. Samples were placed into sealed plastic bags with an internal tag, and then into numbered calico bags for delivery to the PT Intertek Utama sample preparation facility at Padang.

On average core was sampled at approximately 1 metre intervals through mineralised zones and 2 to 4 metre intervals through suspected zones of mineralised waste.

On arrival at the PT Intertek Utama sample preparation facility, samples were treated as shown in Figure 11.1.





#### 11.3. Assaying

Assaying was conducted at the PT Intertek Utama facility in Jakarta. The assaying suite used is shown in Table 11.1.

Table 44.4	Denent	a ta mala nal		
Table 11.1	Barani	standard	assay	/ suite

Element	Lab Method	Code	Lower detection	Upper detection
Au	Fire Assays	FA51	0.01ppm	50ppm
Au >20ppm	Gravimetric	FA12	3ppm	10%
Ag	AAS + 3 Acid Digest	GA02	1ppm	10%
Ag >100ppm	AAS + 3 Acid Digest	GA30	0.01%	5%
Cu, Pb, Zn	AAS + 3 Acid Digest	GA02	2ppm	10%
Cu >10,000ppm	AAS + 3 Acid Digest	GA30	0.01%	5%
As	X-Ray	XR01	1ppm	10%
As >10,000ppm	X-Ray	XR01	0.01%	10%
SxS	LECO - SCIS	SCIS	0.01%	10%
AuCN	Cyanide Leachable	CN05	0.1ppm	10%
AgCN	Cyanide Leachable	CN06	1ppm	10%
CuCN	Cyanide Leachable	CN06	2ppm	10%

An additional suite of minor elements was analysed using inductively coupled plasma analysis (ICP). Elements in this analysis suite included AI, As, Ba, Bi, Ca, Cd, Cr, Co, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, Pb, S, Sb, Sc, Se, Se, Sn, Sr, Ta, Te, Ti, V, W, Y, Zn, and Zr.

### 12. Quality Assurance

Quality assurance was routinely conducted using the following methods:

- An ongoing QA/QC program is conducted using blind samples which include blank samples and certified reference standards,
- Only certified laboratories are used for sample preparation and analysis, and
- The assay laboratory used for Mineral Resource estimation work is audited by PTAR on a regular basis.

### 13. QA/QC program

PTAR has a suite of certified and non-certified standards ("Standards") covering a range of grades and elements (including Au, Ag and Cu but not sulphide sulphur). Certified Standards, sourced from Geostat Pty Ltd and Ore Research and Exploration (OREAS) Pty Ltd, were submitted as part of this campaign.

Either a Standard or Blank was inserted at the rate of 1 in every 20 samples. Overall PT Intertek Utama performed very well with these standards, with the few anomalies observed considered likely due to mislabeling or data mismatching errors. These were corrected after receipt of the final assay results (usually within six weeks of sample submission).

#### 13.1. Assay laboratory audits

Audits were conducted of the two PT Intertek Utama facilities used by PTAR to process core samples. The Padang sample preparation laboratory was last audited in June 2012 and the Jakarta assay facility in June 2013. Audits were conducted by senior geological staff of G-Resources.

There were no significant compliance issues found in either audit.

#### 13.2. Assay laboratory Accreditation

PT Intertek Utama is accredited by the Indonesian National Accreditation Committee (KAN) to ISO IEC 17025:2008 status. PT Intertek Utama was last audited by KAN in June 2013 and passed without any compliance issues.

### 14. Location of data points

The data point locations at Barani were defined using the following methods:

- Drillhole collar positions were located using total station.
- For a small number of early holes, these total station locations were modified to match the surface generated from a LIDAR (Light detection and ranging) survey flown in 2010.
- LIDAR was used to define the pre-mining topographic surface for the Mineral Resource estimate

• Sub-surface drillhole dip and azimuth measurements were taken using a Ranger survey tool Relevant details of these surveys are described below.

#### 14.1. Survey of drillhole collar locations

Diamond drill hole collar locations were located using total station surveying. Most surveys were completed by a contracted licensed surveyor. Recent surveys have sometimes been undertaken by a PTAR mine surveyor.

Collar survey positions were validated by senior geologists before being entered into the SQL database.

### 14.2. LIDAR survey

A LIDAR survey was conducted by PT Surtech Utama Indonesia in June 2010. The survey covered an area of 13,600 ha surrounding the Martabe project area, including the Barani deposit.

Data capture was at nominal point density of more than 2 points per square metre. The LIDAR survey accuracy was measured with post processed kinematics GPS (global positioning system) survey using approximately 30 points at one location. The error between the two methods was found to be within 5cm.

Processed data was produced to a grid at 0.15 centimetre spacing. The data was presented to PTAR as ASCII files suitable for creation of a digital terrain model, and as rectified, georeferenced orthophotos.

LIDAR does not completely penetrate vegetation and this can lead to elevation inaccuracies in densely forested areas, such as the original surface at Barani. The LIDAR surface in places tends to have greater elevation than the actual ground surface (up to several metres in places), however this accuracy is adequate for the purpose of constructing a Mineral Resource estimate.

#### 14.3. Downhole survey measurements

Down hole measurements have been conducted exclusively with electronic survey tools, consisting of a magnetic compass and inclinometer with electronic reading. Initial surveys were taken at 20 metres below the collar, with further surveys at 50 metre intervals down the hole.

### 15. Orientation of data in relation to geological structure

The mineralisation at Barani has been emplaced along a north south trending structure which generally dips steeply toward the west.

Most diamond drilling was to the east at an average of 60 degrees inclination and a significant portion of drilling has also been completed in a westerly orientation at an average inclination of 47 degrees. This drilling pattern was designed to assess both the east dipping lithological control and the sub-vertical structural controls to mineralisation. Numerous scissor holes provided statistical and geological confidence to the resource estimate and its underlying geological interpretation.

### 16. Bulk density

Bulk density (BD) is routinely measured at Barani. Vuggy mineralisation at Martabe deposits caused difficulty in measuring BD with standard methods, and this resulted in a well-developed procedure which has been routinely followed at all Martabe deposits including Barani.

Bulk density measurements are taken using 10 to 15 centimetre long samples at 10 metre intervals down hole using the following procedure:

- Sample cut to size with a diamond saw.
- Sample dried in an industrial gas oven for 9 hours at temperature of 90°C.
- Sample wrapped tightly in plastic film ("Glad Wrap"). This allowed porosity to be measured by sealing pores from water.
- Sample weighed in air and weighed immersed in water.
- The unwrapped sample soaked in water to ensure all pores are filled and weighed again in air and water.

This procedure measured the BD of non-porous and porous rock by the Archimedes method, and determined the saturated moisture content of the rock. During the calculation, the density of plastic wrap is accounted for and removed from the final BD used for the Mineral Resource estimate.

Quality was controlled by the use of standards to ensure the scale is calibrated, regular review of results by management and by a training and assessment program for employees carrying out bulk density measurements. This method has been in use at the Martabe site since 1992 and has been subject to several reviews, including a study by Snowden Mining industry Consultants in 1992 and a review by AMC consultants in June 2013.

The database contains a total of 2291 measurements with an average length of 14 centimetres. AMC assigned BD values to each estimation domain based on combinations of lithology, alteration and oxidation. The table below shows the mean densities of each lithology at Barani. Similar tables were prepared for alteration and oxidation were prepared and appropriate combinations chosen for use in the Mineral Resource estimation. The mean value for each combination was generally applied. Where fewer data points existed the mean of a similar combination was applied.

The bulk density measurements applied to the Mineral Resource estimate block model are of sufficient sample density and quality for use in this Barani Mineral Resource estimate.

### Table 16.1 Barani bulk density by lithology

Lithology	Count	Minimum	Maximum	Mean
Sandstone/Conglomerate (SCG)	1185	1.41	2.86	2.41
Andesite (VAN)	172	1.39	2.59	2.11
Breccia (BPM)	609	1.11	2.94	2.24
Quartz (QTZ)	238	1.44	3.06	2.33
Hot spring (HOTS)	1	1.93	1.93	1.93
Soil (SOIL)	6	1.92	2.57	2.27
No lithology flag	80	1.87	2.69	2.53

Note: samples with no lithology flag lie outside the Mineral Resource estimation area

### 17. Moisture

Potential maximum relative moisture content of drill core is measured as part of the procedure for bulk density measurement. This measurement is stored in the database. Moisture was not estimated as part of this Mineral Resource estimate as it is measured during the milling process and used in mine-mill reconciliation.

### 18. Audits and reviews

Reviews of the Barani Mineral Resource and the process of resource estimation were held as follows:

- Prior to the estimation process: internal PTAR reviews of the geological modelling interpretation are held on a regular basis. Independent consultants in specialist areas provide advice as appropriate (for example metallurgy, statistics and resource estimation methodology). The results are documented as minutes of meetings and consulting reports.
- During the estimation process: AMC conducts a peer review process at several times during the estimation process.
- Every two years: an independent, expert review of the systems and processes relating to the Mineral Resource estimation process is conducted. In the last audit in May 2013 no material issues likely to affect the estimate were reported.

#### 18.1. Internal/external reviews

Multiple reviews were held during the development of the Barani geological model and Mineral Resource estimation. Participants on these reviews were company employees and employees of AMC.

#### 18.2. Biennial 'JORC Table 1' reviews

Since 2011 PTAR has conducted biennial reviews of the resource estimation process. The intent of these reviews is to examine performance against industry best practice for resource estimation. The JORC Code Table 1, 'Checklist of Assessment and Reporting requirements', is the basis for the scope of the reviews.

The last such review was completed in May 2013 by an independent consultant. The review consisted of 5 days onsite at the Martabe Gold Mine, where the consultant examined aspects of the operation dealing with exploration, geological interpretation, sample handling, resource estimation and exploration staff skills and competency.

Areas for improvement were noted regarding some ongoing operational aspects of the resource development program. These are being addressed and do not affect the issue or underlying quality of this Mineral Resource Statement.

### 19. Estimation and modelling techniques

The Barani Mineral Resource estimate was completed by David Boakye of AMC Consultants.

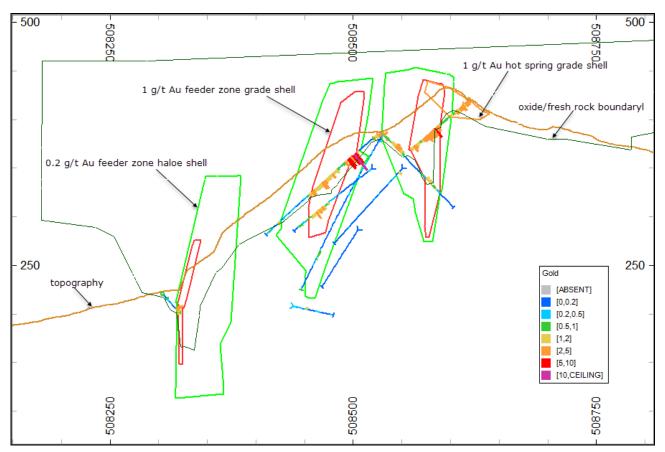
#### 19.1. Gold domains

PTAR supplied AMC with a series of wireframes based on a nominal 0.2 ppm gold and 1 ppm gold cut-off grade. The interpretations were completed using 2 metre composites to assist with establishing continuity of mineralization between sections. In addition, wireframed interpretations of lithology, alteration and oxidation were supplied.

The spatial distribution of the 0.2 ppm gold wireframes approximates the distribution of the advanced argillic alteration zone. Similarly, the 1 ppm gold wireframes coincide with the interpreted silicic alteration zone, quartz-rich feeder zones and hydrothermal breccias (including the hot spring lithology). Consequently, the alteration and lithology wireframes were not used as constraints during the estimation.

Statistical analysis of the oxide and fresh material at Barani, indicated further control on the mineralization distribution using the oxidation wireframe was appropriate.

Figure 19.1 is an example west-east cross section at 165980 mN illustrating the gold domains coded into the block model for estimation.

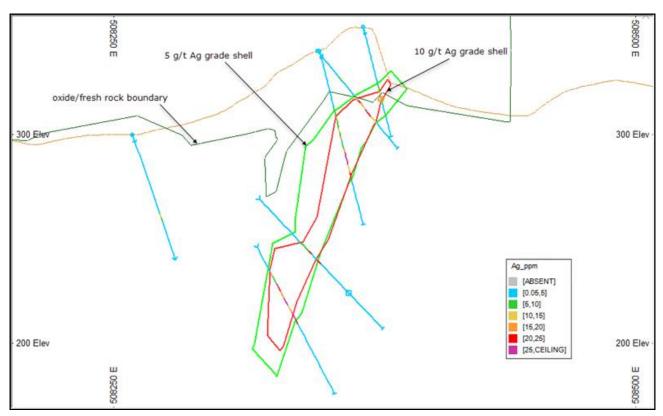


#### Figure 19.1 Barani gold domaining at 165980 mN

#### 19.2. Silver domains

PTAR supplied AMC with a series of wireframes based on nominal 5ppm silver and 10 ppm silver cut-off grades. The interpretations were completed using 2 metre composites to assist with establishing continuity of mineralization between sections. In addition, wireframed interpretations of lithology, alteration and oxidation were supplied.

The spatial distribution of the 5 ppm and 10 ppm silver wireframes approximates the distribution of the interpreted advanced argillic and silicic alteration zones respectively. Consequently, alteration wireframes were not used as constraints during the estimation. Figure 19.2 is an example west east cross-section at 166975 mN illustrating the silver domains coded into the block model for estimation.

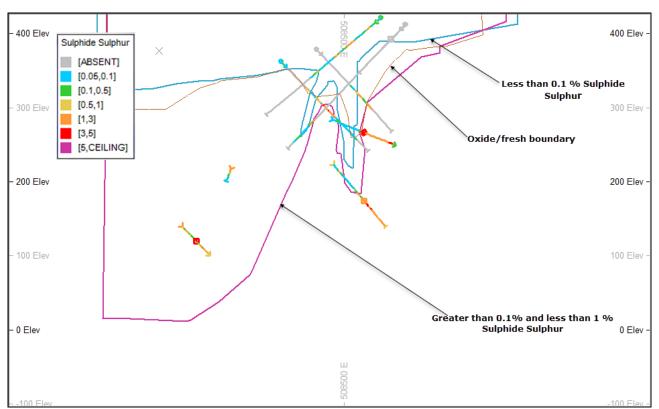


### Figure 19.2 Barani silver domaining at 166975 mN

#### 19.3. Sulphide sulphur domains

PTAR supplied AMC with wireframe based on nominal 0.1% sulphide sulphur and 1.0% sulphide sulphur. The interpretation was completed using 2 metre composites to assist with establishing continuity of mineralization between sections. In addition, wireframed interpretations of lithology, alteration and oxidation were supplied.

Statistical analysis of the composite dataset indicated that the use of oxidation as a further constraint on the sulphide sulphur distribution was appropriate. Figure 19.3 is an example west east cross section at 171200 mN illustrating the sulphide sulphur domains coded into the block model for estimation.



### Figure 19.3 Barani sulphide sulphur domaining at 171200 mN

#### 19.4. Oxidation domains

PTAR supplied AMC with a wireframe based on logged oxidation greater than 80%. The interpretation was completed using 2 metre composites to assist with establishing continuity of mineralization between sections. A highly variable pattern of oxidation exists at Barani as a result of faulting and alteration, especially within the breccia. Figure 19.3 shows the oxidation surface coded into the block model for estimation.

### 20. High grade assay cuts

Gold, silver and sulphide sulphur assays were composited to 2 metre intervals within their respective estimation domains.

AMC used a combination of histograms, log-transformed probability plots and the spatial location of outliers to ascertain the need for high grade cuts. Analysis was completed for each estimation domain and appropriate top capping applied to composites prior to variography and estimation.

### 21. Variography

Variography was completed on the gold, silver, and sulphide sulphur data, using Isatis software. Models were produced for individual estimation domains where sufficient data points existed. Where insufficient data was available to model a reliable variogram, a model from a domain with similar statistical and/or geological characteristics was adopted.

The modelling process used comprised:

- estimation of the nugget effect using a downhole variogram,
- estimation and modelling of variograms in planes that reflect the underlying geological and structural controls on the mineralisation.
- varying parameters such as lag distance and angular tolerance to refine the structures within each model.

### 22. Block modelling and estimation

#### 22.1. Block model definitions

A three dimensional block model was created and flagged with the topography, lithology, alteration, oxidation and mineralisation wireframes. Table 22.1 details the extent of the model. The block size was chosen to reflect the drill spacing and the dimensions of the mineralisation.

Table 22.1	Barani	block	model	definition

Block attribute	East	North	Elevation
Minimum (m)	508000	165500	-100
Maximum (m)	509000	167350	500
Model Extent (m)	1000	1850	600
Number of Cells	160	148	60
Parent Cell Size (m)	6.25	12.5	10
Minimum Cell Size (m)	1.5625	3.125	2.5

### 22.2. Interpolation

AMC utilised ordinary kriging (OK) to estimate gold, silver and sulphide sulphur into the three dimensional block model. Variogram models and orientated search ellipses were used to interpolate the high grade cut data.

Estimates were based on interpolation into 12.5 metre (N) by 6.25 metre (E) by 10 metre (elevation) parent cells. Block discretisation points were set to 4(E) by 4N) by 2(elevation) points.

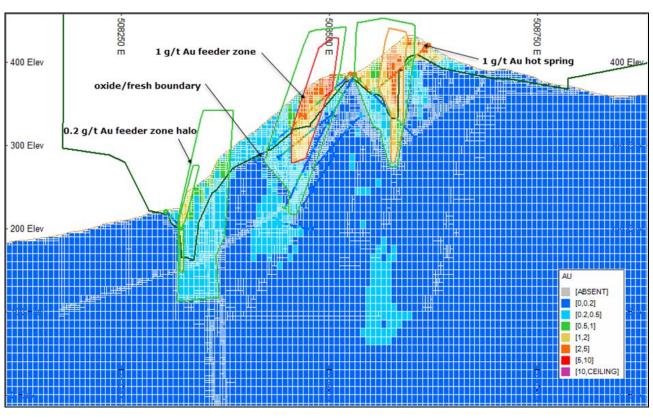
Estimation parameters including minimum and maximum number of composites and maximum number of contributing samples from individual drillholes were adjusted to test the sensitivity and robustness of the estimated grade distribution.

Unestimated blocks within the gold and silver models were assigned a background value dependent on their position inside or outside the mineralisation wireframes. Unestimated blocks in the sulphide sulphur model were assigned the mean value of the appropriate combination of lithology, alteration and oxidation given their potential use in any future acid waste characterisation.

#### 22.3. Estimate validation

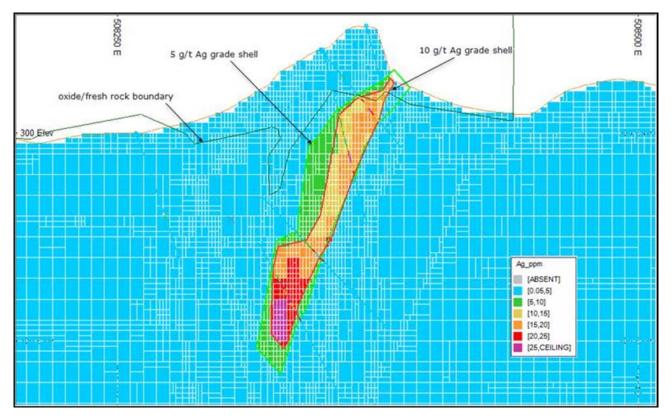
A series of model validation processes were completed for gold, silver and sulphide sulphur.

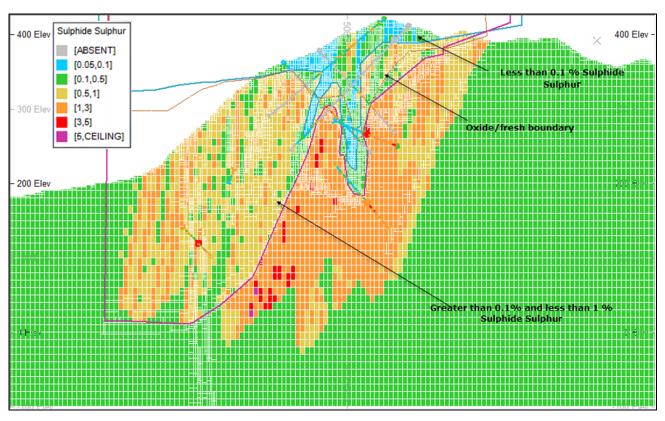
AMC investigated visually the relationship between composite grade and block grade on a section by section basis. AMC is satisfied that, locally, composite grades are well modelled in the grade estimate. Figures 22.1, 22.2, and 22.3 are sections through the model for gold, silver, and sulphide sulphur respectively.



#### Figure 22.1 Section 165980 m N though gold block model



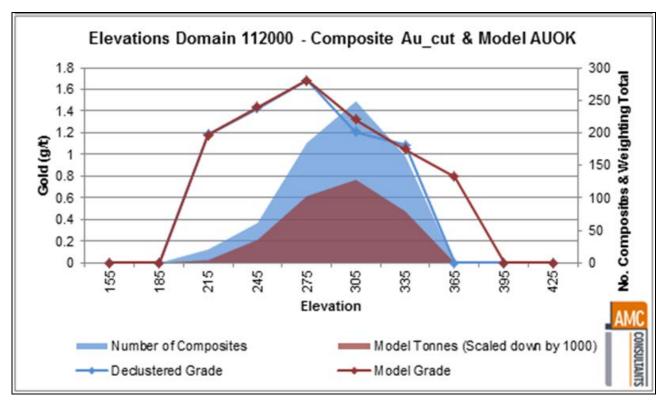




### Figure 22.3 Section 171200 mN though sulphide sulphur block model

Grade statistics were generated for the model blocks, grouped by the domains used in the estimate. These statistics were compared to those of the composites. Based on this comparison AMC is of the opinion the model adequately reflects the input composites.

AMC generated swath plots showing an average grade profile by northing, easting and elevation for the block estimates and composite data, as well as the number of composites and tonnage per slice. An example swath plot through Barani gold model is shown in Figure 22.4. AMC considers the overall trends between the block estimates and the composite grades indicate the block estimates are reasonable given the data spacing at Uluala Hulu.



### Figure 22.4 Example swath plot through Barani gold model

### 22.4. Cut-off grade parameters

This Barani Mineral Resource estimate is reported using a cut-off grade of 0.5 g/t gold. This is the same as the cut-off grade utilised at Purnama, based on the current production.

#### 22.5. Classification

The Barani Mineral Resource was classified by constraining the reported estimate within an optimized pit developed by AMC using similar operating parameters to those used by PTAR at Purnama. The pit was based on a gold price of US\$2,000/oz, and a silver price US\$35/oz, to demonstrate reasonable prospects for eventual economic extraction. The relationship between the pit and the Barani gold block model is shown in Figure 22.5.

In addition to the pit, the Barani Mineral Resource is limited to the north by the position of the Martabe Mine tailings storage facility. Consequently, material north of 166600 mN is not reported in this Mineral Resource.

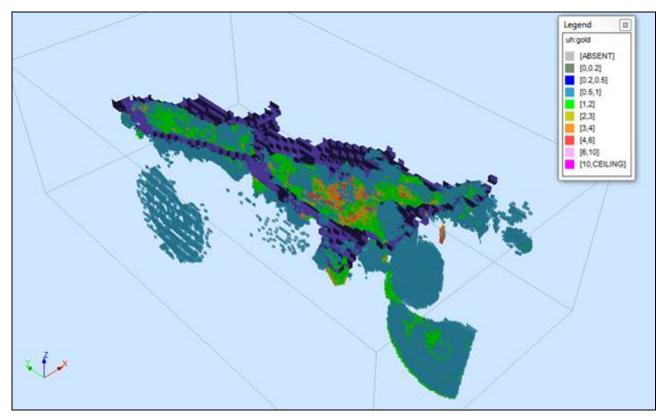


Figure 22.5 Barani gold block model, at 0.5g/g gold cut-off grade, with optimized pit

Mineral resource confidence classification takes into account drilling, sampling and assay integrity, drillhole spacing, geological controls, and grade continuity, as well as the robustness of the grade estimate and potential mining method. AMC considered a number of statistical and geological parameters associated with resource confidence.

Resource classification for the December 2014 Barani model was based on a number of parameters including drill data density, average distance to samples, estimation pass, and the confidence in geological continuity. Other parameters including number of samples used in the estimate and kriging variance were also considered but did not demonstrate consistent trends which supported them being used as primary criteria to assign resource classification to the block model. The previous resource classification (December 2013 model) was also taken into consideration.

# 23. Explanatory Notes for the Uluala Hulu Mineral Resource Statement at 31 December 2014

### 23.1. General

This 31 December 2014 Uluala Hulu Mineral Resource estimate is an updated Mineral Resource estimate to replace the 30<sup>th</sup> September 2009 Uluala Hulu Mineral Resource estimate.

Uluala Hulu is the one of a cluster of six mineral deposits at the Martabe Gold Mine. Three of these deposits (Purnama, Barani and Ramba Joring) have published Ore Reserve estimates. The remaining three deposits (Tor Uluala, Uluala Hulu and Horas) have published Mineral Resource estimates but do not yet have Ore Reserve estimates.

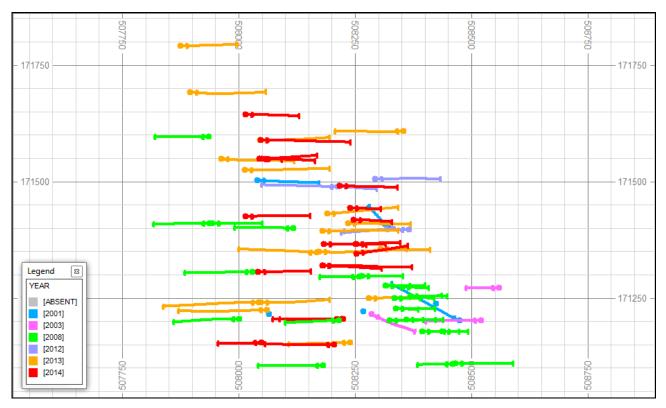
### 23.2. Purpose of this Uluala Hulu Mineral Resource estimate

This updated Uluala Hulu Mineral Resource estimate results from additional drilling at the deposit and subsequent improved understanding of the controls and extent of mineralization.

Note: Only blocks inside the pit and south of 166600mN are reported

#### 23.3. Additional drilling completed since the previous Mineral Resource

Significant additional drilling has been completed at the Uluala Hulu Deposit (42 holes for 8881.8 metres) since the last Mineral Resource estimate in 2009. This drilling has shown extensions to the north and south west as well as beneath the current Uluala Hulu Mineral Resource. Figure 23.1 shows the location of drillholes at Uluala Hulu coded by year drilled.



## Figure 23.1 Uluala Hulu drillhole locations by year drilled

Table 23.1 details drillholes included in this Mineral Resource estimate that have not been reported as exploration drillholes.

#### Table 23.1 Uluala Hulu drilling additional to previously reported exploration results

Hole Number	Easting (m)	Northing (m)	RL (m)	Final depth (m)	Azimuth (degrees)	Inclination (degrees)
APSD1467	508218.27	171489.49	621.91	169.3	90	-40
APSD1469	508048.83	171588.40	681.36	221.9	90	-30
APSD1475	508014.95	171643.21	679.09	182.6	90	-50
APSD1477	508015.00	171424.76	766.35	229.0	90	-50
APSD1482	508181.20	171318.81	690.55	256.6	90	-40
APSD1488	507936.96	170987.37	620.04	217.6	270	-50
APSD1492	508268.17	171215.42	666.73	189.3	90	-60

## 24. Location, access, and infrastructure

The Uluala Hulu deposit is located 4 kilometres north of the Martabe Gold Mine.

The Martabe Gold Mine is located on the Island of Sumatra in North Sumatra Province (Figure 24.1). Access to the site is by the Trans Sumatra Highway. The village of Batangtoru is close to the mine on the highway, providing a local source of labour.

The mine is adjacent to a high voltage power line operated by the Indonesian Government power company PLN. Freight access to the Martabe Gold Mine is by ship to the port of Sibolga, or by road from the provincial capital of Medan.

The presence of pre-existing services and infrastructure has been important for the economic viability of the Martabe Gold Mine.



## Figure 24.1 Location plan

## 25. Land tenement status and permitting

The Uluala Hulu deposit is located in the Martabe Contract of Work (CoW) area. This "Generation 6" COW was signed in 1997 and provides for a minimum 30 years tenure after production has commenced. Two potential extensions of 10 years each are specified in the CoW.

The CoW covers a total area of 1639 km2. Three relinquishments were made by previous operators, in compliance with the CoW. This has fulfilled the contractual requirement of the CoW and no further relinquishment is necessary until the CoW is terminated.

## 26. Exploration and ownership history

The Martabe deposits were discovered in 1986 during a regional reconnaissance exploration program conducted by a joint venture between Normandy and Anglo Gold Corporation. A bulk leach extractable gold (BLEG) stream sediment survey located the Martabe cluster of deposits.

Surface exploration work included mapping, rock and soil sampling. Multiple phases of exploration up to delineation drilling were continued throughout several ownership changes. A high level of continuity and work quality has been maintained over the project life.

Drilling commenced at Uluala Hulu in 2001, however an initial Mineral Resource estimate was not completed until 2009.

## 27. Geology

The general geology of the Martabe Region and the district surrounding Martabe is well described by Harlan et al (2005) and Supoto et al (2003). A summary is presented in Sections 27.1 and 27.2.

The Uluala Hulu deposit is located in northern Sumatra to the south west of the major NW-SE trending Sumatra Fault system. This fault system extends the full length of the island of Sumatra, on the western side of the island parallel to the coast. The majority of known metal occurrences on Sumatra are located around this fault system.

The Sumatra Fault represents the main structure along which horizontal movement occurs between the subducting Indo-Australian Plate to the south and the Eurasian plate to the north. The subduction zone is interpreted as a primary locator of metal deposits and forms part of the Banda-Aceh Arc metallogenic province.

The Martabe District forms one of a series of Au (and minor Cu) mineralised camps and prospects extending the length of the COW and beyond. These prospects range from epithermals through intrusive silica breccias, replacement silicification in limestones to deep level magnetite skarns. The major prospects are strongly confined to within 2km of a NW-SE trending corridor that is interpreted as a mineralising structure sub parallel to the main Sumatra Fault (which lies to the NE).

The Martabe deposits are interpreted to be emplaced within an extensional site associated with a jog in the fault system parallel to the Sumatra Fault. The geometry of the extension allows for magma to travel upwards from the subducting plate zone, with the associated emplacement of gold bearing hydrothermal fluids.

## 27.1. District geology

District geology at Martabe consists of an older basement sequence (the Mesozoic Tapanuli group and the Sibolga Granite), which is unconformably overlain by a Miocene sedimentary and volcanic sequence.

## 27.2. Deposit geology

The Uluala Hulu deposit lies within a structurally complex zone at the junction of a north west – south east strike slip fault zone (parallel to the Sumatra Fault) and north east – southwest strike slip faults.

The deposit is interpreted as a HSE deposit derived from a buried source associated with a volcanic/intrusive centre, similar to the other Martabe deposits at Purnama, Ramba Joring, and Tor Uluala.

Mineralisation at Uluala Hulu is hosted in a volcanic andesite and volcanic dacite host sequence. In the areas of mineralisation, the lithology is dominated by a polymict breccia cemented by a sandy matrix. These areas of mineralised polymict breccia lie to the south-west of a main breccia fault zone which is unmineralised.

Similar zones of alteration occurs to those at Barani, and are typical of epithermal deposits. The alteration zones are closely correlated to gold grade.

At Uluala Hulu, the highest gold grades occur in a brecciated central silicic alteration zone. An example of silicic alteration with in the polymict sandy matrix breccia unit (XUS) at Uluala Hulu is shown on Figure 27.1. Around this silicic alteration zone, the grades progressively reduce outwards into an enveloping advanced argillic zone, then an argillic zone.

The high grades also occur in steeply-dipping to near vertical, continuous zones of greater than 1 g/t gold intersections in drill holes. Individual zones are 5 to 20 metres wide with vertical continuity up to 150m and continue along strike for hundreds of metres.

The surrounding halo of advanced argillic and argillic alteration contains a wide zone of dispersed veins, with 0.1-0.2 g/t gold closely correlated with the argillic alteration zone.

Mineralisation at Uluala Hulu displays similar grades to those reported at Purnama, and is higher in grade in both gold and silver than Barani. The deposit is also deeply weathered to depths of greater than 100m in places.

## Figure 27.1Silicic alteration in polymict sandy matrix breccia unit at Uluala Hulu

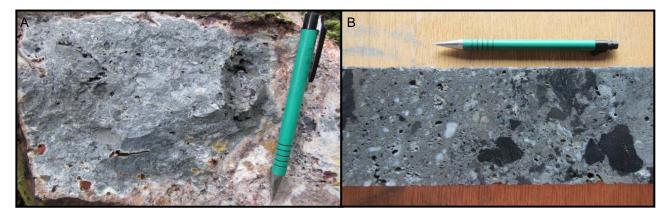
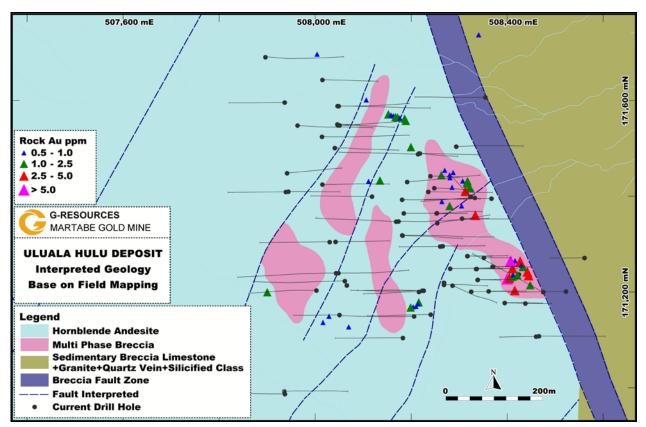
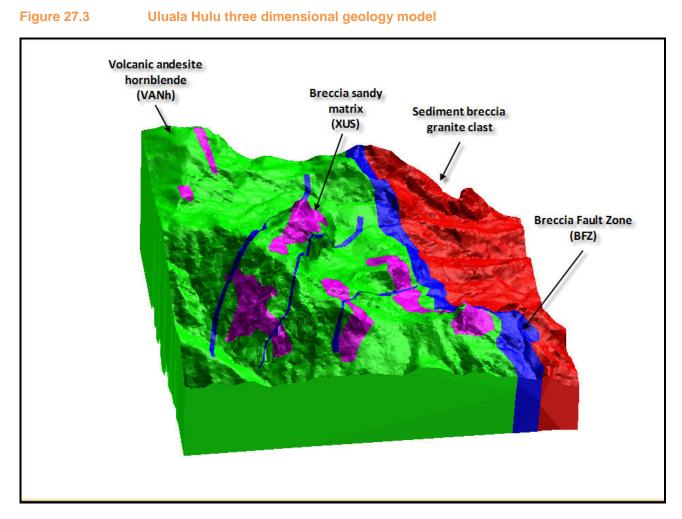


Figure 27.2 shows the interpreted geology and alteration at Uluala Hulu, which is based from a compilation of field mapping and drill core data.





A three dimensional model of the geology at Uluala Hulu has been constructed by PTAR personnel and is shown in Figure 27.3.



## 28. Drilling techniques

A total of 78 diamond drill holes for 14176.7 m of core were used for this Uluala Hulu Mineral Resource estimate. The average hole depth was 179.9 metres with maximum hole depth being 349.4 metres. The majority of drilling at Uluala Hulu dips at 50 to 70 degrees toward the east.

All the drilling used for the Mineral Resource estimate was diamond drill core. The majority of core at Uluala Hulu has been HQ size, with lesser PQ from surface to 100m depth and rare NQ where ground conditions have required core reduction. All drilling is triple tube to minimise sample disturbance.

## 29. Drillhole spacing

Drilling at Uluala Hulu is on nominal east west sections, ranging from 25 metre spacing through the main mineralised zones to a maximum of 100 metre spacing in less well defined areas at the periphery of the deposit area.

## 30. Drill sample recovery

Drilling recoveries at Uluala Hulu are dependent on lithology, alteration type and structure. Overall the drill recovery has been very good, averaging 95%. Table 30.1 summarises the drilling recoveries for each lithology at Uluala Hulu.

## Table 30.1 Uluala Hulu mean recovery by lithology

Lithology	Mean % recovery
Sediment granite clast breccia (SGB)	93.8
Volcanic hornblende andesite (VANh)	95.1
Polymict sandy matrix breccia (XUS)	94.8
North west fault zone (BFZ)	96.2

## 31. Geological logging

All diamond drill holes were logged for geology and geotechnical features.

Geotechnical logging was done by trained technicians under the supervision of geologists. Geotechnical logging includes measurements of drill run length, core recovery, rock quality designation, fracture count and fracture characteristics.

Geological logging was done by geologists on hand written logging sheets, which were transcribed into the GBIS data entry platform. Logged characteristics include (but are not limited to) assay mark-up interval, lithology, structure, breccia type, alteration type and intensity, and mineralisation style and intensity.

Geological logging was undertaken by a relatively small team of geologists. The early (pre 2008) drilling was supervised by experienced geologists and logged by a total of 10 to 11 geologists. The 2008 - 2012 drilling campaign was also supervised by experienced geologists and all core was logged by a consistent team of four geologists.

The reproducibility of the geological logging was checked by senior geologists on a routine basis and these checks revealed that a high level of consistency was achieved. The logging geologists were involved in the interpretation process, ensuring that there was consistency between logging and interpretation.

All core was digitally photographed after logging and before cutting and sampling.

## 32. Sampling and assaying

Rigid procedures were in place to ensure high quality of sampling, assaying and quality control. Sampling and assaying protocols are well documented and diligently managed by site personnel.

## 32.1. Sample security

Sample security was controlled through supervision of the diamond samples at the drill rigs, security controls in the core shed, and controls on transportation of samples to a commercial assay preparation area off-site.

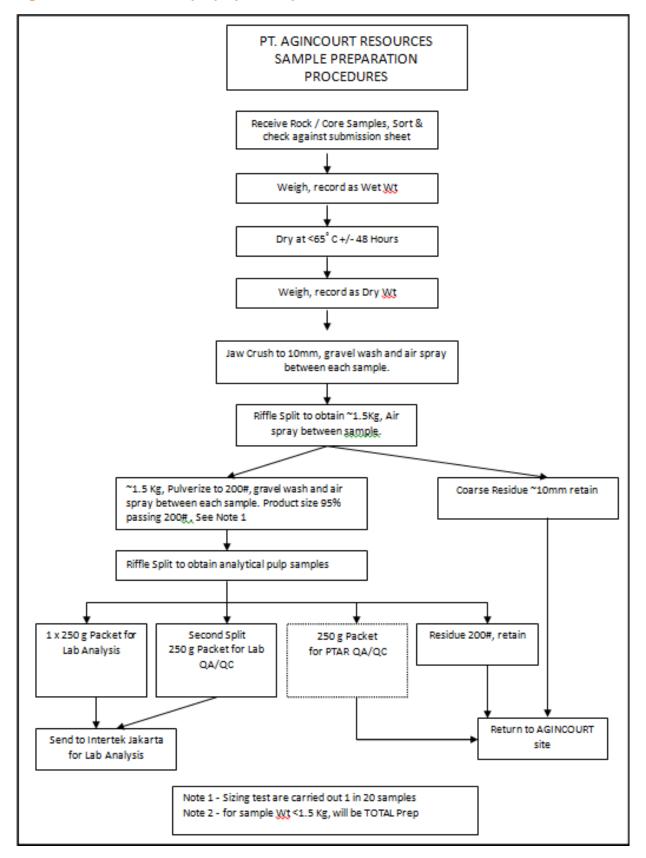
In 2011, security staff at the Martabe Gold Mine completed a review of security related to exploration sample handling. This review did not find significant issues in the security arrangements of core handling. The same procedures are still in place at this time.

## 32.2. Sub-sampling techniques and sample preparation

Diamond drill core was marked with sampling intervals by geologists according to geological boundaries and pre-determined sampling lengths. The core was generally cut into halves using a diamond saw. A small percentage of core was cut into quarter to enable metallurgical testing. Samples were placed into sealed plastic bags with an internal tag, and then into numbered calico bags for delivery to the PT Intertek Utama sample preparation facility at Padang.

On average core was sampled at approximately 1 metre intervals through mineralised zones and 2 to 4 metre intervals through suspected zones of mineralised waste.

On arrival at the PT Intertek Utama sample preparation facility, samples were treated as shown in Figure 32.1.





## 32.3. Assaying

Assaying was conducted at the PT Intertek Utama facility in Jakarta. The assaying suite used is shown in Table 32.1.

Element	Lab Method	Code	Lower detection	Upper detection
Au	Fire Assays	FA51	0.01ppm	50ppm
Au >20ppm	Gravimetric	FA12	3ppm	10%
Ag	AAS + 3 Acid Digest	GA02	1ppm	10%
Ag >100ppm	AAS + 3 Acid Digest	GA30	0.01%	5%
Cu, Pb, Zn	AAS + 3 Acid Digest	GA02	2ppm	10%
Cu >10,000ppm	AAS + 3 Acid Digest	GA30	0.01%	5%
As	X-Ray	XR01	1ppm	10%
As >10,000ppm	X-Ray	XR01	0.01%	10%
SxS	LECO - SCIS	SCIS	0.01%	10%
AuCN	Cyanide Leachable	CN05	0.1ppm	10%
AgCN	Cyanide Leachable	CN06	1ppm	10%
CuCN	Cyanide Leachable	CN06	2ppm	10%

## Table 32.1 Uluala Hulu standard assay suite

An additional suite of minor elements was analysed using inductively coupled plasma analysis (ICP). Elements in this analysis suite included Al, As, Ba, Bi, Ca, Cd, Cr, Co, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, Pb, S, Sb, Sc, Se, Se, Sn, Sr, Ta, Te, Ti, V, W, Y, Zn, and Zr.

## 33. Quality Assurance

Quality assurance was routinely conducted using the following methods:

- An ongoing QA/QC program is conducted using blind samples which include blank samples and certified reference standards
- Only certified laboratories are used for sample preparation and analysis
- The assay laboratory used for Mineral Resource estimation work is audited by PTAR on a regular basis

## 34. QA/QC program

PTAR has a suite of certified and non-certified standards ("Standards") covering a range of grades and elements (including Au, Ag and Cu but not sulphide sulphur). Certified Standards, sourced from Geostat Pty Ltd and Ore Research and Exploration (OREAS) Pty Ltd, were submitted as part of this campaign.

Either a Standard or Blank was inserted at the rate of 1 in every 20 samples. Overall PT Intertek Utama performed very well with these standards, with the few anomalies observed considered likely due to mislabeling or data mismatching errors. These were corrected after receipt of the final assay results (usually within six weeks of sample submission).

## 34.1. Assay laboratory audits

Audits were conducted of the two PT Intertek Utama facilities used by PTAR to process core samples. The Padang sample preparation laboratory was last audited in June 2012 and the Jakarta assay facility in June 2013. Audits were conducted by senior geological staff of G-Resources.

There were no significant compliance issues found in either audit.

## 34.2. Assay laboratory Accreditation

PT Intertek Utama is accredited by the Indonesian National Accreditation Committee (KAN) to ISO/IEC 17025:2008 status. PT Intertek Utama was last audited by KAN in June 2013 and passed without any compliance issues.

## 35. Location of data points

The data point locations at Uluala Hulu were defined using the following methods:

Drillhole collar positions were located using total station.

- For a small number of early holes, these total station locations were modified to match the surface generated from a LIDAR (Light detection and ranging) survey flown in 2010.
- LIDAR was used to define the pre-mining topographic surface for the Mineral Resource estimate
- Sub-surface drillhole dip and azimuth measurements were taken using a Ranger survey tool

Relevant details of these surveys are described below.

#### 35.1. Survey of drillhole collar locations

Diamond drill hole collar locations were located using total station surveying. Most surveys were completed by a contracted licensed surveyor. Recent surveys have sometimes been undertaken by a PTAR mine surveyor.

Collar survey positions were validated by senior geologists before being entered into the SQL database.

#### 35.2. LIDAR survey

A LIDAR survey was conducted by PT Surtech Utama Indonesia in June 2010. The survey covered an area of 13,600 ha surrounding the Martabe project area, including the Uluala Hulu deposit.

Data capture was at nominal point density of more than 2 points per square metre. The LIDAR survey accuracy was measured with post processed kinematics GPS (global positioning system) survey using approximately 30 points at one location. The error between the two methods was found to be within 5cm.

Processed data was produced to a grid at 0.15 centimetre spacing. The data was presented to PTAR as ASCII files suitable for creation of a digital terrain model, and as rectified, georeferenced orthophotos.

LIDAR does not completely penetrate vegetation and this can lead to elevation inaccuracies in densely forested areas, such as the original surface at Uluala Hulu. The LIDAR surface in places tends to have greater elevation than the actual ground surface (up to several metres in places), however this accuracy is adequate for the purpose of constructing a Mineral Resource estimate.

#### 35.3. Downhole survey measurements

Down hole measurements have been conducted exclusively with electronic survey tools, consisting of a magnetic compass and inclinometer with electronic reading. Initial surveys were taken at 20 metres below the collar, with further surveys at 50 metre intervals down the hole.

## 36. Orientation of data in relation to geological structure

At both Barani and Uluala Hulu, drilling is carried out on nominal east west section lines which are perpendicular to the strike of the mineralisation at each deposit. Steep topography means that drillhole sampling may not be perpendicular to the dip of mineralisation. Scissor holes have been completed on some section lines to gain further understanding of the nature of the mineralisation.

## 37. Bulk density

Bulk density (BD) is routinely measured at Uluala Hulu. Vuggy mineralisation at Martabe deposits caused difficulty in measuring BD with standard methods, and this resulted in a well-developed procedure which has been routinely followed at all Martabe deposits including Uluala Hulu.

Bulk density measurements are taken using 10 to 15 centimetre long samples at 10 metre intervals down hole using the following procedure:

- Sample cut to size with a diamond saw.
- Sample dried in an industrial gas oven for 9 hours at temperature of 90°C.
- Sample wrapped tightly in plastic film ("Glad Wrap"). This allowed porosity to be measured by sealing pores from water.
- Sample weighed in air and weighed immersed in water.
- The unwrapped sample soaked in water to ensure all pores are filled and weighed again in air and water.

This procedure measured the BD of non-porous and porous rock by the Archimedes method, and determined the saturated moisture content of the rock. During the calculation, the density of plastic wrap is accounted for and removed from the final BD used for the Mineral Resource estimate.

Quality was controlled by the use of standards to ensure the scale is calibrated, regular review of results by management and by a training and assessment program for employees carrying out bulk density measurements. This method has been in use at the Martabe site since 1992 and has been subject to several reviews, including a study by Snowden Mining industry Consultants in 1992 and a review by AMC consultants in June 2013.

The database contains a total of 807 measurements with an average length of 14 centimetres. AMC assigned BD values to each estimation domain based on combinations of lithology, alteration and oxidation. The table below shows the mean densities of each lithology at Uluala Hulu. Similar tables were prepared for alteration and oxidation were prepared and appropriate combinations chosen for use in the Mineral Resource estimation. The mean value for each combination was generally applied. Where fewer data points existed the mean of a similar combination was applied.

The bulk density measurements applied to the Mineral Resource estimate block model are of sufficient sample density and quality for use in this Uluala Hulu Mineral Resource estimate (Table 37.1).

## Table 37.1Uluala Hulu bulk density by lithology

Lithology	Number	Minimum	Maximum	Mean
Sediment granite clast breccia (SBG)	14	1.71	2.62	2.34
Volcanic hornblende andesite (VANh)	415	1.44	2.69	2.21
Polymict sandy matrix breccia (XUS)	369	1.72	2.87	2.36
North west fault zone (BFZ)	22	1.63	2.61	2.19

Note: flagging of data with lithology wireframes has resulted in the splitting of a small number of samples and this accounts for the difference between the sample count in this table and the text above.

## 38. Moisture

Potential maximum relative moisture content of drill core is measured as part of the procedure for bulk density measurement. This measurement is stored in the database. Moisture was not estimated as part of this Mineral Resource estimate as it is measured during the milling process and used in mine-mill reconciliation.

## 39. Audits and reviews

Reviews of the Uluala Hulu Mineral Resource and the process of resource estimation were held as follows:

- Prior the estimation process: internal PTAR reviews of the geological modelling interpretation are held on a regular basis. Independent consultants in specialist areas provide advice as appropriate (for example metallurgy, statistics and resource estimation methodology). The results are documented as minutes of meetings and consulting reports.
- During the estimation process: AMC conducts a peer review process at several times during the estimation process.

• Every two years: an independent, expert review of the systems and processes relating to the Mineral Resource estimation process is conducted. In the last audit in May 2013 no material issues likely to affect the estimate were reported.

#### 39.1. Internal/external reviews

Multiple reviews were held during the development of the Uluala Hulu geological model and Mineral Resource estimation. Participants on these reviews were company employees and employees of AMC.

#### 39.2. Biennial 'JORC Table 1' reviews

Since 2011 PTAR has conducted biennial reviews of the resource estimation process. The intent of these reviews is to examine performance against industry best practice for resource estimation. The JORC Code Table 1, 'Checklist of Assessment and Reporting requirements'', is the basis for the scope of the reviews.

The last such review was completed in May 2013 by an independent consultant. The review consisted of five days onsite at the Martabe Gold Mine, where the consultant examined aspects of the operation dealing with exploration, geological interpretation, sample handling, resource estimation and exploration staff skills and competency.

Areas for improvement were noted regarding some ongoing operational aspects of the resource development program. These are being addressed and do not affect the issue or underlying quality of this Mineral Resource Statement.

## 40. Estimation and modelling techniques

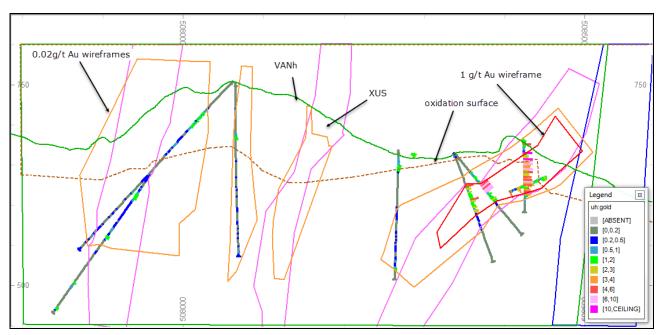
The Uluala Hulu Mineral Resource estimation was completed by Maree Angus of AMC Consultants Pty Ltd.

#### 40.1. Gold domains

PTAR supplied AMC with a series of wireframes based on a nominal 0.2 ppm gold and 1 ppm gold cut-off grades. The interpretations were completed using 2 metre composites to assist with establishing continuity of mineralization between sections. In addition, wireframed interpretations of lithology, alteration and oxidation were supplied (Figure 40.1).

The spatial distribution of the 0.2 ppm gold wireframes approximates the distribution of the advanced argillic alteration zone. Similarly, the 1 ppm gold wireframes coincide with the interpreted silicic alteration zone. As such, these alteration wireframes were not used as constraints during the estimation.

Subsequent to a boundary analysis indicating a hard boundary between the polymict sandy matrix breccia and andesite units, further control on the mineralization distribution was obtained using the lithology wireframes (including the northwest faultzone). The northeast trending faults were not used. A boundary analysis of gold across the oxidation wireframe showed a relatively soft transition. Due to limited oxide data in some domains, and to maintain consistency across the estimation, oxidation was not used as a constraint.



#### Figure 40.1 Section through 171225 mN showing gold domaining

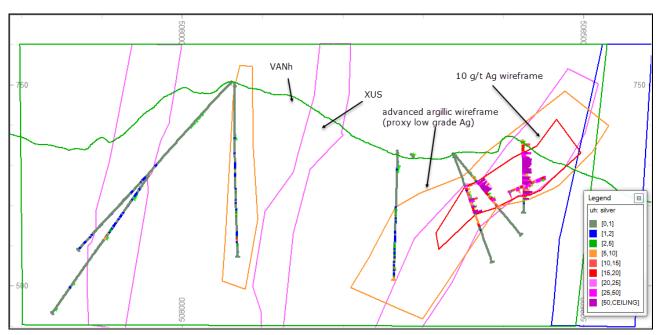
Note drillholes coloured by g/t gold

#### 40.2. Silver domains

PTAR supplied AMC with a series of wireframes based on a nominal 10 ppm silver. Three separate zones were wireframed. The interpretations were completed using 2 metre composites to assist with establishing continuity of mineralization between sections.

The spatial distribution of the 10 ppm silver wireframes approximates the distribution of the interpreted silicic alteration zone. As such, the silicic alteration wireframes were not used as constraints during the estimation. A lower grade silver halo is evident around the 10 ppm silver zones. To better model that halo area, the advanced argillic alteration shell was used as a constraint (Figure 40.2).

Subsequent to a boundary analysis indicating a hard boundary between the breccia and andesite units, further control on the mineralization distribution was obtained using the lithology wireframes (including the northwest faultzone). Contact analysis of silver across the oxidation wireframe showed a relatively soft transition. Due to limited oxide data in some domains, and to maintain consistency across the estimation, oxidation was not used as a constraint.



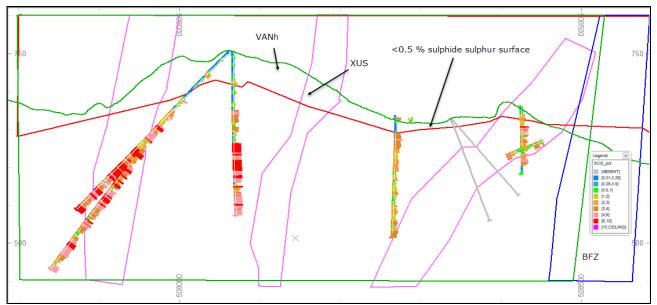
## Figure 40.2 Section through 171225 mN showing silver domaining

Note drillholes coloured by g/t silver

#### 40.3. Sulphide sulphur domains

PTAR supplied AMC with a wireframe based on a nominal 0.5% sulphide sulphur. The interpretation was completed using 2 metre composites to assist with establishing continuity of mineralization between sections. In addition, wireframed interpretations of lithology, alteration and oxidation were supplied (Figure 40.3).

The material within the <0.5% sulphide sulphur wireframe lies above the >80% oxidation surface. Statistical analysis of the composite dataset indicated that the use of lithology as a constraint on the sulphide sulphur distribution was appropriate. Due to limited oxide data, in some domains, and to maintain consistency across the estimation, oxidation was not used as a constraint.



#### Figure 40.3 Section 171225 mN through sulphide sulphur domains

Note drillholes coloured by % sulphide sulphur

## 41. High grade assay cuts

Gold, silver, and sulphide sulphur assays were composited to 2 metre intervals within their respective estimation domains.

AMC used a combination of histograms, log-transformed probability plots and the spatial location of outliers to ascertain the need for high grade cuts. Analysis was completed for each estimation domain.

## 42. Variography

Variography was completed on the cut 2 metre composites for gold silver and sulphide sulphur, using a combination of Isatis and Supervisor software.

Variography was completed on combinations of lithology, alteration and oxidation, both inside and outside mineralisation wireframes. An appropriate model was then adopted for the individual estimation domain.

The modelling process used comprised:

- Estimation of the nugget effect using a downhole variogram,
- Estimation and modelling of variograms in planes that reflect the underlying geological and structural controls on the mineralisation.
- Varying parameters such as lag distance and angular tolerance to refine the structures within each model.

## 43. Block modelling and estimation

#### 43.1. Block model definitions

A three dimensional block model was created and flagged with the topography, lithology, alteration, oxidation and mineralisation wireframes. Table 43.1 details the extent of the model. The block size was chosen to reflect the drill spacing and the dimensions of the mineralisation.

Block attribute	East	North	Elevation
Minimum (m)	507810	171080	400
Maximum (m)	508590	171820	800
Model Extent (m)	780	740	400
Number of Cells	78	74	80
Parent Cell Size (m)	10	10	5
Minimum Cell Size (m)	2.5	2.5	2.5

#### Table 43.1 Uluala Hulu block model definition

#### 43.2. Interpolation

AMC utilised ordinary kriging (OK) to estimate gold, silver and sulphide sulphur into the three dimensional block model. Variogram models and orientated search ellipses were used to interpolate the data.

Estimates were based on interpolation into 10 m (N) by 10 m (E) by 5 m (elevation) parent cells. Block discretisation points were set to 5(E) by 5(N) by 2(elevation) points.

Estimation parameters including minimum and maximum number of composites and maximum number of contributing samples from individual drillholes were adjusted to test the sensitivity and robustness of the estimated grade distribution.

Unestimated blocks within the gold and silver models were assigned a background value dependent on their position inside or outside the mineralisation wireframes. Unestimated blocks in the sulphide sulphur model

were assigned the mean value of the appropriate combination of lithology, alteration and oxidation given the potential use of these estimates in any future acid waste characterisation.

## 43.3. Estimate validation

A series of model validation processes were completed for gold, silver and sulphide sulphur.

AMC investigated visually the relationship between composite grade and block grade on a section by section basis. AMC is satisfied that, locally, composite grades are well modelled in the grade estimate. Figures 43.1, 43.2, and 43.3 are sections through the model at 171225 mN for gold, silver, and sulphide sulphur respectively.

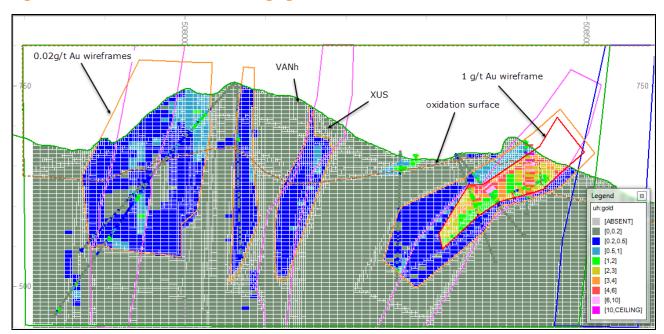
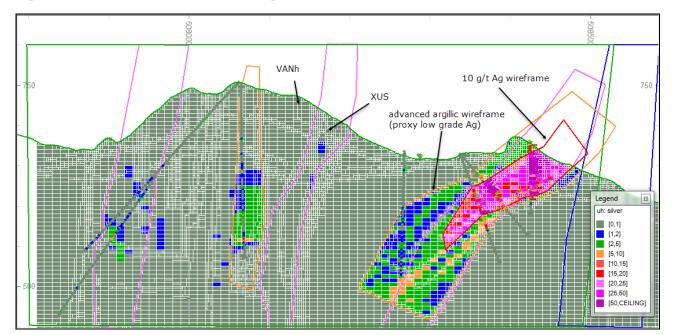
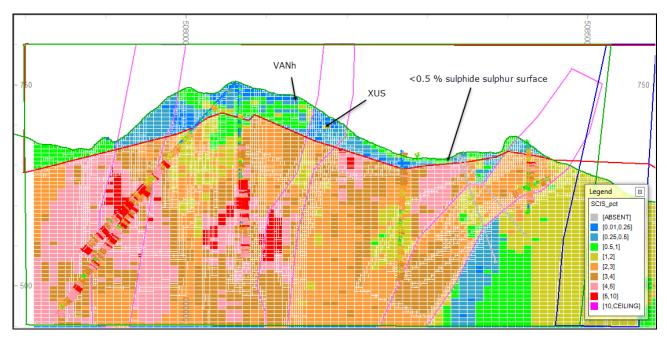


Figure 43.1 Section 171225 m N though gold block model

Figure 43.2 Section 171225 m N though silver block model

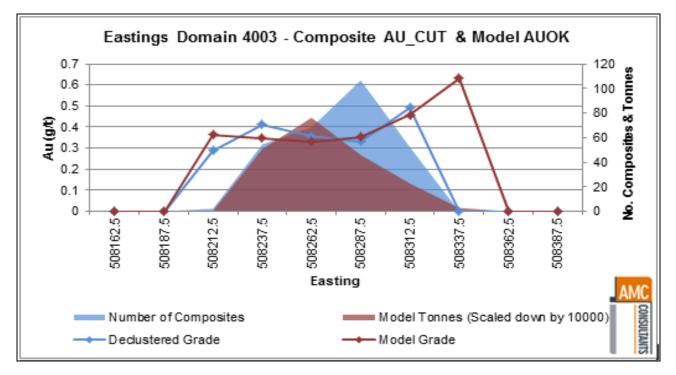




## Figure 43.3 Section 171225 m N though sulphide sulphur block model

Grade statistics were generated for the model blocks, grouped by the domains used in the estimate. These statistics were compared to those of the composites for each estimation domain.

AMC generated swath plots showing an average grade profile by northing, easting and elevation for the block estimates and composite data, as well as the number of composites and tonnage per slice. AMC considers the overall trends between the block estimates and the composite grades indicate the block estimates are reasonable given the data spacing at Uluala Hulu. Figure 43.4 presents a swath plot of gold as an example of the output of this process.



## Figure 43.4 Swath plot of gold

#### 43.4. Cut-off grade parameters

This Uluala Hulu Mineral Resource estimate is reported using a cut-off grade of 0.5 g/t gold. This is the same as the cut-off grade utilised at Purnama. No pit optimisations have been completed over the Uluala Hulu Mineral Resource.

#### 43.5. Classification

Mineral resource confidence classification takes into account drilling, sampling and assay integrity, drillhole spacing, geological controls, and grade continuity, as well as the robustness of the grade estimate and potential mining method. AMC considered a number of statistical and geological parameters associated with resource confidence.

Resource classification for the December 2014 Uluala Hulu model was based on a number of parameters including drill data density, average distance to samples, estimation pass, and the confidence in geological continuity. Other parameters including number of samples used in the estimate and kriging variance were also considered but did not demonstrate consistent trends which supported them being used as primary criteria to assign resource classification to the block model.

The Uluala Hulu Mineral Resource is not constrained by a pit. Figure 43.5 shows an oblique view, looking north east, of the Uluala Hulu Mineral Resource at 0.5 g/t gold cut-off.

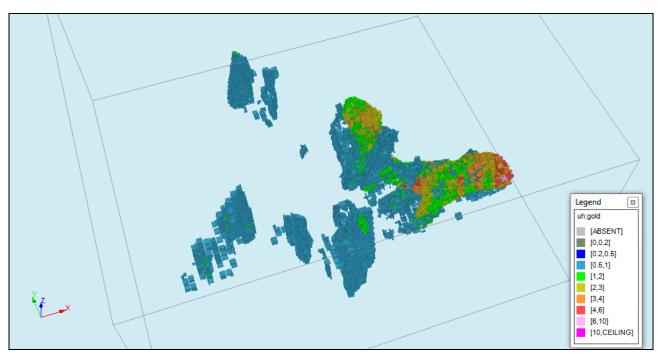


Figure 43.5 Uluala Hulu Mineral Resource

Note: Blocks classified as Indicated or Inferred and above 0.5 g/t gold cut-off shown.

## 44. Persons involved in compiling these Explanatory Notes

Personnel involved in producing these explanatory notes are shown in Table 44.1.

## Table 44.1 Personnel involved in producing these explanatory notes

Name	Role Employer	
Ms Maree Angus	Competent Person for the 31 December AMC Const 2014 Mineral Resource estimate and compilation of these explanatory notes	ultants Pty Ltd
Mr Peter Stoker	Review of the 31 December 2014 Mineral AMC Consu Resource estimate	ultants Pty Ltd
Mr Shawn Crispin	Assisting in compilation of these PTAR Marta explanatory notes	abe Gold Mine

## 45. Reporting against 2012 JORC Code Table 1 Criteria

Table 45.1Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary				
Sampling techniques	Nature and quality of sampling		Uluala Hulu, samples referred to in this the highest quality sample possible for n			
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	pre-determined sampl	s marked with sampling intervals by geolo ing lengths. Samples are generally taken with waterproof tags to prevent sample co	at 2-5kg in weight and placed in se		
	Aspects of the determination of mineralisation that are Material to the Public Report.	Half-core diamond drill core samples of approximately 4-5kg, were pulverised to produce 50g flux fused charge for fire assay.				
Drilling	Drill type (e.g. core, reverse circulation, open-hole	All the drilling reported	d in this document is from diamond core o	Irilling.		
techniques			f core at Barani has been HQ size (98%), diameter. All drilling is triple tube to mini		round conditions have	
			prity of core at Uluala Hulu has been HQ (3%), where ground conditions have requ			
		Where appropriate, a	down hole core orientation tool is used to	gather detailed structural information	on. The tool used is an	
		Asahi Orishot Procore orientation device. PQ, HQ and NQ sizes are kept on site. AMC was not supplied with files of structural measurements for either Barani or Uluala Hulu.				
recovery	recoveries and results assessed.	Barani: Drill sample recovery at Barani is dependent on lithology, alteration type and structure. Overall the drill recover has been very good, averaging 92% across the deposit. The table below shows averages for drill recovery in differe lithologies for the Barani deposit.				
			Lithology	Mean % recovery		
			Sandstone/Conglomerate (SCG)	97.5		
			Andesite (VAN)	95.9		
			Breccia (BPM)	94.3		
			Quartz (QTZ)	95.9		
			Hot spring (HOTS)	78.8		
			Soil (SOIL)	86.7		
		Uluala Hulu: Drill sample recovery at Uluala Hulu is dependent on lithology, alteration type and structure. Overal recovery has been very good, averaging 95%. The table below shows averages for drill recovery in different lit for the Uluala Hulu deposit.				
			Lithology	Mean % recovery		
		-	Sediment granite clast breccia (SGB)	93.8	_	
		Volcanic hornblende andesite (VANh) 95.1			_	
			Polymict sandy matrix breccia (XUS)	94.8	_	
			North west fault zone (BFZ)	96.2		

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	A triple tube recovery system is used at both Barani and Uluala Hulu to maximise core recovery. In areas where core loss is a concern, e.g. in more fractured Fe rich intervals, drill runs are limited to 0.20m. Efforts are made to minimise the loss of drilling fluids downhole, wherever possible.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Whilst no specific studies have been completed at Barani or Uluala Hulu, a substantial body of work has been completed at Purnama on loss of gold from the fine fractions during sampling and drilling. This work suggests that there is a statistically insignificant loss of gold from fine fractions. Given the similarities in the style of mineralisation across the Martabe deposits this work is considered relevant to Barani and Uluala Hulu.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies	For both Barani and Uluala Hulu, all diamond drill holes were logged for geology and geotechnical features. Geotechnical logging was done by trained technicians under the supervision of geologists. Geotechnical logging includes measurements of drill run length, core recovery, RQD, Fracture count and fracture characteristics.
	and metallurgical studies.	Geological logging was done by geologists on hand written logging sheets, which were transcribed into the GBIS data entry platform. Logged characteristics include (but are not limited to) assay markup interval, lithology, structure, breccia type, alteration type and intensity, and mineralisation style(s) and intensity.
		Geological logging was undertaken by a relatively small team of geologists. The reproducibility of the geological logging was checked by senior geologists on a routine basis and these checks revealed that a high level of consistency was achieved. The logging geologists were involved in the interpretation process, ensuring that there was consistency between logging and interpretation.
		All core was digitally photographed after logging and before cutting and sampling.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	For both Barani and Uluala Hulu, visual geological and alteration logs are taken by a dedicated core team of experienced geologists using a standardised logging scheme. Although visual logs are inherently qualitative, additional quantitative measurements of core are also taken routinely and are included in the interpretation of logged data. These include RQD measurements, SWIR (short wave infra-red) analysis, and magnetic susceptibility measurements. These are all measured on a metre by metre basis. All core is photographed after logging and sample mark up, but before sampling. The photographs are digitally stored, and used as a reference when interpreting the geology and mineralisation at the deposit.
	The total length and percentage of the relevant intersections logged.	Barani: The Barani drilling database used for this Mineral Resource estimation comprises 39581.35 metres of drilling (277 drillholes) All drillholes have been logged.
		Uluala Hulu: The Uluala Hulu drilling database used for this Mineral Resource estimation comprises 14838.5 metres of drilling (78 drillholes) All drillholes have been logged.
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	Core is cut into halves using a diamond blade core- saw, with one half sampled and one half retained. Quarter core samples were only taken on rare occasions (e.g. for metallurgical sampling).
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No non-core drilling has been completed at Uluala Hulu or Barani.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	For both Barani and Uluala Hulu, samples are placed into sealed plastic bags with an internal tag, and then into numbered calico bags for delivery to the PT Intertek Utama sample preparation facility at Padang. The process for sample preparation is as follows:
		Drying
		• Samples are placed onto aluminum trays and dried at 65°C.
		<ul> <li>If samples are specified for low temperature drying or if Hg assay is requested then samples should dried at low temperatures T &lt; 65°C</li> </ul>
		Crushing     Crush complex using a low Crusher
		Crush samples using a Jaw Crusher.

Criteria	JORC Code explanation	Commentary			
		<ul> <li>Jaw plates are cleaned after each sampling routine using a gravel wash.</li> </ul>			
		<ul> <li>Jaw crusher size result &lt; 5mm</li> </ul>			
		Pulvurising			
		<ul> <li>Use LM5, RM2000 and LM2 pulverize techniques employed depending on sample size.</li> <li>Samples pulverised to 200# (200# &gt; 95%)</li> </ul>			
		<ul> <li>Sizing tests performed 1/20 on each pulverize</li> </ul>			
		<ul> <li>Bowls cleaned between each sample routine using a gravel wash.</li> </ul>			
		Rolling/Mixing			
		• The pulverized sample is then rolled/mixed in a rubber mat for a minimum of 20 times.			
		<ul> <li>Rubber mat cleaned thoroughly between samples.</li> </ul>			
		Splitting			
		Riffle splitter used to split an analytical pulp sample of approximately 250g to be sent to Jakarta for analysis.			
		<ul> <li>Residue and Coarse rejects placed in a plastic bag and return to G-Resources.</li> </ul>			
		Thorough reporting is carried out throughout the process and G-Resources deems the sample preparation technique			
		appropriate and of sufficient quality.			
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	On average core was sampled at approximately 1m intervals through mineralised zones and 2-4m intervals through suspected zones of mineralised waste. Core was cut in half with a diamond saw, with half sampled and half retained for reference. The sample length histograms below show the distribution of sample lengths at Barani and Uluala Hulu respectively.			
		10     AMC Consultants       0     2       4     LENGTH       6     B       10     30/2020/55			

Criteria	JORC Code explanation	Commentary	100 Para 100				
	Whether sample sizes are appropriate to the grain size of the material being sampled.	that approximately 7 and less than 1% of	The second secon	e in the <5µn m size fracti	n fraction, with a furthe	er 26%% in the 5-50µm fractio	
Quality of assay data	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the	There is no evidenc comprehensive scal	e to indicate the Barani or Uluala e of the initial program, the same incted at the PT Intertek Utama fac	Hulu behave sample sizes	differently in this resp are used.		
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	There is no evidenc comprehensive scal Assaying was condu- table below:	e to indicate the Barani or Uluala e of the initial program, the same incted at the PT Intertek Utama fac	Hulu behave sample sizes ility in Jakar	differently in this resp are used. a. The standard assa	ying suite used is shown in th	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element	e to indicate the Barani or Uluala e of the initial program, the same incted at the PT Intertek Utama fac Lab Method	Hulu behave sample sizes ility in Jakar Code	differently in this resp are used. a. The standard assa	ying suite used is shown in th	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays	Hulu behave sample sizes ility in Jakart Code FA51	differently in this resp are used. a. The standard assa Lower detection 0.01ppm	ying suite used is shown in th Upper detection 50ppm	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric	Hulu behave sample sizes ility in Jakard Code FA51 FA12	differently in this resp s are used. a. The standard assa Lower detection 0.01ppm 3ppm	ying suite used is shown in th Upper detection 50ppm 10%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02	differently in this resp are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm	ying suite used is shown in th Upper detection 50ppm 10% 10%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02 GA30	differently in this resp s are used. a. The standard assa Lower detection 0.01ppm 1ppm 0.01%	ying suite used is shown in th Upper detection 50ppm 10% 10% 5%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm Cu, Pb, Zn	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02	differently in this resp are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm	ying suite used is shown in th Upper detection 50ppm 10% 10%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02 GA30 GA02	differently in this resp s are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm 0.01% 2ppm	ying suite used is shown in the Upper detection 50ppm 10% 10% 5% 10%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm Cu, Pb, Zn Cu >10,000p	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest om AAS + 3 Acid Digest X-Ray	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02 GA30 GA02 GA30	differently in this resp are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm 0.01% 2ppm 0.01%	ying suite used is shown in the Upper detection 50ppm 10% 10% 5% 10% 5% 5% 5%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm Cu, Pb, Zn Cu >10,000p As	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest om AAS + 3 Acid Digest X-Ray	Hulu behave sample sizes ility in Jakard FA51 FA12 GA02 GA30 GA02 GA30 XR01	differently in this resp s are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm 0.01% 2ppm 0.01% 1ppm	ying suite used is shown in th Upper detection 50ppm 10% 10% 5% 10% 5% 10%	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm Cu, Pb, Zn Cu >10,000p As As >10,000p	e to indicate the Barani or Uluala e of the initial program, the same inted at the PT Intertek Utama face Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest MAS + 3 Acid Digest X-Ray MMX-Ray	Hulu behave sample sizes ility in Jakart Code FA51 FA12 GA02 GA30 GA30 GA30 XR01 XR01	differently in this resp s are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm 0.01% 2ppm 0.01% 1ppm 0.01%	ying suite used is shown in the Upper detection 50ppm 10% 10% 5% 10% 5% 10% 5% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	
assay data and laboratory	and laboratory procedures used and whether the	There is no evidenc comprehensive scal Assaying was condu- table below: Element Au Au >20ppm Ag Ag >100ppm Cu, Pb, Zn Cu >10,000p As As >10,000p SxS	e to indicate the Barani or Uluala e of the initial program, the same incted at the PT Intertek Utama fac Lab Method Fire Assays Gravimetric AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest AAS + 3 Acid Digest X-Ray M X-Ray LECO - SCIS	Hulu behave sample sizes ility in Jakart FA51 FA12 GA02 GA30 GA30 GA30 XR01 XR01 SCIS	differently in this resp are used. a. The standard assa Lower detection 0.01ppm 3ppm 1ppm 0.01% 2ppm 0.01% 1ppm 0.01% 0.01% 0.01%	ying suite used is shown in the Upper detection 50ppm 10% 10% 5% 10% 5% 10% 10% 10% 10%	

Criteria	JORC Code explanation	Commenta	ary									
			additional ele f elements lo d below:									
		Element	LDL	Element	LDL	Element	LDL	Element	LDL	Method ID	Lab method	
		Ag	(0.5ppm)	AI	(0.01%)	As	(5ppm)	Ва	(2pmm)			
		Bi	(5pmm)	Ca	(0.01%)	Cd	(1ppm)	Co	(2pmm)			
		Cr	(2pmm)	С	(2pmm)	Fe	(0.01%)	Ga	(10pmm)			
		К	(0.01%)	La	(1ppm)	Li	(1ppm)	Mg	(0.01%)		ICP + 4 acid digest	
		Mn	(2ppm)	Мо	(1ppm)	Na	(0.01%)	Nb	(5pmm)	IC50		
		Ni	(5ppm)	Pb	(2pmm)	Sb	(5ppm)	Sc	(2pmm)			
		Sn	(10ppm)	Sr	(1ppm)	S	(50ppm)	A	(5pmm)			
		Те	(10ppm)	Ti	(0.01%)	V	(1ppm)	W	(10pmm)			
		Y	(1ppm)	Zn	(2pmm)	Zr	(5ppm)	-	-			
		and correct Two Terrap The machin on a per m	ted by a train blus KT-10 m nes are facto	ned operator agnetic sus ory calibrated nd interprete	: Drillcore n ceptibility m I in accorda d both on s	neasurement leters are in u ince with the site, and with	ts are made use, and rou manufactur verification	on a per-me utine collectio ers guideline from outside	etre basis or on of data fro es. Sample n e geophysic	all drillcore om drillcore i neasuremer	en are visually checked all drillcore. n drillcore is employed. easurements are taken I contractors. Standard	
	Nature of quality control procedures adopted (e.g.	Quality ass	urance was	conducted i	n these way	/S:						
	standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.		ongoing QA/ eference sta		n was cond	lucted using	blind samp	oles which in	cluded blan	k samples a	and certified	
	bias) and precision have been established.	Only certified laboratories were used										
		<ul> <li>Assay laboratories used for resource estimation work were audited by PTAR every two years.C PTAR has a suite of certified and non-certified standards ("Standards") covering a range of grade (including Au, Ag and Cu but not sulphide sulphur). Certified standards, sourced from Geostat Pty Ltd a and Exploration (OREAS) Pty Ltd, were submitted as part of this campaign.</li> </ul>				f grades ar	nd elements					
		well with th errors. The	ese standar	ds, with the rected after	few anoma receipt of t	alies observe he final assa	ed considere ay results (	ed likely due usually withir	to mislabeli n six weeks	k Utama performed very ing or data mismatching of sample submission). ss.		
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.		Barani and lintersections			ed by severa	al levels of	PTAR staff	and externa	l consultan	ts to ensure	
	The use of twinned holes.		veral sets of al paramete									

Criteria	JORC Code explanation	Commentary
		Uluala Hulu: Two sets of 'scissor' intersections are have been drilled through the main mineralisation zone and these provide short range validation of geological models and geostatistical parameters. No twinned holes have been drilled at Uluala Hulu.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All sample collection data, geological logging, borehole location and laboratory analysis results, for both Barani and Uluala Hulu, are retained and archived. All data is backed up with both a daily full SQL backup, and a weekly compilation. Monthly downloads to DVD are stored in a separate location to database hardware. Data entry and QAQC are managed in-house by an experienced database manager.
	Discuss any adjustment to assay data.	No adjustments to assay data are made.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	At both Barani and Uluala Hulu, diamond drill hole collar locations were located through Total Station. Most surveys were completed by a contracted licensed surveyor. Some later surveys have been undertaken by a PTAR mine surveyor. Collar survey positions were validated by senior geologists before being entered into the SQL database.
		Down hole measurements have been conducted exclusively with electronic survey tools, consisting of a magnetic compass and inclinometer with electronic reading. Surveys were taken at 20m below the collar, and then at 50 metre intervals to the end of the hole.
	Specification of the grid system used.	The grid system employed is UTM (WGS84) Zone 47N.
	Quality and adequacy of topographic control.	A LIDAR survey was conducted by PT Surtech Utama Indonesia in June 2010. The survey covered an area of 13,600 ha surrounding the Martabe project area. Data capture was at nominal point density of more than 2 points per square metre. The Lidar survey accuracy was measured with post processed kinematics GPS survey using approximately 30 points at one location. The error between the two methods was found to be within 5cm. Processed data was produced to a grid at 0.15cm spacing. The data was presented to PTAR as ASCII files suitable for creation of a digital terrain model, and as rectified, georeferenced orthophotos.
		Lidar does not completely penetrate vegetation and this can lead to elevation inaccuracies in densely forested areas, such as the original surface of the Purnama deposit. The LIDAR surface may have greater elevation than the actual ground surface (up to several metres in places), however this accuracy is adequate for the purpose of constructing Mineral Resource estimates.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Barani: Drilling at Barani is generally spaced on 25 metre spaced E-W section lines. Drillholes on each section line are spaced at approximately 40 metre intervals. Most of the drillholes are inclined at 45 to 60 degrees toward the east, however there are a significant number of drillholes inclined to the west.
		Uluala Hulu: Drill holes were completed on nominal E-W sections, ranging from 25 metre spacing through the main mineralised zones to a maximum of 100 metre spacing in less well defined area at the periphery of the deposit area.
·	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The data spacing and distribution at both Barani and Uluala Hulu is sufficient to establish geological and grade continuity. Continuity between drillhole sections is well supported by surface mapping and sampling.
	Whether sample compositing has been applied.	Sample compositing has not been applied to exploration samples at Uluala Hulu or Barani.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	At both Barani and Uluala Hulu, drilling is carried out on nominal east west section lines which are perpendicular to the strike of the mineralisation at each deposit. Steep topography means that drillhole sampling may not be perpendicular to the dip of mineralisation. Scissor holes have been completed on some section lines to gain further understanding of the nature of the mineralisation.

Criteria	JORC Code explanation	Commentary
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Where possible, drilling has attempted to intersect structures as close to normal to the structures strike extension as possible. Where scissor holes have been drilled down the dip of the mineralisation their influence during the resource estimation has been limited by gradeshells.
Sample security	The measures taken to ensure sample security.	Sample security was controlled through supervision of the diamond samples on the drill rigs, security controls in the core shed, and through controls on transportation of samples to a commercial assay preparation area off-site. In 2011, security staff at the Martabe Gold Mine completed a review of security related to exploration sample handling. This review did not find significant issues in the security arrangements of core handling.
Audits	The results of any audits or reviews of sampling	Reviews of the exploration program (including sampling techniques and data) were held as follows:
reviews	techniques and data.	<ul> <li>During and after the estimation process: internal reviews of the geological modelling and estimation processes were held on a regular basis.</li> </ul>
		<ul> <li>Independent consultants in specialist areas provided advice as appropriate (for example QA/QC evaluation prior to resource estimation). The results were documented as minutes of meetings and consulting reports.</li> </ul>
		• Every 3-6 months: A steering committee headed by an independent geological consultant conducts a review of the program on site. This consists of a review of the program with regard to the exploration strategic plan, and a review of the exploration techniques used and results received during the intervening period.
		<ul> <li>Every two years: an independent, expert review of the systems and processes relating to the Exploration program Mineral Resource estimation Process were conducted.</li> </ul>
		The last major review was completed in May 2013 by an independent consultant. The review consisted of 5 days onsite at the Martabe Gold Mine, where the consultant examined aspects of the operation dealing with exploration, geological interpretation, sample handling, and exploration staff skills and competency. Areas for improvement were noted regarding some ongoing operational aspects of the resource development program. These have been addressed and do not affect the issue or underlying quality of this report.

## Table 45.2 Section 2 Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Uluala Hulu and Barani deposits are located in the Martabe Contract of Work (CoW) area. This "Generation 6" CoW was signed in 1997 and provides for a minimum 30 years tenure after production has commenced.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Martabe deposits were discovered in 1997 during a regional reconnaissance exploration program conducted by a joint venture between Normandy and Anglo Gold Corporation. A bulk leach extractable gold (BLEG) stream sediment survey located the Martabe cluster of deposits. Three deposits were initially identified, including the Purnama deposit. Surface exploration work included mapping, rock and soil sampling. Drilling commenced at Barani in 1998 and at Uluala Hulu in 2001. Multiple phases of exploration up to delineation drilling were continued throughout several ownership changes. A high level of continuity and work quality has been maintained over the project life.

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	The general geology of the Martabe Deposits Martabe Region and the district surrounding Martabe is described by Harlan et al (2005) and Supoto et al (2003).
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar	Details are reported in the main text of the Explanatory Notes for the Uluala Hulu Mineral Resource estimate.
	<ul> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	
	<ul><li> dip and azimuth of the hole</li><li> down hole length and interception depth</li><li> hole length</li></ul>	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No exploration results are included in this Mineral Resource report.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No exploration results are included in this Mineral Resource report.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Metal equivalent values are not reported at Uluala Hulu or Barani.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	No exploration results are included in this Mineral Resource report.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	No exploration results are included in this Mineral Resource report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	No exploration results are included in this Mineral Resource report.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of	No exploration results are included in this Mineral Resource report.

Criteria	JORC Code explanation	Commentary
	treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Uluala Hulu: Additional work is planned to bring Inferred Resource to a higher category, and to explore for potential extensions to the north of known mineralisation. Barani: Work is ongoing to explore for parallel vertical vein sets to the west of known mineralisation.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Details of possible extensions and future drilling plans are considered commercially sensitive at this time.

## Table 45.3 JORC Table 1: Section 3, Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database Integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation Purposes. Data validation procedures used.	
Site Visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	An associate of the Competent Person visited the Martabe Mine site for one week in mid-2014, and completed a review of the departments responsible for Resource Development and Mine Geology. The review did not find areas of concern with the operation. In, May 2013 AMC Principal Geologist Peter Stoker, completed a site visit as part of the Martabe mine biennial JORC Table 1 internal company review.
Geological Interpretation	Confidence in (or conversely the uncertainty of) the geological interpretation of the mineral deposit.	Barani: The geological interpretation at Barani is considered to be understood with high confidence within the main body of mineralisation. Outer areas have lesser confidence, though surface mapping supports the current geological interpretation. The level of confidence is reflected in the assignment of resource classification to the resource model. Uluala Hulu: The geological interpretation is considered to be understood with moderate confidence in the main body of mineralisation. Outer areas have lesser confidence, though surface mapping supports the current geological interpretation. The level of confidence is reflected in the assignment of resource classification to the resource model. Uluala Hulu: The geological interpretation is considered to be understood with moderate confidence in the main body of mineralisation. Outer areas have lesser confidence, though surface mapping supports the current geological interpretation. The level of confidence is reflected in the assignment of resource classification to the resource model.
	Nature of the data and of any assumptions made.	Barani: Geological interpretation at Barani was made with the guidance of surface mapping on the original land surface, open pit mapping, and 277 diamond drill holes for 39581.35 m of core. Interpretation of grade and geological domains beyond known data points was limited to a maximum of 25m beyond the limit of drilling intersections for any given domain
		Uluala Hulu: Geological interpretation at Uluala Hulu was made with the guidance of surface mapping on the original land surface, and 84 diamond drill holes for 14838.5 m of core (only 78 of these drillholes were used in this Mineral Resource estimation, due to a lack of assay data or their position outside the model boundary). Interpretation of grade and geological domains beyond known data points was limited to a maximum of 25m beyond the limit of drilling intersections for any given domain.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Barani: The controls on mineralization at the Barani deposit are well understood and given the close association with the well delineated north south trending breccia zone the interpretation of the current dataset is unlikely to change.
		Uluala Hulu: Previous interpretations used for Mineral Resource estimation at Uluala Hulu were completed using significantly less drilling and as such were less well constrained than this Mineral Resource estimate. The distribution of the silicic alteration at Uluala Hulu is critical as it hosts the highest gold and silver grades. Thus any change to the understanding of its distribution will impact on future Mineral Resource estimations. The use of the short wave infra-red spectrometer to map alteration in the drill core significantly increases confidence in the interpretation of the mineralised zones. The interpretation used in this estimate is considered a reasonable fit to available data.
	The use of geology in guiding and controlling mineral Resource estimation	Barani: The distribution of mineralization at Barani is closely associated with alteration and lithology. As such these features influence the position of the wireframes used to constrain the Mineral Resource estimation.
		Uluala Hulu: The main host to mineralization at Uluala Hulu is a series of highly altered, structurally controlled breccia bodies. Wireframes of these features have been produced and have been used in conjunction with a series of mineralization wireframes to constrain the Mineral Resource estimation.
	The factors affecting continuity both of grade and geology	Barani: The mineralisation at Barani occurs across a number of lithologies, but dominantly within quartz veins and breccias. Mineralisation occurs in north-south trending quartz veins within a larger zone of hydrothermal breccias. The quartz veins dip steeply to the west. The gold grades are generally highest within these quartz veins. Distinct alteration zones occur from the highest grade veins in the deposit, which are generally coincident with a silicic alteration zone, outwards into the surrounding breccia zone, with grade progressively reducing into the advanced argillic, then argillic, then

Criteria	JORC Code explanation	Commentary
		propylitic alteration zone
		Uluala Hulu: The Uluala Hulu deposit consists of a series of moderately dipping to sub-vertical mineralized zones hosted by polymictic, sandy matrix breccia. The distribution of the breccia units is controlled by faults in two directions. The most continuous high grades are found in breccias which trend northwest. Breccias trending north to northeast, associated with northeast trending faults, are narrower and based on current knowledge contain less concentrated mineralization. The current interpretation suggests that the northeast trending faults may limit the extent of northwest trending breccias. Breccias related to northeast trending faults remain open to the southwest.
Dimensions	expressed as length (along strike or otherwise), plan	
	width, and depth below surface to the upper and lower limits of the Mineral Resource	Uluala Hulu: The Uluala Hulu Mineral Resource is approximately 650 metres in strike length, with the main zone up to 180m true width. The Mineral Resource extends from surface to its deepest point of approximately 180m below surface.
Estimation and		Barani: Samples were composited to 2 metre intervals within the gold, silver and sulphide sulphur domain shells.
Modelling Techniques	interpolation parameters and maximum distance of	AMC used a combination of histograms, log-transformed probability plots and the spatial location of outliers to ascertain the need for high grade cuts. Analysis was completed for each estimation domain, and the cut composites used as input to the Mineral Resource estimation.
	extrapolation from data points. If a computer assisted estimation was chosen include a description of computer	Variography was completed on the cut 2 metre composites for gold silver and sulphide sulphur, using a combination of Isatis and Supervisor software.
	software and parameters used.	Variography was completed on combinations of lithology, alteration and oxidation, both inside and outside mineralisation wireframes. An appropriate model was then adopted for the individual estimation domain.
		The modelling process used comprised
		<ul> <li>Estimation of the nugget effect using a downhole variogram,</li> </ul>
		<ul> <li>Estimation and modelling of variograms in planes that reflect the underlying geological and structural controls on the mineralisation.</li> </ul>
		• Varying parameters such as lag distance and angular tolerance to refine the structures within each model.
		Variograms were estimated within the planes of interpreted geological controls on mineralization and resulted in total ranges of up to 58 m for gold, 110 m for silver and 115 m for sulphide sulphur.
		AMC utilised ordinary kriging (OK) to estimate gold, silver and sulphide sulphur into the three dimensional block model. Estimates were based on interpolation into 12.5 m (N) by 6.25 m (E) by 10 m (elevation) parent cells. Block discretisation points were set to 5(E) by 5(N) by 2(elevation) points.
		First pass interpolations were completed at a distance of 60 metres and expanded to 2 times that number for the second pass, and 3 times that number for the third pass. Estimation parameters including minimum and maximum number of composites and maximum number of contributing samples from individual drillholes were adjusted to test the sensitivity and robustness of the estimated grade distribution.
		Unestimated blocks within the gold and silver models were assigned a background value dependent on their position inside or outside the mineralisation wireframes. Unestimated blocks in the sulphide sulphur model were assigned the mean value of the appropriate combination of lithology, alteration and oxidation given the potential use of these estimates in any future acid waste characterisation.
		Uluala Hulu: Samples were composited to 2 metre intervals within lithology, alteration and oxidation domains and statistically analysed both inside and outside the grade shell wireframes supplied by PTAR. Statistically supported combinations of these zones were then used as used as estimation domains.
		AMC used a combination of histograms, log-transformed probability plots and the spatial location of outliers to ascertain the need for high grade cuts. Analysis was completed for each estimation domain, and the cut composites used as input to the Mineral Resource estimation.
		Variography was completed on the cut 2 metre composites for gold silver and sulphide sulphur, using a combination of Isatis and Supervisor software.
		Variography was completed on combinations of lithology, alteration and oxidation, both inside and outside mineralisation

Criteria	JORC Code explanation	Commentary
		wireframes. An appropriate model was then adopted for the individual estimation domain.
		The modelling process used comprised:
		<ul> <li>Estimation of the nugget effect using a downhole variogram,</li> <li>Estimation and modelling of variograms in planes that reflect the underlying geological and structural controls on the</li> </ul>
		mineralisation.
		Varying parameters such as lag distance and angular tolerance to refine the structures within each model.
		Variograms were estimated within the planes of interpreted geological controls on mineralization and resulted in total ranges of up to 128.5 metres for gold, 162.5 metres for silver, and 130.5 metres for sulphide sulphur.
		AMC utilised ordinary kriging (OK) to estimate gold, silver and sulphide sulphur into the three dimensional block model. Estimates were based on interpolation into 10 m (N) by 10 m (E) by 5 m (elevation) parent cells. Block discretisation points were set to 5(E) by 5(N) by 2(elevation) points.
		First pass interpolations were completed at 2/3 the modelled variogram range and expanded to two times that number for the second pass and three time for the third estimation pass. Estimation parameters including minimum and maximum number of composites and maximum number of contributing samples from individual drillholes were adjusted to test the sensitivity and robustness of the estimated grade distribution.
		Unestimated blocks within the gold and silver models were assigned a background value dependent on their position inside or outside the mineralisation wireframes. Unestimated blocks in the sulphide sulphur model were assigned the mean value of the appropriate combination of lithology, alteration and oxidation given the potential use of these estimates in any future acid waste characterisation.
	and/or mine production records and whether the Mineral	Barani: This Mineral Resource estimate has been compared to the 2013 Mineral Resource compiled by Cube Consulting. A review of the 2013 Barani Mineral Resource estimate noted that the grade and tonnage of certain blocks in the model had been double counted due to the mathematical procedure used. Subsequently this procedure was modified for the current Mineral Resource Estimate.
		The result was a decrease to approximately half the previously reported tonnes at the same (to 2 significant figures) gold and silver grades grade.
		Uluala Hulu: This Mineral Resource estimate has been compared to the 2009 Uluala Hulu Mineral Resource estimate and the result is an increase of 100,000 oz of gold and 300,000 oz of silver. This includes a significant increase in tonnage due to the substantially increased drilling information and model area. The previous estimation was completed using a topography surface generated using only drillhole collar elevations. Subsequent LIDAR survey has established tighter control on the topographic surface and shows large differences locally with the original surface.
		The extents of the Indicated Mineral Resource from the 2009 Mineral Resource estimation were considered in the classification of the 2014 estimation. Material that was classified as Inferred in 2009 has maintained that classification in this estimation.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding the recovery of by-products at Uluala Hulu. Potential gold and silver recoveries have been calculated for Barani and are detailed in a separate section of this table.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation)	Barani: Sulphide sulphur was estimated for the purpose of acid mine drainage characterization. Sulphide sulphur was estimated into domains based on the combination of nominal 0.1% and 1% sulphide sulphur shells and the oxidation wireframe as shown in Section 22.3 of these Explanatory notes.
		Uluala Hulu: Sulphide sulphur was estimated for the purpose of acid mine drainage characterization. Sulphide sulphur was estimated into domains based on the combination of a nominal 0.5% sulphide sulphur shell and the lithology wireframes as shown in Section 43.3 of these Explanatory notes.
		Barani: All block estimates were based on interpolation into 12.5m N x 6.25mE x 10m RL parent cells, sub-celling to a minimum of $3.125m$ N x 1.5625 m E x 2.5 m RL. Average sample spacing is 1metre along drill holes in mineralization, (composited to 2 metre intervals) with hole spacing ranging from 25 metres x 25metres to a maximum of 100 metre

Criteria	JORC Code explanation	Commentary
		spacing. Uluala Hulu: All block estimates were based on interpolation into 10m N x 10mE x 5m RL parent cells, sub-celling to a minimum of 2.5m N x 2.5m E x 2.5m RL. Average sample spacing is 1metre along drill holes in mineralization, (composited to 2 metre intervals) with hole spacing ranging from 25 metres x 25metres to a maximum of 100 metre spacing.
	Any assumptions behind modelling of selective mining units.	No assumptions have been made regarding selective mining units. The block dimensions and splitting were chosen based on the limited width and extent of many of the mineralized zones.
	Any assumptions about correlations between variables	Variables were estimated independently estimated. Whilst statistical analysis showed that the correlation between variables is weak to moderate, geological understanding of Uluala Hulu suggests that the gross distribution of all estimated elements is controlled by the same mechanism.
	Description of how the geological interpretation work was used to control the resource estimates	The description of geological interpretation and its control on the resource estimate is provided in the main text of these Explanatory Notes.
	Discussion of basis for using or not using grade cutting or capping	Grade cutting was determined by statistical analysis at Barani and Uluala Hulu. The analysis comprised investigation of outlier locations in conjunction with population breaks in lognormal histograms and probability plots. The need for high grade cutting was assessed for each estimation domain.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available	The Barani Mineral Resource estimation was validated in a variety of ways. Cross sections and plans through the model were checked against drillholes; input composite and output model statistics were compared; and swath plots constructed. Examples of validation of the model are shown in the main body of the explanatory notes.
		The Uluala Hulu Mineral Resource estimation was validated in a variety of ways. Cross sections and plans through the model were checked against drillholes; input composite and output model statistics were compared; and swath plots constructed. In addition, inverse distance squared and nearest neighbour estimations were completed. Examples of validation of the model are shown in the main body of the explanatory notes.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	Tonnages were estimated on a dry basis. Moisture content is available if required, being measured during the Bulk Density calculations.
Cut-off parameters	The basis if the adopted cut-off grade or quality parameters applied	Barani: The cut-off grade used was 0.5 g/t Au. This is considered to be the lower limit of samples likely to fall into economically viable mineralization and is based on the cut-off grade at the Martabe mine.
		Uluala Hulu: The cut-off grade used was 0.5 g/t Au. This is considered to be the lower limit of samples likely to fall into economically viable mineralization and is based on the cut-off grade at the Martabe mine
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or if applicable external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	assumptions used for Purnama.
Metallurgical factors or assumptions		Illuala Hulu: The metallurgical amenability of the mineralization at Illuala Hulu is considered to be similar to that at

Criteria	JORC Code explanation	Commentary
	with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions		The potential environmental factors at Uluala Hulu and Barani are assumed to be similar to those at Purnama, where potential impacts have been extensively investigated. Sulphide sulphur has been included in the model for both the Barani and Uluala Hulu Mineral Resource estimates.
Bulk Density	for the assumptions. If determined, the method used,	<ul> <li>Bulk density (BD) is routinely measured at Barani and Uluala Hulu. Vuggy mineralisation at the nearby Purnama deposit caused difficulty in measuring BD with standard methods, and this resulted in a well-developed procedure which has been routinely followed at all deposits including Barani and Uluala Hulu.</li> <li>Bulk density measurements are taken using 10 to 15 cm long samples at 10 metre intervals down hole. The procedure followed was: <ol> <li>Sample cut to size with a diamond saw.</li> <li>Sample dried in an industrial gas oven for 9 hours at temperature of 90°C.</li> <li>Sample wrapped tightly in plastic film ("Glad Wrap"). This allowed porosity to be measured by sealing pores from water.</li> <li>Sample weighed in air and weighed immersed in water.</li> <li>The unwrapped sample soaked in water to ensure all pores are filled and weighed again in air and water.</li> </ol> </li> <li>This procedure measured the BD of non-porous and porous rock by the Archimedes method, and determined the saturated moisture content of the rock. During the calculation the density of the plastic wrap is accounted for and removed from the final BD used for the Mineral Resource estimate.</li> <li>Quality was controlled by the use of standards to ensure the scale is calibrated, regular review of results by management and by a training and assessment program for employees carrying out bulk density measurements. This method has been in use at the Martabe site since 1992 and has been subject to several reviews, including a study by Snowden Mining industry Consultants in 1992 and a review by AMC consultants in June 2013.</li> <li>Barani: The database contains a total of 2291 measurements with an average length of 14 centimetres. Bulk density and aquality for use in this Barani Mineral Resource estimate.</li> <li>Uluala Hulu: Within the Mineral Resource estimate model are a, the Uluala Hulu bulk density database contains 807 measurements with an average length of 14 centimetres. Bulk density and quality for use in this Barani</li></ul>
		At both Barani and Uluala Hulu the mineralised rock can be highly porous and this was managed by wrapping the density sample in plastic film before weighing in water. A detailed description of the method is provided in a previous section of this

Criteria	JORC Code explanation	Commentary
	spaces (vugs, porosity etc.), moisture and differences between rock and alteration zones within the deposit.	table.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different minerals.	Bulk density estimation into the block model was not undertaken as part of this Mineral Resource estimate. Bulk densities were assigned based on a combination of lithology, alteration and oxidation.
Classification	The basis for the classification of the Mineral Resource into varying confidence categories.	Barani: Resource classification for the December 2014 Barani model was based on consideration of a number of parameters including drill data density, estimation pass, and the confidence in geological continuity. Other parameters including number of samples used in the estimate and kriging variance were also considered but did not demonstrate consistent trends which supported them being used as primary criteria to assign resource classification to the block model. The previous resource classification (December 2013 model) was also taken into consideration.
		Using a combination of these criteria, resource classification envelopes for each of the Indicated and Inferred <sup>3</sup> confidence categories were generated. The envelopes were digitised on 50m spaced east-west cross sections and 3D wireframes generated. The relevant confidence flag was then applied to the resource blocks. Material outside the classification wireframes was flagged as not classified.
		Barani Mineral Resource classification at 165980 mN
		Inferred Indicated I
		Uluala Hulu: Resource classification for the December 2014 Uluala Hulu model was based on a number of parameters including drill data density, average distance to samples, estimation pass, and the confidence in geological continuity. Other parameters including number of samples used in the estimate and kriging variance were also considered but did not demonstrate consistent trends which supported them being used as primary criteria to assign resource classification to the block model.
		Using a combination of these criteria, resource classification envelopes for each of the Indicated and Inferred <sup>4</sup> confidence categories were generated. The envelopes were digitised on 25m spaced east-west cross sections and 3D wireframes generated. The relevant confidence flag was then applied to the resource blocks. Material outside the classification

<sup>&</sup>lt;sup>3</sup> As defined by the JORC Code.

<sup>&</sup>lt;sup>4</sup> As defined by the JORC Code.

Criteria	JORC Code explanation	Commentary
		wireframes was flagged as not classified.
		Uluala Hulu Mineral Resource classification at 171250 mN
		750 Thered T
	relevant factors (i.e. relative confidence in tonnage, grade	Mineral resource confidence classification takes into account drilling, sampling and assay integrity, drillhole spacing, geological controls, and grade continuity, as well as the robustness of the grade estimate and potential mining method. AMC considered a number of statistical and geological parameters associated with resource confidence.
	Whether the results accurately reflect the Competent Person's view of the deposit.	The Competent Person was responsible for Mineral Resource classification and the results accurately reflect her view of the deposit.
Audits or reviews	The results of any audits or reviews of mineral resource estimates.	A description of the audits and reviews is provided in the Explanatory Notes, and in Section 2 of this Table 1 appendix above.
Discussion of relative accuracy / confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the competent person.	sampling and assay integrity, drillhole spacing, geological controls, and grade continuity, as well as the robustness of the

## **Appendix 2:**

# Ore Reserves Statement as at 31 December 2014 Explanatory Notes



# Ore Reserves Statement as at 31 December 2014 Explanatory Notes

## 1. Introduction

The Martabe Gold Mine (Martabe) is owned and operated by PT Agincourt Resources (PTAR), a subsidiary of G-Resources Group Limited. The mine is located on the western side of the island of Sumatra, Indonesia, approximately 40 km south of the port of Sibolga and 200 km south of the provincial capital of Medan.

The mine has been operating since July 2012 and comprises the Purnama open-pit mine, a conventional carbon-in-leach (CIL) ore processing plant (OPP) of 4.5 Mtpa capacity, an integrated waste management storage facility (WMSF), incorporating as waste rock dump and tailings storage facility (TSF) with associated water catchment and diversion systems, an accommodation village for mine workers, and supporting infrastructure. In calendar year 2014, the mine produced 276 koz of gold and 2.2 Moz of silver from 3.9 Mt of OPP feed.

The Purnama mining operation is currently mining benches to the topography in both east and west directions on a steeply-dipping ridge. Mining operations to date have been undertaken by drill-and-blast on 5 m benches, and mined on 2.5 m lifts (before blast induced swell) by 80-tonne Caterpillar excavators (backhoe configuration), loading into 38-tonne Caterpillar 740 six-wheel articulated dump trucks (ADTs). The Purnama pit design has been modified to allow the introduction of Caterpillar 773 trucks (55-tonne capacity).

The ROM pad, the processing plant, and the contractor's facilities are sited immediately to the east of the Purnama pit. The integrated WMSF is located approximately 1 km to the south-east of the Purnama pit. Mine site offices and support facilities are located approximately 1.5 km to the south-west of the pit.

Additional open-pit operations are proposed for the Ramba Joring deposit (approximately 1 km north of Purnama), and the Barani deposit (approximately 1.5 km south-east of Purnama).

All of the pits are designed and scheduled as single-stage pits with no pushbacks. This simple bench by bench mining approach leads to a very simple mining operation, with a straightforward production scheduling approach.

## 2. Key Ore Reserves parameters

Ore and waste blocks are determined within the mining model using economic parameters, rather than the traditional approach of a gold cut-off grade, or a gold equivalent cut-off grade, using the contribution of silver to the revenue. Material is defined as ore when the revenue achieved from the recovered gold and silver is greater than the mining and processing cost.

Ore is defined and ore reserves were estimated for the Purnama Pit using medium-term (now-2020) price forecasts of US\$1,300/oz gold and US\$20/oz silver, in line with the 2015 PTAR budget. A longer-term view

of US\$1,433/oz for gold and US\$26.90/oz for silver was applied to the Barani and Ramba Joring deposits, as per the previous public ore reserves statement of December 2013.

The cut-off to define ore is therefore variable in metal grades, but for Purnama equates to an average gold cut-off grade of approximately 0.8 to 0.9 g/t Au, depending upon the accompanying silver grades.

A state royalty of 0.5% has been included in the economic valuation and cut-off.

Average CIL processing plant recoveries used in the estimation of the Ore Reserves were:

- Purnama: Gold = 74%; Silver = 66%
- Barani: Gold = 87%; Silver = 73%
- Ramba Joring: Gold = 83%; Silver = 72%

Actual plant recovery for 2014 (Purnama ore feed only) was 82.8% for gold and 68.9% for silver.

## 3. Ore Reserves summary

The Martabe Ore Reserves as of 31 December 2014 is summarized in Table 3.1, and is reported in accordance with the 2012 JORC Code<sup>5</sup>.

#### Table 3.1 31 December 2014 Martabe open-pit Ore Reserves estimate by classification

Ore Reserves	Ore Tonnes	Gold Grade	Silver Grade	Containe	ed Metal
Classification	(Mt)	(g/t Au)	(g/t Ag)	Gold (koz)	Silver (koz)
Proved	6.0	1.9	28	360	5,450
Probable	36.2	2.0	19	2,320	21,700
Total	42.2	2.0	20	2,680	27,200

Notes:

- 2. Estimates are rounded to the nearest 0.1 Mt; 2 significant figures Au and Ag grade; 10 koz for Au metal and 50 koz for Ag metal.
- 3. The Ore Reserves were estimated using a projected gold price of US\$1,300/oz and silver price of US\$20/oz for Purnama pit, and a gold price of US\$1,433/oz and silver price of US\$26.90/oz for Barani and Ramba Joring pits.
- 4. Ore Reserves are based on an expected value calculation to report tonnages above a zero \$/t net expected value. The cut-off to define ore is therefore variable in metal grades, but equates to an average gold cut-off grade of approximately 0.8 to 0.9 g/t Au depending upon the accompanying silver grades.

<sup>1.</sup> Totals may not equal the sum of the component parts due to rounding adjustments.

<sup>&</sup>lt;sup>5</sup> Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code 2012 Edition, effective December 2013. Prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and the Minerals Council of Australia (JORC).

The estimated split of Ore Reserves by mining area (three separate pits and a stockpile) is set out in Table 3.2.

	Ore Reserves	Ore	Gold Grade	Silver Grade	Contained Meta	
Deposit	Classification	Tonnes (Mt)	(g/t Au)	(g/t Ag)	Gold (koz)	Silver (koz)
Purnama	Proved	3.5	2.4	41	270	4,700
Purnama	Probable	27.5	2.0	23	1,800	20,700
Barani	Probable	3.5	2.0	2.6	230	300
Ramba Joring	Probable	5.2	1.8	4.4	290	700
Purnama Stockpile	Proved	2.5	1.1	9.5	90	750
Total Proved and Probable Ore Reserves		42.2	2.0	20	2,680	27,200

#### Table 3.2 31 December 2014 Martabe open-pit Ore Reserves estimate by mining area

Notes:

- 1. Totals may not equal the sum of the component parts due to rounding adjustments.
- 2. Estimates are rounded to the nearest 100,000 tonnes; 2 significant figures Au and Ag grade; 10,000 ounces for Au metal and 50,000 ounces for Ag metal.
- 3. The Ore Reserves were estimated using a projected gold price of US\$1,300/oz and silver price of US\$20/oz for Purnama pit, and a gold price of US\$1,433/oz and silver price of US\$26.90/oz for Barani & Ramba Joring pits.
- 4. Ore Reserves are based on an expected value calculation to report tonnages above a zero \$/t net expected value. The cut-off to define ore is therefore variable in metal grades, but equates to an average gold cut-off grade of approximately 0.8 to 0.9 g/t Au depending upon the accompanying silver grades.

The main changes from the previous public Ore Reserves statement (31 December 2013) for Martabe is depletion of Purnama due to mining and processing operations, additions due to modification of the existing Purnama pit design, and reduction of Purnama ore tonnes due to lower metal prices resulting in a higher-grade cut-off. No changes were made to Barani or Ramba Joring from the 31 December 2013 Ore Reserves statement. These changes are summarized in Table 3.3.

#### Table 3.3 Summary of major changes from 2013 to 2014 Martabe open-pit Ore Reserves estimate

Category	Ore Tonnes (Mt)	Contained Gold (koz)
Mining and Processing Depletion	-3.9	-331
Design Modifications	+1.0	+53
Economics Changes (prices and costs)	-5.0	-145
Total	-7.9	-423

Notes:

- 1. Totals may not equal the sum of the component parts due to rounding adjustments.
- 2. Design modification changes after depletion considered.
- 3. Economic changes after depletion and design modifications considered.

## 4. Reporting against JORC Code 2012 Table 1 Criteria

Table 4.1 summarizes the reporting requirements for the Martabe Ore Reserves as at 31 December 2014, consistent with the reporting requirements of the 2012 JORC Code "Table 1 – Section 4".

## Table 4.1 JORC Code Ore Reserves Assessment and Reporting Criteria (Table 1 – Section 4) for Martabe Ore Reserves at 31 December 2014

Criteria	Commentary
	The Ore Reserves estimate has been based on the following Mineral Resource estimates:
	Purnama – Mineral Resource estimate updated as at 31 December 2013 with resource estimation carried out by Cube Consulting Pty Ltd (Cube). This resource update incorporated new drilling information as well as mining depletion up to the date reported.
Mineral Resource Estimate for	Barani – Mineral Resources estimate updated as at 30 June 2013 with resource estimation carried out by Cube. This resource update incorporated new drilling information. No mining has taken place at this deposit since the previous report.
Conversion to Ore Reserves	Ramba Joring – Mineral Resource estimate completed in September 2010 and re-stated unchanged as at 30 June 2013 with resource estimation carried out by Cube. This resource update incorporated new drilling information. No mining has taken place at this deposit since the previous report.
	The mineral resources of all three deposits were reported inclusive of the ore reserves estimated, and stated here less variations since December 2013. Refer to the public statement as at 31st December 2013, which can be accessed in PDF format at <a href="http://www.g-resources.com/wp-content/themes/twentyten/pdf/martabe/minerals_140422.pdf">http://www.g-resources.com/wp-content/themes/twentyten/pdf/martabe/minerals_140422.pdf</a>
Site Visits	The Competent Person, Julian Poniewierski, has not visited the site. An associate of the Competent Person, Principal Mining Engineer of AMC Consultants Pty Ltd (AMC), Glen Williamson, visited site in February 2014, but was medically indisposed and unavailable to complete the Competent Person reporting at the required time. The Competent Person was able to discuss the operation with Glen Williamson.
Study Status	This is an operating mine and is well advanced beyond the feasibility-study stage. Mining of the Purnama open pit is on-going, with processing of ore mined from the Purnama open pit. The Barani and Ramba Joring proposed open pits are at feasibility-study stage, based on future economic outlook and hence have not changed since last reported.
Study Status	Modifying factors used in the estimation of these ore reserves were compiled using a combination of feasibility-study level investigations and more importantly, actual production figures from the operating mine and processing facility, providing a high level of confidence in the estimation process.
Cut-off Parameters	The cut-off value used in the estimation of these ore reserves is the non-mining, break-even value taking into account mining recovery and dilution, metallurgical recovery, site operating costs including processing and administration, doré transport, refining, royalties, and revenues. These were updated for the Purnama deposit using costs and predicted revenue consistent with the 2015 budget. The parameters previously used for the public statement were adopted for Barani and Ramba Joring.

Criteria	Commentary
	When applying the budget parameters to the remaining Purnama deposit, this results in reclassification of some low-grade ore (LG) previously classified as ore reserve in 2013 to a mineralized waste (MW) category which, while not currently economic, has future potential at a higher revenue of \$1,650/oz gold and \$30/oz silver. This material is not included in the ore reserves on current parameters.
	Ore Reserves currently stockpiled were also re-assessed on the revised cost, revenue, measured grades, and modelled recoveries. The evaluation confirms that all stockpiled ore reserves remain economic, albeit marginal.
	This is an operating mine, with mining of the Purnama pit having commenced and ore processing through the existing process facility having taken place over the preceding 30 months. Operating parameters together with feasibility parameters have been used, where appropriate, together with the existing mineral resource models. In the case of Barani and Ramba Joring deposits, there was no material change in the expected operating parameters. Hence no pit optimizations were performed, with the current pit designs deemed as valid in the reporting of the ore reserves. The optimization was undertaken using Whittle 4X Version 4.5 software with consideration of all operating costs, commodity prices, mine recovery and dilution factors, metallurgical recoveries, process throughputs, and mining rate limits. The pit shell selected was one revenue factor larger than the best-case optimum to ensure that future potential was not restricted.
Mining Factors or Assumptions	The currently operating Purnama pit was re-optimized on the new cost and revenue parameters, including allowance for wider ramps to suit proposed truck upgrades. The ramps were changed from 18 m to 24 m width, suitable for 60 t dump trucks. The design change honoured geotechnical recommendations, with inter-ramp angles remaining unchanged from previous designs. With ramp placement on the west wall, there was no significant change to the pit crest at the surface on the east wall, compared to the previous pit design. The change in revenue and costs and the effective marginal cut-off has, however, reduced the economic ore and increased the strip ratio for Purnama pit from 0.8:1 to 0.9:1 (W:O).
	Processing costs referenced variable milling rates for different lithology, based on production observations during 2014. Observed milling performance gave a minimum of 433 tph, maximum of 524 tph, median of 516 tph and average of 499 tph on a monthly basis. The ore reserve economic value (EV) or effective marginal cut-off was applied, based on updates cost, revenue, and recovery inputs.
	Both the Barani and Ramba Joring open pits are designed for the current smaller scale of mining equipment due to the smaller scale of operations and development requirements.
	Stockpiled ore, which was estimated through the current grade control practices, was also included and listed separately in the stated ore reserves.
	Mining operations are currently performed by a mining contractor using 80 t excavators and 40 t articulated dump trucks for ore and waste mining. A combination of 10 m and 7.5 m blasted benches are excavated in 2.5 m flitches in bulk waste and selective ore zones respectively. Ancillary equipment utilised includes bulldozers, graders, and water carts. Drilling for blasting is performed with drills capable of 6 m one pass drilling for holes with diameters varying between 89 mm and 127 mm. The blasting service is provided by a separate contractor. Grade control drilling is by contractor using a reverse circulation drill

Criteria	Commentary								
	rig on a 12.5 m × 6.2	•				•		and 24	1 m. Mining has
	been undertaken sind	e May	/ 2011 8	and no a	ccess	issues ex	KIST.		
	All infrastructure to support the mining operation is in place. This includes a run-of-minine (ROM) stockpile located near the crusher, a waste disposal area within the tailing storage facility (TSF) footprint, a mine office, and mobile plant workshop. Two magazine are in place to support the blasting operation. Power is provided by diesel generators. Connection to the national grid is now complete, although to date no grid power has been supplied. There is a positive water balance on site, with excess water discharged after treatment through a polishing plant. All roads are in place, allowing access from one area to another.					hin the tailings Two magazines esel generators. Dower has been discharged after			
	The geotechnical op studies during the pro- studies. The most re- Management. This re- recommendations for Purnama open pit is updates of the struc- update.	oject p cent s port c future s withi	orogress tudy wa ontains e work. n what	sion from as under discuss Overall is cons	n conce taken ion of the ass sidered	eptual stu in Decer risk facto sessmen Laccepta	udies thro nber 2010 ors for slo t states th able limits	ough to 0 by F pe sta hat the s of s	o final feasibility PT Ground Risk ability as well as the stability of the stability. Recent
	Slope parameters for Associates in 2005, a						mendatio	ons fro	om Golder and
	Lomain/Litroion/				Batter A (deg)	Batter Angle Inter-ramp (deg) Angle (deg			
	VANh		20	20 9.5			70		50
	Other Fresh		20		7.7		70	53	
	Other Fresh (Inclu Ramp)	uding	20	7	7.7	70	49		
	Clay Breccia		10		9.5		40		25
	Slope parameters for Barani South were based on recommendations from Chris Orr and Associates in November 2009, and are also summarized in the table below.					w.			
	Domain/Region Bench Berm Width Batter Angle A					Angl	verall Slope ngle (Excluding amp) (deg)		
	Breccia (East Wall)	10		8.0		75		42	
	Sandstone (West Wall)	10		7.0		75		45	
		1		1		I		1	

Criteria	Commentary				
	Slope parameters O'Bryan and Assoc		-		nendations from Peter table below.
	Domain/Region	Bench Height (m)	Berm Width (m)	Batter Angle (deg)	Overall Slope Angle (Excluding Ramp) (deg)
	Upper 60 m	5	3.0	55	38
	60 m to 80 m depth	10	8.0	60	43
	Below 80 m depth	20	8.0	60	46
	<ul> <li>part of the mine's well-resourced geo advice, monitoring a</li> <li>Geotechnical and h</li> <li>Regular visua acceptance</li> <li>Pit wall mappi</li> <li>Design review</li> <li>Instrumentation real-time existence</li> <li>Establishment</li> <li>Ongoing deven characteriz identification</li> <li>In addition to the programme for devenorizontal drainage there would be incrited adjacent non-ore b sizes as follows:</li> </ul>	ground conti technical and l and design inp ydrogeology e al pit wall ins before vertica ng to collect, u ys and stability on monitoring, stensometers. t and on-going elopment of a p ation, major n, and appropria above, there a vatering of the program to en eased stability ning loss and ed in the resound plocks and so 12.5 m x 25 m	rol managem hydrogeology ut for manage fforts focus on spections and advance. update, and un analysis. including pr monitoring of bit slope mana structure m riate mitigation are plans to o eastern wall able pit wall d risks. dilution, ore r nd non-ore pro irce model. Th simulating mi	ent plan. There team on site to er ment of ground co a the following area l a quality assur derstand geotech isms, convention a dewatering prog agement programm odel, slope des n. complete a more to ensure stability epressurization. W eserves block mo oportions across m his has effectively ning dilution base	ance system for wall nical features. al crack meters, and

Criteria	Commentary
	Ramba Joring: 12.5 m x 12.5 m x 5 m (x,y,z)
	All gold and silver grades reported in this estimate refer to these diluted grades. Mining ore losses result from blocks with small ore proportions, which are effectively diluted to the extent that the average grade is below the economic cut-off of the reported ore reserves.
	In the case of Ramba Joring, to account for potential additional ore losses, which may occur at the surface on steep terrain, all mineralized material occurring within ore reserves model blocks with less than 60% of their volume occurring under the modelled topography had the grades zeroed, thereby excluding them from the estimation of these ore reserves.
	No inferred material was included in the conversion of Mineral Resource to Ore Reserves. All inferred material was treated as waste in the planning process.
	The current process consists of a primary crusher, semi-autogenous grinding (SAG) and ball mill, with pebble crushing. Gold and silver are recovered via a CIL circuit with carbon stripping via an Anglo-America-Research (AAR) process. The tailings pass through a cyanide detoxification circuit before being discharged to a TSF. Excess water from site is treated in a water treatment polishing plant (WPP) before testing and release.
	Dependent on ore hardness, mill throughput typically ranges from 450 – 600 tph, with an 80% passing a size of 150 microns. Copper loading onto carbon is managed by increasing cyanide concentrations in the leach and adsorption circuits whenever ores with high copper levels are being treated, as identified in the geological crusher feed data.
	The circuit has no dedicated process to manage excessively high silver feed but is controlled by establishing daily blending targets from geological ore block data. The guidelines for the blending targets were developed with input from the plant metallurgists, accounting for the processing circuit limits and priorities as follows.
Metallurgical Factors or	• Gold average should be between 2 and 3.5 Au g/t with a high of 4.5 Au g/t.
Assumptions	• Silver average should be below 30 Ag g/t with a high of 40 Ag g/t.
	• Copper average should be below 150 Cu g/t with a high of 200 Cu g/t.
	Mixture of siliceous and softer ores for milling consistency.
	The process operators will respond to increasing silver grades by elevating the cyanide in the leach circuit to control silver tails losses. With respect to cyanide soluble copper (CNSolCu), observations to date indicate that the copper mineral ranges between 30% and 40% cyanide soluble. Small amounts are beneficial (~20 ppm CNSolCu) in aiding the cyanide detoxification plant. With persistently high concentrations of cyanide soluble copper, high copper loadings onto carbon become an issue. This is managed by:
	<ul> <li>Keeping cyanide concentrations high, which promotes Cu(CN)<sub>4</sub><sup>3-</sup> which does not load onto carbon, rather than Cu(CN)<sup>2-</sup> which readily loads.</li> </ul>
	• Introduction of a cold stripping sequence in the elution circuit. This has been designed in the circuit, but not yet been used. The concept being to strip the copper off the carbon with a concentrated solution of cyanide at ambient temperature and

Criteria	Commentary
	elevated pH, followed by precious metal stripping, which is done at a high temperature and pressure.
	There is no current evidence of gold cyanide solution robbing carbonaceous materials and there are no onward processing restrictions after transport of the doré.
	For the Purnama deposit, Peter J. Lewis and Associates (Consulting Metallurgist) conducted an in-depth study of metallurgical recovery factors based on sampling of the 2007-08 in-fill drilling programme. Key aspects of his findings were:
	Sulphide sulphur (SxS) levels are a factor in recovery.
	Recoveries are different for differing rock types and alteration states.
	Precious metal grades can also affect recovery.
	Peter Lewis derived a series of regression formulae, with adjustments for "real life" plant efficiencies, to predict Purnama plant recovery factors. These were applied to each block in the ore reserve model and a "recovered grade" for both gold and silver was calculated for each block.
	An alternative recovery regression based on relationships between assay head grade and cyanide soluble grade has been derived through studies conducted by Stuart Masters for comparison to the Lewis formulae, and both were compared to the actual process performance during 2014. There have been no identified significant variations to date. Both methods were also applied to the pit optimization, with no significant change to the pit value or selection. The alternative formulae may be adopted for future application due to the simpler application and predictive capability for the grade control system.
	A similar approach was undertaken for the Barani and Ramba Joring deposits using formulae derived by Peter Colbert in 2009 and 2010 respectively. These estimates were based on specific metallurgical test work on samples taken from each deposit and interpreted to estimate expected CIL plant recovery performance.
	Using the above methods for calculation of recoveries, the following are indicative averages for the three deposits:
	<ul> <li>Purnama: Au 74% Ag 66% (Update as depleted to 31 December 2014)</li> <li>Barani: Au 87% Ag 73%</li> <li>Ramba Joring: Au 83% Ag 72%</li> </ul>
	• In addition to the above metallurgical work and studies, the actual performance of the treatment plant over the last 30 months has provided confirmation that the recoveries are at least as high as those determined in the studies discussed above, although this confirmation is only relevant to the material processed, which was sourced from the upper areas of the Purnama open pit. Budget recovery 2014 Au=81.7% and Ag=66.7% versus actual plant recovery for 2014 was Au=82.8% and Ag= 68.9%
Environmental	Successful management of environmental aspects is recognized by the company to be a critical contributor to the success of the Martabe Gold Mine. Environmental management efforts since operations commenced were focussed on a range of important issues,

Criteria	Commentary
	including:
	Environmental monitoring.
	Statutory reporting.
	Safe tailings disposal
	<ul> <li>Safe treatment and discharge of excess mine water.</li> </ul>
	Communication of environmental performance to stakeholders.
	Revegetation.
	Development of waste rock management strategy, including acid mine drainage (AMD).
	Run-off water management.
	Waste and chemical management.
	A submitted and approved mine closure plan.
	The management of the Martabe Gold Mine is progressively implementing an Equator Principles Compliance Plan, with the aims of continuing the very high level of conformance over the coming 12 months.
	Reporting procedures and active management plans were put in place to not only meet legislative requirements, but also ensuring that issues of sustainability are addressed through proactive measures, resulting in the efficient and timely application of environmental procedures and strategies.
	An AMD programme was outlined, with completed classification and oxygen diffusion testwork completed. The block model is in the process of being updated to new AMD classifications, based on the recent testwork. Currently all potentially acid forming (PAF) waste has high-clay content and is being placed in compacted layers within the TSF construction, as per Knight Piésold guidelines and construction supervision.
	The TSF construction is as per the Knight Piésold design. Knight Piésold is also the engineer of record for the design and construction. The construction schedule is aligned with mining capacity and process storage requirements. Construction progress is updated regularly and aligned with budget ore processing requirements.
	The key environmental permits, being the Indonesian AMDAL (environmental impact assessment and environmental management plan), are currently in place and being updated as part of the Life of Mine Plan review.
Infrastructure	The site has been producing bullion since July 2012. All infrastructure, such as a 4.5 Mtpa processing plant, workshops, offices, accommodation, and warehouse, is established and in operation. Power is supplied via diesel generators. Connection to the national grid has been recently completed. The operation has a positive water balance with excess water discharged. The TSF is under continuous construction and when completed will hold in excess of 10 years of tailings storage capacity.
Costs	As this is an operating mine with all major infrastructure and processing facilities already in place, the projection of capital costs are not a factor influencing the reporting of these ore reserves.

Criteria	Commentary
	Operating costs have taken into account actual expenditures supplied in raw format from the site accounting system, which were then summarized into key components for pit optimization, economic value calculations, and marginal cut-off for use in the estimating of the ore reserves.
	Mining costs were derived from existing mining contract rates, with additional allowance for mining contract escalation to date, haulage to the TSF facility construction site for waste disposal, and extra over costs associated with the challenging terrain at the Ramba Joring deposit.
	As a result of the above, the overall average total ore-based costs amounted to \$34.26/t of material processed. The updated average project mining costs for all pits combined is \$4.66/t mined. Mining costs are calculated to include the effects of increased depth and hardness for excavation, drilling and blasting, and haulage distances for truck costs as inputs to the optimization process. For assessments of future mineralized waste from Purnama, the process costs were escalated together with the revenue, being \$41.21/t processing and \$1,650/oz gold revenue respectively.
	Deleterious elements included in the estimation process were sulphur sulphides, which impacted on metallurgical recovery, as discussed above, and cyanide soluble copper, which has a negative impact on the processing costs.
	Metal prices have been updated for the economic value calculations and the ore reserves estimation. For the purposes of this ore reserves update, the Purnama pit is based on US\$1,300/oz gold and US\$20/oz silver in line with the 2015 budget. A longer-term view of US\$1,433/oz for gold and US\$26.90/oz for silver has been applied to the Barani and Ramba Joring deposits as per the previous public ore reserves statement of December 2013.
	As all accounting and estimation of costs and revenues were based on USD, no further allowance for exchange rates were made in the technical work in this estimation process.
	A state royalty of 0.5% has been included in the economic valuation and cut-off.
Revenue	In general, no factors were applied in the application of the metal prices stated in the above section. A reduction in revenue is applied in the form of doré transport, refinery and smelting charges based on current US\$/oz costs.
Factors	The head grades as reported in these estimates were not factored. Mining dilution and ore mining recoveries were taken into account as discussed elsewhere in this statement by applying a re-blocking methodology, and as such no further factors were considered appropriate and were therefore not applied.
Market Assessment	The combined gold and silver doré is transported from site and refined in Jakarta, it is then on-sold primarily through Singapore. There are no impediments to the sale of the refined product.
Economic	Martabe is an operating mine, with the capital associated in realizing the estimated ore reserves already expended and the relevant infrastructure in place, the economics of the reported ore reserves are based on operating costs and assumptions, which have been applied in the selection of distinguishing mill feed material as discussed in the section

Criteria	Commentary
	addressing the cut-off grade methodology applied.
	The pit optimization updates for Purnama were recently completed with net present value (NPV) values that align with the cash flow of the financial models for the life of mine. A discount rate of 7% has been applied to the optimization assessments.
Social	All agreements with key stakeholders are in place and current. All matters leading to social licence to operate were resolved with the central, regional, and local governments. The company has an extremely active community development plan operating, which was developed in conjunction with the local communities.
	Acquisition is currently in progress for the Ramba Joring project, where there are multiple land claims. This is expected to be resolved in 2015 through ongoing interaction with the lands department and community leaders.
	Martabe is located within an area prone to earthquakes. This was factored in with the design of all key infrastructure on the site including the TSF. It is also situated in an area of high rainfall (+4 m/year). Excess water is captured and directed by dedicated drainage systems to water dams for treatment prior to release into the environment.
Other	All government approvals to operate Martabe are current. Purchase of the land that Ramba Joring covers is outstanding, and will occur prior to mining commencing in 2019. All other outstanding issues have been resolved. The TSF design approval for a crest raise to the currently required design capacity and elevation of RL360 has been approved by the Dam Safety Commission. This included assessment of the Knight Piésold design and seismic risks incorporated into the design factor of safety.
Classification	All in-pit ore reserves that have been reported as proved were derived from the mineral resources classified at the measured level of confidence and ore reserves reported as probable have been derived from the mineral resources classified at the indicated level of confidence.
	No mineral resources classified at the inferred level of confidence are included in these estimated ore reserves. The high degree of confidence in the modifying factors gives the Competent Person confidence that the ore reserves classifications are appropriate.
Audits or Reviews	An audit of the Cube Martabe Ore Reserves was undertaken by AMC's Brisbane office in early 2014. The review found that the estimate was technically sound.
	In the estimating of these ore reserves, the confidence levels as expressed in the mineral resource estimates were accepted in the respective resource classification categories.
Discussion of Relative Accuracy/ Confidence	The ore reserves estimates relate to global estimates in the conversion of mineral resources to ore reserves, due largely to the spacing of the drill data on which the estimates are based, relative to the intended local selectivity of the mining operations. The diluting methodology applied by way of re-blocking to a parent sized resource block rather than factoring of a selective mining unit sized block further supports the assertion of a global rather than local estimate.
	Due to the advanced stage of the project, with mining and ore processing having taken place over the preceding 30 months, the modifying factors applied in the estimation of the ore reserves are considered to be of a sufficiently high level of confidence not to have a

Criteria	Commentary
	material impact on the viability of the estimated ore reserves. This is confirmed by positive reconciliations, which will be further reviewed in detail for the next major resource and reserve model update. The current project to date compiled reconciliation data indicates that grade control declared ore mined is positive compared to the resource model for ore tonnage and gold grade and slightly negative for silver grade.
	Operating practices as part of the existing grade control programme are still evolving as the mining operation matures. While information for reconciliation does exist, at this stage the sample set is too small to make conclusive commentary other than the ore mining is tracking favourably when compared to the forecasts based on the resource model and planning inputs.
	There remains some moderate risk in the confidence of the pit geotechnical parameters for design of Purnama, however a peer review is planned for early 2015 to address these issues and verify that the budget allowance for ground support and groundwater management will mitigate any future risk.