Technical Report on the

Beutong Copper-Gold-Silver-Molybdenum Mineralisation,

Aceh, Indonesia.

November, 2014

Prepared for: Kalimantan Gold Corporation Limited. Tigers Realm Metals Pty. Ltd. by Hackman and Associates Pty. Ltd.

Qualified Person's Technical Report on the Beutong Copper-Gold-Silver-Molybdenum Mineralisation, Aceh, Indonesia.

Effective Date: 30th November 2014

Prepared for: Kalimantan Gold Corporation Limited Unit 1, 15782 Marine Dr. White Rock, British Columbia, CANADA V4B 1E6

And

Tigers Realm Metals Pty. Ltd. ACN 151 002 087 Level 7, 333 Collins Street Melbourne, Victoria, AUSTRALIA 3000

Prepared By:

Hackman and Associates Pty. Ltd. A.B.N. 99 088 013 110 260A Crawford Rd Inglewood, WA, 6052 Australia

Contact: Duncan Hackman duncan.hackman@bigpond.com

Compiled and Signed by:

Duncan Hackman B.App.Sc. MSc. MAIG Principal Consultant, Qualified Person This 30th day November, 2014

Table of Contents

1	Sun	Summary					
	1.1	Project Overview	. 8				
	1.2	Review Overview	11				
	1.3	Resource Estimate	12				
	1.3	.1 Compliance with the Canadian NI 43-101 assessment criteria	14				
	1.3	.2 Key points relating to the Beutong 2014 Copper Resource Estimate	15				
	1.4	Adjacent Properties and Other Information	16				
	1.5	Further evaluation and exploration	17				
	1.6	Recommendations	18				
2	Intr	oduction	19				
	2.1	Terms of Reference					
	2.2	Reporting standard	20				
	2.3	Data and Information Sources	20				
	2.4	Qualified Persons Site Inspection	21				
	2.5	Basis of Opinion	21				
	2.6	Qualification of Consultants	22				
	2.7	Statement of Independence	22				
	2.8	Consents	23				
	2.9	Conversions and Abbreviations	23				
3	Reli	iance on Other Experts	23				
4	Pro	perty Description and location	23				
	4.1	Land Use	24				
	4.2	Corporate Structure, Tenure and Permitting	25				
	4.2	.1 Corporate Structure and Ownership of Mining Rights	26				
	4.2	.2 Tenure History and Status	27				
	4.2	.3 Environmental Permitting	29				
	4.3	Royalties, Restrictions, Liabilities and Encumbrances	30				
5	Acc	essibility, Climate, Local Resources, Infrastructure and Physiography	30				
6	Hist	tory	32				
	6.1	Operational History	34				
	6.2	Exploration History	34				
7	Geo	blogical Setting and Mineralisation	35				
	7.1	Regional Setting	35				
	7.2	Prospect Geology and Mineralisation	38				
	7.2	1 Geology	38				
	7.2	2 Alteration	41				
	7.2	.3 Mineralisation	42				
	7.2	.4 Structure	46				
8	•	posit Types					
9	Exp	loration	47				
	9.1	Exploration Programme Descriptions	48				
	9.1	.1 Geological Mapping	48				
	9.1	.2 Soil Surveys	48				

9.1.	9.1.3 Rock Chip and Channel Sampling						
9.1.	9.1.4 Stream Sediment & Pan Concentrate Sampling						
9.2	Expl	pration Targets	50				
10 D	rilling		52				
10.1	Drill	Programmes	53				
10.2	Colla	r Locations	54				
10.3	Dow	nhole Surveys	55				
10.4	Prim	ary Sampling	55				
10.5	Sign	ficant Intercepts	57				
11 S	ample	Preparation, Analysis and Security	57				
11.1	Prot	ocol documentation	57				
11.2	Sam	ple preparation	59				
11.3	Assa	γs	60				
11.4	Sam	ple Security	61				
11.5	Audi	ts and Reviews	62				
12 D)ata V	erification	63				
12.1	Data	Management	64				
12.2	Data	audits	64				
12.3	Veri	ication and Validation	64				
12.3	3.1	Tenure	65				
12.3	3.2	Logging and Core Orientation	65				
12.3	3.3	Density	66				
12.3	3.4	Recovery	68				
12.3	3.5	Assays	69				
13 N	/linera	l Processing and Metallurgical Testing	69				
13.1	Met	allurgical Testwork	69				
13.2	Mine	eralogy	70				
13.3	Gen	eral Metallurgical Conclusions	71				
14 N	/linera	l Resource Estimates	71				
14.1	Resc	urce Data Analysis and Investigation	72				
14.1	1.1	Assay Quality Assurance and Quality Control Assessment	72				
1	4.1.1.						
1	4.1.1.	2 Quality Assurance Protocols	72				
1	4.1.1.	3 Quality Control Sample Inclusion Rates	72				
1	4.1.1.						
1	4.1.1.	5 Cross Contamination and Grade Carryover – Blanks Analysis	76				
1	4.1.1.	6 Analytical Accuracy and Precision – Standards Analysis	76				
1	4.1.1.	7 Duplicate and Repeat Sample Analysis	79				
1	4.1.1.	8 Assay Quality and Reliability Considerations	80				
14.1	1.2	Comparison of Assay Datasets	80				
14.1	1.3	Copper Grade Relationship with Core Recovery	83				
14.2	1.4	Copper Grade Relationship with Drilling Orientation	86				
14.2		Tonnage Factor Determination					
14.2	Resc	urce Domaining	87				
14.3	Сор	per Assay Compositing	90				

14	4.4	Hig	h Grade Copper Treatment	. 91
14	4.5	Blo	ck Model Details	. 93
14	4.6	Gra	ade Interpolation	. 94
14	4.7	Tor	nnage Factors	. 99
14	4.8	Мо	del Validation	. 99
14	4.9	Cla	ssification	103
14	4.10	0 0	Copper Resource Table and GT Curves	106
15		Miner	ral reserve Estimates and Advanced Project Evaluation	109
16		Adjac	ent Properties	109
17		Other	Relevant Data and Information	109
18		Interp	pretation and Conclusion	110
19		Recor	nmendations	116
19	9.1	Tec	chnical Recommendations	116
19	9.2	Imr	mediate Work Programme	117
	19	.2.1	Phase one – Ensure Granting of IUP Production License	117
	19	.2.2	Phase Two – Expand Skarn Mineralisation Resource	118
20		Refere	ences	119
21		Apper	ndices: Numbers 1 to 12	120

List of Tables

Table 1a: Total Beutong 2014 Mineral Resource - reported at 0.3% Copper Lower Cut. TRM	
through TRC and TCS currently holds 40% interest in the Beutong Project.	. 13
Table 2: Beutong 2013 Rainfall Records	. 32
Table 3: Drill hole sample intervals.	. 56
Table 4: Analytical Details - Resource Dataset	. 61
Table 5: Relative error in dry bulk density measurements due to balance graduation issues –	
samples from Porphyry, Outer Porphyry and Skarn domains	. 67
Table 6: Summary details of Bulk Density and Dry Bulk Density dataset for determining Tonnage	
Factors in Mineralised Domains.	. 67
Table 7: Recovery logging coverage	. 68
Table 8: Holes where Recovery Logging not delivered for 2014 resource estimate	. 69
Table 9: FPT Blanks analysis summary	. 76
Table 10: TCS Blanks analysis summary.	. 76
Table 11: Partial or interstitial core loss logging.	. 86
Table 12: Contact Analysis - Sample grades relative to grade interpolation triangulation	
boundaries	. 90
Table 13: Composite Details	. 91
Table 14: High grade treatment criteria and effect on resource estimate	. 92
Table 15: Block Model resource variables – details and coding criteria.	. 94
Table 16: Percentage of resource domains estimated by interpolation strategy	. 97

Table 17:	Interpolation statistics for estimated blocks (refer Table 16 for percentage of domains	
	estimated)	97
Table 18a:	Total Beutong 2014 Mineral Resource - reported at 0.3% Copper Lower Cut. TRM	
	through TRC and TCS currently holds 40% interest in the Beutong Project	107
Table 19:	Indicative Budget Phase One Work Programme	118
Table 20:	Indicative Budget – Phase Two Work Programme	118

List of Figures

Figure 1:	Beutong Prospect Location Map (base maps from public open source images)	24
Figure 2:	Forestry map showing classification of areas covering the EMM IUP 545 and adjoining	
	tenements to the IUP.	25
Figure 3:	(Left) View of the Beutong West Porphyry (BWP), showing a drill rig along the main	
	road, looking south. (Right) PT EMM drill rig setup at the BWP and testing the	
	porphyry potential at depth	31
Figure 4:	Beutong exploration camp, looking north towards the Beutong Skarn in the foothills	31
Figure 5:	Geological Provinces of Sumatra (after Barber et. al., 2005)	37
Figure 6:	North Sumatra, Woyla Group and Regional Structural Geology (after Barber et. al., 2005)	38
Figure 7:	Geological interpretation map of the Beutong Deposit, showing mapped BEP, BWP and	
	Beutong Skarn mineralisation and the 850m RL resource footprint extrapolated to	
	surface	40
Figure 8:	Cross section (BEU0700) through the BEP, showing strong copper-gold-molybdenum	
	mineralization from surface	41
Figure 9:	Beutong Porphyry Mineralisation (incl. high sulphidation overprint)	43
Figure 10	: Left: Molybdenite mineralization in the BEP. Right: Molybdenite-pyrite veins cutting	
	the BWP at depth	44
Figure 11	: Skarn Mineralisation. Left: Near surface malachite – azurite in the copper-gold skarn.	
	Right: Deeper seated semi-massive pyrite – chalcopyrite mineralization in garnet-	
	diopside skarn	45
Figure 12	: Aerial view of the Beutong deposit, looking northwest, and showing the approximate	
	boundaries of the BWP, BEP and Beutong Skarn (with of photo ~3.5km)	46
Figure 13	: Exploration target areas identified from surface and geophysical work and	
	interpretation (see Appendix 6 for presentation of surface sample results)	51
Figure 14	: Drill hole location plan - Split by drilling programmes.	54
Figure 15	Eighteen FPT holes with missing laboratory QC results (resource triangulations	
	visualised with partial transparency, Outer Porphyry triangulation not shown)	75
Figure 16	: Copper Field Standards- FPT; overall performance summary. A complete set of	
	analyses results are tabulated at Appendix 9	77
Figure 17	: Copper Field Standards- FPT; Shewart control chart. A complete set of analyses results	
	are tabulated at Appendix 9	78
Figure 18	: TCS Pulp Duplicates analysis. A Complete set of analyses results are tabulated at	
	Appendix 9	80
Figure 19	: Comparison of copper and gold assay populations between FPT and TCS datasets	82

Figure 20:	Length core recovery investigation.	85
Figure 21:	Core showing significant clay alteration and partial core loss.	85
Figure 22:	Beutong resource estimation domains.	88
Figure 23:	Beutong clay domains and Oxide/Partial-Oxide logged intervals.	89
Figure 24:	High grade treatment analysis of Eastern Porphyry domain	92
Figure 25:	Display of estimated Copper grades	98
Figure 26:	Copper Swath plots - Easting Sections. Comparison between 2014 resource model and	
	2012 resource model	100
Figure 27:	Copper Swath plots - Easting (top) and RL Sections. Comparison between 2014	
	resource model and 2012 resource model for those blocks updated/changed in the	
	remodeling and grade interpolation undertaken in the 2014 resource model (~50%)	101
Figure 28:	Copper Grade Tonnage Curves for material within the 2012 resource model that has	
	been updated/changed	102
Figure 29:	Weightings of drilling programmes on Measured and Indicated Resources. Most of	
	these resources are estimated from data heavily weighted with TCS composites	105
Figure 30:	Spatial assessment of source data weights for the East Porphyry Measured and	
	Indicated Resources – Easting sections (a, b) and RL sections (c, d)	105
Figure 31:	Measured and Indicated Resource locations (CIM Guidelines).	106
Figure 32:	Beutong 2014 Copper-Gold-Silver-Molybdenum Resource Estimate – grade tonnage	
	curves	108

List of Appendices

Appendix 1:	Qualified Persons Certificate	121
Appendix 2:	H&A Consent; Report Filing and Statement Release	123
Appendix 3:	Data and Information Disclosure Statement	124
Appendix 4:	English Translation of original EMM IUP 545 Tenure Document	125
Appendix 5:	Correspondence Regarding IUP 545 Status	135
Appendix 6:	Plans Showing Significant Surface Exploration Results	143
Appendix 7:	Drilling Cross Sections	155
Appendix 8:	Tabulated Significant Drillhole Intercepts and Collar Details	173
Appendix 9:	Assay Quality Control Sample Evaluation; Summary Tables	184
Appendix 10:	Variography and QKNA Report	192
Appendix 11:	Resource Estimate Validation Plots.	208
Appendix 12:	Abbreviations and Conversions	223

1 SUMMARY

1.1 Project Overview

The Beutong Project is located in the Nagan Raya Regency, Aceh Province, Sumatra, Indonesia, 60 kilometres north of Suka Makmue on Aceh's west coast, the capital city of Nagan Raya Regency. The project is in mountainous jungle terrain ten minutes north-east of Beutong Ateuh village and is accessible by sealed roads providing good access for light vehicles. The mineral resources estimated at Beutong and proximal six target areas (subject of this report) are located within an area designated as Forest [for] Other Purposes that surrounds Beutong Ateuh (permitting open pit or underground mining). The remaining 63.8% of the Beutong license area is designated as Protected Forest (no open pit mining allowed) and no work has been undertaken in exploring these areas.

The Beutong project area is subject to a 10,000 hectare IUP Exploration license held 100% by PT Emas Mineral Murni (EMM, license no. IUP 545 or "the Beutong IUP"). EMM has two shareholders. It is 80% owned by the Singaporean domiciled Beutong Resources Pte. Ltd. (BRPL) and 20% by the Indonesian domiciled PT Media Mining Resources (MMR). BRPL is in turn 50% owned by Tigers Copper Singapore No 1 Pte. Ltd. (TCS, a 100% subsidiary of Tigers Realm Copper Pty. Ltd. (TRC) which in turn is 100% owned by Tigers Realm Metals Pty. Ltd.), with the remaining 50% ownership of BRPL held by MMR (MMR currently holds a total 60% interest in IUP 545 and TCS 40%). Pursuant to an option joint venture agreement TCS can increase its shareholding in BRPL to 100% by completing expenditure and development milestones so that it can ultimately hold an effective 80% interest in the Beutong IUP. Kalimantan Gold Corporation Limited (KGL) and TRM have signed a non-binding letter of intent where KLG will purchase TRM's interest in the Beutong Project by acquiring 100% of TCS.

IUP 545 is currently within its 8th year of existence and in a recognized and approved one year work suspension period until 6th June 2015. In accordance with the relevant mining regulations and on completion of all compliance requirements, EMM lodged an application with the Indonesian Government to convert license IUP 545 from an Exploration IUP to a Production IUP on the 24th April 2014. A Production IUP is current for 20 years and extendable for two subsequent periods, each of 10 years duration. TCS has advised H&A that they have complied with all 36 Duties set out in the IUP concession license and that they can see no reason that the IUP Production license that the project would be lifted from suspension status allowing exploration and evaluation work to continue.

The Beutong IUP area has been subjected to exploration and evaluation activities over a 40 year period. First indications of the Beutong mineralisation was through anomalous stream sediment

samples taken during regional mapping and sampling programmes in the mid-1970s to mid-1980s conducted by the British Geological Survey (BGS) and the Indonesian Bureau of Mineral Resources. Rio Tinto Indonesia in joint venture, targeted the Beutong area through stream sediment sampling and mapping (1979-1981) and recognized the porphyry and skarn potential of the area. Two subsequent tenement holders since 1994 (and three workers, in joint venture) have focused their exploration and evaluation work on the porphyry and skarn mineralisation at Beutong, drilling a total of 160 diamond holes, of which 106 holes (29,797m) are within and proximal to mineralisation now subject to the mineral resource estimate reported within. The Measured, Indicated and Inferred Mineral Resources at Beutong (NI 43-101) have been estimated for the West Beutong Porphyry, the East Beutong Porphyry and the Skarn Mineralisation. The six exploration target areas are identified by surface sampling, mapping, geophysical interpretation and limited scout drilling. Three high priority target areas are adjacent to and in interpreted geological continuity with the estimated resources at Beutong.

The Beutong IUP is located in northern section of the Barisan Mountain Range that runs the length of Sumatra. The Barisan Range and other Volcanic Arc related geological environments of Sumatra are shaped by the subduction of the Indo-Australian plate beneath the Eurasian Plate, 400km to the west of Sumatra. Uplift, forming the range, has exposed variably metamorphosed Upper Paleozoic and Mesozoic basement rocks and the Beutong Igneous Complex (BIC) is hosted by the exposed metamorphosed sediments and serpentinites of the Jurassic to Cretaceous Woyla Group rocks.

Structurally, stress related to the oblique convergence of the plates has led to the development of the Sumatra Fault System (SFS), which parallels the volcanic arc. The SFS comprises an intricate network of right-lateral strike-slip faults and splays running the entire length of Sumatra. The SFS, splits the Barisan Mountains and Beutong is located less than 5km from the SFS at the intersection of one of the splays and a major arc-normal structure.

Magma has periodically erupted through the 34 active volcanoes located along the Barisan Mountain Range and this is the source of Quaternary to Recent volcanic rocks in Sumatra. The BIC was emplaced in the early Pliocene (\sim 4 – 4.66 Ma).

The 2500m (NE-SW) by 900m (NW-SE) Beutong Igneous Complex shows characteristic porphyry alteration styles, manifest as a vertically and laterally zoned sequence of propylitic, argillic, phyllic and rare potassic alteration at depth. Superimposed on these is an advanced-argillic alteration assemblage as part of a "high-sulphidation epithermal" mineralization event. Two zones of exoskarn ± endoskarn have formed along the contact of the Main Beutong Diorite and carbonate rocks approximately 200 meters north of the East Beutong Porphyry. The skarn bodies have an E-W orientation with an outcrop strike length of at least 800 meters and widths of between 10 and 60 meters.

Porphyry related copper-gold-molybdenum mineralization at Beutong is invariable contained within stockwork quartz vein systems developed within apical parts of the East and West Beutong Porphyries and to a lesser extent in the immediate wall rocks. High-sulphidation associated

covellite, digenite and chalcocite dominated sulphide assemblage is superimposed onto the early pyrite and chalcopyrite dominant porphyry-type mineralization resulting in hypogene enrichment of the lower grade porphyries. With respect to copper and gold mineralisation, the two element grades do not correlate well, with typically Cu(%):Au(ppm) ratios observed between 1:1 and 8:1. Copper is dominant (~0.60% Cu) in the core of each porphyry system, and gold mineralisation is widely distributed and of low grade tenor (~0.13 g/t Au). Molybdenite mineralization is late, overlaps strong copper mineralization and is concentrated mainly in 25 to 75 meter wide zones along the northern porphyry margins and locally along the southern margins. Locally, zinc–silver–lead mineralization overprints the porphyry mineralization and is typically coincident with the high sulphidation style mineralization and the magmatic hydrothermal breccia or found locally within narrow shear zones.

There are two mineralized skarns within the Beutong deposit area. The Southern skarn contains strong copper–gold mineralisation and is interpreted to have formed along the marble front between the BEP and calcareous lithologies to the north. The Northern Skarn contains significant zinc-lead-silver mineralization.

The East Beutong Porphyry mineralisation has been intruded by a phreatomagmatic breccia along its southern margin (which appears to have remobilized mineralisation into the upper parts of the porphyry) and the West Beutong Porphyry mineralisation is intruded by late stage dykes and diorite porphyry.

The total 2014 Beutong Mineral Resource is estimated as:

- At a 0.3% Cu reporting cut:
 - Measured: 34MT @ 0.66% Cu, 0.13g/t Au, 1.74g/t Ag and 90ppm Mo.
 - Indicated: 59MT @ 0.58% Cu, 0.12g/t Au, 2.01g/t Ag and 99ppm Mo.
 - Inferred: 418MT @ 0.45% Cu, 0.13g/t Au, 1.11g/t Ag and 129ppm Mo.

0.3% Cu reporting cut, the base case estimate representing the mineralisation with reasonable prospect of economic extraction and also approximates the natural geological grade tenor boundary for the modeled mineralisation.

- At a 0.5% Cu reporting cut:
 - Measured: 28MT @ 0.71% Cu, 0.13g/t Au, 1.80g/t Ag and 91ppm Mo.
 - Indicated: 38MT @ 0.66% Cu, 0.13g/t Au, 2.21g/t Ag and 101ppm Mo.
 - Inferred: 88MT @ 0.59% Cu, 0.14g/t Au, 1.72g/t Ag and 132ppm Mo.

0.5% Cu reporting cut approximates the extents of the higher grade core of porphyry mineralisation which will impact positively on the economic viability of the project.

[TRM through TRC and TCS currently holds 40% interest in the Beutong Project]

Priority target areas for expanding the resource base at Beutong are immediately adjacent to the modeled and estimated mineralisation as the lateral and vertical extents of this mineralisation are

still to be defined. The confidence in the estimated resources at Beutong can be improved through infill drilling to create greater data density within the Indicated Resource material. The upper reaches of this infill drilling and purpose specific holes can be planned to generate data and information suitable for change of support analysis to assist in further improving the estimation of Measured Resources and to generate information that will advance investigations into suitable mining parameters for the project. Three satellite target areas within the Forest [for] Other Purposes area show the potential for additional mineralised systems to exist within the Beutong area.

1.2 Review Overview

This report comprises Hackman And Associates Pty Ltd (H&A) independent Qualified Persons technical assessment of the mineral resources at the Beutong Prospect and the exploration potential adjacent to, and elsewhere within the covering tenement held by PT Emas Mineral Murni (EMM, IUP 545), Aceh, Indonesia. This report is prepared for Kalimantan Gold Corporation Limited (KLG) and Tigers Realm Metals Pty. Ltd. (TRM). TRM, through subsidiary companies is a 40% owner and contributor with EMM in IUP 545 and the copper-gold-silver-molybdenum mineralization at Beutong can be considered material with respect to assets held by TRM. KLG and TRM on the 26th November 2014 announced they have signed a non-binding letter of intent where KLG will purchase TRM's interest in the Beutong Project (IUP 545) by acquiring 100% of the TRM subsidiary Tigers Copper Singapore No. 1 Pte. Ltd. (TCS). The consideration for this acquisition will be the issue of 171,407,156 KLG common shares and 14,675,000 KLG share purchase warrants. On completion of the acquisition the copper-gold-silver-molybdenum mineralization at Beutong would be considered material with respect to assets held by KLG.

The objectives of this report are to:

- Present aspects of the Beutong project, environs and statutory/compliance standings so that the reader can gain an appreciation of the project.
- Present the 2014 resource estimate of copper-gold-silver-molybdenum mineralization at Beutong and to identify and classify risk associated with the estimate so that the reader can better understand the value of the Beutong prospect to TRM and KLG and the confidence independent qualified persons' place in the reliability of the estimate.
- Present the potential to expand the resource base and to increase the confidence in the resources at Beutong by recommending further evaluation of the known mineralisation and by presenting programmes to test other targets within the IUP.

In compiling this review and report Hackman and Associates Pty. Ltd. (H&A) has followed the guidelines as set out in the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines" and according to the NI 43-101 guidelines. In particular H&A has:

- Undertaken a site trip in February 2012 to review and assess the project and operational procedures. Reviewed additional information obtained since the site trip and established that no material differences exist between the data/information/interpretation of 2012 and 2014.
- reviewed documents transferred delivered to H&A by TCS These expert and internal reports outline the:
 - o tenure details,
 - o geographical, cultural, social and environmental aspects of the Beutong project,
 - o geological and mineralization setting and styles identified/interpreted at Beutong,
 - o historical exploration undertaken at Beutong, and
 - data collection and validation procedures and quality investigations undertaken by previous workers.
- Validated 2014 drilling data and information. Reviewed new drilling data against 2012 resource data and estimation models.
- Updated the 2012 resource model with 2014 data and generated 2014 resource estimate.
- Evaluated resource input data (including 2014 data) and classified resource estimate.
- Assessed exploration potential within the EMM IUP 545.
- Compiled this report on observations, procedures, interpretations and findings.

1.3 Resource Estimate

The Beutong 2014 Resource Statement deals with the Copper-Gold-Silver-Molybdenum Mineral Resources for the Beutong mineralisation, within IUP 545, located 60 km north of Suka Makmue on Aceh's west coast, Indonesia.

This resource estimate is based on the TCS and historical geological databases as at 4th November 2014 and the geological, clay and oxidation interpretations by Steve Hughes of PT Tigers Realm Consultants Indonesia (an associated company to TCS). The data analysis, triangulation domaining, block modeling and grade interpolation was undertaken by Duncan Hackman of Hackman and Associates Pty. Ltd. and the geostatistical analysis and kriging strategy was undertaken by Trent Strickland of Quantitative Group Pty. Ltd.

The November 2014 Resource Estimate is an update of the September 2012 Resource Estimate for the porphyry and skarn mineralisation on the project and includes additional data and information from three holes drilled in 2012 (assays received post 2012 estimation) and two deep holes drilled in 2013/2014. The 2014 resource model covers the 1500m strike extent of the mineralisation at Beutong and the 200 to 500m width the porphyry system. Porphyry mineralisation is open to the east, west and at depth. A 600m by 50m skarn body to the north of the porphyry is included in the resource estimate.

Table 1a: Total Beutong 2014 Mineral Resource - reported at 0.3% Copper Lower Cut. TRM
through TRC and TCS currently holds 40% interest in the Beutong Project.

	Total - Beutong 2014 Resource Estimate - Report at 0.3% Cu Lower Cut									
Classification	Mineralisation	Tonnes (Mt) Grade					Metal			
(NI 43-101)			Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	Cu (Mlb)	Au (kOz)	Ag (kOz)	Mo (Mlb)
Measured	East Porphyry	34	0.66	0.13	1.74	90	494	137	1,901	7
Indicated	East Porphyry	52	0.56	0.10	1.53	110	646	176	2,563	13
	Skarn	7	0.70	0.28	5.84	8	101	59	1,234	0
Tota	l Measured	34	0.66	0.13	1.74	90	494	137	1,901	7
Tota	l Indicated	59	0.58	0.12	2.01	99	747	236	3,797	13
Total Meas	sured + Indicated	93	0.61	0.13	1.97	97	1,241	373	5,698	20
Inferred	East Porphyry	80	0.52	0.10	2.24	139	904	251	5,753	25
	West Porphyry	326	0.43	0.14	0.77	128	3,064	1,443	8,101	86
	Outer East Porphyry	6	0.36	0.06	1.10	153	46	12	209	2
	Outer West Porphyry	1	0.37	0.11	1.06	45	11	5	49	0
	Skarn	5	0.64	0.24	5.22	10	66	36	791	0
Tota	al Inferred	418	0.45	0.13	1.11	129	4,091	1,746	14,903	113

Table 1b: Total Beutong 2014 Mineral Resource - reported at 0.5% Copper Lower Cut. TRMthrough TRC and TCS currently holds 40% interest in the Beutong Project.

Total - Beutong 2014 Resource Estimate - Report at 0.5% Cu Lower Cut											
Classification	Mineralisation	Tonnes (Mt)		Grade				Metal			
(NI 43-101)			Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	Cu (Mlb)	Au (kOz)	Ag (kOz)	Mo (Mlb)	
Measured	East Porphyry	28	0.71	0.13	1.80	91	436	113	1,615	6	
Indicated	East Porphyry	33	0.64	0.10	1.64	113	472	110	1,759	9	
	Skarn	4	0.84	0.34	6.46	7	84	48	928	0	
Tota	Measured	28	0.71	0.13	1.80	91	436	113	1,615	6	
Total Indicated		38	0.66	0.13	2.21	101	555	158	2,687	9	
Total Meas	ured + Indicated	66	0.68	0.13	2.04	97	992	271	4,302	14	
Inferred	East Porphyry	40	0.63	0.11	2.36	159	549	144	3,006	14	
	West Porphyry	45	0.55	0.15	0.85	120	536	216	1,216	12	
	Outer East Porphyry	0.2	0.55	0.09	1.22	223	2	1	8	0	
	Outer West Porphyry	0.1	0.59	0.08	2.55	33	2	0	11	0	
	Skarn	3	0.74	0.27	5.59	9	55	30	618	0	
Tota	al Inferred	88	0.59	0.14	1.72	132	1,144	391	4,859	26	

Mineral Resources for the Beutong mineralization have been estimated in conformity with the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines" and Reported according to the NI 43-101 guidelines. In the opinion of Duncan Hackman, the block model resource estimate and resource classification reported herein are a reasonable representation of the copper-gold-silver-molybdenum mineral resources found in the defined area of the Beutong mineralization. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The resources reported at 0.3%Cu cut represent the base case estimate as they present the extent of the mineralisation that has reasonable prospect of economic extraction. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserve. Computational discrepancies in the table are the result of rounding.

The Resource model is underpinned by data from 106 Diamond Drill holes (29,797m) containing 9,220 logged and assayed, mainly 3m intervals. Sample data was composited to three (3) metre intervals and flagged by the domains defined in the geological interpretation. Two passes of Ordinary Kriging were employed to interpolate copper, gold, silver, molybdenum, and arsenic grades within domains into a sub-blocked model (arsenic not reported with resource figures). High grade cuts and restrictions were applied. The resource estimate has been classified based on data density, data quality, confidence in the geological interpretation and confidence in the copper grade interpolation.

Contributing experts:

Expert Person/Company	Area of Expertise and Contribution of Expert
Duncan Hackman B.App.Sc. MSc.	Exploration and Resource Geologist – 29yrs
MAIG.	experience.
Hackman and Associates Pty. Ltd.	Qualified Person
	Data validation and quality analysis, resource
	domaining, block modeling, grade
	interpolation, resource classification.
Stephen Hughes BSc.(Hons),	Copper Gold Exploration Geologist – 16yrs
PT Tigers Realm Consultants Indonesia.	experience.
	Geological interpretation and data validation.
Trent Strickland BSc. (Hons) AusIMM.	Exploration, Mining and Resource Geologist –
Quantitative Group Pty. Ltd.	10yrs experience.
	Kriging neighborhood analysis and grade
	interpolation design.

1.3.1 Compliance with the Canadian NI 43-101 assessment criteria

The Beutong 2014 Resource Estimate and this mineral resource report have been compiled in accordance with the guidelines set out in the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines" (CIM Guidelines) and the Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects (NI 43-101).

Duncan Hackman is a member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralization and type of deposit under consideration and to the activity undertaken to qualify as a Qualified Person as defined in NI 43-101.

Duncan Hackman consents, in principle, for the inclusion in a Tigers Realm Metals Pty. Ltd. Public Release Statement or Kalimantan Gold Corporation Limited Public Release Statement of matters based on H&A information and for Tigers Realm Metals Pty. Ltd., Kalimantan Gold Corporation Limited or their agents to use information in this report in the form and context in which it appears. Duncan Hackman will be required to approve of any statement prior to Public Release to ensure that the information for which H&A is responsible fairly and accurately reflects how this information in this presented in the technical report.

The opinions and recommendations provided by Duncan Hackman are in response to requests by Tigers Realm Metals Pty. Ltd. and based on data and information provided by Tigers Realm Metals

Pty. Ltd. or their agents. Duncan Hackman therefore accepts no liability for commercial decisions or actions resulting from any opinions or recommendations offered within.

Duncan Hackman B.App.Sc. MSc. MAIG Consultant Geologist Hackman & Associates Pty. Ltd.

1.3.2 Key points relating to the Beutong 2014 Copper-Gold-Silver-Molybdenum Resource Estimate

- The resource estimate applies to outcropping porphyry and skarn hosted copper-gold-silver-molybdenum mineralisation centred on 229900E, 495400N (WGS84, UTM Zone 47N). The mineralisation has been delineated as three bodies over a strike length of 1500m (towards 080°), across a total width of 700m and to a depth of 600m below surface. The deepest drilling intercepts the porphyry mineralisation at 800m below surface, indicating that the mineralisation persists below the current depth of delineation drilling. Mineralisation is open to the east, west and at depth.
- Porphyry style copper, gold, silver and molybdenum mineralisation is hosted in a fractured and brecciated diorite known locally as the Beutong Porphyry. This porphyry forms the majority of the 3km by 1.5km Beutong Intrusive Complex. Mineralisation is cut by dioritic and dacitic post mineralisation dykes and a persistent un-mineralised footwall breccia complex. Well-developed porphyry mineralisation is located in the eastern half of the deposit. Mineralisation is less-well developed and patchy, both peripheral to the eastern porphyry core and in the western half of the deposit. Skarn mineralisation has been delineated to the north of the porphyry mineralisation, at the steeply dipping contact between the Beutong Intrusive Complex at a thick limestone unit.
- 160 diamond drillholes have been drilled at Beutong. The deposit is delineated by 106 of these holes, totaling 29,797m. This drilling was undertaken in three programmes by three separate companies; Highlands Gold Indonesia (HG), Freeport McMoRan Copper & Gold Inc. (FPT) and Tigers Copper Singapore No 1 Pte. Ltd. (TCS). The eastern porphyry and skarn bodies are mostly delineated by steeply angled holes clustered to form fan-like configurations, drilled from multi-use pads along 100m spaced section lines. The western porphyry is sparsely drilled, with the majority of the mineralisation loosely defined by holes drilled radially from five drill pads. There are no twin holes drilled at Beutong.
- Sampling of mineralisation is at a nominal 3m length. Copper and multi-element assays from 12,999 half-PQ, half-HQ3 and half-NQ3 diamond core samples populate the Beutong Resource Database. Copper grades are higher for the TCS samples than the HG and FPT

samples, partly due to TCS targeting the core of the mineralisation and partly due to more appropriate drilling and sampling protocols designed to preserve the integrity of friable mineralised core. Appropriate laboratory sample reduction and analytical protocols were utilised and the analytical quality control programme results confirm that the copper, gold and molybdenum assay values are of acceptable quality to underpin Measured Resources at Beutong (following CIM Guidelines). Lower detection limits for the HG (1ppm) and majority of FPT silver analyses (5ppm) are inappropriately high for the Beutong mineralisation and the HG silver assays and the FPT 3 acid digest, volumetric determination silver assays were not included in the estimate.

- Copper grade is estimated by Ordinary Kriging interpolation methods. Interpolation is guided and constrained by solid TIN (triangulated) boundaries. 6141 copper, gold and molybdenum and 3657 silver, three metre composites inform the grade interpolation within domains. Parent cell estimates (25mE x 25mN x 10mRL) were written to a sub-blocked model. High grade values were restricted from informing block grades at greater than 50m (E and N) and 30m (RL) distance from sample locations. 116 copper composites are affected by this treatment. Twenty gold values (two domains) and twenty molybdenum values (one domain) were cut in the estimate. Tonnage factors of 2.37g/cc (low clay altered material) and 2.25g/cc (moderate clay altered material) were utilised, based on 678 dry bulk density measurements taken from mineralised drill core intercepts.
- The Beutong Mineral Resource Estimate was classified utilising the definitions of Resources as described in the CIM "Definition Standards on Mineral Resources and Mineral Reserves". The estimate is assigned a Measured Mineral Resource classification where there is high confidence in the 2014 geological interpretation (geological continuity), where drilling is concentrated and comprises of mostly TCS holes and where the copper grade is estimated from the more locally focused, first interpolation pass. An Indicated Mineral Resource classification in the porphyry where confidence in the geological continuity is high, however the confidence in the grade interpolation is reduced due to the lower drilling density in this volume. An Indicated Mineral Resource classification has been assigned to part of the skarn mineralisation based on drill density and confidence in the grade interpolation. Volumes of the resource that do not meet the Measured and Indicated criteria are assigned an Inferred Mineral Resource classification. Drilling or data density and geological and grade continuity are the key risk inputs in determining the resource classification.

1.4 Adjacent Properties and Other Information

Two IUPs abut the Beutong IUP. PT Tambang Emas Cemerlang holds the license that abuts the northern boundary, and is entirely within protected forest. PT Kencana Murni Sarana abuts the western boundary of IUP 545. This tenement contains approximately 40% other purpose forest and the extension of major NW and NE structures and lithological units found at Beutong.

There is no significant mining activity within the Beutong area.

Other than that included in this report, there was no relevant data or information offered to or uncovered by H&A during the course of generating the Beutong 2014 resource estimate.

1.5 Further evaluation and exploration

The Beutong mineralisation is interpreted to extend to the east, west and below the limits of the 2014 Resource Model volume. Expansion of the resource is expected with holes targeted in these areas. Drilling within and in proximity to the current Indicated Resources will increase the volume of the resources available to be considered for Measured and Indicated Classification in future resource estimates (at the expense of the current Indicated and Inferred Resources). Close proximity drilling or twining of holes within the current Measured Resources will be required to obtain data for robust change of support analysis which can be utilised for more robust design of grade interpolation parameters and for the evaluation of suitable mining parameters and protocols for defining and delineating and extracting ore material. H&A recommends that workers:

- Expand the current global resource by:
 - Drilling holes to text for lateral extension of mineralisation (E-W) to depths of up to 500m below surface.
 - Drill holed to test for vertical extension of the mineralisation (>1000m for the Porphyry mineralisation and >500m for Skarn mineralisation).
- To convert the current Indicated Resources to Measured Resources by increasing the drilling density within the Indicated Resource volume by an estimated 50% in the East Beutong Porphyry and 100% in the Skarn mineralisation.
- Convert Inferred Resources adjacent to the current Indicated Resources by extending the Indicted-to-Measured upgrade holes at the East Beutong Porphyry and by drilling additional holes within the Skarn mineralisation.
- Drill close spaced or twin holes for change of support and associated analyses in the current Measured and Indicated Resources.

Further evaluation and interpretation work is required on the surface targets outside of the BIC area firm up drill targets. H&A considers the following work would assist in targeting holes to test the areas:

- Priority 1 areas, adjacent to the current resources: assessment of geology to determine the extent of the step-out incremental resource expansion drilling outlined above.
- Priority 2 areas, proximal to the current resources: field mapping and sampling to determine credentials of the areas and to target scout drill holes to test for mineralisation.
- Priority 3 area, distal to the current resources: field mapping and sampling to determine credentials of the areas and to target scout drill holes to test for mineralisation.

1.6 Recommendations

The following activities directed at improving the confidence in the input data utilised in generating future estimates of the copper resources at Beutong are recommended by H&A:

- Update Access[™] database with edits undertaken in validating the 2014 Resource Dataset.
- Drillhole locations and TIN domains are corrected with the new collar and topographic data from the GeoIndo Survey Services survey and the model re-run prior to undertaking any definitive engineering studies.
- Adjusted downhole survey data to be entered into TCS Access[™] database.
- Correct the 633 assay values within the TCS Access[™] database to reflect PT Intertek Utama Services report results.
- Update TCS Access[™] database with geology logs for entire FPT holes BC005-02A and BC025-03A and TCS holes BEU0600-03 and BEU0700-06 and part holes for further 73 holes.
- Enter clay logging into TCS Access[™] database and complete the clay logging by including holes BC011-01A and BC025-03 from the FPT drilling.
- Complete compilation of the recovery logging data within the TCS Access[™] database.
- Locate and evaluate the missing FPT laboratory QC assay data.
- Update the TCS AccessTM database with laboratory QC assay results.
- Acquire and assess sizing data for batches showing poor repeatability in the duplicate pairs QC dataset.
- Investigate the precision issues noted in the FPT field standards assay data.
- Undertake a programme of Referee Laboratory Assays (select samples for check assays with the aid of information in included tables that highlight batches of concern regarding current assay reliability).
- Investigate effect of preferential loss during drilling, handling and sampling of core and qualify risk associated with using the suspected low biased FPT data, particularly at near economic cut-off grades.

Some of these recommendations will require new drill core and would be included in a programme designed to increase both the size and confidence of future resources at the Beutong.

The following two phases of work are recommended.

Phase 1: to ensure the granting of IUP Production License. This will extend the tenure over the Beutong Project area for up to 40 years. H&A recommends proactive engagement with the Republic Indonesia Government and diligence in ensuring the security of tenure during the approval process. The indicative budget for this work is estimated at US\$104,000.

Phase 2: this work programme is conditional on the successful completion of and favorable outcome anticipated from the phase 1 programme. H&A recommends that the advancement of

the project be initiated by the extension drilling of the higher grade Skarn Mineralisation. The indicative budget for this work is estimated at US\$778,700.

2 INTRODUCTION

This report details aspects of the Beutong Project and the generation and classification of the 2014 Mineral Resource identified by drilling of the Beutong Porphyry and Skarn mineralisation and undertaken in accordance with directives set-out in the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines" (CIM Guidelines) and the CIM "Definition Standards On Mineral Resources and Mineral Reserves" (CIM Standards)

The Beutong 2014 Resource Estimate deals with the copper-gold-silver-molybdenum mineralization for the Beutong prospect located 60 kilometres north of Suka Makmue on Aceh's west coast. The Beutong mineralization is located within tenement held 100% by PT Emas Mineral Murni (EMM) under license IUP 545.

This NI 43-101 report is prepared for both Tigers Realm Metals Pty. Ltd. (TRM) who, through subsidiary companies currently holds a 40% interest in the Beutong Project and Kalimantan Gold Corporation Limited who, on the 26th November 2014 entered into a non-binding agreement (Letter of Intent) to purchase 100% of TRM's interest in the Beutong Project.

2.1 Terms of Reference

This report comprises Hackman And Associates Pty Ltd (H&A) independent Qualified Persons technical assessment of the mineral resources at the Beutong Prospect and the exploration potential adjacent to, and elsewhere within the covering tenement held by PT Emas Mineral Murni (EMM, IUP 545), Aceh, Indonesia. This report is prepared for both Tigers Realm Metals Pty. Ltd. (TRM) who through intermediary subsidiary companies is currently a 40% owner and contributor with EMM in IUP 545 and Kalimantan Gold Corporation Limited (KGL) who has entered into a nonbinding agreement (Letter of Intent) to purchase 100% of TRM's interest in the Beutong Project. The copper-gold-silver-molybdenum mineralization at Beutong can be considered material with respect to assets held by TRM and would be considered material with respect to the assets held by KGL if/when they complete the transaction with TRM.

The objectives of this report are to:

- Present aspects of the Beutong project, environs and statutory/compliance standings so that the reader can gain an appreciation of the project.
- Present the 2014 resource estimate of copper-gold-silver-molybdenum mineralization at Beutong and to identify and classify risk associated with the estimate so that the reader can

better understand the value of the Beutong prospect to TRM and KLG and the confidence independent qualified persons' place in the reliability of the estimate.

• Assess the potential to expand the resource base and to increase the confidence in the resources at Beutong by recommending further evaluation of the known mineralisation and by presenting programmes to test other targets within the IUP.

The report:

- relays the current understanding of the geology and mineralization styles uncovered at the Beutong prospect,
- reports on the current standing of the project's tenure status,
- relays the current understanding of the geographical, cultural, social and environmental aspects associated with the project
- reviews the historic activities undertaken on evaluating the Beutong prospect,
- presents the work undertaken in producing the mineral resource estimate for Beutong,
- evaluates reliability risks within inputs and methodologies undertaken in producing the mineral resource estimate,
- presents material aspects of the Beutong prospect for consideration in evaluating its value to TRM and KGL,
- outlines the process undertaken to classify the mineral resource estimate according to the directives set out in the Canadian National Instrument 43-101 and accompanying policies and documents, and
- presents interpretations, conclusions and recommendation, including indicative exploration and evaluation activities and budgets.

2.2 Reporting standard

This report has been produced in accordance with the Standards of Disclosure for Mineral Projects as contained in National Instrument 43-101 (NI 43-101) and accompanying policies and documents. NI 43-101 utilises the definitions and categories of mineral resources and mineral reserves as set out in the Canadian Institute of Mining, Metallurgy and Petroleum "Definition Standards On Mineral Resources and Mineral Reserves" (CIM Standards).

2.3 Data and Information Sources

All data and Information utilised in preparing the Beutong 2014 Resource Estimate and this report were supplied by or verified by TCS personnel who have provided a written assurance that the data supplied is current, complete, accurate and true and that they have disclosed all data and information for the assessment of the resources at Beutong and the surrounding areas within IUP 545 (Appendix 3).

2.4 Qualified Persons Site Inspection

Duncan Hackman from Hackman and Associates Pty Ltd (H&A) undertook a site inspection of the Beutong Project, the TCS core processing and storage facility and the PT Intertek Utama Services sample processing and laboratory facilities from February 27, 2012 to March 3, 2012. The primary reason for visiting the prospect, core and laboratory facilities was to locate and confirm evidence of exploration activities reported by TCS and earlier workers, to observe the drilling and sampling procedures being conducted by TCS and to observe and confirm copper mineralisation in core and outcrop. H&A also assessed and modified core handling and sampling protocols employed by TCS to improve their suitability for preserving core and sample integrity, accounting for site and prospect specific conditions and features, so that greater reliability can be placed on data and information derived from the material. A protocols document was produced from this work.

H&A did not uncover any reason to question the exploration activities undertaken in exploring and evaluating the Beutong prospect nor to question the presence of copper mineralisation of the tenor and styles reported by TCS.

Little field work has been undertaken since 2012 with two deep holes being drilled into the porphyry mineralisation. Results from these holes were not unusual for the Beutong mineralisation and H&A has determined that no material changes to the understanding or evaluation of the mineralisation has occurred in the intervening time between Mr. Hackman's site visit and the preparation of this report and that the 2012 visit by Mr. Hackman constitutes a current site visit as outlined in section 6.2.1 of NI 43-101

2.5 Basis of Opinion

The Interpretations, opinions, Methodologies and Comments presented in this report are based on the following work programme undertaken to complete the project:

- Late October 2014 review of documents transferred via DropBox from TCS to H&A. These expert and internal reports outline the:
 - o geographical, cultural, social and environmental aspects of the Beutong project,
 - o geological and mineralization setting and styles identified/interpreted at Beutong,
 - \circ $\;$ historical exploration undertaken at Beutong, and
 - data collection and validation procedures and quality investigations undertaken by previous workers.
- Late October 2014 validated 2014 drilling data and information. Reviewed new drilling data against 2012 resource data and estimation models.
- Early November 2014 updated 2012 resource model with 2014 data and generated 2014 resource estimate.

- Mid November 2014 evaluated resource input data (including 2014 data) and classified resource estimate
- Mid-November assessed exploration potential within the EMM IUP 545.
- Late-November Report writing and compilation.

2.6 Qualification of Consultants

H&A is an independent technical consulting group who's principles and associates each have a minimum of 25 years' experience in the mining and resources industry.

H&A's independence is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its principles. H&A has a demonstrated track record in undertaking independent assessments of Mineral Resources, Ore Reserves, project reviews and audits, qualified person's reports and independent feasibility evaluations on behalf of exploration and mining companies and financial institutions world-wide. H&A has specific and extensive experience in undertaking project reviews and mineral resource estimates of copper prospects of the styles identified at Beutong.

This report has been prepared by Duncan Hackman (B.App.Sc., MSc., MAIG). Duncan Hackman has the expertise and experience required to be considered a Qualified Person under the guidelines outlined in the Canadian National Instrument 43-101 for undertaking resource estimates on mineralization styles such as those identified at Beutong.

2.7 Statement of Independence

Neither H&A nor any of the authors of this Report have any material present or contingent interest in the outcome of this report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of H&A.

H&A previously generated a resource estimate of the Beutong prospect in 2012. Other than this work H&A has no prior association with TCS in regard to the mineral asset that is the subject of this Report. H&A has no beneficial interest in the outcome of the technical assessment being capable of affecting H&A's independence.

H&A's fee for completing this Report is based on its normal professional daily rates plus reimbursement of incidental expenses. The payment of that professional fee is not contingent upon the outcome of the report. A signed statement of independence is included at Appendix 1.

2.8 Consents

Pursuant to Section 8.3 of NI 43-101 H&A and the author consents to this Report being published, in full, on SEDAR, on the Tigers Realm Minerals Pty. Ltd. web site (TCS parent company) or on the Kalimantan Gold Corporation Limited web site in the form and context in which the technical assessment is provided, and not for any other purpose.

H&A provides this consent on the basis that the technical assessments expressed in the Summary and in the individual sections of this Report are considered with, and not independently of, the information set out in the complete Report. A signed consent is included at Appendix 2.

2.9 Conversions and Abbreviations

A list of conversions and abbreviations used in this report can be seen at Appendix 12.

3 RELIANCE ON OTHER EXPERTS

H&A has relied on input from Tigers Realm Metals Pty. Ltd. personnel and their agents, and historic reports from previous workers where relaying information relating to:

- the tenure status of the Beutong IUP 545,
- project history and previous exploration and evaluation work,
- geological and mineralization setting and styles,
- the geographical, cultural, social and environmental aspects of the project and,
- source data and information for undertaking the mineral resource estimate and exploration potential within the IUP.

TCS has represented in writing to H&A that full disclosure has been made of all material information regarding the resources at Beutong and other targets within the IUP and that such data and information is current, complete, accurate and true (Appendix 3).

Where stated in this report, H&A has independently checked the data and details provided by others and comments on the confidence in and reliability of the data, information and facts obtained.

4 PROPERTY DESCRIPTION AND LOCATION

Beutong is located within the EMM Exploration License (IUP 545) area in Nagan Raya Regency, Aceh Province, Sumatra (Figure 1). It is about 60 kilometres north of Suka Makmue, the capital city of Nagan Raya Regency on Aceh's west coast. The Beutong project (centred on Lat. 4° 28' 37" N, Long.

96° 33' 57" E) is in mountainous jungle terrain at the headwaters of the southwest flowing Manggi river in an accessible area and ten minutes from the village of Beutong Ateuh. The location, though remote, is not isolated and a sealed road provides direct access to the project area for light vehicles, hence there have been no restrictions on prospect exploration and evaluation operations to date.



Figure 1: Beutong Prospect Location Map (base maps from public open source images)

4.1 Land Use

Timber logging is the only commercial activity to have been undertaken over the Beutong area.

There are 2 types of forest classification within the Beutong IUP area; Protected and Other Purposes. Based on Aceh Provinces's Department of Forestry function map (Number 522.51/4261-III), approximately 36.2% (3,617ha) of the IUP is designated as Areal Penggunaan Lain (APL) or Forest Other Purposes (open pit or underground mining permitted, Figure 2) and the remaining 63.8% (6383ha) is classified as protected or conservation forest (underground mining permitted, no open-pit mining).

The Beutong project area is 100% within the forest classification APL (Figure 2), the Ministry of Forestry does not require companies to obtain a Pinjam Pakai permit to conduct exploration activities within areas designated APL. No exploration has been carried out in areas outside of the APL area surrounding the Beutong Project.



Figure 2: Forestry map showing classification of areas covering the EMM IUP 545 and adjoining tenements to the IUP. Permitting required to conduct exploration activities in Hutan Lindung, no open cut mining allowed (green area). Exploration, open cut and underground mining is permitted in Areal Penggunaan Lain (non-coloured area).

There are no commercial undertakings covering the Beutong Project area. Local inhabitants in the Beutong Ateuh area farm along the Meureubo river that dissects the APL area within the IUP. The Beutong project is located on land owned by two families and EMM has established a cooperative relationship with these families, which has enabled total access to the project area and facilitated the smooth undertaking of exploration and evaluation programmes.

4.2 Corporate Structure, Tenure and Permitting

The history and current status of corporate ownership, tenure and regulatory compliance commitments are discussed in the following sub-sections.

4.2.1 Corporate Structure and Ownership of Mining Rights

Beutong consists of one Exploration Mining Business Permit or Ijin Usaha Pertambangan (IUP), referred to as IUP 545. The total area of the Beutong IUP is 10,000 hectares and is owned by an Indonesian approved foreign investment company (Penanaman Modal Asing or PMA Company). PT Emas Mineral Murni (EMM) is the PMA Company that holds the 100% interest in the Beutong IUP 545 (an English translation of the IUP Mining Exploration Concession document is included at Appendix 4).

EMM has two shareholders. It is 80% owned by the Singaporean domiciled Beutong Resources Pte. Ltd. (BRPL) and 20% by the Indonesian domiciled PT Media Mining Resources (MMR). BRPL is in turn 50% owned by Tigers Copper Singapore No 1 Pte. Ltd. (TCS, a 100% subsidiary of Tigers Realm Copper Pty. Ltd. (TRC) which in turn is 100% owned by Tigers Realm Metals Pty. Ltd.), with the remaining 50% ownership of BRPL held by MMR (MMR currently holds a total 60% interest in IUP 545).

Tigers Copper Singapore No 1 Pte. Ltd., through an Option Joint Venture Agreement with MMR, can increase their holding of EMM to 80% in two equal amounts by purchasing MMR's shares in BRPL. TCS can move to 60% upon payment of A\$2.9M to MMR and to 80% upon a further A\$1.5M payment on completion of a bankable feasibility study (at TCS's cost).

Currently IUP 545 is within its 8th year of existence and is in a recognized and approved period of work suspension, which is a one year "stop-the-clock" hiatus, extendable for one year, that affectively permits a hiatus in activity (Chapter XIV, Law Of The Republic of Indonesia, Number 4 of 2009 Concerning Mineral and Coal Mining). IUP 545 is scheduled to come out of the suspension on the 6th June 2015 and is scheduled to expire on the 15th June 2015. EMM lodged applications and supporting documents, in accordance with the relevant mining law, requesting the conversion of the IUP Exploration to an IUP Production license regulations (Chapter X, Law of RI Number 4 of 2009) firstly to the Dept. Energy and Mineral Resources (ESDM), Nagan Raya Regency on the 14th March 2013 and again, on the 24th April 2014 to the Directorate General of Mineral, Coal and Geothermal (DGMCG), following clarification from the Central Government that the DGMCG is the issuing authority. The IUP Production application is currently under process at DGMCG, and MMR expects the Production license to be issued by April 2015 and when granted will extend tenure over the Beutong Project area for up to 40 years (initial 20 year period plus two 10 year sequential extensions).

TCS informs H&A that the IUP 545 Eksplorasi and Option Joint Venture Agreement are both in good standing and relays that there are no foreseen factors that would affect the upgrade of the IUP Eksplorasi or the continuation of the joint venture agreement, if both parties elect to do so.

4.2.2 Tenure History and Status

A legal opinion repared by Nurhadin, Sumono, Mulyadi and Partners on behalf of PT Emas Mineral Murni regarding the current status of the EMM IUP 545 dated the November 28, 2014 is included at Appendix 5. H&A has relied on this legal opinion in verifying EMM's tenure status. Although H&A did not supervise this work (and therefore disclaims responsibility for this work) Nurhadin, Sumono, Mulyadi and Partners opinion (refer Section 12.3.1) confirms the current status of the EMM IUP as stated below.

The following outlines the tenure history of the Beutong IUP 545.

PT Emas Mineral Murni (EMM), an Indonesian limited liability company, requested access to the Beutong area in 2005. A Kuasa Pertambangan (KP) was issued for the Beutong area on the 29th October, 2005 in letter number 545/14/KP-EKSPLORASI/2005, by the Bupati (Mayor) of Nagan Raya Regency. The area covered by this tenement and subsequent title conversions (following changes to the Indonesian Mining Law) is unchanged and is shown in Figure 2.

The KP was renewed with a new starting date on June 16, 2006 in letter number 545/68/KP-EKSPLORASI/2006, with a validity of 3 years, expiring 15 June 2009.

On March 12, 2009, EMM submitted a request to Dept. Energy and Mineral Resources (ESDM) Nagan Raya, to extend the Exploration stage of the KP. The request was acknowledged and EMM considered it under process.

Indonesia passed Law No 4 of 2009 on Minerals and Coal Mining (the 'New Mining Law') that replaced Law No 11 of 1967 (the 'Old Mining Law') and under the 'New Mining Law' all KPs must be converted to IUPs (Izin Usaha Pertambangan). On March 24, 2009 the Directorate General of Mineral, Coal and Geothermal (DGMCG) issued a circular letter (number 1053/30/DJB/2009) to all mayors and governors requiring compliance with the new Mining Law, whereby:

- 1. All KPs still valid must be adapted to the new mining law, which are to be based on the IUP Format. Beutong IUP fell under this category, as it had not yet expired.
- 2. The extension of KPs will be coordinated by the DGMCG based on the IUP Format.

Although EMM held discussions with representatives of ESDM Nagan Raya Regency regarding the conversion of the KP to an IUP, EMM was verbally told that ESDM required additional time to seek clarity from DGMCG. EMM followed up with a second letter to ESDM Nagan Raya on November 23, 2009, again requesting an extension to the KP but also requesting the KP be converted to an IUP as stated in the circular letter. EMM's KP was converted to an IUP Exploration license on 11th January 2010, signed and granted by the Bupati of Nagan Raya Regency under decree number 545/22/SK/IUP-Ekspl./2010 (an English translation of the Mining Exploration Concession document is included at Appendix 4). The IUP was issued as being valid to June 15, 2013.

In 2011 EMM and Tigers Copper Singapore No 1 Pte. Ltd. (100% owned by Tigers Realm Metals Pty. Ltd. through intermediary subsidiary Tigers Realm Copper Pty. Ltd.) signed an earn-in Joint Venture agreement, but in order for an Indonesian limited liability company (that holds an IUP) to have foreign equity participation the following is required:

- 1. The IUP holder must obtain a recommendation letter from the issuing authority of the IUP (the Bupati of Nagan Raya) confirming that the issuing authority has no objection to the change in shareholding in the IUP holder; and
- 2. The IUP holder would then apply to the Indonesian Capital Coordinating Board (BKPM) to obtain foreign investment approval, with a copy of the Bupati recommendation letter attached to the application to BKPM;
- 3. The IUP holder needs approval from Ministry of Law and Human Rights (MOHLR).

The Bupati of Nagan Raya signed a recommendation letter on March 24, 2011 (number 545/218/2011), BKPM approval was obtained June 1, 2011 and MOHLR approval was received June 17, 2011. This completed all requirements that allowed for foreign ownership in EMM and the PMA conversion was completed.

In Late 2011, the DGMCG announced an IUP National Reconciliation Process, requiring IUP holders to obtain "Clean and Clear" status. All the required documentation was provided to confirm that land payments, reports, and mandatory deposits (security and environmental guarantees) were completed and DGMCG checked to ensure there are no overlapping IUP's. EMM was put on the third list of Clean and Clear companies May 9, 2012. A certificate was issued on July 12, 2012 (182/Min/06/2012).

On March 8, 2013 EMM lodged an application and supporting documents, in accordance with the relevant mining regulations, to convert the IUP Exploration to an IUP Production license done at ESDM Nagan Raya (Letter No. 0018/EMM/III/2013). ESDM subsequently sought clarification from DGMCG with regards to who is the issuing authority. On April 24, 2014 DGMCG confirmed to ESDM Nagan Raya that DGMCG is the issuing authority, and therefore the application and all supporting documentation should be forwarded to them. EMM lodged a duplicate application directly with the DGMCG (Letter No. 0018/EMM/II/2014, February 4, 2014).

In 2013 the Beutong IUP expiration date of June 15, 2013 was revised to June 15, 2014 under decree number 545/143/SK/Rev.IUP-Eksplorasi/2013, to be in line with the New Mining Law, which stipulates 8 years for an exploration IUP.

On April 22, 2014 EMM requested a 1-year suspension of IUP 545 from ESDM Nagan Raya, a 1-year "stop-the-clock" allowance, requested by EMM and allowed under Article 76.1.c of Regulation 23, 2010, concerning the implementation of mineral and coal mining business activities, which stipulates "activities may be subject to suspension in the event of any preventing circumstances..." *[including]* "laws and regulations issued by the Minister that delay mineral and coal mining business activities in progress". In the EMM IUP case, the suspension was requested and approved due to the delay in converting the IUP from an Exploration License to a Production license (see next

paragraph). Regulation 23, 2010, Article 77.3 states that suspensions due to preventing circumstances shall be granted 1 (one) time for a period of 1 (one) year and is extendable 1 (one) time for a period of 1 (one) year in every stage of the activities with approval of the competent Minister, governors, or regents/mayors. If requested the EMM suspension period can be extended to 6th June 2016. The first suspension request was granted on June 6, 2014 (number 545/200/2014).

The IUP Production application is currently under process at DGMCG, and it is anticipated to be completed by April 2015, while IUP 545 is still under suspension and before its expiry date of June 15, 2015. When granted the IUP Production license will extend tenure over the Beutong Project area for up to 40 years (initial 20 year period plus two 10 year sequential extensions).

A company can only apply to convert an IUP Exploration to an IUP Production if all 36 duties set out in the IUP Exploration title document are completed. These duties cover commitments to the government, community, environment, workforce and advancing the project. TCS informs H&A that they have met these commitments and that the IUP 545 Eksplorasi and TCS/EMM Joint Venture Agreement are both in good standing and relays that there are no foreseen factors that would affect the conversion of the Beutong area from an IUP Eksplorasi license to an IUP Production license or for the continuation of the joint venture agreement, if both parties elect to do so.

4.2.3 Environmental Permitting

As part of statutory compliance, EMM contracted PT. Adia Environment Consult to undertake an environmental management and environmental monitoring program (known in Indonesia as an UKL-UPL), which is required as part of the guidelines for managing and monitoring environmental impacts from planned exploration activities. The UKL-UPL was reviewed and approved by the regency environmental department of Nagan Raya on 1 May 2012, Doc Ref No. 660/235/LHK/2012.

As part of the company's application for an IUP Production license, an Environmental Impact Assessment (referred to as an AMDAL in Indonesia) relating to the Beutong Project was approved by the Bupati of Nagan Raya on 24 July 2014, Doc Ref No. 660/148/Kpts/2014.

EMM has also completed the requirement to obtain an environmental permit, which was approved and sign on 23 September 2014, Doc Ref No. 660/003/Kep/2014

TCS informs H&A that all statuary requirements have been met regarding environmental permitting and approvals, there are no current environmental liabilities, and that they cannot see any reason that the evaluation of Beutong cannot proceed uninhibited by environmental factors. H&A is of the opinion that the current TCS Management is aware of and proactive with respect to their environmental obligations and that they will continue to be so as the project progresses.

4.3 Royalties, Restrictions, Liabilities and Encumbrances

The EMM IUP 545, being an exploration IUP is free of royalty commitments to the Indonesian Government. Government royalties are payable on an IUP Production when mining commences and the royalty structure is determined by the government when the IUP is converted from Exploration to Production status. There are no signed agreements with any other company with regards to royalty payments, back in rights, payments or any other agreements and encumbrances regarding the EMM IUP.

As stated in Section 4.2.2 TCS has met all of their duty commitments on the EMM IUP. One ongoing commitment is to undertake complete reclamation of disturbed areas and a RP50Mil reclamation bond is held in a bank account in Nagan Raya as a requirement under this commitment to cover any future environmental liabilities.

As stated in Section 4.1, 63.8% of the EMM IUP is classified as protected or conservation forest (underground mining permitted, no open-pit mining). There are restrictions to working in protected forest areas and a company must obtain a forestry permit if it decides to work in protected forest areas. TCS to date has not applied for a work permit to undertake work within the protected forest areas of the IUP and is not aware of any issues that would prevent the favorable consideration of their application if and when submitted to the Indonesian Government.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Daily air flights (Garuda Airlines, Lion Air) connect Jakarta with Medan and Nagan Raya has an airport with twice daily commercial connections to/from Medan utilising Susi Air and Lion Air. Beutong is three hours travel by vehicle (approx. 98km) along sealed roads from Suka Makmue to Jeuram at the base of the mountain range, then along a new road that climbs up and into the Sumatran Fault valley, passing through the village of Beutong Ateuh. Alternately the area can be access from Banda Aceh via sealed road to the village of Takengon, which is about a six-hour drive. Beutong can be accessed from the village of Takengon by a two hour drive along a sealed road.

Beutong is located in the central highlands area and hence the topography is rugged and mountainous (Figure 3). The main drainage in the project area is northwest trending, following the main structural trend of the Sumatran Fault System. Secondary drainages in the area are relatively linear to locally dendritic. The area is sparsely vegetated, with a history of logging activities and subjected to slash-and-burn cultivation and farming by the local villagers. The rugged topography ranges in elevations from 900 meters to about 1,250 meters above sea level.



Figure 3: (Left) View of the Beutong West Porphyry (BWP), showing a drill rig along the main road, looking south. (Right) PT EMM drill rig setup at the BWP and testing the porphyry potential at depth.

The Beutong exploration camp is well established (Figure 4), consisting of a dozen or more buildings to accommodate field personnel and conduct exploration and evaluation work. A well pointed office and core handling facilities enable staff to adequately measure, log, sample and store core. It is ideally located adjacent to a well-kept local road, a perennially running stream and directly over the Eastern Beutong Porphyry. Access inside the project area is afforded by a network of walking trails which are best developed along rivers and along major ridge tops. These trails provide good access to the internal portions of the Beutong project area.



Figure 4: Beutong exploration camp, looking north towards the Beutong Skarn in the foothills

The Beutong Project site is located close to the equator and has a tropical climate. Temperatures range from 20^oC at night to around 31^oC during the day with a relative humidity of 85%. The highest rainfall occurs from October through to March, but rain continues to fall consistently throughout the year, as the area is affected by both the northern and southern monsoons. The average monthly precipitation is 200 - 250mm. Table 2 shows the 2013 rainfall statistics for Beutong. Erosion is rapid, resulting in steep-sided river valleys where landslides are common.

Beutong Rainfall Records, 2013							
Month	Total Days	Days >10mm	Total Rainfall	Month	Total Days	Days >10mm	Total Rainfall
	Rain (>2mm)	Rain	(mm)		Rain	Rain	(mm)
January	20	10	305	July	9	2	142
February	16	9	216	August	17	11	266
March	16	11	264	September	10	6	201
April	21	9	264	October	21	10	248
May	14	8	260	November	12	8	201
June	19	11	293	December	18	10	288

Table 2: Beutong 2013 Rainfall Records.

The key infrastructure within the region that may prove advantageous to the advancement and development of the Beutong Project are the power stations and port facilities. There are two power plants in Nagan Raya, one owned by Media Group, with a capacity of 15MW, and a recently completed 220-megawatt (MW) coal-fired station owned by PT Pelayanan Listrik Nasional (PLN). These plants have the capacity to supply electricity to the Beutong project. A new seaport is under construction and almost complete, it is located approximately 5 kilometres southeast of the Meulaboh city center. This port will be suitable for offloading and uploading materials moved to and from Beutong by sea.

The single lane sealed road access to the project is currently suitable only for light vehicle use and will require significant re-engineering and upgrading before any heavy or large vehicles will be able to travel to Beutong.

6 **HISTORY**

From the mid-1970s to 1985 the British Geological Survey (BGS) and the Indonesian Bureau of Mineral Resources conducted regional geological surveying, mapping and geochemical sampling over the northern half of Sumatra, which included the Beutong area. Two stream sediment samples returned anomalous copper values, including one collected from the Meureubo River that coincides with the Sumatra Fault (100ppm copper) and a second sample from an east draining creek that bisects the Beutong deposit (105ppm copper).

At the same time as the BGS program, Rio Tinto Indonesia (RTI) was conducting its own regional exploration activities over northern Sumatra (1979 – 1981) under a joint venture agreement with PT Tambang Timah Persero. Helicopter-supported stream sediment mapping and sampling programs were carried out over Aceh and successfully identified targets at Beutong, Dusun and Kutacane. Beutong was considered the highest priority, where RTI defined a five square kilometre zone of phyllic and advanced argillic alteration coincident with anomalous Cu-Mo in soils (Hughes, Stephen 2014, pers. comm.). However, rock chip samples collected from mineralized skarn and porphyry returned low copper values (<0.30% Cu) and RTI opted to discontinue exploration activities.

In August 1994 the Beutong prospect was secured by Highlands Gold Indonesia (HG), under a 5th generation Contract of Work that was held by their Indonesian affiliate PT Miwah Tambang Emas. Fortunately for HG, the Jeuram - Lhokseumot - Beutong Ateuh road project was well underway, which passes the Beutong project area and provided geologists with easy access. HG conducted reconnaissance mapping and sampling in early 1995 and identified copper mineralization in a "boulder train" that led to the discovery of mineralized skarn and porphyry outcrops. Follow-up exploration activities comprised geologic mapping, geophysical surveys (ground magnetics & IP) and extensive geochemical sampling in order to define drill targets. HG conducted a scout drilling program in late 1996, using a small "man portable" drill rig to complete 19 holes, for a total of 2,227.25 metres. The discovery hole (002BE96) intersected 120m of mineralized porphyry that assayed 1.05% Cu, 0.14g/t Au, 2.12g/t Ag and 144ppm Mo. This hole finished in mineralisation. Another 16 holes were drilled in 1997 totaling 1,895 metres, but results were less impressive. Further work was intermittent with interruptions reflecting diminishing investor confidence owing to the Bre-X Busang scandal in 1997, the Asian financial crisis in 1998, and subsequent changes in Indonesian politics. HG abandoned the project and in 2002 the Ministry of Energy and Natural Resources revoked the CoW agreement following several years of inactivity.

In 2006 PT Emas Mineral Murni (EMM) secured a "Kuasa Pertambangan" (KP) over the Beutong area and subsequently partnered with International Mining Investments LLC an affiliate of Freeport McMoRan Copper & Gold Inc. to further develop the project (for simplicity and clarity the International Mining Investments LLC and Freeport McMoRan Copper & Gold Inc. association is referred to as "Freeport" or FPT in this report). In early 2007 FPT undertook a review of HG exploration data and recognized Beutong had not been sufficiently tested at depth, with more than 95% of the holes drilled to less than 125 meters. During the period 2007 to 2008 EMM carried out a drilling program aimed at extending mineralization intersected by HG. Drilling intersected broad zones of high grade porphyry style mineralization in multiple holes, including 147.5m @ 1.32% Cu and 0.25g/t Au. By the end of the 2008 season, EMM had completed 91 holes for a total 23,044 metres. However, owing to the impact of the global financial crisis and the decline in mineral commodity prices in the latter months of 2008, FPT decided to withdraw from the project, and did so in early 2009.

Tigers Copper Singapore No 1 Pte. Ltd. (TCS), entered into an Option Joint Venture Agreement with EMM and drilled 32 holes into the East Porphyry and Skarn mineralisation at a scale and configuration that has allowed the delineation of Measured and Indicated Resources in the project area. Two deep holes were drilled to test the depth extent of both the West and East Porphyry systems, with encouraging results that show mineralisation present below the more densely drilled areas. Both the West Porphyry and depth extents of the East Porphyry and Skarn mineralisation constitute areas in the project area that are still to be adequately tested and delineated.

6.1 Operational History

There has been no mineral production from the area described by the EMM IUP 545.

6.2 Exploration History

The following exploration and evaluation of the Beutong mineralisation and surrounding area has been conducted over the last 40 years:

- 1975 to 1985 Indonesian Department of Mines, British Geologic Society and Rio Tinto Indonesia:
 - Field mapping and rock chip sampling
 - o Stream Sediment sampling
 - Outcrop & Float sampling
 - Soil sampling

Elevated copper values in stream sediment sampling pointed workers to the Beutong area. Rio Tinto Indonesia workers mapped an extensive area of coincident advanced argillic alteration and anomalous copper and molybdenum in soil samples. Rockchip samples were not considered of favorable grade for Rio Tinto Indonesia who then withdrew from the area.

- 1994 to 2002 PT Miwah Tambang Emas (in Joint Venture with Highlands Gold Indonesia):
 - Field mapping and rock chip sampling
 - Outcrop channel sampling
 - Stream Sediment sampling
 - Approximate 2800m by 2000m soil sampling grid, 25m sample intervals
 - Dipole dipole IP
 - Airborne and Ground magnetics
 - Drilling 35 holes totaling 4,122m

Mapping and sampling identified the porphyry and skarn mineralisation subject of this review and resource estimate. Drill targets were identified through mapping and sampling, soil geochemistry surveys and geophysics. Significant porphyry mineralisation was intersected in drill hole 002BE96 (120m at 1.05% Cu, 0.14g/t Au, 144ppm Mo). Significant intercepts identified the potential of the East and West Porphyries and Skarn mineralisation. Effects of outside influences resulted in a halt in exploration by PT Miwah Tambang Emas who eventually had their title revoked.

- 2002 to 2009 PT Emas Mineral Murni (in Joint Venture with Freeport):
 - Reprocessing of Airborne Magnetic data
 - Field mapping and rock chip sampling
 - Outcrop channel sampling
 - o Stream Sediment & Pan concentrate sampling

- Approximate 700m by 400m soil sampling grid, 25m sample intervals
- Drilling 91 holes totaling 23,044m

Deep targets were identified and drilled. Significant intercepts of high grade porphyry were encountered in drilling of the East Porphyry. High grade intercepts and significantly long intercepts identified the tonnage potential of the West Porphyry. Outcropping high grade skarn mineralisation was drilled and intercepted along a continuous horizon.

- 2011 to 2014 PT Emas Mineral Murni (in Joint Venture with Tigers Copper Singapore):
 - o Reprocessing of Ground Magnetic data
 - Field mapping and rock chip sampling
 - o Drilling 34 holes totaling 14,262m

Delineation drilling on section lines within the upper portion of the East Porphyry to enable mineralisation to be considered for Indicated and Measured Mineral Resource Classification under the CIM Guidelines. Three deep holes drilled into the East and West Porphyry to test for depth continuity of mineralisation. Identified targets within the greater IUP area with potential to expand the resource base at Beutong.

No work on the Beutong project has been undertaken since EMM put the IUP under suspension in June 2014.

Details and discussion relating to the exploration potential of the IUP 545 area are included at Section 9 and figures portraying the location of samples and results for the work listed above are included at Appendix 6.

7 GEOLOGICAL SETTING AND MINERALISATION

The following details the current understanding of the regional geology and the geological setting and mineralisation styles within the IUP 545 area.

7.1 Regional Setting

The geological environment that has shaped the geology and geomorphology of Sumatra is dominated by the Sunda Volcanic Arc generated by the subduction of the Indo-Australian plate beneath the Eurasian Plate. The convergence of the two plates has created the following geological, tectonic and topographic elements of Sumatra (refer Figure 5):

• An active subduction zone, manifested as the Sunda Trench that runs along the entire length of Sumatra at approximately 400km off its western coastline.

- An Accretionary Complex forming a forearc ridge and a string of islands located approximately 200km off, and running the length of the west Sumatran coastline.
- Forearc basins overlaying earlier accretionary complexes now located under the shallow sea between Sumatra and the forearc islands stretching from Simeuleu Island in the north to Enggano Island in the south.
- Volcanic activity and mountain range formation (Barisan Mountain Range) along the western-central side of Sumatra. Uplift has exposed older Pre-Tertiary basement rocks along the mountain range.
- The formation of the transverse Sumatran Fault System that runs the entire length of Sumatra.
- Backarc basins forming relatively flat topography on the eastern side of Sumatra.

The Beutong IUP 545 is situated in the northern section of the Sunda Volcanic Arc.

Sumatra is dominated by the Barisan Mountain Range that runs the entire length of the island along its central-western side. The range has formed predominantly by uplift (a feature of volcanic arc systems) that has exposed variably metamorphosed Upper Paleozoic and Mesozoic basement rocks, including the Jurassic to Cretaceous Woyla Group rocks, the host unit to the Beutong Porphyries (Figure 6). Woyla Group lithologies range in origin from old basin-fill sequences, through erosional remnants of the younger island arc, to structural slithers of oceanic crust (Barber, 2000).

Magma generation is associated with subduction of the India-Australian plate under the Eurasian Plate along the Sunda trench, which is being buried at the rate of 6-7cm per annum. Magma has periodically erupted through the 34 active volcanoes located along the Barisan Mountain Range and this is the source of Quaternary to Recent volcanic rocks in Sumatra.

Stress related to oblique convergence of the plates led to the development of the Sumatra Fault System (SFS), which parallels the volcanic arc. The SFS comprises an intricate network of rightlateral strike-slip faults and splays running the entire length of Sumatra. The SFS, splits the Barisan Mountains and Beutong is located less than 5km from the SFS at the intersection of one of the splays and a major arc-normal structure.

Details of the regional geology and a thorough review on the tectonics of West Sumatra, including Aceh, can be sourced from Barber et. al., 2005.


Figure 5: Geological Provinces of Sumatra (after Barber et. al., 2005)



Figure 6: North Sumatra, Woyla Group and Regional Structural Geology (after Barber et. al., 2005)

7.2 Prospect Geology and Mineralisation

7.2.1 Geology

The principal rock types at Beutong as defined by current mapping have been assigned to four units. From oldest to youngest these are:

- 1. metamorphosed sedimentary host rocks,
- 2. serpentinite that predates mineralization,
- 3. porphyry intrusions (at least 6) of the Beutong Intrusive Complex (BIC), includes the Beutong East Porphyry (BEP) and Beutong West Porphyry (BWP) and
- 4. post-mineralisation magmatic hydrothermal breccia and smaller occurrences of hydrothermal breccias cemented by pyrite or tourmaline and intrusion breccias.

Sedimentary rocks encompass the BIC on all sides, and belong to the Bale Formation of the Jurassic–Cretaceous Woyla Group. These units comprise a thick sequence of variably metamorphosed siltstone, argillite, sandstone and greywacke in the south and central prospect area and reefal and deep water limestone units in the north. The meta-sediments strike in a south-

easterly direction, parallel to the Sumatra Fault direction, and dip steeply to the north-northeast. The distribution of these rock types are shown on the geology map (Figure 7) and cross-section (Figure 8 and Appendix 7). A skarn front has developed along the northern margins of the BEP, where it is in contact with carbonate rocks. Massive basic volcanics, pillow basalts, volcaniclastic sandstones and tuffs of the Geumpang Formation (Barber, 2000) occur in the central-southern project area (south of the BIC and drilled mineralised area).

Massive serpentinite, interpreted as altered harzburgite (Barber, 2000), is NW-SE trending and can be traced for more than 3km, primarily following the path of the Beutong River. This unit is locally sheared, mylonitic to schistose and brecciated and marks the inferred thrust fault contact between epiclastics to the southwest and limestone to the northeast.

The BIC measures approximately 2500m in northeast-southwest dimension by 900 meters in northwest-southeast dimension and is situated 4.5km north of the regional scale Sumatra Fault System. It occurs at the intersection of a NW-SE (Beutong Fault) trending thrust fault and NE-SW strike-slip fault, probably reflecting arc-parallel and arc-normal structures, respectively. The Beutong Fault is interpreted as a splay off the Sumatra Fault System. The BIC was emplaced in the early Pliocene (~4 – 4.66 Ma), into Jurassic–Cretaceous variably metamorphosed rocks of the Woyla Group, which contain northwest–southeast-trending dismembered ophiolite slivers. Late biotite porphyry dykes intrude the BEP, BWP and magmatic hydrothermal breccias and record the waning phases of the BIC in the late Pliocene (~2.58 – 3.06 Ma).

A large phreatomagmatic breccia body truncates the southern margin of the BEP and dips steeply north at approximately 80°. The breccia extends for a distance of at least 700 m in an east-west direction and has a maximum drilled thickness of 100 meters. The eastern margin remains undefined, although the breccia is anticipated to continue to the edge of the BEP. The breccia is highly polymict, clast to matrix supported, and contains abundant mineralized fragments in proximity to its contact with the BEP deposit. With respect to shape, the breccia resembles a tree, comprising a long narrow trunk with several major branches (injection breccias) angled outwards. This turns into an upward flaring funnel shaped breccia body towards surface, creating the impression from its surface expression of being an extensive geologic unit. The breccia is clearly late, but not the final manifestation of the Beutong system, as it is crosscut by the finer grained diorite dykes, and by a generation of quartz ± pyrite ± anhydrite veins.



Figure 7: Geological interpretation map of the Beutong Deposit, showing mapped BEP, BWP and Beutong Skarn mineralisation and the 850m RL resource footprint extrapolated to surface.



Figure 8: Cross section (BEU0700) through the BEP, showing strong copper-gold-molybdenum mineralization from surface. Note the injection breccias at depth, branching off the magmatic hydrothermal breccia. (CuEq = Cu% + (Mo ppm/10000 * 3.8883) + (Au g/t * 0.5089) + (Ag g/t * 0.0063))

7.2.2 Alteration

The BIC shows characteristic porphyry alteration styles, manifest as a vertically and laterally zoned sequence of propylitic, argillic, phyllic and rare potassic alteration at depth. Superimposed on these is an advanced-argillic alteration assemblage as part of a "high-sulphidation epithermal" mineralization event. The advanced argillic alteration is most extensive at the BWP, where a 50 to 100m thick lithocap is preserved. Propylitic alteration is confined to the contact margins of the BIC and to post mineral dykes and late stage hydrothermal breccias.

Two zones of exoskarn ± endoskarn have formed along the contact of the Main Beutong Diorite (MBD) and carbonate rocks to the north, approximately 200 meters north of the BEP. The skarn bodies have an E-W orientation with an outcrop strike length of at least 800 meters and widths of between 10 and 60 meters. Drill results indicate at least 300 meters of vertical depth extent of the skarn alteration and mineralization. Exoskarn alteration comprises garnet and pyroxene, as the prograde assemblage, and magnetite, epidote, and tremolite as a retrograde mineral assemblage. The MBD exhibits varying degrees of endoskarn alteration along its northern margin, typically within 25 meters of the limestone. Endoskarn is characterized by garnet ± pyroxene fracture

selvedge controlled alteration to more pervasive garnet – pyroxene alteration at the limestone contact. Epiclastic wall rocks are hornfelsed (dark brown), and secondary biotite is converted to chlorite-illite, instead of muscovite.

7.2.3 Mineralisation

Porphyry related copper-gold-molybdenum mineralization at Beutong is invariable contained within stockwork quartz vein systems developed within apical parts of the BEP and BWP (Figure 7, Figure 9 and Figure 12) and to a lesser extent in the immediate wall rocks (classic wall-rock porphyry mineralization). Mineralization defines two distinct, broad and coherent zones within the BEP and BWP that are sub-vertical and steeply-dipping towards the north. At an approximate 0.3% copper contour the mineralized zones vary in thickness from 175 to 500 meters, but generally average 200m in width and extend to at least 900m depth. Porphyry mineralization outcrops at the BEP, while it is intersected from shallow to moderate depths at the BWP (50 to 125 meters) underneath the alteration lithocap. With respect to copper and gold mineralisation, the two element grades do not correlate well, with typically Cu(%):Au(ppm) ratios observed between 1:1 and 8:1. Copper is dominant (~0.60% Cu) in the core of each porphyry system, and gold mineralisation is widely distributed and of low grade tenor (~0.13 g/t Au).



Figure 9: Beutong Porphyry Mineralisation (incl. high sulphidation overprint). Top Left: BEP with 5-10 vol% quartz veins, and disseminated covellite. Top Right: BWP strongly acid leached, with significant native sulphur and covellite. Bottom Left: BEP core showing covellite forming a thin coating on pyrite crystals. Bottom Right: BEP core showing sheeted quartz-covellite veins, 1.4% Cu over 3 meters.

Molybdenite mineralization is late, overlaps strong copper mineralization and is concentrated mainly in 25 to 75 meter wide zones along the northern porphyry margins and locally along the southern margins. Molybdenite mineralization (Figure 10) does not coincide with the magmatic hydrothermal breccia. However, the breccia does contain quartz-anhydrite vein fragments that contain appreciable coarse molybdenite and moderate chalcopyrite. Molybdenite occurs as disseminated grains, in centerline vugs of porphyry "B veins", in stringers along vein selvages and in hairline veinlets.



Figure 10: Left: Molybdenite mineralization in the BEP. Right: Molybdenite-pyrite veins cutting the BWP at depth.

High-sulphidation associated covellite, digenite and chalcocite dominated sulphide assemblage is superimposed onto the early pyrite and chalcopyrite dominant porphyry-type mineralization resulting in hypogene enrichment of the lower grade porphyries (Allen, 2008). High sulphidation feeder structures are telescoped onto both the BWP and BEP porphyry stockwork systems and are characterized by residual vuggy quartz containing enargite-covellite-pyrite and/or massive pyrite containing appreciable covellite, enargite and luzonite. These zones contain high-grade copper and gold mineralization (intercepts of up to 7.75% Cu and 5.65g/t Au over three meters).

Locally, zinc–silver–lead mineralization overprints the porphyry mineralization and is typically coincident with the high sulphidation style mineralization and the magmatic hydrothermal breccia or found locally within narrow shear zones. With this style of mineralization there is a distinct change in the texture and color of the drill core, altering to a darker color and with notable 'dark sulphide' minerals. Black sphalerite Fe>Zn occurs in hotter conditions (Corbett, 2002), and therefore could account for this deep seated zinc mineralization. The highest zinc grades are below the 300m RL, and commonly associated with late stage native sulphur alteration. Interestingly, locally the gold, molybdenite and arsenic grades can be very high with the zinc mineralisation.

There are two mineralized skarns within the Beutong deposit area. The Southern skarn contains strong copper–gold mineralisation and is interpreted to have formed along the marble front between the BEP and calcareous lithologies to the north. In the top 50 meters the most obvious mineralization is malachite-azurite with other green blue copper oxides and carbonates. The oxides and carbonates transition to sulphides at depth, which is dominated by pyrite, chalcopyrite and lesser bornite (Figure 11). The Northern Skarn contains significant zinc-lead-silver mineralization.



Figure 11: Skarn Mineralisation. Left: Near surface malachite – azurite in the copper-gold skarn. Right: Deeper seated semi-massive pyrite – chalcopyrite mineralization in garnetdiopside skarn.

Strongly quartz stockwork-veined phyllic and potassic altered porphyry and quartz vein fragments have been identified in the phreatomagmatic breccia (along the southern margin of the BEP), these fragments can contain significant chalcopyrite-bornite mineralization. The breccia also contains fragments of mineralized garnet-diopside-magnetite skarn, epiclastics and serpentinite.

Although unrelated to the porphyry, garnierite has been identified and exists as light green encrustations that are widespread in drill holes and in surface outcrops. Drill intersections show that the garnierite has significant Ni and Co values, with broad drill intersections of ~0.20% Ni and ~100ppm Co. Kavalieris & Bat-Erdene (2013) interpret that the garnierite may be related to the high sulphidation alteration, formed by acid fluids dissolving nickel sulfides (likely pentlandite) in serpentinite and re-precipitating Ni and Co as garnierite. Garnierite occurs to deep levels in drill holes, and in this case is not related to weathering.



Figure 12: Aerial view of the Beutong deposit, looking northwest, and showing the approximate boundaries of the BWP, BEP and Beutong Skarn (with of photo ~3.5km).

7.2.4 Structure

The WNW trending serpentinite (Figure 7) follows a major structural corridor that is referred to as the Beutong Fault which is interpreted as a splay of the Sumatra Fault System. The Beutong Fault appears to have controlled the emplacement of the BIC where it is intersected by a major NE-SW trending arc-normal fault, a feature that is distinct and identifiable on the ASTER Global Digital Elevation Model image. The same NE-SW structure is a controlling feature in the development of the Bur ni Geureudong volcanic complex, which consists of two adjacent volcanoes, namely Bur ni Geureudong and Bur ni Telong, situated less than 50km northeast of Beutong.

8 DEPOSIT TYPES

Mineralization on the Beutong property is an example of porphyry and skarn copper-goldmolybdenum style deposit found elsewhere in Asia (Corbett, G.J., and Leach, T.M., 1997). Unique to Beutong is a telescoped high-sulphidation epithermal copper-gold system overprinting the porphyry system, which appears to have resulted in hypogene enrichment of copper within the overprinted zones (i.e. abundance of covellite). Common features of the Beutong porphyry mineralisation with other porphyries within the Southeast Asia region include the following:

• A broad zone of pervasive (> 5 km²) hydrothermally altered rocks that grade from a central potassic core to peripheral phyllic, argillic and propylitic altered rocks.

- Mineralization is generally low to moderate grade and comprises disseminated, fracture, veinlet and quartz stockwork controlled sulphide mineralization.
- A metal assemblage of copper-gold-silver-molybdenum
- Mineralization is zoned with a chalcopyrite-bornite-molybdenite core (identified in vein fragments) and peripheral chalcopyrite-pyrite (overprinted by covellite) and pyrite.
- Enrichment zone of the primary copper mineralization by a late-stage hypogene high sulphidation event.
- Other deposit styles associated with the Beutong East and West porphyries (spatially and genetically) include copper-gold rich high sulphidation epithermal vein systems and copper-gold skarns at the margins of the intrusive complex.

9 EXPLORATION

The chronological exploration history for the EMM IUP 545 area is outlined in Section 6.2. Surface exploration results used in targeting mineralisation are plotted over mapped geology and presented in Appendix 6. Details regarding the collection and treatment of surface samples and geophysical data are non-existent (not known by current workers), not recorded or unreliable (relying on individual workers' memories) or incompletely recorded. H&A is not commenting on the processes of obtaining these datasets as they are of the opinion that the effort in constructing the provenance of data will never suitably establish the reliability/validity of details and therefor the information would be of limited use and at worst, may be misleading. H&A recommends that future workers need to understand the gross processes undertaken for each exploration programme so that they are aware of any issues that may question the reliability of individual data units, groups of data, or the entire dataset and consider the inherent risk within the data during interpretation and evaluation. In accordance with section 6.4(1a) of NI 43-101, where liability can be limited if a qualified person did not prepare or supervise the preparation of a section of the report, H&A, or any QP, was not present during the collection of historic Beutong data and therefor does not accept responsibility for any errors or omissions in the supplied data and information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

Although many of the detailed records concerning historical exploration in the area have not been secured by EMM, there is sufficient geochemical data to support the targeting of several areas for copper and gold mineralization. Evaluation work has identified five target areas for follow-up (Figure 13) and, given the identification of large porphyry and skarn mineralised bodies at Beutong, H&A considers these areas as significant for advancement of the IUP project area as they have a good probability of hosting further mineralised bodies related to the BIC or similar proximal intrusive complexes.

9.1 Exploration Programme Descriptions

A summary of the exploration activities utilized in generating the target areas follows. Maps showing anomalous sample locations are included in Appendix 6.

9.1.1 Geological Mapping

The geological mapping program at Beutong undertaken by TCS was overseen by Bowo Kusnanto and Stephen Hughes during the 2012 and 2013 exploration periods and focused on an area measuring 3km by 2.5km. The previous geological map generated by EMM (in Joint Venture) was revised based on the compilation and review of over 500 geological mapping points collected during mapping and supported by the drilling data. All geological field mapping stations have GPS coordinates that were obtained from a handheld Garmin GPS unit and recorded as UTM coordinates (WGS 84, Zone 47N). The resulting geological interpretation and map is presented in Section 7.2 (Figure 7).

9.1.2 Soil Surveys

No soil samples were collected by EMM (in Joint Venture with TCS) during the period 2011 to 2014.

In joint venture with Freeport, EMM collected more than 327 soil samples over the BEP covering an area of 2.4km². Soil sample stations were spaced at 25 m intervals, and taken along 100m spaced north-south oriented lines. This grid based soil sampling program was carried out utilizing a shovel and geopick. Samplers targeted the "B" horizon and every effort was made to obtain a sample from this horizon. Soil samples were collected and stored in brown paper 'cloth' sample bags and labeled with a corresponding sample number. Sample location sites were marked with flagging tape, which was also labeled with the sample number. For each soil sample the following data was recorded in sample books UTM coordinates, sample depth (cm), colour, texture, rock fragment types, organic material, slope and presence or absence of Fe-mottles. Sample locations were recorded using hand-held Garmin GPS units. Samples were collected along a reasonably steep and south facing slope, therefore soil anomalies might be exaggerated through dispersion of elements outward (south) from the source.

9.1.3 Rock Chip and Channel Sampling

Rock chip samples were collected from outcrop and float showing signs of mineralisation and/or alteration, in particular rocks that were hydrothermally altered and contained visible pyrite, chalcopyrite etc. Extensive zones of outcropping mineralization were channel sampled if

warranted. Channel sample lengths varied depending on the location, with emphasis on effectively obtaining a continuous chip-channel sample across the mineralized zone.

Rock chip samples were collected throughout the mapping program. The samples tested locations with hydrothermal alteration and mineralization. Rock samples, generally weighing 1 to 2kg, were taken as representative chips from float boulders, scree or outcrop. These were described in hand specimen, numbered, bagged and submitted for analysis. Reference chips (Hand Specimen) were retained for all samples and stored for future reference.

A total combined 500 rock chip and channel samples were collected by EMM (in Joint Venture with TCS). All samples were assayed by PT Intertek Utama Laboratories in Jakarta for gold by fire assay and the multi-element suite of Ag, Al, As, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, Pb, S, Sb, Sc, Sn, Sr, Ta, Te, Ti, V, W, Y, Zn, and Zr by the IC30 acid digest ICP method (refer Section 11.3 for analytical descriptions).

A total combined 432 rock chip and channel samples were collected by EMM (in Joint Venture with Freeport). The element suite of Au, Ag, Cu, Pb, Zn, Ni, Co, Bi, As, Sb and Mo was assayed.

9.1.4 Stream Sediment & Pan Concentrate Sampling

No stream sediment sampling was undertaken by EMM in Joint Venture with TCS.

EMM (in Joint Venture with Freeport) conducted a stream sediment sampling campaign between 2006 and 2009. 200g minus 80mesh stream sediment samples were collected by geologists, double-bagged in plastic zip-lock bags and dispatched for Au, Ag, Cu, Pb, Zn, Ni, Co, Bi, As, Sb and Mo at PT Intertek Utama Laboratories.

A pan concentrate stream sediment sample of greater than 15 litres in size (un-sieved stream sediment) was collected from a single trap location at each of the minus 80mesh sites and processed on-site using a 3 liter Garret gold pan. The sample was reduced to a mineral concentrate size of between 50 and 100 grams in weight. The concentrate heavy minerals were then studied using a Peak 25x pocket microscope and notes made on the mineralogy and the relative abundances of gold, sulphides and indicator minerals were recorded. A count of gold grains and their size and morphology was made where gold was detected. The relative abundances of minerals identified were recorded as either trace, minor, moderate or abundant. The panned concentrate samples were not sent for assay.

A total combined 83 pan concentrate and minus 80mesh stream sediment samples were collected by Freeport.

9.2 Exploration Targets

Five target areas have been identified (Figure 13) and are hierarchically ranked according to the tenor of assays and the geological interpretation of data/information obtained from mapping. Plans showing anomalous samples are included at Appendix 6. These plans support the interpreted target areas presented in Figure 13. The terms "Priority 1, 2 and 3" are employed here, however these rankings are likely to change with the evaluation of new data obtained through ongoing exploration:

Priority 1 targets:

Adjacent to or extensions of the Beutong Intrusive Complex and mineralization.

Target A - located east of the Beutong East Porphyry resource. With respect to surface mineralization/alteration, there is a narrow zone (<50m) of skarn outcropping along the main road. A total six channel samples were collected over 15m of the mineralized skarn, and samples assayed up to 2.3g/t Au, 0.26% Pb and 0.65% Zn. The 3D magnetic-inversion model (based on ground magnetic data) shows a magnetic feature occurs at depth, below the skarn. Furthermore, drilling on within the Beutong East Porphyry indicates the system is plunging to the east at its eastern end. This area represents a high priority drill target, and it is proposed that two scout holes be drilled to test the magnetic feature in this target area.



Figure 13: Exploration target areas identified from surface and geophysical work and interpretation (see Appendix 6 for presentation of surface sample results)

- Target B located west of the Beutong West Porphyry resource. There is a large coppergold in soil anomaly that measures more than 1km in north - south dimension, by up to 400m in width, and is in the shape of a boomerang. With respect to surface mineralization/alteration, there is a broad zone of pervasive argillic and advanced argillic alteration exposed along the drill access road. The host rock is hydrothermal breccia and diorite porphyry, which is strongly oxidized and contains abundant FeO on fractures and in quartz veins. Rock chip grab and float samples collected along the access road and nearby creeks returned up to 2.14 g/t Au, 45.7% Cu, 995ppm Mo and 72g/t Ag. The 3D magneticinversion model (based on ground magnetic data) shows a strong magnetic feature at depth, and is along trend of the Beutong West Porphyry. This area represents a high priority drill target, and several scout holes are proposed to test for extensions of the porphyry mineralization and high sulphidation style gold mineralization (oxide and sulphide).
- Target C located in the vicinity of the major northeast/northwest Beutong fault, and west of the Beutong Skarn. There appears to be some continuity of the Beutong skarn here, as field mapping identified strongly skarn altered float/scree and outcrop. Rock chip float and outcrop samples returned up to 2.33% Cu, 0.59% Pb, 0.51% Zn, 151g/t Ag, and 1.1g/t Au.

The skarn in Target C appears in a similar position spatially to the Beutong Skarn, along the margins of the Beutong Intrusive Complex. High grade poly-metallic mineralization was intersected drillhole BC028-02, which was drilled on the south side of the Beutong River and to the north at -60 inclination. This hole returned 21.5m @ 6.34% Zn, 1.83% Pb, 45.2g/t Ag, 0.40g/t Au, 0.88% Cu (including 13.5m @ 9.1% Zn, 2.75% Pb, 65g/t Ag, 0.32g/t Au, 1.27% Cu). This area represents a high priority drill target, and one scout hole is proposed to test for extensions of the skarn mineralization.

Priority 2 Targets:

Proximal to, but not adjoining the Beutong Intrusive Complex and mineralization.

- Target D- located south-southwest of the BIC. An area with spotty copper-gold in soil geochemistry where float and outcrop rock chip grab samples returned up to 5.9g/t Au and 0.20% Cu. Alteration is structurally controlled, and mineralization is described as high sulphidation style. Additional field mapping and sampling are required in order to determine if drilling is warranted.
- Target E- located south of the BIC. Field mapping and sampling identified an area with anomalous Au in stream sediments (up to 2.2ppm). Geologists observed high sulphidationstyle veins that assayed up to 3.94g/t Au and with elevated copper and arsenic. Alteration is structurally controlled. Additional field mapping and sampling are required in order to determine if drilling is warranted.

Priority 3 Target:

• Target F – located south of the Target D. Geologists collected rock chip samples from float boulders that assayed up to 0.82g/t Au. The source is further north, and could be shedding off Target D. Additional field mapping and sampling is required.

10 DRILLING

This section outlines the collection and treatment of drilling data undertaken by workers at Beutong. This information is obtained from protocol documents (refer Section 11.1) and from observations made by H&A during a site visit in February-March 2012. H&A comments on the appropriateness of the procedures undertaken and reports on the actions taken in verifying and cleaning the data in preparation for use in generating the 2012 and 2014 Beutong Copper Resource Estimates.

H&A has exercised all due care in reviewing, using and reporting on the supplied data, information and drill core. Whilst H&A has checked supplied data against alternative sources (where possible) and compared key supplied data with expected values, the accuracy and reliability of the review, resource estimate, interpretations and opinions are entirely reliant on the accuracy, reliability and completeness of the supplied data and information. H&A cautions that, although historic data may appear viable and reliable, the lack of detailed or reliable documentation, the absence of a qualified person (QP, CIM definition)) during its collection and the absence of audits by a QP reduces confidence in this data. H&A comments on the risk associated with this data and utilises the CIM Resource Classification criteria to relay this risk in the reporting of the resource estimate. In accordance with section 6.4(1a) of NI 43-101, where liability can be limited if a qualified person did not prepare or supervise the preparation of a section of the report, H&A, or any QP, was not present during the collection of historic Beutong data and therefor does not accept responsibility for any errors or omissions in the supplied data and information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

Data/information verification and discussion relating to the relationships between grade and drilling sample recovery, hole orientation and primary sample size is included with the investigation of other resource estimation data in Section 14.1.

10.1 Drill Programmes

160 diamond drillholes have been drilled in and around the Beutong deposit of which 106 (29,797m) have intercepted significant mineralisation and form the basis of the 2014 resource estimate.

Three drilling programs were undertaken in the evaluation the Beutong Copper Project. These are:

- 1. 1996-97: PT Miwah Tambang Emas and HG; a man-portable, NQ drilling program of 35 holes totaling 4,122m (hole nomenclature format: *BE*).
- 2. 2007-08: FPT and EMM; a shallow and deep PQ, HQ and NQ triple-tube diamond drilling programme of 91 holes totaling 23,044m (hole nomenclature format: BC*).
- 2011-14: TCS and EMM; a delineation PQ, HQ and NQ triple-tube diamond drilling programme of 32 holes totaling 11,745m. Two deep diamond holes totaling 2,517m into the BEP and BWP to test for depth extensions of mineralisation (hole nomenclature format: BEU*).

A drillhole collar location and trace plan can be seen at Figure 14 and hole details are tabulated at Appendix 8.



Figure 14: Drill hole location plan - Split by drilling programmes.

10.2 Collar Locations

Drillhole collar locations, orientations and total length are tabulated at Appendix 8.

The reliability of the collar locations for FPT and TCS drilled holes is well established with collars being surveyed by differential GPS methods. The FPT drill hole pick-up survey programmes are documented in two reports by contract surveyors PT Millar Bahroeny. H&A confirmed the location of TCS holes with site personnel during a site visit and again when resource models were reviewed and approved by the TCS senior geology staff. Details of how collar locations for the HG holes were determined by the original workers are not known. TCS crosschecked tabulated collar coordinates for the HG holes against geo-referenced historical maps and confirmed that coordinates within the database correlate with the plotted collars.

Inconsistencies exist between the supplied topographic models (a compass and tape derived DTM and the ASTER Global Digital Elevation Model). A topographic surface was generated for use in the resource estimate that utilised the drillhole collars and a perimeter rectangle draped on the SRTM surface at >400m from the modeled mineralisation.

H&A considers that the drillhole collar locations are known to an acceptable standard that there is a high degree of confidence in their internal relationships.

10.3 Downhole Surveys

The HG and FPT downhole survey data was collected using a conventional Eastman single shot camera, and the TCS survey data was collected using a digital Reflex single shot camera. The magnetic declination at Beutong is currently approximately 1[°] west. TCS does not adjust magnetic survey data to account for this small declination and H&A followed suite in undertaking the resource estimate.

Confidence in the accuracy of drillhole traces plotted for the HG and FPT holes is low as downhole surveys were either not taken (all HG holes and 15 FPT holes) or taken with long intervening intervals (hole traces for BC001-01, BC017-01, BC023-02, BC027-02, BC028-02 drilled by FPT are located with surveys taken at >100m downhole intervals). TCS holes were surveyed at 40-50m intervals and subsequently the confidence in the hole trace and sample locations for this data is high.

The TCS holes show mostly minor, gradual deviation in azimuths and very minor dip changes (holes tend to drop with depth). Holes BEU0700-03 and BEU0800-09 show a number of severe deviations in and around logged clay zones with poor core recovery (most obvious in BEU0800-09). The generally predictable nature of hole locations shown in the TCS drilling suggests that the risk to a resource estimate in using data from the poorly located HG and FPT holes will be low and that sample location reliability is not a key consideration in classifying the resource estimate.

Downhole surveys from the database were crosschecked against the collar survey details and a secondly supplied VulcanTM survey dataset and discrepancies resolved with the assistance of TCS personnel. Significant deviations in azimuth and dip measurements were investigated (± 5 degrees deviation between consecutive surveys) and the drillhole trace determined by utilising adjusted azimuths and dips to account for severe, unexplained and most likely erroneous surveys (23 in total).

Drillhole traces are defined by the Vulcan[™] tangential desurvey method. The final downhole survey file used in the resource estimate comprises 644 validated survey data records.

10.4 Primary Sampling

Fourteen holes at Beutong were not submitted for assaying. The three abandoned TCS holes were redrilled and assayed. Of the HG and FPT holes, BC020-02 is interpreted as intercepting the Outer Eastern Porphyry mineralisation and BC005-02A is proximal to the Outer Western Porphyry mineralisation. All other holes are greater than 50m from the interpreted mineralised domains.

Table 3 lists the sample intervals employed at Beutong. HG holes were sampled at nominal 2m intervals and the FPT and TCS holes sampled at nominal 3m intervals. Non-recovery of core and

non-favorable geology encountered has resulted in a number of intervals not sampled in all three drilling campaigns.

The primary sub-sampling was set at ½ core, split length-wise, for all drilling programmes. The HG procedure for collecting samples is unknown to H&A.

	Coro			Number o	f Samples			Average	Length
Company	Core Diameter	0 to 1m	>1 to 2m	>2 to 3m	>3 to 4m	>4m	Not	>4m	Not
	Diameter	Length	Length	Length	Length	Length	Assayed	Length	Assayed
Highlands Gold	NQ		1459	21	5	3	44	8.7	20.3
	PQ			525	39		22		9.4
Freeport	HQ		1	2374	164	1	67	6.0	21.7
rreeport	NQ		1	3382	242	17	5	5.5	53.5
	BQ			108	34				
	PQ	1	4	789	44		19		11.6
Tigers Realm Copper	HQ	1	205	1911	98	1	14	6.0	16.6
	NQ		49	1415	104	1	1	4.2	3.3

Table 3: Drill hole sample intervals.

In the FPT document "Tatacara Belah Core.doc" (how to halve core) it states to "Cut the Core with a hammer or Splitter". Personal communication with FPT personnel uncovered that this protocol of mechanically splitting core was undertaken for the more competent segments of core from the 45 holes drilled in 2007. A core saw was used for the 46 holes drilled in 2008, where core was wrapped in plastic film (Glad Wrap) and packing tape prior to cutting. All broken or incompetent segments of core were sampled directly from the tray utilising a blunt wooden instrument. It is highly likely that the mechanical splitting and "halving" with a "chunk of wood" would introduce a bias in favor of the competent material during sampling (as observed by H&A in February 2012 when reviewing TCS coreyard procedures where only the easy to grab pieces of core were collected and friable material was crushed and settled in the base of the tray channels).

Prior to March 2012, TCS wrapped the more competent core in plastic film (Glad Wrap) and packing tape prior to cutting with a diamond core saw. H&A observed during a site visit in late February 2012 that wrapping was not undertaken diligently or consistently on the core and hence has lower confidence on the integrity of the primary samples pre March 2012 than for those collected post February 2012 when the core yard procedures were upgraded and enforced. Incompetent or crumbling core was sampled directly from the core tray (pre March 2012) as per FPT protocols by splitting and collecting the material with a blunt wooden instrument. Post February 2012 TCS used a sharp steel cleaver and brushes and scoops to split and collect the both the competent and incompetent material from crumbly segments of core.

Sample weights for 3m intervals are nominally 7.5kg for fresh ½ NQ3 core, 13.5kg for fresh ½ HQ3 core and 21kg for fresh ½ PQ3 core. The large primary sample sizes are of concern with regard to maintaining representivity during subsequent sample reduction procedures. A field/sample-

reduction duplicate assay programme was implemented in March 2012 to assess the representivity of analytical samples (Section 14.1.1), the results of which show that there is good repeatability of assay results throughout the sample reduction process.

The quality of the initial sample from the core tray is a key concern regarding the reliability of assay data and there is a suggestion that the FPT and early TCS procedures were inappropriate for this purpose. The weighting of samples prepared by these procedures in estimating grades in the resource model is considered when classifying the resource estimate.

10.5 Significant Intercepts

Drillhole intercepts included within the resource domains and other significant intercepts are Tabulated and presented at Appendix 8.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Protocol documentation

H&A has not sighted any protocol or procedural documentation for the HG drilling, nor any certified protocol documentation for the FPT drilling campaign. The following passages are reported by FPT in their 2009 technical report on the project "PTEMM_Technical Report_2009.pdf".

Of HG work, Freeport states:

"Drilling in 1996 was limited to a depth of approximately 120 metres because of the limited capacity of the "man portable" drill used to carry out the drilling."

Of their own work they state:

"Four drill rigs were employed on the program including a man-portable scout Maxi 150 drill capable of drilling to 150m NQ, and three deep capacity drills: LF70-01, LF70-06, LY-44 capable of drilling between 900 and 1400m depth NQ. A total of 91 drill holes for 23,044m was completed during the 2007 to 2008 program.

Drill penetration rates were poor overall averaging around 14m per day. Drilling with the shallow Maxi 150 rig was the most efficient. Hole loss was significant especially in the Fault Crush Zone where the combination of broken rock, clay gouge and alteration lead to 13 collapsed hole that could not reach the target depth.

Drill core samples were collected for all drilling that included PQ, HQ, and NQ core sizes. The core size depends on the ground conditions and depth of the hole. Core was placed in

corrugated plastic core trays with lids and transported to the Alue Baru Drill Camp core logging area. In the logging area the core was carefully washed, labeled and photographed. Following photography the core was measured for recovery, RQD, magnetic susceptibility, specific gravity, and PIMA analysis for alteration minerals by geotechnicians. Detailed geological logging was then completed by geologists, and the sample intervals marked out for sampling. Sample intervals of 3m are the standard but a range of between 2.5 to 3.5 meter lengths is acceptable.

The drill core was split in half lengthwise along the core sample interval using a mechanical splitter. One half was placed into the sample bag for preparation and analysis and the other half returned to the drill core box for storage and future reference."

The TCS Jakarta office contains a number of Freeport SOPs that may detail the work undertaken in processing core from Beutong. If these processes were implemented at Beutong it is unknown as to how diligently they were followed as H&A is not aware of any core processing audits or reviews undertaken during the Freeport campaign. H&A's main concern regarding the implementation of these protocols is that they are designed and written for the FPT Timika operations (Irian Jaya) and make no reference to the Beutong Project. The latest update stamp on the SOP files is October 2005, two years prior to FPT's drilling at Beutong. SOPs or protocols that may apply to processing Beutong core can be found in the following files:

- Aceh SOP_Logging Inti Pemboran_Informasi Geologi.doc
- Aceh SOP_Logging Inti Pemboran_Informasi Geoteknis.doc
- Joint Expression.doc
- Pengukuran SG.doc
- Summary Geology Logging.doc
- Summary Logging Guideline.doc
- Tatacara Belah Core.doc
- CORE LOGGING-SOP-GSG-CLG-07_Core_and_Sample_Movement_and_Tracking_Procedures.doc
- CORE LOGGING-SOP-GSG-CLG-06_Core_Logging-Geotechnical_Information.doc
- CORE LOGGING-SOP-GSG-CLG-08 Taking Drill Core Assay and non-Assay Samples_Clyde_edit.doc
- SOP-GSG-SPA-02_Sample_Preparation_and_Analysis_Protocols.doc
- SOP-GSG-SPA-
 - 01_Sample_Handling_and_Standard_Control_Sample_Insertion_Procedures.doc
- SOP-GSG-CLG-04 Digital Core Photography.doc
- SG Measurements and Modelling .doc

FPT SOPs (Timika Operations) cover all activities undertaken for that operation and, if implemented and followed at Beutong, H&A considers thorough, however in part not appropriate for all of the

core drilled at Beutong. H&A concerns regarding protocols and the associated risk assessment for the compromised data are detailed in Section 10.4 and Section 12.3.

The following 20 holes drilled by TCS in 2011 and early 2012 followed the same procedures as those undertaken by Freeport:

• BEU0700-[01-04], BEU0800-[01-09], BEU0900-[01-05], BEU1100-[01,02]

TCS personnel state that the procedures are detailed in the following two files:

- "Standard Operating Procedure: Core Logging Geotechnical Information"
- "Standard Operating Procedure: Core Logging Geological Information"

TCS adopted revised protocols in March 2012 and the following 19 holes were processed according to the procedures outlined in "DD_Protocols_Photos updated_v1_Final_20120815.docx":

 BEU0600-[01-03], BEU0700-[03-05,07], BEU800D-01, BEU900-[04,05], BEU1000-[01-05], BEU1100-[01-03], BEU1700D-01.

Two site visits were undertaken by TCS Operations Manager to assess adherence to these protocols and, although no formal reports were produced, TCS confirm that site personnel were diligently following protocols when processing core.

11.2 Sample preparation

Drill Core sampling procedures are outlined in Section 10.4. The preparation procedures for the HG samples are not recorded (comminution and sub-sampling). Preparation of the FPT and TCS drill samples was undertaken by PT Intertek Utama Services (ITS) in Medan. The laboratory followed flow sheets which detail the procedures, quality control and quality assurance measures and performance criteria, numbering sequence to be followed and the production of duplicate sub-samples. In summary:

- Samples are receipted, weighed, dried at 105^oC and reweighed at Medan facility.
- Jaw crushed at -2mm:
 - FPT sizing test 1:20 samples [no compliance criteria listed],
 - TCS sizing test 1:10 samples [95% passing].
- Riffle split:
 - FPT 1kg for pulverizing, retain coarse reject. Prepare second coarse split 1:15 samples.
 - TCS 1.5kg for pulverizing, retain coarse reject. Prepare second coarse split 1:25 samples.
- Pulverise to -75µm:
 - FPT sizing test 1:20 samples [95% passing], collect 4x250g pulp portions,
 - TCS sizing test 1:10 samples [95% passing], collect 2x250g pulp portions, prepare third pulp 250g pulp portion 1:15. Retain reject.

• Pulps transported to ITS Jakarta, receipted and dried prior to analysis.

H&A notes that sample weights for 3m intervals are nominally 7.5kg for fresh ½ NQ3 core, 13.5kg for fresh ½ HQ3 core and 21kg for fresh ½ PQ3 core. The large primary sample sizes are of concern with regard to maintaining representivity during subsequent sample reduction procedures. A field/sample-reduction duplicate assay programme was implemented in March 2012 to assess the representivity of analytical samples (Section 14.1.1), the results of which show that there is good repeatability of assay results throughout the sample reduction process and H&A is of the opinion that the reduction procedures, though not ideal, have minimal impact on integrity of subsamples obtained for assaying.

11.3 Assays

The assaying procedures for the HG samples are not recorded. All assaying of HG, FPT and TCS samples was undertaken by PT Intertek Utama Services (ITS) at their Jakarta Laboratory. The following describes the ITS analytical methods:

- GA31: 1.00g charge; triple acid digest (HCl/HNO₃/HClO₄); AAS detection. Detection ranges:
 - \circ $\,$ Cu: 20ppm (No designated upper limit)
 - Ag: 5ppm (No designated upper limit)
- IC01: 0.5g charge; aqua regia digest (3:1 HCI:HNO₃ most sulphide minerals are readily dissolved, however silicate and refractory mineral will remain largely undigested); ICP-OES detection. Detection range Ag: 0.1ppm to 200ppm
- IC30: 0.5g charge; triple acid digest (HCl/HNO₃/HClO₄ preferred ore grade digest though not suitable for silicates) – volumetric detection. NB: solubility and upper limits are mineral dependent. Detection Ranges:
 - Cu: 2ppm to 100000ppm
 - Ag: 0.5ppm (No designated upper limit)
 - Mo: 1ppm (No designated upper limit)
 - As: 5ppm (No designated upper limit)
- FA30: 30g charge; Fire Assay; AAS detection. Detection range Au: 0.01ppm to 30ppm
- XR01: 10 g pressed pellet XRF. Detection ranges:
 - Mo: 1ppm to 10000ppm
 - As: 5ppm to 10000ppm
- XR02: Pressed Pellet XRF over range elements (analysed by diluting the sample with silica prior to pressing of the pellet). Detection range As: 10ppm (No designated upper limit)

The element/method combination for assays included in the resource estimate are presented in Table 4.

Tubic 4. Analytica		uns	NC3	ourc		aset									
Company	A	g_MET	TH I		As_I	Meth		Au_I	METH		Cu_Ⅳ	IETH	N	lo_ME	TH
Company	GA31	IC01	IC30	IC30	XR01	XR02	Unkn	FA30	Unkn	GA31	IC30	Unknown	IC30	XR01	Unkn
Highlands Gold							1488		1488			1488			1488
Freeport	247	1395			6886	2		6888		6888				6888	
Tigers Realm Copper			4772	4772				4772			4772		4772		

Table 4: Analytical Details - Resource Dataset

Assays for the Beutong project include an extensive multi-element dataset. This dataset has not been validated or analyzed for the resource estimate.

The provenance of the historic data compiled in the TCS database is largely unknown. The risks associated with unknown data history are significant enough to be a consideration in classifying a resource estimate under the CIM Guidelines. To alleviate this risk the entire FPT and TCS assay dataset was reconstructed from report files provided by ITS (excluding assays where files could not be located, affecting holes BC001-01, part- BC001-02, part-BC005-04, part- BC012-01, part- BC025-02 and BC028-02). ITS could not locate the report files for the HG assays. Cross-checking of the two datasets (TCS database and the recompiled dataset) showed that 632 FPT records were incorrect within the TCS database (mostly due to incomplete loading of elements and containing records of initial assay releases that were reissued by ITS) and the recompiled data assay data was utilised for the resource estimate.

The 1ppm lower detection limit for the HG silver assays sits within the expected grade range at Beutong as does the 5ppm lower detection limit for method GA31 undertaken by FPT. All Ag assays for the HG dataset were excluded from the resource dataset. GA31 silver assays less than the detection limit were removed from the resource estimate and the 1:5 inserted IC01 silver assays comprise the majority of Ag values for the FPT holes.

11.4 Sample Security

Sample security is not known for the HG programme and, though not audited for the FPT and TCS programmes, relies on the diligence of personnel at the site processing facility and the use of numbered security zip ties between dispatching and receipting at the ITS sample preparation laboratory (these allow personnel to determine if samples were opened). H&A, during a February 2012 site visit, did not observe any on-site facility or procedures suggesting subversive activity and the use of security tags and having company personnel accompany the couriers that delivered samples to the ITS preparation laboratory gives confidence that samples would have been received at the laboratory in the same state as they were when dispatched. H&A cannot rule out the possibility of tampering (as samples are dispatched in calico bags, packaged inside poly-weave bags) however, as the assay results for both core and quality control samples are as expected H&A considers the integrity of samples has been maintained throughout their handling, preparation and assaying.

11.5 Audits and Reviews

Intertek Utama Services, Jakarta Laboratory is currently ISO (International Standard) and KAN (Indonesian Standard) accredited, ISO17025 and LP-130-IDN respectively (Boyle, D., pers. comm. 2014). H&A requested copies of certification certificates covering the periods when Beutong drill samples were being processed at the ITS facilities, however only received copies of the KAN certificates confirming accreditation for the Jakarta Laboratory from May 2, 2006 to present. Follow-up request for proof of certification has not been successful to the time of finalizing this report and therefor H&A cannot comment on the accreditation status covering the entire period when samples were submitted to the ITS Medan and Jakarta facilities.

It is unknown if FPT undertook any laboratory audits and the following observations on the Laboratory can only be applied to the TCS programme. TCS requested that H&A undertake a review of the ITS facilities in February 2012 to assess the laboratory's suitability for analyzing Beutong samples and to assist in designing appropriate coreyard and laboratory protocols to do so. H&A observed:

- The ITS sample preparation facility in Medan:
 - Was adequately equipped, except for ovens, which were of older convection styles and possibly not best suited for drying clayey samples.
 - The staff were trained in and diligently documenting procedures (for all samples/batches).
 - Was not in operation on the two days when visits were made.
- The ITS Jakarta Fire Assay facility:
 - Was adequately equipped and set-out for handling the workload observed during the visit.
 - The staff were trained in and diligently documenting procedures (for all samples/batches).
 - Can complete four firings in an 8hr shift.
 - Can processes 45 client samples in a firing, leading H&A to recommend that batches be submitted at multiples of 45, with 180 being the optimum size.
- The ITS Jakarta Wet-Lab:
 - The work place was adequately equipped and set-out.
 - Had an acceptable level of hygiene.
 - Readily accessible work flow-sheets and diligently completed monitoring paperwork.
- Detection:
 - The facility was clean and well kept. Maintenance and service records of analytical instruments readily available for inspection.
 - Calibration liquors stored and handled with adequate care.
 - Paperwork adequate and diligently completed.

- Quality Control:
 - $\circ\,$ Records of internal and external calibration checks appropriate and diligently completed.
 - QC process adequate for Beutong assays.
 - No reporting of re-assay and check assay Lab job numbers.
- Reporting:
 - Adequate, however could be improved by reporting sizing information and sequence numbers and by reporting both client and laboratory (QC) results in the one file.

H&A is of the opinion that it would be highly unlikely that the Beutong samples would be compromised by being prepared and assayed at ITS and, in the event that QC results indicate a shortcoming in quality assurance or a breakdown in adherence to protocols that ITS has the right paperwork, being diligently completed, to undertake a thorough investigation to identify any causal issues. The thoroughness observed in designing and recording of protocols and work flow-sheets suggests that ITS has the commitment and tenacity to undertake the necessary changes to rectify any issues identified so as to minimize the likelihood of sample quality/reliability breakdown reoccurring.

12 DATA VERIFICATION

43 files containing data, information and interpretation were utilised by H&A in undertaking the Beutong 2014 resource estimate. The data and information covered areas of the estimation such as:

- Topography and grids: utilised for the validation of Drillhole locations and Resource Estimate topographic surface.
- Drilling data: hole details, logging, sampling details and lab assay result files (routine plus QC) for generating csv files for resource estimation software (includes cross-check against rebuilt assay dataset from ITS report files). Utilised for creating domain triangulations, block model and resource model/estimate.
- SG data: DBD data for determination of Tonnage Factors.
- Geological Interpretation: 3D dxf transfers of TCS geological interpretation cross sections and surface plan utilised for guiding and validating resource domain triangulations.
- QC analysis: Assay reliability and verification.
- Data quality evaluation: core recovery vs grade evaluation

H&A is satisfied that the files/data and information supplied by TCS is sufficient and suitable for producing a resource estimate on the mineralization at Beutong and for evaluating the risk inherent in the estimate and reporting findings following the guidelines set out in the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines". TCS has provided written

assurance that the data supplied is current, complete, accurate and true and that they have disclosed all data and information material for the assessment of the resources at Beutong (Appendix 3).

12.1 Data Management

H&A is not aware of any documented management procedures relating to the HG data and has no comment on the provenance of this data.

H&A understands that both FPT and TCS drill core data was recorded on paper logging sheets and subsequently transferred into excel spreadsheets formatted identically to the paper copies. The digital entries were then collated into tables and entered into an Access[™] database. Comma separated value assay results files were received from ITS and merged into the Access[™] database utilising the sample number as the key field. Laboratory QC assay results are also stored in the Access[™] database.

In March 2012 TCS instigated a project to re-organize and review all historic data and information and correct/validate the previous workers drilling data from source files uncovered during this work. In parallel to this, TCS's personnel constructed and corrected data within a VulcanTM database while undertaking evaluation of the drilling and the geological interpretation of the Beutong deposit. The TCS AccessTM database is the official dataset for the project and the VulcanTM dataset is an alternative that has been utilised as a check dataset for validating the resource estimation data.

12.2 Data audits

There are no recorded audits of the drilling database. The Freeport and TCS drilling dataset was validated by H&A prior to undertaking the 2014 resource estimate. Details of the validation process and findings are reported in Section 11.3.

12.3 Verification and Validation

This section covers the verification and validation procedures undertaken in preparing this report and the 2014 Beutong resource estimate. Validation and verification of the drill sample locations (trace determination) is included with the drilling data description (Section 10). Verification of the assay data is covered in Section 11.3 and the assay quality control assessment is covered in Section 14.1.1.

12.3.1 Tenure

A certified English translation of the RI government's granting of the work suspension status of IUP 545 is included at Appendix 5 as is a legal opinion regarding the current status of the EMM IUP 545 dated the November 28, 2014 ("Legal Opinion regarding the Status of Mining Business Permit (Izing Usaha Pertambangan or IUP) of PT Emas Mineral Murni" dated 28th November 2014 and prepared by Nurhadin, Sumono, Mulyadi and Partners on behalf of PT Emas Mineral Murni).

Nurhadin, Sumono, Mulyadi and Partners are of the opinion that (subject to assumptions and qualifications) EMM is a limited liability company duly established under the saw of the Republic Indonesia, with the status of PMA Company, engaging in the business activities of mining by holding the IUP Exploration which currently is hiatus in activity while suspended for 1 (one) year, while waiting for the issuance of its IUP Production. The IUP Exploration granted to EMM further grants EMM the right to conduct mining exploration activities on the Beutong Project and while suspended, the IUP Exploration remains a valid enforceable permit in favour of EMM until 5 June 2015, and may, on application, be extended as a valid and enforceable permit for another year until 5 June 2016.

TCS has informed H&A that the IUP is considered in good standing by the Indonesian Government and that they cannot see any reason that the Production License will not be granted for the IUP area in the fullness of time.

12.3.2 Logging and Core Orientation

All holes have been logged at the core shed, on a sample interval basis, to provide geological and mineralisation descriptions utilised in generating the resource domains in this estimate. The clay logging utilised in this estimate was undertaken by TCS geologists who interpreted clay intensity from the wet core photographs. All 35 HG holes are missing geology logging. Freeport holes BC005-02A and BC025-03A and TCS holes BEU0600-03 and BEU0700-06 are missing geology logs in the TCS database. 73 holes are missing up to 25m of geology logging at the beginning of the hole and nine of these holes are missing up to 30m of geology logging from additional intervals. As both mineralisation and clay logs can be discontinuous within holes, there has been no effort by H&A to determine coverage of this data. Clay logging has not been undertaken for holes now missing core photographs, these being all 35 HG drillholes and holes BC011-01A and BC025-03 from the FPT drilling.

There is no oriented core at Beutong, hence the logged structural data is of limited use.

H&A during a site visit in 2012 observed both porphyry and skarn mineralisation in drill core and outcrop at Beutong. Some of the lithologies described in Section 7.2 were also observed. Core photography exist for FPT and TCS holes which offer a way of quickly validating logging on an asrequired basis.

H&A did not find any reason to question that the logging is adequate for modeling the Beutong geology and mineralisation at the scale undertaken for the 2014 resource estimate.

12.3.3 Density

Specific Gravity measurements were taken using the immersion method (Archimedes Principle) for determining sample volume. FPT protocols for taking specific gravity measurements included a step of sun drying competent and friable samples in open plastic bags. Subsequent work by TCS, who determined both bulk density (BD) and dry bulk density (DBD) from each sample show that FPT specific gravity measurements are more akin to the TCS bulk density measurements than the dry bulk density measurements. The FPT data is excluded from determining tonnage factors for the resource estimate.

The TCS protocols relied on the PT Intertek Utama Services Medan laboratory (ITS) to dry and weigh samples in determining their dry bulk density. Despite providing protocols and two visits to the laboratory to instruct ITS personnel on how to undertake the work, ITS used three balances, two of which had inappropriately large graduations to accurately determine the weight of the SG samples.

Table 5 shows the effect of the rounding or precision issues on the measured DBD resulting from the use of balances with 100g and 10g graduations. The relative errors increase with decrease in sample volume and increase in balance graduation steps. The readings off the balances is a rounded reading and, although each sample will inherit an absolute error up to the maximum value noted in Table 5, it is expected that as a population, the error of the average all values will be negligible as positive and negative errors will tend to cancel each other, especially in large datasets. The imprecision of individual values in the DBD dataset renders them independently unreliable in determining tonnage factors, however as a population, the DBD dataset is likely to be reliable in determining global tonnage factors for domains with large sample numbers.

Table 5: Relative error in dry bulk density measurements due to balance graduation issues –samples from Porphyry, Outer Porphyry and Skarn domains.

Balance	Volume of	Count	Max. Relative
Graduation	DBD Sample		DBD Error
	<500ml	125	0.1%
1 gram	500-1000ml	56	0.0%
1gram	1000-1500ml	10	0.0%
	Total	191	0.1%
	<500ml	60	0.7%
10 gram	500-1000ml	117	0.4%
10gram	1000-1500ml	30	0.3%
	Total	207	0.5%
	<500ml	190	6.6%
100 gram	500-1000ml	294	3.5%
100gram	1000-1500ml	93	2.3%
	Total	577	4.3%
То	tal	975	2.7%

20cm samples were selected to undertake BD and DBD determinations. To guard against sample selectivity, and to reflect the observation that sulphide content is generally low for mineralised intervals, the BD and DBD datasets were trimmed to exclude values <1.00g/cc and >3.00g/cc. The dataset used in determining tonnage factors for the mineralised domains is summarized in Table 6.

Table 6: Summary details of Bulk Density and Dry Bulk Density dataset for determining TonnageFactors in Mineralised Domains.

Company	Period	Domain	Ν	lumber of M	easurement	S	Avera	ge SG
			Ommitted (SG <1 or >3)	Inclu	ıded	Inclu	ıded
			Bulk	Dry Bulk	Bulk	Dry Bulk	Bulk	Dry Bulk
			Density	Density	Density	Density	Density	Density
Freeport	2007-2008	Porphyry	26		1952		2.41	
		Outer Porphyry	31		896		2.41	
		Skarn	74		123		2.53	
	Total		131		2971		2.42	
Tigers	Post-March	Porphyry	8	8	678	678	2.50	2.30
Copper	2012	Outer Porphyry	31	31	373	297	2.37	2.14
Singapore	Pre-April	Porphyry	19		460		2.39	
	2012	Outer Porphyry			18		2.52	
		Skarn	9		17		1.96	
	Total		67	39	1546	975	2.43	2.25

12.3.4 Recovery

Table 7 summarizes the recovery data made available for the 2014 resource estimate. Recovery logs for 30% of HG holes, 10% of both FPT and TCS holes are absent from the dataset evaluated as part of the 2014 resource estimate. Table 8 lists the holes within the mineralised domains that are missing recovery logs in the resource dataset. Although there is a significant percentage of data missing for analyzing the relationship between recovery and grade, the available data is considered sufficient to make an assessment on the overall affect recovery has on grade for each of the drilling programmes.

Company	Domain		Interval (m)	
		Recovery Log	Missing	Total in
		Located	Recovery Log	Domains
Highlands Gold	Porphyry	358	37	396
	Outer Porphyry	258	212	470
	Skarn	10	0	10
HG	Total	626	249	876
Freeport	Porphyry	5531	628	6159
	Outer Porphyry	2498	399	2897
	Skarn	564	40	604
FPT	Total	8593	1066	9660
Tigers Copper	Porphyry	6493	425	6918
Singapore	Outer Porphyry	1291	352	1643
	Skarn	200	0	200
TSC	Total	7983	777	8761
Т	otal	17203	2093	19296

Table 7: Recovery logging coverage.

Holes missing recovery:

Missing Recove	ery Data - Lis	ting of missing	-	vithin Porphyry, Outer Porphyry and Skarn Domains
Entire Domain	Intercept	>20m in D	omain	1m to 20m in Domains
Hole	length	Hole	length	Holes
101BE97	238	BC002-01	58.5	002BE96; 008BE96; 009BE96; BC001-01
BC008-02	24.7	BC010-02	95	BC001-02; BC001-03; BC001-04; BC004-01
BC020-02	45.5	BC010-04	62	BC004-02; BC004-03; BC005-01; BC005-02
BEU0600-01	8.2	BC011-01	55.5	BC006-01; BC010-01; BC010-03; BC013-02
BEU0600-02	275.65	BC011-03A	173.3	BC013-03; BC016-01; BC016-02; BC016-03
BEU0600-03	97.7	BC013-01	20	BC017-01; BC020-01; BC020-02A; BC020-03
BEU1000-05	257.65	BC015-01	28.6	BC021-01; BC021-02; BC026-01; BC026-02
		BC015-02	29.8	BEU0800-01; BEU0800-02; BEU0800-03; BEU0900-01
		BC015-03	25.8	BEU0900-02; BEU0900-03; BEU0900-04; BEU0900-05
		BC029-01A	241.8	BEU1000-01; BEU1000-02; BEU1000-03; BEU1100-01
		BEU1000-04	46.7	BEU1100-02; BEU1100-03

Table 8: Holes where Recovery Logging not delivered for 2014 resource estimate.

There was no investigation into the accuracy of the recovery logging undertaken by H&A.

12.3.5 Assays

Details of element coverage and validation processes are covered in Sections 11.3 to 11.5.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Metallurgical Testwork

Preliminary flotation test work was conducted on Beutong drill core samples by Metcon Laboratories. The aim of the test work was to demonstrate acceptable metallurgical performance of a conventional crush/grind/flotation process to produce a saleable, quality product (copper concentrate). The main copper bearing minerals reported at Beutong are covellite and digenite which suggest high concentrate grades will result from flotation. Enargite (Cu₃AsS₄) is also reported and could potentially lead to elevated levels of arsenic (As) in the copper concentrate produced.

Samples

Three porphyry samples and one skarn sample were prepared from holes BC007-01, BC007–03, BC017–02, BEU0800–01, BEU0800–02 and BEU0800–03. These samples are considered indicative of the mineralisation styles at Beutong though it became evident during the testwork that sample quality was dubious due to aging/storage conditions and that the deteriorated core may possess different metallurgical responses than in situ ROM ore.

Four composite samples were selected, to provide a range of Cu:As ratios in order to assess As levels in a final concentrate, as follows:

- Composite 1: Porphyry high Cu (>1%), low As (<80ppm)
- Composite 2: Porphyry high Cu (>1%), high As (>200ppm)
- Composite 3: Porphyry low Cu (~0.5%), low As (<100ppm)
- Composite 4: Skarn high Cu (~0.88%), high Au (~0.87g/t), moderate As (<500ppm), high Zn (>1%)

Flotation Tests

Rougher flotation tests were carried out as follows -

- Primary grind size 120μm
- pH 10 (using lime)
- Frother MIBC (common frother)
- Collector several collectors were screened, collector "A238" selected
- Flotation time 8 minutes (5 rougher, 3 scavenger)

Under these conditions, copper recoveries of up to 89% and concentrate grades up to 23% Cu were achieved. Although satisfactory, higher concentrate grades were expected based on the reported mineral species present. The low concentrate grades may be due (in part) to the poor sample quality, but requires further investigation.

Arsenic levels in concentrates were generally well below the penalty levels applied by smelters.

Regrinding

Cleaner flotation tests were conducted on one composite after regrinding the rougher concentrates to $40\mu m$ and to $20\mu m$ to increase mineral liberation. This resulted in a slight increase in copper concentrate grade.

13.2 Mineralogy

Mineralogical assessment of some flotation feed, concentrate and flotation tails was carried out by McArthur Ore Deposit Assessments (MODA) to evaluate the textural features of the sulphides and their likely metallurgical impact.

Observations

• The chalcopyrite, covellite, bornite and chalcocite grainsizes are quite variable. Whilst most should liberate well using a medium grind, composites containing pyrite and muscovite/chlorite will occur.

- The very fine-grained intergrowth of melnikovite pyrite with covellite may need to be addressed, although the additional Cu metal content of covellite will be a benefit.
- Some tennantite and enargite will report to the concentrate, introducing minor penalty arsenic. This may be overcome by blending ore sources, as only a few samples contained tennantite or enargite.
- The major gangue minerals (quartz, muscovite, chlorite, albite and carbonates) are not expected to cause any metallurgical difficulty, apart from the energy required to grind such siliceous ores.
- The garnet that occurs only in one sample will introduce additional ore hardness

MODA concluded that the textural variability would not present many challenges during processing.

13.3 General Metallurgical Conclusions

Despite the preliminary nature of the test programme and the quality of the samples used, the simple conclusions are as follows:

- 1. Beutong ore is amenable to a conventional crush/grind/float process.
- 2. A saleable copper concentrate can be produced both in terms of the copper grade and the arsenic levels.
- 3. Further test work is needed to improve the metallurgical performance higher copper recoveries and concentrates grades are expected.
- 4. Elevated molybdenum levels in ore may provide for a by-product molybdenum concentrate with related financial benefits.

14 MINERAL RESOURCE ESTIMATES

The maiden resource estimate for the Beutong mineralisation was undertaken by H&A in September 2012. In late 2012 TCS advised H&A that one batch of results had not been accounted for in their data transfer to H&A for the 2012 estimate (part three holes) and in early 2014 TCS drilled an additional two deep holes into the mineralisation. The 2014 resource estimate update for the Beutong Mineralisation utilises the 2012 estimate as a base which has been updated to include the data and information from the late batch and two deep holes.

The Measured and Indicated mineralisation at Beutong is both spatially and statistically consistent at the 0.3%Cu reporting cut (basis for cut explained at Section 14.10). These volumes report grades consistent with large porphyry deposits located elsewhere in Asia (such as Batu Hijau). Large volumes of the Inferred mineralisation indicates that they too will prove to be consistent and of comparable (though slightly lower) grades to the current Measured and Indicated Resource material. It is on these bases that the resources estimated at Beutong are considered as having a reasonable prospect for economic extraction.

14.1 Resource Data Analysis and Investigation

The following analyses and investigations underpin the modeling of the deposit and the grade interpolation strategies for and classification of the 2014 Beutong resource estimate.

14.1.1 Assay Quality Assurance and Quality Control Assessment

An assessment of the Cu, Au, Ag, Mo and As assay quality control data was undertaken prior to conducting the resource estimate. A presentation of key points is presented in this Section of the report.

The QC analysis is incomplete as there are a number of assay results not available for the FPT samples and there is no historic record of sample preparation or analytical methods undertaken on the HG samples nor any preserved QC assay results for evaluating the reliability of their assays. Given that the HG data contributes to a minor portion of the resource estimate the risk associated with this lack of information is considered low and does not impact on the classification of the resource estimate (Section 14.9). The missing FPT QC data requires locating and including into the evaluation of assay reliability in future resource estimates. However if this is not possible, the omission of this data is considered of low risk to the estimate as it is considered a high probability that the missing data would show similar good quality and consistency as shown in the available QC data.

14.1.1.1 Sample preparation and assay

Details of sample preparation and analysis can be found in Section 11.

14.1.1.2 Quality Assurance Protocols

Core yard sampling protocols and laboratory sample preparation flow sheets exist for the FPT and TCS programmes (Section 11). It is unknown if FPT undertook any laboratory audits. Findings from a H&A review in 2012 of the ITS facilities and practices can are included in Section 11.5.

14.1.1.3 Quality Control Sample Inclusion Rates

Assay quality control sample insertion rates described here are derived from the assay results in the reissued report files from ITS.
Standards

Both FPT and early TCS protocols (pre March 2012) submitted small batches of samples, typically 20-40 in number and included one or two client standards in each batch. This insertion rate is inappropriate for assessing data reliability of individual batches and can only be confidently used in assessing the long-term consistency of the laboratory's performance. Following March 2012 TCS increased the number of samples per batch to better fit with ITS's ideal batch sizes of 150 to 200 samples and increased the number of QC samples to typically between 6 and 8 standards per batch (suitable for assessing both the short and long term laboratory performance). Inclusion of standards in batches is incomplete, with 20 of 259 batches missing Copper QC assays, 60 missing Au QC assays, 246 missing Ag QC assays and 198 missing Mo QC assays.

ITS inserted laboratory standards into the analytical stream at the rate of 1:15 samples.

Blanks

FPT dispatches included one coarse blank sample. The pre-March 2012 TCS batches typically contain one or two coarse blank samples which was increased to 1:25 samples post-March 2012. These were selectively inserted to be concentrated within mineralised intervals. All coarse blanks are identified as being made from limestone.

TCS inserted certified pulp blanks into dispatches post-March 2012 at the rate of 1:25 samples and they follow the standards in the analytical sequence.

ITS inserted laboratory blanks at the rate of 1:15 samples into the FPT analytical stream which was decreased to 1:25 samples for the TCS analytical work.

20 of 259 batches were submitted without either client/field coarse or pulp blanks.

Duplicates and Repeats

FPT directed ITS to generate a -2mm coarse crush duplicate at the rate of 1:15 samples and insert these samples into the analytical stream immediately following the original samples. This appeared to be a late amendment to the laboratory protocols, possibly post 2nd March 2007 (as indicated on the sample flowsheet) and was not consistently undertaken. 109 of the 217 batches contain crusher duplicate assays.

No crusher duplicates were prepared for TCS batches pre-March 2012. Post-March 2012 -2mm coarse crush duplicates were included nominally at a rate of 1:25 samples (as directed in protocols), however rates vary from 1:10 to 1:60 samples.

Pulp duplicates were inserted into the sampling stream by ITS. This was undertaken irregularly for the FPT work, with only 21 batches containing 1 or 2 duplicates and routinely for the TCS work at a rate of 1:15 samples.

Laboratory repeat assays were undertaken at a nominal rate of 1:15 samples however most batches show higher insertion rates as a result of selective re-assaying during the QC process.

Missing Laboratory QC results

ITS reported the client data and the laboratory QC results in separate files for the FPT programme. By detaching the lab QC results from the client results, ITS created a system that allowed related QC results to be lost from their system. Of the 217 client data reports re-issued by ITS for the FPT programme only 164 Lab QC reports were re-issued. Details of the missing QC data for batches are:

- 53 DPOs namely from ACH-25 and EMM-0002 to EMM-0060 excluding:
 - o EMM-0055 (QC supplied), and
 - EMM-0032, EMM-0037, EMM-0045, EMM-0048, EMM-0053, EMM-0058 (DPO's not used for drill core samples)
- 18 Holes affected; BC001-[01-04], BC002-[01,02], BC003-[01,02], BC004-[01-03], BC005-[01-03], BC006-[01,02], BC007-[01,02]
- 1,338 samples affected.
- The grades in the Western Porphyry (Inferred classification, CIM Guidelines) and upper central area of the Eastern Porphyry (Measured classification, CIM Guidelines) are informed by these holes (Figure 15).



Figure 15: Eighteen FPT holes with missing laboratory QC results (resource triangulations visualised with partial transparency, Outer Porphyry triangulation not shown).

The omission of this data is considered of low risk to the estimate as:

- there are a significant number of assays in the vicinity of this data where reliable assay quality is well established from QC data and these assays contribute to block grades at the same or greater extent as the samples of unknown quality,
- the western porphyry mineralisation is classified as Inferred Resources, which considers the lower confidence in assay reliability for this mineralisation than at the Eastern Porphyry, and
- it is considered a high probability that the missing data would show similar good quality and consistency as shown in the available QC data.

14.1.1.4 Sample Preparation – Sizing Data Analysis

ITS does not routinely report the results of their crushing and pulverizing sizing checks. H&A did not request to obtain this data as the duplicate samples show acceptable precision that does not impact on resource classification under the CIM Guidelines. The sizing analysis data is required for evaluating reasons as to why some dispatches show higher percentages of duplicate pairs with poorer repeatability than that shown for the overall dataset.

14.1.1.5 Cross Contamination and Grade Carryover – Blanks Analysis

Coarse blanks, pulp blanks and laboratory blanks all show that there are no issues regarding contamination or grade carryover that impacts on resource classification under CIM Guidelines, (2012 Edition, Table 9 and Table 10). A single elevated Cu value of 1070ppm was returned for the coarse blank inserted into batch EMM-0196. This blank indicates that there is an issue with contamination or carryover in this batch which contains assays for samples from 108m to 225m in hole BC029-01. This mineralisation is modeled as being part of the Inferred Outer East Porphyry Resource.

			Free	port - A	Analytic	cal Bla	nks Ana	alysis				
Do	nulation	F	Field - C	Coarse	Blanks			La	b Blan	ks		
Population Distribution		Cu	Au	Ag	Мо	As	Cu	Au	Ag	Mo	As	
		GA31	FA30	IC01	XR01	XR01	GA31	FA30	IC01	XR01	XR01	
COUNT		200	200	28	199	199	407	319	149	220	220	
	1%	10	0.005	0.1	0.5	0.5	10	0.005	0.05	0.5	0.5	
	25%	10	0.005	0.4	0.5	0.5	10	0.005	0.05	0.5	0.5	
e.	50%	10	0.005	0.6	1	2	10	0.005	0.05	0.5	0.5	
ercentile	75%	10	0.005	0.6	1	4	10	0.005	0.05	0.5	0.5	
D a	90%	30	0.010	2.0	2	6	10	0.005	0.05	0.5	0.5	
ď	95%	30	0.010	2.3	3	7	10	0.005	0.05	1	0.5	
	99%	80	0.02	2.8	4	9	10	0.005	0.05	1	1	
	100%	1070	0.03	3.0	12	14	10	0.005	0.05	1	1	

Table 9: FPT Blanks analysis summary.

 Table 10: TCS Blanks analysis summary.

	Tigers Copper Singapore - Analytical Blanks Analysis														
De	nulation	F	Field - (Coarse	Blanks		Fie	Field - Pulp Blanks				La	b Blanl	ks	
Population Distribution		Cu	Au	Ag	Мо	As	Cu	Ag	Мо	As	Cu	Au	Ag	Мо	As
		IC30	FA30	IC30	IC30	IC30	IC30	IC30	IC30	IC30	IC30	FA30	IC30	IC30	IC30
0	COUNT	90	90	90	90	90	27	27	27	27	121	169	121	121	121
	1%	1	0.005	0.25	0.5	2.5	3	0.25	1	2.5	1	0.005	0.25	0.5	2.5
	25%	5	0.005	0.25	2	2.5	7	0.25	4	2.5	1	0.005	0.25	0.5	2.5
<u>e</u> .	50%	10	0.005	0.25	3	2.5	9	0.25	5	2.5	1	0.005	0.25	0.5	2.5
ercentile	75%	20	0.005	0.25	5	2.5	11	0.25	6	2.5	1	0.005	0.25	0.5	2.5
0	90%	32	0.010	0.5	7	5	11	0.25	7	2.5	1	0.005	0.25	0.5	2.5
ď	95%	47	0.010	0.7	8	6	11	0.25	7	2.5	1	0.005	0.25	0.5	2.5
	99%	68	0.021	0.9	10	10	13	0.25	14	2.5	1	0.005	0.25	0.5	2.5
	100%	73	0.030	1.1	11	11	14	0.25	16	2.5	1	0.02	0.25	0.5	2.5

14.1.1.6 Analytical Accuracy and Precision – Standards Analysis

Sixty-three different certified standards were utilised over the years by FPT, TCS and ITS, some of which are too low in value to be of use in assessing assay data quality. Only those standards with certified values for elements that are within the significant ranges (wrt mineralisation and the laboratory method lower detection limits) were used in assessing the analytical accuracy and precision of the assays used in the resource estimation.

The QC was assessed through performance summary plots and shewart control charts (split by worker) as per the examples presented at Figure 16 and Figure 17. The overall performance of all standards for Cu, Au, Ag, Mo and As assays can be viewed in the performance summary table at Appendix 9.

Observations from the Certified Standards Evaluation for each element follows:

Copper

There are no discernible issues with the Cu assay accuracy or precision that can be identified from the standards QC dataset that require consideration in classifying the resource estimate under the CIM Guidelines.



Figure 16: Copper Field Standards- FPT; overall performance summary. A complete set of analyses results are tabulated at Appendix 9.



Figure 17: Copper Field Standards- FPT; Shewart control chart. A complete set of analyses results are tabulated at Appendix 9.

Gold

The FPT Au standards show acceptable accuracy, however precision for the field/client standards is relatively high (wrt past observations by H&A). There are no discernible issues with the Au assay accuracy or precision that can be identified from the laboratory or TCS field standards QC dataset that require consideration in classifying the resource estimate under the CIM Guidelines.

FPT prepared their own standards which did not include an intra-pulp homogeneity test (a procedure that usually involves neutron activation analysis for gold from multiple charges taken from a single pulp). It is likely that the quality of the standards is the issue highlighted in the FPT field Au QC analysis rather than any concern regarding the ITS analytical procedure. As gold a minor component of the mineralisation at Beutong, the precision of the FPT field standards is not considered in the classification of the resource estimate. An investigation into the reasons why the FPT field standards Au grades show lower precision than other datasets is advised to ensure that there are no reasons to doubt the quality of the ITS assay data.

Silver, Molybdenum and Arsenic

There are discernible issues with both accuracy and precision observed in the silver, molybdenum and arsenic assays for both field and laboratory standards, predominantly in the FPT dataset. It is anticipated that these elements will contribute to the economics of the Beutong project in only a minor way and in addition, the FPT dataset is not a significant input into the Measured and Indicated Resources in the estimate (Section 14.9). There is no consideration for the reliability of the Ag, Mo and As assays in classifying the resource under the CIM Guidelines.

Full evaluation

A complete tabulation presenting the evaluation of the standards data is included at Appendix 9.

14.1.1.7 Duplicate and Repeat Sample Analysis

Details of duplicate and repeat samples analysis are tabulated at Appendix 9 and an example of the analysis included at Figure 18. The FPT data shows that total variance for Cu assays introduced during sample preparation is 5%AAMPD (%Av. |Mean Paired Difference|) for crushing, splitting, pulverizing, pulp-sampling and taking the assay charge. The total variance for the TCS assays is shown to be 3%AAMPD. The variance measured at both the pulp and assay charge generation is 2%AAMPD for both the FPT and TCS datasets, indicating that the pulverized material is well homogenized at both small and large scales of support. Similar analyses of the duplicate and repeat Au, Ag, Mo and As assay datasets show acceptable low levels of variance introduced during sample preparation.

There are no discernible issues identifiable from any of the -2mm coarse crush duplicate, pulp duplicate or repeat assay datasets from both the FPT and TCS analytical programmes that impact on the classification of resources at Beutong (following CIM Guidelines).

Batches that show poor repeatability (high %MPD) of individual duplicate pairs are identified in the tabulated information at Appendix 9. This information is supplied and is to be used as a guide in selecting samples for submission to reference laboratories in any future analytical programme or resource update.



Figure 18: TCS Pulp Duplicates analysis. A Complete set of analyses results are tabulated at Appendix 9.

14.1.1.8 Assay Quality and Reliability Considerations

It is of interest that in most cases the laboratory standards data shows significantly better accuracy and precision than the field submitted standards. This observation requires further investigation and highlights the necessity to submit a batch of samples to reference laboratories (including QC samples). The overall acceptable standard of the current QC data suggests that reference laboratory results should correlate well with the original ITS assays, however there is always a chance that they will not (possibly uncovering currently non-detectable issues) and this important step in the QC procedure is required for any future resource update.

14.1.2 Comparison of Assay Datasets

The FPT and TCS assays were compared to assess if combining these datasets was appropriate for undertaking the resource estimate. No comparison was made with the earlier HG dataset as these holes have limited input into the grade interpolation at Beutong (Section 14.9).

The FPT copper, gold and silver assay populations within the mineralised domains (porphyry, outerporphyry and skarn) are negatively skewed compared to the TCS copper gold and silver assay populations (Cu and Au comparisons presented at Figure 19). This trend is also observed when lower-cuts are applied (>5000ppm and >10000ppm Cu subsets) and when the assays from holes on section lines 800 and 900 are assessed, representing a restricted volume where mineralisation is likely to be comparable (>230125E and <230350E, >495250 and <495450N, >790RL; including holes BEU0800-[01-03], BEU0800D-01, BEU0900-[01-05], BC001-[02-04], BC004-[01-03], BC010-[01-04], BC011-[01-03], BC015-[01,03], BC016-[01-03]).

The molybdenum and arsenic assays are comparable between the FPT and TCS datasets.



Figure 19: Comparison of copper and gold assay populations between FPT and TCS datasets. The FPT dataset is negatively skewed compared to the TCS dataset. Improved drilling, core handling and sampling protocols by TCS may be responsible for better representivity of in situ material in samples submitted to ITS.

FPT undertook check assays of 394 samples from 13 holes by IC30 (the analytical method used by TCS) which shows very good correlation with results from their routine method GA31, ruling out

analytical method as the source of relative bias. QC data analysis supports the reliability of assays from both the FPT and TCS datasets.

The reasons for this relative bias is yet to be positively identified and qualified, however there are four key areas where TCS have improved the protocols and chances of getting better representivity of the deposit grades of the Beutong porphyry, namely:

- Focusing the drilling on the known mineralisation, as the purpose of the TCS drilling was to generate a dataset suitable for classifying resources as Indicated and Measured according the CIM Guidelines. Their drilling may have concentrated on the better mineralised areas of the deposit, particularly between 200m and 500m below surface in the Eastern Porphyry, where TCS holes dominate.
- TCS drilled a higher percentage of PQ meters than FPT within the mineralised domains (15% vs 2%). Core recovery and sample representivity generally improves with increase in the primary sample size (core diameter).
- TCS have focused on obtaining good core recovery in their drilling. The improved core recoveries for the TCS drilling can be seen in Section 14.1.3.
- Core handling and sampling procedures were improved for part of the TCS programme to be more suitable in maintaining the integrity of clay-rich and friable core. The friable core is common in the upper portions of the Eastern Porphyry, a volume where FPT and TCS holes are focused.

H&A considers that all of these factors contribute to improvement in sample and assay representivity in the TCS programme and that the relative bias affects the reliability of FPT data in informing the resource estimate (Section 14.9).

14.1.3 Copper Grade Relationship with Core Recovery

Length core recovery shows improvement for each drilling programme [Length core recovery = length of core recovered expressed as a percentage of length of metres drilled]. Overall recovery for the HG drilling is poor, with only 27% of mineralised intervals (samples) recording recoveries of >90% (Figure 20a). 52% of the HG mineralised samples have recorded recoveries of <80%. The recorded data from the FPT drilling programme show marked improvement in recoveries, however with only 38% of mineralised intervals showing recoveries of >90% and 30% of samples showing recoveries of <80%, the dataset is still considered to be significantly affected by recovery issues. TCS focused on improving and maintaining core recovery during their drilling programme and the results of their effort show, with 60% of the mineralised samples having recoveries of >90% and only 15% of samples showing recoveries of <80%. The TCS dataset is likely to be less impacted by recovery issues than data from the earlier two programmes.

There is a noticeable correlation between length core recovery and copper grade (Figure 20b) particularly in the TCS dataset. It is likely that the inverse relationship shows up better in the TCS

dataset than in the FPT or HG dataset as this data better reflects the relative difficulty in drilling conditions between weakly and strongly mineralised material (as TCS focused strongly on maximizing recoveries) whereas recovery in the earlier programmes may be affected by drilling protocols governed by goals other than recovery.

Evaluation of the core shows that preferential loss or retention of material is occurring in friable and clay rich intervals. Figure 21 shows an example of clayey material having been washed or scrubbed out of fractures and the core has been affected by partial or interstitial core loss, which in places is extreme and it presents as rubbly sections and measurable length core loss. Length core recovery is measured at 90% for this core however volume core recovery is significantly lower.

TCS introduced the logging of partial core loss where, if present, loss is logged as trace, moderate and severe. Table 11 shows the distribution of this logging from holes in the Eastern Porphyry. 60% of core from the modeled clay zone show moderate to severe partial core loss which is a higher portion than that for the non-clay zone material (still significantly high at 46%). Partial core loss will impact on the representivity of the samples at Beutong. H&A observed that the handling of core during processing also preferentially favoured the loss of friable material, especially as the core dried out. It is suspected that the partial core loss during handling and sampling has been severe in the past and would have persisted, though significantly reduced, with the improved TCS handling protocols.

Core recovery at Beutong appears to preferentially favour the more competent material. As yet it is unknown if the preferential recovery (or loss) has biased measurements of the core wrt the in situ values (assays, SGs, geotech, logging etc.). It is quite likely that a portion of the improvement in Cu, Au and Ag grades in the TCS dataset (over the FPT dataset) can be attributed to better recoveries and core handling procedures employed to obtain more representative samples for assay. If this is the case then loss is resulting in an underestimation of grade at Beutong. It is unlikely that the effect of core loss can be quantified, however an investigation into the preferential loss is required so that the affect can be qualified and the risk to the resource estimate better understood.



Figure 20: Length core recovery investigation. TCS drilling shows best core recovery and clearest association between Cu grade and recovery. It is unknown if this reflects a positive or negative bias in grade as the grade of the material lost is not known.



Figure 21: Core showing significant clay alteration and partial core loss.

Table 11: Partial or interstitial core loss logging. Trace = some evidence in loss i.e. small pits and washing up to 1mm in depth. Moderate = pits washing and gouging on core surface and along fractures/faults that visibly scars the core i.e. 1-3mm in depth. Severe = Substantial loss, gouging that has a deform appearance of core from significant washing of soft materials.

			Internal Core Loss Estimate					
Modelled Domain	Count	Detail	none	Trace	Moderate	Severe		
Porphyry -	657	Portion	5%	34%	35%	26%		
Clay Zone	657	Cu Grade (%)	0.40	0.45	0.49	0.45		
Dorphyry		Portion	10%	44%	33%	13%		
Porphyry	476	Cu Grade (%)	0.76	0.45	0.61	0.37		

14.1.4 Copper Grade Relationship with Drilling Orientation

There is no discernible relationship between assay grades and drillhole orientations.

TCS personnel and H&A have not recognized any persistent prevailing veining or micro/meso-scale mineralizing orientations at Beutong. Furthermore there is no oriented core and limited logging data to effectively investigate this relationship through data interrogation methods. H&A considers that the mineralised drill intercept lengths approximate true thicknesses (resulting in minimal impact on experimental variography) and that the modeling of the deposit, in generating a resource estimate, correctly accounts for any volume (tonnage) considerations.

H&A considered that any likely grade uncertainty relating to primary sampling orientations (eg. vein to core axis angles) be accounted for through classification of the resource estimate. With the mineralisation being both of porphyry and skarn style and of significant scale, and at the current sampling densities (a consideration in classifying the resource estimate), H&A considers that any local unfavorable primary sampling orientation would not materially impact on the global grade of the Measured and Indicated Resources at Beutong. Any risk to the estimate associated with the primary sampling orientation within the less densely drilled volumes of mineralisation is accounted for through the low confidence Inferred Resource Classification (NI 43-101) applied to these volumes.

14.1.5 Tonnage Factor Determination

Average dry bulk density numbers are employed as tonnage factors for the resource estimate.

Dry Bulk Density (DBD) determinations were coded by the modeled clay domains (Figure 23). The average DBD for samples within the clay domains is 2.25g/cc (from 389 samples) and for those

outside of the clay domains is 2.37g/cc (286 samples). These tonnage factors were stamped on the block model according to clay coding of blocks assigned by the same clay domains.

14.2 Resource Domaining

Sectional interpretation of the project geology was supplied from site to H&A as 3D drawing exchange files. The outlines in these files were used as a guide to generate the resource interpolation domains which are TIN (triangulated) 3D geometries that honour both the geological interpretation, the copper grade from the drillhole data and the spatial location of samples. The interpolation domains differ from the geological interpretations as they have been simplified to more robustly honour the drilling intercepts (straight line interpretations), are restricted to the mineralised portions of the porphyry and have been modified to generate more simplified 3D geometries than those described by the sectional geology interpretation outlines. The overall volumes defined by the resource domain and the geology interpretation strings are comparable where the mineralisation is classified as Indicated and Measured Resources (CIM Guidelines).

The Beutong resource domains were modeled using the Minesight[™] mining software package and triangulations imported into Vulcan[™] to complete the resource estimate. To ensure spatial consistency the drillholes were first desurveyed in Vulcan[™], then polar coordinates were generated for each assay interval and used to define the hole traces in Minesight[™]. The triangulations used in generating the estimation domains are displayed in Figure 22 and Figure 23.



Figure 22: Beutong resource estimation domains.



Figure 23: Beutong clay domains and Oxide/Partial-Oxide logged intervals.

The final triangulations utilised for grade interpolation are listed in Table 15. Table 12 shows the average grade for samples within 15m of the resource domains' contacts. The distinct grade differential for Cu and Mo between the porphyry and other domains is portrayed in this table. The grade differential is less obvious between the outer porphyry domain and non-mineralised material for these elements, reflecting the sporadic nature of this mineralisation. Grade differentials are less obvious for Au and Ag and only moderately detectable for As. Distinct grade differential shown in Table 12 and by more detailed analysis undertaken as part of the exploratory data analysis and estimation design work (Section 14.6) supports the employ of the domains as hard boundaries for controlling grade interpolation for copper, gold, silver and molybdenum with no boundaries applied for the arsenic interpolation (which shows more continuous grade distribution across the prospect).

Doulluaries.							
Contact	Domain	Count	Average	e Grade : Sa	mples wit	hin 15m of	contact
Contact	Domain	count	Cu (ppm)	Mo (ppm)	Au (ppm)	Ag (ppm)	As (ppm)
Porphyry_East to	Porphyry_East	91	4639	175	0.06	1.4	174
Outer_Porphyry_East	Outer_Porphyry_East	85	1953	93	0.05	0.7	69
Downhum: Cost to other	Porphyry_East	270	5250	87	0.11	2.1	67
Porphyry_East to other	other	270	1470	40	0.06	1.5	45
Outer_Porphyry_East to	Outer_Porphyry_East	65	2903	55	0.05	3.3	156
other	other	70	1527	47	0.04	0.7	36
Porphyry_West to	Porphyry_West	67	4376	84	0.10	0.6	188
Outer_Porphyry_West	Outer_Porphyry_West	59	2020	64	0.07	1.7	93
Damahumu Mashka akhan	Porphyry_West	72	3752	131	0.10	2.7	199
Porphyry_West to other	other	80	1568	90	0.07	2.8	125
Outer_Porphyry_West to	Outer_Porphyry_West	41	778	63	0.10	0.9	79
other	other	45	674	75	0.11	11.8	45
Chann to other	Skarn	143	7831	9	0.28	8.5	204
Skarn to other	other	131	878	19	0.06	2.1	51

Table 12: Contact Analysis - Sample g	rades relative to grade interpolation triangulation
boundaries.	

Clay models were generated from broad classification logging of core photographs (in conjunction with the coreyard logs). The aim of the clay logging is to assess the association between dry bulk density (DBD) measurements and the intensity of clay alteration. Core was classified as being either:

- Clay type 0 = no clay alteration.
- Clay type 1 = weak patchy/blotchy clay alteration and vein infill.
- Clay type 2 = moderate to strong patchy/blotchy clay alteration and vein infill commonly showing weak to moderate internal core loss.
- Clay type 3 = strong to intense pervasive clay alteration, obliterating original textures commonly showing moderate to intense internal core loss.

There is an association between DBD and intensity of clay alteration and the clay model is utilised in applying tonnage factors to the resource model.

14.3 Copper Assay Compositing

3m composites were generated and coded by triangulations with the same "dommin" variable values as used in coding the block model (Table 15). The coded composites and block model "dommin" variable are utilised in controlling grade interpolation into the block model. Composite numbers and average grades are listed in Table 13.

Domain			Number	of Com	posites			Average	Grade (ppm)	
Classification	Domain	Cu	Au	Ag	Мо	As	Cu	Au	Ag	Мо	As
	East Porphyry	3459	3459	2489	3459	3459	6576	0.13	2.2	105	143
	West Porphyry	992	992	361	992	992	4242	0.12	1.0	154	264
	Outer East Porphyry	973	973	554	973	973	2540	0.06	1.6	93	120
Mineralised	Outer West Porphyry	448	448	85	448	448	2137	0.10	1.4	49	161
	Skarn	269	269	168	269	269	7661	0.33	8.1	15	159
	Total	6141	6141	3657	6141	6141	5283	0.12	2.2	103	161
	Barren Breccia	717	717	511	717	717	1587	0.06	1.6	46	44
	Diorite Dyke	187	187	115	187	187	1011	0.04	0.3	56	24
Non-Mineralised	Serpentinite	541	541	321	541	541	914	0.07	2.6	19	64
	Unconstrained	4582	4582	1465	4582	4582	930	0.04	2.4	42	87
	Total	6027	6027	2412	6027	6027	1009	0.05	2.1	41	78
1	Total		12168	6069	12168	12168	3166	0.09	2.2	72	120

Table 13: Composite Details.

14.4 High Grade Copper Treatment

The composites' grade populations for the porphyry, outer porphyry and skarn domains were assessed and appropriate strategies for the treatment of high grade values determined. High grade cuts and restrictions were applied to outlier grades following an assessment of their spatial distribution which, if determined to be clustered, a restriction was applied (preserving grade but limiting spatial influence) and if more evenly distributed, a cut was applied (limiting grade but not spatial influence). Figure 24 presents an example of the high grade analysis and Table 14 lists the treatment applied for each element and domain in the resource estimate. Where restricted, outlier grades influenced the interpolation of blocks within a radius of 50m in both the major and semi-major search directions and within 30m in the minor search direction (i.e. the restriction volume is aligned with the search ellipsoid utilised for resource estimation sample selection).

The change in metal content listed in Table 14 is the global difference between the reported resource estimate and a model estimated with no high grade treatment. The effect is -3% for copper, -3.7% for gold and -0.8% for the molybdenum estimate. In addition the copper metal differs by only -0.4% in the Measured Resource material and by -0.6% in the Indicated Resource material, showing that where adequately drilled, the high grade treatment has minimal effect on the estimate. Both the silver and arsenic composite populations are positively skewed and the extreme grades have a significant spatial effect, contributing 26% and 25.6% of the contained metal of an estimate if included without treatment.



Figure 24: High grade treatment analysis of Eastern Porphyry domain.

Table 14: High grade treatment criteria and effect on resource estimate

Element		Porp	hyry		Outer Porphyry				Skarn				%Metal diffence
	Threshold	Treatment	Composites	Av. Grade >	Threshold Treatment Composites Av. Grade >			Av. Grade >	Threshold Treatment Composites Av. Grade >				(from check
	(ppm) Affected threshold				(ppm)		Affected	threshold	(ppm)		Affected	threshold	estimate)
Copper	16000	Restrict	66	20660	11000	Restrict	24	15883	17000	Restrict	26	26160	3.0%
Gold	0.60	Cut	12	1.42	0.50	Cut	8	1.14	0.65	Restrict	35	1.37	3.7%
Silver	6.0	Restrict	174	13	3.5	Restrict	47	10.3	15.0	Restrict	27	21.7	26.0%
Molybdenum	-	None	-	-	-	None	-	-	30	Cut	20	120	0.8%
Arsenic	2000	Cut	91	4022		incl in Porphyry figures		incl in Porphyry figures				25.6%	

14.5 Block Model Details

Grade estimation was undertaken using the Vulcan[™] software. Details of the block model are as follows and outlined in Table 15 (coordinates and azimuths are listed in UTM Zone 47N).

Model name: Beu post estimate Nov2014 Number of blocks: 483565 Number of variables: 24 (includes four variables not listed in and not populated in resource model) Number of schemas: 2 Bearing/Dip/Plunge: 90.0 0.0 0.0 Origin Parent Block Centre (x, y, z): 00000 000000 000 Offset Minimum (x, y, z): 229000.00 494800.00 0.00 Offset Maximum (x, y, z): 230700.00 495900.00 1250.00 Schema 1: Min Block Size (x, y, z): 25 25 10 Max Block Size (x, y, z): 25 10 25 No of blocks: 68 44 125 Schema 2: Min Block Size (x, y, z): 5 5 5 Max Block Size (x, y, z): 25 25 10 No of blocks: 340 220 250

Table 15:	Block Model	resource variables	- details and	coding criteria.
-----------	--------------------	--------------------	---------------	------------------

		Block Mo	del Variables						
Variable	Data Type	Default	Description						
dommin	Byte (Integer * 1)	-99	Mineralisation Domains : 10-11 Outer_porph ; 20-21 porph ; 50 skarn						
domclay	Byte (Integer * 1)	0	Clay Domains : 0 non ; 1 weak ; 2 moderate & strong						
domox	Byte (Integer * 1)	-99	Oxide Domains : 5 OxPox						
flag	Byte (Integer * 1)	-99	flagging for last Cu estimation run						
okcu	Float (Real * 4)	-99	Copper OK estimate ppm						
okau	Float (Real * 4)	-99	Gold OK estimate ppm						
okag	Float (Real * 4)	-99	Silver OK estimate ppm						
okas	Float (Real * 4)	-99	Arsenic OK estimate ppm						
okmo	Float (Real * 4)	-99	Molybdenum OK estimate ppm						
class	Byte (Integer * 1)	4	Classification : 1 meas ; 2 indicated ; 4 inferred						
tonnagefactor	Float (Real * 4)	-99	Tonnage factor - DBD defined on clay models						
nosamples	Byte (Integer * 1)	-99	number of samples in Cu estimate						
nodrillholes	Byte (Integer * 1)	-99	number of drillholes in Cu estimate						
krig_w	Float (Real * 4)	-99	kriging wt						
slope	Float (Real * 4)	-99	kriging slope						
dist_ok	Float (Real * 4)	-99	average anisotropic distance						
hgperc	Float (Real * 4)	-99	percentage Cu grade estimated utilising HG composites						
fptperc	Float (Real * 4)	-99	percentage Cu grade estimated utilising FPT composites						
trmperc	Float (Real * 4)	-99	percentage Cu grade estimated utilising TRM composites						
largesearch	Byte (Integer * 1)	-99	filled by bcf and estruns (initial value 1 where nodrillholes <3.5)						
	Var	iable Codiı	ng by Triangulation						
Triangulation	Variable	Value	Condition						
20120903_Topo_RE_Box.00t	dommin	1	within triangulation						
20120903_10_Weak_Porphyry.00t	dommin	10	within triangulation						
20141103_20_Porphyry.00t	dommin	20	within triangulation						
20141103_30_Barren_Bx.00t	dommin	30	within triangulation						
20141103_40_Serp_roof_pend.00t	dommin	40	within triangulation						
20120903_50_Skarn.00t	dommin	50	within triangulation						
20141103_60_Diorite_Dyke.00t	dommin	60	within triangulation						
20120903_OX-POX.00t	domox	5	within triangulation						
20120903_1_CLAY_Type-ge1.00t	domclay	1	within triangulation						
20120903_2_CLAY-TYPE-ge2.00t	domclay	2	within triangulation						
solid_High_class.00t	class	1	within triangulation						
solid_mid_class.00t	class	2	within triangulation						
Variable Coding by Block Calculation File									
File	Variable	Value	Condition						
TonFact_Store_DHNo.bcf	tonnagefactor	2.37	domclay It 0.5 - applied following first interpolation run						
TonFact_Store_DHNo.bcf	tonnagefactor	2.25	domclay gt 0.5 - applied following first interpolation run						
TonFact_Store_DHNo.bcf	largesearch	1	nodrillholes It 3.5 - applied following first interpolation run						
recode_porph_outerporph.bcf	dommin	21	if (xcentre lt 229880 and dommin eq 20) - post grade interpolation						
	dommin	11	if (xcentre It 229800 and dommin eq 10) - post grade interpolation						

14.6 Grade Interpolation

The experimental data analysis and estimation design was undertaken by QG Group Pty. Ltd. (QG) in conjunction with H&A. The analysis was undertaken for the 2012 estimate and remains the same for the 2014 estimate. H&A and QG consider that the additional 8% of data in four holes (of which 6% is in Inferred Classified Resources) will have negligible effect on the data analysis and estimation design.

The 2012 QG report on their input is included at Appendix 10.

QG reviewed the data and domain models and recommended that:

- Hard boundaries should be used for the estimation Cu, Au, Mo and Ag. While As should be estimated un-bounded;
- Spatial (variogram) analysis for Beutong shows the Cu grade within the main Porphyry domain to be reasonably continuous with maximum range of 200m towards 340° with a 70° dip, as illustrated by relatively low 'nugget' (25%). However, the Au, Ag, and Mo grades are less continuous within the Porphyry domain with moderate relative nugget effects (42 54%) and ranges of 45 to 200m. All elements across the Outer Porphyry and Skarn domains display only moderate continuity with relative nugget effects in the range of 40 54% and ranges from 34 to 190m. The decision to not use a boundary in the estimation of As is further supported by the variogram using all of the data, which displays reasonable continuity with a range of 45m and a relative nugget of 29%;
- A grade restriction strategy be applied to the Porphyry, Outer Porphyry and Skarn domains for Cu and Au, based on assessment of the histogram, cumulative probability plots and grade length of the element concerned; and
- The results of QKNA suggest an ellipse in the order of 200m x 120m x 90m for all three domains, orientated to the average orientation of the domains. A minimum number of samples selected of 6 and a maximum of 28, with 7 samples per quadrant.

Advice from QG and visual observations regarding the data spatial distribution and domain geometries were used to design the neighborhood search parameters. Treatment of high grade composite data is listed in Table 14. The following parameters were utilised for interpolating grade into the block model:

- First Pass:
 - Minimum number of composites to estimate variable: 6
 - Maximum number of composites to estimate variable: 28
 - Octant Search:
 - Minimum number of composites per octant: 0
 - Maximum number of composites per octant: 4
 - Minimum number of octants informed before a grade is estimated: 4
 - A minimum of samples from 4 drillholes required before a grade is estimated
 - No limit to maximum number of samples accepted from individual holes
 - Composite values above cuts are set to cuts. Samples above restriction thresholds are restricted to estimate blocks within 50 (major) x 50 (semi-major) x 30 (minor) metres from composite location, oriented by search ellipsoid. High grade treatment details are listed in Table 14.
 - Each block is discretized with
 - 5 steps in the X direction,
 - 5 steps in the Y direction and
 - 2 steps in the Z direction
 - o Sample points are selected by a search ellipsoid with the following Radii:

- Major: 200m
- Semi-major: 120m
- Minor: 90m

Composites restricted to interpolate grade into the blocks within the same estimation domains as they are located for Cu, Au, Ag and Mo. No restrictions applied in the estimation of As.

- Ellipsoids orientation:
 - Porphyry and Outer Porphyry Domains:
 - Bearing: 340^o rotation around Z' axis
 - Plunge: -70⁰ rotation around Y' axis
 - Dip: 0⁰ rotation around X' axis
 - Skarn:
 - Bearing: 270⁰ rotation around Z' axis
 - Plunge: 0⁰ rotation around Y' axis
 - Dip: -60⁰ rotation around X' axis
 - Ordinary Kriging. Kriging parameters included at Appendix 10.
 - Estimates are conducted at block centroids and written to sub-blocks
- Second Pass for blocks not estimated in Pass1 and if the number of drillholes is less than 4 in pass 1, parameters the same as for Pass 1 except:
 - \circ $\;$ The minimum number of drillholes requirement not utilised
 - o Sample points are selected by a search ellipsoid with the following Radii:
 - Major: 600m
 - Semi-major: 360m
 - Minor: 270m
 - Pass 2 not undertaken for As (increased search ellipsoid selects samples from significant lateral distance away from mineralised domains).

The percentages of the triangulated models interpolated by the estimation strategy are listed in Table 16 and the basic statistics on the reliability of the estimates are listed in Table 17. The interpolation (and classification) strategy has performed as designed, with blocks estimated and classified as Measured Resources (CIM Guidelines) having been estimated with close to the ideal (maximum) composite numbers, from a high number of holes, located relatively close to blocks (<81m). 86% of the Measured Resource is interpolated in the first pass, whereas for the Indicated Resources this portion drops to 49% and lower at 4% for the Inferred Resources. The Inferred Resources fails on the first estimation run pass predominantly due to the minimum number of holes requirement (set at equal to or more than four holes).

Table 16: Percentage of resource domains estimated by interpolation strategy. The West Porphyry domain is sparsely drilled and peripheral volumes are not estimated. The silver composite dataset is more sparsely distributed than the copper dataset, resulting in non-interpolation of peripheral areas of domains. Arsenic grades estimated by first pass only.

Element	Domain	Percentage	e Domain Int	erpolated
		Total	Measured	Indicated
		Estimate	Resource	Resource
	Outer East Porphyry	99.3%		
	Outer West Porphyry	99.9%		
Copper, Gold, Molydenum	East Porphyry	99.4%	100.0%	100.0%
	West Porphyry	97.3%		
	Skarn	99.6%		100.0%
	Outer East Porphyry	97.4%		
	Outer West Porphyry	99.1%		
Silver	East Porphyry	99.2%	100.0%	100.0%
	West Porphyry	96.8%		
	Skarn	99.6%		100.0%
	Outer East Porphyry	100.0%		
	Outer West Porphyry	95.0%		
Arsenic	East Porphyry	73.6%	100.0%	99.5%
	West Porphyry	45.6%		
	Skarn	89.5%		100.0%

Table 17: Interpolation statistics for estimated blocks (refer Table 16 for percentage of domains estimated).

Resource	Estimation	Copper, C	Gold, Silver, Mo	lydenum - estii	mated blocks	Arsenic - estimated blocks statistics					
Classification	Run	% Volume	Av Distance to	Av number of	Av number of	% Volume	Av Distance to	Av number of	Av number of		
(NI43-101)		Estimated	Composites	Composites	Drillholes	Estimated	Composites	Composites	Drillholes		
Measured	Pass 1	87%	76	27.4	4.8	100%	77	27.3	4.6		
	Pass 2	13%	88	27.2	3.4						
Indicated	Pass 1	49%	101	23.8	4.6	100%	127	23.0	4.2		
	Pass 2	51%	157	22.0	3.8						
Inferred	Pass 1	4%	110	21.8	4.3	100%	219	21.5	3.7		
	Pass 2	96%	291	19.0	3.3						

An example of the distribution of the interpolated blocks can be seen in Figure 25.



Figure 25: Display of estimated Copper grades.

14.7 Tonnage Factors

Average dry bulk density numbers are employed as tonnage factors for the resource estimate.

Dry Bulk Density (DBD) determinations were coded by the modeled clay domains (Figure 23). The average DBD for samples within the clay domains is 2.25g/cc (from 389 samples) and for those outside of the clay domains is 2.37g/cc (286 samples). These tonnage factors were stamped on the block model according to clay coding of blocks assigned by the same clay domains.

14.8 Model Validation

The 2014 resource model was validated by statistically and spatially comparing the block model against the 2012 resource model both globally (Figure 26) and by those blocks that have been updated or changed between the two resources (Figure 27 and Figure 28). The comparison between the two models and resource estimates are as expected with the inclusion of the new drilling data. The majority of the differences between the models are within the Inferred Resources and at depth. This is as expected as the Beutong mineralisation is drilled at low densities in these areas.

The 2012 resource model compares as expected with the source composite data (Appendix 11).



Figure 26: Copper Swath plots - Easting Sections. Comparison between 2014 resource model and 2012 resource model. Total resources (top) and Measured + Indicated resources (bottom). The differences between the models are predominantly within the Inferred Resource.



Figure 27: Copper Swath plots - Easting (top) and RL Sections. Comparison between 2014 resource model and 2012 resource model for those blocks updated/changed in the remodeling and grade interpolation undertaken in the 2014 resource model (~50%). The majority of the difference between the models is below 800m RL.



Figure 28: Copper Grade Tonnage Curves for material within the 2012 resource model that has been updated/changed in the remodeling and grade interpolation undertaken in the 2014 resource model. Approximately 50% of the resource has been affected by the update, however the good comparisons show that there is not a great material difference between the 2012 and 2014 estimates.

14.9 Classification

Confidence in geological and grade continuity, data reliability and interpolation reliability are the key considerations in determining the resource classification as per the guidelines outlined in the generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines". Only the more closely drilled areas of the Eastern Porphyry and Skarn mineralisation were considered for Indicated and Measured Classification on this criterion. Drilling density for all other areas of the resource at Beutong is such that the geological and grade continuity is assumed (based on the porphyry mineralisation model) which limits their classification to Inferred status under the CIM Guidelines.

In classifying the resource:

- Domain contacts for volumes considered for Measured and Indicated Resources had to be well defined and consistent/predictable by drill holes and surface data. The volume most densely drilled shows that the geological contacts for the Measured and Indicated Resources are acceptably consistent and predictable from section to section.
- Grade ranges within volumes considered for Measured and Indicated Resources had to be consistent/predictable. Contact analysis investigations (Table 12 and Appendix 10) show significant grade tenor differences between interpolation domains and consistency throughout the Measured and Indicated Resources volumes (on a moving average basis).
- Analytical QC data for TCS and FPT samples shows that resources estimated with samples from holes drilled by these workers can be considered for Measured and Indicated Classifications, however the unknown reliability of the HG assays dictates that resources estimated with significant weighting of this data be considered only for Inferred Classification (CIM Guidelines).
- The suspected core recovery and handling/sampling issues, suggested from observations in both the relationship between recovery and grade and the grade tenor comparisons between datasets, shows that there is a risk associated with resources estimated by the FPT and HG data. Volumes considered for Measured and Indicated Resource classification that have a high portion of their source data from these programmes were assessed with respect to their grade continuity with adjoining volumes estimated predominantly with data from the TCS drilling programme before being assigned these classifications.

The sample weightings for the portions of Measured and Indicated Resources can be seen at Figure 29. The effect of the suspected low biased FPT data will correlate positively with the percentage of FPT data selected to inform a block's grade. Figure 29 shows that for 52% of the Measured Resource and for 66% of the Indicated Resource the FPT sample weighing is <25% (>75% TCS data). It is likely that grades for these resources are affected at lower than 10% (relative); however this estimate of risk cannot be verified without appropriate test work. Similarly 32% of the Measured Resource and 21% of the Indicated Resource are estimated with more than 50% of data from the FPT drilling. Grades may be affected in the

range of 10% to 30% (relative) for these resources. Figure 30 identifies the upper 140 metres of the Eastern Porphyry Measured and Indicated Resources being heavily weighted by the FPT data, particularly between sections 230100E and 230300E.

Globally the Measured Resource estimate is 65% weighted by TCS data, 34% by FPT data and 1% by HG data. The Indicated Resource estimate is 75% weighted by TCS data, 23% by FPT data and 2% by HG data. Globally, the risk associated with the FPT data has been minimized due to the drilling configuration and the interpolation methodology (it is likely that the use of the FPT data has translated into a 5-10% reduction in the global Cu grade). However, the risk associated with local resources that are heavily weighted by the FPT data (Figure 30) will have manifested as a more severe low grade bias, translating into uncertainty of resources, particularly those close to mining cut-off grades. This risk must be considered when applying conversion factors in determining Reserves from both the Measured and Indicated Resources.

- The details on sample numbers, drill hole numbers and average distance from block centroids to samples were stored during the grade interpolation process. This information was plotted and utilised as a guide in determining the confidence in the resource estimation.
- Criteria for outlining volumes to be considered for Measured Resource classification (CIM Guidelines) were, where blocks are predominantly estimated:
 - With no fewer than 28 samples the optimum number of samples recommended by the QG Quantitative Kriging Neighborhood Analysis study.
 - With samples selected from no fewer than 4 drillholes.
 - With the average distance of samples selected is no greater than 100m.
 - From the first interpolation run/pass.
 - \circ Statistics for adherence to these criteria can be seen in Table 17.
- Criteria for outlining volumes to be considered for Indicated Resource classification (CIM Guidelines) were, where blocks are predominantly estimated with:
 - No fewer than 25 samples (except for eastern edge of the East Porphyry where sample numbers are no fewer than 15).
 - Samples selected from no fewer than 4 drillholes (except for eastern and western edges of the East Porphyry where hole numbers are no fewer than 3).
 - Statistics for adherence to these criteria can be seen in Table 17.

Two triangulated solids were generated and used to re-block and code the resource model (Figure 31). Block centroids located within the solid_High_class.00t triangulation are assigned a Measured Classification (variable 'class'=1, CIM Guidelines) and blocks outside of solid_High_class.00t and within solid_mid_class.00t are assigned an Indicated Classification (variable 'class'=2, CIM Guidelines). All other resources are assigned an Inferred Classification (variable 'class'=4, CIM Guidelines).



Figure 29: Weightings of drilling programmes on Measured and Indicated Resources. Most of these resources are estimated from data heavily weighted with TCS composites.



Figure 30: Spatial assessment of source data weights for the East Porphyry Measured and Indicated Resources – Easting sections (a, b) and RL sections (c, d).



Figure 31: Measured and Indicated Resource locations (CIM Guidelines).

14.10 Copper Resource Table and GT Curves

The Beutong 2014 Mineral Resource (NI 43-101) is reported in Table 18a and Table 18b at 0.3% and 0.5% copper reporting cuts and for a volume bound by 229050mE and 230600mE, 494800mN and 495920mN and above 000mRL. The reporting cuts of 0.3%Cu and 0.5%Cu are in line with how resource estimates are reported for other porphyry projects in the Southeast Asia Region. For example:

- Batu Hijau, a large porphyry mine with a resource of 914 Mt @ 0.53% Cu & 0.40 g/t Au applies similar reporting cuts.
- Tampakan, in the Philippines applies reporting cuts of 0.2%Cu and 0.3%Cu.

The 0.3%Cu reporting cut is the preferred cut for reporting of the Beutong Copper Mineralisation as it defines the extent of the Mineral Resources considered to have reasonable prospect of economic extraction.

The 0.5%Cu reporting cut spatially delineates the extent of the high grade core in the upper reaches of the East Porphyry Mineralisation. It also describes 80% of the Measured Resources and 65% of the Indicated Resources. A significant portion of the 66Mt of Measured + Indicated Resources and

some of the 40Mt of Inferred Resources reported above this cut and estimated in the East Porphyry Mineralisation reflect a likely high-grade copper resource that would impact positively in any economic analysis of the project.

Grade tonnage curves for the estimate are presented at Figure 32.

Table 18a: Total Beutong 2014 Mineral Resource - reported at 0.3% Copper Lower Cut. TRMthrough TRC and TCS currently holds 40% interest in the Beutong Project.

	Total - Beutong 2014 Resource Estimate - Report at 0.3% Cu Lower Cut											
Classification	Mineralisation	Tonnes (Mt)		G	irade		Metal					
(NI 43-101)			Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	Cu (Mlb)	Au (kOz)	Ag (kOz)	Mo (Mlb)		
Measured	East Porphyry	34	0.66	0.13	1.74	90	494	137	1,901	7		
Indicated	Indicated East Porphyry		0.56	0.10	1.53	110	646	176	2,563	13		
	Skarn	7	0.70	0.28	5.84	8	101	59	1,234	0		
Tota	l Measured	34	0.66	0.13	1.74	90	494	137	1,901	7		
Tota	l Indicated	59	0.58	0.12	2.01	99	747	236	3,797	13		
Total Meas	sured + Indicated	93	0.61	0.13	1.97	97	1,241	373	5,698	20		
Inferred	East Porphyry	80	0.52	0.10	2.24	139	904	251	5,753	25		
	West Porphyry	326	0.43	0.14	0.77	128	3,064	1,443	8,101	86		
	Outer East Porphyry		0.36	0.06	1.10	153	46	12	209	2		
	Outer West Porphyry	1	0.37	0.11	1.06	45	11	5	49	0		
	Skarn		0.64	0.24	5.22	10	66	36	791	0		
Tota	Total Inferred			0.13	1.11	129	4,091	1,746	14,903	113		

Table 18b: Total Beutong 2014 Mineral Resource - reported at 0.5% Copper Lower Cut. TRMthrough TRC and TCS currently holds 40% interest in the Beutong Project.

Total - Beutong 2014 Resource Estimate - Report at 0.5% Cu Lower Cut										
Classification	Mineralisation	Tonnes (Mt)	Grade				Metal			
(NI 43-101)			Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	Cu (Mlb)	Au (kOz)	Ag (kOz)	Mo (Mlb)
Measured	East Porphyry	28	0.71	0.13	1.80	91	436	113	1,615	6
Indicated	East Porphyry	33	0.64	0.10	1.64	113	472	110	1,759	9
	Skarn	4	0.84	0.34	6.46	7	84	48	928	0
Total Measured		28	0.71	0.13	1.80	91	436	113	1,615	6
Total Indicated		38	0.66	0.13	2.21	101	555	158	2,687	9
Total Measured + Indicated		66	0.68	0.13	2.04	97	992	271	4,302	14
Inferred	East Porphyry	40	0.63	0.11	2.36	159	549	144	3,006	14
	West Porphyry	45	0.55	0.15	0.85	120	536	216	1,216	12
	Outer East Porphyry	0.2	0.55	0.09	1.22	223	2	1	8	0
	Outer West Porphyry	0.1	0.59	0.08	2.55	33	2	0	11	0
	Skarn	3	0.74	0.27	5.59	9	55	30	618	0
Total Inferred		88	0.59	0.14	1.72	132	1,144	391	4,859	26

Mineral Resources for the Beutong mineralization have been estimated in conformity with the CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines" and Reported according to the NI 43-101 guidelines. In the opinion of Duncan Hackman, the block model resource estimate and resource classification reported herein are a reasonable representation of the copper-gold-silver-molybdenum mineral resources found in the defined area of the Beutong mineralization. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The resources reported at 0.3%Cu cut represent the base case estimate as they present the extent of the mineralisation that has reasonable prospect of economic extraction. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserve. Computational discrepancies in the table are the result of rounding.



Figure 32: Beutong 2014 Copper-Gold-Silver-Molybdenum Resource Estimate – grade tonnage curves.
TCS has informed H&A that it is not aware of any non-technical issues such as tenure negotiations, any current legal, political, environmental, permitting, taxation, socio-economic, marketing or other risks that could materially affect the advancement of the mineral resources at Beutong (as outlined in Sections 18 and 19).

15 MINERAL RESERVE ESTIMATES AND ADVANCED PROJECT EVALUATION

There are no investigations that can be considered associated with Advanced Projects (under guidelines in NI 43-101F1 document). These topics are as listed, and are not reported against in this review:

- Mineral Reserves
- Mining Methods
- Recovery Methods
- Project Infrastructure
- Market Studies and Contracts
- Environmental Studies, Permitting, and Social or Community Impact
- Capital and Operating Costs
- Economic Analysis

16 ADJACENT PROPERTIES

Two IUPs abut the EMM IUP 545 (Figure 2). PT Tambang Emas Cemerlang holds the license that abuts the northern boundary, and is entirely within protected forest. PT Kencana Murni Sarana abuts the western boundary of IUP 545. This tenement contains approximately 40% other purpose forest and the extension of major NW and NE structures and lithological units found at Beutong. Neither TCS nor H&A can discern if any significant work has been undertaken or areas of mineralisation have been identified in the adjoining tenements.

There is no significant mining activity within the Beutong area.

17 OTHER RELEVANT DATA AND INFORMATION

Other than that included in this report, there was no relevant data or information offered to or uncovered by H&A during the course of generating the Beutong 2014 resource estimate.

18 INTERPRETATION AND CONCLUSION

The Beutong porphyry-skarn prospect is located within the Emas Mineral Murni (EMM) Exploration License (IUP 545) area in Nagan Raya Regency, Aceh Province. The prospect consists of three recognized mineralised bodies that have been modeled as five domains and interpolated for Cu, Au, Ag and Mo grades to generate the 2014 mineral resource estimate.

The mineralised domains are the:

- 1. West Beutong Porphyry (BWP): this mineralisation has been subdivided into porphyry and outer-porphyry domains (reflecting the veining and mineralisation intensity).
- 2. East Beutong Porphyry (BEP): this mineralisation has been subdivided into porphyry and outer-porphyry domains (reflecting the veining and mineralisation intensity).
- 3. Skarn: this mineralisation abuts the northern boundary of the Beutong Igneous Complex (BIC) predominantly within marble lithologies however a component of endoskarn is observed in the drilling (within the BIC).

The key focus of activities within the EMM IUP 545 has been the defining the extents and particulars of, and establishing the grade tenor of the Beutong mineralised bodies. Diamond drilling totaling 160 holes and 42,572 metres has been the principle method of undertaking the delineation programme. Historically there have been three significant drilling programmes. These are:

- 1. 1996-97: PT Miwah Tambang Emas and HG; a man-portable, NQ drilling program of 35 holes totaling 4,122m.
- 2. 2007-08: FPT and EMM; a shallow and deep PQ, HQ and NQ triple-tube diamond drilling programme of 91 holes totaling 23,044m.
- 3. 2011-14: TCS and EMM; a delineation PQ, HQ and NQ triple-tube diamond drilling programme of 32 holes totaling 11,745m. Two deep diamond holes totaling 2,517m into the BEP and BWP to test for depth extensions of mineralisation.

Drill core logging along with surface mapping and sampling has generated a substantial dataset, both in size and spatial coverage allowing site geologists to confidently interpret the geological, structural and mineralisation setting of the prospect. At Beutong:

- A large igneous intrusive complex, the Beutong Igneous Complex (BIC), consisting of at least six magmatic phases has intruded metamorphosed sedimentary rocks and serpentinite at the intersection of regional scale southeasterly and northeasterly striking faults. The BIC is approximately 2500m long (NE-SW), 900m wide and has been intercepted to depths of 1600m.
- Two porphyries are variably mineralised, these being the Beutong West Porphyry (BWP) and the Beutong East Porphyry (BEP). The porphyry style copper, gold, silver and molybdenum mineralisation is best developed in/around the core of the porphyries and surrounded by sporadic and weaker mineralisation on the outer and upper regions of the intrusives. An

0.3% copper shell of the mineralisation varies between 175m and 500m thick (N-S direction) is up to 1500m long and has been intercepted at 900m below surface.

- Porphyry mineralisation and propylitic, argillic, phyllic alteration has been overprinted by a high-sulphidation epithermal advanced-argillic alteration and mineralisation assemblage. This mineralizing event has enriched the porphyry mineralisation through hypogene processes.
- A large diorite dyke and un-mineralised late porphyry intrude the centre of the BWP. A post mineralisation magmatic hydrothermal breccia is located along the southern region of the BEP, invading the possibly remobilizing the mineralisation away from its location.
- The BIC is in contact with limestone units in the north. The limestone has been variably marbleized and a copper, gold, silver skarn body of mineralisation has formed along and within the contact zone and in a separate parallel zone to the north of the contact. The northern skarn contains significantly more zinc, lead and silver mineralisation than the southern skarn.

Stream sediment sampling, soil sampling, rockchip sampling, geophysics and mapping of the area surrounding the BIC has identified six copper and gold anomalous areas that have the potential for expanding the resource base within the EMM IUP. The Beutong mineralisation and the exploration target areas are within a forestry area designated as "Other Purposes" which surrounds the Beutong Ateuh township and has been excised out of the Protected Forest area that makes up the remaining 63.8% of the IUP. There has been no work identifying targets within the Protected Forest area of the IUP.

Surface exploration and geophysical techniques have identified the following targets for followup work:

- Priority 1: three targets identified through mapping, rockchip and soil sampling and geophysical interpretation to the east and west of the current BIC and Skarn mineralisation. These targets are surface expressions of the step-out resource expansion targets (identified from the resource modeling) and the follow-up drilling programme the targets are outlined below in discussion relating to the expansion of the current global resource.
- Priority 2: two targets separated from but close by and to the south of the BIC identified from scattered anomalous copper in soil samples and rockchip samples and gold in steam sediment samples. Follow-up work will initially involve further field mapping and sampling to establish the areas' likelihood of hosting significant mineralisation and warrant drill testing.
- Priority 3: one area located ~2km to the south of the BIC and identified from anomalous gold grades in float. Follow-up work will initially involve further field mapping and sampling to establish the area's likelihood of hosting significant mineralisation and warrant drill testing.

Regionally the exploration potential is largely untested, with large tracts of the area designated as Protected Forest. PT Tambang Emas Cemerlang holds the license that abuts the northern

boundary, and is entirely within protected forest. PT Kencana Murni Sarana abuts the western boundary of IUP 545. This tenement contains approximately 40% "Other Purpose" forest and the extension of major NW and NE structures and lithological units found at Beutong. There is no significant mining activity within the Beutong area.

The Mineral Resources for Beutong were estimated and reported in 2014 as:

- Measured: 34MT @ 0.66% Cu, 0.13g/t Au, 1.74g/t Ag and 90ppm Mo.
- Indicated: 59MT @ 0.58% Cu, 0.12g/t Au, 2.01g/t Ag and 99ppm Mo.
- Inferred: 418MT @ 0.45% Cu, 0.13g/t Au, 1.11g/t Ag and 129ppm Mo.

(NI 43-101 Classification, and reported at 0.3%Cu lower cut, the base case estimate representing the mineralisation with reasonable prospect of economic extraction).

In classifying the 2014 resource estimate H&A addressed the following data quality and geological/grade continuity issues and the classification represents the risk profile for the mineral resources at Beutong, with the material classified as Inferred Resources harboring the highest risk and Measured the lowest:

- Geological and grade continuity: Domain contacts and grade ranges for volumes considered for Measured and Indicated Resources had to be well defined and consistent/predictable by drill holes and surface data.
- Assay reliability: Only resources where grade interpolation is heavily weighted by samples from the FPT and TCS drilling data were considered for Measured and Indicated Resource Classification. The assay quality control data shows that these assay data are of adequate reliability, whereas the reliability of the HG assay data is unknown.
- Core recovery and sampling: Grade profiles of volumes where resources are heavily weighted by FPT (and HG) data were assessed against the profiles of adjoining volumes (where resources are heavily weighted by TCS data) as part of the consideration in assigning Measured and Indicated Classification to these volumes. The TCS data is shown to have higher core recovery percentages and deemed to have more appropriate core handling and sampling protocols than the other data.
- Interpolation reliability: Only those resources that were estimated from the interpolation strategy that utilises parameters designed to maximize grade reliability from close-spaced data were considered for Measured and Indicated Classifications (the "First Pass"). Additional considerations regarding sample and drillhole numbers, average distance to, and spatial coverage of composites (selected for interpolation) were employed to differentiate between volumes assigned to Measured or Indicated Resources.

A systematic and rigorous process was employed to define volumes for classifying Measured and Indicated Resources from the Resource Model. Validation of the resource classification shows that:

- For Measured Resource Material:
 - o 65% is weighted by TCS data, 34% by FPT data and 1% by HG data.

- 86% of volume is estimated from the First Pass interpolation run.
- An average of 28 composites used in estimating block grades.
- An average of 4.5 drillholes accessed for composites used in estimating block grades.
- Average distance of 80m to composites used in estimating block grades.
- For Indicated Resource Material:
 - 75% is weighted by TCS data, 23% by FPT data and 2% by HG data.
 - 49% of volume is estimated from the First Pass interpolation run.
 - An average of 23 composites used in estimating block grades.
 - An average of 4.2 drillholes accessed for composites used in estimating block grades.
 - Average distance of 128m to composites used in estimating block grades
- For Inferred Resource Material:
 - 4% of volume is estimated from the First Pass interpolation run.
 - \circ An average of 19 composites used in estimating block grades.
 - An average of 3.2 drillholes accessed for composites used in estimating block grades.
 - Average distance of 310m to composites used in estimating block grades

These statistics verify that the classification strategy was implemented as intended and transparently portray the level of confidence underpinning the resource classification.

The following evaluation programmes are indicative of what is required in increasing the size of and confidence in the resources at Beutong. H&A in discussion with TCS proposes these as it is the opinion of both parties that each or both of these actions are required in advancing the project towards feasibility studies.

The Beutong mineralisation is interpreted to extend to the east, west and below the limits of the 2014 Resource Model volume. Expansion of the resource is expected with holes targeted in these areas. [NB. The immediate eastern extension of the skarn mineralisation transgresses the Hutan Lindung area (protected forest) where permitting is required to undertake any exploration activities.] Drilling within and in proximity to the current Indicated Resources will increase the volume of the resources available to be considered for Measured and Indicated Classification in future resource estimates (at the expense of the current Indicated and Inferred Resources). Close proximity drilling or twining of holes within the current Measured Resources will be required to obtain data for robust change of support analysis which can be utilised for more robust design of grade interpolation parameters and for the evaluation of suitable mining parameters and protocols for defining and delineating and extracting ore material.

H&A suggests the following approaches be considered (their applicability is dependent on TSC strategy in advancing the project) and recommends two phases of work to in initiating the advancement of the project (these being to ensure tenure and expand the higher grade Skarn mineralisation resource, refer Section 19 for details):

• To ensure conversion of IUP Exploration to IUP Production of the EMM IUP 545 and secure tenure:

- o Proactively engage the Republic Indonesia (RI) Government
- Respond in timely fashion to any queries and/or requests from the RI Government
- Monitor conversion progress and ensure that IUP Exploration tenement status remains valid by ensuring compliance to requirements set-out in tenement document
- Apply for extension to the suspension status of IUP Exploration license if required.
- To expand the current global resource:
 - Holes be drilled to test for lateral extension of mineralisation (E-W) to depths of up to 500m below surface:
 - Porphyry Mineralisation: 100m step-out section drilling. Two angled holes per section designed intercept mineralisation between 150m and 200m and again between 400m and 500m (approximately 1200m per section).
 - Skarn Mineralisation: 50m-100m step-out section drilling. Two angled holes per section designed intercept mineralisation between 100m and 150m and again between 200m and 250m (approximately 700m per section).

Sequential step-out continuation and extent will be depended on results obtained from previously drilled holes within the programme.

- \circ $\;$ Holes drilled to test for vertical extension of the mineralisation:
 - Porphyry Mineralisation: the current resource is interpreted to extend to below 1000m from surface, between 200m and 300m beyond the deepest drill intercepts. Two strategies should be considered, reflecting the risk associated with the reliability of the current model projection. The first is to drill to intercept the current model at depth and extend beyond the interpreted model (holes >1500m in length, and confirming current model plus extending 200-300m). The second and higher risk strategy is to drill to intercept beyond the current model extent (hole >2000m in length, and confirming current model plus extending 400-500m). Both the BWP and BEP would require two to three holes to confidently establish vertical continuation across the length of the current resource.
 - Skarn Mineralisation: Three angled holes >550m in length designed to intercept mineralisation between 150m and 200m down-dip from current resource model.
- To convert the current Indicated Resource to Measured Resource the drilling density within the Indicated Resource volume will need to be increased by an estimated 50% in the BEP and 100% in the Skarn mineralisation. Extending these holes will enable the conversion of Inferred Resources to Indicated below the current Indicated material in BEP. H&A suggests that, if converting mineralisation to higher classification is required for the advancement of the project then:
 - For the BEP: drilling between 11 and 15 holes averaging at least 600m, but extending to >800m to convert Inferred to Indicated Resources.

- For the Skarn Mineralisation: drilling between 15 and 20 holes averaging 250m. due to the planar nature of the skarn mineralisation additional 10 to 15 holes averaging 250m will be required to convert Inferred Resources to Indicated Resources
- Close spaced or twin holes for change of support and associated analyses:
 - For the BEP: two holes averaging 500m in length.
 - For the Skarn Mineralisation: three holes averaging 250m in length.

Further evaluation and interpretation work is required on the surface targets outside of the BIC area to firm up drill targets. The greatest risk associated with the reliability of the priority 2 and 3 areas is the lack of metadata and QA/QC data to assist in establishing confidence in the historic data and the interpreted targets. H&A considers the following work would assist in establishing confidence in the targets and in designing holes to test the areas:

- Priority 1 areas: assessment of geology to determine the extent of the step-out incremental resource expansion drilling outlined above, and/or to target holes further away from the planned step-out drilling to establish extents of the BEP, BWP and Skarn mineralisation.
- Priority 2 areas: field mapping and sampling to determine credentials of the areas and to target scout drill holes to test for mineralisation.
- Priority 3 area: field mapping and sampling to determine credentials of the areas and to target scout drill holes to test for mineralisation.

As with all exploration and evaluation programmes there is a risk that drilling and other activities return unfavorable results and this could be the case for the expansion and new target generation/testing programmes outlined above. This risk can be managed somewhat by carefully considering parameters for the programmes, however it cannot be negated. There is a low risk associated with the resource upgrade drilling, mostly in the converting of Inferred Resources to Indicated Resources. H&A considers that this risk is lesser for porphyry mineralisation than for other less pervasive mineralisation styles (eg vein hosted gold mineralisation), however in considering the total geological setting at Beutong there is still considerable risk that yet to be uncovered faulting and post mineralising events (such as dyke intrusions or phreatomagmatic brecciation) can significantly impact on these resources which are currently defined by widely spaced and erratically designed drilling.

The EMM IUP 545 Exploration is currently being processed for conversion to an IUP Production and work activities are currently in a recognized and approved one year suspension status (extendable for a further year if required). TCS has advised H&A that they have complied with all 36 Duties set out in the IUP concession license (Appendix 4) and that they can see no reason that the IUP Production license would not be granted following due process and that with the granting of the Production license that the project would be lifted from suspension status allowing exploration and evaluation work to continue.

19 RECOMMENDATIONS

The following recommendations are categorized as either technical recommendations, or as immediate work programme recommendations. The technical recommendations are presented to assist TCS in upgrading the quality of and reliability of the Beutong data for use in future resource estimates. These projects have not been costed as they are not considered critical for the immediate advancement of the project.

The immediate work programme recommendations are split into two phases, the first being ensuring the timely conversion of the IUP from Exploration to Production Status, thus securing tenure. The second phase, being the expansion drilling of the Skarn mineralisation is contingent on the successful completion of the first phase of work.

Other programmes that TCS may consider in advancing the project are offered Section 18 (Interpretation and Conclusions). They are not repeated here as recommendations, they are presented as indicative programmes that are contingent on the direction that TSC takes in their development strategy of the overall Beutong Project.

19.1 Technical Recommendations

The following activities directed at improving the confidence in the input data utilised in generating future estimates of the copper resources at Beutong are recommended by H&A:

- Update Access[™] database with edits undertaken in validating the 2014 Resource Dataset.
- Drillhole locations and TIN domains are corrected with the new collar and topographic data from the GeoIndo Survey Services survey and the model re-run prior to undertaking any definitive engineering studies.
- Adjusted downhole survey data to be entered into TCS Access[™] database.
- Correct the 633 assay values within the TCS AccessTM database to reflect ITS report results.
- Update TCS Access[™] database with geology logs for entire FPT holes BC005-02A and BC025-03A and TCS holes BEU0600-03 and BEU0700-06 and part holes for further 73 holes.
- Enter clay logging into TCS Access[™] database and complete the clay logging by including holes BC011-01A and BC025-03 from the FPT drilling.
- Complete compilation of the recovery logging data within the TCS AccessTM database.
- Locate and evaluate the missing FPT laboratory QC assay data.
- Update the TCS AccessTM database with laboratory QC assay results.
- Acquire and assess sizing data for batches showing poor repeatability in the duplicate pairs QC dataset.
- Investigate the precision issues noted in the FPT field standards assay data.

- Undertake a programme of Referee Laboratory Assays (select samples for check assays with the aid of information in tables at Appendix 9 that highlight batches of concern regarding current assay reliability).
- Investigate effect of preferential loss during drilling, handling and sampling of core and qualify risk associated with using the suspected low biased FPT data, particularly at near economic cut-off grades.

Some of these recommendations will require data from new drill core and this requirement should be considered in the design of any future drilling at Beutong.

19.2 Immediate Work Programme

The following two phase of work are recommended to initiate the advancement of the Beutong Project.

19.2.1 Phase one – Ensure Granting of IUP Production License

TCS's immediate task is to ensure that they actively pursue the conversion of the IUP Exploration license, currently in place on the Beutong tenement, to an IUP Production license. This will extend tenure over the Beutong Project area for up to 40 years (initial 20 year period plus two 10 year sequential extensions). TCS must be mindful of both the current suspension status expiry date (June 6, 2015) and the IUP Exploration license expiry date (June 15, 2015) and ensure that all requirements under the IUP Exploration license are met so that they ensure that the tenement license is secure while the IUP Production application is being considered by the Republic Indonesia (RI) Government.

To ensure conversion of IUP Exploration to IUP Production of the EMM IUP 545 and secure tenure, TCS should:

- Proactively engage the Republic Indonesia (RI) Government
- Respond in timely fashion to any queries and/or requests from the RI Government
- Monitor conversion progress and ensure that IUP Exploration tenement status remains valid by ensuring compliance to requirements set-out in tenement document
- Apply for extension to the suspension status of IUP Exploration license if required.

The indicative budget (Table 19) covers active monitoring and communication with the RI Government and legal, site maintenance, community relations commitments, permitting etc. for a six month period, a time frame that approximates the remaining term of the IUP Exploration license (excluding the additional one year extension of the suspension status still allowed).

Indicative Budget: Secure Tenure - Conversion of IUP Exploration license to IUP Production license				
Technical staff	\$	21,000		
Camp Food / Accommodation	\$	21,000		
Community Relations	\$	14,000		
Permitting / Legal	\$	30,000		
Field Supplies	\$	18,000		
Total	\$	104,000		

Table 19: Indicative Budget Phase One Work Programme (US\$)

19.2.2 Phase Two – Expand Skarn Mineralisation Resource

The phase 2 work programme is conditional on the successful outcome of the phase 1 work programme (Section 19.2.1).

By extending the drilling along the mineralized Skarn horizon to the west of hole BC017-03, TCS can expect to add to the outcropping high grade skarn resources in future estimates. H&A proposes that 50m-100m step-out section drilling be undertaken with two angled holes drilled per section and designed to intercept mineralisation between 100m and 150m below surface and again between 200m and 250m below surface. This equates to approximately 700m drilling per section.

H&A proposes that an initial programme of two sections be drilled (four holes, 1400m) at section intervals of ~100m. An indicative budget for this programme is included at Table 20. If successful then TSC can expect to increase the Skarn mineralisation resource by up to 30% and present a strong case supporting further step-out drilling along the projection of this mineralization.

Indicative Budget: Expansion Drilling - Skarn Mineralisation				
Assaying	\$	31,500		
Geological staff	\$	240,000		
Drilling	\$	210,000		
Camp Food/Accommodation	\$	89,100		
Field Work/Contract Labour	\$	64,800		
Transport/Aircraft	\$	10,800		
Community Relations	\$	27,000		
Permitting/Legal	\$	15,000		
Field Supplies	\$	30,000		
Travel	\$	10,500		
Evaluation and Reporting	\$	50,000		
Total	\$	778,700		

Table 20: Indicative Budget – Phase Two Work Programme (US\$).

20 REFERENCES

- Allen, M.J., 2008: Petrography of 49 Drillcore Samples from the Beutong Porphyry Copper Prospect, Sumatra, Indonesia. *Unpubl. Internal Report*
- Barber A.J., 2000: The origin of the Woyla Terranes in Sumatra and the Late Mesozoic evolution of the Sundaland margin. *Journal of Asian Earth Sciences 18 (2000) 713-738.*
- Barber, A.J., Crow, M.J. & De Smet, M.E.M., 2005: Chapter 14: Tectonic evolution. In: BARBER, A.J., CROW, M.J. & MILSOM, J.S. (eds) Sumatra: Geology, Resources and Tectonic Evolution.
 Geological Society, London, Memoirs, 31, P. 234-259.
- Corbett, G., 2002: Epithermal Gold For Explorationists. AIG Journal, April 2002 Edition.
- Corbett, G. & Leach T. M., 1997: Southwest Pacific rim gold-copper systems: Structure, alteration and mineralization. *Unpubl. Short Course Manual.*
- Kavalieris, I., and Bat-Erdene, K., 2013: Beutong porphyry Target. Unpubl. Internal Report.

21 APPENDICES: NUMBERS 1 TO 12

Appendix 1 Qualified Persons Certificate and Statement of Independence

TITUTE OF ISTS Supporting Geoscientists Annual Membership Certificate 2014/2015 The Council of the Australian Institute of Geoscientists hereby certifies that Mr Duncan Howard Hackman (# 1742) is a current, financial member of the Institute, as stipulated in the Articles of Association, has agreed to be bound by the Institute's Code of Ethics, and holds the membership level of Member. T.W. Apilsbury NGX5-Wayne Spilsbury Anne Tomlinson President Councillor for Membership Issued this 1st day of July 2014 Australian Institute of Geoscientists www.aig.org.au

Qualified Persons Statement

RE: Technical Report on the Beutong Copper-Gold-Silver-Molybdenum Mineralisation, Aceh, Indonesia. November 30, 2014.

I, Duncan Hackman B.App.Sc. MSc. MAIG am employed as a Principal Consultant for Hackman and Associates Pty. Ltd., 260A Crawford Rd, Inglewood, Western Australia.

(a) I am a Member of the Australian Institute of Geoscientists.

As a result of my experience (10 years in copper resource evaluation) and qualifications, I am a Qualified Person for the purposes of the National Instrument 43-101. Experience includes JORC (1992, 1996, 2004 and 2012 Editions) Competent Person assuming responsibility for Resource Estimates at:

- Scuddles Zinc-Copper-Gold Deposit and Oxide Copper Deposit, Golden Grove, Western Australia (1990-1992, 2009).
- Khanong Copper Deposit, Thengkham Copper Deposit, Sepon, Laos (2002-2009).
- Prominent Hill Copper and Gold Deposit, South Australia (2004-2007).
- Beutong mineralisation, Indonesia (2012).
- Mt Ararat Copper and Thursday Gossan Copper mineralisation, Victoria, Australia (2013-2014).
- (b) My most recent visit to the Beutong Project was between the 27th February and 3rd March 2012. No material advances or changes to the project have taken place since this date.
- (c) I am responsible for all sections of the above mentioned report.
- (d) I am not aware of any material fact or material change with respect to the subject matter of this technical report that is not reflected in this report and that the omission to disclose would make this report misleading.
- (e) I am independent of Tigers Realm Metals Pty. Ltd. and Kalimantan Gold Corporation Limited in accordance with the application of Section 1.5 of National Instrument 43-101.
- (f) I conducted the 2012 and 2014 mineral resource estimates for the Beutong Project and other than this work have had no previous involvement with the Beutong Project.
- (g) I have read National Instrument 43-101 and Form 43-101F1 and this report has been prepared in compliance with same.

Dated this 30th day of November 2014.

Duncan Hackman B.App.Sc. MSc. MIAG Principal Consultant

Appendix 2 H&A Consent; Report Filing and Statement Release

Duncan Hackman Hackman & Associates Pty Ltd. 260A Crawford Rd. Inglewood Western Australia, 6052

TO:

TSX Venture Exchange

CONSENT OF QUALIFIED PERSON

I, Duncan Hackman, consent to the public filing of the technical report titled "Technical Report on the Beutong Copper-Gold-Silver-Molybdenum Mineralisation, Aceh, Indonesia" dated 30th November, 2014 (the "Technical Report") by Kalimantan Gold Corporation Limited (KGCL, the "Issuer") with the TSX Venture Exchange under its applicable policies and forms in connection with the purchase by KGCL of Tigers Realm Copper Pty. Ltd. interest in the Beutong project, Sumatra, Indonesia and outlined in a press release by KGCL dated 26th November, 2014. I acknowledge that the technical report will become part of the Issuer's public record.

Dated this 30th day of November, 2014

Duncan Hackman B. App.Sc. MSc. MAIG

Appendix 3 Data and Information Disclosure Statement



Appendix 4 English Translation of original EMM IUP 545 Tenure Document



[Coat of Arms] DISTRICT HEAD OF NAGAN RAYA				
	DECREE OF THE DISTRICT HEAD OF NAGAN RAYA Number: 545/22/SK/IUP-Ekspl./2010			
	CONCERNING			
	GRANTING OF MINING EXPLORATION CONCESSION TO PT. EMAS MINERAL MURNI			
	DISTRICT HEAD OF NAGAN RAYA			
Reading:	 The Letter of Application of the Director of PT. Emas Mineral Murni Number 001/X/EMM/05 dated 13 October 2005 as to the Request for Exploration Rights for Gold as Primary Mineral and Its Associated Minerals, which is domiciled at Jln. Merdeka No. 33 Kuta Baro – Jeuram, Seunagan Sub-district, Nagan Raya District. The Letter of Application of the Director of PT. Emas Mineral Murni Number 013/MBO-EMM/XI/09 dated 23 November 2009 as to Follow-up Extension Request for Exploration Rights for Gold as Primary Mineral and Its Associated Minerals. 			
Considerin	 g: a. that the Application filed by the Director of PT. Emas Mineral Murni has met conditions as stipulated in effective regulations of the law; b. that based on the consideration as meant above in letter b, it needs to be enacted as a Decree of the District Head of Nagan Raya. 			
Noting:	 Law Number 23 of 1997 concerning Environmental Management (State Gazette of the Republic of Indonesia No. 68 of 1997); Law Number 4 of 2002 concerning the Establishment of Southwest Aceh District, Gayo Lues District, Aceh Jaya District, Nagan Raya District, and Aceh Tamiang District in Nanggroe Aceh Darussalam Province; Law Number 32 of 2004 concerning Regional Governments (State Gazette of the Republic of Indonesia Number 125 of 2004, Supplement to State Gazette of the Republic of Indonesia Number 4437), as amended by Law Number 8 of 2005 concerning the Enactment of Government Regulation in lieu of Law Number 3 of 2005 concerning the Amendment of Law Number 32 of 2004 concerning Regional Governments into Law; Law Number 33 of 2004 concerning Fiscal Balance between the National Government and Regional Governments; Law Number 11 of 2006 concerning the Aceh Government (State Gazette of the Republic of Indonesia Number 62 of 2006, Supplement to State Gazette of the Republic of Indonesia Number 62 of 2006, Supplement to State Gazette of the Republic of Indonesia Number 62 of 2006, Supplement to State Gazette of the Republic of Indonesia Number 4638); Law Number 25 of 2007 concerning Capital Investment (SG Number 67 of 2004, SSG 4724); Law Number 26 of 2007 concerning Spatial Zoning (SG Number 68 of 2007, SSG 4725); 			
	2			

	 2009, SSG 4959); Government Regulation Number Analysis (State Gazette of the Supplement to State Gazette of Government Regulation Number the National Government, Re District/ City Governments (S Number 82 of 2007, Supplement Number 4737); Government Regulation Number Zoning Plan (State Gazette of the Supplement to State Gazette of Decision of the Minister of 1453/K/29/MEM/2000 dated Guidelines for the Conduct of Sector; Qanun of Nanggroe Aceh Daru General, Petroleum, and Natur 	-			
In view of:	dated 8 June 2006 as to the Re Emas Mineral Murni.2. The Letter of the Directorate	Nanggroe Aceh Darussalam Number: 545/12161 ecommendation for Exploration Rights to PT. General of Minerals, Coal, and Geothermics ated 23 March 2009 as to Mining Exploration eral 1 (one) in the above letter.			
	RESOL	VED			
Enacted:	DECREE OF THE DISTRICT HEAD OF NAGAN RAYA CONCERNING GRANTING OF MINING EXPLORATION CONCESSION TO PT. EMAS MINERAL MURNI.				
Firstly:	Granting a Mining Exploration Co Name of Company: Name of Directors/ Commissioners Company shareholders and stating Name of Shareholders: Occupation of Shareholders: Address of Shareholders: Commodity: Mining Site: Village: Sub-district: District/ City: Province: Area Code:	PT. EMAS MINERAL MURNI :1. Toh Seng Hee (Commissioner) 2. Irsan Sosiawan (Director)			
		5			

	Area:	10,000 (ten thous	sand) hectares	
	With the Map and the List of issued by the District Head of of this Decree.			
	Site of Exploration: Inside N Periods of time for activity p a.General Survey: 1 (one) y b.Exploration For: 5 (five) y c.Feasibility Study: 1 (one) y	phases: ear rears		
Secondly:	The Mining Concessionaire is feasibility study activities wit of 7 (seven) consecutive ye calculated from the date of 2	hin the Mining Concession ears. And is declared to	on Area (WIUP) for a period be retroactively effective,	
Thirdly:	It is prohibited to transfer th without the approval of the I			
Fourthly:	PT. Emas Mineral Murni as M reserves those rights and dut			
Fifthly:	The Mining Concessionaire n (RKAB) to the District Head issuance of this Decree.			
Sixthly:	As of 90 (ninety) working day Budget (RKAB) as meant in have commenced activities i	the Fifth Dictum, the M		
Seventhly:	Without prejudice to provisions of the law, this Mining Exploration Concession can be suspended, revoked or rescinded, in the event the Mining Concessionaire fails to honor the duties and prohibitions as meant in the Third, Fourth, and Fifth Dictum of this Decree.			
Eighthly:	This Decree of the District 1 effective from the date of 16 proper corrections and or a 1	June 2006 and in the ev	ent this order is erroneous,	
		Enacted in:	Suka Makmue	
		on the date of:	11 January 2010 AD 25 Muharram 1431 H	
		[signed	[initialed] OF NAGAN RAYA, & stamped] ILKARNAINI	
			4	

Copy:

- Minister of Energy and Mineral Resources of the Republic of Indonesia, in Jakarta.
 Minister of Finance of the Republic of Indonesia, in Jakarta.
- 3. Secretary General of the Department of Energy and Mineral Resources, in Jakarta.
- 4. Inspector General of the Department of Energy and Mineral Resources, in Jakarta.
- Director General of Taxation of the Department of Finance, in Jakarta.
 Director General of Treasury, Department of Finance, in Jakarta.
- 7. Director General of Local Revenue, Department of the Interior, in Jakarta.
- 8. Governor of the Aceh Government, in Banda Aceh.
- 9. District House of People's Representatives of Nagan Raya, in Suka Makmue.
- 10. Chief of the Law and PR. Bureau/ Chief of the Finance Bureau/ Chief of the International Planning and Cooperation Bureau, Secretariat General of the Department of Energy and Mineral Resources, in Jakarta.
- 11. Secretary of the Directorate General of Minerals, Coal, and Geothermics, Department of Energy and Mineral Resources, in Jakarta.
- 12. Director of Minerals, Coal, and Geothermics Engineering and the Environment, Department of Energy and Mineral Resources, in Jakarta.
- 13. Director of Minerals, Coal, and Geothermics Programme Development, Department of Energy and Mineral Resources, in Jakarta.
- 14. Director of Minerals and Coal Exploitation Development, Department of Energy and Mineral Resources, in Jakarta.
- 15. Director of Property Taxation, Department of Finance, in Jakarta.
- 16. Chief of the Aceh Mining and Energy Service, in Banda Aceh.
- 17. Chief of the Nagan Raya District Mining and Energy Service, in Suka Makmue.
- 18. Chief of the Nagan Raya District Local Revenue, Financial Management, Wealth and Assets (PPKKAD) Service, in Suka Makmue.
- 19. Head of the Nagan Raya District Capital Investment and Regional Enterprises Management Body, in Suka Makmue.
- 20. Beutong Sub-district Head, of this district.
- 21. File copy .-

ANNEX II

DECREE OF THE DISTRICT HEAD OF NAGAN RAYA Number: 545/22/SK/IUP-Ekspl./2010 Date: 11 January 2010

COORDINATES OF THE MINING CONCESSION AREA

Name of Company Site Province District : PT. EMAS MINERAL MURNI : NANGGROE ACEH DARUSSALAM : NAGAN RAYA : Beutong

Sub-district Type of Mineral Area

: Beutong : Gold and Its Associated Minerals : 10,000 hectares

NO.	LONGITUDE		LATITUDE			N LAT./	
NO.	•	'		•	'		S LAT.
1	96	37	0.00	4.00	26.00	0.00	N Lat.
2	96	38	0.00	4.00	26.00	0.00	N Lat.
3	96	38	0.00	4.00	30.00	0.00	N Lat.
4	96	33	0.00	4.00	30.00	0.00	N Lat.
5	96	33	0.00	4.00	24.00	0.00	N Lat.
6	96	34	0.00	4.00	24.00	0.00	N Lat.
7	96	34	0.00	4.00	23.00	0.00	N Lat.
8	96	36	6.09	4.00	23.00	0.00	N Lat.
9	96	36	6.09	4.00	25.00	0.00	N Lat.
10	96	37	0.00	4.00	25.00	0.00	N Lat.

Suka Makmue, 11 January 2010 [initialed] DISTRICT HEAD OF NAGAN RAYA [initialed] [signed & stamped] DRS. T. ZULKARNAINI

б

ANNEX III - DECREE OF THE DISTRICT HEAD OF NAGAN RAYA 545/22/SK/IUP-Ekspl./2010

Number:

Date:

11 January 2010 AD 25 Muharram 1431 H

RIGHTS AND DUTIES OF THE MINING CONCESSIONAIRE

A. RIGHTS

- 1. To enter the Mining Concession Area (WIUP) in accordance with the map and list of coordinates:
- 2. To carry out Mining Exploration Concession activities (general surveys, explorations, feasibility studies, and EIAs) in accordance with provisions of the law;
- 3. To construct supporting facilities for Mining Exploration Concession activities (general surveys, explorations, feasibility studies, and EIAs) within the Mining Concession Area;
- 4. To file a request to cease from time-to-time Exploration activities at the entire part or at several parts of the Mining Concession Area either on the grounds that continuing said exploration activities would be commercially unviable or impractical or because of force majeure, circumstances that impede, which lead to the cessation of part or all of the mining activities;
- 5. To file a request to exploit other minerals that are not associations of the primary mineral found inside the Mining Concession Area;
- 6. To file a statement of disinterest in relation to the exploitation of other minerals that are not associations of the primary mineral found inside the Mining Concession Area;
- 7. To make use of public facilities and infrastructure for the interests of Mining Exploration Concession activities(general surveys, explorations, feasibility studies, and EIAs), pending the fulfillment of provisions of the law;
- 8. To file for a temporary license to transport and sell minerals that have been mined;
- 9. To file a written request to continue or not to continue to the Production Concession phase at part of the area or at several areas inside the Mining Concession Area.

B. DUTIES

- 1. To elect a jurisdiction in the local District Court where the site of the Mining Concession Area is located:

- To set up a representative office at the site where the Mining Concession Area is located;
 To report investment plans;
 To place a sum of money as performance bond for exploration activities in the form of a deposit in the amount of US\$ 100,000 in a State Bank that is appointed by and in the name of the District Head of Nagan Raya, in accordance with provisions of the law;
- 5. To submit a Work Plan and Expense Budget (RKAB) in November at the latest that encompasses plans for the following year and realization of activities for any current year to the District Head of Nagan Raya with copies to:
 - Minister of Energy and Mineral Resources of the Republic of Indonesia;
 - Governor of Aceh;
- 6. To submit Quarterly Progress Reports that must be delivered periodically within 30 (thirty) days after the end of a calendar quarter to the District Head of Nagan Raya, with copies to:
 - Minister of Energy and Mineral Resources of the Republic of Indonesia;
 - Governor of Aceh;
- 7. In the event the time limits for the RKAB and reports as meant in points 5 (five) and 6 (six) have been exceeded, the Mining Concessionaire will be given a warning in writing;

- 8. To submit development and empowerment plans for communities residing in the vicinity of the mining area as part of the RKAB to the District Head of Nagan Raya;
- 9. To fulfill tax provisions in accordance with provisions of the law,
- To fulfill provisions of the law effective in the Forestry Sector relating to mining activities in forest areas;
- 11. To pay Land Tax every year in accordance with provisions of the law;
- To prepare EIAs or Environmental Management Efforts (UKL)/ Environmental Monitoring Efforts (UPL) documents in accordance with provisions of the law and that form part of Feasibility Study Documents;
- 13. To prepare Reclamation Documents and Post-mining Documents based on Feasibility Study Documents in accordance with provisions of the law;
- 14. To prepare documents on local communities development and empowerment plans;
- 15. To place a Reclamation and Post-mining Bond in accordance with provisions of the law;
- 16. To appoint a Chief Mine Engineer who is in charge of Mining Exploration Concession activities, mining work safety and security, and mining environmental management;
- 17. The request to upgrade Mining Exploration Concession to Production Concession must be filed at the latest 3 (three) months prior to the expiration of this license, furnished with requirements in accordance with provisions of the law;
- 18. Negligence of the aforementioned provision in point 16 gives rise to the expiring by law of the Mining Exploration Concession and any mining effort is to be ceased. Within a time period not later than 6 (six) months after the expiration of this decree the Mining Concessionaire must have lifted out anything it owns, except for goods/ buildings that are used for public interest;
- To apply good mining principles/ to carry out exploration activities in accordance with exploration principles;
- 20. To manage finances in accordance with Indonesia's accounting system;
- To report and conserve the functions and carrying capacities of relevant water resources in accordance with provisions of the law;
- To prioritize use of local workers, domestic goods and services in accordance with provisions of the law;
- 23. To engage as optimum as possible local entrepreneurs existing in the region, pending the granting of a Mining Services Provider License by the District Head of Nagan Raya;
- To prioritize the use of local and/ or national mining service companies and to submit data and usage of supporting services periodically or from time-to-time when called upon;
- 25. It is prohibited to involve subsidiaries and/ or their affiliations in the Mining Service sector inside the Mining Concession Area that is being exploited, other than with permission of the District Head of Nagan Raya;
- 26. To hand over any data that was obtained from Mining Exploration Concession activities to the District Head of Nagan Raya, with copies to:
 - Minister of Energy and Mineral Resources of the Republic of Indonesia;
 - Governor of Aceh;
- 27. To report the implementation of local community development and empowerment as part of periodic reports;
- 28. To compensate holders of right over land and stands who have been disturbed by Mining Exploration Concession activities;
- To file a request to cease Mining Exploration Concession activities and to restore the Mining Concession Area;
- To report mined minerals during the implementation of Mining Exploration Concession activities;

- 31. To submit a Final Report on Mining Exploration Concession activities in the form of a final report on General Survey activities, a Final Report on Exploration Activities, a Final Report on Feasibility Studies, and also a Mapping Report for the entire Mining Concession Area that includes:
 - a. Maps that indicate all locations inside the exploration area where the Mining Concessionaire has drilled holes or excavated wells;
 - b. A copy of a list of drilled holes (drilling log) and the wells and examination results for samples that had been taken and analyzed;
 - c. A copy of every geological map scaled 1 : 50,000 and also every geophysical and geochemical map of the exploration area;
 - d. A topographical map scaled 1 : 50,000;
- 32. To submit Feasibility Study Reports, which comprise:
 - a. An in-depth geological survey and proof of ore deposits within the Mining Concession Area, inclusive of ore reserves, that is measured, referenced, and calculated so as long they are needed in considering the company's economic viability and examinations and samplings of these valuable deposits in accordance with approved work plans;
 - An observation and detailed information on sites of operational activities that are inclusive of the company along with the preparation of maps and drawings relating to these sites;
 - c. Technical and economic feasibility studies on the mining, transporting, loading, and shipping of ores, concentrates, and products in other forms from the Mining Concession Area, inclusive of a technical survey on potential port sites, feeder roads leading from the mine to the river port, and other possible means of transport;
 - d. A survey on any possible impact arising out of transport by barge or ship;
 - e. A survey on sites and planned structure of an airfield, inclusive of grounding and landing facilities, if deemed necessary;
 - f. A survey and planning for development relating to proper permanent possibilities, including designs for housing facilities and social facilities, cultural affairs, and social affairs as far as they are required to fulfill needs of the community that may develop following company activities within a period of 5 (five) years after the commencement of the operations period;
 - g. A study on needs of workers in relation to future exploitation activities that considers the types and duration of training courses that are needed to ensure the replacement of international workers by Indonesian workers and the use of local workers to a maximum extent in step with safe and efficient operations of exploitation;
 - A physical impact study on the effect exploitation activities will have on the environment. The study will be conducted in consultation with independent, qualified consultants;
 - i. A survey on the number and types of local enterprises that may potentially be needed to address exploitation and permanent settlement needs, which may potentially develop within a period of 5 (five) years after the commencement of production activities;
 - j. A metallurgical and marketing research to identify yields, sales, and sales contracts;
 - k. A marketing research to identify coal yield, potential sales of upgraded coal, and the proper contractual conditions for sellable products;
 - A preliminary survey on the viability of building smelting and purifying facilities, sufficient to assess capital and operating expenses and potential electrical power sources that may be required in the future;
 - Mathematical analysis, based on proper criteria for a mining enterprise, that includes prospective cash flows and exploitation rate of returns;

- n. A survey on proper water supply facilities for mining, industrial, and permanent settlement needs;
- o. Complete studies and survey in connection with the following matters:
 - Viability of and expenses for the construction of relevant telecommunications facilities;
 - Viability of and expenses for the construction and operating of a power station to supply electrical power required for construction, mining, industry, and permanent settlement in connection with exploitation activities;
- 33. Domestic processing and purifying plans;
- 34. Required to downsize area in accordance with provisions of the law;
- 35. To carry out agreements that have been drawn up with the District Government of Nagan Raya;
- 36. The District Head has the competence to rescind this Mining Exploration Concession even if its effective term has not yet expired, in the event this Mining Exploration Concession is not properly executed.

[initialed]

[initialed]

DISTRICT HEAD OF NAGAN RAYA, [signed & stamped] DRS. T. ZULKARNAINI

10

Appendix 5 Correspondence Regarding IUP 545 Status



REGENT OF NAGAN RAYA

Number:	645/200/2014	Suka Makmue, 6 Juni 2014
Appendix:	-	То
Subject:	Temporary Suspension Approval	President Director of PT. EMAS MINERAL
	of PT. Emas Mineral Murni Activities	MURNI

- 1. Pursuant to Letter of President Director of PT. Emas Mineral Murni Number 0030/EMM/IV/2014 dated 22 April 2014 concerning Request for Temporary Suspension of Activities.
- 2. Based on information that you have provided in the above letter and based on Government Regulation Number 23 Year 2010 concerning Implementation of Mineral and Coal Mining Business Activities, Article 76 paragraph 1. Hereby we grant our approval to the temporary suspension of PT. Emas Mineral Muri, for the period of 1 (one) Year, beginning of June 6th, 2014 until June 6, 2015, with the following conditions
 - a. To submit reports to the Regent, Minister, Governor, or Regent/Mayor according to their authority.
 - To fulfill the financial obligations; and b.
 - To maintain the occupational safety and health practice, environmental management, c. and environmental monitoring;
 - This Approval of Temporary Suspension shall end upon expiration, or requested by d. Mining Exploration Business (IUP).
- 3. This Approval was granted to be used accordingly as it may deemed fit.

(Signature) BUPATI NAGAN RAYA (Initialed) (Signature Affixed) (Regent Stamp Affixed)

DRS. H. T. ZULKARNAINI

NOI

- Minister of Energy and Mineral Resources Republic of Indonesia in Jakarta.
- 2. Minister of Finance of of Republic of Indonesia in Jakarta.
- Director General of Minerals and Coals; Ministry of Energy and Mineral Resources in Jakarta з.
- Governor of Aceh, in Banda Aceh. 4. 5. DPRK Nagan Raya, in Suka Makmue.
- Head of Mining and Energy Office, Aceh in Banda Aceh 6.
- Head of Mining and Energy Office, Nagan Raya in Suka Makmue.
- 8.
- Head of PPKKAD Nagan Raya Regency, in Suka Makmue. Head of Integrated Permits Service and Investment Nagan Raya Regency in Suka Makmue.
- 10. Archive







II. Facts

1. EMM is a limited liability company duly established under the law of the Republic of Indonesia based on the Deed of Establishment No. 20 dated 26 September 2005, which have been approved by the MoLHR through MoLHR Decree No. C-24671 HT.01.01.TH.2006 dated 24 August 2006

Accordance with the stipulation under the Article 7 paragraph (1) of UUPT, a limited liability company shall be established at least by 2 (two) parties, based on the notarial deed in Bahasa. Further, the paragraph (4) of the same Article states that the limited liability company shall obtain its legal status at the date of the issuance of MoLHR Decree regarding the legalization of its establishment.

2. EMM is a Foreign Direct Investment Company (*Perusahaan Penanaman Modal Asing* or PMA) which has obtained the approval from the Indonesia Investment Coordinating Board (*Badan Koordinasi Penanaman Modal* or BKPM) by virtue of BKPM Principle License dated 1 June 2011

EMM was initially a non-PMA and non-domestic investment company which is 100% (one hundred percent) owned by local investors. However, since Beutong Resources Pte Ltd, a company incorporated under the laws of Singapore ("Beutong") became the shareholder of the Company, EMM shall be obliged to conduct the change of status into the PMA Company. The said change of status further approved by the BKPM through the issuance of the BKPM Principle License dated 1 June 2011. This to be in accordance with the stipulation under the Investment Law and Perka BKPM 2009.

In connection with the above, the Investment Law and Perka BKPM 2009 define the foreign direct investment company as a company duly established under the laws of the Republic of Indonesia which fully or partially owned by the foreign investor, either individual or company ("Foreign Direct Investment Company"). The Foreign Direct Investment Company is usually called as *Perusahaan Penanaman Modal Asing* or PT PMA/PMA Company in Indonesia.

In order to be able to conduct its business activities in Indonesia, a PMA Company shall be required to obtain any necessary licenses issued by the related government authority. In this matter, according to the provision under the Article 3 paragraph (1) in conjunction to Article 2 of Perka BKPM 2009, EMM shall be required to obtain the Principle License issued by the Indonesia Investment Coordinating Board (*Badan Koordinasi Penanaman Modal* or "**BKPM**").

According to the Article 5 paragraph (1) of Perka BKPM 2009, BKPM is the government institution which has the authority to issue the business license for PT PMA in Indonesia.

14

008558000-00137929; 1 0111CML14 03



3. EMM is a company which engages in the business field of mining and already have the required licenses as regulated under the prevailing laws and regulation in Indonesia, where currently EMM is holding the IUP Exploration which allowed to be hiatus in activity for 1 (one) year while waiting for the issuance of IUP Production

Pursuant to the stipulation of the Article 15 paragraph (1) of the Old Mining Law, it is stated that in order to be able to conduct the business activities of mining, any parties shall be required to obtain the Mining Authority (*Kuasa Pertambangan* or KP).

A Mining Authority was issued for EMM at first based on the Nagan Raya Regent Decree No. 545/14/KP-EKSPLORASI/2005 dated 29 October 2005. Such first Mining Authority was issued for the period of 3 (three) years and should be expired at the date of 28 October 2008. Nevertheless, the said first Mining Authority has been renewed before the expiration date with a new starting date on 16 June 2006, with the validity of another 3 (three) years, and shall be expired on 15 June 2009. Such renewal as stated within the Nagan Raya Regent Decree No. 545/68/KP-EKSPLORASI/2006 dated 16 June 2006.

EMM further converted its Mining Authority into a Mining Business Permit (*Izin Usaha Pertambangan* or "**IUP**") for the compliance with the provision under the New Mining Law and Dirjen Minerba Circular Letter No. 1053/30/DJB/2009 dated 24 March 2009. Such conversion further is stated in Nagan Raya Regent Decree No. 545/22/IUP-Ekspl./2010 dated 11 January 2010, in which EMM Mining Authority converted into an IUP Exploration valid up to 15 June 2013.

The IUP Exploration which was valid up to 15 June 2013 has also been renewed by the issuance of the Nagan Raya Regent Decree No. 545/143/SK/Rev. IUP-Eksplorasi/2013 dated 15 April 2013, to become valid up to 15 June 2014.

The Article 76 of GR No. 23/2010 provides that mining business activities may be applied to be suspended as a result of force majeure, preventing circumstances or the carrying capacity of the environment, and that such suspension of mining business activities shall not detract from the validity period of the IUP. In accordance with Article 76 of the same regulation as above, due to certain reason, EMM applied the Suspension Request Letter to the Nagan Raya Regent by virtue of Request Letter No. 0030/EMM/IV/2014 dated 22 April 2014, in order to suspend its IUP Exploration for 1 (one) year. The said request letter further granted by Nagan Raya Regent through the issuance of the Nagan Raya Regent Decree No. 545/200/2014 dated 6 June 2014, stating that the IUP Exploration of EMM shall be affectively hiatus in activity for 1 (one) year until 5 June 2015.

008558000-00137929; 1 0111CML14 03 4



Subject to the assumption and qualification as below, we are in the opinion that EMM is a limited liability company duly established under the law of the Republic Indonesia, with the status of PMA Company, engaging in the business activities of mining by holding the IUP Exploration which currently is hiatus in activity while suspended for 1 (one) year, while waiting for the issuance of its IUP Production. The IUP Exploration granted to EMM further grants EMM the right to conduct mining exploration activities on the Beutong Project and while suspended, the JUP

008558000-00137929; 1 0111CML14 03 5



NURJADIN SUMONO MULYADI Partners	
11. Whereas, each assumption as the above is true, accurate and complete in all its aspeproviding the above assumptions does not mean that we have asked questions to validity of assumptions and we do not have any knowledge of a condition that may af validity of the assumptions above. There is no restriction on an assumption of the assumptions.	test the fect the
V. Qualification	
 Whereas, this Legal Opinion is only made based on the applicable and prevailing la regulation in the Republic of Indonesia; 	ws and
Whereas, this Legal Opinion is only made according to the facts as stated within the documents which have been reviewed by us as above.	ne copy
Thus, this Legal Opinion is made in order to render an explanation regarding the status of Business Permit of EMM.	Mining
Sincerely yours, Nurjadin Sumono Mulyadi & Partners	
NURJADIN SUMONO	
Ilya Sumono, S. H.	
008558000-00137929; 1 0111CML14 03	7



Appendix 6 Plans Showing Significant Surface Exploration Results






















Appendix 7 Drilling Cross Sections







































Appendix 8 Tabulated Significant Drillhole Intercepts and Collar Details

The following table is not a significant intersections table, however is a table showing the modeled intercepts (intercept type = "Modeled") utilised in the resource estimate and reflects the geological, spatial and grade interpolation considerations in identifying drill intervals to include in modeled domains. Significant intercepts outside of the modeled domains and those within the domains (higher grade cut or gold intercept criteria) are identified by a minimum of 6m > cut and can include a maximum of 6m internal waste (if >3m from intercept edge) or a maximum of 3m waste (if within 3m of interval edge).

NB. Silver assays excluded for all *BE* holes and the routine GA31 assays at or below detection for all BC* holes, as these assays inappropriately undertaken with high lower-detection (1ppm and 5ppm respectively). Where BC* hole intervals have both GA31 and IC01 silver assay (undertaken approx. 1 in 5 samples) and the GA31 assay is at or below detection then the IC01 silver assay is substituted. Missing silver assays in the following table reflect intervals where silver assays are at or below detection. The majority of BC* silver composite grades presented will be underpinned by the periodically undertaken IC01 assays.

Holes *BE* : drilled 1996-97 : PT Miwah Tambang Emas and Highlands Gold Indonesia
Holes BC* : drilled 2007-08 : PT Emas Mineral Murni and Freeport
Holes BEU* : drilled 2011-14 : PT Emas Mineral Murni and Tigers Copper Singapore No 1

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	Ag(ppm) Mo(ppm)
002BE96	East Porphyry	Modeled	1.00	121.00	120.00	1.05	0.14	144.42
		incl. >1.0%Cu	1.00	15.00	14.00	1.76	0.13	97.00
		>0.3ppmAu	15.00	21.00	6.00	0.82	0.49	57.00
		incl. >1.0%Cu	33.00	49.00	16.00	1.43	0.10	135.38
		incl. >1.0%Cu	83.00	115.00	32.00	1.26	0.15	141.69
003BE96	Outer BEP	Modeled	0.00	30.00	30.00	0.26	0.07	62.73
005BE96	Skarn	Modeled	0.00	10.00	10.00	0.37	0.05	3.00
008BE96	Outer BEP	Modeled	0.00	120.30	120.30	0.27	0.07	84.95
009BE96	East Porphyry	Modeled	8.35	30.00	21.65	0.31	0.17	51.93
011BE96	Not Modelled	>0.3ppmAu	56.00	62.00	6.00	0.38	0.47	1.33
		>0.3%Cu	82.00	88.00	6.00	0.54	0.35	3.33
012BE96	Not Modelled	>0.3ppmAu	112.00	120.40	8.40	0.07	0.32	11.29
013BE96	Outer BWP	Modeled	102.00	120.40	18.40	0.08	0.08	28.61
014BE96	Outer BWP	Modeled	110.00	121.00	11.00	0.01	0.06	83.00
015BE96	West Porphyry	Modeled	0.00	120.20	120.20	0.03	0.07	48.10
016BE96	Outer BWP	Modeled	88.00	104.00	16.00	0.20	0.12	117.00
016BE96	West Porphyry	Modeled	104.00	120.20	16.20	0.37	0.09	115.09
017BE96	West Porphyry	Modeled	108.00	120.20	12.20	0.66	0.08	63.36
018BE96	West Porphyry	Modeled	54.60	120.80	66.20	0.69	0.06	143.05
		incl. >1.0%Cu	80.00	86.00	6.00	1.19	0.10	163.67
019BE96	Not Modelled	>0.3%Cu	96.00	106.00	10.00	1.06	0.42	25.20
		incl. >1.0%Cu	98.00	104.00	6.00	1.30	0.47	23.33
		>0.3ppmAu	98.00	106.00	8.00	1.16	0.47	26.25
023BE97	Outer BEP	Modeled	0.00	60.00	60.00	0.03	0.06	0.50
101BE97	Not Modelled	>0.3%Cu	6.00	24.00	18.00	0.41	0.22	499.56
101BE97	Outer BWP	Modeled	120.00	162.00	42.00	0.14	0.08	20.50
		Modeled	190.00	358.00	168.00	0.26	0.12	66.79
101BE97	West Porphyry	Modeled	162.00	190.00	28.00	0.38	0.17	59.86

Hole	Resource Domain	Intercept			Interval	Cu(%)	Au(ppm)	Ag(ppm)	Mo(ppm)
BC001-01	East Porphyry	Modeled	2.50	150.00	147.50	1.16	0.19		124.17
		incl. >1.0%Cu	2.50	56.50	54.00	1.44	0.17		125.53
		>0.3ppmAu	79.50	85.50	6.00	0.86	0.49		43.00
		incl. >1.0%Cu	91.50	103.00	11.50	1.27	0.08		196.78
		incl. >1.0%Cu	116.50	150.00	33.50	1.14	0.21		104.51
BC001-02	East Porphyry	Modeled	2.50	150.00	147.50	1.32	0.25	2.05	145.17
		incl. >1.0%Cu	9.50	107.00	97.50	1.52	0.22	2.00	164.93
		>0.3ppmAu	71.00	77.00	6.00	1.43	0.35	1.70	69.00
		>0.3ppmAu	104.00	150.00	46.00	1.02	0.35	2.13	102.48
		incl. >1.0%Cu	122.00	131.80	9.80	1.11	0.41	1.30	90.59
		incl. >1.0%Cu	142.50	150.00	7.50	1.11	0.36	3.60	36.00
BC001-03	East Porphyry	Modeled	3.00	12.00	9.00	0.05	0.05	0.30	12.67
		Modeled	110.00	150.00	40.00	0.41	0.18	0.77	49.94
BC001-04	East Porphyry	Modeled	2.70	150.30	147.60	0.92	0.26	4.80	78.19
		incl. >1.0%Cu	21.40	47.00	25.60	1.83	0.46	6.92	110.52
BC002-01	East Porphyry	Modeled	70.50	150.00	79.50	0.60	0.22	0.62	51.65
		>0.3ppmAu	82.50	91.50	9.00	0.41	0.41		40.67
		>0.3ppmAu	102.00	108.00	6.00	0.54	0.34	0.60	29.50
BC003-01	East Porphyry	Modeled	11.50	50.50	39.00	0.37	0.38	1.35	56.31
		>0.3ppmAu	38.50	44.50	6.00	0.37	1.14		31.50
BC004-01	Outer BEP	Modeled	42.00	150.00	108.00	0.30	0.07	0.50	216.09
BC004-01	East Porphyry	Modeled	9.00	42.00	33.00	0.49	0.03	0.77	280.91
BC004-02	East Porphyry	Modeled	9.20	134.50	125.30	0.54	0.10	1.16	168.72
BC004-03	East Porphyry	Modeled	10.50	150.50	140.00	0.94	0.08	2.03	137.24
		incl. >1.0%Cu	13.00	22.00	9.00	1.67	0.06		132.67
		incl. >1.0%Cu	108.00	150.50	42.50	1.20	0.13	3.93	144.81
BC005-01	Outer BWP	Modeled	83.00	437.00	354.00	0.22	0.12	0.67	42.99
BC005-01	West Porphyry	Modeled	437.00	732.00	295.00	0.51	0.25	1.27	96.40
	1	>0.3ppmAu	501.00	540.00	39.00	0.60	0.36	0.70	34.69
		>0.3ppmAu	549.00	579.00	30.00	0.64	0.38	0.85	67.80
		>0.3ppmAu	603.00	630.00	27.00	0.68	0.46	1.25	78.44
		Modeled	819.00	889.20	70.20	0.38	0.13	0.50	163.32
BC005-02	Outer BWP	Modeled	85.00	376.00	291.00	0.24	0.09	1.97	43.98
		>0.3ppmAu	178.00	184.00	6.00	0.19	0.48	1.30	24.00
		incl. >1.0%Cu	277.00	286.00	9.00	2.50	0.08	11.33	34.33
BC005-02	West Porphyry	Modeled	376.00	692.20	316.20	0.43	0.19	1.28	62.25
		>0.3ppmAu	424.00	430.00	6.00	0.37	0.39	0.70	52.50
		incl. >1.0%Cu	466.00	472.00	6.00	1.36	0.09	7.00	46.50
		>0.3ppmAu	525.00	531.00	6.00	0.54	0.34		65.00
		>0.3ppmAu	669.00	689.50	20.50	0.61	0.38	0.90	49.73
BC005-03	Outer BWP	Modeled	86.00	107.00	21.00	0.22	0.10	4.57	127.14
		Modeled	155.00	167.00		0.25	0.05	0.30	77.25
		Modeled	227.00	519.40	292.40	0.23	0.07	0.79	36.69
BC005-03	West Porphyry	Modeled	107.00	155.00	48.00	0.49	0.08	0.57	110.56
		Modeled	167.00	227.00	60.00	0.37	0.09	0.48	123.85
		Modeled	519.40	687.00	167.60	0.37	0.12	0.75	141.97
		Modeled	801.00	901.00	100.00	0.34	0.06	0.87	327.98
BC005-04	Not Modelled	>0.3ppmAu	39.00	45.00	6.00	0.03	0.46		205.00
BC005-04	Outer BWP	Modeled	99.00	168.00	69.00	0.07	0.12	3.14	108.96
20000 04		Modeled	189.00	213.00	24.00	0.15	0.03	0.90	34.25
BC005-04	West Porphyry	Modeled	168.00	189.00	21.00	0.59	0.05	0.65	76.86
20000 04	troot orphyly	Modeled	213.00	616.00	403.00	0.51	0.03	1.14	237.45
		incl. >1.0%Cu	355.00	364.00	9.00	1.31	0.09	2.20	486.67
BC005-05	Not Modelled	>0.3ppmAu	533.00	539.00	6.00	0.13	1.11	2.20	48.00
BC005-05	Outer BWP	Modeled	87.00	121.00	34.00	0.15	0.08	0.25	15.18
BC005-05 BC005-05	West Porphyry	Modeled	121.00	416.00		0.03	0.00	0.25	64.56
0000-00	wearcorphyry	>0.3ppmAu	121.00	199.00	295.00	0.30	0.10	1.20	64.56 88.93
		COLDUNIAU	I/1.50	133.00	21.30	0.75	0.43	1.20	00 20

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	(mag)pA	Mo(ppm)
BC006-01	Outer BEP	Modeled	33.00	128.50	95.50		0.04	2.54	26.25
BC006-01	East Porphyry	Modeled	128.50	150.00	21.50		0.06	0.30	142.84
BC007-01	Skarn	Modeled	48.00	96.00	48.00		0.88	15.52	4.84
		incl. >1.0%Cu	48.00	81.00	33.00		1.23	18.00	5.73
		>0.3ppmAu	51.00	78.00	27.00		1.46	19.11	4.78
		incl. >1.0ppmAu	57.00	72.00	15.00		2.16	22.80	3.60
BC007-02	Skarn	Modeled	54.00	63.00	9.00		0.42	6.50	1.00
		incl. >1.0%Cu	54.00	60.00	6.00	1.68	0.50	6.50	1.25
		>0.3ppmAu	54.00	60.00	6.00	1.68	0.50	6.50	1.25
		Modeled	72.00	150.00	78.00	0.41	0.09	6.39	6.03
		incl. >1.0%Cu	84.00	96.00	12.00	1.30	0.20	11.50	6.50
BC007-03	Skarn	Modeled	51.80	108.00	56.20	0.95	0.20	11.28	4.04
		incl. >1.0%Cu	55.00	69.50	14.50	2.42	0.28	15.14	3.66
BC008-01	Skarn	Modeled	9.00	30.00	21.00	0.62	1.02	5.78	2.66
		>0.3ppmAu	12.00	24.00	12.00	0.82	1.74	6.50	2.78
		incl. >1.0ppmAu	17.60	24.00	6.40	0.77	2.92	6.53	3.00
		Modeled	75.00	111.00	36.00		0.08	5.36	15.76
BC008-02	Skarn	Modeled	11.30	36.00	24.70		0.24	11.34	5.15
		incl. >1.0%Cu	11.30	24.00	12.70		0.27	12.47	4.14
BC009-01	Outer BEP	Modeled	87.00	105.00	18.00		0.03	3.95	93.33
BC009-01	East Porphyry	Modeled	105.00	150.00	45.00	0.40	0.09	2.72	83.07
BC010-01	East Porphyry	Modeled	11.00	150.00	139.00		0.11	1.05	75.40
		incl. >1.0%Cu	56.00	75.00	19.00	1.28	0.29	1.70	26.96
		>0.3ppmAu	59.00	65.20	6.20		0.39		15.19
BC010-02	East Porphyry	Modeled	7.50	150.00	142.50		0.08	0.77	110.91
BC010-03	East Porphyry	Modeled	7.50	150.00	142.50		0.11	1.00	37.67
BC010-04	East Porphyry	Modeled	3.00	150.00	147.00		0.07	0.72	121.63
BC011-01	East Porphyry	Modeled	134.00	326.50	192.50		0.17	9.18	83.52
		>0.3ppmAu	268.00	274.00	6.00		0.41		96.50
		incl. >1.0%Cu	274.00	280.00	6.00		0.22	4.05	39.00
BC011-02	East Porphyry	Modeled	109.00	410.00	301.00		0.12	1.64	73.75
		Modeled	479.00	545.00	66.00		0.08	2.78	176.73
		incl. >1.0%Cu	518.00	524.00	6.00		0.14		79.50
		Modeled	614.00	700.00	86.00		0.17	8.71	250.88
BC011-03	East Porphyry	Modeled	84.00	259.20	175.20		0.14	4.29	68.03
		>0.3ppmAu	109.00	115.00	6.00		0.33		182.50
		>0.3ppmAu	160.00	172.00	12.00		0.28	13.75	65.25
BC011-03A	East Porphyry	Modeled	259.20	350.00	90.80		0.09	1.30	69.55
		Modeled	398.00	404.00	6.00		0.19		189.00
D0040.04	0.000	incl. >1.0%Cu	398.00	404.00	6.00		0.19	0.40	189.00
BC013-01	Outer BEP	Modeled	20.00	150.00	130.00		0.03	2.13	194.80
BC013-02	Outer BEP	Modeled	10.00				0.03	1.00	83.65
BC012.02	Faat Darahura	Modeled	114.00	143.90 114.00	29.90		0.04	0.90	109.73
BC013-02 BC013-03	East Porphyry	Modeled	78.00		36.00		0.08	6.67	166.17
0013-03	Outer BEP		7.00	150.00	143.00		0.08	1.52	68.11
BC014-01	Not Modellad	>0.3ppmAu >0.3%Cu	131.00 314.00	140.00 320.00	9.00 6.00		0.45	2.70	47.33
00014-01	Not Modelled	>0.3%Cu >0.3%Cu	488.00	320.00 497.00	9.00		0.04		9.00
		>0.3%Cu >0.3ppmAu	400.00 536.00	497.00 542.00	9.00 6.00		0.02		9.00 65.00
BC014-02	West Porphyry	Modeled	112.00	125.00	13.00		0.46		6.62
BC014-02 BC014-03	West Porphyry	Modeled	99.20	125.00	26.80		0.04	5.01	46.78
00014-03	west Forphyry	Modeled	165.00	120.00	12.00		0.03	5.01	23.75
		Modeled	217.00	495.00	278.00		0.08	1.45	298.71
BC015-01	East Porphyry	Modeled	217.00	150.00	121.40		0.08	1.45	61.17
00010-01	Last i orphyry	incl. >1.0%Cu	65.00	74.00	9.00		0.15	1.05	43.00
		incl. >1.0%Cu	89.00	95.00	6.00		0.25	1.50	43.00
BC015-02	East Porphyry	Modeled	29.80	150.00	120.20		0.20	1.88	120.11
DC010-02	Last Forphyry	Modeled	29.00	150.00	120.20	0.35	0.13	1.00	120.11

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	Ag(ppm)	Mo(ppm)
BC015-03	East Porphyry	Modeled	25.80	150.00	124.20	0.77	0.20	1.45	74.14
		>0.3ppmAu	29.00	35.00	6.00	0.71	0.30		93.50
		incl. >1.0%Cu	101.00	107.00	6.00	1.05	0.25	5.00	191.50
		incl. >1.0%Cu	119.00	150.00	31.00	1.16	0.26	1.50	61.24
		>0.3ppmAu	128.00	140.00	12.00	1.09	0.42		71.25
BC016-01	East Porphyry	Modeled	9.40	150.00	140.60	0.49	0.07	2.22	136.23
BC016-02	East Porphyry	Modeled	9.60	150.00	140.40	0.70	0.10	0.84	54.27
		incl. >1.0%Cu	28.00	37.00	9.00	1.13	0.13		103.67
BC016-03	East Porphyry	Modeled	8.00	150.00	142.00	0.77	0.10	1.47	92.73
		incl. >1.0%Cu	68.00	83.00	15.00	1.16	0.09	1.05	81.20
BC017-01	Skarn	Modeled	15.00	30.00	15.00	0.33	0.13	4.66	8.27
BC017-02	Skarn	Modeled	26.90	86.20	59.30	1.41	0.20	15.56	6.33
		incl. >1.0%Cu	30.00	36.00	6.00	1.13	0.15	7.50	4.50
		incl. >1.0%Cu	45.00	86.20	41.20	1.73	0.24	17.42	6.61
BC017-03	Skarn	Modeled	15.10	123.00	107.90	0.84	0.76	7.27	5.70
		>0.3ppmAu	24.00	123.00	99.00	0.83	0.81	5.77	5.60
		incl. >1.0%Cu	39.00	54.00	15.00	1.15	0.94	6.00	5.60
		incl. >1.0%Cu	86.60	119.80	33.20	1.21	1.29	7.72	4.87
		incl. >1.0ppmAu	93.00	102.00	9.00	1.36	2.58	5.80	7.00
BC018-01	Not Modelled	>0.3ppmAu	87.50	97.30	9.80	0.14	0.46	7.00	8.28
BC018-01	Skarn	Modeled	31.00	87.50	56.50	0.40	0.15	1.07	67.86
		incl. >1.0%Cu	75.00	84.00	9.00	1.27	0.37		9.67
		>0.3ppmAu	78.00	87.50	9.50	0.96	0.43		6.79
BC018-02	Skarn	Modeled	141.00	150.00	9.00	0.38	0.17	5.80	25.33
BC018-03	Skarn	Modeled	37.40	102.00	64.60	0.32	0.16	6.75	43.52
		incl. >1.0%Cu	75.00	81.00	6.00	1.36	0.56	9.00	9.50
		>0.3ppmAu	75.00	81.00	6.00	1.36	0.56	9.00	9.50
BC020-01	Outer BEP	Modeled	13.50	98.00	84.50	0.17	0.18	12.71	41.57
		>0.3ppmAu	26.00	41.00	15.00	0.06	0.63	17.80	58.00
		Modeled	144.00	150.00	6.00	0.15	0.11		42.00
BC020-01	East Porphyry	Modeled	98.00	144.00	46.00	0.30	0.07	0.98	92.11
BC020-02A	Outer BEP	Modeled	15.30	27.00	11.70	0.05	0.08	0.20	7.46
BC020-03	Not Modelled	>0.3%Cu	133.00	150.00	17.00	0.74	0.17	0.60	33.29
BC020-03	Outer BEP	Modeled	13.30	94.00	80.70	0.23	0.07	0.84	30.64
BC021-01	Outer BEP	Modeled	10.00	21.20	11.20	0.19	0.27	0.20	20.40
BC021-01	East Porphyry	Modeled	21.20	150.00	128.80	0.54	0.07	1.20	80.01
BC021-02	Not Modelled	>0.3%Cu	46.50	65.00	18.50	0.35	0.10	1.50	88.16
		>0.3%Cu	74.00	80.00	6.00	0.51	0.19	2.90	6.50
		>0.3%Cu	131.00	137.00	6.00	0.39	0.05	13.00	8.50
BC021-02	Outer BEP	Modeled	8.20	32.00	23.80	0.09	0.02	0.41	7.53
BC025-01	Not Modelled	>0.3%Cu	63.50	69.50	6.00	4.00	0.16	4.20	35.50
BC025-02	Not Modelled	>0.3%Cu	67.00	97.00	30.00		0.02	0.60	54.90
Dougo as		>0.3ppmAu	428.00	434.00	6.00	0.07	1.64		41.00
BC025-03	Not Modelled	>0.3%Cu	57.00	84.00	27.00	0.55	0.10	1.10	83.33
BC026-01	Outer BEP	Modeled	3.00	150.00	147.00	0.24	0.07	2.53	4.34
BC026-02	Outer BEP	Modeled	5.80	150.00	144.20	0.14	0.03	4.29	8.19
BC027-02	Not Modelled	>0.3ppmAu	63.00	69.00	6.00		0.38	9.00	4.50
BC028-01	West Porphyry	Modeled	135.00	150.00	15.00	0.33	0.03	0.30	129.40
BC028-02	Not Modelled	>0.3%Cu	119.00	133.00	14.00	1.27	0.29	61.29	87.21
		incl. >1.0%Cu	122.00	130.50	8.50	1.66	0.31	67.06	101.94
Dooroo oo	N	>0.3ppmAu	125.00	140.80	15.80	0.82	0.48	84.02	93.49
BC028-03	Not Modelled	>0.3%Cu	108.00	114.00	6.00	0.40	0.01		14.50
BC029-01	Not Modelled	>0.3%Cu	29.00	35.00	6.00	0.36	0.07	4.00	76.50
BC029-01	Outer BEP	Modeled	123.00	292.80	169.80	0.38	0.16	1.32	171.54
Doggo citi	N	incl. >1.0%Cu	216.00	228.00	12.00	1.21	0.13	1.50	419.00
BC029-01A	Not Modelled	>0.3%Cu	614.00	620.00	6.00	0.32	0.09		128.00
		>0.3%Cu	651.00	657.00	6.00	0.36	0.08		104.50

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	Ag(ppm)	Mo(ppm)
BC029-01A	Outer BEP	Modeled	292.80	416.00	123.20		0.09	1.40	121.05
		incl. >1.0%Cu	308.00	314.00	6.00	1.25	0.29	2.60	172.00
BC029-01A	East Porphyry	Modeled	416.00	577.50	161.50	0.49	0.12	3.18	198.76
		>0.3ppmAu	504.00	514.20	10.20	1.28	0.44	8.72	157.08
		incl. >1.0%Cu	507.50	514.20	6.70	1.57	0.48	9.09	209.36
		Modeled	846.00	869.00	23.00	0.36	0.06	2.19	201.76
BC029-02	Not Modelled	>0.3%Cu	142.00	148.00	6.00	0.35	0.04	1.00	130.00
		>0.3%Cu	495.00	501.00	6.00	0.63	0.03		12.50
		>0.3%Cu	609.00	615.00	6.00	0.71	0.05	1.90	25.00
BC032-01	Not Modelled	>0.3%Cu	9.00	18.00	9.00	0.47	0.00		1.17
		>0.3%Cu	30.00	36.00	6.00	0.53	0.00		2.25
BEU0600-02	East Porphyry	Modeled	39.50	72.50	33.00	0.05	0.05	0.91	7.32
		Modeled	169.00	197.00	28.00	0.38	0.11	1.34	44.95
		Modeled	231.50	446.10	214.60	0.45	0.09	1.24	70.09
BEU0600-03	East Porphyry	Modeled	158.00	232.40	74.40	0.21	0.17	1.10	69.16
BEU0700-01	Skarn	Modeled	96.00	142.00	46.00	0.30	0.11	3.48	9.76
BEU0700-02	East Porphyry	Modeled	41.00	270.50	229.50	0.45	0.11	1.20	73.68
		>0.3ppmAu	126.00	132.00	6.00	0.72	0.33	1.15	57.50
BEU0700-03	East Porphyry	Modeled	74.50	459.20	384.70	0.67	0.21	4.42	99.68
		>0.3ppmAu	95.50	117.00	21.50	0.33	1.27	32.69	34.20
		incl. >1.0ppmAu	101.50	107.50	6.00	0.52	3.69	101.70	28.00
		incl. >1.0%Cu	164.00	179.00	15.00	1.08	0.12	2.78	97.60
		incl. >1.0%Cu	354.00	366.00	12.00	1.05	0.09	4.45	171.25
		incl. >1.0%Cu	438.00	444.00	6.00	1.33	0.29	3.20	128.00
BEU0700-04	East Porphyry	Modeled	136.00	360.00	224.00	0.73	0.12	3.58	73.86
		incl. >1.0%Cu	257.00	263.00	6.00	1.18	0.09	2.60	196.00
		incl. >1.0%Cu	296.00	311.00	15.00	1.01	0.11	2.88	78.60
		Modeled	375.00	420.00	45.00	0.58	0.07	1.69	86.73
	Fast Darahura	Modeled	444.00	461.70	17.70	0.47	0.05	2.82	69.98
BEU0700-05	East Porphyry	Modeled	136.00	409.00	273.00	0.57	0.12	1.27	45.48 74.38
BEU0700-07	East Porphyry	Modeled Modeled	143.55 383.00	347.00 407.20	203.45 24.20	0.44	0.15 0.06	2.45 1.64	74.30 55.26
BEU0800-01	East Porphyry	Modeled	3.25	220.50	24.20	1.18	0.00	2.49	96.47
DE00000-01	Last Forphyry	incl. >1.0%Cu	6.35	89.00	82.65	1.45	0.20	2.45	92.88
		incl. >1.0%Cu	103.00	111.00	8.00	1.45	0.18	16.66	64.56
		>0.3ppmAu	111.00	124.75	13.75	0.79	0.35	1.19	108.85
		incl. >1.0%Cu	139.85	170.50	30.65	1.37	0.30	2.19	42.08
		>0.3ppmAu	152.60	168.50	15.90	1.43	0.41	2.48	29.93
		incl. >1.0%Cu	176.50	196.30	19.80	1.11	0.20	2.14	104.38
		incl. >1.0%Cu	200.90	207.30	6.40	1.20	0.25	1.83	250.84
BEU0800-02	East Porphyry	Modeled	2.80	349.90	347.10	1.06	0.18	1.72	132.54
		incl. >1.0%Cu	10.70	87.00	76.30		0.15	1.68	88.92
		incl. >1.0%Cu	101.00	107.00	6.00		0.17	1.57	221.00
		>0.3ppmAu	121.00	148.80	27.80		0.45	1.58	114.84
		incl. >1.0%Cu	147.00	168.00	21.00		0.21	1.98	161.70
		incl. >1.0%Cu	182.00	215.85	33.85		0.16	2.16	134.23
		incl. >1.0%Cu	229.00	255.00	26.00	1.35	0.23	2.42	189.74
		incl. >1.0%Cu	299.00	305.00	6.00	1.36	0.11	2.33	76.33
BEU0800-03	East Porphyry	Modeled	5.00	335.90	330.90	0.79	0.15	1.95	106.06
		incl. >1.0%Cu	20.00	115.00	95.00		0.22	3.02	133.80
		>0.3ppmAu	110.00	117.50	7.50		0.34	1.93	115.67
		incl. >1.0%Cu	221.00	227.00	6.00	1.44	0.14	2.15	145.50
BEU0800-04	Skarn	Modeled	124.10	136.95	12.85		0.13	8.09	4.33
		Modeled	149.60	211.50	61.90		0.28	6.14	4.20
		incl. >1.0%Cu	149.60	158.60	9.00	1.91	0.21	20.37	1.33
		incl. >1.0%Cu	182.60	193.50	10.90		0.84	7.10	1.58
		>0.3ppmAu	182.60	196.50	13.90	1.17	0.77	5.91	1.45

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	Ag(ppm)	Mo(ppm)
BEU0800-05	East Porphyry	Modeled	97.00	333.00	236.00	0.59	0.17	1.32	73.11
		>0.3ppmAu	177.00	186.00	9.00	0.76	0.47	0.67	35.67
		Modeled	351.00	399.00	48.00	0.73	0.06	1.69	95.64
		Modeled	459.00	525.00	66.00	0.57	0.08	1.60	73.25
BEU0800-06	Skarn	Modeled	290.20	308.80	18.60	0.53	0.30	6.08	34.56
BEU0800-07	Skarn	Modeled	121.00	177.50	56.50	1.39	0.38	6.84	2.35
		incl. >1.0%Cu	121.00	162.50	41.50	1.78	0.43	8.02	1.82
		>0.3ppmAu	127.00	139.00	12.00	2.42	0.85	8.00	1.50
BEU0800-08	East Porphyry	Modeled	94.00	227.80	133.80	0.46	0.16	1.64	45.50
		>0.3ppmAu	118.00	124.00	6.00	0.45	0.34	1.15	88.50
BEU0800-09	Outer BEP	Modeled	65.00	109.50	44.50	0.25	0.02	3.01	38.54
BEU0800-09	East Porphyry	Modeled	109.50	448.50	339.00	0.58	0.12	1.13	111.47
		incl. >1.0%Cu	274.60	301.60	27.00	1.21	0.17	2.12	87.56
		incl. >1.0%Cu	316.00	322.00	6.00	1.27	0.09	1.65	114.00
		incl. >1.0%Cu	367.00	373.00	6.00	1.19	0.14	2.35	134.50
		>0.3ppmAu	430.00	439.00	9.00	0.86	0.46	1.33	93.00
BEU0800D01	East Porphyry	Modeled	111.00	390.00	279.00	0.54	0.13	1.20	83.04
		Modeled	438.00	498.00	60.00	0.57	0.07	1.87	67.13
		Modeled	503.00	526.00	23.00	0.73	0.09	2.15	287.78
		Modeled	532.00	725.00	193.00	0.62	0.13	5.82	145.94
		incl. >1.0%Cu	622.00	640.00	18.00	1.08	0.09	10.05	286.50
BEU0900-01	East Porphyry	Modeled	5.30	379.50	374.20	0.89	0.13	2.03	117.45
		incl. >1.0%Cu	8.30	17.30	9.00	1.32	0.27	1.87	57.33
		>0.3ppmAu	14.30	26.30	12.00	0.94	0.43	2.17	124.00
		incl. >1.0%Cu	29.30	35.30	6.00	1.36	0.29	1.50	587.00
		>0.3ppmAu	44.30	53.30	9.00	1.43	0.42	6.67	115.67
		incl. >1.0%Cu	53.30	74.30	21.00	1.23	0.17	1.83	156.86
		incl. >1.0%Cu	95.30	101.30	6.00	1.06	0.23	1.30	53.00
		incl. >1.0%Cu	168.30	192.30	24.00	1.17	0.09	2.08	148.88
		incl. >1.0%Cu	219.30	231.30	12.00	1.03	0.13	2.45	85.75
		incl. >1.0%Cu	291.00	315.00	24.00	1.10	0.07	2.73	98.25
		Modeled	436.20	501.00	64.80	0.55	0.11	1.64	113.45
		incl. >1.0%Cu	439.00	445.00	6.00	1.13	0.07	2.35	383.50
		>0.3ppmAu	471.00	477.00	6.00	0.88	0.32	2.20	53.00
		Modeled	549.00	709.00	160.00	0.75	0.19	7.07	247.77
		>0.3ppmAu	680.00	689.00	9.00	1.06	0.39	2.17	46.00
	0.1.050	incl. >1.0%Cu	683.00	689.00	6.00	1.12	0.41	2.20	38.50
BEU0900-02	Outer BEP	Modeled	179.00	274.40	95.40	0.35	0.04	0.72	262.30
BEU0900-02	East Porphyry	Modeled	5.30	179.00	173.70	0.78	0.08	1.47	123.84
		incl. >1.0%Cu incl. >1.0%Cu	5.30 29.00	20.00 41.00	14.70 12.00	1.62 0.96	0.16 0.09	1.77 2.65	151.55 103.00
		incl. >1.0%Cu	29.00	41.00	12.00			3.60	137.00
BEU0900-03	East Porphyry	Modeled	4.50	304.50	300.00	1.10 0.65	0.05	1.37	62.71
DE00300-03	Last Porphyry	>0.3ppmAu	7.00	33.00	26.00	0.65	0.14	1.08	172.00
		>0.3ppmAu	72.00	78.00	6.00	0.52	0.36	1.55	19.00
		>0.3ppmAu	233.00	239.00	6.00	0.31	0.54	1.55	47.50
		Modeled	342.50	372.00	29.50	0.60	0.04	2.06	88.35
BEU0900-04	East Porphyry	Modeled	5.20	283.00	277.80	0.63	0.04	1.10	55.09
5200300-04	East i orphyry	>0.3ppmAu	67.00	73.00	6.00	0.84	0.39	1.30	12.50
		incl. >1.0%Cu	274.00	280.00	6.00	1.23	0.10	3.10	43.00
		Modeled	313.00	330.00	17.00	0.64	0.03	1.82	84.79
BEU0900-05	Outer BEP	Modeled	284.00	309.00	25.00	0.47	0.03	3.86	137.36
BEU0900-05	East Porphyry	Modeled	5.50	230.00	224.50	0.71	0.03	1.29	44.03
		incl. >1.0%Cu	50.00	62.00	12.00	1.33	0.41	2.22	8.50
		>0.3ppmAu	50.00	65.00	15.00		0.39	2.08	9.20
BEU1000-01	Outer BEP	Modeled	13.00	101.00	88.00	0.31	0.06	1.20	111.15
DE01000-01		Modeled	15.00	101.00	00.00	0.51	0.00	1.20	111.10

Hole	Resource Domain	Intercept	From	То	Interval	Cu(%)	Au(ppm)	Ag(ppm)	Mo(ppm)
BEU1000-01	East Porphyry	Modeled	101.00	330.50	229.50	0.60	0.06	1.88	193.80
		incl. >1.0%Cu	245.00	251.00	6.00	1.11	0.19	2.35	155.00
		incl. >1.0%Cu	310.00	328.00	18.00	1.31	0.06	3.07	38.17
		Modeled	348.00	410.00	62.00	0.77	0.04	5.55	76.78
		incl. >1.0%Cu	395.00	401.00	6.00	1.09	0.06	26.70	129.50
BEU1000-02	Outer BEP	Modeled	8.00	154.00	146.00	0.25	0.04	0.94	106.40
BEU1000-02	East Porphyry	Modeled	154.00	406.70	252.70	0.67	0.05	1.66	86.94
		incl. >1.0%Cu	348.10	404.00	55.90	1.29	0.08	3.11	164.56
BEU1000-03	Outer BEP	Modeled	5.25	219.20	213.95	0.25	0.03	1.42	188.00
BEU1000-04	Outer BEP	Modeled	6.50	104.00	97.50	0.29	0.07	1.49	118.96
		Modeled	227.00	230.00	3.00	0.50	0.03	0.60	165.00
BEU1000-04	East Porphyry	Modeled	104.00	227.00	123.00	0.34	0.02	0.65	145.87
		Modeled	230.00	337.00	107.00	0.52	0.04	1.05	405.02
BEU1000-05	Not Modelled	>0.3%Cu	352.50	364.30	11.80	0.49	0.07	1.37	29.69
BEU1100-01	Outer BEP	Modeled	9.50	24.00	14.50	0.35	0.05	0.82	30.07
BEU1100-02	Not Modelled	>0.3%Cu	353.00	369.50	16.50	0.39	0.03	1.09	193.88
BEU1100-02	Outer BEP	Modeled	4.80	239.00	234.20	0.29	0.04	1.49	37.36
		incl. >1.0%Cu	50.00	62.00	12.00	1.61	0.04	7.20	46.25
		incl. >1.0%Cu	98.00	104.00	6.00	1.31	0.20	7.30	35.50
		Modeled	257.00	335.00	78.00	0.32	0.02	0.72	122.58
BEU1100-02	East Porphyry	Modeled	239.00	257.00	18.00	1.03	0.07	1.15	258.33
		incl. >1.0%Cu	251.00	257.00	6.00	2.21	0.02	1.35	366.50
BEU1100-03	Outer BEP	Modeled	7.50	228.00	220.50	0.15	0.02	0.78	25.54
		Modeled	300.00	330.00	30.00	0.18	0.03	0.43	41.50
BEU1100-03	East Porphyry	Modeled	228.00	300.00	72.00	0.44	0.06	1.65	268.38
BEU1700D01	Not Modelled	>0.3%Cu	1338.00	1359.00	21.00	0.33	0.06	0.51	160.36
BEU1700D01	East Porphyry	Modeled	102.00	387.00	285.00	0.60	0.10	0.95	167.32
		>0.3ppmAu	102.00	108.00	6.00	0.50	0.36	1.65	67.50
		incl. >1.0%Cu	177.00	183.00	6.00	1.22	0.08	0.75	136.50
		incl. >1.0%Cu	201.00	216.00	15.00	1.15	0.08	2.04	362.00
		>0.3ppmAu	246.00	252.00	6.00	0.88	0.38	1.30	142.50
		Modeled	522.00	821.00	299.00	0.43	0.17	0.67	191.75
		>0.3ppmAu	604.00	613.00	9.00	0.62	0.36	0.72	748.33
		>0.3ppmAu	755.00	761.00	6.00	0.55	0.36	0.97	133.25
		>0.3ppmAu	779.00	788.00	9.00	0.65	0.36	1.17	67.67

Tabulated drillhole collar location, orientation and total length.

Hole	UTM East	UTM North	RL	Azimuth	Dip	EOH length
001BE96	230354.0	495288.1	917.0	330	-60	67.6
002BE96	230314.7	495365.6	937.0	330	-60	121.0
003BE96	230245.1	495489.2	976.0	330	-60	111.7
004BE96	230191.5	495581.9	1024.0	330	-60	121.0
005BE96	230147.3	495670.8	1071.0	330	-60	121.8
006BE96	230390.4	495627.5	1044.0	330	-60	120.4
007BE96	230438.4	495536.7	999.0	330	-60	120.4
008BE96	230486.4	495442.2	975.0	330	-60	120.3
009BE96	230536.2	495353.2	928.0	330	-60	120.6
010BE96	230663.1	495537.8	975.0	330	-60	120.2
011BE96	230615.1	495630.4	996.0	330	-60	126.6
012BE96	230565.3	495721.3	1036.0	330	-60	120.4
013BE96	229541.9	495117.8	1179.0	0	-90	120.4
014BE96	229591.8	495028.8	1181.0	0	-90	121.0
015BE96	229637.9	494939.8	1175.0	0	-90	120.2

Hole	UTM East	UTM North	RL	Azimuth	Dip	EOH length
016BE96	229492.1	495208.6	1154.0	150	-60	120.2
017BE96	229442.2	495297.6	1127.0	150	-60	120.2
018BE96	229396.1	495390.3	1098.0	150	-60	120.8
019BE96	229346.3	495479.3	1072.0	150	-60	112.6
020BE97	229298.3	495570.1	1050.0	150	-60	38.2
021BE97	229764.4	495557.4	1025.0	150	-60	120.3
022BE97	229838.2	495422.1	976.0	150	-60	80.0
023BE97	229934.1	495238.6	1020.0	150	-60	90.
024BE97	228586.6	494468.3	1189.0	0	-90	63.
025BE97	228805.7	494877.8	1173.0	330	-60	120.
026BE97	228719.0	495037.3	1139.0	150	-60	120.
027BE97	228844.0	495216.3	1147.0	150	-60	88.
028BE97	229041.0	495260.1	1200.0	150	-60	87.
029BE97	228991.7	494943.8	1196.0	330	-60	80.
030BE97	229090.0	494761.7	1154.0	330	-60	38.
031BE97	229187.8	494583.8	1101.0	330	-60	79.
101BE97	229565.9	495071.4	1181.0	330	-60	358.
102BE97	229759.7	494713.7	1093.0	330	-60	20.
103BE97	229117.9	495502.2	1088.0	150	-50	316.
104BE97	228906.3	495508.5	1087.0	150	-50	195.
BC001-01	230295.4	495366.5	928.4	330	-60	150.
BC001-02	230295.4	495366.5	928.4	30	-60	150.
BC001-03	230295.4	495366.5	928.4	180	-60	150.
BC001-04	230295.4	495366.5	928.4	0	-90	150.
BC002-01	230402.8	495355.3	925.1	0	-60	150.
BC002-02	230402.8	495355.3	925.1	180	-60	150.
BC003-01	230506.4	495324.9	943.0	0	-60	150.
BC003-02	230506.4	495324.9	943.0	180	-60	150.
BC004-01	230157.0	495426.0	923.8	0	-60	150.
BC004-02	230157.0	495426.0	923.8	180	-60	134.
BC004-03	230157.0	495426.0	923.8	90	-60	150.
BC005-01	229599.8	495070.3	1148.9	270	-60	889.
BC005-02	229599.8	495070.3	1148.9	0	-90	692.
BC005-02A	229599.8	495070.3	1148.9	0	-90	63.
BC005-03	229599.8	495070.3	1148.9	315	-60	901.
BC005-04	229599.8	495070.3	1148.9	45	-60	654.
BC005-05	229599.8	495070.3	1148.9	210	-60	1364.
BC006-01	230292.6	495530.4	987.2	180	-60	150.
BC006-02	230292.6	495530.4	987.2	0	-60	150.
BC007-01	230301.6	495746.3	1102.8	180	-60	150.
BC007-02	230301.6	495746.3	1102.8	0	-90	150.
BC007-03	230301.6	495746.3	1102.8	225	-60	150.
BC008-01	230152.2	495695.8	1078.4	0	-90	150.
BC008-02	230152.2	495695.8	1078.4	0	-60	150.
BC009-01	230400.1	495548.0	980.3	180	-60	150.
Hole	UTM East	UTM North	RL	Azimuth	Dip	EOH length
-----------	----------	-----------	--------	---------	-----	------------
BC009-02	230400.1	495548.0	980.3	0	-60	150.0
BC010-01	230168.8	495306.5	932.6	0	-60	150.0
BC010-02	230168.8	495306.5	932.6	180	-60	150.0
BC010-03	230168.8	495306.5	932.6	45	-60	150.0
BC010-04	230168.8	495306.5	932.6	225	-60	150.0
BC011-01	230317.3	495259.5	919.5	0	-60	326.5
BC011-01A	230317.3	495259.5	919.5	0	-60	52.5
BC011-02	230317.3	495259.5	919.5	330	-60	700.0
BC011-03	230317.3	495259.5	919.5	300	-60	259.2
BC011-03A	230317.3	495259.5	919.5	300	-60	445.7
BC011-04	230317.3	495259.5	919.5	180	-60	619.5
BC011-05	230317.3	495259.5	919.5	0	-90	426.5
BC012-01	229013.5	494886.2	1190.3	70	-60	655.8
BC013-01	230083.6	495307.6	951.8	0	-60	150.0
BC013-02	230083.6	495307.6	951.8	180	-60	144.0
BC013-03	230083.6	495307.6	951.8	270	-60	150.0
BC014-01	229126.9	495095.6	1211.8	0	-60	900.2
BC014-02	229126.9	495095.6	1211.8	0	-90	125.0
BC014-03	229126.9	495095.6	1211.8	135	-60	596.0
BC015-01	230346.3	495434.9	946.2	180	-60	150.0
BC015-02	230346.3	495434.9	946.2	0	-60	150.0
BC015-03	230346.3	495434.9	946.2	0	-90	150.0
BC016-01	230222.5	495410.8	923.0	0	-60	150.0
BC016-02	230222.5	495410.8	923.0	180	-60	150.0
BC016-03	230222.5	495410.8	923.0	0	-90	150.0
BC017-01	230074.1	495706.3	1058.4	180	-60	96.9
BC017-02	230074.1	495706.3	1058.4	0	-60	150.0
BC017-03	230074.1	495706.3	1058.4	270	-60	150.0
BC018-01	230390.6	495761.6	1046.4	180	-60	150.0
BC018-02	230390.6	495761.6	1046.4	0	-60	150.0
BC018-03	230390.6	495761.6	1046.4	240	-60	150.0
BC019-01	229842.4	495116.8	1048.1	45	-60	83.3
BC019-01A	229842.4	495116.8	1048.1	45	-60	78.1
BC019-01B	229842.4	495116.8	1048.1	45	-60	69.5
BC019-02	229842.4	495116.8	1048.1	90	-60	58.0
BC020-01	230101.8	495160.7	1004.4	0	-60	150.0
BC020-02	230101.8	495160.7	1004.4	180	-60	45.5
BC020-02A	230101.8	495160.7	1004.4	180	-60	48.0
BC020-03	230101.8	495160.7	1004.4	0	-90	150.0
BC021-01	230190.7	495174.1	975.0	0	-60	150.0
BC021-02	230190.7	495174.1	975.0	180	-60	143.0
BC022-01	230321.2	495129.3	973.8	180	-60	49.5
BC022-02	230321.2	495129.3	973.8	0	-90	150.0
BC023-01	230202.3	495057.8	1008.5	0	-60	73.0
BC023-02	230202.3	495057.8	1008.5	0	-90	103.0

Hole	UTM East	UTM North	RL	Azimuth	Dip	EOH length
BC024-01	230401.7	495114.8	976.1	0	-60	84.1
BC025-01	229763.7	494824.6	1100.0	0	-90	603.0
BC025-02	229763.7	494824.6	1100.0	270	-60	1081.0
BC025-03	229763.7	494824.6	1100.0	210	-60	197.0
BC025-03A	229763.7	494824.6	1100.0	210	-60	283.0
BC026-01	229929.5	495322.1	966.0	180	-60	150.0
BC026-02	229929.5	495322.1	966.0	225	-60	150.0
BC027-01	229751.3	495362.0	975.2	180	-60	150.0
BC027-02	229751.3	495362.0	975.2	0	-60	144.3
BC028-01	229602.8	495363.6	977.5	180	-60	150.0
BC028-02	229602.8	495363.6	977.5	0	-60	140.8
BC028-03	229602.8	495363.6	977.5	270	-60	150.0
BC029-01	230068.6	495425.2	925.7	45	-70	292.8
BC029-01A	230068.6	495425.2	925.7	45	-70	869.0
BC029-02	230068.6	495425.2	925.7	0	-60	900.0
BC030-01	228383.9	494119.6	1118.4	0	-60	150.0
BC031-01	228863.8	494029.5	1152.4	0	-90	150.0
BC032-01	228094.5	494230.6	1119.9	0	-60	150.0
BC033-01	228806.2	494486.3	1136.2	0	-90	150.0
BC034-01	228656.5	494450.8	1167.7	0	-90	150.0
BC035-01	228505.9	494238.3	1137.7	0	-90	150.0
BEU0600-01	230496.0	495373.0	945.0	350	-70	158.1
BEU0600-02	230504.0	495317.0	943.0	350	-72	446.1
BEU0600-03	230496.0	495373.0	945.0	350	-70	232.4
BEU0700-01	230321.0	495796.0	1101.0	170	-67	210.5
BEU0700-02	230402.7	495355.2	925.0	346	-48	290.0
BEU0700-03	230402.7	495355.2	925.0	346	-63	459.2
BEU0700-04	230402.7	495355.2	925.0	346	-72	461.7
BEU0700-05	230402.7	495355.2	925.0	346	-84	459.4
BEU0700-06	230402.7	495355.2	925.0	174	-83	163.5
BEU0700-07	230402.7	495355.2	925.0	174	-83	407.2
BEU0700-07	230402.7	495355.2	925.0	174	-83	407.2
BEU0800-01	230295.6	495363.2	929.9	350	-64	220.5
BEU0800-02	230295.6	495365.2	929.9	350	-74	349.9
BEU0800-03	230295.6	495365.2	929.9	350	-84	335.9
BEU0800-04	230232.0	495819.0	1137.0	170	-66	239.1
BEU0800-05	230314.0	495260.0	924.0	350	-70	525.0
BEU0800-06	230232.0	495819.0	1137.0	170	-88	415.1
BEU0800-07	230232.0	495819.0	1137.0	170	-45	190.5
BEU0800-08	230314.0	495260.0	924.0	350	-80	227.8
BEU0800-09	230292.6	495530.4	987.1	188	-80	497.0
BEU0800D-01	230278.0	495321.4	936.4	2	-76	924.4
BEU0900-01	230200.0	495372.0	919.0	350	-74	794.5
BEU0900-02	230200.0	495372.0	919.0	347	-58	274.4
BEU0900-03	230200.0	495372.0	919.0	347	-90	472.4

Hole	UTM East	UTM North	RL	Azimuth	Dip	EOH length
BEU0900-04	230200.0	495372.0	919.0	176	-78	367.1
BEU0900-05	230200.0	495372.0	919.0	170	-65	327.3
BEU1000-01	230104.0	495315.0	943.0	170	-90	495.1
BEU1000-02	230104.0	495315.0	943.0	348	-78	444.6
BEU1000-03	230081.0	495364.0	918.0	350	-76	219.2
BEU1000-04	230104.0	495315.0	943.0	170	-75	337.0
BEU1000-04	230104.0	495315.0	943.0	170	-75	337.0
BEU1000-05	230081.0	495364.0	918.0	350	-73	400.0
BEU1000-05	230081.0	495364.0	918.0	350	-73	400.0
BEU1100-01	229995.0	495342.0	945.0	350	-76	506.5
BEU1100-02	229995.0	495342.0	945.0	175	-65	414.1
BEU1100-03	229995.0	495342.0	945.0	175	-78	404.2
BEU1700D-01	229371.4	495388.4	1082.1	156	-79	1592.3

Appendix 9 Assay Quality Control Sample Evaluation; Summary Tables

							nber o	f Sta	nda	rds V	Vithi	in Batc										
	و					Field							Lab					ab and F				
	COL		Cu	Au	GA31	Ag IC01	IC30	Мо	As	Cu	Au	GA31	Ag IC01	IC30	Мо	As	()	of range	: (>3 or	·<3 SD)		
Dispatch	Count of Drillcore Samples		(>300ppm)	(>0.1ppm)	(>6.0ppm)	(>2.5ppm)	(mqq0.c<)	(>100ppm)	(>100ppm)	(>300ppm)	(>0.1ppm)	GA31 (mdd0.9<)	(>2.5ppm)	(>3.0ppm)	(>100ppm)	(>100ppm)	5	Аи	Ag	P	As	Suspected Bias
1		BEU0800-01	4	4				4		- 7	7			5	2	4						
2		BEU0800-[01,02]	8	7				3		8	11			6	2	4				1 of 5		Au_High-Bias
3		BEU0800-03	4	1				1		9	8			7	2							
5		BEU0800-04	3	2				1		5	5			3	1	2						
6		BEU0800-[05,06], BEU0900-01	6	3				1		9	8			6	1	6						
		BEU0800-[05,06], BEU0900-01	1	2				2		7	6			5	1	4						
8		BEU0800-[05,06], BEU0900-01	5	2				2		8 7	9			5	3	4						
9		BEU0800-[05-07], BEU0900-01 BEU0800-05	5	3				3		5	3			4	3	3						
11		BEU0900-01	1	- '				- 1		2	- 3			- 2	1	2					1 of 2	
12		BEU0800-07	2							6	3			5	- 1	3					1012	
13		BEU0800-08	~							1	1			1		1						
14		BEU0900-02	1	1						5	6				1	2						
15		BEU0800-08	3	1				1		4	3			2	1	2						
16		BEU0900-02	2	2						5	5			1	3	2						
17		BEU0700-01	2							3	3			2	_	1						
18	25	BEU0900-03	1							3	2			1	2	1				1 of 2		
19	13	BEU0800-08								3	2			2		1						
20	30	BEU0700-01								- 4	3			2		2						
21	27	BEU0900-03								4	2			2	1	1						
22	37	BEU0900-03	1							6	3			3	1	2						
23		BEU0800-09	1							3	2			2		2						
24		BEU0700-02	1	1				1		- 4	3			3	1	2						
25		BEU0800-09	2	1						- 7	3			2	1	3						
26		BEU0900-03	3	1				1		- 7	- 5			4	3	3				1 of 4		
27		BEU0800-09	3	3				1		- 7	6			4	2	4						
28		BEU0700-02	1							7	4			4	2	3						
29		BEU0800-09	1							2	2			1		1						
30		BEU0700-03	1							6 5	4			5	1	2						Cu_High-Bias
31 32		BEU0900-04		1				1			7					2						
32		BEU1100-01 BEU0700-03, BEU0900-04	1	2				2		5 8	6			4	1	5						
34		BEU1100-01	4	3				3		6	7			5	1	3						
34		BEU0700-03, BEU1100-01	4	2				2		6	8			4	2	3						
36		BEU0900-05	6	1				1		7	8			5	1	4						
37		BEU0700-04, BEU1100-02	9	4				3		8	10			6	1	5						
38		BEU0700-04, BEU1100-02	12	9				5		11	11			8	3	6	2 of 23					
39		BEU0900-04, BEU1000-01	5	4				4		9	11			6	3	5		1 of 15				
40		BEU0700-05, BEU1100-03	7	3				3		8	10			7	1	6						
41		BEU0700-05, BEU1000-[01,02]	7	5				4		9	12			6	2	6						
42	148	BEU0700-05, BEU1000-[02,03]	6	4				2		11	11			10	3	7				2 of 5		Mo_Low-Bias
43	82	BEU1000-[02,03], BEU1100-03	- 4	3				3		- 5	6			4	3 2 3	4						
44	149	BEU0700-07, BEU1000-04	6	3				2		9	12			6	3	5				1 of 5		
45		BEU0700-07, BEU1000-[04,05]	7	3				1		9	10			7	2	6						
46		BEU0600-[02,03]	- 7	5				3		9	9			6	2	5						
47		BEU0600-[02,03]	11	6				6		6	5			4	2	3						
55		BEU1700D-01	2	1				1		4	4			1	1	2						Mo_Low-Bias
56		BEU1700D-01	1	1				1		3	4			1	2	1						Mo_Low-Bias
57		BEU1700D-01	2	1				1		3	3			1	2	1						Mo_Low-Bias
58 59		BEU1700D-01 BEU1700D-01	2	1				1		3	4			1								Mo_Low-Bias
59		BEU1700D-01 BEU1700D-01	1	4				1		3	4			1	1							Mo_Low-Bias Mo_Low-Bias
60		BEU1700D-01 BEU1700D-01	2	1				1		- 3 - 4	4			1	4	1						Mo_Low-Blas Mo_Low-Blas
61		BEU0800D-01	1							4	4			3	4	4						Mo_Low-Blas Mo_Low-Blas
63		BEU0800D-01	- 1							4	4			3								Mo_Low-Bias
64		BEU0800D-01	2	1				1		4	4			2	1	1						Mo_Low-Bias
65		BEU0800D-01	1							4	4			2	1	1						o_cow-bida
66		BEU0800D-01	1							3	3			1	2	1						Mo_Low-Bias

8 batches 172 st EMM-0010 2 EMM-0011 2 EMM-0012 1 EMM-0013 2 EMM-0014 1 EMM-0015 2 EMM-0016 1 EMM-0017 2 EMM-0018 2 EMM-0019 3 EMM-0019 3 EMM-0020 3 EMM-0021 1	29 BC0 22 BC0 15 BC0 25 BC0 18 BC0 21 BC0 19 BC0	002-01 005-01 002-01 005-01 002-02 005-01	Cu (udd008<)	Au (mdd1:0<) B W 1 1	GA31 (udd0;9<) hen requ		IC30 (mdd0.6<)	(>100ppm) ŏ	(>100ppm) ×	> 300ppm) C	Au (Li	GA31	Lab Ag IC01	IC30		As		ab and F of range				Suspected Bias
8 batches 72 st EMM-0010 2 EMM-0011 2 EMM-0012 1 EMM-0013 2 EMM-0014 1 EMM-0015 2 EMM-0016 1 EMM-0017 2 EMM-0018 2 EMM-0019 3 EMM-0019 3 EMM-0010 3 EMM-0010 3 EMM-0021 1	sample 29 BC0 22 BC0 15 BC0 25 BC0 18 BC0 21 BC0 21 BC0 23 BC0 26 BC0	es - QC data not delivered b 001-04 002-01 005-01 005-01 002-02 005-01	(udd0002<) y LA 1 1	(>0.1ppm)	(>6.0ppm)	IC01 (x2:2bbm) Jested	(>3.0ppm)						IC01					range	(~3 01	<3 30)		
8 batches 72 st EMM-0010 2 EMM-0011 2 EMM-0012 1 EMM-0013 2 EMM-0014 1 EMM-0015 2 EMM-0016 1 EMM-0017 2 EMM-0018 2 EMM-0019 3 EMM-0019 3 EMM-0010 3 EMM-0010 3 EMM-0021 1	sample 29 BC0 22 BC0 15 BC0 25 BC0 18 BC0 21 BC0 21 BC0 23 BC0 26 BC0	es - QC data not delivered b 001-04 002-01 005-01 005-01 002-02 005-01	y LA 1 1			lested		100ppm)	(mqq0)	(mdd	(Li	Ê)	(0	(Bias
EMM-0010 2 EMM-0011 2 EMM-0012 1: EMM-0013 2 EMM-0014 1: EMM-0016 1: EMM-0016 1: EMM-0017 2 EMM-0017 2 EMM-0017 2 EMM-0019 3 EMM-0020 3 EMM-0021 1:	29 BC0 22 BC0 15 BC0 25 BC0 18 BC0 21 BC0 21 BC0 23 BC0 26 BC0	001-04 002-01 002-01 002-01 005-01 005-01 005-01	1 1 1	B w	hen requ						(>0.1ppm)	(nqq0.8<)	(>2.5ppm)	(mqq0.8<)	(mqq001<)	(>100ppm)	cu	Au	Ag	ę	As	
EMM-0011 2: EMM-0012 1: EMM-0013 2: EMM-0014 1: EMM-0015 2: EMM-0015 1: EMM-0017 2: EMM-0018 2: EMM-0019 3: EMM-0020 3: EMM-0020 1:	22 BC0 5 BC0 25 BC0 18 BC0 21 BC0 19 BC0 23 BC0 26 BC0	002-01 005-01 002-01 005-01 002-02 005-01	1	1	1		201208	_	/M-[0	2-09	1							1-11	0 - 10	4 - 4 4		
EMM-0012 1: EMM-0013 2 EMM-0014 1: EMM-0015 2 EMM-0016 1: EMM-0017 2 EMM-0018 22 EMM-0019 3 EMM-0020 3 EMM-0021 1:	15 BC0 25 BC0 18 BC0 21 BC0 19 BC0 23 BC0 26 BC0	005-01 002-01 005-01 002-02 005-01	1	1		1		1										1 of 1	2 of 2	1 of 1		
EMM-0014 11 EMM-0015 2 EMM-0016 11 EMM-0017 2 EMM-0018 2 EMM-0019 3 EMM-0020 3 EMM-0021 1	8 BC0 1 BC0 9 BC0 23 BC0 26 BC0	005-01 002-02 005-01																				
EMM-0015 2 EMM-0016 11 EMM-0017 2 EMM-0018 20 EMM-0019 33 EMM-0020 33 EMM-0021 10	21 BC0 19 BC0 23 BC0 26 BC0	002-02 005-01	1	1																		
EMM-0016 11 EMM-0017 2 EMM-0018 20 EMM-0019 3 EMM-0020 3 EMM-0021 10	19 BC0 23 BC0 26 BC0	005-01	1	4																		
EMM-0017 2 EMM-0018 2 EMM-0019 3 EMM-0020 3 EMM-0021 1	26 BC0		1	1																		
EMM-0019 3 EMM-0020 3 EMM-0021 1		005-01	1	1																		
EMM-0020 3 EMM-0021 1	53 BCU		1	1																		
EMM-0021 1	30 BC0		1	1				1												1 of 1		
EMM 0000 0	6 BC0		1	1				1												1 of 1		
		005-01	1	1																		
	3 BC0 8 BC0	005-01	1	1																		
		003-02	1	1																		
EMM-0026 2	22 BC0	004-01	1	1				1												1 of 1		
	0 BC0		2	1													1 of 2					
	25 BC0 12 BC0	004-01	1	1																		
	24 BC0		1	1																		
EMM-0033 4	6 BC0	004-03	2	1													1 of 2					
	32 BC0		1	1																		
		005-01 005-02	1	1																		
	9 BC0		1	1				1										1 of 1		1 of 1		
	23 BC0		1	1																		
	31 BC0		1	1														1 of 1				
	21 BC0 18 BC0	005-02 005-02	1	1																		
	28 BC0		1	1																		
	10 BCO		2	2																		
		005-02	1	1																		
	26 BC0 24 BC0	005-02	1	1				1												1 of 1		
		007-01	1	1				1												1 of 1		
	28 BC0		1	1																		
	19 BC0 33 BC0	007-01	1	4													1 of 1					
	21 BC0		1	1				1		3	3	2	1		1	1				1 of 2		
		005-03	1	1						_	_	_										
	4 BC0		1	1				1												1 of 1		
	33 BC0 24 BC0		1	1														1 of 1				
	26 BC0		1	1						2	2		1		1	3		1011				
		005-03	1	1				1		- 5	3		1		1	2				1 of 2		Cu_High-Bias
		007-03	1	1	1					3	4		2			4						
	28 BC0 30 BC0	005-03 005-03	1	1				1		3	2	1	1		1	3				1 of 2		
	26 BC0		1	1	1					4	6		1			3					1 of 3	
EMM-0067 3	32 BC0	005-03	1	1				1		3	4		1		1	3				1 of 2		
	24 BC0		1	1				1		3	2		1			2				1 of 1	4 - 6 2	A.a. Lawy Dian
	28 BC0 26 BC0		1	1	1					3 4	4	2	1		1	3					1 01 3	Ag_Low-Bias
EMM-0072 2	6 BC0	005-04	1	1						3 4 3	4	-	1		1	3 3 2 3						
		008-02	1							3	2	1	1			2						
		005-04 005-04	1	1				1		4	5	1	1		1	3				1 of 1		
	30 BC0		1	1				1		4	2		1			4				1 of 1		
EMM-0079 2	20 BC0	009-01	1							1	2		1			3 2 5 2						
EMM-0080 2	29 BC0	005-04	1	1				1		4	3	1	1			5				1 of 1		
		009-02 005-04	1							3	2	1	1		1						1	As_Low-Bias
		005-04 009-02	1	1	1			1		4	2	1	1		1	4				1 of 2	1014	AS_LOW-DIAS
EMM-0084 3	37 BC0	005-04	1	1				1		- 4	2	1	1			2				1 of 1		
EMM-0085 2	23 BC0		1							6	4	2	1		1	4						
EMM-0086 2 EMM-0087 4	20 46 BC0	10_01	2	4						2	2	1	1			4						

							nber o	f Sta	nda	rds V	Vithi	n Batch										
	2					Field							Lab					ab and F of range				
	Drillcore		Cu	Au	GA31	Ag IC01	IC30	Мо	As	Cu	Au	GA31	Ag IC01	IC30	Мо	As		range	(>5 01	~3 30)		Suspected
Dispatch	Count of Dri Samples	Hole ID	(>300ppm)	(>0.1ppm)	(>6.0ppm)	(>2.5ppm)	(>3.0ppm)	(>100ppm)	(>100ppm)	(mqq00E<)	(>0.1ppm)	(>6.0ppm)	(>2.5ppm)	(mqq0.8<)	(mqq001<)	(mqq001<)	сu	Au	Ag	P	As	Bias
EMM-0088		BC010-02	2	1						5	4	2	2		2	4					1 of 4	As_Low-Bias
EMM-0089 EMM-0091		BC012-01 BC010-03	2							4	2	1	1			2	1 of 7				1 of 5	As_Low-Bias
EMM-0092		BC012-01	1							3	2	1	1			3						_
EMM-0093 EMM-0094		BC012-01 BC010-04	1	1						9 5	3	3	1		1	2						
EMM-0095		BC012-01	1	'						6	2	1	1			3					1 of 3	
EMM-0096		BC013-01	2	2						5	4	2	2		1	6						
EMM-0097 EMM-0098		BC012-01 BC012-01	1	1						3	3	1	1		1	2						
EMM-0099		BC012-01	1	1						2	1		1			2						
EMM-0100		BC013-02	2	1						5	4	2	2			4						
EMM-0101 EMM-0102		BC011-01 BC013-03	1	1						10	4	6 1	1			3						
EMM-0103		BC011-01	1	1						5	2		1			3						
EMM-0104		BC014-01	1	1						5	3		1			4						
EMM-0105 EMM-0106		BC014-01 BC015-01	1	1						5	2	1	1			2						
EMM-0107		BC014-01	1							3	2	1	1			3						
EMM-0108		BC011-01	1							4	1	1	1			3						
EMM-0110 EMM-0111		BC015-02 BC014-01	1	1						4	3	1	1			2						
EMM-0112		BC011-01	1	1						4	1	1	1			4						
EMM-0113		BC015-03	1	1				1		5	5	2	2			4				1 of 1		
EMM-0114 EMM-0117		BC014-01 BC014-01	1	1						2	2		1			3						
EMM-0118		BC016-01	1	1						5	2	1	1		1	3						
EMM-0120		BC014-01	2	1						6	3		2			4						
EMM-0122 EMM-0123		BC016-02 BC011-02	1	1						5	3	2 2 1	2			4						
EMM-0125		BC016-03	1	1						8	2	4			1	5						
EMM-0126		BC011-02	1	1						4	5	1	2			5						
EMM-0127 EMM-0128		BC014-01 BC011-02	1	1						4	4	1	2			5						
EMM-0120		BC011-02	1	1						6	3	3	2			4						
EMM-0130		BC017-01	1	1						2	4		1			2						
EMM-0131 EMM-0132		BC014-02 BC014-02	1	1						3	3		1			2						
EMM-0132 EMM-0133		BC014-02 BC011-02	1	1						4	- 2		1		1	2						
EMM-0134		BC017-02	1	1						7	5	4	2			5						
EMM-0135 EMM-0136		BC011-02 BC014-03	1							4	7	2	2		1	4						
EMM-0136 EMM-0137		BC017-03	1							5	4	2	1			3			1 of 2			
EMM-0138	51	BC014-03	1	1						5	3	2	2		1	4						
EMM-0139 EMM-0140		BC011-03 BC014-03	1							5	4	2	1		1	3						
EMM-0140 EMM-0141		BC014-03 BC011-03	1	1						4	3	1	1		- 1	3						
EMM-0143	40	BC018-01	1							4	2	1	1			3						
EMM-0144		BC014-03	1	1						5	3	2	2		1	4						
EMM-0146 EMM-0147		BC018-02 BC014-03	1	1						4	2	2	1		1	3						
EMM-0149		BC014-03	1							1	1		1			2						
EMM-0150		BC011-03	1	1						2	1		1			2			1 - 10			
EMM-0151 EMM-0153		BC018-03 BC020-01	1	1						5	3	3	2			4			1 of 3			
EMM-0154	11	BC020-02A	1	1						1	2		1			2						
EMM-0155		BC011-03A	2	1						6	6	2	1			4						
EMM-0156 EMM-0157		BC020-03 BC011-03A	2	1						8	4	2 3 1	2			4						
EMM-0158	47	BC021-01	2							5	5	1	2			- 4						
EMM-0159		BC019-01	1							4	3	1	1		1	3			4			
EMM-0160 EMM-0161		BC021-02 BC011-04	2	2						6	5 4	3	2		1	4			1 of 3			
EMM-0163		BC011-04 BC011-04	1	1						4	2	2	1			3						
EMM-0164	24	BC011-04	1	1						4	4	1	1			3						
EMM-0165 EMM-0166		BC011-04 BC024-01	1	1				1		5	4	1	1			5				1	1 of 5	
EMM-0166 EMM-0167		BC024-01 BC022-01	1	1				1		3	2	1	1			2				1 of 1		
EMM-0168		BC011-04	1	1				1		5	2	1	1			2				1 of 1		

						Num Field	nber o	f Sta	nda	rds V	Vithi	n Batcl	hes Lab				total L	ab and F	iold St	andar	le out	
	Drillcore		Cu	Au	GA31	Ag	IC30	Мо	As	Cu	Au	GA31	Ag	IC30	Мо	As		of range				
Dispatch	Count of Dril Samples	Hole ID	(>300ppm)	(>0.1ppm)	GA31 (mdd0.9<)	(>2.5ppm)	(mqq0.5<	(>100ppm)	(>100ppm)	(>300ppm)	(>0.1ppm)	(mqq0.8<	(>2.5ppm) 10	(mqq0.5<	(>100ppm)	(>100ppm)	cu	Au	Ag	ę	As	Suspected Bias
EMM-0169	14	BC011-04	1	1						4	3	1	1			3						
EMM-0170 EMM-0171		BC023-01 BC023-02	1	1				1		5	1	2	1			2				1 of 1		
EMM-0173		BC022-02	1	1				1		5	4	2	2			4				1 of 1		
EMM-0174		BC025-01	1	1				1		5	2	1			1	3				1 of 2		
EMM-0175 EMM-0176	33	BC025-01	1	1						3	2	2	1		1	3						
EMM-0177	2									1	2		1			2						
EMM-0178		BC026-01	1	1						8	4	2	2			5			1 of 2			
EMM-0179 EMM-0180	31	BC025-01	1	1						3	2	1	1			3						
EMM-0181		BC011-05	1	1						5	4	2	2			4						
EMM-0183		BC026-02	1	1						7	4	3	2			5						
EMM-0184 EMM-0185		BC025-01 BC027-01	1	1						6	4	2	2			4						
EMM-0187		BC025-01	1	1						4	3	1	1			3						
EMM-0189		BC011-05	1	1						6	5	3	2			4						
EMM-0190 EMM-0191		BC027-02 BC011-05	1	1						4	3	2	1			2						
EMM-0192		BC025-02	1	1						6	4	1	1			6					1 of 6	
EMM-0193		BC028-01	1	1						6	4	1	1			4						
EMM-0194 EMM-0195		BC029-01 BC025-02	1	1						4	2	1	1		1	3						
EMM-0195 EMM-0196		BC029-02 BC029-01	1	1						4	2	3	2		1	2						
EMM-0198		BC029-01	1	1				1		6	2	2	1		1	3			1 of 2	1 of 2		
EMM-0202		BC025-02	2	1						9	5	1			1	6						
EMM-0204 EMM-0206		BC028-03 BC025-02	1	1						10	3	3				6					1 of 6	
EMM-0207	70	50020 02								10	Ŭ					4						
EMM-0208		BC029-01A	1	1						8	5	2				5						
EMM-0209 EMM-0210		BC025-02 BC030-01	1	1				1		8	3	1			1	5				1 of 2		
EMM-0210		BC005-05	1	1						6	4	1				4						
EMM-0214		BC005-05	1	1						6	3	1			1	4						
EMM-0215 EMM-0216		BC031-01 BC025-02	1	1						4	3	2			1	3						
EMM-0216 EMM-0217		BC029-01A	1	1						6	4	2			1	4	1 of 7	1 of 5				
EMM-0218		BC025-02	1	1						2	1					2						
EMM-0219		BC029-01A	1	1						7	3	2			1	4						
EMM-0220 EMM-0221		BC032-01 BC005-05	1	1						6	3	1				5						
EMM-0222		BC029-01A	1	1						5	4	1			2	5						
EMM-0223		BC029-01A	1	1						4	1	1			2	5				1 of 2	1 of 5	
EMM-0224 EMM-0225		BC033-01 BC025-03	1	1						6 9	4	1			2	4						
EMM-0226		BC005-05	1	1						5	2	2			-	4						
EMM-0227	40	BC029-02	1	1						6	3					4					1 of 4	
EMM-0228 EMM-0229		BC034-01 BC005-05	1	1						8	3	1				5						
EMM-0229 EMM-0231		BC005-05 BC025-03	2	1						3	1	1				2						
EMM-0233	39	BC029-02	2							6	4				1	4	1 of 8					
EMM-0234		BC005-05	1	1						6	4	1				5						
EMM-0235 EMM-0236		BC035-01 BC005-05	1							8	3	2				5						
EMM-0237	41	BC029-02	1							6	2	1				4						
EMM-0238		BC005-05	1					1		7	4	1				5				1 of 1		
EMM-0239 EMM-0240		BC029-02 BC005-05	2		1			2		5	3	1				3						
EMM-0241		BC029-02	2		1			2		7	4	2				4						
EMM-0242	24	BC005-05	1	1	1			1		6	3					3						
EMM-0243 EMM-0245		BC025-03A BC025-03A	1	1				1		4	3					2				1 of 1		
EMM-0245 EMM-0246		BC005-05	1	1	1					- 3 6	3					2						
EMM-0247	39	BC029-02	2		1			2		6	3	1			1	3						
EMM-0248		BC005-05								2	1	-				2						
EMM-0249 EMM-029		BC029-02 BC005-01	1	1	1			1		7	4	2			1	4						
HT-250	62									8	7											

As	sa	count >=5% MPD As-IC30	<u> </u>
.ab_Rep	Batches		
La	Total in	10AX_2A	4 000
		count >=5% MPD	40
Rep_Mo	se	Wo-IC30	<u> </u>
Lab_Rep	Total in Batches		
Le	otal in	109X-om	4 500
		Ag-IC30	
	>=10%MPD	1001_8Å	
p_Ag	count >	18A0_0A	
Lab_Rep.		05OI-8 Å	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
	in Batches	Ag_IC01	- N400
	Total i	15A0_8A	<u>ω</u> υ
Au		count >=10% MPD	
b_Rep_			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lab		Total in Batches	
5	0	count >=4% WPD	
ab_Rep_	Total in Batches	C ^{n_} IC30	
Lab	tal in B	Cu_GA31	·····································
	To		
_		GGM %0f=<8A finoo	40 40<
SS (Second Pulp	(sau	count Mo>=5% MPD	
Secon		Count Ag>=10% MPD	
ab_SS (Count Au>=15% MPD	
La		count Cu>=5% MPD	×××××××××××××××××××××××××××××××××××××
		Total in Batches	20 EU 20 EU ↓ □ 0 ↓ 0 ↓ 0 ↓ 0 ↓ 0 ↓ 0 ↓ 0 ↓ 0 ↓
Sdng		s∦	
i ≝' i	0dW%	oM	
Crush	Count >=5%M	Ag (no Assays in BMB Batches)	
Field_Coarse_Crush_Spl	Cou	nĄ	
eld_Co		Cu	
Fie		Total in Batches	
			900-01 900-01 900-01 01 00-00000000
		0	EEU0800-(05.05), BEL09000-01 BEL00800-05 BEL00800-01 BEL00800-02 BEL00800-02 BEL00800-02 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-03 BEL00800-04 BEL00800-01 B
		Hole ID	
			EELU0800-105 061 BELU0800-07 BELU0800-07 BELU0800-07 BELU0800-08 BELU0800-08 BELU0800-08 BELU0800-08 BELU0700-01 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU0700-03 BELU7000-04 BELU7000-04 BELU7000-04 BELU7000-05 BELU7000-01 B
sə	Idme	Count of Drillcore S	
		DPO	8 9 1 1 1 1 1 1 1 1 1 1 1 1 1
1		ō	B bat MMM CO

(2)		count >=5% MPD		-	-																	-	e		-			2							-	-	-		-									c	° ,	-		-			
Lab_Rep_As	atches	gs-IC30	1																																																				
Lab	Total in Batches	109X_2 <i>8</i>	1 5	2	0	e	~~~	9	9	S	ç	9	• •	t 0	n 4	t 0	0 0	VU	5 1	n	(9	7	ç	00	4	2	10	e	6	7	9	m	ç	2	10	2	- 1	0 0			14	r uc	4	7	. u) (C	0 0	0	21	-	2	0	6	6
	10		-	2							-				¢	V			•	-		m	2		2	-		9	-									-		4			-		0	1	*	- c	V (0 0	2				-
OM_	es	conut >=2% WbD	┢																																																				
Lab_Rep.	Total in Batches			~										+ 0		+ 0		<u> </u>	+ 1				_			**	_	_			~				<u></u>	_				0.0										_		_		_	0
	Total ir	109X-0N						Ĩ	Ĩ														÷			Ì		7				Ĩ			-	7														F.					
	%MPD	g B-IC30	L																																																				
₽đ	count >=10%MPD	ga_lc01		-	-			-			_					*	_													-				-				N				_						•	_						
Lab_Rep_Ag		4g-IC30																																																					
Lab	Total in Batches	48_IC01		e	4	2	2	2	-	-	m	4	4 (V T	+ c	4 0) (<u>, v</u>	<u>, (</u>	N	-	4	ۍ	m	ی	-	n	4	4	2	4	0	2	9	2	2	4	4 (V •	4 4		4 (*	0 00	0	1 40		2	t 0	<u>, ,</u>	4 (ر ا	2		2	4
	Total in	15A0_0A	1	e		2	-	e					¢	N 4	-	•	-	•	-							2	2			-				-	2						¢	V T	•	-					-						
_Rep_Au		Count >= 10% MPD	,	-	-	-		-					1	-					ſ	7							-									-		-			*	-			ſ	1									
Lab_Re		Total in Batches		13	10	e	9	9	e	m	2	4	4 •	4 4	- 0	V -	•	4 4	+ 1	~	(9	0	2	9	e	9	10	e	~	5	n	2	10	2	9	4	0 0	. .	4 4	r c	4 (C	0	0	-		0 4	t u	0 0	00 (9.	4	9	00	9
-		Count >=4 MPD	,	٣	Γ		4	Т		-	-	ñ		Ŧ		-		*	- ,	-	(2			-		-	0	-						Τ	4	-	,	-		*	- •	•				ſ	• •	7	0 0	21	- 1	2		
Rep_Cu	ches	Cn_IC30	┢	L	L			L			_																								_												L	1	1						-
Lab_R	l in Batches	LEAD_UD) [©]	8	6	9	6	7	2	4	m	2	2 7	- •	กแ	οa	, u	0 0	• •	5	;	4	7	9	6	2	÷	9	~	12	4	4	2	0	<u>6</u>	14	7	5 (0 0	0 10	. u	σ		4	1) @		n (23	7	<u>, 5</u>	17	6	6
	Total										-																																												
		QQM %01=<2A truoo)																																																				
d Pulp)	ísa	Assays in EMM Batch count Mo>=5% MPD	╀																																																				
SS (Second Pulp)		i) G9M %0f= <ga th="" thuos<=""><th>⊢</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></ga>	⊢									-							-																										-										
Lab_SS			╀											•	-																																								_
		Total in Batches count Cu>=5% MPD	┢			-	-	-	-		-	-	-	•		-			- ,	-																									-					_	_			_	_
s		sy	+-																																															_				_	_
lit_Dups	Odi	oM	ł																				-					-				-													-										_
ush_Sp	Count >=5%M	Ag (no Assays in EMM Batches)																																																_				_	
rse_Cr	Count	ny	1																						-			-											1	-			•												
Field_Coarse_Crush_Spli		ng																	_		_	_	01		~		_	01	_	_	_	_		-	_	~	- -				_	_		_	_			_					_	_	
Fie		Total in Batches							1				_	_	_	_						-			2		-	~	-	-	-	-		-	-	2	- ·		_											~ ~		_	-		
		Hole ID																																																					
		Hol		Ļ	0	-		0	4	0	4	4		-	t C			N	,	4			2	÷		÷	F	4	÷	-	-	÷	-	2	-		-	_ ,	_			- 0							_ ,	-	0	2		2	-
			BC005-03	BC008-01	BC005-03	BC008-01	BC005-03	BC008-02	BC005-04	BC008-02	BC005-04	BC005-04								BCUU5-04		BC010-01	BC010-02	BC012-01	BC010-03	BC012-01	BC012-01	BC010-04	BC012-01	BC013-01	BC012-01	BC012-01	BC012-01	BC013-02	BC011-01	BC013-03	BC011-01	BC014-01	BC014-01			BC015-02	BC014-01	BC011-01	BC015-03	BC014-01	BC014-01			BC014-01	BC016-02	BC011-02	BC016-03	BC011-02	BC014-01
sə	Idme	Count of Drillcore Se	30 B	_	32 B				26 B																			49 B				27 B					30 B			21 C														45 B	
		DPO	0065	0066	0067	0068	0069	0200	0072	0073	0075	2200	8/00-	6/00	1000	Cano		2000	+ 000	G800-	9800	-0087	0088	0089	0091	0092	0093	0094	0095	9600	7600	0098	6600	0100	0101	0102	0103	0104	0010	0102	0100	0110	0111	0112	0113	0114	0117	0110	0110	0120	0122	0123	0125	0126	0127
		ā	EMM-0065	EMM-0066	EMM-0067	EMM-0068	EMM-0069	EMM-0070	EMM-0072	EMM-0073	EMM-0075	EMM-0077	EMM-00/8			EMM-0001		EMM-0004		G800-MM3	EMM-0085	EMM-0087	EMM-0088	EMM-	EMM-0091	EMM-0092	EMM-0093	EMM-	EMM-0095	EMM-0096	EMM-	EMM-0098	EMM-0099	EMM-0100	EMM-	EMM-0102	EMM-0103	EMM-0104			EMM 0100	EMM-0110	EMM-0111	EMM-0112	EMM-0113	EMM-0114	EMM-0117	EMM 0110		EMM-0120	EMM-0122	EMM-0123	EMM	EMM-0126	EMM-0127

0		OdM %2=< tuno	co				-	2			- 0		-														0	10	-	3	-					-		-		-	-	-	(، ر.		0	1 +				c	1
_Rep_As	atches	s-IC30	A																																																	ĺ
Lab	Total in Batches	r0AX_a.	× ۹	οα	9 (9	9 0	2	9	6	ę '	nα	9	9	90	00 L	1 0	<u> </u>	0 0	0 7	-	u	0 0	00	1 00	~	• 4	· 0	о ис	σ	10	00	S	ດເ	0 -	t 10	4	n	e	10	9	9	n i	2	E '	- 0	14	; ;	<u>v</u> c	5 0	ומ	10	
	Ĕ	OdW %9=< tuno		ç)					-		-	-	0	N			`	-			°	2	0	1 -	•	•			-				*	-				0	-	-				°	00	4	¢	n 4	- ,	- 0	
oM_q	hes		_																																																	
Lab_Rep	Total in Batches	109X-of	w °	<u>ο α</u>	0 0	0 0	-	9	6	<u>e</u> ,	<u>. «</u>	<u>, 6</u>	9	9 0	0 1	01		0.0	0 7	-	u	0 0	00	1 00	~	. 4	· 0	, LC) σ	2	00	ŝ	<u>о</u> і	0 -	1 4	4	e	e	10	7	9	<u>ო</u>	2	= ^		2 4	; ;	_ <	ז ככ	- 1	- +	7
	IdW%0	B-IC30			_	-			_		_																		-															_							_	
_Ag	count >=10%MPD	10-1004							L	~ ~												_																														
Lab_Rep_/																																																				
Lab	Batches	B-IC30		<u>v</u>		10	-	4	0		2 0	0.00	4				0.0	2	-	_	_	4 C	<u>v r</u>	- 00	2 4			0.00	0 4	<u>ې</u> .		n	2				2	0	9	4	<u></u>				2 0	<u> </u>		V 0	N	<u> </u>	40	
	Total in Ba													- 0				-											~			-							_	_	···	<u> </u>								_		
	Tota	16A9_0.	١A			_				₽ °											`				_													•				·						,				
Rep_Au		OdW %01=< µno:			`																			`			6						•														ľ	Ί		Ì		
Lab_R		otal in Batches		2 0	o un	000	2	4	00	<u>+</u> ,	4 00	o o	~	~ 0	ø		4 •	4.	4 +			4 6	2 0	, (0	იი	, ,	4	. 6	-	4	00	90	، ر.	- •	. 0	2	4	10	4	e	e	(י ת	4 0	° 6	•	•	ກເ	70	- 0	0
		OdW %t=< tuno	oc (-					°	_				-	ſ	7	٦	-				*		•	•	•	9	'n	4	<u>۳</u>	Γ			*	-			2	Γ	-	-		(N	¢	V					٢	1
Lab_Rep_Cu	ches	n_lC30	ci																								L	1	-	1	1							L	I													
Lab_	otal in Batches	15A0_u:	י כו	» 0) (n	~~	e	9	~	4	- ¢	0	0	o 1			1 00	- 1		- 0	10	0 ç	20	1 -	: 0	<u>i 0</u>	÷			15	7	9	5	• •	t ¢	4	00	2	0	9	ŝ	e	;	<u>p</u> "	0 0	n tr	2 5	<u>v</u> 4	2 9	<u>v</u> 1	- ;	51
	Tota		_																																																	
		QQM %01=<2Å truo	20																																																	
(dınd		OdW %S= <om inno<="" th=""><th>20</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></om>	20																																																	
SS (Second Pulp)		n) OTM %01= <g& mpd<br="">adoted MM3 ni 25622</g&>																																																		
		OdM %St= <na inno<="" th=""><th>20</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></na>	20																																																	
Lab		OdM %8= Dqm	20			2																																		-												
		otal in Batches	_																																					·												
sdn		S	۶¥																																					-												
plit_Dups	DDM	0	w					-																						-									-	-						-					c	1
s_hsu	Count >=5%M	ni ayasaya in (senotea MM	i A I I																																																	
se_Cn	Count	n	-			-																				•														-				-			-					
Field_Coarse_Crush_Spl		n;	c	•	•					-												•	-	•	•					2	-								-	-			(N	•	•			- 1	-	•	-
Field		otal in Batches	л	- •				-	-			. 2	-	- '	- '	- 1	- 1		-				•	. 0	1 0)	~	, -		2	-	٢	2	-			-		0	-	-		(N 7	- 0	40	10	vc	N	V 1		
			t	T	Γ	1					T				T	T	T	T	T	Τ	T	T	T	Γ	Γ	1	Γ	T	Γ	Γ				T	T	Γ							T	T	Τ	T	T	T	T	T	T	
		Hole ID																																																		
		위						~		~ /				~			_						A	. A		A								_	_		L	~	~	_	_					- 10			_			
			00 44 000	BC011-02	BC017-01	BC014-02	BC014-02	BC011-02	BC017-02	BC011-02	BC014-03 BC017-03	BC014-03	BC011-03	BC014-03	BC011-03	BC018-01	BCU14-U3	20-81000	BC014-03			BCU18-03	BC020-01	BC011-03A	BC020-03	BC011-03A	BC021-01	BC019-01	BC021-02	BC011-04	BC011-04	BC011-04	BC011-04	BC024-01	BC011-04	BC011-04	BC023-01	BC023-02	BC022-02	BC025-01	BC025-01			BC026-01	DC00E 01	BC020-01		-070	10-62000	10-12000	BC025-01	- C L C
								34 BCC			45 BCC			32 BCC												17 BCC							51 BC					20 BC0				2		48 BC								Albu,
Sə	lqm	Count of Drillcore Sa	+					· · ·		_		_				_	_	_							_		_			_	_		_	_		_		~				_	_			_	_	_		_		
		OdO	0400	EMM-0120	EMM-0130	EMM-0131	EMM-0132	EMM-0133	EMM-0134	EMM-0135	EMM-0130	EMM-0138	EMM-0139	EMM-0140	EMM-0141	EMM-0143	EMM-0144	EMM-0 140	EMM-0140	EMM-0150	1910 MM	EMM-0151	EMM-0154	EMM-0155	EMM-0156	EMM-0157	EMM-0158	EMM-0159	EMM-0160	EMM-0161	EMM-0163	EMM-0164	EMM-0165	EMM-0100	EMM-0168	EMM-0169	EMM-0170	EMM-0171	EMM-0173	EMM-0174	EMM-0175	EMM-0176	EMM-0177	EMM-01/8	EMM 0100	EMM-0181	EMM.0100	2010-1	EMM-0184		EMM-018/	5210-0
I I		_					M	M.	M	M		Ň	N.																	M	M	Ň	5			M	M	EMI	ĒM	ž.	S.	M										ŝ

		Count >=5% MPD	-	
As	es	Vario 20		
Lab_Rep_As	Fotal in Batches	LUMX_2A	<u>ოν 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</u>	
_	Total i	POGA - P		
٩o		conut >=2% WbD		
Lab_Rep_Mo	atches	Wo-IC30		
Lat	Total in Batches	Mo-XR01	©rtütroroücü töcrraxr400rr4x50rx8x4r000r00r00r00+t	
		Ag-IC30		
	=10%	Ag_IC01		
pAg	count >=10%MPD	15A0_0A	, ,	
_ab_Rep_Ag		Ag-IC30		
La	Batches	F001_BA	T T N L N N N T T	
	Fotal in	15A0_0A	0 - 0 0-	
Rep_Au		Count >=10% MPD		۲.
Lab_Re		Total in Batches	<u>หลดสสส๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛</u>	10
		count >=4% MPD		*
Lab_Rep_Cu	atches	cn_lC30		
Lab	otal in Batches	Cu_GA31	∞∞455∞∞5∞45554 5 ∞∠∞∞4≻505∞4∞0∞5≻∞5∞0∞0∞∞∞05∞∞544-≻∞+5	10
	T	Count As>=10% MPD		
(dın,		count Mo>=5% MPD		
SS (Second Pulp)) OAM %01=<0A thuco A saays in EMM Batch		
SS (S		QqM %∂t= <ua muoo<="" th=""><th></th><th></th></ua>		
Lab		count Cu>=5% MPD		
		Total in Batches		5
sdi		sA		12-21
plit_Dups	MPD	oM		-HT-[2
s_hsu	Count >=5%MPD	Ag (no Assays in EMM Batches)		0.1208
Field_Coarse_Crush_Spli	Count	nA		sted 2
Coars		Cu		Leque
Field		Total in Batches		3 when
				by LAE
				samples - QC data not delivered by LAB when requested 20 62
		Hole ID		a not d
		ž	22 22 22 22 22 22 25 25 25 25 25 25 25 2	C data
			BC027-02 BC027-02 BC011-05 BC025-01 BC025-01 BC025-02 BC025-02 BC025-02 BC025-02 BC025-02 BC025-03 BC0	es - Q
60	due	Count of Drillcore S	2010 2010	sample 62
30	Jacue	Count of Delloces C		252
		DPO	EMM-0191 EMM-0191 EMM-0191 EMM-0191 EMM-0191 EMM-0191 EMM-0191 EMM-0195 EMM-0202 EMM-02021 EMM-0201 EMM-0201 EMM-0201 EMM-0201 EMM-02021	4 batches HT-250

Appendix 10 Variography and QKNA Report

Beutong Copper Project - 2012 Resource Estimate Report

Memorandum

To:	Duncan Hackman
From:	Trent Strickland
CC:	Scott Jackson, <u>Bosta Pratama</u>
Date:	11 September 2012
Subject:	Beutong Copper Project Estimation Parameters

Introduction and Scope

Duncan Hackman, of Hackman and Associates ('H&A'), requested, on behalf of Tiger Realm Metals ('TRM'), that Quantitative Group ('QG') provide assistance by completing exploratory data analysis, variography and quantitative kriging neighbourhood analysis ('QKNA') on drill data from the Beutong Copper Project in Aceh Indonesia.

Data Import and Domain

A total of 158 drillholes, from three different periods of ownership (Freeport, Highlands and Tiger Realm Metals), have been drilled in the Beutong area containing 11,939 assay intervals. Freeport drilling consists of 91 holes. Highlands 35 holes and Tiger Realm Metals contribute 32 holes to the dataset. The project area illustrating the three drilling datasets is shown in Figure 1.

Data was supplied in the form of the current Beutong Minesight[®] project. Minesight[®] software was utilised for visualisation, flagging, compositing and contact analysis. Further statistical analysis, variography and QKNA was conducted in ISATIS[®] utilising coded data from Minesight[®].

Drillhole data included Cu, Au, Ag, Zn, Pb, Mo and As. However, only Cu, Au, Ag, Mo and As were used in this analysis. Due to concerns with the Freeport and Highlands Ag assays, only Ag assays from the Tiger Realm dataset were used.

Three domains were the focus of this analysis: Porphyry (20), Outer Porphyry (10) and Skarn (50), and are illustrated in Figure 1. For the purposes of contact analysis the remaining domains: 30, 40, 60 were combined to form an un-mineralised domain (99).

I



Figure 1. Beutong drilling collars (Freeport: purple diamonds; Highlands: green squares; Tiger Realm: blue circles); and the Porphyry (20), Outer Porphyry (10) and Skarn (50) domains.

Contact Analysis

QG conducted a boundary analysis in <u>Minesight</u> for all domains. The aim of the boundary analysis is to see whether two or more domains can be combined into one major domain for estimation purposes and how that boundary should be treated during estimation. This was discerned by looking at the mean Cu, Au, Ag, <u>Mo</u> and As grades on either side of the mineralised domain boundaries via contact analysis.

Figure 2 is an example showing the behaviour of Cu and Au across the boundary between mineralised domain 20 and 99. QG recommends using hard boundaries for Cu, Au and Mo for all three domains. Silver is not as well supported (Figure 3 below), but should also be included with Cu, Au and Mo as the available data is restricted due to the concern with the Ag assays from the Freeport and Highlands datasets. Arsenic does not appear to be related to the current domain shapes (Figure 4) and it is recommended that a boundary is not used in the estimation of As.





Figure 4, Analysis of As grade across domain 20 with un-mineralised domain 99 (left) and across domain 10 with un-mineralised domain 99 (right).

Variography

The variogram characterises spatial variability and is the basis of most geostatistical tools.

The average sample length of the Beutong dataset is 2.85m (Figure 5). QG consider that a sample length of 3m is suitable for <u>variography</u> analysis and compositing was considered to be necessary for this stage of the study. Assay intervals respect the domain boundaries and a minimum interval of 1.5m was accepted. Basic statistics of the composited assay data are presented in Table 1 below.



Beutong Copper Project - 2012 Resource Estimate Report

Down-hole experimental variograms were generated and calculated using a lag of 3m. Downhole variograms are useful for determining the nugget effect, as this is the most closely sampled direction. The nugget defined from the downhole variograms was used to assist in subsequent modelling of the directional experimental variograms.

VARIABLE	Domain	Count	Minimum	Maximum	Mean	Std. Dev.
	Outer Porphyry	1,425	1.0	34000	2397	2314
CU	Porphyry	3,932	133	36213	6205	3575
(ppm)	Skarn	266	237	38353	7767	7669
	Other	5,817	0.0	64387	934	1517
	Outer Porphyry	1,425	0.0	4.00	0.07	0.13
AU	Porphyry	3,932	0.01	5.65	0.13	0.13
(g/t)	Skarn	266	0.01	3.32	0.33	0.50
	Other	5,817	0.0	2.06	0.05	0.07
	Outer Porphyry	434	0.25	35.46	1.24	2.23
AG	Porphyry	1,854	0.25	154.00	2.07	5.27
(g/t)	Skarn	66	0.25	22.60	5.75	4.85
	Other	1,075	0.25	228.08	1.85	9.06
	Outer Porphyry	1,425	0.5	1300	79	107
мо	Porphyry	3,932	0.5	2878	112	133
(ppm)	Skarn	266	0.5	306	14	38
	Other	5,817	0.5	1290	34	65
	Outer Porphyry	1,425	0.5	10000	133	511
AS	Porphyry	3,932	0.5	9450	145	444
(ppm)	Skarn	266	2.0	1997	159	231
	Other	5,817	0.5	5990	77	261

Table 1, Statistics of composited drillhole assay data.

In modelling a <u>variogram</u>, the anisotropy can be specified by defining the three principal orthogonal axes.

The variogram principal axes were determined by:

Generating 'Variogram Maps' in Isatis, which provides graphical fan representations of the variogram in three orthogonal planes; and

Generating four to five experimental variograms in the 'plane of maximum continuity.'

In general, the experimental variogram with the lowest apparent nugget, longest range and slowest rate of increase (continuity) within the plane of maximum continuity is interpreted as the principal

Beutong Copper Project – 2012 Resource Estimate Report

axis. The <u>variograms</u> were modelled in the plane of the geometry between the major and intermediate directions, with the minor direction being across strike. The orientations were set to be the same for all variables in the plane of the domain.

The experimental <u>variograms</u> were generally modelled using a nugget effect and two nested spherical models. When <u>variograms</u> were 'noisy' and difficult to interpret, alternative measures of assessing the spatial continuity were used; including Gaussian transformation.

All Gaussian-based methods rely on the raw data being transformed to a Gaussian distribution. A Gaussian transform (or 'anamorphosis') is a simple technique whereby a raw data population is transformed to a Gaussian distribution with zero mean and unit variance (Figure 6). For each raw data value a Gaussian equivalent is generated via the cumulative histograms for both the raw and Gaussian distributions (Vann, et.al., 2003). Gaussian distributions can then be transformed back to raw space via numerous methods. The two common approaches are a simple graphical method or a more complex but more mathematically useful technique using Hermite polynomials (Marechal, 1978; Riviorard, 1994).



Figure 6. Example of transformation from raw value to Gaussian value.

Variography analysis for Cu, Au, Ag, Mo in the Porphyry (20) domain; Mo in the Outer Porphyry domain (10); Cu and Au in the Skarn (50) domain and As (all domains) were constructed using the raw data. Analysis of Cu, Au and Ag in the Outer Porphyry domain and Ag and Mo in the Skarn domain was performed using the Gaussian transformed data, with models subsequently transformed back into raw grade values. This was required because variograms of these raw variables were poorly structured and difficult to interpret.

In general <u>variograms</u> have been modelled with anisotropies that reflect the geometry of the domains - i.e. longer ranges in the generalised plane of continuity and shorter ranges across the plane. This varies somewhat between domains. An example of the experimental and modelled <u>variograms</u> is shown in Figure 7 and Figure 8 below. Table 2 below shows the summary <u>variogram</u> parameters for the Beutong Project.



Figure 7. Example of Variogram plot for Cu – Porphyry (20) domain.



Figure 8. Example of Variogram plot for Au – Porphyry (20) domain.

Variable	Domain	CO	Nugge t%	а	22	S	tructure 1	×	S	tructure 2	*	Rot	tation (Vulc	an)
variable Domain		n ugge t/s	u	· · ·	Major	Interm	Minor	Major	Interm	Minor	Bearing (Z)	Dip (X)	Plunge (Y)	
	10	0.42	42%	0.34	0.25	25	25	25	190	190	190		lsotrop ic	
Cu	20	0.25	25%	0.54	0.21	30	105	80	200	120	90	340	0	-70
	50	0.40	40%	0.27	0.33	90	50	20	150	50	35	270	-60	0
	10	0.41	41%	0.41	0.19	27	27	27	180	180	180		Isotrop ic	
Au	20	0.50	50%	0.14	0.36	15	70	40	45	70	40	340	0	- 70
	50	0.51	51%	0.49	0.00	130	65	25				270	-60	0
	10	0.44	44%	0.41	0.15	28	28	28	140	140	140		Isotrop ic	
Ag	20	0.54	54%	0.18	0.28	80	100	50	120	110	50	340	0	- 70
	50 0.54 54% 0.17 0.29 31 31 31 34 34 34 Isotropic													
	10	0.53	53%	0.27	0.19	45	65	20	70	110	40	340	0	-70
Mo	20	0.42	42%	0.38	0.19	80	70	50	200	160	80	340	0	- 70
	50	0.40	40%	0.27	0.33	25	25	25	95	95	95		Isotrop ic	
As	As ALL 0.29 29% 0.39 0.32 15 15 15 45 45 45 Isotropic													
*Variogram	Variogram model fitted using a nuzzet effect and two spherical models (one spherical model was used for modelling Au in domain 30)													

Table 2. Summary of variogram parameters for the Beutong Project.

Beutong Copper Project - 2012 Resource Estimate Report

Top Cuts & Grade Restriction

Top-cutting is the practice of capping grades above a given threshold to that threshold. The net effect of applying top-cuts is to reduce the influence of outlier grades, and restrict the quantity of metal present in the estimate (by reducing the maximum grades estimated). Often this is motivated by reconciliation problems, as well as a recognition that is it not possible to isolate all 'like' mineralisation in domaining, and that extreme grades may be related to mineralisation that is atypical of the domain as a whole. There is, however, little science, or agreement, on how to apply top-cuts. Decisions on top-cutting rely on judgement, taking into account such considerations as the mineralisation style, population distribution, the purpose of the estimate, reconciliation history etc. A possible top-cut strategy for the Beutong project is presented in Table 3 below.

An alternative to top-cutting is applying a grade restriction strategy during estimation. This process involves restricting the influence of outlier grades during the estimate by a nominated distance. If the block being estimated falls within this distance, the outlier grade will be used; however, if the block falls outside of this distance the outlier grade will still be used, but will have a cut applied.

QG recommends applying a grade restriction strategy during the estimation of Beutong as an alternative to top-cutting. This would apply to domain 10, 20 and 50 for both Cu and Au using the same cuts presented in Table 3. The distance of influence of Cu could be approximately twice the block size in the horizontal plane (e.g. \sim 50m); however, for Au the distance of influence should be more restricted (e.g. \sim 10m).

Variable	Domain	Count	Minimum	Maximum	Mean	Std. Dev.	Variance	c.v.	Skewness	Cut Applied	% Metal diff to uncut
Cu Cut	Outer Porphyry	1425	1	15,195	2,367	2,054	4,220,650	0.87	3.16	15,195	-1.26%
Cu Cut	Porphyry	3932	133	20,800	6,185	3,472	12,056,759	0.56	1.21	20,800	-0.29%
Cu Cut	Skarn	266	237	34,109	7,740	7,568	57,278,529	0.98	1.57	34,109	-0.35%
AuCut	Outer Porphyry	1425	0	0.8	0.07	0.08	0.01	1.14	4.59	0.80	-3.24%
Au Cut	Porphyry	3932	0.01	0.51	0.13	0.09	0.01	0.69	1.64	0.51	-2.08%
Au Cut	Skam	266	0.01	2.83	0.33	0.49	0.24	1.48	3.3	2.83	-0.79%

Table 3. Beutong top-cut strategy.

Quantitative Kriging Neighbourhood Analysis

Search neighbourhoods were optimised using an iterative testing process, generally referred to as Quantitative Kriging Neighbourhood Analysis or QKNA (Vann, et.al., 2003).

QKNA requires that decisions to be made regarding the anisotropy, dimension of the search ellipsoid, what type of sectoral search strategy to utilise (quadrants or octants) and whether to limit the number of samples used from one drill hole. These decisions must be made with the geometry and location bf domains, grade distributions within domains and the limitations of the software in mind. An example of the result of QKNA is shown in Figure 9 and Figure 10.



Figure 9. Example of QKNA for Cu estimation.



Figure 10. Example of QKNA for Cu estimation.

The data density is broadly similar across all three domains and all five elements were informed for each sample interval. Consequently, QKNA testing was performed on the Porphyry domain using Cu assays, using a block size of 25m x 25m x 10m.

QG recommends the search strategy for Beutong should utilise an anisotropic search of 200m x 120m x 90m, orientated to the average orientation of the domains. Figure 11 is an example of search ellipsoid in the Porphyry domain. It is recommended that searches allow for a minimum of 6 composites and a maximum of 28, with 7 samples per quadrant.



Figure 11. Illustration of search strategy, Porphyry domain.

Conclusions and Recommendations

Contact analysis indicates hard boundaries should be used for the estimation Cu, Au, Mo and Ag. While As should be estimated un-bounded;

Domain	Cu	Au	Ag	Мо	As
10	Hard	Hard	Hard	Hard	No boundary
20	Hard	Hard	Hard	Hard	No boundary
50	Hard	Hard	Hard	Hard	No boundary

Table 4. Boundary treatment strategy for Beutong estimation.

Beutong Copper Project - 2012 Resource Estimate Report

- Spatial (variogram) analysis for Beutong shows the Cu grade within the main Porphyry domain to be reasonably continuous with maximum range of 200m towards 340° with a 70° dip, as illustrated by relatively low 'nugget' (25%). However, the Au, Ag, and Mo grades are less continuous within the Porphyry domain with moderate relative nugget effects (42 - 54%) and ranges of 45 to 200m. All elements across the Outer Porphyry and Skam domains display only moderate continuity with relative nugget effects in the range of 40 - 54% and ranges from 34 to 190m. The decision to not use a boundary in the estimation of As is further supported by the variogram using all of the data, which displays reasonable continuity with a range of 45m and a relative nugget of 29%;
- QG recommends applying a grade restriction strategy to the Porphyry, Outer Porphyry and Skam domains for Cu and Au, based on assessment of the histogram, cumulative probability plots and grade length of the element concerned; and
- The results of QKNA suggest an ellipse in the order of 200m x 120m x 90m for all three domains. A minimum number of samples selected of 6 and a maximum of 28, with 7 samples per quadrant.

Yours faithfully,

Trent Strickland Senior Consultant

<u>References</u>

Marechal, A., 1978. Gaussian anamorphosis models. Fontainebleau Summer School Notes C-7:22pp. Centre de Morphologie Mathematique: Fontainebleau.

Rivoirard, J., 1994. Introduction to disjunctive kriging and non-linear <u>geostatistics</u>: 180pp Clarendon Press: Oxford.

Vann, J., Jackson, S and Bertoli, O., 2003. Quantitative Kriging Neighbourhood Analysis for the Mining Geologist – A Description of the Method with Worked Case Examples. In: Proceedings Fifth International Mining Geology Conference, pp 215-223 (The Australasian Institute of Mining and Metallurgy: Melbourne).





Figure 14. Analysis of As (left) grade across domain 20 with un-mineralised domain 99 and Cu (right) grade across domain 10 with domain 20.



Figure 15. Analysis of Au (left) and Ag (right) grade across domain 10 with domain 20.



Figure 16. Analysis of Mo (left) and As (right) grade across domain 10 with domain 20.



Figure 17, Analysis of Cu (left) and Au (right) grade across domain 10 with un-mineralised domain 99.



Figure 18, Analysis of Ag (left) and Mo (right) grade across domain 10 with un-mineralised domain 99.



Figure 19. Analysis of As (left) grade across domain 10 with un-mineralised domain 99 and Cu (right) grade across domain 50 with un-mineralised domain 99.



Figure 21, Analysis of Au (left) and Ag (right) grade across domain 50 with un-mineralised domain 99.



Figure 22, Analysis of Mo (left) and As (right) grade across domain 50 with un-mineralised domain 99.

1

Appendix 11 Resource Estimate Validation Plots.

The figures below show that the estimate grades in the 2012 resource model statistically and spatially reflect the distribution of the composite source data and the effect of the interpolation methodology. The 2014 estimate correlates well with the 2012 estimate, rendering the following diagammes pertinent to the validation of the 2014 resource estimate.

[NB. The 2012 resource estimate is the maiden resource estimate for the Beutong mineralisation and was undertaken by Hackman and Associates Pty. Ltd. (H&A) in September 2012. The 2012 estimate:

- was undertaken utilizing the same methodology and parameters as the current November 2014 resource estimate (refer Section 14, report "Technical Report on the Beutong Copper-Gold-Silver-Molybdenum Mineralisation, Aceh, Indonesia. November, 2014").
- was prepared and reported under the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004 Edition). The JORC Code under the definitions in the NI 43-101 is acceptable foreign code as it defines mineral resources and mineral reserves in a manner that is consistent with mineral resource and mineral reserve definitions and categories set out in sections 1.2 and 1.3 of the Instrument.
- is reported in a document titled "Report: Beutong Copper Mineralisation, 2012 Resource Estimate, September 2012" prepared for Tigers Ream Copper Pty. Ltd. by Hackman and Associates Pty. Ltd.
- at the time of reporting in 2012 was considered as reliable as the 2014 resource estimate is now for the Beutong mineralisation.
- is no longer current as it is superseded by the 2014 resource estimate as the 2014 estimate includes data from an additional five holes drilled in late 2012 and in 2013/14 [BEU0700-07, BEU0800D-01, BEU1000-04, BEU1000-05 and BEU1700D-01].
- Although three of the additional holes transgress Measured and Indicated Resource material for both the 2012 and 2014 estimates, all material changes to the resource estimate are within the Inferred Resource classified material, reported in 2012 as 412MT @ 0.44% Cu, 0.13g/t Au, 1.05g/t Ag and 129ppm Mo (JORC 2004, reported at 0.3%Cu lower cut).]





Sectional comparison – block and composite grades. The block grades compare well with the composite grades. Deviations in grades occur on sections with low drilling density. Block model grades are marginally lower than composite grades on some sections due to the high grade treatment strategy employed.



Levels comparison – block and composite grades. Block model grades are marginally lower than composite grades, particularly on the upper levels due to the high grade treatment strategy employed and clustering of high grades in the upper portion of the domain.

























Appendix 12 Abbreviations and Conversions

Abbreviation	:	Meaning
%	:	Percent
%Av		Percent average
%Difference		Percentage difference (duplicate - original)/original
%MPD		Percent Mean Paired Difference = (duplicate -
	•	original)/Average(original and duplicate)
%RSD	:	Percentage Relative Standard Deviation = StdDev/Average *100
&	:	and
*	:	any and any length of characters
/	:	divider/divisor
, @	:	at
x	:	absolute value (of x)
~	:	approximate
<	:	less than
=	:	equals
>	:	greater than
±	:	plus or minus
°C	:	Degrees Celsius
μm	:	micron
3:1 HCI:HNO ₃	:	Auqua Regia
3D	:	Three Dimension
A\$:	Australian currency
A.B.N.	:	Australian Business Number
A.C.N	:	Australian Company Number
AAMPD	:	Average Absolute Percent Mean Paired Difference =
		average((duplicate - original)/Average(original and duplicate))
AAS	:	Atomic absorption spectroscopy - method for measuring element
		concentrations in solution (assays)
Access [™]	:	Access (Trade Marked) computing software
Ag	:	Silver
AIG	:	Australian Institute of Geoscientists
AIM	:	formerly the Alternative Investment Market - a sub-market of the London Stock Exchange
AMDAL	:	Environmental Impact Assessment
APL	:	Areal Penggunaan Lain (Forest Other Purposes)
ASL	:	above sea level
Au	:	Gold
AusIMM	:	Australian Institute of Mining and Metallurgy
B.App.Sc. MSc. MAIG	:	Bachelor Applied Science, Master of Science, Member Australian Institute of Geoscientists
BD	:	bulk density

Abbreviation	:	Meaning
BEP	•	Beutong East Porphyry
Beutong		Beutong Copper-Gold-Silver-Molybdenum Mineralisation, Prospect,
Deatong	•	Project or Area
BGS	:	British Geological Survey
BIC	:	Beutong Intrusive Complex
ВКРМ	:	Indonesian Capital Coordinating Board
BRPL	:	Beutong Resources Pte. Ltd.
BSc.(Hons)	:	Bachelor Science with Honours
BWP	:	Beutong West Porphyry
CIM	:	Canadian Institute of Mining, Metallurgy and Petroleum
cm	:	centimetre
Со	:	Cobalt
CoW	:	Contract of Work
CRM	:	Certified Reference Material
CSV	:	commer seperated value file
Cu	:	Copper
CuEq	:	Copper Equivalent
DBD	:	dry bulk density
Dept.	:	department
Doc	:	document
DPOs	:	direct purchase order
DTM	:	digital terrain model
dxf	:	drawing exchange file
E	:	East
E	:	East
EMM	:	PT Emas Mineral Murni
ESDM	:	Department of Energy and Mineral Resources
et al.	:	and others
etc.	:	Etcetera
E-W	:	East-West
FA30	:	30g charge; Fire Assay: AAS detection
Fe	:	Iron
FeO	:	Iron Oxide
FPT	:	Freeport McMoRan Copper & Gold Inc. and International Mining Investments LLC affiliation
Freeport	:	Freeport McMoRan Copper & Gold Inc. and International Mining Investments LLC affiliation
g	:	gram
g/cc	:	unit for measurement of specific gravity - grams per cubic centimetre (also can be expressed as T/m ³)
g/t	:	grams per metric tonne - a measurement of element concentration, interchangeable with ppm
GA31	:	triple acid digest: AAS detection
GPS	:	Global Positioning System
Grade	:	Quantity of metal per unit weight of host rock.

Abbreviation	Meaning
GT	Grade Tonnage
H&A	Hackman and Associates Pty Ltd
ha.	hectare(s)
HCI/HNO ₃ /HClO ₄	triple or three acid
HG	Highlands Gold Indonesia
hr	hour
i.e.	that is
IC01 :	aqua regia digest: ICP-OES detection
IC30	triple acid digest: volumetric detection
ICP-MS	Inductively coupled plasma mass spectrometry - method for measuring element concentrations in solution (assays)
ICP-OES :	Inductively coupled plasma optical emission spectrometry - method for measuring element concentrations in solution (assays)
Inc.	Incorporated
incl.	including
IP :	Induced Polarization - involves transmitting a current into the ground using two electrodes and measuring the voltage between another pair of electrodes.
ISO	International Organization for Standardization
ITS	PT Intertek Utama Services
IUP	Mining Business License (Izin Usaha Pertambangan).
VL	Joint Venture
К	Potassium
kg	kilogram
KGL	Kalimantan Gold Corporation Limited
km :	kilometre
km ²	kilometre squared
KP	Mining Authorization (Kuasa Pertambangan) - now defunct.
Lat.	Latitude
LIDAR	Lidar is a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light.
LLC	Limited Liability Company
Long.	Longitude
Ltd.	Limited
M	million
m	metre(s)
Ma	million years ago
MAIG	Member of Australian Institute of Geoscientist
Max	maximum
MBD	Main Beutong Diorite
mE	metres East
mesh	grid mesh (measurement of aperture)
MIBC	Methyl Isobutyl Carbinol

Abbreviation	:	Meaning
Mil	:	Million
Min	:	minimum
Minesight [™]	:	Minesight (trade Marked) mining industry software
mm	:	millimeters
MMR	:	PT Media Mining Resources
mN	:	metres North
Мо	:	Molybdenum
MODA	:	McArthur Ore Deposit Assessments
MOHLR	:	Ministry of Law and Human Rights
MPD	:	Mean Paired Difference (expressed as a percent)
MPRD	:	Mean Paired Relative Difference (expressed as a percent)
MT	:	Million Tonnes (metric)
MW	:	megawatt
Ν	:	North
Ν	:	North
NB.	:	Please note
NE	:	Northeast
NE-SW	:	Northeast-Southwest
NI 43-101	:	"Canadian National Instrument 43-101 - Standards of Disclosure for
		Mineral Projects" defines and regulates public disclosure in Canada
		for mineral projects and it relies on resource and reserve
		classification as defined by CIM.
NI 43-101F1	:	Form 43-101F1 Technical Report
N-S	:	North-South
NW	:	Northwest
NW-SE	:	Northwest-Southeast
Pb	:	Lead
pers. Comm.	:	personal communication
рН	:	measure of the acidity or basicity of an aqueous solution
PLN	:	PT Pelayanan Listrik Nasional
PMA	:	Penanaman Modal Asing (foreign investment company)
ppm	:	parts per million - a measurement of element concentration,
		interchangeable with grams per metric tonne
PQ PQ3 HQ HQ3 NQ NQ3	:	Diamond Drill Hole Core sizes
BQ PT	:	Perseroan Terbatas ("Limited Liability") Company
Pte. Ltd	:	Propriety Limited Company
Pty. Ltd	:	Propriety Limited Company Propriety Limited Company
Py	:	Pyrite
Py QA		Quality Assurance
QC		Quality Control
QG		QG Group Pty. Ltd. (formerly Quantitative Group Pty. Ltd.)
QKNA	:	Quantitative Kriging Neighbourhood Analysis
Q-Q		Quartile - Quartile (plot)
Rd.	:	Road
NG.	•	nouu

Abbreviation	:	Meaning
RE	:	Reference to
RI	:	Republic of Indonesia
RL	:	reduced level (relative to vertical datum - usually ASL - Average Sea Level)
ROM	:	Run-Of-Mine (grade)
RQD	:	Rock Quality Descriptor
RTI	:	Rio Tinto Indonesia
S	:	South
Sb	:	Antimony
SEDAR	:	System for Electronic Document Analysis and Retrieval (Canadian - www.sedar.com)
SFS	:	Sumatra Fault System
SG	:	Specific Gravity (mass/volume)
Si	:	Silica
SOP	:	Standard Operating Procedure
StdDev	:	Standard Deviation
Т	:	metric tonnes
T/m ³	:	Mteric tonnes per cubic metre
TCS	:	Tigers Copper Singapore No 1 Pte. Ltd.
TIN	:	Triangulated Irregular Network (computer solid model shape that domains features of projects in 3D)
TM	:	Trade Mark
TRC	:	Tigers Realm Copper Pty. Ltd.
TRM	:	Tigers Realm Metals Pty. Ltd.
UKL-UPL	:	environmental management and environmental monitoring program
US\$:	United States of America Currency
UTM	:	Universal Transvers Mercator (Cartesian coordinate grid system)
vol%	:	Percentage of total volume
VS	:	versus
Vulcan [™]	:	Vulcan (Trade Marked) mining industry software
W	:	West
WA	:	Western Australia
WGS84, UTM Zone 47N	:	Spheroid projection and grid datum for the geographical location of data at Beutong
WNW	:	West-Nortwest
yr	:	year
Zn		Zinc