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PEKO TAILINGS: Estimation of Mineral Resources

(concise report)

2017 November

Consultant:

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15 November, 2017



Report:

PEKO TAILINGS: Estimation of Mineral Resources (concise report)

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Contributors:	
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CONCISE REPORT

The report presents Resources of the Peko mine tailings that were estimated using new drilling data.

GEOLOGICAL BACKGROUND

The mineralisation is not a natural deposit but is represented by the tailings of the Au-Cu-Fe processing plant. In total, there are 6 tailings dams at the Peko mine site (Fig. 1). The tailings were formed by slowly and evenly infilling the natural depressions by the rejects (tailings) of the processing plant. This has created horizontal layering of the mineralisation infilling tailings.



Figure 1: Map of the Peko tailings showing distribution of the drill holes drilled in 2016

The tailings consist of mainly magnetite (~80%) with smaller amounts of silicate gangue mineral and minor amounts of sulphides and quartz. The sulphide minerology consists of mainly gold bearing pyrite with small amounts of chalcopyrite, marcasite, arsenopyrite and pyrrhotite. The primary copper bearing mineral is chalcopyrite. Main cobalt bearing mineral is pyrite. Cobalt also present in arsenopyrite, which is rare and occurs only as the traces in the tailings samples.

DATA

Resource database contains 65 drill holes with 496 samples (Table 1).

Dam	No. Auger Holes	Total Metres	No. RC Holes	Total Metres	Average Depth
1	15	30			2
1X	4	8			2
2			9	126	14
3			9	83	9
4			20	180	9
5			8	20	2.5
Total	19	38	46	409	

Table 1: Distribution of the drill holes, drilled in 2016, by the tailings dams

TAILINGS DENSITY

Dry Bulk Density was determined in 1989 by Laurie Smith and Associates. For this purpose they dug two trenches in Dam 2 and three trenches in Dam 3. The bulk density of tailings was determined by measuring of the excavated volumes ranging from 25-53m³ and the sample weights ranging from 60-100 tonnes. The bulk dry density determinations of the 5 trenches varied from 1.48 to 2.58 tonnes/m3 (ie. BDD22 - 2.31, BDD21 - 1.48, BDD33 - 2.21, BDD32 - 1.79 and BDD31 - 2.58).

Based on these data the following density values were estimated for the tailings dams:

Dam 1; 2.15 dry tonnes /m³

Dam 2; 2.17 dry tonnes /m³

Dam 3; 2.17 dry tonnes /m³

Dam 4; 2.16 dry tonnes /m³

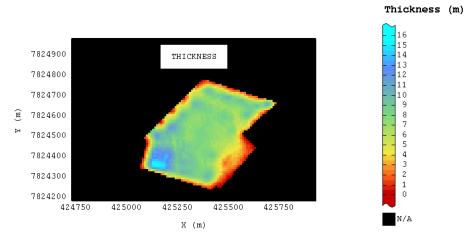
These values were used for tailings Resource estimation in 1997 by Normandy and used for the current Resource estimation.

ESTIMATION METHODOLOGY

Resources were estimated in a 2D system.

- Geostatistical analysis was made using ISATIS, a special geostatistical software.
- The 2D model area was constrained by the boundaries of the tailings dams digitised from the map shown on the Figure 1

 Volume of the mineralised bodies was estimated using thickness of the tailings deduced form the drill holes and extrapolated between drill holes using Ordinary kriging (Fig. 2).





Volume of the mineralised bodies was estimated using thickness of the tailings d

• 2D variograms of Au, Cu and Co are summarised on the Figures 3 and 4:

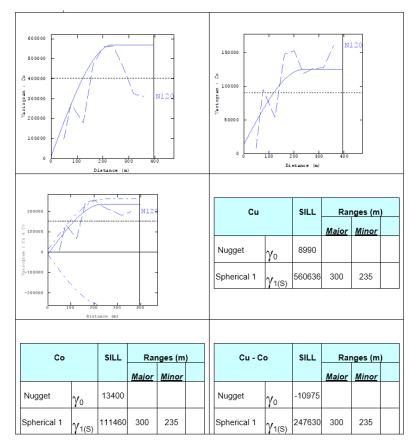


Figure 3: 2D variograms and cross-variograms of Cu - Co and their models

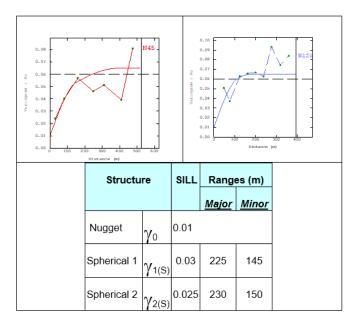


Figure 4: 2D variograms of Au

• Grade was estimated as follows:

Dams 3, 4 and 5 were estimated as one body. Au by Ordinary kriging; Cu and Co by Ordinary Co-kriging;

Dam 2: was estimated separately. Au by Ordinary kriging; Cu and Co by Ordinary Co-kriging;

Dam 1x: grade of Au, Cu and Co was estimated as average of 8 samples collected from 4 holes drilled in this dam;

Dam 1 was not estimated due to insufficient data.

<u>RESULTS</u>

Resources of the Peko tailings

Dam	Tonnage (Kt)	Grade			Со	ontained me	tal
		Au g/t	Cu %	Co %	GOLD (Koz)	COPPER (Kt)	COBALT (Kt)
1		not	estimate	d due to	insuffient data	а	
1x	11	2.9	0.66	0.20	1	0.1	0.02
2	384	1.6	0.48	0.21	20	1.8	0.8
3	476	1.2	0.24	0.09	18	1.1	0.4
4	2,157	1.0	0.17	0.08	68	3.7	1.7
5	136	1.2	0.09	0.02	5	0.1	0.03
TOTAL	3,163	1.1	0.22	0.10	112	6.9	3.0

RECOMMENDATIONS

Mineralisation is constrained by the tailings borders. A high resolution topographic model need to be created for a more detailed evaluation of the project. It is recommended to create the detailed DTM using LiDAR technology.

The drilling grid shoud be infilled to the level of details sufficient for estimation Indicated and Measured Resources and Ore Reserves.

A robust QAQC procedures for assuring integrity and high quality of the drill hole samples should be developed and implemented at the next phase of drilling.

DISCLAIMER

The report is prepared for exclusive use of PEKO BULL for the sole purpose of the mine project evaluation of the mineralised Peko tailings.

The report must be read in light of:

- report distribution and purposes for which it was intended
- its reliance upon information obtained from Peko Bull
- the limitations of the data that were explained in the JORC Check list (JORC Table 1)
- the assumptions referred to throughout the report
- limited scope imposed on the report
- other relevant issues which are not within the scope of the report.

Subject to the limitations referred to above, all due care in the preparation of the report has been exercised and that the information, conclusions, interpretations and recommendations of the report are both reasonable and reliable.

MASSA Geoservices makes no warranty or representation to a company (expressed or implied) with regard to any commercial investment decision made on the basis of the report

- the report is integral and must be read in its entirety
- this Disclaimer must accompany every copy of this report.

The conclusions of the reported study are made using various assumptions, conditions, limitations and abbreviations, main of them are briefly explained in the report.

APPENDIX 1

CP Consent Form



ABN 28 154 057 274

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COMPETENT PERSON'S CONSENT FORM

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

PEKO TAILINGS: Estimation of Mineral Resources (concise report)

(Insert name or heading of Report to be publicly released) ('Report')

Peko Bull

(Insert name of company releasing the Report)

Peko Tailings

(Insert name of the deposit to which the Report refers)

If there is insufficient space, complete the following sheet and sign it in the same manner as this original sheet.

15 November 2017

(Date of Report)

Statement

I, Marat Abzalov

confirm that I am the Competent Person for the Report and:

• I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

• I am a Competent Person as defined by the JORC Code 2012 Edition, having five years experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.

• I am a Fellow of The Australasian Institute of Mining and Metallurgy.

• I have reviewed the Report to which this Consent Statement applies.

I am a consultant working under the business name MASSA Geoservices

I am a consultant working under the business name MASSA Geoservices.

(Insert company name)

and have been engaged by

Peko Bull

(Insert company name)

to prepare the documentation for

PEKO tailings

(Insert deposit name)

on which the Report is based, for the period ended

15 November 2017

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Exploration Targets, Exploration Results and Mineral Resources (select as appropriate).

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

Peko Bull

ire of Competent Person

15 November, 2017

Date:

AusIMM Professional Membership:

Signature of Witness:

202718

Membership Number:

GEOFFRET ALEXANDER HAWKINS

5 HELICONIA TORN STIRLING WA 6021

Print Witness Name and Residence: (eg town/suburb)

APPENDIX 2

JORC CHECK LIST (Table 1)

JORC (2012) TABLE 1 Checklist of Assessment and Reporting Criteria

Section 1 - Sampling Techniques and Data

Criteria of JORC Code 2012	Explanation given in the JORC Code 2012	Details of the Reported Project
(1.1.) Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	 Resource database includes 19 hand auger drill holes (38m drilled) and 46 track mounted RC drill holes (409m drilled). All drilling was made in January 2016. Drill holes were sampled at 1m intervals. A total of 447 samples were analysed at ALS in Perth for the following elements: Au - ALS laboratory code of assay method is Au-AA26 (fire assay with atomic absorption finish) Cu, Co, Ag, Bi, Fe, S - ALS laboratory code of assay method is ME-ICP61 (inductively coupled plasma atomic emission spectroscopy, ICP – AES)
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Drilling in 2016 was carried using standard drilling and sampling procedures.

	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been		amples were					pproximately 3 for preparati	
	done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.			ere individually ay determinati				en from the pul nalyses	lverised
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer,	Types the tab		nd the distribut	tion of the dr	ill holes per	the tailings da	ams is summa	rised in
(1.2.)	rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube,		Dam	No. Auger Holes	Total Metres	No. RC Holes	Total Metres	Average Depth	
	depth of diamond tails, face-		1	15	30			2	
	sampling bit or other type, whether core is oriented and if so, by what		1X	4	8			2	
	method, etc).		2			9	126	14	
			3			9	83	9	
			4			20	180	9	1
			5			8	20	2.5	1
		1			1	1			

Drill sample recovery (1.3.)	• Method of recording and assessing core and chip sample recoveries and results assessed.	Sample weight was recorded and used to control the samples recovery
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	The tailings at the Peko project was drilled by previous owners and RC drilling was found well suited for this environment allowing to obtain a good quality samples for Resource estimation. Based on the knowledge gained by the previous explorers the RC drilling was chosen as the main method for Resource definition drilling at the Peko tailings project.
	• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No evidences of relationships between samples recovery and grade was noted. In most of the dams there is evidence of copper and cobalt grade decreased in the upper two metres of the tailings. A.L.Govey, geologist, who reviewed the 2016 data, has explained the systematic decrease of Cu and Co grade in the upper layer of the tailings by leaching of these metals, possibly as a result of supergene weathering processes.
Logging (1.4.)	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Geological logging was limited to documentation of the tailings material with an emphasis on recording of the depth where natural ground material has appeared in the drill hole samples. Level of detail is sufficient to support Inferred Resource estimation Drill holes were not geotechnically logged.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging was qualitative. Photos of the tailings dam was made for better understanding the type of material drilled and the tailings shapes.
	• The total length and percentage of the relevant intersections logged.	100% of the drill holes was logged
Sub- sampling techniques	• If core, whether cut or sawn and wether quarter, half or all core taken	Not applicable. Non-core type of drilling (i.e RC) was used
and sample preparation (1.5.)	• If non-core, whether riffled, tube sampled, rotary split, etc and	RC samples were split using a riffle splitter built into the drill rig.

whether sampled wet or dry.	
• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	 Samples were sent to the ALS laboratory where they were prepared following the standard protocol of ALS. The samples were all checked against the logsheet supplied by the company and found to be all present and accounted for. The samples were placed in labelled trays and dried at 95DegC for 24hours to remove any moisture. The dried samples were placed into sealed plastic bags labelled with the corresponding sample details The dried samples were pulverized with double silica flushed between each sample. Portions of the pulverized sample were removed for analyses
• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Quality of the pulp pulverising was controlled by test sieving. Results confirm that 95% pass for 75 μ m fraction is commonly achieved.
• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Field duplicates was not used. Pulp duplicates were re-assayed if high grade Cu and Fe results were obtained by 1 st analysis (laboratory code ME-ICP61). The samples were re-assayed using ICP-AES method, laboratory code OG62
• Whether sample sizes are appropriate to the grain size of the material being sampled.	3 kg sample representing 1 m of the drilled interval is a standard size of the RC samples used for estimation Resources of the base-metal mineralisation. This size is well suited for estimation of the tailings which are composed by a finer grained material then the natural ore.

Quality of assay data and laboratory tests (1.6.)	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All analyses were made at the ALS laboratory in Perth. Au was assayed by fire assay method with atomic-absorption finish. Laboratory code Au-AA26. Cu, Co, Ag, Bi, Fe, S assayed by Inductively Couple Plasma Atomic Emission Spectroscopy, Laboratory code ME-ICP61. Sample preparation was made using 4 acid digest.
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable. Geophysical tools not used.
	• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Pulp duplicates were re-assayed if high grade Cu and Fe results were obtained by 1 st analysis (laboratory code ME-ICP61). The samples were re-assayed using ICP-AES method, laboratory code OG62. Accuracy control was limited to using of the internal ALS reference materials
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. 	The 2016 drilling results have been compared with the previous drilling data, in particular the Resource definition database of Normandy. The comparison indicates that 2016 results are in a good agreement with the previous drilling results. Twin holes were not used.
(1.7.)	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Assays results were obtained from the laboratory in electronic format as *.csv files. The data were compiled into a single Excel file, and checked by consulting geologist (A.L.Govey). The files were electronically sent to the project CP for Resource estimation.
	• Discuss any adjustment to assay data.	No adjustments were made to the data.

Location of data points (1.8.)	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	Location of the drill hole collars was determined by a hand-held GP Holes are shallow and were drilled vertically down, therefore down MGA (GDA94) zone 53 Topographic control was not used. The volume of the mineralised t the thickness of the drillhole intersections and the spatial extents of digitized from the map of the testing down	hole survey was not used.
Data spacing and distribution (1.9.)	• Data spacing for reporting of Exploration Results.	DAM 1X 0043 0043 0043 0043 0044	Drill holes spacing is as oblows: Dam 1x 40 x 20m Dam 2 40 x 20m Dam 3 30 x 60m Dam 4 50-60 x 80-100m Dam 5 40 x 40-50m
	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The drill spacing is suitable for estimation Inferred Resources	

	• Whether sample compositing has been applied.	All samples were 1 m long. No compositing of samples was used.
Orientation of data in relation to geological structure (1.10.)	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The mineralisation in tailings is essentially horizontal and all drill holes are drilled vertically intersecting the mineralisation at right angle, which ensures that the sampling is unbiased.
	• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Orientation of the drill holes is orthogonal to the strike of mineralisation providing unbiased results
Sample security (1.11.)	• The measures taken to ensure sample security	Sampling in the field was made by authorised personnel. In the laboratory security of samples and assays were controlled by the internal security procedures of the ALS.
Audits or reviews (1.12.)	• The results of any audits or reviews of sampling techniques and data.	Results of the 2016 drilling was reviewed by A.L.Govey, an independent consultant. He has concluded: "Drilling by PekoBull has successfully verified or exceeded the grade, thickness and lateral and downhole continuity of the Peko tailings deposit as reported by predecessor companies. In addition ample new sample material was made available for extensive metallurgical test work. The project has passed a significant milestone in reducing, if not eliminating, any uncertainty relating to the Au-Cu-Co grades. There is sufficient previous work to reliably establish the volume and tonnage of tailings present and hence the contained metal inventory".

Section 2 - Reporting of Exploration Resu	ılts
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Criteria of JORC Code 2012	Explanation given in the JORC Code 2012	Details of the Reported Project
Mineral tenement and land tenure status (2.1)	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Airport Tennent Creek Township North-South Rail North-South Highway 1 58

	• The security of the tenure held at the time		Title Id	Status	Percent	Grant Date / Expiry	Holder Name
			EL23141 EL23844	Application Application	100		SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
	of reporting along with any known		EL23922	Application	100		SITZLER SAVAGE PTY_LTD
	impediments to obtaining a licence to operate		EL24165	Application	100		SITZLER SAVAGE PTY_LTD
			HLDC19	Grant	100	19/07/1954	SITZLER SAVAGE PTY_LTD
	in the area.		HLDC20	Grant	100	30/06/1955	SITZLER SAVAGE PTY_LTD
			HLDC21 HLDC22	Grant Grant	100	30/06/1955 30/06/1955	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			HLDC22 HLDC25	Grant	100	23/08/1955	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			HLDC26	Grant	100	23/08/1956	SITZLER SAVAGE PTY LTD
			HLDC27	Grant	100	3/05/1957	SITZLER SAVAGE PTY_LTD
			HLDC28	Grant	100	23/05/1957	SITZLER SAVAGE PTY_LTD
			HLDC29	Grant	100	26/02/1958	SITZLER SAVAGE PTY_LTD
			HLDC30 HLDC31	Grant Grant	100	25/06/1958 13/04/1961	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			HLDC33	Grant	100	14/06/1962	SITZLER SAVAGE PTY LTD
			HLDC38	Grant	100	16/08/1967	SITZLER SAVAGE PTY_LTD
			HLDC60	Grant	100	17/08/1976	SITZLER SAVAGE PTY_LTD
			HLDC61	Grant	100	17/08/1976	SITZLER SAVAGE PTY_LTD
			HLDC62 HLDC63	Grant Grant	100	17/08/1976 15/08/1977	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			HLDC63 HLDC64	Grant	100	15/08/1977	STIZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			HLDC66	Grant	100	15/08/1977	SITZLER SAVAGE PTY_LTD
			HLDC67	Grant	100	15/08/1977	SITZLER SAVAGE PTY_LTD
			MLC10	Renew Retained	100	31/12/2031	SITZLER SAVAGE PTY_LTD
			MLC11	Renew Retained	100	31/12/2031	SITZLER SAVAGE PTY_LTD
			MLC12 MLC125	Renew Retained Renew Retained	100	31/12/2031 31/12/2023	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			MLC125	Renew Retained	100	31/12/2023	SITZLER SAVAGE PTY LTD
			MLC128	Renew Retained	100	31/12/2023	SITZLER SAVAGE PTY_LTD
			MLC13	Renew Retained	100	31/12/2031	SITZLER SAVAGE PTY_LTD
			MLC14	Renew Retained	100	31/12/2018	SITZLER SAVAGE PTY_LTD
			MLC156 MLC157	Renew Retained Renew Retained	100	31/12/2024 31/12/2024	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			MLC19	Renew Retained	100	31/12/2024 31/12/2020	SITZLER SAVAGE PTY_LTD
			MLC3	Renew Retained	100	31/12/2023	SITZLER SAVAGE PTY_LTD
			MLC43	Renew Retained	100	31/12/2034	SITZLER SAVAGE PTY_LTD
			MLC44	Renew Retained	100	31/12/2034	SITZLER SAVAGE PTY_LTD
			MLC507	Renew Retained	100	31/12/2033	SITZLER SAVAGE PTY_LTD
			MLC509 MLC510	Renew Retained Renew Retained	100	31/12/2020 31/12/2020	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			MLC510 MLC519	Renew Retained	100	31/12/2033	SITZLER SAVAGE PTY_LTD
			MLC6	Renew Retained	100	31/12/2025	SITZLER SAVAGE PTY_LTD
			MLC664	Renew Retained	100	31/12/2025	SITZLER SAVAGE PTY_LTD
			MLC665	Renew Retained	100	31/12/2020	SITZLER SAVAGE PTY_LTD
			MLC666	Renew Retained	100	31/12/2020	SITZLER SAVAGE PTY_LTD
			MLC667 MLC7	Renew Retained Renew Retained	100	31/12/2020 31/12/2025	SITZLER SAVAGE PTY_LTD SITZLER SAVAGE PTY_LTD
			MLC7 MLC8	Renew Retained	100	31/12/2025	SITZLER SAVAGE PTY_LTD
			MLC9	Renew Retained	100	31/12/2031	SITZLER SAVAGE PTY_LTD
Innlanation		Sovoral	•				on was undertaken a
Exploration	• Acknowledgment and appraisal of	Several	campaigi	is or unning			JII Was UNUERIANEIT
lone by other	exploration by other parties.	Peko tail	ings.				
parties (2.2)		• [Drillina bv	ADL in 198	5 was m	ade using an o	pen hole power aug
			• •			-	showed that the 19
		S	amples h	ad become :	significa	ntly oxidized, p	rompting a decision

		redrill the dams, concentrating on Dams 1, 2 and 3 for a total of 135
		holes and 1,213m (average depth 8.9m). The method of drilling and
		sample collection for this program is not known.
		 The Normandy drilling comprised 50m by 50m spaced, auger cased,
		core holes, with samples taken every metre downhole. This was the first
		confirmed use of cased holes and the implied greater confidence in
		sample integrity.
		The drilling program totalled 103 holes for 760.25 metres and covered
		the four main dams, a small dump east of Dam 4.
		For the greater part sample recoveries exceeded 90% with more difficult
		moist material near the bottom of the dams. Normandy found that there
		were no apparent high grade gold domains within the resource despite a
		long processing history (1954-1976) and multiple ore sources.
Geology (2.3)	• Deposit type, geological setting and style of mineralisation.	The mineralisation is not a natural deposit but is represented by the tailings of the Au-Cu-Fe processing plant (map is shown on the section 1.9).
		The tailings consist of mainly magnetite (~80%) with smaller amounts of silicate
		gangue mineral and minor amounts of sulphides and quartz.
		The sulphide minerology consists of mainly gold bearing pyrite with small amounts of chalcopyrite, marcasite, arsenopyrite and pyrrhotite. The primary
		copper bearing mineral is chalcopyrite. Main cobalt bearing mineral is pyrite.
		Cobalt also present in arsenopyrite, which is rare and occurs only as the traces
		in the tailings samples. Within the ferromagnetic material of the tailings, all elements (with the exception
		of iron) generally decrease with finer particle size.

MASSA	geoservices

Drill hole Information (2.4)	• A summary of all information material to the understanding of the exploration results including a tabulation of the following	Dam	No. Auger Holes	Total Metres	No. RC Holes	Total Metres	Average Depth
		1	15	30			2
	information for all Material drill holes:	1X	4	8			2
		2			9	126	14
		3			9	83	9
		4			20	180	9
		5			8	20	2.5
		Total	19	38	46	409	
	• Easting and Northing of the drill hole collar.	Hole ID	Depth Contac Grou		GA)53 N	orth (MGA)53	DAM
		D1-01	2				1
		D1-02	2				1
		D1-03	2				1
		D1-04	2				1
		D1-05	1				1
		D1-06	2				1
		D1-07	2				1
		D1-08	2				1
		D1-09	2				1
		D1-10	2				1
		D1-11	2				1
		D1-12	2				1
		D1-13	2				1
		D1-14	2				1
		D1-15	2				1
		D1X-01	2 2	4248	47	7824351	1x
		D1X-02	2 2	4248	79	7824339	1x

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	D4-10	12	9	425594	7824601	4
	D4-09	11	9	425484	7824592	4
	D4-07 D4-08	11	9	425426	7824614	4
	D4-00	12	9	425377	7824634	4
	D4-05 D4-06	12	10	425038	7824658	4
	D4-04 D4-05	12	10	4255638	7824668	4
	D4-03 D4-04	12	10	425505	7824690	4
	D4-02 D4-03	12 12	10 10	425465 425505	7824698 7824690	4 4
	D4-01	12	11	425403	7824725	4
	D3-09	12	9	425390	7824275	3
	D3-08	12	9	425320	7824295	3
	D3-07	11	9	425270	7824312	3
	D3-06	12	10	425399	7824301	3
	D3-05	12	9	425327	7824323	3
	D3-04	11	9	425277	7824343	3
	D3-03	12	9	425406	7824326	3
	D3-02	12	9	425333	7824351	3
	D3-01	10	9	425284	7824370	3
	D2-09	15	14	425183	7824337	2
	D2-08	15	14	425152	7824341	2
	D2-07	15	14	425121	7824349	2
	D2-06	15	14	425190	7824362	2
	D2-05	15	14	425155	7824368	2
	D2-04	15	14	425128	7824372	2
	D2-03	15	14	425197	7824404	2
	D2-02	15	14	425139	7824419	2
	D2-01	15	14	425156	7824404	2
	D1X-04	2	2	424875	7824319	1x
	D1X-03	2	2	424839	7824328	1x

r							
		D4-11	11	11	425270	7824599	4
		D4-12	9	7	425326	7824570	4
		D4-13	10	9	425388	7824537	4
		D4-14	11	9	425441	7824525	4
		D4-15	11	9	425523	7824522	4
		D4-16	12	10	425215	7824542	4
		D4-17	11	9	425261	7824514	4
		D4-18	10	8	425304	7824493	4
		D4-19	10	8	425365	7824445	4
		D4-20	10	9	425421	7824405	4
		D5-01	4	3	425533	7824422	5
		D5-02	4	3	425563	7824405	5
		D5-03	4	3	425504	7824394	5
		D5-04	4	3	425536	7824359	5
		D5-05	3	2	425483	7824362	5
		D5-06	3	2	425500	7824339	5
		D5-07	1	1	425493	7824307	5
		D5-08	1	1	425473	7824280	5
	• Elevation or RL (Reduced Level –	Elevation	of the colla	ars was no	t recorded		
	elevation above sea level in metres) of the drill hole collar.						
	• <i>dip and azimuth of the hole.</i>	All holes	drilled verti	cally down			
	• down hole length and interception depth	0.3	Nb Samples: 65 Minimum: 1.0		Average	down hole length	n of interceptions

	• hole length.		6.85 m				
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	The drill hole information is material and included in this table					
Data aggregation methods (2.5)	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 	Not applicable. Tailings grade was estimated geostatistically into 3D block model using 1m long samples					
	• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not applicable. All samples are 1m long.					
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable. Metal equivalents were reported for Au, Cu and Co	re not estimated. Resources estimated and				
Relationship between mineralisation	• These relationships are particularly important in the reporting of Exploration Results.		width and intercept length is irrelevant for d for estimation of the tailings Resources				
widths and intercept lengths (2.6)	• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Mineralisation is distributed as flat lying beds in the tailings. All drill hole vertical and intersect the mineralisation approximately orthogonally pro- good estimate of the true thickness of mineralisation					
	 If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 						

Diagrams (2.7)	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	A Top of the tailings B Basement (natural ground) B B
Balanced reporting (2.8)	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Not applicable because tonnage and grade of the tailings were estimated and reported as Mineral Resource
Other substantive exploration data (2.9)	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	A substantial amount of historical (pre 1987) testwork has been completed for the recovery of gold, copper and cobalt metals from the Peko tailings material. Almost all testwork completed after 1987 (mainly in the early 2000s) has been focused on magnetic separation of a suitable coal washery magnetite product. Historical flotation work on the tailings showed ~50% of the gold reports to a flotation concentrate, with the remainder to the flotation tail (consisting of magnetite plus gangue). Cyanide leaching of the float tail yielded a residue which contains 0.2 to 0.3g/t Au. Total copper and cobalt recovery of 86% to 88%, (including water soluble plus concentrate) was produced when a flotation concentrate weight of 10 to 12% was produced. Gold recoveries of 65% - 75% were regularly achieved from this historical testwork.
		Additional metallurgical tests have been undertaken in 2016. Results of the tests are as

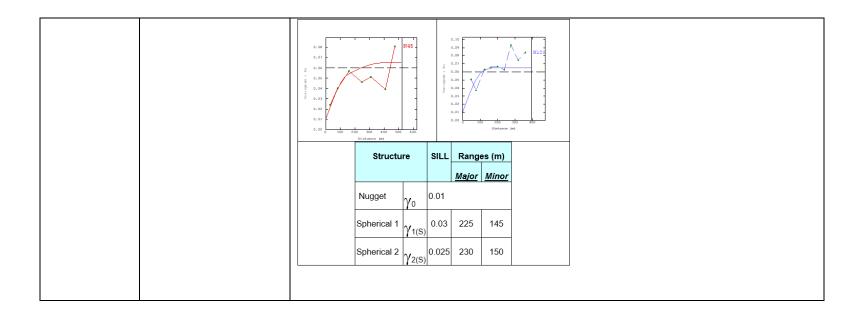
		 follows: Upfront grinding of the material is unlikely to have any additional benefits for gold, copper and cobalt extraction and can likely be eliminated from future flowsheets. A clean sulphide concentrate can be produced from the tailings by flotation. This fact was demonstrated in the proof of concept testwork and also in previous testing (1985 to 1987), which demonstrated that flotation could recover a concentrate which amounted to between 10 to 12% of the weight containing 50% of the gold. The tailings will produce a saleable grade coal washery magnetic concentrate. The tailings are acidic and a significant proportion of the copper and cobalt are soluble when the tailings are mixed with water. Historical testing also demonstrated that LoPOx leaching can have a significant improvement in total metal recovery. A 50% increase was observed for cobalt recovery.
Further work (2.10)	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of 	Mineralisation is constrained by the tailings borders. A high resolution topographic model will be created using LiDAR technology. The drilling grid will be infilled to the level of details sufficient for estimation Indicated and
	possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Measured Resources and Ore Reserves.

Section 3 - Estimation and Reporting of Mineral Resources

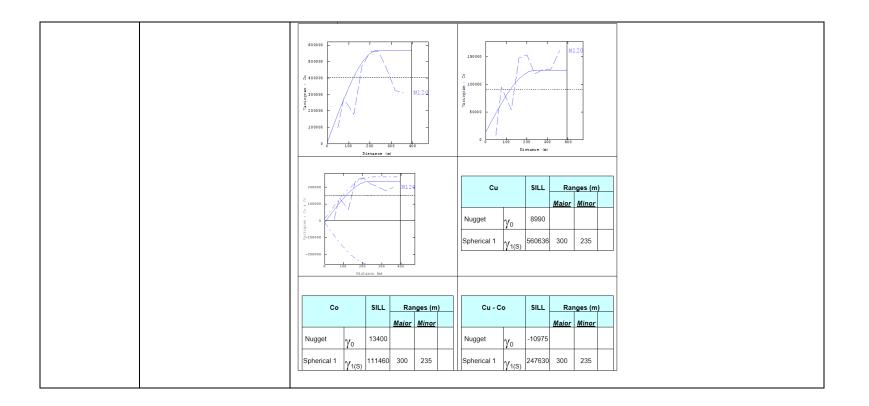
Criteria of JORC Code 2012	Explanation given in the JORC Code 2012	Details of the Reported Project
Database integrity (3.1)	• Measures taken to ensure that data has	Assays results were obtained from the ALS laboratory in electronic format as *.csv files. The data were compiled into a single Excel file, which is located on the company server which
	not been corrupted by, for example, transcription or keying	is regularly backed up.
	errors, between its initial collection and its use for Mineral Resource estimation	The data were electronically sent to the project CP for Resource estimation.
	 purposes. Data validation procedures used. 	The data were checked by consulting geologist (A.L.Govey).
Site visits (3.2)	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Dr.M.Abzalov did not visit the project site.
	• If no site visits have been undertaken indicate why this is the case.	Dr.M.Abzalov was approached and requested to estimate Resources of the Peko tailings in late October 2017. Timing and concurrent commitments did not permit to undertake site visit.
Geological interpretation (3.3)	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The current interpretation is based on 65 drill holes distributed as approximately regular grid. All drillholes were sampled at 1m intervals and logged. The available information together with the mapped tailing contacts have provided a sound base for the current geological interpretation.

	• Nature of the data used and of any assumptions made.	496 samp	les from 65 drill	holes					
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	There appears to be a limited scope for alternative interpretations. The biggest uncertainty the volume of the tailings which is approximately deuced from the thickness of the drill hole intersections.							
	• The use of geology in guiding and controlling Mineral Resource estimation.	infilling cre	Understanding of the tailing infilling procedures, which was formed by slowly and evenly infilling creating horizontal layering of the mineralisation, was incorporated into the estimation procedures.						
	• The factors affecting continuity both of grade and geology.	structure	of the tailings co continuities hav	ntrols distribut	ion of the met	ng infilling procedures. The layered als, including Au, Cu and Co. ating the variograms of the main metals			
Dimensions	• The extent and	Dam	Length, m	Width.m	Depth.m				
(3.4)	variability of the	1	80	70	1.9				
	Mineral Resource expressed as length (along strike or otherwise), plan width,	1x	80	60	2.0				
		2	150	130	14.0				
		3	230	140	9.1				
	and depth below	4	400	350	9.0				
	surface to the upper	5	230	100	2.5				
	and lower limits of the Mineral Resource.								

• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a	Resources were estimated in a 2D system using special geostatistical software (lsatis). Volume of the mineralised bodies was estimated using thickness of the tailings which was extrapolated using Ordinary kriging between drill holes within the boundaries of the tailings dams. The boundaries was digitised from the map of the tailings. Thickness (m) 7824900 7824400 782490 782
aata points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	Treation of the second seco
	Search neighbourhood was as follows: Radius 350 x 200m Declustering 16 sectors with 1 sample per sector Minimum number of samples 3 Grade was estimated to the 2D blocks of 40 x 40m Variograms and their estimated models of Au, Cu-Co are as follows:
	appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and



MASSA geoservices



	• The availability of		Dam	Tonnage (Kt)		Grade		Co	ontained me	tal
	check estimates,	te			Au g/t	Cu %	Co %	GOLD (Koz)	COPPER (Kt)	COBALT (Kt)
	previous estimates	na ov)	1		no	t estimate	d due to i	insuffient dat	а	
	and/or mine production	stir cal	1x	11	2.9	0.66	0.20	1	0.1	0.02
	records and whether the Mineral Resource	es	2	384	1.6	0.48	0.21	20	1.8	0.8
		ent 1.4	3	476	1.2	0.24	0.09	18	1.1	0.4
	estimate takes	rre , N	4	2,157	1.0	0.17	0.08	68	3.7	1.7
	appropriate account of such data.	The current estimate (2017, M.Abzalov)	5	136	1.2	0.09	0.02	5	0.1	0.03
	sich auta.	Ē	TOTAL	3,163	1.1	0.22	0.10	112	6.9	3.0
		2	1	72	2.2	0.86	0.31	5	0.6	0.2
			1x				ot exist i			
		, 1	2	645	1.6	0.47	0.19	33	3.0	1.2
		dy	3	517	1.3	0.27	0.09	21	1.4	0.5
		lan	4	2,519	1.0	0.18	0.08	79	4.6	2.0
		Normandy, 1997	5		was no	t considere	ed as a se	eprate dam in	1997	
		Ň								
			TOTAL	3,753	1.1	0.25	0.11	138	9.6	4.0
	• The assumptions made regarding recovery of by- products.	Recove estimat		the by-products	was i	not ana	lysed a	and not us	sed in the	Resource
	• Estimation of deleterious elements or	Deleter	ious ele	ements were not	estima	ated				
	other non-grade variables of economic									
	significance (eg									
	sulphur for acid mine									
	drainage									
	characterisation).									

• In the case of block model interpolation, the block	Parent blocks are 40 x 40m. This size is optimal for the drill spacings which are as follows:
size in relation to the	Dam 1x 40 x 20m Dam 4 50-60 x 80-100m
average sample spacing and the search employed.	Dam 2 40 x 20m Dam 5 40 x 40-50m Dam 3 30 x 60m
Any assumptions behind modelling of selective mining units.	SMU size was not considered for the current Resource estimation
• Any assumptions about correlation between variables.	Co and Cu exhibit strong correlation. The grade of these metals was estimated by Co-Kriging.
• Description of how the geological interpretation was used to control the resource estimates.	Layered structure of the mineralised tailings was understood as is considered as the main factor that controls distribution of the valuable metals, including Au, Cu and Co. This interpretation was implemented in the Resource estimation procedure

• Discussion of basis for using or not using grade cutting or capping.				Samp withou In ord grade	up was not us le grades are ut outliers. er to prevent s values from t ated separate	distributed e smearing of he Dam-2 it	the high-
• The process of validation, the checking process used,	Results pi tailings da	resented in th ms with corr	ne table showed a show	w good reconnem samples		e estimated	
the comparison of	Dam		hole samp			ock model	A
model data to drill hole data, and use of	- 1	Cu, ppm	Co, ppm	Au, ppm	Cu, ppm	Co, ppm	Au, ppm
reconciliation data if	1	(570	107/	2.00	(570	107/	2.00
available.	1x	6572	1976	2.89	6572	1976 2122	2.89
	2	4952	2201	1.63	4786		1.62
	3	2588	983	1.17	2393	925	1.18
	4 5	1728 932	807 217	0.99 1.24	1725 928	784 196	0.99 1.19

Moisture (3.6)	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnage is estimated on a dry basis, using Dry Bulk Density as a tonnage factor
Cut-off parameters (3.7)	• The basis of the adopted cut-off grade(s) or quality parameters applied.	Cut-off was not applied because it is assumed that the whole dam will have to be excavated.

Mining factors	Assumptions made	Mining factors was not applied and was not considered at the given Resource
or	regarding possible	estimate
assumptions	mining methods,	
(3.8)	minimum mining	
	dimensions and	
	internal (or, if	
	applicable, external)	
	mining dilution. It is	
	always necessary as	
	part of the process of	
	determining	
	reasonable prospects	
	for eventual economic	
	extraction to consider	
	potential mining	
	methods, but the	
	assumptions made	
	regarding mining	
	methods and	
	parameters when	
	estimating Mineral	
	Resources may not	
	always be rigorous.	
	Where this is the case,	
	this should be reported	
	with an explanation of	
	the basis of the mining	
	assumptions made.	

Metallurgical factors or assumptions (3.9)	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 The general metallurgical characteristics are: The metal distribution within the tailings is as follows: Gold: 50% in magnetite, 50% in pyrite; Copper: 100% in copper sulphides; and Cobalt: 80% in pyrite, 20% in cobalt sulphides. Significant water soluble copper and cobalt are present in each dam. A relatively small amount of cyanide soluble copper and cobalt is also present. The tailings contain some agglomerates which were most likely caused by the oxidising sulphides. Based on historical (pre 1990) drilling, all but one dam is acidic in nature (Dam 1 - pH 1.6, Dam 2 - pH 4.0, Dam 3 - pH 6.0, Dam 4 - pH 7.2). It is suspected that all dams have deteriorated further since that date, as the pH of a composite from recent (2015) sampling was below pH 3.0. Historical flotation work on the tailings showed ~50% of the gold reports to a flotation concentrate, with the remainder to the flotation tail (consisting of magnetite plus gangue). Cyanide leaching of the float tail yielded a residue which contains 0.2 to 0.3g/t Au. Total copper and cobalt recovery of 86% to 88%, (including water soluble plus concentrate) was produced when a flotation concentrate weight of 10 to 12% was produced. Gold recoveries of 65% - 75% were regularly achieved from this historical testwork. Additional metallurgical tests undertaken in 2016. Results of the tests are as follows: Upfront grinding of the material is unlikely to have any additional benefits for gold, copper and cobalt recover of of concept testwork and also in previous testing (1985 to 1987), which demonstrated that flotation could recover and concentrate. A clean sulphide concentrate can be produced from the tailings by flotation. This fact was demonstrated that flotation could recover a concentrate which amounted to between 10 to 12% of the weight containing 50% of the gold. The tailings will produce a saleable grade coal washery magnetic concentrate.<!--</th-->
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Environmental	• Assumptions made	Environmental factors were not considered at the current Resource estimation
factors or	• Assumptions made regarding possible	
assumptions	waste and process	
(3.10)		
(3.10)	residue disposal	
	options. It is always	
	necessary as part of the	
	process of determining	
	reasonable prospects	
	for eventual economic	
	extraction to consider	
	the potential	
	environmental impacts	
	of the mining and	
	processing operation.	
	While at this stage the	
	determination of	
	potential	
	environmental impacts,	
	particularly for a	
	greenfields project,	
	may not always be well	
	advanced, the status of	
	early consideration of	
	these potential	
	environmental impacts	
	should be reported.	
	Where these aspects	
	have not been	
	considered this should	
	be reported with an	
	explanation of the	
	environmental	
	assumptions made.	

Bulk density (3.11)	• Whether assumed or determined. If	Average	values, assig	ned to the Dams are as follows					
()	assumed, the basis for	Dam	DBD (t/m3)	Source					
	the assumptions. If	1	2.15	Resource estimation by Normandy, 1997					
	determined, the method	1x	2.15	assumed that it is simialr to Dam 1					
	used, whether wet or	2	2.17	Resource estimation by Normandy, 1997					
	<i>dry, the frequency of</i>	3	3 2.17 Resource estimation by Normandy , 1997						
	the measurements, the nature, size and	4	2.16	Resource estimation by Normandy, 1997					
	representativeness of	5	2.15	Data was not awailable. The value simiar to Dam 1 was used					
	• The bulk density for bulk material must have been measured by methods that	These values were determined in 1989 by digging trenches and determining the Bulk Dry Density of the bulk samples which were approximately 60 – 100 tonnes each.Dry Bulk Density was determined in 1989. Laurie Smith and Associates in 1989 carried out a comprehensive analysis of the specific gravity of the Peko tailings including digging two trenches in Dam 2 and three trenches in Dam 3 and determining the bulk specific gravities of volumes ranging from 25-53m and with wet sample weights from 60-100 tonnes. The bulk							
	methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.		ty determination D21 - 1.48, BD these data the M nt Resource esti 2.15 dry tonnes 2.17 dry tonnes 2.17 dry tonnes 2.16 dry tonnes	ns of the 5 trenches varied from 1.48 to 2.58 tonnes/m ₃ (ie. BDD22 - D33 - 2.21, BDD32 - 1.79 and BDD31 - 2.58). Normandy used the following density values, that were also used in mation: m ³ /m ³ /m ³					
	• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	walls who	ere the tailings	t the location of the samples with the high values taken from near the were discharged and the two low values from the centre of the dams tion might be expected to accumulate.					

Classification (3.12)	• The basis for the classification of the Mineral Resources into varying confidence categories.	The Resources are preventing construct Data quality, quant of the Inferred Reso	ction of the	e detaile	d 3D moo	lel.		
	• Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	All factors were co because of lacking sample assays.						
	• Whether the result appropriately reflects	Dr. M. Abzalov (C tailings are as follor	WS:		consent			
	the Competent Person's view of the	Tonnage (Kt)		Grade Cu %	Co %			
	deposit.	3,163	Au g/t 1.1	0.22	0.10	GOLD (Koz) 112	COPPER (Kt) 6.9	COBALT (Kt) 3.0
Audits or reviews (3.13)	• The results of any audits or reviews of Mineral Resource estimates.	No audits of the Re	sources	vere und	ertaken			

Discussion of relative accuracy/ confidence (3.14)	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the	Quantitative assessment of the relative accuracy and confidence level in the tailings Resource estimate was not undertaken. Data distribution, with the distances between drill holes varying from 40 x 20m to 80-100m is suitable for accurate estimation of the Inferred Resources of Au, Cu and Co, which spatial continuity, according to variogram ranges is approximately 250 – 300m.
	accuracy and confidence of the estimate.	

The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	Resources were estimated as 2D block model. In other words, they accurately represent the lateral changes of the Au, Cu and Co grades by can not be used for Analysis of the vertical profiles of the metal in the tailings.
1	Not applicable. Production data not available for the Peko tailings