



RNI INCREASES GROSVENOR GOLD RESOURCE BASE TO 1.4 MILLION OUNCES

Peak Hill option gives RNI scope to increase resources to 1.9Moz

HIGHLIGHTS

- RNI has increased the JORC compliant gold resource inventory at its 100% owned Grosvenor Gold Project in Western Australia to 1.4Moz, an increase of more than 161,000oz
- Option to acquire neighbouring Peak Hill gold project gives RNI scope to increase its total gold inventory to more than 1.9Moz
- Revised Grosvenor resource includes upgraded indicated and inferred resource of 161,000oz at the Callies deposit, up from 44,800oz
- ~65% of Callies resource is hosted by oxide and transitional-type mineralisation which may be amenable to heap leach processing

Resource and Investment NL (ASX: **RNI**) (**RNI** or the Company) is pleased to announce an increased gold resource inventory at the Company's Grosvenor Gold Project in Western Australia's Bryah Basin.

The Company's JORC compliant gold resource base at Grosvenor now stands at 1.4Moz, based on 22.6Mt @ 1.9g/t (Table 2). This is an increase of more than 161,000oz on the Company's previous resource base of 1.24Moz, based on 18.92Mt @ 2.05g/t.

In addition, RNI has an option agreement with Montezuma Mining Company Limited (See RNI ASX announcements 27 September 2012 and 21 November 2012) to acquire the neighbouring Peak Hill gold project, which has JORC compliant gold resources of 561,000oz, based on 11.52Mt @ 1.5g/t (Table 3).

The combined Bryah Basin resource base at Grosvenor and Peak Hill stands at 1.97Moz¹, based on 34.1Mt @ 1.8g/t (Table 3).

The revised 1.4Moz Grosvenor gold resource base includes an upgraded indicated and inferred resource at the Callies deposit resulting from a recent extensional drilling program (see ASX announcement 5 August 2013).

The Callies resource now stands at 161,000oz, based on 3.8 million tonnes @ 1.30g/t, using a 0.5g/t Au cut-off grade (Table 1). The revised Callies resource at other cut-off grades is presented in Appendix 1.

This updates the previous indicated and inferred resource of 949,000 tonnes @ 1.47g/t for 44,800 ounces of contained gold at Callies.

The new resource at Callies has been estimated from surface to a depth of 190m. Significantly, the majority of the resource (65%) as declared is hosted by either laterite, oxide or transitional mineralisation. The new Callies resource is included in the Grosvenor heap leach study, announced to the ASX on 16 August 2013.

The Grosvenor resource upgrade also includes re-validation of a 2004 resource estimate for the Labouchere open pit. This has added an additional 45,400oz to the resource base, based on 812,000 tonnes @ 1.7g/t (Table 2).

¹ Approximately 14,000oz of the Peak Hill resource base is not directly attributable to RNI under the Montezuma option agreement

Product type	Indicated			Inferred			Totals		
	kT (1000's tonnes)	Grade (g/t)	Koz (1000's ounces)	kT (1000's tonnes)	Grade (g/t)	Koz (1000's ounces)	kT (1000's tonnes)	Grade (g/t)	Koz (1000's ounces)
Laterite	44	0.84	1.2	110	0.73	2.6	154	0.76	3.8
Oxide	1,275	1.60	65.4	99	1.97	6.2	1,374	1.62	71.7
Transition	554	1.36	24.2	443	1.26	17.9	997	1.32	42.2
Fresh	452	1.11	16.1	874	0.96	27.1	1,327	1.01	43.3
Total	2,325	1.43	105.8	1,526	1.10	53.8	3,853	1.30	161.2

Table 1: 2013 Callies gold resource at 0.5g/t cut-off grade

Summary of Project Resources, Resource Classification and metrics - September 2013										
Mineral Resource	Cut-off grade (g/t)	Tonnes (kt)	Grade (Au g/t)	Tonnes (kt)	Grade (Au g/t)	Tonnes (kt)	Grade (Au g/t)	Tonnes (kt)	Grade (Au g/t)	Au Ounces
		Measured		Indicated		Inferred		Total		
Yarlarweelor	0.5		--	5,498	1.6	1,511	1.6	7,009	1.6	360,500
Starlight	1		--	1,558	3	924	3.4	2,482	3.2	252,500
Starlight Hanging Wall	1	--	--	145	4.3	503	2.9	648	3.2	67,500
Twilight	1	--	--	1,138	2.7	316	2.6	1,454	2.7	124,700
Ricks	1	--	--	232	1.9	63	2.1	295	2.0	18,800
Midnight	1	--	--	229	2.3	124	2.7	353	2.4	27,400
Dougies	1	--	--	99	3.1	123	2.9	222	3.0	21,500
Eldorado	0.6	--	--	--	--	386	1.4	386	1.4	17,300
Toms & Sams	1	42	1.64	1,031	1.53	272	1.66	1,345	1.6	67,400
Horseshoe, Cassidy & Pod	0.5			1,578	2.09	792	2.3	2,370	2.2	164,600
Nathans	0.75	--	--			1,081	1.9	1,081	1.9	66,900
Callies	0.5			2,326	1.43	1,527	1.10	3,854	1.3	161,000
Labouchere	1			278	1.7	534	1.8	812	1.7	45,400
Regent	0.6	--	--	--	--	328	1.4	328	1.4	14,300
TOTAL		42		14,112		8,484		22,638	1.9	1,409,800

Table 2: Classified gold resources at the Grosvenor project at cut-off grades as stated

2013 Combined Global Mineral Resources Estimated for the Grosvenor Gold Project			
Classification	Tonnes	Au	Ounces
	(t)	(g/t)	(Oz)
MEASURED	42,000	1.6	2,200
INDICATED	14,112,000	1.9	869,800
INFERRED	8,484,000	1.9	537,800
TOTAL	22,638,000	1.9	1,409,800
2013 Combined Global Mineral Resources Estimated for the Peak Hill Project			
Classification	Tonnes	Au	Ounces
	(t)	(g/t)	(Oz)
INDICATED	9,270,000	1.5	436,000
INFERRED	2,255,000	1.7	125,000
TOTAL	11,525,000	1.5	561,000
GLOBAL	34,163,000	1.8	1,970,800

Table 3: Classified global resources for Grosvenor and Peak Hill

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Competent Persons Statement

The information in this ASX release that relates to overall **Exploration Results and Mineral Resources** is based on information compiled by **Mr Albert Thamm**, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Thamm is Technical Director of Resource and Investment NL and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting of Mineral Resources and Ore Reserves. The information in this ASX release that relates to the 2013 Callies Resource is based on information compiled by **Mr Mark Savage**, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Savage is a full time employee of Grosvenor Gold Pty Ltd, a 100% subsidiary of Resource and Investment NL and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting of Mineral Resources and Ore Reserves.

Messrs Savage and Thamm consent to the inclusion in the release dated 5 September 2013 on the matters based on information in the form and context in which it appears.

Resources have been rounded to 1000 tonnes and 100 ounces and computational discrepancies may arise in tabulation. One troy ounce gold is taken at 31.10747g.

Forward-Looking Statements

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Appendix 1: 2013 Callies gold resource at various cut-off grades

Mineral Resources at 0.3 g/t gold cut-off									
Product type		Indicated			Inferred			Totals	
	kT	Grade (g/t)	Koz	kT	Grade (g/t)	Koz	kT	Grade (g/t)	Koz
Laterite	120	0.56	2.1	150	0.65	3.1	270	0.61	5.3
Oxide	1,316	1.56	65.9	111	1.80	6.4	1,426	1.58	72.3
Transition	576	1.32	24.5	466	1.22	18.2	1,043	1.28	42.8
Fresh	465	1.09	16.4	947	0.92	28.1	1,413	0.98	44.5
Total	2,477	1.37	108.9	1,675	1.04	56.0	4,152	1.24	164.9
Mineral Resource at 0.5 g/t gold cut-off									
Product type		Indicated			Inferred			Totals	
	kT	Grade (g/t)	Koz	kT	Grade (g/t)	Koz	kT	Grade (g/t)	Koz
Laterite	44	0.84	0.1	110	0.73	2.6	154	0.76	3.8
Oxide	1,275	1.60	65.4	99	1.97	6.2	1,374	1.62	71.7
Transition	554	1.36	24.2	443	1.26	17.9	997	1.32	42.2
Fresh	452	1.11	16.1	874	0.96	27.1	1,327	1.01	43.3
Total	2,325	1.43	105.8	1,526	1.10	53.8	3,853	1.30	161.2
Mineral Resource at 0.8 g/t gold cut-off									
Product type		Indicated			Inferred			Total	
	kT	Grade (g/t)	Koz	kT	Grade (g/t)	Ounces	kT	Grade (g/t)	Koz
Laterite	19	1.16	0.7	27	1.00	0.9	46	1.07	1.5
Oxide	1,043	1.80	60.4	74	2.41	5.7	1,117	1.84	66.1
Transition	423	1.58	21.4	318	1.49	15.2	742	1.54	36.7
Fresh	295	1.35	12.8	458	1.24	18.3	753	1.28	31.0
Total	1,780		95.3	877	6	40.1	2,658	6	135.3

Appendix 2: Peak Hill classified resources

Mineral Resources at 0.8 g/t cut off				
Harmony, Enigma, Durack and Main Pit-Five Ways				
Classification	Material	Tonnes	Au	Ounces
		(t)	(g/t)	(Oz)
	Oxide	1,270,000	1.24	50,000
INDICATED	Transitional	2,940,000	1.35	128,000
	Fresh	4,960,000	1.58	252,000
TOTAL INDICATED		9,170,000	1.46	430,000
	Oxide	160,000	1	5,000
INFERRED	Transitional	80,000	1.12	3,000
	Fresh	1,510,000	1.57	76,000
TOTAL INFERRED		1,750,000	1.5	84,000
SUBTOTAL		10,920,000	1.47	514,000
Mineral Resources at 1.0 g/t cut-off				
Jubilee Deposit				
Classification	Material	Tonnes	Au	Ounces
		(t)	(g/t)	(Oz)
INDICATED		100,000	1.95	6,300
INFERRED		505,000	2.49	40,500
SUBTOTAL		605,000	2.41	46,800
Combined Global Mineral Resources Estimated for the Peak Hill Project				
Classification	Material	Tonnes	Au	Ounces
		(t)	(g/t)	(Oz)
INDICATED		9,270,000	1.46	436,000
INFERRED		2,255,000	1.72	125,000
TOTAL		11,525,000	1.51	561,000

Appendix 3: 2013 Callies Resource Estimate JORC Table 1 Compliance

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been 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 (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Historic reverse circulation drilling used to obtain 1m samples. 3kg pulverised and split to produce a 30g charge for fire assay. Historic diamond drilling sampled according to mineralisation and lithology resulting in 10cm to 1.5. Half core pulverised and split to produce a 30g charge for fire assay New reverse circulation drilling used to obtain 1m samples. 1-3m reverse circulation drilling, 1kg subsamples, 40g charges for fire assay and other assay methods. TerraSpec™ alteration (mineral) mapping taken on each and every 1m interval. Innovex™ and Niton™ multi-element handheld XRF every meter. Representivity demonstrated by repeat sample and reference sample assay. Repeat, random re-assay and reference standard re-assay
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.). 	<ul style="list-style-type: none"> All reverse circulation at nominal 5.5" diameter, utilising face sampling hammers to reduce the risk of sample contamination. Diamond drilling utilised 10-40m RC pre-collars to penetrate transported cover then continued as NQ core. Core was oriented by down-hole spear.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	<ul style="list-style-type: none"> Reverse circulation recorded recovery and moisture for 1m samples. The majority of samples were of good quality with ground water having minimal effect on sample quality or recovery. Statistical analysis of sample quality for samples over an Au bottom cut of 0.1ppm indicates no sample bias. Diamond drilling recorded rock hardness, recovery and RQD. Core recovery was good.
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Reverse circulation chips were washed and stored in chip trays in 1m intervals. Chips were visually inspected, recording lithology, weathering, alteration, mineralisation, veining and structure. In the case of new drilling by Resource and Investment, one meter samples routinely electronically logged with multi-element XRF for alteration mineralogy using Terraspec (TM) short wave infrared spectral analysis to complement the visual inspection. Diamond core was visually inspected, recording data related to lithology, weathering, alteration, mineralisation, veining and structure. Photographs of each core tray were taken wet.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> All mineralised intersections from both diamond core and reverse circulation were logged.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Diamond core samples to be analysed were taken as half core. Sample mark-up was controlled by geological domaining represented by mineralisation and lithology. Reverse circulation samples were split from dry, 1m bulk sample via a 3-tier riffle splitter. Field duplicates were inserted at a ratio of 1:20, analysis of primary vs. duplicate samples indicate sampling is representative of the in-situ material. Detailed discussion of sampling techniques and Quality Control are documented in the Callies Deposit Mineral Resource Estimation August 2013 technical report.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Historic assaying of RC and core was done by 30g charge fire assay with Atomic Absorption Spectrometry finish at Analabs. The method is standard for gold analysis and is considered appropriate in this case. No Laboratory Certificates are available for the assay results pre 2008 however, evaluation of the database identified the following: Certified Reference Material (CRM) are inserted at a ratio of 1:20, Assay repeats inserted at a ratio of 1 in 20. QAQC analysis of this historic data indicates the levels of accuracy and precision are acceptable. Assaying of recent sampling was done by 40g charge fire assay with Inductively Coupled Plasma – Optical Emission Spectroscopy finish at Bureau VERITAS (Ultratrace), Perth. The method is standard for gold analysis and is considered appropriate in this case. Laboratory Certificates are available for the assay results and the following QAQC protocols used: Laboratory Checks inserted 1 in 20 samples, CRM inserted 1 in 30 samples, Assay Repeats randomly selected 1 in 15 samples. QAQC analysis of this data indicates the levels of accuracy and precision are acceptable. Detailed discussion of analytical QAQC is documented in the Callies Deposit Mineral Resource Estimation August 2013 technical report.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> No twinned holes. Verification and grade analysis by external consultants (Coffey Mining). In-field independent verification by consultant geologists from OmniGeox. All sampling, geological logging, borehole location, laboratory analysis results and QAQC data is retained in a relational database.

Criteria	JORC Code explanation	Commentary
		<p>Resource and Investment use Datashed™ as the relational database which has thorough built-in triggers for validation of imported data. An experienced Database Administrator oversees quality control of data.</p> <ul style="list-style-type: none"> • Borehole, Geological and Sampling data is captured in specifically designed spreadsheets with built in validation for data entry fields, using established procedures. • No adjustment to assay data is made.
<i>Location of data points</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The grid system used for historic Callies drilling is the established Fortnum Mine Grid. Control station locations and traverses have been verified. Collar locations of boreholes have been established by either total station or differential GPS (DGPS). The Callies open pit (currently abandoned) was picked up by DGPS at the conclusion of mining. The transformation between Mine Grid and MGA94 Zone 50 is documented and well established. • A recent LIDAR survey was undertaken and results are in agreement with survey pickups of pits and waste dumps. • Recent drilling picked up by hand held GPS on MGA94 Zone 50. • Down hole surveys taken by single shot camera every 50m.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • Borehole spacing is a nominal 40m x 40m that has been in-filled to a nominal 20m x 20m in the main zone of mineralisation at Callies. • The spacing is considered sufficient to establish geological and grade continuity for appropriate Mineral Resource classification. • During the historic exploration phase, samples were composited to 4m by spearing 1m bulk samples. Where the assays returned results greater than 0.15ppm Au, the original 1m bulk samples were split using a 3-tier riffle splitter and analysed.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • 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. 	<ul style="list-style-type: none"> • Drilling planned at right angles to known strike and at best practical angle to intersect target at right angles
<i>Sample security</i>	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • Sample bags tagged and logged, sealed in bulka bags, dispatch by third party contractor, in-company reconciliation with laboratory assay returns.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • Database compilation into Data-shed for data integrity. • Program review by external consultants • Review by second CP.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Callies: M52/132. Pre-1994 Mining Lease. Lease held 100% by Grosvenor Gold Pty Ltd
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Drilled by RAB, RC and diamond coring, assayed gold only, various parties not limited to Eagle Gold, Gleneagle, Perilya, Homestake Australia and Dominion Mining.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Paleoproterozoic age oxide gold and base metal mineralisation. Structurally controlled and structurally remobilised. Primary intermediate sulphur epithermal mineralisation related to bimodal felsic and mafic volcanism. Possible IRD at depth. Oxide gold mineralisation in deeply weathered regolith.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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. 	<ul style="list-style-type: none"> This information is included as part of Appendix B in the Callies Deposit Mineral Resource Estimation August 2013 technical report.
Data aggregation methods	<ul style="list-style-type: none"> 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Where triplicate assays for gold reported, average of these. All other assays are single assays.

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i> • <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i> 	<ul style="list-style-type: none"> • All reported intersection lengths are down hole. Long section widths are true widths.
<i>Diagrams</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • Plans and sections included in the Callies Deposit Mineral Resource Estimation August 2013 technical report.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • All gold grades > 2g/t reported.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • All gold grades > 2g/t reported. • All precious metals > 4g/t reported. • All base metals > 1000ppm (combined > 0.1% reported). • Routine mineral mapping using Terraspec™ SWIR technology
<i>Further work</i>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Diamond drilling below water table to establish enhanced geological knowledge of primary mineralization.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	<ul style="list-style-type: none"> As outlined in Section 1: <i>Verification of sampling and assaying</i> above, all sampling, geological logging, borehole location, laboratory analysis results and QAQC data is retained in a relational database. Resource and Investment use Datashed as the relational database which has thorough built-in triggers for validation of imported data. An experienced Database Administrator oversees quality control of data. Borehole, Geological and Sampling data is captured in specifically designed spreadsheets with built in validation for data entry fields, using established procedures. Validation includes but is not limited to; No overlapping intervals. Downhole surveys at 0m depth and also at the end of hole. Consistency of depths between different data tables. Check gaps in the data. Sample number matching between field sample records and laboratory results.
<i>Site visits</i>	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> A week long site visit by the Competent Person was undertaken in early August which included; A review of historic mining at the Callies deposit by examining the pit, pit mapping, grade control plans and a review of hard copy production data. Inspection of drill core and RC chips housed at the Fortnum Mine core-yard and a review of the current drilling program completed. A bulk density determination program was designed and implemented for use in the Mineral Resource Estimation.
<i>Geological interpretation</i>	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	<ul style="list-style-type: none"> Confidence in the interpretation is high for the following reasons; Geometry, geology, alteration and tenor of the mineralised zone is consistent, agreeing in adjacent holes both along strike and down dip and agrees well with historic pit geological flitch plans and the orientation of exposed quartz veining in the pit. Note that the anastomosing veins themselves do not carry the bulk of mineralisation but the surrounding alteration selvages. The main zone of mineralisation is controlled by a well-established hanging wall structure. A major east west trending fault offsets the mineralised in a dextral sense by 40m. This fault separates the deposit into Callies North and South.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Numerous small scale E-W trending faults have been identified within the pit, they do not have a significant impact on the continuity of geology or grade.
<i>Dimensions</i>	<ul style="list-style-type: none"> <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i> 	<ul style="list-style-type: none"> The main mineralised zone of anastomosing veins and associated vein selvage's strike 1000m with excellent continuity, from 10m below surface to 175m below surface. Widths vary between 4m and 15m. Footwall mineralised zones are less coherent, usually with strike extents of 40-60m with similar down dip extents, and are interpreted as localised brecciated zones in the footwall.
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <i>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 computer assisted estimation method was chosen include a description of computer software and parameters used.</i> <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> <i>The assumptions made regarding recovery of by-products.</i> <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> <i>Any assumptions behind modelling of selective mining units.</i> <i>Any assumptions about correlation between variables.</i> <i>Description of how the geological interpretation was used to control the resource estimates.</i> <i>Discussion of basis for using or not using grade cutting or capping.</i> <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i> 	<ul style="list-style-type: none"> Ordinary kriging (OK) has been used and is considered appropriate for the style of deposit. A thorough description of the methods is described in the Callies Deposit Mineral Resource Estimation August 2013 technical report and is summarised below; Domaining of different mineralised zones was accomplished by use of wireframe solids derived from sectional interpretations of the drill data and take into consideration geological factors such as lithology, alteration and structure. To 'close off' wireframes, the sectional interpretation from the last section was projected half the drill spacing, 10m for 20m lines, 20m for 40m lines. In the case of down dip extrapolation from the last hole on a given line, this was 10m, excepting where adjacent lines showed mineralisation at greater depth, the extrapolation was extended to equivalent depths. These wire frames were used to both constrain block model cell grade estimates and to partition grade populations for statistics and estimation of individual domains. Vulcan software by Maptek was used for wireframe construction, variography to derive the OK parameters and the construction and reporting of the block model. Variography was interpreted using a spherical 2-sill model. Top cuts were utilised on the model to remove extreme outliers that may have locally skewed estimates. Checks on the spatial relationships of high grades were made before implementing top cuts. Model cell sizes were set at y10m, x2.5m and z5m and are appropriate for the sample density and style of mining. Sub celling to ¼ cell size in all dimensions was used to improve volumetrics. As part of block model validation, previous estimates were reported and volumetrics, grades and tonnages compared. At this point the only element of economic interest modelled is gold. Further drilling is required to estimate multi element population in the primary zone.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> The block model, once interpolation was complete was dumped as a point file for spatial comparison against raw composite data to determine validity, as well as visually assessing the model using Vulcan.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnages are estimated as dry metric.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> For the purpose of resource estimation, mineralised lodes were interpreted separately for main, hanging wall and foot wall lodes and were modeled on a lower cutoff grade of 0.3g/t Au and by consideration of a down-hole minimum intersection of 2m with a cut-off of 0.5g/t. In areas where structure, lithology and alteration indicated the lode was not simply defined by gold grades and a pure grade model would compromise the geometric robustness of the lode structures, lower cut-off grades were applied. Internal dilution of max 2m down hole below cut off. The 0.3g/t lower cut-off was adopted to reflect the possibility of utilizing dump-leaching as the extraction process.
Mining factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<ul style="list-style-type: none"> Mining methods were considered in the selection of model cell sizes as described above and the consideration of maximum 2m internal dilution in the interpretation.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Horizons were modelled based on oxidation state of the host rocks, taken from the drilling information. These were: Transported and lateritic residuum, oxidised, transitional and fresh.
Environmental factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible waste and process 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. 	<ul style="list-style-type: none"> Assumptions, prior to an optimisation review, are that the oxide zone is to be conventionally mined for dump leach and as such, acid drainage through sulphide oxidation of primary material will not be a factor. Previous oxide rock NPI analysis identified no deleterious elements.

Criteria	JORC Code explanation	Commentary
	<p>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.</p>	
Bulk density	<ul style="list-style-type: none"> Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	<ul style="list-style-type: none"> Bulk density has been measured from drill core and specimens collected from the Callies pit, and represent the different oxidation states of the ore zones as well as host rocks as was determined by the water immersion method. Gas Pycnometer determinations were made on assay pulps for transition and fresh rocks.
Classification	<ul style="list-style-type: none"> The basis for the classification of the Mineral Resources into varying confidence categories. 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). Whether the result appropriately reflects the Competent Person's view of the deposit. 	<ul style="list-style-type: none"> Classification was based on numerous factors including; Distance to nearest sample, Number of samples, Number of drillholes, Geological continuity, Grade continuity. The resultant Mineral Resource Estimation reflects the Competent Person's view of the deposit.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> Internal review by another Competent Person.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> 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 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. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	<ul style="list-style-type: none"> The relative accuracy of the model is expected to be +/- 10% on tonnes, reflecting the proportion of Inferred material in the footwall primary mineralised zones. Overall the grade ranges of the block model compare very well with the composite data used in the interpolation, with very little difference in local or global populations when compared spatially. The error associated with grade is in the order of +/-5%. Previous poor reconciliations documented by Perilya for Callies relate to the method of modelling (sectional, polygonal) and grade control (ditch witch) and cannot easily be compared to the current block model to determine accuracy.

Subsequent sections of JORC 2012 Table 1 do not apply to the 2013 Callies Mineral Resource at this stage.