HILL END GOLD LIMITED

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30 November 2015

ASX Code: HEG

RED HILL DEVELOPMENT OUTLOOK SUPPORTED BY NEW RESOURCE ESTIMATE

The Red Hill deposit is located three kilometres north of Hill End on EL5868. Preliminary studies have indicated that Red Hill development may be viable as a stand-alone project or could add significant value to any development of the Hargraves Gold Project.

Either development scenario for Red Hill includes approximately 30% Indicated Resource and may add approximately $20m net profit to the Company's estimated $40m net profit for the Hargraves Gold Project after total cost recovery and royalty payments at A$1,600/oz. More detailed studies are to be conducted for both projects before any development decision.

Comprehensive re-logging and re-interpretation of selected drill core and detailed re-interpretation of the controls of the higher grade gold mineralisation for the Red Hill deposit have confirmed the kilometre-scale continuity of the mineralised vein sets and stockworks along the intersection of the host horizons with feeder structures. This is a similar plumbing system for the gold mineralisation found elsewhere along the Hill End Anticline at Hargraves and in the Hawkins Hill – Reward deposit at Hill End.

A new resource estimate that is consistent with JORC 2012 has been completed for the Red Hill deposit which incorporates all the drilling above 700m RL (approximately 150m below surface). The resource is summarised in the table below. More detail on the data and method of resource estimation is provided in Table 1.

Category (0.5 g/t Cut Off)	Oxidation	Tonnes	Gold Grade (g/t)	Contained Gold (oz)
Indicated	*Oxide*	*228,000*	*1.3*	*9,300*
	Transition	*77,000*	*1.3*	*3,300*
	Fresh	*107,000*	*1.8*	*6,000*
Total Indicated		413,000	1.4	18,600
Inferred	*Oxide*	*180,000*	*1.6*	*9,200*
	Transition	*212,000*	*1.7*	*11,400*
	Fresh	*671,000*	*1.9*	*40,700*
Total Inferred		1,063,000	1.8	61,400
Total Indicated & Inferred		1,475,000	1.7	80,000

Rounding errors may be present

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Successive past drilling campaigns continued to discover new *en echelon* vein sets at depth and wide mineralised quartz 'bedded' stockwork zones have been intersected in the White's, Red Hill and Marshall McMahon areas. There is potential to extend the resource in several locations immediately adjacent to the resource (Figure 1) at depth and along strike. Additional shallow resource extensions are expected in the Red Hill area, such as at the Western Line of mineralisation and towards the south under the Tambaroora Creek alluvial workings.

The 2008 resource estimate included high grade and wide diamond drill intersections drilled below 700m RL (approximately 160m below surface), which have not been included in the current resource. However, drilling to 400m below surface has indicated that the mineralised zones continue to repeat at depth and down plunge and additional drilling may extend the resource at depth.

Preliminary studies suggest that Red Hill Gold Project development may be viable as a stand-alone project or could add significant value to the any future development of the Hargraves Gold Project. Project design includes an open pit, gravity processing plant and infrastructure located at Red Hill, or for the Red Hill ore to be trucked to a planned processing plant near Hargraves approximately 30km to the north.

Previous metallurgical test work on oxide, transition and primary material from Red Hill has confirmed that a high recovery of gold is achievable with simple gravity processing at a coarse grind and without the use of cyanide. This is similar processing performance to the Hill End and Hargraves deposits, which only require gravity processing to achieve ~90% recovery of gold. Consequently the processing plant, power requirements and infrastructure are a very low capital cost and of low environmental impact.

The Company's existing gravity processing plant located at Hill End can be modified and relocated for the Red Hill Gold Project, which has sufficient water supply and there are existing facilities and infrastructure available in the nearby town of Hill End for significant savings in development and operating costs.

The Company has a 100% beneficial interest in its Hill End tenements, while a portion of the ground now encompassed by EL 5868 is subject to a reduction to 85% if an 'economic feasibility study' is completed by the Company, and First Tiffany Resource Corporation, if it establishes that it continues to hold a right against the Company to do so, contributes at the 15% level.

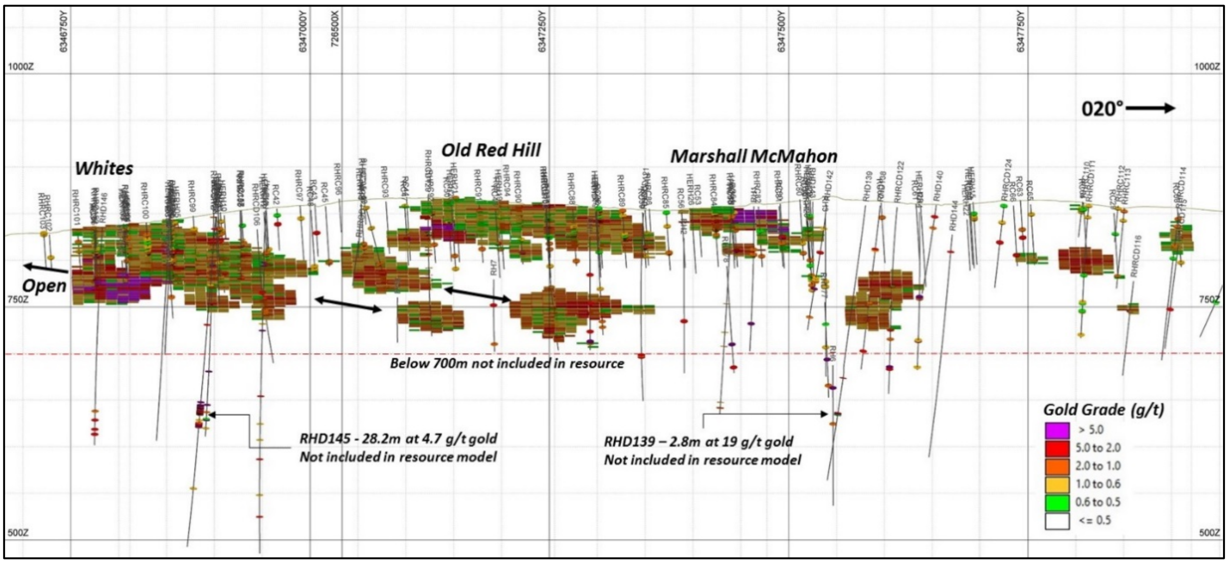


Figure 1. Long section through Red Hill resource model showing block grades greater than 0.5 g/t gold. Drill hole intersections shown below resource blocks are down hole widths and not necessarily true widths.

Competent Persons' Statement

The information in this report that relates to Red Hill and Hargraves Mineral Resources and for Exploration results is based on information reviewed by Stuart Munroe and Philip Bruce. Dr Munroe is a Member of the Australasian Institute of Mining and Metallurgy and Mr Bruce is a Fellow of the Australasian Institute of Mining and Metallurgy and both are full-time employees of HEG. Dr Munroe and Mr Bruce have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (The JORC Code). Dr Munroe and Mr Bruce consent to the inclusion of the matters based on their information in the form and context in which it appears.

Appendix 1

Red Hill – EL 5868 (HEG 85% minimum)

Mineral Resource Estimate: Supporting Information

Hill End Gold (HEG) provides the following information, including Table 1 as required under the JORC Code (2012), in support of the 30 November 2015 Red Hill resource estimate.

Geology and Mineralisation

The Red Hill system lies within a mineralised corridor on the east limb of the Hill End Anticline. It is hosted by thin to thick bedded turbidites, massive quartzose feldspathic volcaniclastic sandstones, siltstone and shale of the Early Devonian (416-407 Ma) Crudine Group, metamorphosed to greenschist facies. The mineralised corridor generally parallels the axis of the Hill End Anticline, which strikes 020° and plunges gently to the north with a relatively broad, regular axial crest.

A series of bedding-parallel NNW-striking, moderately east dipping gold mineralised shoots on the east limb of the Hill End Anticline are a single linked system of bedding-parallel quartz veins that carry shoots of high-grade Au mineralisation where they intersect a zone of low displacement faults that strike NNE and dip steeply east. The most significant high-grade Au-mineralised quartz veins within the mineralised corridor appear to be bedding-parallel, and are often in the immediate footwall or hangingwall of especially thick, coarse-grained mechanically strong turbidite units. Bedding dips relatively steeply (65°-90° east) within the mineralised zone at Red Hill, which is steeper than is expected for the local fold geometry (dip 45°-60° east. This suggests an additional structural influence whereby bedding has locally been rotated to be near-parallel to the cleavage as a result of the action of the low-displacement faults.

The low displacement faults are poorly identified in outcrop and drill core, but appears to cause, or are localised by, a flexure or kink along a steeper-dipping portion of the eastern limb of the Hill End Anticline. This steepening of the east limb is most strongly developed in the Red Hill zone of the system, decreasing north through the Valentine into the Emily zone and south through White's zone. Vein sets within the Red Hill zone will intersect Indicator-type faults at a lower angle and have larger areas of intersection and reaction, resulting in greater tonnage of high-grade Au mineralisation.

At the local scale, individual bedding-parallel veins strike north (000°) and step north - east. Major veins are commonly 0.1-0.4m thick and 30-100m in strike. At a larger scale, mineralised shoots are organised as en-echelon segments of vein sets about 500m in strike that trend 010° and step north - east. Segmentation occurs at the intersection of the mineralised corridor with prominent NW-striking, bedding parallel veins known as cross-courses, located in the footwall of mechanically strong stratigraphic units. The cumulative north - east steps among veins, vein sets and corridor segments results in an overall trend of around 020°, sub-paralleling the axis of the Hill End Anticline at a distance of about 300m to the east.

The Red Hill system has a high potential for untested high-grade Au targets, particularly at depth and along strike to the south with multiple vein sets present within the mineralised corridor that only partially tested.

Drilling

The following is a summary of the drill holes used in the resource estimation.

Year	Company	Drill Type	Holes Drilled	RC (m)	DD (m)	Total Drilled (m)
1984	Flanagan McAdam Resources Incorporated	DD	8		1,674.07	1,674.07
1989	BHP-Utah Minerals International	RC	28	2,248		2,248
2004	Hill End Gold Limited	RC	42	3,136		3,136
2006	Hill End Gold Limited	RC/DD	31	1,835	1,061.7	2,896.7
2007	Hill End Gold Limited	RC/DD	18	1,551	581.3	2,132.3
2008	Hill End Gold Limited	RC/DD	19	394	4,179.8	4,573.8
2011	Hill End Gold Limited	RC	9	591		591
Total Included in Current Resource			**155**	**9,755**	**7,496.87**	**17,251.87**

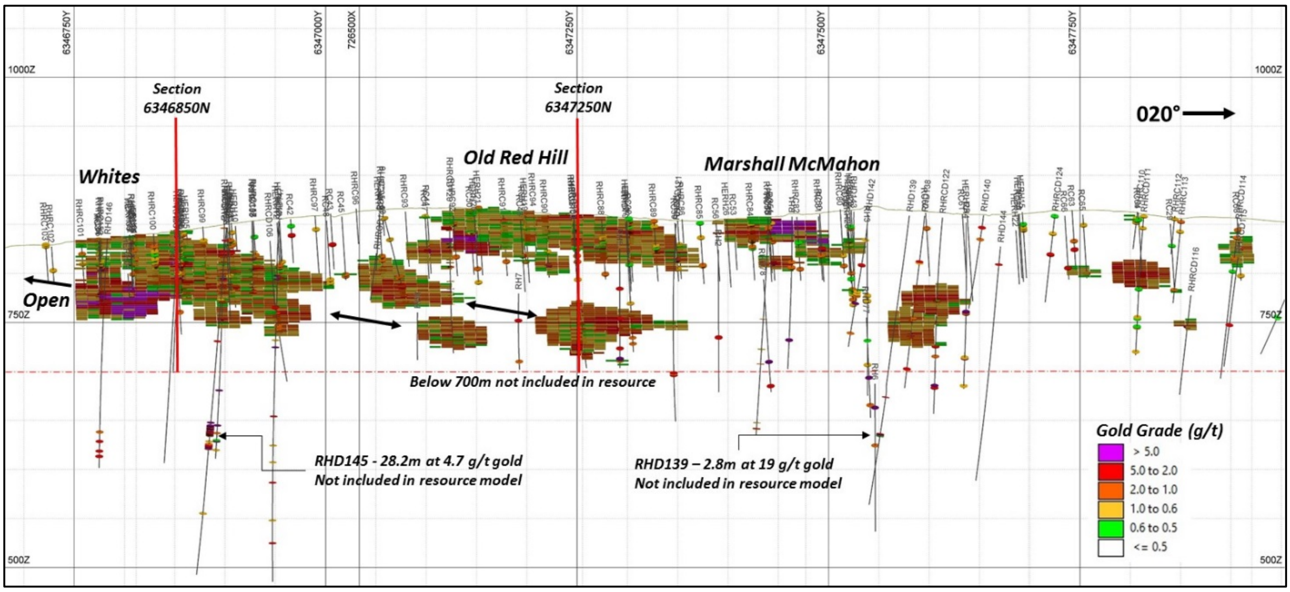
RC – Reverse Circulation drilling
DD – Diamond core Drilling

Details of the drill hole types, sizes, collar surveys and down hole surveys are as follows:

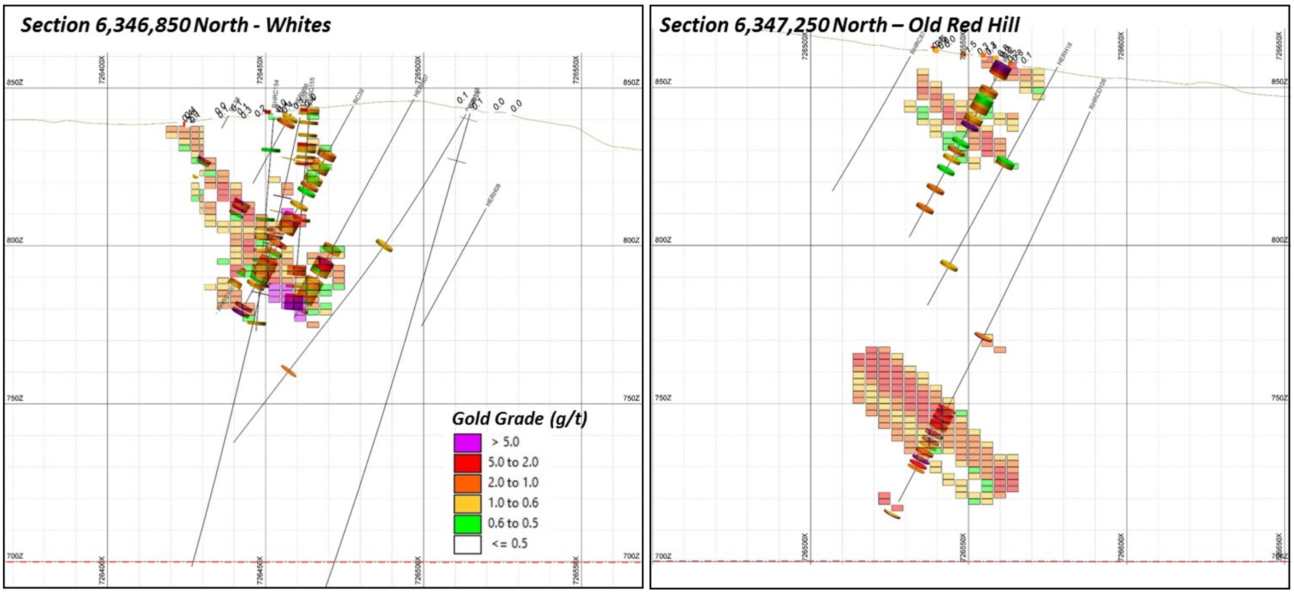
Year	Company	Drill Type	Collar Survey	Down Hole Survey
1984	Flanagan McAdam Resources Incorporated	DD (HQ)	Measured from established 50 x 50m grid and converted to MGA zone 55	Eastman compass at 50m intervals
1989	BHP-Utah Minerals International	RC (mm)	Measured from established 50 x 50m grid and converted to MGA zone 55. 4 Collars checked for location by Hill End Gold Limited	No down hole survey
2004	Hill End Gold Limited	RC (133mm)	Total station survey	Gyroscopic down hole survey for one hole only. No DH surveys on other holes.
2006	Hill End Gold Limited	RC (mm), DD tails (HQ3)	Differential GPS survey	Down hole surveys on DD holes completed using Reflex Digital camera at approximately 20-40m intervals. Gyro survey also used for RHD104.
2007	Hill End Gold Limited	RC (mm), DD tails (HQ3)	Differential GPS survey	Down hole surveys on DD holes completed using Reflex Digital camera at approximately 20-40m intervals.
2008	Hill End Gold Limited	RC (mm), DD tails (HQ3)	Differential GPS survey	Down hole surveys on DD holes completed using Reflex Digital camera at approximately 20-40m intervals.
2011	Hill End Gold Limited	RC (89mm and 133m)	Differential GPS survey	No down hole survey

HQ diamond drill core is 63.5 mm diameter
HQ3 (triple tube) diamond core is 61.1 mm diameter

Representative sections through the Red Hill resource



Longitudinal section looking WNW (290°) at the resource model blocks above 0.5 g/t gold. Possible extensions to mineralisation near the resource are indicated. Below 700 m are previously reported intersections that to not form part of the resource.



Cross sections looking north of the resource block model at Whites and Old Red Hill. Location of sections is shown on the longitudinal section.

JORC Code (2012) - Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling*	• Drill hole samples have been taken from RC drill cuttings and diamond drill core. 3,106 gold assay results have been used for the resource estimate. This does not include duplicate and replicate sample analyses, standards or blanks. RC drill cuttings are collected over 1m intervals at the time of drilling into labelled plastic bags. Where samples are larger than a nominal 3 kg to be sent for assay, a riffle splitter is used to obtain a representative sub-sample. Drill core is cut longitudinally with a diamond saw such that the two halves sub-sample the same geological units of interest for sampling. One half of the core is sent for assay and the other is retained for future reference.
	• *Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• HEGL RC samples are weighed prior to splitting and the sample weight compared with the theoretical sample weight over the 1m sample interval. Unusually low or high weight samples are generally excluded as not being representative. Riffle splitting of RC cuttings is done be feeding the cuttings from the bag on to a tray and then across the full width of the riffle splitter. Recovered drill core lengths are compared to the drilled interval and core recovery is calculated. Where core loss is significant as sometimes occurs in the weathered zone, intervals are not sampled as they may not be representative.
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Gold is contained in quartz veins reactivated and re-mineralised by repeated hydraulic fracturing events accompanying deformation and metamorphism. Samples of quartz commonly contain gold but not all quartz contains gold. Numerous samples of altered and sulphide mineralised host rock have been collected and analysed for gold by various methods. None of these samples contain greater than 0.1 g/t gold. Consequently, following geological logging, only RC and DD core samples containing quartz veining are collected and sent for gold assay. RC samples collected over 1m intervals and logged as containing quartz were collected at the drill rig in plastic bags. ¼ sub-samples were riffle split at the

		drill site and placed in a separate plastic bag in preparation for transport to laboratory. DD core samples that are logged as containing quartz veins were sub-sampled over geologically determined intervals. The core interval to be sampled was cut longitudinally with a diamond saw and one half of the core was placed in a calico bag in preparation for transport to the laboratory.
Drilling techniques	• *Drill type*	• Drilling is a combination of 7,496.87m diamond core (HQ and HQ3) and 9,755m RC drilling. Additional details of the drilling can be found in the information preceding Table 1.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Diamond core drilling: Core was placed into core trays at the drill site by the drillers and down hole depth markers were placed at the end of each core run by the drillers to record the depth. Depth down hole is measured by the driller directly from the drill string. The core that is returned is laid out, reconstructed and length measured to measure the core recovery as a percentage of the length drilled. Core recovery less than 90% is rare in fresh rock. Flanagan McAdam average recovery for duplicate core samples was 95%. Hill End Gold core recovery average is 97.6%. In the zone from surface to 20m vertical depth the average recovery is 70% where there are no quartz veins, but generally higher where there are quartz veins. RC drilling: Cuttings returned for each 1m interval drilled are collected in a plastic bag and weighed. The sample weight is compared to the expected weight to obtain a measure of recovery. Hill End Gold sample weights were as expected for the RC drill programs. No sample weight data is available to assess recovery of RC drilling completed by BHP-Utah in 1989.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	Supervision of the drilling by HEGL personnel for RC and DD drilling was maintained and sample recovery was monitored during the drilling. There is no specific information on supervision of the drilling prior to 2004.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may*	• There is no relationship observed between sample recovery and grade in any of the drilling.

	have occurred due to preferential loss/gain of fine/coarse material.	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies 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.*	• Flanagan McAdam Resources (1984) – all of the drill core (1,674.07 m) was logged for lithology, structure, weathering and alteration with particular emphasis on the quartz vein intersections. The logging is qualitative with a detailed graphic log. There is no geotechnical data logged that would support a detailed mining study. Core recovery was noted which gives some indication as to where rare weak zones were encountered. BHP-Utah (1989) – all samples of all of the 1m interval RC chips (2,248m) were logged for grain size, lithology, quartz vein percentage, presence of sulphide minerals, colour and weathering using binoculars to magnify the view. The logging was qualitative with quantitative percentage of quartz vein and notes on each 1m sample interval. HEGL RC samples (2004 – 2011) – all samples of all the 1m interval RC chips (7,507m) were logged for lithology, weathering, alteration, mineral assemblage and percentage of quartz vein. The logging is qualitative with percentage quartz vein. HEGL DD samples (2006-2008) – all of the drill core (5,822.87m) was logged for lithology, structure, weathering, alteration, quartz and mineral assemblage with detailed graphic logs. Geotechnical data was limited to fracture count / RQD and core recovery. The geotechnical logging would not support a detailed mining study but is sufficient to give some indication as to the likely ground conditions.
Sub-sampling techniques and sample preparation	• *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.*	• Flanagan McAdam Resources (1984) – HQ DD core was cut longitudinally with a diamond saw and one half of the core was sent for assay and the other half remain in the core tray for future reference. HEGL DD samples (2006-2008) – Sampled DD core was cut longitudinally such that the quartz veins that were being sampled are equally represented in both halves of the core. One half of the core was placed in a numbered calico bag and sent for assay and the other half placed back in the core tray for future reference. BHP-Utah RC samples (1989) – There is no record of the method of sample collection and sub-sampling for these holes. Initially, 2m composite sub-samples were submitted for analysis. 1m sub-samples were

	later submitted for higher grade 2m composite results. HEGL RC samples (2004 – 2011) –sub-sampling of these samples was done by feeding the sample evenly across a riffle splitter via a feeding tray such that a 75:25 ratio sub-sample is generated. Where the sample is damp it is air dried on a plastic liner before being sub-sampled. ¼ of the original sample is placed in a numbered calico bag which is sent for assay. ¼ of the original sample is retained in storage in a separate calico bag with the same sample number for future reference. The other ½ sample is placed in the original plastic sample collection bag at the drill site.
• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• DD samples: The sample preparation techniques are appropriate for this type of sample. The quality of the sample is good. Whole core samples would reduce the statistical nugget, but have not been taken at this stage of the exploration in favour of having reference core for geological reference, future sampling or metallurgical test work. RC samples: No information is available to check the appropriateness of the BHP-Utah RC samples, although it is expected that sampling procedures would have followed company and industry standard practice of the time which would be appropriate for this type of sample. HEGL RC sample quality and preparation techniques are appropriate for this type of sample.
• *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.*	• Flanagan McAdam Resources (1984) HQ DD program: Sampling procedures as described above maximize representivity. No duplicate or second half of core sampling has been done. 415 core samples were sent for 50g fire assay. 38 repeat assays were conducted on second split 50g sub-samples that originally returned > 0.5 g/t Au. For the 38 replicate, an average 0.64 ppm Au was reported against the original assays average of 0.90 ppm Au with a weak correlation between pairs (R^2 = 0.5). The results indicate a high nugget for replicate 50g sub-samples. This may be a function of the sample preparation (no details provided) and/or the inherent nugget of the sample. HEGL (2006-2008) DD program: Sampling procedures as described above maximize representivity. No duplicate or second half of core sampling has been done. BHP-Utah (1989) RC program: 31 duplicate sub-

		samples were submitted to the lab with separate sample IDs to check sampling precision. The samples were given separate sample numbers so that the lab could not cross check results. The assay lab results are published, however the true intervals that were sampled are not recorded so no analysis of the results is possible. A reported note from the lab that the "results indicate coarse gold", based on repeat analysis indicates similar level of precision as the earlier core samples. HEGL (2004 – 2011) RC program: Sampling procedures as described above maximize representivity. All (405) intervals selected for assay were weighed prior to riffle splitting to generate sub-samples for assay. . The total sample weights ranged from 5.3kg to 29.4kg with a mean weight of 18.1kg. In the case where the weight of the sample was below 10 kg, ½ the sample was sent for analysis. Damp samples were air dried prior to riffle splitting but wet intervals were not sampled. 11 samples from the 2011 RC drill program had a second split replicate 50g fire assay. The results compared very well with a statistical R^2 of 99%
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes have been appropriate for the style of mineralisation. The mineralisation contains some coarse gold which will introduce a statistical nugget as is the case for other similar styles of gold deposit.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Gold assay techniques used are fire assay (FA) of 50g sub-samples, screen fire assay (SFA) of 1 kg sub-samples and LeachWell® bottle roll of 2 kg sub-samples. These techniques are appropriate for the style of mineralisation at Red Hill and provide a total measure of gold in the sample for the style of mineralisation at Red Hill. The HEGL samples sent for FA are pulverized in their entirely to p80 passing 75 um. A 50g split is assayed with AAS finish. The SFA technique as used to allow a better measure of the grade of the samples with coarse gold present. The sample is pulverised then wet sieved at 75µm. The +75µm (oversize) is weighed and fire assayed and the -75µm (undersize) is weighed, sub-samples and duplicate fire assayed. The individual assays are weight averaged to calculate to total gold in the sample. The LeachWell® bottle roll technique is used to provide a more precise measure of the total leachable gold in a larger 2 kg sample which is done to get a better measure of total gold where coarse gold may be present. The sample is entirely pulverized to p80 passing 75 µm and cyanide bottle

	rolled with Leachwell catalyst for 24 hours. • Flanagan McAdam Resources (1984) HQ DD program: 415 half-core samples analysed by 50g FA. There are no specific details of the laboratory procedures used for the assay. BHP-Utah (1989) RC program: .RC chip sub-samples analysed by 50g FA at ALS Laboratories in Orange, NSW. There are no specific details of the laboratory procedures used for the assay. HEGL DD program: For the 2006 diamond drill core, all diamond core samples were analysed for gold by the SFA using a 1kg sub-sample to help account for coarse gold. Samples were analysed at ALS Laboratories in Orange, NSW. 2007 and 2008 DD samples were analysed for gold by 2 kg LeachWell® bottle roll at SGS Laboratories in Townsville, QLD. 5 holes had additional intervals sampled and analysed by 50g FA at SGS Laboratories in Townsville. HEGL: 2004 RC holes –riffle split 3 kg sample analysed for gold by 50g FA at ALS Laboratories in Orange, NSW HEGL: 2006 RC samples were analysed for gold by SFA at ALS Laboratories in Orange, NSW. 2007 RC samples were analysed for gold by the LeachWell® method at SGS Laboratories in Townsville, QLD. HEGL 2011 RC - 123 RC samples that contained quartz were riffle split to 3 kg and analysed for gold by the LeachWell® method at SGS Laboratories in Townsville, QLD. A further 262 samples that identified quartz veining following check logging were analysed for gold by 50g FA at SGS Laboratories in West Wyalong, NSW
• *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 to the mineralisation or analysis for the resource estimate. No geophysical tools used to estimate grade or tonnage.
• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external*	• Flanagan McAdam Resources (1984) HQ DD program: There is no information suggesting any standards or blanks were inserted into the sample batches to

	laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	independently check laboratory analytic precision. 38 duplicate assays were conducted on samples that returned greater than 0.5 g/t gold. The duplicate samples returned an average of 0.64 g/t gold against the original assays average of 0.90 g/t gold. With a weak correlation between the pairs (R^2 50%). The results indicate a high nugget for repeat 50g sub-samples which may be a function of the sample preparation (no details provided) and/or the inherent variability within 50g sub-samples but are reasonable for the style of mineralisation. BHP-Utah (1989) RC program: There is no information suggesting any standards or blanks were inserted into the sample batches to independently check laboratory analytic precision. 31 duplicate samples of 1m intervals were submitted to the laboratory with unique sample IDs to check sampling precision, however the results are not available. A note on the laboratory report following internal replicate analysis of some samples "results indicate coarse gold" suggests some variability in analyses which is expected for this style of deposit. Initial compositing of 1m samples into 2m samples for assay was done routinely. This was followed up with re-assaying of the original 1m samples for intervals of anomalous gold assay or geological interest. 2m interval assay compared well to 1m interval assays (composited up to 2m). These duplicates had similar arithmetic averages (0.50 and 0.43 respectively) with R^2 of 72%. The difference is likely due to inconsistent sub-sampling methodologies and/or inherent statistical 'nugget'. HEGL: For the 2006 drill holes, there were no independent standards and blanks used. Each batch of 50 samples analysed at the laboratory included a reagent blank, 3 replicate determinations and 2 standard analyses. Samples exhibiting anomalous values (high or low) were routinely re-analysed or a second split was analysed. HEGL: For the 2007 drill holes, assay pill standards (a blank RC sample of known weight with assay pill of known quantity of gold) and blank samples were inserted into the batches sent for assay. Approximately one assay pill standard was inserted for every 40 samples sent for assay. Blank samples used were of locally sourced quartz vein material that had returned below detection values from screen fire assay. The assay pill standards are strongly heterogeneous and generally performed poorly. This is probably due to poor mixing of the sample during crushing and grinding and/or unrepresentative

		splitting in the laboratory. HEGL: For the 2007 drill holes. Sample batches sent for assay had standard reference samples and blanks inserted approximately 1 for every 20 samples submitted. HEGL 2004 RC program: There were 2 reference standards and 1 blank inserted into each sample batch (of 50 samples) sent for assay as an independent measure of laboratory precision. Each batch also has 3 laboratory replicate analyses and 2 standard analyses. A total of 332 laboratory replicate analyses were reported. The laboratory replicate analyses correlate well (R2 of 95%). Also for the 2004 drill program, 286 duplicate samples were collected at approximately 10m intervals as a check on sampling methodology. Samples were analysed by 50g FA. The original and duplicate average analyses are 0.50 g/t gold and 0.45 g/t gold respectively with a correlation coefficient (R^2) of 99%. For duplicate data in the range 0.2 – 15.0 g/t gold the averages are similar but standard deviation is greater and R^2 reduces to 42% as a result of the removal of below detection pairs. In addition, for the 2004 RC drill program, 696 samples were analysed with both FA (50g) and SFA (1 kg sub-sample). The average for FA is 0.50 g/t gold and for SFA is 0.89 g/t gold indicating a low bias in the FA samples possibly introduced during sample preparation. The correlation coefficient is 56%. For the 2011 RC drill program, 11 replicate (second split) FA analyses were done with good correlation. There have been no external laboratory checks completed. Standards, blanks, duplicate and replicate analyses have performed as expected with acceptable levels of accuracy and precision for the different assay techniques for the style of mineralisation at Red Hill.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary*	• Laboratory assay results are received by several people within HEG including the Managing Director, Exploration Manager, project geologists and senior field supervisor. Final assay results are digitally entered into the drill hole database by the Project Geologist and checked by the Exploration Manager. Any significant intersections are checked by the Exploration Manager before public reporting. • There are no twinned holes. • Assay data is received in preliminary and final form

	data, data entry procedures, data verification, data storage (physical and electronic) protocols. • *Discuss any adjustment to assay data.*	via e-mail in PDF and .CSV format from the laboratory. Final assays, standards and blanks are checked. Batch analyses that pass QA/QC procedures are loaded digitally into the drill database and checked. PDF and CSV files are backed up on the HEG server and the database is also included in a daily back up. Flanagan McAdam Resources (1984) and BHP-Utah (1989) data is provided as scans of photocopied Laboratory originals as appendices to Annual reports submitted to NSW Government. • There have been no adjustments made to the assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid*	• Flanagan McAdam Resources (1984) HQ DD program: The location of the drill hole collars was surveyed from a local grid pegged to the ground on 50m x50m centres. Collars have been converted to MGA zone 55 from a fit of local grid plans of shafts and workings as surveyed on to their local grid. Downhole surveys were done using an Eastman compass with readings taken approximately every 50m. BHP-Utah (1989) RC program: Collar positions converted from local grid co-ordinates (same grid as earlier drilling programs). Following the RC drill program later in 2004, Hill End Gold check surveyed 4 BHP collars (HERH24, 28, 13 and 14). The other BHP collars positions were located using the BHP assigned coordinates. No down hole surveys were done of BHP RC holes. A survey of the drill mast was used as a proxy for down hole orientation. HEG drill collars are surveyed using either DGPS or total field equipment in GDA94, MGA (zone 55). DGPS can be precise to 0.1m and total field equipment is precise to 0.01m. Down hole surveys have been done at 30-50m intervals and at the end of the hole using single shot digital survey tools for the DD holes. No down hole surveys have been done for most of the RC holes and so drill mast surveys have been used as a proxy for hole orientation. RC holes that have a DD tail have had the DD tail surveyed down hole. A down hole survey was also done for RC58 only by north-seeking gyroscope. RC58 lifted 9.5 degrees in inclination over 75m and has a 1.4 degree azimuth change over the same interval indicating there is significant drift in the RC holes that will introduce some positional error with depth. • The grid used in MGA, zone 55.

	system us	
	• *Quality and adequacy of topographic control.*	• For the drill holes completed prior to HEG drilling, a LiDAR survey of the area provides good topographic control and a topographic check for pre HEG drill collars. HEG drill collars are surveyed using DGPS or total field instruments which provide ground control and an elevation which has been checked against the LiDAR survey. The collar surveys reported are consistent with the topographic features. The 2011 differential GPS collar survey elevations were consistently not as expected. The collars have been draped on to the LIDAR DTM to provide a more precise collar elevation than provided by the DGPS. The smallest shift reported was -2.908m and the largest shift is -6.639m (average -4.594m). The draped collars have been used for the resource estimate rather than the surveyed collar elevations.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Drilling has been done on 50m spaced lines and in-filled to 25m spacing to a vertical depths of approximately 60 metres where the mineralized shots have been identified. Deeper drilling to 150m vertical below depth has been done on 50m spaced lines.
	• *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 hole spacing and directions of drilling are adequate to provide a high quality geological interpretation. The 25m drill spacing and sampling in the upper part of the resource is of sufficient quality to obtain a good control on the quantity and gold grade of the mineralisation. When combined with the geological control, these areas may be considered part of an Indicated resource but are unlikely to contain sufficient confidence to warrant a Measured resource classification. The 50m drill spacing and sampling is of sufficient quality to obtain some control on the quantity and gold grade of the mineralisation. When combined with the geological control, these areas may be considered part of an Inferred resource but are unlikely to contain sufficient confidence to warrant an Indicated resource classification.
	• *Whether sample compositing has been applied.*	• No sample compositing has been done in preparation material sent for analysis
Orientation of data in relation to	• *Whether the orientation of sampling achieves unbiased sampling of*	• The gold mineralisation at Red Hill is in: 1. Bedding parallel veins that strike NNW, and. 2. A fault zone (or multiple fault zones) striking NNE

geological structure	*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.*	which is poorly defined at surface and in drill core samples, but which has a strong control over gold in the bedding parallel veins. • The drilling direction optimizes the intersection with the fault zone striking NNE which provides an unbiased intersection through the zone of mineralisation
Sample security	• *The measures taken to ensure sample security.*	• No information is available on sample security from exploration prior to HEG. RC samples collected by previous explorers were previously discarded. Drill core from exploration prior to HEG is stored at Hill End Exhibition Flat in metal trays which are stacked and covered to prevent weathering. Drill core from HEG drill holes is taken from the drill site to the core preparation area daily. After processing, photographing, logging and sampling the core is stacked on palates and covered to limit weathering. The drill core is stored at the Red Hill core preparation facility and at Hill End. Sampled ½ core is placed in calico bags which are checked and are placed into Bulka® bags for dispatch to the laboratory. RC samples from HEG drill holes are logged and processed at the drill site. Drill intervals that were not sampled were kept on site until final analysis of the drill program. ¼ splits of the sampled intervals are placed in plastic bags which are then checked and placed into Bulka® bags for transport to the laboratory. The remaining ¼ splits of the sampled intervals are stored in plastic bags on palates in a secure storage shed at Hill End for future reference. Unsampled intervals from the RC drill program that were stored at the drill site have subsequently been discarded. Samples for dispatch to the SGS Laboratory in West Wyalong and the ALS laboratory in Orange are driven directly to the Laboratory in light vehicle by HEG personnel and submitted directly on arrival. Pulps and rejects previously prepared by the laboratory are loaded and returned directly to a secure Hill End storage shed for future reference.

		Samples for dispatch to the SGS Laboratory in Townsville are driven to a Bathurst courier contractor by HEG personnel from Hill End and submitted to the contractor. The contractor takes the samples to the laboratory by road courier. Pulps and rejects from SGS Townsville are returned to Hill End for storage by courier and are picked up in Bathurst by HEG personnel. On-line courier tracking of the consignments is available. When a consignment arrives at the laboratory, samples are checked and counted by the Laboratory and advice of submission is sent by e-mail from SGS Townsville Laboratory to HEG.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Audits and reviews of the ALS laboratory in Orange, and SGS laboratories (West Wyalong and Townsville) have been undertaken by HEG personnel at various times, commonly just prior to a significant sampling program such as drill testing. Particular emphasis is placed on the sample receipt, preparation and storage procedures. HEG have provided written sample preparation and assay procedures for the laboratories which have been adhered to for all HEG samples. Facilities and procedures at both the SGS laboratories were found to be good at the times of the HEG visits.

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	• *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.*	• Exploration Licence (EL) 5868 (1992) is operated by HEG. The resource is contained entirely within EL 5868. EL 5868 (113 units) was granted on 18 June 2001 to Nugget Resources. Nugget Resources changed its name to Hill End Gold Limited and completed an IPO. The Licence excludes various areas within the Hill End and Tambaroora Historic Site and mining licences held under separate title. From 17 June 2015, EL 5868 has been renewed for a further 2 years over an area of 16 units (42 km^2) until 17 June 2017. EL 2037 preceded EL 5868 and was incorporated into EL 5868 on grant. EL 2037 (1973) was granted on 20 July 1983 to Silver Orchid Pty Ltd (Silver Orchid) for a period of 6 years. In June 1982 Silver Orchid signed an agreement with First Tiffany Resource Corporation (Tiffany) for Tiffany to obtain a 20% free carried interest subject to conditions. This agreement included EL 2037 while it was under application (ELA) and has been carried through the subsequently granted EL 2037. EL 2037 was renewed for a further 1.5 years to 19 January 1992 over a reduced area of 17 units and then renewed for a further 2 years to 19 January 1994 over the same 17 units. On 25 June 1993, Silver Orchid and Tiffany entered into an agreement with Big Nugget Partnership, which was subsequently listed in Alberta, Canada as Nugget Resources Inc (Nugget). As Silver Orchid was not contributing pro rata to expenditure following the agreed initial expenditure by Nugget, the matter was resolved in the Warden's Court on 23 May 1996 that Nugget held 62.96% of 80% and a 5% non-contributory interest, Silver Orchid held 37.04% of 80% and Tiffany held a 15% non-contributory interest. Silver Orchid's interest was to be further diluted by 1% for every $CND 10,000 spent by Nugget. Silver Orchid subsequently elected not to contribute to the JV and was diluted to 0% interest. On 11 March 1999 EL 2037 was transferred from Silver Orchid to Nugget. On 18 June 2001 EL 2037 was cancelled due to the granting of EL 5868 (1992). The result of agreements and Court determinations is that the Company has a 100% beneficial interest

		in its Hill End tenements, while a portion of the ground now encompassed by EL 5868 is subject to a reduction to 85% if an 'economic feasibility study' is completed by the Company, and Tiffany, if it establishes that it continues to hold a right against the Company to do so, contributes at the 15% level.. There are no known impediments to obtaining a licence to operate at Red Hill.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The relevant exploration completed by previous Licence holders is documented in Section 1 (Sampling Techniques and Data) and the preceding Supporting Information.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Details of the deposit style at Red Hill and the geological setting are provided in the introduction preceding Table 1 (Sampling Techniques and Data).
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	• As summary of the drill hole information used in the resource estimate is provided in the introduction preceding Table 1 (Sampling Techniques and Data). No new drill hole intercepts are presented with the Red Hill resource estimate update. Significant drill hole intercepts have been published previous in public documents.
	• *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.*	• No new drill hole intercepts are presented with the Red Hill resource estimate update.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually*	• Intersection cut off grades are not relevant to the reporting of the resource estimate. The Red Hill resource estimate is reported to 0.5 g/t gold cut-off grade for depths to 700m RL (approximately 130 – 170m below surface).

	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.*	 • 2m composite of all samples has been used throughout. Composites are not reported as selective aggregates • No metal equivalents used in reporting of Hargraves resources (gold only).
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Not relevant to the understanding of the Red Hill resource estimate update.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Diagrams of the Hargraves resource estimate are provided in introduction preceding Table 1.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid*	• All drill hole intersections have been included in the resource estimate.

	misleading reporting of Exploration Results.	
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No other substantive exploration data is relevant to the Red Hill resource update. Metallurgical test work previously completed has been reported to the ASX previously. The metallurgical character of the Red Hill deposit is similar to other deposits in the district held by Hill End Gold Limited. There are no potentialy deleterious elements or compounds in the Red Hill deposit.
Further work	• *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 possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further planned exploration at Red Hill includes: 1. Investigation of mining and processing options, 2. Gravity gold recovery grind size optimization (metallurgical), 3. Drilling to extend the resource and investigate underground mining potential, and 4. Sterilization drilling of plant and waste installation areas. • Possible extensions to mineralisation are shown in the diagrams preceding Table 1.

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
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• HEG core recovery and RQD estimates are made from the core recovered from the tray and pieced back into a single drill string on a V-rail. Data on core recovery and RDQ is manually transcribed onto paper recording sheets and checked against driller's depths by the geologist. These data are then manually transferred onto digital spreadsheets and checked for error. The paper copies are filed for future reference. The spreadsheets are digitally loaded into the database and backed up. The database is checked against the spreadsheet. HEG geological logging is done onto handwritten paper logs at the core logging facility. The geologist then transfers the data to digital spreadsheets and checks the entries. The paper logs are filed for future reference. The digital spreadsheets are loaded into the database. HEG drill hole collar and down hole survey data is received in digital (CSV) format and is digitally loaded into the database. Final assay data for all HEG drill holes is received digitally in PDF and CSV format. The data are loaded into the database from the CSV files and checked. For drill holes done by previous explorers (Challenger Mining and Compass Resources NL), all drill hole data is reported in Annual Reports to Government. The data reported has been manually transcribed from the paper copies into spreadsheets and checked for error by the project geologist. Digital and paper copies of the report are available for future reference. The digital database has been loaded into various modelling and mining software packages by HEG personnel and by independent consultants for various data analysis functions, including geological interpretation, construction of 3D geological surfaces, analysis of assay data and resource estimation. As part of the workflow for each task, data is validated before the software can use the data. Any errors picked up during the validation has been checked and corrected in the original database Drill hole statistics from the various company drilling campaigns were analysed and found to be non-biased:

	HEG	FMcA	BHP
Count	4112	276	475
Max	393	118	17
Min	0.01	0.003	0.01
Mean	1.12	0.80	0.36
Median	0.05	0.021	0.07
Std Dev	8.84	7.25	1.11
Variance	78.13	52.56	1.23

BHP reconciles reasonably well against HEG with similar characteristics and plenty of holes in strongly mineralized parts of the deposit. Flanagan-McAdam is dissimilar as most holes are located east of the main zone and intersect isolated intersections at depth.

Drill hole statistics within the HEG drilling were also found to be non-biased.

	RHRC	RHD	RC	RHRCD
Count	1080	991	553	1488
Max	393	94.3	60.7	62
Min	0.01	0.01	0.01	0.01
Mean	1.41	1.66	1.27	0.49
Median	0.09	0.04	0.06	0.03
Std Dev	15.0	7.3	5.0	2.6
Variance	225	53	24	7

The distributions are similar. Higher grades are more prevalent in the selective diamond core sampling, as expected. The mean of the RHRCD samples is lower, as a result of some of the infill drilling missing higher grade zones.

Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visits have been undertaken by Dr Stuart Munroe and Mr Philip Bruce, both full time employees of HEG. Red Hill Mineral Resource reported here is based on information reviewed by Dr Stuart Munroe and Mr Philip Bruce. Dr Munroe is a Member of the Australasian Institute of Mining and Metallurgy and Mr Bruce is a Fellow of the Australasian Institute of Mining and Metallurgy. Dr Munroe and Mr Bruce have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code

		for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (The JORC Code 2012).
Geological interpretation	• *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 Red Hill geological model has been generated and reviewed by a large team of Company geologists and independent consulting geologists. Consequently there is a high level of confidence in the geological model and the controls on gold mineralisation. • Geological data has been gathered from surface exposures, old mining shafts, mining records and drill holes (RC and DD). 2012 HEG drill core was oriented in space enabling measurement of geological contacts and structure. • Alternative (previous) resource estimation methods have been completed to test the effect of alternative models and techniques. • The two geological elements used in the model are: 1. NW-striking, moderately NE-dipping stratigraphic sequence that contains a number of bedding parallel swarms of quartz veining in particular stratigraphic locations associated with more fissile shale and sandstone sequences. 2. NNE-striking, steeply west dipping fault zone with a clearly defined footwall and more diffuse hangingwall. This structure is difficult to identify in outcrop and in drill core but is very clearly defined in the larger scale drill data. • The geology is continuous along strike and down plunge to the NNE. Down-dip, the mineralisation is fault-bounded by an east-bounding fault, focusing mineralisation into a long, narrow corridor approximately 50m wide. A fault existence is not confirmed by drilling, but appears evident and sub-vertical in section. The fault is used as a hard boundary to limit down-dip mineralisation. A second sub-vertical western boundary was defined at surface by sterilisation drilling conducted to the west of the main exploration region and at depth by deeper drill holes, sampled beyond the western limit of mineralisation. Mineralisation is hosted within bedding-parallel veins and vein slockwork which may cross bedding. Mineralisation is predominantly found in the White's Tuff & Lower Marshall McMahon facies west of the eastern bounding fault. The concentration of veining within two units may indicate an additional lithological control within the hangingwall. A comprehensive stratigraphic model was constructed in Leapfrog Geo using a widespread marker horizon to help constrain bedding orientation.

		Mineralisation was modelled along this trend anisotropically using geostatisitically-obtained parameters.
	• *The factors affecting continuity both of grade and geology.*	• Gold grades can be discontinuous on a small scale due to variations within veins (high nugget) which can reduce statistical grade continuity.
Dimensions	• *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.*	• Northern Limit: 6,348,100N Southern Limit: 6,346,745N Eastern Limit: 726,720E Western Limit: 726,390E General plan width: 40 - 60m Upper Limit: 868m Lower Limit: 700m All co-ordinates in GDA94, zone 55 and elevations in metres above AHD
Estimation and modeling techniques	• *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.*	• Block modelling of Au grade was conducted using a combination of Leapfrog Geo® and Micromine® 2014. Micromine® was used to estimate the grades reported in the mineral resource, while a Leapfrog grade interpolant was employed as validation of the Micromine® estimate to ensure robustness. Micromine® was used to wireframe the oxide-transitional-fresh zones within the deposit. These were evaluated onto the individual blocks, with bulk density estimates specified for each zone from average core measurements. Grade interpolation in Micromine® was conducted using Ordinary Kriging. The interpolator followed an anisotropic search configured to the following distances/directions: D1: 352° | 0° | 60m D2: 84° | 45° | 40m D3: -90° | 45° | 10m Kriging parameters were geostatistically-derived based on directions obtained during the creation of the geological model. Variography was conducted for the three major directions and range, sill and nugget parameters obtained from the fitted experimental distributions were incorporated into the interpolation weighting model: 4.2 (sill) | 2.4 (nugget) | spherical distribution.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• There are no modern mine production records that can be compared with the resource estimate. Production in the late 1800's involved hand-sorting higher grade ore. No records were kept of the proportion of quartz vein mineralisation was processed and rejected. In 2008, HEG released an Inferred resource estimate

	for the Red Hill deposit of 849 Kt at 3.3 g/t gold (89 Koz gold). The resource was estimated using a polygonal method for interpreted veins or vein sets assuming a minimum 0.8m horizontal width and a cut-off of 1 gram metre (>1.25 g/t gold over 0.8 minimum width).
• *The assumptions made regarding recovery of by-products.*	• There are no by-products associated with the Red Hill gold deposit.
• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	• There are no deleterious elements in the mineralisation. Visual estimates of the sulphide content of the mineralisation range from 0 – 3%. Most of the ore has less than 2% sulphide. Sulphides include pyrite, arsenopyrite, galena, sphalerite and chalcopyrite. There is a minor carbonate content in the host rock and veins which is expected to counter the risk of acid production from the rock during weathering. Most of the sulphide is expected to be recovered in gravity concentrates and so will not report to the waste dump, coarse tails or fine tails. The sulphides do not impede the gold recovery by gravitational methods and so are unlikely to be deleterious to gold recovery. Fine gold not recovered from the concentrate is expected to be sent, with the sulphides to an established off-site gold leach processing facility.
• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• The blocks have dimensions of 4m (X) x 12m (Y) x 2m (Z) which is likely to be consistent with minimum mining widths and volumes. RC and 2012 DD sample composites are 2m of drilling length. The model uses composite sample intervals and a model block size which is consistent with the widths of mineralised zones in the deposit.
• *Any assumptions behind modeling of selective mining units.*	• A selective mining unit has not been modeled. The choice of block size is appropriate for the drill hole spacing and sample length of the drill data.
• *Any assumptions about correlation between variables.*	• There are no correlations between variables assumed.
• *Description of how the geological interpretation was used to control the resource estimates.*	• Mineralisation is controlled by the intersection of the bedding parallel veins and a through-going fault/shear zone as described above. Well defined, shallowly north plunging higher grade gold shoots occur at the intersection of these two structures. These higher grade shoots have been modelled in

		Leapfrog. The plunge and trend of the higher grade shoots and the plane of the lower grade halo have been used to guide the resource estimation.
	• *Discussion of basis for using or not using grade cutting or capping.*	• A 30g/t cutoff was employed to limit the impact of outlier grades. The cut was derived statistically from investigation of composited grade population statistics and sensitivity testing of different cutoffs. No bottom-cut was required as it would have interfered with dilution of grade within the model. Zero grades were applied where sampling was absent, due to selective procedures.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Grade was estimated using different interpolators in different software packages. The estimations reconciled within an acceptable margin, proving the estimate is robust. Regions of grade contrast between both models were identified and investigated in order to minimise potential model error. The resource model appears representative of the composited sample grades in sectional and 3D reconciliation.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut off of 0.5 g/t gold to 700m RL for reporting the resource estimate is based on break even grades for similar deposits in the region that are expected to be recoverable from open pit mining methods. Below 700m RL there is no conversion of drilling intercepts to resource, pending additional deeper drilling and conceptual underground mining options..
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always*	• It is assumed that the upper part of the resource will be recoverable from open pit mining and that gold below the base of an optimized open pit may be recoverable by underground narrow mining methods. It is assumed that a mineralized zone equivalent to the block size is recoverable in both an open pit and underground mining scenario although no mine plan has been finalized at this stage.

	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	• *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.*	• In 2004, 4 samples of RC drill cuttings from Red Hill were tested for gold recovery by gravity and cyanide leach at a nominal grind size of 150 µm. The head grade of the material sampled ranged from 0.43 g/t gold (close to expected economic cut off) to 2.0 g/t gold. 2 of the 4 samples were of oxide material, 1 was of transitional material and the other of fresh material to emulate the rock types and weathering profile of an expected open pit operation. Gold recovery by Knelson® gravity concentration and amalgamation ranged from 65-89% and is independent of rock oxidation state. Tails leach recoveries range from 9-32% with low cyanide consumption resulting in overall gold recoveries of 97-99%. As a result of the metallurgical test work, it is assumed that high recovery of gold is possible by gravity methods with some off-site cyanidation of gravity concentrate necessary to recover very fine gold. Further work is planned to optimize the grind size for gravity recovery.
- Environmental factors or assumptions	• *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. 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*	• It is assumed that waste material will be stored on site with little risk of acid mine drainage. Grinding to a relatively coarse grind size, is expected to reduce the fine tailings storage requirements, with much of the gravity tails able to be stored with the mining waste.

<table>
<tr><td></td><td>not been considered this should be reported with an explanation of the environmental assumptions made.</td><td></td></tr>
<tr><td>Bulk density</td><td>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.</td><td>From the 2006 drill program, 41 representative core samples had bulk density measurements determined by ALS Chemex in Orange, NSW. The results are shown in the following table for dry rock.
<table>
<tr><th></th><th>oxidized</th><th>part-oxidised</th><th>fresh</th></tr>
<tr><td>Shale</td><td>1.97</td><td>2.29</td><td>2.53</td></tr>
<tr><td>Greywacke</td><td>2.03</td><td>2.26</td><td>2.55</td></tr>
<tr><td>Sandstone</td><td>2.14</td><td>2.24</td><td></td></tr>
<tr><td>Average</td><td>2.02</td><td>2.27</td><td>2.54</td></tr>
</table></td></tr>
<tr><td></td><td>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.</td><td>The method used accounts for void space by sealing the sample and void space between grains prior to bulk density measurement.

There is no significant volume of alteration associated with the mineralisation that would require a separate alteration bulk density estimate.
The bulk densities are measured. Quartz veins have a theoretical assumed density of 2.6 which is close to the fresh rock average density. Given that quartz veins in the ore zone are approximately 5% of the rock mass, the density of the quartz veins is assumed to be the same as the host rock.</td></tr>
<tr><td>Classification</td><td>The basis for the classification of the Mineral Resources into varying confidence categories.</td><td>The resource classification boundaries were created in Leapfrog Geo using Indicator grade interpolants to define isosurfaces of sufficient local sample grade confidence.
The Indicated classification employed more stringent indicator cutoff and confidence criteria and was restricted to two host stratigraphic units within the geological model where mineralization appears focused.
Inferred classification employed a broader shell designed to envelope significant mineralization with reasonable sample support.
The Inferred shell was also used to prevent high grades interpolating excessively into empty model space devoid of drilling. It was not used to limit sample eligibility into grade interpolation and full dilution has been permitted.</td></tr>
<tr><td></td><td>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations,</td><td>Appropriate account has been taken of all factors pertinent to the Mineral Resource estimate.</td></tr>
</table>

	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.*	• The result reflects the expected Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The current Mineral Resource estimate has not been audited or reviewed. Previous estimates have been reviewed internally and by independent consultants in preparing the current Resource estimate.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. 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.*	• The resource model was constructed following a comprehensive geological model built from logged observations as a foundation. Gold grade was modelled in a realistic manner with attention paid to key mineralisation orientations and bounding structures. The resource model relates directly to geological observations made in the field. Grade was estimated using different interpolators in different software packages. The estimations reconciled within an acceptable margin, indicating the estimate is robust. Regions of grade contrast between both models were identified and investigated in order to minimise potential model error. Resource estimation included sensitivity testing of the interpolation and model configuration prior to production of the final resource model (which supports the stated Mineral Resources). The final model was optimised to produce the most reasonable realisation The resource model appears representative of the composited sample grades in sectional and 3D reconciliation.