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Resolute | ASX Announcement

18 October 2017

Bibiani Resource Upgrade

Mineral Resources increased by 40% to 2.5 million ounces

Highlights

- Updated Bibiani Mineral Resource estimate now totals **2.5 million ounces** of gold
- Indicated and Inferred Resources increased by **40%** to **21.7Mt at 3.6g/t Au for 2.5Moz**
- Indicated Resources increased by 26% to 1.5 million ounces of gold (13.3Mt at 3.5g/t Au)
- Phase 2 drilling program completed with results including:
  - **BSDD040** **30m @ 8.9g/t Au from 498.7m**
  - **BSDD060** **26m @ 5.0g/t Au from 347m**
  - **BSDD068** **15m @ 8.5g/t Au from 488m**
  - **BUDD072** **48m @ 3.6g/t Au from 171m; and**
    6m @ 16.5g/t Au from 227.14m
  - **BUDD077** **51m @ 4.3g/t Au from 117m**
  - **BUDD087** **29m @ 9.0g/t Au from 279m**
- The updated Mineral Resource Estimate is the result of the excellent Phase 2 drilling results
- The drilling results confirm significant untested potential for further growth remains at Bibiani
- 65% of the updated Mineral Resource Estimate is contained within the Central Lode which will be the focus of a revised mine plan for Bibiani
- An updated Feasibility Study has commenced which is expected to be completed by the end of 2017 and is designed to enable a development decision

Resolute Mining Limited (Resolute or the Company) (ASX:RSG) is pleased to announce an updated Mineral Resource Estimate for the Company's 90% owned Bibiani Gold Mine (Bibiani) in Ghana. The updated resource estimate was undertaken following the completion of the successful Phase 2 exploration drilling program and has resulted in significant increases in both tonnes and contained gold.

Managing Director and CEO, Mr John Welborn, was impressed by the increase in contained gold at Bibiani and encouraged by the implications of the updated Mineral Resource for the potential to recommission the mine:

"Bibiani is a key growth asset for Resolute and represents a valuable organic opportunity to increase future gold production and generate positive cash flows. The Phase 2 drilling program has achieved the objective of substantially increasing our Mineral Resource. Significantly the Central Lode has expanded and represents the focus of an updated mine plan. The drilling results suggest substantial additional upside remains, especially down dip of the Central Lode where a number of very broad, high grade intersections were recorded. I am looking forward to completion of an updated Feasibility Study later this year and the potential for a positive development decision."

"Resolute remains committed to working with our partner, the Government of Ghana, as we move towards our mutual goal of recommissioning the Bibiani Gold Mine as a long life, robust, profitable operation."

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Drilling Program and Results

The Phase 2 exploration drilling program at Bibiani commenced in December 2016 and was completed in June 2017 with 25,400m of diamond drilling undertaken from both surface and underground positions. The primary focus of the program was to convert Inferred Resources to the Indicated category and to explore for new unmined mineralised lodes. Interim drill results (see ASX announcement dated 23 March 2017) detailed impressive intersections from the Central Lode between 5000N and 5700N. Better results previously announced from the first half of the drill program included:

- BSDD035 14m @ 4.4 g/t Au from 454m
- BSDD040 30m @ 8.9g/t Au from 499m
- BSDD042 24m @ 3.2g/t Au from 426m
- BUDD072 48m @ 3.6g/t Au from 171m; and
  6m @ 16.5g/t Au from 227m
- BUDD074 47m @ 2.3g/t Au from 130m; and
  17m @ 3.5g/t Au from 182m
- BUDD077 51m @ 4.3g/t Au from 117m

These excellent results continued in the Central Lode for the remainder of the program. Further intersections obtained in the second half of the Phase 2 drilling program have confirmed the large panel of continuous high grade mineralisation in the Central Lode. Better results from the second half of the program include:

- BSDD044W1 35m @ 3.9g/t Au from 516.12m
- BSDD060 26m @ 5.0g/t Au from 347m
- BSDD061 57m @ 2.1g/t Au from 328m
- BSDD068 15m @ 8.5g/t Au from 488m (drilled after updated resource estimation)
- BUDD084 50m @ 2.1g/t Au from 149m
- BUDD087 29m @ 9.0g/t Au from 279m

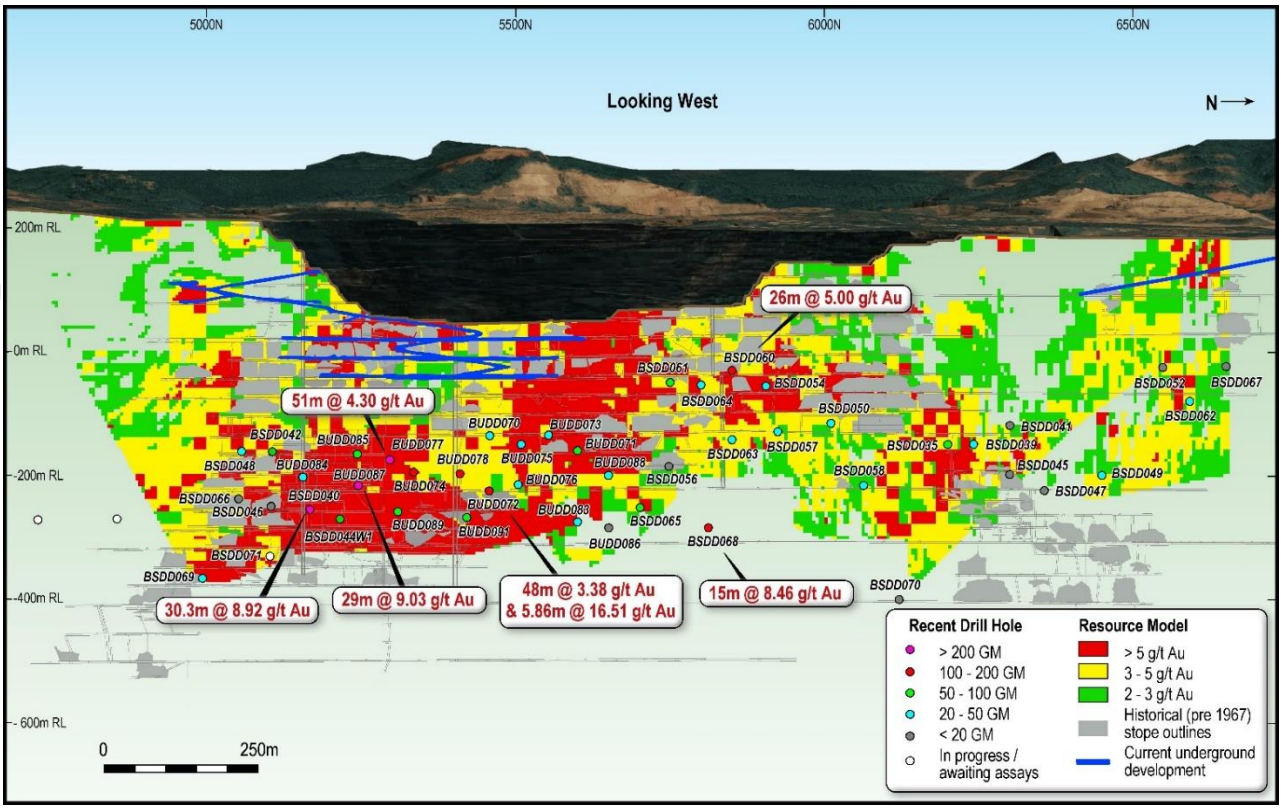

Figure 1: Long Section of Bibiani updated resource model and Phase 2 drilling results

Figures 1-4 display a selection of drilling intersections in both long section (Figure 1) and cross section view. Of particular note is the consistent widths and grades intersected in the deepest holes on these sections. The deposit remains open below these depths. The results indicate that further extensions to resources are likely. Historical records also indicate that the prevalence of previous stoping diminishes below these levels. The result in BSDD068, which was drilled after the resource estimation was commenced, is particularly encouraging.

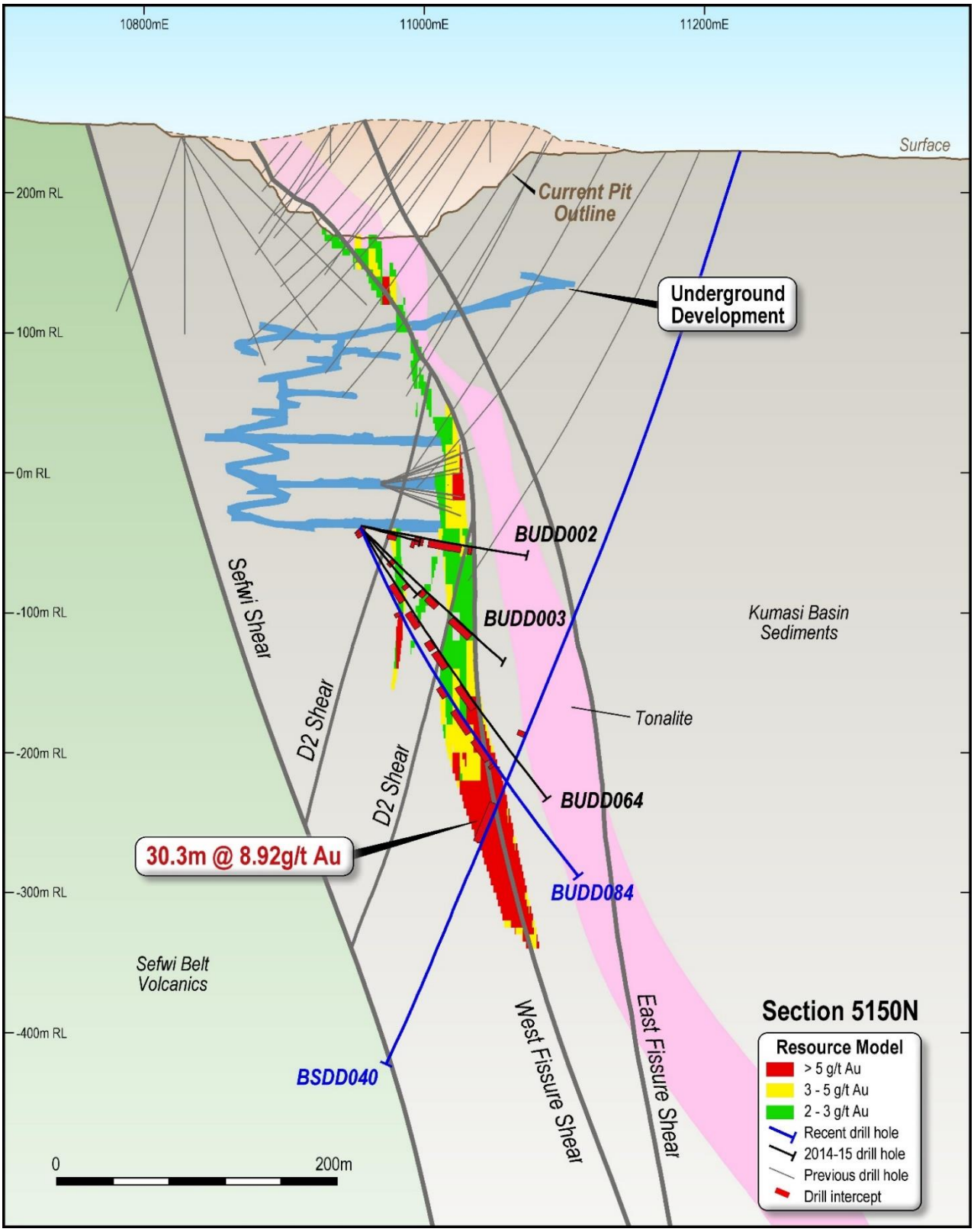

Figure 2: Drill section 5150N

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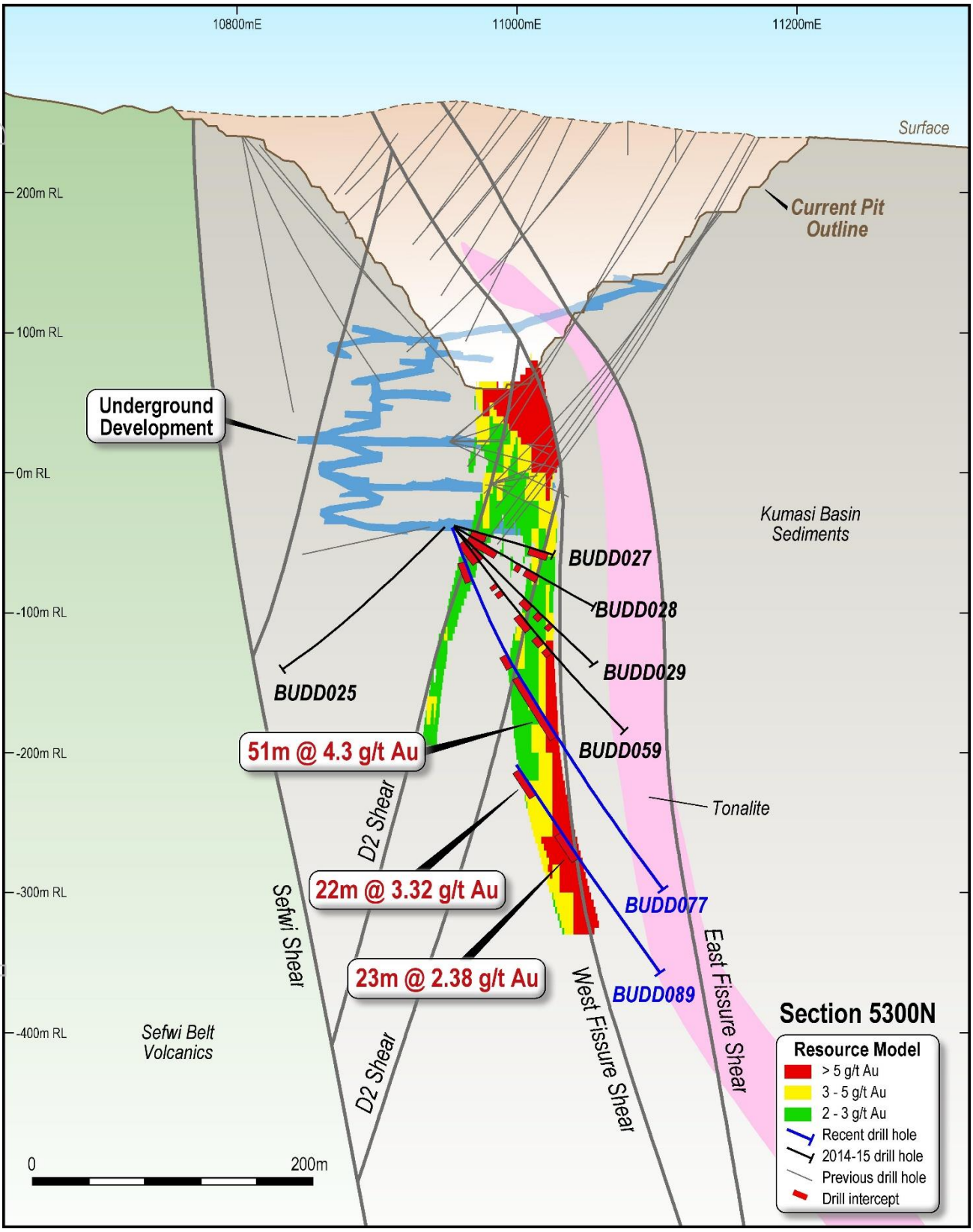

Figure 3: Drill Section 5300N

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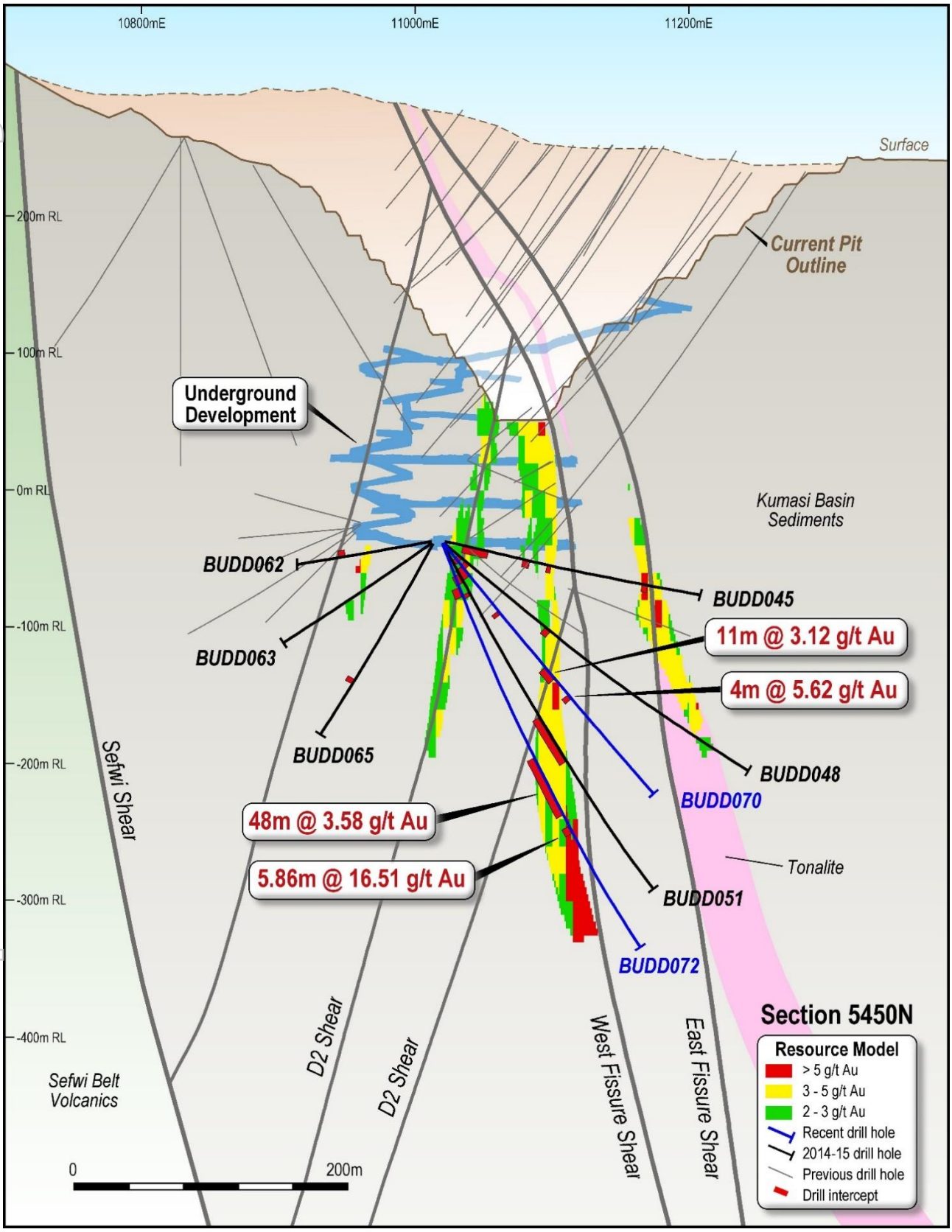

Figure 4: Drill Section 5450N

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Updated Mineral Resource Estimate

Following completion of the Phase 2 drilling program Optiro Pty Ltd (Optiro) was engaged to prepare an independent resource estimate. As part of this engagement the Bibiani mineralisation was reinterpreted and revised geological domain wireframes were constructed. Optiro have used an ordinary-kriged methodology constrained by these domain wireframes. The Bibiani mineralised system has been classified into discreet domains which reflect the mineralisation and the natural grade of the deposit. Significantly, 65% of the updated Mineral Resource Estimate is contained within the Central Lode domain.

The updated Mineral Resource Estimate produced a 40% increase in total resources from the previous estimate. The updated combined Indicated and Inferred Resource is 21.7Mt @ 3.6g/t Au at a 2 g/t Au cut off for a total of 2.5 million ounces. This is an increase of 729,000 ounces over the June 2016 estimate of 1.8 million ounces. In addition to a significant increase in volume, the grade of the total resources at Bibiani has increased from 3.5g/t to 3.6g/t. The updated Mineral Resource Estimate is primarily a result of the excellent Phase 2 drilling from the Central Lode.

Total Indicated Resources now stand at 13.3Mt at 3.5 g/t Au for 1.5Moz, an increase of 300,000 ounces over the previous estimate. The updated Indicated Resource will form the basis of a revised mine plan and updated feasibility study which will allow for an updated estimate of Reserves for Bibiani. The revised mine plan will focus on the Central Lode and will provide the key input into an updated feasibility study.

Bibiani Mineral Resources as at 18 October 2017 (2g/t Au cutoff)			
Classification	**Tonnes (000s)**	**Grade (g/t)**	**Ounces (000s)**
Indicated	13,255	3.50	1,493
Inferred	8,438	3.73	1,011
Total	**21,693**	**3.59**	**2,504**

Table 1: Bibiani Mineral Resources as at 18 October 2017

Bibiani Mineral Resources as at 30 June 2017 (2g/t Au cutoff)			
Classification	**Tonnes (000s)**	**Grade (g/t)**	**Ounces (000s)**
Indicated	11,180	3.3	1,184
Inferred	4,485	4.1	591
Total	**15,665**	**3.5**	**1,775**

Table 2: Bibiani Mineral Resources as at 30 June 2017

Bibiani 2016 Feasibility Study

A positive Feasibility Study for Bibiani was completed and lodged with the Government of Ghana in June 2016 (see ASX announcement dated 23 June 2016). The 2016 Study proposed an underground mine that would produce in excess of 100,000 ounces of gold per annum at a Life of Mine All-In Sustaining Cost of US$851/oz. Mine production was anticipated to be 1.2 million tonnes per annum from Long Hole Open Stope underground mining. Processing of the ore was planned to occur at the existing on-site Bibiani processing plant. The Study identified a modest start-up capital requirement of only US$72 million and a short lead time to production of only nine months. The majority of the upfront capital was allocated to the refurbishment of the plant and to the purchase of owner operated mining fleet.

An initial Ore Reserve of 5.4 million tonnes at 3.7g/t Au containing 640,000 ounces of gold was established as a result of the 2016 Study. This initial Ore Reserve was expected to maintain 100,000oz per annum production for an initial 5 year mine life. The method of mining and the production rate envisaged at Bibiani is consistent with Resolute's demonstrated capability in operating large mechanised underground gold mines. Given Resolute's extensive and successful experience of underground mining, and the Company's previous operating history in Ghana, Bibiani is a key organic growth opportunity.

The original workings at Bibiani extend to around 800m below surface. The previous resource only considered the area between the base of the pit at around 200m below surface and the limit of Resolute's drilling which extended to approximately 450m below surface. Substantial opportunity was identified to enhance the outcomes of the 2016 Study. Specifically the strong economic benefit of upgrading the higher grade portions of the Inferred Resource of 4.5Mt at 4.1g/t Au motivated the planning and implementation of the Phase 2 drilling program. Further successful exploration to upgrade and extend the orebody was expected to boost project economics, extend the mine life and further enhance value.

Updated Bibiani Feasibility Study

An updated Feasibility Study has commenced based on the Updated Mineral Resource Estimate. The Phase 2 drilling program has successfully increased the size, grade, and confidence in the resource and will drive improved project economics and extension to the mine life beyond the initial five years. The updated Feasibility Study will include an updated Ore Reserve. In addition to incorporating the Phase 2 drilling and increased Mineral Resource, the updated study will incorporate a review of capital expenditure and consider alternative mining rates and mining methods appropriate to the underground project.

Resolute has identified opportunities for introducing emerging technologies in mining and processing at Bibiani to improve productivity and safety and reduce costs. The Company intends to transfer a number of innovations from its Mt Wright Mine, where it has made a number of advances in equipment productivity through sophisticated maintenance planning and in remote operation of mobile equipment.

The Feasibility Study is expected to be completed by the end of calendar 2017 and is designed to enable a development decision.

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About Resolute

Resolute is a successful gold miner with more than 25 years of continuous production. The Company is an experienced explorer, developer, and operator having operated nine gold mines across Australia and Africa which have produced 8 million ounces of gold. Resolute currently operates two mines, the Syama Gold Mine in Africa and the Ravenswood Gold Mine in Australia, and is one of the largest gold producers listed on the Australian Securities Exchange with FY18 guidance of 300,000 ounces of gold production at All-In Sustaining Costs of A$1,280/oz (US$960/oz).

Resolute's flagship Syama Gold Mine in Mali is a robust long life asset comprising parallel sulphide and oxide processing plants. The move to underground mining is expected to extend the mine life beyond 2028.

The Ravenswood Gold Mine in Queensland demonstrates Resolute's significant underground expertise in successfully mining the Mt Wright ore body, where operations are expected to cease in FY18. The Company's next stage of development in Queensland is the return to large scale open pit mining at the Ravenswood Expansion Project which will extend the Company's local operations for a further 13 years to at least 2029.

In Ghana, the Company has completed a feasibility study on the Bibiani Gold Project focused on the development of an underground operation requiring modest capital and using existing plant infrastructure. Resolute is also exploring over 6,600km^2 of potential world class tenure in West Africa and Australia with active drilling programs in Mali, Ghana, Cote d'Ivoire and Queensland, Australia. The Company is focused on growth through exploration and development and is active in reviewing new opportunities to build shareholder value.

Competent Persons Statement

The information in this announcement that relates to Exploration Results is based on information compiled by Mr Bruce Mowat, a Competent Person who is a member of the Australian Institute of Geoscientists and is a full-time employee of Resolute Mining Ltd. Mr Mowat has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Mowat consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resource estimate has been based on information and supporting documents prepared by Mr Kahan Cervoj, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr Cervoj is a full time employee of Optiro Pty. Ltd. and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which has been undertaken to qualify as a Competent Person. Mr Cervoj confirms that the Mineral Resource section is based on the information in his supporting documents and consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

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Hole_ID	North (WGS)	East (WGS)	RL (m)	Dip	Azi (WGS)	EOH (m)	From (m)	To (m)	Width (m)	Au (g/t)
BSDD035	715537	574972	238	-59	301	597.2	454	468	14	4.36
BSDD040	714563	574542	230	-72	303	700.07	498.7	529	30.3	8.92
BSDD042	714518	574518	231	-67	301	494.3	426	449.7	23.7	3.15
BSDD044W1	714587	574581	230	-70	303	628.9	516.12	551	34.88*	3.92
BSDD048	714486	574477	232	-70	301	436.4	418.4	436.4	18*	3.09
BSDD060	715207	574833	223	-53	301	520.2	347	373	26	5.00
BSDD061	715070	574853	225	-52	301	669.5	328	385	57	2.10
BSDD062	716201	574682	296	-68	127	550.3	374	402.1	28.1	2.26
BSDD065	715020	574853	226	-69	299	600.8	506	532	26	2.56
BSDD068	715127	574866	224	-80	297	852.6	488	503	15*	8.46
BUDD071	715059	574518	-38	-48	96	300	139	173	34	1.60
BUDD072	714988	574465	-39	-68	125	330.2	171	219	48	3.58
							227.14	233	5.86	16.51
BUDD074	714867	574411	-39	-69	117	252	130	177	47	2.26
							182	199	17	3.53
BUDD077	714835	574396	-39	-69	122	300.2	117	168	51	4.30
BUDD078	714942	574452	-39	-71	126	277.6	152	189	37	3.86
BUDD080	715087	574521	-37	-6	353	333.5	68	88	20	2.71
BUDD084	714744	574337	-39	-66	144	300.6	149	199	50*	2.08
BUDD085	714817	574271	22	-50	111	270	229	246	17	4.88
BUDD087	714820	574266	22	-60	111	369.1	250	266	16	3.13
							279	308	29	9.03
BUDD089	714927	574373	-5	-63	140	420.2	241	263	22	3.32
							292	315	23	2.38
BUDD091	714984	574404	-35	-65	121	400	107	118	11	4.64
							254	275	21	2.59

Table 3: Bibiani Phase 2 drilling intercepts

Notes to Accompany Table 3:

- Grid coordinates are WGS84 Zone 30 North
- Cut-off grade for reporting of intercepts is >1g/t Au with a maximum of 3m consecutive internal dilution included within the intercept; only intercepts >=3m and >=50 grams x metres are reported
- No top cut of individual assays prior to length weighted compositing of the intercept has been applied
- Samples are analysed for gold by FA25/AAS method which is a 25g fire assay with AAS instrument finish
- Intervals with asterisk (*) include voids

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BIBIANI GOLD MINE GHANA

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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.*	Samples were collected by Mensin Gold Bibiani Ltd (Mensin) from diamond core (DD) drill holes and reverse circulation (RC) pre-collars. Diamond core was sampled at 1m intervals and cut in half, to provide a 2-4kg sample, which was sent to the laboratory for crushing, splitting and pulverising, to provide a 30g charge for analysis. RC samples were collected on 1m intervals by riffle split to obtain a 2-4kg sample, which was sent to the laboratory for crushing, splitting and pulverising, to provide a 30g charge for analysis. Mensin sampling and sample preparation protocols are industry standard and were deemed appropriate by the Competent Person. Previous owners (1994-2012) collected samples from RC and DD drill holes and underground channels (CHAN). In 2012 Coffey Mining Pty Ltd (Coffey Mining) assessed that the previous sampling was conducted using industry standards techniques.
Drilling techniques	• *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.).*	Drill types used include RC and diamond PQ, HQ and NQ2 sizes. Since 2014, HQ and NQ2 core has been orientated using the Reflex ACTIII electronic core orientation tool.

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Drill sample recovery	• *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.*	Diamond core interval recoveries were measured from core block to core block using a tape measure. Stopes and voids were identified as separate intervals. A relationship between sample recovery and grade was not identified.
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.*	Drill holes were geologically logged by geologists for lithology, alteration, mineralisation and weathering on geologically domained intervals. Geotechnical and structure orientation data was measured and logged for diamond core intervals. Drill core is photographed (dry and wet). Diamond core and RC chips were captured digitally using LogChief logging software, then validated and imported into the digital drill hole database. Holes were logged in their entirety (100%).
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.* • *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.*	Diamond core was sampled at one metre intervals and cut in half to obtain a 2-4kg sample. Interval lengths were adjusted around voids, to ensure samples were at least 0.5m in length. RC intervals are riffle split (dry) to obtain a 2-4kg sample. Sample preparation of diamond core and RC samples included oven drying, crushing to 10mm and splitting, pulverising to 85% passing 75 microns. These preparation techniques are deemed to be appropriate to the material being sampled. Drill core coarse duplicates were split by the laboratory after crushing at a rate of 1:20 samples. Reverse circulation field duplicates were collected from pre collars and were collected at a rate of 1:20 samples. Mensin sampling, sample preparation and quality control protocols are industry standard and all attempts are made to ensure an unbiased representative sample is collected. The methods applied in this process are deemed appropriate by the Competent Person. Sub-sampling techniques and sample preparation completed by previous owners was assessed by Coffey Mining in 2012 and was determined to have been conducted using industry standards techniques.

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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.* • *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.*	All Mensin samples were assayed for gold by 25g fire assay fusion with AAS instrument finish. The analysis was performed at Intertek Tarkwa (method code FA25/AAS). The analytical method was appropriate for the style of mineralisation. The analytical method is considered a total gold analytical method. No geophysical tools were used to determine any elemental concentrations. Quality control (QC) procedures included the use of certified reference material and coarse blanks included at a rate of 1:20 drill samples, diamond core coarse duplicates (1:20) and reverse circulation field duplicates (1:20). Reanalysis of 1.5% of the pulps for gold by fire assay fusion AAS was carried out at a second laboratory, SGS Ghana, to test repeatability. Additionally, 2.5% of the pulps and 2.5% of the coarse reject samples were reanalysed at the primary laboratory at the completion of the drilling programs. Laboratory quality control data including laboratory standards, blanks, duplicates, repeats and grind size results are also captured into the digital database. Analysis of the Mensin QC sample assay results indicates that an acceptable level of accuracy and precision has been achieved. Assay data quality for previous owners was assessed by Coffey Mining in 2012 and was considered to be of industry standard for Noble data (2011-2012) and not verifiable at the time for data that pre-dated Noble (1994-2008). Assessment of the available QAQC data demonstrated acceptable levels of assay precision and accuracy. When Mensin took ownership of the Bibiani project in 2014 they initiated a data validation and verification process for the historical drill holes.
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 data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Verification of significant intersection was completed by Mensin personnel following the receipt of assay results. No drill holes within the resource were twinned. Drill hole data was logged into LogChief digital logging software, validated and then compiled into a relational SQL2012 digital database using DataShed data management software. The SQL database includes verification protocols which were used to validate the data. The drill hole database was backed up on a daily basis to the head office server. Assay result files were reported by the laboratory in PDF and CSV format and imported into the SQL database without adjustment or modification. In 2012 Coffey Mining assessed the sampling and assaying procedures for previous owners and considered them of appropriate industry standards.

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		When Mensin took ownership of the Bibiani project in 2014 they initiated ongoing validation and verification processes for the data collected by previous owners. This has involved resampling historical diamond core to verify intersections as well as cross-checking samples, void intervals and assays against the original data sources including digital files, reports and laboratory assay certificates in both hardcopy and digital format. The outcome of the verification processes is that 40% of the assay data for holes drilled by previous owners included in the resource have been validated by Mensin.
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 system used.* • *Quality and adequacy of topographic control.*	Collar coordinates were surveyed in local Bibiani Mine Grid using a Total Station Theodolite with expected accuracy of less than 1cm. Down hole surveys are collected using a Reflex EZTrac electronic magnetic survey tool. Surveys are obtained every 30m during drilling (single shot mode) and every 6m at the completion of each hole (multi-shot mode). Survey data is checked and verified using the Reflex SProcess software, with survey readings outside of expected magnetic and gravity values flagged and excluded. A time-dependent declination was applied to the magnetic readings to determine UTM azimuth. Coordinates and azimuths are reported in UTM WGS84 Zone 30 North.
Data spacing and distribution	• *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.*	Drill hole spacing was sufficient to demonstrate geological and grade continuity appropriate for the Mineral Resource and the classifications applied under the JORC Code (2012). The appropriateness of the drill spacing was reviewed by resource geologists at Optiro and by the Competent Persons in 2017. Downhole RC and diamond samples approximated 1m intervals.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	The mineralisation trend extends over 2km of strike length with a steep to sub-vertical dip. The majority of holes have been drilled perpendicular to the strike and at a high angle to the dip. Where this was not possible (such as from underground), holes have been drilled at oblique angles to the mineralisation (up to 30°). No orientation based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	Samples were collected from the drill site and stored on site. All samples were individually bagged and labelled with unique sample identifiers, then securely dispatched to the laboratories. All aspects of sampling and dispatch process were supervised and tracked by Mensin personnel.

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Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	In 2012 Coffey Mining assessed the sampling and assaying procedures for previous owners and found that prior to 2008 the sampling and assay data was not verifiable. The data collected by Noble between 2008 and 2012 were of an appropriate industry standards. External audits of current sampling procedures indicated sampling protocols reflect current industry standards.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Drilling was conducted within the Ghanaian Mining Concession Permit of Bibiani which covers the current mining leases of the Bibiani Project. Resolute Mining Limited has a 90% interest in the Bibiani Project through its subsidiary company Mensin Gold Bibiani Limited and the Exploitation Permit on which it is based. The Ghana Government holds a free carried 10% interest in Mensin Gold Bibiani Ltd (MGBL). The Bibiani Mine concession is located approximately 6° 27' latitude north and 2° 17' longitude west in the Western Region of Ghana. The Bibiani mineral concessions lie approximately 80 kilometres south west of the Ashanti capital, Kumasi. The principal access to the mine is from the east, along the Kumasi – Bibiani – Sefwi Bekwi Highway. Ghana mining law provides that all mineral resources are administered by the Minerals Commission of Ghana.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Commercial gold production commenced at Bibiani in the early 1900s and was suspended in 1915. In 1927 mining activities recommenced as the mine was developed and operated by foreign investors until it was nationalised in 1958. Post nationalisation, the mine was operated by SGMC (State Gold Mining Corporation) until it was closed in 1973 following the depletion of economic reserves. During the SGMC period, reserves within the existing infrastructure were depleted and the old workings were reworked to recover pillars and remnant lower grade material (probably plus 6g/t) that was below the pay limit applied to the deposit prior to nationalisation. Reports have suggested that during the first 65 years of production a total of 7.8 million tonnes from underground mining and 0.5 million tonnes from surface operations were milled, producing over 2 million ounces of gold at an average recovered grade of approximately 9.5 g/t Au. In the late-1980s, Glamco and International Gold Resources ("IGR") gained rights to the old Bibiani mine and initiated tailings reclamation and surface exploration, which activities led to the delineation of an open pit resource and a positive feasibility study.

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		Ashanti Goldfields purchased Bibiani from IGR in the mid-1990s for US$ 130 million, financed an additional US$ 85 million to capitalize the operation, and redeveloped the mine as an open pit operation with a modern processing plant. Ashanti Goldfields (now AngloGold Ashanti ("AGA") produced approximately 1.8 million ounces of gold from the main and satellite pits (after main pit production was hampered by a slope failure in 2004) and tailings retreatment, bringing total Bibiani production since inception to almost four million ounces. Central African Gold plc (CAG) purchased Bibiani, for a cash consideration of US$ 40 million. Subsequent to acquisition, CAG expended a further US$ 51 million of capital on the mine, nearly all of which was used to accelerate underground access and to purchase a modern underground mining fleet. Despite development and capital constraints Bibiani produced a further 53,066 oz. of gold between 2007 and 2008 from three sources, namely old tailings, underground ore, and near-mine open pit oxide ore not included in the mineral resources. In late 2009, Noble Mineral Resources Ltd signed a 'Sale of Shares' agreement to acquire Central African Gold Ghana Ltd from Investec Bank subject to a number of Conditions. One of these Conditions states that Noble shall formulate a 'Development Plan' for the development of and the return to production of the Bibiani mining and processing operations. Resolute Mining Ltd became the owner of the Bibiani Project in June 2014 following the completion of the Deed of Company Arrangement (DOCA) regarding Noble Mineral Resources Limited (ASX:NMG) and acceptance and approval of a scheme of arrangement in Ghana. Prior to Resolute acquiring the project, approximately 1,100 RC and/or diamond holes for 168,000m had been drilled by previous operators into the Bibiani resource area (excluding satellite deposits and regional exploration). Since 2014, Mensin have drilled 169 diamond holes (17 holes have RC pre-collars) for 50,100m into the resource area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The project is located within rocks of the Birimian Supergroup in SW Ghana. Locally mineralisation is hosted within predominately carbonaceous metasediments of the Kumasi-Afema Basin, immediately adjacent to the eastern margin of metavolcanic-dominant Bibiani-Sefwi Belt. The basin sediments are dominated by a thick sequence of fine grained graded turbidites (siltstone to shale) with localised interbeds of fine to medium grained turbiditic sandstones. The shales are variably carbonaceous and often develop phyllitic and schistose fabrics, as a result of overprinting deformation. Several felsic to intermediate composition dykes intrude the sedimentary sequences, including dacite, tonalite, granodiorite and rare monzonitic lamprophyres. Rocks of the Bibiani-Sefwi Belt occur to the west, in the footwall of the Bibiani deposit and include coarser grained turbidites with lithic fragments, and thick intervals of basalt, often with doleritic bases and flow-top breccias with carbonaceous interflow sediments.

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		The margin between the Kumasi-Afema Basin and Bibiani-Sefwi Belt is marked by a broad zone of roughly sub-vertical shearing, striking roughly NNE, regionally referred to as the Bibiani or Sefwi Shear. The sedimentary sequence is tightly folded, with west-dipping axial planes and localised development of steep W-NW dipping shear zones, which acted as conduits for initial Au mineralisation. Further deformation resulted in development of S-SE dipping brittle-ductile faults and emplacement of larger quartz reefs. Mineralisation is related to emplacement of quartz veins, which occur as either sheared, stockwork veins with quartz-ferroan dolomite, or as larger, up to 20m wide, locally stylolitic quartz reefs. Both veins types are associated with pyrite +/- arsenopyrite. Fine-grained disseminated Fe-carbonate and sericite alteration with pyrite +/-arsenopyrite occurs adjacent to the veining. The overall mineralised trend extends over 2km along strike. Mineralisation has also been identified on a sub-parallel trend to the east of the main deposit, with numerous pits developed by pervious operators over a strike length of approximately 4km.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *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* ○ *Whole 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.*	All information including easting, northing, elevation, dip, azimuth, coordinate system, drill hole length, interval length and depth are measured and recorded in UTM WGS84 Zone 30 North. The Bibiani local mine grid has been tied to the UTM WGS84 Zone 30 North coordinate system. Drill hole information has been tabulated for this release in the intercepts table of the accompanying text. For completeness the following information is provided for each drill hole: • Easting, Northing and RL of the drill hole collars are measured and recorded in UTM WGS84 Zone 30N. • Dip is the inclination of the drill hole from horizontal. For example a drill hole drilled at ○ -60^0 is 60^0 from the horizontal • Down hole length is the distance down the inclination of the hole and is measured as the distance from the horizontal to end of hole. • Intercept depth is the distance from the start of the hole down the inclination of the hole to the depth of interest or assayed interval of interest.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually*	Exploration results reported in this announcement are tabulated using the following parameters: • Coordinates are UTM WGS84 Zone 30N • Cut-off grade for reporting of intercepts is >=1g/t Au with a maximum of 3m consecutive internal dilution included within the intercept; only intercepts >=3m are reported.

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	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.*	• No top cut of individual assays prior to length weighted compositing of the reported intercept has been applied. Metal equivalent reporting was not used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Mineralised zones across the deposit vary from steeply east dipping to steeply west dipping, with dips generally exceeding 70^0. Drill holes are designed to intersect the mineralisation as close to orthogonal to the strike and dip as practical. Surface drill holes were drilled with azimuths at mine grid 270° in the south and at mine grid 090° in the northern end, depending access and the overall trend of the mineralisation. Underground drill holes were mostly drilled at mine grid 090° and occasionally at slightly oblique angles to the mineralisation depending on access. In general, true widths may be 50-90% of the downhole length.
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.*	Relevant maps, diagrams and tabulations are included in the body of text.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Reporting of drill holes accompanies this report in a table highlighting significant intercepts.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but*	No geophysical or geochemical data is reported in this release as they are not deemed relevant to the release.

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	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.	All diamond core drilled and sampled by Mensin are measured for bulk density which has a mean value of 2.77 g/cm^3 and varies between 2.30 and 3.00 g/cm^3.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Drilling by Mensin to test lateral and depth extensions of the known mineralisation is ongoing.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	Data captured in a relational SQL database. The setup of this database precludes the loading of data which do not meet the required validation protocols. The data was managed using DataShed© drill hole management software (Maxwell Geoservices) using SQL database techniques. Validation checks are conducted using SQL and DataShed© relational database standards. Approximately 6% by number (17% by length) of assayed samples prior to compositing were greater than 3.0 m in length. These overlength samples were sampled prior to 2014 and had an average grade lower than the < 3.0 m samples. These overlength samples were excluded from variography analysis but were included in the top-cut analysis and subsequent grade estimate. Drillhole database has been supplied as an extract of the master drillhole database. The drillhole collar data was visually inspected for any obvious errors (underground holes plotted up on surface, surface holes projected up above the surface).

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		The assay and density data was inspected for potential outlier values and overlapping intervals, none of which were identified in the assay data. Approximately 1% of the 39,862 density determinations were identified as being potentially erroneous and excluded from further analysis. The database was subsequently validated and checks made to the database prior to use included: • check for overlapping intervals • downhole surveys at 0m depth • consistency of depths between different data tables check gaps in the data.
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.*	No site visit has been undertaken by the Kahan Cervoj who is accepting responsibility for the compilation of the Mineral Resource. As this is a long lived project that recently was being successfully mined by the current operators, that Mensin Gold Bibiani Ltd personnel have accumulated extensive experience at the project and are taking responsibility for data collection, exploration results and interpretations (i.e. sections 1 and 2 of the JORC Table 1), a site visit by the person completing the Mineral Resource was not deemed necessary
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 factors affecting continuity both of grade and geology.*	The historical underground mining and recent open pit mining has resulted in a good understanding of the geology and mineralisation. There is high confidence in the geological interpretation. All available data (diamond and RC drilling, underground channel sampling) has been used to update the mineralised interpretations. The 2017 update is focussed on the underground potential. Oxidised material has been depleted as part of the main and satellite pit mining and is assumed to be fully depleted. There is limited scope for alternative interpretations on a global scale. As a series of parallel lodes and splays, there is scope for very localised alternative interpretation. The mineralisation interpretation was guided by a combination of the geology (presence of structure and/or quartz veining) and gold grade. The only exception is Stope 13 domain which is based on a 0.5 g/t gold cut-. Factors that affect grade and geological continuity include the structural orientation (main shear or footwall/hanging wall splay), and thespatial relationship with the tonalite intrusive to the west of the mineralised system.
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*	The Bibiani mineralisation outcrops on surface and can be traced over 1,950 m strike length and 700 m vertically, consisting of 12 lodes. The individual lodes range in strike length from 100 to 970 m along strike, 150 to 650 m vertically and with true widths that range from less than 1 m to 32 m true width.

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	Resource.	
Estimation and modelling 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.*	Grade estimation was by ordinary kriging using top-cut 1.0 m length composites samples which was appropriate given the grade distributions. Top-cuts were applied to each individual lode to reduce the impact of a limited number of outlier grades. The lodes were interpreted using a combination of geology and grade, and the final solids were wireframed using Leapfrog Geology software. Each lode was treated individually and estimated using hard boundaries. Grade compositing was undertaken in SURPAC v6.6.2 and grade estimation completed in Datamine Studio RM v1.3.11.0. The grade estimation search and variogram orientation used the Studio RM dynamic anisotropy function. Less than 1% of the resource is extrapolated and the maximum distance of extrapolation is 131 m.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Compared to the 2014 Mineral Resource estimate, there has been an increase in the interpreted volume and tonnes at approximately the same grade for the deposit. This change is the result of on-going extensional and infill exploration drilling and updated interpretations.
	• *The assumptions made regarding recovery of by-products.*	No assumptions regarding the recovery of any by-products have been made.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).*	No deleterious elements or other non-grade variables of economic significance have been estimated or modelled.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	A parent block size of 20 mN x 5 mE x 20 mRL was used for estimation. The nominal drillhole spacing is 20 mN x 20 mRL in the plane of the mineralisation. An expanding 3 pass search method was employed, with the search radii based on the overall geometry of the lode. The search radius for the first pass ranged from 75 x 50 x 10 m to 175 x 85 x 20 m, and was expanded by a factor of 1.25 for the second pass and 2.5 for the third pass. A minimum number of two drillholes were required to inform the estimate. Any cells that were not estimated after the third pass (approximately 2% by volume) were assigned the nearest estimated block grade.
	• *Any assumptions behind modelling of selective mining units.*	No assumptions regarding the selective mining unit have been made.
	• *Any assumptions about correlation between*	

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	variables. • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	No other variables other than gold and dry density have been modelled. The mineralised interpretations were built on observed geology (presence or absence of alteration, veining, structure) and grade. Domain Stope 13 was an exception to this, which was based on a 0.5 g/t gold cut-off due to the limited exposure of this zone/structure. All boundaries were treated as 'hard' boundaries to flag the raw and subsequent composite samples, and for grade estimation. Grade cutting was used for all domains/zones, with each zone being individually reviewed using a combination of population disintegration and grade distribution plots. The only exception was for the non-mineralised (waste) domain which was severely top-cut to manage the limited number of outliers. The block grade estimate was initially validated by visual review of block grades to drillhole data, followed by a global comparison between the naïve and declustered grades and finally by swath plots by easting, northing and elevation. The Mineral Resource has been depleted for known underground mining. Production data has currently not been reviewed and no reconciliation between the production and the 2017 estimate has been undertaken.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	All tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	A reporting cut-off of 2.0 g/t gold has been used to reflect the most probable underground mining scenario presented in the June 2016 Feasibility Study.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining*	A Feasibility Study has been completed in June 2016, that used the June 2014 Mineral Resource. The preferred mining method identified was large scale long-hole mining methods.

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	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.*	It is assumed that the metallurgy does not materially change with depth and that the metallurgical performance of the fresh open pit ore is not materially different for underground ore. It Is also assumed that future treatment options will utilise much of the exiting processing infrastructure. The current circuit configuration includes a Knelson Concentrator which typically recovers up to 35% of the gold. Historically, the processing facility has produced dore with a fineness of 80% gold and 20% silver. The gold grain size distribution is reported as predominantly less than 50 microns however visible gold has been observed within some quartz veins. Arsenopyrite has been observed within the ore body and there is generally a good correlation between the presence of gold. The presence of arsenopyrite has no deleterious effect on processing of the ore. The ore host rock can be graphitic and carbonaceous with the graphite content increasing in the more intensely sheared zones. Historic processing data suggests the graphite may negatively impact gold recovery in the elution circuit, but this is reflected in the historical processing performance.
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 greenfield 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.*	Future processing operations would employ the existing regulated tailings storage facility that was used for the processing of the open pit material. Some waste rock from future mining underground may be potentially-acid forming, the majority of the waste rock will be non-acid forming. Waste rock dumping has been scheduled, along with encapsulation designs and optimization determined to minimize the risk of acid forming conditions from the waste rock dumping landform. The rehabilitation plan for the landform is also a key control. Tailings generated from the project are not expected to be net acid forming and will be stored in the current regulated storage facility.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the asumptions. If determined, the method used, whethser wet or dry, the of the measurements, the nature, size and frequency representativeness of the samples.*	Bulk density is based on 37,123 validated dry density determinations. For the insitu mineralisation a density value of 2.75 t/m3 was assigned. This value remains unchanged from previous estimates. There was no material difference between the different weathering or oxidation conditions. Tne mineralised oxide and transitional material has been fully depleted.

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	• *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.*	Procedures used to collect the bulk density information are not available. On-going mining at Bibiani has confirmed that the density value is appropriate. It was noted some of these determinations were on whole runs along the drillhole, while others were 'spot' density chosen either at a fixed distance down the drillhole or to capture some observed feature in the core. However, no bias was identified between the two data collection types. There was no observed difference between the grade distributions for the different weathering/oxidation conditions or between the mineralised/non-mineralised material. A single value has been assigned to all insitu material.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. 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.*	Mineral Resource classification was based on a combination of the drillhole spacing and kriging efficiency. Where grade and geological confidence was demonstrated, and the nominal drilling approached less than 40 to 50 m spacing and the average nominal KE was greater than 30%, the mineralisation was classified as an Indicated Mineral Resource. Material that did not meet this criteria were classified as an Inferred Mineral resource. There were small areas that remain unclassified because of either the extent of extrapolation and/or associated lack of confidence in the interpretation. The Mineral Resource classification incorporates all relevant factors. The classification appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	The Mineral Resource has undergone internal peer review but no other independent third party audits are available at this time.
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*	No geostatistical studies have been undertaken to determine relative accuracy or confidence limits of the estimate. Relative accuracy and confidence is reflected in the resource block model by the resource category assigned to blocks, that ultimately relates to local drillhole spacing and the geological interpretation.

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	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.*	Overall the 2017 Mineral Resource estimate is considered a global estimate. In areas of closer spaced drilling and where reflected by the resource classification, the estimate approximates a local estimate, but requires grade control sampling prior to mining. Reconciliation with historical underground or open pit mining has not been done.