21% Increase in Mineral Resources at Wa Gold Project, Ghana

AZUMAH RESOURCES LIMITED

- **Mineral Resources increased by 21% or 433,900oz to 2.5Moz**
- **Total Measured and Indicated Mineral Resources increased by 16% to 1.6Moz at 1.8g/t Au**
- **Julie and Kunche continue to deliver with increases of 191,000oz and 95,500oz respectively**
- **Maiden estimates for several new prospects adds 148,600oz**
- **New season drilling campaigns to commence soon with emphasis on further uplifts in Mineral Resources**

West African gold explorer and developer **Azumah Resources Limited (ASX: AZM) ('Azumah')** advises it has increased combined Mineral Resources by 21% or 433,900oz to 2.5Moz (49.2Mt at 1.6g/t Au) for its Wa Gold Project ('Project') in Ghana, West Africa inclusive of maiden estimates for several emerging satellite discoveries (Table 1).

With this recent increase in Mineral Resources and the successes being achieved in lowering capital and operating costs, expectations for attractive Project financial metrics are high (ASX release 24 September 2018).

Ore Reserves will be updated, along with the financial metrics for the Project, when an interim study is reported before the end of 2018 (Table 2).

Measured and Indicated Mineral Resources have increased by 16% to 1.6Moz (28.8Mt at 1.8g/t) and Inferred Mineral Resources increased by 31% to 0.9Moz (20.4Mt at 1.4g/t Au) (Table 1). These Mineral Resources are evenly distributed across the Kunche-Bepkong and the Wa East development camps.

Drilling down-dip and strike extensions at the flagship Julie deposit saw Mineral Resources lifted by 191,000oz to 1,025,000oz, while drilling has lifted Mineral Resources by 95,500oz to 846,500oz at the flagship Kunche deposit.

Maiden estimates for the emerging Kunche Northwest, Yagha, Josephine, Manwe and Alpha-Bravo satellite prospects accounted for a combined 148,600oz increase in Mineral Resources, with several of these yet to be fully closed-off.

Additional Mineral Resources updates are to be expected from planned drilling that will commence shortly at several of the Project's deposits and prospects, and which will continue through into 2019.

The first scheduled RC holes are designed to test the continuity of high-grade mineralisation below the intercept of 44m at 5.37g/t Au from 99m (KRC831) obtained in Kunche's central saddle zone (ASX release 8 May 2018). Details of the entire programme will be made available soon.

ASX & Media Release

28 September 2018

ASX: AZM

www.azumahresources.com.au

Wa Gold Project:

Value

2.5Moz Mineral Resource

2,400km² fertile terrain

624,000oz, 2.14g/t Au Ore Reserve

Upside

Growing resources and reserves

Widespread anomalism

Numerous priority targets

Activity

~47,000m drilling in 2018

Feasibility Study

Fully Funded

<A$17M over 2yrs

Ibaera Capital earning 47.5% directly in Project

Ibaera technical team managing Project

Issued Capital:

782M ordinary shares
35M 3c opts exp 13.11.2021
3M 3c opts exp 30.06.2020
1.5M 3c opts exp 31.01.2021

Directors & Management:

Chairman:
Michael Atkins

Managing Director:
Stephen Stone

Non-Executive Director:
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Azumah's Managing Director Stephen Stone said:

"This 21% increase in Mineral Resources represents yet another positive milestone in the repositioning of the Wa Gold Project under the management of joint venture partner, Ibaera Capital, and adds to the preliminary advances in reducing capital and operating costs reported earlier this week.

"The additional 148,600oz of gold obtained from maiden estimates at several new discoveries is an important pointer to the highly prospective nature of the project's extensive tenure and its capacity to continue delivering new quality discoveries.

"We are increasingly confident that the many positive attributes of the project will become apparent when we provide an interim study update later this year, with a fully updated Feasibility Study to be finalised in Q3 2019.

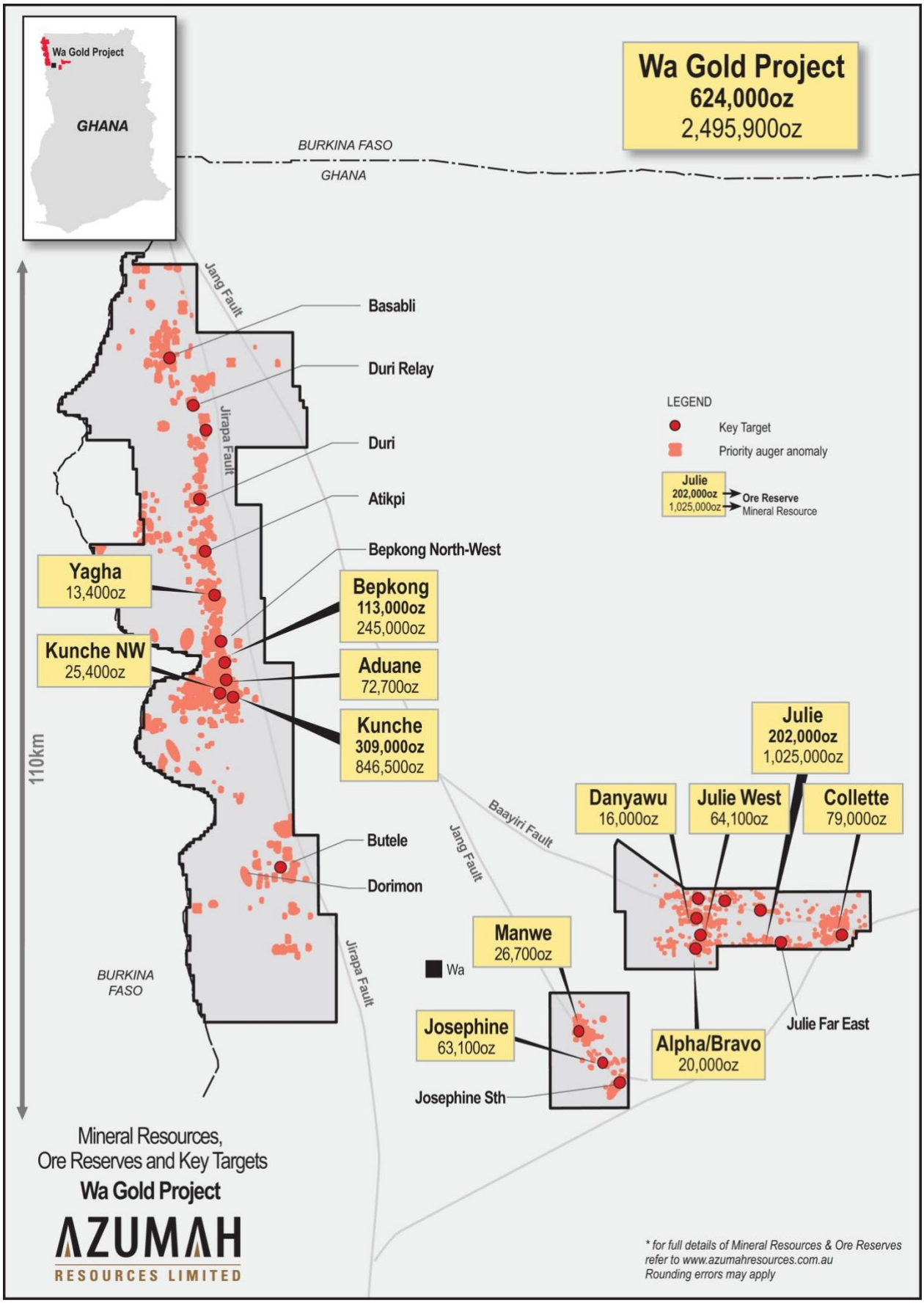
"The new field season will commence shortly with intensive, project-wide drilling campaigns directed at increasing Ore Reserves the primary focus".

Table 1: Mineral Resource Estimate – JORC Code 2012 – Updated September 2018

		Measured			Indicated			Measured + Indicated			Inferred			Grand Total		
Deposit	**Cutoff Au g/t**	**Tonnes (Kt)**	**Au g/t**	**Ounces**	**Tonnes (Kt)**	**Au g/t**	**Ounces**	**Tonnes (Kt)**	**Au g/t**	**Ounces**	**Tonnes (Kt)**	**Au g/t**	**Ounces**	**Tonnes (Kt)**	**Au g/t**	**Ounces**
Wa-Lawra:																
Kunche	0.5	8,835	1.6	446,000	3,404	1.3	145,000	12,239	1.5	591,000	7,616	1.0	255,700	19,855	1.3	**846,500**
Bepkong**	0.5	2,220	1.8	128,000	1,700	1.3	73,000	3,920	1.6	201,000	1,170	1.2	44,000	5,090	1.5	**245,000**
Aduane	0.5				322	1.2	12,800	322	1.2	12,800	1,491	1.3	59,900	1,812	1.3	**72,700**
Kunche NW	0.5										694	1.1	25,400	694	1.1	**25,400**
Yagha	0.5										333	1.3	13,400	333	1.3	**13,400**
Wa East:																
Julie*	0.5	1,490	2.1	101,000	9,300	1.9	572,100	10,790	1.9	673,000	6,360	1.7	352,000	17,150	1.9	**1,025,000**
Collette**	0.5										1,690	1.5	79,000	1,690	1.5	**79,000**
Julie West	1.0				455	4.0	58,900	455	4.0	58,900	68	2.4	5,100	523	3.8	**64,100**
Danyawu	1.0				105	4.2	14,200	105	4.2	14,200	38	1.5	1,800	143	3.5	**16,000**
Alpha/Bravo	1.0										148	4.2	20,000	148	4.2	**20,000**
Josephine	1.0				709	1.5	34,500	709	1.5	34,500	580	1.5	28,600	1,290	1.5	**63,100**
Manwe	1.0				257	2.1	17,300	257	2.1	17,300	192	1.5	9,400	450	1.9	**26,700**
Total		**12,545**	**1.7**	**675,000**	**16,252**	**1.8**	**927,800**	**28,797**	**1.8**	**1,602,700**	**20,380**	**1.4**	**894,300**	**49,178**	**1.6**	**2,496,900**

Note: Values have been rounded. A lower cut-off of 0.5g/t Au was used for Kunche, Aduane, Kunche NW, Yagha, Julie, Collette and Bepkong. A lower cut-off of 1.0g/t Au was used for Julie West and Danyawu, Alpha/Bravo, Josephine and Manwe.
*Julie resources completed by CSA 2018. **Bepkong and Collette resources from ASX announcement 2 September 2014.

Wa Gold Project: Deposits, Prospects, Mineral Resources and Ore Reserves as at September 2018



ASX Listing Rule 5.8.1 and Clause 20 of the JORC Code

In compliance with ASX Listing Rule 5.8.1 and Clause 20 of the JORC Code, the following summary information is provided for each Mineral Resource. Please also refer to Competent Persons' Statements and to Appendix: Tables 1, 2 and 3:

General

Drilling Techniques

All Mineral Resources are supported by samples collected from RC and DD drilling. RC holes were drilled with a 5.25-inch hammer bit and DD holes drilled with HQ diameter (63.5mm) coring bit. Drilling was conducted by GeoDrill Ghana Limited and Minerex Drilling Contractors Limited with a KL900 or UDR650 multi-purpose rig.
Trenching was carried out during earlier phases of the project development and provided valuable geological information but were not used to constrain the geological interpretations or provide data for the grade interpolation.

Sampling and Sub-sampling Techniques

RC samples were collected at 1m intervals. Every metre drilled was collected via cyclone into a plastic bag, then placed in rows of 20. The samples were composited into 4m composites using a PVC spear, then sent to the laboratory for analysis, except in zones of obvious mineralisation, where the single metre riffle split sample was sent to the analytical laboratory. RC sample weights averaged 20kg in oxide material and 30kg in fresh material.
Diamond samples were taken at 0.1–1.1 m intervals. The sample quality and recovery of DD core from fresh and oxidised rock was good. Sampling intervals were based on lithology and/or alteration changes. The core was cut in half longitudinally using a core saw.
Field Quality Assurance and Quality Control (QA/QC) procedures included insertion of field duplicates and certified reference materials (CRMs) in every batch (1 per 50 samples).
Laboratory QA/QC procedures included:

- Every 50th sample was screened to check grinding results (% passing 2mm and 75µm).
- 1 reagent blank was inserted every 50 samples, 1 preparation process blank was inserted every 50 samples and 1 weighed replicate was inserted every 50 samples.
- 1 preparation duplicate (re-split) every 50 samples and 2 CRMs every 50 samples.

Sample Analysis Method

Laboratory sample preparation included:

- Drying the sample at 105°C for 4 hours.
- Grinding the sample to less than -6mm.
- Splitting the sample using a riffle splitter.
- Pulverising the sample for 4 minutes to achieve 85% of sample passing -75µm in grain size.

Gold analysis on RC and DD samples was carried out by fire assay with atomic absorption spectroscopy method which has a detection level of 0.01ppm Au.

Julie

The Julie data set consists of 916 drill holes, 70,130.5m of drilling. The drilling consists of 43 diamond drill holes for 1,895.4m, 841 RC holes for 62,455mm and 32 RC/Diamond tail holes for 5,780.1m. Drill hole spacing varies across the deposit; along strike spacing varies from 20m to 50m and across strike 10m to 40m.

The Julie Mineral Resource is presented below and is reported above a cut-off grade of 0.5g/t Au.

Julie Mineral Resource. Reported from blocks where Au >= 0.5g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Measured	1,490	2.1	101,000
Indicated	9,300	1.9	572,100
Measured + Indicated	10,790	1.9	673,000
Inferred	6,360	1.7	352,000
Total	17,150	1.9	1,025,000

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

The Julie deposit is hosted in deformed granodiorite and is comprised of quartz lodes within a 6km long E-W-trending shear zone that dips consistently north, with a moderate to low (30–40°) dip. The quartz veins appear to crosscut the majority of host rock structures, including several orientations of epidote-chlorite quartz shears.
The earliest formed recognisable structure in the host granodiorite is a tectonic foliation defined by grain alignment. The host shear zone is intensely foliated, and a strongly deformed suite of carbonate veins is prominent, oriented parallel to the shear foliation. The shear foliation is axial planar to a number of tightly folded quartz veins. Carbonate-sericite alteration has imparted a buff brown colour to the foliated country rocks adjacent to the veins. A dominant NW- to N-plunging extension lineation is also evident within the shear zone, which supports a steeply oblique dextral, north-side-up sense of movement.
The sulphide assemblage in the gold-bearing quartz veins is dominated by pyrite, which occur as single euhedral crystals, as disseminated grains in the vein alteration selvedge's, and as irregularly-shaped "clots". Chalcopyrite is quite rare and is interpreted to have formed at the same time as pyrite (and gold).
The Julie deposit is divided into five areas: Far East (597300m E – 591800m E); East (596550m E – 597300m E); Central (595600m E – 596450m E); West (593800m E – 595500m E); and Far West (592650m E – 593600m E). The area boundaries are based upon northing offsets in Au mineralisation and / or strike extents of barren host rock.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.3g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.3 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 145 individual wireframe solids were constructed capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOCO) and top of fresh rock (TOFR) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 10m (X) by 5m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells. Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1m and therefore a sample composite length of 1m was adopted. Top cuts for the sample data were determined with top cuts ranging between 20g/t and 60g/t. Variograms were modelled for the three most populated domains, with high relative nugget effects and short ranges of approximately 20m modelled. Primary directions were modelled with a shallow plunge to the NNW, which is supported by structural lineations as observed in drill core.
Grade was interpolated into the block model parent cells using ordinary kriging. The choice of minimum and maximum number of samples and search ellipse radii were guided by kriging neighbourhood analysis (KNA). Between 8 and maximum of 34 samples from a minimum of 4 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 30m (major) by 30m (semi-major) by 10m (minor) radii was used, with ellipse

orientation determined by the local dip and dip direction of the domain boundaries. The mineralisation envelopes were used as hard boundaries during grade interpolation. The distribution of interpolated block model grades is presented below.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.15t/m^3, transitional material was assigned a density of 2.52t/m^3 and fresh material was assigned a density of 2.74t/m^3.

Block Model Parameters

Field	East	North	Z
Min	592600	1115000	90
Max	598100	1116600	360
User block size	10m	5m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Measured, Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting). Domains with between 1 and 3 holes intercepting the domain are classified as Inferred.

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 0.5 g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Persons believe there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Julie deposit is part of the larger Wa Gold Project which includes the Kunche and Bepkong Gold deposits located to the north west of Julie.

Kunche

The Kunche data set consists of 980 drill holes, 91,680 m of drilling. The drilling consists of 15 diamond drill holes, 614 RC holes for 59,939m and 86 RC/Diamond tail holes for 18,792m. Drill hole spacing varies across the deposit; along strike spacing varies from 20m to 50m and across strike 10m to 40m.
The Kunche Mineral Resource is presented below and is reported above a cut-off grade of 0.5 g/t Au.

Kunche Mineral Resource. Reported from blocks where Au >= 0.5g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Measured	8,835	1.57	446,000
Indicated	3,404	1.33	145,000
Measured+ Indicated	12,239	1.50	591,000
Inferred	7,616	1.04	255,700
Total	19,855	1.33	846,500

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Mineralisation at Kunche is intimately associated with a major approximately N-S to NNW striking quartz-vein system, characterised by dark grey vein quartz, with minor sulphide, largely concentrated on vein margins and sediment selvedges. Veining is best developed in coarse wackes or in a zone of interbedded wackes and phyllites (the Kunche Shear Zone) and it varies from irregular and partly replacive, to sharply bounded zones of brittle stockworks. Brecciation appears to have been achieved largely through shortening and resulted in deformation of the veins without major displacement. The planar through-going shear fabrics appear to overprint the brecciation textures.
The main veins are parallel or sub-parallel to the S1/S2 fabric, typically dipping steeply west, but locally rolling to sub-vertical or steeply east. While minor veins occur in many orientations, shallow veins are prominent as well as veins sub-parallel to the main vein. This suggests a component of reverse (up-from-west) shear (Warries et al, 2012).
At Kunche gold mineralisation occurs as brittle quartz lode/breccia-hosted with higher grade mineralisation associated with intense silicification, smoky quartz veins, arsenopyrite and pyrrhotite.
The geometry (strike and dip) of the mineralisation was interpreted based upon structural observations from diamond core, trenching, outcrop mapping and geochemistry. A trend surface was used to orientate the search ellipse for the grade interpolation.
A categorical indicator approach was used to define the mineralisation envelopes by estimating the probability of areas being mineralised or unmineralised. An Au cut-off grade of 0.2g/t was used as the probability indicator. This probabilistic technique was used as it results in the mineralised zones being defined in detail and with a high resolution and without bias or triangulation issues. A resolution of 2 x 2 x 2 (X, Y, Z) was used. Mineralisation envelopes generated using this approach were used for sample coding and block model construction.
Late stage sub vertical dolerite dykes, striking roughly NS, which are void of any significant mineralisation, were interpreted in cross section using the lithology logging and multi element pXRF data. These where used as domains in the model and excluded from the main mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells. The block size is half the drill spacing and is considered the industry standard for cell size.

Block Model Parameters

Field	East	North	Z
Min	526700	1147900	-20
Max	527500	1150100	340
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1 m and therefore a sample composite length of 1m was adopted. Top cuts for the composite data were determined using statistics with a top cut of 20g/t applied. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 144m modelled along strike. Primary directions were modelled with a shallow plunge to the South.
Grade was interpolated into the block model parent cells using ordinary kriging. Inverse distance to the power of 2 and 3 estimates were also run to validate the OK estimation. Interpolation parameters were based on the geometry of geology and geostatistical parameters determined by variography.
A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) radii was used. The search ellipse orientation was determined by dip and dip direction of the trend surface, with the search ellipse expanded by 2 and then by 3, the maximum range from the variography, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. Static search ellipse interpolated blocks, using the orientation obtained by the variography, were used to validate the anisotropy search interpolations.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, comparing other estimation methods and types and comparison of mean grades from sample data.
A bulk density database consisting of 524 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 1.93t/m3, transitional material was assigned a density of 2.37t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, the relative confidence in the geological interpretation, grade continuity and kriging variances.
The Mineral Resource is classified as a combination of Measured, Indicated and Inferred. All blocks were classified.
Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 0.5 g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Kunche deposit is part of the larger Wa Gold Project.

Aduane

The Aduane data set consists of 622 holes for a total of 54,520m. This includes 45,211m (455holes) of RC drilling, 6,704m (149 holes) of AC drilling, 3,248m (73 holes) of RAB drilling, 2254m (12 holes) of RCDD drilling and 352m (6 holes) of DD drilling drill holes. Only the RC and Diamond drilled holes were used in the estimation. Drill hole spacing varies across the deposit; along strike spacing varies from 25m to 100m and across strike of 20m to 50m.
The Aduane Mineral Resource is presented below and is reported above a cut-off grade of 0.5g/t Au.

Aduane Mineral Resource. Reported from blocks where Au >= 0.5 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Indicated	322	1.23	12,800
Inferred	1,491	1.25	59,900
Total	1,813	1.25	72,700

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Aduane, located immediately south of Bepkong, is hosted by a meta-sedimentary package, with carbonaceous phyllites dominant over arenitic wacke units. Arsenopyrite appears to be more prevalent in mineralised zones. The deformation style is similar to that at Bepkong and is ductile in nature.

Mineralisation occurs within approximately N-S trending structural zones of stringer veining and disseminated arsenopyrite in wacke units. Higher grade mineralisation occurs within a broad envelope of lower grade mineralisation. Best intersections define four 'pods' spaced at 30-40m trending NNW over 1500m to the south of Bepkong. Each 'pod' comprises multiple discontinuous N-S oriented high-grade zones, related to sheared zones and disseminated wacke-hosted mineralisation in core
The geometry (strike and dip) of the mineralisation was interpreted based upon structural observations from diamond core, trenching and outcrop mapping.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.3g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.3 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 20 individual wireframe solids were constructed capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	526740	1150100	-15
Max	527755	1151860	345
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

The mineralised domains were flattened in Easting for statistical analysis and grade estimation.
Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1m and therefore a sample composite length of 1m was adopted. Top cuts for the sample data were determined with top cuts 12g/t. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 198m modelled along strike. Primary directions were modelled with a shallow plunge to the S.
The mineralised domains were flattened in Easting for statistical analysis and grade estimation.
Grade was interpolated into the block model using ordinary kriging. A minimum of 5 and maximum of 30 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) radii was used, with the ellipse flattered by the domain boundaries. The search ellipse expanded by 2 and then by 3, the maximum range from the variography, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. Blocks outside the mineralised domains were interpolated using only the first interpolation search of 40 x 30 x 5.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the Kunche core. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 1.93t/m3, transitional material was assigned a density of 2.37t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
Due to the patchy nature of the mineralisation. The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 0.5g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Aduane deposit is part of the larger Wa Gold Project.

Julie West

The Julie West data set consists of 96 holes for a total of 5,566m. 90 holes were RC for 5,471m and 6 RAB holes for 95m. Holes were drilled on a 20-40m by 20-40m pattern within mineralised zones. Hole dips ranges from -50 degrees to -90 degrees towards 220 degrees perpendicular to the mineralisation. Only the RC drilled holes were used in the estimation.

The Julie West Mineral Resource is presented below and is reported above a cut-off grade of 0.5g/t Au.

Julie West Mineral Resource. Reported from blocks where Au >= 1 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Indicated	455	4.02	58,900
Inferred	68	2.35	5,100
Total	523	3.81	64,000

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Julie West is situated 3.5km West of the larger Julie deposit, with the same rock types and similar mineralisation styles.

The Au mineralisation is almost exclusively confined to a moderately dipping (-50°) quartz reef, with only subordinate grades being reported in the host diorite. The primary vein dips to the north east and varies in thickness from 1m to 9m with an average of approximately 3.5m. The mineralised vein has a north-south extent of 560m.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.5 /t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.5 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 4 individual wireframe solids were constructed capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) rotated at 35 degrees to the west was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	589050	1116450	30
Length	800	900	310
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	-35

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1 m and therefore a sample composite length of 1 m was adopted. Top cuts for the sample data were determined with top cuts 30g/t and 10g/t. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 170 m modelled along strike.
Grade was interpolated into the block model parent cells using ordinary kriging. A minimum of 5 and maximum of 20 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 60m (major) by 45m (semi-major) by 5m (minor) radii was used, with ellipse orientation determined variography and geological trend. The search ellipse was expanded by 2 and then by 3, the maximum range from the variography, to fill the remaining blocks. The mineralisation envelopes were used as hard boundaries during grade interpolation.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the nearby Julie deposit with the same rock types and mineralisation style. A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.05t/m3, transitional material was assigned a density of 2.45t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 1.0g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong

community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Julie West deposit is part of the larger Wa Gold Project.

Danyawu

53 holes were drilled for a total of 3956m with all holes drilled RC. Hole dips range from -50 degrees to -90 degrees towards 220 degrees perpendicular to the mineralisation. The average RC depth was 74m. Holes were drilled on a 10-25m by 10-25m pattern within mineralised zones
The Danyawu Mineral Resource is presented below and is reported above a cut-off grade of 1.0g/t Au.

Danyawu Mineral Resource. Reported from blocks where Au >= 1 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Indicated	105	4.21	14,200
Inferred	38	1.47	1,800
Total	143	3.48	16,000

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Danyawu is situated 5km North West of the Julie deposit and 2km North of Julie West, with the same rock types and similar mineralisation styles.

The Au mineralisation is almost exclusively confined to a moderately dipping (-40°) quartz reef, with only subordinate grades being reported in the host diorite. The primary vein dips to the north northeast and varies in thickness from 1m to 16m with an average of approximately 8m. The mineralised vein has a north-south extent of 120m.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.5g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.5 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 4 individual mineralisation domains were constructed using surfaces for the top and bottom of mineralisation, capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 5m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	588600	1118900	60
Max	588850	1119260	270
User block size	5m	5m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1 m and therefore a sample composite length of 1m was adopted. Top cuts for the sample data were determined with top cuts of 40g/t adopted. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 90m modelled along strike.
Grade was interpolated into the block model parent cells using ordinary kriging. A minimum of 5 and maximum of 20 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 40m (major) by 50m (semi-major) by 5m (minor) radii was used, with ellipse orientation with ellipse orientation determined variography and geological trend. The search ellipse was expanded by 2 and then by 3, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. The remaining un domained blocks were modelled using only the first interpolation.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the nearby Julie deposit with the same rock types and mineralisation style. A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.05t/m3, transitional material was assigned a density of 2.45t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
Due to the patchy nature of the mineralisation. The Indicated Mineral Resource is supported at a drill spacing of 20m (N) x 20m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 20m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 1.0g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Danyawu deposit is part of the larger Wa Gold Project.

Josephine

The Josephine data set consists of 67 holes for a total of 5,295m. 63 holes were RC for 4990m and 4 holes were DD for 305. Hole dips ranges from -50^0 to -90^0. Average RC depth was 79m. Holes were drilled on a 25-50m by 25-50m pattern within mineralised zones.

The Josephine Mineral Resource is presented below and is reported above a cut-off grade of 1.0g/t Au.

Josephine Mineral Resource. Reported from blocks where Au >= 1 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Indicated	709	1.51	34,400
Inferred	580	1.53	28,600
Total	1,289	1.52	63,000

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

At Josephine, coarse clastic metamorphosed sandstones or quartzites, often pebbly, form prominent outcrops, locally with well-preserved cross-lamination. The northwest- to north northwest-trending mineralised zone corresponds with a recessively weathered mixed unit of meta-clastics, amphibolite, garnet-bearing phyllite and marble, best seen in drill core. The sandstones are strongly deformed with S1 parallel to S0 and a northeast-plunging L1 stretching lineation with a movement sense up from the northeast. The deformation style and thrust geometry is similar to Julie and it is possible that this was originally the same movement sense now rotated into a northwest trend.

The clastic outcrops at Josephine correlate with a prominent magnetic high, very similar in pattern to the 'Tarkwaian' sediments to the east where very similar cross-laminated coarse pebbly sandstone form extensive outcrops. The similarity suggests that the rocks at Josephine may be part of the same domain, metamorphosed at higher grade.

Mineralisation occurs along a northwest-trending structural fault zone (the 'Josephine fault') that splays from the Jang fault as the latter bends clockwise to a southwest trend towards the Jirapa Fault. The Josephine fault cuts through a relatively flat magnetic domain which appears to include high-metamorphic grade metasediments and granitoid intrusives.

Mineralisation at Josephine is not associated with strong veining. Minor stringer grey quartz veins in drill core appear to pre-date main-stage deformation and metamorphism. The workings are aligned in a northwest-trending zone, but individually trend north-northwest in the south swinging to northwest in the north into one of the main bounding faults. Dips are steep through the main part of the zone, but the clastics on the northeast edge of the zone dip shallowly northeast.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.5g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.5g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 6 individual wireframe solids were constructed capturing the Au mineralisation over a strike length of 400m.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 10m (X) by 5m (Y) by 5m (Z), rotated 30 degrees to the west was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	586000	1100100	160
Length	930	1070	220
User block size	10m	5m	5m
Min block size	1m	1m	1m
Rotation	0	0	30

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1m and therefore a sample composite length of 1m was adopted. Top cuts for the sample data were determined with top cuts of 10g/t adopted. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 80 m modelled along strike.
Grade was interpolated into the block model parent cells using ordinary kriging. A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 40m (major) by 20m (semi-major) by 8m (minor) radii was used, with ellipse orientation determined by the local dip and dip direction of the domain boundaries. The search ellipse was expanded by 2 and then by 3, the maximum range from the variography, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. Static search ellipse interpolated blocks, using the orientation obtained by the variography, were used to validate the anisotropy search interpolations.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.

No Bulk density data has been collected at Josephine. Although rock types were different the high-grade metamorphism at Josephine and limited oxide profile have made the bulk densities similar to Julie, so the Julie bulk densities were applied. A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.05t/m3, transitional material was assigned a density of 2.45t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
Due to the patchy nature of the mineralisation. The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 1.0g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Josephine deposit is part of the larger Wa Gold Project.

Manwe

24 holes were drilled for a total of 2087m with all holes drilled RC. Hole dips ranges from -50 degrees to -70 degrees towards 230 to 270 degrees perpendicular to the mineralisation. The average RC depth was 86m. Holes were drilled on a 25-50m by 25-50m pattern within mineralised zones
The Manwe Mineral Resource is presented below and is reported above a cut-off grade of 1.0g/t Au.

Manwe Mineral Resource. Reported from blocks where Au >= 1 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Indicated	256	2.10	17,300
Inferred	192	1.52	9,400
Total	449	1.85	26,700

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Gold mineralisation at Manwe, located 5.5km NW of Josephine along the Josephine Fault, is associated with silicification, arsenopyrite, pyrite, haematite alteration and glassy translucent quartz veining, occurring along the contact of the phyllite and schist. The main zone consists of two plunging shoots of mineralisation with widths of around 60m and thickness up to 15m. The shoots plunge at 10 to 15 degrees towards 350 degrees, dipping at 48 degrees to the east with an identified strike of 250m

The geometry (strike and dip) of the lodes was interpreted based upon structural observations from trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.5g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.5g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
Two main zones of mineralisation were modelled with a total of 5 individual mineralisation domains were constructed using surfaces for the top and bottom of mineralisation, capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

Two block models were created at Manwe to cover the two zones of mineralisation. Block models with parent cell dimensions of 5m (X) by 5m (Y) by 5m (Z) were constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters Zone 1

Field	East	North	Z
Min	572800	1104680	140
Max	573055	1105150	360
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Block Model Parameters Zone 2

Field	East	North	Z
Min	57300	1104500	140
Max	57250	1104730	330
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1 m and therefore a sample composite length of 1 m was adopted. Top cuts for the sample data were determined with a top cut of 10g/t adopted. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 90 m modelled along strike.
Grade was interpolated into the block model parent cells using ordinary kriging. A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 35m (major) by 15m (semi-major) by 5m (minor) radii was used, with ellipse orientation with ellipse orientation determined variography and geological trend. The search ellipse was expanded by 2 and then by 3, the maximum range from the variography, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.

No Bulk density data has been collected at Manwe. Although rock types were different the high-grade metamorphism at Manwe and limited oxide profile have made the bulk densities similar to Julie, so the Julie bulk densities were applied. A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.05t/m3, transitional material was assigned a density of 2.45t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as a combination of Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
Due to the patchy nature of the mineralisation. The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting).

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 1.0g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Manwe deposit is part of the larger Wa Gold Project.

Alpha/Bravo

The Alpha/Bravo data set consists of 89 holes for a total of 2,999. 26 holes were RC for 1487 m and 63 holes were RAB for 1,512m. Holes were drilled on a 20-80m by 15-40m pattern within mineralised zones. Only the RC drilled holes were used in the estimation.
The Alpha/Bravo Mineral Resource is presented below and is reported above a cut-off grade of 1g/t Au.

Alpha/Bravo Mineral Resource. Reported from blocks where Au >= 1 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Inferred	148	4.2	20,000
Total	148	4.2	20,000

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Alpha/ Bravo is located 2km south west of Julie West and 5km west of Julie. Two zones of mineralisation exist, Alpha and Bravo, with the mineralisation almost exclusively confined to a moderately dipping (40-70°) quartz reef, with only subordinate grades being reported in the host diorite. The primary vein dips to the northeast and varies in thickness from 1m to 10m with an average of approximately 4m. The mineralised zone has an identified strike lengths of 200m which remains open.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.5g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.5 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 40m beyond the last fence of drill holes supporting the interpretations.
Mineralisation was in two distinct zone, Alpha and Bravo. A total of three individual wireframe solids were constructed capturing the Au mineralisation, one at Alpha and two at Bravo.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) rotated at 35 degrees to the west was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	586550	1114600	30
Max	587990	1115530	310
User block size	10m	5m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1 m and therefore a sample composite length of 1m was adopted. Top cuts for the sample data were determined with top cuts 15g/t. Variograms from nearby Julie West were used, with high relative nugget effects and ranges of 170m modelled along strike.
Grade was interpolated into the block model parent cells using ordinary kriging. A minimum of 5 and maximum of 20 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 60m (major) by 45m (semi-major) by 5m (minor) radii was used, with ellipse orientation determined variography and geological trend. The search ellipse was expanded by 2 and then by 3, the maximum ranges from the variography, to fill the remaining blocks. The mineralisation envelopes were used as hard boundaries during grade interpolation.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the nearby Julie deposit with the same rock types and mineralisation style. A bulk density database consisting of 738 dry bulk density determinations was used to assign dry bulk densities to the block model. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.05t/m3, transitional material was assigned a density of 2.45t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as Inferred. All blocks within all mineralisation envelopes were classified.

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 1.0g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Alpha/Bravo deposit is part of the larger Wa Gold Project.

Kunche NW

The Kunche NW data set consists of 20 holes for a total of 1312. This includes 17 RC holes for 1,312m and 3 RAB holes for 65m. Only the RC drilled holes were used in the estimation. RC holes were drilled on a spacing of 50 by 25m
The Kunche NW Mineral Resource is presented below and is reported above a cut-off grade of 0.5g/t Au.

Kunche NW Mineral Resource. Reported from blocks where Au >= 0.5 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Inferred	694	1.14	25,300
Total	694	1.14	25,300

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Kunche NW, located 1.4km north west of Kunche and 2km south west of Bepkong, is hosted by a meta-sedimentary package, with carbonaceous phyllites dominant over arenitic wacke units. Arsenopyrite appears to be more prevalent in mineralised zones. The deformation style is similar to that at Kunche and is ductile in nature.

Mineralisation occurs within approximately N-S trending structural zones of stringer veining and disseminated arsenopyrite in wacke units. Mineralisation has a current drilled strike of 250m.
The geometry (strike and dip) of the mineralisation was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. This trend surface was used to orientate the search ellipse.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.3g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.3 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
A total of 2 individual wireframe solids were constructed capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	525630	1150530	120
Max	525830	1150870	300
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1m and therefore a sample composite length of 1m was adopted. Composites within the mineralisation envelopes ranges between 0.03 and 8.86 with a low coefficient of variance. No

top cuts were applied. Variograms were modelled for the mineralised domain, with high relative nugget effects and ranges of 57 m modelled along strike. Primary directions were modelled with a shallow plunge to the S.
The mineralised domains were flattened in Easting for statistical analysis and grade estimation.
Grade was interpolated into the block model using ordinary kriging. A minimum of 5 and maximum of 30 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 60m (major) by 40m (semi-major) by 5m (minor) radii was used, with the ellipse flattered by the domain boundaries. The search ellipse was flattened in Easting, with the search ellipse expanded by 2 and then by 3, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. Blocks outside the mineralised domains were interpolated using only the first interpolation search of 60 x 40 x 5.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the Kunche core. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 1.93t/m3, transitional material was assigned a density of 2.37t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as Inferred. All blocks within all mineralisation envelopes were classified.

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 0.5g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Kunche NW deposit is part of the larger Wa Gold Project.

Yagha

The Yagha data set consists of 22 holes for a total of 1513. This includes 14 RC holes for 1,163m and 8 RAB holes for 65m. Only the RC drilled holes were used in the estimation. RC holes were drilled on a spacing of 50 -100 by 25m within mineralised zones.
The Yagha Mineral Resource is presented below and is reported above a cut-off grade of 0.5g/t Au.

Yagha Mineral Resource. Reported from blocks where Au >= 0.5 g/t.

JORC Classification	Tonnes (Kt)	Au g/t	Contained Ounces
Inferred	333	1.25	13,400
Total	333	1.25	13,400

Note: Tonnes and grade are rounded to reflect uncertainty in the estimates

Geology and Geological Interpretation

Yagha, located 15km north of Kunche, is hosted by a meta-sedimentary package, with carbonaceous phyllites dominant over arenitic wacke units. Arsenopyrite appears to be more prevalent in mineralised zones. The deformation style is similar to that at Kunche and is ductile in nature.

Mineralisation occurs within approximately N-S trending structural zones of stringer veining and disseminated arsenopyrite in wacke units. Mineralisation has a current drilled strike of 1,600m.
The geometry (strike and dip) of the mineralisation was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. This trend surface was used to orientate the search ellipse.
The geometry (strike and dip) of the lodes was interpreted based upon structural observations from diamond core, trenching and outcrop mapping. Cross sectional interpretations of the individual lodes were conducted using assay data (Au g/t) from reverse circulation (RC) and diamond (DD) core samples. Mineralisation envelopes were interpreted using a lower cut-off grade of 0.3g/t Au from drill sample assays. Internal dilution of 2m down hole intervals (where Au<0.3 g/t) was allowed although some additional dilution was included to allow for strike or dip continuity to be maintained. Domains were extrapolated to between 12.5m and 25m beyond the last fence of drill holes supporting the interpretations.
One wireframe solid was constructed capturing the Au mineralisation.
Weathering profiles for the base of complete oxidation (BOX) and top of fresh rock (TOF) were interpreted in cross section views using lithological logs of weathering characteristics of the samples.

Estimation Methodology

A block model with parent cell dimensions of 5m (X) by 10m (Y) by 5m (Z) was constructed with mineralisation and weathering domains used to appropriately flag the cells.

Block Model Parameters

Field	East	North	Z
Min	525350	1159400	180
Max	525570	1160000	350
User block size	5m	10m	5m
Min block size	1m	1m	1m
Rotation	0	0	0

Statistical analysis of drill sample data was carried out to determine composite lengths, choice of top cuts and variogram modelling. The drill sample lengths are predominantly 1m and therefore a sample composite length of 1m was adopted. Composites within the mineralisation envelopes ranges between 0.03 and 8.86 with a low coefficient of variance. Top cuts for the sample data were determined with top cuts 15g/t. Variography of nearby Aduane was used, with high relative nugget effects and ranges of 57m modelled along strike.
The mineralised domains were flattened in Easting for statistical analysis and grade estimation.
Grade was interpolated into the block model using ordinary kriging. A minimum of 5 and maximum of 30 samples from a minimum of 2 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. A search ellipse of 60m (major) by 40m (semi-major) by 5m (minor) radii was used, with the ellipse flattered by the domain boundaries. The search ellipse was flattened in Easting, with the search ellipse expanded by 2 and then by 3, to fill the remaining blocks. The mineralisation envelope was used as hard boundaries during grade interpolation. Blocks outside the mineralised domains were interpolated using only the first interpolation search of 60 x 40 x 5.
The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
Bulk densities were assigned from the Bulk densities tested from the Kunche core. The density data were determined from conventional Archimedes technique of weighing sealed samples in air and water. The database was subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide

material was assigned a density of 1.93t/m3, transitional material was assigned a density of 2.37t/m3 and fresh material was assigned a density of 2.75t/m3.

Mineral Resource Classification

The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation.
The Mineral Resource is classified as Inferred. All blocks within all mineralisation envelopes were classified.

Cut-Off Grades

The Mineral Resource is reported above a cut-off grade of 0.5g/t Au. This cut-off grade is considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.

Other Modifying Factors

It is assumed any future mining will be by way of open cut mining. No other modifying factors were considered during the preparation of the Mineral Resource estimate.

Reasonable Prospects

The Competent Person believes there are reasonable prospects for the eventual economic extraction of the Mineral Resource. A feasibility study currently in progress identifies abundant water from the local Black Volta River, strong community support and a government jurisdiction supportive of mining. Ghana has a long mining history with available skilled workforce. The Yagha deposit is part of the larger Wa Gold Project.

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Table 2: Ore Reserves Summary – JORC Code 2012

	Proved		Probable		Total		Gold To Mill
(As at August 2014)	Tonnes (Mt)	Grade g/t Au	Tonnes (Mt)	Grade g/t Au	Tonnes (Mt)	Grade g/t Au	Gold oz
Kunche	4.91	1.92	0.05	3.11	4.97	1.94	309,000
Bepkong	1.79	1.84	0.11	1.97	1.90	1.85	113,000
Julie	0.29	2.45	1.93	2.89	2.21	2.84	202,000
Total	**7.00**	**1.92**	**2.09**	**2.85**	**9.08**	**2.14**	**624,000**

Values have been rounded.

About Azumah Resources Limited

Azumah Resources Limited is a Perth-based, ASX-listed (ASX: AZM) company focused on exploring and developing its regional-scale Wa Gold Project in the Upper West Region of Ghana, West Africa.

Three main deposits have been discovered and extensively drilled at Kunche and Bepkong, adjacent to the Black Volta River and Ghana's border with Burkina Faso, and at Julie ~80km to the east.

Several satellite deposits, including Aduane, Kunche Northwest, Yagha, Julie West, Danyawu, Alpha/Bravo, Josephine and Collette have also been discovered and delineated.

To date, the Company has estimated a JORC 2012 Mineral Resource of 2.5Moz of gold grading 1.6g/t Au, including 1.6Moz Measured and Indicated grading 1.8g/t Au, with these evenly distributed between the Kunche-Bepkong and Wa East (Julie deposit etc) camps.

A 2015 Feasibility Study defined an Ore Reserve of 624,000oz Au (9.1Mt at 2.14g/t Au)(JORC 2012). The Feasibility Study is being updated with delivery scheduled for Q3 2019.

Extensive metallurgical test work has confirmed a high average overall gold recovery of ~92% for the combined Kunche, Bepkong and Julie deposits.

Mineral Resources have been progressively grown through a focused, systematic approach to exploration of the Company's 2,400km2 licence holdings. These encompass large tracts of prospective Birimian terrain, the rocks that host the majority of West Africa's gold mines.

Much of the tenure is covered in soil, alluvium or laterite so most discoveries have been 'blind'. Azumah anticipates Mineral Resources will grow substantially as it continues to generate and test its large pipeline of targets.

Azumah's exploration strategy is primarily driven by its aim to materially increase its existing Ore Reserve base and demonstrate attractive project economics. This will enhance funding capability and solidly underpin a development decision.

Azumah has two 15-year Mining Leases over its key deposits (Ghana government holds a 10% free carried interest in their 'rights and obligations' and is also entitled to a 5% gross gold royalty).

No technical, social or environmental impediments to development have been identified, no communities need to be relocated and rehoused and there is strong support from key stakeholders for the Project.

The Project benefits from excellent regional infrastructure including grid power to site, good quality bituminised and non-bituminised roads, easy access to water, a 2km sealed airstrip at the regional centre of Wa and good general communications.

Ibaera Funding Transaction

All of Azumah's Ghana interests are held through its wholly owned Ghana subsidiary, Azumah Resources Ghana Limited (AZG).

On 1 September 2017 Azumah executed a transformative Earn-In and Shareholders Agreement (EISA) with Perth managed private equity group, Ibaera Capital GP Limited (Ibaera), whereby Ibaera can initially earn a 42.5% interest in AZG and therefore the Wa Gold Project by spending US$11.5M over two years.

If Azumah elects not to co-contribute pro-rata thereafter, Ibaera may increase its interest to a maximum of 47.5% for a total minimum expenditure of US$13.5 million (~A$17M).

Ibaera is backed by a US-based +US$1 billion natural resources focused investment fund. Prior to committing to the Project, Ibaera reviewed many other international resource projects and, having selected the Azumah Project, undertook an extremely thorough due diligence prior to committing to the EISA.

The terms of the EISA set out the basis for the parties to boost Mineral Resources, Ore Reserves and to deliver a feasibility level study supporting a decision to proceed to production (refer ASX release dated 2 September 2017).

Ibaera's principals and management are all very experienced geologists, engineers and financiers and, pursuant to the EISA, are now managing all facets of the Project.

References

All references to Mineral Resources and Ore Reserves pertain to ASX releases dated 2 September 2014, 23 March 2015 and 12 October 2016 respectively. Also refer to Tables 1 and 2 herein. The Company confirms that all material assumptions underpinning the production targets and forecast information continue to apply and have not materially changed other than a positive material reduction in capital costs (refer ASX release dated 9 May 2016). For further information on Azumah Resources Limited and its Wa Gold Project please visit its website at www.azumahresources.com.au which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.

'Competent Persons' Statements

The scientific and technical information in this report that relates to the geology of the deposits and exploration results is based on information compiled by Mr Stephen Stone, who is an executive employee of Azumah Resources Limited. Mr Stone is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Stone is the Qualified Person overseeing Azumah's exploration projects and has reviewed and approved the disclosure of all scientific or technical information contained in this announcement that relates to the geology of the deposits and exploration results.

The information in this report that relates to a Mineral Resource estimate for the Julie deposit is based on and fairly reflects information compiled by Mr David Williams, a Competent Person, who is an employee of CSA Global Pty Ltd and a Member of the Australian Institute of Geoscientists (#4176) and Mr Mark Glassock, a Competent Person, who is an employee of Extomine Pty Ltd and a member of the AusIMM (#202048). Mr Williams assumes responsibility for the interpretation and the grade estimation and Mr Glassock assumes responsibility for the input data. Mr Williams and Mr Glassock have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Williams and Mr Glassock consent to the disclosure of information in this report in the form and context in which it appears.

The information in this report that relates to a Mineral Resource estimate for the Kunche, Aduane, Kunche NW, Yagha, Julie West, Danyawu, Alpha/Bravo, Josephine and Manwe deposits is based on and fairly reflects information compiled by Mr Mark Glassock, a Competent Person, who is an employee of Extomine Pty Ltd and a member of the AusIMM (#202048). Mr Glassock has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Glassock consents to the disclosure of information in this report in the form and context in which it appears.

Statements of Competent Persons for the various Mineral Resource Estimates, Ore Reserve Estimates and Process Metallurgy can all be found on the Company's website at: http://www.azumahresource.com.au/projects-competent_persons.php

Forward-Looking Statement

All statements other than statements of historical fact included on this website including, without limitation, statements regarding future plans and objectives of Azumah, are forward-looking statements. Forward-looking statements can be identified by words such as 'anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other

important factors, many of which are beyond the control of the Company, its directors and management of Azumah that could cause Azumah's actual results to differ materially from the results expressed or anticipated in these statements.

The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained on this website will actually occur and investors are cautioned not to place any reliance on these forward-looking statements. Azumah does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained on this website, except where required by applicable law and stock exchange listing requirements.

Appendix: *Wa Gold Project - JORC Code 2012 Edition – 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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	The Wa Gold Project (Project) prospects (Kunche, Bepkong, Aduane, Julie, Collette, Julie West, Danyawu, Alpha/Bravo, Josephine, Manwe, Kunche NW and Yagha) were sampled using surface trenching and drilling. Drilling methods include diamond (DD), reverse circulation (RC), rotary air-blast (RAB) and air-core (AC). RAB and AC drilling data have not been used to estimate the Mineral Resources. Surface trenching has not been used to estimate Mineral Resources. **Kunche:** 980 holes were drilled for a total of 91,680m. This includes 15 DD holes for 1,945m, 614 RC holes for 59,939m and 86 RCDD holes for 18,792m. Holes were drilled at dips between -50° and -90°. 54 trenches were also excavated totaling 2,766m in length. **Bepkong:** 248 holes were drilled for a total of 27,158m. This includes 6 DD holes for 894m, 211 RC holes for 19,938m and 31 RCDD holes for 6,326m. The majority of holes are drilled grid west at -50° to intersect the steeply west dipping/vertical mineralisation at high angles. **Aduane:** 622 holes were drilled for a total of 54,520m. This includes 45,211m (455holes) of RC drilling, 6,704m (149 holes) of AC drilling, 3,248m (73 holes) of RAB drilling, 2254m (12 holes) of RCDD drilling and 352m (6 holes) of DD drilling. The majority of the holes were drilled towards the west with dips varying between -30° and -57°. There is one trench 78m in length. **Julie:** 916 holes were drilled for a total of 70,130.5m. This includes 43 DD holes for 1895.4m, 841 RC holes for 62,455m and 32 RCDD holes for 5780.1m. The majority of the holes were drilled at dips between -45° and -60° with only 28 holes drilled with an inclination greater than -60°. 33 trenches were excavated totaling 2,557m in length. **Collette:** 544 holes were drilled for a total of 22,530m. All holes were RC. Hole dips varied between -35° and -60°. 10

Criteria	JORC Code explanation	Commentary
		trenches were excavated totaling approximately 500m in length. **Julie West:** 96 holes were drilled for a total of 5566m. 90 holes were RC for 5471 m and 6 RAB holes for 95m. Hole dips ranges from -60° to -90°. Average RC depth was 60m **Danyawu:** 53 holes were drilled for a total of 3956m with all holes drilled RC. Hole dips ranges from -50° to -90°. Average RC depth was 74m. **Alpha/Bravo:** 89 holes were drilled for a total of 2999m. 63 holes were RAB for 1512 m and 26 holes were RC for 1487m. Hole dips ranges from -50° to -70°. Average RC depth was 57m. **Josephine:** 67 holes were drilled for a total of 5295m. 63 holes were RC for 4990 m and 4 holes were DD for 305. Hole dips ranges from -50° to -90°. Average RC depth was 79m. **Manwe:** 24 holes were drilled for a total of 2087m. All holes were RC. Hole dips ranges from -50° to -70°, with azimuths ranging from 230° to 270°. Average RC depth was 86m. **Kunche NW:** 20 holes were drilled for a total of 1377m. 17 holes were RC for 1312 m and 3 holes were RC for 65m. Hole dips ranges from -50° to -70°, with all drilling at an azimuth of 270°. Average RC depth was 77m. **Yagha:** 22 holes were drilled for a total of 1513m. 14 holes were RC for 1163 m and 8 holes were RAB for 65m. Hole dips ranges from -50° to -70°, with all drilling at an azimuth of 270°. Average RC depth was 77m.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	AC sampling was carried out at 1m intervals and samples composited to 4m. Anomalous AC results were re-assayed at 1m intervals. RC samples were collected at 1m intervals. RC sample weights averaged 20 kg in oxide material and 30 kg in fresh material. DD samples were taken at 0.5–1.1m intervals. The sample quality and recovery of DD core from fresh and oxidised rock was good. Appropriate quality assurance/quality control (QAQC) protocols were followed, including submission of field duplicates and insertion of commercial standards for all types of drilling.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information	DD sampling intervals were based on lithology and/or alteration changes. The core was cut in half longitudinally using a core saw. Each 1m RC sample was split into two 1 kg samples. The remaining sample was used to create a 4m composite sample. Sample preparation included: • Drying the sample at 105°C for 4 hours. • Grinding the sample to less than -6mm. A quartz wash was completed after every grind. • Splitting the sample using a riffle splitter. • Pulverising the sample for 4 minutes to achieve 85% of sample passing -75µm in grain size. A quartz wash was completed after every sample. RC and DD samples are analysed by fire assay method with a detection level of 0.01 ppm Au. RAB/AC drilling, surface samples and auger samples are analysed with a detection limit of 0.001 ppm Au.

Criteria	JORC Code explanation	Commentary
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	Minerex Drilling drill some of the RC holes at Julie West and Danyawu, all other RC and DD holes was drilled by Geodrill using a drill rig with speciation's for a high-quality sample. All RC and DD holes were drilled with one of the below rig types • KL900: Sandvik 820 crawler-mounted multi-purpose drill. RC with 5¾ hammer bits; Core HQ & NQ2 (wireline methods). • UDR650: Sandvik 810 truck-mounted multi-purpose drill. RC with 5¾ hammer bits; Core HQ & NQ2 (wireline methods). A Reflex EZ-Trac single shot downhole camera was used to measure the orientation of all holes at 30m downhole intervals from surface.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	DD core recovery is logged and recorded in the database. No significant core loss has occurred. RC recovery was visually assessed and considered to be acceptable within the mineralised zones.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	DD core recovery is generally very good (>90%). However, the core recovery of shallow DD holes in oxidised material is 80–90%. Overall, the quality of DD sampling is excellent. The quality of RC drill samples is very good.
	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.	Sample recovery is generally very high within the mineralised zones. No significant bias is expected, and any potential bias is not considered material.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resources	DD core and RC drill chips were logged in detail over the entire hole length (at 1m intervals for RC samples). Colour, lithology, degree of oxidation and water table depth etc were recorded. DD was geotechnically logged for recovery and rock quality designation. Structure type and orientation are recorded in the database. DD core and RC chip trays are stored at the main exploration camp.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	DD and RC logging included records of lithology, oxidation state, colour, mineralisation, alteration and veining. Core was photographed dry and wet.
	The total length and percentage of the relevant intersections logged.	All holes were geologically logged in full.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	DD core was sawn in half.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were collected on the rig using cone or riffle splitters. Samples were generally dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were crushed to -6mm and riffle or cone split to obtain a representative fraction weighing 50g. Samples were then dried and ground to 85% passing 75 microns using laboratory mills for Fire Assay analysis. The resultant prill is

Criteria	JORC Code explanation	Commentary
		dissolved in aqua regia and gold content is determined by flame atomic absorption spectroscopy (AAS).
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field QA/QC procedures included insertion of field duplicates and commercial standards for RC drilling. No field duplicates were inserted with DD core samples. Standards, duplicates and blanks were inserted in every batch (1 per 50 samples). Laboratory QA/QC procedures included: • Every 50th sample was screened to check grinding results (% passing 2mm and 75 microns). • 1 reagent blank was inserted every 50 samples, 1 preparation process blank was inserted every 50 samples and 1 weighed replicate was inserted every 50 samples. • 1 preparation duplicate (re-split) every 50 samples and 2 certified reference materials (CRMs) every 50 samples. Repeat analyses are completed whenever an analytical batch fails to meet the laboratory standards or when requested by a client.
	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	Duplicate samples are taken for all drilling except DD. The duplicate versus original sample results is considered satisfactory.
	Whether sample sizes are appropriate to the grain size of the material being sampled	Sample size is considered appropriate.
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.	The analytical technique used was fire-assay with an atomic-absorption finish which is industry standard for Au.
	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.	No geophysical tools, XRF instruments etc were used to determine any element concentrations used in the resource estimates.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Field QA/QC procedures included the insertion of field duplicates, blanks and commercial standards.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Independent company personnel visually verified intersections in both DD core and RC chips at all prospects.
	The use of twinned holes.	Twinned holes were drilled at all areas. Results were generally consistent between holes.
	Documentation of primary data, data entry procedures, data verification, data	Field data was all recorded as hard copies. Geological logging and sample intervals were recorded in digital form using a

Criteria	JORC Code explanation	Commentary
	storage (physical and electronic) protocols.	logging computer or Excel templates. This data was imported into a SQL database for validation and QC. The analytical data was imported into SQL database with all related metadata and QA/QC information.
	Discuss any adjustment to assay data.	No adjustments were made, other than for values below the assay detection limit. These values have been entered as the negative of the detection limit. Half the detection limit was used in the MRE.
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.	The collar locations of all holes were initially surveyed using a hand-held GPS (accurate to ±2m). All holes were later resurveyed using a total station instrument or a Dual Frequency differential GPS (accurate to ±2cm).
	Specification of the grid system used.	The grid system is WGS84 Zone 30 North.
	Quality and adequacy of topographic control.	The topographic surfaces for Kunche, Bepkong, Aduane, Kunche NW, Julie, Julie NW, Alpha/Bravo and Danyawu were created using a GeoEye image and Digital Surface Model. This was corrected and validated using DGPS drill hole points collected in the field. Other areas used drill hole survey data. Drill hole's RL was assigned from Geoeye's elevation when available "DTMRL".
Data spacing and distribution	Data spacing for reporting of Exploration Results.	**Kunche**: Holes were drilled on a 20m by 20m pattern within mineralised zones. **Bepkong**: Holes were drilled on a 25m by 25m pattern within mineralised zones and on a 25–50m by 100–150m pattern as a mapping grid. **Aduane**: Holes were generally drilled 20-50m apart across-strike and 25-100m apart along-strike of the mineralised zone. **Julie**: Holes were drilled on a nominal 50mN x 50mE to 25mN x 25mE pattern (or better) within mineralised zones. In more tightly drilled areas drill holes may be within 20m horizontal separation on section. **Collette**: Holes were generally drilled on a 50m by 50–100m pattern. **Julie NW**: Holes were drilled on a 20-40m by 20-40m pattern within mineralised zones. **Danyawu**: Holes were drilled on a 10-25m by 10-25m pattern within mineralised zones. **Alpha/Bravo:** Holes were drilled on a 20-80m by 15-40m pattern within mineralised zones **Josephine**: Holes were drilled on a 25-50m by 25-50m pattern within mineralised zones. **Manwe**: Holes were drilled on a 25-50m by 25-50m pattern within mineralised zones. **Kunche NW**: Holes were drilled on a 50m by 25m pattern within mineralised zones.

Criteria	JORC Code explanation	Commentary
		Yagha: Holes were drilled on a 50-100m by 25m pattern within mineralised zones.
	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 data spacing and distribution is considered sufficient to demonstrate spatial and grade continuity of the mineralised zones to support the classification of Measured, Indicated and Inferred Mineral Resources under the 2012 JORC Code.
	Whether sample compositing has been applied.	Single metre RC samples were composited into 4m intervals. Composite samples returning greater than 0.1g/t Au were resubmitted as 1m samples for analysis.
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.	**Kunche**, **Bepkong, Aduane, Kunche NW and Yagha**: Drilling sections are orientated perpendicular to the strike of the mineralisation. About 5% of drill holes, mainly at Aduane, were drilled from north-east to south-west. The majority of the holes dip between -50° and -60° to maintain high angles to the mineralisation. **Julie**: Drill sections are orientated north to south across strike of the mineralised zone. The majority of the holes dip between -45° and -60° towards the south. **Julie NW**: Drill sections are orientated 230° perpendicular to the strike of mineralisation and across strike of the mineralised zone. Holes dip either -60° or -90°. **Danyawu**: Drill sections are orientated east west and perpendicular to the strike of mineralisation and across strike of the mineralised zone. The majority of the holes dip between -60° and -90°. **Alpha/Bravo**: Drill sections are orientated 180° or 230° perpendicular to the strike of mineralisation and across strike of the mineralised zone. The majority of the holes dip between -50°. **Josephine**: Drill sections are orientated 230° perpendicular to the strike of mineralisation and across strike of the mineralised zone. Holes dip either -60° or -90°. **Manwe**: Drill sections are orientated are orientated between 230° and 270° and across strike of the mineralised zone. The majority of the holes dip between -50° and -60°. **Collette**: Drill sections are orientated north to south and across strike of the mineralised zone. The majority of the holes dip between -35° and -60°.
	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.	No orientation based sampling bias has been identified in the data based on the interpreted mineralised structures.
Sample security	The measures taken to ensure sample security.	Chain of Custody is managed by Azumah staff (geologists and technicians). Samples are stored on site and delivered to the SGS Laboratory at Tarkwa, Intertek Minerals Limited at

Criteria	JORC Code explanation	Commentary
		Tarkwa or Minalytical in Perth. Samples submission sheets are in place to track the progress of every batch of samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques are consistent with industry good practice. Data was validated by CSA Global during loading into the database. Checks included Depth from Depth to, sample interval hole depth and overlapping sample intervals. Any data which failed the checking process is returned to Azumah for validation. Global consistency was also checked at a later stage by plotting holes on sections using the database and reconciling assays against the geology.

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 **Kunche**, **Bepkong, Aduane, Kunche NW and Yagha** prospects are located within the 100% Azumah owned exploration license ML10/11. **Julie** is located within ML10/5. **Collette** is located within PL10/4. **Julie West, Danyawu** and **Alpha/Bravo** are all located with PL10/13 **Josephine** and **Manwe** are located within PL10/9. All license areas are located in the Upper West Region in the north-west corner of Ghana.
	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.	The tenements are in good standing with no known impediments. Two mining leases, over the main Kunche-Bepkong-Aduane and Julie deposits, were issued in July 2014.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Previous mapping and exploration works were completed by BHP-Utah (1990's), AGEM (late 1990's) and Semafo (late 1990's). All exploration activities have been completed by Azumah and Castle since 2006.
Geology	Deposit type, geological setting and style of mineralisation.	The Project covers approximately 70% of the Palaeoproterozoic Upper and Lower Birimian units, typically known as the Wa-Lawra greenstone belt, within Ghana. Gold mineralisation occurs as follows: **Kunche**: Brittle quartz lode/breccia-hosted with higher grade Au mineralisation associated with zones of intense silicification, smoky quartz veins, arsenopyrite and pyrrhotite. Mineralisation is steeply dipping striking NS and extends 1.8 km. **Bepkong, Aduane**: Increased ductile shearing and dismemberment of quartz veins. Greater than 1 g/t Au mineralisation occurs within translucent quartz veins and arsenopyrite. Mineralisation is steeply dipping striking NS, Bepkong's mineralisation extends 700m and Aduane's mineralisation is several 100-150m zones of mineralisation. Thickness ranges from 1m to 30m. **Kunche NW**: Brittle sheared quartz lode/breccia-hosted with higher grade Au mineralisation associated with zones

Criteria	JORC Code explanation	Commentary
		of intense silicification, smoky quartz veins, arsenopyrite and pyrrhotite. The mineralisation is subvertical striking NS and varies in thickness from 1m to 15m with an average of approximately 4m. The mineralised vein has a north-south extent of 350m. **Yagha**: Brittle sheared quartz lode/breccia-hosted with higher grade Au mineralisation associated with zones of intense silicification, smoky quartz veins, arsenopyrite and pyrrhotite. The mineralisation is subvertical striking NS and varies in thickness from 1m to 15m with an average of approximately 4m. The mineralised vein has a north-south extent of 1400m. **Julie**: Quartz veining and lodes within sheared granodiorite host. Au mineralisation is associated with silicification, pyrite, chalcopyrite, carbonate, sericite and haematite alteration. **Collette**: Quartz veining with at least 3 orientations. Au mineralisation is associated with silicification, arsenopyrite, pyrite, haematite alteration and glassy translucent quartz veining. **Julie West** is almost exclusively confined to a moderately dipping (-50° striking 220°) quartz reef, with only subordinate grades being reported in the host diorite. The primary vein dips to the northeast and varies in thickness from 1m to 9m with an average of approximately 3.5m. The mineralised vein has a north-south extent of 560m. **Danyawu** is defined by a zone of quartz veining with minor pyrite alteration within a host granodiorite. This zone has a moderately shallow north dip with the mineralisation exhibiting a well-defined 40° plunge to the north northeast. The primary vein varies in thickness from 1m to 16m with an average of approximately 8m. The mineralised vein currently has a drill defined north-south extent of 120m. **Josephine** is defined by a zone of quartz veining with minor pyrite and arsenopyrite within metamorphosed phyllites and quartzite. There are a number of steeply dipping lodes striking 310°, approx. 500m in length. Au mineralisation is associated with silicification, arsenopyrite, pyrite, and glassy translucent quartz veining. **Manwe**. Au mineralisation is associated with silicification, arsenopyrite, pyrite, haematite alteration and glassy translucent quartz veining, along contact of the phyllite and schist. The main zone consists of two plunging shoots of mineralisation with widths of around 60 m and thickness up to 15 m. The shoots plunge at 10 degrees towards 350 degrees, dipping at 48 degrees to the east. Known shoot length is 200m.
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	A summary of drilling data is shown below: **Kunche**: • Collar data from 526,352mE through 527,665mE and from 1,147,960mN through 1,149,898mN. • RL varies from 280.8m to 318.0m. • Dip varies from -35° to -90° (average -50°) and hole

Criteria	JORC Code explanation	Commentary
	• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length.	azimuths vary from 80° to 100°. • Depths of intersection are from 0m to 170m. • The average hole length is 114.7m (from 20m to 339.2m). **Bepkong**: • Collar data from 526,437mE through 527,690mE and from 1,151,426mN through 1,152,851mN. • RL varies from 228.3m to 279.0m. • Dip varies from -30° to -90° (average -50°) and hole azimuths vary from 170° to 180°. • Hole lengths are generally between 30m and 170m and depths of intersection are from 3 to 140m. • The average hole length is 82.9m (from 16m to 386.8m). **Aduane**: • Collar data from 526,709mE through 527,700mE and from 1,149,950mN through 1,151,800mN. • RL varies from 267m to 299m. • Dip varies from -30° to -55° and Azimuth varies from 0° to 360°. • Hole lengths are 20m to 357m and depths of intersection are from 0m to 150m. • The average hole length is 101m. **Julie**: • Collar data from 592,500mE through 598,200mE and from 1,115,300mN through 1,116,500mN. • RL varies from 270m to 350m. • Dip varies from -45° to -60° (average -50°) and hole azimuths although generally N – S vary from 0° to 330°. • Drill holes are 20m to 275m in length and depths of intersection along the full length. • The average hole length is 77m. **Collette**: • Collar data from 604,447mE through 607,400mE and from 1,117,738mN through 1,118,809mN. • RL varies from 237.7m to 261.6m. • Dip varies from -35° to -60° (average -50°) and hole azimuths vary from 135° to 185°. • Drill holes are 30m to 170m in length and depths of intersection are from 3m to 140m. • The average hole length is 69.0m (from 20.0 m to 246.0 m). **Julie West**: • Collar data from 588630mE through 589420mE and from 1,116,292mN through 1,117,241mN. • RL varies from 243m to 250m. • Dip varies from -48° to -90° (average -56°) and hole azimuths although 230 vary from 230° to 260°. • Drill holes are 15m to 220m in length and depths of

Criteria	JORC Code explanation	Commentary
		intersection along the full length. • The average hole length is 60.7m. **Danyawu**: • Collar data from 588,613mE through 588,820mE and from 1,118,980mN through 1,119,102mN. • RL varies from 230m to 236m. • Dip varies from -48° to -90° (average -58°) and hole azimuths although generally 230 vary from 0° to 324°. • Drill holes are 42m to 177m in length and depths of intersection along the full length. • The average hole length is 75m. **Alpha/Bravo**: • Collar data from 559,797mE through 587,975mE and from 1,114,793mN through 1,115,500mN. • RL varies from 247m to 274m. • Dip varies from -48° to -60° (average -55°) and hole azimuths although generally 240 vary from 0° to 360°. • Drill holes are 25m to 102m in length and depths of intersection along the full length. • The average hole length is 57m. **Josephine**: • Collar data from 576,121mE through 576,823mE and from 1,099,664mN through 1,100,318mN. • RL varies from 350m to 363m. • Dip varies from -48° to -80° (average -52°) and hole azimuths although generally 230^0 vary from 50° to 250°. • Drill holes are 22m to 174m in length and depths of intersection along the full length. • The average hole length is 79m. **Manwe**: • Collar data from 572,861mE through 573,204mE and from 1,104573mN through 1,105,550mN. • RL varies from 334m to 347m. • Dip varies from -48° to -61° (average -52°) and hole azimuths although generally 230° vary from 214° to 270°. • Drill holes are 70m to 120m in length and depths of intersection along the full length. • The average hole length is 87m. **Kunche NW**: • Collar data from 525,600mE through 525,758mE and from 1,150,552mN mN through 1,150,802mN. • RL varies from 267m to 269m. • Dip varies from -48° to -61° (average -55°) and hole azimuths are generally at 90°. • Drill holes are 50m to 145m in length and depths of intersection along the full length.

Criteria	JORC Code explanation	Commentary
		• The average hole length is 77m. **Yagha**: • Collar data from 525,383mE through 525,475mE and from 1,159,644mN through 1,159,898mN. • RL varies from 315m to 322m. • Dip varies from -45° to -90° (average -57°) and hole azimuths are generally at 90°. • Drill holes are 55m to 108m in length and depths of intersection along the full length. The average hole length is 73m.
	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.	Not applicable.
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 Material and should be stated.	Not relevant when reporting Mineral Resources.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not relevant when reporting Mineral Resources.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not relevant.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.	Drill hole dips vary between -30° and -90°. Most of the hole drill holes were drilled perpendicular the mineralisation.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	All mineralised units of Kunche, Bepkong, Aduane, Kunche NW, Yagha are sub-vertical. The true thickness of the mineralised intercepts is ±75% of the downhole intercept length. The true width is 2.5–20m at Kunche, 3–20m at Bepkong and 1.5–15m at Aduane. The Julie mineralised zone is northerly dipping (generally 30°-35°) and the true thickness of the mineralised intercepts is close to the downhole intercept length. The Collette mineralised zone is northerly dipping (30°-40°) and the true thickness of the mineralised intercepts is very close to the downhole intercept length. Julie West's mineralised zone is north westerly striking dipping at (30°-40°) and the true thickness of the

Criteria	JORC Code explanation	Commentary
		mineralised intercepts is very close to the downhole intercept length. Danyawu's mineralised zone is northerly plunging shoot (generally 10°-30°) and the true thickness of the mineralised intercepts is close to the downhole intercept length. Josephine's mineralised units are steeply dipping northwesterly, striking northeasterly. The true thickness of the mineralised intercepts is ±75% of the downhole intercept length. Manwe's mineralised zone is set of northerly plunging shoot (generally 10°-30°) and the true thickness of the mineralised intercepts is close to the downhole intercept length.
	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.
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.	Refer to diagrams in 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.	Not relevant when reporting Mineral Resources.
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.	**Geochemistry:** Surface sampling, mapping and geochemistry were completed by BHP and Azumah. The geochemical database contains data for 51,680 soil samples and 228,673m of combined auguring and AC drilling. **Airborne Geophysics:** A high resolution aeromagnetic and radiometric survey was completed over the central region of the Wa-Lawra Belt (over the Vapor PL) with line spacing of 100m and sensor height of 40m. The Wa-Lawra Belt geophysical data has been interpreted at 1:100,000 scale by Southern Geoscience Ltd. The processed imagery has provided a base for a new regional geological interpretation. **Ground Geophysics:** Magnetics: A ground magnetic survey conducted in 2006 was plagued by data acquisition problems and the data

Criteria	JORC Code explanation	Commentary
		were rejected as being of insufficient quality for interpretation. **Induced Polarisation:** SAGAX Afriques completed a gradient induced polarisation survey (IP) over the Kunche and Bepkong deposits. The anomalies were interpreted to be caused by disseminated sulphides and quartz veining. The IP survey outlined several linear zones with a similar geophysical response, particularly a prominent linear anomaly west of Kunche. Three dominant orientations were interpreted as a dextral reverse shear model. Several other geophysical targets were identified and require drill testing. **Metallurgical Test Work:** Extensive metallurgical test work has been undertaken on the Kunche, Bepkong and Julie deposits. There has been only minor work completed on Collette, Julie NW and Danyawu and no work on Aduane, Josephine, Maunu, Kunche NW or Yagha. Metallurgical test work performed on the Kunche, Bepkong and Julie ores has included: • Comprehensive head analysis. • Comminution. • Gravity concentration. • Direct cyanide leaching. • Carbon kinetics. • Thickening. • Rheology. • Oxygen uptake. • Cyanide detoxification. • Variability testing. In addition for Julie ore, test work has included: • Bulk sulphide flotation. • Ultra-fine grinding (UFG) of concentrate. • Cyanide leaching of UFG flotation concentrate and of flotation tailings. • QEM*SCAN® analysis of Julie concentrate products. Collette testing only includes: • Gravity concentration. • Direct cyanide leaching. **Potential Deleterious Substances:** Both Kunche and Bepkong mineralisation contains small quantities of organic carbon, arsenic in the form of arsenopyrite, and other sulphide mineralisation. In general, this does not appear to have a significant deleterious effect on gold extraction. The limited number of Kunche primary variability composites that do exhibit a

Criteria	JORC Code explanation	Commentary
		reduction in extraction have been included in the correlation equation for gold recovery. Preliminary testing indicates the flotation/regrind circuit designed for the Julie primary ore may also benefit some of the Kunche primary ore and further test work is planned on some Kunche primary ore samples. Julie mineralisation contains sulphides which is predominantly pyrite and relatively unreactive. Approximately 35% of the gold is associated with pyrite which can be recovered by flotation and fine grinding of concentrate prior to extraction by cyanide.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further drilling is also required to better define the structural geological framework. Any additional work is expected to have a reasonable prospect for increasing the interpreted total volumes and shapes of mineralised bodies that have not yet been drill tested along strike and down dip from the currently interpreted horizons.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to diagrams in body of text.

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.	All drill hole information including collar surveys, assays, hole surveys, lithological logs and density data are stored in Datashed, a relational database with inbuilt validation procedures. The database is maintained by CSA Global, with data security of paramount importance. Database and files were backed up to a server on a regular basis. Validation steps included checking for coincident collar coordinates, overlapping sample intervals, priorities given to relevant assays fields, abrupt changes in down hole surveys and missing data. These steps were independently carried out during loading of data into Datamine and Micromine. Validation protocols for the data entered to the Datashed database are described in Section 1.
	Data validation procedures used.	Validation of the imported data included checks for overlapping intervals, missing survey data, missing assay data, missing lithological data and missing collars. The surveyed drill holes were also verified against paper sections containing the lithological interpretation.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The Competent Person (data) visited site on two occasions. 29th January 2018 to 8th February 2018, inspected RC drilling on Wa Lawra leases.

Criteria	JORC Code explanation	Commentary
		23rd June to 30th June 2018, inspected diamond drilling activities on the Wa East leases. A site visit was also conducted in 2010 by a CSA Global geologist, with drilling and sampling activities observed at the time. The Competent Person (data) believes the quality of sampling, lithological logging and sample chain security are of sufficient quality to support the use of the samples in the Mineral Resource estimate.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	There is a reasonable level of confidence in the geological interpretation of gold mineralised units. The units are traceable over numerous drill holes and drill sections and in surface mapping. Additional work is required to better define depth extents of the interpreted mineralised bodies. Further work is also required to better define the structural geological framework. Any additional work is expected to have a reasonable prospect for increasing the interpreted total volumes and shapes of mineralised bodies that have not yet been drill tested along strike and down dip from the currently interpreted horizons.
	Nature of the data used and of any assumptions made.	Surface mapping of mineralised outcrops using trenches, drill hole intercept assay results and structural interpretations have formed the basis for the geological interpretation.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The precise limits and geometry cannot be accurately defined due to limitations of the current drill coverage. Further work is required to better define the geometry and limits of the mineralised bodies but no significant downside changes to the interpreted mineralised volume are anticipated.
	The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The lithological interpretation was carried out to define domains of oxidised and transitional rock which have different physical and metallurgical properties. These lithological domains were utilised for Mineral Resource estimation.
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.	**Kunche**: The Au mineralisation was interpreted 1.54km along-strike (north-south). The mineralisation has a sub-vertical dip and is 20m to 50m in width. The vertical range of interpreted mineralisation is 160m–170m. **Bepkong**: The Au mineralisation was interpreted 1.2km along-strike (north-south). The mineralisation has a sub-vertical dip (80°–90°). The lens thicknesses vary between 8m and 15m thick with the depth extent limited to a fixed 75mRL (or on average approximately 100m to 120m below surface). **Aduane**: The interpretation of Au mineralisation includes 20 separate, sub vertical mineralised envelopes striking NS with are located within a zone 1.7km in strike-length. The lens thicknesses vary between 2.5m and 7m and the depth varies from 40m to 110m below surface. **Julie**: The Au mineralisation has been interpreted along 5.4km along-strike (E-W). The mineralisation has a shallow to moderate dip to the north and consists of multiple mineralised shears and lodes varying in thickness from as little

Criteria	JORC Code explanation	Commentary
		as a few metres to a maximum of around 30m. The mineralisation is not consistent along the strike length but thickens and thins and grade intensity is strongly variable. The vertical range of interpreted mineralisation is between 40 m and 180 m below surface. Plan width varies between 50 m and 300 m. **Collette**: The mineralised bodies were interpreted as 43 individual sub-parallel lodes using a 0.5 g/t cut-off grade. The lodes generally dip 60° to the north and are approximately 3 m in width. The mineralisation extends over a 50m wide corridor for 2.5km. The interpreted mineralisation extends to approximately 30–50m depth. **Julie West.** The primary vein strikes at 330° dips to the north east and varies in thickness from 1m to 9m with an average of approximately 3.5m. The mineralised vein has a north-south extent of 560m. The vertical range of interpreted mineralisation is between 40m and 180m below surface. **Danyawu:** The primary vein dips to the north-northeast and varies in thickness from 1m to 16m with an average of approximately 8m. The mineralised vein has a north-south extent of 120m and a vertical extent of 90m from surface at 260mRL to 170mRL. **Alpha/Bravo:** Two zones of plunging mineralised quartz. The interpretation of Au mineralisation includes 3 separate mineralised envelopes striking to the NW with 200m strike-length. The mineralised envelopes thicknesses vary between 2m and 8m and vertical extent of 115m, 260mRL to 150mRL. **Josephine:** The interpretation of Au mineralisation includes 5 separate subvertical envelopes striking to the NW with 400m strike-length. The mineralised envelopes thicknesses vary between 2m and 25m and vertical extent of 175m, 365mRL to 190mRL. **Manwe:** Two zones of shallowly plunging mineralised quartz. The interpretation of Au mineralisation includes 5 separate mineralised envelopes striking to the north with 250m strike-length. The mineralised envelopes thicknesses vary between 1m and 22m and vertical extent of 135m, 365mRL to 230mRL. **Kunche NW:** The Au mineralisation was interpreted 350m along-strike (north-south). The mineralisation has a sub-vertical dip and is 2m to 15m in width. The vertical range of interpreted mineralisation is 160m–170m. **Yagha:** The Au mineralisation was interpreted 1400m along-strike (north-south). The mineralisation has a sub-vertical dip and is 2m to 15m in width. The vertical range of interpreted mineralisation is 160m–170m.
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	The grade estimations were by ordinary kriging (OK) using Datamine. 1m composite intervals were used for estimation. **Kunche:** Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z) was constructed. Sub celling was used to honour the

Criteria	JORC Code explanation	Commentary
	computer software and parameters used In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • A categorical indicator approach was used to define the mineralisation envelopes by estimating the probability of areas being mineralised or unmineralised. An Au cut-off grade of 0.2 g/t was used as the probability indicator. This probabilistic technique was used as it results in the mineralised zones being defined in detail and with a high resolution and without bias or triangulation issues. A resolution of 2 x 2 x 2 (X, Y, Z) was used. Mineralisation envelopes generated using this approach were used for sample coding and block model construction. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts, with a top cut of 20g/t was applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Downhole and directional variograms were modelled for the mineralised domain. Variograms were modelled in the plane of mineralisation (350° strike with steep dip to the west) with the primary direction modelled with a shallow plunge to the south. This direction is supported observation of galamsey working and drill core. A high relative nugget effect (~ 50%) was modelled for the mineralised domain with a range short range of 60m with ranges extend to approximately 140m in the principal direction. Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The first pass used a search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled to the maximum range from the variography, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • Datamine's Dynamic Anisotropy (DA) was used to control the orientation of the search ellipsoids. DA estimates the local dip and dip directions of the mineralisation using trend surface following the trend of the mineralisation. The search ellipse orientations were reviewed for randomly selected blocks by comparing the interpolated

Criteria	JORC Code explanation	Commentary
		dip and dip directions with the ellipse (wireframe solid). • The mineralisation envelopes were used as hard boundaries during grade interpolation. • The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Bepkong**: Grade interpolation was carried out using OK (Datamine Studio 3). Top cuts were applied to unit 101 (30 g/t Au) and units 102, 113,114 and 115 (20 g/t Au). The ranges of semivariogram are 35/56m along-strike, 35/86m down-dip and 23/34m across strike. A minimum of 12 and a maximum of 30 samples were used from a minimum of 2 drill holes. The parent block size is 5mN x 10mE x 5mRL, with sub-celling to 1mE x 1mN x 1mRL for domain volume resolution. The parent block size is based on a section interval of approximately 25m for about one third of the modelled strike length, with the remainder being nominally 50m apart. The search ellipse has been oriented in a north-south direction. The major axis has a bearing of 50° and the semi major dips at 40° towards 180°. Search ellipse dimensions are 35m x 35m x 20m. **Aduane**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z) was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts, with a top cut of 12g/t was applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Composite samples and mineralised envelopes were flattened in easting for statistical analyses and interpolation. • Downhole and directional variograms were modelled the mineralised domain. Variograms were modelled in the plane of mineralisation. A nugget of 28% was modelled for with a short range of 20 m with ranges extend to 57 m.

Criteria	JORC Code explanation	Commentary
		Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse was flattered in easting along with the composites and model during the interpolation The first pass used a search ellipse of 40 m (major) by 30 m (semi-major) by 5 m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radius tripled, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data **Julie:** • Datamine software was used for geological modelling, block model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 10m (X) by 5m (Y) by 5m (Z) was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts, with the following top cuts applied: • Far East (40 g/t); East (60 g/t); Central (no top cut); West (40 g/t); and Far West (20 g/t). • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Datamine to determine if they were clustered with other high-grade samples. • Downhole and directional normal scores variograms were modelled for the three domains with the largest sample populations, from the Far East, East and West areas. Variograms were modelled in the plane of mineralisation (moderate dip to north) with the primary direction modelled with a shallow plunge to the NNW in each domain. This direction is supported by a dominant NW- to N-plunging extension lineation as observed in diamond

Criteria	JORC Code explanation	Commentary
		drill core. A high relative nugget effect (~ 70%) was modelled for each domain with a short range of approximately 20m in the principal direction. Most of the population variance is accommodated within the short range. The full variogram ranges extend to 100m. • Kriging neighbourhood analyses were undertaken to determine the optimal block model size, search ellipse radii, and number of samples to estimate each block. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The first pass used a search ellipse of 30m (major) by 30m (semi-major) by 10m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii quadrupled, so as to allow unestimated blocks to be interpolated. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 8 and maximum of 34 samples from a minimum of 4 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • Datamine's Dynamic Anisotropy (DA) was used to control the orientation of the search ellipsoids. DA estimates the local dip and dip directions of the domain envelope (wireframe solids) into each block and the ordinary kriging uses the estimated parameters to align the search ellipse. The search ellipse orientations were reviewed for randomly selected blocks by comparing the interpolated dip and dip directions with the ellipse (wireframe solid). • The mineralisation envelopes were used as hard boundaries during grade interpolation. • The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Collette**: Grade interpolation was carried out using OK (Datamine Studio 3). Variograms were modelled using composite samples from lodes 24, 25, 26, 27, 28, 29, 31, 32 and 40. Semivariogram ranges are 66m along-strike, 41m down-dip and 10m across strike. A minimum of 8 and a maximum of 40 samples were used from a minimum of 2 drill holes. The parent block size is 25mN x 5mE x 10mRL, with sub-celling to 2.5mE x 1mN x 1mRL for domain volume resolution. The parent block size is based on a section interval of approximately 50m for about one fifth of the modelled strike length, with the remainder being nominally 100m apart. The search ellipse has been oriented east-west. The major axis has a bearing of 90° and the semi major axis dips -60° towards 40°. Search ellipse dimensions are 65m x 40m x 10m. **Kunche NW**: Micromine software was used for geological modelling,

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		Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z) was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts. Composites within the mineralisation envelopes ranges between 0.03 and 8.86 with a low coefficient of variance. No top cuts were applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Composite samples and mineralised envelopes were flattened in easting for statistical analyses and interpolation. • Variography of nearby Aduane was used for Kunche NW. A nugget of 28% was modelled for with a short range of 20m with ranges extend to 57m. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse was flattered in easting with the composites and model during the interpolation the first pass used a search ellipse of 60m (major) by 45m (semi-major) by 5 m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data **Yagha**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral

Criteria	JORC Code explanation	Commentary
		Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z) was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts. A top cut of 10g/t was applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Composite samples and mineralised envelopes were flattened in easting for statistical analyses and interpolation. • Variography of nearby Aduane was used for Yagha. A nugget of 28% was modelled for with a short range of 20m with ranges extend to 57m. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse was flattered in easting with the composites and model during the interpolation. The first pass used a search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data **Julie West**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z) rotated 35° to the west was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X)

Criteria	JORC Code explanation	Commentary
		and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts. Top cuts of 30 g/t and 10g/t were applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Downhole and directional variograms were modelled for the mineralised domain. Variograms were modelled in the plane of mineralisation (330° strike with dip to the north east at 40°). This direction is supported mapping. A nugget effect of 32% was modelled for the mineralised domain with a range short range of 60m with ranges extend to approximately 170m in the principal direction. Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse had an orientation of 330° with dip of -40° to the north east. The first pass used a search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled to the maximum range from the variography, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 20 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Danyawu**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 5m (Y) by 5m (Z) was constructed. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the

Criteria	JORC Code explanation	Commentary
		distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts. Top cuts of 40g/t was applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Downhole and directional variograms were modelled for the mineralised domain. Variograms were modelled in the plane of mineralisation (azimuth 65° plunging at 35° with dip of 20°). This direction is supported mapping. A nugget effect of 16% was modelled for the mineralised domain with a range short range of 65m with ranges extend to approximately 85m in the principal direction. Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse had an azimuth of 65°, plunge of 35° and dip of 20°. The first pass used a search ellipse of 40m (major) by 30m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 20 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Josephine**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 10m (X) by m (Y) by 5m (Z) rotated at 30° to the west. Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and

Criteria	JORC Code explanation	Commentary
		mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine appropriate top cuts. Top cuts of 10g/t were applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Downhole and directional variograms were modelled for the mineralised domain. Variograms were modelled in the plane of mineralisation (315° strike, plunge of -65° and dip -60°). This direction is supported observation of galamsey working and mapping. A nugget effect of 35% was modelled for the mineralised domain with a range short range of 40m with ranges extend to approximately 80m in the principal direction. Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse had an orientation of 310° with dip of -60°. The first pass used a search ellipse of 40m (major) by 20m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Manwe**: Micromine software was used for geological modelling, Datamine software was used block for model construction, grade interpolation and final classification of the Mineral Resources. • A block model with block sizes 5m (X) by 10m (Y) by 5m (Z). Sub celling was used to honour the wireframe boundaries. The Easting (X) and Northing (Y) dimensions of the parent cells are approximately half the distance of the drill spacing in the more densely drilled areas. • Blocks were flagged according to the weathering and mineralisation envelopes. • Most drill holes were sampled at 1m intervals and the drill samples were composited to 1m lengths. Composited sample data were statistically reviewed to determine

Criteria	JORC Code explanation	Commentary
		appropriate top cuts. A Top cut of 10g/t was applied. • Log probability graphs were used to determine the top cuts, and the very high-grade samples were reviewed in Micromine to determine if they were clustered with other high-grade samples. • Downhole and directional variograms were modelled for the mineralised domain. Variograms were modelled in the plane of mineralisation (160° strike and dip -37° degrees). This direction is supported by mapping. A nugget effect of 20% was modelled for the mineralised domain with a range short range of 80m with ranges extend to approximately 100m in the principal direction. Most of the population variance is accommodated within the short range. • All grades were interpolated by ordinary kriging. A 3-pass estimation strategy was used. The search ellipse had an orientation of 350° with plunge -5° and dip of -48°. The first pass used a search ellipse of 35m (major) by 15m (semi-major) by 5m (minor) dimensions. The second estimation pass search radii were doubled, and the third pass radii tripled to the maximum range from the variography, to the to fill the remaining blocks. The minimum number of samples required per block estimated was relaxed for the third pass. • A minimum of 5 and maximum of 30 samples from a minimum of 3 drill holes were used to interpolate a cell. Cell discretization of 3 x 3 x 3 (X, Y, Z) was employed. Octant based searching was not used because the sample data is not regarded as clustered. • The mineralisation envelopes were used as hard boundaries during grade interpolation. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No mining has taken place. This estimate was based on sample assay results. The database was closed on 31 Julie 2018. An inverse distance squared and cubed algorithm was used to validate the kriged grades. The interpolated grades were validated by way of review of cross sections (block model and drill samples presented with same colour legend), swath plots, and comparison of mean grades from sample data. **Kunche**: A resource at Kunche was first published in 2011. The Mineral Resource estimate was 4.9Mt at 2.0g/t Au (Indicated) and 3.6Mt at 1.7g/t Au (Inferred). An updated Kunche Mineral Resource estimate was previously published in 2013. The Mineral Resource estimate was 8.42 Mt at1.73 g/t Measured,2.24Mt at 1.38g/t Au

Criteria	JORC Code explanation	Commentary
		(Indicated) and 4.86Mt at 1.17g/t Au (Inferred) at a cut-off grade of 0.5 g/t Au. Additional drilling conducted between 2013 and 2018 has contributed to the slight increase in tonnage and slight decrease in grade. The current model used a categorical indicator approach was used to define the mineralisation also contributing to the increase in tonnes and slight drop in grade with more overall ounces. **Bepkong**: The Bepkong Mineral Resource estimate was previously published in 2011. The Mineral Resource estimate was 1.93Mt at2.5g/t Au (Indicated) and 3.87Mt at 2.1g/t Au (Inferred). The current Mineral Resource estimate, after further drilling, is 2.22Mt at 1.79g/t Au (Measured), 1.70Mt at 1.33g/t Au (Indicated) and 1.17Mt at 1.17g/t Au (Inferred) with a cut-off grade of 0.5g/t. **Aduane**: The previous Mineral Resource estimate was published in September 2013 and reported 1.77Mt at 1.5g/t Au (from Au > 0.5g/t) all inferred. Additional drilling conducted between 2013 and 2018 has contributed to the slight increase in tonnage and slight decrease in grade with more overall ounces. Change in drill hole spacing contributed to the change in classification. **Julie**: The previous Mineral Resource estimate was published in September 2014 and reported 16.93Mt at 1.53g/t Au (from Au > 0.5g/t). The 2014 Mineral Resource was a Multiple Indicator Kriging (MIK) recoverable resource which had significant additional dilution built into the model. A direct comparison of the current ordinary kriged and the 2014 MIK estimate based upon tonnage and grade is inappropriate without a detailed discussion comparing the assumptions and parameters used in each estimate. The Julie Mineral Resource was earlier reported in June 2013, based upon an ordinary kriged estimate. The Mineral Resource estimate was reported above a cut-off grade of Au > 0.5g/t. The Mineral Resource estimate was: Measured 0.8Mt at1.95g/t Au, Indicated 8.33Mt at 2.01g/t Au and Inferred 6.64Mt at 1.9g/t Au (total 16.25Mt at 1.98g/t) and provides a better comparison with the current Mineral Resource. Additional drilling conducted between 2013 and 2018 and additional dry bulk density test work have contributed to the slight increase in tonnage and slight decrease in grade. The current geological interpretation is a refinement of the 2013 interpretation with some domains having increases or decreases in contained volume due to sample grades from recent drilling, and/or a refinement to previous domain interpretations with the removal of excessive dilution in the hangingwall or footwall.

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		Collette: The Mineral Resource estimate was completed in 2011. The Mineral Resource estimate was 1.69Mt at 1.45g/t Au. **Julie NW:** The previous Mineral Resource estimate was published in October 2016 and reported 0.38Mt at 4.2g/t Au (Indicated) and 0.03Mt at 4.0g/t Au (Inferred). This was 2009 resource model reported under JORC 2012. Additional drilling conducted between 2009 and 2018 has contributed to the slight increase in tonnage and slight decrease in grade, with more overall ounces. **Danyawu:** The previous Mineral Resource estimate was published in October 2016 and reported 0.07Mt at 5.5g/t Au (Indicated). This was the 2009 resource model rereported under JORC 2012. Additional drilling conducted between 2009 and 2018 has contributed to the slight increase in tonnage and slight decrease in grade, with more overall ounces. Josephine, Manwe, Alpha/Bravo, Kunche NW and Yagha are all new resource estimates.
	The assumptions made regarding recovery of by-products.	The only by products recovered will be immaterial quantities of silver and this has been ignored.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	As discussed in Section 2 the small quantities of organic carbon and arsenopyrite at Kunche and Bepkong appear not to have a serious deleterious effect on gold extraction, or to be an environmental issue that cannot be adequately mitigated. At Julie approximately 35% of the gold is associated with pyrite which can be recovered by flotation and fine grinding of concentrate prior to extraction by cyanide.
	Any assumptions behind modelling of selective mining units.	No Selective mining unit assumptions were incorporated in the block models.
	Any assumptions about correlation between variablesAny assumptions behind modelling of selective mining units.	Not applicable.No Selective mining unit assumptions were incorporated in the block models.
	Description of how the geological interpretation was used to control the resource estimates.Any assumptions about correlation between variables	Estimates are completed for all blocks within the mineralised envelope wireframes. The oxidation surfaces were used for definition of oxidation domains in the block model.Not applicable.
	Discussion of basis for using or not using grade cutting or capping.Description of how the geological interpretation was used to control the resource estimates.	Top cuts for Au were determined using classical statistical methods – histograms and probability plots. Various top cuts were applied to the composited samples and are discussed above under 'Estimation and modelling techniques'Estimates are completed for all blocks within the mineralised envelope wireframes. The oxidation surfaces were used for definition of oxidation domains in the block model.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if	Validation of the block model initially involved comparing the block model volume to the wireframe volume. Grade estimates were then validated by statistical comparison with the drill hole data. Visual comparison of Au grade trends in the

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	available.Discussion of basis for using or not using grade cutting or capping.	model with the drill hole Au grade trends was also completed in addition to swath plots for northing, easting and RL. Reported OK grades were compared to inverse distance grades. No reconciliation data is available.Top cuts for Au were determined using classical statistical methods – histograms and probability plots. Various top cuts were applied to the composited samples and are discussed above under 'Estimation and modelling techniques'
	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Tonnages are estimated on a dry basis. Validation of the block model initially involved comparing the block model volume to the wireframe volume. Grade estimates were then validated by statistical comparison with the drill hole data. Visual comparison of Au grade trends in the model with the drill hole Au grade trends was also completed in addition to swath plots for northing, easting and RL. Reported OK grades were compared to inverse distance grades. No reconciliation data is available.
Moisture	The basis of the adopted cut-off grade(s) or quality parameters applied.Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The Mineral Resource For Kunche, Bepkong, Aduane, Kunche NW , Yagha and Julie are reported above a cut-off grade of 0.5 g/t Au. Julie West, Danyawu, Alpha/Bravo, Josephine and Manwe are reported above a cut-off grade of 1 g/t Au. These cut-off grades are considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.Tonnages are estimated on a dry basis.
Cut-off parameters	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.The basis of the adopted cut-off grade(s) or quality parameters applied.	Mining would be by open cut methods. The widths of the zones of mineralisation would allow a larger scale mining fleet because edge dilution (waste material at the edges of the ore domains being captured in the ore) will be kept to a minimum. The Mineral Resource For Kunche, Bepkong, Aduane, Kunche NW , Yagha and Julie are reported above a cut-off grade of 0.5 g/t Au. Julie West, Danyawu, Alpha/Bravo, Josephine and Manwe are reported above a cut-off grade of 1 g/t Au. These cut-off grades are considered reasonable for the reporting of a Mineral Resource which will support an open pit mining scenario.
Mining 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	Kunche, Bepkong, Aduane, Kunche NW, Yagha Josephine and Manwe's mineralisation contains sulphides which is predominantly pyrite and arsenopyrite. In general, this does not appear to have a significant deleterious effect on gold extraction. Julie, Julie West, Danyawu and Alpha/Bravo mineralisation contains sulphides which is predominantly pyrite and relatively unreactive. Approximately 35% of the gold is associated with pyrite which can be recovered by flotation

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	rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	and fine grinding of concentrate prior to extraction by cyanide. The mineralisation modelled and metallurgical test work available at the resource estimation stage indicated conventional gold extraction for all Kunche and Bepkong ores and for Julie oxide ore by CIL (refer Section 2). Julie primary and transition ores require bulk sulphide flotation with fine grinding of concentrate and leaching of both the flotation concentrate and tailings products. For all ores data indicates recovery of gold would be feasible. For Collette, only three oxide samples have been tested by conventional CIL methods. **Julie West and Danyawu** have had cyanide leach test work carried out on pulps and coarse rejects and has shown similar characteristics to the nearby Julie deposit. **Aduane, Kunche NW, Yagha, Josephine** and **Manwe** have not been metallugically tested at all. Recoveries for these deposits are expected to be similar to the surrounding larger deposits. Subsequent pre-feasibility and feasibility metallurgical work has confirmed the mineralisation is amenable to the gold processing techniques discussed above.Mining would be by open cut methods. The widths of the zones of mineralisation would allow a larger scale mining fleet because edge dilution (waste material at the edges of the ore domains being captured in the ore) will be kept to a minimum.
Metallurgical 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 not been considered this should be reported with an explanation of the environmental assumptions made.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	No detailed assumptions regarding possible waste and process residue disposal options were made. Subsequent pre-feasibility and feasibility work has confirmed that mining waste and processing residue can be safely and efficiently placed in adjacent waste dumps and nearby tailings dam.Kunche, Bepkong, Aduane, Kunche NW, Yagha Josephine and Manwe's mineralisation contains sulphides which is predominantly pyrite and arsenopyrite. In general, this does not appear to have a significant deleterious effect on gold extraction. Julie, Julie West, Danyawu and Alpha/Bravo mineralisation contains sulphides which is predominantly pyrite and relatively unreactive. Approximately 35% of the gold is associated with pyrite which can be recovered by flotation and fine grinding of concentrate prior to extraction by cyanide. The mineralisation modelled and metallurgical test work available at the resource estimation stage indicated conventional gold extraction for all Kunche and Bepkong ores and for Julie oxide ore by CIL (refer Section 2). Julie primary and transition ores require bulk sulphide flotation with fine grinding of concentrate and leaching of both the flotation concentrate and tailings products. For all ores data indicates recovery of gold would be feasible. For Collette, only three oxide samples have been tested by conventional CIL methods. **Julie West and Danyawu** have had

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	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.	cyanide leach test work carried out on pulps and coarse rejects and has shown similar characteristics to the nearby Julie deposit. **Aduane, Kunche NW, Yagha, Josephine** and **Manwe** have not been metallugically tested at all. Recoveries for these deposits are expected to be similar to the surrounding larger deposits. Subsequent pre-feasibility and feasibility metallurgical work has confirmed the mineralisation is amenable to the gold processing techniques discussed above.
Environmental factors or assumptions	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.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 not been considered this should be reported with an explanation of the environmental assumptions made.	In-situ dry bulk densities were determined using the water displacement method on wax coated half core samples. An electronic precision balance was used to weigh the samples and standard industry procedures were followed. **Kunche**: 524 density measurements have been taken for this deposit. Oxide material was assigned a density of 1.93 t/m^3, transitional material was assigned a density of 2.37 t/m^3 and fresh material was assigned a density of 2.75 t/m^3. **Bepkong**: Density values were obtained from Azumah. Oxide material was assigned a density of 2.21 t/m^3, transitional material was assigned a density of 2.49 t/m^3 and fresh material was assigned a density of 2.76 t/m^3. **Aduane**: 155 bulk density measurements have been taken within the oxide and transitional zones. Results returned 1.84 t/m^3 for strongly oxidised material and 2.49 t/m^3 for weakly and moderately oxidised material was used. 2.75 t/m^3 was used for fresh material. It was decided to use the Kunche densities as there was some issue were identified in the oxide and transition results. 1.93 t/m^3 was assigned for the oxide, transitional material was assigned a density of 2.37 t/m^3 and fresh material was assigned a density of 2.75 t/m^3. **Julie**: A bulk density database consisting of 738 dry bulk density determinations has been supplied for this deposit. The database has been subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.15 t/m3, transitional material was assigned a density of 2.52 t/m3 and fresh material was assigned a density of 2.74 t/m3. **Collette**: There has been no bulk density data collected from the Collette deposit. Oxide material was assigned a density of 2.0 t/m^3, transitional material was assigned a density of 2.4 t/m^3 and fresh material was assigned a density of 2.7 t/m^3. Bulk densities values are based on similar deposits and rock types in the region. **Julie NW, Danyawu, Alpha/Bravo, Josephine** and **Manwe** used the old Julie bulk densities of oxide 2.05 t/m^3, transition 2.45 t/m^3 and primary of 2.75 t/m^3. **Kunche NW** and **Yagha** used Kunche bulk densities of oxide 1.93 t/m^3, transition 2.37 t/m^3 and primary of 2.75 t/m^3.No

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		detailed assumptions regarding possible waste and process residue disposal options were made. Subsequent pre-feasibility and feasibility work has confirmed that mining waste and processing residue can be safely and efficiently placed in adjacent waste dumps and nearby tailings dam.
Bulk density	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.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.	In-situ dry bulk densities were determined using the water displacement method on wax coated half core samples. An electronic precision balance was used to weigh the samples and standard industry procedures were followed. In-situ dry bulk densities were determined using the water displacement method on wax coated half core samples. An electronic precision balance was used to weigh the samples and standard industry procedures were followed. **Kunche**: 524 density measurements have been taken for this deposit. Oxide material was assigned a density of 1.93 t/m^3, transitional material was assigned a density of 2.37 t/m^3 and fresh material was assigned a density of 2.75 t/m^3. **Bepkong**: Density values were obtained from Azumah. Oxide material was assigned a density of 2.21 t/m^3, transitional material was assigned a density of 2.49 t/m^3 and fresh material was assigned a density of 2.76 t/m^3. **Aduane**: 155 bulk density measurements have been taken within the oxide and transitional zones. Results returned 1.84 t/m^3 for strongly oxidised material and 2.49 t/m^3 for weakly and moderately oxidised material was used. 2.75 t/m^3 was used for fresh material. It was decided to use the Kunche densities as there was some issue were identified in the oxide and transition results. 1.93 t/m^3 was assigned for the oxide, transitional material was assigned a density of 2.37 t/m^3 and fresh material was assigned a density of 2.75 t/m^3. **Julie**: A bulk density database consisting of 738 dry bulk density determinations has been supplied for this deposit. The database has been subdivided into oxide, transition and fresh material allowing a mean dry bulk density to be calculated for each. On this basis, oxide material was assigned a density of 2.15 t/m3, transitional material was assigned a density of 2.52 t/m3 and fresh material was assigned a density of 2.74 t/m3. **Collette**: There has been no bulk density data collected from the Collette deposit. Oxide material was assigned a density of 2.0 t/m^3, transitional material was assigned a density of 2.4 t/m^3 and fresh material was assigned a density of 2.7 t/m^3. Bulk densities values are based on similar deposits and rock types in the region. **Julie NW, Danyawu, Alpha/Bravo, Josephine** and **Manwe** used the old Julie bulk densities of oxide 2.05 t/m^3, transition 2.45 t/m^3 and primary of 2.75 t/m^3. **Kunche NW** and **Yagha** used Kunche bulk densities of oxide 1.93 t/m^3, transition 2.37 t/m^3 and primary of 2.75 t/m^3.

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	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.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.	The bulk density values were assigned to each model cell according to the state of oxidation.In-situ dry bulk densities were determined using the water displacement method on wax coated half core samples. An electronic precision balance was used to weigh the samples and standard industry procedures were followed.
	The basis for the classification of the Mineral Resources into varying confidence categories.Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The Mineral Resource is classified as a combination of Measured, Indicated and Inferred. All blocks within all mineralisation envelopes were classified.The bulk density values were assigned to each model cell according to the state of oxidation.
Classification	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).The basis for the classification of the Mineral Resources into varying confidence categories.	The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation **Kunche:** Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting). **Bepkong:** was classified as a combination of Measured, Indicated and Inferred. The Measured Mineral Resource sits in the near surface core of the largest domains with a drill hole spacing of better than 25m x 25m, with an outer crust of Indicated. Classification was applied on a domain by domain basis. Inferred Mineral Resources were confined to depth extents of domains with limited sample support, or those domains with one or two drill holes penetrating them. **Aduane:** The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting). **Julie**: Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting). Domains with between 1 and 3 holes intercepting the domain are classified as Inferred. **Julie West** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 20m by 20m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to

Criteria	JORC Code explanation	Commentary
		areas of the deposit where drill hole spacing was greater than 20m by 20m. **Danyawu** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 20m by 20m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 20m by 20m. **Josephine** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 25m by 25m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 25m by 25m. **Manwe** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 25m by 25m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 20m by 20m. All material has been classified as inferred at **Alpha/ Bravo, Kunche NW** and **Yagha**. Infill drilling is required to increase the confidence levels. The results reflect the Competent Person's views of the deposits.The Mineral Resource is classified as a combination of Measured, Indicated and Inferred. All blocks within all mineralisation envelopes were classified.
	Whether the result appropriately reflects the Competent Person's view of the deposit.Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The Mineral Resource estimate classification appropriately reflects the view of the applicable Competent Person.The Mineral Resources were classified based upon drill hole spacing, quality of sampling and sample analyses, quantity of density measurements, and the relative confidence in the geological interpretation **Kunche:** Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting). **Bepkong:** was classified as a combination of Measured, Indicated and Inferred. The Measured Mineral Resource sits in the near surface core of the largest domains with a drill hole spacing of better than 25m x 25m, with an outer crust of Indicated. Classification was applied on a domain by domain basis. Inferred Mineral Resources were confined to depth extents of domains with limited sample support, or those domains with one or two drill holes penetrating them.

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		Aduane: The Indicated Mineral Resource is supported at a drill spacing of 25m (N) x 25m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 25m (northing and easting). **Julie**: Drill holes supporting the Measured Mineral Resource are drilled at a spacing of 25m (N) x 25m (E). The Indicated Mineral Resource is supported at a drill spacing of between 25m (N) x 25m (E) and 50m (N) x 50m (E). The Inferred Mineral Resource is supported by drilling with drill spacing typically greater than 50m (northing and easting). Domains with between 1 and 3 holes intercepting the domain are classified as Inferred. **Julie West** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 20m by 20m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 20m by 20m. **Danyawu** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 20m by 20m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 20m by 20m. **Josephine** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 25m by 25m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 25m by 25m. **Manwe** was classified as a combination of Indicated and Inferred. The Indicated Mineral Resource was defined within areas of close spaced RC drilling of less than 25m by 25m, and where the continuity and predictability of the lode positions was good. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 20m by 20m. All material has been classified as inferred at **Alpha/ Bravo, Kunche NW** and **Yagha**. Infill drilling is required to increase the confidence levels. The results reflect the Competent Person's views of the deposits.
	The results of any audits or reviews of Mineral Resource estimates.Whether the result appropriately reflects the Competent Person's view of the deposit.	Extomine's resource estimates were subject to internal check lists and reviews. The Resources of Kunche, Aduane are updates on the 2013 Mineral Resource with addition drilling.

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		The Resources of Julie West and Danyawu are updates on the 2016 Mineral Resource with addition drilling. The Alpha/Bravo, Josephine, Manwe, Kunche NW and Yagha are all new Mineral Resource estimates. The Julie Mineral Resource estimate was reviewed by a CSA Global resource geologist as part of the CSA Global peer review process. The Mineral Resource is an update to the 2013 Mineral Resource with the 2013 domains used as a basis, with modifications based upon additional drilling or slight adjustments to existing domain boundaries where considered prudent. The Collette Mineral Resource estimate has not been updated: it is the original 2011 MRE. The Bepkong Mineral Resource estimate has not been updated: it is the original 2013 MRE. No external reviews have taken place.The Mineral Resource estimate classification appropriately reflects the view of the applicable Competent Person.
Audits or reviews	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 results of any audits or reviews of Mineral Resource estimates.	The relative accuracy of the Mineral Resource estimate is reflected through classification of the Mineral Resources in accordance with the 2012 JORC Code. The geological interpretation supporting the Mineral Resource has sufficient width, strike extent and depth extent to minimise geological risk in the interpretation of the geological envelopes. The classification of the Mineral Resource is a fair and reasonable representation of the relative accuracy in grade distribution and the geological domains as modelled.Extomine's resource estimates were subject to internal check lists and reviews. The Resources of Kunche, Aduane are updates on the 2013 Mineral Resource with addition drilling. The Resources of Julie West and Danyawu are updates on the 2016 Mineral Resource with addition drilling. The Alpha/Bravo, Josephine, Manwe, Kunche NW and Yagha are all new Mineral Resource estimates. The Julie Mineral Resource estimate was reviewed by a CSA Global resource geologist as part of the CSA Global peer review process. The Mineral Resource is an update to the 2013 Mineral Resource with the 2013 domains used as a basis, with modifications based upon additional drilling or slight adjustments to existing domain boundaries where considered prudent. The Collette Mineral Resource estimate has not been updated: it is the original 2011 MRE. The Bepkong Mineral Resource estimate has not been updated: it is the original 2013 MRE.

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		No external reviews have taken place.
Discussion of relative accuracy/ confidence	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.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 refers to global estimation of tonnes and grade.The relative accuracy of the Mineral Resource estimate is reflected through classification of the Mineral Resources in accordance with the 2012 JORC Code. The geological interpretation supporting the Mineral Resource has sufficient width, strike extent and depth extent to minimise geological risk in the interpretation of the geological envelopes. The classification of the Mineral Resource is a fair and reasonable representation of the relative accuracy in grade distribution and the geological domains as modelled.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.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.	No production has occurred.The statement refers to global estimation of tonnes and grade.