

# JORC Code, 2012 Edition – Table 1 for Zanaga Iron Ore Project, located in Republic of Congo, as at September 2013.

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<p>The deposit was sampled between 2007 and 2013 by diamond and reverse circulation ("RC") drilling on an average grid of 100 x 400 m at the northern end of the deposit and 200 x 400 m at the southern end of the deposit. The central area is more densely drilled to 100 x 200 m, 100 x 100 m and 100 x 50 m grids, with the tighter drilling east-west along the sections.</p> <p>A total of 323 diamond holes were drilled for 74,614 m and 908 RC holes for 103,439 m. Drill holes are inclined to the west typically at an angle of 60° to intercept the true thickness of mineralisation where possible. Drilling at the closest spacing give intersections around 100 x 100 m apart. The maximum number of intersections into the fresh material on any one section is 5, averaging 1-2 intersections per unit.</p> <p>The diamond core was sampled at 1 m intervals to the lithological contacts and the RC chips were sampled at 2 m intervals (with a few exceptions where samples are 1 m). A paint line on the mast allowed drillers to identify the 2 m intervals adequately.</p> <p>RC samples were split twice at the drill site using a three tier splitter to produce A and B samples, each of which represent 6.25% of the original sample. The A and B sample weights vary between 2.5 and 3.5 kg each depending on the horizon intersected. Samples A and B are then tagged and labelled.</p>

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		<p>Diamond drill (“DD”) samples were split using a core saw or where too friable for sawing, were cut or cleaved in half.</p> <p>CSA Global (UK) Ltd (“CSA”) reviewed the drilling and sampling procedures prior to the Mineral Resource Estimate (“MRE”) being completed and concludes that the sampling techniques are suitable, of good practise for the style of mineralisation so as to ensure reliable and representative data is collected for downstream MRE use.</p> <p>54 RC holes were twinned by DD to validate RC data and this is described in more detail in “<i>Verification of sampling and assaying</i>”.</p>
<p><i>Drilling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<p>DD drilling commenced using PQ or PQ3 rods to produce 85 / 83.1 mm diameter core from surface which reduced to HQ or HQ3 (63.5 / 61.1 mm diameter) and in some cases to NQ / NQ3 (47.6 / 45.1 mm diameter) with depth. All DD drilling was completed using triple tube.</p> <p>DD core was oriented by means of a Reflex ACE tool with three levels of confidence in the orientation recorded in the database, indicating high, moderate and low confidence. This enables interrogation of the oriented data using the appropriate level of confidence.</p> <p>RC holes have the bit type and bit size (mm) recorded in the database. Often a wider bit was used for the pre-collar and a smaller diameter bit for the remainder of the hole. The average depth of the PQ/PQ3 pre-collar was 50 m but varied between 14 m and 99 m, with depth being a function of the oxidation profile and depth of friable materials.</p>
<p><i>Drill sample recovery</i></p>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential</i></li> </ul>	<p>DD core recoveries were recorded per drilled run by measuring the length recovered compared to the length drilled.</p>

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	<i>loss/gain of fine/coarse material.</i>	<p>In the competent lithologies (competent itabirite (“ITC”), transitional itabirite (“ITT”) and banded iron formation (“BIF”), the core recovery was excellent with mean recoveries of 92%, 92% and 97% respectively. Recovery was poorer in the friable materials (colluvium and canga “COL”, goethitic itabirite “ITG” and friable itabirite “ITF”) with mean recoveries for DD core of 69% for COL, 74% for ITG and 86% for ITF. CSA did not see drilling actively take place during the site visit (the drill program had just ended), however, a review of the procedures was completed, and they state that shorter runs should be employed through the more friable material.</p> <p>For RC samples, recovery was measured by comparing the actual weight of sample drilled and the theoretical weight of the material. Of 38,645 RC samples, 38,406 had sample weights, and therefore recovery data for near 100% of data could be reviewed.</p> <p>Sample recovery for RC drilling was approximately 50%, which is considered low, particularly with respect to fresh BIF material. The reason for the low recovery is believed to be due to the presence of water in samples, with no auxiliary booster in place to keep the samples drilled at depth dry. A review of recovery by sample condition (dry, moist, wet) showed that recovery was best for dry samples. A review of Fe grade by sample condition showed good compatibility and suggests that no bias was introduced by the inclusion of moist and wet samples. However, if further drilling is conducted, CSA recommends that efforts are made to keep samples dry through the use of an auxiliary booster.</p> <p>CSA investigated the relationship between iron grade and recovery and found there was no definable relationship between recovery and grade. In addition, the comparison between DD core, where there is very good recovery and RC chips shows excellent correlation. In conclusion, the low</p>

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		<p>recovery observed in RC chips does not introduce bias into the resource, and are suitable for use in the MRE.</p>
<p><i>Logging</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>RC chip samples were logged for lithology on 2 m intervals at the rig. Magnetic susceptibility readings were measured at the rig. All RC chips were logged for lithology and chip trays were stored to preserve the record.</p> <p>DD core was orientated and lithologically and geotechnically logged at the Mining Project Development Congo (“MPD”) Camp core shed where it was also photographed. Magnetic susceptibility readings were taken.</p> <p>DD logging was completed on 1 m intervals or &lt;1 m where contacts between geological units were encountered (&lt;5% total records). All DD core was logged.</p> <p>Core was photographed on completion of logging, and prior to sampling. Pathways to core photographs are stored in the database.</p> <p>The level of information gained from the sampling is of sufficient quality and consistency to be used for the basis of Mineral Resource Estimation, mining studies and metallurgical studies.</p>
<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material</i></li> </ul>	<p>Core was orientated and sampled on 1 m intervals. Where core was not orientated, samples are between 0.5 and 1.5 m in length. Some samples (&lt;0.3% of total number) are less than 0.5 or greater than 1.5 m in length.</p> <p>31% of DD core was split in half using a core saw and sampled along the apex of the structures in the core. 69% of DD core was quarter split, due to the requirement to retain samples for metallurgical test work. If the apex line coincided with the orientation line, the core was sampled 5 mm to the right of the line. Where half core samples were submitted for</p>

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	<i>being sampled.</i>	<p>preparation and analysis, the remaining half was stored for reference. Where quarter core samples were submitted for preparation and analysis, one half was available for metallurgical test work, and the remaining one quarter was stored for reference. Checks on the compatibility of sample types was completed – quarter core vs half core, chips vs core, and samples showed a very high level of correlation. Where core was too friable for sawing, it was sampled using a machete.</p> <p>The majority (98%) of RC chips were sampled at 2 m intervals. Dry RC samples were split twice at the rigs using a three tier splitter and wet samples were collected in bulk, dried in the sun, and then split by a three tier Jones Riffle splitter into approximately 3 kg samples. The sample weights were recorded at each stage of the process to enable recoveries be calculated. Original sample condition (dry, moist, wet) is recorded in the database.</p> <p>The samples were prepared at the on-site ALS Chemex facility where they were crushed to 70% passing 2 mm then split to obtain 1,000 g sample (through a 50:50 Jones riffle splitter). The 1,000 g samples were then pulverised to 85% passing 75 µm with the remaining crushed sample retained for reference purposes. 100 g of the pulp was submitted to ALS Chemex in Perth for XRF analysis. The remaining pulp was stored on site for reference. Lab standards, duplicates and blanks were reviewed and no issues were identified.</p> <p>100 g pulps were analysed on site by portable XRF using a desktop Niton. Comparison of Niton and laboratory analyses showed an excellent correlation.</p> <p>Field duplicates were sampled and analysed using both portable XRF Niton and laboratory XRF methods. They were collected at the same time as the primary sample, using the same sampling protocol and were used</p>

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		<p>to measure the precision of the sample preparation and analysis and results indicate that the procedures in place are working.</p> <p>The sample preparation procedures are appropriate for the iron ore mineralisation at Zanaga.</p>
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<p>The primary samples were analysed by multi-element XRF (fused disc) at ALS Chemex (Perth, Australia) for Al<sub>2</sub>O<sub>3</sub>, As, Ba, CaO, Cl, Co, Cr<sub>2</sub>O<sub>3</sub>, Cu, Fe, K<sub>2</sub>O, MgO, Mn, MnO, Na<sub>2</sub>O, Ni, P, Pb, S, SiO<sub>2</sub>, Sn, Sr, TiO<sub>2</sub>, V, Zn, Zr and Loss on Ignition at 105°C, 400°C, 650°C and 1,000°C.</p> <p>1,166 samples from the magnetite bearing material (ITC, ITT and BIF) were also analysed by Davis Tube Recovery at ALS Perth.</p> <p>A portable XRF (Niton XL3t) was used on site to collect additional oxide analyses from 100 g of the remaining pulp after sample preparation. Calibration of the machine was done at the beginning of each day. Field duplicates were used to assess the precision of the Niton results. Niton results were reviewed against laboratory assays, and were found to have an excellent correlation, but were not used in the MRE, since laboratory assays were available for all samples.</p> <p>Blanks, Field Duplicates and Certified Reference Materials (“CRMs”) were used to monitor the precision and accuracy of the analytical data through insertion into the sample stream before submission to the laboratory.</p> <p>1,938 of the primary samples (approximately 2%) were analysed by XRF at umpire laboratories (Ultratrace and ALS Perth).</p> <p>Field duplicates were inserted into the sample stream at a rate of 5%, field blanks at a rate of 3.4%, CRMs at a rate of 2.5% constituting an overall 10.9% check on the original data. 17 different standards were used to cover the expected ranges of iron mineralisation. In addition, the</p>

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		<p>laboratory quality assurance and quality control (“QAQC”) material was reviewed (17% CRMs and blanks and 13% pulp splits).</p> <p>On analysis of the results of the QAQC system CSA concluded:</p> <p>There was good correlation (correlation coefficient of 0.98) between the Niton and laboratory results.</p> <p>High analytical precision was demonstrated by good correlation between duplicate and original samples.</p> <p>Accuracy was demonstrated by the majority of CRMs.</p> <p>A small number of QC samples appeared to have been affected by contamination and misallocation of standard IDs. The proportion was small enough to be considered not material.</p> <p>The results of blanks analysis suggested that there may have been an issue of sample switching in the laboratory preparation since two samples showed noticeable contamination. Overall, the blanks performed well and showed no material contamination (noting that the field blanks were uncertified sands sourced locally).</p> <p>Overall, the laboratory procedures and analysis were considered appropriate and did not indicate bias.</p>
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>Two umpire laboratories (Ultratrace and ALS Perth) were used to verify samples during the drilling campaigns. Other QAQC checks were employed as outlined above.</p>

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		<p>Sampling, Logging, Niton and Data Management Procedures were documented and have been reviewed by CSA and are considered fit for purpose.</p> <p>Maria O'Connor verified logged intercepts from several DD and RC drill holes while on site. Collar locations were field checked, database spot checks conducted, and geological interpretation and review were completed during the site visit. The site visit lasted four days from 4th May until 7th May 2012 inclusive.</p> <p>Drilling had stopped during the site visits completed by CSA, and therefore, drilling procedures were not verified first hand. However, sample preparation and logging were still ongoing, and CSA verified that these were being completed as outlined in the procedures.</p> <p>The information collected from the drill site, core shed and laboratory was digitally entered and imported into DataShed software (a data management system by Maxwell GeoServices).</p> <p>54 RC holes were twinned and results were reviewed and show good correlation. No adjustments were made to the data.</p>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<p>Drill collars are surveyed on completion of the hole using a Total Station (Sokkia) differential GPS in the WGS84 projection and UTM coordinate system.</p> <p>The topographical survey used is a LiDAR based digital terrain model which gives a very high level of accuracy.</p> <p>Downhole surveys were recorded at the end of the hole using a gyro survey. The data was also collected at regular intervals of 2 m, 3 m or 5 m in the majority of cases. Older data recorded downhole surveys by a</p>



Criteria	JORC Code explanation	Commentary
		<p>camera shot tool at the end of the hole and at approximately 30 m intervals.</p> <p>Where drill holes collars were picked up by hand held GPS, and the difference between the surveyed RL and topography was greater than 2 m, the collars were draped onto the topography, since the reliability of a hand held GPS in the RL can be considered low.</p> <p>Where collars were <math>\pm 2</math> m from the topography, coordinates were sent to site for verification.</p> <p>The level of topographic control and accuracy of the drill hole and sample locations is suitable for the reporting of Mineral Resources.</p>
<p><i>Data spacing and distribution</i></p>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>The deposit was sampled between 2007 and 2013 by DD and RC drilling on an average grid of 100 x 400 m at the northern end of the deposit and 200 x 400 m at the southern end of the deposit. The central area is more densely drilled to 100 x 200 m, 100 x 100 m and 100 x 50 m grids, with the tighter drilling east-west along the sections.</p> <p>The drilling pattern is sufficiently dense to interpret the geometry and boundaries of the iron mineralisation with confidence. The data quantity and distribution is considered appropriate for the reporting of Inferred, Indicated and Measured Mineral Resources.</p> <p>Samples were composited to 2 m within each of the different lithological zones for the majority of drilling, which CSA believes is appropriate given the original sample size and support of the RC and DD drilling.</p>
<p><i>Orientation of data in relation to</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a</i></li> </ul>	<p>The majority of the drill holes have been orientated perpendicular to the dipping lenses so that sampling bias is not introduced although the</p>

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<i>geological structure</i>	<i>sampling bias, this should be assessed and reported if material.</i>	<p>geometry of the iron mineralisation indicates there are faults that offset the mineralisation that are sometimes sub- parallel to the sections.</p> <p>The sampling configuration has not introduced any material bias to the grade and tonnage estimation.</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	Core samples taken from surface holes are kept in secure storage on the Zanaga camp until submission to the laboratory for analysis. The Chain of Custody is managed by Glencore Iron Ore (“Glencore”) personnel on site.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<p>CSA visited site to review and audit the drilling, logging and sampling on site in March 2012 and May 2012.</p> <p>CSA considers the sample collection and assaying techniques to be appropriate for the style of geometry and style of mineralisation and the data is suitable for use in the Mineral Resource Estimate.</p>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<p>The licences are owned by MPD, a company wholly owned by Zanaga Iron Ore Company (“ZIOC”). Glencore is majority joint venture partner with ZIOC and has effective management control of the project.</p> <p>On 14th August 2014, a mining licence was awarded over a single permit area – Zanaga – covering 499.3 km<sup>2</sup>. This mining licence replaces two exploration licences that had previously covered the same area (Zanaga-Bambama and Zanaga- Mandzoumou). The mining licence has been granted for a duration of 25 years, with options to extend as per the</p>

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		<p>Mining Code of Republic of Congo. The Zanaga deposit lies wholly within the licence boundary.</p> <p>The licence name is 2014-443 and the coordinates are in the following table (extracted from the 'Permis Zanaga' mining licence document).</p> <table border="1"> <thead> <tr> <th>SOMMETS</th> <th>LONGITUDES</th> <th>LATITUDES</th> </tr> </thead> <tbody> <tr><td>A</td><td>13° 32' 14" E</td><td>2° 27' 36" S</td></tr> <tr><td>B</td><td>13° 32' 13" E</td><td>2° 35' 22" S</td></tr> <tr><td>C</td><td>13° 34' 37" E</td><td>2° 35' 22" S</td></tr> <tr><td>D</td><td>13° 34' 37" E</td><td>2° 37' 29" S</td></tr> <tr><td>E</td><td>13° 34' 18" E</td><td>2° 37' 29" S</td></tr> <tr><td>F</td><td>13° 34' 17" E</td><td>2° 45' 31" S</td></tr> <tr><td>G</td><td>13° 34' 46" E</td><td>2° 45' 31" S</td></tr> <tr><td>H</td><td>13° 34' 46" E</td><td>2° 49' 55" S</td></tr> <tr><td>I</td><td>13° 34' 26" E</td><td>2° 49' 55" S</td></tr> <tr><td>J</td><td>13° 34' 26" E</td><td>2° 52' 34" S</td></tr> <tr><td>K</td><td>13° 35' 08" E</td><td>2° 52' 34" S</td></tr> <tr><td>L</td><td>13° 35' 08" E</td><td>2° 57' 37" S</td></tr> <tr><td>M</td><td>13° 35' 42" E</td><td>2° 57' 37" S</td></tr> <tr><td>N</td><td>13° 35' 42" E</td><td>2° 58' 40" S</td></tr> <tr><td>O</td><td>13° 38' 17" E</td><td>2° 58' 40" S</td></tr> <tr><td>P</td><td>13° 38' 17" E</td><td>2° 53' 00" S</td></tr> <tr><td>Q</td><td>13° 37' 50" E</td><td>2° 53' 00" S</td></tr> <tr><td>R</td><td>13° 37' 51" E</td><td>2° 48' 53" S</td></tr> <tr><td>S</td><td>13° 37' 21" E</td><td>2° 48' 53" S</td></tr> <tr><td>T</td><td>13° 37' 22" E</td><td>2° 40' 17" S</td></tr> <tr><td>U</td><td>13° 37' 59" E</td><td>2° 40' 17" S</td></tr> <tr><td>V</td><td>13° 38' 00" E</td><td>2° 35' 22" S</td></tr> <tr><td>W</td><td>13° 41' 35" E</td><td>2° 35' 22" S</td></tr> <tr><td>X</td><td>13° 41' 35" E</td><td>2° 27' 37" S</td></tr> </tbody> </table>	SOMMETS	LONGITUDES	LATITUDES	A	13° 32' 14" E	2° 27' 36" S	B	13° 32' 13" E	2° 35' 22" S	C	13° 34' 37" E	2° 35' 22" S	D	13° 34' 37" E	2° 37' 29" S	E	13° 34' 18" E	2° 37' 29" S	F	13° 34' 17" E	2° 45' 31" S	G	13° 34' 46" E	2° 45' 31" S	H	13° 34' 46" E	2° 49' 55" S	I	13° 34' 26" E	2° 49' 55" S	J	13° 34' 26" E	2° 52' 34" S	K	13° 35' 08" E	2° 52' 34" S	L	13° 35' 08" E	2° 57' 37" S	M	13° 35' 42" E	2° 57' 37" S	N	13° 35' 42" E	2° 58' 40" S	O	13° 38' 17" E	2° 58' 40" S	P	13° 38' 17" E	2° 53' 00" S	Q	13° 37' 50" E	2° 53' 00" S	R	13° 37' 51" E	2° 48' 53" S	S	13° 37' 21" E	2° 48' 53" S	T	13° 37' 22" E	2° 40' 17" S	U	13° 37' 59" E	2° 40' 17" S	V	13° 38' 00" E	2° 35' 22" S	W	13° 41' 35" E	2° 35' 22" S	X	13° 41' 35" E	2° 27' 37" S
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Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>Resistivity survey work was undertaken by the United Nations Development Programme between 1967 and 1969 which reported a strong resistivity contrast between the mineralised and unmineralised lithologies.</p>																																																																											
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The mineralisation of the Zanaga deposit comprises a series of Itabirite sequences steeply dipping to the east at 60-65°.</p>																																																																											

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		<p>The deposit is overprinted by a horizontal weathering profile with colluvium and canga at surface (40-60% Fe, 4-8 m), underlain by goethitic itabirite (45% Fe, 6-10 m), friable itabirite (40-45% Fe, 10-26 m), competent itabirite (35-40% Fe, 6-24 m), transition material (30-35% Fe in places, 4-12 m thick) and the primary unweathered magnetite BIF (25-30% Fe). Overall, the eastern units are higher grade than the western units.</p> <p>The geological descriptions reveal that the Canga, Colluvium and goethitic units are structureless and do not have a prominent banding in the rock which implies that the base of oxidation is at the base of the goethitic clay. Immediately below this, the units may still display some oxidation but are more similar to saprock with the original mineralised structures still visible, until the fresh BIF is reached.</p> <p>The contacts between the different weathering profiles are generally transitional over a distance of up to 5 m in places but more usually 1-2 m.</p>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<p>It is the Competent Person’s opinion that listing this material would not add any further material understanding of the deposit and Mineral Resource. The Project is at an advanced stage of exploration, resource development and mine planning. Furthermore, no Exploration Results are specifically reported.</p> <p>However, all available drill hole data is contained in the SQL database.</p> <p>The following table summarises drilling data used in the MRE. It has been adapted from “JORC Technical Report on the September 2013 Mineral Resource Update of the Zanaga Iron Ore Project, Republic of Congo” (referred to hereafter as the “2013 JORC Technical Report”).</p>

Criteria	JORC Code explanation	Commentary																																																	
		<table border="1"> <thead> <tr> <th rowspan="2">Area</th> <th rowspan="2">Hole Type</th> <th colspan="3">Total 2013 MRE Update</th> </tr> <tr> <th># Drill holes</th> <th>Metres</th> <th># 2m Composites</th> </tr> </thead> <tbody> <tr> <td rowspan="2">North</td> <td>DD</td> <td>198</td> <td>49,841</td> <td>12,425</td> </tr> <tr> <td>RC</td> <td>512</td> <td>63,368</td> <td>18,036</td> </tr> <tr> <td rowspan="2">Central</td> <td>DD</td> <td>91</td> <td>19,268</td> <td>3,529</td> </tr> <tr> <td>RC</td> <td>325</td> <td>33,295</td> <td>8,832</td> </tr> <tr> <td rowspan="2">South</td> <td>DD</td> <td>34</td> <td>5,504</td> <td>952</td> </tr> <tr> <td>RC</td> <td>71</td> <td>6,777</td> <td>1,506</td> </tr> <tr> <td rowspan="2">Total</td> <td>DD</td> <td>323</td> <td>74,614</td> <td>16,906</td> </tr> <tr> <td>RC</td> <td>908</td> <td>103,439</td> <td>28,374</td> </tr> <tr> <td colspan="2">Grand Total</td> <td>1,231</td> <td>178,053</td> <td>45,280</td> </tr> </tbody> </table> <p>Drill holes ranged from 8 to 318 m for RC holes, and 14 to 657 m for DD holes. The average depth for RC holes was 114 m and for DD holes was 231 m.</p> <p>178,053 m of drilling was available for use in the MRE, with 74,614 m coming from 323 DD holes and 103,439 m coming from 908 RC holes.</p> <p>The vast majority of holes were drilled between 55° and 70° to the west.</p>	Area	Hole Type	Total 2013 MRE Update			# Drill holes	Metres	# 2m Composites	North	DD	198	49,841	12,425	RC	512	63,368	18,036	Central	DD	91	19,268	3,529	RC	325	33,295	8,832	South	DD	34	5,504	952	RC	71	6,777	1,506	Total	DD	323	74,614	16,906	RC	908	103,439	28,374	Grand Total		1,231	178,053	45,280
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<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<p>Samples were composited to 2 m intervals for use in the estimation. No bottom cut for Fe was applied.</p> <p>Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, %S, %P, LOI, MnO, MgO, CaO, K<sub>2</sub>O and Na<sub>2</sub>O composite values were top-cut in some domains, where necessary.</p>																																																	
<i>Relationship between mineralisation widths and</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there</i></li> </ul>	<p>Drill holes are inclined to the west, typically at an angle of 60° in order to try to intercept the true thickness of mineralisation.</p>																																																	

Criteria	JORC Code explanation	Commentary
<i>intercept lengths</i>	<i>should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	The drilling was generally perpendicular to the geometry of the orebody. In a small number of cases, there may be sub-optimal intersections due to locally changing orientations of the orebody due to faulting and intrusions, but the proportion is considered low relative to the amount of data, and is not likely to introduce bias into the dataset.
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	Maps and sections showing the location of the mineralisation are presented in the 2013 Technical Report, which includes plan views, cross sections showing the location of the deposit, the data, interpretations, resistivity and block model.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<p>Exploration Results are not reported here, but data used in the resource is representative of mineralisation.</p> <p>Sample intercepts have been composited so that all data is weighted equally.</p> <p>High grade outliers are managed through top cutting prior to grade estimation.</p>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<p>Resistivity surveying was undertaken between 1967 and 1969 by the United Nations Development Programme.</p> <p>A small program of down-hole geophysical logging was completed in 2012. This comprised of 29 holes. This data has not been reviewed in the context of the Mineral Resource and has therefore not been used.</p> <p>Evaluation of Landsat Enhanced Thematic Mapper Satellite and SRTM elevation data of the licence area.</p> <p>Select pitting and trenching. Detailed ground mapping.</p>

Criteria	JORC Code explanation	Commentary
		<p>Airborne magnetic survey and interpretation.</p> <p>Bulk density was measured on an ongoing basis during the drill programs using the water displacement method on billets of core. QAQC was completed on bulk density measurements through spot-checks of the bulk density dataset and re-measurement using the same procedures.</p>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>The project is currently in the advanced exploration / resource development / mine planning phase.</p> <p>A figure showing the magnetic anomaly and its 47 km extent at Zanaga is presented in the 2013 JORC Technical Report. It remains partially unexplored, but no further work is planned at present.</p>

### Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Data validation procedures used.</i></li> </ul>	<p>Data validation procedures are in place to ensure integrity of the data in the geological database which is housed in an SQL database with inbuilt validations, constraints and triggers. Assays were merged into the database from the laboratory assay certificates.</p> <p>The drill hole data was checked for errors and validated in Datamine before modelling of the deposit. Any apparent errors were discussed with personnel on site and investigated, with the database being corrected on site, and re-exported, prior to further work.</p>
<i>Site visits</i>	<ul style="list-style-type: none"> <li><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li><i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<p>Maria O'Connor, Senior Resource Geologist, CSA, and Robyn Belcher, Principal Database Geologist, CSA, visited site on separate visits during May 2012 and March 2012 respectively. Robyn Belcher visited site</p>

Criteria	JORC Code explanation	Commentary
		<p>between 27th and 30th March 2012. During the site visit, a review and audit of the drilling, logging, sampling and data management procedures was completed.</p> <p>Malcolm Titley, Principal Consultant, CSA, and Competent Person for the MRE has not visited site. However, he supervised the site visit completed by Maria O'Connor, between 4th and 7th May 2012. Collar locations, DD core and RC chips were checked against logs, the procedure of measuring density was observed, the sample preparation procedures were observed and the sample preparation facility was inspected. The conclusions from the site visit were that sample collection procedures are to industry standard or better, and that data collected was fit for use in the MRE. Note: no drilling was observed during the site visit. The drill program for the MRE had finished in February 2012.</p>
<p><i>Geological interpretation</i></p>	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<p>The geological modelling of the iron-bearing zones is based on the geological logging codes of DD core and RC chips. 2D sectional interpretations of these units, snapped to drill hole intersections, were completed on drill sections at 100 and 200 m spacing along strike (over 25 km) within the defined resource area. The deposit was modelled in three contiguous blocks, termed North, Central and South.</p> <p>The majority of interpretation was completed on site and any anomalous logging was checked against chips and core.</p> <p>The mineralised units dip to the east at between 60-70°. The units have been modelled between 1 and 300 m in thickness, with the average downhole length being approximately 45 m. The northern units are the thickest, between 150 and 200 m, the central units are between 20 and 150 m, and the southern units are between 10 and 60 m in thickness. Internal waste of greater than 5 m thickness was modelled separately. In addition, the surfaces between the six material type zones were</p>



Criteria	JORC Code explanation	Commentary
		<p>generated, based on lithological logging codes, COL, ITG, ITF, ITC, ITT and BIF.</p> <p>The interpretation of colluvium differs from ITG, ITF, ITC, ITT and BIF in that mineralisation is not solely focused directly above BIF. The reason for this is that extreme weathering has mobilised it to drape over a wider area than that defined by the mineralisation wireframes. The interpretation was extended beyond the BIF units by 50 m where supported by drill data and resistivity.</p> <p>A waste surface was digitised to define sub-grade material close to surface, whose thickness was between 1 and 5 m.</p> <p>Major units were extended down to the 100 and 0 mRL based on the deepest intercept encountered along strike. Minor units, particularly in the west, which were less well supported by data, were extended to the 400 and 200 mRL.</p> <p>The continuity of grade in the other units is directly related to the continuity of the BIF units, and Fe grades decrease with depth through the various units. There are faults, some which offset or terminate mineralisation in places. There is a mapped ultramafic body that terminates mineralisation between the Central and Northern units, and several dykes are noted in the logging.</p> <p>Overall, there is good confidence in the geological interpretation of the deposit.</p>
<p><i>Dimensions</i></p>	<ul style="list-style-type: none"> <li><i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<p>The MRE has a strike length of over 25 km. The depth below surface is approximately 500 to 600 m, while the plan width extent is approximately 1,200 m at its widest point, made up of several sub-parallel vertical units. Individual units range from approximately 5 to 500 m width.</p>

Criteria	JORC Code explanation	Commentary
		<p>The deepest mineralised drill intercept was at 0 mRL in the North, 180 mRL in the Central and 140 mRL in the south.</p>
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p>The MRE was constrained by the wireframes as detailed in the “Geological Interpretation” section above.</p> <p>The samples within the mineralised wireframe were composited to 2 m which, given the potential bench height and average sample length is considered appropriate. No bottom cut was considered necessary for Fe. The composites were then considered for top cutting in the case of Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, %S, %P, LOI, MnO, MgO, CaO, K<sub>2</sub>O, Na<sub>2</sub>O. Anomalous values were reduced to the cut value and the pre and post capping statistics for these variables do not have a significant effect on the mean grade in the majority of cases.</p> <p>17 domains were used for estimation, divided by lithology and geographically into the west and east units. In addition, the COL domain was subdivided into a low Fe grade and high Fe grade domain, and the ITG into low Fe, moderate Fe and high grade Fe domains. The geological interpretation was central to domaining, with hard boundaries modelled between COL, ITG, ITF, ITC, ITT and BIF.</p> <p>Variography was performed on the composites. Directional variograms were modelled for Fe and were modelled for the six lithological domains. The ranges varied along strike between 650 and 2,050 m, across strike between 130 and 640 m and down dip between 9 and 82 m. All variograms were horizontally orientated, except those for the BIF which were orientated with an azimuth of 010° and a dip of -70° to the east. Variograms were modelled for Al<sub>2</sub>O<sub>3</sub>, S, P, SiO<sub>2</sub> and LOI in the COL, ITG and ITF horizons, where deleterious elements are most concentrated. The normalised Fe variogram parameters were used for interpolation of</p>

**Criteria**

**JORC Code explanation**

**Commentary**

Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, %S, %P, LOI, MnO, MgO, CaO, K<sub>2</sub>O and Na<sub>2</sub>O where variograms were not modelled in the ITC, ITT and BIF.

The estimation was completed in Micromine Software. The block model, was not rotated and has a parent cell size of 50 m x 50 m x 10 m (X, Y, Z), which is considered compatible with the drill spacing in Measured and Indicated areas. The minimum sub-block size was set as 5 m x 5 m x 1 m to honour the volume of the wireframes more accurately. The grades were interpolated by Ordinary Kriging in three search passes with increasing search radii and decreasing minimum number of samples, including a minimum number of four holes for interpolation. The zones were interpolated with samples from the lithological code. The search ellipse for estimation was orientated in the same direction as the variograms.

Sample search rotations and neighbourhoods are presented in the following tables.

Material	Orientation	Axes		
		Azimuth	Plunge	Rotation
Colluvium	All	0	0	0
ITG	All	0	0	0
ITF	All	0	0	-36
ITC/ITT/BIF	100	5	0	-55
	200	325	0	-45
	300	10	0	-45
	400	0	0	-50
	500	350	0	-60
	600	0	0	-50
	700	10	0	-60

Run	Material	Search Radii			Samples used			
		1	2	3	Min	Max	Angular Sectors	Min Holes
1	Colluvium	300	50	12	6	40	4	4
	ITG	300	50	12	6	40	4	
	ITF	300	50	12	6	40	4	
	ITC/ITT/BIF	200	135	10	12	40	4	
2	Colluvium	600	100	24	6	40	4	
	ITG	600	100	24	6	40	4	
	ITF	600	100	24	6	40	4	
	ITC/ITT/BIF	400	270	20	12	40	4	
3	Colluvium	1500	250	60	3	40	4	1
	ITG	1500	250	60	3	40	4	
	ITF	1500	250	60	3	40	4	
	ITC/ITT/BIF	2000	1350	20	5	40	4	

Grade estimation was completed for Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, S, P, LOI, Mn, MgO, CaO, K<sub>2</sub>O and Na<sub>2</sub>O to fully characterise the mineralisation in terms of product specifications.

The model was validated by visual checks, comparing the global average grade against the output block model grades and the generation of swath plots by easting and northing. (For further details see the JORC Technical Report 2013).

Production has not commenced at Zanaga, and therefore there is no production data available for reconciliation.

A previous MRE was completed by SRK in 2011. A further 284 holes for 51,044 m were drilled and assays returned from a further 135 holes that had not been available for that MRE. The geological interpretation was in line with the original MRE and completed on site, updated to reflect the new data, and extended at depth (100 m beyond intercepts) where drilling supported continuity of the BIF units. A check estimate using IDW

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		<p>was completed alongside the MRE and compared closely with the reported MRE.</p> <p>Recovery of by-products is not considered relevant for this style of deposit.</p> <p>Work completed during Variography to assess the use of the Fe variogram for other variables showed correlation with Fe varies by unit. The following table shows the correlation coefficient results of cross-validation of other variables using the Fe variogram.</p> <table border="1" data-bbox="1263 603 2101 826"> <thead> <tr> <th><u>Lith</u></th> <th><u>Al<sub>2</sub>O<sub>3</sub></u></th> <th><u>CaO</u></th> <th><u>SiO<sub>2</sub></u></th> <th><u>S</u></th> <th><u>P</u></th> <th><u>LOI</u></th> <th><u>MnO</u></th> <th><u>MgO</u></th> <th><u>K<sub>2</sub>O</u></th> <th><u>Na<sub>2</sub>O</u></th> </tr> </thead> <tbody> <tr> <td>Colluvium</td> <td>0.72</td> <td>0.30</td> <td>0.78</td> <td>0.79</td> <td>0.78</td> <td>0.72</td> <td>0.27</td> <td>0.26</td> <td>0.54</td> <td>0.39</td> </tr> <tr> <td>ITG</td> <td>0.79</td> <td>0.20</td> <td>0.86</td> <td>0.84</td> <td>0.64</td> <td>0.82</td> <td>0.45</td> <td>0.34</td> <td>0.61</td> <td>0.17</td> </tr> <tr> <td>ITF</td> <td>0.81</td> <td>0.14</td> <td>0.89</td> <td>0.65</td> <td>0.74</td> <td>0.84</td> <td>0.43</td> <td>0.42</td> <td>0.53</td> <td>0.21</td> </tr> <tr> <td>ITC</td> <td>0.79</td> <td>0.73</td> <td>0.91</td> <td>0.52</td> <td>0.68</td> <td>0.81</td> <td>0.57</td> <td>0.65</td> <td>0.60</td> <td>0.69</td> </tr> <tr> <td>ITT</td> <td>0.75</td> <td>0.86</td> <td>0.94</td> <td>0.45</td> <td>0.74</td> <td>0.74</td> <td>0.49</td> <td>0.70</td> <td>0.65</td> <td>0.63</td> </tr> <tr> <td>BIF</td> <td>0.75</td> <td>0.81</td> <td>0.95</td> <td>0.49</td> <td>0.81</td> <td>0.69</td> <td>0.80</td> <td>0.73</td> <td>0.69</td> <td>0.65</td> </tr> </tbody> </table> <p>The correlation between Fe and CaO, MnO and MgO is poor in certain units, and this may be related to the presence of mafic/intermediate intrusives or faulting, resulting in a different control on the distribution. Further work could be completed on this by modelling different orientations on for these variables, which would be unlikely to have a major effect on the total chemistry of the block. However, these elements do not appear to impact the overall DTR recovery and concentrate grade which counters any urgency on this work.</p>	<u>Lith</u>	<u>Al<sub>2</sub>O<sub>3</sub></u>	<u>CaO</u>	<u>SiO<sub>2</sub></u>	<u>S</u>	<u>P</u>	<u>LOI</u>	<u>MnO</u>	<u>MgO</u>	<u>K<sub>2</sub>O</u>	<u>Na<sub>2</sub>O</u>	Colluvium	0.72	0.30	0.78	0.79	0.78	0.72	0.27	0.26	0.54	0.39	ITG	0.79	0.20	0.86	0.84	0.64	0.82	0.45	0.34	0.61	0.17	ITF	0.81	0.14	0.89	0.65	0.74	0.84	0.43	0.42	0.53	0.21	ITC	0.79	0.73	0.91	0.52	0.68	0.81	0.57	0.65	0.60	0.69	ITT	0.75	0.86	0.94	0.45	0.74	0.74	0.49	0.70	0.65	0.63	BIF	0.75	0.81	0.95	0.49	0.81	0.69	0.80	0.73	0.69	0.65
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ITT	0.75	0.86	0.94	0.45	0.74	0.74	0.49	0.70	0.65	0.63																																																																					
BIF	0.75	0.81	0.95	0.49	0.81	0.69	0.80	0.73	0.69	0.65																																																																					
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<p>The resource estimates are expressed on a dry tonnage basis and in-situ moisture content is not estimated.</p>																																																																													
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<p>Grade or deleterious element cut-off was not applied in the MRE. The MRE was reported on a global basis.</p>																																																																													

Criteria	JORC Code explanation	Commentary
<p><i>Mining factors or assumptions</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<p>CSA undertook a preliminary Whittle optimisation on the grade model prior to classification to satisfy the criteria that the resource reported is “potentially economic”. This was used to constrain the mineralisation for reporting purposes.</p> <p>Benchmarked costs were used against a selling price of 130 USD/dmtu with 5% mining dilution.</p> <p>The Whittle parameters used are listed in the 2013 JORC Technical Report and reproduced below.</p>

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		<table border="1"> <thead> <tr> <th>Revenue</th> <th>units</th> <th>Model</th> </tr> </thead> <tbody> <tr> <td>Iron price</td> <td>(USDc/dmtu)</td> <td>130</td> </tr> <tr> <td>Government royalty</td> <td>(%)</td> <td>3%</td> </tr> <tr> <td>Discount rate</td> <td>(%)</td> <td>0%</td> </tr> <tr> <td colspan="3"><b>Mining</b></td> </tr> <tr> <td>Mining recovery</td> <td>(%)</td> <td>95.0%</td> </tr> <tr> <td>Mining Dilution</td> <td>(%)</td> <td>5.0%</td> </tr> <tr> <td>Operation mining cost at surface (waste)</td> <td>(USD/t)</td> <td>1.04</td> </tr> <tr> <td>Operation mining cost at surface (ore free dig)</td> <td>(USD/t)</td> <td>0.99</td> </tr> <tr> <td>Operation mining cost at surface (ore D&amp;B)</td> <td>(USD/t)</td> <td>1.12</td> </tr> <tr> <td>Incremental mining cost</td> <td>(USD/t/10m<sub>bench</sub>)</td> <td>0.025</td> </tr> <tr> <td colspan="3"><b>Processing</b></td> </tr> <tr> <td>Hematite processing cost</td> <td>(USD/t<sub>ore</sub>)</td> <td>3.11</td> </tr> <tr> <td>Magnetite processing cost</td> <td>(USD/t<sub>ore</sub>)</td> <td>2.41</td> </tr> <tr> <td>Tailing cost</td> <td>(USD/t<sub>tailings</sub>)</td> <td>0.99</td> </tr> <tr> <td>Total Hematite Processing Cost</td> <td>(USD/t<sub>ore</sub>)</td> <td>3.66</td> </tr> <tr> <td>Total Magnetite Processing Cost</td> <td>(USD/t<sub>ore</sub>)</td> <td>3.07</td> </tr> <tr> <td>General &amp; administrative cost</td> <td>(USD/t<sub>ore</sub>)</td> <td>0.29</td> </tr> <tr> <td>Transport</td> <td>(USD/t<sub>conc</sub>)</td> <td>5.84</td> </tr> <tr> <td>Port</td> <td>(USD/t<sub>conc</sub>)</td> <td>1.06</td> </tr> <tr> <td>Total Transport</td> <td>(USD/t<sub>ore</sub>)</td> <td></td> </tr> <tr> <td>Total Transport Hematite</td> <td>(USD/t<sub>ore</sub>)</td> <td>3.09</td> </tr> <tr> <td>Total Transport Magnetite</td> <td>(USD/t<sub>ore</sub>)</td> <td>2.32</td> </tr> <tr> <td>Total Cost Hematite</td> <td>(USD/t<sub>ore</sub>)</td> <td>7.04</td> </tr> <tr> <td>Total Cost Magnetite</td> <td>(USD/t<sub>ore</sub>)</td> <td>5.68</td> </tr> <tr> <td>COL Fe recovery</td> <td>(%)</td> <td>59.2%</td> </tr> <tr> <td>ITG Fe recovery</td> <td>(%)</td> <td>72.4%</td> </tr> <tr> <td>ITF Fe recovery</td> <td>(%)</td> <td>69.9%</td> </tr> <tr> <td>ITC Fe recovery</td> <td>(%)</td> <td>53.3%</td> </tr> <tr> <td>ITT Fe recovery</td> <td>(%)</td> <td>65.1%</td> </tr> <tr> <td>BIF Fe recovery</td> <td>(%)</td> <td>74.8%</td> </tr> </tbody> </table>	Revenue	units	Model	Iron price	(USDc/dmtu)	130	Government royalty	(%)	3%	Discount rate	(%)	0%	<b>Mining</b>			Mining recovery	(%)	95.0%	Mining Dilution	(%)	5.0%	Operation mining cost at surface (waste)	(USD/t)	1.04	Operation mining cost at surface (ore free dig)	(USD/t)	0.99	Operation mining cost at surface (ore D&B)	(USD/t)	1.12	Incremental mining cost	(USD/t/10m <sub>bench</sub> )	0.025	<b>Processing</b>			Hematite processing cost	(USD/t <sub>ore</sub> )	3.11	Magnetite processing cost	(USD/t <sub>ore</sub> )	2.41	Tailing cost	(USD/t <sub>tailings</sub> )	0.99	Total Hematite Processing Cost	(USD/t <sub>ore</sub> )	3.66	Total Magnetite Processing Cost	(USD/t <sub>ore</sub> )	3.07	General & administrative cost	(USD/t <sub>ore</sub> )	0.29	Transport	(USD/t <sub>conc</sub> )	5.84	Port	(USD/t <sub>conc</sub> )	1.06	Total Transport	(USD/t <sub>ore</sub> )		Total Transport Hematite	(USD/t <sub>ore</sub> )	3.09	Total Transport Magnetite	(USD/t <sub>ore</sub> )	2.32	Total Cost Hematite	(USD/t <sub>ore</sub> )	7.04	Total Cost Magnetite	(USD/t <sub>ore</sub> )	5.68	COL Fe recovery	(%)	59.2%	ITG Fe recovery	(%)	72.4%	ITF Fe recovery	(%)	69.9%	ITC Fe recovery	(%)	53.3%	ITT Fe recovery	(%)	65.1%	BIF Fe recovery	(%)	74.8%
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Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>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</li> </ul>	<p>Davis Tube Recovery test work was completed on 1,166 samples which covered ITC, ITT and BIF (the magnetite bearing lithologies). Bench scale grind-recovery tests were completed to determine the optimum grind size required to produce a saleable quality magnetite concentrate. Based</p>																																																																																													

Criteria	JORC Code explanation	Commentary
	<p><i>when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></p>	<p>on this test work, samples have a P97 of 75 microns with an expected P80 of 45 microns. The average mass recovery for the samples was 41% for a recovered concentrate grade of 68%.</p> <p>More detail has been provided in Section 4 Estimation and Reporting of Ore Reserves, which was reported in the Updated Reserve Statement for Zanaga Iron Ore Project, 30th September 2014.</p>
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<p>Detail regarding Environmental factors or assumptions has been provided in Section 4 Estimation and Reporting of Ore Reserves, which was reported in the Updated Reserve Statement for Zanaga Iron Ore Project, 30th September 2014.</p>
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<p>In-situ dry bulk density measurements were estimated from DD core using the water displacement method which is considered appropriate for the characteristics of the majority of mineralisation at Zanaga i.e. competent core with very low permeability. Core was coated in wax as part of the procedures.</p> <p>In-situ dry bulk density (“BD”) data was collected in a systematic way throughout the deposit and there is a substantial dataset from all material types to adequately ascertain the tonnage factor and be considered representative of the deposit. 21,451 BD values were available and BD values less than 1.5 t/m<sup>3</sup> and greater than 4.0 t/m<sup>3</sup> were removed as outliers in the dataset.</p> <p>CSA reviewed density by grade and by lithology unit and results suggested that variations in bulk density were most sensitive to lithology.</p>



Criteria	JORC Code explanation	Commentary
		<p>Variability was low within lithological units, and there was no obvious relationship between grade and density within these units. Where density was a function of grade, it appeared to be with depth, which correlated to lithological boundaries.</p> <p>CSA assigned densities by lithology unit. Other methods of estimating density were considered e.g. regression and block estimation. On balance, CSA decided to assign average densities due to the lack of variability within lithological units. Regressions can be strongly influenced by the existence of outliers, while estimation of density through Kriging for example, can result in problems during production and reconciliation.</p> <p>Where lithologies are more friable, and likely to crumble when cored during DD drilling, densities may be difficult to verify. The volume of such material is a relatively small proportion of the resource but in situ dry bulk density can be estimated for bulk samples obtained during any small scale excavations for mining or metallurgical test work. Simple volume and mass checks should be taken and bulk density values compared with those already produced.</p>
<p><i>Classification</i></p>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>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).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<p>The MRE for the Zanaga Project has been classified as Measured, Indicated and Inferred Mineral Resources, based on the guidelines specified in the JORC Code (2012 Edition). CSA has considered the following in determining the classification of the MRE:</p> <ul style="list-style-type: none"> <li>• Adequate validation of drilling, sampling and geological process completed during two site visits by Robyn Belcher, Principal Data Geologist, and Maria O'Connor, Senior Resource Geologist, CSA, in March and May 2012. The site visits included validation of tenement data, drill data, drilling and sampling procedures (note: no drilling was taking place during either visit), review of the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>geological mapping and core/chip logging and field checks on existing hole collars and outcrop;</p> <ul style="list-style-type: none"> <li>• Adequate geological evidence for continuity of mineralisation in the reporting of the mineral resource;</li> <li>• Completion of a sampling and multi element assaying program suitable to estimate the grade of the mineralised material;</li> <li>• Adequate DD core and RC chip sampling;</li> <li>• Adequate QAQC controls in place to validate data used and ensure control on the estimation of the in-situ grade of mineralised material;</li> <li>• Adequate drill spacing nominally at 100 m east-west and 100 m north-south to define Measured material, 200 m east-west and 200 m north-south to define Indicated material and a whittle shell to assist in constraining what deep material is classified as Inferred Mineral resources;</li> <li>• Robust variography with good cross validation results which supported the ranges of Fe grade continuity indicated by drilling as well as the continuity of Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, S, P and LOI in COL, ITG and ITF where variability in these deleterious variables are likely to be at their highest;</li> <li>• Adequate twinning of RC drill holes to validate grades;</li> <li>• Adequate DD core sampling to determine the dry in situ bulk density in order to estimate the tonnage of mineralisation;</li> <li>• Completion of Davis Tube Recovery test work demonstrating the potential processing requirements, indicative recovery factors</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>and potential quality of a saleable magnetite concentrate suggesting that Fe can be recovered from the lithology units with minimal contaminant issues.</p> <p>The additional criteria used to classify this MRE as Indicated and Measured Mineral Resources were:</p> <p>For Indicated Mineral Resources:</p> <ul style="list-style-type: none"> <li>• Block grade estimated using an average sample distance of between 100 and 200 m;</li> <li>• Slope &gt;0.4.</li> </ul> <p>For Measured Mineral Resources:</p> <ul style="list-style-type: none"> <li>• Block grade estimated using an average sample distance ≤ 100 m;</li> <li>• Slope &gt;0.6.</li> </ul> <p>Block-by-block estimates of slope were smoothed into geologically reasonable and coherent zones that reflect a realistic level of geological and grade estimation confidence taking into account the amount, distribution and quality of data by wireframing.</p> <p>The remaining blocks have been classified as Inferred Mineral Resources if:</p> <ul style="list-style-type: none"> <li>• they are within the resource shell guided by the whittle optimisation; and</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>they do not meet the criteria specified above for Indicated or Measured Mineral Resources.</li> </ul> <p>The only exception to point (a) are units close to the surface, namely COL, ITG and ITF, which fall outside the conceptual pit shell, but have been included in the MRE as Inferred Mineral resources. CSA is satisfied that the shallow nature of these units means that these units can be considered as having potential to be economically extracted, as required under JORC (2012) and therefore satisfy the criteria of being included as resources in the MRE.</p> <p>The classification of the MRE reflects the Competent Person's view of the deposit</p>
Audits or reviews	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<p>In house CSA reviews have been conducted prior to the release of the MRE to Glencore.</p> <p>SRK completed a review of the MRE prior to work commencing on the estimation of ore reserves. This is outlined in JORC Table 1 Section 4 Estimation and Reporting of Ore Reserves, reported in the Updated Reserve Statement for Zanaga Iron Ore Project, 30th September 2014.</p>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>These statements of relative accuracy and confidence of the</i></li> </ul>	<p>The MREs have been prepared, classified and reported in accordance with the JORC (2012) code by CSA.</p> <p>Resource modelling has been completed using drilling data and geological interpretation to produce a resource within a lithological boundary (and therefore at a 0% Fe cut-off).</p> <p>The total Mineral Resource (as at 30th September 2013) comprises 2.33 Bt of Measured Mineral Resources at 33.7% Fe, 2.46 Bt of Indicated</p>

Criteria	JORC Code explanation	Commentary
	<p><i>estimate should be compared with production data, where available.</i></p>	<p>Mineral Resources at 30.4% Fe and 2.1 Bt of Inferred Mineral Resources at 31.0% Fe.</p> <p>The risks with respect to grade variability are considered low due to the low variability of Fe grade particularly in the magnetite bearing material where the majority of the resource lies.</p> <p>The confidence level is reflected in the MRE classification of the resource.</p> <p>If excavations are completed to estimate in-situ dry bulk density, particularly in the friable, less competent hematite units (representing 11% of the M&amp;I material), this information can be used to verify the density data used in the MRE. The high level of drilling density and modelling of the deposit show its geological and grade continuity and provides a high level of confidence for the MRE.</p> <p>Mining of the deposit has not commenced and therefore production data is not available.</p> <p>The MRE models are provided as a basis for long term planning and mine design, and are not designed to be sufficient for short term planning and scheduling.</p>