

# Juruena's Dona Maria Prospect: + 90% gold recoveries from first metallurgical tests

## Highlights

- Metallurgical testwork at Dona Maria prospect **recovers +90% gold** in standard leaching tests
- Various tests including leaching and leaching plus gravity at different grind sizes and leach times, recover **between 85.4% and 91.0% gold** (39.7% and 47.6% Ag)
- **A head grade of 31.2 g/t gold** of the composite sample, composed of recent drill cuttings, is indicative of the high grades observed at Dona Maria
- Negligible copper associated with mineralisation, (unlike adjacent Crentes prospect)
- Additional tests to refine and potentially improve the results are now being proposed

Crusader has received very encouraging results from the first metallurgical testwork program over Dona Maria - the high-grade gold prospect recently highlighted in the Juruena Gold Project maiden JORC compliant mineral resource estimate (ASX Announcement – 29 September 2015).

Dona Maria is a high-grade prospect with geometry suited to potential exploitation by underground mining. Dona Maria's recently announced inferred mineral resource estimate of **196kt at 11.8 g/t Au for 76,087oz of gold** (using a 60 g/t top-cut) is the subject of a current conceptual study into potential development.

The Juruena Project (> 400km<sup>2</sup> of contiguous tenements, 100% Crusader owned) is located in Central Brazil on the southern fringe of the Amazon basin. Situated on the western end of the prospective Juruena-Alta Floresta gold belt (estimated to have produced ~7Moz Au), Juruena has been worked extensively by artisanal miners (garimpeiros) since the 1980s, producing an estimated 500koz of gold.

As noted above, Crusader recently announced a maiden resource for three prospects at Juruena, including Dona Maria, Querosene and Crentes. Metallurgical sampling from Querosene was recently announced (see ASX release 1 July 2015) and the results mirror the results reported over Dona Maria today.

At Dona Maria, a 15kg composite sample was collected from mineralised sections of the recent RC and diamond drilling program and dispatched to the independent metallurgical testing laboratory- Testwork Desenvolvimento de Processo Ltda. (Testwork) in Belo Horizonte. Testwork crushed, mixed and selected sub-samples for testing and then performed a series of leaching, grinding and physical property tests on the samples. It is noted that the high head grade of 31.2 g/t Au will be further investigated via additional planned tests. Assaying of the various concentrates, tails and composites was performed at SGS labs in Belo Horizonte.

## Australian Securities Exchange Information

ASX Code: CAS

- Ordinary Shares **163,976,116**
- Options **35,242,308**  
(exercise prices: \$0.286 to \$1.35)
- Market Capitalisation **\$27M**
- Treasury **\$2.8M** (30 Jun 2015)
- Share price **\$0.165**  
(12 month closing range: \$0.12 to \$0.31)

## Board of Directors

Non-Executive Chairman  
**Stephen Copulos**

Managing Director  
**Rob Smakman**

Executive Director  
**Paul Stephen**

Non-Executive Directors  
**John Evans**  
**Mauricio Ferreira**

A summary of the results is presented in Table 1 below;

<b>Section 1: Leach test - Dona Maria</b>									
Sample Name		LT3				LT4			
Grind size- P80		106 µm				75 µm			
Cyanide (NaCN) Consumption (g/t)		1450				1512			
		<b>Au</b>		<b>Ag</b>		<b>Au</b>		<b>Ag</b>	
Leaching	Time	Tail	Recovery	Tail	Recovery	Tail	Recovery	Tail	Recovery
	2		28.80%		3.24%		19.04%		2.11%
	4		49.28%		10.41%		47.46%		8.88%
	6		60.82%		18.17%		61.27%		16.47%
	24		86.36%		37.96%		86.31%		37.01%
	32	4.70	<b>87.1%</b>	23.9	<b>41.4%</b>	4.50	<b>85.4%</b>	25.8	<b>39.7%</b>
<b>Section 2: Gravity separation with leaching of the Tails - Dona Maria</b>									
Sample Name		LT5				LT6			
Grind size- P80		106 µm				75 µm			
		<b>Au</b>		<b>Ag</b>		<b>Au</b>		<b>Ag</b>	
Gravity Recovery (%)		<b>33.3%</b>		<b>14.5%</b>		<b>31.5%</b>		<b>11.5%</b>	
Leaching	Time	Tail	Recovery	Tail	Recovery	Tail	Recovery	Tail	Recovery
	2		31.56%		3.91%		33.85%		5.80%
	4		44.12%		11.07%		46.17%		12.95%
	24		57.03%		36.29%		59.48%		38.39%
	32	3.06	<b>58.3%</b>	19.0	<b>39.0%</b>	2.90	<b>60.8%</b>	18.1	<b>40.6%</b>
Global Recovery (%)		<b>90.4%</b>		<b>46.9%</b>		<b>91.0%</b>		<b>47.6%</b>	

**Table 1: Dona Maria Metallurgical testwork results, October 2015**

Commenting on the results, Crusader's Managing Director Rob Smakman said; "These are really impressive first pass results and indicate that Dona Maria ore should be easily treatable in a standard leach plant. We note the similarities to the metallurgical characteristics we have at Querosene and are therefore confident that the same process flow sheet will be suitable for both the prospects- which are only 1km apart. The results today are a key part of the conceptual design we continue to work towards and should enhance the overall project."

Results indicate that using cyanide leaching alone, recoveries of 85-87% are possible, with moderate consumption of cyanide (See Section 1 of Table1). Additional leaching time (from 24 to 32 hours residency) did not significantly increase the recovery. It should be noted that the high-grade tail (between 4.5-4.7 g/t Au) will be the subject of additional testing in order to minimise the gold sent to tailings.

The overall gold recovery results are improved when the samples were subjected to gravity separation first and the rejects leached in cyanide for up to 32 hours (Section 2 of Table 1). The grade of the tails were also reduced using the combined beneficiation however the inclusion of a gravity circuit will be the subject of a trade-off study to ensure the additional gold recovery is worthwhile.

Additional testwork is now being planned and will include multiple samples from different areas of the project (with various head-grades), inclusion of a pre-lime step (to increase recovery and decrease Cyanide consumption), the addition of carbon to the leaching process and the addition of oxygen to the leaching process in order to study the effect on recoveries.

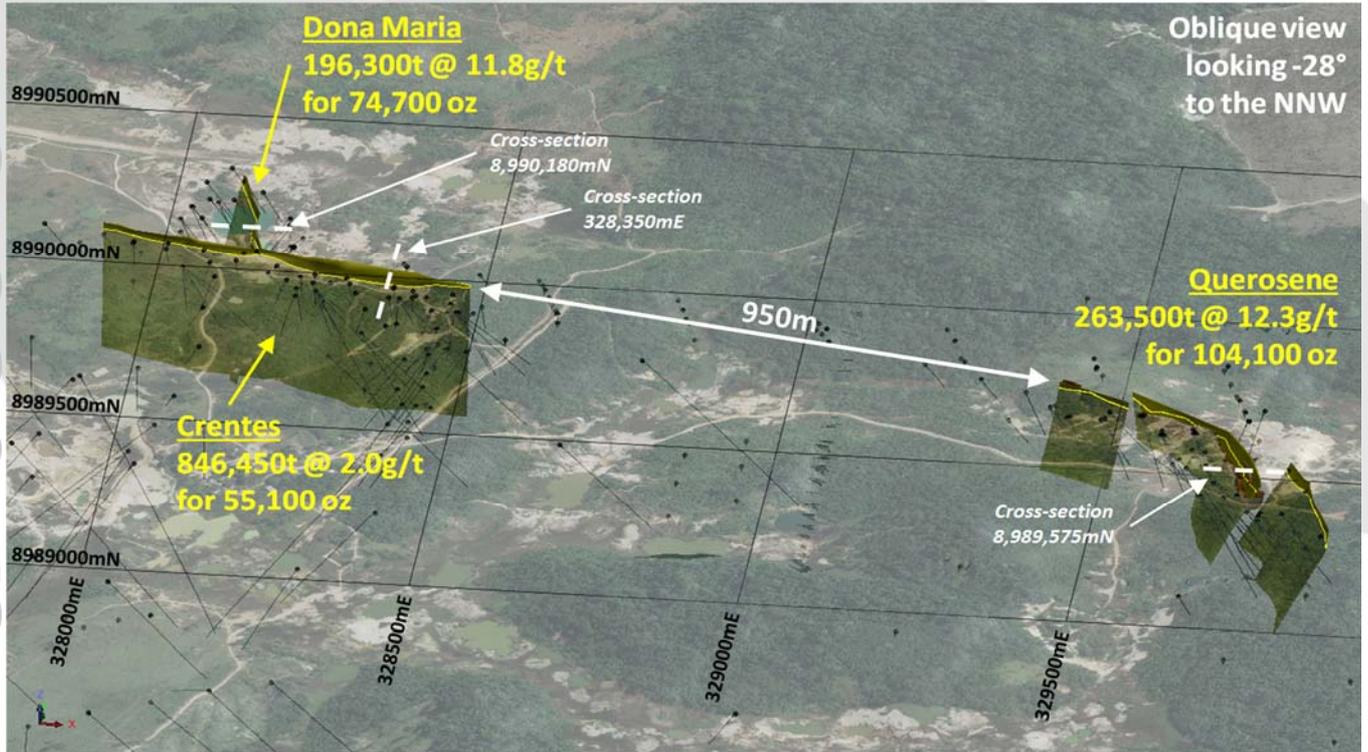


Figure 1: Querosene, Crentes and Dona Maria prospects shown relative to each other

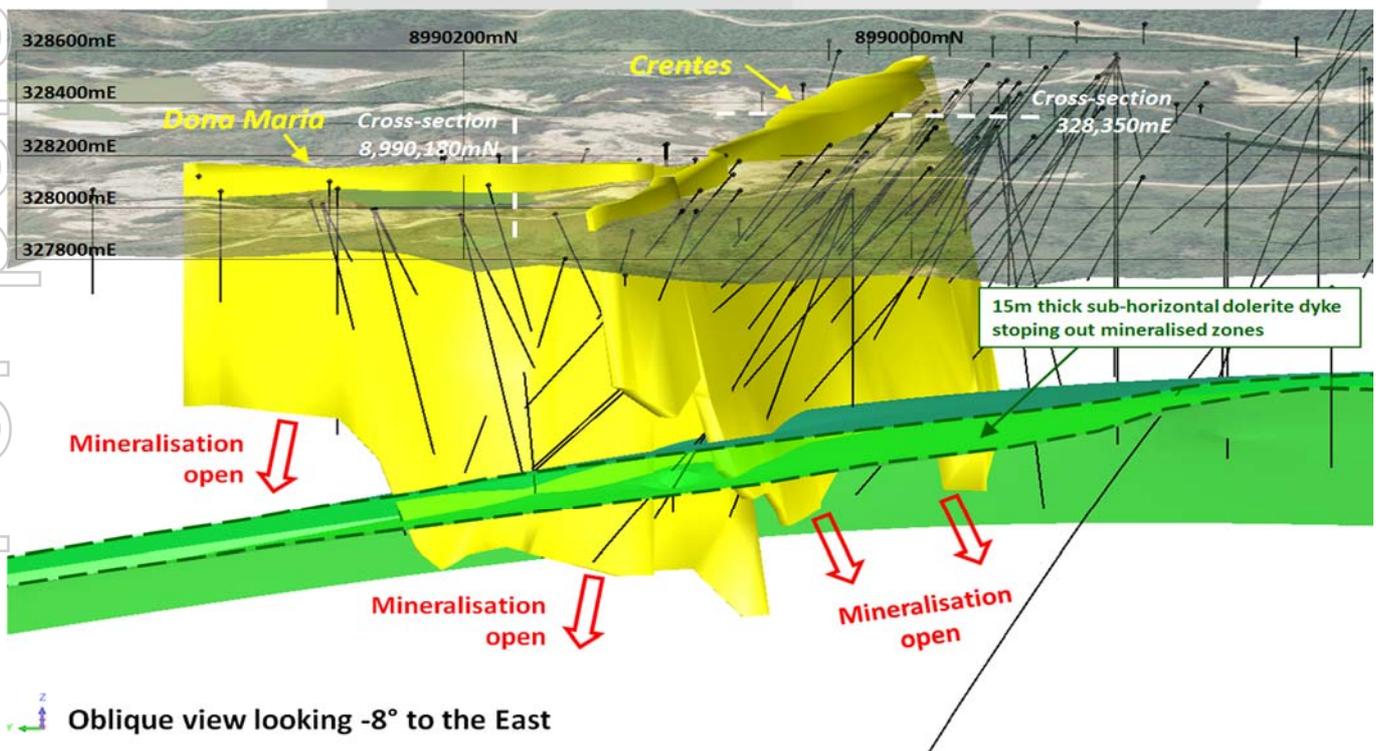


Figure 2: Dona Maria and Crentes location plan



Figure 3: Aerial View of the Juruena Gold Project

-ENDS-

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**About Crusader**

Crusader Resources Limited (ASX:CAS) is a minerals exploration and mining company listed on the Australian Securities Exchange. Its major focus is Brazil; a country Crusader believes is vastly underexplored and which offers high potential for the discovery of world class mineral deposits.

Crusader has three key assets:

**Juruena Gold**

The Juruena Gold Project is located in the highly prospective Juruena-Alta Floresta Gold Belt, which stretches east-west for >400km and has historically produced more than 7Moz of gold from 40 known gold deposits.

The Juruena Project has been worked extensively by artisanal miners (garimpeiros) since the 1980s, producing ~500koz in that time. Historically there is a database of more than 30,000 meters of drilling and extensive geological data.

**Posse Iron Ore**

The Posse Iron Ore Mine is located 30km from Belo Horizonte, a city acknowledged as the mining capital of Brazil and the capital of Minas Gerais state. The project had an indicated and inferred Mineral Resource estimate of 36Mt @ 43.5% Fe when mining began in March 2013. Posse is currently selling DSO into the domestic market. With an experienced mining workforce amongst a population of over 2.5 million people, the infrastructure and access to the domestic steel market around the Posse Project is excellent.

**Borborema Gold**

The Borborema Gold Project is in the Seridó area of the Borborema province in north-eastern Brazil. It is 100% owned by Crusader and consists of three mining leases covering a total area of 29 km<sup>2</sup> including freehold title over the main prospect area.

The Borborema Gold Project benefits from a favourable taxation regime, existing on-site facilities and excellent infrastructure such as buildings, grid power, water, sealed roads and is close to major cities and regional centres. The project's Ore Reserve includes Proven and Probable Ore Reserves of 1.61Moz of mineable gold from 42.4Mt @ 1.18g/t (0.4 & 0.5g/t cut-offs for oxide & fresh).

The measured, indicated and inferred Mineral Resource Estimate of 2.43Moz @ 1.10g/t gold, remains open in all directions.

**Competent Person Statement**

The information in this report that relates to Juruena Gold Project exploration results, Posse Iron Ore Project exploration results and Borborema Gold Project exploration results released after 1 December 2013, is based on information compiled or reviewed by Mr. Robert Smakman who is a full time employee of the company and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information in this report that relates to Mineral Resources at the Juruena Gold Project is based on information compiled or reviewed by Mr. Lauritz Barnes and Mr. Aidan Platel who are independent consultants to the company and Members of the Australasian Institute of Mining and Metallurgy. Each of Mr. Smakman, Mr. Barnes and Mr. Platel have sufficient experience that is relevant to the type of mineralisation and type of deposits under consideration 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. Smakman, Mr. Barnes and Mr. Platel consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to:

- a) Borborema Gold Project and Posse Iron Ore Project Exploration Results released prior to 1 December 2013 is based on information compiled or reviewed by Mr. Robert Smakman who is a full time employee of the company;
- b) Borborema Gold Mineral Resources is based on information compiled by Mr. Lauritz Barnes and Mr. Brett Gossage, independent consultants to the company;
- c) Borborema Gold Ore Reserves is based on information compiled by Mr. Linton Kirk, independent consultant to the company;
- d) Posse Fe Mineral Resources is based on and accurately reflects, information compiled by Mr. Bernardo Viana who was a full time employee of Coffey Mining Pty Ltd,

and who are all Members of the Australasian Institute of Mining and Metallurgy (Rob Smakman and Linton Kirk being Fellows), and who all have sufficient experience that is relevant to the type of mineralisation and type of deposit under consideration, and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Each of Mr. Smakman, Mr. Barnes, Mr. Kirk, Mr. Viana, and Mr. Brett Gossage consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information was prepared and disclosed under the JORC Code 2004. It has not been updated since to comply with JORC Code 2012 on the basis that the information has not materially changed since it was last reported

**Appendix 2**

**Juruena Gold Project JORC Code, 2012 Edition**

**Section 1. Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
<i>Sampling Techniques</i>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation (RC) drill samples and half diamond core samples were collected for this metallurgical sample. A sample was composited from results which &gt;1g/t from previous analysis and submitted to the laboratory.</li> <li>Only a single sample was collected for analysis. Samples were chosen &gt;1g/t Au and the resulting composite sample submitted</li> <li>As per previous announcements (drilling results)</li> <li>As per previous announcements (drilling results).</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i></li> </ul>	<ul style="list-style-type: none"> <li>Crusader completed 73 RC drill-holes in 2014 and 2015 (7,749.50m) using a nominal 5 ½ inch face sampling hammer. Hole conditions were mostly dry, with sufficient air pressure available to keep water from entering the drill-hole. Where high water inflows potentially threatened sample integrity, the drill-hole was abandoned and subsequently re-drilled with a diamond rig . Drill-hole inclinations ranged from -55 to -67 degrees. In early 2015 Crusader also completed 11 diamond drill-holes (1,863.81m) of NQ2 diameter with HQ pre-collars in unconsolidated material.</li> </ul>

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Section 1 - continued

Criteria	JORC Code Explanation	Commentary
<i>Drilling Techniques (cont.)</i>		<ul style="list-style-type: none"> <li>Down-hole surveys were completed for the diamond drill-holes, but the core was not oriented.</li> <li>Crusader's resource drill-hole database includes 90 RC drill-holes (6,618m) and 70 diamond drill-holes (22,497.81m) completed between 2010 and 2013 by Lago Dourado Minerals Ltd ("Lago"). The RC drill-holes were drilled with a nominal 5 inch face sampling hammer, and the diamond drill-holes were of NQ2 diameter with HQ pre-collars. All diamond core was oriented, initially with a spear and subsequently with a Reflex ACT II instrument. Drill-hole inclinations ranged from -50 degrees to vertical.</li> <li>Crusader's resource drill-hole database also includes 91 diamond drill-holes (15,821.89m) completed between 1994 and 1998 by Madison Minerals Ltd ("Madison"). The diamond drill-holes were of NQ2 diameter with HQ pre-collars. Drill-hole inclinations ranged from -45 to -62 degrees. Sampling for the metallurgical sample was comprised of Crusader drilling only</li> </ul>
<i>Drill sample recovery</i>	<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 loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>RC drill sample recoveries were verified by weighing every sample; diamond core recovery by measuring the length of core recovered compared to the drill run. For the whole database (i.e. combined Crusader and Lago drill-holes) over 90% of measured recoveries are above 80%.</li> <li>For both Crusader and Lago drill-holes, recovery data has been recorded, and field duplicates submitted and analysed. No sample recovery information is available for Madison</li> <li>Gold mineralisation does not apparently correlate to zones of low sample recovery; sample bias due to poor sample recovery is therefore not believed to be an issue.</li> </ul>
<i>Logging</i>	<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>	<ul style="list-style-type: none"> <li>All Crusader and Lago drill-holes have been geologically and geotechnically (core) logged in detail, and the data stored in a digital database. Summary logs exist for the Madison holes.</li> <li>Logging of diamond drill-core and RC samples recorded lithology, mineralogy, mineralisation, structure (core only), weathering and colour. Core photographs also exist for all drill-holes.</li> <li>Lithological data exists for all Crusader, Lago and Madison drill-holes in the database that were utilized in the resource estimation.</li> </ul>

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Section 1 - continued

Criteria	JORC Code Explanation	Commentary
<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. 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 being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>RC samples were collected using a 3-stage Jones riffle splitter, a high density plastic bag was placed directly over the sample chute on the rifle splitter. The sample size was 3-4 kilograms and the size of the chips was predominantly 0.4-0.8 centimetres with a few chips greater than this. The compartment of gold is fine and evenly distributed normally associated with fine disseminated sulphides. Sampling was generally conducted on dry samples.</li> <li>Diamond drill-core was cut in half lengthways on site using a diamond saw; for duplicate samples quarter-core was used.</li> <li>Sample preparation was undertaken by SGS-Geosol Laboratories ("SGS") in Brazil for Crusader samples and Acme Analytical Laboratories ("Acme") in Brazil for Lago samples. Madison used SGS in Brazil for sample preparation and analysis with check assaying performed at X-RAL labs in Toronto. All used industry standard methods (dry – crush – split – pulverise) which are considered appropriate for the style of mineralisation intersected in the drill-holes. The sample preparation method used by SGS-Geosol laboratories is presented in the following section.</li> <li>Standards (certified reference material), blanks and duplicates were inserted into the sample stream at the rate of 1:25, 1:25 and 1:40 samples, respectively for both Crusader and Lago drill-holes.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></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>	<ul style="list-style-type: none"> <li>SGS were used by Crusader for all analyses.</li> <li>The samples were assayed for Au by Fire Assay of 50g aliquots followed by Atomic Absorption Spectroscopy (AAS), a technique designed to report total gold.</li> <li>No geophysical tools were used to determine any element concentrations.</li> <li>N/A</li> </ul>

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Section 1 - continued

Criteria	JORC Code Explanation	Commentary
<p>Quality of assay data and laboratory tests (cont.)</p>	<ul style="list-style-type: none"> <li></li> <li></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> <li>N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>Significant intercepts were generated by Crusader personnel and verified by Rob Smakman, the qualified person for previous releases comprising the significant intersections.</li> <li>A number of RC drill-holes were partially twinned by diamond drill-holes; the drill-holes compare well visually, but it was not possible to compare assay results due to lack of sampling. This has been flagged for ongoing work</li> </ul> <p>All drill-hole data are recorded in Microsoft Excel spreadsheets and then stored in a digital database (Microsoft Access). Only Crusader's database administrator has the capacity to enter or change data. Standardised geological codes and checks have been employed to ensure standardised geological logging and required observations performed. The database is stored on a central server which is backed up weekly. Work procedures exist for all actions concerning data management.</p> <ul style="list-style-type: none"> <li>No adjustments or calibrations were made to any assay data used in this estimate.</li> </ul>
<p>Location of data points</p>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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>	<ul style="list-style-type: none"> <li>Collar surveys have been used from the supplied database. Where discrepancies occurred, these coordinates were edited only after checking against hard copy logs and survey field pick-ups. This process will continue as part of the database enrichment. All drill-holes have been checked spatially in 3D and all obvious errors addressed.</li> <li>The grid system used for all data types, was in a UTM projection, Zone 21 Southern Hemisphere and datum South American 1969. No local grids are used.</li> <li>Topographic control in the area is basic. The topographic surface was sourced from digital satellite imagery (Aster). Further surveying work is planned prior to future resource estimation work.</li> </ul>

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Section 1 - continued

Criteria	JORC Code Explanation	Commentary
<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>	<ul style="list-style-type: none"> <li>The drilling carried out is on an approximate 50m x 50m grid, both horizontally and vertically (in the plane of the mineralised structure, which is sub-vertical). It is anticipated that this density of information will be sufficient for conducting a mineral resource estimate to the standards required by the JORC 2012 mineral resource code.</li> <li>Sample compositing was made from both RC and diamond drilling. RC samples from the original RC samples were collected and sent to the Met lab. The diamond drill samples were collected from ¼ drill core and sent to the met lab. All samples were composited together to form a representative sample for analysis.</li> </ul>
<p><i>Orientation of data in relation to geological structure</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 sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised structures were targeted and planned to be intersected so that minimal sample bias would occur. All structures were planned to be intersected as perpendicular as possible and to pass through the entire structure. Mineralised structures had relatively sharp contacts and all material was sampled together i.e. the structure and the hangingwall / footwall.</li> <li>Where ever possible all reverse circulation drill holes were oriented to intersect the intended structure perpendicular to the strike and approximately 40 degrees to the dip of the mineralised zone. The mineralised structures are visible from within the artisanal miners' workings which allowed drill holes to be oriented to minimise introducing a sample bias. None of the reported significant intersections are a result of intentional sample bias.</li> </ul>
<p><i>Sample security</i></p>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>No sample security issues were raised or noted by Crusader during the transportation of the samples from the project site to the preparatory laboratory. All samples were sealed with double cable ties in strong high density plastic bags, two sample ID tags were placed in different locations inside the sample bags, all sample bags were clearly marked on the outside with permanent marker pen. All sample bags were checked off the dispatch list before being placed into a heavy duty and highly durable sacks for transportation to the laboratory. A packing list (confirming the number of sacks for transport) was received from the freight company transporting the sample bags to their destination. Upon receipt at the laboratory, samples were checked in and the list of received samples immediately sent back to the company's database administrator as a security check that all samples were received and all were fully intact and not opened.</li> </ul>
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No external audits were commissioned by Crusader. The sampling techniques and data were reviewed by the Competent Persons as part of the Mineral Resources estimation process and were found to be of industry standard.</li> </ul>

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**Section 2. Reporting of Exploration Results**

Criteria	JORC Code Explanation	Commentary
<p><i>Mineral tenement and land tenure status</i></p>	<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> </ul>	<ul style="list-style-type: none"> <li>Results are from exploration tenement 866.080/2009, 100% owned by a wholly owned subsidiary of Crusader, Lago Dourado Mineração Ltda. There is an existing 1% net smelter return payable to a previous owner. There is one garimpo mining licences within the tenement package, allowing the garimpeiro to legally work under certain restrictions. The Dona Maria tenement is not subject to any native title interests, no known historical sites, wilderness or national park, but is located within the border zone around a national park. Within this border zone further conditions may be required to gain an operating licence. Cattle grazing and legal timber felling are the two primary industries and land uses for the area.</li> </ul>
	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>The tenement is in good standing and there are no material impediments to operating in the area.</li> </ul>
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Garimpeiros first discovered the mineralised areas around Juruena in the 1970's. Garimpeiros have been active in the region since, recovering gold from alluvial, colluvial and some oxidised rock. The area has been explored on and off from the mid 1990's through to the present, with the majority of drilling taking place over the last four to five years. Madison Minerals Ltd first explored and carried out some drilling evaluation of the Juruena core area in 1995/1996. The drill information of Madison would not be useable in a JORC compliant mineral resource estimate, however Crusader considers the information relevant from an exploration perspective and will use these results to guide future exploration work. Lago Dourado Minerals drill tested several anomalies and zones from 2010 to 2013. All work undertaken by Lago Dourado Minerals was performed to a JORC compliant standard and the data generated is considered sufficient to be used for a JORC compliant mineral resource estimate, should further results confirm continuity, grade and geological interpretation in the future.</li> </ul>

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Section 2 - continued

Criteria	JORC Code Explanation	Commentary
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Juruena mineralisation is considered to have resulted from magmatic activity (intrusions and fluids) which could be sourced from a gold porphyry system or intrusive-related gold system, whilst still containing characteristics commonly associated with epithermal systems. The mineralisation is hosted by Paleoproterozoic volcanic and granitoid rocks of varying composition. The host rocks are found within the Juruena-Rondonia block of the Amazon Craton.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• No new results reported</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and / or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually 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>	<ul style="list-style-type: none"> <li>• Significant intercepts were calculated using a 1ppm lower cut-off, no upper cut, and up to 2m of consecutive dilution.</li> <li>• No metal equivalent values considered.</li> </ul>

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Section 2 - continued

Criteria	JORC Code Explanation	Commentary
<i>Relationship between Mineralisation widths and intercept lengths</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 downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• As far as practically possible and with the geological interpretation available, the drill targets were tested with the aim of intersecting the interpreted mineralised structure as perpendicular as possible to the strike. All positive holes to date intersected the mineralisation at approximately 40 degrees to the dip, which will cause an overstatement of the actual intercept width.</li> <li>• Results are reported as downhole widths, in most cases, true width is approximately 75% of down-hole length.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• See included Figure(s)</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• Results from the metallurgical sampling program for are reported.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• Historical exploration data has been presented previously and includes soil sampling, auger drilling, geophysical surveys, geological mapping and interpretation. No material additional exploration data has been generated by Crusader at Juruena to date. No historical metallurgical sampling has been previously reported from Dona Maria.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• Future exploration will continue to target the already identified mineralised areas.</li> </ul>

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