

**ASX Release**  
**7 January 2014**

## **Positive Results from Iron-ore Fieldwork in Bahia State, Brazil**

### Highlights

- Assay results from outcrop samples taken from multiple projects held by Cleveland and BC Iron return average Fe content within targeted range
- Mapping confirms multi-kilometre strike lengths and apparent thicknesses between 20 and 70 metres at surface
- Initial drilling program to commence as soon as possible

Cleveland Mining Company Ltd ("Cleveland", ASX: CDG) is pleased to announce the results of mapping and sampling of the Bahia Iron Ore Projects, which form part of the projects held in alliance with BC Iron Ltd (collectively, the "Alliance") and private Brazilian company Bahmex (the Vendors).

The main project areas in the Bahia State tenement portfolio were re-mapped and sampled to:

- (a) Confirm the results presented by the Vendors and Coffey Mining (Brazil); and
- (b) Facilitate the planning of an initial 2000-metre diamond drilling program aimed at confirming the thickness and quality of iron mineralisation.

Multiple kilometres of mineralised strike were confirmed in outcrops and apparent thicknesses between 20 and 70 metres were observed across the project areas during the sampling program. The average iron content of surface samples taken by Cleveland from the five areas was 34.8% Fe, surpassing the Alliance's minimum requirement of 28% Fe. The balance of the mineral content is predominantly SiO<sub>2</sub> (46.2%), with insignificant levels of Al<sub>2</sub>O<sub>3</sub> (0.62%) and P (0.031%).

The rock types and grades are similar to "standard" iron ores in Brazil that are beneficiated into high-quality, highly-demanded products and represent one of the most commonly mined styles of iron ores globally. Preliminary metallurgical test-work conducted by the Vendor, but not yet confirmed by Cleveland, indicates that the silica can be easily removed through simple beneficiation to achieve the Alliance's target product grade of +60% Fe.

The Alliance have selected these projects based on the rock types, access to port and rail systems that are currently under construction, strong community and government support, and the low cost of production in Brazil. Whilst Brazilian in-ground iron ore grades are typically lower than the Direct Ship Ores (DSO) from Australia, the final processed product from Brazilian ore is generally higher grade than the Australian DSO. The low cost of power and labour in Brazil, along with the typically coarse grind size, generally allow Brazilian iron ore to be processed into a high-grade product with mining and processing costs below those of Australian DSO.

The proposed drilling program will cover five discrete areas of mineralisation and commence as soon as possible.

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#### **Corporate Information**

ASX Code: CDG  
Total shares: 241.3 million  
Listed options: 11.4 million  
Unlisted options: 34.7 million

#### **Contact**

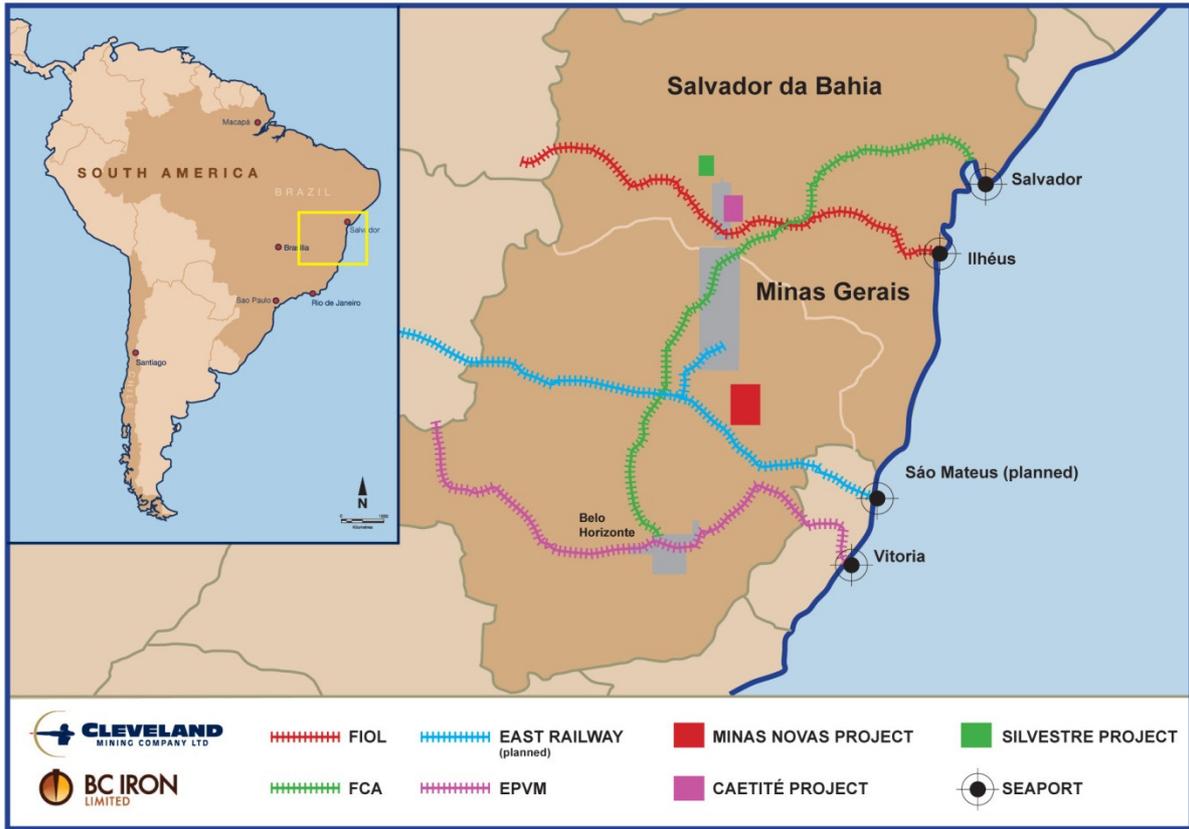
Investor & Media Enquiries  
investors@clevelandmining.com.au

#### **Board of Directors**

Non-Executive Chairman – Russell Scrimshaw  
Managing Director – David Mendelawitz  
Executive Director – Rod Campbell  
Non-Executive Director – Rick Stroud

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▲ Location of the Caetite Claims in Salvador da Bahia state, Brazil.

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**Further Information**

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**About Cleveland Mining Company Ltd**

Cleveland Mining Company Ltd is an Australian-managed, ASX-listed minerals company squarely focused on developing projects into mines.

The Company's management team have a track-record for building billion-dollar projects from the ground up, providing Cleveland with the expertise to secure and build robust projects.

Cleveland has gold and iron ore assets in Brazil in areas with excellent mining credentials:

- Mining and production are underway at Cleveland's Premier 50/50 Gold Mine JV in Goiás State in central Brazil. The Company is working to add throughput from the O Capitão project, which is less than 10km from the Premier Mine.
- Cleveland has formed a strategic alliance with ASX-listed company BC Iron Ltd (ASX: BCI) to co-acquire and co-develop new iron projects in Brazil as joint venture partners. The companies recently signed binding Option Agreements for three Brazilian iron projects.

Cleveland has a different approach to project selection with project economics driving target selection. Projects are chosen according to their likelihood of generating returns at the bottom of the economic cycle.

## Forward-looking Statements

Forward-looking statements can be identified by the use of terminology such as 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue' or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward looking statements. They are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this ASX update. Readers are cautioned not to put undue reliance on forward looking statements

## Competent Person's Statement

The information in this report that relates to Exploration Results is based on information reviewed by David Mendelawitz, who is a Fellow of the AusIMM. Mr Mendelawitz has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Mendelawitz consents to the inclusion of the matters based on his information in the form and context in which it appears. Mr Mendelawitz is employed by Cleveland Mining Company Ltd.



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>	<ul style="list-style-type: none"> <li>• Forty-five samples were collected during a mapping and sampling campaign of six different areas from the Caetité Iron Project.</li> <li>• The samples were representative of the localized area that they were recovered from, with follow up drilling and sampling to follow.</li> <li>• The samples were indicative of the continuity of the deposits down dip and along strike where outcrop is covered by soil, given the general extensive stratigraphic nature of these BIF deposits.</li> </ul>
Drilling techniques	<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>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>• N/A</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>• Sample chips were geologically logged</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<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 being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<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>• Whole rock analysis was carried out. More advanced metallurgical test work to follow once drilling commences.</li> </ul>
Verification of sampling and assaying	<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>• N/A</li> </ul>
Location of data points	<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>	<ul style="list-style-type: none"> <li>• Sample location points picked up by hand held GPS.</li> </ul>
Data spacing and distribution	<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>• Data collected over six prospects. The BIF units are regionally extensive with sample density adequate for initial testing.</li> <li>• Samples were composited over varying sample lengths between 5 and 40 metres</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<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>• The orientation of the sampling gave a representative sample.</li> </ul>
<i>Sample security</i>	<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>• N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• N/A at this stage</li> </ul>

## Section 2 Reporting of Exploration Results

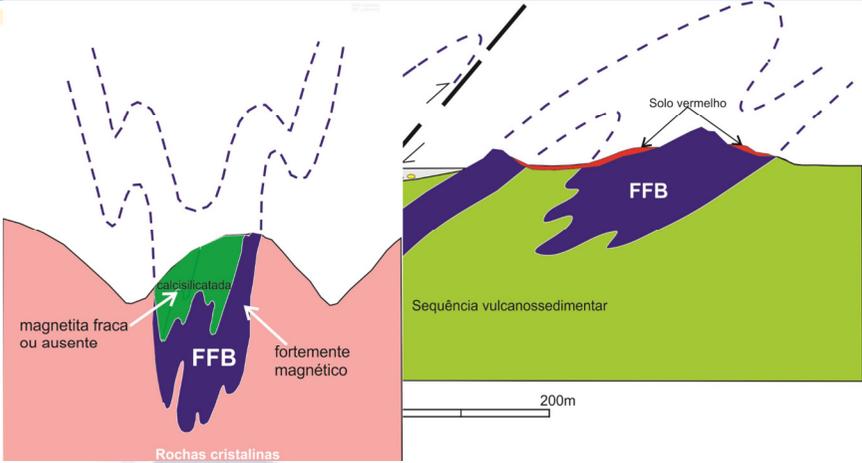
(Criteria listed in the preceding section also apply to this section.)

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>	<ul style="list-style-type: none"> <li>• The tenements are held by a wholly-owned subsidiary of Bahmex and a 50/50 CDG/BCI company can earn up to an 80% interest by funding exploration and evaluation activity and making vendor payments.</li> <li>• This report contains the results of fieldwork including mapping and exploratory sampling on six claims located in the municipalities of Caetité, Riacho de Santana and Bom Jesus da Lapa.</li> </ul>
<i>Exploration done by other parties</i>	<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>• Bahmex and Coffey Mining (Brazil)</li> </ul>

Criteria	JORC Code explanation	Commentary
Geology	<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>• Iron ore is in the form of Banded Iron Formations (BIF), related to volcanic sedimentary sequences of Paleo Proterozoic and Archean age. BIF is associated with both carbonate metasediments and oxide clastic sediments. The carbonate BIFs are associated with marbles, chert and silicate rocks, whilst the BIFs in the oxide material are within micaceous schists and quartzites.</li> <li>• The volcanic host sequences for the BIF are located on a regional scale in the Riacho de Santana Unit, Licinio and Mosquito Formations. These rock sequences have been deformed on a regional scale, with localised parasitic folding containing thickened layers of BIF.</li> </ul>
Drill hole Information	<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 holes have been drilled by Cleveland Mining Company Ltd at this stage into the Caetité Iron Deposits. Sampling has been carried out in the form of 45 surface grab samples from the six project areas.</li> </ul>
Data aggregation methods	<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> </ul>	<ul style="list-style-type: none"> <li>• N/A at this stage</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"><li>• 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.</li><li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li></ul>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"><li>• These relationships are particularly important in the reporting of Exploration Results.</li><li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li><li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li></ul>	<ul style="list-style-type: none"><li>• N/A at this stage</li></ul>



Criteria	JORC Code explanation	Commentary
		 <p data-bbox="1234 730 2096 804">Illustrative geological sections of the structural style of the BIF deposits in the Caetité area.</p>
<p data-bbox="136 820 331 900"><i>Balanced reporting</i></p>	<ul data-bbox="344 820 1218 979" style="list-style-type: none"> <li data-bbox="344 820 1218 979">• <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 data-bbox="1234 820 2107 1091" style="list-style-type: none"> <li data-bbox="1234 820 2107 900">• The Alliance is targeting iron mineralization with grades greater than 28% Fe.</li> <li data-bbox="1234 900 2107 1091">• The average iron content of 45 samples taken by Cleveland from the six project areas was 34% Fe (approximately 50% Fe<sub>2</sub>O<sub>3</sub>). The balance of the material content is predominantly silica, with only minor levels of Al and P observed.</li> </ul>
<p data-bbox="136 1107 331 1251"><i>Other substantive exploration data</i></p>	<ul data-bbox="344 1107 1218 1375" style="list-style-type: none"> <li data-bbox="344 1107 1218 1375">• <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 data-bbox="1234 1107 2107 1347" style="list-style-type: none"> <li data-bbox="1234 1107 2107 1347">• Preliminary metallurgical test-work conducted by Bahmex, but not yet confirmed by Cleveland indicates that the silica can be removed easily. These results are similar to “standard” iron ores in Brazil that are beneficiated into high quality, high demand products and represent one of the most commonly mined styles of iron ores globally.</li> </ul>

Criteria	JORC Code explanation	Commentary
Further work	<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>• The BIF has multiple kilometres of strike over the confirmed project areas. There are indications for continuity of deposits – not outcropping – under coverage of existing soils.</li><li>• The Alliance is preparing to conduct a 2000m diamond drilling program to test the thickness and quality of the mineralisation at depth, over a number of the claims.</li></ul>

