

13 January 2020

## High grade NdPr drill results demonstrate potential to extend Longonjo mine life

Pensana Metals Ltd (ASX: PM8) is pleased to report the first assay results received from the first 16 holes of the 7,000 metre infill and extension drilling programme at the Longonjo NdPr Project in Angola. The programme is being undertaken in support of the Definitive Feasibility Study.

- The results have identified further high grade weathered mineralisation from surface over an area extending 250 by 450 metres immediately to the west of the current pit design;
- The results demonstrate the potential to extend the weathered zone mineralisation and the mine life in the recently reported Preliminary Feasibility Study (ASX announcement 15 November 2020).
- Several of the infill drill holes intersected higher NdPr grades than estimated by the current Mineral Resource estimate block model in this area.

<u>Drill hole</u>	<u>Intersection</u>
<b>LRC175:</b>	<b>16 metres at 4.19% REO including 0.93% NdPr from surface</b>
<b>LRC180:</b>	<b>18 metres at 5.69% REO including 1.06% NdPr from surface</b>
<b>LRC181:</b>	<b>10 metres at 4.60% REO including 0.88% NdPr from surface <i>and</i> 8 metres at 3.52% REO including 0.59% NdPr from 16 metres to end of hole</b>
<b>LRC182:</b>	<b>16 metres at 6.53% REO including 1.27% NdPr from surface to end of hole</b>
<b>LRC189:</b>	<b>13 metres at 6.19% REO including 1.01% NdPr from surface to end of hole</b>

\*NdPr = neodymium – praseodymium oxide. REO = total rare earth oxides. Intersections reported at a +0.4% NdPr lower grade cut off. See Table 1 for details of all new results, including wider intersections at a +0.2% NdPr cut

**Executive Director Dave Hammond commented:**

*“This is a great start to the DFS drilling programme and these initial results confirm the continuous and consistent nature of this weathered blanket style of mineralisation from surface.*

*We expect to be able to upgrade significant amounts of currently Inferred Mineral Resource to the higher Indicated JORC category, thereby extending the current mine life with further studies.*

*We look forward to reporting many more results from this large drilling programme that will include the testing of some potentially high grade targets, extensions to the known mineralisation and an area of high grade fresh rock hosted mineralisation that could add a further dimension to the project.”*

## Technical Report

Initial assay results have been received from the first 16 drill holes of a 7,000 metre infill and extension reverse circulation drilling programme underway at Longonjo. The drilling is in support of Definitive Feasibility Studies now in progress with Wood Group as lead engineers.

The drilling is designed to convert more of the Longonjo weathered zone Inferred Mineral Resource estimate (ASX Announcement 15 November 2020) into Measured and Indicated Mineral Resource and then into Proved and Probable Ore Reserves on completion of further technical studies for financing purposes. An updated Mineral Resource estimate is expected in May 2020.

The programme is expected to lead to an increase of the current mine life of nine years as indicated by the November 2019 Preliminary Feasibility Study.

Drilling will also test several high grade targets, which have the potential to provide sources of high grade NdPr material and also drill into the fresh material immediately underlying the shallow weathered zone in the current mine plan.

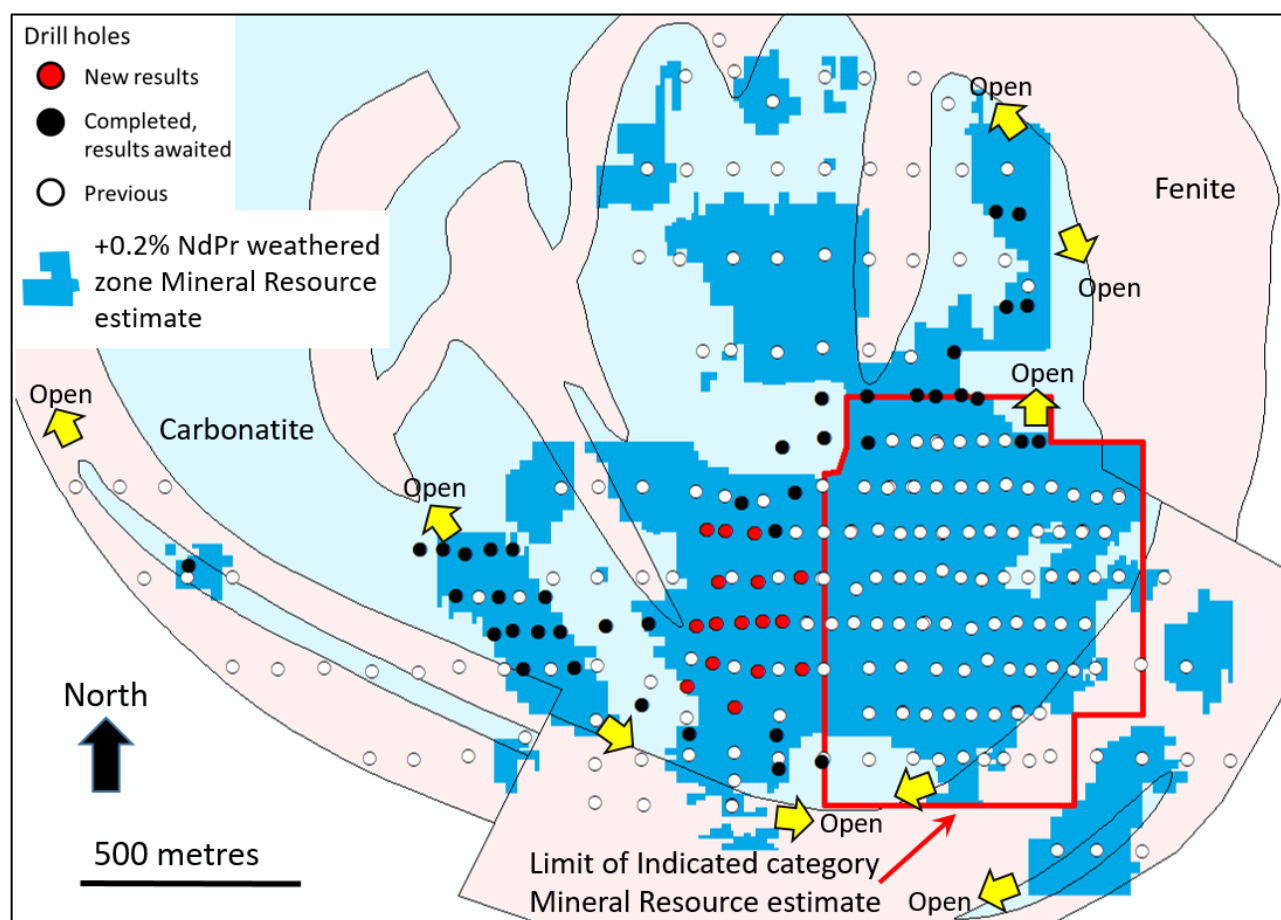


Figure 1: Plan view of the location of new assay results (red) and completed new drill holes (black) over the +0.2% NdPr November 2019 Mineral Resource estimate block model for the weathered mineralisation. The current extent of the Indicated category Mineral Resource estimate is highlighted.

The new results show all drill holes intersected mineralisation from surface and include several high grade intersections:

<b><u>Drill hole</u></b>	<b><u>Intersection*</u></b>
<b>LRC175:</b>	<b>16 metres at 4.19% REO including 0.93% NdPr from surface</b>
<b>LRC176:</b>	<b>20 metres at 3.56% REO including 0.67% NdPr from surface</b>
<b>LRC178:</b>	<b>14 metres at 3.61% REO including 0.81% NdPr from surface</b>
<b>LRC179:</b>	<b>12 metres at 3.47% REO including 0.70% NdPr from surface</b>
<b>LRC180:</b>	<b>18 metres at 5.69% REO including 1.06% NdPr from surface</b>
<b>LRC181:</b>	<b>10 metres at 4.60% REO including 0.88% NdPr from surface <i>and</i> 8 metres at 3.52% REO including 0.59% NdPr from 16 metres to end of hole</b>
<b>LRC182:</b>	<b>16 metres at 6.53% REO including 1.27% NdPr from surface to end of hole</b>
<b>LRC189:</b>	<b>13 metres at 6.19% REO including 1.01% NdPr from surface to end of hole</b>

\*NdPr = neodymium – praseodymium oxide. REO = total rare earth oxides. Intersections reported at a +0.4% NdPr lower grade cut off. See Table 1 for details of all new results, including wider intersections at a +0.2% NdPr cut

The continuity of mineralisation from surface (see plan Figure 2 and drill sections Figures 3 to 5) demonstrated by the 50 metre x 100 metre infill drilling is expected to enable much of this area of Inferred Mineral Resource estimate for the weathered zone mineralisation to be upgraded to Indicated JORC category on completion of a revised Mineral Resource estimate.

Several of the new drill intersections are high grade and are expected to improve the grade of the current Mineral Resource estimate in this area as well as category in these areas immediately adjacent to the PFS open pit.

**The new and high grade results lie within a 250 metre x 450 metre area outside of the PFS 9 year life of mine open pit shells, suggesting the potential to extend the open pit to the west.**

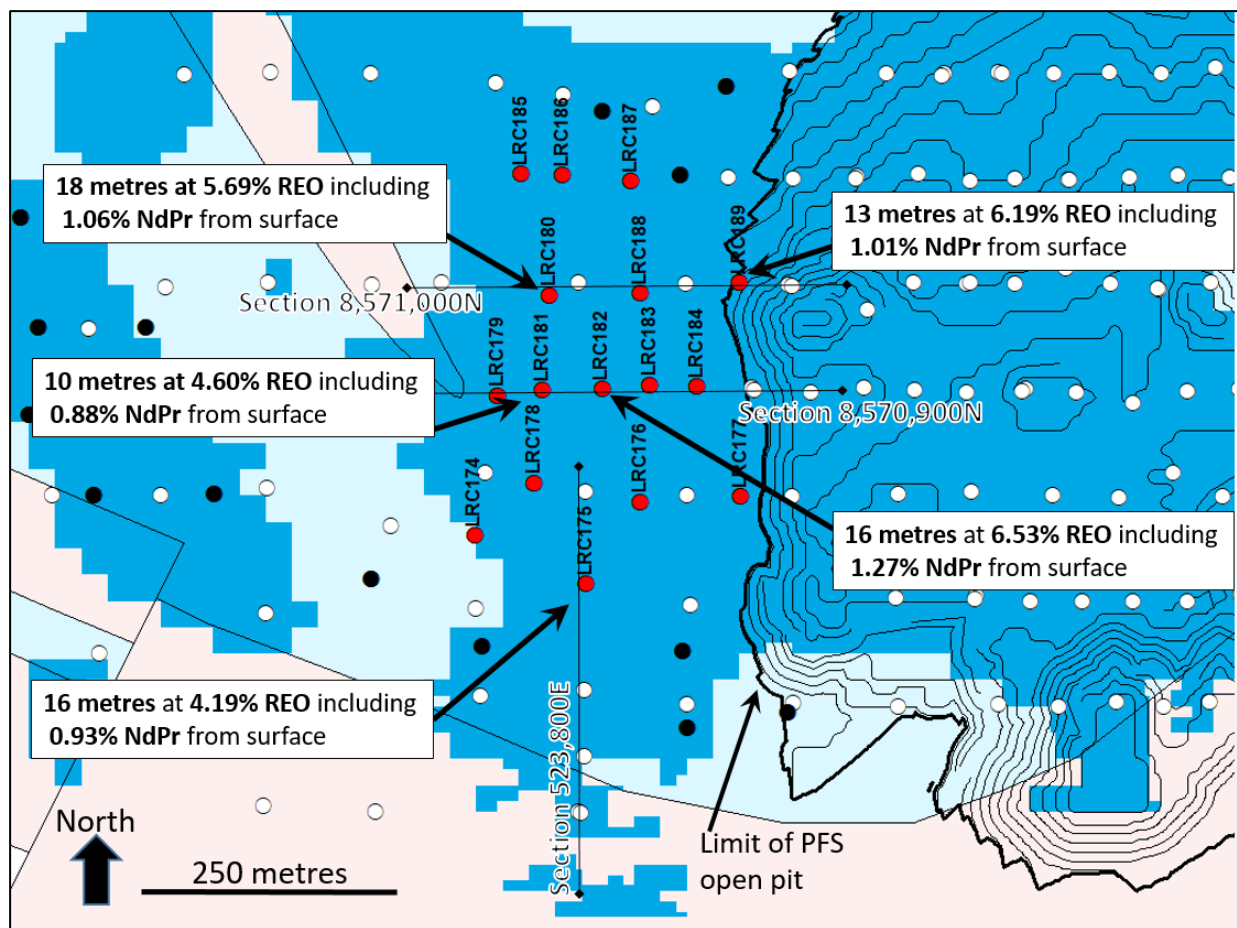


Figure 2: Plan showing location of new drilling results (red) and intersection highlights over the +0.2% NdPr November 2019 Mineral Resource estimate block model (blue) for the weathered mineralisation and the 9 year PFS open pit (see previous figure for legend and location).

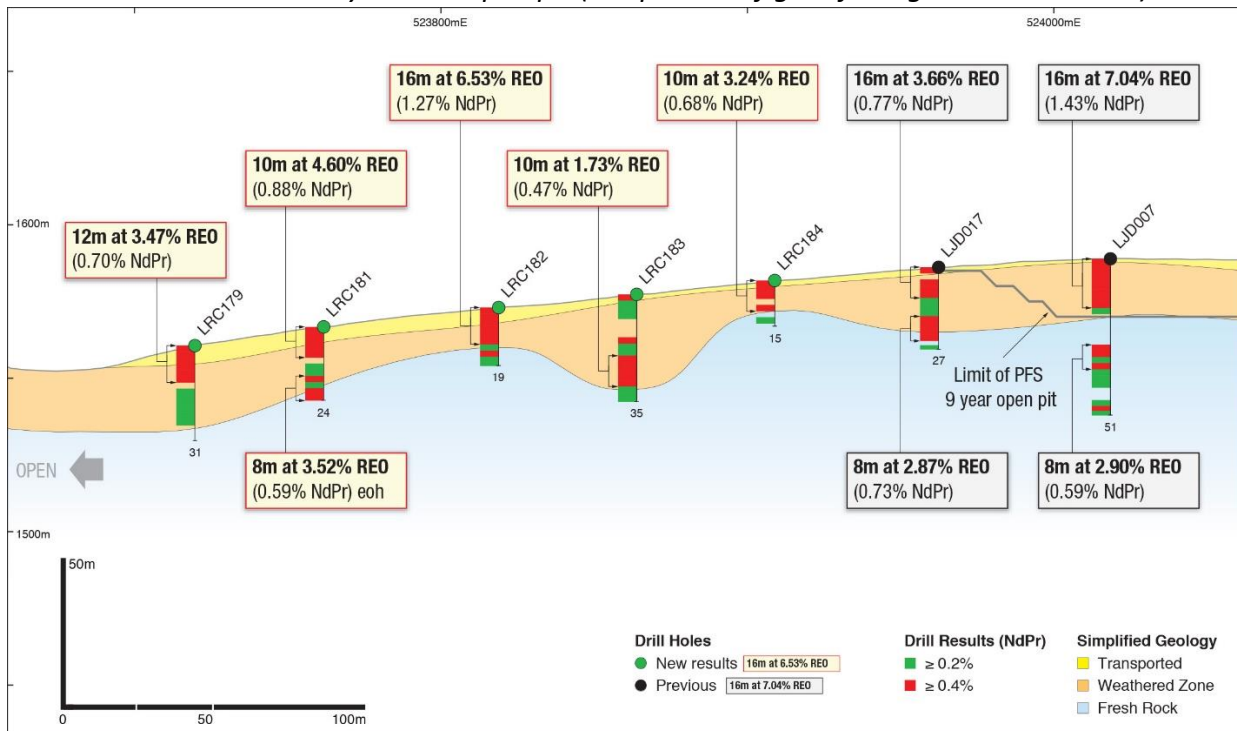
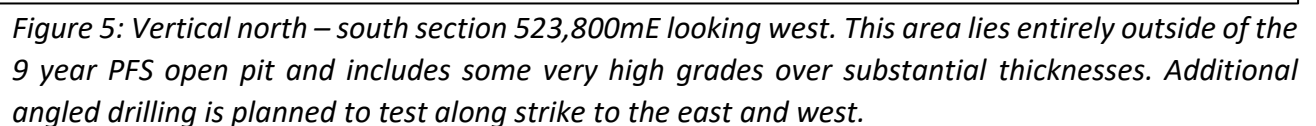
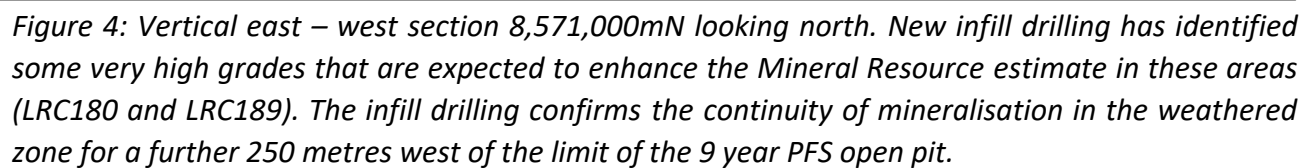


Figure 3: Vertical east – west section 8,570,900mN looking north. New high grade drill intersections in red show the continuous blanket of weathered zone NdPr mineralisation continues for a further 250 metres at surface west of the 9 year PFS open pit.



To date, a total of 57 holes for 1,591 metres have been completed of the estimated 7,000 metre DFS drilling programme.

Samples from a further 41 drill holes have been despatched for analysis and drilling operations have recommenced on site after the Christmas and New Year holiday period. The Company is to mobilise a second drill rig this month is expected to be completed in March to support a revised Mineral Resource estimate by May 2020.

The Company looks forward to providing further updates from the drilling programme as results are received.

*Authorised by the board of Pensana Metals Limited.*

#### **Competent Persons Statement**

The information in this report that relates to Geology, Data Quality and Exploration results is based on information compiled and/or reviewed by David Hammond, who is a Member of The Australasian Institute of Mining and Metallurgy. David Hammond is the Chief Operating Officer and a Director of the Company. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity which he is undertaking to qualify as a Competent Person in terms of the 2012 Edition of the Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves. David Hammond consents 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 statement that relates to the 2019 Mineral Resource estimates is based on work done by Rodney Brown of SRK Consulting (Australasia) Pty Ltd. Rodney Brown is a member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 edition).

The Company confirms that it is not aware of any new information or data that materially affects the information included in the above original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

**Table 1:** Longonjo NdPr Project, RC drill intersections at least 4m thick and  $\geq 0.20\%$  NdPr lower grade cut. Intersections **> 0.40% NdPr** lower grade cut shown in ***bold italics***

Hole ID	East	North	RL	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %	NdPr %
LRC174	523,698	8,570,762	1,536	31	0	16	16	2.07	0.44
				<i>(incl.</i>	<b>0</b>	<b>8</b>	<b>8</b>	<b>2.73</b>	<b>0.54)</b>
					20	28	8	1.56	0.34
				<i>(incl.</i>	<b>20</b>	<b>24</b>	<b>4</b>	<b>1.97</b>	<b>0.43)</b>
LRC175	523,804	8,570,716	1,554	30	0	30	30eoh	2.95	0.67
				<i>(incl.</i>	<b>0</b>	<b>16</b>	<b>16</b>	<b>4.19</b>	<b>0.93</b>
				<b>and</b>	<b>22</b>	<b>26</b>	<b>4</b>	<b>2.02</b>	<b>0.49)</b>
LRC176	523,855	8,570,794	1,557	30	0	26	26	3.07	0.57
				<i>(incl.</i>	<b>0</b>	<b>20</b>	<b>20</b>	<b>3.56</b>	<b>0.67)</b>
LRC177	523,951	8,570,799	1,563	37	<b>0</b>	<b>22</b>	<b>22</b>	<b>2.72</b>	<b>0.59</b>
					26	30	4	1.68	0.75
					34	37	3eoh	1.27	0.29
LRC178	523,755	8,570,812	1,546	30	0	24	24	2.51	0.59
				<i>(incl.</i>	<b>0</b>	<b>14</b>	<b>14</b>	<b>3.61</b>	<b>0.81)</b>
LRC179	523,720	8,570,895	1,543	31	0	26	26	2.35	0.49
				<i>(incl.</i>	<b>0</b>	<b>12</b>	<b>12</b>	<b>3.47</b>	<b>0.70)</b>
LRC180	523,769	8,570,990	1,555	29	<b>0</b>	<b>18</b>	<b>18</b>	<b>5.69</b>	<b>1.06</b>
					20	24	4	1.22	0.24
LRC181	523,762	8,570,900	1,549	24	0	24	24eoh	3.44	0.64
				<i>(incl.</i>	<b>0</b>	<b>10</b>	<b>10</b>	<b>4.60</b>	<b>0.88</b>
				<b>and</b>	<b>16</b>	<b>24</b>	<b>8eoh</b>	<b>3.52</b>	<b>0.59)</b>
LRC182	523,819	8,570,901	1,551	19	0	19	19eoh	5.78	1.12
				<i>(incl.</i>	<b>0</b>	<b>16</b>	<b>16</b>	<b>6.53</b>	<b>1.27)</b>
LRC183	523,864	8,570,905	1,555	35	0	8	8	1.98	0.44
					14	35	11eoh	1.58	0.40
				<i>(incl.</i>	<b>20</b>	<b>30</b>	<b>10</b>	<b>1.73</b>	<b>0.47)</b>
LRC184	523,909	8,570,903	1,565	15	<b>0</b>	<b>10</b>	<b>10</b>	<b>3.24</b>	<b>0.68</b>
LRC185	523,742	8,571,105	1,569	26	0	26	26eoh	2.82	0.55



Hole ID	East	North	RL	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %	NdPr %
				<i>(incl. and</i>	<i>0 16</i>	<i>12 24</i>	<i>12 8</i>	<i>3.21 2.86</i>	<i>0.68 0.50)</i>
LRC186	523,782	8,571,104	1,579	21 <i>(incl.</i>	0 <i>0</i>	14 <i>12</i>	14 <i>12</i>	2.66 <i>2.93</i>	0.58 <i>0.64)</i>
LRC187	523,846	8,571,098	1,570	28 <i>(incl.</i>	0 <i>0</i>	18 <i>8</i>	18 <i>8</i>	1.79 <i>2.18</i>	0.40 <i>0.53)</i>
					22	28	6eoh	1.70	0.35
LRC188	523,855	8,570,992	1,570	17	<i>0</i> 10	<i>6</i> 14	<i>6</i> 4	<i>2.84</i> 1.07	<i>0.63</i> 0.24
LRC189	523,950	8,571,002	1,577	13	<i>0</i>	<i>13</i>	<i>13eoh</i>	<i>6.19</i>	<i>1.01</i>

REO = Total rare earth oxide includes NdPr and is the sum of La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>. NdPr = neodymium + praseodymium oxide. eoh = intersection to end of hole. All holes are vertical reverse circulation. Co-ordinate system is WGS84 UTM Zone 33 south, rounded to nearest metre. Assays of 2m composite samples by peroxide fusion and ICP analysis, Nagrom laboratories Perth, Western Australia. Maximum of 2m internal subgrade included.

## APPENDIX

### 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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</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. 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>All samples are from vertical reverse circulation (RC) drilling sampled to 2m composites using a 3 tier riffle splitter to obtain approximately 4kg of sample from the whole one metre rig sample for sample preparation. Entire down hole lengths were sampled from surface to end of hole.</li> <li>During RC drilling the drill string is cleaned by flushing with air and the cyclone cleaned regularly.</li> <li>Sampling is carried out under Pensana QAQC protocols and as per industry best practise.</li> <li>RC sample returns are closely monitored, managed and recorded. A reference weight is used to calibrate the weighing scale.</li> <li>Samples are riffle split using a 3 tier splitter which is cleaned between every sample</li> <li>Vertical reverse circulation drilling and a riffle splitter were used to obtain 2m samples of approximately 3 to 4kgs. Samples are prepared (dry, split, pulverise, split) to a 100g pulp for analysis at Analabs laboratories Windhoek, Namibia</li> <li>Samples are assayed at for Ca, Fe, K, Mg, Mn, P Pb, S, Si, Sr, Ti, Zn, Ce, Dy, Er, Eu, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Sm, Ta, Tb, Th, Tm, U, Y, Yb, Al, Ba by peroxide fusion followed by ICP analysis at Nagrom laboratories, Perth, Western Australia.</li> <li>All commercial laboratories used use industry best practise procedures and QAQC checks.</li> <li>Entire hole lengths were submitted for assay.</li> </ul>
Drilling techniques	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation (RC) drilling was completed using a Powerstar 5000 drill rig with a face sampling hammer button bit of 131mm diameter and 5 metre rods. A 131mm diameter blade RC bit was used in some holes in the weathered zone, generally for around 10 metres.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>so, by what method, etc).</i>	
<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 recoveries were monitored closely, recorded and assessed regularly over the drilling programme.</li> <li>• Every 1m sample from the rig was weighed and recorded for moisture content. The weigh scale was calibrated frequently.</li> <li>• RC sample weights are compared against expected weights for the drill diameter and geology.</li> <li>• Drill pipes and cyclone were flushed and cleaned regularly</li> <li>• Some short intervals 1 to 3 metres of reduced sample recovery occur in the soft weathered zone. Data analysis to date has not identified any relationship between recovery and grade. A selection of holes will be twinned by diamond core drilling to investigate any relationship.</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>• RC 1m samples were geological logged by specifically trained geologists for the entire length of all holes. All relevant features such as lithology, mineralogy, weathering, structure, texture, grain-size, alteration, veining style and mineralisation were recorded in the geological log.</li> <li>• All logging was quantitative. All RC chip trays were photographed.</li> <li>• All holes were logged in full 100%</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</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC drilling only, no core drilling results reported</li> <li>• 1m rig samples were riffle split using a 3 tier splitter. All samples were dry or wet samples were sun-dried in a protected environment before sampling.</li> <li>• The preparation of samples follows industry practice. This involves oven drying of the full 4kg 2m composite sample, splitting to a representative 1kg sample, pulverising to 85% passing 75 micron and splitting to a 100g sample pulp.</li> <li>• Field duplicates, certified reference standards and blanks were inserted at random but on average every 27 samples for each as part of Pensana QAQC protocols as per industry best practise. Laboratories also have and report internal QAQC checks including assay and preparation duplicates</li> <li>• Field, preparation and assay lab duplicate results indicate no significant sampling variance</li> <li>• The sample sizes are considered more than adequate for this disseminated style and</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>the material being sampled.</i>	grainsize of material sampled. Repeatability of assays was good.
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 (e.g. 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>The analysis was carried out by an accredited independent assay laboratory.</li> <li>Samples are assayed at for Ca, Fe, K, Mg, Mn, P Pb, S, Si, Sr, Ti, Zn, Ce, Dy, Er, Eu, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Sm, Ta, Tb, Th, Tm, U, Y, Yb, Al, Ba by peroxide fusion, hydrochloric leach and followed by ICP analysis at Nagrom laboratories, Perth, Western Australia.</li> <li>The assay technique is total.</li> <li>Laboratory data only. No geophysical or portable analysis tools were used to determine assay values stored in the database.</li> <li>Certified reference materials (CRM's) –standards and blanks - were submitted at random with the field samples on an average of 1 of each type every in 27 field samples basis, as well as the laboratory's standard QAQC procedures.</li> <li>Samples were selected periodically and screened tested to ensure pulps are pulverised to the required specifications.</li> <li>Analysis of QAQC data results indicates acceptable levels of accuracy and precision</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>Significant intersections have been verified by company management.</li> <li>No twin holes undertaken at this early stage.</li> <li>Field data was logged into an Ocris logging package and uploaded to the main, secure, database in Perth once complete. The data collection package has built in validation settings and look-up codes. All field data and assay data was verified and validated upon receipt. The database is managed by an independent and professional database manager offsite</li> <li>Data collection and entry procedures are documented and training given to all staff</li> <li>Scans of original field data sheets are stored digitally and never altered</li> <li>Digital data entry is checked and validated against original field sheets if not entered directly</li> <li>Laboratory assay data for rare earths is received in element form and converted to oxides for the reporting of rare earth results using molecular</li> </ul>

	<p>weight conversion and the oxide states factors:</p> <p>La to <math>\text{La}_2\text{O}_3</math> – 1.1728</p> <p>Ce to <math>\text{CeO}_2</math> – 1.2284</p> <p>Pr to <math>\text{Pr}_6\text{O}_{11}</math> – 1.2082</p> <p>Nd to <math>\text{Nd}_2\text{O}_3</math> – 1.1664</p> <p>Sm to <math>\text{Sm}_2\text{O}_3</math> – 1.1596</p> <p>Eu to <math>\text{Eu}_2\text{O}_3</math> – 1.1579</p> <p>Gd to <math>\text{Gd}_2\text{O}_3</math> – 1.1526</p> <p>Tb to <math>\text{Tb}_4\text{O}_7</math> – 1.1762</p> <p>Dy to <math>\text{Dy}_2\text{O}_3</math> – 1.1477</p> <p>Ho to <math>\text{Ho}_2\text{O}_3</math> – 1.1455</p> <p>Er to <math>\text{Er}_2\text{O}_3</math> – 1.1435</p> <p>Tm to <math>\text{Tm}_2\text{O}_3</math> – 1.1421</p> <p>Yb to <math>\text{Yb}_2\text{O}_3</math> – 1.1387</p> <p>Lu to <math>\text{Lu}_2\text{O}_3</math> – 1.1371</p> <p>Y to <math>\text{Y}_2\text{O}_3</math> – 1.2699</p> <ul style="list-style-type: none"> <li>Intersection grades are reported as REO (the sum of the above oxides) and as NdPr (the sum of <math>\text{Nd}_2\text{O}_3</math> and <math>\text{Pr}_6\text{O}_{11}</math>, which is included in the REO grade)</li> </ul>	
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All sample locations were surveyed using a hand held GPS, accurate to within 3m. Hole collars will be surveyed by a professional surveyor using an RTK DGPS at the end of the programme</li> <li>Holes are vertical and no down hole survey was completed, the collar set up was checked on every hole by measuring the mast is vertical using a spirit level</li> <li>The grid system used is WGS84 UTM Zone 33S. All reported coordinates are referenced to this grid.</li> <li>Topography control is currently by GPS and SRTM radar data. A high precision satellite based topographic survey has been completed and will be used for future reporting of RLs and topography. An RTK DGPS survey has been completed on ground control points to ensure accuracy and precision of the satellite DTM survey</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole spacing is 50m x 100m. Samples are 2m down hole.</li> <li>Infill drilling is considered sufficient for a, Indicated category Mineral Resource estimate which is planned once all drilling is completed. Data spacing is considered sufficient to accurately define the continuity of zones of NdPr (oxide) and REO mineralisation over the area drill tested.</li> <li>1m RC drill samples were combined in the field after riffle splitting for a final 2m composite sample for submission to laboratory.</li> <li>Two metre composites are considered adequate for the resource estimation, variography studies and potential mining techniques for this style of mineralisation</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>• The high grade NdPr mineralisation at Longonjo takes the form of a thick horizontal blanket of disseminated mineralisation averaging 20m or more in thickness and with good lateral continuity. The vertical drilling and 2m sampling is optimum for this style of mineralisation.</li> <li>• No sampling bias is considered to have been introduced by the drilling orientation.</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>• Sample security is managed by the Company. After collection in the field the samples are stored at camp in locked sea containers.</li> <li>• A customs officer checks and seals the samples into containers on site before transportation by the Company directly to the preparation laboratory. The preparation laboratory submits the samples to the assay laboratory by international air freight – the samples again being inspected by customs and sealed prior to despatch.</li> <li>• The laboratories audit the samples on arrival and reports any discrepancies back to the Company. No such discrepancies occurred.</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 review of the sampling techniques has been carried out. The database is compiled by an independent consultant and is considered by the Company to be of sufficient quality to support the results reported. In addition, from time to time, the Company carries out its own internal data audits.</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>Prospecting License 013/03/09T.P/ANG-M.G.M/2015. Pensana owns an 84% holding in the Project with Ferrangol (10%), an agency of the Angolan government, and other Angolan partners (6%).</li> <li>The concession is in good standing and no known impediments exist.</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>Previous workers in the area include Black Fire Minerals and Cityview Corporation Ltd.</li> </ul>
<i>Geology</i>	<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 Longonjo NdPr deposit is a rare earth enriched carbonatite with particularly high grades occurring within the weathered regolith zone from surface as a result of the dissolution of carbonate minerals and residual enrichment. Some mineralisation also occurs within fresh rock beneath. Mineralisation is disseminated in style. The Longonjo Carbonatite is a sub circular and subvertical explosive volcanic vent (diatreme) approximately 2.6km x 2.4km in diameter. Primary rocktypes include carbonatite lava and magma, extensive mixed carbonatite - fenite breccia and tuffaceous deposits. The iron rich weathered zone that is host to the higher grade mineralisation discovered to date extends over much of the carbonatite.</li> </ul>
<i>Drill hole Information</i>	<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> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Refer to the Table 1 in the body of the text. All holes are vertical</li> </ul>

	<ul style="list-style-type: none"> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• No material information was excluded.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• 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.</li> <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>	<ul style="list-style-type: none"> <li>• Cut-off grade of 0.20% NdPr oxide applied in reporting of intersections and 0.40% NdPr oxide for high grade 'Highlights'. No upper grade cuts have been applied.</li> <li>• Intersections are reported as length weighted averages above the specified cut-off grade. Length weighted grade averages for REO and NdPr are presented</li> <li>• Intercepts may include a maximum of 2m internal dilution.</li> <li>• No metal equivalent values have been used for the reporting of these exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<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</li> </ul>	<ul style="list-style-type: none"> <li>• Geometry of the mineralisation is a sub horizontal blanket, the drill holes are vertical. As such mineralisation is at a high angle to the drill holes.</li> <li>• Drill hole intercepts reported can be considered true thicknesses</li> </ul>



*statement to this effect (e.g. 'down hole length, true width not known').*

<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>• Appropriate plans and sections are included in this release.</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>• All new exploration results above the specified cut off grade 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>• Previously reported evaluations of the NdPr mineralisation at Longonjo, including the November 2019 Mineral Resource estimate and previous drilling programme results are contained within ASX releases</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly</i></li> </ul>	<ul style="list-style-type: none"> <li>• The reported results are the first batch of 16 holes (416 metres) of a 7,000 metre infill RC drilling programme testing the shallow weathered zone mineralisation at Longonjo. The programme also includes drilling of high grade zones, strike extensions of known mineralisation and an area of high grade fresh rock mineralisation. Remaining results are expected to be received in several batches between now and April 2020. A revised Mineral Resource estimate will be completed once all assay results are received.</li> <li>• Appropriate diagrams accompany this release.</li> </ul>

*highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*