**24 June 2019**

# Final RC drill results confirm and extend high grade NdPr mineralisation

Pensana Metals Ltd (ASX: PM8) is pleased to report the final results from the recent infill and exploration reverse circulation (RC) drilling programme at the Longonjo NdPr Project located in an infrastructure rich region of Angola.

The results have confirmed the continuity of high-grade weathered mineralisation from surface. The **infill RC drilling** was completed to support a revised Mineral Resource estimate for the high-grade weathered zone mineralisation at Longonjo.

An updated **Mineral Resource estimate** has commenced in support of the Preliminary Feasibility Study which is scheduled for completion in September 2019.

**Exploration drilling** on the southern margin of the carbonatite has identified a thick zone of weathered mineralisation which remains open along strike for 550 metres to the east and requires further drilling to evaluate its full potential.

**Executive Director Dave Hammond commented:**

*"These high grade NdPr intersections confirm the continuous nature of the near surface blanket of weathered zone NdPr mineralisation in the area targeted for initial open pit mining in the Preliminary Feasibility Study.*

*The results from the exploration holes are significant as they add further proof of the existence of arcuate mineralised ring dyke structures around the margins of the circular carbonatite.*

*Several kilometres of this prospective contact zone have yet to be drill tested and offer further upside potential to the weathered zone mineralisation at Longonjo."*

**Results highlights**

**Infill RC drilling** returned high grade intersections from surface including:

| Drill hole | Intersection* |
|---|---|
| **LRC159:** | **8 metres** at **7.66% REO** including **1.39% NdPr** from surface |
| **LRC161:** | **12 metres** at **5.12% REO** including **0.91% NdPr** from 6 metres |

**Exploration drilling** along the southern margin of the carbonatite intersected a deep zone of weathered mineralisation including:

| Drill hole | Intersection* |
|---|---|
| **LRC172:** | **22 metres** at **4.26% REO** including **0.86% NdPr** from 48 metres |
| **LRC173:** | **10 metres** at **4.07% REO** including **0.73% NdPr** from 16 metres |

*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

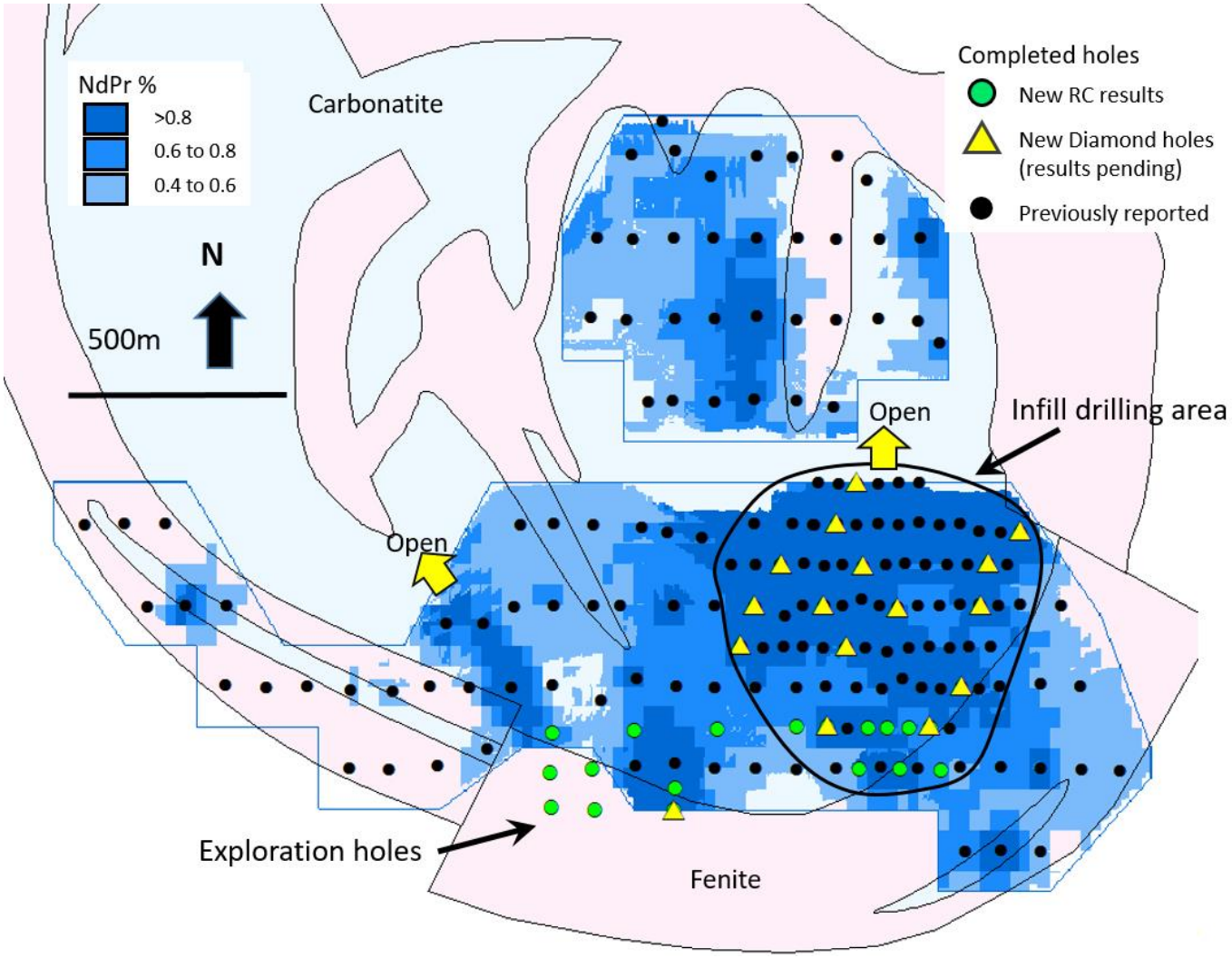
**Technical Report**

High grade intersections have been returned from the final outstanding assay results from the 2019 RC drilling programme at the Company's 84% owned Longonjo NdPr Project in Angola.

The 66 hole infill reverse circulation (RC) and 16 hole diamond core drilling programmes were completed in May to provide information to support a series of technical work programmes that form part of the Preliminary Feasibility Study (PFS) that is on schedule for completion in September 2019. Diamond drilling results are still awaited but are expected shortly.

The RC assay results are presented below under the following two areas:

- infill RC drilling results
- exploration RC drilling results




*Above: Plan view of the location of new assay results from the infill and exploration RC and the recently completed diamond drilling (results awaited) over the February 2019 Mineral Resource block model for the weathered mineralisation coloured by NdPr grade.*

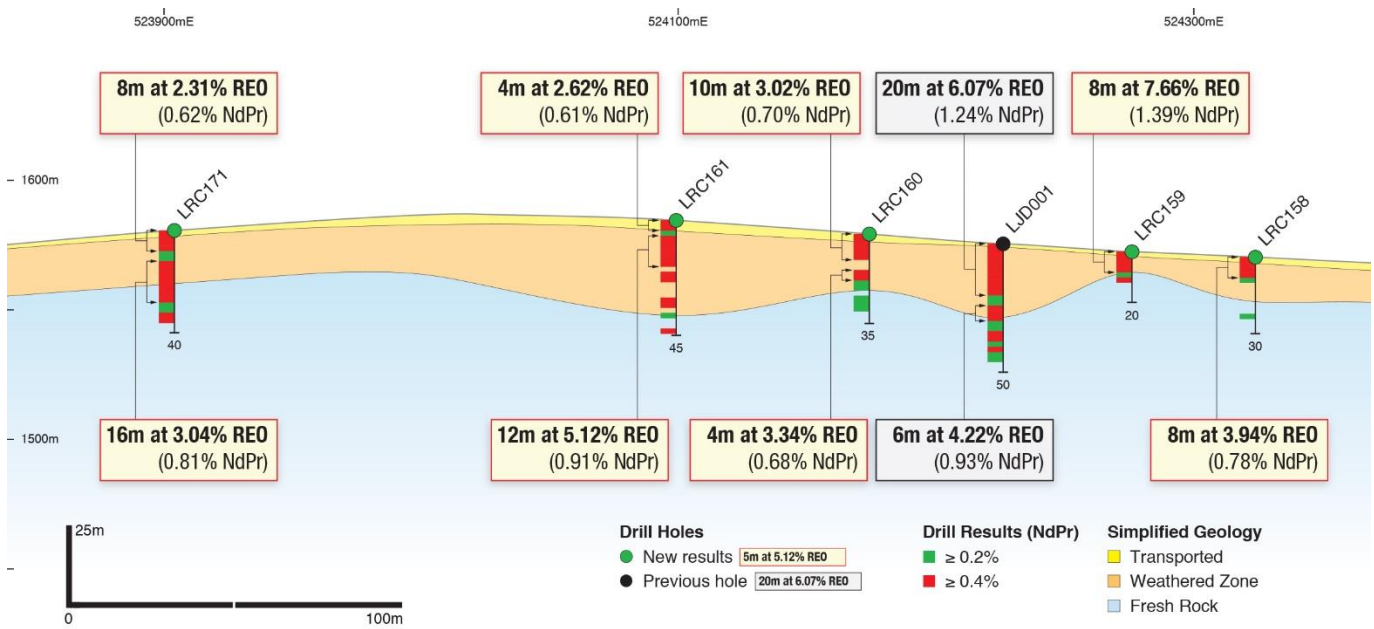
## Infill RC drilling results

A programme of 50m x 100m spaced vertical infill RC drilling has been completed to provide the definition required to upgrade a portion of the current Inferred JORC category Mineral Resource estimate to Indicated category, as is required for a Preliminary Feasibility Study.

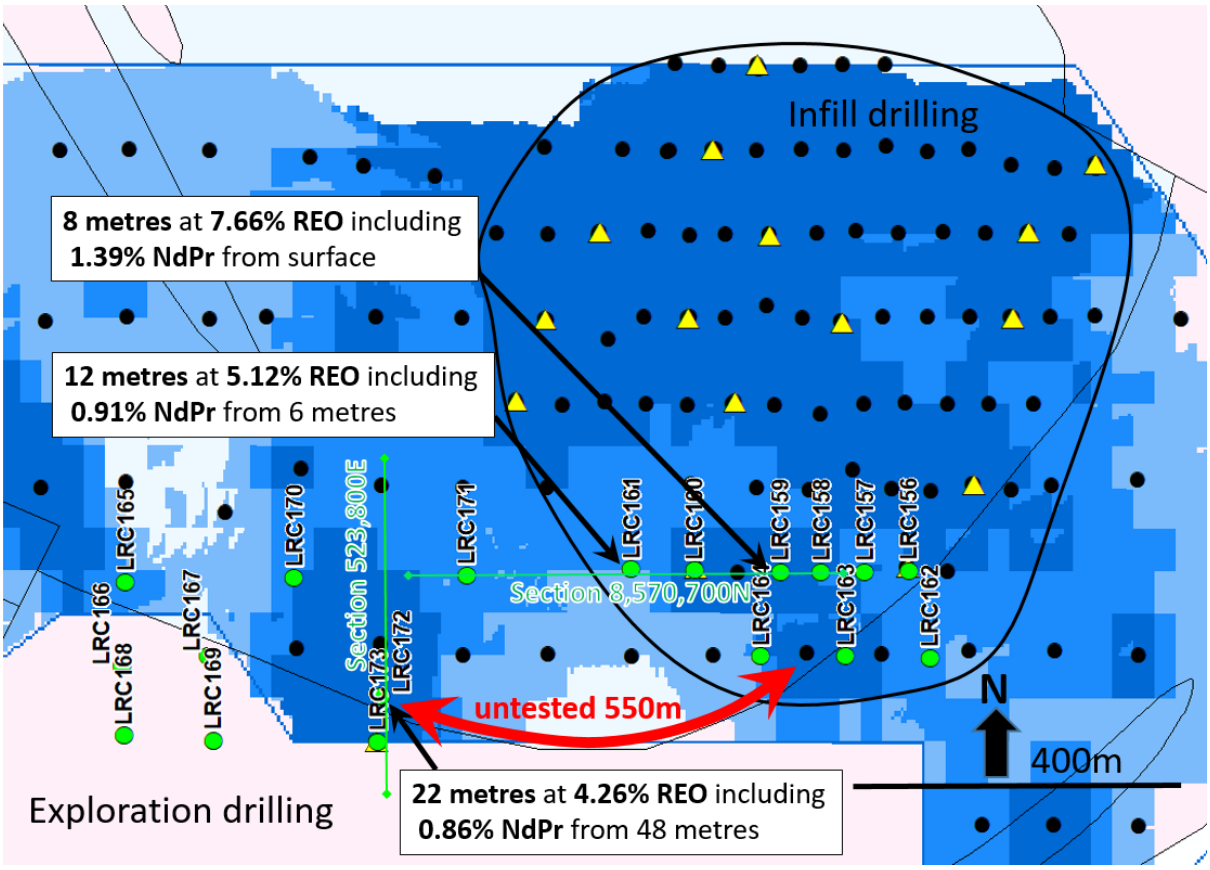
Although on the southern periphery of the infill drill pattern, the latest high grade intersections continue to confirm the continuity of the blanket of weathered mineralisation from surface with new intersections up to:

| Drill hole | Intersection* |
|---|---|
| **LRC159:** | **8 metres** at **7.66% REO** including **1.39% NdPr** from surface |
| **LRC161:** | **12 metres** at **5.12% REO** including **0.91% NdPr** from 6 metres |
| **LRC158:** | **8 metres** at **3.94% REO** including **0.78% NdPr** from surface |
| **LRC171:** | **16 metres** at **3.04% REO** including **0.81% NdPr** from 12 metres |

*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 drilling results, including wider intersections at a +0.2% NdPr cut.




*Above: Vertical east-west section 8,570,700N looking north. New high grade intersections from surface demonstrate the continuity of the weathered zone mineralisation in the area of infill drilling (see plan following for location)*




*Above: Plan showing location of new RC assay results reported over February 2019 Mineral Resource block model for the weathered mineralisation (see previous figure for legend and location).*

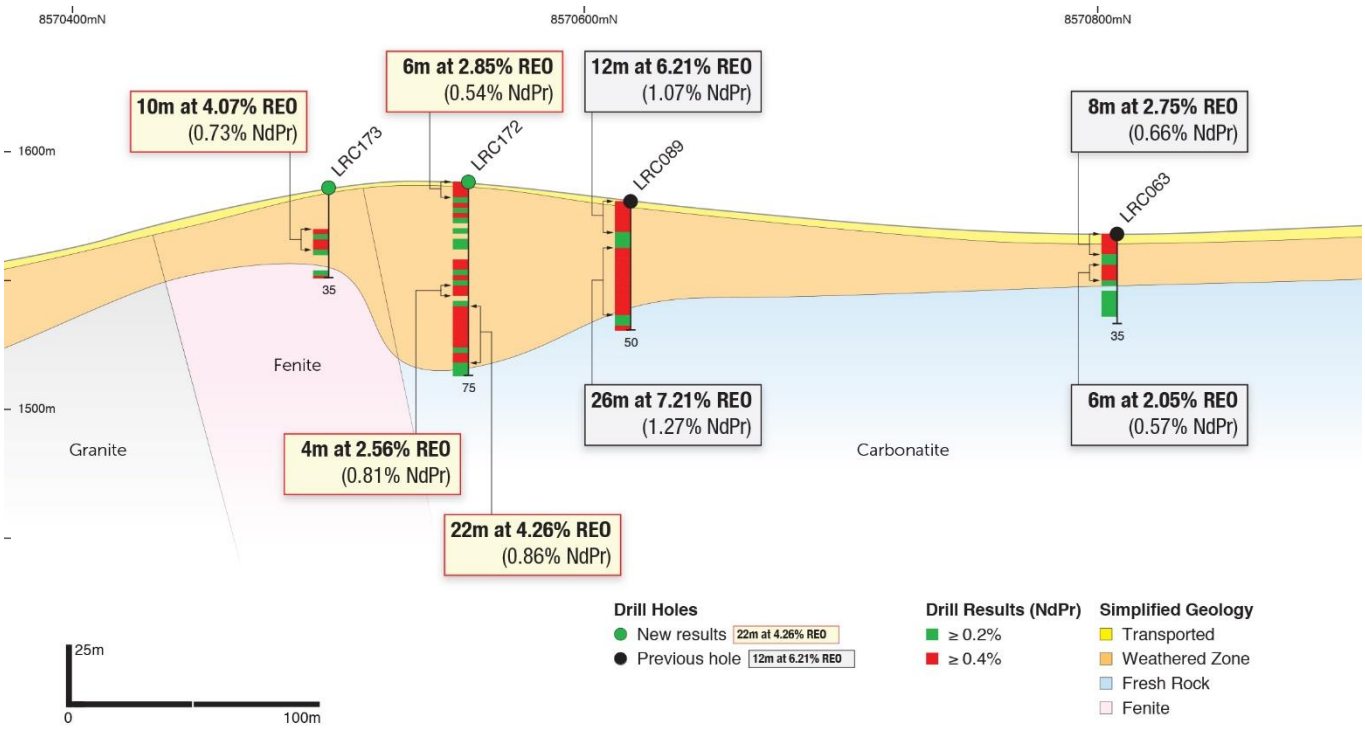
## Exploration RC drilling results

Eight RC holes were completed to test for potential extensions to high grade NdPr mineralisation along the southern margins of the carbonatite (see plan above and vertical cross section following).

Drilling intersected a mineralised zone of deeply weathered carbonatite along the contact with the altered granite (fenite) country rock with intersections including:

| Drill hole | Intersection* |
|---|---|
| **LRC172:** | **22 metres** at **4.26% REO** including **0.86% NdPr** from 48 metres |
| **LRC173:** | **10 metres** at **4.07% REO** including **0.73% NdPr** from 16 metres |
| **LRC165:** | **14 metres** at **3.87% REO** including **0.80% NdPr** from 16 metres |

*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




*Above: Vertical north – south section 523,800E looking west. Thick and high grade NdPr intersections in the weathered zone around the fenite:carbonatite contact may represent steeply dipping and mineralised carbonatite ring dykes, which are untested for 550 metres to the east.*

These new results, together with adjacent previously reported intersections, suggest the potential for the presence of steeply dipping mineralised carbonatite ring dyke structures along the southern and eastern margins of the carbonatite on the contact with the surrounding fenite (see section above).

**A 550 metre strike length of this prospective contact zone remains untested by drilling.**

## Longonjo NdPr Project Development Strategy

The Company is focussed on studies to fast track the Longonjo NdPr Project into production based on the high grade, near surface weathered zone portion of the greater deposit. Development will take advantage of the modern road, rail, port and power infrastructure available on the project's doorstep.

With the receipt of these final RC drilling results, work has commenced on an updated **Mineral Resource estimate** that will include an amount of Indicated JORC Category mineralisation to support the Preliminary Feasibility Study scheduled for completion in September 2019.

**Competent Persons Statement**

The information in this report that relates to Geology 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 Australasian 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 contest in which it appears.

**Table 1:** Longonjo NdPr Project, RC drill intersections at least 4m thick and ≥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 % |
|---|---|---|---|---|---|---|---|---|---|
| LRC156 | 524,428 | 8,570,701 | 1,566 | 30 | 0 | 14 | 14 | 2.18 | 0.47 |
| | | | | ***(incl.*** | ***0*** | ***4*** | ***4*** | ***3.32*** | ***0.70*** |
| | | | | ***and*** | ***8*** | ***12*** | ***4*** | ***2.27*** | ***0.49)*** |
| | | | | | 16 | 20 | 4 | 2.65 | 0.47 |
| LRC157 | 524,376 | 8,570,700 | 1,569 | 30 | 0 | 8 | 8 | 2.87 | 0.60 |
| | | | | ***(incl.*** | ***0*** | ***6*** | ***6*** | ***3.30*** | ***0.68)*** |
| LRC158 | 524,324 | 8,570,700 | 1,558 | 30 | 0 | 10 | 10 | 3.41 | 0.68 |
| | | | | ***(incl.*** | ***0*** | ***8*** | ***8*** | ***3.94*** | ***0.78)*** |
| LRC159 | 524,276 | 8,570,700 | 1,573 | 20 | 0 | 12 | 12 | 5.53 | 1.03 |
| | | | | ***(incl.*** | ***0*** | ***8*** | ***8*** | ***7.66*** | ***1.39)*** |
| LRC160 | 524,174 | 8,570,702 | 1,580 | 35 | ***0*** | ***10*** | ***10*** | ***3.02*** | ***0.70*** |
| | | | | | 14 | 30 | 16 | 1.75 | 0.36 |
| | | | | ***(incl.*** | ***14*** | ***18*** | ***4*** | ***3.34*** | ***0.68)*** |
| LRC161 | 524,099 | 8,570,703 | 1,585 | 45 | 0 | 24 | 24 | 3.53 | 0.68 |
| | | | | ***(incl.*** | ***0*** | ***4*** | ***4*** | ***2.62*** | ***0.61*** |
| | | | | ***and*** | ***6*** | ***18*** | ***12*** | ***5.12*** | ***0.91*** |
| | | | | ***and*** | ***20*** | ***24*** | ***4*** | ***2.38*** | ***0.56)*** |
| | | | | | 30 | 34 | 4 | 2.07 | 0.51 |
| LRC162 | 524,453 | 8,570,598 | 1,556 | 33 | 0 | 20 | 20 | 1.54 | 0.50 |
| | | | | ***(incl.*** | ***0*** | ***8*** | ***8*** | ***2.58*** | ***0.83)*** |
| LRC163 | 524,353 | 8,570,600 | 1,564 | 35 | 12 | 22 | 10 | 1.98 | 0.43 |
| LRC164 | 524,253 | 8,570,600 | 1,571 | 35 | 0 | 20 | 20 | 1.82 | 0.39 |
| LRC165 | 523,500 | 8,570,688 | 1,544 | 35 | 0 | 35 | 35eoh | 2.27 | 0.49 |
| | | | | ***(incl.*** | ***0*** | ***14*** | ***14*** | ***3.87*** | ***0.80)*** |
| LRC166 | 523,496 | 8,570,589 | 1,552 | 45 | 0 | 10 | 10 | 1.07 | 0.26 |
| | | | | | 26 | 32 | 6 | 2.57 | 0.73 |
| | | | | ***(incl.*** | ***26*** | ***30*** | ***4*** | ***3.40*** | ***0.92)*** |

| Hole ID | East | North | RL | Hole Depth (m) | From (m) | To (m) | Interval (m) | REO % | NdPr % |
|---|---|---|---|---|---|---|---|---|---|
| LRC167 | 523,598 | 8,570,600 | 1,563 | 35 | 6 | 10 | 4 | 1.12 | 0.21 |
| | | | | | ***24*** | ***30*** | ***6*** | ***2.37*** | ***0.71*** |
| LRC168 | 523,498 | 8,570,506 | 1,549 | 45 | 0 | 14 | 14 | 1.27 | 0.40 |
| | | | | | 20 | 30 | 10 | 0.72 | 0.25 |
| | | | | | 34 | 45 | 11eoh | 1.17 | 0.33 |
| LRC169 | 523,604 | 8,570,500 | 1,558 | 35 | 20 | 24 | 4 | 1.73 | 0.29 |
| LRC170 | 523,700 | 8,570,693 | 1,565 | 30 | 14 | 28 | 14 | 2.38 | 0.47 |
| LRC171 | 523,904 | 8,570,696 | 1,581 | 40 | 0 | 36 | 36 | 2.44 | 0.64 |
| | | | | ***(incl.*** | ***0*** | ***8*** | ***8*** | ***2.31*** | ***0.62*** |
| | | | | ***and*** | ***12*** | ***28*** | ***16*** | ***3.04*** | ***0.81*** |
| | | | | ***and*** | ***32*** | ***36*** | ***4*** | ***2.60*** | ***0.58)*** |
| LRC172 | 523,803 | 8,570,553 | 1,588 | 75 | 0 | 16 | 16 | 2.21 | 0.46 |
| | | | | ***(incl.*** | ***0*** | ***6*** | ***6*** | ***2.85*** | ***0.54)*** |
| | | | | | 22 | 26 | 4 | 1.35 | 0.24 |
| | | | | | 30 | 75 | 45eoh | 2.96 | 0.65 |
| | | | | | ***(incl.*** | ***30*** | ***34*** | ***4*** | ***1.68*** | ***0.54*** |
| | | | | | ***and*** | ***40*** | ***44*** | ***4*** | ***2.56*** | ***0.81*** |
| | | | | | ***and*** | ***48*** | ***70*** | ***22*** | ***4.26*** | ***0.86)*** |
| LRC173 | 523,799 | 8,570,499 | 1,586 | 35 | 16 | 26 | 10 | 4.07 | 0.73 |
| | | | | ***(incl.*** | ***20*** | ***24*** | ***4*** | ***6.30*** | ***1.14)*** |

REO = Total rare earth oxide includes NdPr and is the sum of $La_2O_3$, $CeO_2$, $Pr_6O_{11}$, $Nd_2O_3$, $Sm_2O_3$, $Eu_2O_3$, $Gd_2O_3$, $Tb_4O_7$, $Dy_2O_3$, $Ho_2O_3$, $Er_2O_3$, $Tm_2O_3$, $Yb_2O_3$, $Lu_2O_3$, $Y_2O_3$. 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. Assays of 2m composite RC samples from vertical drilling by peroxide fusion and ICP analysis, Nagrom laboratories Perth, Western Australia. Maximum of 2m internal subgrade included. NSI= No Significant Intersection.

## APPENDIX

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | • *Nature and quality of sampling (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.* | • 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. |
| | • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | • During RC drilling the drill string is cleaned by flushing with air and the cyclone cleaned regularly.<br>• Sampling is carried out under Pensana QAQC protocols and as per industry best practise.<br>• RC sample returns are closely monitored, managed and recorded. A reference weight is used to calibrate the weighing scale.<br>• RC samples are riffle split using a 3 tier splitter which is cleaned between every sample |
| | • *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.* | • 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<br>• 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.<br>• All commercial laboratories used use industry best practise procedures and QAQC checks.<br>• Entire hole lengths were submitted for assay. |
| *Drilling techniques* | • *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc)* | • Reverse circulation (RC) drilling was completed using a Super rock 100 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 |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *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).* | some holes in the weathered zone, generally for around 10 metres. |
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • RC recoveries were monitored closely, recorded and assessed regularly over the drilling programme.<br>• Every 1m RC sample from the rig was weighed and recorded for moisture content. The weigh scale was calibrated frequently.<br>• RC sample weights are compared against expected weights for the drill diameter and geology.<br>• Drill pipes and cyclone were flushed and cleaned regularly<br>• Some short intervals (1 to 3m) of reduced RC sample recovery occur in the soft weathered zone. Data analysis to date has not identified any relationship between recovery and grade. A selection of RC holes have been twinned by diamond core drilling to investigate any relationship and results of the diamond twins are awaited. |
| *Logging* | • *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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • 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.<br>• All logging was quantitative. All RC chip and diamond core trays were photographed.<br>• All holes were logged in full 100% |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and* | • Only RC drill results are reported<br>• 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.<br>• The preparation of samples follows industry practice. This involves oven drying of the full 4kg 2m composite RC sample, splitting to a representative |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *appropriateness of the sample preparation technique.*<br><br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | 1kg sample, pulverising to 85% passing 75 micron and splitting to a 100g sample pulp.<br>• 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<br>• Field, preparation and assay lab duplicate results are closely monitored and indicate no significant sampling variance<br><br>• The sample sizes are considered more than adequate for this disseminated style and grainsize of material sampled. Repeatability of assays is good. |
| *Quality of assay data and laboratory tests* | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br><br>• *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.*<br>• *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.* | • The analysis was carried out by an accredited independent assay laboratory.<br>• Samples are assayed 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.<br>• The assay technique is total.<br>• Laboratory data only. No geophysical or portable analysis tools were used to determine assay values stored in the database.<br>• 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.<br>• Samples were selected periodically and screened tested to ensure pulps are pulverised to the required specifications.<br>• Analysis of QAQC data results indicates acceptable levels of accuracy and precision |
| *Verification of* | • *The verification of* | • Significant intersections have been verified by |

| | | |
|---|---|---|
| *sampling and assaying* | *significant intersections by either independent or alternative company personnel.* | company management. |
| | • *The use of twinned holes.* | • 16 diamond core holes have been completed as twins against RC drill holes and assay results are pending. |
| | • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | • 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<br>• Data collection and entry procedures are documented and training given to all staff<br>• Scans of original field data sheets are stored digitally and never altered |
| | • *Discuss any adjustment to assay data.* | • Digital data entry is checked and validated against original field sheets if not entered directly<br>• Laboratory assay data for rare earths is received in element form and converted to oxides for the reporting of rare earth results using molecular weight conversion and the oxide states factors:<br>La to $La_2O_3$ – 1.1728<br>Ce to $CeO_2$ – 1.2284<br>Pr to $Pr_6O_{11}$ – 1.2082<br>Nd to $Nd_2O_3$ – 1.1664<br>Sm to $Sm_2O_3$ – 1.1596<br>Eu to $Eu_2O_3$ – 1.1579<br>Gd to $Gd_2O_3$ – 1.1526<br>Tb to $Tb_4O_7$ – 1.1762<br>Dy to $Dy_2O_3$ – 1.1477<br>Ho to $Ho_2O_3$ – 1.1455<br>Er to $Er_2O_3$ - 1.1435<br>Tm to $Tm_2O_3$ – 1.1421<br>Yb to $Yb_2O_3$ – 1.1387<br>Lu to $Lu_2O_3$ - 1.1371<br>Y to $Y_2O_3$ – 1.2699<br>• Intersection grades are reported as REO (the sum of the above oxides) and as NdPr (the sum of $Nd_2O_3$ and $Pr_6O_{11}$, which is included in the REO grade |

| | | |
|---|---|---|
| *Location of data points* | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • All sample locations were surveyed using a hand held GPS, accurate to within 3m prior to drilling. Hole collars have subsequently all been surveyed after drilling by a professional surveyor using an RTK DGPS at the end of each drill programme<br>• 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<br>• The grid system used is WGS84 UTM Zone 33S. All reported coordinates are referenced to this grid.<br>• Topography control is by a high precision satellite based topographic survey. The survey utilised an RTK DGPS survey of ground control points to ensure accuracy of georectification and precision of the satellite DTM survey. Drill holes are surveyed using an accurate RTK DGPS survey and collars fitted to the satellite topography surface using the surveyed East and North co-ordinates for Mineral Resource estimation purposes. |
| *Data spacing and distribution* | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The infill area drill hole spacing is 50m x 100m, otherwise 100m x 100m or 100m x 200m. Samples are 2m down hole.<br>• Exploration and resource definition infill drill results are being reported. Data spacing is considered sufficient to establish the continuity of NdPr mineralisation to at least an Indicated category in the area of infill and Inferred in areas defined by wider spaced drilling for future Mineral Resource estimation studies.<br>• 1m RC drill samples were combined in the field after riffle splitting for a final 2m composite sample for submission to laboratory.<br>• Two metre samples are considered adequate for the resource estimation, variography studies and potential mining techniques for this style of disseminated mineralisation |

| | | |
|---|---|---|
| *Orientation of data in relation to geological structure* | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *If the relationship* | • 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.<br>• Mineralised carbonatite ring dykes, which could have a more steeply dipping morphology beneath the predominantly horizontal weathered zone, have been identified but are restricted to the periphery of the carbonatite. These structures will be tested in the fresh rock by angled drill holes orthogonal to strike. |

| | | |
|---|---|---|
| | *between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | • No sampling bias is considered to have been introduced by the drilling orientation. |
| *Sample security* | • *The measures taken to ensure sample security.* | • Sample security is managed by the Company. After collection in the field the samples are stored at camp in locked sea containers.<br>• 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.<br>• The laboratories audit the samples on arrival and reports any discrepancies back to the Company. No such discrepancies occurred. |
| *Audits or reviews* | • *The results of any audits or reviews of sampling techniques and data.* | • 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. |

## Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* | • 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%). |
| | • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The concession is in good standing and no known impediments exist. |
| *Exploration done by other parties* | • *Acknowledgment and appraisal of exploration by other parties.* | • Previous workers in the area include Black Fire Minerals and Cityview Corporation Ltd. |

| Criteria | JORC Code explanation | Commentary |
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| *Geology* | • *Deposit type, geological setting and style of mineralisation.* | • 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. |
| *Drill hole Information* | • *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>  ○ *easting and northing of the drill hole collar*<br>  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>  ○ *dip and azimuth of the hole*<br>  ○ *down hole length and interception depth*<br>  ○ *hole length.*<br>• *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.* | • Refer to Table 1 in the body of the text. All holes are vertical<br>• No material information was excluded. |
| *Data* | • *In reporting Exploration* | • Cut-off grade of 0.20% NdPr oxide applied in |

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| *aggregation methods* | *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.*<br><br>• *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.*<br><br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | reporting of intersections and 0.40% NdPr oxide for high grade 'Highlights'. No upper grade cuts have been applied.<br><br>• Intersections are reported as length weighted averages above the specified cut-off grade. Length weighted grade averages for REO and NdPr are presented<br><br>• Intercepts may include a maximum of 2m internal dilution.<br><br>• No metal equivalent values have been used for the reporting of these exploration results. |
| *Relationship between mineralisation widths and intercept lengths* | • *These relationships are particularly important in the reporting of Exploration Results.*<br><br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br><br>• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').* | • 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.<br><br>• Drill hole intercepts reported can be considered true thicknesses |

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| *Diagrams* | • *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional* | • Appropriate plans and sections are included in this release. |

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| | *views.* | |
| *Balanced reporting* | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • All new exploration results above the specified cut off grade are reported. |
| *Other substantive exploration data* | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • Previously reported evaluations of the NdPr mineralisation at Longonjo, including the February 2019 Mineral Resource estimate and drilling programme results are contained within ASX releases |
| *Further work* | • *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • The reported results are the final batch of 18 holes of a 66 hole infill RC drilling programme testing the shallow weathered zone mineralisation at Longonjo. Results from a recently completed 16 hole diamond drilling programme are expected shortly. A revised Mineral Resource estimate will be completed to include these infill drill results and a Preliminary Feasibility Study on the Longonjo NdPr Project is in progress, scheduled for completion in September 2019.<br>• Additional step out and deeper drilling will test for extensions to the known mineralisation, which remains open in several areas.<br>• Appropriate diagrams accompany this release. |