31 October 2018

First drill results extend NdPr mineralisation at Longonjo

Pensana Metals Ltd ("Pensana" or "Company") (ASX: PM8) is pleased to report the first assay results from its exploration programme at the Longonjo NdPr Project in Angola.

The first fourteen holes have all intersected mineralisation with the majority of them reporting mineralisation starting from the surface and extending up to fifty metres in depth.

Several new zones of deep weathering, up to fifty metres in thickness, have been intersected across the highly weathered carbonatite compared to the average twenty metres of thickness in the area of the Mineral Resource estimate.

The east west extent of the horizontal blanket of weathered mineralisation has increased from 450 to over 1,400 metres and remains open in all directions.

Highlights include:

Drill hole	Intersection*
LRC011:	30 metres at 7.72% REO including 1.21% NdPr from surface
LRC003:	16 metres at 5.36% REO including 1.06% NdPr from surface
LRC006:	22 metres at 4.68% REO including 1.02% NdPr from 2 metres
LRC007:	18 metres at 4.88% REO including 1.04% NdPr from surface

*NdPr = neodymium – praseodymium oxide. A 0.4% NdPr grade cut applied for intersection highlights. REO = total rare earth oxides

The reverse circulation drill programme which is covering an area approximately ten times that of the maiden Mineral Resource estimate is progressing well with seventy five holes completed.

The programme is expected to be completed towards the end of this month with results flowing through over the next few weeks.

Chairman Paul Atherley commented:

"These are very encouraging first results as they confirm that the blanket of highly weathered mineralisation extends well beyond the known resource, is thicker in places and has some very good grades. We look forward to a regular flow of drill results over the coming weeks as we build up a better understanding of the scale and grade of this very promising deposit."

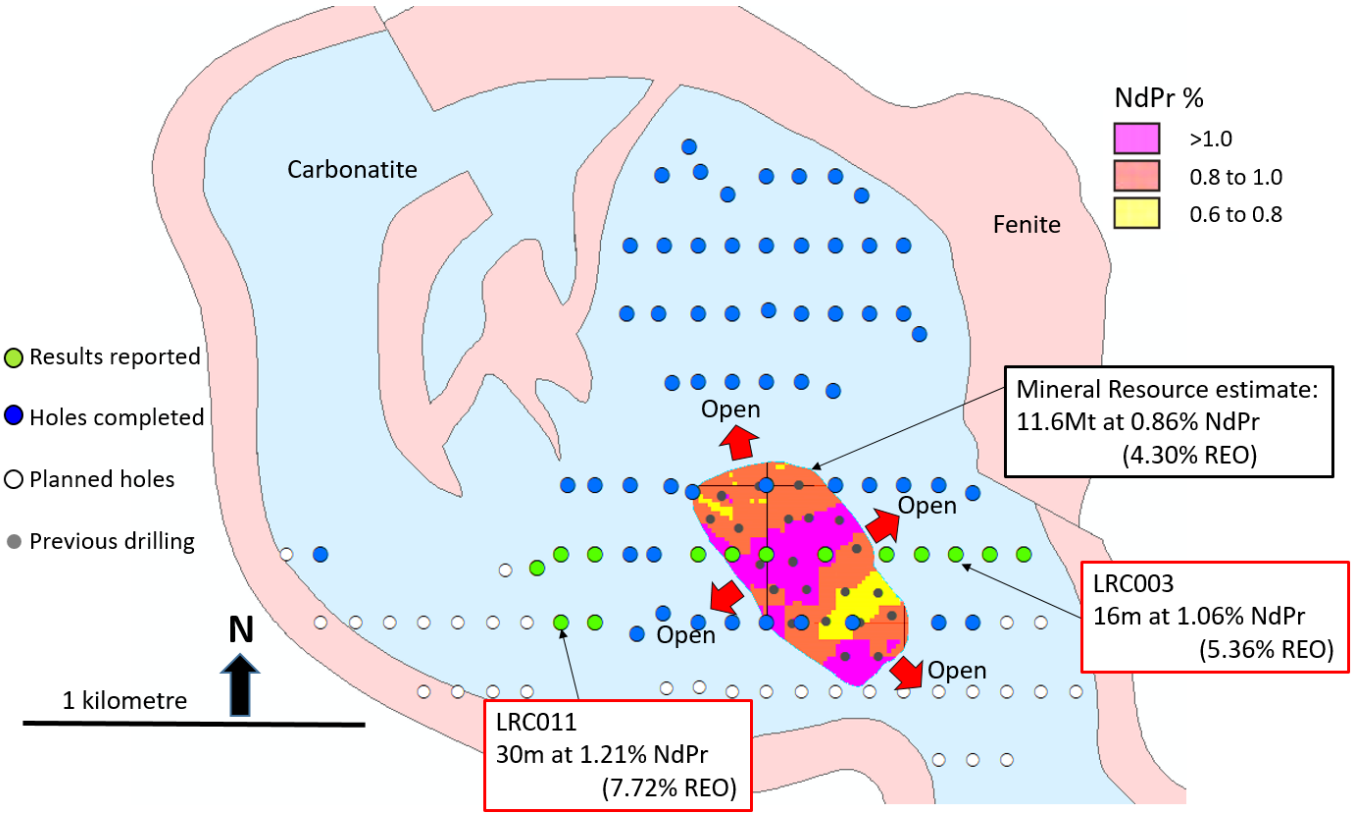
Technical Report

The first assay results have been received from the 2018 drilling programme currently in full swing at the Company's 70% owned Longonjo NdPr Project in infrastructure rich Angola.

The Company is testing the wider area of the Longonjo Carbonatite to assess the potential for a globally significant and high grade NdPr deposit. With its location close to major transport infrastructure, Longonjo could become a strategic source of NdPr for the expanding clean energy sector and for the electrification of modern society.

Several high grade intersections have been returned, with up to **30 metres at 7.72% REO including 1.21% NdPr from surface,** that significantly extend the NdPr mineralisation.

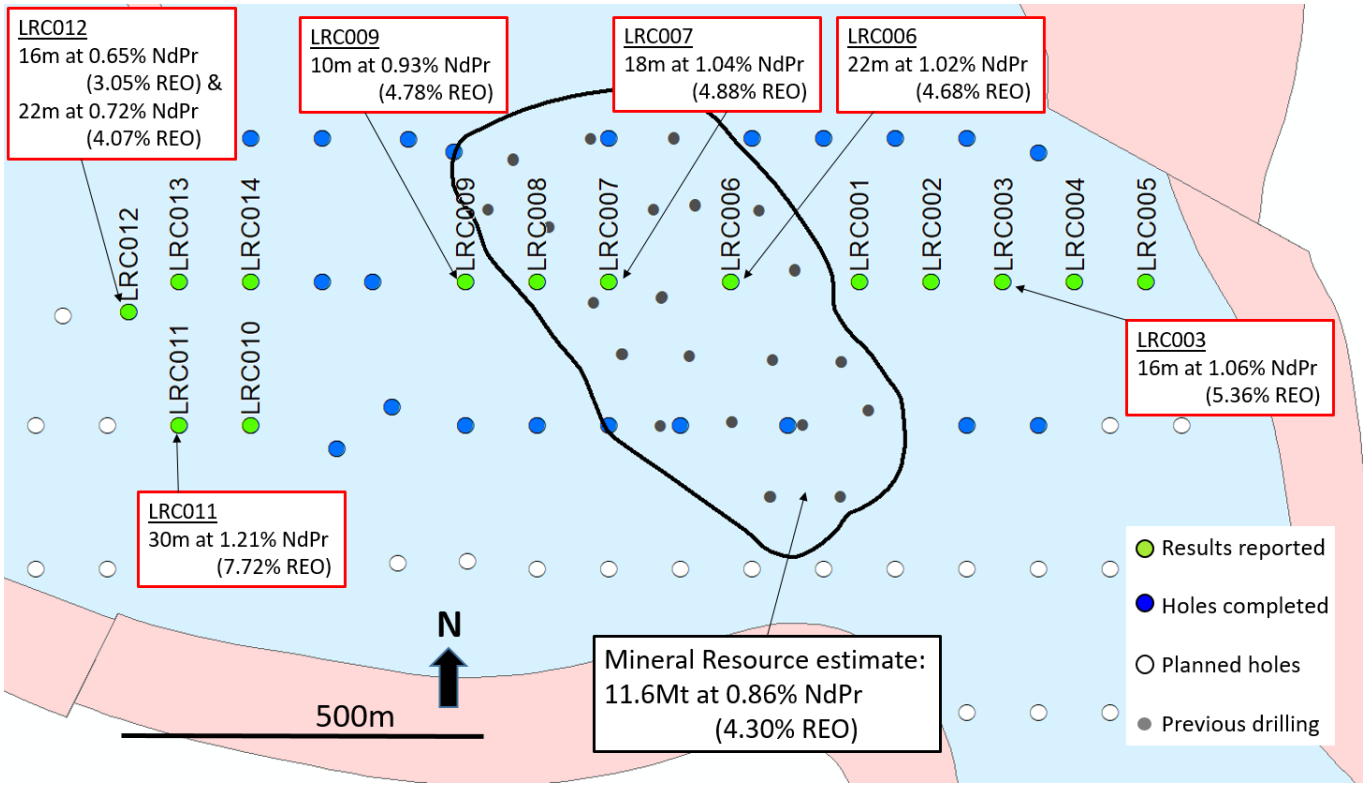
Mineralisation was intersected by all holes and remains open in all directions, with the highest grades on the most western drill hole LRC011. The highest grades occur from surface within the soft weathered zone.



Location of reported drill results and drill programme status over simplified geological map of the Longonjo Carbonatite (revised October 2018) and NdPr grade block model from the maiden Mineral Resource estimate.

The 14 drill holes reported are from two, 200 metre spaced, east - west drill traverses extending across the southern portion of the carbonatite (see map).

Vertical reverse circulation drill holes tested the entire thickness of the weathered zone and into the fresh rock below. JORC Tables 1 and 2 in the Appendix provide further details of the drilling programme.



Intersection highlights from the new drilling results, which extend the mineralisation significantly to the east and west. The majority of intersections start at surface (see Table 2). Mineralisation remains open in all directions.

The maiden Longonjo weathered zone Mineral Resource estimate (see ASX announcement of 26 September 2017) has a width of 450 metres with mineralisation open in all directions.

These results demonstrate that mineralisation continues for a further 400 metres to the east and 600 metres to the west of the current limits of the Mineral Resource to a total width of 1,400 metres as detailed in the following plans and sections.

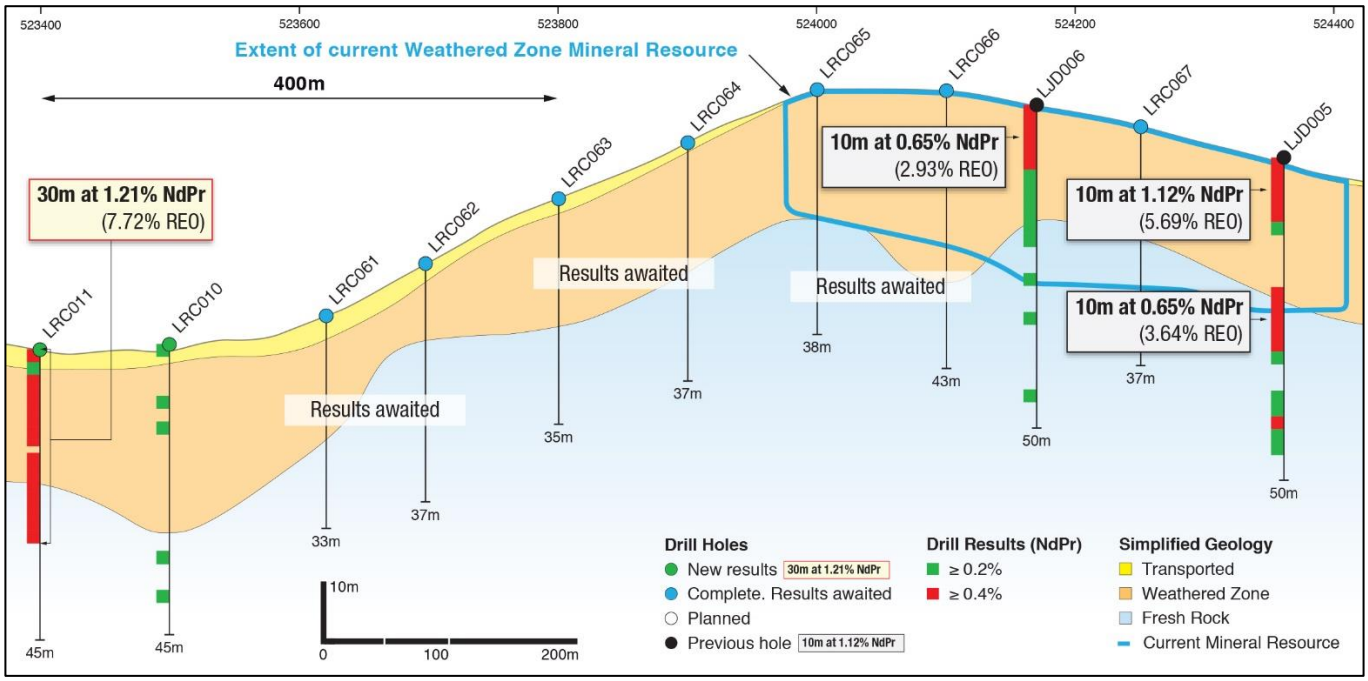
High grade intersections from surface include:

Drill hole	**Intersection***
LRC011:	30 metres at 7.72% REO including 1.21% NdPr from surface
LRC001:	24 metres at 3.05% REO including 0.69% NdPr from surface
LRC003:	16 metres at 5.36% REO including 1.06% NdPr from surface
LRC006:	22 metres at 4.68% REO including 1.02% NdPr from 2 metres
LRC007:	18 metres at 4.88% REO including 1.04% NdPr from surface
LRC009:	10 metres at 4.78% REO including 0.93% NdPr from 8 metres
LRC012:	16 metres at 3.05% REO including 0.65% NdPr from 2 metres
	and 22 metres at 4.07% REO including 0.72% NdPr from 22 metres
LRC013:	6 metres at 2.98% REO including 0.60% NdPr from surface
LRC014:	14 metres at 2.81% REO including 0.57% NdPr from surface

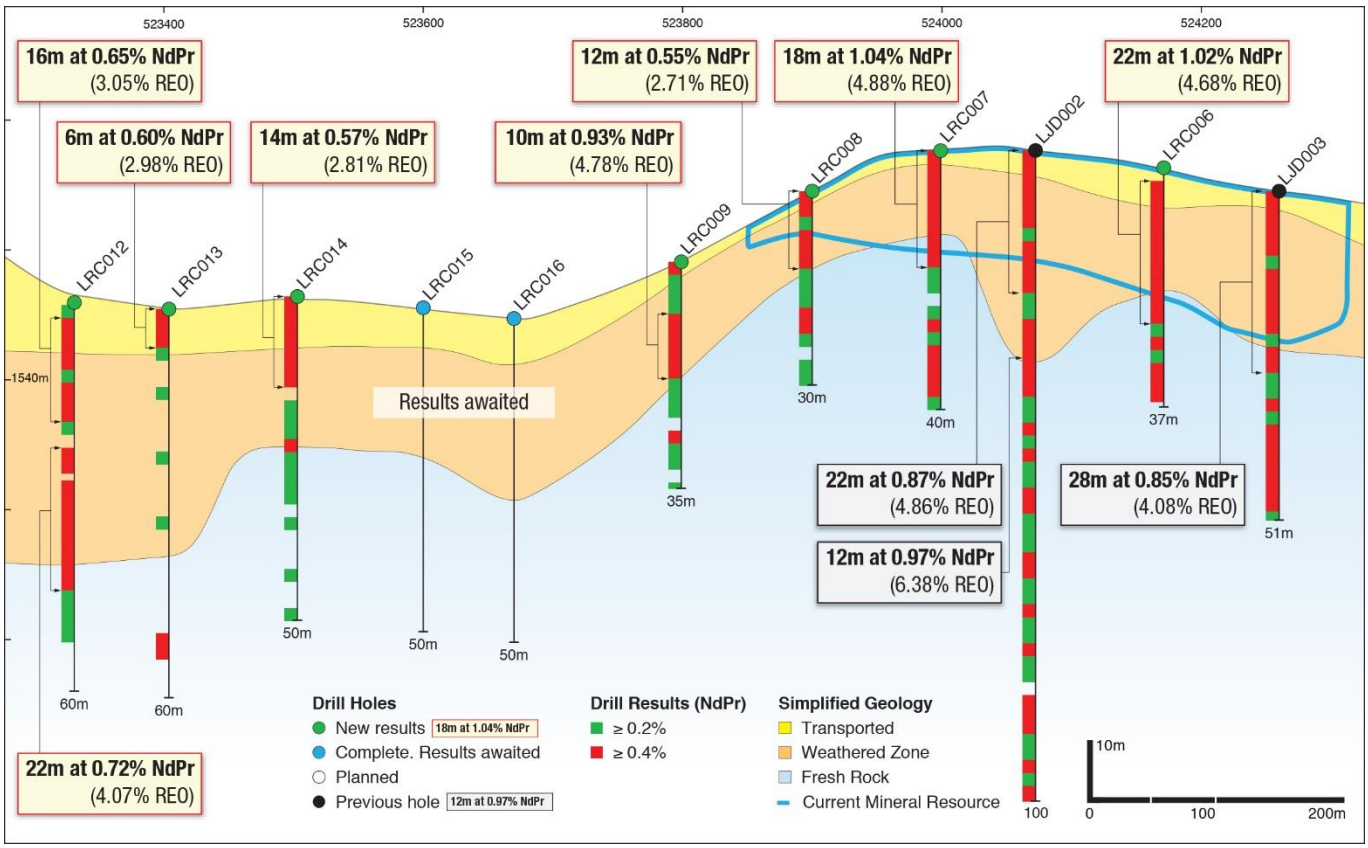
*Intersection highlights reported at ≥0.4% NdPr. NdPr = neodymium + praseodymium oxide: Nd_2O_3+Pr_6O_{11}. REO = total rare earth oxides, the sum of La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3, Y_2O_3. Table 2 provides all NdPr and REO intersections ≥0.20% NdPr together with drill hole details.

The first drill results support the potential to significantly expand the maiden Mineral Resource estimate, which remains open in all directions and extends over just 6% of the total area of the Longonjo carbonatite

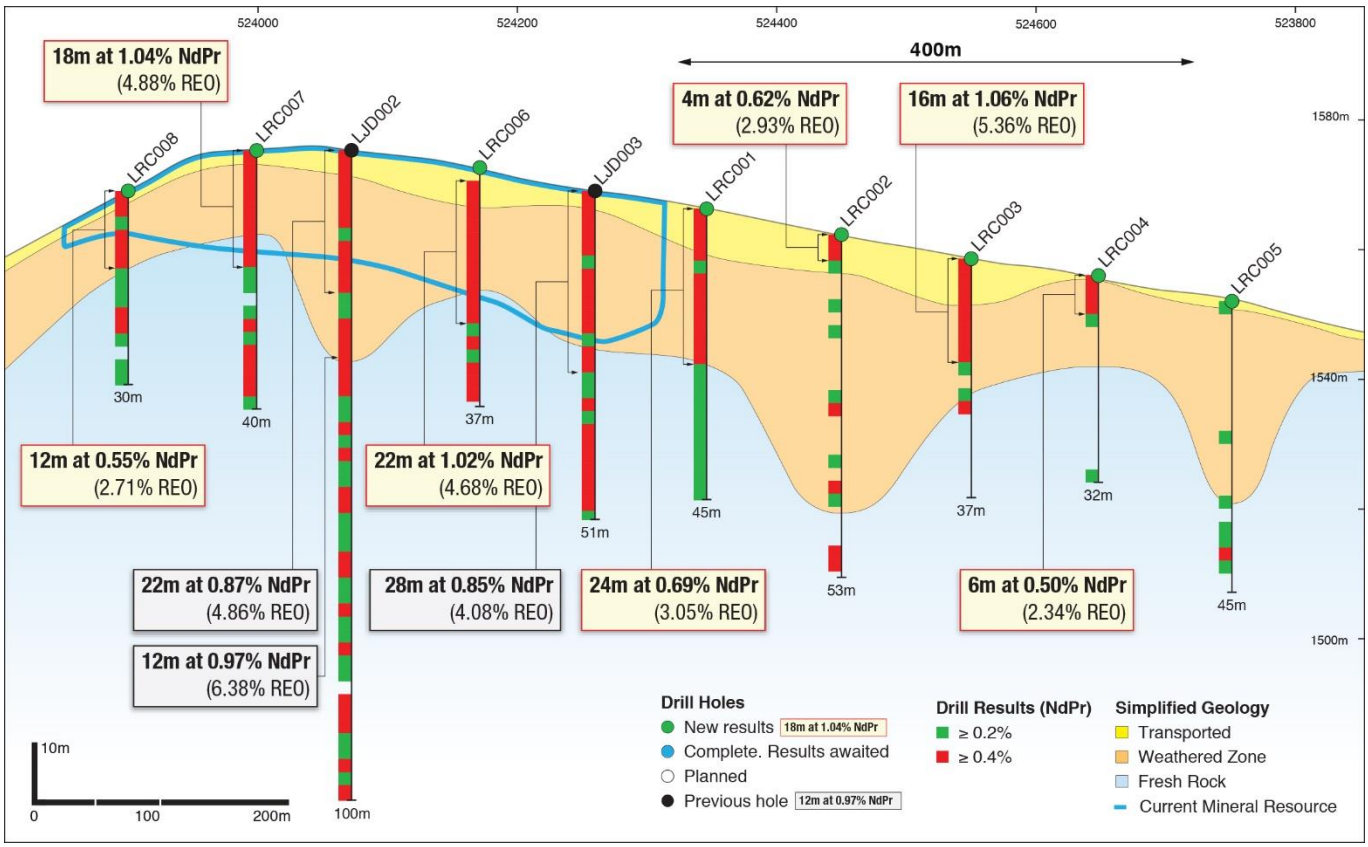
As the cross sections following illustrate, the new results compare favourably with previously reported drill intersections within the Mineral Resource area, where the high grade weathered zone averages **20 metres in thickness at a grade of 4.30% REO including 0.86% NdPr**.



Above: New assay results from section line 8,570,800N. Extent of current Mineral Resource estimate shown for reference. See plans for location. **Note horizontal scale 1/5th of vertical scale – drill holes are 100m apart.**



Above and following: New assay results from western and eastern portions of section line 8,571,000N. Extent of Mineral Resource estimate replicated in both for reference. See plans for location. **Note horizontal scale 1/5th of vertical scale – drill holes are 100 metres apart.**



The Company announced a maiden Mineral Resource estimate for the Longonjo weathered zone in September 2017 after a short drilling programme.

With the Company's focus and the potential future value of the project now firmly on NdPr, the Company is pleased to provide the NdPr component of the REO (total rare earth oxides) Mineral Resource estimate. There is no change to the 2017 Mineral Resource estimate (ASX announcement of 26 September 2017), which was expressed as REO (total rare earth oxides) and further split into heavy (HREO) and light (LREO) rare earth oxides for definition.

The Longonjo Mineral Resource estimate is summarised in the Table 1. The breakdown of the individual rare earth oxides for the weathered zone is provided in Table 3, at the same 1% REO grade cut-off as the maiden Mineral Resource (2017) and are reported in accordance with the definitions and technical reporting of the JORC Code (2012):

Table 1: Classification of 2017 Mineral Resources for the Longonjo NdPr Project, 1.0% REO cut-off grades, with NdPr grades and contained NdPr oxide

Zone	JORC Resource Category	Tonnes (Mt)	REO (%*)	Contained REO (tonnes)	NdPr (%**)	Contained NdPr (tonnes)
Weathered Zone	Inferred	11.6	4.30	499,000	0.86	100,000
Fresh Rock Zone	Inferred	33.2	1.87	621,000	0.37	123,000
TOTAL	**Inferred**	**44.7**	**2.50**	**1,120,000**	**0.51**	**223,000**

*REO (%) includes yttrium oxide plus all the lanthanide elements plus yttrium oxides. **NdPr = neodymium + praseodymium (NdPr) are included already in the REO figures and are provided individually for information purposes. Figures above may not sum precisely due to rounding. The number of significant figures does not imply an added level of precision.

With 100,000 tonnes of contained NdPr at a grade of 0.86% NdPr in the weathered zone Mineral Resource estimate, Longonjo is already a significant size and grade deposit.

The successful delineation of a very large expanded NdPr Mineral Resource estimate at Longonjo would allow the Company to identify and select the most favourable, highest quality mineralisation for development.

Drilling has now been completed in the previously untested 900 x 800 metre area in the north of the Longonjo Carbonatite. A weathered zone, the host to high grade mineralisation in the Mineral Resource area, was intersected up to 50m thick in places.

Drilling operations on site are progressing well with a total of 75 drill holes of the estimated 100 hole programme now complete.

Samples from another 53 of these drill holes have been despatched to the laboratory and the Company looks forward to providing regular updates on the flow of results as they are received.

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 Australian 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 contest in which it appears.

The information in this report that relates to the Mineral Resource estimate for the Longonjo Project is based on information compiled by Dr Heather King who is a member of a 'Recognised Professional Organisation' (RPO) included in a list posted on the ASX website from time to time, specifically the South African Council for Natural Scientific Professions, and Dr King is registered as a Professional Natural Scientist (Pr. Sci. Nat.). Dr King is a full-time employee of Deloitte, consulting to Pensana Metals Ltd. Dr King has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Dr King consents to the inclusion in the report of matters based on her information in the form and context in which it appears.

Table 2: Longonjo NdPr Project, RC drill intersections greater than 4m thick and ≥0.20% NdPr. ***High grade weathered zone*** intersections ***> 0.40% NdPr*** shown in ***bold italics***

Hole ID	East	North	RL	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %	NdPr %
LRC001	524,346	8,570,996	1,573	45	0	45	45eoh	2.34	0.52
				(Incl.	***0***	***24***	***24***	***3.05***	***0.69)***
LRC002	524,450	8,571,001	1,568	53	0	6	6	2.32	0.52
				(Incl.	***0***	***4***	***4***	***2.93***	***0.62)***
					10	16	6	0.97	0.20
					24	28	4	1.71	0.33
					34	42	8	1.63	0.45
					48	52	4	2.32	0.66
LRC003	524,550	8,571,001	1,563	37	0	24	24	4.07	0.81
				(Incl.	***0***	***16***	***16***	***5.36***	***1.06)***
LRC004	524,648	8,571,003	1,558	32	0	8	8	2.06	0.44
				(Incl.	***0***	***6***	***6***	***2.34***	***0.50)***
LRC005	524,751	8,570,996	1,551	45	30	42	12	0.77	0.28
LRC006	524,171	8,571,003	1,576	37	2	37	35eoh	3.96	0.83
				(Incl.	***2***	***24***	***22***	***4.68***	***1.02)***
LRC007	523,999	8,570,997	1,582	40	0	40	40eoh	3.42	0.68
				(Incl.	***0***	***18***	***18***	***4.88***	***1.04)***
LRC008	523,900	8,570,999	1,575	30	0	30	30eoh	2.29	0.45
				(Incl.	***0***	***12***	***12***	***2.71***	***0.55)***
LRC009	523,799	8,571,000	1,559	35	0	32	32	2.87	0.55
				(Incl.	***8***	***18***	***10***	***4.78***	***0.93)***
LRC010	523,500	8,570,807	1,534	45	8	14	6	1.07	0.22
LRC011	523,400	8,570,801	1,528	45	***0***	***30***	***30***	***7.72***	***1.21***
LRC012	523,331	8,570,958	1,555	60	0	52	52	3.07	0.58
				(Incl.	***2***	***18***	***16***	***3.05***	***0.65***
				and	***22***	***44***	***22***	***4.07***	***0.72)***
LRC013	524,346	8,570,996	1,573	60	0	8	8	2.69	0.52
				(Incl.	***0***	***6***	***6***	***2.98***	***0.60)***

Hole ID	East	North	RL	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %	NdPr %
					50	54	4	3.00	0.50
LRC014	524,450	8,571,,001	1,568	50 ***(Incl.***	0 ***0***	32 ***14***	32 ***14***	2.10 ***2.81***	0.40 ***0.57)***

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. All holes are vertical reverse circulation. Co-ordinate system is WGS84 UTM Zone 33 south. Assays by peroxide fusion and ICP analysis, Nagrom laboratories Perth, Western Australia.

Table 3 - Relative components of individual rare earth oxides (including yttrium) as a percentage of total REO* for the weathered zone Mineral Resource estimate at a 1% REO lower cut-off grade

Oxide		Weathered Zone	
		REO Grade (%)	Proportion (%) of Total REO*
Total Rare Earth Oxides		4.30	100%
Lanthanum	La_2O_3	2.06	27.0
Cerium	CeO_2	1.14	48.0
Praseodymium	**$Pr6O_{11}$**	**0.21**	**5.0**
Neodymium	**Nd_2O_3**	**0.65**	**15.0**
Samarium	Sm_2O_3	0.07	2.0
Europium	Eu_2O_3	0.02	0.4
Gadolinium	Gd_2O_3	0.03	1.0
Terbium	Tb_4O_7	0.00	0.1
Dysprosium	Dy_2O_3	0.01	0.4
Holmium	Ho_2O_3	0.00	0.1
Erbium	Er_2O_3	0.00	0.1
Thulium	Tm_2O_3	0.00	0.0
Ytterbium	Yb_2O_3	0.00	0.1
Lutetium	Lu_2O_3	0.00	0.0
Yttrium	Y_2O_3	0.06	1.0
REO	**Total %**	**4.30**	**100**

* REO = rare earth oxide

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.*	• 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.
	• *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. • Sampling is carried out under Pensana QAQC protocols and as per industry best practise. • RC sample returns are closely monitored, managed and recorded. A reference weight is used to calibrate the weighing scale. • 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 • 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. • All commercial laboratories used use industry best practise procedures and QAQC checks. • 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) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type,*	• 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.

Criteria	JORC Code explanation	Commentary
	whether core is oriented and if so, by what method, etc).	

Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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. • Every 1m sample from the rig was weighed and recorded for moisture content. The weigh scale was calibrated frequently. • RC sample weights are compared against expected weights for the drill diameter and geology. • Drill pipes and cyclone were flushed and cleaned regularly • 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.
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *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. • All logging was quantitative. All RC chip trays were photographed. • 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.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half*	• RC drilling only, no core drilling this programme • 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. • 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. • 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 • Field, preparation and assay lab duplicate results indicate no significant sampling variance

	sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes are considered more than adequate for this disseminated style and grainsize of material sampled. Repeatability of assays was 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.*	• The analysis was carried out by an accredited independent assay laboratory. • 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. • The assay technique is total.
	• *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.*	• Laboratory data only. No geophysical or portable analysis tools were used to determine assay values stored in the database.
	• *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.*	• 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. • Samples were selected periodically and screened tested to ensure pulps are pulverised to the required specifications. • Analysis of QAQC data results indicates acceptable levels of accuracy and precision
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• Significant intersections have been verified by company management.
	• *The use of twinned holes.*	• No twin holes undertaken at this early stage.
	• *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 ghas 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 • Data collection and entry procedures are documented and training given to all staff • Scans of original field data sheets are stored digitally and never altered • Digital data entry is checked and validated against original field sheets if not entered directly

	• *Discuss any adjustment to assay data.*	• 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: La to La_2O_3 – 1.1728 Ce to CeO_2 – 1.2284 Pr to Pr_6O_{11} – 1.2082 Nd to Nd_2O_3 – 1.1664 Sm to Sm_2O_3 – 1.1596 Eu to Eu_2O_3 – 1.1579 Gd to Gd_2O_3 – 1.1526 Tb to Tb_4O_7 – 1.1762 Dy to Dy_2O_3 – 1.1477 Ho to Ho_2O_3 – 1.1455 Er to Er_2O_3 - 1.1435 Tm to Tm_2O_3 – 1.1421 Yb to Yb_2O_3 – 1.1387 Lu to Lu_2O_3 - 1.1371 Y to Y_2O_3 – 1.2699 • 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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• 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 • 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 • The grid system used is WGS84 UTM Zone 33S. All reported coordinates are referenced to this grid. • 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
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been*	• Drill hole spacing is 200m x 100m. Samples are 2m down hole. • Exploration results only being reported. Data spacing is considered sufficient to identify zones of NdPr and REO mineralisation at a reconnaissance level over the area drill tested. Infill drilling will be completed prior to further Mineral Resource estimation.

	applied.	• 1m RC drill samples were combined in the field after riffle splitting for a final 2m composite sample for submission to laboratory. • Two metre composites are considered adequate for the resource estimation, variography studies and potential mining techniques for this style of 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.* • *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.*	• 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. • 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. • 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. • 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.* • *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.*	• Prospecting License 013/03/09T.P/ANG-M.G.M/2015. Pensana owns a 70% holding in the Project with Ferrangol (10%), an agency of the Angolan government, and other Angolan partners (20%). • 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.
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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the*	• Refer to the Table 2 in the body of the text. All holes are vertical

	drill hole collar ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	• No material information was excluded.
Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Cut-off grade of 0.2% NdPr oxide applied in reporting of intersections and 0.4% NdPr for high grade 'Highlights'. No upper grade cuts have been applied. • Intersections are reported as length weighted averages above the specified cut-off grade. Length weighted grade averages for REO and NdPr are presented • Intercepts may include a maximum of 2m internal dilution. • 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.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear*	• 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. • Drill hole intercepts reported can be considered true thicknesses

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

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 views.*	• Appropriate plans and sections are included in this release.
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 September 2017 Maiden 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).*	• The reported results are the first 14 drill holes of an estimated ~100 hole programme scheduled for completion at Longonjo in 2018. To date a further 56 holes have been already completed and results will be reported when received. Drilling is designed to test the entire 2.1km x 2.0km area of the weathered zone at Longonjo as well as possible extensions 700 metres to the south east. Drilling is designed to determine the potential for a globally significant NdPr deposit at Longonjo.

	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Appropriate diagrams accompany this release.