

16 March 2020

High grade NdPr drill results expected to upgrade resource and extend mine life

Pensana Metals Ltd (ASX: PM8) is pleased to report assay results received from a further 41 drill holes of the 7,000 metre, infill and extension drilling programme at the Longonjo NdPr Project in Angola. The drilling programme is being undertaken in support of the Definitive Feasibility Study (DFS).

- The new results include high grade shallow intersections from an area 600 metres west of the current Preliminary Feasibility Study (PFS) pit design.
- The infill drilling demonstrates the continuity of this 400m long zone of weathered mineralisation, which remains open to the north.
- The company expects the infill drilling will allow this area of Inferred category mineralisation to be upgraded to the Indicated category of mineral resource, allowing its inclusion into the mine plan
- Drilling also intersected continuous zones of fresh rock hosted mineralisation above 3% REO from surface

<u>Drill hole</u>	Intersection
LRC197:	14 metres at 5.85% REO including 1.07% NdPr from 4 metres
LRC203:	36 metres at 6.74% REO including 1.10% NdPr from 16 metres
LRC214:	10 metres at 4.65% REO including 0.95% NdPr from surface
LRC219:	13 metres at 4.36% REO including 0.93% NdPr from surface to end of hole

LRC220: 18 metres at 4.01% REO including 0.87% NdPr from surface

*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 & COO Dave Hammond commented:

"These high grade drill results are from well outside the limits of the current pit design and suggest the potential to extend the open pit and mine life at Longonjo.

The drilling programme is now complete and we look forward to reporting results from a further 138 drill holes. Areas of deep weathering have been intersected in the north and south of the project that are also outside of the mine plan as defined by the PFS.

Assay results are also awaited from infill drill holes in the main high grade weathered zone, as well as from the first systematic drill testing of a zone of fresh rock hosted mineralisation that has the potential to add a further dimension to the project.

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 at Longonjo after the completion of additional Definitive Feasibility Study work programmes."

Authorised by the Board of Pensana Rare Earths Plc

For further information please contact Tim George (CEO) at: contact@pensana.co.uk

Technical Report

A second batch of assay results have been received from the +7,000m infill and extension reverse circulation drilling programme now just completed at Longonjo. The drilling is in support of Definitive Feasibility Studies in progress with Wood Group as lead engineers.

The new results are from 41 drill holes predominantly infilling areas of Inferred mineralisation on the margins or well outside of the current PFS pit design and Indicated Mineral Resource (ASX Announcement 15 November 2019).



Figure 1: Plan view of the location of new assay results (red) and completed new drill holes with results outstanding (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 programme is designed to increase the November 2019 PFS nine year mine life through the infill drilling of the large area of Inferred category Mineral Resource, the majority of which was excluded from the initial mine plan. The Indicated category weathered zone Mineral Resource has also been infilled to support an upgrade to the Measured category and, after the completion of further DFS engineering studies, to support Probable or Proved Ore Reserves.

The drilling will also test the potential for substantial fresh rock hosted mineralisation immediately beneath the weathered zone by systematically extending drill holes to 80 metres depth in the 450 metre by 350 metre initial target area.

The new results from 41 drill holes predominantly infilling areas of Inferred mineralisation outside of the pit design include several high grade intersections:

<u>Drill hole</u>	Intersection*
LRC190:	18 metres at 3.32% REO including 0.73% NdPr from surface
LRC191:	13 metres at 3.65% REO including 0.77% NdPr from surface to end of hole
LRC196:	12 metres at 3.30% REO including 0.74% NdPr from 6 metres
LRC197:	14 metres at 5.85% REO including 1.07% NdPr from 4 metres
LRC203:	36 metres at 6.74% REO including 1.10% NdPr from 16 metres
LRC204:	22 metres at 3.61% REO including 0.83% NdPr from 2 metres
LRC212:	36 metres at 3.30% REO including 0.75% NdPr from surface to end of hole
LRC214:	10 metres at 4.65% REO including 0.95% NdPr from surface
LRC219:	13 metres at 4.36% REO including 0.93% NdPr from surface to end of hole

LRC220: 18 metres at **4.01% REO** including **0.87% NdPr** from surface *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 new high grade intersections demonstrate the continuity of a 400 metre zone of high grade mineralisation located 600 metres outside of the PFS 9 year mine design (Figure 2).

The near surface weathered mineralisation remains open to the north and the company expects to upgrade this area of Inferred category Mineral Resource to Indicated and allow its inclusion in an extended mine plan for the DFS.



Figure 2: 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). Results from the green drill holes reported in January also support the potential to extend the open pit into this area.



Figure 3: Vertical east – west section 8,571,060mN looking north. New high grade drill intersections demonstrate the continuity and northward extension of the continuous blanket of weathered zone NdPr mineralisation located 600 metres west of the current open pit design.

Additional new high grade drill intersections received from the centre of the project extend the weathered mineralisation to the west and north (see plan Figure 4 and drill section Figure 5).



Figure 4: 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 location).

Drill holes LRC215 and LRC216 lie on the northern extension of the fresh rock target and intersected fresh rock from surface, returning grades averaging above 3% REO down their entire lengths. Fresh rock hosted mineralisation remains open at depth, to the north and south (Figure 4):

<u>Drill hole</u>	Fresh rock Intersection*
LRC215:	15 metres at 3.26% REO including 0.70% NdPr from surface to end of hole
1 BC216.	12 metres at 3 35% REO including 0 63% NdPr from surface to

end of hole * Intersections reported at a +0.2% NdPr lower grade cut off. See Table 1 for summary

* Intersections reported at a +0.2% NdPr lower grade cut off. See Table 1 for summary details of all new drill holes reported.



Figure 5: Vertical east – west section 8,571,400mN looking north. New infill drilling has identified some very high grades that are expected to enhance the Mineral Resource estimate in these areas (LRC180 and LRC189). The infill drilling confirms the continuity of mineralisation in the weathered zone for a further 250 metres west of the limit of the 9 year PFS open pit.

Samples from a further 138 drill holes have been despatched from site for analysis and the Company looks forward to providing further updates as results are received.

An updated Mineral Resource estimate for Longonjo that will incorporate the new drilling is on schedule for completion in May 2020.

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 contest 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.

Hole ID	East	North	RL	Hole Depth (m)	From (m)	То (m)	Interval (m)	REO %	NdPr %
LRC190	523,937	8,571,188	1,616	21	0	18	18	3.32	0.73
LRC191	523,894	8,571,104	1,598	13	0	13	13eoh	3.65	0.77
LRC192	523,819	8,571,165	1,598	14	0	10	10	2.02	0.51
				(incl.	0	6	6	2.34	0.59)
LRC193	523,111	8,571,064	1,620	29	10	22	12	0.65	0.30
LRC194	523,161	8,571,062	1,610	29	2	6	4	0.67	0.22
LRC195	523,211	8,571,052	1,598	45	0	12	12	1.14	0.37
				(incl.	0	6	6	1.55	0.49
					20	24	4	1.27	0.35
					32	42	10	1.25	0.55
LRC196	523,267	8,571,064	1,590	25	0	20	20	2.49	0.58
				(incl.	6	18	12	3.30	0.74)
LRC197	523,316	8,571,063	1,582	40	0	26	26	3.86	0.74
				(incl.	4	18	14	5.85	1.07)
LRC198	523,190	8,570,960	1,584	40	0	10	10	0.88	0.31
					22	36	14	1.01	0.30
LRC199	523,284	8,570,959	1,572	26	0	18	18	1.81	0.55
LRC200	523 <i>,</i> 386	8,570,959	1,564	36	0	6	6	2.44	0.49
LRC201	523,275	8,570,877	1,562	36	0	12	12	1.48	0.48
				(incl.	2	8	6	2.03	0.69)
					16	28	12	2.21	0.65
				(incl.	18	24	6	3.15	0.91)
LRC202	523,315	8,570,885	1,558	33	0	16	16	2.26	0.50
					22	28	6	1.05	0.23
LRC203	523,372	8,570,880	1,555	55	0	8	8	2.17	0.44
					16	52	36	6.74	1.10
LRC204	523337	8570800		33	0	33	33eoh	2.84	0.65

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)	То (m)	Interval (m)	REO %	NdPr %
				(incl.	2	24	22	3.61	0.83)
LRC205	523,451	8,570,801	1,547	23	0	10	10	3.45	0.59
					16	20	4	1.89	0.30
LRC206	523,614	8,570,898	1,556	26	0	16	16	1.67	0.33
				(incl.	0	4	4	2.88	0.55
					22	26	4eoh	1.10	0.21
LRC207	523,521	8,570,895	1,558	33	0	14	14	1.43	0.29
					24	33	9eoh	1.83	0.20
LRC208	523,421	8,570,880	1,556	33	0	8	8	2.04	0.40
				(incl.	0	4	4	2.85	0.50)
LRC209	524,098	8,571,299	1,628	17	0	14	14	2.52	0.55
LRC210	524,000	8,571,307	1,643	22	0	20	20	2.40	0.58
				(incl.	0	8	8	2.97	0.74
				and	10	20	10	2.25	0.53)
LRC211	523,908	8,571,289	1,639	26	0	26	26eoh	2.03	0.38
				(incl.	0	6	6	3.52	0.61)
LRC212	524,096	8,571,399	1,649	36	0	36	36eoh	3.30	0.75
LRC213	524,288	8,571,497	1,660	13	0	8	8	1.88	0.48
				(incl.	0	4	4	2.58	0.65)
LRC214	523,996	8,571,394	1,656	24	0	24	24eoh	3.23	0.69
				(incl.	0	10	10	4.65	0.95
				and	14	24	10eoh	2.44	0.56)
LRC215	524,206	8,571,404	1,637	15	0	15	15eoh	3.26	0.70
LRC216	524,247	8,571,399	1,634	12	0	12	12eoh	3.35	0.63
				(incl.	0	10	10	3.64	0.68)
LRC217	524,338	8,571,396	1,639	15	0	15	15eoh	2.46	0.58
				(incl.	0	12	12	2.65	0.64)
LRC218	524,301	8,571,404	1,638	11	0	11	11eoh	2.12	0.47
				(incl.	0	6	6	2.64	0.59)

Hole ID	East	North	RL	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %	NdPr %
LRC219	524,473	8,571,300	1,628	13	0	13	13eoh	4.36	0.93
LRC220	524,434	8,571,301	1,627	19	0	18	18	4.01	0.87
LRC221	524,448	8,571,600	1,716	23	0	23	23eoh	1.01	0.45
				(incl.	0	4	4	1.76	0.44
				and	8	18	10	2.51	0.55)
LRC222	524,430	8,571,801	1,709	65	0	12	12	1.39	0.29
					32	56	24	1.50	0.29
				(incl.	40	44	4	1.93	0.40)
LRC223	524,380	8,571,807	1,698	34	0	6	6	1.26	0.29
LRC224	524,403	8,571,597	1,707	25	0	25	25eoh	2.20	0.51
				(incl.	0	12	12	2.24	0.54
				and	16	25	9eoh	2.46	0.54)
LRC225*	523,600	8,570,721	1,551	20	0	4	4	1.84	0.45
LRC226*	523,705	8,570,657	1,569	26	0	4	4	1.19	0.31
LRC227*	523,900	8,570,580	1,589	30	0	12	12	2.26	0.53
				(incl.	0	4	4	4.39	0.80)
					16	20	4	1.76	0.34
					24	30	6eoh	1.64	0.28
LRC228*	522,602	8,571,027	1,552	74	6	22	16	0.93	0.34
					32	40	8	0.87	0.33
					42	62	20	2.00	0.74
				(incl.	44	60	16	2.29	0.85)
LRC229*	523,896	8,570,653	1,584	30	0	30	30eoh	2.06	0.38
				(incl.	0	8	8	3.46	0.66)
LRC230*	523,996	8,570,594	1,593	35	6	12	6	1.88	0.36
					16	20	4	2.07	0.39
					24	30	6	1.02	0.28

*All holes are vertical reverse circulation except for LRC225 to LRC230 on the southern contact zone, which are drilled at -60° to the south. REO = Total rare earth oxide includes NdPr and is the sum of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃. NdPr = neodymium + praseodymium oxide. eoh = intersection to end of hole. 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	 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 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. 	 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. A 131mm diameter blade RC bit was used in most holes in the weathered zone, generally for around 10 metres.

Criteria	JORC Code explanation	Commentary		
	whether core is oriented and i so, by what method, etc).			
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. 	 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. 		
	 Measures taken to maximise sample recovery and ensure representative nature of the samples. 	 RC sample weights are compared against expected weights for the drill diameter and geology. Drill pipes and cyclone were flushed and cleaned regularly 		
	 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. 	• Some short intervals 1 to 3 metres of reduced sample recovery occur in the soft weathered zone in some holes. Data analysis to date including diamond hole twins to RC holes, has not identified any relationship between recovery and grade.		
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. 	 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. 		
	 Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc, photography. 	 All logging was quantitative. All RC chip trays were photographed. 		
	The total length and percentage of the relevant intersections logged.	All holes were logged in full 100%		
Sub-sampling techniques and sample	 If core, whether cut or sawr and whether quarter, half or al core taken. 	RC drilling only, no core drilling results reported		
preparation	 If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet of dry. 	• 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.		
	 For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	 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. 		
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative 	 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 		
	of the in situ materia collected, including for instance results for field duplicate/second-half sampling.	 Field, preparation and assay lab duplicate results indicate no significant sampling variance 		

Criteria	JORC Code explanation	Commentary
	 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 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.	 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 twins completed for the current programme. Twin diamond holes have been completed for previous RC drill programmes with no bias observed.
	 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 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

Criteria	JORC Code explanation	Commentary
	 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 La₂O₃ – 1.1728 Ce to CeO₂ – 1.2284 Pr to Pr₆O₁₁ – 1.2082 Nd to Nd₂O₃ – 1.1664 Sm to Sm₂O₃ – 1.1596 Eu to Eu₂O₃ – 1.1579 Gd to Gd₂O₃ – 1.1526 Tb to Tb₄O₇ – 1.1762 Dy to Dy₂O₃ – 1.1477 Ho to Ho₂O₃ – 1.1455 Er to Er₂O₃ - 1.1435 Tm to Tm₂O₃ – 1.1421 Yb to Yb₂O₃ – 1.1387 Lu to Lu₂O₃ – 1.1387 Lu to Lu₂O₃ – 1.2699 Intersection grades are reported as REO (the sum of the above oxides) and as NdPr (the sum of Nd₂O₃ and Pr₆O₁₁, 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. 	 All drill hole 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 The majority of holes are vertical, with no down hole survey completed. Holes LRC225 to LRC230 are angled at -60° to south and were surveyed at 5m intervals using a down hole gyro tool. The collar set up was checked on every hole by measuring the angle of the mast is vertical using a spirit level clinometer.
	 Specification of the grid system used. Quality and adequacy of topographic control. 	 The grid system used is WGS84 UTM Zone 33S. All reported coordinates are referenced to this grid. Topography is modelled using a high precision satellite based topographic survey and surveyed drill collars fitted to the surface. 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 	 Drill hole spacing is 100m x 50m for reported drill results. Samples are 2m down hole. Data spacing is considered sufficient to establish geological and grade continuity of this disseminated style of NdPr and REO mineralisation and support Mineral Resource estimation.

Criteria	JORC Code explanation	Commentary
	 Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been 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. 	 High grade NdPr mineralisation within the central parts of the Longonjo carbonatite occurs as a thick horizontal blanket of disseminated mineralisation within weathered carbonatite averaging 20m or more in thickness and with good lateral continuity. The vertical drilling and 2m sampling is optimum for this style of mineralisation. Subvertical carbonatite dykes and carbonatite:country rock contacts occur on the margins of the carbonatite body, overprinted by a zone of subhorizontal weathering of variable thickness. This peripheral zone is tested by angled -60° drill holes perpendicular to strike, which are considered optimum to intersect both vertical and horizontal orientations to the 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. 	 SRK has completed a site visit and conducted a review of the primary and QAQC data as part of the November 2019 Mineral Resource estimation work. 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 an 84% holding in the Project with Ferrangol (10%), an agency of the Angolan government, and other Angolan partners (6%). 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 occurs within the rare earth enriched Longonjo Carbonatite, 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. Mineralisation is disseminated in style. Particularly high grades occur within the iron rich weathered zone that extends from surface over much of the carbonatite. The higher grades in the regolith are a result of residual enrichment through dissolution of primary carbonate minerals. NdPr rare earth mineralisation also occurs within fresh rock carbonatite and carbonatite:fenite breccia beneath the weathered zone and associated with subvertical carbonatite ring dykes on the carbonatite margins.
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 	 Refer to the Table 1 in the body of the text. The majority of holes are vertical except for LRC225 to LRC230 which are angled -60⁰ to the south

Criteria	JORC Code explanation	Commentary
	in metres) of the 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. 	 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. Intersections are reported as length weighted averages above the specified cut-off grade. Length weighted grade averages for REO and NdPr are presented
	 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 	 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. 	 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 in the centre of the carbonatite

Criteria	JORC Code explanation	Commentary
	 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'). 	 Subvertical mineralised carbonatite dykes on the margins of the carbonatite are overprinted with a horizontal weathering profile of variable depth and true widths are variable in relation to down hole length.
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 November 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). 	 The reported results are the second batch from 41 of a 195 hole infill and extension RC drilling programme testing the shallow weathered zone and an area of fresh rock mineralisation at Longonjo. Remaining results from a further 138 drill holes are expected to be received before the end of April 2020. Drilling is designed to provide data for a revised Mineral Resource

Criteria	JORC Code explanation	Commentary
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	 estimate and to upgrade a significant portion of the large amount of Inferred weathered zone Mineral Resource at Longonjo to Indicated or Measured category, thereby enabling the current 9 year mine life as defined in the Preliminary Feasibility Study to be extended. The revised Mineral Resource estimate is scheduled for completion in May 2020 in support of the Definitive Feasibility Studies for Longonjo. Appropriate diagrams accompany this release.