

## **Quarterly Activities Report For the Period Ended 30 September 2019**

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Pensana Metals Ltd (ASX: PM8) (the Company or Pensana) is pleased to present its quarterly activities report for the period ended 30 September 2019.

### **Highlights**

- **Diamond drilling reported spectacular NdPr intersections and opens up fresh rock potential at Longonjo**
- **Preliminary Feasibility Study (PFS) lead by internationally recognised experts, Wood Group is progressing well**
- **Taking advantage of the existing infrastructure we have asked Woods to base the PFS on an open pit mining and flotation operation producing NdPr concentrate for export to China**
- **Studies are evaluating the potential for an ultra-low Capex and early start-up option**
- **SRK Consulting are working on an update to the Longonjo Mineral Resource estimate that is expected to include an amount of Indicated Mineral Resource to support the PFS**
- **The Company is in discussion with Chinese customers for concentrate offtake agreements.**
- **Working with advisors to list on the London Stock Exchange by the end of 2019.**
- **Environmental and Social Impact Assessment study for Longonjo is at an advanced stage**

## Diamond drilling

During the quarter, the Company reported particularly high grade intersections from a diamond core drilling programme completed at its Longonjo NdPr Project located within an infrastructure rich region of Angola.

Drilling intersected particularly high grades of NdPr mineralisation from surface within the weathered zone together with a coherent zone of high grade fresh rock hosted mineralisation over a large area immediately below the weathered zone.

### Diamond Core drilling results

The programme of 16 diamond core holes sited as twins to previous RC holes was completed to provide information and samples for the PFS technical work programmes:

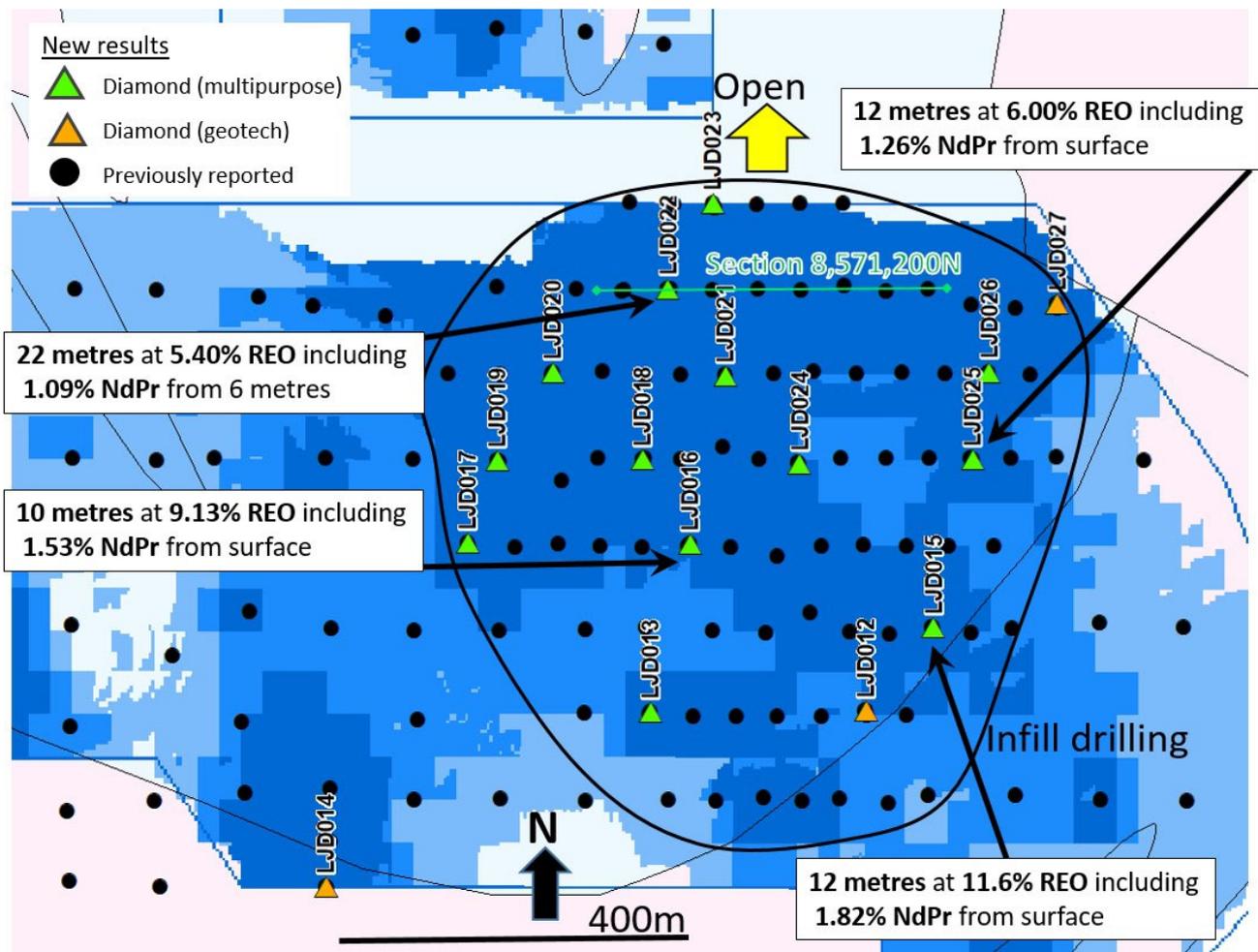
- for metallurgical optimisation testwork
- geotechnical information for open pit engineering design
- rock density determinations for Mineral Resource estimation
- twinning of RC drilling for Mineral Resource estimation

Assay results from the drilling confirm the previous reverse circulation drilling results with very high grade NdPr mineralised intersections within the weathered zone, including:

<u>Drill hole</u>	<u>Intersection*</u>
<b>LJD015:</b>	<b>12 metres at 11.6% REO including 1.82% NdPr from surface and 7.45m at 4.94% REO including 0.70% NdPr from 22m to eoh</b>
<b>LJD016:</b>	<b>10 metres at 9.13% REO including 1.53% NdPr from surface and 6 metres at 3.64% REO including 0.74% NdPr from 16m</b>
<b>LJD019:</b>	<b>8 metres at 6.03% REO including 1.20% NdPr from surface</b>
<b>LJD022:</b>	<b>22 metres at 5.40% REO including 1.09% NdPr from surface</b>
<b>LJD023:</b>	<b>23.52 metres at 4.49% REO including 0.95% NdPr from surface to end of hole</b>
<b>LJD025:</b>	<b>12 metres at 6.00% REO including 1.26% NdPr from surface</b>
<b>LJD026:</b>	<b>12 metres at 5.06% REO including 0.94% NdPr from surface and 4 metres at 8.43% REO including 2.13% NdPr from 16 metres</b>

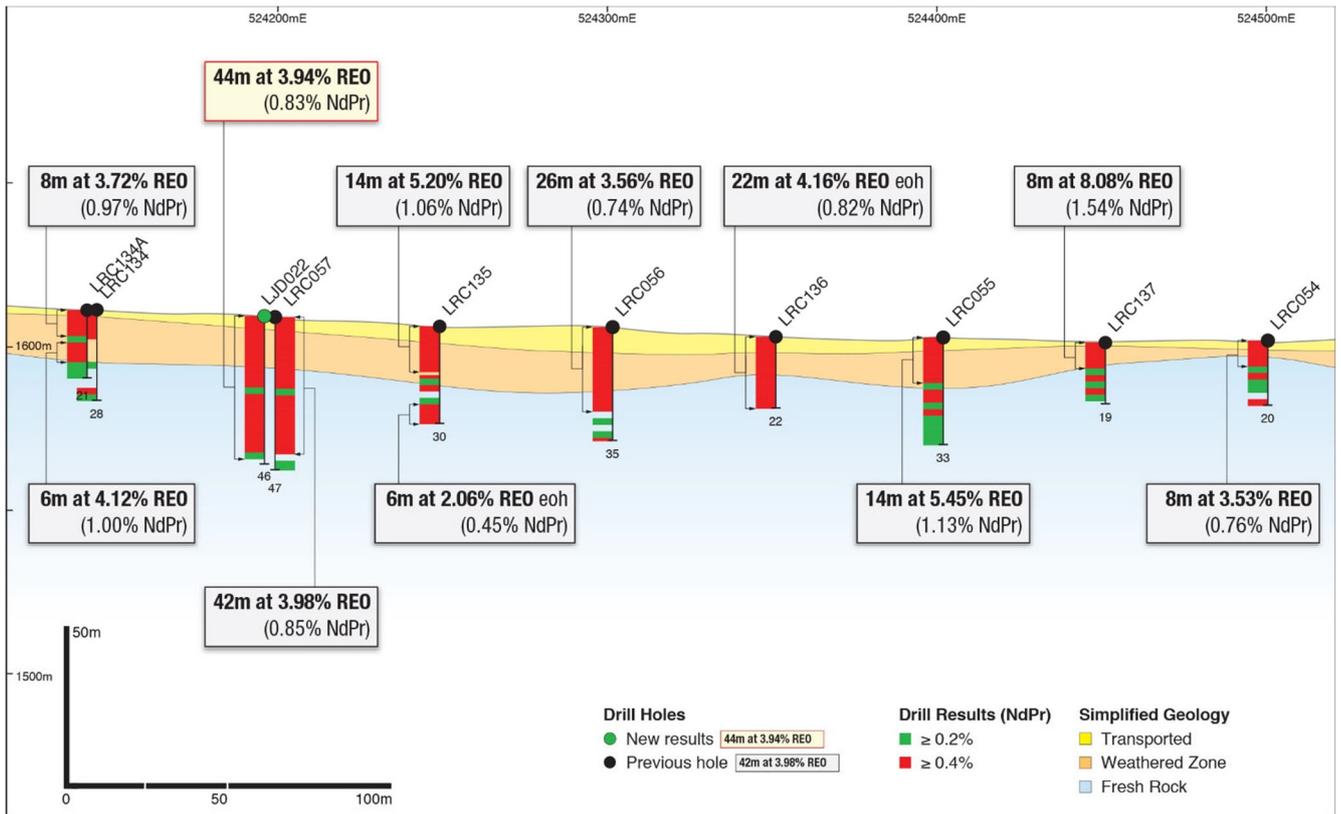
\*NdPr = neodymium – praseodymium oxide. REO = total rare earth oxides, eoh = end of hole. Intersections reported at a +0.4% NdPr lower grade cut off. See ASX announcement 8 July 2019 “Diamond drilling reports spectacular intersections” for details of alldiamond drilling results, including wider intersections at a +0.2% NdPr cut

The plan following shows the location of these diamond core holes. Samples have now been selected and despatched from site to the metallurgical test facilities conducting the PFS work programmes.



Above: Plan showing location of new diamond core assay results over February 2019 MineralResource block model for the weathered mineralisation

Assay results from the diamond drilling confirm the RC drill results. The vertical cross section following illustrates the consistency of the weathered blanket of high grade NdPr mineralisation from surface within the area of infill drilling.



Above: Vertical east – west cross section 8,571,200N looking north demonstrating the continuity of the high grade weathered zone mineralisation from surface. Diamond hole LJD022 is a twin to LRC057 as shown.

## Fresh rock exploration target

The infill RC drilling completed in 2019 over a portion of the current Mineral Resource estimate area was predominantly designed to test the high grade near surface weathered zone mineralisation with shallow vertical holes. Drill holes were however continued for several metres past the base of weathering so as to provide an initial test of the underlying fresh bedrock.

A significant and well defined high grade fresh rock exploration target is identified by this drilling immediately beneath the weathered zone mineralisation. Infill drill holes within a 500m x 150 metre area all contain high NdPr grades within fresh rock at the end of hole.

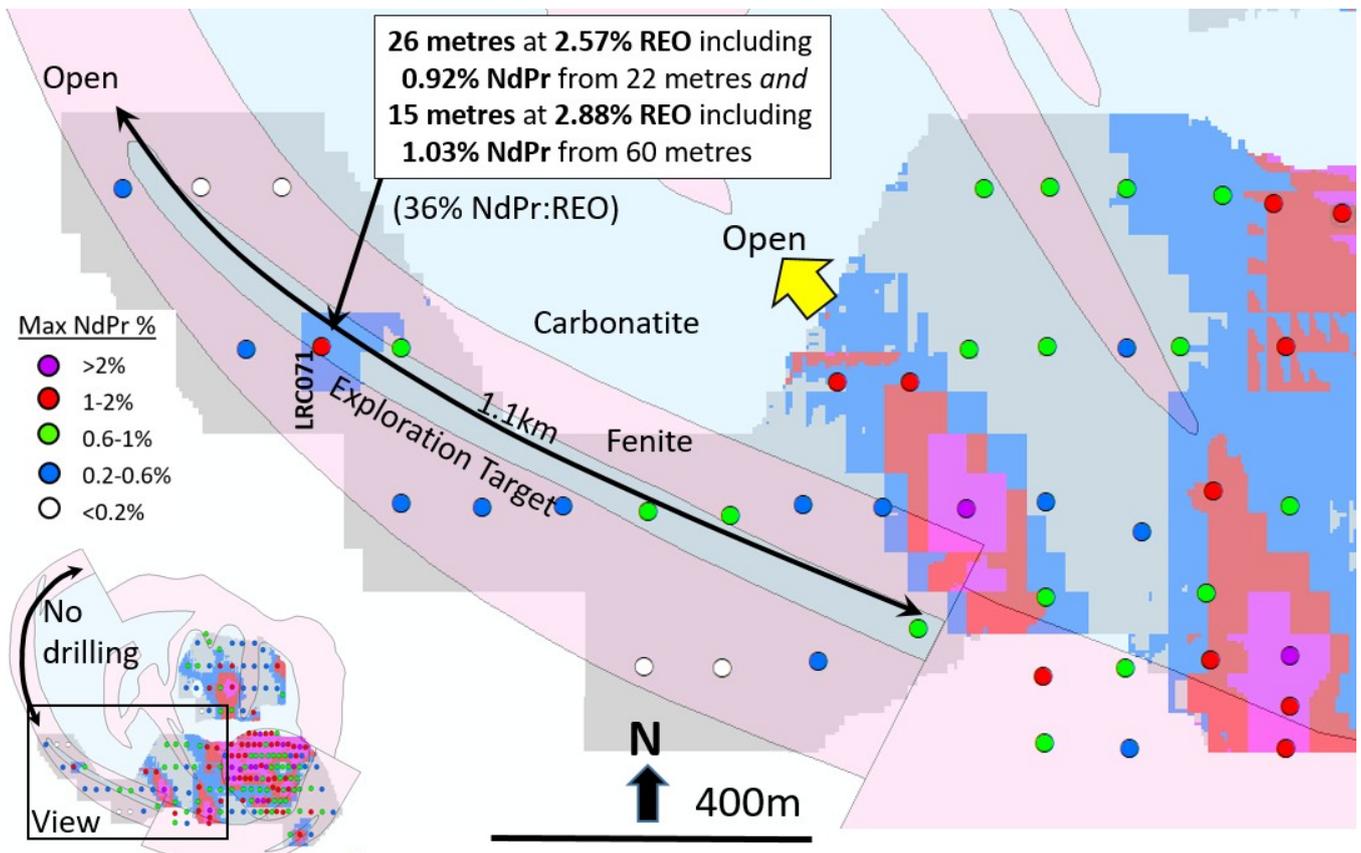
This fresh rock mineralised zone represents a significant exploration target in its own right and is not included in the Preliminary Feasibility studies.

## Additional exploration targets

With all drill results now received, a review of the geology and exploration potential at Longonjo has been completed. In addition to the high grade fresh rock target discussed above, several other mineralised positions remain open along strike within the weathered zone and remain to be drill tested.

The western margin of the Longonjo Carbonate in particular has seen little exploration to date (see inset figure below).

Previously reported drilling (LRC071 and surrounding holes) intersected high grade NdPr mineralisation within a deeply weathered, steeply dipping carbonatite ring dyke structure within fenite. The mineralisation has an unusually high NdPr:REO ratio with NdPr comprising 36% of total rare earths. The steeply dipping carbonatite is covered by soil and gravel to the north and is only sparsely tested by the current 100m x 200m vertical drill pattern.



Above: South western portion of the Longonjo Carbonatite, drill holes and NdPr mineralisation as per previous figure. High grade NdPr mineralisation hosted within a deeply weathered, steeply dipping carbonatite ring dyke is sparsely tested and may extend beneath soil and gravel cover to the north

## Longonjo Preliminary Feasibility Study

During the quarter, the Company, along with international engineering company Wood Group continued to execute technical programmes to deliver a Preliminary Feasibility Study (PFS) for the expedited development of the Longonjo NdPr Project.

The study is focussing on the delivery of a relatively low cost open pit mining and processing operation to export flotation concentrates to customers in China via the recently upgraded Benguela rail line and the Atlantic port of Lobito.



*Pensana has identified a practical path to early development that aims to position Longonjo as an important supplier of NdPr raw materials in time to meet looming demand from the electrification of vehicles*

The studies are well advanced, with the drilling programmes now complete and all assay results received.

Work is in progress on a revised Mineral Resource estimate on which mining optimisation studies will be based. Optimisation of the flotation process and comminution work are in progress. The results of this testwork will feed into engineering design work and cost studies.

### 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 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 context in which it appears.

The intersection and drill hole details within this report are detailed in ASX announcements of 30 April, 13 May, 24 June and 8 July 2019.

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.

## LSE Listing

During the quarter, the company progressed with the planned dual listing on the ASX and the London Stock Exchange's Main Board.

Roadshows were completed in the UK and Europe and there is significant interest expressed by major institutional investors to invest in the Company once this process has been completed.

## Share Consolidation

During the quarter, the company completed a consolidation of securities on the basis of 10 existing shares for 1 new share (10:1),

The consolidation involved the conversion of each ten fully paid ordinary shares held at the record date (14 August 2019) into one new fully paid ordinary share. The consolidation of shares was approved by shareholders at the Company's General Meeting held on 9 August 2019.

The below table summaries, the Company's capital structure pre and post consolidation:

Securities	Number of securities on issue (Pre – consolidation)	Number of securities on issue (Post-Consolidation)
Ordinary Shares	1,473,650,081	<b>147,365,277</b>
Options	22,000,000	<b>2,200,000</b>
Performance Rights	144,660,742	<b>14,466,075</b>

For further information please contact:

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## Summary of Tenement Information as at 30 September 2019

Country	Project Name	License Name	License no.	% Held at 30 June 2019	Change	% Held at 30 September 2019
Angola	Ozango	Ozango Minerais SA	Nº013/03/09/T.P/ANG-MGM/2015	84%	-	84%
Tanzania	Kitongo	Ugambilo East	PL11175/2017	100%	-	100%
	Kitongo	Kitongo West	PL10655/2015	100%	-	100%
	Kitongo	Mwamazengo SE (2)	PL6543/2010	100%	-	100%
	Kitongo	Mwamazengo South	PL6631/2010	100%	-	100%
	Kitongo	Gulumungu	PL10656/2015	100%	-	100%
	Kitongo	Ntalebujika	PL10660/2015	100%	-	100%
	Miyabi	Miyabi Dyke	PL8933/2013	100%	-	100%
	Miyabi	Miyabi North	PL10908/2016	100%	-	100%
	Miyabi	Miyabi Airport New	PL10556/2015	100%	-	100%
	Miyabi	Mwabombo	PL10836/2016	100%	-	100%
	Mtemi G	Kitongo	PL8148/2013	100%	-	100%
	Canuck	Canuck South	PL11017/2017	100%	-	100%