

Quarterly Activities Report For the Period Ended 30 June 2019

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

The Quarter was an active one with the appointment of ex Anglo American mining executive Tim George as CEO, a \$5 million placement to institutional investors in London and significant progress on the technical work programmes for the Preliminary Feasibility Study into the development of the Longonjo NdPr Project in an infrastructure rich part of Angola.

Highlights

- **PFS on track for completion September 2019.**
- **Spectacular high grade NdPr drill results reported from the infill diamond drilling programme into the weathered zone identified for immediate mining;**
- **In addition, broad zones of high-grade fresh rock mineralisation identified immediately below the weathered zone has added a new dimension to the project's development potential;**
- **The drill programmes for the PFS studies have been completed however with further drilling there remains considerable potential to extend the resource inventory both in the fresh rock immediately below the weathered zone and also in the exploration targets defined around the margins of the carbonatite.**
- **Advisors appointed for a standard listing on the Main Board of the London Stock Exchange later in the year.**
- **Successful \$5 million placement completed to institutional investors**

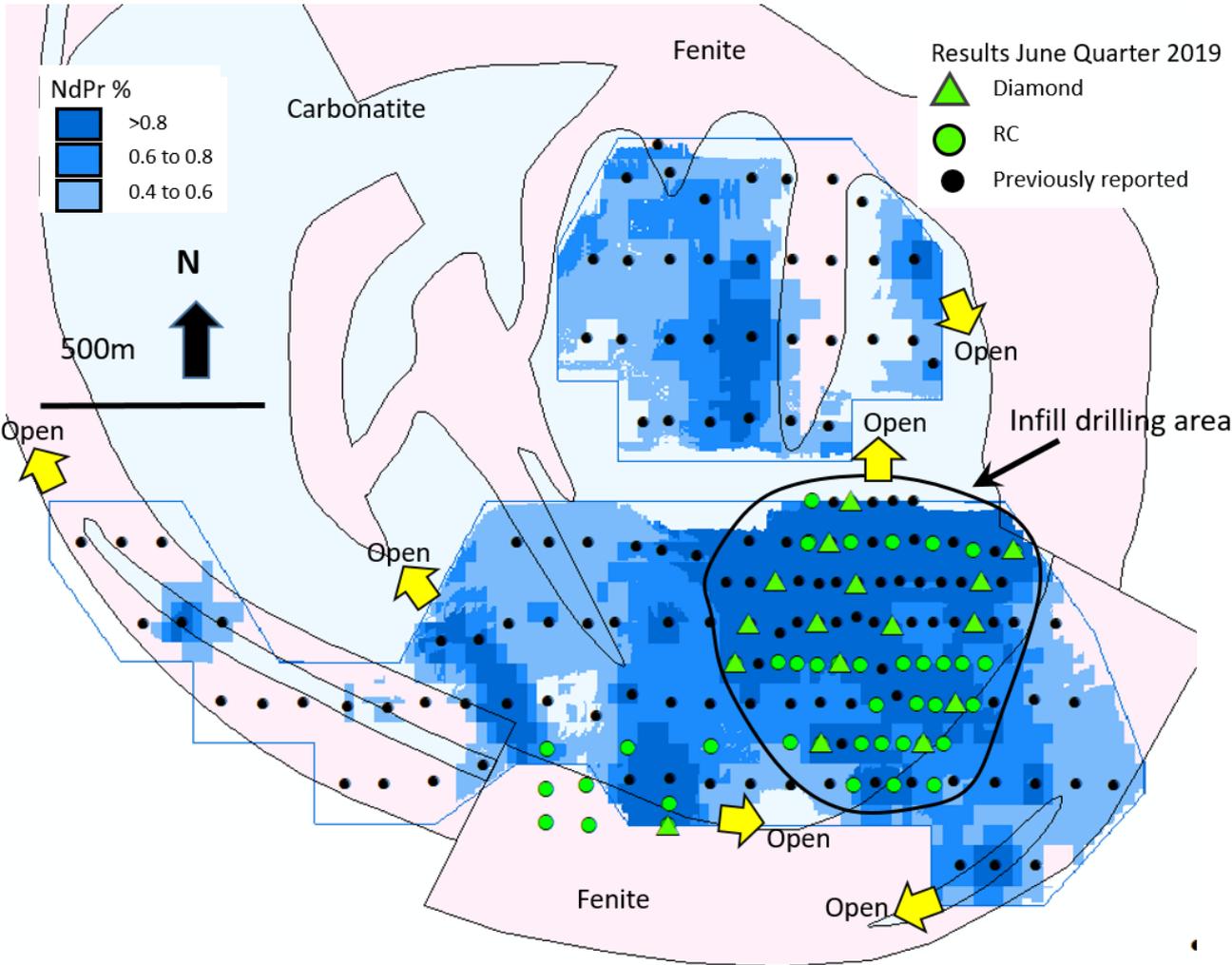
Technical Report

A series of technical programmes to support the Preliminary Feasibility Study for the development of an open pit mine and processing plant at the Company's 84% owned Longonjo NdPr Project were in full swing during the Quarter.

The Company also completed the registration of the project with the Angolan Ministry of Environment and commenced baseline environmental and social studies. The registration is an important first step towards the permitting of the project with the Environmental and Social Impact Assessment (ESIA) study being a major requirements for a mining licence application for Longonjo.

Drilling Programmes

Some particularly high grade NdPr intersections were returned from reverse circulation (RC) and diamond core drilling programmes completed during the Quarter to provide samples and data for the PFS.



Above: Plan view of the location of assay results received during the Quarter from RC and diamond drilling over the February 2019 Mineral Resource block model for the weathered mineralisation

coloured by NdPr grade. The numerous open positions with potential for extensions to known mineralisation are indicated.

The last batch of assay results (for the diamond drilling) were reported just after Quarter end on 8 July 2019.

A programme of 66 RC drill holes for 2,032m was completed to:

- infill to 50m x 100m hole spacing a portion of the weathered zone mineralisation that is the focus of the PFS, to provide the data required to support an Indicated JORC (2012) category Mineral Resource estimate
- test for potential extensions to NdPr mineralisation on the southern margin of the Longonjo carbonatite

A programme of 16 diamond core holes for 481 metres of vertical PQ3 drilling was also completed to provide information for the PFS including:

- samples for metallurgical optimisation testwork
- samples for density determinations of the range of rock types
- geotechnical information for mine engineering design
- twinning of RC drill holes for Mineral Resource estimation purposes

Drilling results demonstrate the continuity of the high grade weathered zone blanket of mineralisation from surface and identify the potential for extensions immediately along strike of currently defined mineralisation.

Infill RC (LRC prefix hole ID's) and diamond drilling (LJD prefix) also identified a high grade zone of NdPr mineralisation in fresh rock over a large area immediately below the weathered zone.

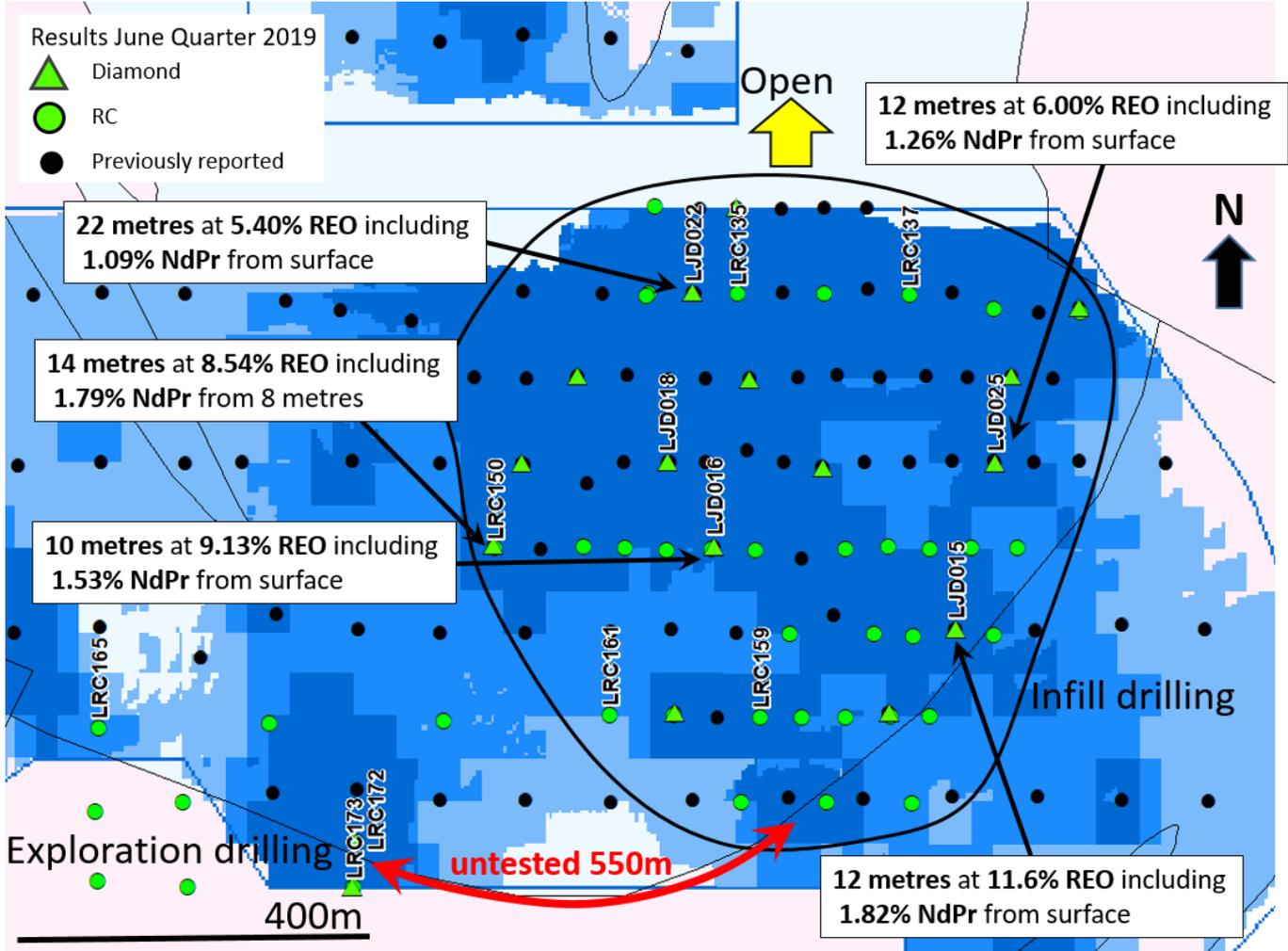
Infill Drilling

Assay results received during and just after the Quarter from the infill drilling area included some particularly high NdPr grades from surface:

<u>Drill hole</u>	<u>Intersection*</u>
LRC135:	14 metres at 5.20% REO including 1.06% NdPr from surface
LRC137:	8 metres at 8.08% REO including 1.54% NdPr from surface

- LRC150:** 14 metres at 8.54% REO including 1.79% NdPr from 8 metres
- 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
- LJD015:** 12 metres at 11.6% REO including 1.82% NdPr from surface
- LJD016:** 10 metres at 9.13% REO including 1.53% NdPr from surface
- LJD022:** 22 metres at 5.40% REO including 1.09% NdPr from surface
- LJD025:** 12 metres at 6.00% REO including 1.26% NdPr from surface

*Intersection highlights reported at $\geq 0.40\%$ NdPr lower grade cut off. 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 . See ASX announcements 13 May, 24 June and 8 July 2019 for drill hole details.

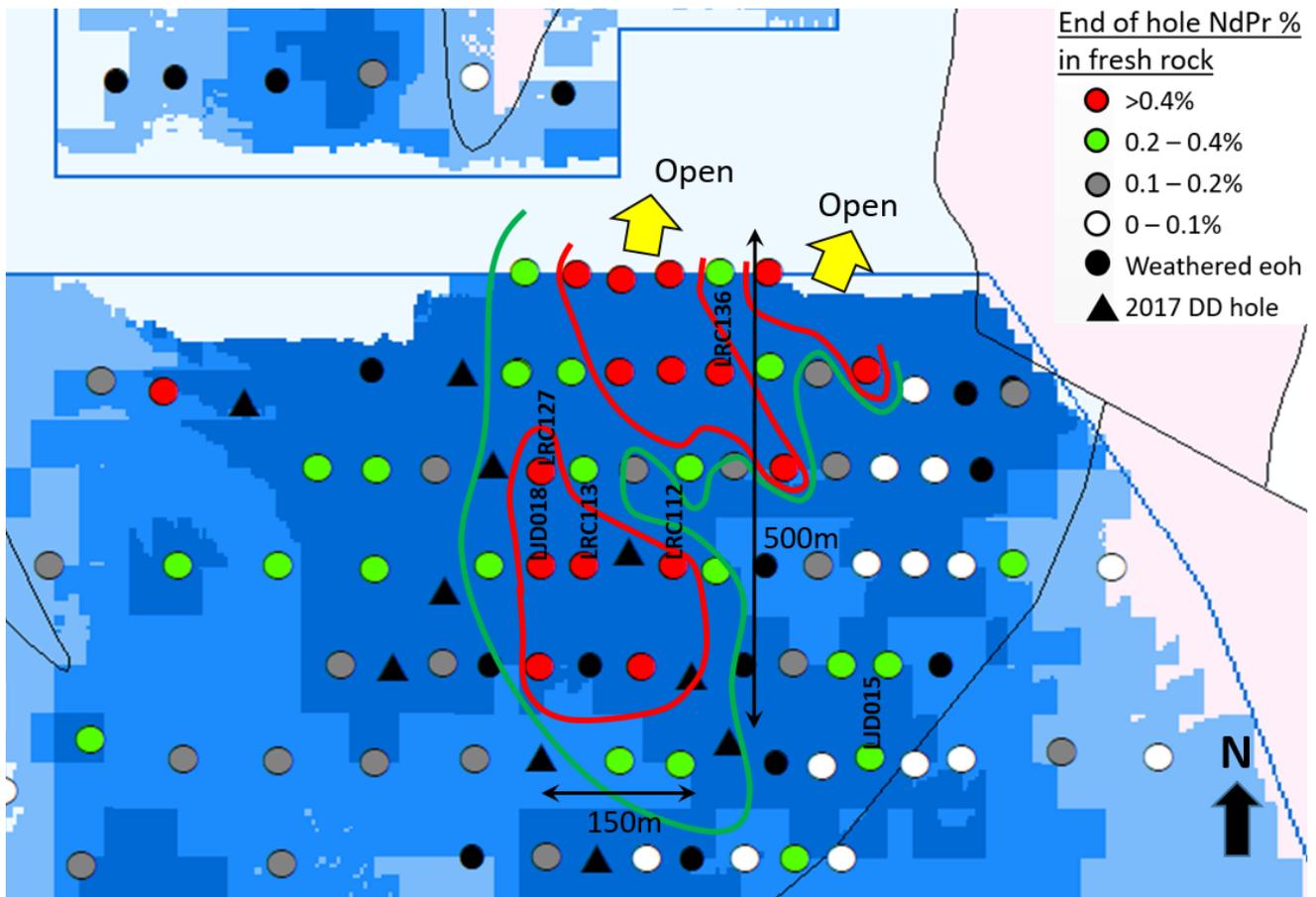


Above: Plan showing location of RC (LRC) and diamond core (LJD) assay results and intersection highlights received during the Quarter over February 2019 Mineral Resource block model for the weathered mineralisation (see previous figure for legend and location).

High grade fresh rock mineralisation

The infill RC drilling 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 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 (see figure following).



Above: Plan showing location of zone of high grade fresh rock mineralisation beneath the weathered zone defined by 2019 infill drilling. The zone has a strike length of 500m and remains open to the north

Fresh rock intersections to end of hole returned from the 2019 RC and diamond drilling programmes include the following highlights:

<u>Drill hole</u>	<u>Intersection*</u>
LRC136:	10 metres at 4.61% REO including 0.84% NdPr from 12 metres to end of hole
LRC113:	5 metres at 4.94% REO including 0.98% NdPr from 22 metres to end of hole
LJD015:	5.45 metres at 4.23% REO including 0.59% NdPr from 24 metres to end of hole
LJD018:	14.5 metres at 3.22% REO including 0.58% NdPr from 22 metres to end of hole
LRC127:	5 metres at 3.46% REO including 0.65% NdPr from 25 metres to end of hole
LRC112:	5 metres at 3.46% REO including 0.75% NdPr from 25 metres to end of hole

*Fresh rock only intersections >0.4% NdPr. Combined weathered+fresh rock intersections reported previously (RC) or within this report (diamond). See ASX announcements 30 April, 13 May and 8 July 2019 for drill hole details.

This fresh rock mineralised zone represents a significant exploration target in its own right and is not included in the current Preliminary Feasibility Study, which considers the weathered zone mineralisation.

Example photographs of the end of hole fresh rock intersections from one metre RC drill chips and diamond drill core follow.

Given the vertical, pipe-like form of the Longonjo Carbonatite, it is geologically likely that fresh rock hosted mineralisation could continue further beneath the current depth of shallow drilling.

Deeper drilling is required to determine the depth extent and continuity of this fresh rock hosted mineralisation, which is currently only tested for 5 to 15 metres beneath the weathered zone.

The Company will commence metallurgical work programmes on samples of fresh rock mineralisation to evaluate the economic potential of this second style of NdPr mineralisation at Longonjo.



Above: Lower portion of diamond core hole **LJD018**: **14.5m at 3.22% REO** including **0.58% NdPr** to end of hole in fresh rock carbonatite (cream)-fenite (grey) breccia. Trays are 1m long. Core is PQ3 diameter (83mm).

Weathered mineralisation exploration targets

Eight RC holes were completed to test for potential extensions to high grade NdPr mineralisation along the southern margins of the carbonatite (see plan previous).

Drilling intersected a mineralised zone of deeply weathered carbonatite along the contact with the altered granite (fenite) country rock with intersections received this Quarter that included:

<u>Drill hole</u>	<u>Intersection*</u>
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 ASX release 24 June 2019 for drill hole details.

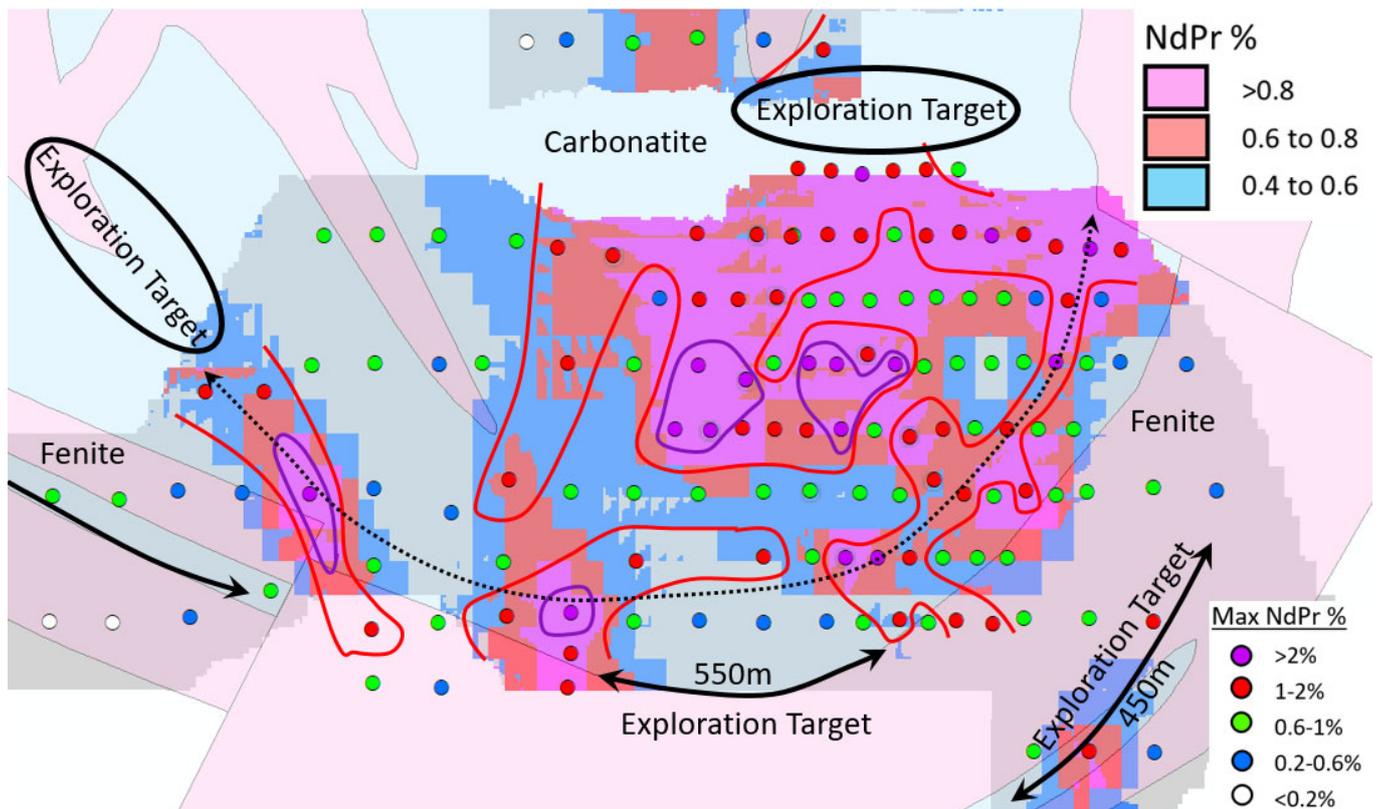
These new results, together with adjacent previously reported intersections, suggest the potential for steeply dipping mineralised carbonatite ring dyke structures along the southern and eastern margins of the carbonatite, along the contact with the surrounding fenite.

A 550 metre strike length of this prospective contact zone remains untested by drilling immediately to the west of LRC172

With all drill results from the 2019 programmes now received, a review of the geology and exploration potential at Longonjo has been completed.

In addition to the high grade fresh rock and 550 metre contact zone exploration targets discussed above, several other mineralised positions remain open along strike within the weathered zone and remain to be drill tested.

As the plan following illustrates, there is potential to extend the weathered zone mineralisation if further drilling is successful in these areas.



Above: Plan view of southern portion of the Longonjo Carbonatite – see inset left for location. Average NdPr grades in saprolite (weathered insitu rock) only, February 2019 Mineral Resource block Model, and maximum downhole NdPr in drill holes.

This plan highlights zones of high grade NdPr mineralisation in red colours. Several open positions and prospective zones are identified, which represent high priority targets for additional exploration drilling. Note also the arcuate high grade mineralised trends near the margin of the carbonatite, largely outside of the area of infill drilling. These arcuate trends could represent mineralised and potentially steeply dipping ring dyke structures extending over more than 2 kilometres, open to the north and west and only sparsely tested by the current drill pattern of shallow, wide spaced vertical holes.

Longonjo NdPr Project registered with Ministry of Environment

Pensana appointed specialist environmental consultants ‘Grupo Simples, Angola’ and ‘HCV Africa’ during the Quarter to complete environmental and social baseline studies in support of an Environmental Impact Assessment (EIA) report for the Longonjo NdPr Project. The study is being completed according to Angolan regulatory and international guidelines.

Registration of the Longonjo NdPr Project with the Angolan Ministry of Environment was completed in June 2019 and baseline studies have now commenced on site. A final EIA report is expected to be completed by year end.

The registration of the Longonjo NdPr Project with Angolan regulatory authorities is an important first step in the permitting of the project. The successful completion of an EIA report is an important requirement for the submission of a mining licence application for Longonjo.

PFS technical development programmes

Pensana have appointed international engineering company Wood Group to execute 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.

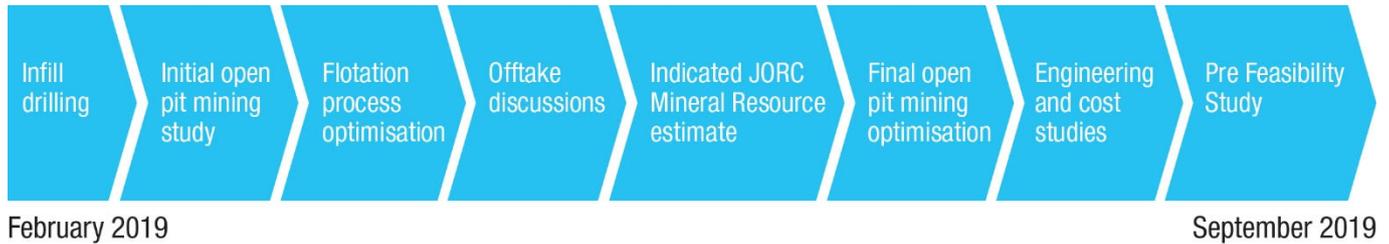


Pensana has identified a practical path to early development that aims to position Longonjo as an important supplier of NdPr raw materials in time to meet looming demand from the electrification of vehicles

Technical programmes to deliver the PFS by September 2019 are now 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.

Longonjo Preliminary Feasibility Study Technical Programmes



The PFS remains on track for completion in September 2019.

NdPr market developments

Following the unsolicited A\$1.5 billion cash bid for Lynas (ASX:LYC) by Wesfarmers (ASX:WES) in late March 2019, NdPr has remained in the mainstream news.

A series of Chinese state media reports this Quarter suggest the possibility that China could use its dominance of rare earth supply, and NdPr in particular, in its trade war with the United States ([Reuters report, 6 June 2019](#)).

The increasing importance of NdPr to the electrification of automobiles is increasingly acknowledged and reported in the press and technical automobile publications.

No doubt as a result of these market dynamics, NdPr prices rose by over 30% in May 2019 ([Bloomberg, June 2019](#)).

Corporate

Appointment of experienced Anglo American veteran as CEO

The Company announced the appointment of Tim George as Chief Executive Officer on 23 April 2019.

Tim is a Minerals Engineer with over 30 years of experience in the mining and engineering sectors, with a broad experience in mining project development throughout Sub-Saharan Africa.

He holds an honours degree in Minerals Engineering from Leeds University and has spent over a decade in production management at several Anglo American operations

in Africa and was involved with plant design and feasibility studies in various base and precious metal projects.

Tim is based in Cape Town and has previous experience working in Angola as Chairman and CEO of Xceldiam an AIM listed diamond exploration company based in Angola, which was bought out by Petra Diamonds in 2007.



Pensana CEO Tim George being interviewed by Angolan national television network TPA on site at Longonjo, April 2019. There is strong interest and government support for the development of the Longonjo Project

Placement

On 4th June 2019, the Company announced that it had received firm commitments from institutional clients of RFC Ambrian and Ashanti Capital for a private placement of 250,000,000 fully paid ordinary shares at \$0.020 to raise \$5,000,000.

The funds will be applied to the execution of a Pre Feasibility Study by Wood Group into the development of the Longonjo NdPr Project in Angola which will be reported in September.

The 250,000,000 fully paid ordinary shares were issued under the Company's placement capacity in accordance with ASX Listing Rule 7.1 (181,822,512 shares) and 7.1A (68,177,488 shares).

LSE Listing

During the quarter the Company announced its intentions to undertake a listing on the Main Board of the London Stock Exchange by the end of 2019.

The Company appointed RFC Ambrian as broker and agent to the Company in advance of a planned listing on the Standard List of the London Stock Exchange.

RFC Ambrian's role will be to provide on-going support, advice and guidance to the Company in respect of the marketing of the Company's shares in the UK and Europe.

Share Consolidation

The Company intends to undertake a consolidation of securities on the basis of 10 existing shares for 1 new share (10:1), subject to approval by shareholders at a General Meeting (GM) to be held on 9 August 2019. The consolidation has been proposed to reduce the number of shares on issue to 147,365,008, creating a more efficient capital structure. Further details of the proposed consolidation are provided in the Company's notice of meeting that was lodged on ASX and sent to shareholders on 9 July 2019.

For further information please contact:

Tim George
CEO

Pensana Metals Ltd
Tel +61 8 9221 0090
www.pensanametals.com

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.

Summary of Tenement Information as at 30 June 2019

Country	Project Name	License Name	License no.	% Held at 31 March 2019	Change	% Held at 30 June 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 (2)	PL6631/2010	100%	-	100%
	Kitongo	Ugambilo	PL10067/2014	100%	(100%) expired	0%
	Kitongo	Kitongo	PL10068/2014	100%	(100%) transferred	0%
	Kitongo	Mwamazengo	PL10069/2014	100%	(100%) transferred	0%
	Kitongo	Isengwa Hills North	PL10060/2014	100%	(100%) expired	0%
	kitongo	Busongo Northeast	PL10065/2014	100%	(100%) expired	0%
	Kitongo	Gulumungu	PL10656/2015	100%	-	100%
	Kitongo	Ntalebujika	PL10660/2015	100%	-	100%
	Miyabi	Miyabi Dyke	PL8933/2013	100%	-	100%
	Miyabi	Miyabi South New	PL10149/2014	100%	(100%) expired	0%
	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 North	PL11016/2017	100%	(100%) transferred	0%
Canuck	Canuck South	PL11017/2017	100%	-	100%	