

## September 2020 Quarterly Activities Report

### ASX RELEASE

27<sup>th</sup> October 2020

ASX: PEC

### **CORPORATE DIRECTORY**

**Executive Chairman**

Julian Babarczy

**Managing Director**

Robert Benussi

**Non-Executive Director**

Brett Grosvenor

**Non-Executive Director &**

**Company Secretary**

George Karafotias

### Projects

Beharra Silica Sands Project,  
Sargon,  
Eneabba  
Eneabba North

### **CONTACT DETAILS:**

Suite 801  
Level 8  
84 Pitt Street  
Sydney NSW 2000

**George Karafotias**

Phone | +61 042 086 550

**Robert Benussi**

Phone | +61 410 415 335

### Quarterly Highlights

#### *Exploration*

- Maiden Mineral Resource Estimate for Beharra released comprising an Inferred Mineral Resource of 111.3Mt at 98.6% SiO<sub>2</sub>, based on first two phases of drilling
- Completed a third phase of drilling at Beharra consisting of a 32 hole air core program that aimed to increase the size of the Beharra resource as well as upgrade the Resource Estimate category, results to be released in the December 2020 quarter
- Sargon North Exploration Licence (70/5376) granted

#### *Project Development*

- Commenced Beharra PFS and appointment of experienced Project Study Manager, aiming to deliver the study by early calendar year 2021
- Partnered with CDE Global to assist with next phase of metallurgical testing on the Beharra project
- Strong progress on the PFS including
  - commencement of 2,000kg bulk sample metallurgical testwork to be undertaken by IHC Robbins to further characterise the Beharra sand and provide samples to potential end user markets
  - completion of initial screening testwork carried out by Derrick Corp (USA) which showed that Beharra silica sand has favourable metallurgical characteristics that should give rise to minimal processing complexity
  - award of engineering design to Queensland based Haald Engineering Pty Ltd
  - tenders submitted and work commenced on other key study packages

## Corporate

- In August, the Company released to market a presentation titled “Sand - The world’s Indispensable Commodity”
- The Chairman released a Letter to Shareholders providing an update on Perpetual’s projects and the broader business strategy
- The Annual Report covering the year to 30<sup>th</sup> June 2020 was released
- The Board appointed an additional Director (Non -Executive), Mr Brett Grosvenor

## Exploration

### Beharra Silica Sand Project

The September quarter 2020 saw further advances at Perpetual’s Western Australian Silica Sand Projects with the release of a Maiden Mineral Resource Estimate (MRE) for the Beharra project. PEC had engaged Snowden Mining Consultants to estimate an MRE in accordance with the JORC Code, 2012 Edition, for the project. **The Inferred Mineral Resource Estimate for Beharra is 111.3 Million Tonnes at 98.6% SiO<sub>2</sub>.** (refer Tables. 1 & 2). In addition, an Exploration Target of 8-13 Million Tonnes at a grade of 97-99% SiO<sub>2</sub> has also been estimated (refer Table. 3).

The Maiden Mineral Resource Estimation was based on a total of 40 air core drill holes for 506.7m of drilling and 38 auger drill holes for 76m of drilling (refer Figure.1). The auger holes were drilled in February 2019 and the air cored holes drilled in March 2020.

The Exploration Target was tested again in late September 2020 as part of the third phase of drilling. Assay results are pending and are due for release in November 2020. 18 air core holes were drilled across the Exploration Target area and included 1 twinned hole. (refer to Figure 3). An additional 14 air core holes that also included 2 twinned holes were drilled south of Mt Adams Road. (refer to Figure 3).

The purpose of this drilling was to provide information for a maiden resource estimate over the Exploration Target north of Mt Adams Road and also to provide additional confidence in the MRE south of Mt Adams Road, which will allow for upgrading of the resource category and to potentially increase the resource tonnage, after completion of the required project studies.

For further details on the MRE and associated drilling, refer to Perpetual’s ASX announcements dated July 22nd, September 24th, and October 1st, 2020.

**Table 1: Beharra Maiden Mineral Resource Estimation**

Sand	Volume (Mm <sup>3</sup> )	Density	Tonnes (Mt)	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	LOI%
Yellow	5.9	1.64	9.6	97.9	0.48	0.21	0.21	0.63
White	62.0	1.64	101.7	98.7	0.42	0.35	0.18	0.22
<b>Total</b>	<b>67.9</b>	<b>1.64</b>	<b>111.3</b>	<b>98.6</b>	<b>0.42</b>	<b>0.34</b>	<b>0.18</b>	<b>0.25</b>

**Table 2: Beharra Maiden Mineral Resource Estimation- Divided by South and North of Mt Adams Road Respectively**

Sand	Volume (Mm <sup>3</sup> )	Density	Tonnes (Mt)	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	LOI%
<b>South of Mt Adams Road</b>								
Yellow	5.2	1.64	8.5	98.1	0.50	0.22	0.20	0.58
White	54.5	1.64	89.5	98.6	0.43	0.37	0.19	0.21
<b>Total South</b>	<b>59.7</b>	<b>1.64</b>	<b>98.0</b>	<b>98.6</b>	<b>0.44</b>	<b>0.35</b>	<b>0.19</b>	<b>0.24</b>
<b>North of Mt Adams Road</b>								
Yellow	0.7	1.64	1.1	96.8	0.31	0.11	0.32	0.97
White	7.5	1.64	12.3	99.0	0.29	0.21	0.15	0.28
<b>Total North</b>	<b>8.1</b>	<b>1.64</b>	<b>13.3</b>	<b>98.8</b>	<b>0.29</b>	<b>0.20</b>	<b>0.17</b>	<b>0.34</b>
<b>Total</b>	<b>67.9</b>	<b>1.64</b>	<b>111.3</b>	<b>98.6</b>	<b>0.42</b>	<b>0.34</b>	<b>0.18</b>	<b>0.25</b>

Notes: Interpreted silica sands unit is defined by surface mapping, auger drilling, air core drilling. Depletion zones include the upper 0.5m for rehabilitation purposes. Differences may occur due to rounding to significant figures.

**Table 3: Beharra Exploration Target**

Classification	Tonnes (Mt)	SiO <sub>2</sub> %
<b>Exploration Target</b>	<b>8-13</b>	<b>97-99</b>

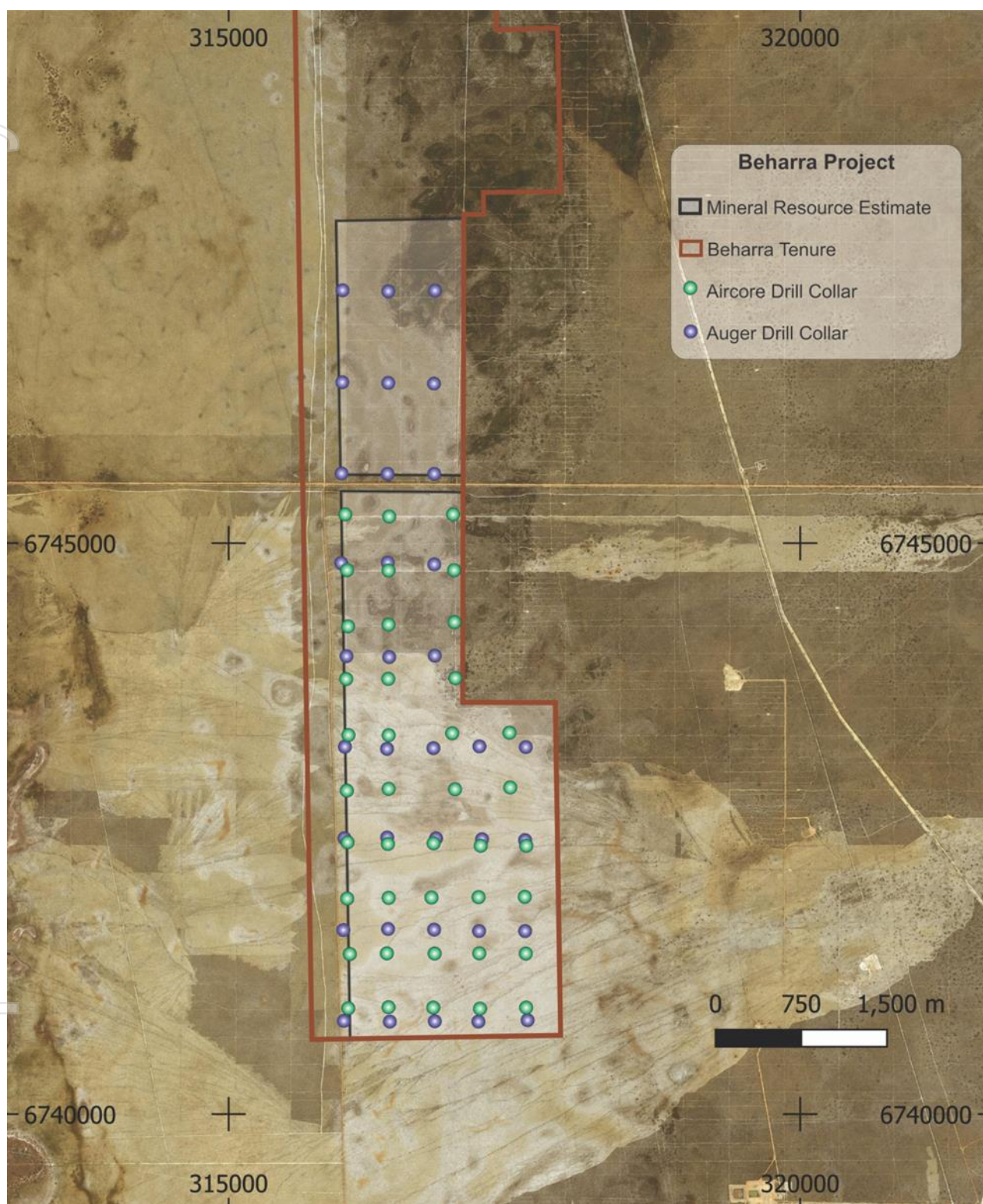
The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of Mineral Resource.

### Sargon Construction Sand Project

Sargon is located approximately 40km south of Geraldton Port and consists of two tenements, Sargon and Sargon North. (refer to Figure 3). The Sargon Hub is being targeted as a source of construction sand and exploration activities in the quarter included 18 hand auger reconnaissance drill holes completed at Sargon North. Laboratory analysis results remain pending, although have not been prioritised.

Other than exploratory drilling, Sargon has not been a focus of Perpetual's efforts in the quarter, with activities at Beharra taking precedence due to the belief that a higher quality project is likely at Beharra. Perpetual will progress the Sargon project once additional exploration information is obtained and management capacity is available.

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**Figure 1:** Air Core Drilling (March 2020) & Auger Drilling (February 2019) Collar Plan

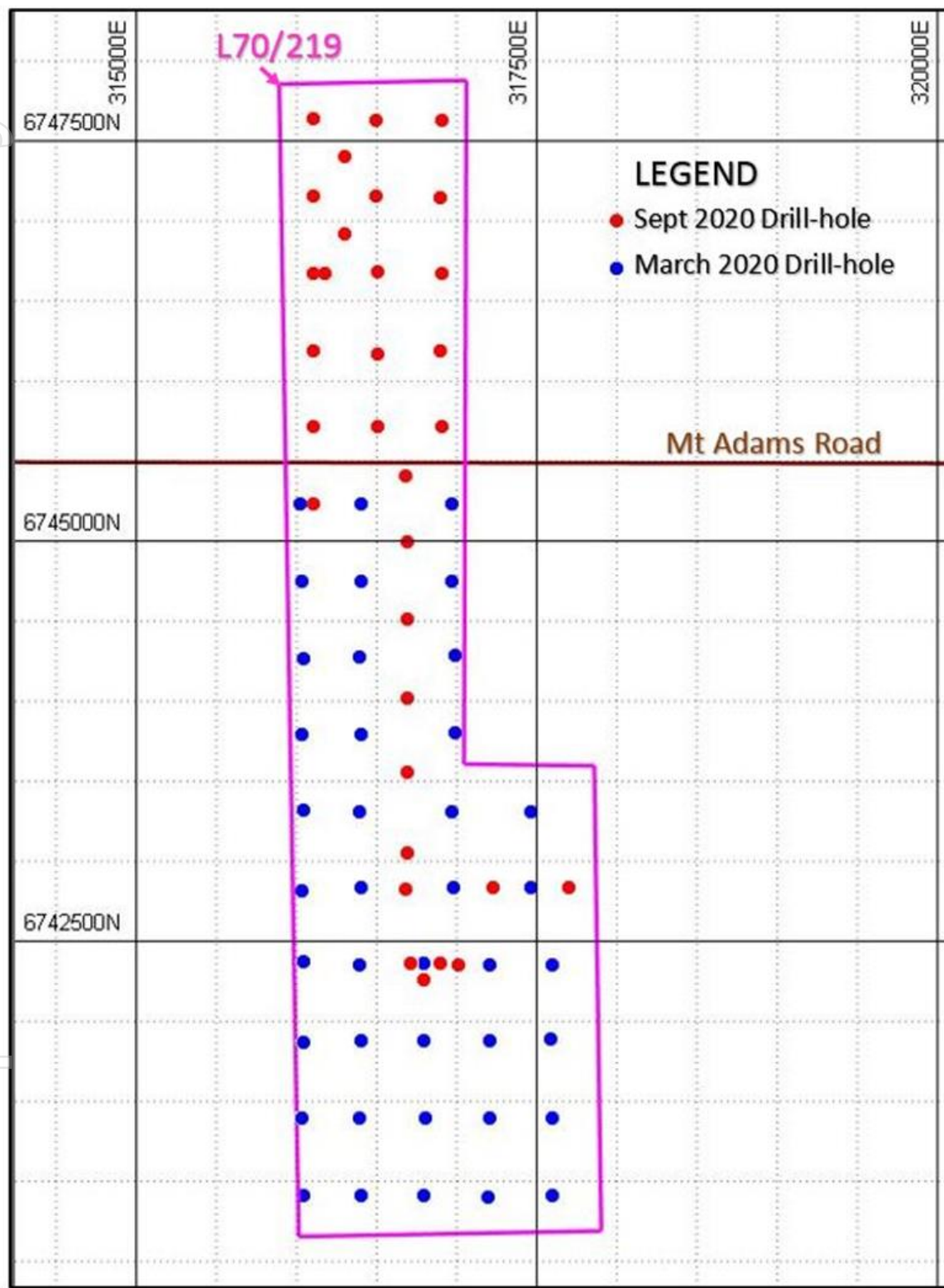
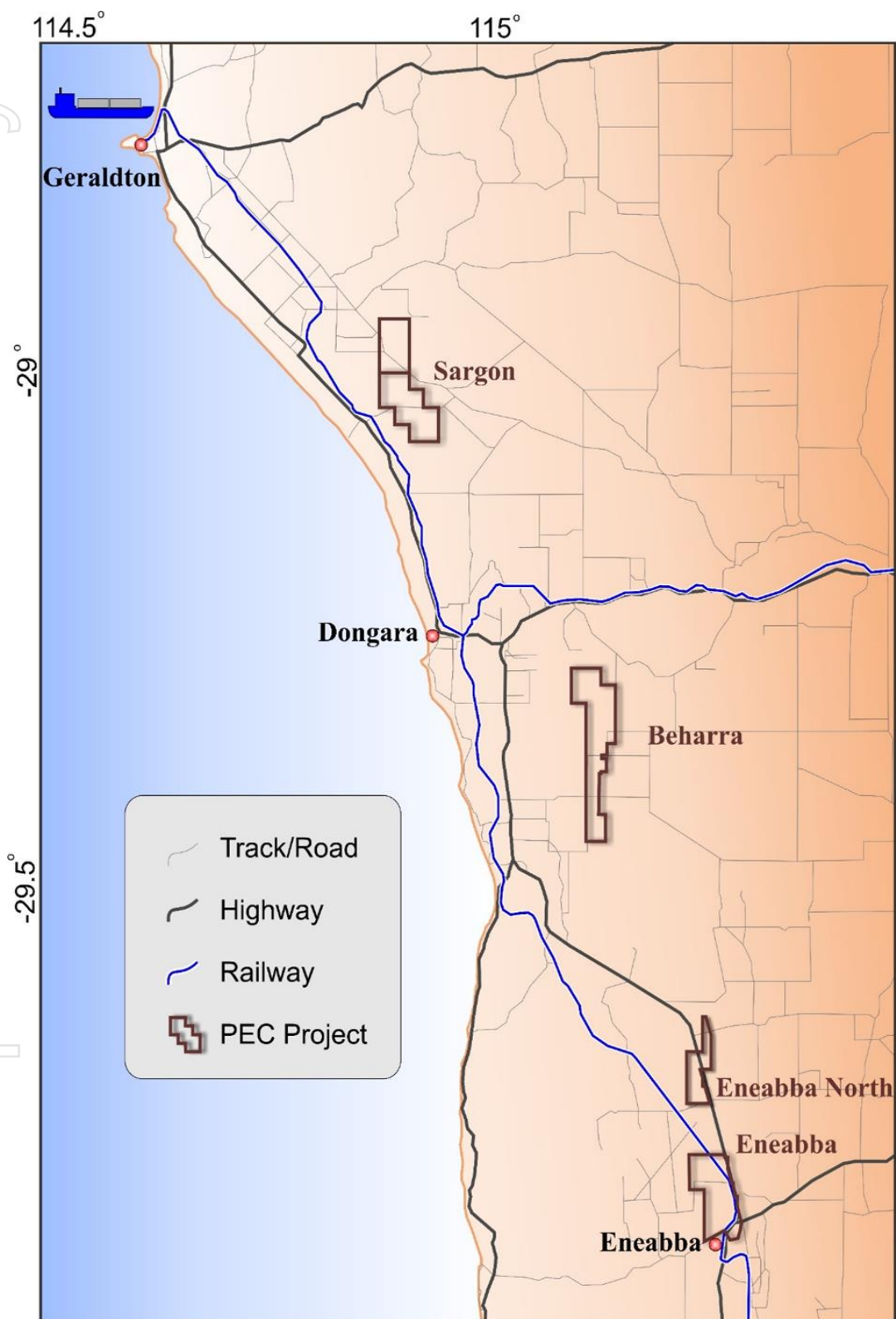


Figure 2: E70/5221 September and March 2020 Air-Core Drill-hole Locations

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**Figure 3** Location of Perpetual's Silica Sand Tenements

## Project Development

As advised 29<sup>th</sup> July ASX announcement, PEC has commenced undertaking a Pre-feasibility Study (PFS) on the high grade Beharra Silica Sand Project. This decision was based on the MRE and preliminary laboratory testing results that had been reported earlier in the year.

The Company has appointed an experienced sand Project Study Manager, Matt Robbins and has partnered with a number of silica sand industry specialists and consultants who have extensive experience in sand plant design, equipment manufacture and installation, as well as metallurgical testing programs and sand-related project execution.

These specialists and consultants include global sand plant designers CDE Global, which are a specialist in sand plant equipment manufacture, installation and commissioning.

CDE Global has been involved in developing the next phase of laboratory testing which is aimed at optimising the likely material process flow sheet, with an aim of increasing the product quality already achieved by prior test work, including trade-off studies with a view to maximizing the economic potential and returns of the final product(s) purity versus process recovery.

Positive results from wet screening testwork by Derrick Corporation was received and announced 24<sup>th</sup> August 2020. This testwork indicated good efficiency and throughput at minus 600 microns and also the removal of the minus 150-micron material, which will deliver a meaningful reduction in impurities. High intensity magnetic separation testwork resulted in limited effect on additional removal of deleterious materials indicating potential for lower capital intensity, although this will be further tested in the current metallurgical testing program.

Further detailed metallurgical testwork has now commenced on a 2,000kg bulk sample extracted from the phase 3 air core drill samples. IHC Robbins will undertake the testwork at their south east Queensland laboratory and focus on optimization of the beneficiation process and will provide sand quality specifications. The laboratory will also produce end product samples which will be used for establishing formal sales and marketing arrangements with potential end users and markets.

Engineering design packages were awarded in September (refer to announcement 1<sup>st</sup> September 2020) to Haald Engineering Pty Ltd. Haald will provide mechanical and structural engineering, electrical engineering, and civil design for input to the PFS.

Additional competitive tender processes are also at either advanced stage of award or have been awarded for other key Beharra PFS related work packages.

Delivery of the PFS is scheduled for early calendar year 2021.

## Corporate

An additional Director was appointed to the Board in September. This is a Non-Executive position and has been taken up by Mr. Brett Grosvenor. (refer to announcement 10<sup>th</sup> September 2020). Perpetual's Chairman Mr. Julian Babarczy released a Letter to Shareholders (see announcement 6<sup>th</sup> August 2020) that provided an informative update to shareholder on the current progress at Perpetual's Beharra project and what key deliverables are expected in coming months.

Perpetual released a Corporate presentation in August (refer to release 18<sup>th</sup> August 2020) titled, "Sand - The World's Indispensable Commodity" This presentation provides a very good overview on silica sand and Perpetual's vision and strategy to be part of this industry.

Sargon North Exploration Licence (70/5376) was granted in July resulting in current total current area of granted tenure across PEC's portfolio is 145.9km<sup>2</sup>. (refer to Table 4).

### Details of related party payments

Pursuant to ASX LR4.7C.1 and as outlined in the Appendix 5.B the aggregate amount of payments to related parties and their associates of \$98,650 represent directors' fees, salaries paid and shares issued in lieu of previous year's fee during the quarter.

This report has been authorised for release to ASX by the Board of Directors.

The total land area of granted tenure across PEC's portfolio now totals 146km<sup>2</sup>

**Table 4 Tenement Schedule**

Project	Licence	Location	Interest at 30 <sup>th</sup> June 2020	Interest at 30 <sup>th</sup> September 2020	Status	Area (Km <sup>2</sup> )
Eneabba	E70/5220	WA	100%	100%	Granted	35.34
Sargon	E70/5227	WA	100%	100%	Granted	30.03
Beharra	E70/5221	WA	100%	100%	Granted	48.55
Eneabba North	E70/5250	WA	100%	100%	Granted	14.00
Sargon North	E70/5376	WA	0%	100%	Granted	18.00
<b>Total</b>						<b>145.92</b>

### Competent Persons Statement

The information in this announcement that relates to the Exploration Results for the Beharra Project and is based on information compiled and fairly represented by Mr. Colin Ross Hastings, who is a Member of the Australian Institute of Mining & Metallurgy and consultant to Perpetual Resources Ltd. Mr. Hastings is also a shareholder of Perpetual Resources Ltd. Mr. Hastings has sufficient experience relevant to the style of mineralisation and type of deposits under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Hastings consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to the Exploration Results for the Beharra Project is based on information compiled and fairly represented by Mr Colin Ross Hastings, who is a Member of the Australian Institute of Mining & Metallurgy and consultant to Perpetual Resources Ltd. Mr Hastings is also a shareholder of Perpetual Resources Ltd. Mr Hastings has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hastings consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. The information in this report that relates to Exploration Targets and Mineral Resources is based on information compiled by Ms Elizabeth Haren and Dr Andrew Scogings. Ms Haren is Associate Principal Consultant at Snowden Group Mining Industry Consultants, a Competent Person who is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Dr Scogings is Associate Executive Consultant at Snowden Group Mining Industry Consultants, a Member of the Australasian Institute of Mining and Metallurgy and a Registered Professional Geoscientist in the field of industrial minerals with the Australian Institute of Geoscientists. Ms Haren and Dr Scogings have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves. Ms Haren and Dr Scogings consent to the inclusion in the report of the matters based on his information in the form and context in which it appears

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