

30 July 2019

## QUARTERLY OPERATIONS REPORT TO 30 JUNE 2019 TITANIUM SAND LIMITED (“Company”)

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- **Proposed acquisition of adjacent tenure at Mannar Island Project with high grade drilling results.**
- **Resource infill drilling continues to confirm mineralisation continuity via visual observation.**
- **Initial mineral products test work on a composite sample indicate 72% of heavy minerals present are valuable heavy mineral (VHM) and high recoveries of TiO<sub>2</sub> into mineral products.**
- **An initial mineral products quality review indicates a wide range of potential markets for the heavy mineral products.**

### SRI LANKAN MINERAL SANDS PROJECT

#### ***Acquisition Additional Mannar Island Tenure***

Subsequent to the end of the quarter the Company announced a proposed acquisition of tenure (‘Acquisition Tenure’) with high grade mineral sands\*. The Acquisition Tenure adjoins the current tenure held by the Company on Mannar island (Figure 1) and contains high grade drilling results along strike from high grade resource zones defined on the Company tenure (Figure 2). This consolidation of tenure on Mannar Island is part of the Company’s strategy to acquire highly prospective tenure to expand its core project.

The Acquisition Tenure has drill intercepts from 362 holes defining high grade heavy mineral sands in a continuous zone 7km long and 1 to 1.5km wide. The Company’s area under tenure at the Mannar Island Project will expand to 204km<sup>2</sup>. The acquisition is part of the Company’s strategy to increase its landholding in this highly prospective area and continue with its coordinated regional exploration approach.

The Acquisition Tenure consists of four exploration licenses (Figure 1 and Table 1). The Acquisition Tenure is held and controlled by a group of Sri Lankan companies which are wholly owned by a Mauritian company Bright Angel Ltd. Under the conditional sale agreement, Titanium Sands Ltd will acquire 100% of the share capital of Bright Angel Ltd. The consideration to the Bright Angel shareholder (**Vendor**) for this acquisition consists of:

- Issue of 417,500,000 fully paid Titanium Sands Ltd ordinary shares to the Vendor or nominee (“Consideration Shares”).
- Issue of 208,750,000 Titanium Sands Ltd unlisted options exercisable by payment of \$0.05 within three years of issue to the Vendor or nominee (“Consideration Options”).

In addition, in acquiring Bright Angel Ltd, the Company will assume a 5% net proceeds royalty payable to the Vendor on minerals sold from the Acquisition Tenure.

The proposed acquisition is subject to satisfaction or waiver of the following conditions precedent:

- Within 30 days, Titanium Sands Ltd notifying the Vendor that it has completed to its satisfaction its due diligence investigations in respect of the Acquisition Tenure (“Due Diligence Condition”).
- Within 60 days of satisfaction or waiver of the Due Diligence Condition, Titanium Sands Ltd shareholders approving the proposed acquisition (including the issue of the Consideration Shares and Options to the Vendor).
- Within 60 days of satisfaction or waiver of the Due Diligence Condition, an independent expert provides a report to the Company that the proposed acquisition is at least fair and reasonable to the Company’s shareholders (other than the Vendor and its associates).
- Within 60 days of satisfaction or waiver of the Due Diligence Condition, the Vendor and the Company obtaining all other approvals necessary from Government Agencies or third parties to complete the proposed acquisition.

The Company’s due diligence investigations to satisfy the Due Diligence Condition are continuing. Subject to the satisfaction or waiver by the Company of the Due Diligence Condition, a notice of meeting seeking shareholder approval of the proposed acquisition (which will include an independent expert’s report on the fairness and reasonableness of the proposed acquisition) will be dispatched to shareholders.

**Table 1 Acquisition tenure, exploration licenses.**

	Status	Expiry	Area Km2
EL351	renewal pending	15/05/2019	15
EL352	renewal pending	15/05/2019	10
EL327	renewed for 2nd 2yr	13/12/2020	5
EL328	renewed for 2nd 2yr	13/12/2020	8

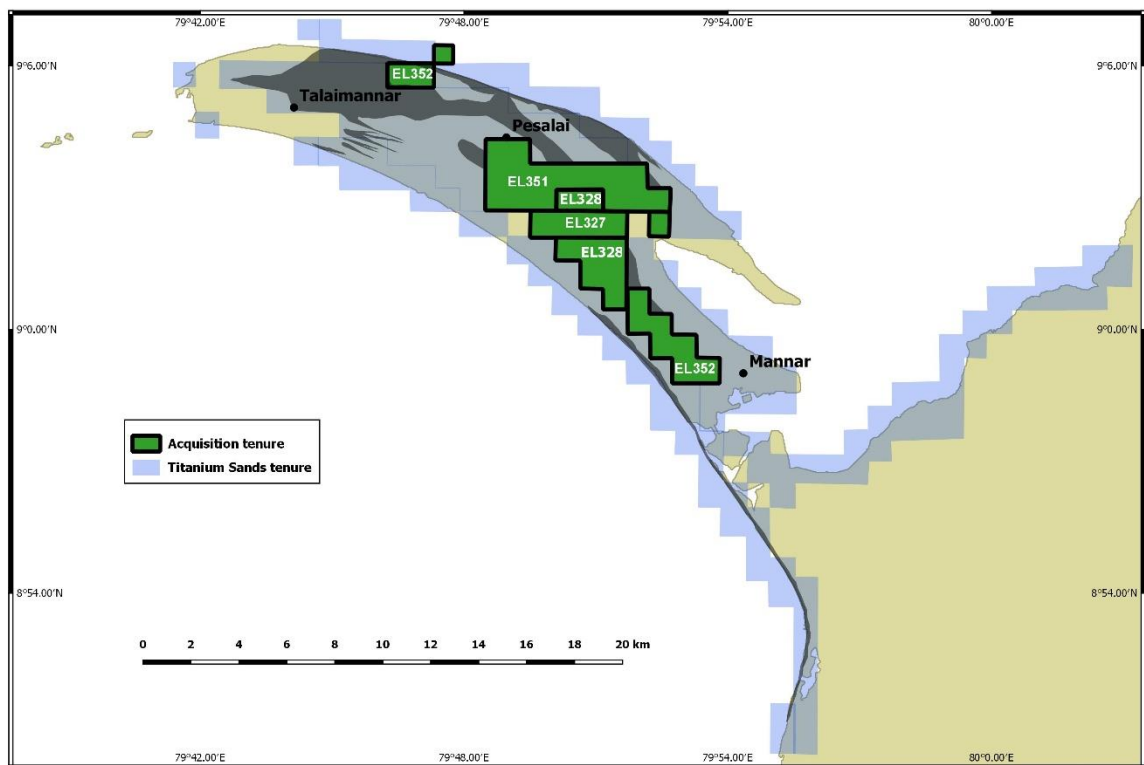


Figure 1 Proposed acquisition tenure.

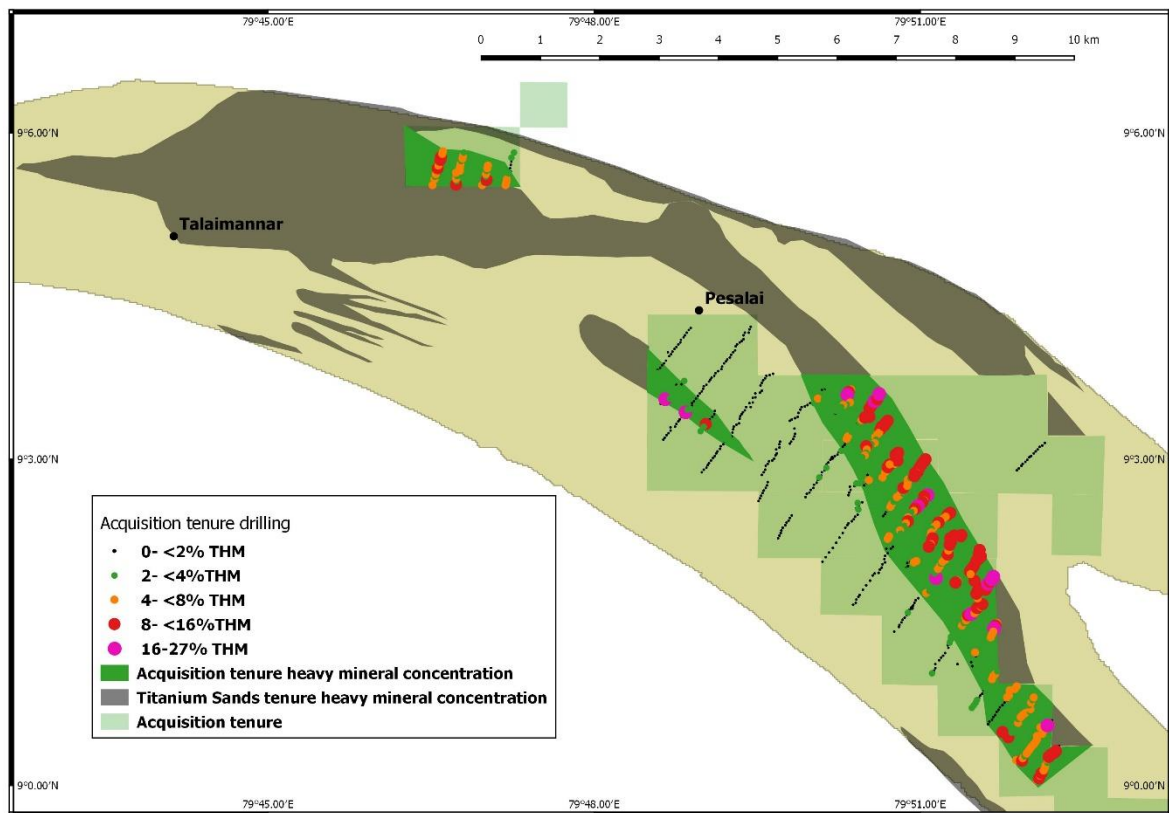
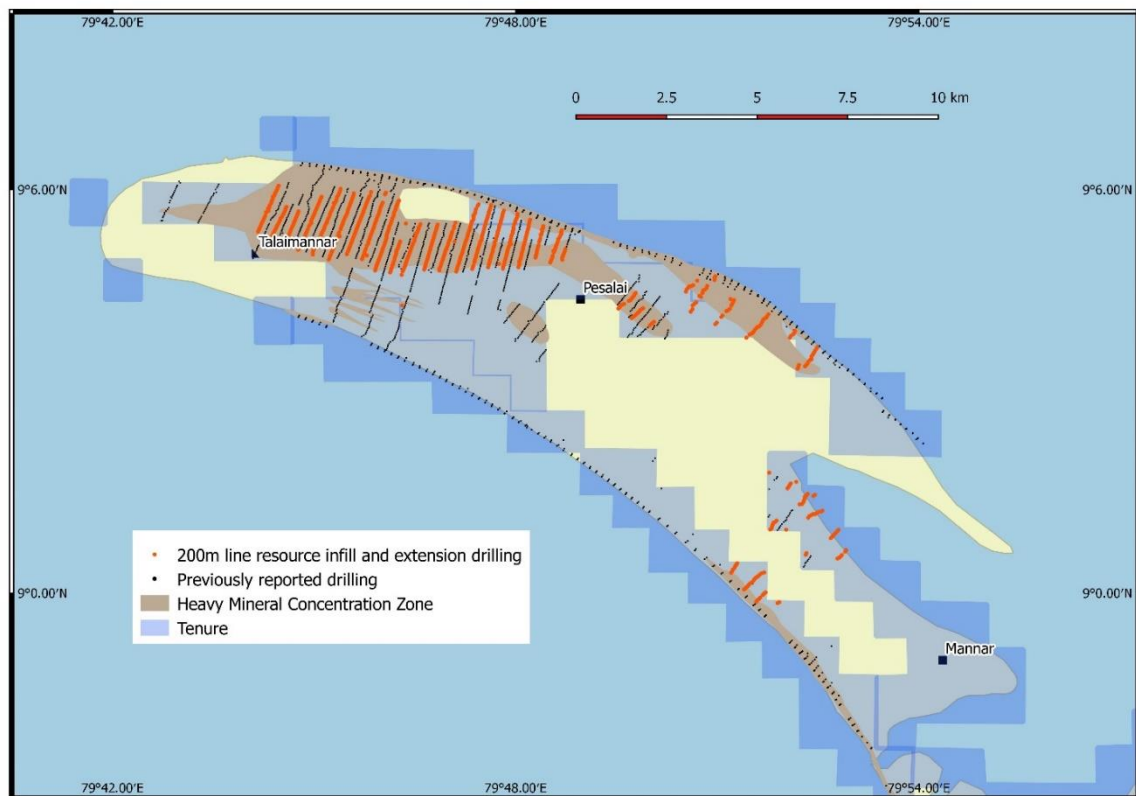


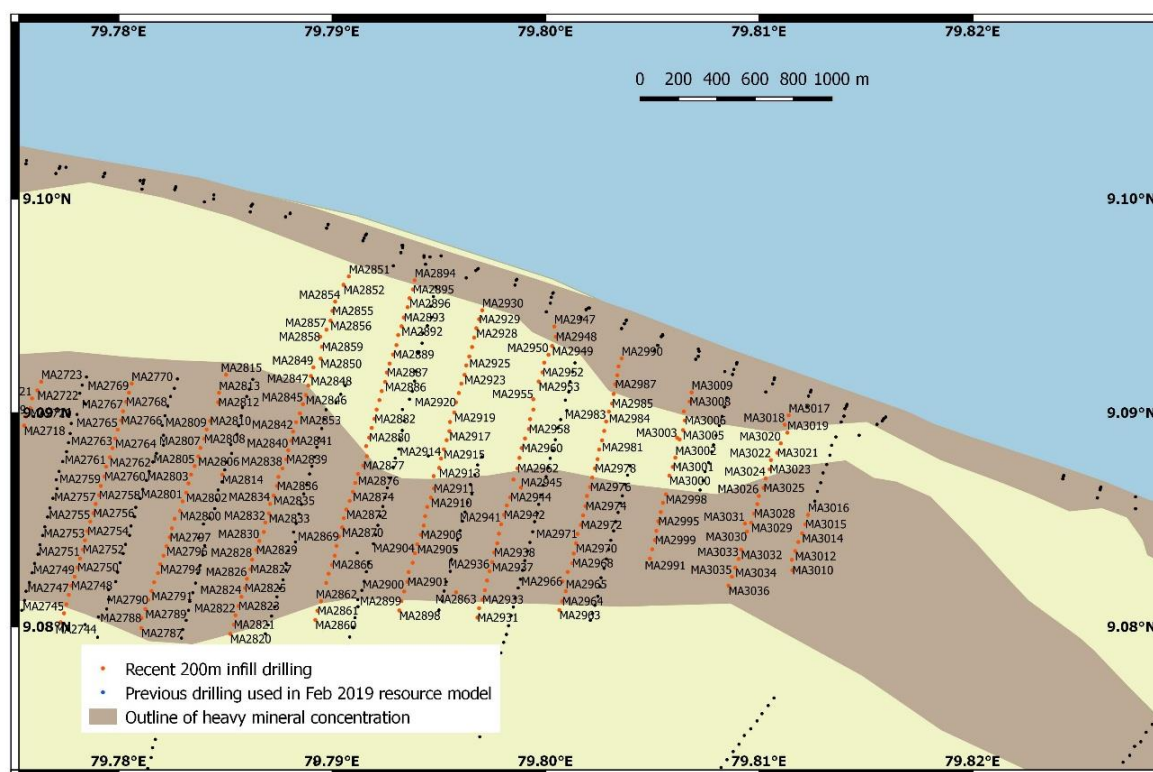
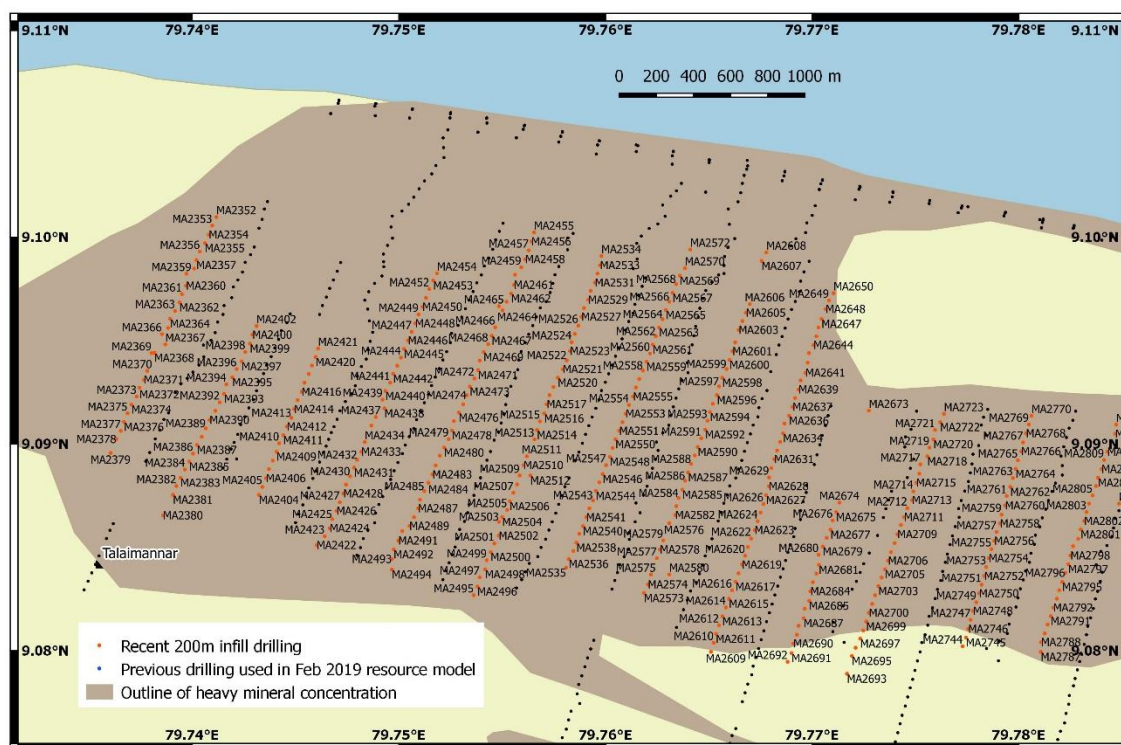
Figure 2 Drilling on proposed Acquisition Tenure.

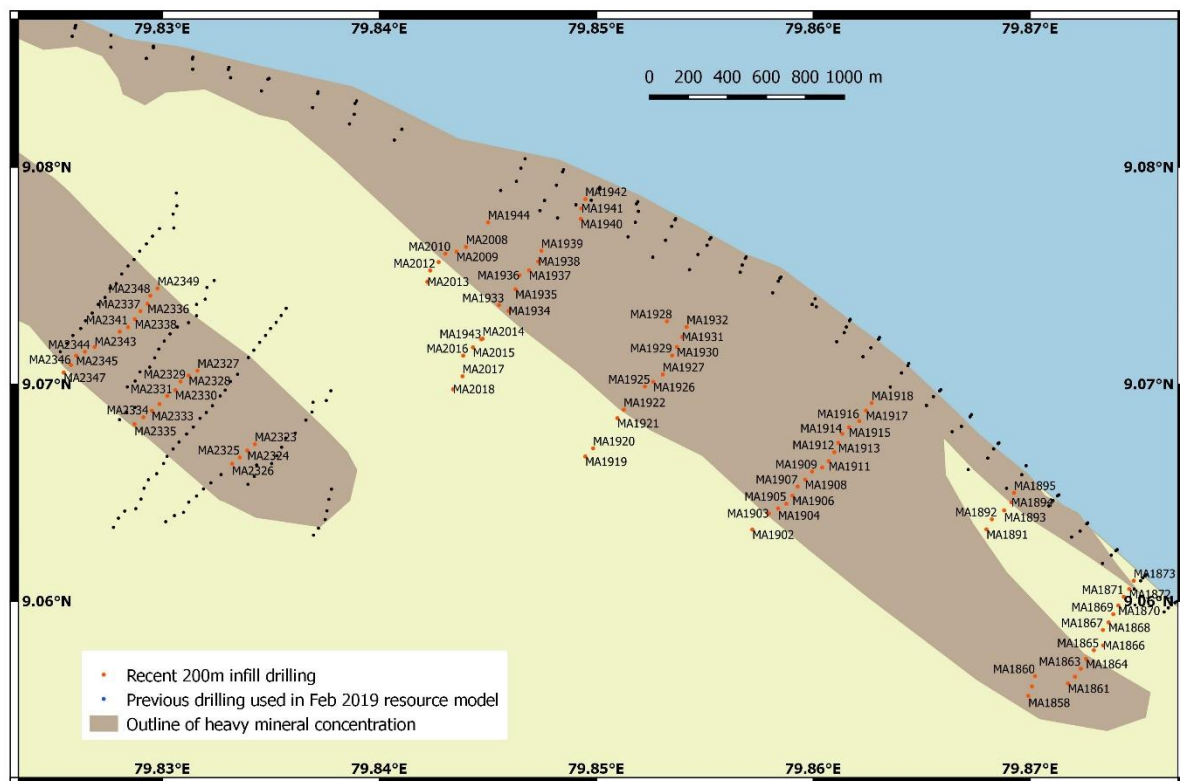
## Drilling

Drilling has succeeded in reducing the nominal resource drilling pattern down from 400m by 50m to 200m by 50m over 90% of the resource envelope (Figs 3 to 6) (reported previously with full JORC details in ASX announcement 2 April 2019\*\*). A total of 802 holes were drilled, with sampling intervals of 0.5m. Samples from this drilling have now been prepared in the Company's Pesalai preparation facility and have been sent to a mineral sands laboratory in South Africa for analysis. Visual observation of the samples indicates good continuity of the mineralisation.



**Figure 3 Mannar Island Heavy Mineral Sands Project, drilling to date, red holes are post the last resource update (reported to the ASX 11 February 2019\*\*\*).**





**Figure 6 Drill hole locations eastern section.**

Drilling recommenced on the Mannar project in March with the aim of producing a further resource update in mid-2019. This drilling will address :

- Lateral and below the water table extensions to the existing resources.
- Infill drilling on high grade portions of the existing resources.
- Test new target areas on the tenure.

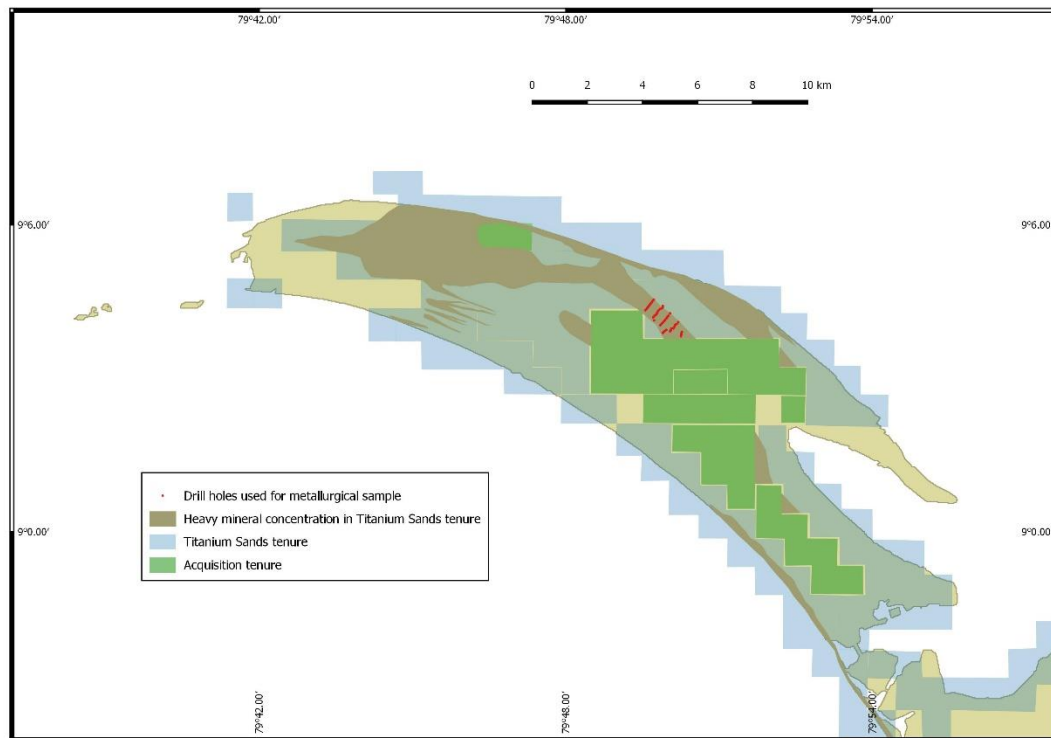
This drilling is initially being undertaken by hand auger teams using shell augers which have proven very effective in the above water table drilling in obtaining excellent sample recovery and precise sample depth control.

The Company has also acquired an RC air core drilling rig and following modifications to optimise it for the Mannar island Project will commence drilling at Mannar shortly. The drilling rig will supplement shallow auger drilling by providing capacity to drill deeper and provide first pass evaluation of material below the water table.

### ***Mineral Products Sighter Test Work***

A composite sample of heavy minerals was consigned for mineral products sighter (preliminary) test work to Allied Mineral Laboratories in Perth. The test work involved using laboratory scale conventional separation technologies. A composite 4kg sample was derived from total heavy mineral sinks from 277 samples from 48 drill holes in the middle of the resource zone in the centre of the island (Figure 7) submitted for analysis.





**Figure 7 Location of drill holes used for a composite samples for mineralogical product sighter test work.**

This sighter test work demonstrated excellent recovery of 86.5% of the  $\text{TiO}_2$  into a composite ilmenite product with a further 2.5% recovered into a minor rutile product. The high rate of recovery into an ilmenite product suggests further separation of the ilmenite product into other  $\text{TiO}_2$  mineral streams is unlikely to be necessary or viable. The test work also indicated a zircon product could potentially be recovered. An additional and significant result was the identification of a substantive (8.7%) almandine garnet component in the composite sample. Garnet has been previously identified in resource mineralogical work but not included in resource modelling. As the sighter test work suggests that a garnet product could be produced it will be included in future resource updates as it represents a significant component of the valuable heavy mineral suite. In conclusion the sighter product test work indicated a valuable heavy mineral component in the total heavy mineral suite of 72%.

A quality review of the mineral products from the initial sighter test work was undertaken by TZMI Pty Ltd. The review indicated the potential for the ilmenite, rutile, zircon and garnet products to be supplied to a wide range of offtake customers. Metallurgical test work including bulk sample processing will be on going as it is necessary to further refine potential products and produce materials for more detailed engagement with potential offtake partners for the mineral products.

### **Tenure**

The Company currently has 5 exploration licenses on Mannar Island and the adjacent mainland coast, covering an area of 166 square kilometres (Table 2). This will increase to 204km<sup>2</sup> with the Acquisition Tenure.

Exploration License #	Location	Area	EL Validity		Interest at Quarter End	Change in Interest During Quarter
			From	To		
EL180/R/3	Mannar Island, Sri Lanka	45 Sq. Km	05.03.2019	04.03.2021	100%	-
EL182/R/3	Mannar Island, Sri Lanka	26 Sq. Km	05.03.2019	04.03.2021	100%	-
EL370	Mannar Island, Sri Lanka	40 Sq. Km	14.12.2017	13.12.2019	100%	-
EL371	Mannar Island, Sri Lanka	4 Sq. Km	26.02.2018	25.02.2020	100%	-
EL372	Mannar Island, Sri Lanka	51 Sq. Km	26.02.2018	25.02.2020	100%	-

**Table 2 Current Titanium Sands Ltd tenure.**



### Competent Persons and Compliance Statements

Except where indicated, exploration and technical information above have been reviewed and compiled by James Searle BSc (hons), PhD, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy, with over 37 years of experience in metallic and energy minerals exploration and development, and as such has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration 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 Searle is the Managing Director of Titanium Sands Limited and consents to the inclusion of this technical information in the format and context in which it appears.

### Previously Reported Information Footnotes

This report includes information that relates to Exploration Results and Mineral Resources prepared and first disclosed under JORC Code 2012. The information was extracted from the Company's previous ASX announcements as follows:

*\*An announcement entitled **"Proposed acquisition of tenure with high grade heavy mineral sands"** announced to the ASX on 15 July 2019.*

*\*\*A drilling update in compliance with JORC exploration reporting guidelines entitled **"Mannar Island Mineral Sands Project Drilling Update"** announced to ASX on 2 April 2019.*

*\*\*\* A resource update in full compliance with JORC 2012 requirements titled **"Titanium Sands Triples Heavy Mineral Sands JORC Resources"** announced to the ASX on 11 February 2019.*

These announcements are available to view on the Company's website [www.titaniumsands.com.au](http://www.titaniumsands.com.au)

The Company confirms that it is not aware of any new information or data that materially affect the information included in the relevant market announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply with respect to the resource block model and total heavy mineral content and have not materially changed with the exception noted in the text of this Quarterly report that in future resource updates are likely to include block modelling of the garnet content in addition. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the relevant original market announcements.

### Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "expect," "intend," "may", "potential," "should," "further" and similar expressions are forward-looking statements. Although the Company believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that further exploration will result in additional Mineral Resources.

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

**Titanium Sands Limited**

### ABN

**65 009 131 533**

### Quarter ended ("current quarter")

**30 June 2019**

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(305)	(347)
(b) development	-	-
(c) production	-	-
(d) staff costs	(276)	(603)
(e) administration and corporate costs	(82)	(1,034)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	5	7
1.5 Interest and other costs of finance paid	-	(15)
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)		
- Native title settlement claim	(150)	(150)
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(808)</b>	<b>(2,142)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(78)	(167)
(b) tenements (see item 10)	-	-
(c) investments (Srinel consideration)	-	(182)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
	(d) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans from other entities	-	-
2.4	Other	-	-
2.5	Other	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(78)</b>	<b>(349)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	6,000
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(25)	(271)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>(25)</b>	<b>5,729</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	4,167	18
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(808)	(2,142)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(78)	(349)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(25)	5,729
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>3,256</b>	<b>3,256</b>

5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1    Bank balances	3,256	267
5.2    Call deposits	-	3,900
5.3    Bank overdrafts	-	-
5.4    Other (share application funds held)	-	-
<b>5.5    Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,256</b>	<b>4,167</b>

6. <b>Payments to directors of the entity and their associates</b>	Current quarter \$A'000
6.1    Aggregate amount of payments to these parties included in item 1.2	251
6.2    Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3    Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

1.    Director fees.
2.    Consultancy fees.

7. <b>Payments to related entities of the entity and their associates</b>	Current quarter \$A'000
7.1    Aggregate amount of payments to these parties included in item 1.2	-
7.2    Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3    Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

8. <b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1    Loan facilities	-	-
8.2    Credit standby arrangements	-	-
8.3    Other (please specify)	-	-
8.4    Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

<b>9.</b>	<b>Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1	Exploration and evaluation	(246)
9.2	Development	-
9.3	Production	-
9.4	Staff costs	(153)
9.5	Administration and corporate costs	(134)
9.6	Other	-
<b>9.7</b>	<b>Total estimated cash outflows</b>	<b>(533)</b>

<b>10.</b>	<b>Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-Nil	-N.A.	-N.A.	-N.A.
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-Nil	-N.A.	-N.A.	-N.A.

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here: James Searle  
 (Managing Director)

Date: 30 July 2019

### Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report

has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.