

# 26 November 2018 Annual General Meeting Presentation

**ASX: SER** 

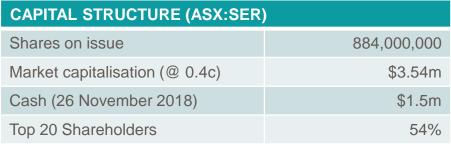
#### Competent Person Statements

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The information in this document that relates to Exploration Results is based on information compiled by Mr Stuart Rechner BSc (Geology) MAIG, a Competent Person who is a Member of Australian Institute of Geoscientists. Mr Rechner is a Director of, and consultant to, Strategic Energy Resources Ltd. Mr Rechner has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Rechner consents to the inclusion in the document of the matters based on his information in the form and context in which it appears.'

The information in this document that relates to the Ambergate Mineral Resource Estimate is based on work conducted by David Slater of SRK Consulting (Australasia) Pty Ltd. David Slater takes responsibility for the Mineral Resource Estimate. David Slater is a Member of The Australian Institute of Mining and Metallurgy (AusIMM) and a member of the Australian Institute of Geoscientists (AIG) and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activities undertaken, to qualify as Competent Person in terms of the Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). David Slater consents to the inclusion of such information in this document in the form and context in which it appears.





	SAXBY Gold SER 100%
WA Mineral Sands	WYALL CREEK Copper SER 100%  ULEY Graphite SER royalty
SER 100%	IONIC Industries SER 15%

BOARD	
Chairman	Stuart Rechner BSc LLB MAIG GAICD
Director	David DeTata BSc MSc PhD MBA GAICD
Director	Harvey Kaplan LLB

Building substantial Heavy Mineral Sands inventory in WA

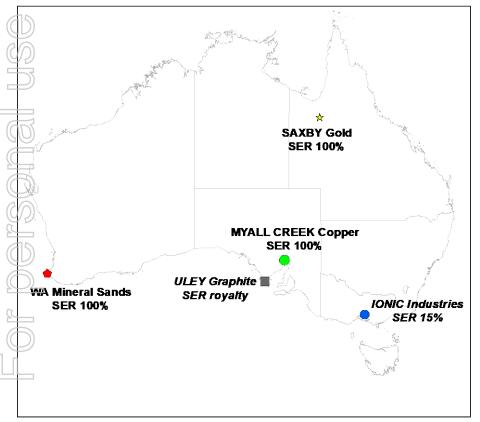
Exploring large-scale Copper targets in SA

Exploring high-grade Gold intercepts in Queensland

Major shareholder of graphene company: Ionic Industries

1.5% Gross Revenue Royalty over Uley Graphite Mine



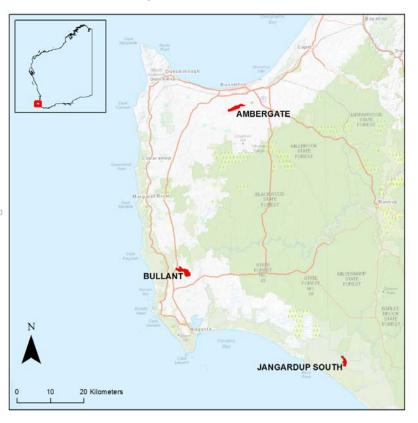


## Significant Events 2017-2018

- August 2017 capital raising of \$2 million
- October 2017 Board refresh
- Defence of Quantum Graphite Ltd
  - Requisition of QGL Board
  - Application for forfeiture of Uley tenements
  - Takeover Panel application
  - Referral to ASIC
- Increase Ambergate mineral resource
  - Secured ground west of Ambergate
  - Delineated additional 3.4Mt @ 5.1% for 175,000 tonnes of Heavy Mineral
- Jangardup South Mining Lease application
- Defence grants access to explore Myall Creek
- Saxby JV discussions with multiple parties
- **Ionic Industries** forms JV with CleanTeq

# **Heavy Mineral Sands (Western Australia)**

- Prices for both titanium dioxide feedstocks and zircon are rising sharply
  - Supply of high grade titanium dioxide feedstocks and zircon in structural deficit
  - Zircon price has increased 50% since 2017
- Used in everyday products with growth driven by global urbanisation
  - Titanium dioxide: whitening pigment in paints, plastics and paper
  - Zircon: ceramics
  - Annual global market: US\$18 billion



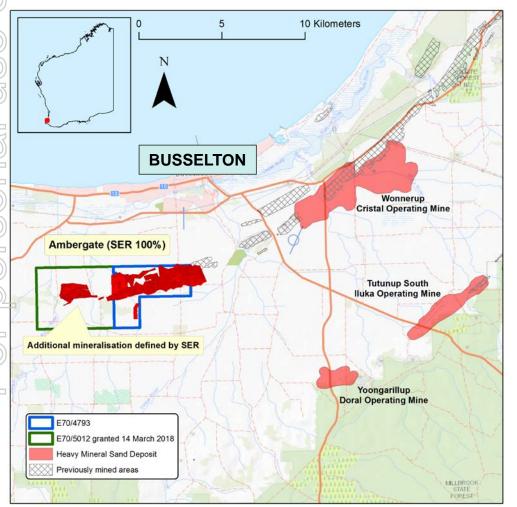
- SER has been building an inventory of HMS deposits in WA since market lows in 2015
- Recognised deposit type in well established HMS mining district
  - Multiple operating mines
  - Infrastructure in place
  - Multiple potential customers
  - State Planning Policy provides protection from conflicting land uses
- SER well placed to take advantage of turning HMS market

## **Heavy Mineral Sands: Ambergate**

#### JORC 2012 Inferred Resource

### 11.2.Mt grading 5.1% Heavy Minerals (HM) for a total HM content of 569,000t

- low grade Heavy Mineral cut-off of 3% and Slimes cut off of <22%</li>
- heavy mineral assemblage: 73% ilmenite (average TiO<sub>2</sub> content of 58.7%), 12% leucoxene, 12% zircon, 0.6% monazite, 2% other

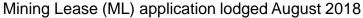


- Mineralisation from surface
- High zircon content of 12%
- Ilmenite TiO<sub>2</sub> content averages 58.7%
- Multiple operating HMS mines in the immediate vicinity
- SRK Independent Report:

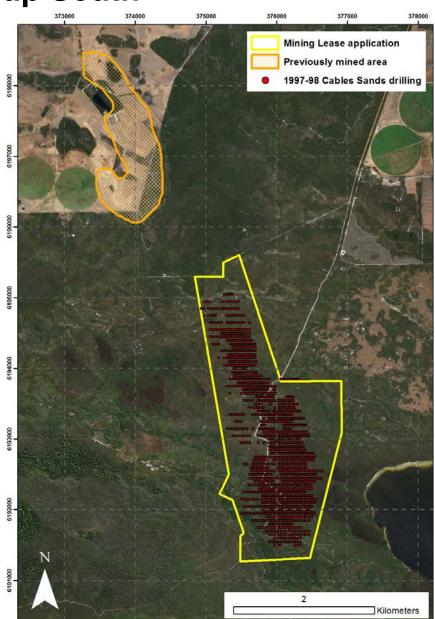
   "Ambergate appears to have reasonable potential for economic extraction by way of small open pit surface mining."

## **Heavy Mineral Sands: Jangardup South**



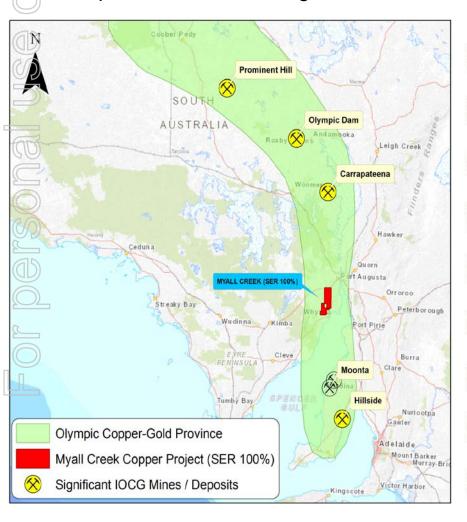


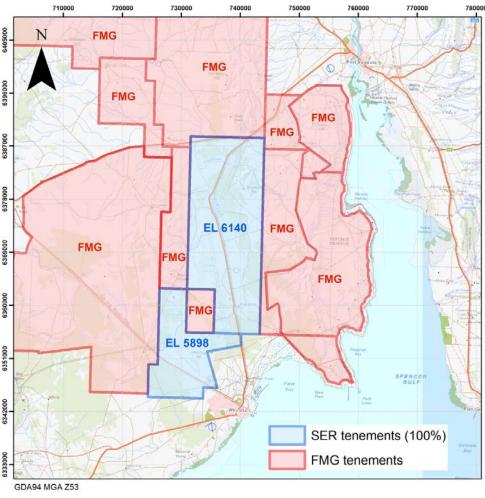
- Objection period closed with no objections
   Discovered by Cable Sands in 1987
  - 1855 drill holes, 89 bulk samples, multiple test pits
- Northern deposit mined from 1994-2003
- Geological Survey of Western Australia classified deposit as a "Strategic Mineral Resource Protection Area" which "should be set aside for future mining"



# Myall Creek Copper-Gold Project (South Australia)

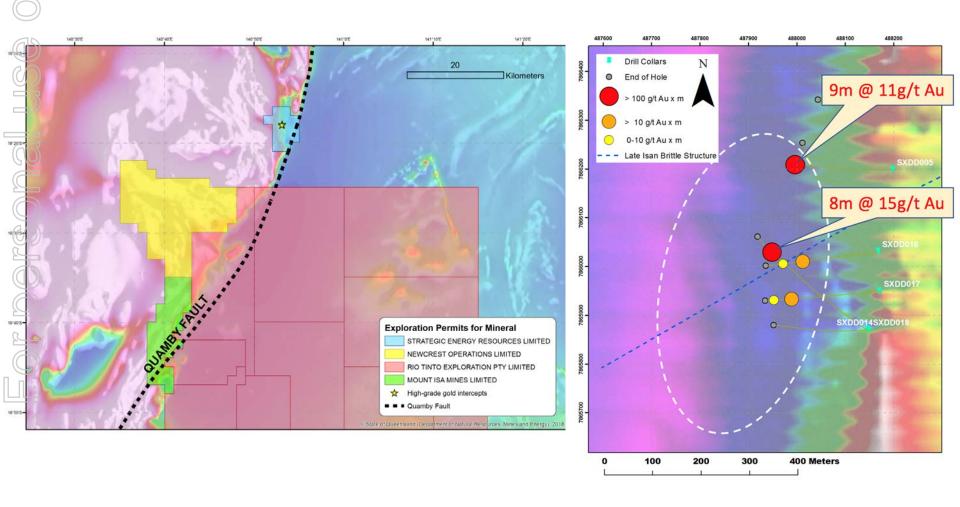
- Prime location in Olympic Copper-Gold Province
  - 15km zone of anomalous copper in historic drilling of overlying sediments
  - Iron Oxide Copper-Gold (IOCG) potential in the underlying basement
  - FMG secured all available surrounding ground ahead of major exploration campaign
- Department of Defence grants SER access to explore in September 2018





## **Saxby Gold Project (Queensland)**

- Northeast Mt Isa Province attracting major miners hunting high-grade deposits at depth
- Saxby is the most significant gold exploration prospect in this region
  - 17m @ 6.75g/t Au and 15m @ 9.09 g/t Au in two holes 190m apart
- SER in discussions with multiple potential partners



# **Ionic Industries (SER 15%)**



- Australia's first company focused on the commercialisation of graphene technologies SER holds circa 15% of the issued capital of Ionic
  - Water treatment: Efficient Waste Water Treatment Using Graphene Oxide Technology
  - Joint Venture with CleanTeQ Holdings Ltd (ASX: CLQ)
  - Ionic 25%, CleanTeQ 75%
  - Focus on commercial scale production of GO-Membranes and water purification modules
  - Energy Storage: 3D-stacked micro supercapacitors "MICRENs".
  - planar micro supercapacitor printed on a porous film
  - stack multiple layers to create 3D device with ground-breaking energy and power density characteristics
  - method for mass printing these devices at low cost
  - applications such as wearables, medical technologies, IoT applications

#### www.ionicindustries.com.au



