



# **Delivering Australia's Highest Quality Graphite Project**

**LINCOLN MINERALS LIMITED**  
**ASX : LML**  
**[www.lincolnminerals.com.au](http://www.lincolnminerals.com.au)**

Kookaburra Gully Trench 4  
12m @ 20.5% graphitic carbon



# Important Notice



This presentation has been prepared by Lincoln Minerals Limited ("LML") and Australian Graphite Pty Ltd ("AGL") as an aid to a spoken explanation. It should not be considered as an offer or invitation to subscribe for or purchase any securities in LML or AGL nor as an inducement to make an offer or invitation with respect to those securities. AGL is a wholly-owned subsidiary of LML; all rights and interests in graphite minerals and associated minerals in certain tenements are assigned to AGL. Information in this presentation is a professional opinion only but is given in good faith.

## **Forward-Looking Statements**

This presentation contains forward looking statements concerning the Kookaburra Gully Graphite Project. Statements concerning Mineral Resources, mine plans and project economics may be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact, and actual events and results may differ materially from those described in the statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on AGL's and LML's beliefs, opinions and estimates as of the date the statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. Data and amounts shown in this presentation relating to capital costs, operating costs, graphite prices and project timelines are based on consultant reports and internally generated estimates and are best estimates only. Accordingly, AGL and LML cannot guarantee the accuracy and/or completeness of the figures or data included in the presentation. All dollar amounts are in Australian dollars unless otherwise stated.

## **Competent Person's Statement**

Information in this presentation that relates to exploration activity, mineral resources and results was compiled by Dr A J Parker who is a Member of the Australasian Institute of Geoscientists. Dr. Parker is Managing Director of and has shares in Lincoln Minerals Limited. He has sufficient experience relevant to the styles of mineralisation and to the activities which are being presented to qualify as a Competent Person as defined by the JORC code, 2012. Dr. Parker consents to the release of the information compiled in this presentation in the form and context in which it appears.

## **Previously Published Reports**

Information extracted from previously published reports identified in this presentation is available to view on the Company's website [www.lincolnminerals.com.au](http://www.lincolnminerals.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original 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 announcements continue to apply and have not materially changed. 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 announcements.

# Corporate Snapshot



- A **focused emerging graphite producer** with key projects on SA's Eyre Peninsula – a proven world-class flake graphite province
- Mining lease application being processed by SA Government for flagship **Kookaburra Gully Graphite Project**, 35km north of Port Lincoln, South Australia
- Targeting **maiden graphite production** and sales of high purity (>94% TGC) concentrate in **CY2016**



*97.8% TGC graphite concentrate from Kookaburra Gully*

<b>ASX Code</b>	LML
<b>Market Capitalisation</b>	A\$11.8 million
<b>Shares on issue</b>	268.4 million
<b>52 Week range</b>	0.03 – 0.06 cents
<b>Cash at 30 June 2015</b>	A\$0.44 million + R&D refund
<b>Debt</b>	NIL

## Board Snapshot

Non-Executive Chairman - Mr Jin Yubo  
Managing Director - Dr Allan John Parker  
Non-Executive Director - Mr Eddie Lung Yiu Pang

# Investment Case

- **Focused graphite developer** with Australia's highest quality graphite deposit
- Flagship assets **ideally located in close proximity to necessary infrastructure**
- Flagship **Kookaburra Gully Graphite Project**
  - Very **high-grade deposit** ranked in the world's top 10 highest graphite grade resources
  - High purity levels of up to **98% TGC** easily produced by conventional flotation
  - **Substantial resource** located in recognised mining friendly jurisdiction
- Additional high grade resource at historic **Koppio Graphite Mine** extends mine life
- **Direct exposure to graphite and graphite market opportunity**
  - Foundation shareholder in international graphite trading platform headquartered in one of world's most active graphite trading ports
- **Near-term production – CY 2016**
  - Mining Lease in early 2016 (subject to government approvals)
  - Low capital investment and estimated operating costs
- **PACE program** for drilling large Kookaburra Extended graphite target in early 2016

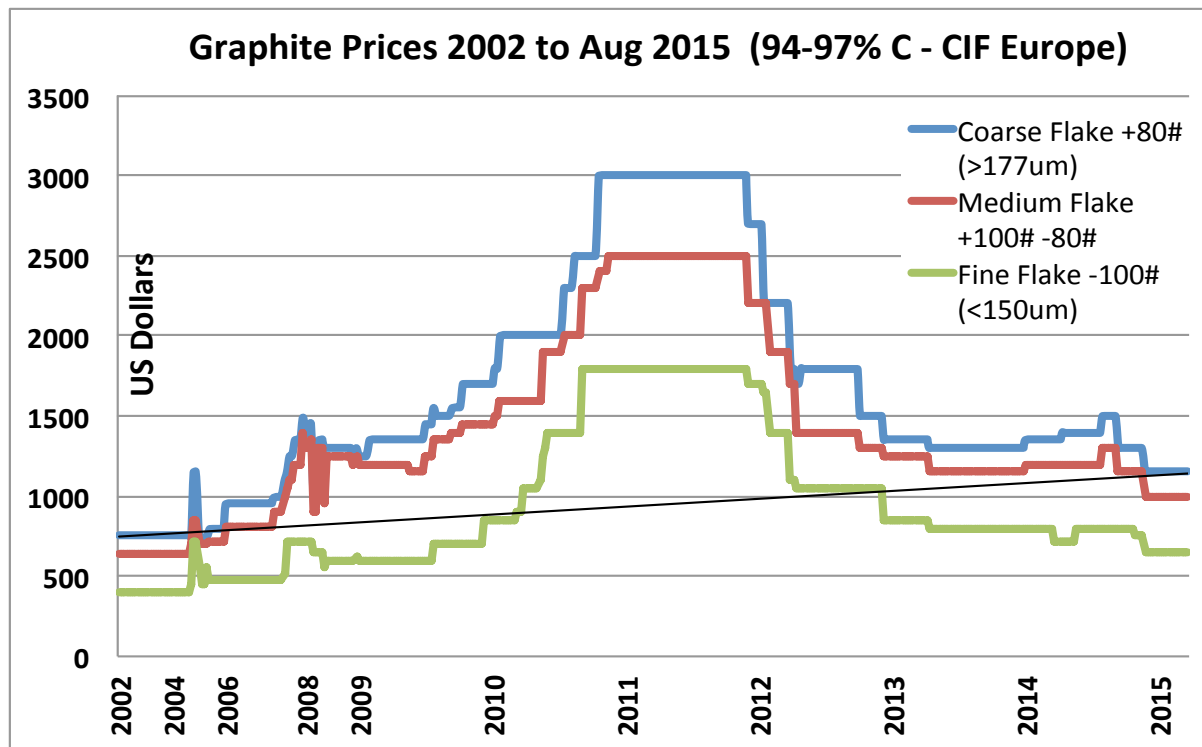


# Graphite Market Fundamentals



## STRONG GROWTH MARKET

- US\$13.6 billion global market
- Growth since 2002 has been approx. 7.5% each year and forecast to grow 3.7% each year (CAGR) from 2014 until 2020
- Expected to reach US\$17.56 billion in 2020
- Demand for graphite and graphene projected to more than double to approx. 2.6Mt per annum by 2020



*Pricing data from Industrial Minerals' premium graphite price charts*

# Graphite Market Fundamentals

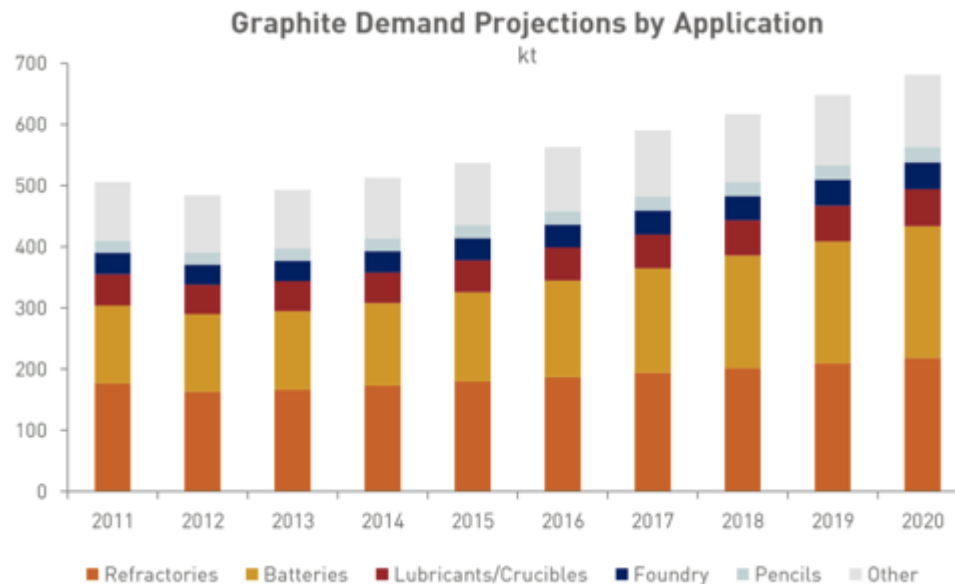


## BATTERY & ENERGY STORAGE COMMERCIALISATION

- Graphite is a key input in the manufacture of lithium-ion batteries
- Batteries widely used in electric vehicles, smart phones, portable computer devices and more – **battery backup for solar powered homes and grid-scale solar power storage and power generation**
- Global demand for battery materials forecast to grow at more than 15% over next three years

## WIDESPREAD INDUSTRIAL APPLICATIONS

- Graphite is used in pencils, dry lubricants, steelmaking, pebble-bed nuclear reactors, solar energy, reinforcements in plastics and much more



*Battery demand to grow by at least 15%*

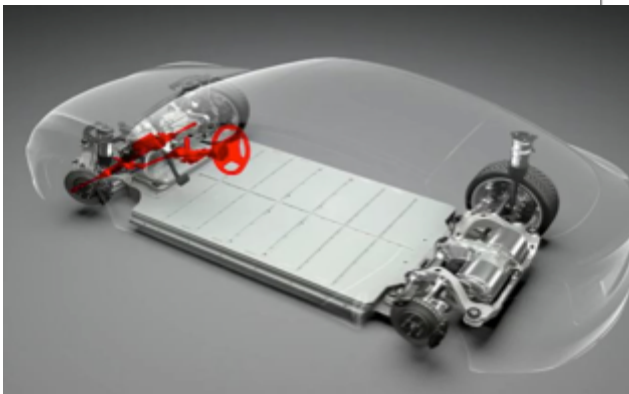
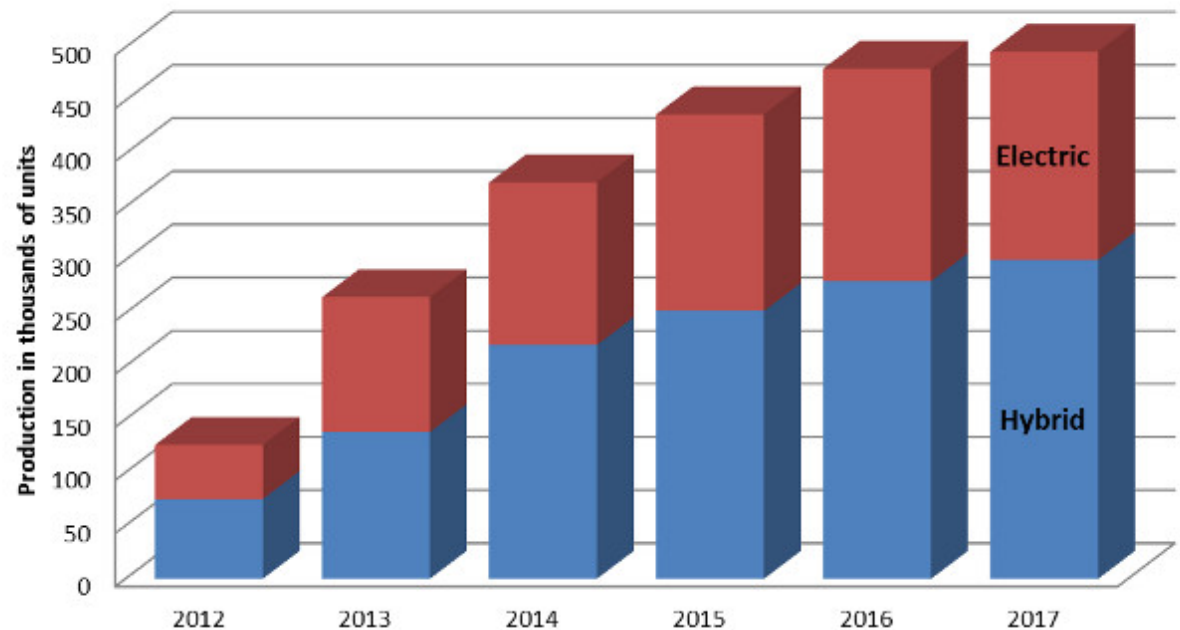
# Graphite Market Fundamentals



## ELECTRIC CAR MARKET

- Demand forecast to increase, driven largely by government plans to increase hybrid & electric cars
- Currently 270,000 electric cars in China – government goal is to increase this to at least 5 million by 2020
- Tesla (USA) produced 10,000 EVs in 2012, 50,000 (projected) in 2015 and their **goal is 500,000 per year**
- Batteries made from natural flake graphite give greater range than batteries made from synthetic graphite

Forecast Production of Hybrid & Electric Cars in China to 2017

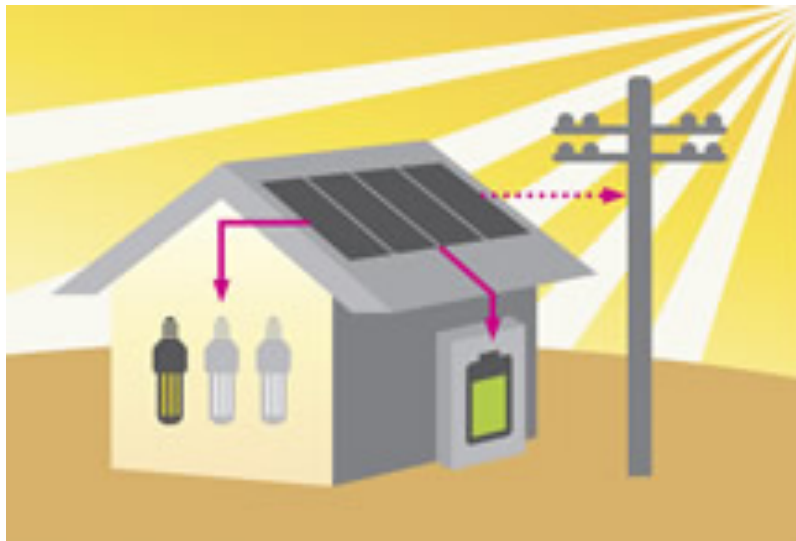


# Graphite Market Fundamentals



## TESLA-ZEN SOLAR BATTERY STORAGE MARKET

- Tesla stated that response to their battery announcement in May 2015 has been **“crazy off the hook,”** with 38,000 reservations for the Powerwall and 2,500 reservations for the higher-capacity Powerpack.
- ***“We’re basically sold out through the middle of next year, in the first week.”***
- Benchmark expects that to produce each Powerwall, 16 kilograms of graphite (or 16 kilograms of spherical graphite derived from 40 kilograms of flake graphite concentrate), as well as 12 kilograms of lithium hydroxide, will be required. For the Powerpacks, Benchmark said those amounts will increase 10 times (about 160 kilograms of spherical graphite).



<http://www.zenenergy.com.au/home/energy-storage/>

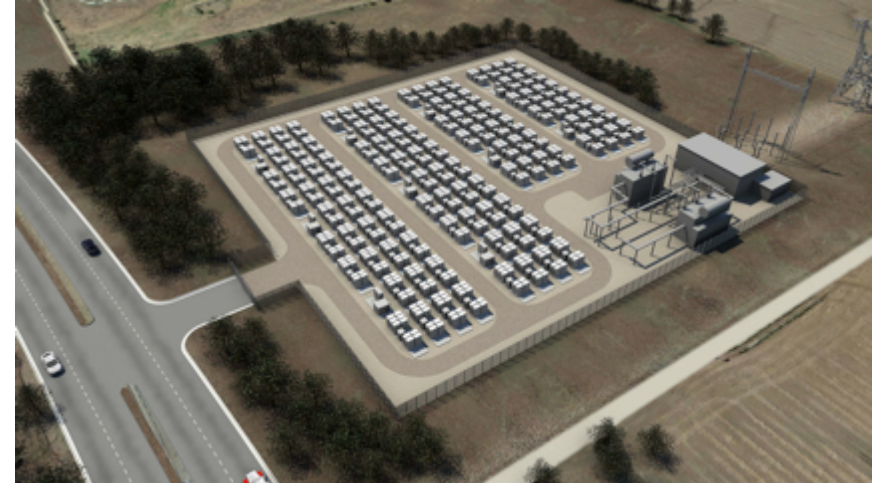


# Graphite Market Fundamentals



## GRID-SCALE GRAPHITE STORAGE SYSTEMS

- Tesla Energy utility scale systems (USA): 100kWh battery blocks are grouped to form 500kWh to 10MWh+ systems to accept energy from grid, solar, wind etc power and feed it back into the grid using bi-directional inverters
- High purity graphite has unique properties => ideal as an energy storage medium (much better than nitrate salt):
  - High melting point (over 3500°C)
  - High specific heat (capacity to hold heat energy)
  - Low emissivity (does not radiate heat readily)
- Thermal energy is stored in high purity graphite then turned into electricity on demand by passing water through tubes embedded in the graphite to make steam to drive a turbine to generate electricity ( EG 3MWe Lake Cargelligo Thermal Power Station in NSW)



<http://www.teslamotors.com>

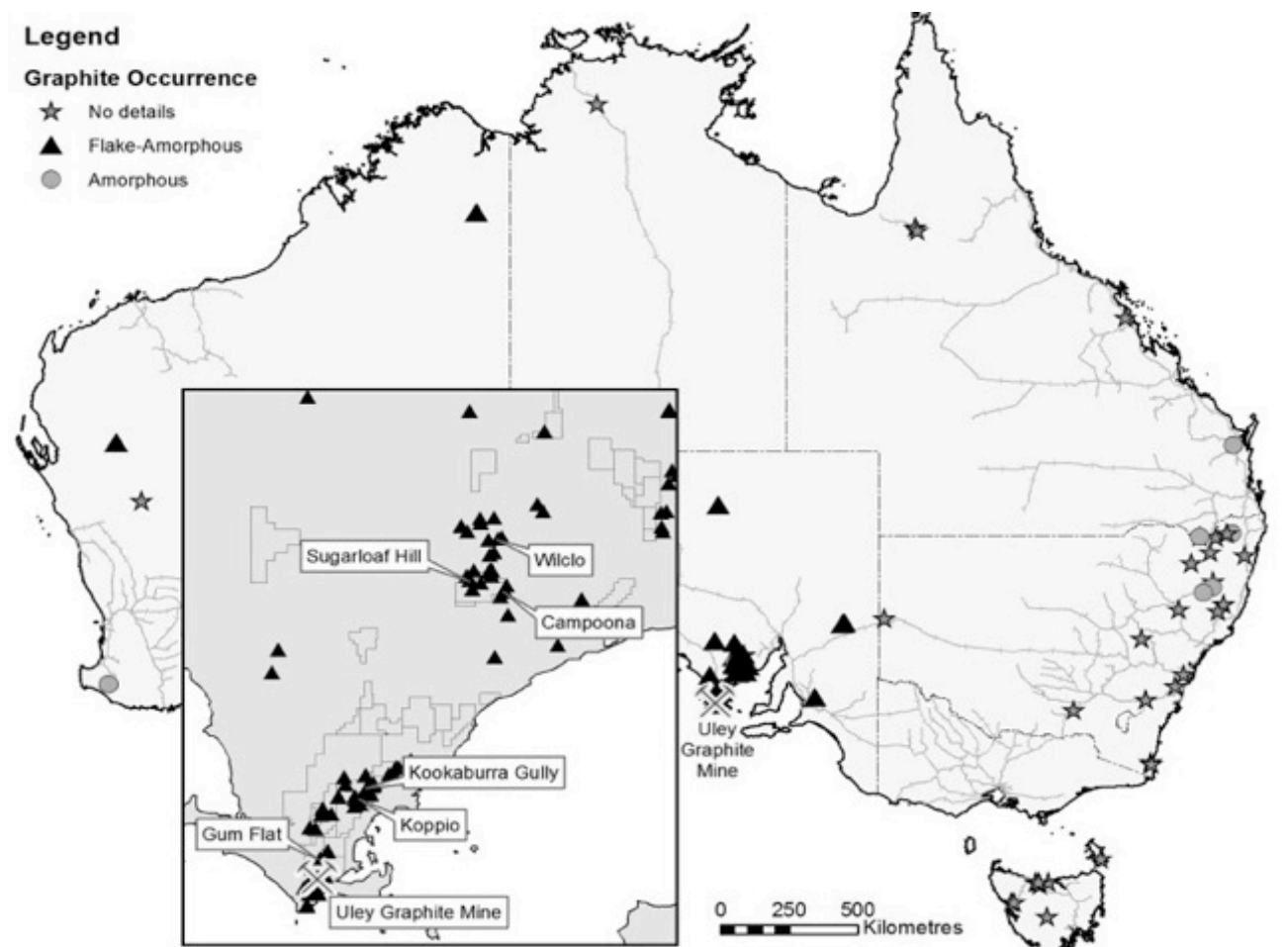


<http://www.graphiteenergy.com>

# World Class Graphite Assets



Significant acreage position in the graphite-rich Eyre Peninsula in South Australia – ranked 19 as world's most attractive destination for mining investment by Fraser Institute

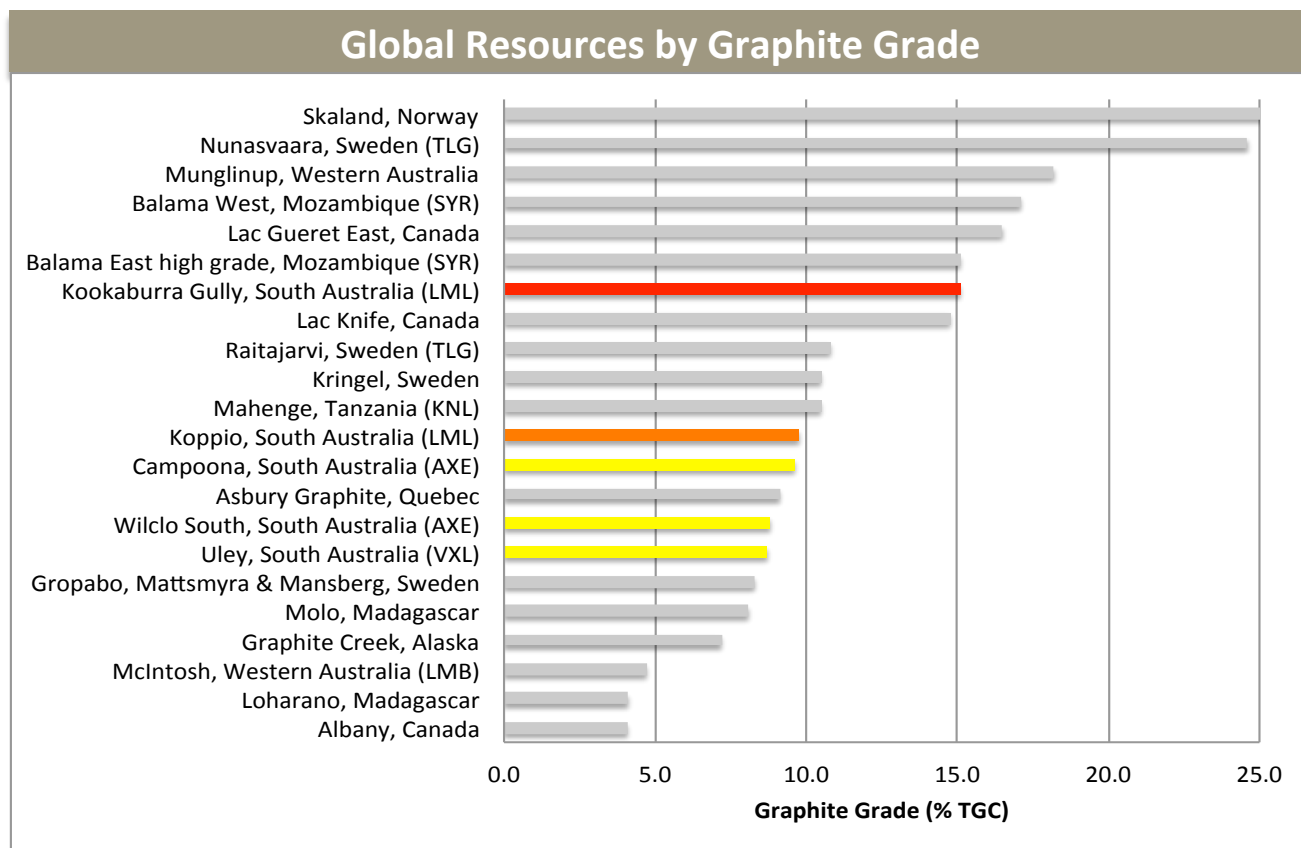


# Kookaburra Gully

## High-grade and Quality Graphite Resource

JORC Mineral Resource:

- **2.2 Mt Indicated and Inferred at 15.1% TGC (5% TGC cutoff)**
- or 3.16 Mt Indicated and Inferred at 11.5% TGC (2% TGC cutoff)



*“Kookaburra Gully is within the Top 10 global resources based on graphite grade and is capable of delivering near-term production at low cost.”*

TGC = Total Graphitic Carbon

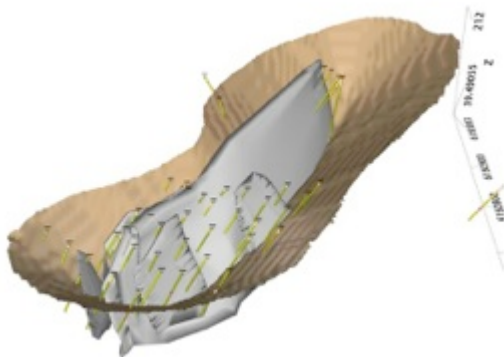
# Kookaburra Gully – Robust Scoping Study



- Small open pit & process plant (cf Uley Graphite Mine) = **small environmental footprint**
- Process 250,000 tonnes per annum (tpa) ore
- Produce up to 40,000tpa of high grade (93-98% TGC) graphite concentrate

## Realisable infrastructure solutions

- Water – pipeline from Tod Reservoir (10 km) + mains water for final product cleaning
- Power – onsite generation and grid – ca. 5km from 33 kV transmission line (2-4 MW)
- Transport to Port Lincoln (35km) in bulka bags or in containers to Port Adelaide for shipping



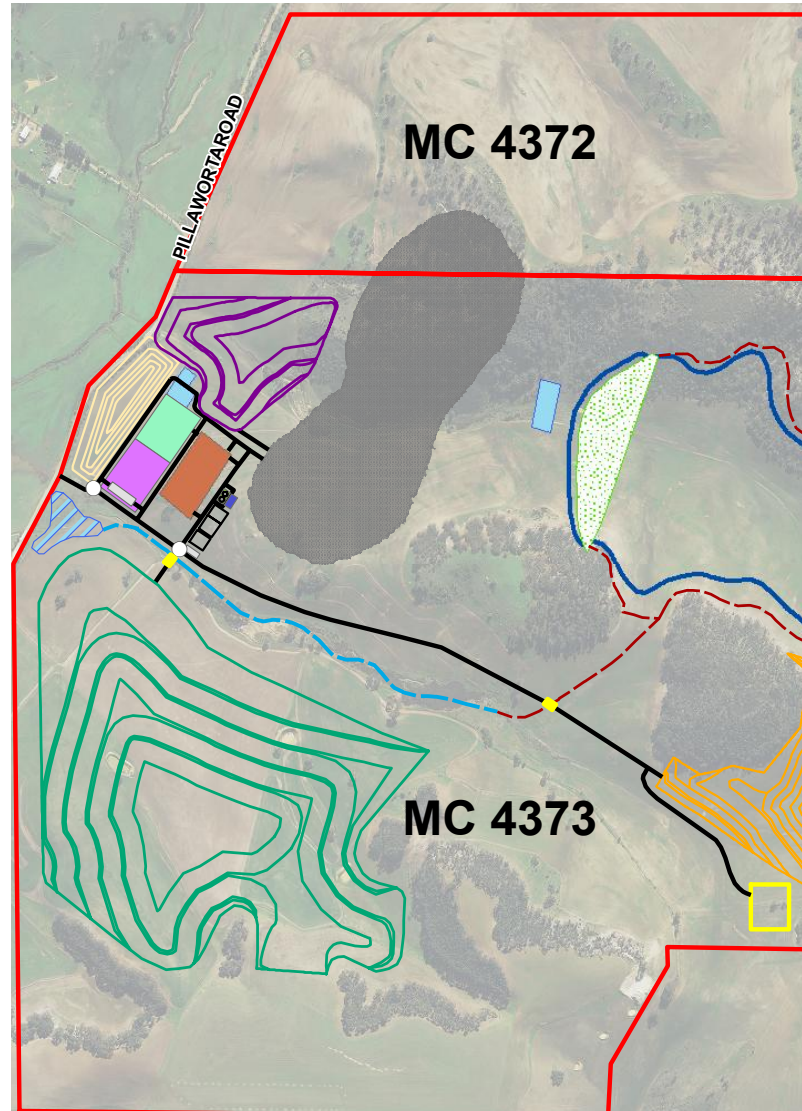


# Kookaburra Gully Conceptual Mine Plan



## Main components

- Open pit mine
- Enclosed processing and storage sheds
- Pit & all infrastructure total approx. 110 hectares
- No major groundwater issues
- Mineral Claims pegged and registered
- **Mining Lease Application lodged & in progress**



### Legend

- Roundabout
- - - Drainage channel
- - - Natural channel
- - - North West waste dump
- - - South waste dump
- Road
- Subsoil stockpile
- Topsoil stockpile
- Mineral claim boundary
- Carpark
- Fuel storage
- Fuel storage & refill area
- Hard stand
- Offices
- Drainage structure
- Magazine
- Process plant
- Offices/admin
- Proposed pit
- Silt detention pond
- ROM pad
- Tailings storage facility
- TSF embankment
- Water storage/treatment





# Kookaburra Gully – Robust Project Economics

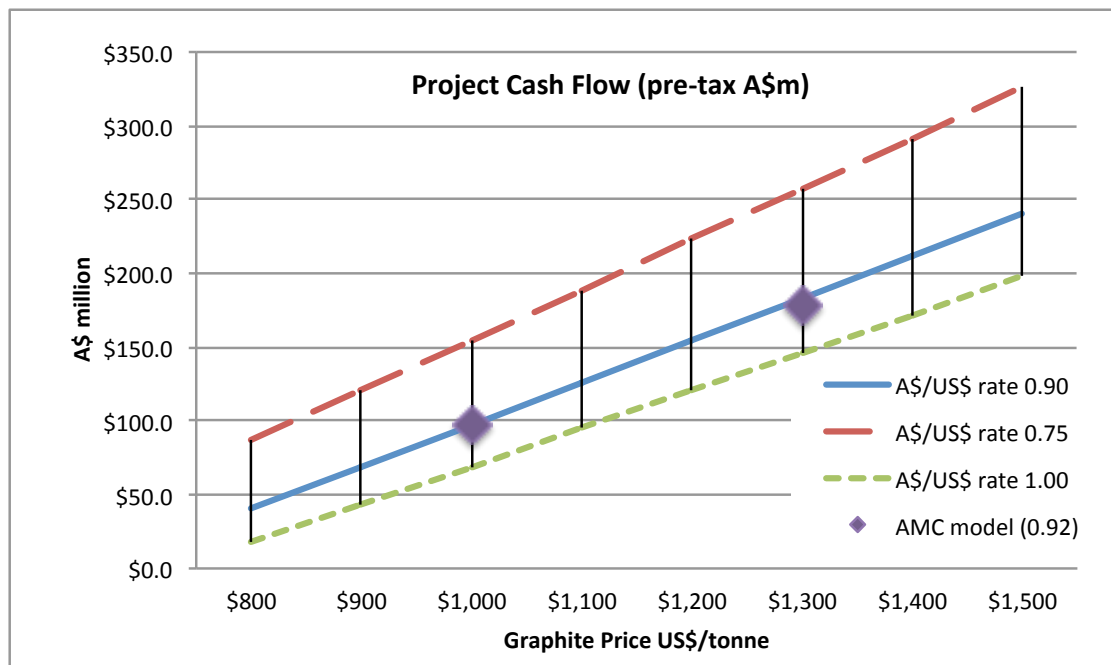


*Low capital investment less than \$50 million and competitive cash operating costs*

Scenario	Graphite Price (A\$/t conc)	Life (yrs)	Production				Operating Cost (\$/t conc)
			Plant feed	Feed %TGC	Concentrate	Conc %TGC	
Low revenue	\$1,077	6.2	1.55 Mt	15.7	233 kt	94.0	\$630
High revenue	\$1,382	7.2	1.80 Mt	15.4	256 kt	97.0	\$704

*AMC Conceptual Mine Plan  
(based on 2012-13 prices)*

*2015 graphite price range  
for Kookaburra Gully  
concentrate (A\$/US\$ = 0.75):  
A\$1,040 to A\$ 1,595 /tonne*

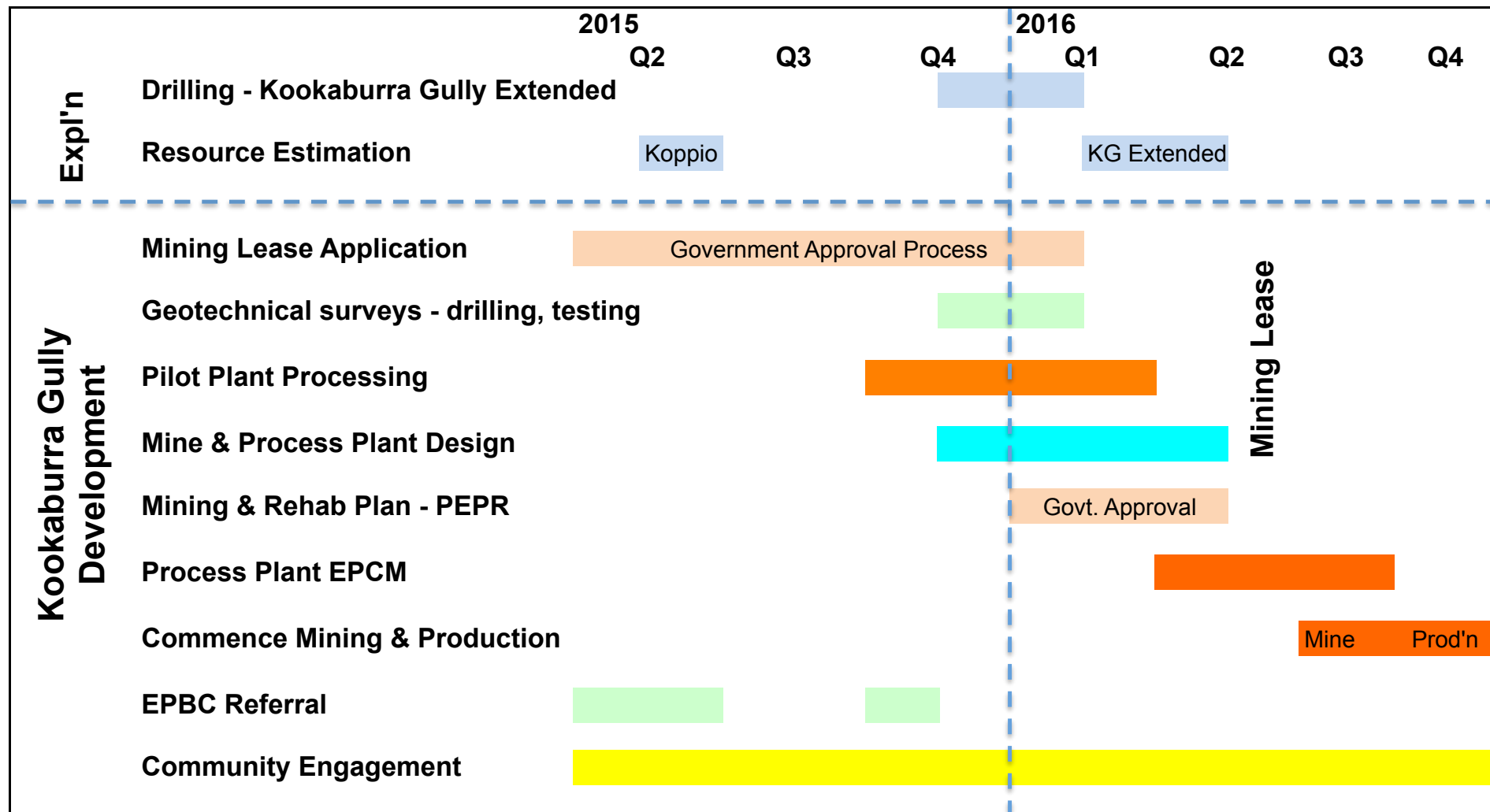


# Upside potential with world-class assets



Project	Current Status	2015- 2016
<b>KOOKABURRA GULLY</b>	<ul style="list-style-type: none"> <li>Indicated &amp; Inferred JORC Mineral Resource</li> <li><b>2.2 Mt @ 15.1% TGC</b></li> <li>Scoping studies completed</li> <li>Mineral Claims pegged</li> <li><b>Mining Lease Application submitted Feb 2015</b></li> </ul>	<ul style="list-style-type: none"> <li>Pilot plant metallurgical studies</li> <li>Customer and market development</li> <li><b>Obtain ML &amp; approval to mine</b></li> <li><b>Develop &amp; commission mine &amp; process plant in 2016</b></li> </ul>
<b>KOPPIO GRAPHITE MINE</b>	<ul style="list-style-type: none"> <li>Historic mine</li> <li><b>1.85 Mt @ 9.8% TGC</b></li> <li>High grade mineralization up to 43% TGC over 500m strike length</li> </ul>	<ul style="list-style-type: none"> <li>Drilling completed in 2014</li> <li>JORC Resource July 2015</li> <li>Metallurgical tests underway</li> </ul>
<b>KOOKABURRA GULLY EXTENDED</b> (Immediate target)	<ul style="list-style-type: none"> <li>EM survey completed</li> <li>4.5km long EM anomaly</li> <li>Approval to drill received</li> </ul>	<ul style="list-style-type: none"> <li>Drilling &amp; JORC Resource 2016</li> <li>Large exploration target</li> <li><b>2015 PACE program grant</b></li> </ul>
<b>GUM FLAT-SLEAFORD</b> (Long-term target)	<ul style="list-style-type: none"> <li>Adjacent Uley Graphite Mine</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targeted 2016</li> </ul>

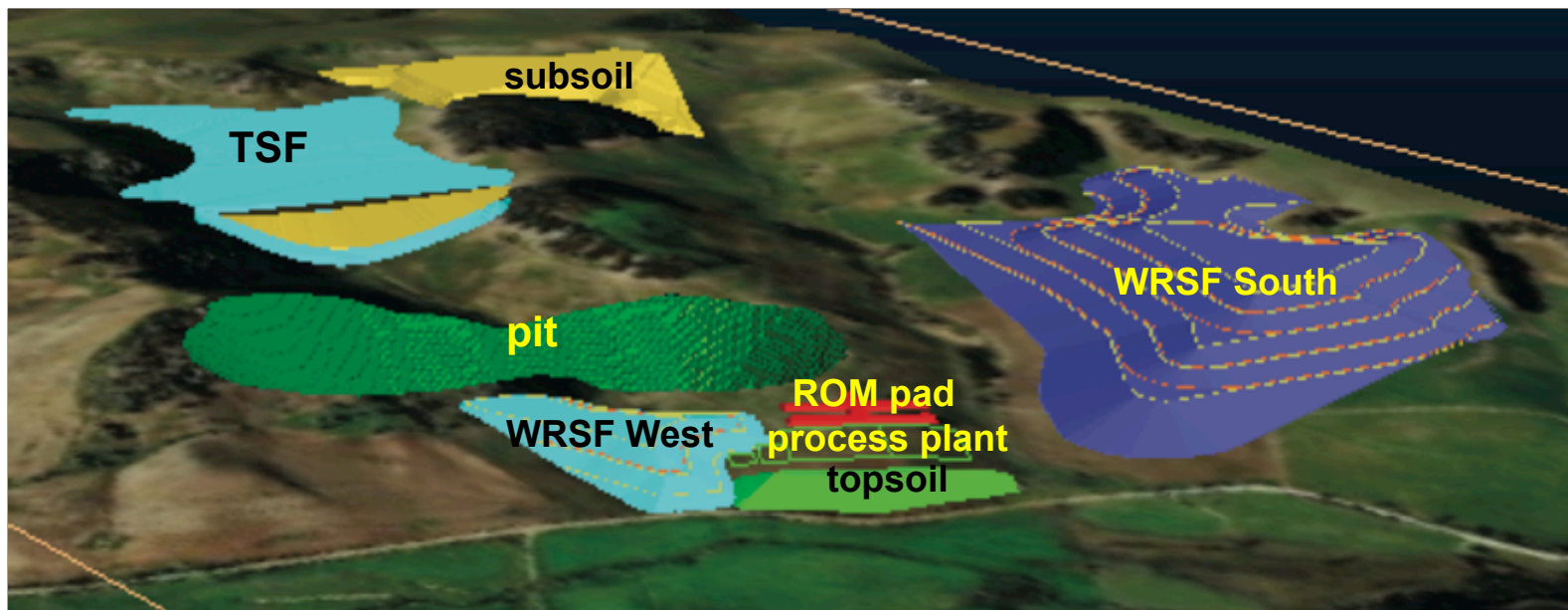
# Production to commence in CY2016



*Subject to finance and Government approvals*

# Summary

- **Focused graphite company** with Australia's highest quality graphite deposit
- Flagship assets **ideally located in close proximity to necessary infrastructure**
- Flagship **Kookaburra Gully Graphite Project**
  - Very **high-grade deposit** ranked in the world's top 10 highest graphite grade resources
  - High purity levels of up to **98% TGC** easily produced by conventional flotation
  - **Substantial resource** located in recognised mining friendly jurisdiction
- Additional high grade resource at historic **Koppio Graphite Mine** extends mine life
- **Direct exposure to graphite and graphite market opportunity**
  - Foundation shareholder in international graphite trading platform headquartered in one of world's most active graphite trading ports
- **Near-term production – CY 2016**
  - Mining Lease in early 2016 (subject to government approvals)
  - Low capital investment and estimated operating costs
- **PACE program** for drilling large Kookaburra Extended graphite target in early 2016



**THANKYOU**

**Dr. A. John Parker**

**Managing Director  
LINCOLN MINERALS LIMITED**

**+61 8 8274 0243**

**[jparker@lincolnminerals.com.au](mailto:jparker@lincolnminerals.com.au)**





# Appendix

This presentation has been prepared by Lincoln Minerals Limited ("LML") as an aid to a spoken explanation. The information contained in this presentation is based on a number of public statements, Quarterly Reports and ASX releases made by LML:

## References

- Lincoln Minerals, 2012. Scoping study completed for Eyre Peninsula graphite. *Lincoln Minerals limited, ASX Announcement* 19 September 2012.
- Lincoln Minerals, 2013. Updated Graphite Mineral Resources for Lincoln's world-class Kookaburra Gully project in South Australia's Eyre Peninsula. *Lincoln Minerals Limited, ASX Announcement* 19 December 2013.
- Lincoln Minerals, 2014. 2013-2014 Annual Report. *Lincoln Minerals Limited October 2014*.
- Australian Graphite Limited, 2015. Community Information Update No.3, Kookaburra Gully Graphite Mine, Mining Lease Proposal. *Lincoln Minerals Limited, ASX Announcement February 2015*
- Lincoln Minerals, 2015. Maiden graphite resource for second Lincoln deposit in SA's Eyre Peninsula lifts total inventory by >50% in this world-class province. *Lincoln Minerals limited, ASX Announcement* 13 July 2015.

*Information extracted from previously published reports identified in this report is available to view on the Company's website [www.lincolnminerals.com.au](http://www.lincolnminerals.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original 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 announcements continue to apply and have not materially changed. 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 announcements.*



# Kookaburra Gully Mineral Resource

**Table 1. Kookaburra Gully Mineral Resource at a nominal 5% TGC lower cut-off grade**

Mineral Resource Classification	Tonnage (Mt)	Average Grade (% TGC)	Contained Graphite (tonnes)	Density (g/cc)
Indicated	1.47	13.9	204,352	2.57
Inferred	0.73	17.3	127,425	2.52
<b>TOTAL (&gt;5% TGC)</b>	<b>2.20</b>	<b>15.1</b>	<b>331,778</b>	<b>2.55</b>

*Mt = million tonnes TGC = Total Graphitic Carbon*

**Table 2. Kookaburra Gully Mineral Resource at a nominal 2% TGC lower cut-off grade**

Mineral Resource Classification	Tonnage (Mt)	Average Grade (% TGC)	Contained Graphite (tonnes)	Density (g/cc)
Indicated	2.10	10.6	223,349	2.56
Inferred	1.13	12.2	137,370	2.52
<b>TOTAL (&gt;2% TGC)</b>	<b>3.23</b>	<b>11.2</b>	<b>360,719</b>	<b>2.54</b>

*Mt = million tonnes TGC = Total Graphitic Carbon*

## Reference

Lincoln Minerals, 2013. Updated Mineral Resources and Metallurgy for Lincoln's world-class Kookaburra Gully project in South Australia's Eyre Peninsula. *Lincoln Minerals Limited, ASX Announcement* December 2013.



# Koppio Mineral Resource

Table 2. Total combined Mineral Resources for Koppio and Kookaburra Gully

Mineral Resource Classification	Cutoff Grade (% TGC)	Tonnage (Mt)	Average Grade (% TGC)	Contained Graphite (tonnes)	Density (g/cc)
<b>Koppio</b>					
High-grade Core (Domain 1) – Inferred	5%	1.85	9.76	180,733	2.67
Low-grade Halo (Domain 2) – Inferred	2%	1.21	3.18	38,560	2.80
<b>Kookaburra Gully</b>					
High-grade Core (Domain 1) - Indicated	5%	1.45	13.74	199,193	2.56
Low-grade Halo (Domain 2) – Indicated	2%	0.62	3.04	18,984	2.54
High-grade Core (Domain 1) – Inferred	5%	0.73	16.17	117,964	2.50
Low-grade Halo (Domain 2) – Inferred	2%	0.40	2.91	11,538	2.54
<b>TOTAL (&gt;2% TGC)</b>		<b>6.26</b>	<b>9.05</b>	<b>566,972</b>	<b>2.63</b>

*Mt = million tonnes TGC = Total Graphitic Carbon*

## Reference:

Lincoln Minerals, 2015. Maiden graphite resource for second Lincoln deposit in SA's Eyre Peninsula lifts total inventory by >50% in this world-class province. *Lincoln Minerals limited, ASX Announcement* 13 July 2015.