

VALENCE  
INDUSTRIES

# Valence Industries

Australia's Only Graphite Producer

Asia Pacific | Europe | North America

October 2014

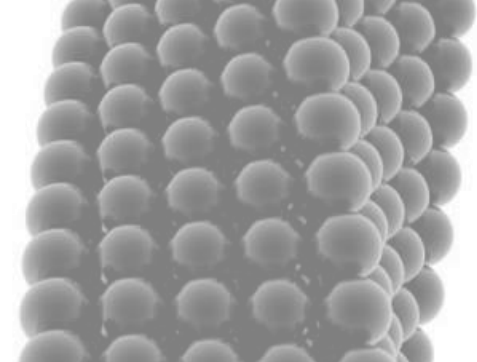
**Christopher S. Darby**  
CEO & MD

Manufacturing our Carbon Future™

[www.valenceindustries.com](http://www.valenceindustries.com)

**Valence** (noun): the combining power of an element, especially as measured by the number of hydrogen atoms it can displace or combine with: carbon always has a valence of 4.

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ASX : VXL  
ASX : VXLO



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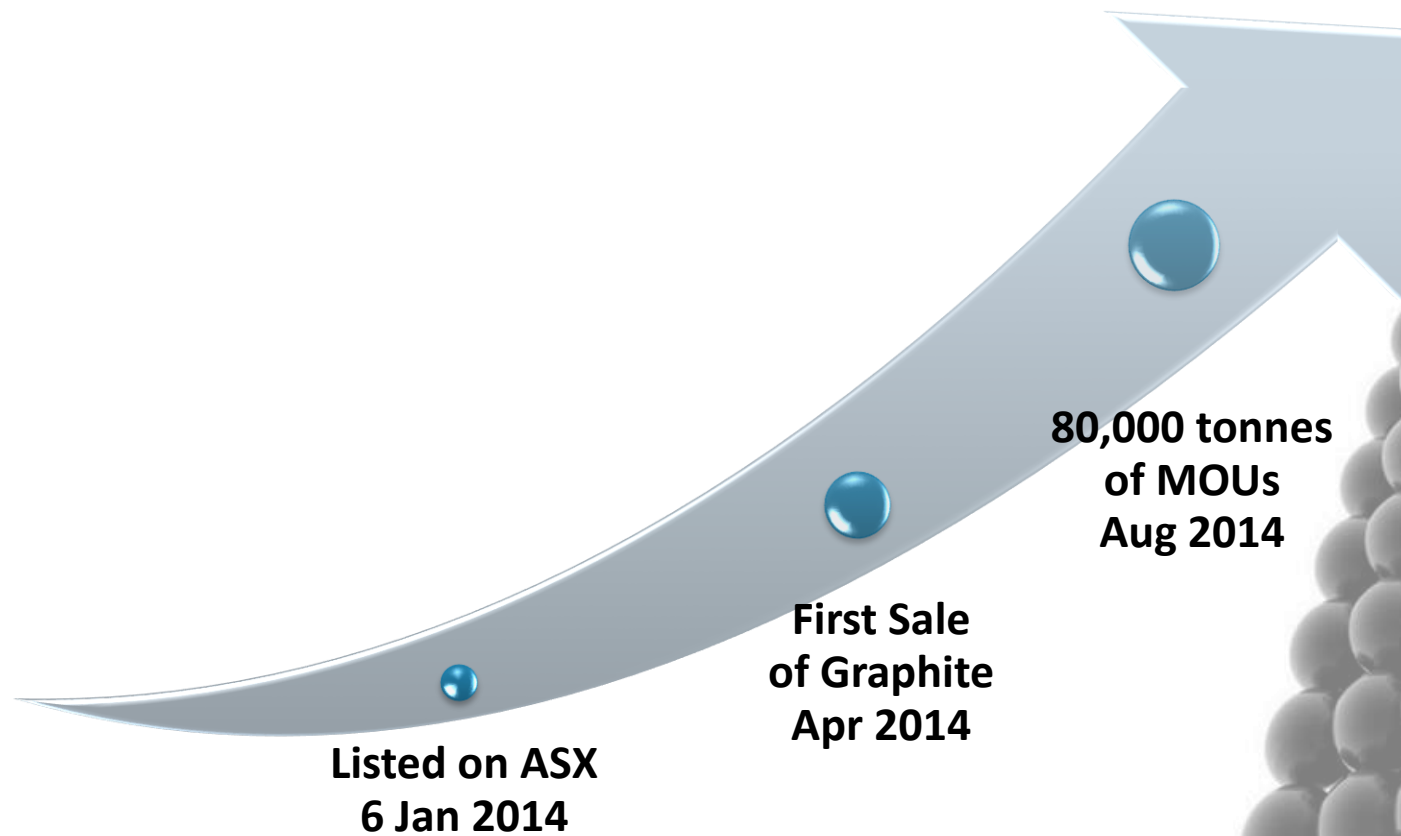
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The information in this presentation which relates to Indicated & Inferred Mineral Resources compiled in accordance with the JORC Code 2012 is based on information supplied by Ms. Karen Lloyd, Mr. Ingvar Kirchner & Ms. Ellen Maidens as detailed in the Company's Replacement Prospectus released as an ASX announcement on 18 November 2013. The Company confirms that it is not aware of any new information included in this presentation. Valence confirms that all material assumptions underpinning the estimates in this report continue to apply & have not materially changed. The Company confirms that the form & content in which the Competent Person's findings are presented have not been materially modified. The information in this announcement that relates to the Mineral Resources pertaining to the Company's in-fill drilling campaign results is based on information compiled by Ms Karen Lloyd, who has been engaged as General Manager – Technical Delivery by Valence Industries. Ms Lloyd is a Member of the Australian Institute of Mining & Metallurgy. Ms Lloyd has sufficient experience that is relevant to the style of mineralisation & type of deposit under consideration & to the activities being undertaken to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources & Ore Reserves". Ms Lloyd consents to the inclusion in this release of the matters based on their information in the form & context as it appears. This presentation also references information, that has not been updated since, previously announced on 6 August 2014 & 9 October 2014.

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# Valence Industries 2014





# Corporate Overview

## ASX Code: VXL & VXLO

Ordinary Shares on issue	185.7m
Options on issue	68.5m
Market cap (@70 cents)	\$130m
Cash (End Q3 2014)	~\$14.5m
Debt	Nil



# Corporate Overview

## Major Shareholders

Strategic Energy Resources Ltd (Restricted)	11.74%
HSBC Custody Nominees (Australia) Ltd	4.80%
Avatar Energy Pty Ltd	4.14%
EERC Australasia Pty Ltd	3.57%
Chimaera Capital Ltd	2.48%

Top 20 shareholders hold 45.60%

## Directors & Senior Management

Graham Spurling AM, Chairman

Christopher S. Darby, CEO & MD

Glenister Lamont, Non-exec Director

Ian Schache, Non-exec Director

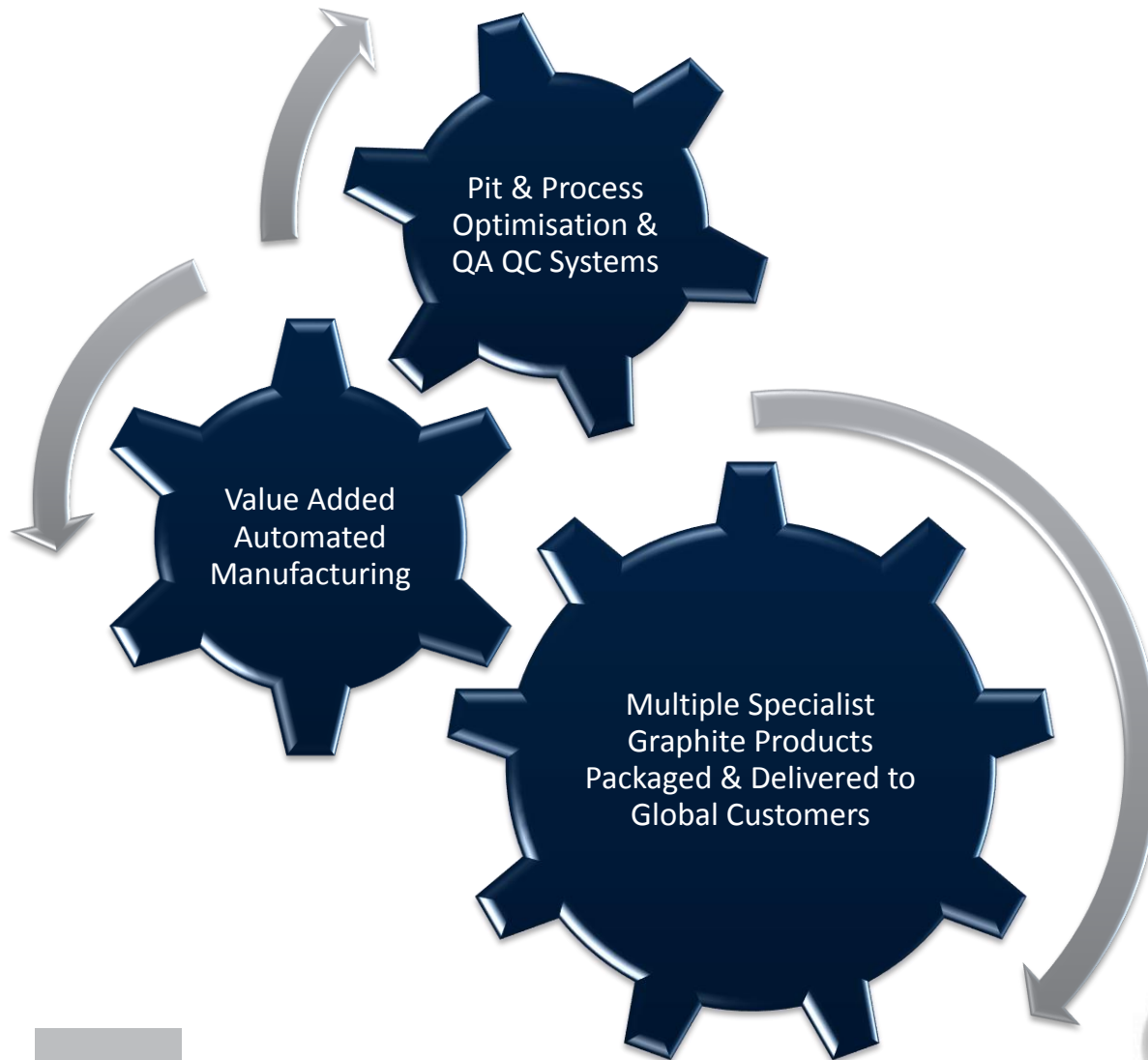
Jarek Kopias, CFO & Co. Sec.

Karen Lloyd, GM Technical Delivery

David J. Salari (P.Eng), Chief Dev. Officer



# Vertically Integrated Manufacturing







# Uley Graphite Phases

## Phase I

Recommission 14000/t  
Primary Process Circuit  
2ndry Process Circuit  
30+ Personnel  
Start Manufacturing  
9+ Month Stockpiles  
First Customer Sales  
Regulatory Approvals  
Recruitment

2014

## Phase II

Complete Phase II BFS  
New Plant Capex  
~\$34-\$35M  
Expand Capacity by  
~50000 tpa ++  
New Open Pit Mining  
Operate Existing  
Facilities ~14000 tpa  
90+ Personnel  
Increase Sales

2014 - 2015

## Phase III & IV

Complete Studies  
High Purity Processing  
Significant Value Add  
Direct Entry Tech &  
Battery Markets  
Associated Graphene  
Research Program  
New & Disruptive  
Technologies  
Advanced  
Manufacturing

2014 - 2016



# Phase I – Existing Plant

- 14,000 tonnes of graphite per year (smaller scale facility than Phase II)
- Proven historical production capability (working model for Phase II expansion)
- Established site workshop & support infrastructure
- Close to Port & Light Industry (15 minutes)
- Undergone Complete Refurbishment in 2014
- Site Operations Crews Recruited (No FIFO)
- ROM Stockpiles First for Production (lower grades than Uley Pit 2)
- Plant Ready as Planned & Now Waiting on Final SA Governmental Approvals







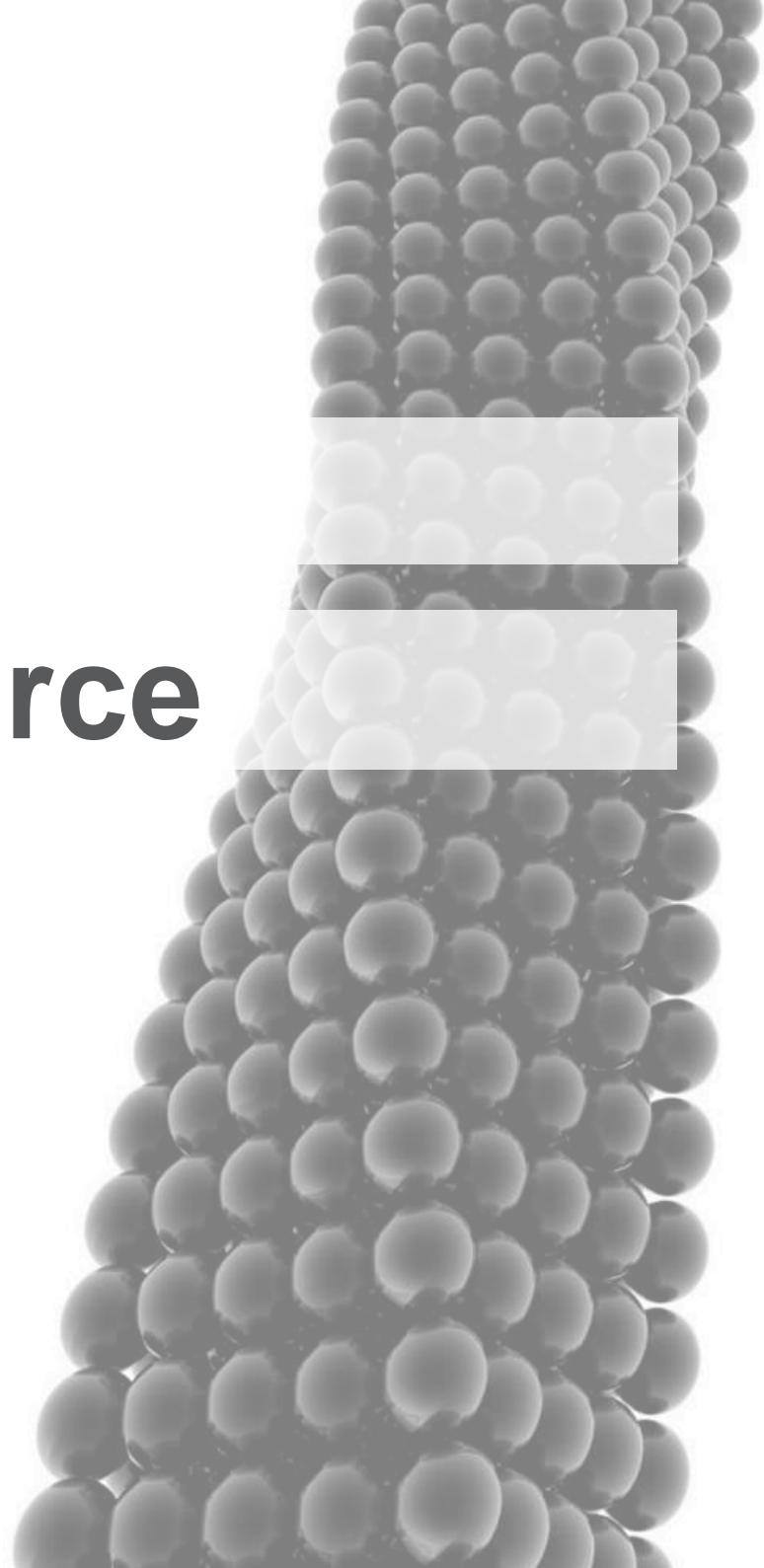
# Phase II Feasibility Program

<b>Capital Cost</b> (Capex)	\$34M-\$35M	Anticipated capex is consistent with 2013 Scoping Study but with significant proposed increase in potential processing capacity. The capex requirements remain relatively modest & will be met from a balance of debt, vendor financing & other capital assessed by reference to risk, production build up & working capital criteria.
<b>Operating Cost</b> (Opex)	\$450-\$500 (per tonne of graphite concentrate)	Anticipated opex is lower than the level estimated in the 2013 Scoping Study of AUD\$650 per tonne of graphite concentrate. This opex level is considered to be globally competitive.
<b>Average Sales Price</b>	USD\$1,400 (per tonne of graphite concentrate)	Consistent with anticipated average sales price expressed in 2013 Scoping Study. Confirmed prices by reference to current customer engagement by Valence Industries.
<b>Phase II Plant Capacity</b>	Phase IIA – 50,000 (tonnes of graphite concentrate per year) + Phase IIB – 50,000 (tonnes of graphite concentrate per year)	This is consistent with the 50,000 tpa capacity planned in the 2013 Scoping Study but provides a new flexibility to increase output capacity by a further 50,000 tpa taking total Phase I & Phase II capacity to a potential 114,000 tonnes of graphite concentrate each year.
<b>Uley Pit 2</b>	Open pit free-dig operations.	Consistent with 2013 Scoping Study the in-fill drilling campaign has verified ability to implement free dig open pit operations for proposed Uley Pit 2 to feed Phase I Plant & Phase II Plant.



# Valence Industries

## **Geology & Resource**





# JORC 2012 Mineral Resource

## Valence Industries Uley Graphite Main Road Uley Pit 2 (JORC 2012)

Resource Classification	Lower Cutoff Grade (% Graphitic Carbon)	Tonnage (Mt)	Average Grade* (% Graphitic Carbon)
Indicated	3.5	1.9	10.7%
Inferred	3.5	4.5	5.5%
<b>Total</b>		<b>6.4</b>	<b>7.1%</b>

\*\*see JORC Statement on Page 2

**ROM Stockpiles 174,000t  
@ 6.23% Graphitic Carbon**

Stockpile	Volume m <sup>3</sup>	SG	Tonnes
1	25,903	2.5	174,000
2	18,161	2.6	
3	24,748	2.4	
4	1,406	2.1	

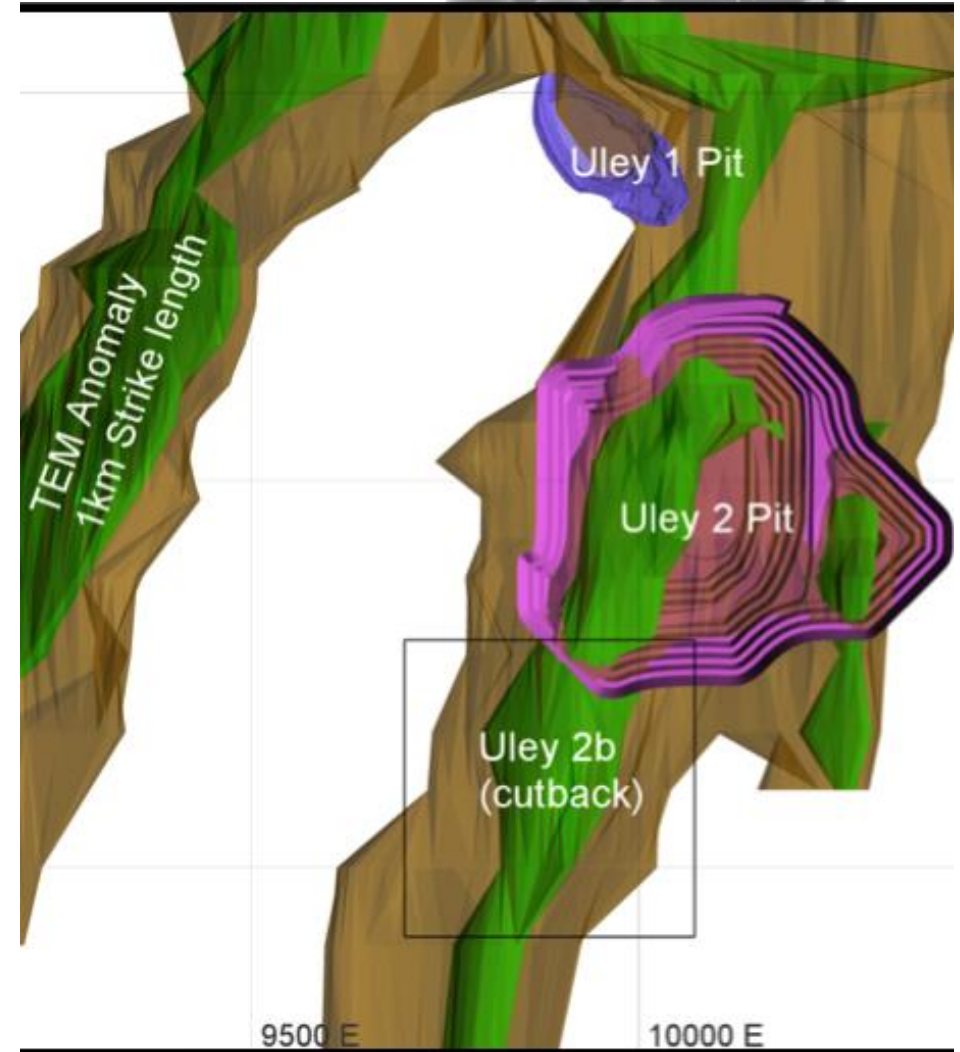
Independent Survey (Maptek 2014)  
ISO 9001 Assay (ALS Adelaide, 2014)

\*\*see JORC Statement on Page 2



# 2014 Drilling campaign

- In fill drilling campaign completed
- Geo-model & Drill Data indicate old Uley Pit 1 did not intersect high grade zones (GREEN) *(despite sitting on regional geophysical high)*
- Uley Pit 2 (PINK) Targets fold limb extension of Uley Pit 1
- Uley Pit 2 is across higher grade zones & has simpler geology *(discrete & continuous lodes)*
- Grades now confirmed as Globally Unique
- Discovery of new mineralised graphitic zone with Arterial Flake™ graphite
- Revised JORC 2012 statement upgrading existing Mineral Resource to an Ore Reserve within weeks







# 2014 Drill Campaign

- Revised model indicates significant multiple lodes
- Assays show very high grade flake graphite in previously known area 47%gC ++
- Discovery of New Graphite Zone \(*mineralised pegmatite*\)
- New zone exceptionally high grade graphite
- Significant Intersections & with substantive graphite between Very High Grades







# VXL Arterial Flake™

60%+

- Globally Unique Flake Graphite Grades

Super  
Jumbo  
Flake

- Exceptionally Large Graphite Flake Sizes +5 Mesh (4mm+)

Arterial  
Flake™

- Game Changing & Beyond Any Other Flake Graphite Material

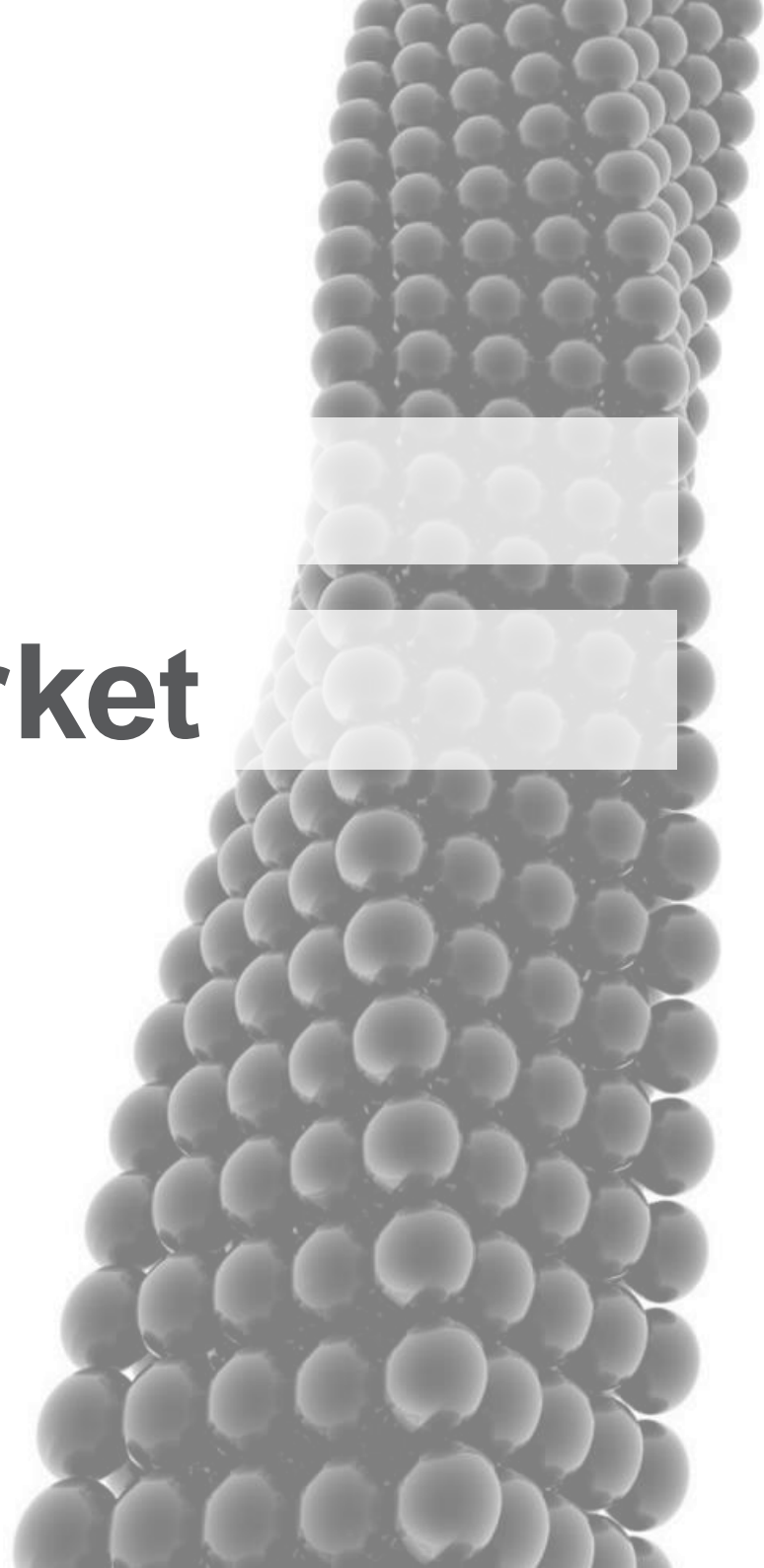


Core sample from new pegmatite zone



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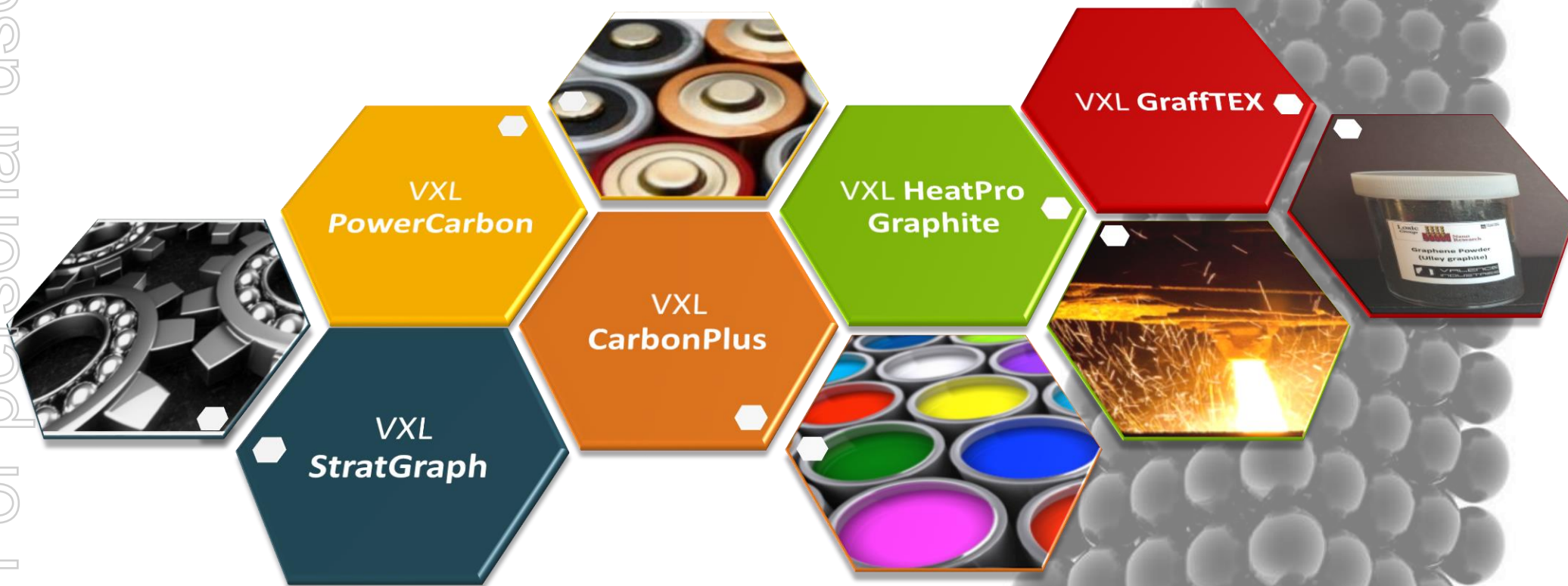
## **VXL Graphite Market**





# VXL Graphite Products

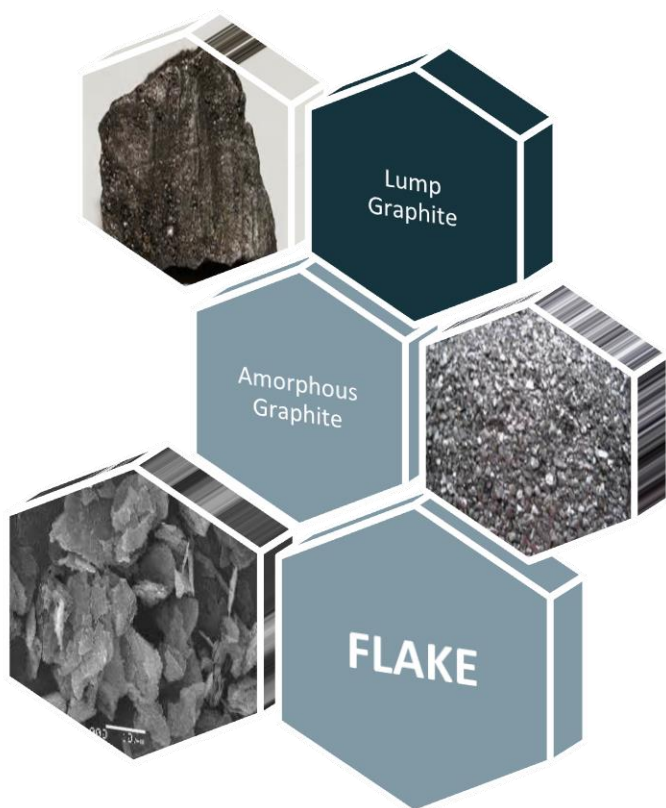
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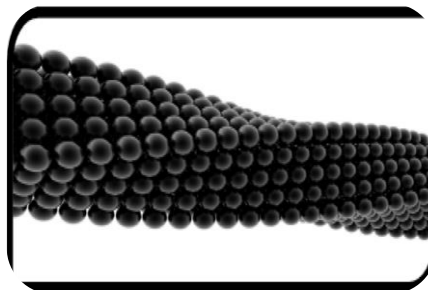


# Graphite Facts



HIGH PURITY FLAKE GRAPHITE IS IN VERY LIMITED SUPPLY

- Graphite is relatively common, but high purity, large flake graphite is rare
- China, the world's major graphite producer is closing polluting operations



- Valence manufactures high purity flake graphite products for multiple applications
- Selling to traditional & new technologies

NEW TECHNOLOGIES ARE DRIVING DEMAND FOR HIGH PURITY FLAKE GRAPHITE

- New technologies require high purity graphite
- Valence's Uley graphite is very low in impurities



# VXL Product Ranges

- Broad range of graphite products
- Globally diversified by region
- Product review initiated using historical production stored at site
- Valence seen as a politically stable source of supply for customers



**+595**

- Premium Product + High Demand
- Consistent High Purity + High Quantity

**+895**

- Premium Product + High Demand
- Consistent High Purity + High Quantity

**-195**

- High Quality + Sustained Demand
- Consistent High Purity + Consistent Quantity

**-295**

- High Quality + Sustained Demand
- Consistent High Purity + Consistent Quantity

**-395**

- High Quality + Increasing Demand
- New Applications + New Markets
- Consistent High Purity + Consistent Quantities

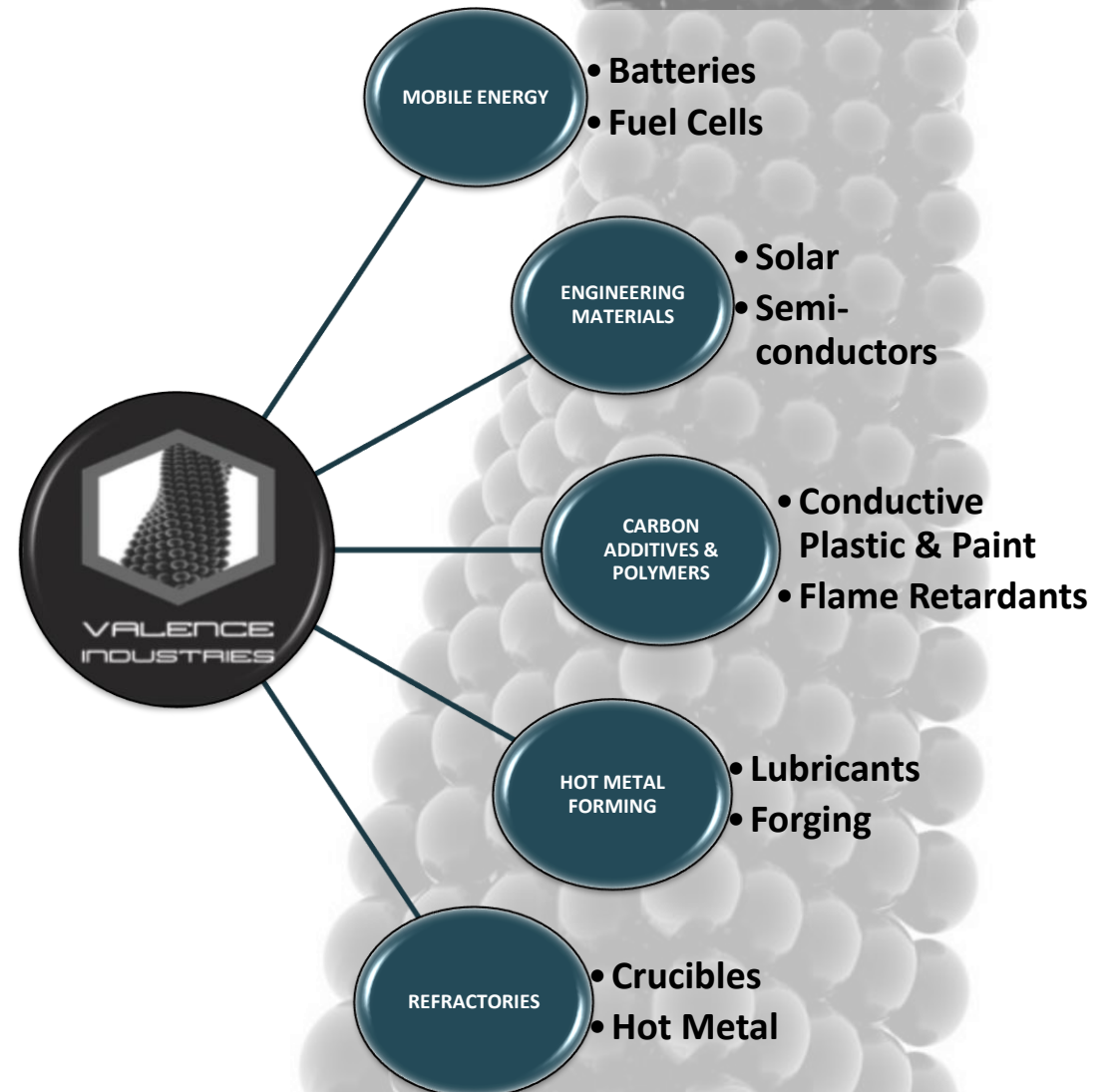
Illustrative of selected VXL +50 Mesh 95% Graphite Products





# Commercialisation & Sales

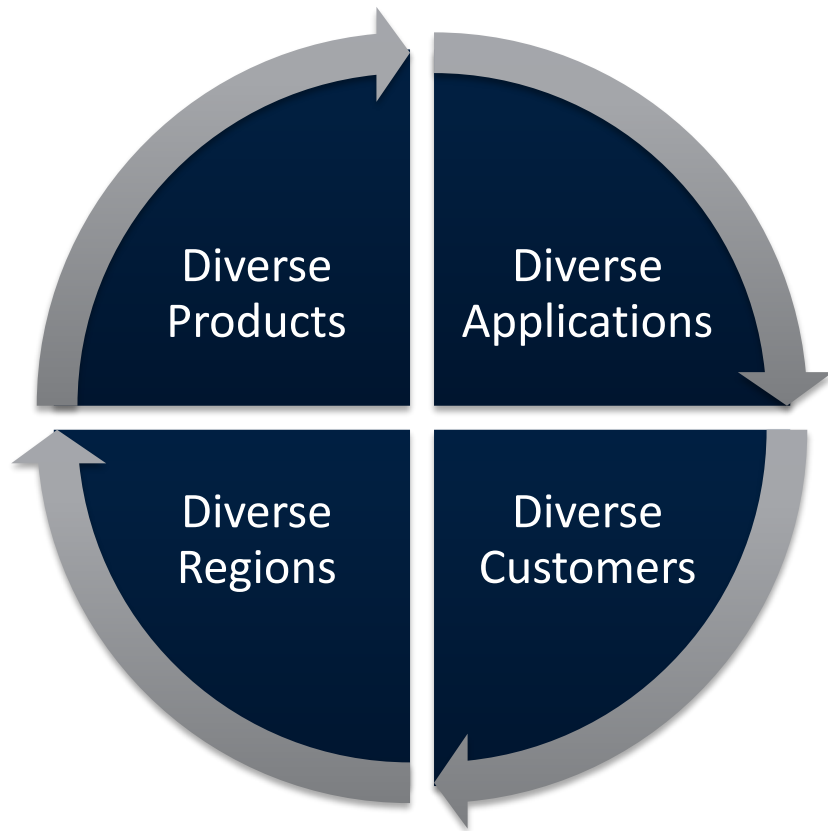
- Phase I & Phase II first target traditional markets as baseline (*refractories, crucibles, foundry applications & lubricants*)
- Phase III targets specialist & high purity markets (*batteries, fuel cells etc*)
- Customer engagement & product review process takes a long time (*Uley Graphite products have been in qualification process for 2+ years*)
- Long term strategy - value add & build on direct relationships with customers
- Ongoing strategy - diversify customer base across end markets & geographic regions





# MOUs Exceed 80,000 t

MOU's signed with separate customers & agents representing 29,000+ tonnes of annual graphite production over 2+ years



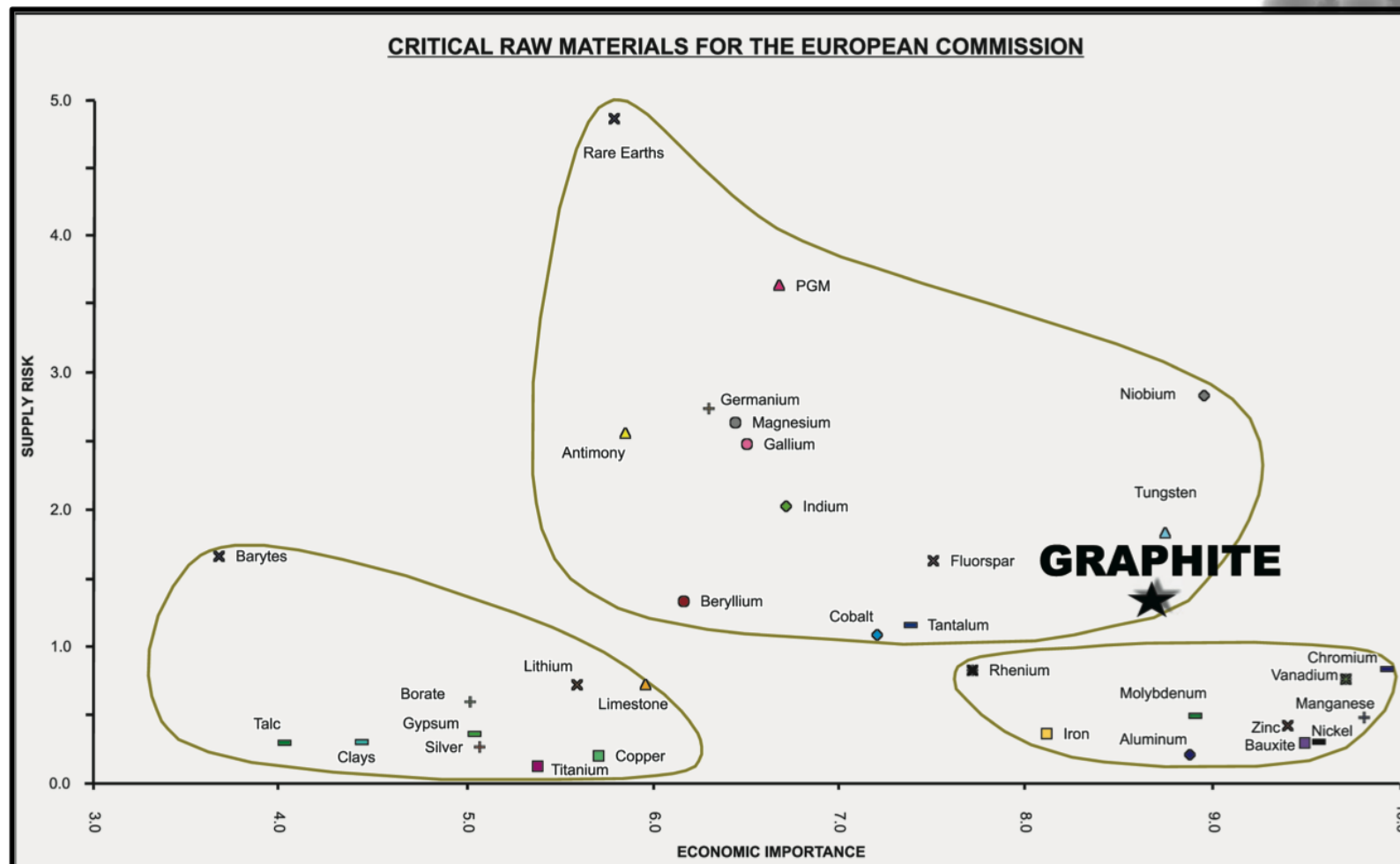
*Diverse Products:* Each MOU is for multiple products from across Valence Industries flake graphite product range. Demand is there for flake graphite of all sizes and purities.

*Diverse Applications:* MOUs are for supply to customers for use in a large number of applications ranging from foundries and refractories through to batteries and energy storage.

*Diverse Regions:* MOUs are for the supply of flake graphite production to customers in different regions of the world from Europe to the Asia Pacific.

*Diverse Customers:* The MOUs are for supply to end user customers and to agents allowing Valence to achieve a spread of sales and market penetration.

# Critical Material



Strategic & Critical for industrial nations including USA & European Commission



# Valence Industries Summary

## Existing Facility & Unique Resource

- Existing Graphite Resource, Mine & 14,000 tpa Processing infrastructure
- Established JORC 2012 Mineral Resource & Soon JORC 2012 Ore Reserve
- Proven past production of high quality Flake Graphite

## Only Australian Production & Sales

- Initial sales of large flake >95% purity graphite commenced in April
- Processing of stockpiles 9 to 12 months from 2014 through 2015
- Strong MoUs & expressions of interest from major global customers supporting avg price of US\$1400 per tonne

## Rapid Growth Program

- New Phase II plant for planned production in 2015 – Adding 50,000+ tonnes per year
- Phase III High Purity & High Value Program
- Phase IV Graphene & New Advanced Manufacturing Program





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