

# **ASX ANNOUNCEMENT**

# ASX: VXL & VXLO

17 December 2014

# Maiden High Grade Graphite Ore Reserve

- Maiden Ore Reserve of 261,000 tonnes of graphite at Uley Pit 2
- Ore Reserve Average Grade of 12.9% graphitic Carbon
- Mine Plan in place as Feasibility Study nears completion

Valence Industries Limited has released its maiden JORC 2012 Graphite Ore Reserve and an initial "Life of Mine" (LOM) for its wholly owned Uley Graphite<sup>™</sup> operations in South Australia.

Valence Industries Managing Director and CEO, Christopher Darby, said "this maiden graphite ore reserve is a significant milestone for Valence Industries. It underpins our plans for production and commercial sales of graphite. Valence Industries is unique in Australia, we have an Ore Reserve and a graphite plant in place with high grades of flake graphite to process. We forecast an initial life of mine of 6 years for Uley Pit 2, with the initial mine production plan processing over 2 Million tonnes of ore."

"The Valence Industries team is keen to demonstrate the wealth of potential at Uley. We have a corporate goal of value adding to our graphite through advanced manufacturing processes and this remains firmly in our sights."

"The drilling campaign now underway on the Uley Pit 2 Extension is expected to add to our mine life with drill results due in early 2015. Based on our JORC exploration target of 9Mt to 12Mt at 9% to 12% graphite grade around Uley Pit 2, we are confident there is no shortage of graphite to support our production expansion plans" said Mr Darby.

Graphite production at the Uley Graphite<sup>™</sup> facilities will commence on receipt of final regulatory approvals. Valence Industries understands that no substantive issues remain and approval will come shortly.

With this announcement, Valence Industries now holds the key supporting elements for the feasibility study planned for release late this month:

- A graphite ore reserve with supporting technical analysis;
- A mine plan with the relevant supporting expert assessment in place; and
- The market and capital assessment informing the ore reserve and mine plan and supporting the positive economics of the project.

# Uley Graphite<sup>™</sup> Maiden Ore Reserve

Valence Industries' maiden Ore Reserve is based on the ordinary kriged Mineral Resource estimate (ASX announcement dated 17 November 2014) prepared by Coffey Mining.

The Mineral Resource and Ore Reserve estimates includes the infill drilling completed by Valence Industries over the current area of Uley Pit 2 but does not include the results (pending) of the



**current drilling program across the Uley Pit 2 Extension** (Figure 1) which was designed to define the nature and extent of mineralisation across a portion of the announced Uley Graphite<sup>™</sup> Exploration Target (ASX announcement dated 17<sup>th</sup> November 2014).

The Ore Reserve estimate was undertaken utilising the Measured and Indicated Mineral Resources only\*\*.

ULEY PIT 2 – MAIDEN ORE RESERVE Tonnes are expressed in dry metric tonnes					
Classification	Tonnage	Average Grade (%gC)	Contained Tonnes		
Proved	319,000	17.9	57,101		
Probable	1,716,000	11.9	204,204		
Total Ore Reserve	2,035,000	12.9	261,305		

\*\*Ore Reserve and Mine Plan do not yet take full account of the existing JORC 2012 Inferred Mineral Resource.

Ore Reserves are based on a cut-off grade of 3.6%, which is slightly higher than the 3.5% applied to the current JORC 2012 Mineral Resource.

A minimum mining cutback mining width of 25m was adopted.

Overall pit wall slope angle used was 40 degrees.

Graphite price assumptions for the ore reserves are US\$1,400 per tonne, with a foreign exchange rate of USD/AUD 0.85.

Other Modifying Factors applied to the Ore Reserve estimate are included in JORC Table 1 (below).

# **Mine Plan & Optimal Pit Shell**

The JORC 2012 Ore Reserve for Uley Pit 2 has been applied to establish a mine plan and to identify an optimal pit shell for Uley Pit 2. These two elements and the detailed expert reports that underpin them are essential for the feasibility study and represent another step forward in that program.

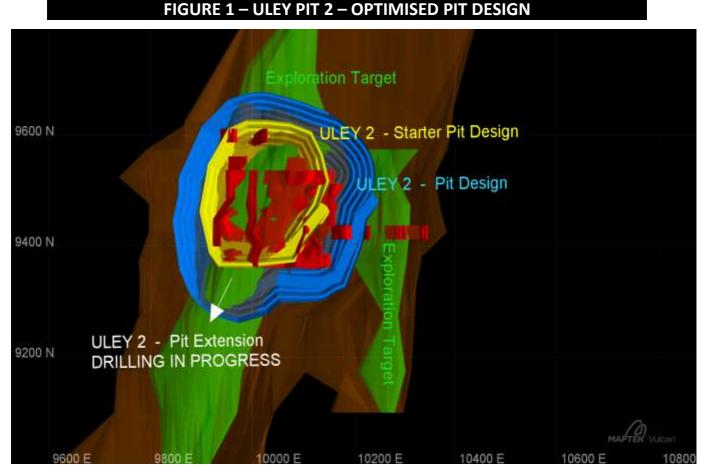
In Figure 1 (below) the design for the progressive mining development of Uley Pit 2 is illustrated.

Uley Pit 2 begins with the "starter pit" shown in yellow. Mining from this area is currently scheduled to commence following the processing of the existing ROM stockpiles at site. This is anticipated to occur in mid-2015.



Uley Pit 2 will then move into an expanded pit design shown in blue. This second stage is the first cutback of the "starter pit".

It is anticipated that a third stage involving a second cutback will be established for the area currently being drilled to the south of Uley Pit 2.



The marked exploration target locations are in addition to the exploration target area immediately to the south of Uley Pit 2 and shown as "Uley 2 – Pit Extension" where the current drilling program is underway. These areas form the JORC 2012 Exploration Targets as previously announced by Valence Industries.

Those Exploration Targets of between 6m and 12m tonnes at between 9% to 12% graphite grades surround the immediate vicinity of Uley Pit 2 and are located on the land owned by the company (ASX announcement dated 17<sup>th</sup> November 2014).

The Exploration Targets are in addition to the current JORC 2012 Mineral Resource held by Valence Industries and summarised in Table 2 (below).



TABLE 2: ULEY PIT 2 – JORC 2012 MINERAL RESOURCE*					
Classification	Tonnage	Average Grade (%gC)	Contained Tonnes		
Measured	340,000	17.92	60,000		
Indicated	1,850,000	11.84	220,000		
Inferred	850,000	8.89	80,000		
Totals	3,040,000	11.69	360,000		

\*November 2014 estimate, reported using a 3.5% graphitic Carbon cut-off grade. Mineral Resource estimate reported in accordance with JORC 2012 guidelines and rounded to two significant figures (refer to announcement dated 17 November 2014, and JORC Tables 1-3 for further information).

\*\*Note that the current Ore Reserve and the Mine Plan do not yet take full account of the existing JORC 2012 Inferred Mineral Resource in defining the LOM.

For further information, please contact:

Christopher S. Darby CEO & Managing Director info@valenceindustries.com +61 8 8418 8564



#### **Competent Persons Statement**

The aspects of this announcement that relate to the Uley Exploration Target, Geology and Database is based on information provided by Ms. Karen Lloyd (Director – Jorvik Resources and retained as GM – Technical Delivery, Valence Industries). Ms Lloyd is a Member of the Australian Institute of Mining and Metallurgy. Ms Lloyd has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and 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 and Ore Reserves". Ms Lloyd consents to the inclusion in this release of the matters based on their information in the form and context as it appears.

#### **Competent Persons Statement**

The aspects of this announcement that relate to Mineral Resources is based on information compiled under the supervision of Mr Ingvar Kirchner, who is a Fellow of the Australasian Institute of Mining and Metallurgy, a Member of the Australian Institute of Geoscientists, and a full-time employee of Coffey Mining. The Uley resource modelling and documentation was completed by Ms Ellen Maidens. Ms Maidens is a Member of the Australian Institute of Geologists and is a full-time employee of Coffey Mining Both Mr Kirchner and Ms Maidens have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and 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 and Ore Reserves". Mr Kirchner and Ms Maidens consent to the inclusion in this release of the matters based on their information in the form and context as it appears.

#### **Competent Persons Statement**

The aspects of this announcement that relate to metallurgical aspects of the Mineral Resource and Ore Reserve have been prepared by Mr Chris Campbell-Hicks. Mr Campbell-Hicks is a full-time employee of Coffey and is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and is a Member of the Mineral Industry Consultants Association.

#### **Competent Persons Statement**

The aspects of this announcement that relate to the Ore Reserve is based on information provided by Mr Harry Warries. Mr Warries is a Fellow of the Australasian Institute of Mining and Metallurgy and an employee of Coffey. Mr Warries has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and 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 and Ore Reserves". Mr Warries consents to the inclusion in this release of the matters based on their information in the form and context as it appears.

#### Forward Looking Statements

All statements other than statements of historical fact included in this announcement including, without limitation, statements regarding future plans and objectives of Valence Industries Limited (Valence Industries) are forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects' or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the company, its directors and management of Valence Industries, that could cause Valence Industries' actual results to differ materially



from the results expressed or anticipated in these statements.

Valence Industries cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. Valence Industries does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law.



## Table 1 – Summary Table – Uley Pit 2 In situ Mineral Resource

		Graphitic C		ed using a 3.5	November 20: % Graphitic Ca istributions su using ROUN	arbon cuto bdivided by	ff for reportir y JORC Code 2		e Categorie	·S	
Measured Indicated			Inferred		Total (Measured + Indicated + Inferred)						
Fonnes (Mt)	Graphitic C	Contained Graphite	Tonnes (Mt)	Graphitic C	Contained Graphite	Tonnes (Mt)	Graphitic C	Contained Graphite	Tonnes (Mt)	Graphitic C	Graphite
0.24	(%)	(Mt)	4.05	(%)	(Mt)	0.05	(%)	(Mt)	2.04	(%)	(Mt)
0.34 Notes:	17.92	0.06	1.85	11.84	0.22	0.85	8.89	0.08	3.04	11.69	0.36
<ul> <li>The area of the area</li></ul>	ne deposit is e angled at alidated dat rillhole data w grade int rillhole loggi form the blo raphitic C as sumed the p not sugges	eralisation is covered by -60° to 090° a from 70 di was used to erpretations ing data was ock model th says and no Non-carbona st the preser C assays sho	25m x 25 amond dr create w have bee used to c ough was n-carbons ate C is co cce of any	illholes has rillholes has rireframes c en omitted create a sur s not used i ate assays v omprised pr	liamond drill been used i of the minera as advice is t face of the b n tabulating vere used in imarily of gra- intal carbon	holes. 30 n the reso alised zon that recov base of oxi the resou the estim aphite. Si within the	o of these ar ource estimates wery of grapi idation and urce. ation. For the tudy of corese e non-carbo	e vertical an ate. a 3.5% Graph hite is proble top of fresh the purpose photos, dri nate C. Con	hitic C lov ematic fro rock. Th of the est Il logs and nparison	ver cut-off. om this mat ese have be timation, Co d petrograp of non-carb	erial. een used to offey have hy reports onate C
<ul> <li>Pr</li> <li>Re</li> <li>ha</li> <li>Qa</li> <li>sa</li> <li>fo</li> </ul>	ecords of we ave not been AQC for the mpling prot r use in the	orts note that eights for the n corrected. earlier drilli cocols. No por Resource es the assaying	e sieved f Assays fr ng consist otential s timation.	ractions have om all othe ts of umpire amples wer QAQC for	ve not been i er samples w e duplicates o re highlighteo the 2014 pro	recovered ere taken of early sa d by the u ogramme	l and hence from comp amples. No impire assay consists of	tonnages re lete sample: blanks or st ys and they a the insertior	elying on o s. andards h are consion of certif	data from tl nave been u dered to be ied standar	nese holes sed in the acceptable ds at a rate
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<ul> <li>St ap</li> </ul>	atistical ana oplied to the	alyses were o composites c C was appli	ompleted in the m	d on the rav ineralised z	v sample dat ones in the f	a and the ootwall (I	1m compo W) and har	site data. A ngingwall (H	-		
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ur re	nderstandin source class	sification wa g and interp sification and contacts are	retation, destimate	sampling, d e does not s	ata density a specifically a	and locati ddress th	on, grade es e definition	stimation an or quantity	d quality	of the estin	nates. The
■ A a ha	graphitic ca coarse fract ave come fro	rbon cutoff ion of 70% a om review o arried out in	of 3.5% w nd an ove f two test	as adopted erall recove work progr	based on a prive based on a prive based on a prive based on the second s	graphite p The values	oroduct pric of 70% coa	e of \$1,500, rse fraction	(>75µm)	and 90% re	covery



### Figure 2 – Drillhole Location

9600 N		M0223	M0222						
9550.N		M0628							
		NDED4 MDEO2	HORODAM/SU2	M0323 M0601	M0321 _M0500	M0324			
9500 N		NDEOS NDEOS	M0601_M0612_	M0610 M0608	M0606	MD621			
		.MD507	MD317 MD506	MC319 MC605	.MD320 MD504	.MD503			
9450 N	M0622	M0624 H0619	MOLIZ MOLIS	NUELS MOET	ND609 MD607	10625.			
					M0307 M051	1 40311	MD310	BROM	MD309
9400 N	M0620_	MD618 MD616	MD614 MD630	MD630	M0638M0636				
		M0639 - M06800		. MD631MD629		_			
9350 N									
9850 E	9900 E	9950 E	10000 E	10050 E	10100 E	10150 E	10200 E	10250 E	10300 E

### Figure 3 – Drillhole and Geology Cross Sections 9375N

# (Coffey, 2014)

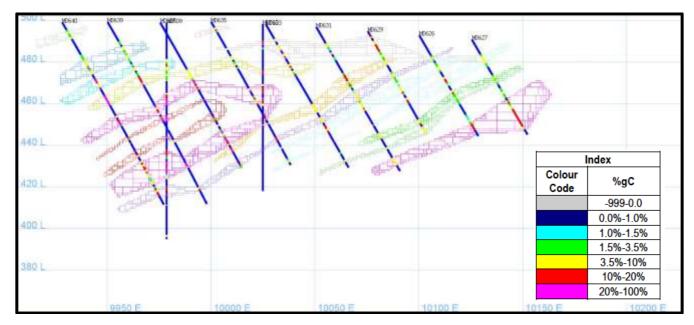
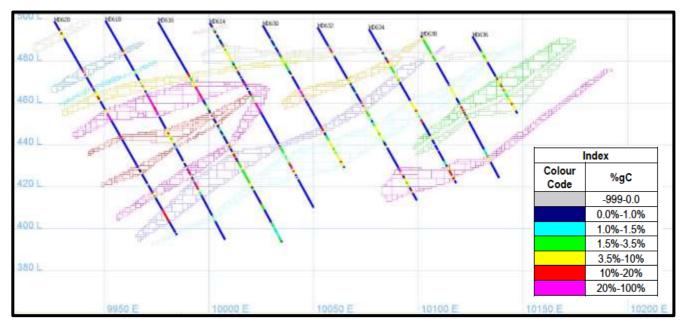


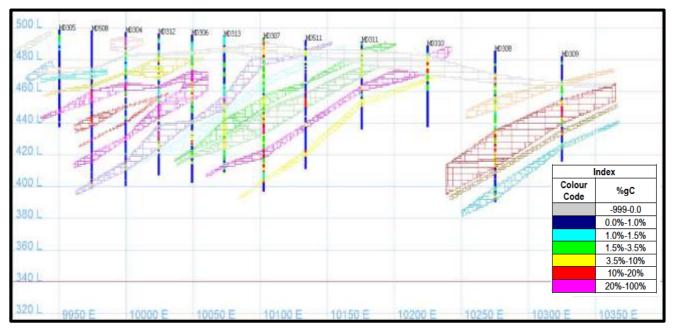


Figure 4 – Drillhole and Geology Cross Sections 9400N



(Coffey, 2014)

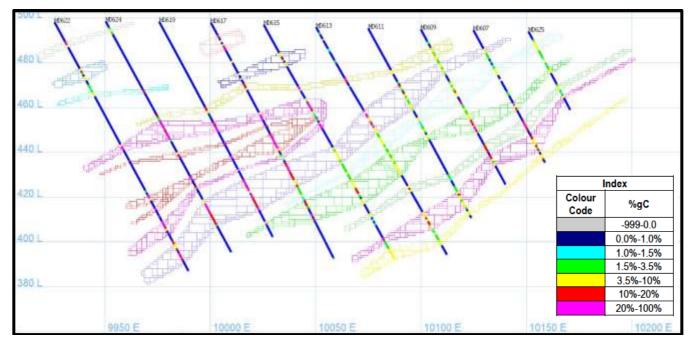
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## Figure 5 – Drillhole and Geology Cross Sections 9425N



Figure 6 – Drillhole and Geology Cross Sections 9450N



(Coffey, 2014)

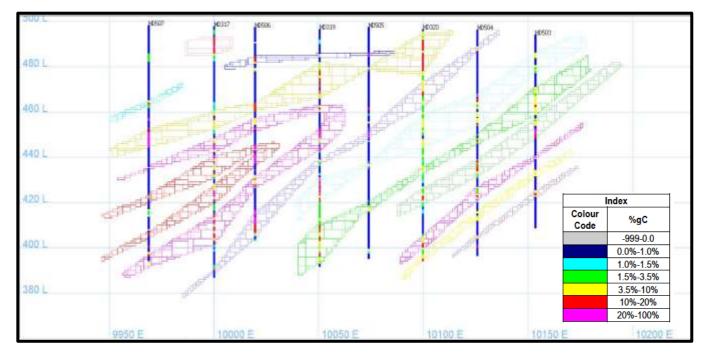
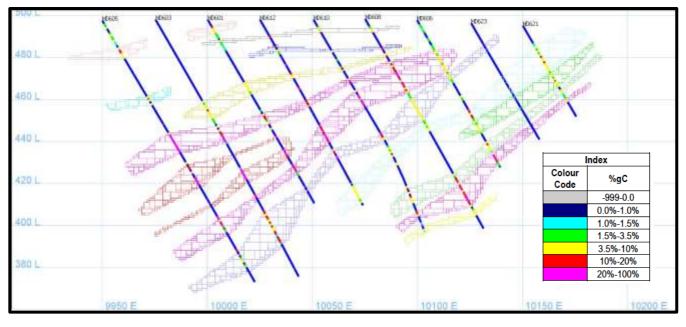


Figure 7 – Drillhole and Geology Cross Section 9475N



Figure 8 – Drillhole and Geology Cross Section 9500N





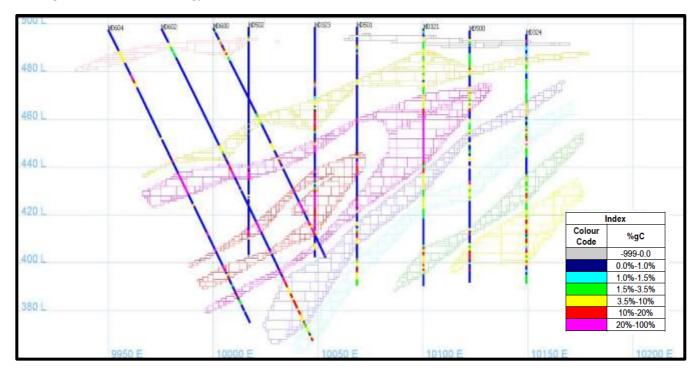


Figure 9 – Drillhole and Geology Cross Section 9525N



Figure 10 – Drillhole and Geology Cross Section 9550N



<sup>(</sup>Coffey, 2014)

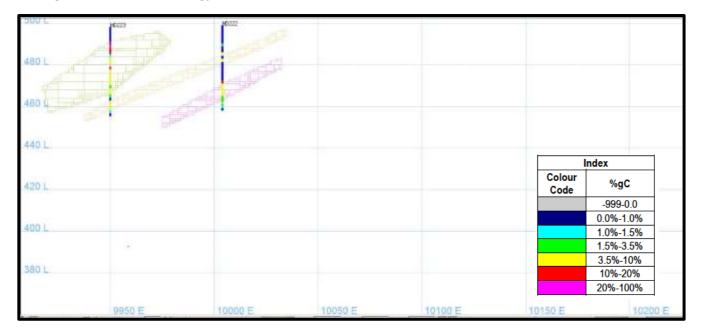


Figure 11 – Drillhole and Geology Cross Section 9600N



### Table 2 – Collar Coordinates for Drillholes used in the Resource

10004 9950 9999.78 9950.19	9593.5 9600 9425.11	499 498.3	41 43
9999.78 9950.19		498.3	10
9950.19	9425.11		43
	JJ.II	497.27	97
	9425.33	498.85	61.4
10049.23	9425.52	495.75	93.5
10102.64	9427.54	493.69	97
10275.21	9425.16	485.57	95.5
10324.96	9425.92	482.2	66.5
10224.77	9424.59	488.98	51.5
10175.68	9426.86	491.38	55.5
10024.4	9425.34	496.55	89.5
10073.15	9426.23	495.15	87.5
9999.94	9474.38	497.88	111.2
10050.38	9476.2	496.55	105
10099.72	9473.07	496.57	102.5
10100.21	9522.52	498.05	108
10048.42	9524.7	498.67	96.5
10149.25	9525.33	495.58	104.5
10122.2		497.16	105.5
10068.51	9523.52	498.76	108.5
			96.3
			85.6
			100
			102.5
			94.4
			105.5
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			149.3
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			80.6
			68.2
			114.7
			80.2
			114.7
			97.9
			101.2
			119.2 101.2
	10324.96 10224.77 10175.68 10024.4 10073.15 9999.94 10050.38 10099.72 10100.21 10048.42 10149.25 10122.2	10324.969425.9210224.779424.5910175.689426.8610024.49425.3410073.159426.239999.949474.3810050.389476.210099.729473.0710100.219522.5210048.429524.710149.259523.0910168.519523.5210016.929525.7210153.519474.0310125.769475.8710073.849479.4610019.499474.159968.769473.829974.319427.349978.639372.7910024.979374.41013.849423.019999.949525.1610000.199499.999975.319525.029975.379499.559949.899524.999950.049500.0510024.889449.9210075.139500.110099.899450.1110050.579499.9510075.0239450.16	10324.969425.92482.210224.779424.59488.9810175.689426.86491.3810024.49425.34496.5510073.159426.23495.159999.949474.38497.8810050.389476.2496.5710099.729473.07496.5710100.219522.52498.0510048.429524.7498.6710149.259525.33495.5810122.29523.09497.1610068.519523.52498.7610016.929525.72498.7210153.519474.03494.210157.669475.87496.3510073.84947.46497.5210019.499474.15497.419968.769473.82498.239974.319427.34498.49978.639372.79498.9210024.979374.4498.351013.849423.01492.349999.949525.16498.2610000.19949.99498.089975.31952.02497.939975.37949.95498.079949.899524.99494.5210075.13950.1498.391009.88950.01498.391009.899450.11494.9110050.57949.95498.0510074.929450.22495.3410025.07949.95498.0510050.239450.16495.86



Hole ID	Easting	Northing	RL	Total Depth (m)
MD615	10025.41	9449.97	496.95	121.8
MD616	9975.76	9399.98	498.62	120.7
MD617	10000.31	9450.07	497.83	110.2
MD618	9950.63	9400.02	499.19	119.2
MD619	9975.78	9449.89	498.28	110.2
MD620	9926.2	9400	498.96	117.7
MD621	10150.29	9500.04	495.13	50.2
MD622	9926.07	9449.86	498.15	128.2
MD624	9950.37	9450.04	498.51	119.2
MD625	10151.01	9449.98	493.89	40.2
MD626	10100.26	9372.25	492.87	56.2
MD627	10125.56	9373.27	490.88	53
MD628	9976.25	9550.04	498.16	119.2
MD629	10075.46	9374.99	494.85	56.8
MD630	10025.81	9402.83	496.96	78.5
MD631	10050.69	9374.97	496.86	80.2
MD632	10051.97	9402.79	495.98	95.2
MD633	10026.43	9375.12	498.15	79.6
MD634	10076.49	9394.31	495.19	84.6
MD635	10000.1	9374.96	499.36	78.8
MD636	10125.94	9399.98	491.74	42.6
MD637	9975.59	9375.02	499.03	80.2
MD638	10101.37	9405.95	492.09	77.7
MD639	9950.27	9374.98	499.28	99.7
MD640	9928.4	9374.97	499.15	100.4



The following extract from the JORC Code 2012 Table 1 is provided for compliance with the Code requirements for the reporting of Mineral Resources:

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections).

Criteria	JORC Code Explanation	Commentary	Competent Person
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>All holes used in the Resource Estimate were HQ diamond drillholes sampling moderately dipping stratabound graphite mineralised zones.</li> <li>30 vertical drillholes were used in the estimate together with 40 drillholes drilled at -60° towards 090.</li> <li>Half cores samples were obtained on geological intervals, typically 1m in length but ranging from 0.3m to 4m.</li> <li>High grade graphite mineralisation is reasonably visible during geological logging and sampling.</li> <li>Visibly mineralised intervals were crushed and pulverised to at least 85% passing 75µm, then sent for analysis by LECO method.</li> <li>The sample preparation and assaying techniques are industry standard and appropriate for this type of mineralisation.</li> <li>Some core material remains selectively sampled.</li> </ul>	KL
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>All holes used in the Resource Estimate were drilled from surface.</li> <li>30 drillholes were drilled using HQ standard tube and were not orientated.</li> <li>42 angled drillholes were drilled using HQ triple tube. Downhole surveys were obtained using a Ranger SS118 downhole camera. The angled drillholes were orientated using the Reflex ACT II RD core orientation tool.</li> </ul>	KL
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Core recovery was captured by logging "Core Loss" in areas of no/low recovery.</li> <li>Industry standard procedures/techniques were employed to ensure maximum downhole recovery. Overall core recovery for all resource drillholes is 85%.</li> <li>There has been no identified relationship between sample recovery and grade.</li> </ul>	KL

Table 3 – Extract of	of JORC Code	2012 Table 1



Criteria	JORC Code Explanation	Commentary	Competent Person
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological and geotechnical logging of the drillholes is of an appropriate standard to support a Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Geological core logging is qualitative.</li> <li>Core photography is available.</li> <li>The total length of the samples intervals for all holes used in the estimate was 3,420m (52% of total core was sampled)</li> </ul>	KL
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Half core samples were taken. In competent core these were cut by core saw. In incompetent material the sample was collected by manual halving of the material. Half core sampling is an appropriate, industry standard technique.</li> <li>Bulk reject duplicate samples were taken in the 42 angles drillholes to ensure sample representivity. These duplicates were inserted at a typical frequency of 1 in 100 samples (1% rate of insertion). Certified reference standards were inserted at a typical rate of 1 in 20 samples (5% rate of insertion) for quality assurance checks of analyses reported by the mineral testing laboratory ALS Global.</li> <li>There is no record of field duplicate samples or standards having been submitted in the 30 vertical drillholes to test sampling representatively.</li> <li>Samples from the 18 vertical 1993 drillholes were crushed and sieved on site prior to dispatching the coarse +75µm to ALS-Chemex for assaying. There is no available data on weights of sieved fractions. If the fine fraction was a significant proportion of the sample, assays from the coarse fractions should be higher than corresponding whole rock assays. A study of grades from the 1993 drillholes with neighbouring holes from the other programme shows no difference in grade tenor. Visual comparison of grades in the 1993 drillholes with neighbouring holes from the other programme likewise shows no notable difference in grade tenor. As such, despite the description of assaying of coarse fractions only, the assays from the 1993 drillholes with neighbouring holes from the cushing/sieving process carried out on site.</li> <li>Sample preparation on the 12 2011 vertical drillholes was undertaken by ALS Adelaide. Samples were crushed and split to &gt;70% passing -6mm and pulverised to &gt;85% passing 75µm prior to assaying by ALS Brisbane.</li> <li>Sample sizes are deemed appropriate for the material being sampled.</li> </ul>	KL



Criteria	JORC Code Explanation	Commentary	Competent Person
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Techniques used are:</li> <li>C-IR18 (Graphitic carbon by LECO analyser)</li> <li>C-CAL15 (Inorganic carbon by difference)</li> <li>C-IR17 (Organic carbon by LECO analyser)</li> <li>C-CON01 (Carbon concentrate by LECO analyser)</li> <li>C-IR07 Total Carbon by LECO analyser)</li> <li>C-IR18 was used for the 2014 samples, and C-IR17 was used for previous samples. As the rocks are assumed to contain no organic material (supported by petrographic study), the difference between these two techniques is less than the analytical error of the techniques and hence considered negligible.</li> <li>Bulk reject duplicate samples were taken in the 42 angles drillholes to ensure sample representivity. These duplicates were inserted at a typical frequency of 1 in 100 samples (1% rate of insertion). Certified reference standards were inserted at a typical rate of 1 in 20 samples (5% rate of insertion) for accuracy checks of analyses reported by the mineral testing laboratory ALS Global.</li> <li>There is no record of field duplicate samples or standards having been submitted in the 30 vertical drillholes to test sampling representatively.</li> <li>Internal laboratory QAQC for all sampling has been reviewed with no problems highlighted with respect to sampling bias or precision.</li> </ul>	KL
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>There are no twinned drillholes. Areas of overlap between angled and vertical drillholes show intercepts of similar tenor and thickness</li> <li>Assays in the database have been checked against laboratory certificates and original logs which contained assay data. No inconsistencies were identified.</li> <li>Non-sampled intervals were assumed to be "unmineralised" and given a Graphitic C value of 0.01%, equivalent to half the detection limit of C-IR18.</li> </ul>	KL
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill location co-ordinates are reported in Uley Mine Grid (transformed to truncated AMG) The reported truncation was: Easting = -554,216.866M Northing = -6,139,092.867M ADH = RL +404.252M</li> <li>Drillhole collars have been re-surveyed in the field and these transformations validated. All drillholes were re-surveyed during 2014 by PA Dansie &amp; Associates Pty Ltd.</li> <li>A whole of site survey was undertaken during 2014 by Maptek Pty Ltd.</li> </ul>	KL



Criteria	JORC Code Explanation	Commentary	Competent Person
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>No exploration results are reported or included in this Mineral Resource estimate.</li> <li>Diamond drilling on an infill spacing of up to 25m X 25m was used to estimate geological and grade continuity at a level deemed appropriate for the classification and reporting of a Mineral Resource estimate.</li> <li>1m sample composites applied during the estimation process.</li> </ul>	KL
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Drilling orientation is considered appropriate considering the deposit type and orientation of moderately WNW dipping mineralisation. Sampling bias relating to the orientation of sampling is considered minimal.</li> </ul>	KL
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>All reasonable measures are being taken to ensure sample security along the value chain. These measures include the recording of sample dispatch and receipt reports, secure storage of samples, and a locked and gated core shed</li> <li>The assay method used is destructive. A representative sample library is maintained on site.</li> </ul>	KL
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No formal third party audits have been undertaken.</li> <li>Laboratory procedures and manuals are comprehensively documented on-site and both the AMDEL and ALS laboratories are considered to be reputable laboratory for carbon analysis. As the assaying techniques used are broadly destructive techniques, with a limited ash residue, they not suited for replicate analysis.</li> <li>The quality control protocols implemented at Uley are considered to represent good industry practice and allow some assessment of analytical precision and accuracy. The assay data is considered to display acceptable precision.</li> <li>Internal laboratory QAQC data (standards, blanks and duplicates) have been reviewed and no significant problems were identified regarding the quality of the assaying.</li> </ul>	KL



## Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section).

Criteria	JORC Code Explanation	Commentary	Competent Person
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Uley Graphite Project consists of five contiguous tenements on the Eyre Peninsula of South Australia, of which two are retention leases two are mining leases and one is an exploration licence. Tenement identification numbers are: ML5561, ML5562, EL4778, RL66 and RL67.</li> <li>Mining development is subject to the development, submission and approval of a Program for Environmental Protection and Rehabilitation (PEPR) and an Environmental Licence which is mandated under South Australian State legislation. The site has been on care and maintenance since historical production ended in 1993. It is not expected that environmental constraints will be considered a material constraint to the prospects of eventual economic extraction.</li> <li>Valence Industries has a 100% interest in these tenements and no joint venture or other material agreements are in place. Valence does have a 1.5% royalty in place with its former parent.</li> <li>Tenement ownership is secure with expiration dates varying from 2016 (EL4778) to March 2017 (ML5561 and ML5562). There are no known impediments to obtaining a license to operate in the area.</li> </ul>	KL
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>A number of parties have undertaken exploration on the leases and the data set held by Valence Industries Ltd includes all available information.</li> </ul>	KL
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Graphite is developed as a constituent mineral in coarse prograde metamorphic assemblages as well as in the fabric and foliation of micaceaous schists. These are interpreted to be the folded, thrust and metamorphosed equivalents of the Cook Gap Schist. Folding of stratigraphy on various local scales is obvious.</li> </ul>	KL
Drillhole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:         <ul> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	A summary of the drillholes used in the Resource Estimate is provided in Table 2 of this report.	EM/KL



Criteria	JORC Code Explanation	Commentary	Competent Person	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>This table accompanies a Resource Estimation, and is not reporting Exploration results.</li> <li>No metal equivalents are used.</li> </ul>	KL	
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>As this table accompanies a Resource Estimation, and is not reporting Exploration results, this section is not applicable.</li> <li>The relationships are captured and defined on a hole-by-hole basis in the resource model and orientations of holes to mineralised zone are appropriately accounted for in the estimate.</li> </ul>	KL	
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Collar Plan of Resource Drillholes is presented in Figure 2 of this report.</li> <li>Typical cross sections are presented in 3 to 11 of this report.</li> </ul>	EM/KL	
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>Valence Industries carry out balanced reporting of exploration results.</li> <li>Selective sampling of only visibly graphitic material has been carried out on the 2011 and 2014 drill core.</li> </ul>	EM/KL	
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>All material available exploration information was considered. This comprised a drilling database, previous estimates and reports and academic literature, petrological reports, metallurgical test work reports, density determinations, and site visit photography/communication. Historical production records from the original Uley Mine provided assumptions relating to future potential economic extraction.</li> </ul>	KL	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Exploration work to quantify the extent and continuity of mineralisation within the Valence held tenure is ongoing. This work includes planned diamond and reverse circulation drilling, further geophysical surveys and geological mapping. This exploration effort is deemed commercially sensitive.</li> </ul>	KL	



# **Section 3 Estimation and Reporting of Mineral Resources** (Criteria listed in section 1, and where relevant in section 2, also apply to this section).

Criteria	JORC Code Explanation	Commentary	Competent Person
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Data has been provided as an Access database.</li> <li>A total of 18 1993 era diamond holes drilled by Graphite Mines of Australia, 12 SER diamond drillholes drilled in 2011, and 40 Valence angled diamond holes in the Uley area have been used in the resource modelling study. The database used for resource estimation consists solely of diamond drilling and has been reviewed and re-validated for obvious errors by Coffey prior to commencing the resource estimation study. The assay data has been cross checked against assay certificates provided by ALS Chemex.</li> <li>The following checks were completed prior to uploading the drilling data into a Vulcan database: <ul> <li>Check and correct overlapping intervals.</li> <li>Ensure downhole surveys existed at a 0m depth.</li> <li>Ensure consistency of depths between different data tables, for example survey, collar and assays.</li> <li>Check gaps in the assay data which were replaced by - 999.</li> </ul> </li> <li>Hole MD623 had not been assayed at time of data handover and so has not been included in the resource database.</li> <li>Hole MD617M is a metallurgical hole and has not been assayed so has not been included in the resource database.</li> <li>No records were apparently kept for the sieved fraction weights from the 1993 drilling to determine factors for tonnage and assay grade fractions. As discussed in the subsampling section of Section 1 of this table, statistical comparison of these samples with the other samples shows there is no difference between the 1993 assays and the whole rock assays. As such the 1993 samples are treated as whole rock assays for the Mineral Resource estimate.</li> </ul>	EM/
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Ms Karen Lloyd (Jorvik Resources Pty Ltd), Competent Person for geology and exploration data has been engaged by Valence Industries in the capacity of General Manager – Technical Delivery and undertakes regular site visits to Uley.</li> </ul>	KL
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The current geological interpretation is based on review of previous estimates and reports and has been augmented by the geological and structural information provided by the 2014 angled infill diamond drillholes.</li> <li>Information from site visits and geological reports suggests the graphite lenses occurs within an anticlinorium i.e. a fold with parasitic folds on its limbs, as occurred in the Uley mine to the north. The current model is of a recumbent antiform plunging very shallowly to the ENE, with HW lodes dipping shallowly to the WNW and FW lodes dipping moderately (~33°) to the WNW.</li> </ul>	EM



Criteria	JORC Code Explanation	C	ommentary				Competent Person
Dimensions • The extent and variability of the			The dimensions of the block model are:				EM
	Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface			Easting (X)	Northing (Y)	RL (Z)	
	to the upper and lower limits of the Mineral Resource.		Minimum Coordinates	9800	9200	340	
			Maximum Coordinates	10400	9700	540	
			Block size (m)	12.5	12.5	4	
			Sub Block size (m)	1.25	1.25	1	
			Rotation	0	0	0	
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</li> </ul>		approximatel Hanging wall dipping at ap	Im composites was constra- aframes with ha vas zone 2. T he blocks were e informed usin ) to allow the e Any non-samp aphitic C. a were estimate were made of edium scale ope l quality were n e for interpret allurgical testin ative of produc ralisation. omained into the hain – in the for y 33° domain – in the for y 33° domain – in the for the FW and H was used within determined base each domain. size is approxim with sub-blocking eters are suitab the orientation of stimate was of derstanding of d zones within 5m spaced drilll ntain valid stru the previous mo omits a low gra	in Vulcan mi ined to block and boundaries his zone conta flagged as beir g all composite stimation of the led intervals w d, be they dele concerning mir en pit mining. ot defined in th ation and esti g based on bu ts likely to be e following dom botwall of the f the hanging w werprinting min ut. A top cut of fW domains an in the Flat lying ed on statistical pately ½ of the g chosen to allo le given the pa of the modelled compared with the orientation the current re holes, more tha ctural data, is of codel. de domain inco	ining software. Is inside the applied. The ins both a HW ins both a HW ing HW (202) or is from zone 2 is hinge area to ere assigned a eterious or not. Ining selectivity he model given mation. It is Ik samples are obtained from tains: fold, dipping at all of the fold, eralisation 50% Graphitic nd a top cut of domain. The analysis of the nominal 25m x w for adequate rent block size, mineralisation. the previous and continuity esource, being an half of which of much higher corporated in the cal comparison	EM



Criteria	JORC Code Explanation	Commentary	Competent Person	
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul> <li>Tonnes are estimated based on a dry insitu bulk density.</li> </ul>	EM	
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	A graphitic carbon cutoff of 3.5% was adopted based on a graphite product price of \$1,500/t, a processing cost of \$28.50/t, a coarse fraction of 70% and an overall recovery of 90%. The values of 70% coarse fraction (>75µm) and 90% recovery have come from review of two testwork programmes carried out on Uley ore samples in April and May 2007 and another programme carried out in August 2014.	CCH/ KL	
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<ul> <li>The Uley project has been historically mined by open cut mining methods and it was assumed that this would still be the case for any future mining operation.</li> <li>No assumptions have been made about mining selectivity for specific material types or quality.</li> <li>No dilution or other factors have been applied to the resource estimate.</li> <li>Conceptually, consideration of the resource estimate and subsequent mining scenarios remain at a high level only. It is assumed that there is some basis for determining reasonable prospects for eventual economic extraction considering historic mining of the nearby Uley graphite deposit in a very similar geological setting and location.</li> </ul>		
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Three testwork reports, ALS Testwork Report P0550, P0565 and P0582 were reviewed and clearly indicate that a total graphitic carbon grade of >90% and at >85% recovery can be achieved on the samples of Uley graphite tested with 3 stages of cleaning in conformance with the existing plant design. The testwork further indicates that if two additional stages of cleaning and an additional regrind mill were added to the circuit a >98% graphite grade product is possible. During further PFS and/or DFS programs additional variability testwork will be required.	ССН	
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these</li> </ul>	Mining development is subject to the development, submission and approval of a Program for Environmental Protection and Rehabilitation (PEPR) and an Environmental Licence which is mandated under South Australian State legislation. The site has been on care and maintenance since historical production ended in 1993. It is not expected that environmental constraints will be considered a material constraint to the prospects of eventual economic extraction.	KL	



Criteria	JORC Code Explanation	Commentary			Competent Person
	aspects have not been considered this should be reported with an explanation of the environmental assumptions made.				
Bulk density	Whether assumed or determined. If	Density was assigned	to the block model as	s follows:	EM
<ul> <li>assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by</li> </ul>	Oxidation state	Average Bulk Density for mineralised material (t/m <sup>3</sup> )	Average Bulk Density for waste material (t/m³)		
	Oxidised	1.79	1.91		
	methods that adequately account for	Transitional	1.91	2.01	
void spaces (vugs, porosity, etc), moisture and differences between	Fresh	2.08	2.25		
	<ul> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>core from 22 reg and weathering a results were flagg Vulcan and avera oxide, transitiona TOFR surfaces). averages due to &lt;1.2 and one way photos and agai section 9.2 of th 2001).</li> <li>These bulk densy year's model. I density data has essentially lower mineralisation are likely to be relate rock than was pressive No corrections has from the 18 1993 assay grade fract these results are assays and as su</li> </ul>	presentative holes w zone in each hole to yed against the ore zo ages for mineralised a l and fresh weathere Four samples were being extreme value s >4. The values we nst "typical" bulk de ne Field Geologist's sity values are lower t should be noted to s improved substar er bulk densities the result of the Vale ed to a higher level eviously understood. ave been applied for the drillholes to determini- tions. As discussed e statistically no diff	ence data. This change is of weathering of the host he sieved fraction weights he factors for tonnage and in the sampling sections, erent to the whole rock re being treated as whole	



Criteria	JORC Code Explanation	Commentary	Competent Person
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Resource classification is based on quantity/quality of sample data as follows:         <ul> <li>The infilling to 25m x 25m drilling centres has increased sample density to the point where confidence in the geological and grade continuity, and the quality of the estimation, are such that the majority of the estimated blocks are classified as Indicated.</li> <li>Mineralised zones based on 1 drillhole only remain unclassified.</li> <li>Small portions of the mineralisation in the centre of the fold (zones 1, 2 and 3) have been classified as Measured due to the continuity of grade thickness and tenor, and the quality of the estimation. These areas are limited due in part to uncertainty introduced by selective sampling of the drillholes.</li> </ul> </li> <li>The classification scheme as applied is considered to adequately reflect the sample density and geological interpretation.</li> <li>The resource classification and estimate does not specifically address the definition or quantity of material types or product quality as all contacts are relatively gradational and metallurgical testwork is on-going.</li> </ul>	EM/IK
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>Ms Karen Lloyd of Jorvik Resources Pty Ltd (engaged as General Manager – Technical delivery for Valence Industries formally reviewed the data used for the Mineral Resource estimate. No third party reviews have been undertaken on the Mineral Resources estimation process, though formal peer review through the Coffey system has been undertaken prior to reporting.</li> </ul>	KL
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The grade estimate is based on the assumption that open cut mining methods will be applied and high confidence grade control, for example RC grade control drilling, or ditch-witch bench top sampling will be available for ore/waste demarcation. As such the Resource estimate should be considered to be a global estimate.</li> <li>The resource classification and estimate does not specifically address the definition or quantity of material types or product quality as all contacts are relatively gradational and metallurgical testwork is on-going. Bulk metallurgical tests are assumed to be representative of the mineralised material within the Uley 2 deposit.</li> </ul>	EM



# **Section 4 Estimation and Reporting of Ore Reserves** (Criteria listed in section 1, and where relevant in section 2 and section 3, also apply to this section).

Criteria	JORC Code Explanation	Commentary	Competent Person
Mineral Resource estimate for conversion to Ore Reserves	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul> <li>The Uley 2 Mineral Resource as described in Section 3 formed the basis for the conversion to Ore Reserves.</li> <li>The Mineral Resources are inclusive of the Ore Reserves.</li> </ul>	HW
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The Competent Person for the Ore Reserves, Mr Harry Warries, has not visited the site.</li> <li>No site visit was deemed necessary as other Coffey personnel have been to site.</li> </ul>	HW
Study status	<ul> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul> <li>A feasibility study is being completed by Valence Industries Ltd. The feasibility was undertaken by a team of industry professionals as listed below.</li> <li>Market research and commodity price Mining operating and capital cost Mine planning Metallurgical and processing Processing operating and capital costs Processing operating and capital costs General site operating and capital costs General site operating costs General site infrastructure Hydro(geo)logical investigation Hydro(geo)logical investigation Mining dilution and recovery Mining dilution and recovery Government Market research and commodity price Lone Star Tech Minerals LLC Valence Coffey Nales Coffey Nales Coffey Nales Coffey Coffey Nales Coffey Nales Coffey</li></ul>	ΗW
Cut-off parameters	<ul> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>A 3.6% graphitic carbon cutoff, based on the economic parameters as described in subsequent sections. In addition, the contact between graphitic mineralisation and waste is sharp, which is shown by the fact that the grade tonnage profile between 2% and 4% graphitic carbon is very flat.</li> </ul>	HW
Mining factors or assumptions	<ul> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation</li> </ul>	<ul> <li>The basis of design for the Project is predicated on ramping up production, as dictated by the predicted sales demand, from approximately 27ktpa of 94% carbon concentrate in Year 1 to 64ktpa by Year 5, which equates to 200ktpa to 550ktpa of crusher feed. The average waste to ore strip ratio is approximately 5.9 : 1, indicating a maximum total material</li> </ul>	HW



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	<ul> <li>or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>The mining recovery factors used.</li> <li>The maner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the selected mining methods.</li> </ul>	<ul> <li>movement of up to 5Mtpa will be required.</li> <li>The material to be mined is classified as soft and it was assumed that no drill and blast would be required. Mining will be undertaken by conventional open pit methods of load and haul, utilising small mining equipment comprising 100t diesel hydraulic excavators and 60t off-highway dump trucks.</li> <li>Detailed pit design work was completed based on pit optimisations using Whittle Four-X optimisation software. Only Measured and Indicated Resources were used in the pit optimisation.</li> <li>Pit slope parameters were based on the slope parameters and conditions of an existing historic and abandoned pit, as well as a total of 42 diamond drillholes from both the geotechnical and resource drilling programmes were drilled and were logged for geological, rock quality and structural data. Overall pit wall slopes of 400 were adopted.</li> <li>Grade control will consist of sampling of ditch-witch spoils across the pit floor.</li> <li>With strong visual control no mining dilution was adopted, although a mining recovery of 95% was assumed.</li> <li>A minimum cutback mining width of 25m was adopted.</li> <li>The primary infrastructure required for the development of the Project are listed below: <ul> <li>Site and local area road construction and upgrades</li> <li>General administration and services infrastructure upgrade.</li> <li>Process plant refurbishment</li> <li>Re-use and re-cycling of existing water supply with recharge</li> </ul> </li> </ul>	
Metallurgical factors or assumptions	<ul> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul> <li>The proposed metallurgical process is conventional primary crushing and milling, followed by floatation and drying, sizing and bagging of concentrate products to meet specific customer requirements. The proposed metallurgical process is well tested and uses established, proven technologies.</li> <li>Three testwork reports, ALS Testwork Report P0550, P0565 and P0582 were reviewed and clearly indicate that a total graphitic carbon grade of &gt;90% and at &gt;85% recovery can be achieved on the samples of Uley graphite tested with 3 stages of cleaning in conformance with the existing plant design. The testwork further indicates that if two additional stages of cleaning and an additional regrind mill were added to the circuit a &gt;98% graphite grade product is possible.</li> <li>During further PFS and/or DFS programs additional variability testwork will be required.</li> </ul>	ССН
Environmental	The status of studies of potential environmental impacts of the mining	<ul> <li>Valence will require approval under the Mining Act (1971) which includes the approval of a comprehensive Program for</li> </ul>	HW



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Infrastructure	<ul> <li>and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> <li>The existence of appropriate</li> </ul>	<ul> <li>Environment Protection and Rehabilitation (PEPR) and an environmental licence.</li> <li>Most baseline environmental surveys have been completed. The preliminary impact assessment did not categorise any potential Project impacts as 'High'. Detailed impact assessments are ongoing in areas including air quality, groundwater, surface water, flora, fauna, noise, social, visual, and heritage.</li> <li>It is expected that all predicted impacts may be adequately mitigated and/or managed and that an updated ML and PEPR will be subsequently approved by the State Government.</li> <li>The existing process plant has been refurbished and the</li> </ul>	HW
	infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Project's supporting infrastructure has been developed through studies by engineering service providers as listed under the Study Status criterion. Works have included 'modelling' of plant availability, plant throughput, tailings storage facility and water consumption with subsequent production of sufficient drawings to enable development of detail estimates including forecasts of consumable consumptions such as grinding media, fuel, reagents and power. First principle estimates have derived labour levels for project construction and on-going operation.	
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and coproducts.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul> <li>The capital cost and operating costs estimates are commensurate with a pre-feasibility level study and were estimated by the Study contributors as listed under the Study Status criterion discussed above. The capital cost estimate has been developed through the collation of a number of first principle estimates completed by the various Study contributors on completion of sufficient design works to provide bills of materials to the estimators, quotations from equipment providers and contracting companies and estimates carried out directly by the owner's team. The operational cost estimate was developed on a 'first principle basis', derived from base data provided by Valence and the Study contributors such as:         <ul> <li>Forecast operational manning levels</li> <li>Proposed organisation charts</li> <li>Reagent usage forecast by system modelling</li> <li>Fuel utilisation estimates</li> <li>Calculated power consumption</li> <li>Operational readiness costs</li> <li>Estimated LOM capital costs for the Project are \$48.5M represented by \$35 million in Phase 2 plant capital and additional capital expenditure over the life of the Ore Reserve.</li> </ul> </li> <li>The estimated process operating costs, including drying and bagging, for the Project are \$439/dmt of concentrate.</li> <li>Royalties have been estimated based on the assumption that Valence will be able to negotiate a New Project Status.</li> </ul>	HW
Revenue factors	<ul> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul> <li>The derivation of, or assumptions made regarding revenue factors including head grade, commodity price, exchange rates, transportation and treatment charges have all been derived from Lone Star Tech Minerals LLC and Roskill in a confidential independent market report dated July 2014. An average LOM concentrate price of \$1,647/dmt was used for the Study.</li> <li>Valence has signed four Memoranda of Understanding (MOU's) for flake graphite sales, providing committed contracts for delivery subject to final product and grade qualifications. Pricing levels are consistent with those anticipated during feasibility level studies.</li> </ul>	HW



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		<ul> <li>A long term USD:AUD foreign exchange rate of 0.85 was adopted for the Study.</li> </ul>	
Market assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul> <li>Independent marketing consultant Lone Star Tech Minerals LLC has completed a detailed analysis on behalf of Valence covering the forward supply and demand outlook and longer term pricing forecasts.</li> <li>A bulk sample of graphitic carbon concentrate was tested for material and processing suitability by the Bluechip Engineering who determined it suitable as a feed source for applications that utilise graphite products.</li> </ul>	HW
Economic	<ul> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul> <li>The financial evaluation undertaken as part of the Study indicated a positive net present value (NPV) at a 10% discount rate.</li> <li>Sensitivity analysis indicated that a negative 20% change in product price, foreign exchange rate, operating cost or capital cost still resulted in a positive NPV.</li> </ul>	HW
Social	<ul> <li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul> <li>A social impacts and benefits study has been completed and results discussed with stakeholders.</li> </ul>	HW
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul> <li>No significant (high) naturally occurring risks were identified during a whole of project risk assessment.</li> <li>Valence has entered into formal marketing arrangement for the sale of graphitic carbon concentrate.</li> <li>All Valence tenure is in good standing with all legal obligations met. Regular meetings with state and federal Government agencies occur for the purposes of discussing required approvals and facilitating meetings with other stakeholders.</li> <li>A Mining Lease and Program for Environmental Protection and Rehabilitation (PEPR) must be approved before the reserve can be extracted and are dependent on the approval of the Minister for Mineral Resources.</li> <li>Valence has no reason to believe that the necessary Government approvals will be received within the timeframes anticipated in the Study.</li> </ul>	HW
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Proved and Probable Ore Reserves were declared based on the Measured and Indicated Mineral Resources contained within the pit design. The financial analysis showed that the economics of the Project were positive and the risk analysis did not identify any insurmountable risks.</li> <li>All Measured Resources that were contained within the pit</li> </ul>	HW



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	<ul> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	design were converted to Proved Ore Reserves.	
Audits or reviews	<ul> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul> <li>No external audits or reviews of the Ore Reserve estimates have been undertaken.</li> </ul>	HW
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>Accuracy and confidence discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The relative accuracy and confidence of the Ore Reserve estimate is inherent in the Ore Reserve Classification.</li> <li>No mine production data is available at this stage for reconciliation and/or comparative purposes.</li> <li>Factors that may affect the global tonnages and the associated grades include: <ul> <li>Mining dilution</li> <li>Mining recovery</li> </ul> </li> <li>Process plant performance</li> </ul>	ΗW