

## **Reporting industrial minerals**

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News that trading in ASX-listed Volt Resources shares were halted hours after the company released an announcement pertaining to its Namangale graphite project prefeasibility study in Tanzania sent ripples through the junior mining community earlier this month. But how do listed companies avoid making the same mistake?

Trading of Volt Resources' shares, a graphite exploration company with operations in Tanzania, was halted after the ASX expressed concern that the announcement indicated, or amounted to, the reporting of a production target or forecast which was not in accordance with listing rules on forward-looking statements.

Volt had outlined production scenarios ranging from 60,000 tpa to 240,000 tpa of graphite concentrate, over a 20-year mine life for the Namangale jumbo flake graphite project.

Following the halt, executive chairperson Stephen Hunt said "The company wishes to clarify that this was not its intention and in an effort to avoid any potential confusion or further conjecture, it has decided to withdraw the announcement".

### **Avoid regulatory hiccups – review your public statements**

Andrew Scogings\* and Ivy Chen\* outline reporting according to the JORC code.

Industrial minerals such as graphite, and more recently lithium minerals, have become the focus of attention for listed exploration and mining companies, mainly due to developments in rechargeable battery technologies related to the emerging electric vehicle market.

Consequently the race has been on to acquire tenure, report larger exploration targets and resources and to tell the market why one project has merits above and beyond a competitor.

Additionally, the competition for scarce investment dollars across the entire resources sector has inspired innovative exploration approaches, as well as creative ways to tell the story of exploration success. The requirements for public reporting however remain clear, and adherence to the JORC Code is essential.

Misunderstandings of the application of the JORC Code and its interaction with corporations' law have led to recent issues with public reporting by industrial minerals companies. Industrial mineral resources or ore reserves must be reported in terms of mineral specifications; it is not only about tonnes and grade. Further ramifications apply to the classification of mineral resources and for the application of modifying factors during technical and economic studies.

### **ASIC's information sheet 214 and the ensuing ripples in the market**

The Australian Securities and Investment Commission (ASIC) recently released guidelines that clarify what exploration and mining companies can report about the economic potential of their projects. These guidelines take the form of an information sheet (214). This development has caused some

consternation, particularly in the junior explorer sector, with the Association of Mining and Exploration Companies (AMEC) raising the issue with the regulatory authorities and the Federal Minister for Resources.

The release of 214 was the culmination of a two-year process, with industry having expressed a need for clarification as to what was, and was not, acceptable in public releases involving results of scoping and prefeasibility studies, production targets and other company forward-looking financial statements.

Information sheet 214 was compiled to draw together and explain the existing rules and reference sources in the style of a 'one-stop shop' guide, referencing the Australian Corporations Act 2001, industry codes (JORC and VALMIN), listing rules, guidelines and FAQ's from the Australian Stock Exchange, as well as existing ASIC regulatory guides.

A perception has emerged that requirements have changed, or goalposts have shifted following the release of this information paper, however the regulators have indicated that the law has not changed.

This perception of change may be driven however by an apparent increased amount of action in the regulated space, coinciding with the first uptick in a long while, in market and fundraising activity particularly in the junior explorer space.

Fundraising by companies via lodgements with the corporate regulator have always been reviewed using the rationale detailed in information sheet 214. Often, background scans of the company's public releases relevant to the transaction are also reviewed. In circumstances where public releases may have breached the requirements of the law, corrective disclosure is required. In some circumstances, this leads to complications that may hinder the smooth progression of fundraising.

Proactive voluntary action by a company ahead of planned fundraising, to either clarify existing public disclosure or to ensure public releases observe the guidelines in information sheet 214, is most likely to minimise these delays.

One of the recent issues in play has been the sufficiency of a reasonable basis to support forward projections of production and income by companies at different stages of project maturity. Under Australian corporation law, forward looking statements must be supported by a reasonable basis. In the resources space, reasonable basis is predicated on the different classification categories as defined in the JORC Code.

For example, inferred resources have a low level of certainty, and are defined in the code as being of sufficient certainty only to imply, but not verify, geological and/or grade continuity, and are not suitable for conversion to ore reserves. Only indicated and measured mineral resources can be converted to probable and proved ore reserves, by the application of appropriate modifying factors. This conversion process is via studies of appropriate levels, commensurate with project maturity. These levels of study are defined in the JORC Code (Clauses 37-40), as scoping, prefeasibility and feasibility studies.

A scoping study can be executed at an early stage of the project. The intended outcome of this level of study is mainly to determine whether, at the time of reporting, progression to a prefeasibility study can reasonably be justified.

At this stage of study, several very different scenarios may be considered as future development paths. Inputs include appropriate assessments of realistically assumed modifying factors, and therefore may not provide a reasonable basis to support a detailed, public, forward-looking, financial statement.

A company electing to publish forward looking financial statements based on scoping studies may need to prepare a clear case, to explain why this preliminary level of study can be considered a reasonable basis for any financial projections. It is also critical to ensure that there is no implication that ore reserves have been established, nor that development will proceed.

### **Reporting terminology – JORC Code Clause 12**

The key takeaway from Clause 12 is that "'modifying factors' are considerations used to convert mineral resources to ore reserves. As highlighted in Figure 1, these include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors." Inferred mineral resources have a low level of certainty, and cannot be converted to ore reserves, whereas indicated and measured mineral resources can be converted to probable and proved ore reserve.

Graphite and spodumene are commonly priced according to size and/or purity specifications. For example flake graphite may range from \$500/tonne (-100 mesh, minimum 90% C, FCL European port) to \$815/tonne (+80 mesh, minimum 94% C, FCL European port). Spodumene for industrial applications such as ceramics and glass is graded according to iron and / or lithium content and has recently ranged between \$170–\$265 per tonne of petalite (4.2% Li<sub>2</sub>O, FOB Durban) and \$755–\$780 per tonne of spodumene concentrate (7.5% Li<sub>2</sub>O, CIF Europe).

It is clear that such price variations could have a significant impact on the economics of an industrial minerals project. But even before pricing consideration, it is first necessary to be able to define a saleable product, to be able to start deriving the economic modifying factors, which leads us to a brief discussion of Clause 49.

### **Modifying Factors – the impact of Clause 49**

According to Clause 49, for minerals that are defined by a specification, the mineral resource or ore reserve estimation must be reported in terms of the mineral or minerals on which the project is to be based and must include the specification of those minerals.

For example in the case of a graphite project, mineral resource tonnes and total graphitic carbon (TGC) are key metrics, but graphite projects also require attributes such as product flake size and product purity to be evaluated. Flake size distribution and carbon content are parameters that drive the value in a graphite project, with the larger and purer flakes typically being more valuable.

Clause 49 would require that minerals such as graphite that are produced and sold according to product specifications to be reported *"in terms of the mineral or minerals on which the project is to be based and must include the specification of those minerals"*.

Therefore, graphite mineral resources must be reported at least in terms of liberated flake size distribution and purity, in addition to TGC and tonnages. To do otherwise could be misleading to investors, as without product information it is not possible to estimate the so-called basket price and hence apply economic Modifying Factors.

### **Reporting of exploration results – JORC Code Clause 19**

An exploration company may wish to publish exploration results and there are very clear guidelines in the JORC Code Clause 19, which highlight that *"Public Reports of Exploration Results must contain sufficient information to allow a considered and balanced judgement of their significance."* and *"Public Reports of Exploration Results must not be presented so as to unreasonably imply that potentially economic mineralisation has been discovered."*

Most importantly, *"Clear diagrams and maps designed to represent the geological context must be included in the report. These must include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views."* Context is king here. The reader must appreciate the risk associated with uncertainty at an early stage of project development

### **Reporting of Mineral Resources – JORC Code Clause 24**

Clause 24 deals with Mineral Resource categories, which depend upon the *"quantity, distribution and quality of data available and the level of confidence that attaches to those data"*. As summarised in Table 1, Indicated Resources are those which are *"estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit."* The JORC Code further recommends *"Caution should be exercised if Inferred Mineral Resources are used to support technical and economic studies such as Scoping Studies"*.

Inferred Resources may be included in technical and economic studies, but if the project viability relies on the Inferred material to make its case, it is unlikely that an acceptable reasonable basis can be established. Issues with public releases may occur at this stage if Inferred resources are used as the primary support for technical and economic studies.

### **Conclusions**

The following points should be considered when preparing public reports, to avoid the possibility of misleading investors:

- Mineral Resources are classified on:
  - quality of information (limited, adequate, or detailed) and
  - geological, grade and quality continuity (implied, assumed or confirmed).
- Appropriate reporting of Mineral Resource estimates must be in terms of Figure 1 in the JORC Code, *"which sets out the framework for classifying tonnage and grade estimates to*

*reflect different levels of geological confidence and different degrees of technical and economic evaluation" .*

- The Mineral Resource estimation must include the specification of those minerals if those minerals are defined by a specification.
- Context is vital, to ensure that the risks associated with the project are understood, and not overplayed or undercooked. For example, maps and diagrams are strongly recommended under the JORC Code.
- It is important to clearly set out the reasonable basis for any forward looking attachments in a public announcement.
- Caution is strongly recommended if Inferred Resources are included in technical and economic studies. It is unlikely that an acceptable reasonable basis can be established if the project viability relies on the Inferred material to make its case.

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**Table 1 Mineral Resource classification criteria based on the JORC Code (2012)**

<b>Criteria</b>	<b>Inferred Resource</b>	<b>Indicated Resource</b>	<b>Measured Resource</b>
<b>Does the resource estimate support the application of Modifying factors?</b>	Must not be converted to an Ore Reserve	Supports mine planning and economic evaluation. Can be converted to Probable Ore Reserve	Supports detailed mine planning and final economic evaluation. Can be converted to a Proved or Probable Ore Reserve
<b>Quality of information</b>	Limited geological and sampling evidence	Adequately detailed and reliable geological and sampling evidence	Detailed and reliable geological and sampling evidence
<b>Geological, grade and quality continuity* between points</b>	Sufficient to imply but not verify	Sufficient to assume	Sufficient to confirm

Source: Jacqui Coombes, Coombes Capability

*\*Note that 'continuity' for a flake graphite project includes 1) graphite assays; 2) in situ flake and lithological characteristics; and 3) product quality as demonstrated by representative extractive metallurgical (process) tests*