

2004 JORC Code – What does it mean to you?

**Presentation to
Southern Queensland Branch The
AusIMM**

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Outline

- **Introduction**
- **The JORC and the ASX Listing Rules**
- **2004 Code included in the ASX Listing Rules 17 December 2004**
- **Differences between the 1999 Code and the 2004 Code**

Introduction

- **The JORC Code is one of the more successful Industry Codes in the world, it has been the model for other national Resource and Reserves Codes and also for other industries self regulatory Codes.**
- **The incorporation of the JORC Code into the ASX Listing Rules (as Appendix 5A) in 1989 and the updating of the Code are the major strengths and the means for effective operation of the Code.**

Background of JORC Code

Australasian Joint Ore Reserves Committee (JORC)

- **JORC in existence for over 30 years.**
- **Australasian Institute of Mining and Metallurgy**
- **Minerals Council of Australia**
- **Australian Institute of Geoscientists**

- **Representation by invitation from:**
 - Australian Stock Exchange
 - Securities Institute of Australia
 - Others if deemed appropriate

ASX Companies Update

6 December 2004 Update no 16/04

Important information for ASX Listed Companies

Revision of JORC Code - ASX Listing Rule Amendments

The proposed listing rule amendments relating to the revision of the JORC Code were released for public consultation in an Exposure Draft dated 2 June 2004. The rule amendments have now been approved and will take effect together with the revised JORC Code incorporated as Appendix 5A of the Listing Rules on 17 December 2004.

What JORC Code Does

- Sets **minimum standards for public reporting (in Australia & New Zealand)** of Exploration Results, Mineral Resources and Ore Reserves
- Provides a mandatory system for **classification** of tonnage/grade estimates according to geological confidence and technical/economic considerations
- Requires Public Reports to be based on work undertaken by a **Competent Person**; describes the qualifications and type of experience required to be a Competent Person
- Provides **extensive guidelines** on the criteria to be considered when preparing reports on Exploration Results, Mineral Resources and Ore Reserves

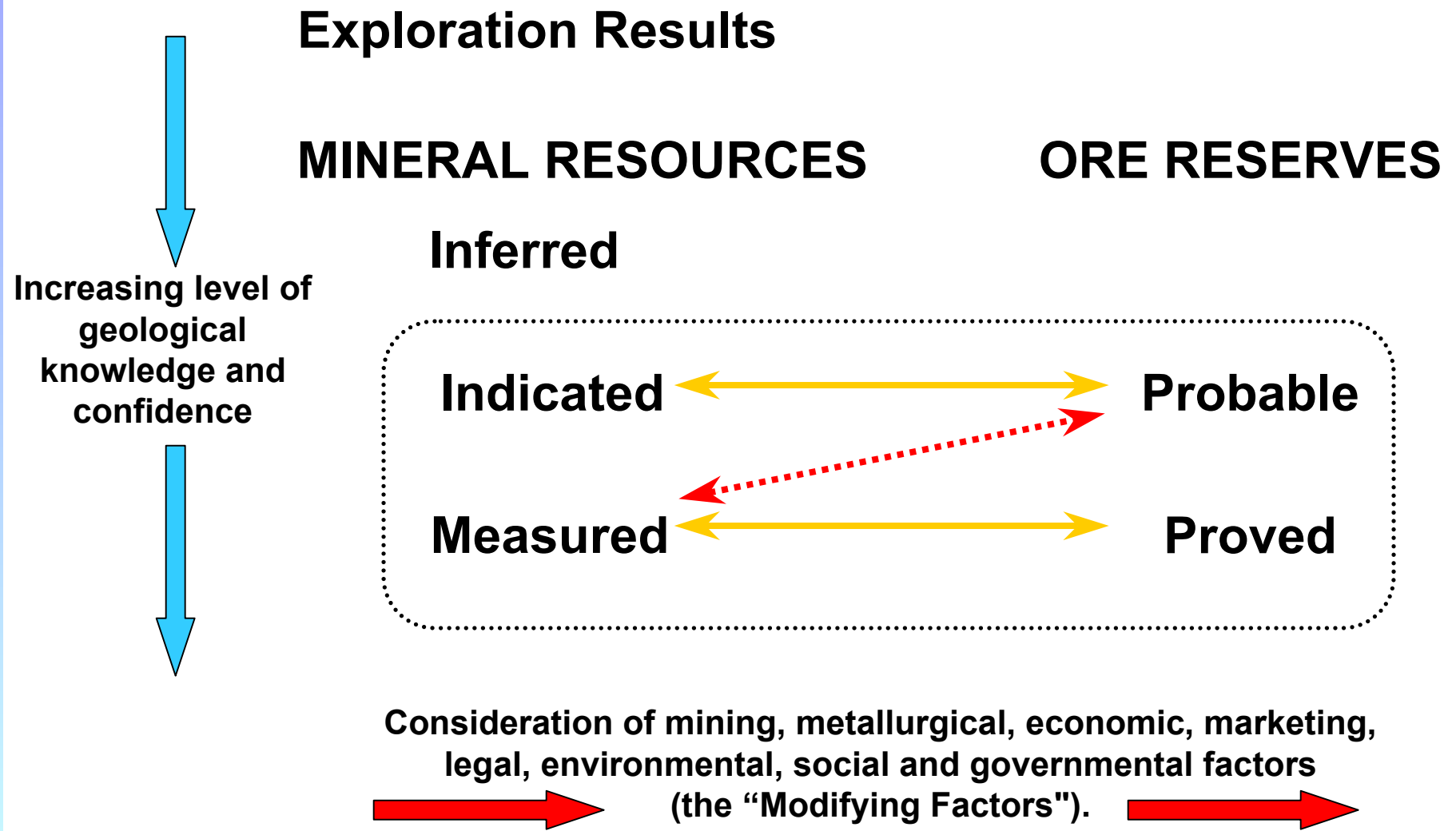
What JORC Code Does Not Do

- **Regulate the procedures used by Competent Persons to estimate and classify Mineral Resources and Ore Reserves (methodology)**
- **Regulate companies' **internal** classification or reporting systems**
- **Deal with breaches of the Code by companies (The ASX does)**
- **Deal with breaches by individuals, these are dealt with under code of ethics of AIG and AusIMM or the relevant ROPO**

Principles of JORC Code

- **Transparency**
 - clear and unambiguous presentation of information.
- **Materiality**
 - all the information reasonably required and expected
- **Competence**
 - public reports based on work undertaken by Competent Persons

Figure 1 General relationship between Exploration Results, Mineral Resources & Ore Reserves



JORC Stakeholders

**Resource &
Reserve
Estimators**

**Mining
Company
Management**

**JORC CODE
& Capital Market Regulations**

**Investment
Community**

**Financing
Community**

Why have a JORC Code?

- Companies Report according to the stock exchange requirements (e.g. ASX Listing Rules).
- In the early 1970s, the Melbourne Stock Exchange and the Federal Government (Rae Commission) requested AMIC (now the Minerals Council of Australia) to develop a code. AMIC responded and AusIMM joined promptly, resulting in JORC.
- This followed the Poseidon Boom & Bust;

The JORC Code

- First released, 1989; latest edition 2004
- Mandatory reporting standard for companies reporting to ASX and NZX. The 2004 Code will be incorporated into the NZX Listing Rules in June 2005
- Mandatory reporting standard for members of AusIMM and AIG; regarded as best practice by MCA, SIA
- Highly influential in developing international reporting standards

Current JORC Members

Chairman:

Mr P Stoker (AusIMM)

Deputy Chairman:

Mr M Adams (AusIMM)

Secretariat:

The AusIMM

Mr R Behets (MCA)

Mr John Dow (AusIMM)

Mr D Dwyer (MCA)

Mr G Fahey (AIG)

Mr P Forrestal (MCA)

Mr S Hunt (Steve) AIG

Mr N Miskelly OAM (ASX)

Mr Chris Roberts AIG

Mr W Staude (SIA)

Mr P Stephenson (AusIMM)

Mr J Vann (AIG)

Mr G Yeates (MCA)

(ex-officio)

Mr D Larkin (AusIMM)

(co-opted)

Mr T Goldsmith (AusIMM)

Mr B Shaw (AIG)

2004 JORC Code public involvement

- December 2001 – call for submissions
- December 2002 – publication of 1st Exposure Draft
- July 2003 – finalisation of draft and lodgement with ASX for public release as 2nd Exposure Draft
- February 2004 – timetable agreed with the ASX
- June 2004 – publication of 2nd Exposure Draft
- December 2004 – publication of 2004 JORC Code and amended ASX Listing Rules
- June 2005 – Inclusion of 2004 JORC Code in NZX Listing Rules

Main differences between 1999 and 2004 JORC Codes

- Recognised Overseas Professional Organisations
- Naming of Competent Person (transfer from ASX listing rules)
- Competent Person required for Exploration Results
- Consolidation of Reporting of Exploration Results (transfer from ASX listing rules)
- Reporting of Exploration Targets
- Encouragement to quantify risk/uncertainty
- Revised Diamond Reporting
- Revised Coal Reporting
- Introduction of Industrial Mineral Reporting guideline
- New Appendix 1 – Generic Terms and Equivalents
- Guideline on level of study expected for Ore Reserves

Recognised Overseas Professional Organisations (ROPOs)

- Under the 1999 JORC Code, Competent Persons needed to belong to either AusIMM or AIG. This was unduly restrictive.
- Acting on advice from JORC, ASX has promulgated a list of ROPO's (currently 17) to which overseas Competent Persons may belong for the purpose of submitting reports to the ASX. This list is referenced in the 2004 JORC Code.
- The recently updated list (18/3/2005) is published on the ASX website: www.asx.com.au/about/pdf/StandAloneROPOLetter18March2005
- Canada (Canadian Securities Administrators) has a similar system and South Africa (Johannesburg Stock Exchange) is currently implementing a ROPO-like system.
- ROPO's are required to have similar standards to AusIMM and AIG, including ability to enforce Rules of Conduct or Codes of Ethics.
- Facilitates international reciprocity of Competent Persons in line with international trends, which in turn promotes high quality reporting across national boundaries.

Current list of ROPOs

www.asx.com.au/about/pdf/StandAloneROPOLetter18March2005

- **Institute of Materials, Minerals and Mining**
- **Geological Society of London**
- **Institute of Geologists of Ireland**
- **European Federation of Geologists**
- **American Institute of Professional Geologists**
- **Engineering Council of South Africa**
- **South African Council for Natural Scientific Professions**
- **Geological Society of South Africa**
- **South African Institute of Mining and Metallurgy**
- **South African Council for Professional and Technical Surveyors**
- **Professional Engineers Ontario**
- **Association of Professional Engineers and Geoscientists of British Columbia**
- **Association of Professional Engineers and Geoscientists of Manitoba**
- **Association of Professional Geoscientists of Ontario**
- **Association of Professional Engineers and Geoscientists of Newfoundland**
- **Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories**
- **Ordre des Geologues du Quebec**

Reporting of Exploration Results

- In the 1999 JORC Code, a Public Report on “exploration results” did not require the involvement of a Competent Person.
- The requirement to involve a Competent Person for ‘Exploration Results’ is introduced in the 2004 JORC Code – (Where we all came in! - Poseidon)
- The change reflects common industry practice and international trends.
- Competent Person definition has been suitably amended.

Poseidon Boom – 1969 Report

Trevor Sykes in *The Money Miners* says:

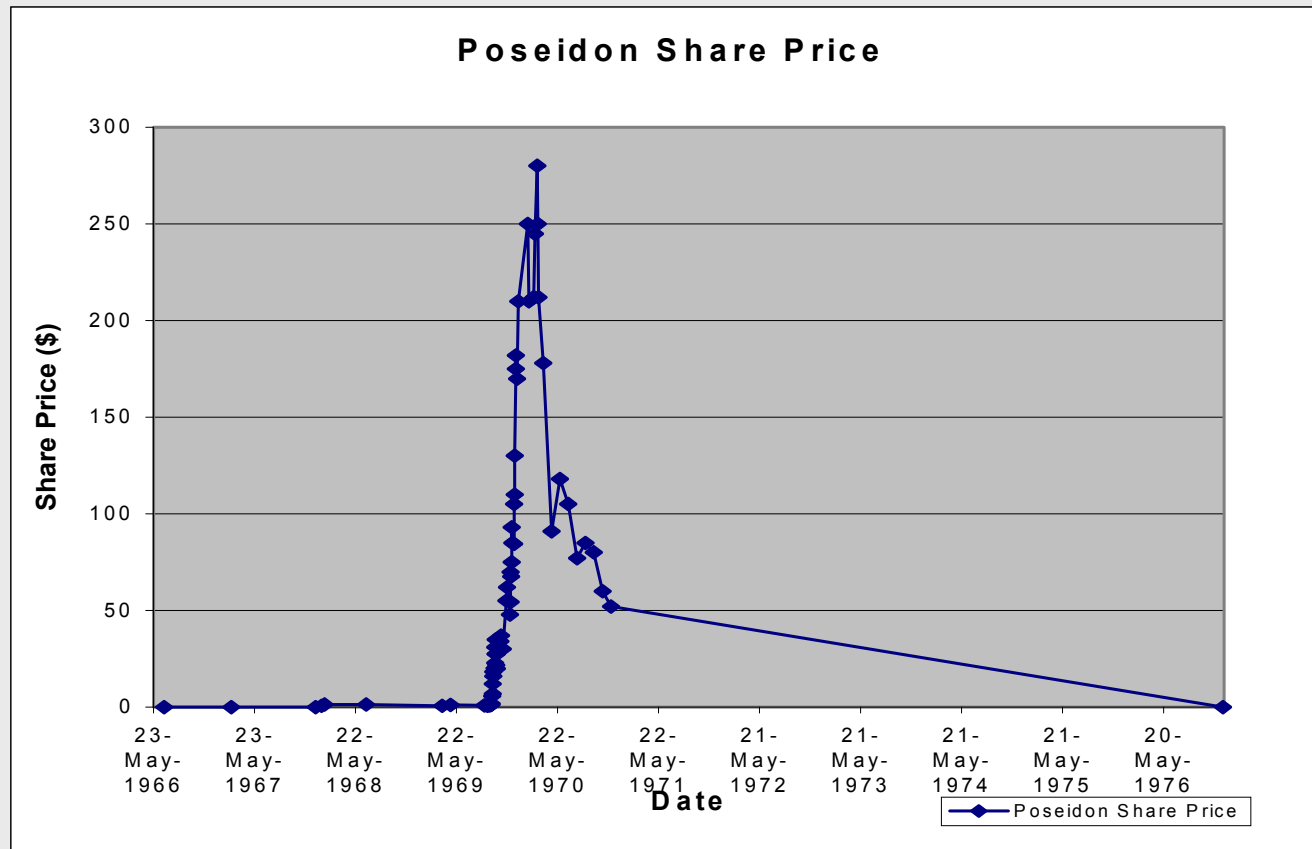
“On October 1, 1969, Poseidon directors issued a historic report to the Adelaide Stock Exchange before the start of trading. The statement began: “Further to the report of the recovery of nickel and copper sulphides on September 29, the directors of Poseidon NL announce that the assays received to date of the first completed drill hole PH2 at Windarra, WA, are as follows:-

Poseidon Boom – 1969 Report

| From - to in feet | Length in feet | Ni % | Cu % | Type of Ore |
|----------------------|-------------------|------|------|------------------------|
| 0 - 25 | 25 | 0.4 | 0.1 | Leached Ore |
| 25 -115 | 90 | 1.53 | 0.25 | Oxide |
| 115 -145 | 30 | 1.6 | 0.4 | Disseminated Sulphides |
| 145 -185 | 40 | 3.56 | 0.55 | Massive Sulphides |

“The Consulting geologists, Burrill and Associates Pty Ltd, quote that the mineralised zone has an indicated length of 1000 ft and a minimum width of 65 ft.”

Poseidon Boom & Bust – Share Price



Poseidon Bust – Aftermath

Trevor Sykes in *The Money Miners* says:

“One disturbing feature of the boom-time geological statements is their misleading air of precision. Poseidon’s statement of 3.56 percent nickel looked like a fine calculation to one-hundredth of one percent. *In fact, Poseidon had no basis on which to make such a calculation at the time and the actual assay of the core turned out to be substantially lower, although still of ore grade.*”

Reporting of Exploration Targets

- In the 2004 JORC Code, Clause 18 has been included on the reporting of exploration targets which has been clarified and separated from the clause on reporting of Exploration Results.
- Designed to facilitate responsible reporting by juniors and other explorers.
- In the 1999 JORC Code, there was no clear distinction between reporting of exploration results and of exploration targets

Clause 18 - Reporting of Exploration Targets

It is recognised that it is common practice for a company to comment on and discuss its exploration in terms of target size and type. Any such information relating to exploration targets must be expressed so that it cannot be misrepresented or misconstrued as an estimate of Mineral Resources or Ore Reserves. The terms Resource(s) or Reserve(s) must not be used in this context. Any statement referring to potential quantity and grade of the target must be expressed as ranges and must include (1) a detailed explanation of the basis for the statement, and (2) a proximate statement that the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

Other differences between 1999 and 2004 JORC Codes (1)

Naming of Competent Person:

- The requirement for the Competent Person to be named was in ASX listing rules, not the 1999 JORC Code.
- It has been transferred to Clause 8 of the 2004 JORC Code.
- The naming of the Competent Person has been a strong deterrent to public reporting using “non-Competent Persons”.

Other differences between 1999 and 2004 JORC Codes (2)

Resource/Reserve risk and uncertainty:

- Competent Persons are encouraged to quantify risk/uncertainty attaching to resource/reserve estimates (see Guidelines to Clauses 24 & 32 and Table 1) .
- No requirement.
- Reflecting mining project evaluation and increasingly common professional practice.

Other differences between 1999 and 2004 JORC Codes (3)

Level of technical/economic study expected to have been carried out to convert Mineral Resources to Ore Reserves:

- Clause 28 of the 2004 JORC Code includes the following guideline:

“In order to achieve the required level of confidence in the Modifying Factors, appropriate studies will have been carried out prior to determination of the Ore Reserves. The studies will have determined a mine plan that is technically achievable and economically viable and from which the Ore Reserves can be derived. It may not be necessary for these studies to be at the level of a final feasibility study.”

Other differences between 1999 and 2004 JORC Codes (4)

Diamonds, Industrial Minerals, Coal:

- The diamond and other gemstone reporting requirements have been consolidated and revised.
- Requirement to name valuer removed.
- Guidelines for the reporting of Industrial Minerals introduced.
- Modification of the coal clauses and recognition of the new Coal Guidelines.

Other differences between 1999 and 2004 JORC Codes (5)

Consolidation of Reporting of Exploration Results:

- Previously, ASX listing rules included requirements for reporting of exploration results additional to those in the 1999 JORC Code.
- These have been transferred to the 2004 JORC Code and removed from the ASX Listing Rules to consolidate the requirements for reporting of Exploration Results.

International developments

- Times are changing and further developments in Resource/Reserve reporting issues will increasingly be driven by international forces, principally overseas regulators.
- Australia has led the international negotiations through the the success of the JORC Code and very successful CMMI/CRIRSCO initiative. We need to remain involved and committed, as international developments will inevitably impact on Australia.

What's happening internationally

- SME Reserves Working Group are finalising a submission “Recommendations Concerning Estimation and Reporting of Mineral Resources and Mineral Reserves” which includes a revised 2005 SME Guide for reporting exploration results, Mineral Resources, and Mineral Reserves” aimed at resolving differences with USA SEC.
- IASB - Extractive Industries Accounting Standard
- Revision of UN-ECE Classification Framework (recently completed)
- South Africa revising aspects of its reporting regulations
- Chile and Peru finalising their reporting standards - JORC based
- CRIRSCO developing an international reporting template

Conclusions

- The 2004 JORC Code is an improvement on the 1999 JORC Code, whilst not materially affecting the Mineral Resource/Ore Reserve definitions
- The improvements reflect evolving regulatory and professional practices, and trends overseas
- The improvements are designed to keep Australia at the forefront of best international practice in public reporting of Exploration Results, Mineral Resources and Reserves
- JORC has been the basis for International Codes and the International Template