



CROWN MINERALS ACT 1991
MINERALS PROGRAMME FOR MINERALS (EXCLUDING PETROLEUM) 2013

Guidance for resource and reserve reporting for Tier 1 permits

In 2013, the New Zealand Government specified in the Crown Minerals (Minerals Other than Petroleum) Regulations 2007 (the “**Regulations**”) and the Minerals Programme for Minerals (Excluding Petroleum) 2013 (the “**Minerals Programme**”) that, for Tier 1 permits and for certain applications, estimates of mineral resources and reserves are to be made in accordance² with a recognised resource classification code.

These reporting requirements created a consistent reporting standard that applies to the following:

- › Applications for a Tier 1 mining permit
- › Applications for an extension of land to a Tier 1 mining permit
- › Applications to extend the duration of Tier 1 mining permit
- › Applications for an extension of duration to appraise a discovery for a Tier 1 exploration permit
- › Annual summary reporting for Tier 1 prospecting, exploration and permits. An exception to this is Tier 1 mining permits for underground coal or gold which do not meet the royalty or production thresholds specified in the Act.

PURPOSE

For Tier 1 permit holders, the Act and Regulations requires that some applications and some reporting of mineral resources and reserves to NZP&M must be in accordance with either the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“**JORC² Code**” 2012 edition), the Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (“**NI 43-101**”), or the South African Code for Reporting of Exploration Results (“**SAMREC**”). This standardises mineral resource estimates submitted to NZP&M, enables consistent assessment of applications against the requirements of the Minerals Programme.

This guideline explains the legislative requirements of the Crown Minerals Act (the “**Act**”) for reporting under these codes and how NZP&M will apply those requirements to permit holders and applications for certain permits. These reporting codes are quite similar in their requirements and standards.

For the sake of simplicity, the JORC Code is generally referred to throughout this guideline but the same principles apply to the other codes.

This guideline is not intended to explain the codes themselves. Applicants for and holders of Tier 1 permits can reasonably be expected to be familiar with the requirements of the codes, and these guidelines assume that.

BACKGROUND

The disparity in reporting resource and reserves to the investment community in relation to mineral exploration and mining has resulted in development of standards for public reporting of mineral (ore) reserves, mineral resources and exploration results. Several national reserve committees have developed reporting standards. An international initiative to standardise reporting definitions for mineral resources and mineral reserves, primarily for market-related purposes, began in 1994 when the Committee for Mineral Reserves International Reporting Standards was formed. The similarity between the different national reporting codes and guidelines has enabled

¹ “in accordance” refers to the manner of the reporting of the resource classification code and not the quality or accuracy of the resource estimate.

² Joint Ore Reserves Committee



CRIRSCO to create an International Minerals Reporting Code Template which any country can use and adopt.

The JORC Code, first released in 1989, is intended for public reporting of exploration results, mineral resources and ore reserves for the benefit of informing investors. It provides a mandatory reporting method for classification of mineable minerals resource estimations according to the levels of confidence in the public reports with respect to geological confidence, and technical and economic considerations (“modifying factors”). Any publicly listed company reporting to the Australian Stock Exchange or New Zealand Stock Exchange has a mandatory responsibility to prepare their public reports using the prevailing JORC Code reporting standard.

LEGISLATIVE CONTEXT

Crown Minerals Act 1991

The Act specifies that applicants must supply any information prescribed in the regulations and that they must comply with relevant obligations under the Act or the regulations in respect to reporting. *Section 29A (Process for considering applications)*, states what general information NZP&M takes into account when assessing permit applications, which is outlined further in the Minerals Programme and specified in detail in the regulations.

The principles of good industry practice embedded in the Act apply to resource and reserve reporting.

Crown Minerals (Minerals Other than Petroleum) Regulations 2007

The Regulations and their Schedules specify which applications and annual summary reports must be accompanied by a reporting of resources and reserves according to a recognised resource classification code. The relevant Regulations, with the Schedule that specifies the recognised code reporting requirements, are as follows.

Regulation 18 *Application for a mining permit (Part 3 of Schedule 2)*

Regulation 23 *Application to extend land to which a mining permit relates (Part 4 of Schedule 3)*

Regulation 25 *Applications to extend duration of mining permit (Part 6 of Schedule 3)*

Regulation 27 *Application to extend duration of exploration permit for purpose of discovery appraisal (Part 8 of Schedule 3)*

Regulation 35 *Annual summary report on prospecting and exploration activities (Part 6 of Schedule 4)*

Regulation 38 *Annual report on mining activities under Tier 1 mining permits (Part 8 of Schedule 4)*

Minerals Programme for Minerals (Excluding Petroleum) 2013

The Minerals Programme links the provisions of the Act and the requirements of the Regulations by providing guidance on which applications require submission of resource and reserve estimates in accordance with a recognised code.

The wording in the Minerals Programme applying to each has some inconsistency, including the use of non-standard and

undefined generic terms such as “mineable mineral resource”³ and “exploitable mineral deposit”, but this does not affect the requirements in the regulations for submitting or reporting according to one of the recognised codes.

The particular sections that refer to requirements to submit resource and reserve estimates according to a recognised code are given in Appendix 1.

ANNUAL SUMMARY REPORTS

Prospecting and exploration permits

*Regulations 35 and 36*⁴ require the holder of a Tier 1 prospecting or exploration permit to include in their annual summary report an up-to-date estimate of the resource made in accordance with a recognised resource classification code.

Mining permits

*Regulation 38*⁵ also requires the holder of a Tier 1 mining permit to include in their annual summary report an up-to-date estimate of the resource made in accordance with a recognised resource classification code, including having a competent person sign-off. An exception to regulation 38 is Tier 1 mining permits for underground coal or gold which do not meet the royalty or production thresholds⁶ specified in the Act.

*Regulation 39*⁷ requires Tier 2 mining permit holders to submit annual summary reports. The regulation also applies to Tier 1 mining permits for underground mines if the annual royalty payable by the permit holder is less than or equal to \$50,000⁸. Tier 2 mining permit holders do not have to report up-to-date estimates, unless it is a permit for coal. Tier 2 coal mining permit holders must provide an up-to-date estimate of the coal resource but are not required to report under any particular code.⁹ However, the overriding good industry practice obligation requires that the permit holder uses technical competence at a level of diligence and prudence reasonably and ordinarily exercised. In effect, estimates must still be done to a good standard.

In-ground resources

Reporting under the JORC and other recognised codes, which are designed for the investment community, creates a large gap between reported Mineral Resources and Reserves and what is in the ground. For example, under the JORC Code, most of New Zealand’s quite well-explored coal resources would not qualify as Resources.

Tier 1 permit holders, and Tier 2 permit holders for coal, must report annually total in-ground resources. This provides NZP&M with an “inventory” of mineral and coal quantities not covered

³ “mineable mineral resources” is a concept in the Act that may include inferred, indicated and measured resources or deposits, probable and proved resources or deposits, and the accompanying documentation on input data, methodology, quality control and validation of the mineral resource estimates.

⁴ Regulations, Schedule 4, Part 6

⁵ Regulations, Schedule 4, Part 8

⁶ specified in the third or fourth column of Schedule 5 of the Act.

⁷ Regulations, Schedule 4, Part 9

⁸ Regulations 39(6)

⁹ Minerals Programme 11.4(2)(a)(iii) – Annual summary reporting by Tier 2 permit holders

by the recognised Resource and Reserve reporting categories. A key concept in the Act is the avoidance of waste or sterilisation of mineral resources. Unless the balance between what is reported under the JORC Code and what is in the ground is known, there can be no assessment of that. Furthermore, without up-to-date reporting of in-ground resource (ie, global or in-situ) estimates, the Crown has only historically reported in-ground resource quantities in the many coalfields and goldfields around New Zealand.

For guidance on the estimation of Coal Resources and Reserves and on statutory reporting **not** primarily intended for providing information to the investing public, The JORC Code 2012 refers to the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves¹⁰. This document is not part of the Code, but adherence to the processes and procedures outlined in the Coal Guidelines is recommended by the Code.

The Australian coal guidelines are broad in nature to accommodate the wide variation of coal deposits in terms of rank, quality and geological environment. While the document is intended for use in Australian coalfields, it is directly applicable to New Zealand.

NZP&M encourages the application of the Australian coal guidelines in reporting coal resources and considers that it is good industry practice to do so.

NZP&M PRACTICE WITH RESPECT TO REPORTING UNDER THE JORC OR OTHER RECOGNISED CODES

The following guidelines explain NZP&M practice.

- › When submitting applications or annual summary reports requiring reporting under the JORC Code, NZP&M require the following information:
 - (a) a resource or reserve estimate.
 - (b) a Competent Person¹¹ statement and signature.
 - (c) a complete JORC Table 1 or equivalent.
 - (d) all supporting information for Table 1. Table 1 is the checklist of assessment and reporting criteria required by the JORC Code and is fundamental to reporting under the Code. It is not a substitute for the full supporting information.
- NZP&M will ordinarily reject an application unless all of this information is submitted.
- › Submitted Resource and Reserves reports must reflect any new information or data that materially affects the report or material assumptions and technical parameters underpinning the estimates, with a competent person signing off on the changes. If there is no change, the same report can be provided, and the supporting information previously submitted can be referred to.
 - › The JORC Code is principles based, not prescriptive. NZP&M will consider the JORC principles which allow discretion in JORC Code reporting: Transparency (clear unambiguous presentation), materiality (all reasonable information

expected – all data and not selected information) and competence.

- › Reporting under the JORC Code refers to the manner of the reporting NOT the quality or the accuracy of the resource estimates. NZP&M do not regulate the procedures used by the competent person nor does NZP&M deal with any breach of the JORC Code.
- › NZP&M are not auditors for the JORC Code, and do not report to the NZX or ASX.
- › Note that there is no such concept as “JORC compliant”. “The JORC Code is a Code for Public Reporting not a Code that regulates the manner in which a Competent Person estimates Mineral Resources or Ore Reserves. The term ‘JORC compliant’ therefore refers to the manner of reporting not to the estimates. Use of the words ‘JORC compliant’ to describe resources or estimates is potentially misleading. The words ‘JORC compliant’ should be interpreted to mean: ‘Reported in accordance with the JORC Code and estimated (or based on documentation prepared) by a Competent Person as defined by the JORC Code.’¹²
- › When assessing an application, NZP&M must be confident that the report on resources and reserves demonstrates what the relevant Regulations and Minerals Programme require. NZP&M has access to internal and external capabilities to determine whether the reported resource and reserves are at a level of geological confidence and suitably adjusted for the effect of modifying factors to support an application. If NZP&M has concerns with the information provided, further information may be requested from the applicant.
- › There is limited discretion with respect to Tier 1 mining permit applicants who should at least have an indicated resource defined in accordance with one of the codes. If the nature of the resource precludes reaching an indicated category, NZP&M has the discretion to allocate a mining permit based on inferred resources, but conditions may be included in the mining permit to require work aimed at improving the resource classification to a level that is adequate to plan the mining operation.
- › There is little discretion regarding submission of resource and reserve estimates in Annual Summary Reports, due 31 March following the end of each calendar year. Tier 1 exploration and mining permit holders who do not adhere to the regulations will be non-compliant unless this information is submitted in full or can be referred to in work programme reports. This will become part of the compliance record for the permit.

APPLICABLE LINKS

The following websites contain further information regarding New Zealand’s recognised resource classification codes.

NI 43-101: www.cim.org/
JORC: www.jorc.org/
SAMREC: www.samcode.co.za
CRIRSCO: www.crirSCO.com/

Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves http://www.jorc.org/docs/Coal_Guidelines_2014_-_Final_Ratified_Document.pdf

¹⁰ http://www.jorc.org/docs/Coal_Guidelines_2014_-_Final_Ratified_Document.pdf

¹¹ As defined in the JORC Code 2012 edition

¹² JORC Code 2012 edition, pg 6

APPENDIX 1: Extracts from the Minerals Programme relating to Resources and Reserves reporting

9.6 Extension of duration to appraise a discovery

- (3)(c) estimates of mineral resources, which:
- (i) should include at least inferred resources, and
 - (ii) for Tier 1 permits, are made in accordance with a recognised resource classification code

10.2 Mining permits

- (2) For Tier 1 permit applications, estimates of mineral reserves and resources require that these are made in accordance with a recognised resource classification code, and be accompanied by:
- (a) documentation on input data, methodology, quality control, and validation of the resource or deposit
 - (b) a spatial definition of the areas to which the figures in the estimates apply
 - (c) a statement of the criteria used to determine the estimates, and
 - (d) a statement of whether the estimates are made on the basis of scoping, pre-feasibility, feasibility study, or other basis.

10.5 Extensions of land

- (1) The Minister will ordinarily grant an extension of the land to a mining permit if satisfied that:
- (a) the permit holder has identified and delineated an indicated mineral resource
 - (b) the indicated mineral resource is generally contiguous with the mineral resource to which the mining permit applies
- (2) For Tier 1 permits, estimates of mineral resources must be made in accordance with a recognised resource classification code, and accompanied by:
- (a) a spatial definition of the areas to which the figures in the estimates apply
 - (a) a statement of the criteria used to determine the estimates, and
 - (a) a statement of whether the estimates are made on the basis of scoping, pre-feasibility, feasibility study, or other basis.

12.6 Extension of duration of a permit

Mining

The Minerals Programme makes no mention of a requirement to report mineral resources and reserves in accordance with a recognised code, but the Regulations (*25 Applications to extend duration of mining permit*) and applicable Schedule (*Part 6 of Schedule 3*) do.

11.3 Annual summary reporting by Tier 1 permit holders

- (3) (a) A prospecting or exploration permit holder must provide, where applicable, information on:
- (iv) estimates of total in-ground resources (see below)
 - (v) an up-to-date estimate of the resource, prepared in accordance with a recognised resource classification code, which may include:
 - (A) inferred, indicated and measured mineral resources, and
 - (B) probable and proven reserves
 - (vi) estimates must be accompanied by:
 - (A) a spatial definition of the areas to which the figures in the estimates apply
 - (B) a statement of the criteria used to determine the estimates, and
 - (C) a statement of whether the estimates are made on the basis of a scoping, pre-feasibility, feasibility study, or other basis
- (b) A mining permit holder must provide information on:
- (vi) estimates of total in-ground resources (see below)
 - (vii) an up-to-date estimate of the resource, prepared in accordance with a recognised resource classification code, which may include:
 - (A) inferred, indicated and measured mineral resources, and
 - (B) probable and proved reserves
 - (viii) a summary of any exploration and prospecting activity undertaken in the past year
 - (ix) a statement of whether the resources and reserves estimates are made on the basis of a scoping, pre-feasibility, feasibility study, or on some other basis
 - (x) to accompany the resource and reserves estimates, a spatial definition of the areas to which those estimates apply
 - (xi) a statement of the criteria used for defining the resource and reserve estimates

Disclaimer

This document is a guideline only and is not intended to cover every possible situation. Where this guideline is inconsistent with the Act, relevant Minerals Programme or relevant regulations, the Act, Programme and regulations prevail. This guideline has no binding legal effect and should not be used as a substitute for obtaining independent legal advice.

New Zealand Petroleum and Minerals (NZP&M) is not responsible for the results of any action taken on the basis of information in this guideline, or for any errors or omissions in this guideline. NZP&M may vary this guideline at any time without notice.

There may be factors taken into account in any application process, transaction or decision that are not covered by this or any other guideline. Adherence to this guideline does not guarantee a particular outcome. NZP&M retains the discretion to decline any application where the statutory requirements for that application are not met.



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NZP&M is a division of the Ministry of Business, Innovation and Employment. We lead and actively manage New Zealand's petroleum and minerals portfolio ensuring the country's economic interests and assets are comprehensively protected. Our goal is to use our wider understanding of the energy and resources sector to increase national and regional prosperity via petroleum and minerals exploration and production.

As a government agency, we engage with Councils, iwi and communities about petroleum and minerals development and regulation of the industry. We manage compliance and revenue collection on behalf of the Crown and aim to maximise the return that these important industries deliver for the benefit of all New Zealanders.

We report to the New Zealand public through the Minister of Energy and Resources.