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DIGGING DEEPER

RESTARTING PRODUCTION AT RIO TINTO

Peter McCarthy

In early 2007 AMC began working on a detailed plan for EMED Mining Public Limited on restarting production at the historic Proyecto Rio Tinto (Rio Tinto Mine) in Andalucia, Spain. Reputed to be the oldest mine in the world, Rio Tinto has a particularly rich history. The mine's mineral wealth was already legendary in ancient times. According to myth, these are the fabled mines of King Solomon, and a section of the area is still known as Cerro Salomón today. Rediscovered in 1556, the mine was worked until sold to a British syndicate in 1871, establishing the Rio Tinto company.

mine could be restarted quickly and easily with EMED estimating the total funding required at £60 to £80 million.

AMC assisted EMED with an Ore Reserve estimate for the Rio Tinto mine, which also has other deposits with additional resources which will not be published until sufficient work is undertaken to establish estimates in accordance with the JORC Code.

The mine plan is based on mining 9 million tonnes of ore per annum at an average of 0.5% copper, shipping 167,000 tonnes



Open pit benches ready for blasting.

When EMED acquired an option over the mothballed open pit mine it was regarded by most observers as being unlikely to restart because of historical disputes between past owners and their financiers. Despite this, the copper concentrator built by RTZ was generally in good repair and there were blastholes drilled out on the pit benches ready for blasting. Within three months, AMC was able to confirm that the

of concentrate containing 37,000 tonnes of copper and 500,000 ounces of silver; stripping 1.1 tonnes of waste per tonne of ore, over a mine life of 14 years. The project will be a significant one for Andalucia, employing over 300 direct employees and contractors at full production.

A significant step forward was achieved by EMED in October 2008 when it announced that it entered into an arrangement to obtain 100% ownership of the project. This was subsequently achieved and a legal roadmap was resolved with the regulatory authorities. In July 2009 EMED announced that the environmental assessment and improvement plans had been submitted and that excellent relations with local government and regulatory authorities had been established.

Continued on page 4.



Part of the concentrator at Rio Tinto.

CANADA'S NATIONAL INSTRUMENT 43-101 - CHANGE IS IN THE WIND

Zoe Grigg and Pat Stephenson

This article summarises the current reporting requirements and potential changes to Canada's securities regulations, primarily National Instrument (NI) 43-101 (Standards of Disclosure for Mineral Projects) and its Companion Policy NI 43-101CP. Public reporting in Canada is also subject to NI 51-102 (Continuous Disclosure Obligations), NI 44-101 (Short Form Prospectus Distributions), and NI 54-101 (Rights Offerings). It should be noted that this article is intended only as a guide to public reporting requirements in Canada and it is essential that interested parties read all relevant regulatory instruments in their entirety.

Part 1: The Status Quo

NI 43-101 applies to any issuer that discloses scientific and technical information about a mineral project to the Canadian public. It applies to all mineral projects, with the extent of application subject to a materiality test in some circumstances. Table 1 describes the application of NI 43-101 throughout the mineral project development cycle. The disclosure can be oral or written and must be based on information prepared by or under the supervision of a Qualified Person. When a Technical Report is required as summarised in Table 2, it must follow Form 43-101F1. All disclosure is also subject to NI 51-102 Continuous Disclosure and to SEDAR formatting requirements for documents lodged with the Canadian Securities Administrators. Provincial or Territorial securities commission/exchange rules may also apply.

The following key terms are defined in NI 43-101:

- **Issuer** – Any entity that has issued, or proposes to issue, a security.
- **Mineral Project** – Includes base/precious metals, coal and industrial minerals (NI 43-101 Part 1.1 for full definition). It does not include oil and gas (NI 51-101).
- **Materiality** – Would reasonably be expected to have a significant effect on the market price or value of the securities of the issuer (NI 43-101 CP Part 2.4(1) & (2)).
- **Qualified Person** – At least five years experience including experience relevant to the subject matter of the project and technical report and is a member of a professional association (NI 43-101 Part 1.1 for full definition).

General Mineral Project Development Stages	Defined Stages in NI 43-101	Resource & Reserve Categories		Other Information	Relevant Documents	
		Disclosure Permitted	Disclosure Prohibited		NI 43-101 & CP Parts	Guidelines
Acquisition of Tenements		None	All	Historic estimates (if applicable)	2.4	
Exploration	Early Exploration Property ↓ Exploration Information	None	All	Potential quality & grade expressed as ranges	2.3(2), 3.1, 3.2, 3.3	CIM Exploration Best Practice
Concept/Scoping	Preliminary Assessment	Measured, Indicated & Inferred Resources	Mineral Reserves	Preliminary Economic analysis of mineral resources	2.3(2), 3.1 3.2, 3.4 CPI.7	
Pre Feasibility	Preliminary Feasibility Study	↑	↑	Underground mining method or pit configuration. Mineral processing method.	↑	CIM Estimation of Mineral Resources & Mineral Reserves Best Practice
Feasibility	Feasibility Study	Measured, Indicated & Inferred Resources Proven & Probable Reserves	Inferred Resources – in economic evaluations	Detailed mine plan, social, environmental & financial studies.	2.3(1), 3.1 3.2, 3.4	
Construction	Development Property	↓	↓	See Item 25 of Form 43-101F1	↓	
Production	Production Property	↓	↓	See Item 25 of Form 43-101F1	↓	
Closure						

Table 1, NI 43-101 throughout mineral project development.

Obligation to File a Technical Report Triggers (NI 43-101 Part 4)		Independent Technical Report Requirement (NI-101 Part 5.3)	
Event	More Information	Producing Issuers (NI 43-101 Part 1.1)	Other Issuers
Becoming a reporting issuer	NI 43-101 Part 4.1 Provincial/Territory Securities Acts	✓	✓
Filing a preliminary prospectus	NI 43-101 Part 4.2(1)(a) NI 44-101	✓	✓
Filing a short form prospectus	NI 43-101 Part 4.2(1)(b) NI 44-101	✗	Conditional
Filing information or proxy circular concerning acquisition of a mineral property, if issuing shares	NI 43-101 Part 4.2(1)(c)	✗	Conditional
Filing an offering memorandum	NI 43-101 Part 4.2(1)(d)	✗	Conditional
Filing a rights offering circular	NI 43-101 Part 4.2(1)(e) NI 45-101 Part 1.1	✗	Conditional
Filing an annual information form (AIF)	NI 43-101 Part 4.2(1)(f) NI 51-102 Part 4.1	✗	Conditional
Filing a valuation required by securities legislation	NI 43-101 Part 4.2(1)(g)	✓	✓
Filing an offering document relating to TSX Venture Exchange policy	NI 43-101 Part 4.2(1)(h)	✗	Conditional
Filing a take over bid circular	NI 43-101 Part 4.2(1)(i)	✗	Conditional
Filing a news release or directors circular relating to a preliminary assessment, mineral resource or mineral reserve	NI 43-101 Part 4.2(1)(j)	✗	Conditional

Table 2, technical report triggers.

Conditional = if first preliminary assessment, mineral resource or mineral reserve for a property, or if 100% or greater change in total mineral resource or mineral reserve (See NI 43-101 Part 5.3 (1)(c)(i & ii))

Part 2: The Future

In January 2009, the Canadian Securities Administrators (CSA), which administers NI 43-101, launched a project to revise the Instrument in response to a number of industry and regulatory concerns that have developed since it was released in 2001. AMC is one of a number of consulting groups that has been providing input to the revision process. CSA has targeted April 2010 to publish draft revisions for comment. Although it is too early to speculate as to the nature of the changes that might be implemented, the following areas have been

flagged by CSA and industry as those of particular concern:

- **Consents of Qualified Persons (QP).**
In particular, the requirement, seen by many as unreasonably onerous and sometimes unworkable, to file new consents and certificates for the QP each time the reporting company triggers a new technical report. This is exacerbated by movement company to company and even country to country by individual authors.

MESSAGE FROM THE CHAIRMAN

The arrest and detention of Stern Hu and his colleagues in China, together with the July hotel bombings in Jakarta that seem to have targeted Western businessmen, must give all of us pause to consider the safety of our international staff. Whichever country we operate from, our Foreign Affairs department will provide advice and travel warnings. How seriously must we take them? How do we weigh that advice against advice from our insurers? What weight do we give to the advice of clients, or joint venture partners, who are familiar with the situation on the ground at their project and the safe paths in and out?

The bottom line is, of course, that there is no safe destination or method of travel. We have to minimise the risks, but we cannot let our activities be dominated by constant fear. As managers or company directors, we must be able to demonstrate that we took all reasonable steps to ensure the safety of our people. Unfortunately, that still leaves grey areas requiring judgement.

Most exploration and mining companies send people to just a few countries and areas of interest. They can obtain advice

and establish procedures to protect staff, to the extent of providing security contractors if necessary and using helicopters to avoid high risk areas. They can take time to assess and respond to threats.

Consultants travel regularly into exotic and unfamiliar territory, usually at short notice, and must rely heavily on the client's arrangements. Often the location is subject to Foreign Affairs warnings and it may require a special insurance premium to obtain coverage, or coverage may not be available at all. Sometimes hazards become apparent only on arrival. For example, I once travelled halfway around the world to inspect a mine, to find on arrival that the shaft safety systems and ropes had not been tested for many years and were obviously corroded. Yet this mine was in production – should I refuse to do the inspection and disappoint my client?

At AMC, our risk management system includes levels of formal approval for travel, with higher-risk travel requiring higher-level approval. It is underpinned by ensuring that the intending traveller has been briefed and fully understands the risks, and is willing to

and/or where a project is re-evaluated as a result of changing economic conditions or the discovery of new deposits.

- **Disclaimers.** Disclaimers are strictly limited in NI 43-101 reports to non-technical areas (legal, environmental, political etc) There has been debate as to whether the scope should be extended to include some specialist technical areas, such as diamond valuation.
- **Independent technical report.** As shown in Slide 3 above, there are three situations where a technical report has to be prepared by a QP who is independent of the issuer: CSA is considering whether to allow producing issuers to file in-house (non-independent) technical reports for all triggers.
- **Sensitive information.** Currently technical reports on development/production properties must include an economic analysis with annual cash flow forecasts using mineral reserves. There is debate as to whether this requires some producing issuers to reveal sensitive information that puts them at a competitive disadvantage to foreign competitors who are not required to disclose this information.

- **Triggers for technical reports.** As shown above, there are currently 11 situations that trigger a requirement to file a technical report. There is some uncertainty regarding when a trigger applies, particularly when NI 43-101 is considered in combination with other reporting regulations. CSA is also considering adding triggers related to a company's decision to commence production and to any first time disclosure of mineral reserves, mineral resources, or a preliminary assessment (as opposed to disclosure only in news releases of directors' circulars).
- **Disclosure of "historical" resource/reserve estimates.** Currently disclosure of "historical" estimates is restricted to pre-1 February 2001. CSA is considering allowing disclosure of "historical" estimates that post-date 1 February 2001 in certain circumstances.
- **Preliminary assessments.** NI 43-101 prohibits the disclosure of an economic analysis that includes Inferred Resources once an issuer has completed a pre-feasibility study. This can have unintended adverse consequences, particularly where there are different mineral projects at different stages of development on the same property



travel. No pressure should ever be applied to someone who is uncomfortable with the travel plan. It is always possible for the individual, and for AMC, to decline an assignment.

One of the pleasures of a mining career is the opportunity to travel to and work in exotic and out-of-the-way places. Recent events have shown that whether you work as an individual, or for a large consulting firm, or for one of the biggest mining companies in the world, this opportunity has some risk attached.

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- **Technical report form.** There is strong consensus in the industry that the current formatting requirements of technical reports as prescribed in form (43-101F1), while suitable for early stage exploration properties, are not well suited for production and development properties and that a separate form is required for these situations.
- **Size and detail of technical reports.** It is generally agreed that technical reports have tended to become too big and to contain too much detail (they are, after all, intended to be summary reports).
- **Recognized Foreign Associations.** The current list of "Recognized Foreign Associations" to which a QP may belong is embedded within NI 43-101, which means that it cannot be modified without modifying the Instrument.

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A SUCCESSFUL YEAR

AMC had a successful 2008–09 year, winning many new clients and being given responsibility for some of the most important corporate projects available worldwide. This was achieved against a background of global turmoil and financial crisis, during which many clients suspended the engagement of consultants for a period of months. We were able to manage through this period with the support of all AMC staff, who shared the burden of cost reduction for the last four months of the financial year, maintaining our cash reserves at a healthy level.

Our geographic range was unaffected by global conditions, with significant work done on projects in Australia, Kazakhstan, India, Indonesia, Canada, Egypt, the UK, Saudi Arabia, South Africa, West Africa and Mongolia, to name a few.

Management changes at year end included the appointment of Paul Harper as Chief Executive Officer. Paul, who joined AMC in 2002, previously held senior management positions in mining operations and with mining contractors, with experience in South Africa and Australia. Peter McCarthy was elected Chairman of the Board of Directors, following the retirement of Bob Appleyard from that position.

Over the next 12 months, AMC's mission is to achieve sustainable growth by providing high-quality professional advice to the global minerals sector. AMC's Directors would like to thank everyone who has helped us to manage through the past year and invite you all to continue to participate in AMC's success.

A MESSAGE FROM AMC'S NEW CEO, PAUL HARPER



In the first half of calendar 2009 spending on consulting services was very slow. In response to this situation AMC staff agreed to work a four day week to reduce overhead costs. However in the last three months AMC has seen the level of activity pick up and conditions are now back to normal, although perhaps not back to the dizzy levels of mid 2008.

In response to the global financial crisis mining companies substantially reduced their expenditure, including exploration, improvement, capital and expansion projects. Now that the initial reaction has passed, there appears to be a realisation that expenditure is required to support the companies as a going concern. There is still an element of caution however the 'must do' projects are now coming back on-line. There also appears to be more funds being made available to carry out these projects.

Apart from the increase in the feasibility type of studies we are also seeing an increase in the demand for technical and operational reviews, optimisation and benchmarking work as companies attempt to streamline their operational cost structures. There is certainly an element of confidence returning to the market and AMC is well placed to continue to provide quality services to our clients as fortunately we have been able to keep our capabilities totally intact during these difficult times.

PROMOTIONS

We also congratulate the following staff member who was promoted to Principal.



Tracie Burrows

Tracie has recently been promoted to Principal Geologist. Tracie's expertise includes geological resource modelling and estimation, resource auditing, data collation and validation, geological database construction, grade control and sampling, blending and ROM pad management and reconciliation. Tracie is also experienced in computer automation, macro writing, and scripting for numerous mining software packages; training in all aspects of grade control and mine geology skills.

Restarting Production at Rio Tinto (continued from page 1).

The company was continuing to refine detailed planning for operational start-up including improvements to infrastructure, operating practices and the condition of the site.

Group Managing Director Harry Anagnostaras-Adams said, "The permit-application process is progressing well. We are pleased that studies show that the environmental condition of the Rio Tinto Mine site will be improved significantly by implementing our policies and plans. Once the permit-granting process is also formally progressing, we will establish the production management teams and workforce recruitment procedures and seek shareholder and financier approvals. We are grateful to AMC Consultants for the high standard of their support on this and other EMED projects."

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