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International Accounting Standards Board

INFORMATION FOR OBSERVERS

Board Meeting: **22 June 2007, London**

Project: **Extractive Activities research project**

Subject: **Possible disclosure principles for minerals and oil & gas reserves and resources (Agenda Paper 15D)**

Purpose

1. This paper identifies:

   (a) some (preliminary) disclosure principles that may assist in identifying and developing disclosure requirements for minerals and oil & gas reserves and resources; and

   (b) the types of information about reserves and resources that might be included as disclosures in the financial report.

2. This paper is not proposing specific disclosures for reserves and resources. The research project team intends to propose some specific disclosures of reserve and resource information in its discussion paper, however those disclosures will be developed in consultation with users and the research project's Advisory Panel and then discussed with the Board.

Context

3. The purpose of identifying disclosure principles is to set some parameters as to the types of disclosures that should be subject to further consideration by the research project. These disclosure principles are expected to be equally applicable regardless of whether reserves and resources are recognised on the balance sheet and regardless of whether the measurement of reserves and resources is at current value (refer Agenda Paper 15B) or at historical cost (refer Agenda Paper 15C). This is because the results of the user survey (as discussed in Agenda Paper 15A) suggest that users of financial reports, or at least the relatively sophisticated users, consider that decision-useful information relating to minerals or oil & gas reserves and resources is best provided via disclosure than via the balance sheet.

4. Although the disclosure principles should be the same, the research project team expects that some of the specific disclosure requirements may differ depending on whether the balance sheet measurement of reserves and resources assets is at current value or historical cost. Such differences may arise due to the need for some disclosures to amplify the information that is presented in the financial statements. For instance, if reserves and resources assets are measured at current value, users indicated that disclosure of the assumptions underlying the current value measurement (such as the price assumption) would be critical if the current value were to have any degree of decision-usefulness.

Disclosure principles

5. The research project team has identified the following principles that may help guide the selection and development of disclosures relating to minerals and oil & gas reserves and resources that should provide decision-useful information to users of financial reports.

6. The proposed guiding principles for disclosure relate to:

   (a) disclosure objective – that is, the disclosure should provide decision-useful information regarding reserves and resources that helps a user to prepare their own valuation;

(b) scope of financial reporting – that is, the types of decision-useful information relating to reserves and resources that should be provided in note disclosure;

(c) consistency and comparability – that is, there should be consistent disclosure around the world and across the mining and oil & gas industries; and

(d) level of disaggregation – that is, reserve and resource information should be disclosed at a level of disaggregation that is consistent with user needs. For some mining or oil & gas companies, the level of disaggregation may be as low as an individual mine or field.

Disclosure objective

7. The research project team considers that, in the financial report, the primary source of information that users need for the valuation of minerals and oil & gas reserves and resources would be presented in note disclosure rather than in the financial statements. This contrasts with the conventional view of accounting for most other assets and liabilities, whereby it is expected that decision-useful information is provided by the financial statements and amplifying disclosures.

8. The IASB *Framework*, at paragraph 21, explains that notes and supplementary schedules "may contain additional information that is relevant to the needs of users about the items in the balance sheet and income statement. They may include disclosures about the risks and uncertainties affecting the entity and any resources and obligations not recognised in the balance sheet (***such as mineral reserves***)" [emphasis added].

9. The example of mineral reserves in paragraph 21 (of the existing *Framework*) is convenient for this analysis, but it also helps illustrate two points.

10. Firstly, under existing historical cost accounting models, mineral reserves may be recognised in the balance sheet at the accumulated costs incurred in finding and developing those reserves (and/or mineral resources). However, as reported in Agenda Paper 15A, users indicated that measuring reserve and resource assets on the balance sheet at historical cost – or similarly current value (or fair value) – would not provide information that they would use in making an investment decision. In that sense,

disclosure sometimes might compensate for– rather than amplify – the information that is presented in the balance sheet.

11. Secondly, the existing *Framework* seems to acknowledge the usefulness of disclosure when the (economic) resource does not satisfy the requirements for either definition or recognition as an asset. Minerals and oil & gas reserve and resource volume disclosures are well suited to providing this information as they have classifications that allow the reporting of volumes that, for instance, may not yet be probable that they will be economically recoverable (e.g. inferred resources in the minerals classification system) either because further geological assessments are required or because development or production is awaiting on the settlement of a contingency, such as an environmental approval. The classification system communicates to the user that the economic recovery of these volumes is less certain than for other reported volumes.

Scope of financial reporting

12. The proposed *Framework* clarifies that the financial statements and notes are not the only sources of financial reporting information to help users assess the amounts, timing, and uncertainty of an entity's future cash flows. Paragraph OB16 explains that although financial statements and notes are a central feature of financial reporting, "...some types of both financial and non-financial information may best be communicated by means other than traditional financial statements. Corporate annual reports, prospectuses, and annual reports filed with governmental agencies in some jurisdictions are common examples of reports that include financial statements, other financial information, and non-financial information. News releases, management's forecasts or other descriptions of its plans or expectations, and descriptions of an entity's social or environmental impact are examples of reports giving financial information other than financial statements or giving only non-financial information."

13. The user survey confirmed that users – specifically, sophisticated analysts – look beyond the financial statements and notes for information to make their investment decisions in mining or oil & gas companies. In fact, most of the information analysts need to value a company's mineral or oil & gas operations is obtained from sources outside the financial statements and notes – this may be in company prepared materials that paragraph OB16 considers as being part of 'financial reporting' but that are outside

the accounting standard setting arena (subject , in part, to any future decision the IASB takes on the management commentary project).

14. This suggests that there is no expectation – conceptually or in practice – for the financial statements and/or note disclosures to provide complete and exhaustive information to make assessments about the entity's future cash flows. Therefore the question of scope relates to defining the boundaries of the information that should be presented in the financial statements and notes and the information that should be either reported by reporting entities elsewhere or obtained by financial reporting users from other sources. The qualitative characteristics of decision-useful financial reporting information may be helpful in this determination.

Relevance (including timeliness)

15. Relevant disclosure is considered to be disclosure that helps users develop their own valuation. To prepare a valuation, users need to make assumptions about the key inputs for the valuation. This is expected to include information on historical performance (e.g. production and cost data) which analysts might use in forecasting future production and future costs. However much of the information users need is future-oriented information. For example, this might include information on production schedules, start up dates, and costs to bring production on. Whenever the income approach is used (which is often likely to be the case for many operating assets, including minerals or oil & gas properties), future-oriented information will be used as inputs to the valuation.

16. The research project team understands that there may be differing opinions regarding the extent to which accounting standard setters should require the disclosure of future-oriented information. However, there is precedence in IFRSs for disclosing future-oriented information when that information is used to amplify the measurement information about assets or liabilities recognised in the balance sheet. IAS 1 *Presentation of Financial Statements*, paragraphs 116 and 117 state the general principle:

> **116. An entity shall disclose in the notes information about the key assumptions concerning the future, and other key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year. In respect of those assets and liabilities, the notes shall include details of:**

(a) their nature; and

(b) their carrying amount as at the balance sheet date.

117 Determining the carrying amounts of some assets and liabilities requires estimation of the effects of uncertain future events on those assets and liabilities at the balance sheet date. For example, in the absence of recently observed market prices used to measure the following assets and liabilities, future-oriented estimates are necessary to measure the recoverable amount of classes of property, plant and equipment, the effect of technological obsolescence on inventories, provisions subject to the future outcome of litigation in progress, and long-term employee benefit liabilities such as pension obligations. These estimates involve assumptions about such items as the risk adjustment to cash flows or discount rates used, future changes in salaries and future changes in prices affecting other costs.

17. Some may argue that there is less justification for an accounting standard to require the disclosure of future-oriented information when that information is not being used to amplify the information presented in the financial statements. The research project team does not agree. The overriding objective should be to provide decision-useful information. Often the disclosure of future-oriented information might be justified as relevant and suitable for note disclosure because it amplifies a balance sheet amount. However, in the research project team's view, the justification for providing future-oriented information is not because it simply amplifies a balance sheet amount, but because it provides (or at least helps to provide) decision-useful information. Therefore, in principle, the future-oriented information should still be relevant and suitable for note disclosure even if it is not intended to (directly) amplify a balance sheet amount. An example of this in existing IFRS is the requirement in IFRS 7 *Financial Instruments: Disclosures*, paragraph 40 to disclose market risk sensitivity analysis.

18. Future-oriented information is often relevant (as it is in evaluating reserves and resources) – the concern is faithful representation (reliability) and this is addressed in a subsequent section of this paper.

19. The relevance of disclosure often depends on its timeliness. Analysts frequently update their valuation models to either reflect new project-specific information or to reflect market changes (e.g. change in commodity price outlook). Analysts seem to be primarily interested in obtaining timely information regarding reserves and resources and are less interested where the company reports that information.

20. To illustrate, some of the reserve and resource information used by (sophisticated) analysts is obtained from:

(a) reserve and resource statements (i.e. reserve and resource disclosures) which are generally prepared annually and included in the entity's annual report (although located outside the financial report);

(b) production and cost reports, which are generally prepared quarterly as separate reports to the relevant stock exchange; and

(c) project feasibility studies or other studies used to support investment decisions, which are prepared as part of the entity's investment decision making process and therefore may be very comprehensive. These studies, or their key points, are often released to the market once the decision has been made.

21. Information that is event driven (such as investment decision making documentation) or activity driven (such as quarterly production reports) may be better suited to being provided separately from the financial report at the time the event or activity has occurred. That is not to say that information of this nature cannot be provided in the financial report, however the disclosure is likely to be more timely if it is released separately from the financial report. The research project team acknowledges that concerns regarding the timeliness (or currency) of information presented in the financial report is not a concern that is unique to the extractive industries. However the issue of timeliness perhaps focuses attention on identifying the incremental benefit that an accounting standard can provide in relation to disclosure of information about reserves and resources. Consequently, in the research project team's opinion, the reserve and resource information most suited for inclusion in a financial report is information that confirms what has happened during the reporting period. In that sense, it serves to help make management accountable. Therefore, year-end disclosures of reserve volumes, the mineral or oil & gas produced and the costs incurred may be suitable for inclusion in a financial report. The financial report disclosures might also distil information regarding current forecasts of future activities (e.g. commencement dates for production, production forecasts) that is currently disclosed outside the financial report and subject to a separate reporting cycle. Nevertheless, this type of information is expected to be decision-useful and capturing (and potentially repackaging) some of this information in the financial report might be particularly useful to less sophisticated users who do not have the time or resources to absorb each piece of information released to the market through other sources.

22. This discussion on timeliness assumes the information would be disclosed elsewhere if not required to be disclosed in financial statements. That assumption is discussed further under the heading of 'Comparability and consistency'.

Faithful representation

23. Broadly speaking, the value of reserve and resource assets will be determined by expectations regarding the:

    (a) volume of minerals or oil & gas that exists and is capable of being economically recoverable; and

    (b) economic (and legal, environmental, political, and social) conditions that exist throughout the development, production and restoration of the property.

    Consequently, information that seeks to provide a faithful representation of the value of reserve and resource assets needs to take account of – and communicate – these uncertainties.

24. Because each reserve and resource asset (e.g. mineral and oil & gas property) is unique, most (if not all) of these expectations will be unobservable – that is, they will be based on the subjective assessments of either management or independent consultants. Consequently verifiability and neutrality concerns will influence perceptions of the representational faithfulness of any disclosures relating to information about reserves and resources. Reserve and resource volumes cannot be directly observed because they are a function of subjective estimates about geological, engineering and economic conditions. Accordingly, other than historical performance data, most information relating to reserves and resources would be capable of, at best, indirect verification. For instance, reserve and resource volume estimates can only be verified by checking the inputs and recalculating the outputs using the same methodology (refer proposed *Framework*, paragraph QC25).

25. Note disclosure allows for the uncertainties associated with minerals and oil & gas properties to be identified and communicated in quantitative and qualitative information and may make the information more verifiable and potentially less subjective. This is because the effect of uncertainty can be communicated using valuation ranges and valuation sensitivities rather than single point valuation estimates. The disclosure of

quantitative information is also not restricted to units of value – it can also be expressed in units of volume. The qualitative information might include narrative discussion of risks relating to the commencement of development or production.

26. For example, the minerals and oil & gas reserve and resource classification systems communicate the uncertainties associated with estimates of recoverable quantities of minerals or oil & gas. These systems establish clearly defined terms (such as proved reserves, probable reserves, resources) that provide insights into the probability of recovery and the maturity of the project (e.g. if the project has or has not yet been approved for development).

27. Lack of verifiability therefore may constrain the types of information about reserves and resources that should be disclosed in the financial report. The research project team notes that verification is a commonly identified concern with the reporting of future-oriented information. However, the research project team notes that the Board has recently indicated that verifiability should be separated from faithful representation, and instead described as an enhancing qualitative characteristic rather than a component of a necessary qualitative characteristic.[1] Consequently, verifiability is seen as a subordinate characteristic compared to relevance.

Comparability and consistency

28. Current reserve and resource disclosures differ by jurisdiction as well as between oil & gas and minerals.

Differences between jurisdictions

29. The different reserve and resource disclosure practices that have emerged in different jurisdictions may be partly the result of different organisations assuming responsibilities for the disclosures. This includes:

    (a) accounting standard setters – specifically the FASB, which sets disclosure requirements for oil & gas via FAS 69 *Disclosures about Oil and Gas Producing Activities*;

[1] Refer IASB *Update*, April 2007.

(b) securities regulators – such as the SEC through Industry Guide 7 *Description of property by issuers engaged or to be engaged in significant mining operations*, and in Canada, National Instrument 43-101 *Standards of Disclosure for Mineral Projects* and National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities*; and

(c) stock exchanges – such as the Australian Stock Exchange and Johannesburg Stock Exchange, which require reserve and resource reporting in accordance with the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* ("the JORC Code") and the *South African Code for Reporting of Mineral Resources and Mineral Reserves* ("the SAMREC Code") respectively.

In addition, in some jurisdictions, reserve and resource reporting practice has evolved through industry practice in the absence of specific, mandatory requirements. Oil & gas reserves reporting practices in Australia are an example of this.

30. Consistency could be enhanced if the IFRS sets disclosure requirements in relation to reserves and resources. The adoption of, or convergence with, IFRS in most major jurisdictions around the world means that IFRS has the infrastructure to achieve consistent reserves and resources reporting internationally. Some industry commentators may disagree with shifting reserves reporting requirements to an IFRS. They consider that disclosure of reserves and resources information is more of a securities regulation issue than an accounting standard setting issue. The research project team acknowledges that this would represent a shift in responsibilities for the setting of reserves reporting requirements in most jurisdictions since responsibility for the reporting of reserves information has largely been assumed by market regulators (i.e. securities regulators or stock exchanges). However, this is not true in the USA where the FASB has set the disclosure requirements for oil & gas reserve volumes since 1978. In addition, it is generally accepted that the most important information in relation to a minerals or oil & gas company is information on the reserves and resources under its control.[2] With this in mind, accepting the continued inconsistent reporting of

[2] See, for example:

> Reserves and resources are the life blood of the mining industry. As a result, they also have a large role in determining equity market values as well as accounting profits. Indeed, much of the value of the mining industry is derived from reserves and resources that are not recorded on companies' balance sheets.

reserve and resource information (albeit outside the financial report)[3] would seem to be in conflict with the Board's stated objective to "develop, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the various capital markets of the world and other users of the information to make economic decisions" (refer paragraph 6(a) of the *Preface to International Financial Reporting Standards*).

31. The research project team notes that the objective of using an IFRS to set reserves disclosure requirements could be restricted to achieving a specified level of consistency across jurisdictions and thereby provide individual jurisdictions with the opportunity to augment the disclosure requirements to deal with jurisdiction-specific concerns (e.g. the Johannesburg Stock Exchange may want South African companies to provide additional disclosures in relation to deep underground mining operations). This type of additional disclosure requirement, set by regulators, would not affect a company's ability to comply with IFRSs.

Differences between minerals and oil & gas disclosures

32. Differences in oil & gas and minerals disclosures presumably reflects the generally held view that these are separate and distinct industries. There are good reasons why these industries have historically been considered separately. For instance, the different physical attributes of minerals and oil & gas (i.e. solids versus liquids and gas) affect the estimation process and this has influenced the development of reserve and resource definitions in each industry. Furthermore, during the development of FAS 19 *Financial Accounting and Reporting by Oil and Gas Producing Companies*, some FASB constituents were of the view that the minerals and oil & gas industries are sufficiently

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Source: *mine* review of global trends in the mining industry*, PricewaterhouseCoopers, May 2004, page 27

Oil & gas reserves information is vitally important as a driver of market values of publicly quoted companies in the sector. It is also critical to the calculation of reported income, through its use in asset depletion and impairment calculations.
Source: *Presenting the full picture. Oil & gas: reserves measurement and reporting in the 21st century*, Deloitte, 10 February 2005, page 1

[3] There are examples of some jurisdictions effectively adopting converged reserve and resource reporting requirements – for example, for minerals reserve and resource reporting frameworks in Australia, Canada,

different to warrant separate pronouncements. One of the reasons provided in support of that view was that "*discovery* is the critical event leading to the production of oil and gas whereas *development* and *extraction* are the critical events for most other minerals" (refer FAS 19 Basis for Conclusions, paragraph 98).[4]

33. The research project team is in favour of a disclosure model that provides consistent disclosure of information relevant to both the minerals and oil & gas industries plus the potential to provide additional industry-specific disclosures. This is consistent with the research project's guiding principle, which is to consider applying the same accounting to both minerals extractive operations and oil & gas extractive operations. (Part of the research involves determining whether the application of this guiding principle is appropriate and to identify if, and under what circumstances, departures from that principle should be contemplated.) The premise behind the guiding principle is that, at least at a high level, mining and oil & gas extractive activities generally follow a similar process (i.e. exploration, evaluation, development, production and site restoration) and generally face similar risks and uncertainties, such as:

    (a) risk of no discovery;

    (b) risk of no development;

    (c) geological uncertainty;

    (d) extraction efficiency uncertainties;

    (e) processing efficiency uncertainties; and

    (f) cost/price uncertainty.

34. Similarly, the information needs of the users surveyed indicates that, at least at a high level, there are common information needs across the two industries. That is, users' information needs are driven by their interest in predicting future cash flows under

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Chile, New Zealand, South Africa and the United Kingdom are all based on the Combined Reserves International Reporting Standards Committee template.

[4] This comment is understood to have been a distillation of the view of some respondents to the FASB Discussion Memorandum that preceded FAS 19. Although FAS 19 only applies to the oil & gas industry, the Basis does not clarify whether or not FASB members agreed with that comment. Paragraph 98 of the Basis explains that "The Board has not yet examined in depth those and other claimed dissimilarities between the oil and gas industry and other extractive industries; nor has it decided whether there is a need to address the other extractive industries in a separate pronouncement".

conditions of geological and economic uncertainty as identified in the previous paragraph. (These information needs are discussed further below under the heading 'Types of value-based information that might be disclosed').

35. Consequently, the research project team believes it may be possible to enhance the consistency and comparability of disclosure requirements in financial reporting across the minerals and oil & gas industries by emphasising the similarities – for instance, under both of the dominant industry-based definitions of minerals reserves and resources and oil & gas reserves and resources:

    (a) reserves are those quantities that are estimated to be commercially recoverable and that are related to an approved or well advanced project to recover those volumes; and

    (b) proved and probable reserves are those categories of reserves which represent the best estimate of recoverable volumes and upon which business decisions might be made.

    The work of the CRIRSCO/SPE convergence team will help the Board identify the extent to which common disclosures may be able to be identified. (Refer Agenda Papers 13 and 13A for more information.)

36. The argument for cross-industry consistency is less clear cut than for cross-jurisdictional consistency. Although investors in a mining company will often make comparisons to other mining companies around the world, comparisons to oil & gas companies would not be as common. Nevertheless, given the commonalities regarding reserves and resources, and the commonalities in user needs, there is an obvious advantage to investors in having common definitions and some degree of commonality in the disclosure requirements. At the same time differences between the industries and the underlying commodities may justify certain disclosure requirements that are unique to each industry. The disclosures must also be responsive to users needs in respect of specific types of minerals or oil & gas. For instance, a South African mining analyst suggested that there are some different information needs depending on whether the Witwatersrand Reef or Greenstone gold pockets are being mined.

Level of disaggregation

37. A major finding from the user survey is that the majority of users would like more disaggregated information to be reported. The users' primary interest seems to be the disclosure of disaggregated information relating to valuation inputs such as reserve and resource volumes and costs, with the information preferably presented at the mine or field level. This reflects the users' desire for information that will assist them in preparing their own valuations.

38. For a current value to be of any use, users indicated that it too would have to be presented at a disaggregated level. However, because the valuation is expected to be used largely as a guide for the analyst valuation rather than a valuation that would be relied on *per se*, users seemed less inclined to push the valuation down to the mine or field level. Instead, most users agreed that a valuation presented at a regional level would be sufficient.

39. In the oil & gas industry in particular, some analysts noted that there may be sensitivities between companies and host governments if information disaggregated to a level such as mine or field were disclosed. Aside from these sensitivities however, there is also the issue of the detail of disclosure that this requirement might create, especially for large companies. Presentation at a partially disaggregated level might offset some of these preparation and public disclosure concerns while still providing decision-useful information.

Types of value-based information that might be disclosed

40. Users indicated that the types of disclosures necessary to understand a current value measurement of minerals or oil & gas reserves and resources would include:

    (a) reserve and resource volumes;

    (b) development plans;

    (c) production schedules;

    (d) development costs;

    (e) operating costs;

(f) commodity price assumptions;

(g) exchange rate assumptions;

(h) discount rate assumptions; and

(i) taxation / royalty obligations.

41. Disclosure of this information to support a current value measurement may, however, not be sufficient to meet the information needs of users. A current value measurement basis for reserves and resources is being contemplated as a pragmatic response to the degree of preparation effort and estimation uncertainty associated with measuring mineral or oil & gas reserves and resources (or more specifically, the mineral or oil & gas property containing reserves and resources) at fair value each reporting period. Consequently, as proposed in Agenda Paper 15B, the scope of the current value measurement might be limited to only valuing some categories of reserves, whereas some users have indicated they need volume information on reserves and resources to make their own assessments of value.

Reserve and resource volumes

42. There was unanimous agreement among the users surveyed that disclosure of estimates of minerals and oil & gas reserve (or reserve and resource) volumes is necessary to support their analysis. However, there were differing views as to the categories of reserves and resources that should be disclosed.

43. Most minerals analysts indicated that they need disclosure of all categories of reserves (being proved reserves and probable reserves) and resources (being measured, indicated and inferred). This level of disclosure would correspond to the disclosure of volumes of minerals that have been discovered and, at a minimum, have "reasonable prospects for eventual economic extraction".[5] This level of disclosure is consistent with existing disclosure practice in jurisdictions such as Australia, Canada, South Africa and the United Kingdom. In the USA, SEC Industry Guide 7 *Description of property by issuers engaged or to be engaged in significant mining operations* limits minerals volume

[5] Refer definition of a 'mineral resource', as per the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2004 edition – also known as the JORC Code. The JORC

disclosure to proved reserves and probable reserves, unless additional disclosure is required to be disclosed by foreign or state law.[6]

44. There was no clear consensus among oil & gas analysts as to the amount of disclosure for oil & gas reserves and resources. Most analysts are interested in the separate disclosure of proved reserves and proved plus probable reserves, noting that proved plus probable reserves represents the estimate of most likely future production from projects approved for development or justified for development. Although disclosure practice in the USA (as set by FAS 69 *Disclosures about Oil and Gas Producing Activities*) is restricted to proved reserves, most, but not all, analysts suggested that the disclosure of proved reserves only is insufficient for valuation. However, a couple of analysts said that they primarily only focus on proved reserves, as they consider that probable reserves may be questionable, especially if in deep water or if they are concerned about the company's reputation. There seems to be less interest in disclosure of possible reserves, as these categories are considered to be too uncertain to factor into investment decisions. Similarly, there was limited demand for the disclosure of contingent resources.

45. There did not seem to be strong demand from either minerals or oil & gas analysts for a financial report to disclose the results from exploration, which for instance in the minerals industry might include results from outcrop sampling, assays of drill hole intercepts, and geophysical survey results. The importance of information regarding exploration potential depends on the size of the company, and therefore the materiality of the company's exploration projects compared to its other operations (if any). One mining analyst suggested that it was difficult to make any inference of value from raw drill results. Two oil & gas analysts mentioned that they sometimes use expected monetary value or monte carlo techniques to estimate the value of exploration properties, although it was not expected that the required geological information would be provided in the financial report.

Code is a member of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) family of reserve and resource definitions.

[6] Refer SEC Industry Guide 7, paragraph (b)(5).

Development plans and production schedules

46. Information about a company's development and production schedule was generally considered to be an important factor in estimating future cash flows. It was acknowledged that this information would be important in understanding any current value estimate of reserves and resources that appears on the balance sheet.

47. As an input to an analyst valuation however, information on development plans and production schedules was considered to be useful as a guide. Some analysts mentioned that they adjust the schedules according to their own expectations of the schedule. Analysts noted that project-specific schedule information is usually made available at the time of an investment decision or feasibility study. The analyst may use this information to assess whether they consider the proposed development schedule to be achievable, and accordingly may factor in their own amendments. If a company is producing, the analyst will also use past production data to assist in their forecasts of future production.

48. There was general agreement among users that disclosure of a development and production schedule for each mine or field would be voluminous. The preferred view of analysts was for the disclosure of narrative discussion of the timing of key events associated with development and production plans and/or the disclosure of a production schedule for a limited forecast period.

49. With respect to narrative disclosure, it was noted that a discussion of the timing of key events is often already provided in the management discussion & analysis section of the annual report.

50. With respect to disclosure of a production schedule, analysts indicated most support for the disclosure of up to a forecast period of 5 years. A longer period was considered to be less decision-useful due to the effect of discounting and concerns regarding the greater potential that the predictions will be inaccurate. Analysts supporting such a disclosure generally indicated that it would have to be presented on a disaggregated basis to be useful.

Development costs and operating costs

51. Similar to their view on development and production plans, users indicated that information about a company's development and production cost assumptions would be critical in understanding any current value estimate of reserves and resources that appears on the balance sheet. It was noted that disclosure of these assumptions is particularly important in high cost environments. As one analyst suggested, companies have not predicted the price or cost inflation that has affected the industry in the last couple of years.

52. In the absence of a current value estimate, users generally seemed to view the disclosure of development and production cost assumptions as helpful, but not necessary, disclosure for the financial report. Analysts indicated they use their own cost assumptions when making investment decisions. Their assumptions are generally based on:

    (a) information from project approval announcements (e.g. feasibility studies) and other regulatory filings;

    (b) industry experience and trends in comparable projects; and

    (c) (in the longer term) historical cash flows for the project in question.

53. This suggests that actual cost data is an important disclosure. As noted above, this information is a useful input in identifying industry trends and trends in comparable projects as well as being useful to forecast future cash flows – especially for production costs – for the project being valued.

54. Some analysts indicated that the disclosure of development cost assumptions was more important as it is more uncertain. The uncertainty is understood to be a combination of uncertainty regarding the development effort (which is a project-specific factor) and cost environment (which is a market factor). Consequently, although industry experience and trends in comparable projects may help the analyst to better understand the cost environment, the disclosure of development cost assumptions may help the analyst to understand the development effort required. Disclosure of development cost assumptions may also enable the analyst to assess the reasonableness of the company's assumptions, especially if the project will be operating in a high-cost environment.

Commodity price, exchange rate and discount rate assumptions

Assumptions used for value estimates

55. Most of the user interviews focussed on which commodity price and, to a lesser extent, which discount rate assumptions should be used in estimating reserve and resource values and volumes (noting that reserve volume estimates essentially represent economically recoverable reserves). Almost all users surveyed displayed a preference for either the use of long-term entity-specific assumptions or the use of standardised assumptions – for price assumptions, the generally preferred standardised price was based on an average price for a set historical reference period. The lack of depth and liquidity of the forward markets was raised as a concern with using market derived price assumptions, noting also that forward markets do not exist for all commodities. One analyst believed that the forward market for oil is significant for 18 months into the future but very small thereafter. Therefore, in the absence of a suitable market derived price assumption that is observable and objectively determined, the general preference that emerged was either that an entity-specific assumption or a standardised assumption should be used.

56. Reasons supporting the use of entity-specific assumptions included that it shows management's view of the future, and therefore management's view of its assets. Disclosure of those assumptions is critical if a current value estimate is to be of any use. To the extent that the price assumption used is an entity-specific assumption, it would also be independently useful by helping the analyst to assess if the company is being aggressive in its view of the future and also providing a guide as to the price the company may pay or accept in asset sales. Some analysts considered that entity-specific price assumptions would therefore be commercially sensitive and would not expect those assumptions to be freely disclosed. It was noted that any requirement for such disclosure might prejudice the company – and therefore its shareholders – when competing for projects (or customers) with other resources companies that operate outside capital markets. One mining analyst did not agree that commercial sensitivity should be a concern except perhaps for some less common minerals.

57. Standardised assumptions were favoured:

(a) for pragmatic reasons, such as the analyst did not expect companies would disclose their planning price assumptions and/or that disclosure of all price assumptions could be voluminous as some price assumptions might be project-specific; or

(b) because of concerns about the subjectivity of a forward looking estimate.

Standardised assumptions are seen as being objective, verifiable and would allow for comparisons between companies. It was acknowledged that standardised assumptions are imperfect, and that there is a trade-off between comparability and understanding how management views its assets. Nevertheless, the findings of this survey suggest that more analysts, on balance, prefer the use of standardised assumptions – at least for a company-disclosed current value estimate.

58. In the absence of a current value estimate in the financial statements or note disclosures, users indicated that they did not need a price assumption to be disclosed to assist them in preparing their own valuation estimate. Instead, analysts would use their own (forward-looking) views on price.

Assumptions used for volume estimates

59. Even in the absence of a current valuation of reserves and resources being included in the financial statements, the approach adopted for these assumptions is important for reserve and resource volume disclosures. At present, different reserve and resource reporting regimes around the world adopt differing views on the perspective that should be used in these estimates – generally ranging from realistically assumed future conditions to current conditions, which might be interpreted to mean year-end conditions or the conditions of a specified historical average.

60. More research is needed to reconcile the views of users regarding whether reserve and resource volume reporting should be using entity-specific forecast assumptions or standardised assumptions. The user survey findings seemed to suggest that the need for disclosure of entity-specific price assumptions is not as strong for volume estimates. This may reflect some degree of comfort and familiarity with the existing reserves reporting requirements in those jurisdictions that permit use of forecast prices but do not

also require disclosure of those price assumptions. This is common in minerals reserve and resource volume reporting outside of the USA.

Taxation / royalty obligations

61. Users indicated that it is important for them to understand the effect of taxation and royalty obligations, including the effect of Production Sharing Contracts (PSCs), in any current value estimate. Users attempt to incorporate the affect of these obligations in their own valuation models.

62. Usually the taxation or royalty regime for each country is generally known. However, less information is available on the terms of PSCs, because it is claimed that host governments do not allow the terms of the agreements to be disclosed. Aside from confidentiality concerns, some analysts suggested that the number and complexity of some PSCs may make it difficult to meaningfully condense the relevant information into a disclosure. The absence of this information affects a user's analysis. For instance, one analyst mentioned that although he tries to model oil & gas companies on a field-by-field basis, he does not have enough information to estimate the PSC impact on that basis. Some information or analysis may nevertheless be disclosed on the effect of PSCs. For example, it was noted that some companies disclose that a given price increase will change future reserves entitlements by a particular percentage.

63. Disclosing the effect of taxation and royalty obligations – and particularly, PSCs – was identified as an area where there is need for improvement. This is considered to relate not only to what information is disclosed, but also how it is disclosed. Comparability was identified as a problem. For instance, it was noted that in accounting for various oil & gas royalty obligations (including Production Sharing Contracts), the effect is sometimes reflected in the total of entitlement barrels and sometimes in the corporate tax line.

Other disclosures

64. Other disclosures that users indicated some support for, but that are not directly used as an input to a valuation of a minerals or oil & gas property, include:

(a) a historical record of finding and development costs that have been incurred for projects – this type of disclosure is considered useful for determining performance measures such as the return of capital employed; and

(b) reconciliations of year-to-year changes in reserve (or reserve and resource) volumes and/or value estimates – a prototype reconciliation was proposed as part of the user survey and most users suggested that a reconciliation of that type for reserve volumes would be useful to understanding the reasons why the estimate has changed during the financial year. There was less interest in such a reconciliation for reserve values, primarily because of their overall concerns about the usefulness of a current value measurement of minerals or oil & gas reserves and resources.

65. More in-depth discussion with the Board is planned on disclosures after the research project team has completed it research (including further consultation with users and preparers) on the design of specific disclosures to provide decision-useful information. As foreshadowed in this agenda paper package, the purpose of this discussion is to identify, and seek Board member feedback, on some of the types of value-based information relating to reserves and resources that might be suitable for disclosure in the financial report.

QUESTIONS

Q1) Does the Board agree that an IFRS should require the disclosure of reserve and resource volumes, whether or not a current value measurement of reserves and resources is provided in the financial statements or note disclosures?

Q2) Does the Board agree that the research project should develop some prototype disclosures, in consultation with users and preparers, that provide decision-useful information about minerals and oil & gas reserves and resources, as per the types of information about reserves and resources proposed above?