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International Accounting Standards Board

INFORMATION FOR OBSERVERS

Board Meeting:	**19 September 2008, London**
Project:	**Extractive Activities research project**
Subject:	**Disclosures for minerals or oil & gas extractive activities (Agenda Paper 15A)**

Purpose

1. This paper outlines some general features of a potential disclosure model for minerals or oil & gas extractive activities. The design of the model is based upon identifying:

   (a) the disclosure objective(s) for extractive activities;

   (b) guiding principles for financial statement note disclosures; and

   (c) types of disclosure that would satisfy these objectives.

2. The project team's proposals were developed after considering the findings from the research project's user survey, consulting with the team's advisory panel, and reviewing the proposals of, and the corresponding comments on, the US Securities and Exchange Commission's project to modernise its oil & gas reserve definition and disclosure requirements.

The objectives of disclosure

3. The objective of general purpose financial reporting is to provide decision-useful information. This applies equally to financial statements and note disclosures, such that the qualitative characteristics and constraints of decision-useful financial reporting information are as relevant to note disclosure as they are to presentation in the financial statements. Note disclosure can provide decision-useful information through amplifying information in the income statement or balance sheet, or by providing additional information. It is interesting to note that paragraph 21 of the existing IASB *Framework*[1] identified mineral reserves as an example of a supplemental disclosure.

A disclosure objective for extractive activities

4. The importance of disclosures to users of financial reports in the extractive industries was made apparent in the research project's 2007 user survey, which found that the primary source of information that users rely on when analysing extractive activities is presented in disclosures or other reporting rather than in the financial statements. (Agenda paper 15B provides a summary of the user survey findings.)

5. Consistent with the feedback from the user survey, the proposed disclosure objective for extractive activities is to provide information that can enable users to evaluate the:

   (a) future cash flows that can be expected from the entity's minerals or oil & gas assets;

   (b) current period financial performance of the entity; and

   (c) nature and extent of the risks and uncertainties associated with the minerals or oil & gas assets, especially the risks and uncertainties associated with the estimation of the recoverable minerals or oil & gas from those assets.

   This disclosure objective is similar to the disclosure objective identified for IFRS 7 *Financial Instruments: Disclosures.*

[1] Paragraph 21 of the existing *Framework* states: "The financial statements also contain notes and supplementary schedules and other information. For example, they 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].

Question for Board members: *Do you agree with this proposed disclosure objective?*

Guiding principles relevant to the disclosure objective

6. The following guiding principles are intended to set the parameters for the disclosures to be proposed:

   (a) there should be consistent disclosure for minerals and oil & gas; and

   (b) the boundaries of what is to be disclosed should be set by:

      (i) the scope of financial reporting; and

      (ii) cost/benefit and materiality considerations.

Guiding principle I – consistency of disclosure

7. The first guiding principle is that the same types of information should be disclosed across the mining and oil & gas industries in relation to extractive activities. This is not meant to imply that there should be identical disclosures across both industries. Rather, it means that the disclosure should be:

   (a) directionally consistent across the mining and oil & gas industries; and

   (b) comparable within each industry.

8. Promoting comparable disclosure within each industry is important because it is what users want – although investors in a mining entity will often make comparisons to other mining entities around the world, comparisons to oil & gas entities would not be as common. Therefore, the proposed disclosures need to be responsive to users' needs in each industry, which might include maintaining some existing disclosures that users indicated are being used when making their investment decisions. However, the proposed disclosures cannot be responsive to all user needs in each industry. 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. The project team does not expect that an IFRS would contemplate requiring disclosures at this level of detail.

9. By promoting directional consistency across both industries, the project team is suggesting that the proposed disclosures should be sufficiently similar so that users in each industry have access to similar types of information when making their investment decisions. For instance, the disclosure of proved and probable minerals and oil & gas reserve volumes meets this guiding principle. This would still be the case even though the mineral reserves estimate may be expressed in terms of gross tonnes and the mineral grade whereas an oil reserve is measured in barrels of oil recoverable. The principle is the same, but some of the content in the disclosures might have to vary.

10. Directional consistency is considered to be an important objective because:

    (a) of the similarities in user needs in both industries, whereby the user survey found that users' information needs are driven by their interest in predicting future cash flows under conditions of geological and economic uncertainty; and

    (b) the CRIRSCO/SPE review indicated geological and economic uncertainty can be described in a consistent manner as a result of the definitions of minerals and oil & gas reserves being broadly comparable.

Question for Board members: *Do you agree with this guiding principle?*

Guiding principle II – scope and constraints of financial reporting

11. It is not possible, and nor is it intended, that financial reporting would meet all of the information needs of users. The scope of financial reporting constraint therefore refers to whether the information to be disclosed should be provided in the financial statements (including notes) or elsewhere, which would include management commentary and other types of communication such as 'fact books' located on entity websites. The project team recognises that there is currently no clear definition of what is within the scope of financial statements. This should become clearer as the Board's work continues on the conceptual framework and management commentary projects. For the purpose of inviting comments on the discussion paper, the project team does not think a clear distinction is needed. Rather the project team anticipates that all disclosures that would (i) benefit users, (ii) meet a cost/benefit test, and (iii) might reasonably be viewed as within the scope of financial statements should be proposed in the discussion paper. Feedback from the discussion paper responses on whether these

disclosures should be included in financial statements and developments in the conceptual framework and management commentary projects should help to identify the types of disclosures that should be contemplated for inclusion in the subsequent draft IFRS for extractive activities.

Additional comments on scope

12. Some industry commentators consider that disclosure of reserves and resources information is more of a securities regulation issue than an accounting standard setting issue. The project team acknowledges that including such disclosures in financial statements 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 entirely true in the USA where the FASB has set some of the disclosure requirements for oil & gas reserve reporting. In addition, it is generally accepted that the most important information in relation to a minerals or oil & gas entity is information on the reserves and resources under its control.[2] With this in mind, accepting the continued inconsistent reporting of reserve and resource information (albeit outside the financial report) across the minerals and oil & gas industries[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

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[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.
> 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

decisions" (refer paragraph 6(a) of the *Preface to International Financial Reporting Standards*). Indeed, including these disclosures in an IFRS may be the most effective way to achieve internationally consistent reporting of reserves and resources information.

Additional comments on cost/benefit considerations

13. Some oil & gas entity representatives on the research project's advisory panel suggested that the disclosures being proposed for the oil & gas industry should be the same as the SEC's revised oil & gas disclosure requirements – which may be issued later this year and before the research project's discussion paper is issued. These panel members noted that a comprehensive due process has been followed in order to update the SEC's disclosure requirements, with public comments invited on the SEC's December 2007 Concept Release (80 comment letters were received in response) and its June 2008 Rule Proposal, and they suggested that the conclusions that the SEC reaches on oil & gas disclosure after considering these constituent comments should be equally relevant in setting the oil & gas disclosure requirements for an IFRS. These panel members did not believe that sufficient justification would exist to warrant a further re-consideration of oil & gas requirements so soon after the SEC is likely to issue its revised disclosure requirements. They also raised the concern that, if the USA moves to IFRSs and the IFRS disclosure requirements are different from the SEC requirements, oil & gas entities that are SEC registrants would be required to change their reserves reporting systems and processes twice in only a few years. This could impose significant compliance costs on entities with potentially limited benefits for users.

14. The project team believes that differences between disclosure requirements in an IFRS and the SEC's revised requirements may be appropriate because the scope and application of the respective projects is different. Unlike the SEC requirements, the scope of the research project includes minerals and oil & gas and the eventual IFRS will apply to numerous capital markets around the world. The project team also believes that the research project (and the discussion paper) should not be constrained in considering the types of disclosures that should be included in an IFRS. The project team's view is that the implications of changing from existing accounting and reporting

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[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,

requirements to those in a new IFRS are part of the cost/benefit analysis that would be considered at the time of development of an exposure draft. The comment letters in response to the discussion paper would also be expected to provide useful information on this issue. The project team notes that, while the disclosure proposals in this paper and the SEC proposals are not identical, some similarities exist. Despite the different scope and application of the project, the reason for the similarities between the proposals can be explained, in part, because both proposals are using the SPE definitions – the Petroleum Resource Management System – as the basis for establishing the disclosure of reserve information and because both proposals have been influenced by some of the same responses from constituents, especially users. The project team will continue to monitor both the comment letters to the SEC Rule Proposal and the SEC's decisions on revising its disclosure requirements.

Question for Board members: *Do you agree with this guiding principle?*

Types of disclosures being contemplated

15. The project team has not attempted to develop the detailed disclosures that should be included in an IFRS, believing that this is a standard-setting activity rather than a research activity. Instead, the remainder of the paper identifies the main types of disclosure that should satisfy the disclosure objective and the key issues associated with providing these disclosures.

Disclosure type #1. Volume information

16. Information about the volumes of mineral or oil & gas that the entity expects to be able to economically recover is critical to understanding an entity's financial position, and therefore its ability to generate future cash inflows. Consequently, the project team proposes that year-end reserve (and possibly resource) volume information should be disclosed.

Which categories of reserves and resources should be disclosed?

17. To satisfy the disclosure objective, the project team proposes that the minimum information provided should be the entity's best estimate of economically recoverable

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Chile, New Zealand, South Africa and the United Kingdom are all based on the CRIRSCO template.

minerals or oil & gas. This would normally be proved and probable reserves, which is the minimum information that most users surveyed indicated should be disclosed.

18. Most oil & gas equity investors surveyed by the project team indicated that proved and probable reserves should be disclosed, as this is the basis on which entities engaged in extractive activities manage their businesses. The disclosure of probable oil & gas reserves would represent a change in practice for many oil & gas entities, including all SEC registrants, since they are currently prohibited from disclosing probable reserves in their annual reports. This may change with the proposed SEC revisions indicating that an entity would be permitted, but not required, to disclose probable reserves and possible reserves.[4] Many of the large oil & gas companies have indicated to the project team and in their comments letters to the SEC that they do not support the mandatory disclosure of probable or possible reserves due to concerns regarding the potential for users to be misled if they do not understand the risks and uncertainties associated with probable reserves, which might also give rise to corresponding litigation risks.

19. All mining equity investors surveyed wanted proved and probable reserves to be disclosed and generally some resource information as well. In part, this reflects existing disclosure practice that these users are generally accustomed to in most jurisdictions other than the USA, where SEC registrants are prohibited from disclosing resource information unless it is required to be disclosed by another jurisdiction.

20. The project team's view is that concerns about some users being misled by the disclosure of less certain estimates of minerals or oil & gas volumes is essentially a user education problem. The *Framework* assumes that users will exercise diligence when analysing financial reporting, and the project team thinks the reserve and resource definitions are helpful in communicating to users the level of uncertainty associated with the estimate through the use of classifications such as proved, probable and possible/inferred, which represent high confidence, best estimate, and low confidence estimates respectively. The project team believes that if addressing these concerns would mean limiting the disclosure requirements, other users would be denied useful information that could otherwise be applied in their investment decision making.

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[4] Disclosure of oil & gas resources (referred to as contingent resources in the SPE definitions) would still be prohibited under the SEC proposals.

21. The project team considers that directional consistency in this disclosure would be achieved by requiring the disclosure of an entity's best estimate of economically recoverable minerals or oil & gas according to the CRIRSCO and SPE definitions, with the proved reserve and probable reserve volumes disclosed separately. In the mining industry, probable reserve estimates are generally prepared exclusive of proved reserves, whereas in the oil & gas industry, probable reserves estimates are generally prepared inclusive of proved reserves (i.e. in reporting oil & gas reserves, disclosure would include proved reserves and proved *plus* probable reserves). This results from the different estimation techniques used in each industry, but the result of the disclosures are the same – the users of the disclosure are able to ascertain the entity's best estimate of its economically recoverable minerals or oil & gas (i.e. the total of proved and probable reserves) as well as separately identifying the volumes that have a high confidence of recoverability (i.e. the proved reserves).

Question for Board members: *Do you agree with the disclosure of an entity's best estimate of economically recoverable mineral or oil & gas volumes?*

Disaggregation of volumes

22. Disclosures of the minerals or oil & gas volumes should be disaggregated by commodity type and by geographical location. In addition to the disaggregation of minerals or oil & gas volumes, the project team believes that the financial report should identify the reserve volumes that are attributable to each segment.

Disaggregation by commodity type

23. Reserve volumes should be separately disclosed by individual commodity type in the following circumstances:

    (a) a common unit of volume for multiple commodity types cannot be meaningfully derived; or

    (b) the commodity is subject to different risk attributes (e.g. extraction, processing and/or market risks) relative to other commodities.

24. This would suggest that reserve volumes should be disclosed separately for most types of minerals and for gas and oil sands volumes. This proposal should not be

controversial in the minerals industry as separate disclosure by commodity type is commonplace. However some disclosure practices in the oil & gas industry involve aggregation by commodity type whereby some entities disclose their oil and gas reserves together on a barrel-of-oil equivalent (BOE) basis. BOE disclosures were not popular among the users surveyed. The users surveyed preferred the separate disclosure of oil and gas volumes over BOE volumes because oil and gas are subject to different market risks, as a result of being sold into different markets. The project team considers that a similar logic should apply to separately disclosed oil reserves from oil sands reserves, due to the latter requiring significantly higher operating costs to produce the oil than for conventional oil deposits. Comments in response to the SEC Rule Proposal suggest that separate disclosure of oil sands are not warranted because the oil from oil sands is sold into the same market as conventional oil. The operating cost structure and the consequent financial risks of changes in costs and prices might seem different from those for conventional oil, but this is not necessarily so. A number of offshore oil fields have significant capital costs. Other fields have major transportation costs or costs of injecting water or gaseous material to increase pressure. There is thus a continuum from the traditional conventional oil field to those with high capital and operating costs. Clearly it is not practical to have separate disclosures about all different types of oil fields. However, oil sands operations are clearly identifiable and are high cost producers and, in the project team's opinion, separate disclosure about them should be provided.

Disaggregation by geography

25. Directional consistency in this disclosure could be achieved by requiring the geographical disaggregation of reserve volumes according to common geological areas that are subject to similar risks. Strictly speaking, this would mean that a separate reserve estimate should be disclosed for each property due to the different geological risks that are likely to be associated with each mine or field. Practically, this will not always be feasible, especially in the oil & gas industry where the project team understands some large entities have in the vicinity of 1000 individual fields. Therefore some level of aggregated volume disclosure would be required in the oil & gas industry. Aggregated volume disclosure is less relevant in the minerals industry due to the generally smaller number of properties and existing disclosure practice tends to be on a property-by-property basis.

26. The project team considers that the geographical disaggregation of reserve volumes at a country level should still provide relevant information due to the significance and prevalence of risks or other dynamics relating to the asset that are country-specific (e.g. taxation regime, legal and regulatory framework, governmental/sovereign risk). However, country-by-country disclosure may not always be the most useful aggregation basis. Sometimes limited or no aggregation would be most relevant, even after considering cost/benefit assessments. For instance, disclosure by individual properties or groups of properties within the same geological area may be appropriate if the reserve volumes are of high significance to the entity. This is broadly consistent with the SEC Rule Proposal for oil & gas disclosures, although the SEC proposed some 'bright lines' to identify when a reserve volume is individually significant to the entity and should be disclosed separately. In other cases, the aggregated disclosures may be more relevant if they are based on geological boundaries rather than political boundaries. An example might be the aggregation of North Sea reserves as a single disclosure unit rather than potentially as three country-based disclosure units. Furthermore, the project team acknowledges that sometimes aggregation on a continental basis may be appropriate, particularly if the reserve volumes attributable to individual countries are of limited significance relative to the entity's total reserve position. Within these general parameters proposed in this paragraph, the project team thinks that management should use its judgement to determine the level of disaggregation should apply to its reserve disclosures. The level of aggregation chosen should be applied consistently from period to period.

Additional disclosure requirements for the minerals industry

27. Given that many users in the minerals industry find that reserve and resource volume disclosures disaggregated on a property-by-property basis provides useful information and that many entities in the minerals industry are currently providing this information, there is a question as to whether the disclosure of this 'extra' information should be specifically required in the minerals industry to promote consistent and comparable disclosure in that industry. This is because the project team expects that some entities in the minerals industry would continue to disclose their reserves on an individual property level even if it was not required by an IFRS. The project team recommends that the discussion paper should invite comment on whether the property-by-property disclosure of reserve volumes should be required in the minerals industry.

Question for Board members: *Do you agree that the discussion paper should invite comment on whether the disclosure of reserve and resource volumes should be required to be presented on a property-by-property basis in the minerals industry?*

Attribution of reserve volumes

28. The reserve volume disclosure should provide sufficient information to indicate the reserve volumes that are attributable to the shareholders in the parent entity. This information could be provided by identifying the:

    (a) entity's equity interest in the reserve volumes; and/or

    (b) minority interests in the reserves that are attributable to partly-owned subsidiaries that form part of the consolidated group.

29. Existing practice in reserves attribution is varied, depending on the jurisdiction and the industry. A common approach to the attribution of reserve volumes should established for both industries and the project team's initial thinking is that reserve disclosures should be prepared on the same basis that applies to accounting for equity interests in other entities in consolidated financial statements. The project team considers that there would need to be strong justification for reserve disclosures to depart from consolidation principles.

30. The reserve volume disclosure should also provide sufficient information to indicate which reserve volumes are attributable to legal rights that provide the entity with a right to cash flows based on the volume of minerals or oil & gas produced rather than a right to the actual production. This is intended to apply to production sharing contracts and similar arrangements that exist in the oil & gas industry.

Question for Board members: *Do you agree with the project team view?*

Underlying assumptions for reserve estimates

31. An explanation of the key assumptions used in estimating reserve volumes should be disclosed. This explanation should quantify, at a minimum, the commodity price assumption.

32. There is no consensus view among either users or preparers regarding whether the commodity price assumption used in reserve estimation should be based on:

(a) a market participant assumption (akin to a Level 2 or Level 3 input, as per the fair value measurement hierarchy in FAS 157 *Fair Value Measurements*);

(b) management's own expectations; or

(c) a historical average.

33. Most users surveyed want the reserve estimate to be based on a consistent and objectively determined price assumption. This tends to be a historical average commodity price for a pre-defined trailing period (e.g. the average price over the past 12 months). A consequence of using a standardised pricing assumption is that the reported reserves estimate would not be entity's best estimate, but those analysts indicated that a comparable price assumption was more important. This view is shared by Standard and Poor's in *Oil And Gas Reserve Reporting: Recommendations For Change* of 29 November 2007, which commented that:

> Management should, of course, make long-term investment decisions based on its estimates of similarly long-term oil and gas prices. However, using anticipated future selling prices, rather than actual year-end amounts, would reduce comparability and consistency. Reserves will likely vary based on how bullish or bearish management is on prices. We therefore favor the use of standard prices, such as average or year-end, to make figures consistent and comparable among companies. Companies should disclose selling prices by geographic area. The use of average prices may reduce volatility caused by swings and seasonality in natural gas prices; year-end prices may be more representative of year-end values. The ultimate solution should require standardized selling prices and costs and allow additional reserve disclosures at different prices (sensitivity analyses).

34. The use of standardised historical prices is also generally supported by entities in the oil & gas industry, especially SEC registrants. One of the reasons given is that this pricing assumption would maintain the comparability of disclosures among entities. As noted above, this is consistent with the view of Standard and Poor's and many other users. It is also consistent with the SEC's proposal to use a 12-month historical average price for estimating oil & gas reserve. In contrast, the use of historical average price assumptions is not supported by most entities in the minerals industry; where there is a strong preference to use management's forecast price assumptions in reserve estimation. One justification for this view is that the disclosure should be based on the reserve estimates that management uses to manage the business – therefore, the price assumptions should reflect management forecasts. A concern with this approach is that some entities may

be reluctant to disclose their price assumptions, especially for non-exchange traded commodities, because this information is considered commercially sensitive.

35. In contrast to Standard and Poors' view, the CFA Institute stated in their recent response to the SEC Rule Proposal that:

> We do not support the recommendation to move to a model based on the use of a 12-month historical pricing average for valuing reserves, but agree there is a need to change from the current practice. The CFA Institute Centre consistently advocates for the use of fair value measurements in reporting financial information rather than using historical price-based measurements. We believe that calculating prices from the futures pricing curve would better approximate the economic value of the company's reserve holdings. … Providing reserve values based on futures prices allows investors to better forecast the earning potential of the firm. A forward looking pricing model incorporates the current expectations of market participants.

36. Consistent with the disclosure objective of enabling users to evaluate the future cash flows that can be expected from the entity's minerals or oil & gas assets, the project team considers that a forecast pricing assumption should be used – preferably reflecting market participants assumptions. Unlike a reserves estimate disclosed using historical pricing assumptions, a reserves estimate prepared using market participant assumptions should be a closer approximation of the reserves estimates that are used by the entity to manage its business. Entities should also be more comfortable in disclosing the key inputs based on market participant assumptions, as this information should not be commercially sensitive. Furthermore, under this requirement, some industry consultants might collate consensus forecasts of pricing assumptions, which could then provide the opportunity for the pricing assumptions to be subject to some degree of standardisation.

Question for Board members: *Do you agree with the project team view on price assumptions?*

37. Arguably other key assumptions relating to the reserve estimate, such as production profiles and cost assumptions, should be quantified as part of this disclosure. However presentation issues may make it more difficult to meaningfully disclose these other assumptions together with the reserves estimate. This is because, for example, the production profile and costs assumptions would usually be project specific, whereas commodity price assumptions may apply equally to several or all projects.

Disclosure type #2. Reconciliation of changes in volumes from year-to-year

38. Minerals and oil & gas reserves (and resources) are subject to significant estimation uncertainty, including uncertainties relating to geological, economic, legal, environmental, and governmental/sovereign risk factors. A disclosure that explains the changes in the entity's reserves (and resources) between the current year and the preceding year should help users to obtain a better understanding of the nature and extent of estimation uncertainties associated with these estimates. It should also assist users in evaluating the entity's financial performance for the current reporting period by identifying, and attributing volumes to, the significant causes for the change in entity's reserves estimates – which would include production for the current period and new discoveries of reserves.

39. This explanation could be presented on a quantitative basis (i.e. a numerical reconciliation) or on a predominantly qualitative basis (i.e. a discussion of the main reasons for change with the volumes attributable to the change(s) being identified as part of the disclosure).

40. Current practice is mixed regarding whether an explanation is provided, and if it is, whether the explanation is quantitative or predominantly qualitative. The project team thinks that the explanation format that might provide the most decision-useful information could depend on the level of disaggregation associated with the reserve volume disclosure. Disclosure of reserve volumes at the property level (i.e. the mine or field) would make a predominantly qualitative explanation useful because the explanation could provide project-specific comments on the cause(s) for the change as well as quantifying the volumes attributable to the change in estimate. If reserve volumes are aggregated, this may make a narrative discussion of the reasons for change too complex to understand or too cumbersome to prepare, in which case a quantitative reconciliation may be more suitable. Consequently, in the project team's opinion, the appropriate explanation format will depend on the aggregation basis chosen for disclosing reserve volumes. Although this could result in separate formats being disclosed across both industries, this is not considered to be a significant concern as both formats should identify the main reasons for change in a reserves estimate.

41. At a minimum, the quantitative reconciliation for an aggregated reserve volume disclosure should identify changes resulting from:

    (a) discoveries and extensions;

    (b) revisions of previous estimates;

    (c) production of minerals or oil & gas;

    (d) acquisition of reserves through the purchase of minerals or oil & gas properties; and

    (e) disposal of reserves through the sale or disposal of minerals or oil & gas properties.

42. To enhance the usefulness of this reconciliation, it may be necessary to provide a more detailed breakdown of the causes of the change in estimate. For instance, the cause for a revision of a previous estimate could be the result of geological factors (e.g. a better understanding of the geology as a result of additional drilling activities), commodity price factors, or other economic factors (e.g. a change in taxation or discount rates).

Questions for Board members: *Do you agree with the project team view that:*
(a) an explanation of the changes in reserve volumes should be provided; and
(b) the format of the explanation should depend on the level of disaggregated presentation of the reserve volumes?

Disclosure type #3. Value-based information

43. Reserve volume disclosure is useful for indicating the amount of minerals or oil & gas that is expected to be economically recoverable, but it does not provide any indication of the amount of future cash inflows that those reserves might generate. Because of its relevance to understanding an entity's financial position, the project team intends to propose that value-based information relating to reserve volumes should be disclosed. This value-based information could be a valuation or it could be other information that provides an insight into the key valuation inputs that users might use to prepare their own valuation

44. The disclosure of value-based information is proposed if the balance sheet measurement basis for minerals and oil & gas assets is historical cost. If the asset measurement basis is fair value (or another type of current value measurement), different disclosures are proposed – refer paragraphs 63-64 below.

A valuation other than fair value

45. The project team is not proposing that a fair value measurement of an entity's minerals or oil & gas assets should be disclosed. This is because if the conclusion is that the fair value measurement of these assets provides decision-useful information that can be justified on cost/benefit grounds, these assets should be measured at fair value on the balance sheet rather than in note disclosure.

A standardised current value measurement

46. One type of value-based disclosure being proposed is a current value measurement of the entity's best estimate of economically recoverable minerals or oil & gas (which is generally expected to be proved and probable reserves) using certain standardised inputs. The current value would be measured using discounted cash flow techniques. In response to the research project's user survey, if a current value estimate is provided, the assumptions underpinning the current value measurement should be based on standardised assumptions to enhance comparability and lessen the extent to which the measurement is based on subjective forecasts of future conditions. Differing views exist as to what the standardised parameters should be for the economic assumptions, but the general thrust of the comments were:

    (a) for commodity prices: use a historical average price or a current market price;

    (b) for development and operating costs: use current costs; and

    (c) for discount rates: use a standardised discount rate or the entity's weighted average cost of capital (which would be disclosed).

47. This type of current value measure is not, and is not intended to be, an estimate of fair value. Estimating the fair value of a minerals or oil & gas asset would require assigning a value to all the reserves and resources and any future exploration potential relating to the asset. Fair value would also reflect a market participant's view on the future cash

flows that could be generated from this asset, and therefore would incorporate a market participant view on future commodity prices, costs and production scheduling etc.

48. Rather, this current value measurement would be similar to the standardised measure of oil & gas proved reserves currently required by FAS 69 *Disclosures about Oil and Gas Producing Activities*. Like the FAS 69 standardised measure, it would have a narrower scope than a fair value measurement – in terms of the discounted cash flow calculation (generally) including only reserves and being subject to some standardised, rather than market participant, assumptions. This should, to some extent, reduce the variability associated with the estimate as well as reduce the time and cost associated with preparing the estimate.

49. The current value measurement should be disclosed in conjunction with:

    (a) an explanation of the key assumptions made, including standardised assumptions; and

    (b) a breakdown of the key components of the measurement. At a minimum, this would be expected to include:

        (i) future cash inflows;

        (ii) future operating and development expenditures (and to be presented separately if feasible);

        (iii) future royalty and taxation expenditures; and

        (iv) the effect of discounting.

Reconciliation of current value measurement

50. If a current value measurement is disclosed, an explanation of the changes in the current value measurement between the current year and the preceding year should also be provided. The reconciliation should identify the significant causes for the change in the measurement. This should include separately identifying the future cash flow impact of the changes identified in the reserve volume reconciliation (refer paragraph 41 above) as well as the future cash flow impact of other measurement assumptions, such as changes in:

(a) commodity prices;

(b) operating costs;

(c) development costs,

(d) taxation and royalty arrangements; and

(e) the discount rate and the accretion of the discount.

Disaggregation basis for a current value measurement and reconciliation

51. Ideally, the current value measurement should be provided for each geographical location to complement the information provided in the reserve volume disclosures. Disaggregating these disclosures by commodity type as well may not always be feasible because many minerals or oil & gas properties include more than one commodity (e.g. copper and gold, or oil and natural gas). In these cases, providing separate value-based disclosures for each commodity would require the future development and operating costs to be arbitrarily allocated to the current value measurement of each commodity. This could lessen the usefulness of a commodity-specific current value measurement.

52. The project team acknowledges that disclosing a current value measurement and a reconciliation of that measurement on the same geographic basis as the reserves disclosure could cause presentation difficulties, especially for large diversified minerals and oil & gas entities due to the volume of information that would be required to be disclosed. The project team therefore suggests that a higher level aggregation should be considered. One option could be to disclose this information at a segment level so that the reserve information can be considered together with the other segment disclosures. Another option could be to present the current value measurement reconciliation at a higher level of aggregation than the reserve volume and current value measurement disclosures. The FASB made a similar decision for the reconciliation of the FAS 69 standardised measure after considering the cost/benefit implications of requiring the disclosure of a disaggregated value-based reconciliation. The project team recommends addressing the disaggregation issue in the discussion paper.

Usefulness of a current value measurement

53. The current value measurement, in conjunction with the reconciliation, would help to illustrate the relationship between the reserve volumes and the future cash flows that could be generated assuming standardised economic assumptions were realised. For instance, the project team understands that this information can provide users with insights into how responsive the current value measurement is to some of the key variables that affect fair value, such as changes in reserve volumes, commodity prices, future development and operating costs and taxation. Because some of the components of the current value measurement would be separately disclosed, users could compare the undiscounted future cash inflows from production based on a constant commodity price with the discounted cash flow measurement to obtain some understanding of when the entity is expecting to produce the reserve volumes. Furthermore, the current value measurement and the reconciliation would provide a common base upon which users may be able to compare minerals and oil & gas assets over time and between entities.

54. For these reasons, the project team thinks that the Discussion Paper should give full consideration to the inclusion of a current value measurement disclosure for both oil & gas reserves and mineral reserves.

Questions for Board members: *Do you agree with the project team view that:*
(a) a current value measurement for minerals and oil & gas assets should be identified in the Discussion Paper as a type of disclosure that warrants further consideration;
(b) a reconciliation of the current value measurement should also be disclosed if a current value measurement is disclosed?

Other types of value-based information

55. Most minerals and oil & gas industry participants that currently do not prepare a current value measurement disclosure such as the FAS 69 standardised measure do not support the disclosure of a current value measurement. They do not believe that the disclosure can be justified on cost/benefit grounds, due to the expected costs involved to prepare the disclosure and the limited benefits they believe it would provide to users (especially users that are not familiar with the disclosure) given that the measurement does not provide a meaningful assessment of value. They also indicate that the current value measurement has no relevance for internal management purposes. Based on this

feedback, the project team thinks that the Discussion Paper should propose an alternative to a current value measurement of minerals or oil & gas assets. The objective of the alternative disclosure should be the same as for the current value measurement, which is to provide users with some insights into the future cash flows that might be capable of being realised from reserve volumes.

56. The project team thinks that the disclosure of the following information may be useful for this purpose:

    (a) cost information, including development and operating costs and direct taxation and royalty charges; and

    (b) production forecast information for existing projects and new projects for defined period, say 5 years.

57. This type of information could assist users in preparing their own valuations. The cost information is relevant because users can develop a cost profile for a project that can be compared to the cashflows that the user expects could be generated from producing the minerals or oil & gas. However, for this to be an acceptable substitute for the information that can be obtained from a current value measurement, the project team thinks that production forecasts should also be disclosed. This would provide an indication of the anticipated timing of future cash flows arising from development and production.

58. There are expected to be limitations to the usefulness of this information. Firstly, the cost and production schedule information may be cumbersome to present in note disclosure. Different minerals or oil & gas projects will be subject to different cost pressures. Some may be unique to the each individual property due to geological factors and extraction method (e.g. underground mining vs strip mining or oil sands extraction vs conventional oil extraction). Other cost pressures may be related to location of the mine or field (e.g. proximity to infrastructure, workforce availability, challenging operating environment – offshore or remote locations, different commercial and regulatory environments). Consequently, to be useful, the cost information should be disclosed on a disaggregated basis, but this could cause the cost disclosure to be voluminous. If the cost information were disclosed on an aggregated basis, it is likely

to make it difficult for users to isolate and quantify the impact that these cost pressures may have on individual properties.

Questions for Board members: *Do you agree that the Discussion Paper should propose an alternative to a current value measurement of minerals or oil & gas assets?*

Disclosure type #4. Sensitivity analysis

59. The project team is proposing that a sensitivity analysis disclosure should be provided to help explain the uncertainties associated with the reserves volume estimate that was made as at the reporting date. At a minimum, it is suggested that the sensitivity analysis should be based on changes to the price assumption used in estimating reserve volumes. The sensitivity could be to an objectively determined price change – such as the year-end or historical average price if the entity's reserves estimates are not based on these assumptions – or to a percentage change in the commodity price assumption. Sensitivity analyses could also be presented for changes to other key assumptions that would be expected to have a significant affect on an entity's reserve volumes estimate.

Questions for Board members: *Do you agree that the Discussion Paper should propose the disclosure of sensitivity analyses for reserve volumes?*

Disclosure type #5. Time series of exploration, development and operating costs incurred

60. The project team proposes that exploration, development and operating costs that have been incurred in the current year should be disclosed. This information can be used to assess the entity's performance in the current period.

61. Disclosing the costs that were incurred in prior periods would provide information that can be used to determine performance measures such as return on capital employed. Because it would not be feasible to provide this cost information on a cumulative basis, the project team recommends providing this information as a time series over a period of time that is sufficient to be able to identify trends (possibly over five years).

62. The disclosure of this cost information should allow users to calculate metrics such as cash costs per unit of product (e.g. cash cost per ounce of gold) or to perform finding and development cost analysis in the oil & gas industry. The level of disaggregation that this type of cost information is presented may depend on decisions made on the

disclosure of value-based information, and whether the alternative disclosure is preferred (see paragraphs 56-58). This is because the project team thinks that the disclosure of disaggregated cost data is more important if users are using the information primarily for inclusion into their own valuation models rather than using the information to calculate performance metrics.

Questions for Board members: *Do you agree that the Discussion Paper should propose a time series of costs information should be disclosed?*

Disclosure type #6. Disclosures that amplify the fair value measurement of minerals or oil & gas assets

63. If the balance sheet measurement basis for minerals and oil & gas assets is fair value, the project team considers that the disclosures similar to those required by FAS 157 may be relevant – particularly paragraph 32 of FAS 157, which states:

> For assets and liabilities that are measured at fair value on a recurring basis in periods subsequent to initial recognition (for example, trading securities), the reporting entity shall disclose information that enables users of its financial statements to assess the inputs used to develop those measurements and for recurring fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on earnings (or changes in net assets) for the period. To meet that objective, the reporting entity shall disclose the following information for each interim and annual period (except as otherwise specified) separately for each major category of assets and liabilities:
>
> a. The fair value measurements at the reporting date
>
> b. The level within the fair value hierarchy in which the fair value measurements in their entirety fall, segregating fair value measurements using quoted prices in active markets for identical assets or liabilities (Level 1), significant other observable inputs (Level 2), and significant unobservable inputs (Level 3)
>
> c. For fair value measurements using significant unobservable inputs (Level 3), a reconciliation of the beginning and ending balances, separately presenting changes during the period attributable to the following:
>
> (1) Total gains or losses for the period (realized and unrealized), segregating those gains or losses included in earnings (or changes in net assets), and a description of where those gains or losses included in earnings (or changes in net assets) are reported in the statement of income (or activities)
>
> (2) Purchases, sales, issuances, and settlements (net)
>
> (3) Transfers in and/or out of Level 3 (for example, transfers due to changes in the observability of significant inputs)
>
> d. The amount of the total gains or losses for the period in subparagraph (c)(1) above included in earnings (or changes in net assets) that are attributable to the change in unrealized gains or losses relating to those assets and liabilities still held at the reporting date and a

description of where those unrealized gains or losses are reported in the statement of income (or activities)

e. In annual periods only, the valuation technique(s) used to measure fair value and a discussion of changes in valuation techniques, if any, during the period.

64. In addition, for the fair value disclosures relating to minerals and oil & gas assets to be useful, disaggregation and reconciliation disclosures similar to those proposed for the value-based information disclosures would also need to be provided.

Disclosure type #7. Publish What You Pay (PWYP)

65. On 15 September 2008, a stakeholders meeting with representatives from some mining and oil & gas entities, investors and auditors will be held with the project team, members of the Board (Tom Jones, Bob Garnett, Stephen Cooper and Warren McGregor) and members of the PWYP coalition to discuss the relevance of the PWYP proposals to financial reporting. The outcome of this meeting will be included in the analysis of the PWYP proposals that will be presented in the research project's Discussion Paper.

66. A pre-reading document has been jointly prepared by PWYP and the project team for participants at the stakeholders meeting. This document provides more information on the PWYP proposals. If Board members would like to read this document, please contact Glenn Brady (gbrady@aasb.gov.au).