A SUBMISSION **to the International Accounting Standards Board in respect of:**

An Issues Paper issued for comment by the IASC Steering Committee on Extractive Industries.

1 INTRODUCTION

1.1 This Submission is presented to the International Accounting Standards Board (hereafter called IASB) on behalf of the International Valuation Standards Committee (hereafter called IVSC) in response to a call for public comment on the Extractive Industries Issues Paper dated November 2000. It is recognised that IASB is the successor body to the International Accounting Standards Committee (IASC), and has assumed the IASC Projects, including that for Extractive Industries. This project is designed to lead to the completion of either a single International Accounting Standard or separate Standards for the petroleum and mining industries by the fourth quarter of 2002. In drafting the Standard(s), the IASB Steering Committee on Extractive Industries will consider the submitted public comments.

1.2 IVSC has limited this Submission to areas of the Issues Paper which fall within the IVSC s area of expertise, these being related to the valuation of assets. Issues related to the quantitative and qualitative reporting of reserves and resources are also addressed. Quantitative and qualitative estimates of reserves and resources underpin much of the value that investors place on the natural resource assets of mining and petroleum companies and hence the value of those companies. Such estimates are a major foundation of the valuation process applied by minerals appraisers/valuers in estimating the market value or *fair value* of mineral and petroleum property assets. The level of accuracy and reliability of reserve and resource estimates determines the level of confidence that an investor should place on them, and the level of risk adjustment that should be incorporated in the valuation of such assets by the appraiser/valuer.

1.3 It is acknowledged that in accordance with the opening paragraphs of the Issues Paper that the published document represents the views of the IASB Steering Committee on Extractive Industries and at this stage has not been considered by the Board of IASB. Whilst IVSC congratulates the Steering Committee on the depth and perception of the Issues Paper, it is considered that there are fundamental policy issues to be addressed by the Board in the process of producing the intended International Accounting Standard. IVSC considers that the Standard should ensure that users of financial reports are provided with a true and fair statement of financial position and that investors and other business interests can rely upon the statements of assets and liabilities, profit and loss and reported business prospects of the disclosing entity. Financial reporting for the extractive industries should be on as much of an equal

footing as possible to reporting for other industries, so as not to handicap financing for the extractive industries. The tentative views expressed by the Steering Committee on the treatment of reserves and resources would amount to a severe handicap if implemented.

1.4 **The due process for preparation of the Standard should in our opinion include a far-reaching assessment of the views of international industry sources as well as extensive input from international professional accounting and valuation bodies. It is also of some consequence that reporting processes should follow established and emerging trends in international reporting practice of the extractive industries. IVSC is not satisfied that the above objectives have been achieved in the tentative views of the Steering Committee now before the Board.**

1.5 **The Issues Paper goes into well considered detail to explain the arguments for and against the specific Issues. The Basic Issues questionnaires set out possible solutions to each question. IVSC notes that the Steering Committee has provided a tentative view on some questions and has not developed a tentative view on others.**

1.6 **It is considered that many of the questions require an in-depth and very informed industry background to arrive at realistic answers. Many of the Issues raised are related to valuation methodology rather than principles for financial reporting practice. There needs to be a clear demarcation between standard setting issues for financial reporting and those for quantification and valuation issues, which should be the prerogative of professional resource estimation and valuation experts. This does not negate the right and responsibility of IASB to qualify and limit the information utilised in the primary accounts and otherwise disclosed in financial reports. The objective of disclosing adequate information to the public must be balanced with the need to ensure that the information is of reasonable quality. The prospect that an extractive industries valuation standard could possibly be produced by IVSC on a timely basis to supplement the proposed accounting standard will be raised later in this paper.**

1.7 **As a general comment, although the for and against arguments are well explained, it is seen as a disadvantage to the Issues Paper that reasons are not given by the Steering Committee for adoption of one position over another in forming their tentative views.**

2 ABOUT IVSC

2.1 **The IVSC is an unincorporated association comprising professional valuation associations from some 50 countries. The IVSC is an NGO (Non Government Organisation) member of the United Nations. IVSC maintains liaison with international agencies, such as the Organisation for Economic Co-operation and Development (OECD), the World Bank, the International Monetary Fund, the World Trade Organisation, the European Commission, and the Bank for International Settlements. IVSC also maintains a close relationship with standard setting bodies such as the International Accounting Standards Board (previously the International**

Accounting Standards Committee), the International Federation of Accountants, and the International Organisation of Securities Commissions.

2.2 **The IVSC has published International Valuation Standards (IVS) since 1985. The Standards, and accompanying Guidance, reflect the collective thoughts, experiences, and professional judgements of Valuers from 50 countries. They are recognised throughout the world and have been incorporated into the domestic standards of many nations.**

2.3 **In January 2000, the IVSC commenced a three year Standards Project with the objective that by 2002, the IVSC will have published a set of comprehensive and robust international standards that will facilitate cross-border transactions involving property and contribute to the viability of global markets by promoting transparency in financial reporting. The Standards issued under the Project represent a development built on earlier editions of IVSC Standards, not a departure from them.**

2.4 **There is growing recognition that the various international standards being developed must be mutually supportive. The importance of International Valuation Standards to the rigorous and consistent application of International Accounting Standards is increasingly acknowledged. The 2000 edition of IVS contained a number of extracts and cross-references to relevant IAS with the permission of the IASC. In turn, reference to International Valuation Standards appears in IAS 40, Investment Property, which became effective 1 January 2001. The 2001 edition of IVS will be available at the end of July.**

3 MEMBERS OF IVSC TASK FORCE

3.1 **In order to assist IASC in this project, IVSC has appointed a Task Force to bring together worldwide perspective in the issues of financial reporting for the extractive industries. The members of the Task Force are as follows:**

Trevor R. Ellis, CPG-AIPG, CMA-AIMA, FAusIMM(CPGeo).
MSc(Mineral Economics) Colorado School of Mines, USA
BSc(Geology) University of Melbourne, Australia
Consulting Mineral Economist, Geologist, Minerals Appraiser/Valuator
President, American Institute of Mineral Appraisers 2000-2002.
Mr Ellis has almost 30 years of international mining industry experience as a geologist and minerals economist. Through his corporation, Ellis International Services, Inc. he has performed valuations and geological and economic studies on a wide variety of mining and energy projects, and carried out many related environmental and remediation assignments. He has presented and published numerous professional papers on mineral property valuation issues, standards and ethics. He resides in Denver, Colorado, USA.

Michael J. Lawrence, FIMM(CEng), FAIG, FAusIMM(CPGeo), AIAMA.
Managing Director and Chief Valuer, Minval Associates Pty. Ltd.
1999 President of The Australasian Institute of Mining and Metallurgy(AusIMM).

Chairman of AusIMM s Mineral Valuation (VALMIN) Committee.
Mr Lawrence is a geologist with 34 years of minerals industry experience at senior executive level, mainly for international consultancies. He is a specialist in mineral property valuation and project development, mining title/environmental administration and also has been involved in stockbroking. He was the leader in the development of AusIMM s VALMIN Code for technical assessment and valuation of mineral and petroleum assets. He has presented and published numerous professional papers on mineral asset valuation, standards and ethics. He is located in Croydon, New South Wales, Australia.

William Roscoe, Ph.D, P.Eng.
Consulting Geologist and Principal with Roscoe Postle Associates Inc. since its founding in 1985. The firm has offices in Toronto and Vancouver, Canada.
Co-Chairman of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Special Committee on Valuation of Mineral Properties (CIMVal Committee) formed in 1999 for the purpose of developing standards and guidelines for valuation of mineral properties.
Dr. Roscoe is a professional geologist in the mineral exploration and mining area, particularly in the metallic mineral industry. He has extensive qualifications and experience as an expert in Mineral Reserve and Mineral Resource estimation and valuation of mineral properties. He has an extended list of publications and presentations to North American and international forums.
Roscoe Postle and Associates Inc. provides consulting and management services and has a clientele of mining companies, financial institutions, government bodies and law firms. Mr Roscoe resides in Toronto, Canada.

Roger Sawyers, BSc, FRICS, FIQ.
Formerly a partner in Gerald Eve, a firm of Chartered Surveyors and Property Consultants based in Central London with regional offices in the principal cities of the UK. Mr Sawyers is now a Consultant to the firm, having recently retired.
Mr Sawyers obtained his BSc in Estate Management and has extensive experience in valuation of many types of commercial property throughout the UK. He is a specialist in the valuation of quarries and mines for all purposes including after use as landfill. His duties have included the valuation of mineral and associated properties throughout Europe, USA, Australia, the Pacific Rim and South America. His expertise includes financial reporting for company accounts and takeovers, negotiation of planning permission, leasehold interests and acting as an expert witness. He resides in London, England.

4 RELATIONSHIP TO IASB STANDARDS

4.1 **As IVSC is the foremost international authority on valuation practice, a policy decision has been taken to harmonise as far as possible with IASB on all matters of financial reporting. In recent times, IVSC has modified its approach to asset valuation for financial reporting purposes to accommodate the requirements of IAS 16 (Property, Plant and Equipment) and IAS 36 (Impairment of Assets). The application of IVSC Standards in terms of *market value*, *fair value*, *value in use* and *recoverable amount* must**

in our opinion be entirely consistent with the meaning of these terms in the above Accounting Standards.

4.2 **It will be recalled that IAS 16 introduced the concept of *fair value*, which took the place of the previously accepted *market value for the existing use*, a valuation concept which has now been rejected by most standard setting authorities. IAS 16 now states at Clause 30 The *fair value* of land and buildings is usually its *market value*. This value is determined by appraisal normally undertaken by professionally qualified valuers .**

4.3 **IVSC acknowledges that IAS 16 allows an alternative treatment of asset measurement on the *historical cost* basis. A wide range of international standard setting authorities has now accepted provision of the reporting alternatives of *historical cost* or *fair value*. The Issues Paper at 5.35 to 5.38 sets out a very detailed summary of arguments for and against Current Value Accounting for the primary financial statements.**

4.4 **The tentative views of the Steering Committee have come down on the side of *historical cost* accounting for the primary financial statements, apparently due to concerns regarding the accuracy and reliability of reserve-resource estimates, indiscriminate use of varying discount rates and need for disclosure of proprietary information to competitors. IVSC does not agree with the conclusion reached by the Steering Committee on this Issue and considers that insufficient technical information has been provided to the Committee prior to its deliberations.**

4.5 **In this Submission, IVSC will give a detailed account of the resource estimation and valuation standards and procedures adopted and under development by institutes and expert appraisers on an international basis.**

4.6 **IVSC considers that for the reasons set out in 5.35 to 5.38 of the Issues Paper, the alternative of *historical cost* or *fair value* measurement should be available to reporting entities. There are examples where this approach has proved successful. For example in Australia, where the alternative treatment is permitted, many of the major mining corporations have adopted the *fair value* basis. IVSC submits that reporting entities of the extractive industries should also be provided the opportunity to adopt *fair value* recognition of reserves within carefully chosen limits and under important quality controls that we recommend later in this submission. In the Issues Paper at 16.3, Dr. Charlotte Wright observes from her research that, Recognition versus disclosure of reserve value information has a significant effect on the value that the market places on an enterprise s shares.**

4.7 ***Fair value* as defined in IAS 16 relies upon a presumption that the asset would be marketable at that price, either as a stand-alone item or as part of acquisition of the entity by a hypothetical purchaser. The circumstances where the *fair value* of land and buildings is usually its market value relate to the situation where the asset is not a specialised item integral with the entity s production process and could be exposed to the market as a separately saleable asset. Where this market approach is not available for specialised assets, the value to the entity can be discovered by current cost valuation methodology (usually written down current cost) see IAS Framework for the**

Preparation and Presentation of Financial Statements (Measurement of the Elements of Financial Statements) Clause 100 (b).

4.8 ***Value in Use*** **is defined in IAS 36 as** ***"the present value of estimated future cashflows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life".*** **This definition essentially relates the** ***value in use*** **valuation to the entity itself. The entity-specific valuation can only be determined using profitability based valuation methodology. The discount rate to be adopted must take into account the particular circumstances of the entity with all the ramifications of market share, purchased goodwill, trading connections, competition aspects etc. The future cash flows cannot however include financing activities, internally generated goodwill or income tax receipts or payments (IAS 36, Clause 43). IASB s Present Value Project is designed to provide greater guidance for such treatments.**

4.9 **At Basic Issue 9.3 the question is asked if industry-specific guidance is needed in determining the discount rate used in measuring impairment of mineral assets. IVSC is of the opinion that the general guidance in IAS 36 is appropriate. It should be recognised, however, that because of the discounted cash flow technology for wasting assets, the determination of discount rate for impairment can only be ascertained by valuation experts and is by no means industry-specific. The correct discount rate is essentially entity-specific.**

4.10 **At many places in the Issues Paper including 5.5 (e) the proposal is put that a standardised measure should be adopted in ascertaining the discount rate for all enterprises in calculating the current value of reserves. The carrying amount shown in primary financial statements must be shown at** ***market value/fair value*****, both of which demand adoption of an asset-specific discount rate. There may be considerable differences in values determined under** ***market value/fair value*** **principles compared to** ***value in use*** **principles. This fundamental aspect of valuation methodology has not been dealt with in the Issues Paper.**

4.11 **The** ***recoverable amount*** **for impairment in accordance with IAS 36 is** ***"the higher of an asset's net selling price and its value in use".*** **This definition illustrates the importance of adopting appropriate discount rates for these differing value definitions, which can only be ascertained by market analysis by professional industry experts.**

4.12 **IVSC strongly advocates that financial reporting for the extractive industries should follow the principles already in place for other items of property, plant and equipment by offering entities the choice of** ***historical cost*** **or** ***fair value*** **accounting. The classes of industry assets to be afforded this option will be discussed later in detail. It is recognised that the level of uncertainty in estimates of quantities and values are much higher for mining and petroleum than for all but a few other industries. However, IVSC considers that the challenges in providing such estimates are no more demanding than for other industries where the alternative accounting treatment is already allowed under IAS Standards. The following sections will outline recommendations for the financial reporting of assets utilised in the identified stages of upstream activities.**

5 MINING INDUSTRY RESERVE-RESOURCE REPORTING STANDARDS AND GUIDELINES

5.1 Estimation of the quantity and grade/quality of mineralisation present in a mineral deposit forms a critical foundation in the valuation of mineral properties in which mineralisation has been located and investigated. The major mining professional institutes of the world have been working together on reserve-resource reporting standards since 1994 through the international Council of Mining and Metallurgical Institutions (CMMI). This has been a systematic effort to develop a uniform international standard for definitions used in public reporting of estimates of mineralisation. The push for uniform standard terms, which has now been largely accomplished, is designed to provide or strengthen reporting standards in most parts of the world, enhance cross-border understanding of the information reported, and improve investor confidence in the mining industry.

In 1997, the CMMI reached a provisional agreement, heavily based on the Australasian Joint Ore Reserves Committee (JORC) Code. [1] JORC was established as a permanent committee in 1971 as an initiative of The Australasian Institute of Mining and Metallurgy (AusIMM). JORC issued its first public recommendations on reserve classification and reporting in 1972. The first issue included the core concept of the Competent Person responsible for the report, upon which the JORC Code and CMMI agreement are built. The first version of the JORC Code for reporting of resources and reserves was published in 1989, and was immediately incorporated into the Listing Rules of the Australian Stock Exchange and was binding on the members of AusIMM and the Australasian Institute of Geoscientists (AIG). A copy of the 1999 Edition of the JORC Code is present in Appendix B of the Issues Paper.

5.3 A 1998 CMMI agreement has resulted in closely consistent standards being issued by the major mining professional institutes, based on essentially identical resource and reserve definitions and a fairly consistent definition of the Competent or Qualified Person who must sign as responsible for the report. The South African Institute of Mining and Metallurgy (SAIMM) issued the SAMREC Code, which has been incorporated by reference into the listing requirements of the Johannesburg Stock Exchange. The standards of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) have been incorporated by reference into National Instrument 43-101 of the Canadian securities administrators thereby prescribing a legal requirement for disclosure. A draft European Code has been released by the United Kingdom s Institute of Mining and Metallurgy (IMM) which developed it in conjunction with the European Federation of Geologists (EFG) and the Institute of Geologists of Ireland. The US Society of Mining, Metallurgy and Exploration (SME) issued its SME Guide, but the US Securities and Exchange Commission (SEC) has not adjusted its reporting requirements to make them compatible with the international definitions.

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[1] Australasia in an economic and political context, effectively encompasses Australia, New Zealand, Papua New Guinea and nearby islands of the South Pacific Ocean.

5.4 In addition to the CMMI initiative, in 1992 a Task Force of the United Nations Economic Commission for Europe (UN-ECE) began developing a United Nations framework classification (UNFC) for reserves and resources for adoption by countries throughout the world. In 1998, UN-ECE agreed to incorporate the CMMI definitions into the UN classification. This effort has continued and a further meeting on progress was held in the fall of 1999. Incorporation of the CMMI standard reporting definitions for categories of Mineral Resources and Mineral Reserves into the UNFC gives true international status to the CMMI definitions.

5.5 Figure 1 illustrates the relationships between the categories of Mineral Resources and Mineral Reserves in the CMMI definitions. Essentially identical diagrams appear in the JORC and SAMREC Codes, the CIM Standard, the SME Guide and the draft European Code.

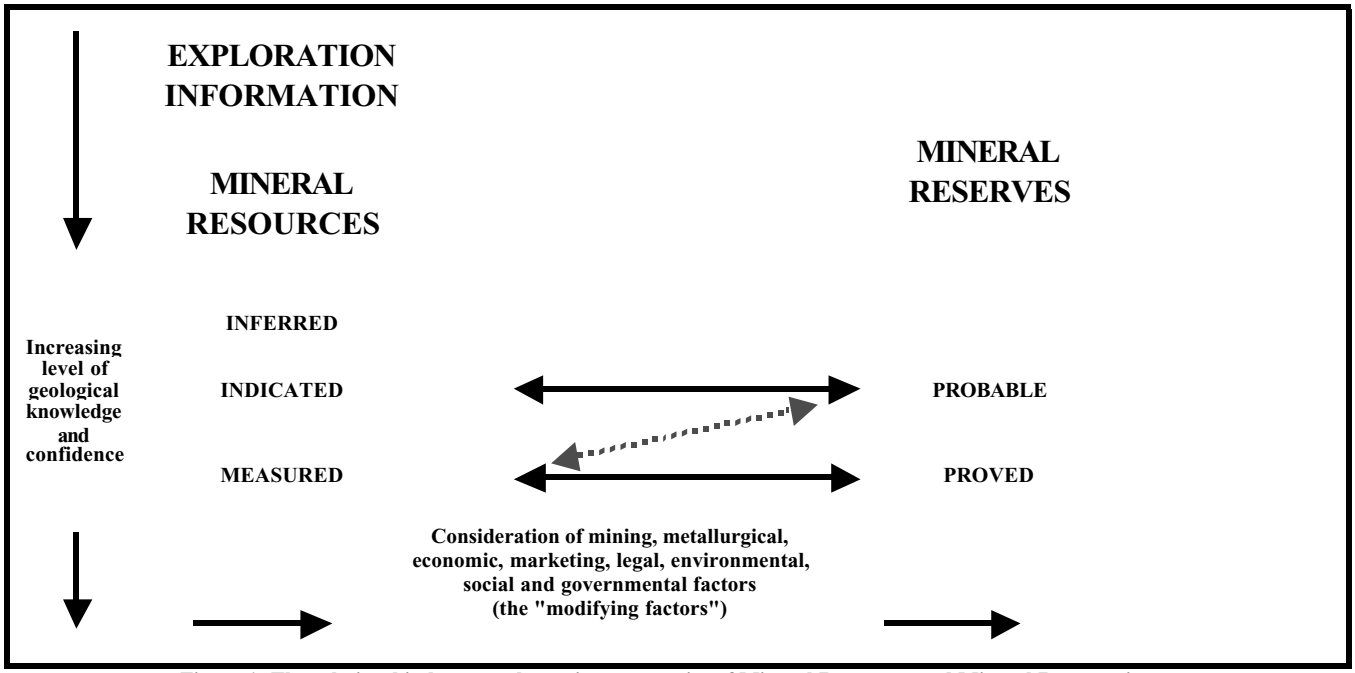


Figure 1: The relationship between the various categories of Mineral Resources and Mineral Reserves in the CMMI definitions as shown in the various standards.

5.6 The wording of definitions varies somewhat between countries to meet their specific needs and terminology usage. However, the meaning conveyed remains very similar. The following are the basic definitions of a Mineral Resource and a Mineral Reserve from the draft European Code:

> ***A 'Mineral Resource' is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are subdivided, in order of increasing geological confidence into Inferred, Indicated and Measured categories.***

5.7 Additional guidance is provided, such as, Portions of a mineral deposit that do not have reasonable prospects for eventual economic extraction must not be included in a Mineral Resource.

> ***A 'Mineral Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is justified. Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proved Mineral Reserves.***

5.8 The concept of the Competent Person as the responsible signatory of the report is used to assure that the estimates of resources and reserves made available to the public are conducted by persons with appropriate levels of qualifications and experience. In Canada, Qualified Person is substituted in essentially the same context because of its derivation in NI 43-101. The following definition is from the draft European Code:

> ***A 'Competent Person' is a person who is a member of the Institution of Mining and Metallurgy, European Federation of Geologists, the Institute of Geologists of Ireland or of another recognised professional body with an enforceable professional ethics code. A Competent Person should have a minimum of five years experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which that person is undertaking. If the Competent Person is estimating, or supervising the estimation of Mineral Resources, the relevant experience must be in the estimation, assessment and evaluation of Mineral Resources. If the Competent Person is estimating, or supervising the estimation of Mineral Reserves, the relevant experience must be in the estimation, assessment, evaluation and economic extraction of Mineral Reserves.***

5.9 A foundation of the Competent Person requirement is that there must be a disciplinary mechanism in place for use against violators of the standards. The Competent Person definitions largely require that the Competent Person be a member of an appropriate self-regulatory professional institute, with an enforceable Code of Ethics, such that a violator can be removed from membership if deemed appropriate as the ultimate sanction. The SME s definition of Competent Person is weaker than in the other standards because the SME lacks an ethical enforcement mechanism.

5.10 The JORC Code and the CMMI sister standards do not regulate the procedures used by Competent Persons to estimate and classify Mineral Resources and reserves. The primary principles on which the standards are based are *Transparency, Materiality and Competence*, for which the JORC Committee has provided explanations. These principles originated in the VALMIN Code and were deliberately adopted in 1999 to make them compatible. *Transparency* requires that a public report contains sufficient information, the presentation of which is clear and unambiguous, so that a reader is able to understand the report and is not misled. *Materiality* requires that a public

report contains all the relevant information which a reader could reasonably be expected to need in order to make a balanced judgement about the matters being reported. *Competence* requires that the public report is based on work which is the responsibility of a suitably qualified and experienced person who is subject to an enforceable professional code of ethics; meaning that public reports are based on work undertaken or supervised by a Competent Person.

5.11 The JORC Committee states that the reasons for the success of the JORC Code in Australasia include:

- **the regulatory backing;**
- **the intentional avoidance of overly prescriptive definitions and operational requirements;**
- **industry's ability and willingness to discipline Competent Persons;**
- **the origins of the Code;**
- **the nature and composition of the Joint Ore Reserves Committee, and**
- **JORC's commitment to communication and to on-going revision of the Code.**

6 PETROLEUM INDUSTRY RESERVES AND RESOURCES REPORTING DEFINITIONS

6.1 The U.S. based Society of Petroleum Engineers (SPE) and the London based World Petroleum Congresses (WPC) worked together to develop a mutually approved set of definitions for petroleum reserves and resources classifications. The document, *Petroleum Reserves Definitions* was published in 1997. *Petroleum Resources Classification and Definitions* was published in 2000 as a supplementary document.

6.2 The WPC provides a major international forum each three years for discussing the issues facing the oil and gas industry. WPC states that its 59 member countries represent over 90% of the world s major oil and gas producing and consuming nations. Each country has a national committee made up from representatives of the oil and gas industry, academia and research institutions and government departments. Therefore, the WPC structure provides for wide international acceptance of the definitions within the petroleum industry and academia.

6.3 In 1987, SPE and WPC produced strikingly similar sets of petroleum reserve definitions from independent efforts. The two bodies then agreed to work together to produce a common nomenclature for petroleum reserves definitions, the resulting document being published in 1997.

6.4 The SPE and WPC then continued the development of definitions to cover the entire resource base, including those quantities of petroleum contained in accumulations that are currently sub-commercial or that have yet to be discovered. The two bodies took the view that these other resources represent potential future additions to reserves and are therefore important to both countries and companies for planning and portfolio management purposes. The American Association of Petroleum Geologists (AAPG) participated in the development of these definitions.

6.5 **The SPE and WPC present their definitions as guidelines rather than as standards, and emphasise that the definitions are neither compulsory nor obligatory. This is in stark contrast to the approach taken by the leading mining institutes of the world, which are presenting their definitions and associated instructions for reserve-resource reporting as mandatory standards or codes with strong competency requirements, backed by enforcement and disciplinary mechanisms. No competency requirement is specified in the SPE/WPC documents for the practitioners responsible for developing or reporting the reserve and resource estimates, and therefore no enforcement or disciplinary mechanism is presented.**

6.6 **Reserves are defined by SPE/WPC as those quantities of petroleum which are anticipated to be commercially recovered from known accumulations from a given date forward. Proved reserves are limited to those quantities that are commercial under current economic conditions, while probable and possible reserves may be based on future economic conditions. In general, quantities should not be classified as reserves unless there is an expectation that the accumulation will be developed and placed in production within a reasonable timeframe. Geological and probability factors are the definitional basis of probable and possible reserves. The complete SPE/WPC reserves definitions document is in Appendix B of the Issues Paper.**

6.7 **Estimated recoverable quantities from known accumulations which do not fulfil the requirement of commerciality should be classified as Contingent Resources. The definition of commerciality for an accumulation is stated as varying according to local conditions and circumstances and is left to the discretion of the country or company concerned.**

6.8 **Contingent Resources are defined as those quantities of petroleum which are estimated, on a given date, to be potentially recoverable from known accumulations, but which are not currently considered to be commercially recoverable. Contingent Resources may include, for example, accumulations for which there is currently no viable market, or where commercial recovery is dependent on the development of new technology, or where evaluation of the accumulation is still at an early stage.**

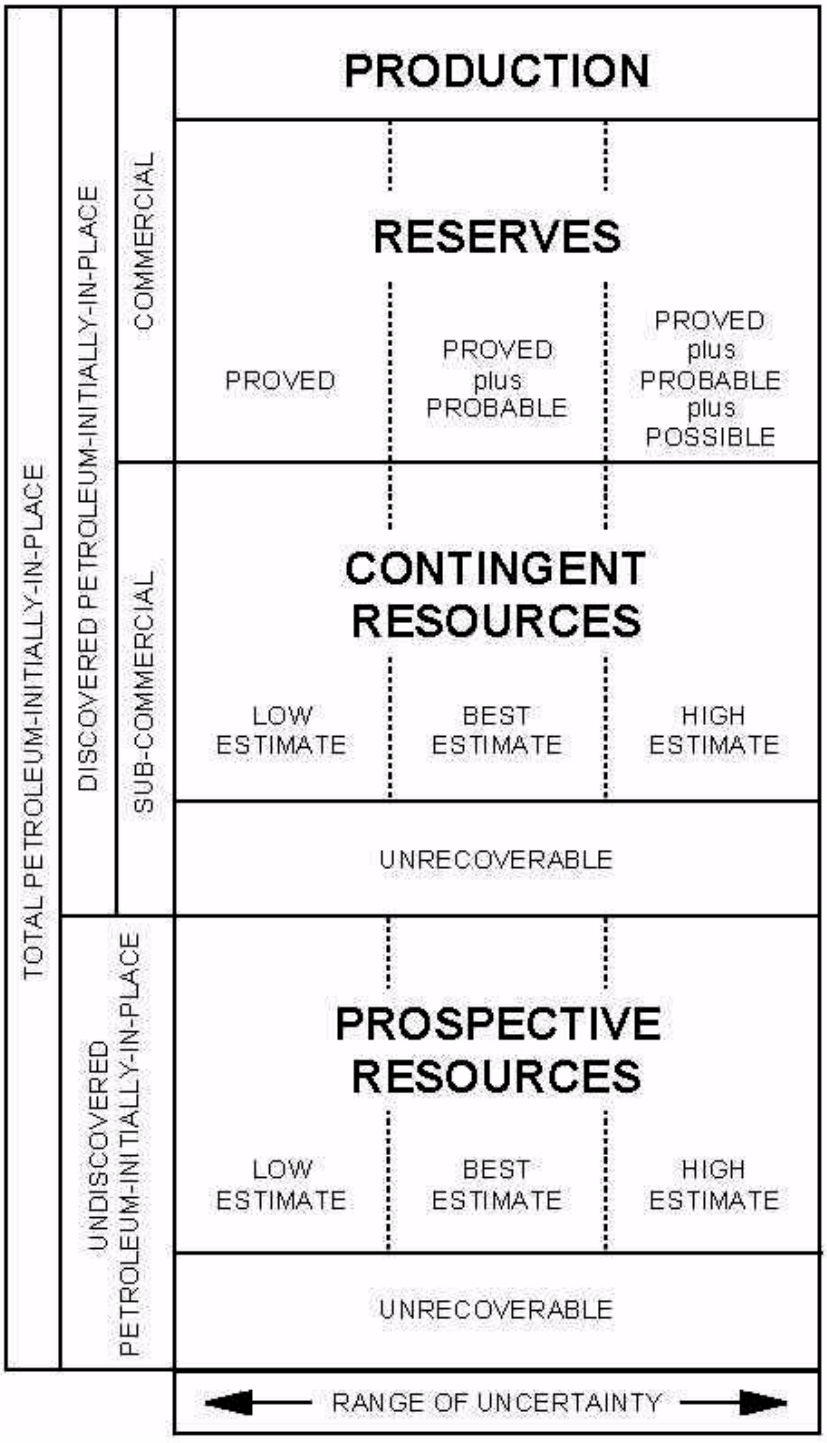
6.9 **Figure 2 (next page) is from the SPE/WPC resources definitions document. It illustrates the relationship between the various reserve and resource categories as defined in the SPE/WPC definitions.**

6.10 **The SPE/WPC reserves and resources classifications are not directly equivalent to the CMMI-JORC mining industry classifications of the same name. As will be discussed later in this submittal, the mining industry classifications are more stringent. The large majority of the content of petroleum Probable and Possible Reserves would not meet the sampling and other requirements of Mineral Reserves. CMMI-JORC has abandoned the Possible Reserve category, with its content being included in the Inferred Resource category. CMMI-JORC requires that for a Mineral Resource to be classified as a Mineral Reserve, in addition to meeting economic criteria, a wide variety of other criteria such as engineering, legal, regulatory, environmental and social must be considered. The SPE/WPC definitions do not specify such**

considerations, although for a Proved Reserve it is specified that there should be reasonable certainty that the project will proceed.

6.11 For petroleum, the U.S. SEC only allows Proved Reserves to be reported. In contrast, for the mining industry it allows Proved and Probable Mineral Reserves to be reported, and informally allows Measured and Indicated Mineral Resources to be reported as mineralised material. This illustrates the SEC s understanding of the substantial differences between the petroleum and mining classifications.

FIGURE 2 - RESOURCE CLASSIFICATION SYSTEM



7 INTERNATIONAL DEVELOPMENT OF EXTRACTIVE INDUSTRIES STANDARDS AND GUIDELINES FOR VALUATION OF RESERVES, RESOURCES AND OTHER ASSETS

Introduction

7.1 **Australia s internationally respected VALMIN Code, developed by The Australasian Institute of Mining and Metallurgy (AusIMM), is presently the only valuation standard specifically designed for the extractive industries. This was first published in 1995 and updated with a 1998 Edition. In being the first in this area, Australia is continuing the leadership role it set in developing the now internationalised standard for reporting of resources and reserves, the JORC Code. Canada is also progressing towards the development of a mineral valuation standard, which will likely have many similarities to VALMIN. The Royal Institution of Chartered Surveyors (RICS), based in London, provides mineral valuation guidance to its members in a section of its Red Book appraisal and valuation manual. A valuation standard development initiative begun in the U.S. in 1999 by the American Institute of Minerals Appraisers was set aside in favour of striving for a coordinated international effort, which is now evolving in conjunction with IVSC.**

The Australasian VALMIN Code 1998

7.2 **In June 1995, AusIMM introduced the VALMIN Code for technical assessment and valuation reports of minerals assets such as exploration properties and mines or the company s securities/shares. A technical assessment report is the foundation of a valuation study. The VALMIN Code grew out of 1989 and 1994 valuation conventions organised by The AusIMM, and a 1990 policy statement on minerals valuations by the Australian National Companies and Securities Commission (the forerunner of the current national regulator, the Australian Securities and Investments Commission [ASIC], which is similar in function to the OSC of Canada and SEC in the U.S.). The current 1998 Edition was expanded to include petroleum and made several changes in response to its practical usage. It is formally titled, *Code and Guidelines for Technical Assessment and/or Valuation of Mineral and Petroleum Assets and Mineral and Petroleum Securities for Independent Expert Reports*. A further review of the Code is currently underway and a report on progress will be given at the third valuation conference to be held 25-26 October 2001 in Sydney (VALMIN 01). Michael Lawrence, 1999 AusIMM President, led much of the development of the Code, and is on the IVSC Task Force that developed this submission.**

7.3 **The strong support for the VALMIN Code throughout the Australian securities bodies and financial institutions is to such an extent that compliance is effectively obligatory for relevant reports to be credible in the market place. Compliance is mandatory for members of AusIMM and its Mineral Industry Consultants Association for reports filed under relevant provisions of the Australian Corporations Law (mainly capital raising and takeovers). Violations of the VALMIN Code are treated under similar procedures to violations of the Institute s Code of Ethics, for which Institute disciplinary actions have included sanctions such as the expulsion of members.**

7.4 **The VALMIN Code is a compact 23-page document of definitions, requirements and guidelines. The document provides extensive guidance on what information must be gathered and evaluated and the level of detail that must be included in a technical assessment and/or valuation report. This includes (to the extent that they are material) requirement of a site inspection, detailed review of current and forecast capital and operating costs, review of employee industrial relations, and investigation of environmental and land access matters. This guidance is down to instructions on the labelling of maps and the information that maps must convey. The quantitative and qualitative estimation of Mineral Resources and Mineral Reserves being valued must be conducted in accordance with the JORC Code.**

7.5 **Definitions of Expert and Specialist are provided, one of whom must have ten years of relevant mining or petroleum experience. A geologist must be involved in a valuation of mineral or petroleum property that includes exploration areas that are material.**

7.6 **The Code is heavily oriented towards providing investors and their advisers with all such information about the subject assets of the report that they might reasonably require to make an informed decision. Hence its main pillars are Transparency and Materiality, supported by Competence and Independence of the Expert/Specialist. Where the Expert/Specialist chooses not to comply with parts of the Code (Guidelines and Aide Memoire) and the matter is referred to AusIMM s Ethics Committee for sanction, the non-compliance is tested against the reasonableness of the non-compliance in the specific circumstances.**

7.7 **An Expert/Specialist who has written a report on an aspect of the subject assets must not give consent for inclusion of their report in the document in the form and context in which it is to be included if the resultant whole document is non-compliant with VALMIN. The entire form of the report for which permission was granted must be included. This prevents misuse of the cachet of compliance with the Code if the document does not materially do so on reasonable analysis by peers of the responsible person.**

7.8 **The Code also places a burden of responsibility on the Commissioning Entity. This includes the requirement for the Commissioning Entity to sign a warrant that it is disclosing all material information pertaining to the subject property to the Expert/Specialist and to indemnify the consultant against costs resulting from relying upon that information.**

7.9 **The Code deliberately does not specify, nor provide specific instructions on, the approaches or methods of valuation to be used, preferring to leave the details of their selection and application up to the judgement of the responsible Expert/Specialist. It relies upon the Transparency and Materiality requirements of the Code to ensure the method is fully exposed to public scrutiny in the document. This was considered preferable to constraining the Expert/Specialist by specific regulation.**

7.10 **Although the VALMIN Code has withstood the test of time, it will continue to evolve to meet the mineral valuation needs of Australasia. The Code is currently being reviewed**

by AusIMM to assess its impact and its effectiveness, and to determine whether amendments may be required. Many non-Australasian valuers also attempt to follow the VALMIN Code. Agencies and institutes in some other countries, including Indonesia and Canada, are reviewing the Code to determine if it would be appropriate for them to apply a variant of it or utilize portions of it in developing their own standard. Some international financial institutions are occasionally specifying that the VALMIN Code must be followed for the valuation of mineral properties unrelated to Australasia. Note that AusIMM members must use it for properties in foreign jurisdictions if the report is to be used within Australia under the Corporations Law.

7.11 A copy of the VALMIN Code is attached (Appendix 1A) together with the Aide Memoire which is distributed with the Code as an inclusion to provide guidance with its interpretation and application (Appendix 1B).

<u>Canadian CIM Valuation Standard Development</u>

7.12 In Canada, there have not been any specific regulations or guidelines for minerals valuators to follow. However, work is underway to change this in the near future.

7.13 On February 1, 2001, National Instrument 43-101, *Standards for Disclosure for Mineral Projects*, came into force in Canada. NI 43-101 was formulated by the Canadian Securities Administrators, an umbrella association of Provincial Securities Commissions across Canada. NI 43-101 is the principal Canadian regulatory document for disclosure of information on mining projects. It requires that reports of Mineral Resource and Mineral Reserve estimates abide by the Canadian Institute of Mining, Metallurgy, and Petroleum s (CIM) standards, Australasia s JORC Code, or an equally strong standard.

7.14 The Mining Standards Task Force, the January 1999 recommendations of which resulted in much of the content of NI 43-101, at the same time recommended that CIM form a committee of valuation practitioners to review and advise on approaches to valuation of mineral properties. CIM approved formation of a Special Committee on Valuation of Mineral Properties (CIMVal) in May 1999. William Roscoe, who is on the IVSC Task Force which developed this submission, is Co-chair of CIMVal.

7.15 CIMVal s mandate is to investigate the various methodologies and practices in the valuation of mineral properties (excluding petroleum properties) and recommend a Canadian Code and/or Guidelines for the valuation of mineral properties. The objective of CIMVal is to develop a working document containing a set of Canadian standards and guidelines which will be recommended for Canadian mineral valuation practitioners to follow in the process of valuing a mineral property. As recommended by the MSTF, particular valuation methodologies are not to be dictated. Widely accepted methods, however, will be recommended, while other methods which are currently less acceptable will be highlighted.

7.16 An April 2001 *Draft Discussion Paper* was issued by CIMVal to publicly air its initial thoughts on the various issues involved in standards and guidelines for valuation of mineral properties and seek responses from interested parties. Many of the concepts

put forth are based on the VALMIN Code, such as the obligations of the Commissioning Entity.

7.17 CIMVal recommends that an independent Qualified Valuator be responsible for the overall valuation of a mineral property. The Qualified Valuator should have at least five years of experience in the valuation of mineral properties; have experience relevant to the subject matter of the subject mineral property; and be a member in good standing of a Canadian self-regulatory professional organisation of engineers, geoscientists, or other relevant self-regulatory professional organisation with an enforceable Code of Ethics, including the Canadian Institute of Chartered Business Valuators. A Qualified Person as defined in NI 43-101, which includes being a member of a recognised self-regulatory professional organisation, may assist in the valuation by conducting an aspect relied upon by the Qualified Valuator. This is similar to the relationship between the Expert and Specialist as defined in the VALMIN Code.

<u>UK RICS Red Book</u>

7.18 The Assets Valuation Committee of The Royal Institution of Chartered Surveyors (RICS) published the first edition of *The Appraisal and Valuation Manual* several years ago. From the outset, practising valuers who were members of the RICS were recommended to apply its provisions whenever they were producing a formal valuation for accounting or secured lending purposes. The Manual became known as the *Red Book* from its inception. It has been, and will continue to be, reviewed and modified regularly, but it retains the same format applied to the first edition.

7.19 The Red Book does not dictate the method of valuation to be employed. This is left to the skill and experience of the valuer. It provides precise definitions of the bases of valuation that must be used and agreed with the client before undertaking an instruction and the procedures to be followed. The manual comprises a number of Practice Statements supported by Guidance Notes. The Practice Statements set out the procedures that should be followed when confirming an instruction, the definitions of the bases of valuation and approaches to be used when dealing with a particular type of property.

7.20 There is a Practice Statement relating to Wasting Assets which covers the valuation of interests in mineral bearing land and waste management sites. The Guidance Notes address the detailed issues that may arise. No standard or definitions for Mineral Resource and Mineral Reserve estimation and classification, such as the CMMI definitions, are referenced or provided.

7.21 Compliance with the Red Book has become compulsory and reports must state that they are prepared in accordance with the manual. There is a Compliance Officer at the RICS who can be consulted by Members on the interpretation of the Red Book. Should a dispute arise concerning a valuation report, the RICS has power to investigate to see if the procedures and requirements of the Red Book had been applied and, if not, disciplinary procedures can be invoked.

7.22 **RICS has announced that it is undertaking a thorough review of the International Valuation Standards published by IVSC, with a view to incorporating them into a future edition of the Red Book. This would likely be supplemented only by specific national/regional guidance if needed.**

U.S. Standards and a Development Initiative

7.23 **Between 1989 and 1995, all 50 states and essentially all Federal agencies adopted the Uniform Standards of Professional Appraisal Practice (USPAP) for real property appraisals (valuations).[2] It is mandatory for State licenced appraisers and members of the major national appraisal societies to abide by USPAP. A significant portion of mineral and petroleum property appraisals must now follow these standards.**

7.24 **USPAP does not provide any guidance specific to mineral or petroleum properties, nor any other property types. It provides general best practice instructions regarding the appraisal process and the appraisal report. Separate standards are included in USPAP for real property, personal property, intangibles and business appraisal. USPAP provides a solid framework for the valuation of a mineral or petroleum property, including valuation of a mine, both as real property and as a business, despite its lack of guidance specific to minerals and petroleum.**

7.25 **In 1999, a standards development initiative was begun in the U.S. by the American Institute of Minerals Appraisers (AIMA). Its goal was to develop a set of standards or guidelines for appraisal of minerals and petroleum properties, using the VALMIN Code as a starting point of reference. A requirement was that the standards must be operable in a subordinate role to USPAP and also operable independent of USPAP.**

7.26 **Trevor Ellis, the leader of the IVSC Task Force which developed this submission, also led the AIMA initiative. His research into existing standards and their application, and existing mineral valuation practice, quickly led to his writing many professional papers. As the 2000-2002 President of AIMA, Mr. Ellis had the AIMA standards initiative set aside in favour of striving for a coordinated international effort, which is now evolving in conjunction with IVSC.**

8 COMMENTARY RELATING TO THE MINERALS INDUSTRY

8.1 **Several issues relating to Mineral Reserves and Mineral Resources have been discussed in the Issues Paper. These include reserve and resource definitions, whether the same rules should be applied to reporting and disclosure for the same categories of mining and petroleum reserves, deterministic versus probabilistic approaches to**

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[2] In the U.S., the term appraisal is used for a valuation assignment and a formal valuation report. The term appraiser is used in place of the international terms valuer and valuator.

classification, and Mineral and Petroleum Reserve and Mineral Resource classes for which to allow reporting or disclosure of value.

8.2 The very nature of the financial reporting process requires accounting for the current value of reserves/resources to give a true current indication of value to shareholders. Hence there must be reasonable consistency in the quantification and valuation of Mineral Reserves and resources. This is necessary to avoid substantial fluctuations in company assets occurring on a frequent basis from changes in the estimation process, and to allow meaningful comparison between the reports and disclosures of companies in the same business sector. However, at the same time, the reporting process must have the flexibility to allow accurate reporting and disclosure of estimates that reflect continually changing geological, engineering, market and economic factors. Accurate reporting and disclosure of the realities of the mineral or petroleum asset base of companies is much more important for investors than some perceived need for accounting precision that may hinder the communication of such realities. Therefore, IVSC maintains that the proposed IASB Standard must allow such changes in the value of mineral and petroleum assets to be shown in the financial statements as a class of assets in an asset revaluation reserve without being directly reflected in the profit and loss statements. A requirement to reflect such changes in the profit and loss statement will discourage reporting of negative corrections, while positive changes could frequently mask operating results.

8.3 The previous section of this submittal has advised IASB of the available guidelines, standards and code in national and international jurisdiction, for the estimation and reporting of mineral and petroleum resources and reserves. Information of a similar nature is also provided for the valuation of such resources and reserves and related assets. Some standards and codes have statutory and/or professionally binding practice requirements.

8.4 It would obviously be counterproductive for IASB to develop its own set of valuation practice definitions which may differ from or conflict with those developed by valuation professionals in the extractive industries. For the reporting and disclosure requirements in the proposed IASB Standard, IVSC recommends that IASB obtain assistance from IVSC and leading international industry bodies for the development of rules which should reference such standards and Codes and require compliance with them.

8.5 The Council of Mining and Metallurgical Institutions (CMMI) is an international organisation with representation from the national mining industry institutes of Canada, the USA, South Africa, Australia, the U.K. and several other countries. An international committee of this body, the International Definitions Group, in 1999 agreed on a set of definitions for Mineral Resource and Mineral Reserve classifications, after a number of years of work. The agreed definitions and the instructions adopted for their application, are based largely on those contained in the 1999 edition of the *Australasian Code for Reporting of Mineral Resources and Ore Reserves*, generally called *The JORC Code*. A copy of the 1999 Australasian JORC Code is contained in Appendix B of the Issues Paper and referenced extensively in the text.

8.6 **Due to the 1999 CMMI agreement, most major mining countries are now using common definitions of resources and reserves and common or compatible public reporting standards. Additionally, the definitions are included in the United Nations Framework Classification for Mineral Resources and Mineral Reserves, which is now being implemented in over 60 countries worldwide. The notable exception is the USA where the Securities and Exchange Commission (SEC) has had a formal policy since 1981 of only allowing disclosure of Mineral Reserves, largely due to its concern about the potential for investors to confuse resources for reserves. However, the SEC has now implemented an informal policy of allowing disclosure under the CMMI-based standards and the U.S. SME s Guide, for Mineral Reserves and Measured and Indicated Mineral Resources, provided a substitute term is used for Resource. This situation is still seen as unsatisfactory.**

8.7 **The CMMI-based definitions and reporting standards have been developed by professional practitioners and have received rapid acceptance throughout the mining industry and by regulatory bodies worldwide. The evolution of the CMMI-based standards is continuing towards a Worldwide Code. The IASB Standard should require compliance with the CMMI-based standards for reporting and disclosure of Mineral Reserves, Mineral Resources and exploration results.**

8.8 **Definitions of reserves and resources in the mining industry are somewhat different from those in the petroleum industry. The internationally recognised *Petroleum Reserve Definitions* of the U.S. based Society of Petroleum Engineers (SPE) and London based World Petroleum Congresses (WPC) are extensively referenced in the Issues Paper and are included in its Appendix B. From our research, the IVSC Task Force has concluded that the large majority of the content of petroleum Probable and Possible Reserves categories would not meet the geological sampling and other non-geological requirements of the CMMI-JORC Mineral Reserve categories. It is important to note that CMMI and JORC determined that a Possible Mineral Reserve category does not meet the definition of a Mineral Reserve and disallows it. SPE/WPC Probable Reserves category would mainly include the equivalent of mining s Indicated Mineral Resource and the higher confidence level portion of the Inferred Mineral Resource category. The SPE/WPC Possible Reserves category would correspond to the lower confidence level portion (and possibly beyond) of the Inferred Mineral Resource category under the CMMI-JORC definitions. In our view, the reserve and resource categories have a measure of comparability as follows:**

SPE/WPC Proved Developed Reserve = CMMI Proved Mineral Reserve
SPE/WPC Proved Undeveloped Reserve = CMMI Probable Mineral Reserve
SPE/WPC Probable Reserve = CMMI Indicated+Inferred Mineral Resource
SPE/WPC Possible Reserve = CMMI Inferred Mineral Resource

8.9 **Mineral Reserve and resource definitions in the mining industry have traditionally been deterministic rather than probabilistic. In our view this is reasonable, since it is very difficult to assign a probability to the various categories of Mineral Resources and Reserves. Probability factors could be used to mislead investors, or could easily attract litigation over resource estimates. Classification must be based upon data density, geological and grade continuity, and a number of other factors such as engineering,**

metallurgical, economic and legal, with the determination made by a competent specialist with appropriate qualifications experience and repute.

8.10 In the mining industry, companies hold exploration properties for their potential to contain economic deposits. Ongoing exploration work is a staged process designed to screen the properties with the result that some will increase in potential and some will decrease. Property values will change accordingly as exploration work progresses, as value is based upon perceived exploration potential. Exploration properties may or may not contain defined Mineral Resources. Nevertheless they do have value.

8.11 If the *fair value* based reporting concept is to be used for mineral properties, there are some issues subject to professional debate concerning valuation methodology for reserves and resources. Whilst there is general agreement that it is appropriate to utilise discounted cash flow (DCF) analysis for valuation of Mineral Reserves, there is not general agreement as to the use of this particular income method of valuation for Mineral Resources, especially if the property is not under development but is still at the exploration/evaluation stage. The Issues Paper concentrates on Net Present Value derived by DCF as being the primary, or maybe only, acceptable method of value determination. Many recent professional papers address valuation methods for Mineral Resources, with a number of alternatives to DCF being available, dependant on the category of the Mineral Resource and the project s development status. These include sales comparison, joint venture terms and multiples of exploration expenditure methods, among others. Application of generally accepted best valuation practice principles often results in a number of valuation methods being applied to the one Mineral Resource property. The selection of appropriate valuation methods must be left up to the professional judgement of the competent valuation specialist. There are no satisfactory recipes or formulas which can be applied. The material information about the methods and results should be submitted with full transparency, so that others can review them for reasonableness. The IASB Standard is not an appropriate place to limit or dictate valuation methods.

8.12 The IASB Extractive Industries Issues Paper suggests that, if current value is to be reported, it should be allowable only for mineral properties with Mineral Reserves, preferably producing mines, with such value being disclosed in the supplemental notes, and that *historical costs* should be reported for Mineral Resources and possibly exploration properties. IVSC strongly favours the inclusion of <u>market determined</u> *fair value* in the primary financial asset statements for Proved and Probable Mineral Reserves. For petroleum properties it strongly favours similar inclusion for proved developed and proved undeveloped reserves. Such *fair value* reporting should be encouraged as the preferred alternative, with *historic cost* based reporting as the less preferred, but mandatory alternative.

8.13 IVSC considers it essential that mining enterprises disclose quantitative and qualitative estimates of Mineral Reserves and Mineral Resources in the supplemental notes. Such reports must abide by the CMMI definitions, and have been developed in compliance with one of the internationally accepted CMMI-based Standards or Code. The reports should include estimates only within the five classes, Proved and Probable Mineral Reserves, and Measured, Indicated and Inferred Mineral Resources. The

contents of two or more classes should not be combined in the disclosure. No reporting of Possible Reserves should be allowed. With Mineral Resources disclosures, IVSC recommends that a brief cautionary statement be included advising the reader that these have not achieved the development potential of Mineral Reserves, and that Inferred Resources are highly speculative and that economic studies predicated on them are not usual (see wording in the JORC Code). Reconciliation with the estimates of the previous year should be included. Disclosure of exploration results should also comply with the same internationally accepted CMMI-based Standard or Code.

8.14 Any enhancements to the mining industry Mineral Resource and Mineral Reserve reporting Standards which IASB determines are needed must be made through CMMI or its successor.

IVSC favours the reporting of market determined *fair value* for disclosure at least in the supplemental disclosures for Mineral Resources (that are not Mineral Reserves reported in the primary financial statements), and for reporting of material values of exploration properties lacking defined Mineral Resources. A substantial portion of the value of the mining industry s asset base is in those Mineral Resources and exploration properties. It is debateable whether market value estimates of sufficient quality can be made using the present pool of mining industry valuation expertise and knowledge, to allow reporting of those Mineral Resources and exploration properties in the primary accounts. The current *fair (market) value* (*fair value*) reporting of Measured and Indicated Resources should be encouraged, with mandatory *historic cost* reporting required as an alternative. *Fair value* reporting for Inferred Mineral Resources and exploration properties lacking defined Mineral Resources should also be allowed, subject to careful review for reasonableness by the reporting entity and where the reported value does not comprise a large portion of the value of the company, with *historic cost* basis being the alternative.

9 COMMENTARY RELATING TO THE PETROLEUM INDUSTRY

9.1 For petroleum enterprises, reporting of quantitative estimates of reserves in the supplemental disclosures should follow the SPE/WPC definitions. The reporting should include proved developed, proved undeveloped and probable reserves only. The IVSC Task Force has concluded that the content of the petroleum possible reserves category is much too speculative for public disclosure as reserves. In strong support of this conclusion, CMMI and JORC determined that a Possible Mineral Reserve category does not meet the definition of a Mineral Reserve and disallows it. The IVSC Task Force has also concluded that SPE/WPC petroleum resources categories, described earlier in this submittal, lack adequate potential for economic viability for disclosure in the supplemental notes.

9.2 Any enhancements to the petroleum industry s resources and reserve reporting definitions which IASB determines are needed, or possible future development of a reserve reporting standard, should be coordinated through SPE/WPC or successor international body representative of the petroleum industry as may exist at the time.

9.3 **IVSC is concerned that the U.S. experience for the completion rates for wells drilled into the proved and probable reserve categories of petroleum properties are below the SPE/WPC assigned lower probability limits for the two categories. The assigned probability limits suggests greater tightness in the classifications than the descriptive information, and the probabilities do not match with actual experience in the petroleum industry s mode of application, at least in U.S. practice. David Abbott compiled data pertaining to this matter while working for the U.S. SEC for 20 years as a Regional Geologist responsible for reviewing and investigating mining and petroleum industry company reports. He drafted much of the mining and petroleum industry reporting rules for reserves (Form S-18) which are now contained in the SEC s *Industry Guide 7*. In 1985 paper, *SEC Reserve Definitions – Principles and Practice*, David Abbott statistically justified the SEC s restriction on petroleum reporting to only proved developed reserves and proved undeveloped reserves, based on a national completion rate of 79% for development class wells and only 24% for exploratory class wells. Mr. Abbott provided the IVSC Task Force with a comprehensive compilation based on American Association of Petroleum Geologists (AAPG) well completion statistics for the U.S. through its last reporting date of 1989. Development wells, which are drilled into proved undeveloped reserves, had a national completion rate of 78% for 1969 — 1989, significantly below the 90% lower limit of the proved reserves category. Exploration wells and new pool wildcat wells, which are drilled to investigate probable reserves, had a national completion rate of 37% for 1946 — 1989, significantly below the 50% lower limit of the probable reserves category. The IVSC Task Force realizes that well completion is not the same thing as profitability, but it is a good indicator of such for the reserves being investigated by those wells. We therefore express our concern about the apparent misleading nature of the term probable reserves. In light of this experience from the U.S. where petroleum drilling and production is tightly regulated by state oil and gas commissions, we must express concern about what the experience might be in other countries regarding the petroleum reserve classifications. IVSC strongly recommends that a brief cautionary note about the speculative nature of probable reserves be included with the disclosure.**

9.4 **The petroleum industry should give a high priority to establishing reserve estimation and reporting standards of a similar nature to the CMMI-JORC based standards of the mining industry described elsewhere in this submission. Such standards need to be based on enforceable Competent Person requirements similar to those contained in the mining industry JORC Code or CIM Standard. Presently, even members of the Society of Petroleum Engineers have no obligation to abide by the SPE/WPC definitions. Introduction of disclosure for probable reserves should await the implementation of such standards.**

9.5 **IVSC strongly favours the inclusion of <u>market determined</u> *fair value* in the primary financial asset statements for proved developed and proved undeveloped petroleum reserves. Such *fair value* reporting should be encouraged as the preferred alternative, with *historic cost* based reporting as the less preferred, but mandatory alternative.**

9.6 ***Fair value*** **disclosure for probable petroleum reserves should be allowed in the supplementary notes. Such disclosure should also be allowed for exploration properties lacking proved or probable reserves, subject to careful review for**

reasonableness, and only if such value does not compose a large portion of the value of the company. In both cases, *historic cost* basis disclosure should be the alternative.

10 GENERAL COMMENTS

10.1 The Issues Paper does not address any need for a Competent Person to be responsible for the development of reserve and resource estimates that are disclosed to investors and forms the basis for *fair value* estimation; nor for that matter for an equivalent person(s) to be responsible for any valuations.

10.2 IVSC views the requirement of a responsible Competent Person who is subject to a disciplinary mechanism, as a critical need in quality control for such important estimates that form the foundation of mining and petroleum company value. In the mining industry, specialists in Mineral Resource and Mineral Reserve estimation who are members of the major institutes and other self-regulatory bodies that enforce the competency provisions for the CMMI-based standards, are plentiful, and widely dispersed internationally. Implementation of the World Code under development by CMMI, and its supporting mechanisms, should greatly expand the availability of such specialists. The fact that the petroleum industry has not moved the SPE/WPC definitions into a standard with a Competent Person requirement for reserve estimates that are reported, is a gap that the industry should urgently address. It is rather disconcerting that even on an *historic cost* accounting basis, the major accounting firms of the world are presently giving their audit blessing to units-of-production depletion and amortization which are based on uncontrolled petroleum reserve estimates.

10.3 IVSC strongly recommends against attempting the development of a consistent set of reserve and resource definitions covering both mining and petroleum for use in financial reporting. The geological and engineering factors involved in the estimation and extraction of petroleum as fluids are quite different to those involved in estimation and extraction of minerals as solids.

10.4 Forward looking economic inputs of selling price, annual sales volume and production costs inherently underlie reserve estimates. Considerable discussion and concern is expressed in the Issues Paper in Chapter 3 at 3.54 — 3.78 about the possible need to standardise those inputs. Those inputs are closely related to the inputs used to estimate reserve value using the net present value method. The JORC, SAMREC and CIM standards and soon to be instituted European standard, all have similar requirements for such input assumptions to be disclosed in reports of Mineral Reserve estimates when such information is material to the estimation process. IVSC is philosophically opposed to specifying standardised inputs due to the restrictions it imposes on the thinking of specialists and planning of companies. The requirements of disclosure and transparency allow the reasonableness of material assumptions to be examined by all interested parties, and concerns expressed and complaints lodged if necessary. A summary of the report must supplement the financial statements and the complete report must be readily available to interested parties. Until the petroleum industry institutes a similar reporting and enforcement mechanism to that of the mining industry, IASB will need to specify the information that should be provided in

reports of petroleum reserve estimates, and reports for which the inputs are not considered reasonable should be rejected. Reports of petroleum reserve estimates should include the name and qualifications of the specialist responsible for the estimates.

10.5 Throughout the Issues Paper, where *current value* is being discussed, it is generally being used in the context of *value in use* or *investment value* instead of the *market value* that is synonymous with the *fair value* requirements of the existing IASB Standards. The net present value (NPV) methods that are being discussed regarding the determination of *current value* of reserves, even when the term market is used, will give a measure of the value of the asset to the company instead of value in the market place. This is because the methods discussed for discount rate determination are not designed to fully reflect the winds of the market place. The disparity between *market value* and *value in use* is well documented in IAS Standards 16 and 36. When discounting is used to calculate NPV as an estimate of market value, the discount rate should be market derived, whereas the Issues Paper is focusing on discount rates internal to the enterprise. There can be a wide disparity between the discount rate that the market supply and demand is dictating and the discount rate appropriate for internal use by the enterprise.

10.6 It must be emphasised that current value should be determined as *market value* whenever it is reasonable to do so. There are three approaches to valuation (the sales, income and cost approaches, of which at least two should if possible be applied in concert. Within those three approaches there are many more methods of valuation than just the discounting (NPV/DCF) method concentrated on in the Issues Paper. Even if NPV is considered to provide a reliable *fair value* estimate, generally accepted best practice principles dictate that another approach to value should be used if possible to validate the estimate. (International Valuation Standards 2000, p.44).

10.7 IVSC understands that many companies would not be willing to have full market valuations done for all of their mineral or petroleum properties each year. This may even be true for just their more significant properties. The cost and disruption would be unbearable. Once every four or five years, or when major quantitative changes in reserves or resources occur that are not due to production, may prove adequate, with standard depletion and other accounting working on those assets in between. Even an annual update market valuation of a mineral property can be a complex, expensive task.

10.8 Lacking from the Issues Paper is any reference to or any discussion of valuation standards or guidelines to govern the valuation process used for determination of current value. Valuation standards for the minerals industry that are in place or under development are discussed earlier in this submittal. The existing Australasian VALMIN Code and the Canadian CIMVal standard that is under development are the best recognised of these. Unless a prescriptive method is specified for determination of a pseudo-value, guidance by such valuation standards should be specified. Acceptable valuation standards for minerals and petroleum should provide comprehensive guidance regarding the provision of material information in a transparent way eg, the requirements of resource and reserve estimates, information that should be gathered

and investigated, considerations in conducting data analysis and applying valuation methods, and extensive guidance on the content of the report, including transparency and disclosure. The present format of the VALMIN Code, naturally addresses minerals and petroleum valuation primarily for Australasian application and some say it does not provide guidance for the wider variety of situations and jurisdictions internationally for reporting under the IASB Standard. Its stringent requirements can be quite expensive to meet and do not seem designed for widespread international application on properties of modest value. The Code purposely does not provide guidance on application of the General Valuation Concepts and Principles that are a major part of the foundation of the International Valuation Standards. Nor was it designed to provide guidance on valuation by asset type and purpose that will likely be necessary to support the IASB Standard. VALMIN and CIMVal provide a good start for an IVSC compatible version, not unlike the CMMI/JORC initiative.

10.9 **The IVSC Board has given approval for the IVSC Extractive Industries Task Force to begin the development process for an Extractive Industries guidance section of the International Valuation Standards (IVS). An important reason behind the development of the existing IVSC IVS 2000 manual and its predecessors, has been supporting the valuation requirements of the IAS through providing high quality guidance for valuers to follow in the form of General Valuation Concepts and Principles. Therefore, providing specific Extractive Industries guidance within the framework of the IVS is a logical step. Much of the guidance necessary for reporting valuations by asset type and purpose for IAS is already present. The experience and knowledge developed from VALMIN and CIMVal will be sought to advance the process and avoid pitfalls. Leaders of their development are already on this Task Force. Development of the Extractive Industries guidance section will allow a truly international extractive industries standard to be referenced by the IASB standard.**

10.10 **Also completely lacking from the Issues Paper is any discussion of who will be competent to determine current value. The Competent Person must be defined even if a tightly specified NPV is to be allowed as a *fair value* estimate. Defining the Competent Person and necessary expertise (possibly allowing for the subordinate role of a specialist as an additional person) is an important role for the IVSC extractive industries guideline that is to be developed. It is recommended that the IASB Standard specify that the responsible valuation expert s name, qualifications and corporate connections be included by notation in the supplemental disclosures. A disciplinary mechanism for enforcement of an IVS Competent Person provision may be possible through supporting institutes and other self-regulatory bodies.**

10.11 **The term appraisal is used in the Issues Paper in the context of evaluation. Care should be taken to assure that this does not occur in the IASB Standard. In the U.S., an appraisal is a formal opinion of value, or the act or process of estimating value. That is, it has a similar meaning to a formal valuation elsewhere in the world. The IASB should substitute evaluation for appraisal in the usages of the Issues Paper where estimation of quantity, quality and grades is involved. If that for some reason is found to be not possible in some circumstances, a qualifier should always be applied to the word, such as appraisal well or geological appraisal for clarity.**

11 VALUATION ISSUES

11.1 **Beginning at Paragraph 3.94 the Issues Paper enters into considerable argument over the use and application of discount rates in the determination of current values on the NPV basis. It is considered by IVSC that several of these arguments are ill conceived as regards developing current market valuations for extractive industry resources and reserves.**

11.2 **Use of any pre-determined discount rate is at best a surrogate valuation methodology that can be adopted for the sake of uniformity in *market value* assessment. The inevitable result is a *valuation* that may differ substantially from the true *market value* that could be derived from analysis of sales and other valuation techniques by industry experts. Depending upon economic conditions and industry practices in response to such conditions, the differences may lead to misleading financial information being provided in the primary accounts if used alone.**

11.3 **As the mining and petroleum industries are widely acknowledged to be high risk industry sectors. The application of risk free and other money market discount rates may lead to serious over valuations, unless risk and uncertainty are incorporated correctly elsewhere in the analysis. Inappropriate application of risk adjusted discount rates can also greatly undervalue mining and petroleum projects that have a long life spans, because most project risk is concentrated in a few years around project development and startup.**

11.4 **IVSC considers that the discount rate adopted by industry experts in *fair value*/*market value* valuation should be arrived at by their own market analysis. Given the importance of the discount rate, if a valuation is largely based on NPV, derivation of the discount rate applied and other material factors should be reported transparently in the supplemental notes for all to see, particularly including investors/shareholders in the entity.**

11.5 **If any pre-determined rate is to be considered, it is recommended that the entity s weighted average cost of capital (WACC) would provide the best solution because of its ability to reflect prevailing economic conditions by changes in the required returns on both debt and equity capital. If the WACC discount rate is in fact adopted, most of the risk and uncertainty should be modelled in the cash flows by proper adjustment of the inputs or probability analysis, rather than applied as a risk factor built into the discount rate.**

11.6 **The *value in use* concept is part of the impairment test applied to the cash flows from identifiable assets as required under IAS 36. It is our opinion that the principles of the *recoverable amount* and the impairment test should not be any different for the extractive industries.**

11.7 ***Value in use* by definition in IAS 36 must be calculated on before tax and financing cash flows and must not include any element of internally generated goodwill. As *value in use* must be calculated on the entity specific basis, it is important that Directors**

understand their responsibilities in this regard through specific instructions in the proposed Extractive Industries Standard.

12 RESPONSES BY ISSUES PAPER ITEM NUMBER

Basic Issue 1.1 - Possible additional industries ...
a. No

Basic Issue 1.2 - Definition of upstream activities
a. Yes, the definition is appropriate.

Basic Issue 1.3 - A single standard
c. A single IAS standard with separate requirements ....

<u>Basic Issue 2.1 - Phases of upstream activities</u>
a. Yes
But, there could be confusion in US where *appraisal* means a formal valuation. The term *evaluation* instead of *appraisal* might be more suitable.

Basic Issue 3.1 - A common set of reserve definitions ....
c. Common definitions are not necessary. .
Although the concept of common definitions have attractions, the geological and engineering implications of fluids versus solids are too great to accommodate.
Despite that statement, we would like to see the SPE/WPC categories adjusted to more closely reflect CMMI-JORC definitions, since they are more useful to investors.

Sub-issue 3.1.1 - Developing the common definitions
b. A joint industry group.
However, it is really up to SPE/WPC to adjust if any changes are to be made.

Sub-issue 3.1.2 - Probabilistic vs. deterministic ....
c. Allow the choice for both joint professional institutes/industry bodies to decide.

Despite that though, we raise serious concerns in our submittal regarding the present SPE/WPC assigned probabilities. Results of U.S. petroleum drilling strongly suggest that the probability estimates used in the SPE-WPC definitions don t match reality, and err considerably to over confident estimates (Abbott, 1985).
We encourage SPE/WPC to abandon the probabilistic approach.

Sub-issue 3.1.3 - Feasibility of probabilistic definitions for mining reserves
b. No
Work is advancing in this area but standards should lag not proceed in advance of work of bodies like CMMI.

There are generally too many variables involved that would need to be modelled simultaneously to allow probability estimates to be applied for public reporting as though they are scientifically and economically valid.

Sub-issue 3.1.4 - Quantification of statistical probabilities
b. Yes, in general quantifications are appropriate, but ...
The contents of the WPC-SPE possible reserves category are much too speculative for public disclosure as in the reserve category.
The lower confidence limit of probable reserves needs to be raised to 60% or 70% to match public perceptions of the meaning of probable.
U.S. national well completion rates demonstrate that in reality the lower probability limits are much too optimistic for the contents of the categories of proved and probable petroleum reserves as applied by industry.

Basic Issue 3.2 - Operating conditions and environment
b. Assumptions that reflect all available evidence as to ....

Basic Issue 3.3 - Levels of prices and costs
c. Management s best estimate of the price expected.
A responsible practitioner (Competent Person) should advise management.
If a current forward or futures price is available, use as supporting evidence.

Basic Issue 3.4 - Income taxes
a. Yes — but only in accordance with the expectations of market participants.
Leave this choice up to the responsible practitioner.

Basic Issue 3.5 - Discount rate
h. Other
The discount rate should be market derived, with the valuation supported by sales transaction analysis or other relevant methods when possible. A discount rate should be appropriate for the industry sector, not specific to the enterprise. If a weighted average cost of capital discount rate is used, most of the risk and uncertainty should be modelled in the cash flows by probability analysis, rather than applied as a risk factor built into the discount rate.

Basic Issue 4.1 - Historical cost concepts for petroleum enterprises
b. A method more consistent with the area-of-interest concept ...
Sub-Issue 4.1.1 - Allow more than one concept ...
a. No.

Basic Issue 4.2 - Historical cost concepts for mining enterprises
b. A method more consistent with the area-of-interest concept ...

Sub-issue 4.2.1 - Allow more than one concept ...
a. No.

Basic Issue 5.1 - Basis of primary financial ...
b. A value-based concept.

Basic Issue 5.2 - Basis for primary financial ... mining ...

b. A value-based concept.

Basic Issue 5.3 - Which value based concept
b. Current value concept

Basic Issue 5.4 - Which reserves
c. All proved (developed and undeveloped). – *for petroleum*
d. All proved plus probable. – *for mining*

Basic Issue 5.5 - Which concepts of value
a. *Fair value*
That is, market value.

Basic Issue 5.6 - Presenting discovery values
c. Report the net discovery value .... recognised in net profit or loss for the period.

Basic Issue 5.7 - Presenting current values
b. Other
Same method as in Basic Issue 5.6 c.

Basic Issue 9.1 - Reserve category for impairment
b. Proved developed and undeveloped only. – *for petroleum*
c. Proved and probable only. – *for mining*

Basic Issue 9.2 - Cash generating unit
a. Same as the cost centre.

Basic Issue 9.3 - Discount rate
a. Yes
Derive discount rate from entity specific market transactions, preferably in the country of the property. A defined pre-tax discount rate is required. Severance tax and non-income-based taxes should be included in the calculation of cash flows.

Basic Issue 9.4 - Reversal of impairment provisions
b. No, the general guidance ...

Basic Issue 9.5 - Impairment of deferred preproduction
b. Impose a time limit.

Basic Issue 13.1 - Purchased exploration
a. Yes, ...

Basic Issue 13.2 - Purchase of mineral property ....
a. Record tangible assets at estimated *fair value* ....

Basic Issue 13.3 - Allocation of cost of a portfolio ...
b. Allocate the cost to each proved ....

Basic Issue 13.4 - Purchase of an enterprise ....
a. Yes. Record the mineral property ...

Basic Issue 13.5 - Sale of a noncommercial property ...
a. Yes.
Otherwise, gains or losses would be hidden from the shareholder.

Basic Issue 13.6 - Gain or loss recognition ...
a. Yes, no matter whether the sale ....
Otherwise, gains or losses would be hidden from the shareholder.

Basic Issue 13.7 - Sale of partial interest ....
a. Yes, no matter whether the sale ....
Otherwise, gains or losses would be hidden from the shareholder.

Sub-issue 13.7.1 - allocation of carrying amount
a. Relative *fair value*s of the properties

Basic Issue 13.8 - Sale of a property ....
a. Yes
The residual cost basis for the property will need to estimated by an allocation process based on reserves quantity and quality.

Basic Issue 13.9 - Retirement or abandonment ...
a. Yes
The residual cost basis for the asset will need to estimated by an allocation process.

Basic Issue 14.1 - Supplemental reserve disclosures ...
b. Favour disclosures of reserve quantities and reserve current (market) values in addition to mandatory *historic cost* measurement.

Basic Issue 14.2 - Disclosures of reserve quantities ....
f. Other
The disclosure should be by all of c., d. and e.

Basic Issue 14.3 - Categories of reserves for quantity disclosures
c. Proved and probable only.
Disclosure of possible petroleum reserves should not be allowed.
The CMMI-JORC definitions prohibit the use of Possible Mineral Reserves.
A brief cautionary statement about speculative nature of possible petroleum reserves should be included whenever they are disclosed.

Sub-issue 14.3.1 - Proved developed and undeveloped ...
a. Disclose proved developed and proved undeveloped separately. – *for petroleum*
b. Disclose a combined measure .... – *for mining*

Sub-issue 14.3.2 - Proved and probable combined ....

a . Disclose proved and probable separately.

Sub-issue 14.3.3 - Proved, probable, and possible ...
a. Disclose proved, probable and possible separately.
This is not a valid question for Mineral Reserves.

Basic Issue 14.4 - Disclosure of Mineral Resources
a. Measured, indicated and inferred ....
A cautionary statement about the speculative nature of Inferred Mineral Resources should be included whenever they are disclosed.

Basic Issue 14.5 - Disclosure of grade factors ...
a. Yes

Basic Issue 14.6 - Number of periods for reserve ....
d. Other
Three years.

Basic Issue 14.7 - Reconciliation of proved reserve quantities
a. Yes

Basic Issue 14.8 - Reconciliation of probable reserves
a. Yes - *Petroleum*
b. No - *Mining*
Production directly from probable reserves should be allowed for mining but not for petroleum.
For petroleum, probable reserves are speculative in nature. For mining, Probable Mineral Reserves are well defined and well delineated.
Consideration should also be given to allowing reporting of production directly from Measured and Indicated Mineral Resources for mining. In some mineral deposits, the uncertainties as to their content, and the ability to recover that content, are too high for the mineralisation to be classified as a reserve until the mineral content has been recovered and sold. For example, this situation occurs with some precious mineral alluvial deposits.

Basic Issue 14.9 - Disclosure of an equity method ...
b. The investor should disclose ....

Basic Issue 14.10 - Minority interest in reserves ....
a. Disclosed separately as a deduction ....

Basic Issue 14.11 - Valuation method for the purpose ...
a. *Fair value* (the amount ....

Basic Issue 14.12 - Which categories of reserves ....
c. Proved and probable only

Basic Issue 14.13 - Assumptions about prices and costs ...

c. Use cost and price factors ...

Basic Issue 14.14 - Discount rate for estimating reserve values ....
h. Other
Market derived. Model risk in cash flows as much as possible rather than including it all in discount rate.

Sub-issue 14.14. 1 - Pre-tax or after-tax discount rate
b. After-tax rate
Pre-tax should be calculated as support.

Basic Issue 14.15 - Standard measure of future cash flows ...
b. A standardised measure should be required ....

Sub-issue 14.15.1 - Standardised measure of future cash flows: measurement
a., b. and c.

Basic Issue 14.16 - Analysis of changes in estimated ....
a. Yes.

Sub-issue 14.16.1 - Items included in analysis ....
a. Yes.

Basic Issue 14.17 - Disclosure of reserve values by ....
b., c., and d.

Basic Issue 14.18 - Disclosure of information useful ...
a. Yes.
Quantity, grade, depth, thickness, surface area, dip, severe faulting, chemical or crystal form, market description.

Basic Issue 14.19 - Disclosure of assumptions
b. Yes
This question assumes that the primary basis of valuation will be NPV/DCF derived. That should not necessarily be the case. The sales comparison approach is often the primary basis of determining the market value of gold reserves for example: A comprehensive, transparent valuation report should be submitted to the securities commission, and a summary disclosure of important information included in the supplementary notes to the financial statements.

Basic Issue 15.1 - Disclosure of costs incurred ...
a., b. and c.

Basic Issue15.2 - Value of properties ...
a. Yes.
Disclosure of the current value should be voluntary.

Basic Issue 15.3 - Performance indicators.

a., b., c., d., f., g.
For g., 5-year moving average for finding costs. Adjust for inflation by the PPI.

Basic Issue 15.4 - Financial disclosures
a., b., d., e., f., g., h., i., j.

Basic Issue 15.5 - Nonfinancial disclosures
a., b., c., d.., e., f.

Basic Issue 15.6 - Special disclosures for individual .....
a., b., c., d., e.

Basic Issue 15.7 - Special disclosures: petroleum ...
a. - i. inclusive.

Basic Issue 15.8 - Balance sheet cost
a. As property, plant and equipment

Basic Issue 15.9 - Balance sheet cost classification - deferred ..
b. As property, plant and equipment.

Basic Issue 15.10 - Environmental disclosures
Not answered. Beyond the task force scope.

Basic Issue 15.11 - Segment information ...
a. Yes.

Basic Issue 15.11.1 - Pricing of downstream transfers ...
a. Current market prices for the minerals ( ) less estimated costs .

13 MAJOR RECOMMENDATIONS

13.1 (a) There should be a single reporting Standard for the extractive industries with differences between the mining and petroleum industries covered by individual rules.

(b) The *fair value* of Proved and Probable Mineral Reserves and proved petroleum reserves should be the preferential reporting definition in the primary financial accounts, with *historic cost* reporting for these reserves as an option. No reporting of value of probable or possible reserves for petroleum, or any Mineral Resource categories should be allowed in the primary accounts.

For mining industry enterprises, quantitative and qualitative information should be included in the supplemental statements for all Mineral Reserve and Mineral Resource categories.

(d) For petroleum industry enterprises, quantitative information should be included in the supplemental statements for all proved and probable reserves. No reporting for possible petroleum reserves should be allowed, nor should such for any petroleum resource category. The IVSC Task Force has concluded that the content of the petroleum possible reserves category is much too speculative for public disclosure as reserves, while the potential for profitable extraction from the contents of the resource classes within a reasonably foreseeable timeframe is too low for public disclosure.

For mining industry enterprises, reporting of the *fair value* of Measured and Indicated Resources should be encouraged in the supplemental notes, with mandatory *historic cost* reporting required as the alternative. *Fair value* reporting for Inferred Mineral Resources and exploration properties lacking defined Mineral Resources should also be allowed, subject to careful review for reasonableness, and only if such value does not compose a large portion of the value of the company, with *historic cost* basis being the alternative.

***Fair value* disclosure for probable petroleum reserves should be allowed in the supplementary notes. Such disclosure should also be allowed for exploration properties lacking proved or probable reserves, subject to careful review for reasonableness, and only if such value does not compose a large portion of the value of the company. In both cases, *historic cost* basis disclosure should be the alternative.**

(e) The IASB standard should specify that reports of Mineral Resource and Mineral Reserve estimates must be developed and reported in compliance with one of the CMMI-based standards. A Competent Person similar to that specified in the CMMI-based standard must take responsibility for the report. Reports of petroleum reserve estimates should comply with the SPE/WPC definitions. IASB should encourage the petroleum industry to develop of petroleum reserve reporting standard containing a competent person provision similar to that in the JORC Code.

***Fair value* valuation of all mineral and petroleum properties should be performed by defined Competent Persons and the name and qualifications of such persons should be disclosed by notation in the supplemental statements. Guidance by a comprehensive internationally respected mineral and petroleum valuation standard should be specified. Presently the Australasian VALMIN Code is the only standard available that meets those criteria. However, the Task Force does not view it as suitable for direct application to meet such wide ranging needs. Development by IVSC of the Extractive Industries guidance section of the International Valuation Standards using VALMIN and CIMVal as a base will allow a truly international extractive industries standard suitable for all jurisdictions to be referenced by the IASB Standard.**

(g) The proposed IASB Standard must allow changes in the value of mineral and petroleum assets to be made in the financial statements without being reflected in the profit and loss statements. A requirement to reflect such changes in the profit

and loss statement will discourage reporting of negative corrections, while positive changes could frequently mask operating results.

***Fair value* revaluation mineral and petroleum properties should only be expected at four or five yearly intervals for inclusion in the primary accounts and supplemental disclosures or when major quantitative changes in reserves or resources occur that are not due to production.**

(i) Any enhancements to the petroleum industry s resources and reserve reporting definitions which IASB determines are needed, or possible future development of a reserve reporting standard, should be coordinated through SPE/WPC or a successor international body representative of the petroleum industry as may exist at the time.

Any enhancements to the mining industry Mineral Resource and Mineral Reserve reporting Standards which IASB determines are needed must be made through CMMI or its successor.

(j) The proposed Standard should clearly differentiate the current valuation requirements for *fair value* and *value in use*, the former being entirely market related and the latter being entity specific. *Value in use* should conform to existing IASB definitions to take account of account trading connections, contractual arrangements and management attributes and be related to identifiable cash flow units. *Value in use* calculations should not include internally generated goodwill in the cash flows.
