



INTERNATIONAL INSTITUTE OF MINERALS APPRAISERS

(A Colorado Nonprofit Corporation, aka American Institute of Minerals Appraisers)

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Subject: Answers by the International Institute of Minerals Appraisers to the IVSC Invitation to Comment issued 15 May 2017.

Answer to *Potential Standard Alternatives*.

The IIMA fully supports the Boards' opinion in Alternative A, as follows:

Alternative A – No Additional Standards Needed

The Boards acknowledge that although the valuation of extractive industries often require consideration of unique issues, many of the principles under which such valuations are prepared are no different than other assets. As such, there is a perspective that the valuation of extractive industries is already addressed by current IVS.

Questions for Respondents and IIMA Answers:

Question 5.1: Should IVSC produce combined standards and guidance for Extractive Industries or produce separate pronouncements for mining and for oil and gas? If you believe the latter, please indicate the reasons why you consider separate guidance is appropriate.

Answer 5.1: IVSC should produce combined standards and guidance for Extractive Industries. In support hereof the IIMA has since Year 2000 sponsored and arranged Valuation Sessions at the venue of the Society of Mining Engineers' Annual Convention [*emphasis added*]. In spite of the name of the venue, over many years equal emphasis has been given to hard-rock minerals, industrial minerals and petroleum. They, and others, are all minerals and deserve the same standards of valuation. Presentations have been recorded since 2011 and are available on the IIMA website.

Question 5.2: Should the standards focus just on the valuation of reserves and resources or should it extend to other assets employed in the industry and to entire businesses in the sector? Please provide reasons for your answer.

Answer 5.2: The standards should focus just on the valuation of reserves and resources in the ground, namely the underlying assets in form of the mineral estate. The limit of the mineral asset and its valuation should be at the first point at which the asset is in saleable form. It should NOT extend to other assets employed in the industry, such as assets for further upgrading, refining or beneficiation. It should NOT extend to entire business in the sector. Such business valuation (while including the value of the mineral asset) is already addressed by current IVS.

Question 5.3: Which classification code or codes are most commonly used in your industry /sector? Which code do you normally use or rely on? Are you aware of differences across your /industry sector on the classification codes used? If so please indicate whether these differences cause problems in undertaking or understanding valuations.

Answer 5.3:

The IIMA has officially adopted the standards and guidelines provided in the IMVAL Template

(Second Edition; currently being updated to refer to 2017 IVS). Specifically, these classification codes are listed and are to be followed by all members of the IIMA, as follows:

Mineral Resources and Mineral Reserves as Used in the Mining Sector.

Terminology for reporting exploration results, Mineral Resources, and Mineral Reserves is published in the *International Reporting Template* of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO), edition of May 2013, as amended from time to time, and may be subject to rules and guidance contained in National Reporting Codes and Standards.

Resources and Reserves as Used in the Petroleum Sector.

While petroleum is broadly included with minerals, definitions and classification of Petroleum Resources and Petroleum Reserves are published in the *Petroleum Resources Management System (PRMS)*, 2007 edition, as amended from time to time.

Yes, differences are found; but the IIMA follows IMVAL, the purpose of which is to harmonize the classification codes while referring to the IVS to the greatest extent possible. The differences occasionally cause problems; however, full disclosure in reporting and reconciliation between opposing classifications ameliorate the problems. The IIMA recently offered as Continuing Education the IVSC course "A BRIDGE FROM USPAP TO IVS - A guide to producing IVS-compliant appraisals". Coordination work among all the IMVAL members and with the IVSC will reduce the problems.

Question 5.4: When valuing with a discounted cashflow do you use internal production forecasts developed by the entity's own geological and engineering specialists, external forecasts, or a combination of both and you adjust the production forecasts for risk by reserve category?

Answer 5.4: The entity's internal production forecasts are used as a base, but due diligence is conducted by the independent Valuer. Differences, if any, are disclosed in the Valuation Report. The production forecasts are risked by *reserve/resource category* and also by *commodity price* risk and by *development cost* and *operating cost* risks. Sensitivities are estimated and shown in *spider* diagrams.

Question 5.5: Please indicate what methods you use or are familiar with that fall under the Cost Approach and that are used in valuing assets in the Extractive Industries. Please indicate in your experience how the cost of an equivalent asset is determined and please indicate the three most common adjustments that are made in your experience to reflect physical, functional or economic obsolescence, and what metrics are used to determine these adjustments?

Answer 5.5: The cost approach may be used for mineral properties in early stages of exploration, prior to major discoveries and/or identification of reserves. The cost approach may also be used for equipment, which by necessity must be included in the mineral asset in order to bring the asset into a saleable form. An example would be a mill, which is dedicated to a mineral deposit, because of geographical isolation. While not strictly additive, the contributing value of the equipment component may be estimated by the cost approach, reflecting physical, functional and economic obsolescence as addressed by current IVS.

Question 5.6: Please identify any intangible assets that are normally separately identified and valued;

- i. In transactions between entities in the Extractive Industries and
- ii. When accounting for the acquisition of a business in the Extractive Industries.

Answer 5.6: The identification of "intangible assets" (from accounting terminology) relates to the business of the extractive industries and is usually beyond the competence of a Valuer of mineral assets. In general, there are no intangible assets related to a mineral asset. As an example, a license to extract minerals is valued as part of the value of the mineral asset. Therefore, this question should be referred to

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a Valuer of business as is already addressed by current IVS.

Question 5.7: In your experience what, if any, value is attributed to components of goodwill, eg an assembled skilled workforce, in corporate transactions in the Extractive Industries. Please briefly indicate any valuation techniques used to establish the value of goodwill in such circumstances.

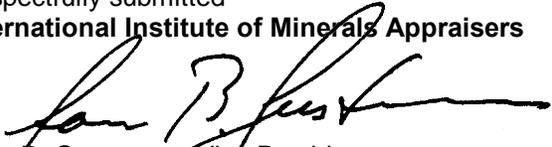
Answer 5.7: The identification of "goodwill" (from accounting terminology) and its associated "benefit of bargain" relates to the business of the extractive industries and is usually beyond the competence of a Valuer of mineral assets. In general, there is no goodwill related to a mineral asset. Therefore, this question should be referred to a Valuer of business as is already addressed by current IVS.

Question 5.8: Please provide any examples of which you are aware of significant differences between the value of otherwise similar resources arising solely from different Governmental policies. Please indicate how %country risk+ factors are reflected in the way in which you price or value extractive assets.

Answer 5.8: Many examples could be listed, but the simplest and yet a drastic example is to compare the different values of practically identical petroleum resources on either side of the Pennsylvania/New York State line. These similar oil & gas resources could geologically, technically and marketwise be developed by horizontal drilling followed by hydraulic stimulation (fracking). The market should hypothetically demonstrate similar values for the mineral resource on both sides of the State boundary. However, the State of New York has implemented a policy against this resource development by imposing a policy against fracking. As a result, the market value of the mineral asset on the New York side is only a small fraction of the market value of the identical resource on the Pennsylvania side. The solution recommended by the IIMA to its members is to apply the market approach and adjust from actual transactions to the Subject under valuation.

"Country risk" factors are included, in particular when adjusting from comparable mineral asset sales in a different country to the Subject Property under valuation. The approach used may include factors derived from consensus surveys (*Fraser Institute Annual Survey, Society of Petroleum Evaluation Engineers Annual Survey of Parameters Used in Property Evaluation*) and differences in project insurance premium (*MIGA, US Exim Bank, a.o.*).

Respectfully submitted
International Institute of Minerals Appraisers


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