

COMMENTS ON SELECTED ASPECTS OF PROPOSED MINERAL LAW

Concerns

DEFINITION OF MINERAL EXPLORATION

ABSENCE OF REFERENCE TO FEASIBILITY STUDY STAGE

TOO SHORT A TERM FOR EXPLORATION (AND FEASIBILITY STUDIES)

Relevant parts of the English translation of Draft Version 5 of the proposed Mineral Law:

Article 3. Definitions

- 7. Mineral exploration** refers to activities to identify in detail mineral resources, **reserves**, quality and any information that serves the purposes of mineral mining;
- 8. Mineral mining** are activities of mine development, excavation, classification, enrichment or any other related activities to recover minerals.

Article 40. Mineral exploration license

3. The valid term of a mineral exploration license shall be no longer than forty eight (48) months. The license may be extended for multiple times providing that **the accumulated extended period shall not exceed** twenty four (24) months.

and

Article 43. First refusal right for mining licensing

1. Within twenty four (24) months from the expiration of the exploration license, the entities or individuals granted non-auction mineral exploration licenses **shall have the first right to apply for a mining licence (also translated as: shall also receive the first refusal right for the mining license)** in respect of the mineral reserve approved by the relevant authority.

Internationally accepted definitions:

Mineral Exploration is the process of searching for and discovering mineralization in the Earth's crust in such form, quality and quantity as to indicate a **Mineral Resource** that has a reasonable chance of eventual economic extraction.

Feasibility Study is the process of confirming and converting an identified or inferred Mineral Resource into an **Ore Reserve** that can reasonably justify a mining operation, and takes into account detailed technical/economic studies addressing confidence in the continuity of geological grade, quality of sampling data, and all mining, metallurgical, operating costs, anticipated commodity prices, taxes and levies, marketing, legal, environmental, social and governmental factors.

In reality there is a very different emphasis and approach to the **Mineral Exploration** and **Feasibility Studies** stages, and what are internationally defined as **Mineral Resources** and what can or cannot be defined as **Ore Reserves**.

Comments:

- There is no definition or recognition in the proposed Law for the stage of **Feasibility Study or Studies**, which would therefore appear to be part of either:
 - (a) The Mineral Exploration Licence period of 4 years plus maximum extension of a further 2 years. The draft Mineral Law's definition of Mineral Exploration includes the words "identify in detail reserves", which is normally part of the Feasibility Study; or
 - (b) The 2 year period during which the holder of the Mineral Exploration Licence may apply for a Mining Licence.

Is completion of a Feasibility Study expected to be completed within the maximum possible Mineral Exploration Licence term of 6 years, or can it be completed in the subsequent 2 years during which the holder of the Mineral Exploration Licence has the right to apply for a Mining Licence?

Impracticality of the 6-Year Maximum Mineral Exploration Term and 2-Year Mining Licence Application Period:

The attached table shows that for significant deposits discovered in South East Asia in the last 50 years, it took an average of **6-7 years** using modern exploration methods to discover/identify a potentially economic mineral resource, and a further **7-9 years** to complete feasibility studies, construct the mine and start production, ie a total of **14-15 years**.

Assuming construction of a mine and commissioning of plant can be achieved in **2-3 years**, the time to conduct Mineral Exploration and complete a bankable feasibility study on a significant deposit (upon which a decision to mine can be made and a mining licence applied for) is likely to be **11-13 years**. The mining laws of the countries mentioned in the attached table were flexible enough to accommodate the time-frames required to bring the deposits into production.

The Proposed Mineral Law in Vietnam, as currently drafted, provides for somewhere between **4-8 years** from commencement of Mineral Exploration to decision to mine and application for a Mining Licence. This time-frame is impractical and unrealistic, and would not have allowed enough time for any of the major deposits shown in the attached table to be brought into mine production.

- The proposed Law therefore appears to:

Discourage exploration for economically feasible large tonnage, often lower ore-grade deposits that can have a major beneficial impact on the Vietnamese economy and socio-economic development in remote areas of the country, as has happened in other countries; and

Encourage the targeting of only small, rich ore-grade deposits or the richer portions of deposits that will inevitably lead to detrimental high-grading and wastage of the nation's total recoverable mineral assets.

Recommendations:

- Initial Mineral Exploration Licence term of 4 years;
- Extension of Mineral Exploration Licence for a further 2 years, subject to proper performance by the entities or individuals holding the Licence;
- Second extension of Mineral Exploration Licence for 2 years if required;
- After expiration of Mineral Exploration Licence, introduction of a specific Feasibility Stage term for 1 year, extendable for a further 1 year if required;
- Greater flexibility in the proposed Mineral Law for recognition of delays in Mineral Exploration and Mine Development caused by factors outside the control of the Licence holder, such as “severe weather conditions, supply, commodity price cycles etc” (quote from IFC expert).

Respectfully submitted
Bill Howell, 2 April 2010

Deposit	Country	Previous recorded prospecting or small scale mining	MODERN MINERAL EXPLORATION				FEASIBILITY AND MINE DEVELOPMENT			TOTAL YEARS	
			Start	- ground control - satellite imagery etc - geological mapping - sampling, trenching - geophysics - geochemistry - scout drilling	Discovery drill hole or recognition of potentially economic mineralization	YEARS	- delineation of resources - delineation of ore reserves (economically minable ore) - feasibility studies - decision to mine - permitting, financing - mine construction	Start of production	YEARS		
Ertsberg	Cu-Au	Indonesia	1934, 1948	1960	1962	2		1972	10	12	
Ok Tedi	Cu-Au	PNG		1967	1969	2		1984	15	17	
Porgera	Au	PNG	1938, 1948	1967	1980	13		1990	10	23	
Hishikari	Au	Japan	1750, 1903, 1933-43	1973	1981	8		1989	8	16	
Mt Leyshon	Au	Australia	1871, 1934-37	1980	1983	3		1989	6	9	
Lihir	Au	PNG		1981	1986	5		1998	12	17	
Gunung Pongkor	Au	Indonesia		1982	1991	9		1997	6	15	
Batu Hijau	Cu-Au	Indonesia		1986	1991	5		2000	9	14	
Mesel	Au	Indonesia	1850, 1900-21	1986	1989	3		1996	7	10	
						AVERAGE	5.6		AVERAGE	9.2	14.8
							6			9	15
Chatree	Au	Thailand		1988	1995	7		2001	6	13	
Sepon (Au)	Au	Laos		1990	1995	5		2003	8	13	
Sepon (Cu)	Cu	Laos		1990	1995	5		2005	10	15	
Phu Bia	Au	Laos		1993	2001	8		2005	4	12	
Phu Kham	Cu-Au	Laos		1993	2001	8		2008	7	15	
						AVERAGE	6.7		AVERAGE	7.0	13.7
							7			7	14

Sources:

1995, Metal Mining Agency of Japan, Richard H. Sillitoe, Exploration and Discovery of Base- and Precious Metal Deposits in the Circum-Pacific Region During the Last 25 Years

Subsequent published company and news reports, and knowledge from personal involvement