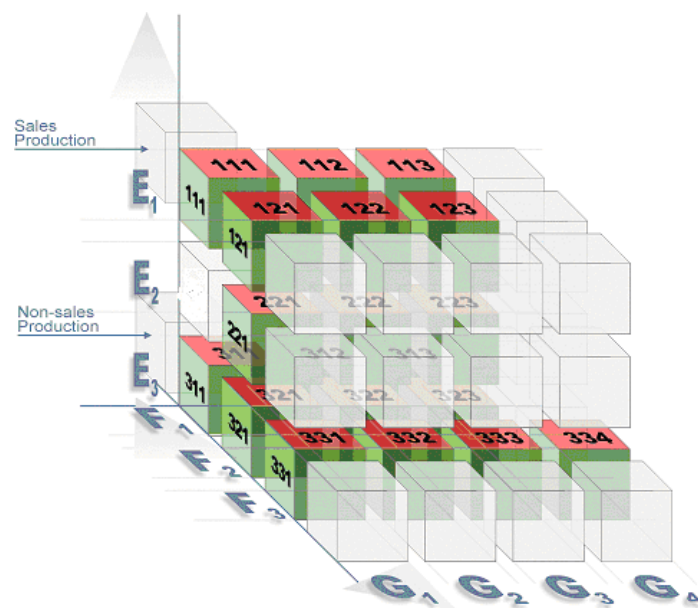


# ***Report from the Ad Hoc Group of Experts on Harmonization of Fossil Energy and Mineral Resources Terminology***

***17<sup>th</sup> Annual session of the UNECE Committee on Sustainable Energy***



**Sigurd Heiberg**

**Chairperson**

**UNECE Ad Hoc Group of Experts on  
Harmonization of Fossil Energy and Mineral Resources Terminology**

**Report of the Ad Hoc Group of Experts on Harmonization of Fossil Energy and Mineral Resources Terminology to the Committee on Sustainable Energy, 17<sup>th</sup> Session**

**Delivered by the Chairman of the Group of Experts, Mr. Sigurd Heiberg**

*As delivered on 20 November 2008*

Chairman, Ladies and Gentlemen,

Thank you for the confidence expressed by the Ukraine delegation this morning for proposing me to the position of Vice Chairperson of your Committee and for your consent in electing me. I shall do what I can to serve you well.

Before I begin my report, I would like to thank the Sustainable Energy Division, ably led by Mr. Frederic Romig, and in particular for the excellent performance of Ms. Charlotte Griffiths, the Programme Officer of our Group of Experts.

Allow me to report to you in two parts. In the first, I will address the relevance of the United Nations Framework Classification for Fossil Energy and Mineral Resources (UNFC) to energy security as I see it personally. In the second, I will report more formally on the work done by your Ad Hoc Group of Experts on Harmonization of Fossil Energy and Mineral Resources Terminology that is following up on your recommendations and requests in this regard.

In addressing the relevance of the UNFC to energy security, I will limit myself to talk about how the UNFC may help to get more oil and gas out of the ground for everyone's benefit. I believe the principles addressed will apply to other extractive activities as well.

We all know that the amount of oil and gas that can be recovered and sold from an accumulation depends on how the recovery process has been conducted from the beginning to the end. We are not dealing with a simple tank where the quantities to be obtained in the future are equal to what remains in the tank.

A few examples from my own experience illustrate this.

Everyone recognises that the gas that is flared to facilitate early oil production and sale is irreversibly lost for future recovery. In Norway, this was accepted and flaring was prevented from the beginning.

In an accumulation where oil floats on water and gas in turn floats on the oil, early gas production may cause the water to fill the void, pushing oil ahead of it into the clean, oil free gas sand. The oil is poured into the sand, both literally and figuratively. It will be smeared over the sand grains and become lost for future recovery. Oil recovery must take place early, before gas production has gone too far, while the oil is concentrated and mobile. The large Norwegian Troll field is an example of this. The first development and production plan was to produce its gas and deliver it to continental Europe. This decision was modified to first develop a technology that could produce the oil, and then to produce the oil early. In May this year, the field had produced 1200 million barrels of what once was oil to be lost. It was still producing at a rate of 150 000 barrels per day.

Displacement of oil with gas is often more efficient at high pressure than at a lower pressure, or if water is used as a displacing agent. This is due to the low interfacial tension between oil and gas near the critical temperature and pressure. The Statfjord reservoir of the Statfjord field was developed to take advantage of this. Oil recoveries are in the range of 70%, a very high number indeed. The production facilities have now been modified to reproduce the injected gas.

I could go on reminding you of how secondary and tertiary recovery schemes, while quite successful, cannot compete with the efficiency to be obtained from a bold recovery scheme that aims to achieve a high recovery in one go from the beginning.

Clearly actions like this improve the availability of oil and gas in the longer run, and thereby contribute to energy security, at least for the actors involved in the processes.

It comes, however at a cost. Gas conservation is more costly initially than flaring, and does not increase the early revenues. Early oil production from under a gas cap constrains early gas production and delays early gas sales revenues. The same can be said for all forms of oil displacement using gas. Also other early enhanced recovery schemes will increase early costs without increasing early revenues.

This leads to my point: many accumulations hold economically marginal recoverable quantities, also, or perhaps particularly, the large and otherwise profitable fields.

The extent to which these quantities can be made recoverable depends on the perceived future value of the recoverable quantities at the well head, and on the risks associated with the realization of this value. The following four elements are essential in providing security of supply in the form of a high recovery from the geologic endowment:

1. Long sighted international energy studies and resulting policies – the subject of the work of this Committee.
2. Government resources management guided by these studies and policies. Fiscal frameworks and environmental protection form an integral part of this.
3. Business process management ensuring that technology, management and capital are used effectively within the framework conditions set by host countries and global markets.
4. Improved financial reporting facilitating appropriate capital allocation in a competitive international capital market and minimising the cost of capital.

The current events in the oil and capital markets have demonstrated unprecedented volatility. If confirmed by future events, this will lead to higher risk premiums on capital costs, hurting the well head prices and recoveries directly. The resulting higher discount factors applied will also reduce the formally derived net present value of revenues in the more distant future and pose a threat to energy security.

The emphasis by the G20 last Saturday on both energy security and improved financial reporting should therefore be welcomed.

I will now report more formally on the work of the Ad Hoc Group of Experts on the Harmonization of Fossil Energy and Mineral Resources Terminology (Group of Experts), recalling the considerations of this Committee made at its 16<sup>th</sup> Session and the Report of the 5<sup>th</sup> Session of the Group of Experts.

The Group of Experts has been following up Resolution 2004/233 of the UN Economic and Social Council.

Continued dialogue has taken place between stakeholders requiring a globally harmonized and acceptable classification and the professional bodies applying their best talent to provide it.

The Group of Experts has identified four principal stakeholder needs to be met. They are the needs for classification and definition of fossil energy and mineral resources in:

1. International energy studies.
2. Government resource management.
3. Business process management; and
4. Financial reporting

A task force (the Mapping Task Force) looked into the similarities and differences between a limited number of well communicated classifications, namely the UNFC of 2004, the New Russian Classification of 2005, The revised template of the Committee for Mineral Reserves International Standards Committee (the CRIRSCO template) of 2006 and the Petroleum Resource Management System of the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists and the Society of Petroleum Evaluation Engineers ( the SPE-PRMS) of 2007. While the wording of these classifications is different, an increased commonality in the way they meet the four needs mentioned can be detected.

At its Fifth Session in April 2008, the Group of Experts received the report of its Mapping Task Force, and with it, a recommendation to modify the UNFC in order to facilitate the harmonization of all the classifications studied.

The Group of Experts formed a Task Force to recommend such a revision (the Revision Task Force). Simultaneously the Revision Task Force is considering the needs for additional complementary texts in the form of specifications and guidelines, or otherwise, in order for the numbers to be relevant, material, comparable, reliable and easy to generate and use relative to the four needs identified. It is recognised that reliability over time may involve the establishment of a governance structure beyond the term of the AHGE which ends in 2009.

The Group of Experts will not be able to revert to the Extended Bureau of the Committee on these issues until after its Sixth Session in March 2009.

I encourage those of you who have an interest in this matter to review and give your comments to the documents that will be posted on the Group of Experts web site for public comments in the next months. You are also encouraged to contact Ms Charlotte Griffiths or me to alert us of your interest and to ensure that you receive an invitation to the Sixth Session of the Group of Experts, to be held here in the Palais from 25 to 27 March 2009.

Thank you for your attention.