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COMMITTEE ON SUSTAINABLE ENERGY

Ad Hoc Group of Experts on the Harmonization
of Energy Reserves/Resources Terminology
Third session, 30-31 October 2003

REPORT

I. INTRODUCTION

1. The third session of the Ad Hoc Group of Experts on the Harmonization of Energy Reserves/Resources Terminology was held on 30 and 31 October 2003, attended by the following UNECE member countries: Bulgaria, Hungary, Norway, Poland, Romania, Russian Federation, Slovenia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America.
2. Representatives of the following countries participated under Article 11 of the Commission's rules of procedure: Algeria, China, Kuwait, Libyan Arab Jamahiriya, Nigeria and Viet Nam. Their representatives were from national petroleum companies and related-state administration. The participation of OPEC Member States was facilitated through the OPEC secretariat, Vienna.
3. The following international organizations were represented: Organization of the Petroleum Exporting Countries (OPEC); World Energy Council (WEC); World Petroleum Congress/Society of Petroleum Engineers/American Association of Petroleum Geologists (WPC/SPE/AAPG); and European Federation of Geologists (EFG);

II. ADOPTION OF THE AGENDA

4. The provisional agenda was adopted without change (ENERGY/GE.3/2003/5). All documents presented at this meeting are available on the following web site:
www.unece.org/ie/se/docs/reserves3.html.

III. OPENING OF THE MEETING

5. Mr. Frederic Romig, Chief of the Sustainable Energy Section, Industrial Restructuring, Energy and Enterprise Development Division, opened the session. He reminded the meeting of the decisions of the Committee on Sustainable Energy concerning the activities of the Ad Hoc Group of Experts (ECE/ENERGY/49) and briefly described its objectives.

IV. ELECTION OF THE BUREAU

6. Mr. S. Heiberg (Norway) was re-elected Chairman; and Mr. A. Subelj (Slovenia) and Mr. T. Ahlbrandt (United States) were re-elected as Vice-Chairmen of the meeting.

V. PROGRESS IN HARMONIZING THE UNFC WITH OTHER INTERNATIONAL CLASSIFICATIONS (Agenda item 2)

(a) UNFC and SPE/WPC/AAPG Classification for Hydrocarbons

7. Mr. P. Blystad, Coordinator of the Ad Hoc Petroleum Sub-Group, presented the latest version of the “United Nations Framework Classification (UNFC) Applied to Petroleum” (document ENERGY/GE.3/2003/1). This version was prepared after substantive cooperation and coordination with countries and international organizations involved in petroleum reserves/resources evaluation, management and accounting.

8. Mr. J. Ross, representing the SPE/WPC/AAPG Oil & Gas Reserve Committee, described the evolution of the SPE/WPC/AAPG Petroleum Reserves/Resources Classification (1997-2000) and the development of related Guidelines for the Reserves/Resources Evaluation (2001). This system represents a consistent approach to assessment of risk and uncertainty for all assets in project development. The SPE/WPC/AAPG Resources System is currently widely accepted by industry and organizations around the world, but oil and gas companies which are listed on the US stock exchanges must report the *Proved reserves only*, in accordance with the US Securities and Exchange Commission (SEC) rules, which creates a number of contradictions.

9. Mr. Ross pointed out that the UNFC for Petroleum as developed and presented by the UNECE Petroleum Sub-Group conforms closely to the SPE/WPC/AAPG Classification. The UNFC field project axis is now in line with the project status approach of the SPE/WPC/AAPG classification system. Furthermore, the UNFC offers a good opportunity to provide a direct and clear link with other systems and this harmonization should provide the basis for internationally consistent reporting of petroleum reserves and resources.

(b) UNFC and NEA/IAEA Classification for Uranium

10. Mr. A. Subelj, Vice-Chairman, described the progress made in harmonizing the UNFC with the NEA/IAEA Classification for Uranium Reserves/Resources. At the request of the NEA/IAEA Uranium Group he had submitted to it a new, more acceptable proposal on how to correlate both classifications, to be considered by that Group at a meeting in Paris taking place at the same time as the present Ad Hoc Group meeting.

(c) UNFC for Coal and Mineral Commodities

11. Ms. M. Ersoy, Coordinator of the Coal/Mineral Ad Hoc Sub-Group, presented the current status of UNFC application to coal & mineral commodities; and the views expressed by the Ad Hoc Group of Experts regarding the harmonization of definitions of all energy and mineral commodities. She underlined that the agreement reached between the UNECE Task Force and the CMMI Group on Mineral Definitions (ENERGY/2000/11) should be scrupulously respected when further developing the UNFC, with a view to covering also oil, natural gas and uranium.

12. A number of experts pointed out that there was a difference between the petroleum classification and the classification of coal and uranium but their harmonization would have to be achieved through the 3-digit codification. The processes in petroleum are more comprehensive, and more strongly tied to industrial processes and financial reporting. This is one of the reasons why the Petroleum Sub-Group broadened the concepts of the *Economic axis* by introducing the word *commercial* on economic grounds in lieu of *economic*, as in the case of mineral commodities. In practice, this implies the consideration of commercial issues in a broader sense (including but not restricted to cost, price, timing, legal, fiscal, and commercial arrangements), and not only cost, price and timing.

VI. PROGRESS IN ADAPTING THE UNFC TO COUNTRIES AND INDIVIDUAL DEPOSITS: CASE STUDIES (Agenda item 3)

(a) UNFC and national classifications

13. In a number of countries, initial attempts have been made to adapt national classifications to the basic principles of the UN Framework Classification. National case studies have been prepared in the Russian Federation, Poland, Romania, China and Norway. They are available on the UNECE website (www.unece.org/ie/se/docs/reserves3.html.)

14. Mr. G. Gabrielyants, Adviser to the Russian Minister of Natural Resources, informed the Ad Hoc Group that a new national classification for petroleum was being developed. This classification, like the UNFC is multi-dimensional, and its criteria with respect to geological knowledge and economic viability generally correspond to those of the UNFC. Although the different categories in the Russian Classification are presented in letters while those of the UNFC are in digits, it seems there would be no serious difficulties in making the classifications comparable and compatible. At this stage, however, further efforts are needed to harmonize the distribution of categories on the *G-Axis: Geological Knowledge*.

15. Efforts have been made in Poland and Romania with the same purpose of adapting their current classifications to the UNFC criteria. Mr. M. Hoffmann, Polish Oil & Gas Company, and Mr. S. Przennioslo, Polish Geological Institute, reported that when evaluating two discoveries (the BMB oil and Koscian natural gas fields) in Poland, by applying both the national classification and the UNFC the results obtained were very close in figures, and the categories of the Polish classification (A,B, C1, C2) could simply be placed into the UNFC. The Romanian National Agency for Mineral Resources reported the same results in the same exercise when they attempted to harmonize their national system (1998) with the UNFC.

16. Mr. Y. Hu, Senior Engineer, Chinese Ministry of Land and Resources, presented the status of development of the Chinese Classification for Reserves/Resources. Since 1998 the Ministry has been working on the amendment of the criteria used in classifying and evaluating the energy and mineral resources in China, taking into account the SPE/WPC/AAPG Classification and the UNFC.

(b) UNFC application to individual deposits

17. Mr. P. Blystad, Norwegian Petroleum Directorate, and Mr. G. Gabrielyants, Russian Ministry of Natural Resources, presented jointly a *Deposit Case Study* illustrating how the UNFC could be applied to fields located both *onshore and offshore*, and how the UNFC could be used to bridge the different national classification systems. The case study allowed the following conclusions to be made:

- UNFC is considered suitable and flexible for classifying petroleum fields in Norway;
- UNFC can be used as a tool for comparing different classification systems;
- UNFC can be tested by using different classifications on the same field/discovery;
- Some problems arise in comparing/harmonizing the Norwegian and Russian Classifications. This is due to the differences in exploration, development and production practices, used in onshore and offshore areas;
- UNFC refining and improvement would need more joint case studies to be performed.

18. Ms. M. Ersoy, Turkish Coal Enterprises (TKI), introduced a case study on UNFC application to the lignite deposit in Yatagan-Eskihisar Mining Area (ENERGY/GE.3/2003/3/Add.1). During the carrying out of the case study, a comparison was made between the current Turkish national Classification and UNFC. The results showed that the UNFC could be adapted well to Turkish lignite deposits. Furthermore, the advantage of the UNFC was that it allowed the economic viability of the entire mining area to be assessed, whereas the Turkish classification system, which is based exclusively on geological assessment, did not.

VII. OPPORTUNITIES TO USE THE UNFC FOR OTHER PURPOSES, INCLUDING RESOURCE MANAGEMENT, FINANCIAL REPORTING, INVESTMENT GUARANTEES (Agenda item 4)

19. Mr. S. Heiberg, STATOIL Company, and Mr. P. Blystad, Norwegian Petroleum Directorate (NPD), made a joint presentation illustrating how the UNFC can be used as a management tool in the exploration and exploitation of energy resources, with emphasis on

hydrocarbons. They described the role that Government, industry and international organizations should play in maximizing *economic recovery* of the available resources and the need to shift the petroleum sector to more sustainable pattern of development. They concluded that the UNFC was designed to help achieve sustainable economic efficiency throughout the full chain, from exploration to abandonment.

20. Mr. Michael Lynch-Bell, Ernst & Young LLP, United Kingdom, made a presentation on petroleum reserves and the current needs of their financial reporting. He explained that several approaches were currently used but there was no consistency in the financial reporting of petroleum reserves, while the international community and financial markets would like to apply one *standard approach*. For this purpose, there are initiatives in progress aimed at developing *International Financial Reporting Standards (IRFS)* for all listed extractive industries companies, including those operating in the European Union. He underlined that the timely completion of the UNFC is therefore very relevant and may provide constructive support to the international accounting debate.

VIII. ONE-YEAR TRIAL PERIOD: GENERAL CONCLUSIONS (Agenda item 5)

21. It was concluded that the elements of the UNFC had now been sufficiently defined and tested to allow the development of a revised UNFC, integrating the classifications for coal, uranium, other solid minerals and petroleum. This would be done based on similarities between these sectors, while recognizing the substantive differences.

IX. THE UNFC AND WEC SURVEY OF ENERGY RESOURCES (Agenda item 6)

22. Mr. D. Kelter, World Energy Council (WEC) introduced a *Proposal* on how the WEC Survey of Energy Resources might use the UNFC for its worldwide resource evaluation purposes. This *Proposal* was prepared in close cooperation with the Chairman and Sub-Group Coordinators, for submission to the forthcoming World Energy Congress (Sidney, Australia, September 2004). The paper has provided a scheme for UNFC categories application in the questionnaire of the World Energy Council for the Survey of Energy Resources (SER). Initial reactions from members of the WEC secretariat have confirmed that further efforts in developing appropriate aggregated categories for the SER would be desirable. This must be done with regard to the need for WEC to maintain some continuity of definitions between their tri-annual surveys, in order to allow for the development of time series. It was agreed to continue consultations with WEC secretariat, with a view to using the *Proposal* in the next WEC Survey, in 2007.

X. REGIONAL SEMINARS ON UNFC APPLICATION TO PARTICULAR COUNTRIES AND REGIONS (Agenda item 7)

23. Mr. G. Gabrielyants, Russian Federation and Mr. A. Dahmani, representative of the OPEC secretariat, reported on the regional seminars related to the UNFC Application to Energy Resources, organized in Moscow, April 2003 and at OPEC Headquarters, Vienna, May 2003. Following the recommendations of the latter seminar, the UNECE and OPEC secretariats were reminded of the necessity to organise a joint regional seminar in 2004, together with the UN

Economic and Social Commission for Western Asia (ESCWA) for OPEC Middle East Member States.

24. The Ad Hoc Group of Experts acknowledged that significant progress had been achieved since the beginning of this project (November 2001) thanks to the effective coordination and constructive cooperation between different sub-groups, the Bureau and UNECE secretariat. Several meetings and telephone conferences were organized by the Chairman and Petroleum Sub-Group Coordinator. The international organizations partners in this project, namely WEC, SPE/WPC, IAEA, OPEC and EFG, were very cooperative.

25. The importance was stressed of the immediate promotion of the UNFC to different potential consumers, such as State Geological Surveys, State Mining and Regulation Bodies, universities, exploration and exploitation companies, international professional associations and organizations. Regional seminars should continue to be organized in different sub-regions. The forthcoming Conferences and meetings of OPEC, SPE/WPI, IAEA, WMC, EFG, WEC should be appropriate fora for advertising and promoting the Classification.

XI. FUTURE PROGRAMME AND ACTIVITIES (Agenda item 8)

26. The Ad Hoc Group discussed the continuation of these activities, whether it should be limited only to promotion of the practical application of the UNFC to countries, regions and international organizations dealing with energy resources classification/evaluation; or if it should rather broaden its activities, by including the impact which the UNFC application might have on the sustainability of the upstream energy sector, e.g. exploration and production of fossil energy commodities; how may UNFC application provide management improvements through the full commodity chain, and help to support economic recovery in the extractive industries, and thus extend the commodity life cycle.

27. The Chairman presented an outline of how the Bureau of the Ad Hoc Group foresees the scope of future activities on this issue. According to the Bureau, future activities should be linked to the mandate of the UNECE Committee on Sustainable Energy, i.e. promoting sustainable energy policies and securing energy supplies. In this context, the Ad Hoc Group of Experts might wish to enlarge the scope of its mandate by preserving, in its work programme, the application of the UNFC to energy commodities as a ground for achieving other sustainable goals. For example, how may the UNFC support policies for the exploitation of extractive fossil energy, which should be compatible with the needs for sustainable energy supplies, and therefore how could an improved basis be provided for more efficient and benign extraction of energy resources. The UNFC may play an important role in one of its many applications in supporting the establishment of common, internationally accepted *Financial Reporting Standards*, so much in demand today from the international community. The UNFC may successfully be used for reporting reserves and resources estimates at the international, national and corporate levels and further efforts should be made to achieve satisfactory results.

28. After in-depth discussion, the Ad Hoc Group of Experts:
- (a) approved the work done to date and considered that the UNFC is basically completed; refinements and detailed improvements, if needed, should be made by the Bureau and sub-group coordinators, over the next three months;
 - (b) recommended that the Committee on Sustainable Energy adopt the Classification and take measures for its further promotion worldwide;
 - (c) expressed its gratitude to the WPC/SPE/ AAPG; OPEC; IAEA; WEC and EFG for their substantive contribution;
 - (d) expressed its appreciation to the Bureau of the Ad Hoc Group and the respective sub-group coordinators for holding a number of meetings and telephone conferences, in their endeavour to involve many experts and organizations in this project;
 - (e) expressed its thanks to the Russian Ministry of Natural Resources and the OPEC secretariat for holding seminars in 2003 on UNFC application;
 - (f) recommended that the UNECE and OPEC secretariats take the initial steps for UNFC application to hydrocarbon resources, and to this end to organize a regional seminar for OPEC Middle East member countries, in the first half of 2004;
 - (g) recommended to further strengthen its support to the Committee on Sustainable Energy by providing an improved basis for considering more efficient and benign extraction of energy resources, through its future programme of work. This includes support for the development of strategies for the exploitation of fossil fuels in line with the need for sustainable energy supplies;
 - (h) requested the Committee on Sustainable Energy to extend the mandate of the Ad Hoc Group of Experts, for a new period of two years;
 - (i) considered it appropriate that the title of the Ad Hoc Group be changed to Ad Hoc Group Experts on the Supply of Fossil Fuels, in order to better reflect the nature of its work;
 - (j) acknowledged the relevance of cooperating, under the new mandate, with international organizations such as the International Accounting Standard Board (IASB), SPE Oil & Gas Reserves Committee, World Petroleum Congresses (WPC) to adapt the UNFC to the needs of international financial reporting standards, including the determination of suitable standard commercial conditions for determining reported reserves and standard measures of their value;
 - (k) recognized the need for closer cooperation with the secretariats of IAEA, IEA, International Energy Forum (IEF), OPEC, WEC and WPC, with a view to introducing the UNFC principles in surveys of fossil energy resources, and in considerations related to their supply;
 - (l) suggested developing, within its future work programme, international expertise for providing assistance to countries and regions on resource assessment, valuation and classification;
 - (m) suggested the creation of national teams for adapting national classifications to the UNFC.
