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ECONOMIC COMMISSION FOR EUROPE

COMMITTEE ON SUSTAINABLE ENERGY
WORKING PARTY ON GAS

Meeting of Experts on Natural Gas Resources
Twentieth session, 19-20 June 1997

REPORT

I. ATTENDANCE

1. The session was attended by representatives of Austria, Croatia, Germany, Hungary, Italy, Netherlands, Norway, Poland, Romania and the Russian Federation.

II. OFFICERS OF THE SESSION

2. The officers of the session were as follows:

| | |
|----------------|-----------------------------|
| Chairman: | Mr. A. Bauk (Croatia) |
| Vice-Chairman: | Mr. M. Kosinowski (Germany) |

III. AGENDA ADOPTED
(Agenda item 1)

GE.97-31214

**IV. DECISIONS OF THE WORKING PARTY ON GAS CONCERNING
THE ACTIVITIES OF THE MEETING OF EXPERTS**

(Agenda item 2)

Documentation: ENERGY/WP.3/13, para. 17.

3. Decisions

- (a) To take note of the information provided by the secretariat on the results of reforms in the Economic Commission for Europe and of the decisions of the Working Party on Gas at its seventh session of concern to the work of the Meeting of Experts;
- (b) To invite Governments to send their representatives to the sessions of the Meeting of Experts, which carry-out substantive and tangible projects.

**V. RELATIONSHIP BETWEEN THE PRODUCTION TECHNOLOGY AND RECOVERY FACTOR
IN GAS RESERVOIRS. NEW DEVELOPMENTS AND NEEDS TO IMPROVE
EXPLORATION AND PRODUCTION OF NATURAL GAS THE ECE REGION,
WITH THE EMPHASIS ON ECONOMIES IN TRANSITION**

- (a) Relationship between the production technology and
recovery factor in gas reservoirs

(Agenda item 3 (a))

Documentation: ENERGY/WP.3/GE.1/R.2/Rev.1

4. Decisions

- (a) To adopt a consolidated report, prepared by Mr. Skorobogatov, rapporteur from the Russian Federation;
- (b) To thank Mr. Skorobogatov for an excellent work he has done in the preparation of the report;
- (c) To give the report general release;
- (d) To delete this topic from the programme of work;
- (e) To include in the programme of work a new programme element 06.5.5.1, "Relationship between the geology, reservoir behaviour and the ultimate recovery factor of gas fields" proposed by the delegation of Germany and unanimously supported by other delegations;
- (f) To invite Mr. H. Porth, rapporteur from Germany, to prepare a draft questionnaire on this subject, by 1 October 1997, for consideration at the next session.

- (b) New developments and needs to improve exploration and production
of natural gas in the ECE region, with the emphasis
on economies in transition
(Agenda item 3(b))

Documentation: ENERGY/WP.3/GE.1/R.9/Add.2

5. Decisions

- (a) To adopt a consolidated report, prepared by Mr. Skorobogatov, rapporteur from the Russian Federation;
- (b) To invite Governments who want to update their contributions to send information to the secretariat by 1 October 1997, in order to have an addendum issued by the eighth session of the Working Party on Gas, in January 1998;
- (c) To thank Mr. Skorobogatov for the preparation of an excellent report;
- (d) To give the report general release;
- (e) To delete this topic from the programme of work;
- (f) To include in the programme of work a new programme element 06.5.5.2 "Application of enhanced seismic techniques, such as 3-D seismic, in prospecting and exploration of gas resources", proposed by the delegation of the Netherlands and unanimously supported by other delegations.
- (g) To invite Mr. J. Breunese, rapporteur from the Netherlands, to prepare a draft questionnaire on this subject, by 1 October 1997, for consideration at the next session.

**VI. PROBLEMS ARISING FROM THE EXPLORATION OF NATURAL GAS DEPOSITS
LOCATED IN ABNORMALLY HIGH PRESSURE AND TEMPERATURE
CONDITIONS AND EXTREMELY DEEP GEOLOGICAL FORMATIONS**
(Agenda item 5)

Documentation: ENERGY/WP.3/GE.1/R.6/ and addenda

6. Decisions

- (a) To adopt the consolidated report prepared by the rapporteur from the Russian Federation;
- (b) To give the consolidated report general release;
- (c) To thank Mr. V. Skorobogatov for the preparation of an excellent report;

- (d) To keep this topic in the programme of work of the Meeting of Experts;
- (e) To decide on the future work on this subject at the next session of the Meeting of Experts.

VIII. INTERNATIONAL MAP OF NATURAL GAS FIELDS IN EUROPE

(Agenda item 6)

7. Decisions

- (a) To approve a concept paper prepared by the delegation of Germany on the implementation of this project;
- (b) To thank the Governments/Organizations which committed, both financially and in-kind, to take an active part in the preparation of a new map;
- (c) To invite Governments/Organizations, who have not yet done so, to take an active part in the project;
- (d) To invite the delegation of Germany to prepare a revised time-table for the implementation of the project;
- (e) To set up an Editorial Committee with a view to giving advice and assistance to the coordinating agency (Niedersaechsisches Landesamt fuer Bodenforschung/Bundesansalt fuer Geowissenschaften und Rohstoffe; Hannover, Germany), consisting of the following experts:

| | |
|---------------------------|----------------------|
| - Mr. Michael KOSINOWSKI | - Germany; |
| - Mr. Hans PORTH | - Germany; |
| - Mr. Jacob BREUNESE | - Netherlands; |
| - Mr. Erling KVADSHEIM | - Norway; |
| - Mr. Victor SKOROBOGATOV | - Russian Federation |
| - Mr. Alexandre CHACHINE | - UN/ECE |
- (f) To invite the Editorial Committee to held its first meeting in September 1997.

IX. DEVELOPMENTS AND PROSPECTS OF UNCONVENTIONAL GAS RESOURCES, SUCH AS TIGHT FORMATIONS, METHANE FORM COAL SEAMS, HYDRATES ETC. AND PROBLEMS ENCOUNTERED WITH THEIR PRODUCTION

(Agenda item 7)

- (a) Developments and prospects of gas resources from tight formations

Documentation: ENERGY/WP.3/GE.1/R.11 and addenda

8. Decisions

- (a) To invite Mr. C. Jaracz, rapporteur from Poland, to prepare a revised version of a consolidated report, including new

contributions from the Netherlands and the Russian Federation, by 1 November 1997;

- (b) To consider a revised version of the consolidated report at the next session of the meeting of Experts.

**X. PROBLEMS RELATED TO THE ASSESSMENT AND DEVELOPMENT OF
GAS CONDENSATE RESERVES AND RESOURCES, INCLUDING
METHODS OF ENHANCED CONDENSATE RECOVERY**
(Agenda item 8)

9. Decisions

- (a) To thank Mr. V. Skorobogatov for an interesting lecture he has given on this subject;
- (b) To invite Mr. Skorobogatov to prepare, by 1 November 1997, a report based on this lecture;
- (c) To request the secretariat to issue this report for the consideration at the next session of the Meeting of Experts.

XI. PROGRAMME OF WORK
(Agenda item 9)

10. Decisions

- (a) To recommend to the Working Party on Gas to extend the duration of the projects in the programme of work of the Meeting of Experts by another year 1998;
- (b) To delete from the programme of work the following topics:
 - "Relationship between the production technology and recovery factor in gas reservoirs"; and
 - "New developments and needs to improve exploration and production of natural gas in the ECE region, with the emphasis on economies in transition".
- (c) To include in the programme of work the following new programme elements:
 - 06.5.5.1 - "Relationship between the geology, reservoir behaviour and the ultimate recovery factor of gas fields";
 - 06.5.5.2. - "Application of enhanced seismic technique, such as 3-D seismic, in prospecting and exploration of gas resources";
 - 06.5.5.8. - "Economic and technological problems related to the development and exploitation of small gas fields.

XII. OTHER BUSINESS

(Agenda item 10)

11. Decisions

- (a) To include in the programme of work a new programme element 06.5.5.8 "Economic and technological problems related to the development and exploitation of small gas fields", proposed by the delegation of Poland, and unanimously supported by other delegations;
- (b) To invite Mr. C. Jaracz, rapporteur from Poland, to prepare an outline of this topic by 1 November 1997, for consideration at the next session;
- (c) To take note with appreciation of the information provided by the secretariat with regard to activities of the Gas Centre;
- (d) To invite the secretariat to inform delegations at the annual sessions of the Meeting of Experts on the work of the Gas Centre;
- (e) To take note of the information provided by the delegation of Germany on the Development of the United Nations International Framework Classification for Reserves/Resources (Solid fuels and mineral commodities);
- (f) To consider the possible contribution of the Meeting of Experts to this classification at the next session;
- (g) To note with appreciation a very efficient and productive venue of the meeting which enabled participants to discuss and exchange views and experience on the latest developments in the field of gas exploration and production.

XIII. DATE OF NEXT MEETING

(Agenda item 11)

12. The twenty-first session of the Meeting of Experts on Natural Gas Resources will be held in Geneva on 8 and 9 June 1998, starting at 3 p.m. on 8 June.

XIV. ELECTION OF OFFICERS

(Agenda item 12)

13. Mr. M. Kosinowski (Germany) and Mr. V. Skorobogatov (Russian Federation) were elected Chairman and Vice-Chairman respectively.

14. The Meeting thanked Mr. A. Bauk (Croatia) for his services as a Chairman of the Meeting of Experts during the two years term.

XV. ADOPTION OF THE REPORT

(Agenda item 13)

15. The Meeting of Experts adopted its report on 20 June 1997.

ANNEX

PROGRAMME OF WORK FOR 1998-2001

- 06.5.5 Assessment of natural gas resources, including geological and geophysical methods of prospecting for natural gas (continuing)

Description

Assessment and evaluation of natural gas resources, reserves and production.

Work to be undertaken

Exchange of views, experience and other relevant information.

- 06.5.5.1 Relationship between the geology reservoir behaviour and the ultimate recovery factor of gas fields (1997-1998)

Description

Exchange of information on recent technologies and related studies to increase gas recovery.

Work to be undertaken

To consider a draft questionnaire prepared by the rapporteur from Germany.

- 06.5.5.2 Application of enhances seismic techniques, such as 3-D seismic, in prospecting and exploration of gas resources (1997-1998)

Description

Address related to new and emerging seismic techniques for prospecting and exploration of gas resources.

Work to be undertaken

To consider a draft questionnaire prepared by the rapporteur from the Netherlands.

- 06.5.5.3 Problems arising from the exploration of natural gas deposits located in abnormally high pressure and temperature conditions and extremely deep geological formations

Description

Exchange of information and experience on recent technical developments in methods of exploration of deep geological formations and problems encountered with their exploration.

Work to be undertaken

To consider future work on this subject at the next session of the Meeting of Experts.

- 06.5.5.4 Developments and prospects of unconventional gas resources, such as tight formations, methane from coal seams, hydrates, etc. and problems encountered with their exploration and production (1990-1998)

Description

Exchange of information and experience on production and utilization of gas from tight formations including economic, environmental, safety and other factors associated with this resource and other non-conventional gas resources.

Work to be undertaken

To consider a revised consolidated report on "Developments and prospects of gas resources from tight formations" prepared by the rapporteur from Poland.

- 06.5.5.5 International Map of Natural Gas Fields in Europe (1995-1998)

Description

An update of the map prepared by the Meeting of Experts in 1984.

Work to be undertaken

Preparation on the basis of a digital database, of a map, both in paper and CE-ROM versions.

- 06.5.5.6 Assessment of natural gas resources and annual collection of data on natural gas reserves (1992-1998)

Description

Annual survey of natural gas reserves.

Work to be undertaken

Consideration of replies to the annual questionnaire on natural gas reserves.

- 06.5.5.7 Problems related to the assessment and development of gas condensate reserves and resources, including methods of enhanced condensate recovery (1993-1998)

Description

Exchange of information on recent technologies related to the assessment and calculation of condensate reserves and resources and on problems encountered with the development of gas condensate fields.

Work to be undertaken

To consider a report, prepared by the rapporteur from the Russian Federation, based on his lecture, given in the course of the twentieth session of the Meeting of Experts.
