

INTERNATIONAL UNION OF
GEOLOGICAL SCIENCES

MINUTES



42ND EXECUTIVE COMMITTEE MEETING
AUGUST 6 AND 14, 1996
BEIJING, CHINA

1996

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

MINUTES

OF

**42nd EXECUTIVE COMMITTEE MEETING
AUGUST 6 AND 14, 1996
BEIJING, CHINA**

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INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
42nd EXECUTIVE COMMITTEE MEETING
AUGUST 6, 1996
BEIJING INTERNATIONAL HOTEL
BEIJING, CHINA

AGENDA

1. **APPROVAL OF AGENDA**
2. **MINUTES OF 41ST EXECUTIVE COMMITTEE MEETING HELD IN AMMAN, JORDAN, JANUARY 1996**
 - a. Approval of Minutes
 - b. Actions Arising from these Minutes
3. **ADMINISTRATIVE AFFAIRS**
 - a. President's Report
 - b. Vice-Presidents' Reports
 - c. Secretary General's Report
 - d. Treasurer's Report
 - e. Ratification of Elections of Officers of Commissions
 - f. Ratification of Applications for Affiliation to the Union
 - g. Ratification of Applications for Adhering Organizations
 - h. Ratification of GSSPs
 - i. IUGS Brochure, revision
4. **INTERNATIONAL GEOLOGICAL CONGRESS (IGC)**
 - a. Report by Secretary General/President of 30th IGC
 - b. Report on the IUGS/IGC Relations
 - c. Scheduled IUGS Activities at IGC
5. **ANNUAL REPORTS OF IUGS ADVISORY BOARDS AND FUTURE PLANS**
 - a. Advisory Board on Research Development
 - b. Advisory Board for Publications (important decision on Episodes)
6. **COOPERATIVE ACTIVITIES**
 - a. Inter-Union Commission on the Lithosphere (ICL)
 - b. International Geological Correlation Program (IGCP)
 - c. Deposit Modeling Program (DMP)
 - d. Programme on Geological Applications of Remote Sensing (GARS)
 - e. Global Change Program
 - f. Science and Technology for Earth Management (STEM)
 - g. Committee on Nuclear Waste Disposal
 - h. World Heritage - Geosites
7. **RELATIONS WITH ICSU**
8. **IUGS COUNCIL MEETING**

Agenda discussion
9. **PROGRAM PRIORITIES AND TENTATIVE BUDGET ALLOCATIONS FOR 1996-2000**
10. **OTHER BUSINESS**

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
42nd EXECUTIVE COMMITTEE MEETING
AUGUST 14, 1996
BEIJING INTERNATIONAL HOTEL
IGC, BEIJING

AGENDA

1. **APPROVAL OF AGENDA**
2. **PAST PRESIDENT'S OPENING REMARKS**
3. **PRESIDENT'S ADDRESS**
4. **PRESENTATION OF NEWLY ELECTED OFFICERS**
5. **REVIEW OF ITEMS RATIFIED AND DISCUSSED AT IUGS COUNCIL MEETING**
6. **STATUS OF PLANNING - 31st IGC**
7. **PLACE, DATE OF 43rd EXECUTIVE COMMITTEE MEETING**
8. **OTHER BUSINESS**

CONTENTS

1.	APPROVAL OF AGENDA	1
2.	MINUTES OF 41ST EXECUTIVE COMMITTEE MEETING HELD IN AMMAN, JORDAN, JANUARY 1996	
	a. Approval of Minutes	1
	b. Actions Arising from these Minutes	1
3.	ADMINISTRATIVE AFFAIRS	2
	a. President's Report	2
	b. Vice-Presidents' Reports	2
	c. Secretary General's Report	3
	d. Treasurer's Report	3
	e. Ratification of Elections of Officers of Commissions	3
	f. Ratification of Applications for Affiliation to the Union	4
	g. Ratification of Applications for Adhering Organizations	5
	h. Ratification of GSSPs	5
	i. IUGS Brochure, revision	5
4.	INTERNATIONAL GEOLOGICAL CONGRESS (IGC)	5
	a. Report by Secretary General/President of 30th IGC	5
	b. Report on the IUGS/IGC Relations	5
	c. Scheduled IUGS Activities at IGC	6
5.	ANNUAL REPORTS OF IUGS ADVISORY BOARDS AND FUTURE PLANS	6
	a. Advisory Board on Research Development	6
	b. Advisory Board for Publications (important decision on <u>Episodes</u>)	6
6.	COOPERATIVE ACTIVITIES	7
	a. Inter-Union Commission on the Lithosphere (ICL)	7
	b. International Geological Correlation Program (IGCP)	7
	c. Deposit Modeling Program (DMP)	7
	d. Programme on Geological Applications of Remote Sensing (GARS)	8
	e. Global Change Program	8
	f. Science and Technology for Earth Management (STEM)	8
	g. Committee on Nuclear Waste Disposal	8
	h. World Heritage - Geosites	9
7.	RELATIONS WITH ICSU	9
8.	IUGS COUNCIL MEETING	9
	a. Agenda discussion	9
9.	PROGRAM PRIORITIES AND TENTATIVE BUDGET ALLOCATIONS FOR 1996-2000	9
10.	OTHER BUSINESS	10

SECOND DAY OF MEETING

1.	APPROVAL OF AGENDA	11
2.	PAST PRESIDENT'S OPENING REMARKS	11
3.	PRESIDENT'S ADDRESS	11
4.	PRESENTATION OF NEWLY ELECTED OFFICERS	11
5.	REVIEW OF ITEMS RATIFIED AND DISCUSSED AT IUGS COUNCIL MEETING	13
6.	STATUS OF PLANNING - 31st IGC	13
7.	PLACE, DATE OF 43rd EXECUTIVE COMMITTEE MEETING	13
8.	OTHER BUSINESS	13

LIST OF ATTENDEES

AUGUST 6, 1996

Executive Committee

W. Fyfe, President, Chairman
R. Brett, Secretary General
M. Schmidt-Thome, Treasurer

Vice Presidents:

A. Boriani, (Italy)
Liu Dunyi (China)
F. Hervé
N. Petit-Maire (France)
V. Zharikov (Russia)

Past President:

U. Cordani

Secretariat

H. Refsdal (Norway)

Observers

W. Eder, Unesco
J. Keller, CSP
C. Kortman, COGEOINFO
W. Al-Hashimi, incoming VP
Z. Johan, incoming Treasurer
G. Gaál, incoming VP
I. Speden, incoming VP
R. Volkov, Russian NC
Russian CSP Representative

AUGUST 14, 1996

Executive Committee

R. Brett, President, Chairman
A. Boriani, Secretary General
Z. Johan, Treasurer
W. Fyfe, Past Chairman

Vice Presidents:

W. Al-Hashimi (Iraq)
G. Gaál (Hungary)
F. Hervé (Chile)
I. Speden (New Zealand)
V. Zharikov (Russia)

Past President:

U. Cordani (Brazil)

Secretariat

H. Refsdal (Norway)

Observers

U. Cordani, 31st IGC, Brazil
J. Remane, ICS
M. Schmidt-Thomé, Past Treasurer
R. Volkov, Russian NC

**INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
42ND EXECUTIVE COMMITTEE MEETING - OUTGOING
AUGUST 6, 1996
BEIJING, CHINA**

1. APPROVAL OF AGENDA

The Committee APPROVED the Agenda.

2. MINUTES OF 41ST EXECUTIVE COMMITTEE MEETING HELD IN AMMAN, JORDAN, JANUARY 1996

a. Approval of the minutes.

The Committee APPROVED the minutes of the 41st Executive Committee meeting.

b. Actions Arising from these Minutes

R. Brett reported that most of the actions resulting from the Jordan meeting had been completed and would come up during the meeting. The following actions would not be covered by this agenda:

A. Boriani reported that the offer from IUGS to assist the International Atomic Energy Agency in the study of the short and long term effects of the French underground nuclear tests in the Pacific had been turned down.

Brett noted that the final decision on the transfer of *EPISODES* to China will be taken at the IUGS Council meeting. He went on to say that one must look for a publisher for the IUGS Monographs, as recommended at the Executive Committee meeting in Jordan earlier this year.

Brett further noted that he had informed Professor Z.R. Beydoun about the decision taken by the Executive Committee in Jordan. The Yemen Stratigraphic Lexicon was accepted for printing under the auspices of IUGS, provided there would be no costs for IUGS.

Brett had conveyed the decision of the last Executive Committee to the Commission on Geoscience Education and Training (COGEOED). It will probably be changed into a Working Group with new officers and will start with a new name and new scope.

Concerning the Association des Services Geologiques Africains (ASGA), Brett reported that he had conveyed the Executive Committee decision of disaffiliation to a representative of the Association.

As for communication within ICS, Brett remarked that he had seen no copies of letters to the Chairman of the Commission on Stratigraphy from the Subcommissions, in which they were asked to comment on workings of the Commission.

Brett said that he had sent a letter to the International Paleontological Association (IPA) recommending cooperation with the Commission on Stratigraphy.

Following a reminder, the Circum-Pacific Council for Energy and Mineral Resources (CPCEMR) had sent the 1996 annual report to Brett.

Brett had written to the Society of Sedimentary Geology (SEPM), asking for a report.

Brett had also sent a letter to INQUA and to ICS, informing them that the Executive Committee asks that an ad hoc committee be set up with three people from each group and a neutral chairman to act as judge, in order to resolve the dispute between them. The ICS Chairman should not be member of this committee.

Brett noted that he had sent a letter to the IUGS Working Group on Continental Geochemical Baselines, informing them that the Group had been unanimously approved as an IUGS Working Group, and asking the group to contact COGEO-ENVIRONMENT.

3. ADMINISTRATIVE AFFAIRS

3.a. President's Report

W.S. Fyfe presented a brief report, noting that many of his activities would be discussed later in the agenda. He drew attention to some interesting meetings which he had attended. He said that he and G. Caldwell had prepared a brief report on the priorities of Earth scientists in the next century, which may be accepted for publication in *Nature*.

As Past President, U. Cordani reported on the activity of the Nominating Committee that he had chaired. The Nominees for new Officers on the Executive Committee will be presented to the IUGS Council in a few days. He also stated that a new National Committee of Brazil had been established two years ago. He said that it was important to have a strong organization to prepare for the IGC in 2000. He also informed the Committee that he was on the Preparatory Committee for the 32nd IGC.

3.b. Vice-Presidents' Reports

F. Hervé reported that he had been busy preparing the next Executive Committee meeting in Chile.

N. Petit-Maire saw a great progress in the IGBP Global Change Programme last year. She reported that she had been invited by the academies of Sweden and Belgium to present a paper at the opening ceremony.

V. Zharikov reported on his activities in Russia. He also mentioned that the Congress newspaper states that there will be 1000 Russian participants at the 31st IGC, but the correct number is only 300.

Liu Dun-yi stated that he had been busy preparing the Ninth International Conference on Geochronology, Cosmochronology and Isotope Geology (ICOG-9) to be held at Peking University in Beijing from August 20-26, 1998.

A. Boriani reported that he had attended the ICSU meeting with the Secretary General. He also reported on electronic publishing. In addition, he told the Committee about the Rome ProGeo meeting, which he had attended, and the continued activity in the Italian Research Council.

3.c. Secretary General's report

R. Brett referred to his written report to Council, covering the activities of IUGS during the last four years. (The report is appended to the Beijing Council minutes.)

3.d. Treasurer's report

M. Schmidt-Thomé (outgoing Treasurer) said that when he took over Treasury the financial situation of IUGS had been difficult. He often faced late payment of membership fees and belated transfer of money for UNESCO contracts. It was therefore often necessary to use money from the reserve account. During the first half of the year, it was usually necessary to prepay on the order of USD 100 000 for ICSU and IGCP. 68 of about 96 member countries are active; 34 have paid their dues in full during the first half of 1996. About 4 per cent of the budget is used for organizing Executive Committee meetings, scientific meetings etc. The German Geological Society ("Deutsche Geologische Gesellschaft") has taken care of the accounting. He showed a graph to demonstrate the need for a large reserve account and how to use it. At least USD 290 000 is necessary to be able to meet the prepayment obligations of USD 130 000 for the commissions and affiliated organizations. The reserve account should be kept close to USD 300 000 to be able to meet expenditures during the year.

W. Fyfe commented that IUGS' Treasury had been kept extremely well. However, the warning from the UK about cancellation of support to IGCP was very serious. Cordani remarked that the UK used to have a high esteem for IGCP and wondered what had changed.

W. Eder was nonetheless optimistic about the fact that the UNESCO contributions will remain at the same level, saying that the annual visit of the President of IUGS to UNESCO, a tradition begun in 1991 by U. Cordani, is bearing fruit. Eder concluded by stating that the overall finances would be no problem for 1997 but that the following years are more uncertain.

3.e. Ratification of Elections of Officers of Commissions

On the second day of the Council meeting, R. Brett reviewed the list of nominations received for officers of IUGS Commissions:

Commission on Comparative Planetology (CCP)

New Chairman: Peter Janle (Germany)

New Vice-Chairman: Steve Saunders (USA) - former Secretary

New Secretary: Richard Schultz (USA)

Commission on Fossil Fuels (CFF)

Chairman: R. Sinding-Larsen (Norway)
New Vice-Chairman: J. Burrus (France)

Commission on Geological Science for Environmental Planning (COGEOENVIRONMENT)

New Chairman: Ed F.J. de Mulder (Netherlands)
New Vice-Chairman: Li Lierong (China)
New Secretary General: Peter T. Bobrowsky (Canada)

Commission on Global Sedimentary Geology (GSGP)

New Chairman: Benoit Beauchamp (Canada)
New Vice-Chairman: Peter Cook UK

Commission on the History of Geological Sciences (INHIGEO)

New President: Hugh S. Torrens (U.K.)
New Vice-Presidents: Wang Hongzhen (China)
F. Urbani (Venezuela)
Ursula B. Marvin (USA)
New Secretary General: David Oldroyd (Australia)

Commission on Igneous and Metamorphic Petrogenesis (CIMP)

New Chairman: to be approved

Commission on Stratigraphy (ICS)

Chairman: Jürgen Remane (Switzerland)
Vice-Chairman: M. Bassett (UK)
New Secretary General: Olaf Michelsen (Denmark)

Commission on Systematics in Petrology (CSP)

Chairman: Jörg Keller (Germany)
Secretary General: Hiltrud Müller-Sigmund (Germany)

Commission on Tectonics (COMTEC)

Chairman: P. L. Hancock (UK)
Secretary General: R. L. Brown (Canada)

Commission on the Management and Application of Geosciences Information (COGEOINFO)

Chairman: James Biesecker (USA)
Vice-Chairmen: Roberto Potenza (Italy)
Jack Gravesteijn (France)
Secretary/Treasurer: Brian Kelk (UK)

The Committee AGREED that the above list of Commission Officers be presented to the Council for ratification.

3.f. Ratification of Applications for Affiliation to the Union

R. Brett introduced the application of the American Geological Institute (AGI), an organization which has an international focus. 20 % of its members are internatio-

nal. AGI produces a directory of international organizations and is trying to serve the international community as a whole.

Brett went on to discuss the application of American Geophysical Union (AGU); over 25 per cent of its members are outside the USA. Cordani added that their situation is similar to the Geological Society of America.

The Committee unanimously APPROVED AGI and AGU as affiliated organizations, pending the decision of the Council.

3.g. Ratification of Applications for Adhering Organizations

R. Brett reported that Byelorussia had applied for IUGS membership and gave some information about the geological community in the country.

The Committee unanimously APPROVED Byelorussia as a member of IUGS, pending the decision of the Council.

3.h. Ratification of GSSPs

A. Boriani informed the Committee that the following four proposals for the Global Stratotype Section and Point had been submitted to the Executive Committee for ratification: the Mid Carboniferous (USA), the base of Emsian Stage in the Devonian (Uzbekistan), the base of Gelasian, a new stage proposed as the third uppermost part of the Pliocene Series (Italy), and the base of the Neogene System (Italy). The four GSSPs were discussed in detail and seriously evaluated.

The Committee RATIFIED the above four GSSPs.

3i. IUGS Brochure, revision

A. Boriani asked for comments or suggestions for changes to the brochure "What is IUGS?". There were no comments.

4. INTERNATIONAL GEOLOGICAL CONGRESS

4.a. Report by Secretary General/President of 30th IGC

W. Fyfe informed the Committee that the IGC Secretary General regretfully was unable to be present at this meeting.

4.b. Report on IUGS/IGC Relations

R. Brett remarked that relations between IUGS and IGC were very good and had no complaints. There had, however, been some unforeseen programme changes during the Congress. Some rooms were either too big or too small for the audience, and some chairmen had not shown up. But it is impossible to have everything work perfectly with such a large group. It might be useful if the Organizing Committee of each congress produces a report to tell the next what can be done better.

4.c. Scheduled IUGS activities at IGC

R. Brett noted that a two-day Council meeting and a two-day Executive Committee meeting would be held, with the outgoing Committee members before the Council and incoming members after the Council meeting. Many IUGS Commissions are meeting during the Congress and Brett recommended the officers to attend the meetings of Commissions and affiliated organizations, at least the ones that they are reporting on.

5. ANNUAL REPORTS OF IUGS ADVISORY BOARDS AND FUTURE PLANS

5.a. Advisory Board on Research Development

R. Brett reported that no meetings had been held since the Jordan meeting. Meetings are now set up ad hoc and G. Caldwell has chaired the last two meetings. When the Executive Committee wants to have activities reviewed by the Board, it will have to appoint a group of people who are qualified for the task and also people from the region where the meeting is held.

5.b. Advisory Board for Publications

W. Fyfe asserted that IUGS has to do something about *Episodes*. He noted that G. Caldwell had written a statement about the transfer of the editorship to China and that he was awaiting an answer.

R. Brett explained the offer by the American Geological Institute (AGI) to combine *Episodes* with *GEOTIMES*, which would be issued four times a year with 16 pages of *Episodes*. The annual charge for 16 pages would be USD 45 000. The question will be on hold until the Chinese offer is clarified.

A. Boriani returned to the question of electronic publishing, which had been discussed at the ICSU meeting last April. A report from this meeting recommends electronic publishing in science as an extremely important issue. It deals with the problem of electronic archives and financial problems behind electronic publishing. He advised the ABP to take this matter seriously because this is an issue of strongly increasing importance.

Fyfe brought up the problems of security and confidentiality. A member of the Board, Dr. Spilhouse, should be asked to call on the American Geophysical Union (AGU) concerning electronic publication.

Brett mentioned that John Aaron, former Editor of *Episodes*, had volunteered to make a home page for IUGS.

Concerning science education and a poster for young people to be included in *Episodes*, beginning with one on water, Fyfe said that his main concern was that the poster, sent out through *Episodes*, would reach just a few of all the hundreds of millions of school children in the world and that support for greater distribution is now sought.

6. COOPERATIVE ACTIVITIES

6.a. Inter Union Commission on the Lithosphere (ICL)

R. Brett said that ICL is holding its bureau meeting during the Congress. It has new officers. The cooperation within the Commission is good and the activities are going well.

6.b. International Geological Correlation Programme (IGCP)

W. Eder (UNESCO) referred to his earlier comments that the joint programme of IGCP and UNESCO is excellent and has a high esteem within the organisation. IGCP has been praised by UNESCO on several occasions, is situated in many countries and, in the mid- and long-term prospective, represents no problems from UNESCO's point of view.

IGCP celebrates its 25 year anniversary next year and will organise a scientific symposium in Paris, to which outstanding scientific speakers will be invited. The funding for this symposium is more or less in order from UNESCO.

W. Eder commented on another idea to run a workshop under the umbrella of IGCP, from which a proposal of implementing a geosite world network, following the example of the man and biosphere network, could be launched. Although the idea of the man and biosphere network is somewhat different, this idea should be discussed further between IUGS and UNESCO. Using a well-established programme like IGCP should only serve to get such a project launched and ensuring that the project be handled in a multi-disciplinary fashion. W. Fyfe reported that 59 countries had signalled their interest in setting up a group of three to four people for this project.

R. Brett asked whether the statutes of IGCP had to be changed to do this, but Eder thought no changes were necessary. Geology now is regarded as an important contributor to the World Cultural Heritage List, which was started six or seven years ago and includes geological and other natural sites.

F. Hervé remarked that about 100 more sites will be necessary for this list. The project should, however, be handled totally separately, only using the scientific reputation of IGCP.

W. Fyfe remarked that the British will withdraw from funding IGCP. Funding has in the past come from The Royal British Overseas Development Association (ODA). Such funding can now only be obtained for special research programmes like water purification in Calcutta; they are no longer interested in supporting scientific unions. It might be an idea to draw up two set proposals to ODA to see if they are interested, but one has to remember that the proposals must have some foreseeable benefit to mankind.

6.c. Deposit Modelling Programme (DMP)

G. Gaál, Past Chairman of DMP, reported that last year the programme included three projects: one successful workshop on ophiolites in Albania, which was or-

ganised with Z. Johan as the driving force; another successful workshop in Brazil on deposits; and an ongoing project in northern Hungary which uses a new kind of approach. He also informed the Committee about a workshop in Kirgizistan and Kazakstan, organised by USGS and Hungarian colleagues.

6.d. Programme on Geological Applications of Remote Sensing (GARS)

R. Brett remarked that he would like to see more IUGS involvement in GARS. He further informed that D. Bannert, Germany, is the new chairman of the programme which presents a good opportunity for more cooperation.

On a request from Brett that GARS consider new guidelines, W. Eder (Unesco) replied that generally GARS is in excellent shape, is developing in the Philippines, and has interests in enlarging the group internationally and in establishing better contact with IUGS, UNESCO and other interested groups in Europe.

6.e. Global Change Programme

N. Petit- Maire informed the new Executive Committee members about a decision taken in 1992 to consolidate the co-operation with IGBP, which involves research on geological records on climatic change. Since then she thought that the IUGS-UNESCO Project on Climates of the Past had been most successful; more publications are in preparation.

6.f. Science and technology for Earth Management (STEM)

W. Fyfe said he started the activity had started in Canada when questioning how to clean polluted water and how to store solar energy. To answer these type of questions requires an integrated team of specialists. But where do you find specialists who have not failed?

He went to ICSU with the idea and agreed to organize the first meeting in Paris. The only way to solve the problems is to bring the experts together; it was therefore necessary to establish a new working group. He sent a letter to ICSU, which replied that the work had already been done. ICSU does not have any money to fund the project and the proposal for a new working group was turned down. A meeting will be held in Washington, D.C. next month. Supporters will have to demonstrate a case where a world problem has been solved by integrating expertise.

I. Speden asked for a greater distribution of reports about STEM. Fyfe replied that these should also be distributed to the National Committees.

6.g. Committee on Nuclear Waste Disposal

W. Fyfe stated this is a small ICSU group, but the amount of money that will be spent for the next 30 years on nuclear waste will be huge in countries like Japan, Russia, Sweden, France, U.S.A. and Canada. The work done under ICSU so far has mainly been by correspondence. He reported on a meeting he had with the French nuclear group ANDRA during one week in Paris. It had been appalling to see how the national groups are not co-operating. During the EUG meeting in Strasbourg in 1997, the committee will convene a symposium on nuclear waste.

6.h. World Heritage - Geosites

M. Schmidt-Thomé referred to a meeting on World Heritage during the Congress, convened by UNESCO, asking whether there should be a new commission on World Heritage sites. Boriani wanted to postpone, asking for more information and arguing that the rules would need to be different in Britain from the Sudan. Cordani recommended using IGCP only as an umbrella and perhaps using the expertise of its Scientific Board. Brett said that it would be important to increase the general awareness of the problem.

7. RELATIONS WITH ICSU

W. Fyfe said that, in general, relations with ICSU are good.

8. IUGS COUNCIL MEETING

8.a Agenda Discussion

W. Fyfe went through the Council Agenda, noting that U. Cordani, as Chairman of the Nominating Committee, will chair the election of new Officers to the Executive Committee.

Fyfe stressed the importance of item 13, which will be a panel discussion on the activities of IUGS, and item 17, which will be a general discussion on future priorities for IUGS. He suggested, however, that the two items be combined and discussed in an open forum rather than by a panel.

R. Brett questioned whether IUGS had the commissions it needed and whether there were any that IUGS did not need. He also brought up the question of how to involve the affiliates more in the work of IUGS.

Concerning the agenda item on Future Priorities for IUGS, Cordani remarked that the Executive Committee had to agree beforehand on what to propose to the Council. He said that a list of topics should be presented on the first day of Council, to be discussed on the second day. Towards the end of the first day, a very brief statement should be made and the rest left open for further discussion when people return. A. Boriani agreed that if the Committee had a list of priorities to put in front of the Council, the members would probably be able to answer more easily.

9. PROGRAMME PRIORITIES AND TENTATIVE BUDGET ALLOCATIONS FOR 1996 - 2000

Budget

M. Schmidt-Thomé said that he had prepared a provisional budget for 1997, but that it would be unrealistic to draw up a budget for years 1997- 2000, because of the uncertainties of UNESCO, ICSU, etc.

Hutchison Fund

M. Schmidt-Thomé recalled that the nucleus of the Hutchison Fund is a donation from the former IUGS President, W. Hutchison, for young scientists to attend international geological meetings. The fund was, when it was established, 20 000 Canadian dollars, which is USD 16 000. U. Cordani remarked that the important thing is the visibility. Perhaps 15 per cent of the reserve account could be added to the fund each year, or the Executive Committee could decide each year how much should be transferred. Up to USD 5000 could be donated if the financial situation is good, otherwise USD 1000.

A discussion followed on the possibility of doing this without seeking any special permission. It was stressed that private donations would be the best. The Committee decided to leave the fund as it is, not suggesting any changes but welcoming even small donations. A. Boriani would like to know the level that has to be reached. Schmidt-Thomé replied that USD 50 000 should be appropriate, meaning that it has to be raised by USD 20 000 within the next few years.

10. OTHER BUSINESS

Next Executive Committee meeting in Santiago de Chile

F. Hervé informed the Committee about the state of arrangement plans for the next Executive Committee meeting in Santiago. A full-day workshop will be devoted to global and regional perspectives.

In Chile, geology means mining. The Executive Committee has been invited to visit the El Teniente Mine. The participants will fly to Coyhaique which is a town of about 50 000 inhabitants. The people of this province are very environmentally oriented. Here there will be a one-day workshop organised by the Geological Society of Chile. On the following days, there will be a field trip in Chilean Patagonia. The host will cover all expenses except flights.

W. Fyfe thanked the Vice Presidents and observers for their cooperation, especially the outgoing Vice Presidents. Brett thanked Fyfe for his inspiration.

The first day of the Executive Committee meeting adjourned at 5:00 p.m.

**SECOND DAY OF 42nd EXECUTIVE COMMITTEE MEETING -
INCOMING MEMBERS - 14th AUGUST**

(10:00 - 14:00)

1. APPROVAL OF AGENDA

The Committee APPROVED the Agenda.

2. PAST PRESIDENT'S OPENING REMARKS

W. Fyfe opened the second day of the Executive Committee meeting, stating that he had enjoyed the four years as President. The abundance of new talent and the emphasis on new directions in education has given him faith in the future of geology. He further commented that up to now most organizations had failed, helping the rich, not the poor. He welcomed new blood and new ideas.

Fyfe said he was pleased to see new members around the table, stating that IUGS is in the hands of a very good President and Bureau. It was with great pleasure he passed the meeting on to the new President, Robin Brett.

R. Brett thanked Fyfe, noting that Fyfe had been a source of inspiration and that IUGS needs to use the next few years to consolidate it.

3. PRESIDENT'S ADDRESS

The new President, R. Brett, started by saying that IUGS will be continuing the activities it has been doing in the past while adding some additional issues. He commented on the public visibility of geology, arguing that astronomy had caught the public imagination even if it is not very useful. He said that with the increase of the world's population, geoscientific advice for mundane problems like toxic waste disposal would be a crucial topic in the years to come.

Concerning the role of the Vice Presidents, he emphasized that they have an obligation to do more than to make a few remarks at the annual meetings, noting that these geologists had been chosen for their common sense and knowledge in general. Since each of the Vice Presidents represents a region, each should take the responsibility for the coordination of the National Committees of that region.

4. PRESENTATION OF NEWLY ELECTED OFFICERS

R. Brett asked the newly elected Officers to introduce themselves around the table and to mention a little about their field of interests.

He started himself by saying that most of the participants would probably know him from his time as Secretary General. He is an Australian by birth, but has been with the U.S. Geological Survey for many years and was Vice President for the Scientific Programs at the 28th IGC. His interests are mainly mineralogy, the

petrology of meteorites and lunar samples, the geology of meteorite impact structures, planetary core formation and mineral deposits.

A. Boriani (Italy), the new Secretary General, noted that he is a professor of igneous and metamorphic petrology at the University of Milan in Italy. He has worked mostly in the Alps, but also in Indonesia and Africa. He said he was concerned about starting his job as Secretary General, but confident that he would be able to manage because his President was the former Secretary General and neither the Treasurer nor the Trondheim Secretariat were far away. He mentioned that the Italian National Research Council was funding the Secretary General's office.

Z. Johan (France), the new Treasurer, said he was born in northern Bohemia, near the German border, and that he once studied piano, but had left it for physics and geology. He was now the Director of Scientific Affairs at the Bureau Recherches Géologique et Minières, Orleans, an organization he joined in 1969, five years after receiving a PhD from Charles University, Prague. He has been interested in crystal chemistry for many years and more recently he has been involved in a research program on origin of platinum deposits. He said his predecessor had done an outstanding job.

G. Gaál (Hungary) noted that he was born in Hungary, but that after some education in Budapest he left Hungary in 1956 and studied geology at the University of Vienna, Austria, where he obtained his PhD in alpine geology. He has worked in India, Brazil, Nicaragua and Australia, but most of his professional work has been in Finland where he worked for the Geological Survey of Finland. His life changed in 1991, when he was asked to work on a five-year contract as Director of the Hungarian Geological Survey, to reform and reorganize the Survey and reduce the work force by 73 per cent. He further mentioned that he had been involved in several IUGS activities. He was Chairman of the Commission COGEO DATA, the Deposit Modelling Programme, and is still a member of the IGCP Scientific Board. He is open to reforms. His publications mostly deal with Precambrian ore geology.

W.S. Al-Hashimi (Iraq) said that he had been Chief Geologist of the Ministry of Oil in Iraq since 1991 and Chief Geologist of the Iraqi Oil Exploration Co. since 1981. He is a sedimentologist and was educated in Baghdad, but received his PhD at the University of Newcastle Upon-Tyne, UK. His main research interests, before turning to petroleum related activities, were on carbonate rocks and dedolomitization processes as well as on the petrology and mineral deposits of the ophiolitic complexes of the Zagros mountains. He has been a member of the International Association of Sedimentologists (1975-90) and has been Secretary General of the Arab Geologists Association from 1992.

I. Speden (New Zealand) remarked that he graduated from the University of Otago in 1955 and earned his PhD from Yale University in 1965. He worked for many years with the New Zealand Geological Survey and has served as its Director. He is a Fellow of the Royal Society of New Zealand. He is currently working as Research Associate at the Institute of Geology and Nuclear Sciences in New Zealand. Brett said it was good to have a stratigrapher on the Committee.

I. O. Nyambok, who was also elected Vice President at the Council meeting, was not present.

5. REVIEW OF ITEMS RATIFIED AND DISCUSSED AT IUGS COUNCIL MEETING

R. Brett stated that there was no need for a formal review of the Council meeting.

6. STATUS OF PLANNING - 31st IGC

U. Cordani said that the Brazilian Preparatory Committee for the next Congress had prepared a booklet and already had an outline of the scientific programme. A full organization is needed in two years, and it is important to have the main Brazilian institutions on the highest possible level involved.

R. Brett stressed that the IGC organizing committee is usually invited to the Executive Committee meeting, but in this case would welcome U. Cordani to the meeting. He further explained how the IGC works, noting that according to the IGC Statutes all the members of the Steering Committee are invited to the IGC, with expenses paid by the organizer. This involves quite a number of people, since all the Secretary Generals of previous Congresses are members, and Brett questioned the usefulness of this practice. Perhaps paying for more students from developing countries would be a better use of the money.

I. Speden argued that during the Congress there had not been sufficient discussion or constructive talks about how to improve the IGC and suggested having a special symposium. He thought that some of the sessions were too small, but could understand that small ones were better for the convenor.

Cordani agreed with Speden that many things could be improved. He said also that IUGS had so many possibilities to cooperate and that contributions like this is very welcome. The presence of the Organizing Committee at the Executive Committee meeting will promote interaction, and advice to the Organizing Committee will help to prevent mistakes.

Brett remarked that it would be important not to make the same mistakes at the next Congress. Information about place and date is also important. Colleagues from neighbour countries should be involved in the preparation.

7. PLACE, DATE OF 43rd EXECUTIVE COMMITTEE MEETING

See agenda item 8. Other Business.

8. OTHER BUSINESS

R. Brett explained to the new participants how IUGS works by having Council meetings every fourth year at the IGC, where Executive Committee decisions are sanctioned. It would be good if the Council could stay for a second day to discuss future priorities of IUGS. Once a year, there is a meeting of the Executive Committee. At these meetings, reports of Commissions, Working Groups, affiliated organizations and joint programmes are reviewed. Since the Affiliates are autonomous, only short reports are needed. It will be necessary to have a stratigrapher to

review ICS. Some commissions are late in sending their reports. This will influence their budget allocations.

Brett referred to F. Hervé's offer to invite the Executive Committee to Chile in 1997, and the Chilean organisers will provide the most of the expenses within the country. An attempt will also be made to organize a field trip. Austria has offered to organize the following Executive Committee meeting in Vienna in 1998. Between Executive Committee meetings, the Bureau will take care of business affairs. Both the IUGS Directory and the brochure "What is IUGS?" will also be updated.

CGMW has entered into a collaboration with ICS on a global stratigraphic chart, using the colours of CGMW to work out overprints. But there are no codes for stages. J. Remane (Chairman of the International Commission on Stratigraphy) said he was pleased that co-operation is established and that the preliminary results will be presented at the meeting in Paris. Speden commented that IGC should be concentrating on finding the time scale for major periods.

Speden further commented that in the future, procedures for the appointment of the members of the Nominating Committee should be transparent and similar to those implemented for the appointment of the Executive Committee. He went on to argue that there would be merit in recording for all projects, Commissions, Working Groups, etc. the voluntary time and organizational support (labour and funds) committed to the activity. The record could then be used to emphasize the tangible value of the contribution and as an aid to obtaining further funding. Speden underlined the importance of promoting the value of geoscience and IUGS activities. He said that in his experience, sound cost-benefit case studies are an effective tool for convincing decision-makers, certainly in western economics. The best ways of publicising and promoting good cases warrants further discussion.

Gabor Gaál expressed the opinion that IUGS should demonstrate a more aggressive approach explaining to the National Committees that paying their dues is crucial for the activities of IUGS.

Brett concluded by saying that it would take far too much time to discuss the Affiliated organizations, and that a major topic for the next Executive Committee meeting should be to discuss the future priorities of IUGS.

U. Cordani thanked W. Fyfe for his period as President of IUGS, saying that he had been able to increase the visibility of geology and IUGS. He stressed that earlier IUGS had mostly been talking to itself. Prof. Fyfe had started to go outside the organization, to try and influence the policy makers and to explain to them his opinion that in order for humanity to survive, geology is essential.

The 42nd Session closed at 2:00 p.m. on August 14, 1996.

(These Minutes are subject to approval and adoption by the Executive Committee.)