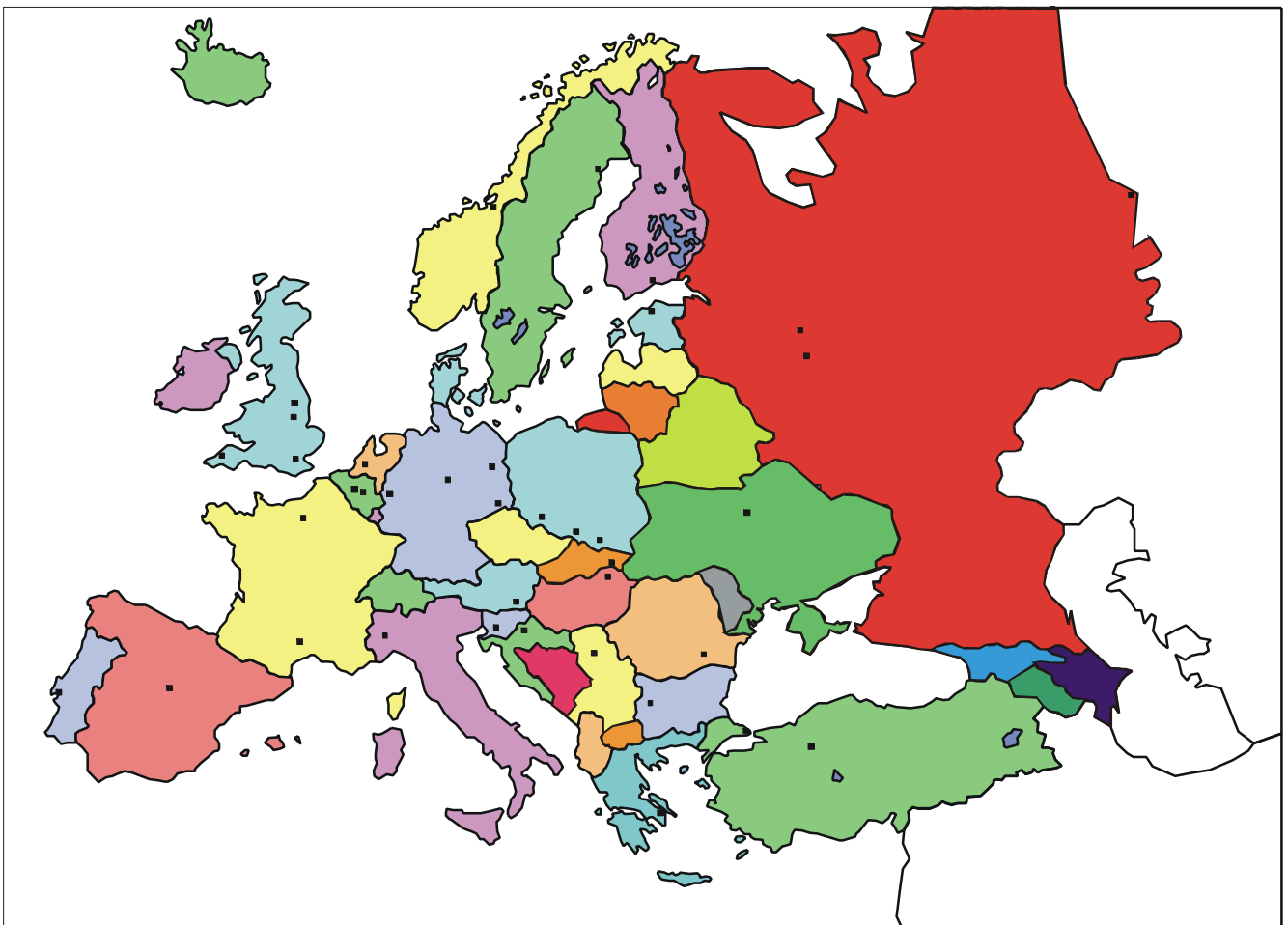


NEWSLETTER

SOCIETY OF MINING PROFESSORS



SOCIETÄT DER BERGBAUKUNDE



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Another year, another annual general meeting has been held and was, as usual, a great success. Once again it was the members who could not come who have missed an excellent meeting, superbly organised both from the point of view of the workload and also from the social side. This was one of the best meetings yet. It is therefore a good thing that it also attracted the highest attendance we have ever had at any of our meetings.

The minutes of the meeting follow and it can be seen that a lot of useful work got done. Most of the social events have not been minuted, but they were well organised and very much enjoyed.

The next meeting of the Society will be in London, and it will be held earlier in the year than normal - May 11 to 15, 2001 - to coincide with the anniversary celebrations of the Royal School of Mines, which will be 150 years old in May. I would urge all those of you who plan to attend to register early, and particularly to follow the accommodation recommendations in invitation documents which will be out shortly.

The Royal School of Mines is in one of the most expensive areas of London, and accommodation is at a premium. Good rates have been negotiated by the College at the local hotels, but even so these are expensive. There is unfortunately no accommodation at the College itself as the students will all still be in residence. The area is a high level tourist area and as such accommodation is always rather full so early reservations are essential.

We plan an interesting meeting and look forward to a high turn out of members.

The web site of the Society at:

<http://www.ta.tudelft.nl/mineprof/>

will be updated soon and a lot of information will be available there, not only on the forthcoming meeting but also papers and information from the last meeting of the Society. The most recent past Newsletters are also available there. I urge all members to bookmark the site and to consult it regularly to find out what is going on with the Society.

I look forward to seeing you all in London next May.

**MINUTES OF THE 11TH
ANNUAL GENERAL MEETING
OF
THE SOCIETY OF MINING PROFESSORS/
SOCIETÄT DER BERGBAUKUNDE**

AT THE

**TECHNICAL UNIVERSITY OF DELFT
DELFT, THE NETHERLANDS
July 1 to 5, 2000**

The 11th meeting of the Society took place in Delft in the Netherlands from the 1st to the 5th July, 2000.

Most of the registrants arrived in Delft during the day of Saturday 1st July. Half were accommodated in the Dish Hotel and the other half in the Juliana Hotel, both of which were close to the mining faculty building of the university. In the evening of the 1st, the registrants met first at Het Noorden, the pub owned by the mining student's society of Delft. Here drinks were enjoyed and the registrants then were taken by canal boat from Het Noorden to the faculty building where there was a registration desk and a buffet supper laid on.

On Sunday morning 2nd July the delegates walked from their hotels to the faculty where, after coffee, they were taken by bus to Alphen aan den Rijn for a day of canal and lake cruising with lunch on board the cruise boat. In the evening there was an official welcoming dinner where the delegates were welcomed by Dr. N. de Voogd, President of TUDelft.

Day 1 - Morning

On Monday morning July 3rd the delegates walked from their hotels to the Aula of the university where the opening meeting was held.

The turn out was the highest attendance yet recorded for a meeting of the Society. The members attending the meeting were:

Professors A. Adamson, Y.G. Agafonov, J. Antoniak, J. Archibald, U. Bajzelj, B. Brady, I.V. Dementiev, P. Dowd, C. Drebenstedt, B. Drzezla, S. Durucan, G.B. Fettweis, G. Fourie, M. Georgescu, H. Gerhardt, M. Hardygora, W. Hennies, N. Ilias, M. Karmis, V.A. Kharchenko, A. Khokriakov, W. Knissel, F. Kovacs, U. Kumar, Y. Kuzmin, E. Lechner, P-A. Lindqvist, W. Lucas, P. Martens, R. Matikainen, K. Nielsen, C. Niemann-Delius, J. Palarski, C. Pelley, D. Potts, L. Puchkov, E. Reinsalu, J.J. de Ruiten, P. Särkkä, M. Scoble, C.T. Shaw, S. Vujec, F.L. Wilke, H. Wolff and J. Yamatomi.

Present by invitation were Prof. W. Dalmijn, of Delft University of Technology and Dr. Corinne Hebestreit of Euromines.

(20 countries were represented - Australia, Austria, Brazil, Canada, Croatia, Estonia, Finland, Germany, Hungary, Japan, Netherlands, Norway, Poland, Romania, Russia, Slovenia, South Africa, Sweden, United Kingdom, USA.)

The meeting proper started with a short video of the history of the Society prepared at Delft. This was followed by a welcoming address by the Rector Magnificus, Prof. K. Wakker, who gave a brief history of the Technical University of Delft, highlighting the part played by the mining department and particularly emphasising its part in the development of international programmes.



The second welcoming talk was by Prof. H.J. Overbeek, the Dean of the faculty of Civil Engineering and geosciences. He gave some interesting information on underground constructions in the Netherlands.

The third talk in this opening session was by Prof. W. Dalmijn and was a history of the European Mineral Programmes which have been developed at Delft in conjunction with the RWTH Aachen, Helsinki University of Technology and the Royal School of Mines. Prof. Dalmijn gave a summary of the development of the courses with time and some insight into the potential for the future of these courses.

A final talk in this session was by Mr. P. van der Gaag who gave a very interesting talk on the synergy between the port of Rotterdam and the minerals industry entitled Rotterdam - the gateway to Europe for raw materials.

At this point there was a break for coffee and the spouses present went off on the spouses programme. The members returned for a most interesting talk by Mr. S. Stewart of Rio Tinto and the current president of Euromines, on the industry's view on developments in the mining industry. The text of this talk is included in this newsletter.

After the coffee break, Mr. Shaun Stewart of Rio Tinto, the current President of Euromines gave a very interesting address on 'Sustainable Development'. The definition used was Dr. Bruntland's "Development which meets the needs of the present generation without undermining the capacity of future generations to meet their needs."

This talk was followed by one by Dr. C. Hebestreit on 'Mining Research and Development within the EU'. The text of this too is included here.

At this point there was some discussion on the mornings papers. The main item of discussion was how to improve the image of the industry in the eyes of the general public.

Prof. Fettweis recalled that at the previous meeting the Society together with Euromines had agreed to hold a press conference in conjunction with Minetime '99. This had in fact happened and Hans de Ruiter pointed out it had been held at the time of Minetime'99 and that 100 press people had been contacted but only three came and two of those were from the mining press. The only non mining press person was a friend of his!

Mr Stewart commented that the press are only really interested in sensational negative stories. He suggested that industry had been too reticent with the press in the past and thus it was somewhat their own fault. He informed the delegates that when the EU had developed a European Minerals Policy, and held a press conference to launch it, only 5 members of the press came there too. What is needed is a global mining initiative - and 9 major companies were working together to do this.

Prof. Dowd pointed out that Minerals '99 in the UK had been a great success, particularly throwing open local quarries to the public. They had been overwhelmed with the number of visitors.

This exercise would be repeated in the UK in 2001.

This again highlights the need for concerted action across the entire industry.

That discussion concluded the opening session of the conference and the delegates broke for lunch followed by the traditional group photograph of all attendees.

Day 1 - Afternoon

The afternoon session on the first day of the conference proper was a Forum on Research. This started with three papers. Prof. Karmis started with a presentation on Mining Research Infrastructure - Challenges and Opportunities. He recommended two publications available from web sites. "The Future Begins with Mining" and "Mining Industry - A Roadmap for Cross-Cutting Technologies" both of which are available and can be downloaded from either of these sites:

- <http://www.nma.org>
- <http://www.oit.doe.gov/mining>

He pointed out that the demands of the industry for research were based on the increasing difficulty in finding world class orebodies, and the resulting mining of lower grade, metallurgically challenged reserves. Cost being the main competitive advantage, expenditure have to be reduced in all facets of mining. This also needs to be done with 'green' technologies. In fact "the challenges can only be met by continuing development of innovative technologies which will enhance recovery and optimise operations while satisfying environmental, health and safety and community needs."

The overhead slides for the rest of the presentation will be available on the web site in the near future.

That presentation was followed by another presentation by Dr. Hebestreit of Euromines on "Research needs and Priorities in the Minerals Industries"

Dr. Hebestreit emphasised that the need was for improved economics in the industry as there was real pressure on costs. The second most important area was environmental effects and in particular:

- Water management, during operations, during processing and after closure
- Waste management including mine energy, mine waste and recycling from waste
- Health and safety where she pointed out that even methods for proper testing of health and safety do not exist
- Finally, rehabilitation of areas destroyed by mining

Also needed was life cycle analysis and the development of environmental indicators.

Finally, Prof. Wilke gave a presentation on "European Research Opportunities and Partnerships." He discussed the general conditions for the industry in Europe. There is the contraction of the industry taking place in most European countries. It has the 4-D image of being Dangerous, Dirty, Detrimental to the environment and Dying. Finally there is an oversupply situation existing for most raw materials. This meant that mining research does not have a high priority.

Prof. Wilke then went on to talk about the current EU research programmes and pointed out that mining research was very low priority indeed. The short term consequences were that it is very hard to get research funded by the EU. To do it it has 'to be camouflaged' behind environment, sustainability or IT. The need is clear to improve the public perception of mining.



He then went on to give some detail of the current programmes of research in the EU.

At the end of his talk he suggested that the Society should be used as a contact forum for research partners. In order that this should be achieved the Secretary General was charged with sending all members a questionnaire to find out their interests and capabilities. This would be based on an existing questionnaire that had been used by Euromines in the past. This will be coming out in the near future and all members are urged to fill it in full and to return it to the Secretary General as soon as possible. The information will then be tabulated and put onto the Society's web page for all members to access. This should be a great help in the development of future research proposals.

After these presentations the floor was thrown open to discussion.

Prof. Fettweis said that one of the reasons that mining was not taken seriously was that it had failed to demonstrate that it was a separate discipline and important in its own right. However, Dr. Hebestreit pointed out that in today's political climate just demonstrating importance and independence is not enough, a major contribution to society now must be shown.

Prof. Matikainen said that mining engineers were poor at putting in good and *new* ideas for funding of research. They tended to enter 'yesterdays' proposals. Prof. Wilke agreed that good proposals would get funding but it was still difficult to meet all the other requirements of the funding bodies. There were all the requirements for partnerships, particularly with industry. Prof. Karmis also pointed out that universities, due to the way they operated with PhD students often worked on a different time scale to industry which also made finding funding difficult.

Prof. Matikainen said that networking was needed because we were otherwise too small to be credible institutions for funding. And Prof. Brady pointed to the modern short termism which made it almost impossible to get funding for blue sky research.

At the suggestion of Prof. Karmis it was then decided to discuss three points in more depth:

Networking & questionnaires
Ideas for best practices in research
Long term vision in research

Networking.

It was firstly agreed that there was a need to follow Prof. Wilke's suggestion and make the Society a forum for exchange of ideas and for finding research partners. So it confirmed that the Secretary General would develop a questionnaire to send to all members of the Society. These would cover their research interests and capabilities and also, at the suggestion of Prof. Wagner through Prof. Fettweis any other relevant activities. These would be sent out by the Secretary General and he would collate all the answers and then the resulting study would be put on the web-site.

Prof. Wilke suggested, and it was agreed, that a web discussion forum should also be set up on our web site so that members could, through this medium discuss their work.

Prof. Niemann-Delius suggested that current partnerships should also be reported and this was agreed.

Best Practices

Prof. Fourie started off this discussion by pointing out that South Africa had a main mining industry for gold and that this industry was now targeting going to a depth of 5 km. This meant that that industry at least was funding research, and this was being taken up also by the platinum and coal industries in that country.

Prof. Brady reported that in Australia there was Federal Government driven co-operation in research. Industry consortia had been set up and were doing research. There was recent federal and provincial government pressure for university/industry co-operative research.

It was further discussed as to how to find the right partners to enable one to join in in a funded programme. The decision taken was to go ahead with the web discussion forum as a place where, among other things, this could be achieved.

Long term vision in research

Dr. Hebestreit started the discussion by raising the point that we really needed to concentrate on what the right questions were. As Prof. Karmis pointed out there never seems to be time to discuss the long term future. However, there is a great need for a long term vision.

Prof. Dowd pointed out that there was a view that mining for metals as we know it will cease to exist, being replaced by methods which recover the materials in situ. So this is clearly one direction of future research. Also suggested was robotics in mining, even though it was pointed out that this is already being heavily researched.

It was decided that brainstorming was needed and it was pointed out that a group such as the Society should be able to do this, but should do it with industry. It was discussed and a committee was nominated to get this going. The members of the committee were **Dr. Hebestreit, Prof. Karmis, Mr. de Ruiter, Prof. Shaw and Prof. Wilke**.

There were then a few business matters on the running of the meeting discussed before closure for the evening.

Day 2 - Morning

This was the business meeting of the Society. The session opened with some announcements of conferences -

- APCOM in China in April 2001
- Regional APCOM Helsinki in 2001
- There will also be a mining Expo in Australia in 2001

Apologies were recorded from Profs Badino, Byzov, Duchene, Eichmeyer, Gregory, Lürig, Mousset-Jones, Pla Ortiz de Urbina, Priest, Ramirez Oyanguren, Reuter, Sitz, Sokolov, Stoll, Uchino, Vogt, Wagner and White.

Prof. Shaw then gave the Secretary General's annual report. The membership of the Society has risen to some 115 members, of whom some 30 are retired members. He also reported that there was a core of active members which kept the Society active. Three members had attended all 11 meetings, four had attended 10 of the 11, two had attended 9 meetings and another 12 had attended more than half the meetings. These 21 were the core of the Society. Names were not mentioned.

He then reported on two pieces of ongoing work. Firstly he had generated a list of all the universities offering a degree course in mining engineering that he could locate. The number currently



stands at 215 world wide, though the ones in India and other parts of Asia have definitely not all been identified yet. In most cases, where they have them, the web sites of these institutions have been located. The list of the institutions will be available on the Society's web site.

The second piece of ongoing work was the identification of the courses being taught in mining engineering around the world. The Secretary General had visited all the web sites identified in the other exercise and where possible had recovered the actual curricula of the universities concerned. These he had been adding to his data base of university mining courses. These had now reached a level of 103 different mining degree courses taught at 87 universities in 41 countries. It is planned that this data base too will be mounted on the web site so that members can access it, add their courses if they are not there, or study what others teach when planning changes to their own courses.

The meeting with the press had been held as reported above, but had been less effective than hoped as so few members of the press elected to come to the meeting.

Prof. Shaw then sought the Society's opinion on expanding membership to be fully worldwide. As members know at present the Society is largely European, with invited members from many countries around the world, but with those on an invitation only basis. The Secretary General pointed out that now that the list of mining universities existed it was possible to go down to the web site and in most cases identify the professors at these institutions. They could then be contacted and membership suggested to them.

However, Prof. Fettweis and Prof. Wilke argued strongly that for the foreseeable future the Society should remain mainly European. The success of the Society was based mainly on those who attended the annual meetings. These had all been in Europe. It was doubtful if the attendance would be as good if the meetings moved to other remote countries.

It must be noted that, while the members present accepted these arguments and agreed that the balance of membership should stay European for the present, the members from Australia and the USA were not in agreement. Prof. Brady for example pointed out that the industry itself was now mainly outside Europe, having migrated to the new world, and that there should be adequate representation from those countries where the industry was now located.

It was decided to make no changes but the Secretary General was charged with developing objective criteria for invitation for membership, and with seeking to increase membership by targeting those universities within Europe which were not yet represented. It was also considered important to try to recruit active members, so the criteria should include some assessment of the likelihood of active participation.

The next item on the agenda was the site of the next meetings. The 12th meeting will be in London in conjunction with the 150th anniversary celebrations of the founding of the Royal School of Mines. The meeting will be from the 11th to the 15th May 2001 inclusive.

It was agreed that the following meeting, the 2002 meeting, will be held in Petrosani in Romania. Following those meetings Tallinn in Estonia and Zagreb in Croatia have expressed interest in holding meetings.

The next item on the agenda was the election of a Secretary General for the next 5 years. Prof. Shaw had been doing it for 10 years now and as each term is 5 years an election was necessary. Prof. Shaw was asked to stand again, and this being the only nomination was re-elected for a further 5-year term of office.

In accordance with the constitution it was then possible to elect the office bearers for the next year. Prof. Shaw, as the organiser of the next meeting, was also elected President of the Society, and Prof. Ilias, as the organiser of the subsequent meeting was also elected on to Council.

This meant that the council for 2000/2001 was Prof. Shaw, Mr. De Ruiter, Prof. Dementiev, Prof. Fettweis, Prof. Ilias, and Prof. Karmis.

At this point the new members of the Society who were present introduced themselves.

That ended the business meeting and the members broke for tea.

After tea the Education Forum was started. The first paper was by Prof. Potts, who gave a talk on the co-operative teaching under the EU Tempus scheme and also with UK government funding between Nottingham University and universities in Russia, Poland and Bulgaria. The students from there had taken modules of their courses in both the UK and in Spain. Some detail of the courses was given.

The next talk was by Prof. Archibald who gave the members an insight into the teaching of mining engineering in Canada. There are 9 universities, two located in western Canada and the other 7 in eastern Canada. Between them they have an enrollment of just over 500 students and graduated 187 last year. The 9 universities have in total 57 mining teaching staff. The course offerings are available in the data base prepared by the Secretary General on the website.

The third talk was by Prof. Shaw and was a presentation of the work on the comparison of mining courses around the world that he has been doing. This data base will be available on the website.

Day 2 - Afternoon

The afternoon started with a demonstration of the program 'Blackboard' which is installed at Delft and which enables teaching staff to install their course notes on the web. This was interesting and there was some input from other members who had had experience with similar software.

Hans de Ruiter then presented a discussion paper on the European Mining Course and the European Minerals Engineering Course. This was followed by discussion on how best to expand the networking that had been started by these courses. This paper by Mr. De Ruiter will be printed in Mineral Resources Engineering.

It was noted that Leeds university was looking for other partners as they wish to set up another grouping. It was suggested that a questionnaire should be prepared to find out from members what web-based courses were available in the field of mining engineering.

After these discussions the meeting of the Society closed.



Day 3 - Wednesday

There was arranged an all day visit to the Port of Rotterdam. This was very interesting. The port handles a huge volume and tonnage of mineral industry products each year, it is for example

the site of the stocks of the London Metal Exchange. In fact they claimed to be 'the largest open pit mine in the world' and in a sense they are. It was a most interesting and worthwhile visit.

The meeting in the year 2001 will be held at the Royal School of Mines in London. Below is the current agenda for the centenary celebrations:

Friday, 11th May, 2001 Day One: Scientific Event

RSM – 150: CELEBRATING 150 YEARS OF THE ROYAL SCHOOL OF MINES

Time		Speakers
09:00-09:30	Registration/Coffee	
09:30-09:45	Opening Remarks	Rector
SESSION ONE -- GEOLOGY		
09:45-10:20	Overview Lecture	John Dewey (Oxford)
10:20-10:40	Topical Lecture:	Mike Warner/Jo Morgan
10:40-10:50	Discussion	
SESSION TWO -- MINING ENGINEERING		
10:50-11:25	Mining Overview	Prof. E.T.S. Brown
11:25-11:45	Mining Topical	Prof. Sevket Durucan
11:45-11:55	Discussion	
11:55-12:15	Coffee	
SESSION THREE - PETROLEUM ENGINEERING		
12:15-12:50	Overview Lecture	Mark Moody-Stuart (Shell)
12:50-13:10	Topical Lecture	TBA
13:10-13:20	Discussion	
13:20-14:30	Lunch	
SESSION FOUR -- ENVIRONMENTAL ENGINEERING		
14:30-15:05	Overview Lecture	Sir John Houghton
15:05-15:25	Topical Lecture	Matthew Leach (Energy Policy Group)
15:25-15:35	<i>Discussion</i>	
15:35-15:55	Tea	
SESSION FIVE -- MATERIALS & METALLURGY		
15:55-16:30	Overview Lecture	Tony Evans
16:30-16:50	Topical Lecture	Dr RW Grimes
16:50-17:00	Discussion	
17:00-17:30	Closing Remarks	Dean RSM
18:30-19:00	Reception	

Saturday, 12th May, 2001 Day Two: Celebration Event

Time		Comments
09:30-10:30	OPEN DAY	
10:30-11:00	Tea/Coffee or Refreshments	There will be displays all around the Royal School of Mines open all day
11:00	Assembly Great Hall	
11:00-12:00	Lecture: "150 Years of the RSM in Science & Technology"	Dr Secord
12:00-12:30	Lecture: "The Life and Impact of Huxley"	Sir Crispian Tickell
12:30-14:00	Lunch	
17:00	Cocktails	
19:30	Assembly (drinks) for Banquet at 20:00 hrs	Sponsors



That covers the official celebrations of the anniversary. The meeting of the Society as such is then planned to start as usual on the Sunday. The present tentative programme for the meeting of the Society is as follows:

Sunday, 13th May, 2001 Day One: Social Event

A Thames river tour has been arranged for this day. The boat will leave at 11.00 am and go down river to the Thames Barrier. This is the barrier built to hold back exceptionally high tides thus preventing flooding in London. We will then return up river and stop at the London Eye (currently the world's largest Ferris Wheel) and we will take the trip in the Eye giving a great birds eye view of London, always assuming the weather is kind to us of course. A buffet lunch will be served on board during the voyage. This event is being sponsored by Billiton.

Monday 14th May, 2001 - Society of Mining Professors meeting :

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|----------|---|
| 10.00 am | Room 1.31 Royal School of Mines building |
| | <ul style="list-style-type: none"> • Welcoming talk by the Dean of the Royal School of Mines. • A Speaker from the City of London will give presentations on the importance of London as a centre for finance for the mining industry. • Speaker from one of the major mining houses located in London (Anglo American or Billiton or Rio Tinto) on the needs of the industry for mining education |
| 1.00 pm | Lunch - Buffet lunch in room 1.02 Royal School of Mines building |
| 2.00 pm | A photograph of the members will be taken on the front steps of the Royal School of Mines building. |
| 2.30 pm | The Business meeting of the Society - room 1.31 Royal School of Mines building |
| | <ol style="list-style-type: none"> 1. Apologies for Absence. 2. Minutes of the last Meeting 3. Matters arising from the minutes. 4. Annual Report by the Secretary General 5. Membership matters 6. Place of next meeting 7. President 8. Any other Business |
| 7.00 pm | Society Dinner - venue to be advised |

Tuesday 15th May, 2001 - Society of Mining Professors meeting

- | | |
|---------|--|
| 9.00 am | Room 1.31 Royal School of Mines Building |
| | <ol style="list-style-type: none"> 1. Discussion of directions of development of mining engineering education
Break for coffee - room 1.02 2. Discussion of any developments in the improvement of the image of mining |
| 1.00 pm | Buffet lunch - room 1.02 |
| 2.00 pm | Report and discussion of sub-committee on Research set up in Delft. |
| 4.00 pm | Closure and end of meeting |