

MINUTES OF COMMISSION I

54th ICCP MEETING, Maputo, 23 and 24/09/2002

Chair: Walter Pickel, Secretary: Deolinda Flores

Opening remarks

The commission I meeting was held on Monday afternoon and Tuesday all-day and attended by 23 and 20 members and 7 and 2 guests respectively. The Chairman outlined the programme for the sessions and presented the opening remarks. The working groups and items presented and discussed in the meeting were:

- Accreditation Programme
- ICCP Reflectance Standard
- Review of new methodologies and techniques in Organic Petrology
- Standardization Working Group
- Temporal variation of coal
- Handbook Editorial Groups
 1. Copyright - Handbook
 2. Huminite
 3. Liptinite
 4. Graphite, Semi-Graphite and Natural Coke
- New Working Group: Degradinite
- Microscope session

The Minutes of the previous meeting were accepted as published in the ICCP Newsletter. Some uncertainty occurred in relation to Accreditation – see there for details.

Accreditation Programme - Aivars Depers

Walter Pickel presented a report from the convenor summarising the 2001-2002 activities. Since last meeting, the ICCP website was updated especially the pages concerning “General information” and “Accredited Petrographers”. The Accreditation program is no longer conducted through the University of Wollongong. A special e-mail address has been established through a commercial ISP (iccpap@ozemail.com.au). Aivars Depers still has an email address at the University but the University address should not be used in relation to ICCP business. Certificates and final assessments for the 2001 round of analyses were mailed to all petrographers in early 2002.

The 2002 Exercise is progressing. To date, 68 petrographers, from 36 laboratories, were contacted and 58 have indicated that they will participate. Five petrographers joined the Accreditation Programme for the first time.

Two new samples were prepared, one of Permian age and the other from the Carboniferous of Europe. There were two mail outs of samples in February and August 2002, the results returned by the 31st August and due by the 14th October respectively.

Two motions were submitted:

- To consider extending the range of the vitrinite content of the samples.
- analysts should be encouraged by the convenor to report vitrinite reflectance data for the accreditation with three decimals. This suggestion is at variance with the ISO Standards, that form the general basis of the methods used in the analytical program for Accreditation. When doing the analysis and in a regular analysis report giving a reflectance result to three decimal places would overstate the degree of accuracy. For the accreditation program, the amounts involved in the rounding calculation (up to 0.0049%) have become significant in relation to the standard deviations. They now represent up to 0.18 standard deviations and this could represent the difference between an analyst having an average of under a mean of under 1.5 and one over this value. As

the results are compared with the mean of all the previous analyses of a sample, reporting results to three decimals removes the likelihood that round-offs errors can affect the assessment.

Further decisions regarding the accreditation programme were made in the council meeting - see council meeting minutes.

The necessity to have a regular backup of all data was noted. Walter had already talked to Aivars and both had agreed to have this happening. In the following council meeting this agreement was further detailed to have the back-ups sent to the ICCP archive.

The motions submitted to the commission were accepted with 19 votes in favour and on vote against (Note: all motions accepted in commission I were accepted to be submitted to the General Assembly. All motions forwarded from com. 1 this year were accepted by the plenary).

Three other motions were discussed. As the status of these motions is uncertain it has been agreed with the proposer to have them recommitted at the Utrecht meeting. However, in the meantime it is assumed that the suggested policy applies. The motions are:

1. That the term Re-accreditation be used internally only and be reserved for members who either have dropped out for a period, or who have failed at some stage and need to commence again. The term should not appear on lists of Accredited petrologists.
2. That consideration be given to appending a date to Accredited petrologists to show the date of first Accreditation, or where Re-accreditation in the sense of the previous motion has occurred, the date of Re-accreditation.
3. That a review is undertaken of the accreditation guidelines.

New ICCP Reflectance Standard – Walter Pickel and Dave Pearson

Walter Pickel reported that two reflectance standards ($R=0.89$) were purchased and calibrated against the results of the standard round robin. The standards will be made available to interested laboratories. One standard will be sent out on request, the convenors will keep the other and analysts/laboratories are asked to send one of their standards in to get them calibrated.

Both services, due to a decision already made in Copenhagen, are available for US-\$ 50 (+ a US-\$ 500 bond + postage, if the standard is mailed to the lab). However, for ICCP member, this service is free of charge.

Review of new methodologies and techniques in Organic Petrology – Lila Gurba

The chairman of the Commission presented a progress report of the working group on behalf of Lila Gurba. The main objective of the WG is to review new methods and techniques related to Coal and Organic Petrology.

The first version of a White Paper, with a description of several methods and techniques, was presented at the ICCP meeting in Copenhagen. A copy is available from the ICCP web-site. The White Paper is open to further contributions. It will be updated twice a year. The next update is due by end of January 2003. The Convenors wishes to encourage everybody who is working on or developing something new related to organic petrology, to submit an extended abstract, short communication or paper as a contribution to the White Paper. The deadline for submission is the end of November 2002. Interested members should send the abstract to Lila Gurba or the chair/secretary of commission I.

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Standardization Working Group – Harold Read

A report on the 2002 round robin was presented by the Convenor:

“INTRODUCTION

The exercise had several objectives:

- maceral group reproducibility – as guide for ISO revision
- information to aid better distinction between inertinite macerals, in particular fusinite/semifusinite
- vitrinite reflectance reproducibility.

An inertinite-rich coal was selected, carefully subdivided using a small rotary sample splitter and riffle; then 35 grainmounts prepared.

23 ICCP members present at the Copenhagen meeting indicated their interest in participating, however only six (including Pickel & Read) actually analysed the sample; an additional nine Australian petrographers participated. Not all petrographers carried out all requested analyses, probably because of unclear instructions.

RESULTS

Results are compiled in three tables:

- maceral groups
- vitrinite reflectance
- fusinite/semifusinite; structure & brightness

ICCP 2002 STANDARDISATION EXERCISE

GM No	Vitrinite	Liptinite	Inertinite	minerals	Rr [%]	Rmax [%]
14	26	1	65	8	1.19	1.26
23	34	-	59	7		
10P	24	1	66	9	1.23	
10F	23	T	68	9		
21R	26	T	64	10		
21D	27	T	67	6		1.29
21W	29	-	65	6	1.22	1.30
13B	31	1	60	8	1.22	
13O	30	1	60	9	1.23	
32	29	T	61	10		
30	28	T	64	8		
29R	33	-	58	9		
29S	27	T	66	7		
22	24	1	65	10	1.26	
15					1.21	
18					1.23	
28						1.29

COMMENTS

Maceral groups and vitrinite reflectance are considered satisfactory, with generally fair to good reproducibility.

However, as shown in the tabulated data, there is very poor agreement regarding what is fusinite and semifusinite. (Other problems eg telo- detrovitrinite; macrinite & inertodetrinite also exist)

PROPOSED 2003 PROGRAMME.

It is intended to repeat the exercise (with the same coal sample) but with clearer instructions that the maceral analysis is to be carried out according to ICCP guidelines, ie as described in the recent ICCP vitrinite and inertinite classifications.

Participants in the previous 2002 exercise will be contacted, also others who may be interested are invited to take part.”

The chairman thanked Harold for this report. In the discussion that followed, it was pointed out that the lack of agreement in the results could possibly be explained by different criteria used by different analysts and/or the complexity of the sample. However, it was considered to be usefull to collect more data. Therefore the convenor asked the members, who already have the samples to either carry out the analysis again or in the cases where no results had been returned to do so now. To avoid further confusion the analysts are asked to strictly follow the ICCP vitrinite and inertinite classifications. Members who want to join the group are welcome and can request the sample from Harold.

Mr. Harold W. **Read**

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The chairman suggested that in his role as convener of the Standardization Working Group Harold might also want to accept the position to monitor constantly the existing maceral systems and their applicability. This would allow the ICCP to have a continuous record of possible problems with ICCP systems and enable it to decide when and to which degree changes are being necessary. The commission agreed to have such a position and Harold accepted it. He will report annually on problems he envisages with the existing systems.

Temporal variation of coal – Lopo Vasconcelos

A report of the second year activities was presented by the Convenor. During this year the WG did not very much progress, mainly due to Lopo's commitment to organise the meeting. Mike Frank, for personal reason could not no longer contribute to the WG. I. Sykorova sent data from the Czech Republic, Poland, Germany, UK, Spain and Byelorussia. She started building a database with these data, also using the data provided by Lopo and M. Frank. Walter Pickel sent also a microfilm of the publication H.J. Harrington & al. (1989) Permian Coals of the Eastern Australia, Bureau of Mineral Resources Bulletin 231. However, the convenor was not able to read microfilms. Until now, a total of 1580 data were collected.

Activities for the next year will include the homogenisation of the data tables layout, complete blank fields of data tables collected until now, find more participants to join the working group and start working with the data and trying to define some patterns.

ICCP Publications

W.P. summarized the new copyright agreement with Elsevier that Alan Cook had achieved and that had been accepted by Council in the previous council meeting. This agreement allows publishing approved ICCP material in Elsevier Journals without Elsevier maintaining the exclusive copyright on these publications. Thus they can be additionally published in different formats (like a handbook) by the ICCP. It was agreed that these publications would be published in one of the following formats:

Authors: ICCP, XYZ, ZYX, (20yx): Title

Or: Authors: (20xy): The ICCP

A standard paragraph has to be included into these publications explaining the ICCP approval process.

The commission approved the decision with all in favour.

A discussion followed, if material should be exclusively being published with Elsevier but a strong motion was brought forward by Petra David to publish a complete new handbook edition by the ICCP as soon as possible. Petra volunteered to organise this edition and report significant progress by next year's meeting. The handbook structure as already agreed on in Porto and presented in Rio and Copenhagen and was accepted as the basis for Petra's work.

It was also mentioned that all material approved will be included in the ICCP webpage. It was decided to add material from former handbook editions that need no or minor changes will be added to this handbook. Adrian Hutton noted that the term 'kerogen' should not be included. Concerning the material to be included in the handbook, namely the microphotographs of the already published inertinite and vitrinite. Walter Pickel will try to find them and send them to Petra to be scanned. With reference to „Maceral analysis“ and „Reflectance analysis“ Angeles pointed out that it is only necessary to prepare an introduction and a short description of the methods and to the corresponding standards. Angeles, Nikki, Harold, Adrian and Barbara offered to help Petra. Petra will ask the Editor to join the group.

Graphite, semi-grahite and natural coke – Barbara Kwiecinska

The final drafts on graphite and natural coke were presented and minor editorial changes applied. A first draft on semi-graphite was also discussed and additional information and/or comments were included. The presentation was supported by an excellent set of microphotographs. The Commission approved all three sheets and the corresponding photographs with 19 votes in favour. The convenor was encouraged to publish the approved sheets in an international journal as Fuel or other relevant journal. The sheets will also be placed on the ICCP web-site and included in the New Handbook edition.

Liptinite - Walter Pickel

The Liptinite sheets are ready and were approved by the Commission and the Plenary Session in 1998. However, due to bad timing by the convener and the -unsuccessful- attempt to motivate other members to submit microphotographs for the sheets delayed the finalisation considerably. The sheets will be published in the Fuel and the New Handbook as organised by Petra. However there is a last chance for everybody to send additional microphotographs.

Huminite – Ivana Sykorova, Monika Wolf, Walter Pickel, Kimon Christanis, Harold Read

During this year, the Huminite sheets as well as a set of microphotographs were placed on the ICCP webpage. The sheets had been prepared in this version by I. Sykorova, M. Wolf, L. Borecka and I. Cermak. Changes were made by members of the group namely by Walter Pickel and Kimon Christanis. These were mainly changes with regard to a recent request by ISO. ISO is going to cover all coal ranks in the future in contrast to the former and recent restriction on hard coals. This required firstly a fast finalisation of the huminite sheet as the ICCP relation to ISO is of great importance for the ICCP and its role to be basically considered to be responsible for the standard definitions. Secondly it is necessary that this sheet corresponds as far as possible and useful to the vitrinite system of 1994. To which degree this could be achieved was the topic of various discussions over the last year. The two systems are now compatible down to the maceral sub-group level and allow for different macerals and maceral varieties (see table) for the two groups. Huminite macerals are significantly different from higher rank macerals and the option to distinguish between both by the use of two different systems was strongly supported by most working group members. As they are however precursors of the vitrinite macerals they can in this sense be seen as part of one bigger (and more complex) system. After some discussion the Commission approved the new sheets.

I. Sykorova presented the microphotographs, which are also available with her report on the ICCP web page. Deolinda Flores also presented a set of microphotographs which were

considered to significantly enrich the selection already available from Ivana.. Both sets were approved by the commission to be published with the sheets.

Maceral group	Maceral Subgroup	Maceral
Huminite /vitrinite	Telohuminite /-vitrinite	Textinite Ulminite Telinite Collotelinite
	Detrohuminite /-vitrinite	Attrinite Densinite Vitrodetrinite Collodetrinite
	Gelohuminite /-vitrinite	Corpogelinite Gelinite Corpogelinite Gelinite

The new Huminite system, huminite terminology bold, the corresponding vitrinite in normal font.

The Huminite sheets were approved by the Commission and will be published in the Fuel under the new copyright agreement immediately.

Proposal for New Working Group to Investigate the Status of Degradinite – Peter Crosdale

A new working group was proposed by Peter Crosdale concerning as to whether or not the term degradinite and its associated microlithotype hydrite as described in the 1963 Handbook edition, should be formally re-instated into an ICCP classification system/publication. The activities proposed are:

- search the ICCP archives and published literature for relevant material;
- provide coal samples (one Australian Jurassic and one SE Asia Tertiary) to identify degradinite and its petrographic and chemical properties:
- provide an opinion as to the origin of the degradinite
- prepare sheets for the Handbook and publish the research in an international journal.

Commission accepted the new working group and A. Hutton and J. Newman joined Peter to participate in this new W.G. Further involvement/participation of members, who had not been able to come to the meeting is strongly encouraged.

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Microscopy Sessions

Two microscopy sessions took place: one in Maputo using a portable microscope that was kindly brought to Maputo by Harold Read. Unfortunately the immersion oil bottle had leaked on the long trip to Maputo and consequently the session was run either with air objectives or with the oil immersion objective using brake fluid. (This solution is highly recommended for similar emergencies and the commission is grateful to Ricki, whose brilliant suggestion the use of the

brake fluid was.). A second microscopy session with 10 participants took place in Pretoria in Vivian DuCann's lab at Coal and Mineral Technologies (Pty) Ltd. on Sunday afternoon. Various samples were looked at and discussed concerning semifusinite, pseudovitrinite and reactive inertinite. A Yallourn lignite (Gippsland Basin, Victoria), the Standardization round robin sample (German Creek) and a sample supplied by Peter in relation to the new degradinite working group as well as various examples of South African coals were also looked at and vividly discussed.

Thanks to Vivian and Coal and Mineral Technologies for this unique opportunity to visit her great laboratory and to use it for this essential session. Thanks as well to Harold for transporting his microscope and we hope to see him with his microscope again at the next ICCP Meeting

The addresses of all conveners are available from the ICCP directory. However, you can send any request or material to the chair/secretary of commission 1:

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