

Commission on Mineral and Thermal Waters

Commission Eaux Minérales et Thermales



Commission on Mineral and Thermal Water

Annual Report

**by Dr James LaMoreaux, CMTW Chairman
Dr Werner Balderer, CMTW Vice Chairmen
Dr Adam Porowski, CMTW Secretary**

PUBLICATION ACTIVITY

Several publications are being prepared or have been prepared by the CMTW during the past year. These include a thematic issue of Environmental Earth Sciences which will be published before the end of 2015. The title of the thematic issue is Utilization of Thermal and Mineral Water and the editors are IAH members Dr. Istvan Foriz and Dr. Joseph Deak. It is a product of the CMTW's field trip to Hungary in 2011. A copy of the forward to the thematic issue is enclosed which provides details about the annual field trip and presentations made at the annual meeting.

Three other publications are in preparation: a thematic issue of Environmental Earth Sciences on Chemical and Thermal Waters-based on CMTW's annual field trip to the Evian, France region in 2012; a book in the Environmental Earth Science Book Series on Mineral and Thermal Waters of New Zealand-based on CMTW's annual field trip and annual meeting in New Zealand in 2013 (a copy of the minutes from the 42nd Annual Meeting of the CMTW is enclosed) ; and a thematic issue of Carbonates & Evaporites on Mineral and Thermal Waters of Carlovy Vary-based on CMTW's field trip to Carlovy Vary, Czech Republic in 2014.

During 2014 the book *Thermal and Mineral Waters: Origins, Properties and Applications* was published by Springer. Editors are Drs. Balderer, Porowski and LaMoreaux and Colonel Idris (deceased), all of whom are IAH members. The book is dedicated to Colonel Idris who organized the CMTW's field trip to the Western Desert of Egypt in 2009. Chapters of the book come from presentations made by CMTW members during the annual meeting which was held during this time.

SCIENTIFIC AND EDUCATIONAL ACTIVITY

CMTW's 2013 annual field trip and meeting was held in New Zealand September 23-29, 2013. Minutes of the 42nd Annual Meeting are enclosed along with the Itinerary for the field trip the title of which was Geothermal and Volcanic Sights of the North Island, New Zealand. IAH member Dr. Andrew Shugg organized the trip which included a trip to the active volcano on White Island. Dr. Shugg is in the process of editing a book for publication by Springer based on presentations made during the trip.

The 2014 annual meeting of the CMTW was held in Carlovy Vary, Czech Republic, September 8-13. Minutes of the 43rd CMTW Annual Meeting and field trip organized by IAH

member Dr. Tomas Vylita are enclosed. He was also one of the main co-organizers of the MinWat2014 Conference held in conjunction with and jointly convened by the CMTW and the IAH Czech Republic National Chapter among others. The conference was an opportunity for official or informal meetings of leading players in the field of mineral waters from both scientific and industrial sectors: hydrogeology and hydro geochemistry (via IAH, IAHS, and FH-DGG), water bottling (via EFBW), and balneology (via ISMH, FEMTEC and ESA). A thematic issue of Carbonates & Evaporites with Dr. Vylita as Guest Editor is in preparation as noted above.

A meeting of the CMTW was held at the 2014 IAH Congress in Marrakech. In attendance were members and IAH members interested in becoming members. The 2015 Annual Meeting will be held In Rome at the IAH 2015 Congress. Four sessions, two oral and two poster, of the Congress will be devoted to Mineral and Thermal Waters. Drs. Werner Balderer, Adam Porowski and Jim LaMoreaux reviewed the abstracts and will serve as moderators of the sessions.

The 44th annual meeting of the CMTW and field trip will be held on September 13-20 during the AQUA 2015 IAH Congress, in Rome, Italy; field trip following the Congress on September 18-20. It will include a tour on the 19th of the volcano on the Island of Ischia and surrounding hot springs and fumaroles. On the 20th CMTW members will visit the mineral springs of Castellammare di Stabia at the foot of the carbonate mountains of the Sorrento Peninsula. Dr. Vincenzo Piscopo of the IAH Italian National Chapter is organizing the annual field trip and meeting.

CONSTRUCTION OF CMTW WEBSITE

The CMTW's liaison with the IAH Executive Council is Dr. Antonio Chambal. Dr. John Chilton and his staff are working with Dr. Adam Porowski, Secretary of the CMTW, and IAH members Anna Wachowicz and Elizabieta Halaj in transferring the CMTW web site from its current site (i.e. <http://www.cmtw.c0.pl>) to the IAH website. This is a critical need for the CMTW and one we have been trying to accomplish for two years. Every effort to bring this to fruition would be greatly appreciated.

Commission on Mineral and Thermal Waters

Commission Eaux Minérales et Thermales



MINUTES OF THE ANNUAL SESSION

12th to 18th August 2012, Budapes, Hungary

**“Groundwater, Thermal and Mineral Water in Karstic Terrains
and Porous Sedimentary Basins: Utilization of Thermal and
Mineral Waters”.**

According to the decision of the CMTW-IAH Meeting 2011 in France, the meeting of the Commission of Thermal and Mineral Water in 2012 was held in Budapest, Hungary.

The meeting took place from August 12th to 18th, 2012, and was jointly organized by the Institute for Geological and Geochemical Research, Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences, and the Hungarian National Chapter of the IAH.

Meeting Topic: *Groundwater, Thermal and Mineral water in karstic terrains and porous sedimentary basins: Utilization of thermal and mineral waters.*

Local organizing committee

Dr. István Fórizs (Secretary of the IAH Hungarian National Chapter, CMTW member)

Dr. József Deák (GWIS Ltd., Dunakeszi, Hungary, CMTW member)

Dr. Árpád Lorberer (VITUKI Non-profit Ltd., Budapest, Hungary, CMTW member)

Scientific committee

Dr. Werner Balderer (ETH- Zurich, IAH - CMTW Vice Chairman)

Dr. József Deák (GWIS Ltd., Dunakeszi, Hungary, CMTW member)

Dr. István Fórizs (Hungary, CMTW member)

Dr. Husein Idris (Egypt, IAH – CMTW Vice Chariman)

Dr. Jim LaMoreaux (USA, IAH – CMTW Chairman)

Dr. Árpád Lorberer (VITUKI Non-profit Ltd., Budapest, Hungary, CMTW member)

Dr. Adam Porowski (Poland, IAH – CMTW Secretary)

LIST OF PARTICIPANTS

No	Name	Country	e-mail
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ACCOMPANING PERSONS

No	Name	Country	
1	LaMoreaux, Nicole, Mrs	USA	field session & cultural program
2	Balderer, Christina, Mrs	CH	field session & cultural program
3	Sarah Shugg	AU	field session & cultural program
4	Susan Shugg	AU	field session & cultural program

ABSENT MEMBERS

Name	Country	Member / Cand. Memb.	Absent with apologies
IDRIS, HUSSEIN (dep. Chairman)	EGY	M	*
CALADO, Carlos	PT	M	
CRUZ, José Virgilio	PT	CM	
CUCHI, Antonio	ES	M	
DOTSIKA, LIANA	GR	CM	
FRANCESCHI, Michel	FR	M	
FRICKE, Michael	FR	M	
HABERMEHL, Rien	AUS	M	
HERCH, Andrea	GER	M	
IBRAGIMOVA, Irada	AZN	M	
IDRIS, Hussein (vice Chairman)	EGY	M	*
ISSAADI, Abderrahmane	ALG	M	
LAHERMO, Pertti. W.	FIN	M	
LACHASSAGNE, Patrick	FR	M	*
LAING, Colin	AUS	M	
LESMO, Renato	IT	M	
KRALJ, PETER (hon. Chairman)	SLO	M	
MELIORIS, Ladislav	SLO	M	
MICHEL, G.	GER	M	
MARCIN, DANIEL	SK	M	
MOORE, JOHN	USA	M	
PANG, Zhonghe	CHINA	M	
POUCHAN, Pierre	FR	M	
ROSENTHAL, Eliahu	IS	M	
RISLER, JEAN J.	FR	M	
SCHNEIDER, Jean	AUS	M	
SHAWKI, Abdine	ET	M	
SHTEREV, KOSTADIN	BUL	M	
TAHLAWI, Mohamed Ragaie El	EGY	M	
VINOGRAD, NATALIA	RU	M	*
VERDEIL, Pierre	FR	M	
VON STORCH, KURT	GER	M	
Vylita, Sen,	CZ	M	
ZUURDEG, Boudewijn	NL	M	

Scientific Session Program

Monday, 13 August, 2012

9:30-9:35	Ferenc Székely <i>The President of the Hydrogeology Subcommittee of the HAS</i>	Hungary	Greetings of the President of the Hydrogeology Subcommittee of the Hungarian Academy of Sciences
9:35-9:40	James LaMoreaux <i>The Chairman of the CMTW, Editor in Chief EES, C&E by Springer, PELA GeoEnvironmental,</i>	USA	President of the Commission on Mineral and Thermal Waters, International Association of Hydrogeologists
9:40-9:45	István Fórizs	Hungary	Greetings of the Hungarian National Chapter and information on the events of the Meeting
9:45-10:10	Ladislau Rybach <i>The President of the International Geothermal Association</i>	Switzerland	Energetic use of thermal waters: Examples from Switzerland (thermal springs, deep aquifers, tunnel waters)
10:10-10:35	Mádl-Szőnyi J., Pulay E.	Hungary	The Great Deal of Hungary? - Possibilities and limitations in energetic use of thermal waters
10:35-11:00	Coffee break		
11:00-11:25	Andrew Shugg <i>Senior Hydrogeologist at Sinclair Knight Merz</i>	Australia	Remediation and Impacts on the Sanitary Condition of Public Mineral Springs
11:25-11:50	Wojciech Górecki, Anna Sowizdzał, Marek Hajto, Anna Wachowicz-Pyzik	Poland	Atlases of geothermal waters and energy resources in Poland
11:50-12:10	Elżbieta Hałaj	Poland	Geothermal bathing and recreation centers in Poland
12:10-13:45	Lunch		
13:45-14:10	Pál Géher	Hungary	Overview of balneological use of thermal waters in Hungary
14:10-14:35	Natalia Vinograd <i>Hydrogeologist SPSU</i> Adam Porowski <i>Hydrogeologist, INGPAN CMTW Secretary</i>	Russia, Poland	Origin of economically useful mineral waters of Staraya Russa Spa inferred from isotopic studies: $\delta^{18}\text{O}$ and $\delta^2\text{H}$ of water, tritium, $\delta^{18}\text{O}$ and $\delta^{34}\text{S}$ of sulfates
14:35-14:55	Attila Korcsog	Hungary	Short introduction to the Hungarian natural mineral and medicinal waters, and the bottled water market
14:55-15:15	József Deák <i>GWIS Ltd.</i> István Fórizs, Árpád Lorberer <i>VITUKI Non-profit Ltd</i> Kornél Albert	Hungary	The Buda thermal karstwater system

Agenda / Points of discussions

at the CMTW Meeting in 2012, Budapest, Hungary

1. Welcome of the participants and members.
2. Acceptance of the CMTW Minutes from Evian, France, 2011.
3. New information (update) from the IAH head office regarding the general way of the activity of the Commission and other working groups.
4. Information on the status of publication "Thermal and Mineral Waters: Origins, Properties and Applications".
5. Discussion on the new publication from CMTW meeting in Evian, France.
6. General discussion on the forms and ways of future publications of papers prepared in the frameworks of the CMTW meetings.
7. Discussion on the new CMTW web-site.
8. Propositions of the next meetings: discussion, voting, decision.
9. New members
10. Miscellaneous

Protocol (by secretary A. Porowski)

Ad. 1.

The main organizer, dr István Fórizs, gave welcome speech and presented organizing and scientific committee.

The chairman of the CMTW welcomed all the members, presented the meeting agenda and invited to active discussion on next points of the program.

Ad. 2.

The Minutes of Evian meeting in 2011 was prepared by prof. Jan Dowgiałło, who deputized absent secretary dr Adam Porowski.

The Minutes were presented by the chairman dr Jim Lamoreaux and accepted univocally by all members.

Ad. 3.

The chairman of the CMTW presented updated information regarding the working groups of the IAH. He told also that the last year activity of the CMTW was accepted by the IAH authorities. He put the members' attention on the fact that the scientific outputs of Commission's activity should be published more regularly. Also, the case of better integration in IAH activities was highlighted.

Ad. 4.

The chairman presented updated information concerning the latest publication "Thermal and Mineral Waters: Origins, Properties and Applications" edited by W. Balderer, A., Porowski, H. Idris and J. Lamoreaux. The publication is 250 pages book published by Springer, and concerning CMTW meeting in Cairo, Egypt, in 2009, organized by many-years member and vice-chair of the Commission dr Hussein Idris. He organized the CMTW meeting together with his 40-years activity in the field of hydrogeology. The book contains several papers presented at the scientific session in Cairo, Egypt.

According to chairman's information the book is actually in press and will available soon.

Ad. 5.

The chairman presented preliminary concept of new publication which would combine papers presented during the CMTW meeting in Evian, France, in 2011. Up to date there is not enough papers to prepare separate book. There was a proposition to combine some other interesting work of the CMTW members. Other option is to publish some available papers from Evian in Special Issue of Environmental Earth Sciences. The third proposition was to combine the best papers from the Evian meeting and Budapest and to publish separate Special Issue of Environmental Earth Sciences.

It was agreed, that the work concerning combination of available papers will be continued after the meeting up to the end of 2012. Based on the number of papers available, the chairman makes the optimal decision concerning the form of publication.

Ad. 6.

The members discussed the possibilities of future publication of papers presented in the framework of CMTW meetings. There was a general agreement that publication of papers is strongly required to raise the external visibility and role of the CMTW as IAH working group. The chairmen, Jim Lamoreaux, presented and offered possibilities of publication of the best quality CMTW's outputs in Environmental Earth Sciences or as separate book published by Springer.

The members agreed that next CMTW meetings should have higher quality of scientific sessions with presentations which could be published in high rank journals, e.g. Environmental Earth Sciences, or others.

Ad. 7.

The secretary, Adam Porowski, raise the problem of the new CMTW website, which should be constructed and connected to IAH information system concerning commissions and working groups.

The participants of the CMTW are able to construct and maintain the website themselves. However, the main problem appeared with the server where such website should exist.

The chairman of the CMTW was ask to discussed this issue with IAH authorities and send information to secretary to start the procedure of constructing and placing the new CMTW website.

Ad. 7.

Three propositions of next CMTW meetings were presented.

1. Proposition 2013, Australia or New Zealand: main organizer Andrew Shugg
2. Proposition 2014: Karlovy Vary, Czech Republic, main organizer Tomas Vylita
3. Preliminary proposition 2015: Crimea Peninsula, Ukraine, main organizer: Elena Kayukova.

The main issue which was discussed concerned the next CMTW meeting in 2013. Preliminary examination among present participants of Budapest meeting shows, that it will be easier for members to rich Australia to attain the IAH Congress in Perth, 2013. Preliminary agreement among members was that the CMTW meeting in 2013 should be organized together with IAH Congress in Perth. The post-congress field trip, specially directed on mineral and thermal waters, can be organized by Andy Shugg for CMTW members as well as other congress participants in the vicinity of Perth or in New Zealand.

The place of the field trip will be finally discussed with members in the beginning of 2013.

Ad. 8.

There were no new members.

Two persons who were announced as new members by the Italian National Chapter of IAH were absent, and sent their apologies before.

Ad. 9.

Last case discussed concerned the possibilities of reduction of fees for students and retired members.

The members agreed that in the future, organizers should take into account the reduction of participation fees for students.

It was also postulated to send some statement to IAH authorities and highlight the need of keeping congress fees as low as possible, with diversification of rates for different types of participants, e.g. members, students, retired.

Commission on Mineral and Thermal Waters

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MINUTES OF THE 42nd ANNUAL SESSION

23 - 29 September 2013, Rotorua, New Zealand

“Geothermal and volcanic sights of the North Island, New Zealand”.

According to the decision of the CMTW-IAH Meeting 2012 in Budapest, Hungary, the next meeting of the Commission in 2013 was held in Rotorua, New Zealand, from Monday 22 September to Sunday 29 September, 2013.

The Meeting was considered as convenient and interesting choice of the post-congress field trip for the participants of the 40th International Association of Hydrogeologists Congress (IAH 2013) held in Perth Convention and Exhibition Centre, Australia, 15 - 20 September, 2013.

During the Congress, the place and time for the CMTW members meeting was provided.

The Minutes contains two Attachement:

Attachment 1: Itinerary of the CMTW meeting in New Zealand by Andy Shugg.

Attachment 2: IAH working meeting program during the IAH-2013 Congress.

Local organizing committee

Dr. Andrew Shugg, (Australia, Senior Hydrogeologist, Sinclair Knight Merz, IAH-CMTW Member)

Dr James LaMoreaux, (USA, CEO PELA GeoEnvironmental, President of the US National Chapter of the IAH, Chairman of the IAH-CMTW)

Scientific committee

Dr. Werner Balderer (ETH - Zurich, IAH-CMTW Vice Chairman)

Dr. James LaMoreaux (USA, IAH-CMTW Chairman, President of the US National Chapter of IAH, CEO PELA GeoEnvironmental)

Dr Kurt von Storch, (Germany, IAH-CMTW member, CEO Spa Med & Wellness Gmbh, Expert Medical Spa and Wellness)

LIST OF PARTICIPANTS

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4	VON STORCH, KURT	GER	info@drvonstorch.de

ACCOMPANING PERSONS

No	Name	Country	
1	LaMoreaux, Nicole, Mrs	USA	field session & cultural program
2	Balderer, Christina, Mrs	CH	field session & cultural program
3	Sarah Shugg	AU	field session & cultural program
4	Susan Shugg	AU	field session & cultural program

ABSENT MEMBERS

Name	Country	Member / Cand. Memb.	Absent with apologies
POROWSKI, ADAM	PL	M	*
DOWGIALLO, JAN	PL	M	*
FÓRIZS, ISTVÁN	HU	M	*
DEÁK, JÓZSEF	HU	M	
LORBERER, ÁRPÁD	HU	M	
VYLITA, TOMÁŠ	HU	M	
HAŁAJ, ELŻBIETA	PL	CM	*
WACHOWICZ-PYZIK, ANNA	PL	CM	*
FERU, ADRIAN	RO	M	
POPESCU, MARIA	GR	M	
CARELLA, ROBERTO	IT	M	
RYBACH, LADISLAUS	CH	M	

CALADO, Carlos	PT	M	
CRUZ, José Virgilio	PT	CM	
CUCHI, Antonio	ES	M	
DOTSIKA, LIANA	GR	CM	
FRANCESCHI, Michel	FR	M	
FRICKE, Michael	FR	M	
HABERMEHL, Rien	AUS	M	
HERCH, Andrea	GER	M	
IBRAGIMOVA, Irada	AZN	M	
IDRIS, Hussein (vice Chairman)	EGY	M	*
ISSAADI, Abderrahmane	ALG	M	
LAHERMO, Pertti. W.	FIN	M	
LACHASSAGNE, Patrick	FR	M	*
LAING, Colin	AUS	M	
LESMO, Renato	IT	M	
KRALJ, PETER (hon. Chairman)	SLO	M	
MELIORIS, Ladislav	SLO	M	
MICHEL, G.	GER	M	
MARCIN, DANIEL	SK	M	
MOORE, JOHN	USA	M	
PANG, Zhonghe	CHINA	M	
POUCHAN, Pierre	FR	M	
ROSENTHAL, Eliahu	IS	M	
RISLER, JEAN J.	FR	M	
SCHNEIDER, Jean	AUS	M	
SHAWKI, Abdine	ET	M	
SHTEREV, KOSTADIN	BUL	M	
TAHLAWI, Mohamed Ragaie El	EGY	M	
VINOGRAD, NATALIA	RU	M	*
VERDEIL, Pierre	FR	M	
Vylita, Sen,	CZ	M	
ZUURDEG, Boudewijn	NL	M	

Meeting Location

Rotorua Bath House, Rotorua, New Zealand.

Sites Visited:

Ngawha

- Geothermal CO₂ Pool,
- Ngawha Geothermal Power Plant Inspection,
- Ngawha Geothermal Mud Pools and Bathing facility

Coramandal Peninsula:

- Miranda Springs – geothermal swimming pool
- Thames Geothermal Gold fissure based Mine
- Hot Water Beach
- Te Aroha Mineral Spas

Bay of Plenty

- White Island Volcano –a crater inspection in clouds of SO₂, ten days after an eruption

Rotorua

- Bath House – Blue Baths – Polynesian Baths
- Whakarewarewa Thermal Village
- City - Urban Geothermal Parks and resurgent fumaroles
- Hospital and Hotel Geothermal bores
- Te Puia – Geysers and mud pools
- Waiotapu Thermal – terraces, mud pools, champagne pool and fumaroles

Taupo

- Wairakei Terraces
- Wairake Power Plant
- Huka Falls

After tour terraces

- Orakei Korako - The Hidden Valley

In Victoria Australia by the Balderer's and Shugg

- Coastal Basin Deep Aquifer Geothermal groundwater at Port Fairy
- Volcanic Plains of Western Victoria volcanic cones and lakes
- Mineral Springs (cold carbonated) of Central Victoria.
- Old fissure based Gold Mines at Ballarat

Agenda / Points of discussion

at the CMTW Meeting in 2013, Rotorua, New Zealand

1. Welcome of the members and participants.
2. Acceptance of the CMTW Minutes from Budapest, Hungary, 2012.
3. New information (update) regarding the activities of the Commission and on-going and future projects.
4. Propositions of the next meetings: discussion.
5. Miscellaneous

Protocol (by James LaMoreaux, the convener)

Ad. 1.

The main organizer, dr Andy Shugg, gave welcome speech and presented shortly the program of the meeting and itinerary schedule.

The chairman of the CMTW, dr James LaMoreaux, welcomed the members and presented the meeting agenda.

Ad. 2.

The Minutes of Budapest meeting in 2012 was sent by secretary dr Adam Porowski to the chairman (the convener), dr James LaMoreaux, before the meeting. The chairmen presented the Minutes which were subsequently accepted by the members.

Ad. 3.

a) The chairman gave updated information regarding the new CMTW website. The new website was set up by Anna Wachowicz and Elżbieta Hałaj from AGH University of Science and Technology, Krakow, Poland in close cooperation with the secretary of CMTW, Adam Porowski. The website of the following address:

<http://www.cmtw.c0.pl>

have been constructed and placed in the free server for update and examination.

It is proposed that a link to the IAH website will be established.

Up to date the website is still under construction and updating by new information concerning the CMTW activity and history. Dr Anna Wachowicz and Elżbieta

Halaj take care of its proper working update. The website is prepare to be linked to the official IAH website.

- b) The Convener shared information that has met with the IAH Committee. James LaMoreaux met with Ken Howard and reported on outcomes to the executive members Werner Balderer and Adam Porowski, this concerned: (i) a discussion of the Hungarian Meeting and its outcomes, (ii) the Mineral and Thermal Water Bibliography is available.

It was of interest that in the IAH Perth Conference Geothermals had been developed as low enthalpy waters for bathing and wellness.

Moreover, The Commission on Mineral and Thermal Waters as an entity appears to have been accepted by the IAH Committee.

- c) On-going projects:

- 2009 – Cairo Book:

The convener informed that the Book including notes on the field trip have being almost prepared. It is estimated to be published in the end of 2013 or beginning 2014.

- 2010 – Evian Publication:

The convener informed that dr Werner is doing a draft, compiling the papers from the French contributors and those from the CMTW member.

Werner Balderer to send to James LaMoreaux: A requirement for Werner Balderer is to identify:

Title,

Chapter,

Email Address,

If a paper is to be contributed

- 2012 - Hungarian Conference Publication; Fórizs István (forizs.istvan@csfk.mta.hu) has compiled and it is ready.

- Project - New Book Series

- a) Prof Jan Dowgiałło (dowgian@twarda.pan.pl) has been preparing the history of the Commission and this is to be published as a IAH publication.

Note: National Science Foundation in US (<http://www.nsf.gov/>) is preparing an inventory of Mineral and Thermal Springs. Possibly there is a need for an International version documenting the thermal and mineral springs of the world. It was recognized that this was a large job.

- b) Ideas appropriate for the applications to mineral and thermal waters.

- IAH Committee

- a) The IAH Association Newsletter will draw attention to the upcoming publication of the History of the IAH CMTW prepared by Prof. Jan Dowgiałło.

- b) Report on the New Zealand Meeting

- c) James LaMoreaux will send the report to the IAH Committee.

Ad. 4.

Discussion concerning next CMTW meetings:

- First proposition:
2014 – Karlovy Vary Meeting.
This is to be held between 8 – 11th September 2014.
Suggested topics sort include: (i) Medical and curative aspects of mineral waters, (ii) Geological aspects of the mineral and thermal waters occurrence.

In addition the meeting will be conducted in the week preceding the 2014 – IAH Congress in Morocco. The Morocco IAH Conference will be between 15 – 19th September. :

- Second proposition:
2015 – Crimean Peninsula

The peninsula was discussed as it might be a potential site to include in a future IAH – CMTW site visitation schedule.

The organizing committee can be: dr Elena Kayukowa – University of St. Petersburg, Natalia Vinograd – University of St. Petersburg, Adam Porowski – Institute of Geological Sciences PAS (ING PAN), and Russian Chapter of the IAH.

Ad. 5.

Miscellaneous: General Business

Name Change

Name change to include Geothermics. Possibly “Mineral, Thermal Waters and Geothermics” or “Mineral Waters and Geothermal Applications”.

Organisational Liaison

Develop a cooperative relationship with IGA, New Zealand Geothermal Association (http://www.nzgeothermal.org.nz/nz_geo_fields.html)

Andy Shugg – get New Zealand Aust contacts {wwb site links}

Articles into IAH Newsletter

Identify and approach speakers at the Perth Conference

Sponsorship

Andy Shugg to seek information from major bottlers and from Tourism Organisations

New Members

- Contact IAH Committee to advertise in its newsletter
- Prepare a list of other Geothermal Organisations
- Establish liaison with other IAH Commissions

Transfer of information

See web-transfer and similar large file size transfer sites on web

ITINERARY

GEOHERMAL & VOLCANIC SIGHTS OF THE NORTH ISLAND, NEW ZEALAND



22nd - 29th SEPTEMBER 2013

Client Details:

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Sunday 22nd September 2013

Own arrangements for the day

Accommodation: Mercure Windsor Auckland - 58-60 Queen St Auckland

Monday 23rd September 2013

Own arrangements for the day

Accommodation: Mercure Windsor Auckland - 58-60 Queen St Auckland

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Tuesday 24th September 2013

Morning

7.00am **Breakfast** - own arrangements with hotel

8.00am **Depart Auckland (AKL)** - 3hrs drive to Ngawha

11.30am **90mins Visit Top Energy Power Station - Ray Robinson, Plant Manager: Please advise if you are running late**
DDI: +64 9 400 9817, MOB: 0274810060,
ray.robinson@topenergy.co.nz



Afternoon

1.30am **Lunch** - own arrangements

2.30pm **Waiariki Pools at Ngawha Springs RD, Ngawha Springs** - they have a pamphlet that tells you a bit about the benefits of the pools.

There is a \$4.00 cost to be paid on arrival if you want to swim



Ngawha hot pools offer a variety of mud pools to soothe away your worries. From boiling hot to tepid, there's a pool for everyone. The muddy sediment on the bottom should be rubbed on your body (don't be scared) and left to dry for a natural body mask. If you're heading north, Ngawha, just out of Kaikohe, is a must visit. Over 10 small pools with water of all temperatures and colours, all with their unique healing properties

Depart Kaikohe for the 3hr drive back to Auckland

Dinner - own arrangements on the way back to Auckland

Staying at the Mercure Windsor Auckland - 58-60 Queen St Auckland

Wednesday 25th September 2013

Morning

7.00am **Breakfast** - own arrangements

8.00am **Depart for Miranda Springs - 1hr drive**

9.00am **Miranda springs 100% Natural Mineral Pools - This will be an extra \$13.00 per person if you decide to swim**

Come and relax with us at Miranda Hot Springs in our thermally heated fresh mineral water. Centrally located, we have three pools to suit all swimmers.

Our largest pool is 47m by 17m of hot thermal mineral water at a temperature of between 36°C and 38°C depending on the season. This pool has accessible entry by an aqua-lift. The children's pool is maintained at a cooler temperature while the adult-only sauna pool sits at around 40°C-41°C. In addition, we have four private spa pools.



10.00am **Depart Miranda Springs to Thames Goldmine - 25mins drive to goldmine**



10.30am **Thames Goldmine, 40 minutes tour -**

The tour underground can be muddy, especially during the wetter months. Bring closed-toe footwear and a water proof jacket just in case, your own torch if you have one, and plenty of luck to strike it rich!

SAFETY - The underground mine is inspected regularly and meets government standards. It is mandatory that visitors to the site carry out instructions from Goldmine Experience guides or any Hauraki Prospectors Association member while on the site. Hauraki Prospectors Association Inc. (HPA) hold the site under a Crown Mining Licence and is the owner of all historical buildings and equipment. HPA reserve the right to restrict access to any part of the site at any time for health and safety reasons.

Afternoon

12.00pm **Lunch** - Own arrangements in Thames township

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Wednesday 25th September 2013

Afternoon cont.

1.00pm **Thames Museum** - there is in a park setting with modern buildings. It has period rooms with genuine locally used furnishings and clothing. Period shops include a Barbers' shop, Palmer's Sweet Shop, a grocer's and a dress shop with models. There are also Maori artefacts and photos of local Maori people. Boer war guns and relics of both World Wars, mining, kauri timber, foundry and early newspaper displays, miners "cabin", Hauraki Plains farming, beekeeping, penny-farthing cycles, early Thames cycles, car and railway exhibits make up the rest of the exhibits. There is also a section on early hospital and medicine, schools of early times from 1867 including teaching resources, status and work of women, men's work tools, clothing and accessories up to 1930s, china, Plant Pottery. There is also a large photo collection. Corner of Pollen and Cochrane Streets, Grahamstown, Thames. North end of Pollen Street, New Zealand

3.00pm **Depart Thames for Whitianga - 1hr - 15mins drive**

4.10pm **Whitianga - Hot water beach** - low tide time - You can visit up to 2hrs either side of low tide time (2.10pm - 6.10pm)

Depart Whitianga for Whakatane via Tauranga - 3hrs 30mins drive

Dinner - own arrangements on the way

8.00pm **Check into White Island Rendezvous Motel - +64 7 308 9588 - Reception closes at 9.00pm please call if you are going to be later then this**

Please Note: Check with the Reception desk for the time of your departure on the White Island tour in the morning.

If the tour is cancelled I will process the refund for everyone.

Thursday 26th September 2013

Morning

7.00am **Breakfast** - own arrangements at motel or town

9.15am **White Island Tours** offers you the incredible experience of exploring the inner crater of New Zealand's only active



marine volcano - White Island! Located 49km off the coast of Whakatane, New Zealand, White Island Tours offers its visitors a 6 hour adventure to this fascinating island volcano.

What to Bring

Fully enclosed shoes with good grip.
Warm waterproof jacket
Drink/water bottle
Sunscreen
Camera

We Provide

Quality cruising aboard purpose-built vessels
Professional and experienced crew and tour guides
1.5 - 2 hour fully guided walking tour of White Island's inner crater area.
A light packed lunch and refreshments
Safety gear (gas mask and hard hat)
Permit to land on the island
Permit to spend time with any marine life that we encounter

Afternoon

3.45pm **Depart Whakatane for Rotorua - 1 hour 15mins drive**

5.20pm **Meet at Mitai Hangi & Concert - 196 Fairy Springs Road (next to Rainbow Springs) if you are running late please call +64 7 343 9132**

Enter the world of Mitai, be enthralled by the natural bush setting and see warriors in traditional dress paddling a waka (ancient warrior war canoe). The cultural performance tells of ta moko (tattoo art), displays of weaponry, the grace of the poi dance and finishing with the mighty Haka. Watch your traditional Hangi being lifted from the ground. Take the opportunity to see glow worms and the crystal clear waters flowing from Fairy Springs. Bring warm clothing and good walking shoes.

8.30pm **Depart Mitai for the IBIS Hotel - The Reception is open 24hrs**

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Friday 27th September 2013

Morning

7.00am **Breakfast** - own arrangements

8.00am **Depart Rotorua for Waiotapu - 30min Drive**

8.30am **Arrive Waiotapu Thermal Wonderland Park**

Wai-O-Tapu (Sacred Waters) is NZ's most colourful and diverse volcanic area. Home to the Champagne Pool, experience the raw beauty and sheer power that Mother Nature offers in all forms of geothermal activity! Stimulate the senses with the sights and sounds of gushing geysers, plopping mud, thundering craters and sizzling earth.

10.00am **Drive around for 10.15am Lady Knox Geyser eruption - 2mins drive**

10.15am **Depart Waiotapu for Wairakei Terraces - 30mins Drive**

10.50am **Arrive at Wairakei Terraces for 11.00am Guided Geothermal Tour - 2 hrs**

Visit the Silica Terraces and geothermal features which have been created using surplus geothermal fluid. Then travel to the steam field lookout which overlooks the Waiora Valley and the Wairakei geothermal field. Then visit the binary Lookout and then onto the viewing room at the PowerStation. Includes Q&A along the tour. Safety clothing: long trousers, long sleeves, closed in shoes (no jandals/sandals)

Afternoon

1.00pm **Arrive at Huka Prawn Park for Lunch** - own arrangements - choose from the café or a la carte menus at own cost.

2.00pm **Huka Park Tour** - We specialise in Aquaculture, a term used to describe the propagation and rearing of aquatic animals in a controlled or selected environment. The aim here was to research and develop the ability to breed and grow tropical prawns in captivity using waste geothermal heat from the geothermal power station next door. 25min tour

2.25mins **Depart for Waimangu Boat Cruise - 40mins Drive**

3.05pm **Arrive at Waimangu Boat Cruise - Bus leaves at 3.15pm for 3.40pm Boat Cruise**

6.30pm **Dinner** - own arrangements

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Saturday 28th September 2013

Morning

7.00am **Breakfast** - own arrangements

8.45am Join the **9.00am Guided Tour of Te Puia**, taking in the Maori Arts and Crafts Institute and Whakarewarewa Thermal Valley, home to bubbling hot springs, plopping mud pools and the mighty Pohutu Geyser! See also the newly renovated Kiwi House and Interactive Gallery.

10.45am **Arrive at Whakarewarewa Thermal Village for 11.00am Cultural Performance:** Hear the melodious voices and feel the rhythm and passion of the cultural presenters, who will entertain you with song and dance. Then join the **12.00pm Guided tour** of the 'Thermal Village', and view bubbling mud pools and mineral springs where the Villagers have bathed for generations. You can even see where food gets cooked in a natural steam vent!

Afternoon

1.00pm **Lunch** - own arrangements

2.00pm **Rotorua Museum - Bath House, Government Gardens, Blue Baths - You can take a guided tour at 2pm (please check in earlier than 2pm) or walk yourself around unguided** - Discover the essence of Rotorua, its people, culture and volcanic landscape. Let us share with you the great stories which have shaped the past and present of New Zealand's premier visitor destination. Located in the world-famous Bath House building, an architectural icon in itself, Rotorua Museum is a must-see for all who visit Rotorua. See: Rotorua Stories - Cinema Experience, The Spiritual World of Te Arawa, Ake! Ake! The Story of B Company 28 Maori Battalion, Tarawera - Te Maunga Tapu / A Sacred Mountain, Taking the Cure - The Story of Rotorua's Bath House

4.00pm **Depart Rotorua for Te Aroha - 1hr 20min drive**

5.30pm **Te Aroha Mineral Spas** - Bruce Langlands, Community Facilities Operations Manager will meet you at 5.30pm at the spa for a 30mins talk - Please call +64 272734661 if you are running late please

If you would like to swim please call +647 884 8717 prior to arriving to book a time - This will be an extra an extra cost per person if you decide to swim - \$18.00 per person 30mins, \$26.00 per person 45min, \$34.00 per person 1hr - Open to 10pm

Inside our Edwardian building in the beautiful Te Aroha domain, you can choose from two kinds of relaxing, refreshing spas. Both spa types are filled with our natural, silky smooth hot soda water that has made Te Aroha famous for over 100 years.

6.00pm **Dinner** - own arrangements

7.00pm **Depart for Auckland - 1hr 40mins Drive**

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POINTS TO NOTE:

- Costs include GST unless otherwise stated.
- Group rates apply for 10 or more people.
- Prices are indicative until the time of booking and may change based on availability and final requirements. Prices are subject to change without notice.
- Prices are valid through ROTORUA VISITOR CENTRE & i-SITE.
- There is no booking fee for ROTORUA VISITOR CENTRE & i-SITE'S service.

FOR FURTHER INFORMATION PLEASE CONTACT:



Karen Cooper
Groups, Product & Packaging Coordinator

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40th International Association of Hydrogeologists Congress Sunday 15 September - Friday 20 September 2013

Current as a 5 September 2013 subject to change

	Sunday Riverview Room 5	Monday Meeting Room 11 International Secretariat	Tuesday Meeting Room 11 International Secretariat	Wednesday Meeting Room 11 International Secretariat	Thursday Meeting Room 11 International Secretariat	Friday Meeting Room 11 International Secretariat		
0900 - 0930	IAH Council Meeting						0900 - 0930	
0930 - 1000							0930 - 1000	
1000 - 1030							1000 - 1030	
1030 - 1100	Morning Tea	Morning Tea in Exhibition Pavilion 1						1030 - 1100
1100 - 1130	IAH Council Meeting	Managed Aquifer Recharge Commission Meeting					1100 - 1130	
1130 - 1200							1130 - 1200	
1200 - 1230							1200 - 1230	
1230 - 1330	Lunch	Lunch in Exhibition Pavilion 1						1230 - 1330
1330 - 1400	IAH Council Meeting		Thermal and Mineral Waters Commission Meeting				1330 - 1400	
1400 - 1430							1400 - 1430	
1430 - 1500							1430 - 1500	
1500 - 1530	Afternoon Tea	Afternoon Tea in Exhibition Pavilion 1						1500 - 1530
1530 - 1600	IAH Council Meeting	Groundwater and Ecosystems Commission Meeting					1530 - 1600	
1600 - 1630							1600 - 1630	
1630 - 1700							1630 - 1700	
1700 - 1730							1700 - 1730	
1730 - 1900		IAH International AGM Meeting Room 2&3	IAH National AGM Meeting Room 1	IAH President's Meeting			1730 - 1900	

Commission on Mineral and Thermal Waters

Commission Eaux Minérales et Thermales



MINUTES OF THE 43rd ANNUAL SESSION

8th to 13th September 2014, Carlovy Vary, Czech Republic

Together with

**MinWat 2014 – International Multidisciplinary Conference on
Mineral Waters Genesis, Exploitation, Protection and
Valorization.**

Carlovy Vary, 8 – 12 September, 2014

According to the decision of the CMTW-IAH Meeting 2012 in Budapest, Hungary, and 2013 in Perth, Australia and New Zealand (field session), **the meeting of the Commission on Mineral and Thermal Water IAH in 2014 was held in Carlovy Vary, Czech Republic.**

The meeting took place from September 8th to 13th, 2014, and was organized together with MinWat 2014 Conference.

The main organizer of the CMTW meeting was dr Tomas Vylita, a member of the Commission, and one of the main co-organizers of the MinWat 2014 Conference.

MinWat 2014 Conference Summary

MinWat2014 Conference was held under the auspices of the Ministry of Public Health of Czech Republic. Jointly convened by:

- International Association of Hydrogeologists (IAH), IAH Commission on Mineral and Thermal Waters
- IAH National Chapter of Czech Republic
- Faculty of Science, Charles University (Univerzita Karlova), Prague, Czech Republic
- T. G. Masaryk Water Research Institute (VÚV), Prague, Czech Republic

The conference was an opportunity for official or informal meetings of leading players in the field of mineral waters both from scientific and industrial sectors: hydrogeology and hydrogeochemistry (via IAH, IAHS and FH-DGG), water bottling (via EFBW), and balneology (via ISMH, FEMTEC and ESA).

Conference structure

The conference was divided into three thematic topics:

Theme A: Hydrogeology and hydrogeochemistry – origin, protection and management.

Theme B: Bottled water – market and demand, health issues.

Theme C: Balneology – balneotherapy and balneotechniques.

All presentations (themes A, B and C) during the entire conference were held in plenary way, i.e. in one lecture hall. The program during each day consisted of a number of presentation time blocks, each of these time blocks being devoted to a certain theme. At the beginning of each day – and at the beginning of most presentation time blocks – **introductory keynote lectures** were presented. The main objective of these keynote lectures was the presentation of typical problems existing in the fields of hydrogeology-hydrogeochemistry (theme A), bottled mineral water (theme B), and balneology (theme C). These introductory keynote lectures were intended also for colleagues from other disciplines. By doing so, the experts from, for example, water bottling and balneology learned about current issues in the field of hydrogeology and hydrogeochemistry, and vice versa. The invited keynote lectures (30 minutes) were followed by a series of **regular oral presentations** (15 or 20 minutes). Most presentations were from themes A and B. There was also possibility to present the work by means of **posters**.

Theme A: Hydrogeology and hydrogeochemistry – origin, protection and management.

Represented by the International Association of Hydrogeologists (IAH), the International Association of Hydrological Sciences (IAHS), and Fachsektion Hydrogeologie in der Deutschen Geologischen Gesellschaft Hydrogeology Section of the German Geological Society (FH-DGG).

Theme A included the following topics:

- A.1.** The interpretation of the term mineral waters and methods of their utilization in various countries.
- A.2.** Hydrogeological origin and hydrogeochemistry of mineral waters – Hydrogeological conceptual schemes of the structure and functioning of hydromineral systems – New ideas and opinions on the origin and specific types of mineral water (thermal, carbonate, radioactive waters, brines), evolution of mineral waters in different types of rock environment
- A.3.** Exploitation and management of mineral waters – Resource assessment and management, modelling of thermal and mineral hydrosystems, estimation of safe yield of mineral waters and quantity of heat stored in thermal water systems
- A.4.** Protection and conservation – Protection of existing mineral water resources, quality approach, risk assessment, quality protection policies
- A.5.** Abstraction and transport of mineral and thermal waters, technical problems (corrosion, transport, heat regeneration, hygiene issues, etc.)
- A.6.** Socio-economic aspects – Socio-economic benefits at the scale of springs, their watersheds and at the regional and national scale
- A.7.** Case studies on mineral water exploitation and protection – Scientific, technological, economic, social and legal issues

Theme B: Bottled water – market and demand, health issues.

Represented by the European Federation of Bottled Waters (EFBW)

Theme B included the following topics:

- B.1.** Challenges and opportunities of the European bottled water sector
- B.2.** The original (pristine) purity of natural mineral waters“– the legislation of the EU, as opposed to that of Czech Republic, does not specify the highest minimum required sensitivity of method detectable levels for chemical analysis methods used to establish the content of anthropogenic constituents, of which the consequence is that the gradual improvement of tools and methods leads to detection of some constituents undetectable before.
- B.3.** The analysis of contaminants at ultratrace level in water, and how to avoid ‘false positive’ results – Also the issue of emerging contaminants, and how to proceed for analyses with very low threshold
- B.4.** EU situation in relation to health claims: what can be claimed by mineral water brands based on EU legislation and recent work by European Food Safety Authority (EFSA)? – Mineral waters as part of food, and legislation on health and nutrition, for example (i) Commission regulation (EU) No 432/2012 of 16 May 2012 establishing a list of permitted health claims made on foods, other than those referring to the reduction of disease risk and to children’s

development and health, and (ii) Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods

- B.5.** Safety of packaging: the issue of plastics (the safety of PET bottles)
- B.6.** Daily intake of mineral waters – links with (i) the definition of natural mineral waters, (ii) contents of natural mineral waters and their effect on health, and (iii) benefits of mineral waters over drinking water
- B.7.** Use of mineral waters for childrens nourishment (mineral waters suitable for preparation of baby food)
- B.8.** The issue of medicinal effect of bottled mineral waters (specifically highly mineralized waters). – Classification of these waters is not regulated by European legislation and therefore these waters are in some countries considered as food, and health supporting additives in other countries.
- B.9.** The issue of microbiological quality of natural mineral waters (as no water purification treatment by chlorination or similar method)
- B.10.** Containers (plastic, etc.) of bottled waters and their impact on the environment – Recycling
- B.11.** Bottled water in developing countries: Benefit for the whole population or 'stealing' water from the poor?

Theme C: Balneology – balneotherapy and balneotechniques.

Represented by the International Society of Medical Hydrology and Climatology (ISMH), World Federation of Hydrotherapy and Climatotherapy (FEMTEC), and the European Spas Association (ESA)

Theme C included the following topics:

- C.1.** Medical use of radon-rich mineral waters – locomotion apparatus diseases
- C.2.** Medical use of carbonated mineral waters – breathing apparatus diseases
- C.3.** Medical use of the sulphuric waters – skin diseases
- C.4.** Medical use of mineral waters in the field of gastroenterology
- C.5.** Treatment of neurological diseases
- C.6.** Treatment of metabolic disorders
- C.7.** Treatment of other diseases – dermatology and psychiatry
- C.8.** Use of mineral waters in the field of sports rehabilitation
- C.9.** Application of mineral waters for cosmetology

CMTW Meeting 2014 during the MinWat 204 Conference

The 43rd Meeting of the Commission on Mineral and Thermal Waters of the International Association of Hydrogeologists (CMTW-IAH) was held together with the MinWAt 2014 Conference.

CMTW Business Meetings in 2014:

10:30 – 12:30, 9.09.2014

15:00 – 17:00, 10.09.2014

CMTW field trip:

13.09.2014 – whole day; Organizer: Dr Tomas Vylita.

LIST OF PARTICIPANTS

No	Name	Country	e-mail
1	LAMOREAUX, JAMES (Chairman)	USA	jlamoreaux@pela.com
2	POROWSKI, ADAM (Secretary)	PL	adamp@warda.pan.pl
3	BALDERER, WERNER (Vice Chairman)	CH	balderer@erdw.ethz.ch werner1111@msh.com
4	VYLITA, TOMÁŠ	CZ	tomasvylita@seznam.cz info@geologie-vylita.cc
5	SHUGG, ANDREW	AU	ashugg@skm.com.au ashug@globalskm.com
6	FÓRIZS, ISTVÁN	HU	forizs.istvan@csfk.mta.hu
7	LORBERER, ÁRPÁD	HU	lorberer@vituki.hu lar@t-online.hu
8	MARCIN, DANIEL	SK	daniel.marcin@geology.sk
9	HAŁAJ, ELŻBIETA	PL	elzbieta.halaj@gmail.com
10	WACHOWICZ-PYZIK, ANNA	PL	amwachowicz@poczta.fm
11	PISCOPO, VINCENSO	IT	piscopo@unitus.it
12	LACHASSAGNE, PATRICK	FR	patrick.lachassagne@danone.com
13	PAPIĆ, PETAR	RS	papic@rgf.rs

ACCOMPANING PERSONS

No	Name	Country	
1	LaMoreaux, Nicole, Mrs	USA	field session & cultural program
2	Balderer, Christina, Mrs	CH	field session & cultural program
3	Susan Shugg	AU	field session & cultural program

ABSENT MEMBERS

Name	Country	Member / Cand. Memb.	Absent with apologies
DOWGIAŁŁO, JAN (hon. Chairman)	PL	M	*
KRALJ, PETER (hon. Chairman)	SLO	M	*
DEÁK, JÓZSEF	HU	M	*
FERU, ADRIAN	RO	M	*
POPESCU, MARIA	GR	M	
CARELLA, ROBERTO	IT	M	
RYBACH, LADISLAUS	CH	M	*
CALADO, Carlos	PT	M	
CRUZ, José Virgilio	PT	CM	
CUCHI, Antonio	ES	M	*
DOTSIKA, LIANA	GR	CM	
FRANCESCHI, Michel	FR	M	
FRICKE, Michael	FR	M	
HABERMEHL, Rien	AUS	M	
HERCH, Andrea	GER	M	
IBRAGIMOVA, Irada	AZN	M	
ISSAADI, Abderrahmane	ALG	M	
LAHERMO, Pertti. W.	FIN	M	
LAING, Colin	AUS	M	
LESMO, Renato	IT	M	
MELIORIS, Ladislav	SLO	M	
MOORE, JOHN	USA	M	
PANG, Zhonghe	CHINA	M	
POUCHAN, Pierre	FR	M	
ROSENTHAL, Eliahu	IS	M	
RISLER, JEAN J.	FR	M	
SCHNEIDER, Jean	AUS	M	
SHAWKI, Abdine	ET	M	
SHTEREV, KOSTADIN	BUL	M	
TAHLAWI, Mohamed Ragaie El	EGY	M	
VINOGRAD, NATALIA	RU	M	*
VERDEIL, Pierre	FR	M	
VON STORCH, KURT	GER	M	
ZUURDEG, Boudewijn	NL	M	

Scientific Lectures by CMTW Members during the MinWat 2014 Conference

8-Sep-2014	Lachassagne P. <i>(introductory key-note lecture; Theme A)</i>	FR	Guarantying the purity of Natural Mineral Water: the 20 years technical and socio-economic Evian experience conciliating collective responsibility for environment protection, and local development
8-Sep-2014	Fórizs I. <i>(introductory key-note lecture; Theme A)</i>	HU	The origin of Hungarian bottled mineral waters by environmental isotopes
9-Sep-2014	Balderer W. <i>(speaker, Theme A)</i>	CH	The Thermal spring of Bad Ragaz Switzerland: Characterisation of origin, chemical properties and observed variations of fluorescence spectra
10-Sep-2014	Lachassagne P. <i>(speaker, Theme A)</i>	FR	The need of a multidisciplinary approach for determining the structure and hydrogeochemical functioning of complex sparkling natural mineral water systems: a case study from southern France
10-Sep-2014	Balderer W. <i>(speaker, Theme A)</i>	CH	Isotopic investigation of the origin of ammonia and nitrate in the mineral spring waters of Scuol / Lower Engadine, South Eastern Switzerland
10-Sep-2014	Lachassagne P. <i>(speaker, Theme A)</i>	FR	Use of several environmental dating tracers with lumped parameter models for the understanding of complex natural mineral water systems (Evian, France, case study)
10-Sep-2014	Piscopo V. <i>(speaker, Theme A)</i>	IT	Mineral waters of Castellammare di Stabia (Southern Italy): a particular case of seawater intrusion in a carbonate aquifer
11-Sep-2014	Lachassagne P. <i>(speaker, Theme A)</i>	FR	Role of deep fractures and ancient weathering profiles in a hard rock sparkling natural mineral water hydrosystem
11-Sep-2014	Shugg A. <i>(speaker, Theme A)</i>	AU	A model for the origin of carbonated mineral waters of Central Victoria
11-Sep-2014	Marcin D. <i>(speaker, Theme A)</i>	SK	A new look at the hydrogeological structure of thermal waters in Piešťany Spa, Slovakia

Agenda / Points of Discussions

at the CMTW Meeting in 2014

International Interdisciplinary Conference on Mineral Waters Genesis,
Exploitation, Protection and Valorization - MinWat2014
8 – 11 September, Carlovy Vary, Czech Republic

CMTW Business Meeting in 2014:

10:30 – 12:30, 9.09.2014

15:00 – 17:00, 10.09.2014

1. Welcome of the participants and members: Jim LaMoreaux and Tomas Vylita
2. Acceptance of the CMTW Minutes from New Zealand, 2013: short info will be given by Andy Shugg or Jim LaMoreaux.
3. New information (update) from the IAH head office regarding evaluation of the CMTW: short info by Jim LaMoreaux
4. Information on the new CMTW web-site construction, development, management: Anna Wachowicz, Elżbieta Hałaj, Adam Porowski
5. Information / discussion about upcoming publications from CMTW meetings: Evian and Budapest: Jim LaMoreaux and Istvan Fórizs
6. New members: voting on the admission of Anna Wachowicz and Elżbieta Hałaj as full members of the CMTW: short info will be given by Secretary Adam Porowski.
7. Propositions of new members
8. Propositions of the next meetings: discussion, voting, decisions

Protocol (by Secretary A. Porowski)

Ad. 1.

The main organizer, Dr Tomas Vylita, gave a welcome speech and presented briefly the organizing and scientific committee at the MinWat Conference.

The chairman of the CMTW welcomed all the members, presented the meeting agenda and invited active discussion on the next points of the program.

Ad. 2.

The Minutes of Perth, Australia and Auckland, New Zealand meeting in 2013 was prepared by Dr Jim LaMoreaux, and Dr Andy Shugg, who deputized absent Secretary Dr Adam Porowski.

The Minutes were presented by the chairman Dr Jim LaMoreaux and accepted unanimously by all members.

Ad. 3.

The chairman of the CMTW presented updated information regarding the working groups of the IAH and requirements from the IAH authorities concerning better integration of working group members and development of joint activities. Also, the case of better integration in IAH activities was highlighted.

Ad. 4.

The secretary, Adam Porowski, presented the updated information about CMTW website development. The website construction team of three CMTW members was formed, namely: Anna Wachowska-Pyzik, Elżbieta Hałaj and Adam Porowski. The new website was completed and started in the free of charge server with the following address: <http://www.cmtw.c0.pl>

The process of moving the website to the official servers of the IAH was officially initiated. However, the response from the IAH authorities was very sluggish and the case is still in the process.

Ad. 5.

The chairman presented updated information concerning the latest and upcoming joint publications. First of the newly published book "Thermal and Mineral Waters: Origins, Properties and Applications" edited by W. Balderer, A., Porowski, H. Idris and J. LaMoreaux was presented for the CMTW members. The publication is regular book, 125 pages, published by Springer. The book concerns CMTW meeting in Cairo, Egypt, in 2009, organized by many-years member and vice-chair of the Commission dr Hussein Idris. He organized the CMTW meeting together with his 60-years activity in the field of hydrogeology. The book contains several papers presented at the scientific session in Cairo, Egypt.

Dr István Fórizs presented updated information about new special issue of Environmental Earth Sciences: the issue was almost ready; however two additional manuscripts were still in the process, due to difficulties in contact with authors. The new manuscripts were considered to replace those which were unable to proceed. The secretary, Adam Porowski, proposed to submit one of his papers and one of Dr Elena Kayukova to complete the special issue. This special issue also will combine best papers from CMTW meeting in Evian, 2011.

Dr Andy Shugg and Chairman Dr Jim LaMoreaux also presented updated information about next publication concerning the mineral and thermal water resources of New Zealand and the CMTW meeting in Rotorua, 2013. Andy Shugg will be the main editor of the upcoming publication. Due to a large material and data to combination the co-authors are seeking. The work is in the process.

Ad. 6.

Two young scientists (doctoral students) from AGH University Of Science and Technology, Kraków, Poland submit their applications for a full membership:

1. Anna Wachowicz-Pyzik
2. Elżbieta Hałaj

Their official CVs were sent to CMTW secretary who forwarded them to the chairman and vice-chairman.

The applicants were present at the CMTW meeting in Budapest, Hungary, 2012. Moreover, both are responsible for construction and maintenance of the new CMTW website.

The chairman and secretary presented the applicants for membership. Also, applicants were asked to make brief presentations about themselves, their scientific fields and their current research.

The CMTW members unanimously accepted Anna Wachowicz-Pyzik and Elżbieta Hałaj as new members of the CMTW.

Ad. 7.

Two new members were proposed for membership: Dr. Petar Papic, Professor of Geochemistry at Belgrade University and Mr. Kriang Pirarai, Senior Hydrogeologist with the Thailand Department of Ground Water Resources. Resumes for both were distributed. Dr. Papic was in attendance and Mr. Pirarai sent his regrets. They are to be considered at the next CMTW meeting to be held in concurrence with the IAH Congress in Rome in 2015.

Ad. 8.

Three propositions of next CMTW meetings were presented.

1. Proposition 2015: together with AQUA 2015 IAH Congress, Rome, Italy.
2. Proposition 2016: together with MinWat 2016 in Portugal.
3. Preliminary proposition 2017: Crimea Peninsula, Russia, main organizer: dr Elena Kayukova and Russian Chapter of IAH.

Dr Vincenzo Piscopo presented detailed information about preliminary program of the AQUA 2015 Congress and very good opportunities for the IAH working group meetings.

The CMTW members accepted the proposition of Dr Piscopo. Additionally, the special field trip recommended for the CMTW members are going to be organized in the form of post-congress field trip.