THIRD CIRCULAR FIRST EAST AFRICAN RIFT GEOTHERMAL CONFERENCE ARGeo C-1



GEOTHERMAL ENERGY: AN INDIGENOUS, ENVIRONMENTALLY BENIGN & RENEWABLE ENERGY RESOURCE

24-29 NOVEMBER 2006

UNITED NATIONS CONFERENCE CENTER ADDIS ABEBA, ETHIOPIA

Organized by the

Geological Survey of Ethiopia



In collaboration with:

The Ethiopian Environmental Protection Authority, The Ethiopian Electric Agency, The Ethiopian Rural Energy Development & Promotion Center, The Ethiopian Electric Power Corporation, The Ethiopian Geoscience and Mineral Engineering Association, and The International Geothermal Association.

www.gse-argeoc1.org













THE CONFERENCE

ARGeo is a project aimed at facilitating the development and utilization of the geothermal resources of the East African Rift region. It is presently in its final stage of preparation. On the occasion of the ARGeo Steering Committee meeting held in Nairobi in April 2004, it was decided that conferences be held periodically within the region to serve as fora for the exchange of information and experience on the exploration, development and utilization of geothermal resources in the region.

For the purposes of the geothermal community in the region staying abreast of developments worldwide and of facilitating the wide dissemination of information on the geothermal resources of the region, the conferences were intended to be for also for international participation.

It was decided that the first conference be organized by the Geological Survey of Ethiopia (GSE), to be held in Addis Ababa in late 2006. An organizing committee was set up by the GSE with its collaborating institutions to hold the conference from November 24 to 29, 2006.

The conference is planned to address all technical issues concerning the resource from initial exploration to development and utilization, including case histories, as well as the key related environmental, social, legal, institutional, economic and financial issues, private sector participation, direct resource utilization schemes and possibilities.

Given the worldwide recognition of the magnitude and quality of the geothermal resource base of the region and the interest to contribute to its development, it is expected that specialists engaged in the exploration, development and utilization of geothermal resources worldwide will participate in the conference, as well as representatives of bi- and multilateral institutions engaged in geothermal project financing and implementation. In addition, participants both from within the current ARGeo region and from other African countries are expected to attend.

CONFERENCE ORGANISATION

The Conference is organised by the Geological Survey of Ethiopia in collaboration with:

- The Ethiopian Environmental Protection Agency (EEPA)
- The Ethiopian Electric Agency (EEA)
- The Ethiopian Rural Energy Development and Promotion Centre (REDPC)
- The Ethiopian Electric Power Corporation (EEPCo)
- The Ethiopian Geoscience and Mineral Engineering Association (EGMEA)
- The International Geothermal Association (IGA)

CONFERENCE ORGANIZING COMMITTEE

(A) Steering Committee:

- * His Excellency Ato Alemayehu Tegenu, Minister of Ministry of Mines and Energy (MME)
- Her Excellency W/o Sinknesh Ejigu, State Minister of Ministry of Mines and Energy (MME)
- * Ato Tolesa Shagi, General Director, Geological Survey of Ethiopia (GSE)
- * Ato Mihret Debebe, General Director, Ethiopian Electric Power Corporation (EEPCo)
- * Ato Getahun Moges, General Director, Ethiopian Electric Agency (EEA)
- Ato Asres Woldegiorgis, General Director, Ethiopian Rural Energy Development and Promotion Centre (EREDPC)
- * Ato Desalegn Mesfin, Deputy General Director, Environmental Protection Agency (EPA)

(B) Organizing Committee:

Chair person: Dr (W/o) Meseret Teklemariam (GSE) Secretary: Ato. Solomon Kebede (GSE) Co-secretary: Ato. Mesfin Haile (GSE)

Technical programme and publications sub-committee

- Ato. Yiheyis Amdebrhan (GSE) Chairman
- Dr. Berhanu Gizaw (GSE)
- Dr. Tadiwos Chernet (GSE)
- Ato. Birhanu Bekele (GSE)
- Ato. Getahun Demissie (GeoMET Plc and EGMEA)
- Ato. Shimeles Fekadu (EPA)
- Ato. Endale Gorfu (EREDPC)
- Ato. Mulugeta Assefa (EREDPC)
- Ato. Mulugeta Assaye (EEPCO)

Fund raising sub-committee

- Ato. Tadesse Mamo (GSE) Chairman
- Dr. W/o Meseret Tekelemariam (GSE)
- Ato. Salahadin Ali (GSE)
- Ato. Meles Teka (MME)
- Ato. Abiy Hunegnaw (MME)
- Ato. Solomon Tadesse (EEPCo)
- Ato. Abraham Muluneh (GSE)

Field trips and logistics sub-committee

- Ato. Kibret Beyene(GSE) Chairman
- Ato. Solomon Kebede (GSE)
- Ato. Asfaw Teclu (GSE)
- Ato. Mergia Tasew (EEPCo)
- Ato. Akalewold Seifu (GSE)
- Ato. Fekade Eguale (GSE)

Press and media co-ordinator

• W/o. Sofia Mohammed (MME)

Public relations, culture and social sub-committee

- Ato Sendeku Araya, Co-ordinator (EEPCo)
- Ato. Mesfin Haile (GSE)
- Ato. Tadesse Mamo (GSE)
- Ato. Salahadin Ali (GSE)
- Ato. Sahlu Alamayehu (EEPCo)
- Ato. Daniel Taye (EEA)

Audit sub-committee

- Ato. Yohannes Lema (GSE) Chairman
- Ato. Tafesse Gizaw (GSE)
- Ato. Zewdu Abtew (GSE)
- Ato. Lema Kassa (GSE)

Contact Address

Hydrogeology, Engineering Geology and Geothermal Department Geological Survey of Ethiopia P. O. Box 40069 Addis Ababa, Ethiopia Telephone: 00 251 (0)11- 320 2858, 320 2861, 371 1297 Fax: 00 251 (0)11- 371 2033 E-Mail: <u>hydrogeology@ethionet.et</u> www.gse-ARGeoC1.org Location: Mekanisa, Addis Ababa, Ethiopia

CONFERENCE VENUE

The conference activities will be held from 27 to 29 November 2006 at the United Nations Conference Center (UNCC) located in the premises of the United Nations Economic Commission for Africa (UNECA) in Addis Ababa, Ethiopia.

The locations of the UNCC and the hotels where participants will be staying are shown the in figure below. The distances to the UNCC along the route that the shuttle bus will follow (white line) are 4.8 kms from the Sheraton, 2.8 kms from the Ghion and 1.1 kms from the Hilton hotels.



The Opening Session will be held in the large conference hall (Room 1) and will be devoted to the opening ceremony and keynote addresses. The technical program will begin after the morning coffee break and will be held in Room 2. This room has a seating capacity of about 500 participants and is equipped with Computers for Power Point Presentations as well as with overhead and slide projectors.

ORGANIZATION AND TECHNICAL PROGRAM

The Technical Program of the conference will consist of key-note lectures as well as oral and poster presentations. The detailed conference programme will be issued with the final circular on November 10, 2006. The language of the conference will be English.

Technical presentations will be made in five sessions from the morning of November 27 to November 29, 2006. The daily program will be from 8:30 AM to 5:30 PM. Lunch break will be from 12:30AM to 2:00 PM. There will be coffee breaks of 15 minutes midway during each session.

The conference will end with a closing ceremony in the afternoon of November 29, 2006. Following that, officials from the ARGeo subscribing countries and the project implementing agencies will hold a round table discussion on the current status of the project and on the way forward.

PRESENTATIONS

About eighty abstracts have been received. These are currently being allocated to oral and poster presentations with a view to maintaining balance in subject and area coverage. Participants who will be requested to make poster presentations will accordingly be advised before mid-November so that they will be able to prepare their posters before they arrive in Addis Ababa.

Oral Presentations

Oral presentations will each have 15 minutes duration with an additional 5 minutes for discussion. The ime allocation will be strictly observed.

Poster Presentations

The available stands for posters will be 2 meters high by 1 meter wide. Poster presenters are expected to remove their displays at the end of the session allocated to them. Pins, adhesive tapes and other materials necessary for setting up the posters will be available at the registration desk.

ACCESS TO THE UNCC

A shuttle bus service will be available to transport participants between their hotels and the UNCC. On November 28 and 29, the bus will leave the Sheraton at 7:40 AM, the Ghion at 8:00 AM and the Hilton at 8:15 AM to arrive at the UNCC at session opening time, 8:30 AM.

On November 27, the bus will leave the hotels respectively 30 minutes earlier to reach the UNCC in time for the start of registration at 8:00AM.

On arrival at the UNCC for the first morning of the conference, participant identity will be checked against a list of participants at the gate. Please have your passports with you in case that it becomes necessary to confirm identities.

Badges will be issued during registration. Conference participants will be required to wear their identification badges at all times, in addition for getting admission to the UNCC,

Vehicles require special permits to be allowed into the premises. However, UNECA does not assume responsibility for any loss of, or damage to, property.

REGISTRATION

1. Registration for the field trip will be made on November 23 starting at 4:00 PM at the hotels where participants will be staying.

A pre-conference field trip fee of US\$ 150.00 or equivalent in Birr or Euro will be payable at registration for those participants who have not been registered by their sponsors. This will go toward partially offsetting the direct cost of organizing the field trip.

2. Registration for the Conference may be done either:

a) on Sunday November 26 starting from 4:00 PM till the end of the Ice-breaker party for participants at the Sheraton Addis Hotel; or,

(b) on November 27, starting from 8:00 AM at the UNCC. The registration desk will be open all day during the hours that the conference will be in session.

A conference registration fee will be payable for those participants who have not been registered by their sponsors. This will go toward partially offsetting the direct cost of organizing the conference. These fees will be as follows:

Participants from ARGeo subscribing countries: US\$ 150.00

Other participants:	US\$ 200.00
Students from ARGeo subscribing countries:	US\$ 150.00
Others:	US\$ 100.00

The above fees can also be paid in Birr or Euro equivalent.

Participants will be provided with conference documentation and stationary at the times of registration.

MEALS AND REFRESHMENT

Lunch will be served to participants at the UNCC cafeteria during 27-29 November. Refreshments will be served during morning and afternoon coffee breaks

SOCIAL FUNCTIONS

An Ice Breaker party will be hosted at the Sheraton Addis Hotel on Sunday November 26, 2006 from 6:30 to 8:30 PM.

A cultural dinner and music and dance show will be organized at the Ghion Hotel on Tuesday November 28 at 7:00 PM.

A conference closing dinner will be hosted at the Addis Hilton Hotel on Wednesday November 29 from 7:00 PM.

Participants who will be staying at the other of the above hotels will be transported to and from the social functions by bus.

FIELD TRIP

It is regretted that the post-conference field trip to the Tendaho geothermal field had to be canceled due to reasons of logistics.

Instead, the organizing committee has extended the duration of the pre-conference field trip by one more day to three days and two nights. This field trip will now take place from November 24 to 26, 2006. The additional day will not result in an increase of the field trip fee of US\$ 150 that has been announced in the 2nd. Circular.

A description of the geological terrain to be traversed, as it pertains to the occurrence and character of geothermal resource prospects, will be provided in the field trip guide. The itinerary to be followed during the pre-conference field trip will be as follows

Friday November 24: Visit the northern sector of the Main Ethiopian Rift (MER)

Leave the hotels at 7:00AM by bus and drive along the main highway to Metahara area (190km from Addis Ababa). View tectonic and magmatological features along the way, stopping in key areas. The geological terrain is the general setting of Fentale-Tedecha and Dofan (Wasero) geothermal prospect areas but these are far out of the way to visit. A stop will be made during the middle of the day for a packed lunch in the Awash National Park above the gorge of Awash River. The group will return to Adama in the late afternoon to spend the night at the Rift Valley Hotel.

<u>Saturday November 25:</u> Start from Adama at 7:00 AM, drive through the central sector of the MER via Mojo town and visit the Alutu volcanic center, geothermal field and pilot plant.

The day will be spent traveling through the typical central MER floor characterized by ignimbrites and volcano-sedimentary rock cover of Plio-Pleistocene age. Silicic volcanic massifs will be visible at varying distances from the highway. The general area of the Tulu-Moye geothermal prospect will be pointed out. During the middle of the day, the group will stop for lunch at the Wabi Shebele Hotel on the northwestern shore of L. Langano. In the afternoon, the Alutu volcanic center and the geothermal field will be visited including the fluid gathering system, the pilot power plant, and well nos. 3, 6, 8 and 4. The working day will end at the Bekele Molla Hotel on the southwestern shore of L. Langano, where the group will stay for the night.

Sunday November 26: Visit the large cluster of coalesced volcano tectonic collapse structures that host the 256m deep L. Shalla and the area of hydrothermal activity on the western shore of the lake. Travel back to Addis Abeba to arrive about 3:00 PM. The group will make a detour on the way back for lunch in Adama.

GENERAL INFORMATION

Visa Requirement

A visa is required to enter Ethiopia except for Djiboutian and Kenyan nationals. Participants from other countries are advised to have valid visas before arrival in Addis Abeba.

For prospective participants from countries where there are no permanent Ethiopian diplomatic missions, the issuance of entry visas upon arrival at Bole international airport can be facilitated by the Geological Survey of Ethiopia. Participants in need of such assistance should send the following

information to the Organizing Committee with a request for assistance by fax or e-mail at least three days before arrival. They should provide the following information.

Full name, Nationality, Passport number, issuing authority, dates of issue and expiry Place of departure for Addis Abeba; Airline, Flight No., expected date and time of arrival in Addis Abeba; and a scan or photo-copy of passport pages with photo, name, nationality and validity dates. A fee of US\$ 20 will be payable in cash at the airport for an entry visa valid for one month.

Airport Tax

An air port tax of US\$ 20 will be payable in cash on departure unless it had been included in the price of the air-ticket at the time of purchase.

Transport from the Airport

Transport will be provided for taking arriving participants from the airport to their hotels. The vehicle will be labelled "ARGeo C-1" and parked near the east end of the parking lot at the airport, on the left end as participants leave the terminal building

The airport is located 5 kilometres from the area of the city where the hotels are located. If by chance participants miss the shuttle service, taxis will be available to provide transport to the hotels.

Currency/ Banks

The legal tender in Ethiopia is the Birr which is divided into 100 santims. The exchange rate with the major currencies fluctuates slightly over time. On 26 October, 2006 it was Birr 8.7037 to the US\$ and Birr 16.3099 to the UK£. Credit card use is not widespread in Addis Abeba and participants are advised to carry cash or traveller's cheques. There are a number of banks where foreign currency may be converted to Birr, including in the UNECA premises and major hotels. Hotel accommodation bills will be required to be settled in foreign exchange.

Power Supply

Mains power supply is 220 volt, 50 Hz

Health and Medication

Drinking water from the tap is not recommended. Several brands of bottled and mineral waters are widely available at moderate price.

Malaria is endemic in the areas of the field excursion. Participants in the field trip are advised to take the necessary preventive measures in time.

It is necessary to have valid vaccination certificates for yellow fever prior to arrival. Vaccination against cholera is also required for persons who, during the six days prior to arrival in Ethiopia, have visited or transited areas where cholera has been reported.

Participants with special health related needs are advised to inform the organizing committee upon arrival as precaution in case of need to for assistance.

Participants are advised to obtain travel insurance (medical, personal accident, luggage) in their countries prior to departure.

ACCOMMODATION

Addis Abeba owes it's founding 120 years ago this November to the Finfine thermal springs and has a 102-year history of commercial use of geothermal water for bathing. The three hotels selected for hosting participants have geothermal water swimming pools. Participants may enjoy these facilities.

1. Most participants are expected to stay at the Ghion Hotel. A block booking of 50 rooms has been negotiated: \$56 (single room) and \$68 (double room) per day inclusive of breakfast, tax and service charge. Participants who wish to benefit from this arrangement should notify the organizing committee before November 5, 2006.

2. Participants who wish to stay at the Sheraton Addis or Addis Hilton hotels may make reservations through the organizing committees. Special rates have been negotiated with both hotels, as below, for

reservations made before November 10, 2006. Further information about these two hotels can be found on the websites shown below.

 Addis Hilton Hotel: The following rates have been negotiated for conference participants: Standard rooms: US\$ 98.00 single and US\$ 113.00 double occupancy, Executive floor rooms: US\$ 150.00 single and US\$ 165.00 double occupancy, Duplex suites on the executive floor: US\$ 160.00 single, US\$ 175.00 double occupancy

The rates are exclusive of breakfast, 15% VAT and 10% Service Charge:

The hotel website is: <u>http://www.hilton.com/en/hi/hotels/index.jhtml?ctyhocn=ADDHITW</u>

• Sheraton Addis Hotel: Single room: US \$147.00, bed and breakfast. The rate are exclusive of 15% VAT and 10% Service Charge. In case of difficulty, guests may contact the hotel and identify themselves as ARGeo C-1 participants.

The hotel has a dedicated web page for making reservations by participants who wish to stay there: <u>The 1st African Rift Geothermal Conference (ARGEO-C1)</u>. The hotel website is: <u>http://www.starwoodmeeting.com/StarGroupsWeb/MPView.go?id=0610195071&mp=true&rep=0</u> Password: 6DA44

CONFERENCE SPONSORS

The conference organizers thankfully acknowledge the support provided by the following organizations:

- ✤ The Federal Institute for Geosciences and Natural Resources, BGR
- ✤ The United Nations Environmental programme, UNEP
- International Geothermal Association, IGA
- ✤ National Mining Corporation, NMiC
- Ethiopian Science and Technology Agency, ESTA
- Midroc Gold
- * Ethiopian Earthscience and Mineral Engineering Association, EGMEA, and,
- ✤ GeoMET Plc,