

## Geothermal Exploration in Turkey with Phoenix Equipment

**P**hoenix equipment is being deployed throughout Turkey in areas where there is high potential for finding geothermal energy.

Energy Holding, a global company involved in iron and steel, agriculture, construction and renewable energy, is acting as a major developer of geothermal energy projects. The company has more than 50 geothermal concessions and is using Phoenix MT/AMT/TDEM equipment to search for this renewable energy resource.

Energy Holding, based in Istanbul, has five years of experience in geothermal energy development projects. The company involvement is vertically integrated, from the exploration stage and drilling, to establishing and operating geothermal power plants.

In line with this full integration strategy, and in order to conduct its own exploration studies, the company purchased from Phoenix one of Turkey's largest systems for AMT/MT/TDEM measurements; it consists of two Phoenix V8 systems with T-4 transmitters as well as seven MTU-5A systems.

The company formed its own in-house MT team led by geophysicist Erhan Erdoğan and consultant Prof. Ahmet T. Başokur. In August 2013, two experienced Phoenix geophysicists, Yann Avram and Alexander Golyashov, visited Energy Holding's concession areas for MT team field training. During the 15 days of training, the Energy Holding MT team learned about data acquisition, processing and interpretation. The Energy Holding MT team recently completed successful MT fieldwork at one of the company's geothermal concessions in Manisa, Turkey. ■



**Above:** an Energy Holding MT team in the field with Phoenix equipment, left to right; Orhan Aydoğan, Boran Demir, Kürşat Erdağ and Egemen Erkanli



**Right:** Dinner on the Bosphorus, Istanbul; the strait forms part of the boundary between Europe and Asia. From left; Eser Tezcür, Atilla Başol, CEO of Energy Holding; and Leo Fox, Audrey Hutchison and Damien Fox of Phoenix

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## PRESIDENT'S MESSAGE

In our June issue, I wrote about Phoenix geophysicist Tes Haile meeting American Peace Corps volunteer Andrew Tadross, leading to Phoenix making a \$5,000 donation to help bring water to the Hugemberda primary school in Tigray, Ethiopia. We're pleased to report the project was completed quickly, with most of the labour donated by local villagers. An inauguration ceremony was held on August 15. Andrew attended and wrote, in part,

"The impact of this project on the 400+ students and teachers is enormous; they can now wash their hands after using the latrine, drink water throughout the day, and fill up their jerry cans to take water to their homes – which is typically the responsibility of girls in the village. Hopefully it will make their lives a little easier."

He added, "My heart swelled, thinking of how many people gave money for this project but won't be able to see how happy the people are."

The pictures Andrew sent show the joy the water project brought this village. Phoenix is proud to have played a part.



Again in 2013, Phoenix donated to the KEGS scholarship fund, as well to the ORBIS "Pull for Sight" on July 14.



On a personal note, on behalf of everyone at Phoenix, congratulations to two recently married couples. Przemek Kiszka, Director of Development with our Polish customer Geopartner married Aleksandra in June near Krakow. In September, Phoenix's Software Products Manager Jorge Torres-Solis married Rebecca Studin in Toronto. We wish them the very best.

~ **Leo Fox**



Jorge and Rebecca combined their cultures in a joyful celebration in Toronto.



Aleksandra and Przemek Kiszka donned traditional garb after their wedding ceremony in Poland.

## Poland



Geopartner, after purchasing their first Phoenix MT system in September 2012, has won several sizeable contracts for hydrocarbon and mining exploration, using MT/AMT, IP and TDEM techniques.

Geopartner recently expanded their stock of Phoenix equipment and can now deploy 30 MT channels and 15 Controlled Source channels in the field.

## Ethiopia

Phoenix Geophysics recently supplied MT and TDEM equipment to the Geological Survey of Ethiopia, within UNEP's African Rift Geothermal Development Facility (ARGeo) Project. The ARGeo project is funded by the UN's Global Environment Facility (GEF).

UNEP, the United Nations Environment Programme, was established in 1972 as the voice for the environment within the United Nations system. UNEP acts as a catalyst, advocate, educator and facilitator to promote the wise use and sustainable development of the global environment.

**Russia**

Last July, Phoenix geophysicists Olex Ingerov and Murat Urakov took part in the Canadian economic mission to Yekaterinburg, Russia led by Canadian Ambassador to Russia, John Sloan. **Right:** Ambassador Sloan, far left, cuts the ribbon to open the fair. As members of the Canadian delegation, Olex and Murat took part in the 2013 Urals International Fair and Forum of Industry, visited scientific universities and institutes and participated in round-table discussions on Canada/Russia co-operation.



**Costa Rica**

The Instituto Costarricense de Electricidad (ICE), purchased a new V8-6R system with MT/AMT/CSAMT techniques, for geothermal surveys.

**Right:** a July visit to the Seismological and Volcanological Observatory, Arenal and Miravalles, Chiripa; Mits Yamashita, Carlos



Guerrero and Yi Lu provided Induced Polarization (TDIP, SIP) training for ICE's Centro Servicio Exploración Subterránea, UEN PySA, Dept. Geofisica

**Right:** geophysicist Alex Golyashov and Latin America sales manager Carlos Guerrero, both of Phoenix; Eddy Leiton from Alvaro Umaña and Cia, Phoenix sales representative in Costa Rica; and from ICE, field



technician Hector Corea, Ing. Diego Badilla, interim field supervisor and field technician Diego Dalvise Zeriali

**Colombia**

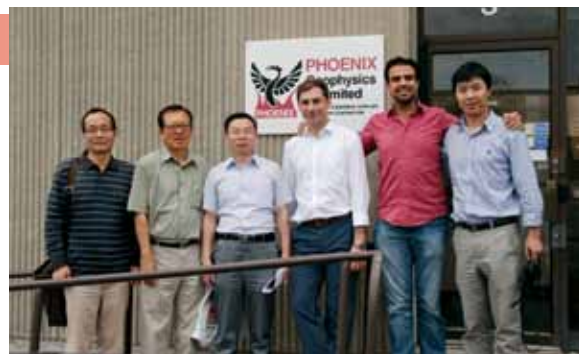


Murat Urakov and Carlos Guerrero visited Colombia in mid-August to train employees of ISAGEN (Colombia Energy Company) and students from the National University of Colombia. ISAGEN purchased two V8-6R (MT/AMT) for geothermal exploration.

**Top:** Murat Urakov gives classroom instruction; **Centre:** training in the field; **Bottom:** The entire group poses with Phoenix equipment, left to right, Murat with five university students; Prof. Jhon Jairo Sanchez (red sweater); Julio Castellon and Jaime Maravilla from from LaGeo, a Phoenix client in El Salvador; Carlos; Julian Echeverri of ISAGEN.

**VISITORS**

A delegation from Xi'an Research Institute of China Coal Technology and Engineering Group Corp., a long-time Phoenix customer, visited our facility on August 12. **Right:** left to right, geologist Xianxin Shi, an expert in EM survey techniques, James Kok (Phoenix), geologist Dewu Jin, Researcher and Vice Director of Hydrological Geology Research Institute, Damien Fox and Jorge Torres-Solis (both of Phoenix) and geological engineer Wang Hao (Mines & Hydrology)



## ON THE ROAD



**England:** Yann Avram, Tes Haile, Leo Fox and Olex Ingerov attended the EAGE London in June; Tower Bridge is in the background.

**Russia:** An SPMI/Phoenix EM conference was held Nov 12–13 in St. Petersburg. Phoenix geophysicist Olex Ingerov gave a talk.

**Right:** Prof. Natalia Pashkevich, the First Vice Rector of National Mineral Resource University (Mining), at the opening ceremony



In June, Olex Ingerov and Murat Urakov attended MIOGE in Moscow.

**Mexico:** Geophysicist Caroline Finateu took part in the IAGA conference, Mérida, Yucatan, in August.

**Right:** left to right, Dr. Jorge Arzate, our customer from the University of Mexico (Universidad Nacional Autónoma de México, Centro de Geociencias), Caroline, and Jorge's wife, Guadalupe



**Turkey:** Tes Haile and Leo Fox attended the Turkish Geophysical Congress in Antalya, Nov 25–27.

**Right:** left to right, Phoenix client Erhan İçöz, Özlem Stamenkovic of Tezcür, and Tes Haile

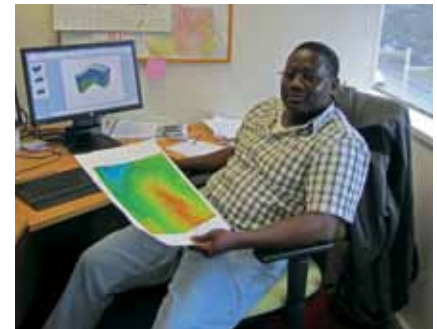


**Brazil:** The Phoenix booth at the 13th International Congress of Brazilian Geophysical Society/EXPOGEF Rio 2013. **Above:** from left to right, Dra. Kátia Rejane Freitas do Nascimento (UFBA), Dra. Susana Silva Cavalcanti (Head of the Dept. of Geophysics of the UFBA), Dr. Abel Carrasquilla, Prof. from LENEP and Carlos Guerrero



**Australia/New Zealand:**

In August, Leo Fox attended the ASEG in Melbourne, then visited our long-time client, the University of Auckland. **Right:** Peter Wameyo of the University of Auckland



**Kazakhstan:** Olex Ingerov and Murat Urakov attended KIOGE (Kazakhstan International Oil and Gas Exhibition) October 01–04

**Japan:** Mits Yamashita presented a paper at the SEGJ in Kochi in October. Leo Fox also attended the conference.

**Uzbekistan:** Harry Song visited Uzbekistan in May for equipment service.

**USA:** In September, Yann Avram, Leo Fox, Carlos Guerrero and Damien Fox participated in the SEG in Houston.

## COMING UP

■ **March 2–5:** PDAC, Toronto; please visit our booth.



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