

Uranium Demand Fuels Canadian Exploration

Phoenix survey crews were busy in Northern Canada during the winter. Projects included a uranium survey for Canalaska Uranium Ltd. and several diamond surveys (*see page 2*).

Nuclear energy is experiencing a renaissance, driven by increasing prices of hydrocarbons and concerns over greenhouse gas emissions and global warming. This rapidly increasing demand, as well as projected supply shortfalls, has created a uranium exploration boom in the 100,000 sq. km Athabasca Basin of Canada's central province of Saskatchewan. The basin hosts many uranium deposits and produces approximately 30% of the world's supply.

The basin rocks are primarily ancient sandstones (up to 1,000 metres thick) that are deposited atop even older crystalline rocks of the Canadian Shield. Uranium is mainly found in the form of the mineral uranite (U_3O_8), deposited where basement faults have fractured the base of the sandstones.

The uranium is usually associated with very conductive graphite mineralization, a good EM target. Therefore, both MT and AMT increasingly have been used to provide detail over broad EM anomalies discovered by airborne techniques and to explore for other targets too deep for airborne detection.

The price of U_3O_8 has increased from US\$7 a pound in 2000 to over US\$60 in 2008, reflecting the increased worldwide demand. ■



Above: The Canalaska survey was carried out partly offshore on the ice of Lake Athabasca. Here the crew augers through ice one metre thick before lowering electrodes to the lake bottom.



Above right: Crew members navigate an ice ridge; near the completion of the survey, pools of melt water and spectacular ice ridges were created by rising daytime temperatures.

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PRESIDENT'S MESSAGE

St. Petersburg EM Seminar

Every March, Russia's St. Petersburg State Mining Institute (SPMI) hosts a geophysical seminar focused on electroprospecting (EM) techniques. The seminar is carried out under the long-term cooperation agreement signed in 2002 between Phoenix and SPMI, represented by Rector Prof. Vladimir Litvinenko (see *Issues 24, 30*).

Russia is the world's largest gas exporter (providing most of Western Europe's gas) and the second largest oil exporter, after Saudi Arabia. Since oil and gas provide more than 70% of Russia's export earnings, Russia is very interested in more, and more effective, exploration. Russia is using resource earnings for such high priority objectives as rapid development of education and infrastructure.

SPMI's interest reflects not only the importance of metals and hydrocarbons to Russia, but also keen awareness that geophysics is very highly leveraged into the economy at all scales, from corporate to global. A relatively modest expenditure on effective geophysics can save literally millions of dollars by increasing the success ratio of drilling. Even more, geophysics has discovered hundreds of billions of dollars worth of natural resources.

The high standard of the papers presented at the SPMI seminar make it an increasingly important forum for Russian applied EM geophysics.

~ Leo Fox

ON THE ROAD

Russia: Olex and Tamara Ingerov attended the EAGE in St. Petersburg in March as well as *Mining Russia* in Moscow in April.

Chile: In April, Leo Fox and Carlos Guerrero attended EXPOMIN in Santiago, Chile.

Bahrain:



Leo Fox and Damien Fox attended Geo2008 in Bahrain in March. Nicolas Meyer (left) of Total E&P, Qatar, receives from Leo one of the daily draw prizes of Canadian maple syrup.

Diamond Exploration in Canada

Canada has become a major player in the world diamond business. Phoenix has carried out several diamond exploration surveys using both natural source and controlled source EM techniques.



Snowmobiles and snowshoes are typical equipment for winter surveys in Canada.



André Collin installs survey equipment.

China

Phoenix continues to add new clients in China, as intensifying demand for natural resources increases exploration and the need for geophysical equipment. The three photos are from recent training and acceptance projects in several provinces.



South Africa

Tes Haile visited clients in Africa, enroute to India for acceptance work.

Right: Phoenix sales agent Terry Odgers of Red Dog Scientific Services, Tiaan le Roux of SPECTREM and Tes.

Far right: Tes gets acquainted with a lion cub.



Japan

Nittetsu Mining of Tokyo has taken delivery of a multi-function V8 system. Mits Yamashita and Wang Fei carried out the acceptance in May.

Left to right: Mr. Hama (Nittetsu), Wang Fei (Phoenix), Mr. Makuuchi and Mr. Teshima (Nittetsu).



Russia

Gerry Graham, Olex Ingerov and Carlos Guerrero pose with participants from several countries who took part in the 8th International Field School in Alexandrovka, Russia, May 12-18. The field school is co-hosted by Moscow State University, Northwest Co. and Phoenix.

VISITORS



Above: It was a lovely spring day in April for a field test in the Beaverton area of Ontario, about 100 kilometres from Toronto.

Shown above are several Phoenix employees and our two Kenyan visitors with, front right, Dr. Carlos Dias and Prof. Hedison Sato of UENF, Macaé, Brazil. Dr. Dias and Prof. Sato were in Toronto to inspect UENF's V8 system for which Dr. Dias had specified the new FDEM function.



Above: In April, four employees of Uzbekgeofizika, Uzbekistan, visited Phoenix for training – and a weekend visit to Niagara Falls. Left to right: Nuriddin Rashidov, Batirali Sultanov, Gafur Uldashev and Gennadiy Kim brave the chilly spray of the falls.



Above: Chief Geophysicist Olga Makeeva, Geologist Andriy Guslya, Geophysicist Oleg Voitsikhovskiy, from the Ministry for Environmental Protection of Ukraine, Prichornomorske State Regional Geological Enterprise, trained at Phoenix for two weeks with Phoenix Senior Engineer Gerald Graham.



Left: Toronto's near-record snowfall contrasted sharply with the weather at home for Amanuel Arafraine (right), Country Manager Eritrea, Sunridge Gold Corp. Here, with Tes Haile, he stands on just one day's snowfall by Phoenix's front door.



Below: Two representatives of Kenya Electricity Generating Company Limited visited Phoenix for training on MTU-A data processing, interpretation and technical troubleshooting. Peter Wameyo and Charles Lichoro are shown with Gerry Graham of Phoenix.

COMING UP

- Oct 23-29, Beijing, China: The biennial EM Induction Meeting will be held in China for the first time. Phoenix is a sponsor. See www.19emiw.cn/ for more information.
- Nov 9-14, Las Vegas, Nevada: Phoenix will exhibit at the 78th SEG; come see us at Booth 2114.



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