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## Canadian Sander Geophysics is chosen by the government to make the most important geological investigation in geology

Writes: Raul Santopietro

"We were thinking about surveying in the territory," commented the Director of Mining and Geology, Pier Rossi. At his side was the Minister of Industry, Energy and Mining, Roberto Kreimerman, with whom he had traveled to the Canadian city of Toronto in order to participate in the PDAC, the most important international mining convention.

The purpose of the trip was one: test the waters for tendering an airborne geophysical survey which was launched shortly after with the objective to update the geological information of the country. That first line was sufficient, as Rossi recalls, for "many to ask" (about the details of the survey).

Three years later on 17 July 2013 (the closing date of the bidding process) there were six companies that submitted their proposals: Lasa Prospeccoes (subsidiary of the multinational Fugro), Geotech Ltd., Macphar PTY, Servicios Geologicos Geodatos SAIC and the Canadian companies Terraquest and Sander Geophysics (SGL).

After months of analysis, the advisory committee, created for the process, decided that the best qualified company was Sander Geophysics, according to information obtained from the government sources. The company based in Ottawa, had not been notified yet, but one of the informants/officials said that in the coming days SGL will be officially notified about the contract award.

The company offered a price of US \$4.5 million for conducting the airborne geophysical survey including magnetometer and gamma-ray spectrometry over eight areas of Uruguay which was half of the US \$9 million budgeted by the ministry.

The survey will be conducted over areas that include the departments of Cerro Largo, Soriano, Thirty-Three, Lavalleja, Rocha, Maldonado, Montevideo, Florida, San Jose Flores, Colonia and Montevideo; the so-called crystalline basement area, which includes the Western, Central and Atlantic domains and the Valentines formation.

Sander Geophysics had performed similar work in Australia, Greenland, Germany, USA, Canada, New Guinea, Tanzania and Antarctica, among others, which was taken into account by the commission.

## Technical

The airborne geophysical survey involves overflying (the survey area) and recording data along lines spaced every 400 meters; which will provide the state (of Uruguay), once the data is

processed, a structural geological map of the survey at scale 1:100,000 - one centimeter on the map equals a kilometer on the ground.

The company will undertake the magnetometer survey (measuring the magnetic field) and gamma-ray spectrometer survey (records changes in the natural gamma-ray radiation emitted by the rock) by calculating the total counts and evaluating the portion emitted by thorium, uranium and potassium, the type of rock can be determined.

Rossi explained before the bidding process had started, that the mapping will help "define where rock with a metal component are located".

The work will take between 12 and 18 months and will "identify areas of interest for metallic minerals (iron and gold), which could lead to a discovery of deposit models" (Busqueda No. 1,698).

The director assured that it will be "the most important investment ever made in geological research" and it will allow "the country to reposition itself in the mining sector".

Claudio Gaucher, geologist told Busqueda that this type of survey is important but even greater detail is required. As an example he pointed out that Germany has a geological map at a scale of 1:25,000 - one centimeter on the map equals 250 meters on the ground. In his opinion, Uruguay requires a map of 1:50,000 scale "as topographic maps are on that scale," but "it costs a lot of money."