

Frontera Resources Hydrogeology Program

Frontera Resources began a comprehensive hydrogeology program within its Block 12 operations area in 2005. This voluntary environmental program is representative of Frontera's commitment to responsible stewardship of the environment in Georgia and reinforces the Company's HSEC Policy of "moving towards zero harm".

Frontera completed six years of this hydrogeology program, which has established a detailed baseline of water quality across Block 12 and has provided a better understanding of ground water flow, direction and its possible interaction with the Company's operations. Additional and noteworthy benefits from this initiative include the identification of source and quality of water that is being or could be used for communities in eastern Georgia. The training and sharing of technical information and data among students in Georgia and the USA is an additional benefit.

Each summer Frontera conducted an extensive field measurement program which included the collection of water samples at over 300 locations within Block 12 and soil samples at about 40 locations. This data collection was conducted by students from Tbilisi Technical University and various



universities in the USA under the leadership of researchers from Tbilisi Technical University and Penn State University. Field measurements and field notes were recorded and results mapped. Samples were analyzed for a comprehensive set of water quality parameters by an independent laboratory in Tbilisi. Analyses were done for a suite of selected anions, cations and organics. Results for each chemical constituent were mapped to define any "hot spots," or areas of high concentration, with year-to-year trends evaluated for possible sources of hot spots, both natural and man-made. In addition to this comprehensive summer program, Frontera personnel have been regularly conducting quarterly field measurements for the past six years at these locations, recording and mapping the results.



At the conclusion of the 2007 summer program, sufficient data had been obtained in order allow preparation of a comprehensive report of findings. The resulting *Block 12 Hydrogeologic Framework Report* was supplemented by three special focus area reports which concentrate on the Taribani Field Unit, the Shallow Fields Production Unit and the Basin Edge Play Unit. All reports were provided to Georgia's National Agency for

Regulation of Oil and Gas (NAOG), and the Company has provided numerous technical presentations to this agency on the hydrogeology program. This hydrogeology program and its findings have also been discussed in various town hall meetings that Frontera regularly conducts with Georgian non-governmental organizations.

Frontera has completed updates of the *Framework* and the three supplemental reports based upon data collected during the program which were also made available to the Georgia's National Agency for Regulation of Oil and Gas (ANR). Results reveal that most areas of Block 12 are essentially contamination free, with relatively few existing hot spots.

For more information regarding Frontera's environmental programs, please contact Terry Thoem, Vice President, Health, Safety and Environment, at tthoem@fronteraresources.com.

