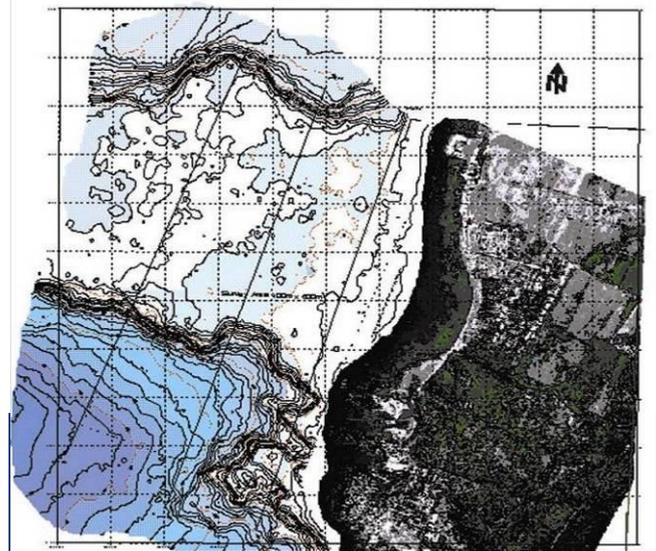


EIA, Marine and Geophysical Studies Selaata, Lebanon

EDESSA was retained by Kellogg Brown & Root (KBR) to provide the technical input for a LNG feasibility study in northern Lebanon. Based on the requirements of the project, the following different tasks were completed:

- A detailed onshore topographic survey was done for an area of 800m by 500m.
- A comprehensive Environmental Impact Assessment (EIA) of the site was conducted, addressing current baseline conditions, constructional and operational impacts, and mitigation measures. The EIA report included valuable information that could be used in the development of a design of the LNG terminal. Such information included geological, hydrological, meteorological and oceanographical data.
- The project impacts during the construction and operational phases were presented to KBR. Mitigation measures, Health and Safety Plan, and monitoring programs were proposed to assist in minimizing the effects of environmental and accidental hazards. In addition, positive impacts of the proposed project were also identified.
- An onshore geotechnical investigation was conducted comprising 6 boreholes drilled to a depth of 20m, and collection of samples for testing. A laboratory schedule was implemented that included sieve analysis and Atterberg limits tests for soils, and unconfined compressive strength (UCS), point load, carbonate, sulfate and chloride content tests for rocks.
- A marine current measuring survey was conducted taking readings at several locations over a period of one month.
- An offshore geophysical survey comprising bathymetric, side-scan, and sub-bottom profiling surveys was conducted. The objective was to evaluate the water depth, sediment thickness, and seabed features in the area, in order to determine the most feasible location for a jetty. The survey was conducted with a vessel equipped with differential global positioning system (DGPS). Based on field results, divers were sent at two locations to obtain sediment samples from the seabed.



BH 509 BOX 1 OF 6

| RUN | DEPTH FROM | TCR | SCR | RGD | COMMENTS |
|-----|------------|-------|-----|-----|----------|
| 1 | 8.00 | 8.74 | 75 | 75 | |
| 2 | 8.74 | 11.75 | 100 | 73 | 67 |

