

Provision of Electric Wireline Logging Services

1. Background

The provision of Electric Wireline Logging services is currently being provided by GOS Limited ("GOS"). The current contract was awarded in April-2016 following a competitive tender. The contract was for a firm period of 3 years with 2 years extension options. The firm period of 3 years has been exercised and contract is due to expire in May 2020 however the extension option will not be exercised but rather to assess the market via a competitive tender exercise.

This exercise is seeking to establish the appropriate market value of service. In addition, it would allow set expectation as to what is required from the new contractor, taking into consideration lessons learnt from the current contractor. A new tender exercise is being initiated with the aim of an award earlier than May-2020.

2. Summary of Scope of Work

Electric Wireline logging is the process of using electric instruments to continuously measure the properties of a formation, to make decisions about drilling and production operations.

The scope of work shall include the provision of contractor equipment and contractor personnel to ensure a complete service of open hole and cased hole electric wireline log acquisition and processing.

- a) Specialty Tools - The following specialty tools are required to be supplied as part of the scope;
- Tractor conveyance for cased and open hole conveyance c/w perforating, back-off and pipe severance capability;
 - Tractor services c/w cutter, stroker, milling tool, clean-out tool, setting tool;
 - Tubing punch;
 - Mechanical pipe cutting tool;
 - Pressure control equipment c/w mono and hepta cable capability;
 - Pump-in tee;
 - RA Markers;
 - Cement bond log and interpretation;
 - Ultrasonic imaging logs;
 - Chemical cutter suitable for 1.75" coiled tubing;
 - Downhole video camera, acoustic leak detection system, multi-fingered caliper.

In addition, pipe-conveyed logging equipment shall be required to be on standby for logging operations on high inclination boreholes.

- b) Electric line measurements - Contractor shall be required to provide full electric line measurements for formation / fluid evaluation for potential exploration / appraisal wells, including but not limited to:
- Formation pressures / fluid samples;
 - Porosity, Density, Spectral Gamma Ray, sonic, resistivity, imaging, magnetic resonance, rotary sidewall coring, VSP.
- c) Contingency services - Electric logging for development drilling is infrequent in open hole and has been largely replaced by logging while drilling technology in development drilling. A certain number of planned or contingent electric wireline operations are however executed every year. Regardless the following contingency services shall be required on standby in the event of a stuck pipe incident:
- Tractor conveyance;
 - String shot;
 - Pipe severance and tubing punch services;
 - A single dedicated crew.

Electric Wireline is also used on completions and workover operations to perform tubing punches / perforations including;

- Tubing cutter operations;
- Caliper log;
- Ultrasonic circumferential cement logging and casing wall thicknesses.;
- Production Logging logs (occasionally specified for production logging).

All the above may be performed with or without a tractor for high inclination operations.

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- d) Others - The contractor shall be responsible for the following:
- Appropriate maintenance and Quality Assurance of equipment;
 - Calibration equipment;
 - Spares;
 - Storage; and
 - Transportation of explosives and nuclear sources.

3. Contract Duration

The contract duration shall be for a period of 5 years.