

They are quality professionals whose permanent staff resources and facilities base allows the aerospace sector optimal flexibility and economies in fulfilling its mandate for quality in confidence and security. They are interested in doing business with the USAF.

KEYWORDS: Calibration; Expediting; Fabrication Procedures; Failure Investigations; Inspection; Metrology; Non-Destructive Testing; Precision Measurement; Product Surveillance; Quality Assurance; Sub-contract Management; Training; Vendor Surveillance; Welding Procedures.

REVISED: February 88

QUESTOR SURVEYS Ltd

ADDRESS: 55A Port Street E
Mississauga, Ontario, Canada
L5G 4P3

CONTACT: Mr S J Kilty, President - (416) 271-0311

HISTORY: Originally a one aircraft operations section of a mining company, the company split in 1961 and formed a Contract Survey Services Division. During this period, the company operated one owned aircraft and three leased aircraft. In 1970, they began expanding operations, and in 1979 acquired the geophysics division of Northway Survey Corporation. During this period, they specialized in the use and development of the Barringer INPUT electromagnetic system. Questor is now associated with World Licensing Corporation of Perth, Australia.

CAPABILITY: Questor specializes in all state-of-the-art airborne sensing for base metal, uranium and oil. In addition to the Barringer INPUT system (Time-Domain electromagnetics), they also are capable of acquiring and analyzing data from airborne standard & high sensitivity magnetics, standard & multi-channel spectrometry, and frequency domain electromagnetics. They also design and build very high sensitivity magnetometers along with their associated data acquisition systems. Their aircraft fleet includes two Skyvans, two Trislanders, and one C206. The INPUT systems generate a pulsed signal from a vertical dipole. The primary field induces eddy currents in conductive targets and these currents produce secondary fields. These secondary fields are then sensed. Through analysis of these secondary field anomalies, sulfide and graphite conducting pockets have been identified to a depth of 300 meters. Standard and high-sensitivity magnetometry provide detailed magnetic contour maps. Corrections for aircraft attitudes & maneuvers, and the use of precision clocks, etc., enable Questor to improve the normal high standard government contour maps by a factor of four in geologic resolution.

Gamma ray spectrometers are used to identify potential uranium deposits as well as for geologic mapping and identification of man-made radio-active wastes. Data reduction for all types of sensors/missions is provided by the company's specially developed algorithms and provides a variety of outputs depending on the users' needs.

Questor has recently organized an internal Research Division. They are presently working to improve the various sensors used by Questor.

AVERAGE WORK FORCE: PhD - 1
Prof Eng - 1
BsE - 4
Technicians - 10
Others - 6

GROSS SALES: No Data

PLANT SIZE: 10,000 Sq Ft

EQUIPMENT: Equipment includes INPUT time domain electromagnetic system and Helium high sensitivity magnetometer and gradiometer.

EXPERIENCE: Questor's clients include 49 different countries around the world for one or more of their surveys. Their surveys have led to the discovery of fourteen base metals, precious metals, or uranium deposits in a variety of geologic environments. In Canada, customers have included Noranda Mines, Falconbridge Mines, Inco,

Imperial Oil, Shell Oil, and Gulf Oil. They are interested in conducting research for the USAF.

KEYWORDS: Data Acquisition; Data Analysis; Data Reduction; Electromagnetic Surveys; Helicopter Magnetic Gradiometer; Magnetic Gradiometer; Magnetometers; Mapping; Pollution; Remote Sensing; Sensors.

REVISED: April 88

RAYLO CHEMICALS (A Division of Terochem Laboratories Ltd)

ADDRESS: 8045 Argyll Road
Edmonton, Alberta, Canada
T6C 4A9

CONTACT: Mr J Matthew Colomb, Commercial Officer - (403) 468-6060

HISTORY: Raylo Chemicals was founded in 1961, became a subsidiary in 1981, and a division in 1985 of Terochem Laboratories Ltd, a private Canadian corporation. Terochem has no US subsidiaries.

CAPABILITY: Raylo Chemicals specializes in contract research, custom synthesis, and sales of manufactured products. Areas of expertise include bench scale pilot plant design & operation; Synthetic chemistry (natural products, pharmaceuticals & hydrocarbon chemistry); high pressure & temperature reactions; polymer chemistry (synthesis of novel monomers and their polymers, characterization and chemical stability testing); and non-routine analysis. A major contract activity is polymer chemistry applied to stable high-strength polymers for composites, elastomers, water soluble polymers, flocculation studies, and electrolyte cell separators. Other principal projects include supercritical gas technology applied to coal liquefaction & analyses of heavy oil, and development of physical & physico-chemical data in support of various commercial industrial processes.

Raylo Chemicals offers custom manufacture of complex chemicals and polymers from a few grams to several thousand kilograms, including process design and development. Raylo routinely handles highly reactive solid, liquid, and gaseous reagents, and can operate under vacuum and inert atmospheres. The following reactions are performed regularly:

- Acylation
- Alkylation
- Condensation
- Dissolved Metal Reduction
- Friedel-Crafts Reactions
- Grignard
- Halogenation (substitution and addition)
- High Vacuum Distillation
- Hydrogenation
- Hydrolysis
- Metal Hydride Reduction
- Optical Resolution
- Phosgenation
- Reductions

Raylo Chemicals products include specialty polymers and other fine chemicals for high technology industries. Over 150 compounds are currently in production and for many of these, Raylo is the sole or principal world manufacturer.

AVERAGE WORK FORCE: PhD Chemists - 10
Chemical Technicians &
Operators - 35
Others - 10

GROSS SALES: 1986 - \$4.5M
1987 - \$5.5M

PLANT SIZE: 16,000 Sq Ft
6,000 Sq Ft (Laboratory + Library)