CONTACT: Mr Andrew Lebel, Director of Marketing & Sales – (613) 727-0604

HISTORY: SENSYS is a business unit of Atomic Energy of Canada (AECL). SENSYS was created in January 1987 to commercially develop Ferroscan™, a ferrous wear debris monitor and other sensor technology for equipment health monitoring.

CAPABILITY: Design and production of leading edge sensor systems. Backed by the internationally recognized AECL research laboratories, SENSYS brings established expertise, proven product testing and business reality to the intelligent sensor marketplace.

AVERAGE WORK FORCE: PhD – 1
Engineers – 9
Others – 20

GROSS SALES: 1988 – 350K (Est'd)

PLANT SIZE: 15,000 Sq Ft

EQUIPMENT: Complete digital electronics production facility with direct access to all the equipment resident at AECL's two major research laboratories.

EXPERIENCE: Ferroscan™ units are currently under global evaluation testing with various helicopter and airframe OEM's, engine manufacturers, airlines, defense establishments, utilities, and petrochemical operators.

KEYWORDS: Sensor Systems; Diagnostic Systems; Engine Health Monitoring; Condition Monitoring, Predictive Maintenance.

REVISED: June 88

SHELLCAST FOUNDRIES Inc

ADDRESS: 10645 Lamoureux
Montreal North, Quebec, Canada
H1G 5L4

CONTACT: Mr B B Morgenstern, President – (514) 322-3760

HISTORY: Shellcast Foundries Inc is a Canadian-owned company founded by the President/Owner in 1970. The company has experienced a very steady and impressive increase in both its technological and production capabilities. It has a US subsidiary, Shellcraft Industries Inc located in Winooski, Vermont, and associate facilities in Europe.

The company's founder/president was previously engaged in the management of an investment casting foundry. The company has grown from a facility of 6,000 sq ft employing major outside services such as X-ray and testing of materials, to a fully integrated facility (total in-house capability) exceeding 50,000 sq ft.

CAPABILITY: Shellcast Foundries Inc are founders of non-ferrous precision investment castings – by the lost wax process. Its major customers are in the aerospace, defense electronics, and electronics industries. Their foundries are capable of producing small and intricate castings of 1" plan area to large complex castings of a maximum of 36" cube, to the highest MIL and commercial standards. They are equipped to produce castings by either the shell or the solid mould process.

AVERAGE WORK FORCE: Engineers – 10
Others – 140

GROSS SALES: 1986 – $ 9.0M
1987 – $10.0M

PLANT SIZE: 50,000 Sq Ft

EQUIPMENT: Equipment includes Robotics in production, in-house computerized production planning and financial systems – Spectograph and coordinates measuring machines both with computer printouts, tensile test and hardness test equipment, a complete metallurgical laboratory, non-destructive test lab (x-ray and penetrant inspection).

EXPERIENCE: Present customers include most of the major contractors in the aerospace and defense industries in North America and they also have major customers in Europe, Israel and Japan.

KEYWORDS: Castings; Enclosures (Electronic); Foundry; Investment Castings; Shell Castings; Solid Mould Castings; Thin Wall Castings.

REVISED: January 88

SHERRITT GORDON MINES Ltd

ADDRESS: Fort Saskatchewan, Alberta, Canada
T8L 2P2

CONTACT: Dr Maurice A Clegg, Dir, Sherritt Research Center – (403) 998-6516

HISTORY: Sherritt is a highly diversified company with a US subsidiary located in Portland, Oregon (Sherritt Fertilizers Inc). Sherritt was incorporated in 1927 as a mining company. In 1954, their processing plant at Fort Saskatchewan was opened. Located at this latter site is the Sherritt Research Center which is their R&D arm.

CAPABILITY: Besides refining nickel & cobalt, Sherritt Gordon carries out R&D at their Research Center in the area of powder metallurgy. Also at Ft Saskatchewan, Sherritt has their Special Products Division which manufactures a wide range of secondary products based on Sherritt's raw materials and technology. These products include nickel strip and coinage, a wide range of special powders and composite powders, dispersion strengthened nickel, magnetic alloys and wear resistant materials. Sherritt is active in developing dispersion strengthened alloys and abradable seals for turbine engines. They have recently expanded their research activities to include rare earth cobalt magnets, wear resistant materials, and ultra fine metal powders for sintered electronic circuits, and electrically conductive plastics for shielding electromagnetic interference (EMI).

Sherritt's research and development work continued in these areas and several new products reached commercial production – notably composite powders for turbine seals, wear resistant materials for the mining industry, and ultra fine nickel and copper powders for electronics.

AVERAGE WORK FORCE: Total (Research) – 75
PhDs – 15
MSs – 4
BSs – 14
Others – 42

GROSS SALES: 1986 – $390.8M
1987 – Not Available

EQUIPMENT: Sherritt's Research Center is well equipped for process research in hydrometallurgy and product research. This includes autoclaves, solvent extraction and ion exchange equipment, standard chemical laboratory equipment, and an analytical laboratory. Also included are powder presses, sintering furnaces, rolling mills, vacuum induction melting equipment, and flame & plasma spray guns. Physical testing equipment includes tensile testing, stress rupture, wear resistance, metallography, transmission and scanning electron microscopes, electron microprobe, x-ray diffraction, and various electrical conductivity measurements.

EXPERIENCE: A large portion of Sherritt's total metal sales go to the US which includes fabricated metal products, such as dispersion strengthened nickel and composite powders for turbine engines. The products, which may be used in military aircraft, are sold to engine manufacturers. Sherritt is interested in doing business with the USAF when the research area is consistent with their research objectives. Research and development projects have been carried under USAF contracts in the late 1960s and early 1970s. These contracts were in the area of dispersion strengthened nickel-chromium alloys. The research specifically dealt with improved oxidation resistance and mechanical properties.