## **Technology Transfer for Oil Industry**

Indonesia will have another facility for manufacturing oil and gas wellheads and related pressure control equipment, thanks to a new joint venture between Canadian based Stream-Flo Industries Ltd., and the Indonesian industrial concern, P. T. Bantalan Teguh Lestari (BTL).

The BTL/Stream-Flo joint venture will be geared for "Total Technology Transfer", eventually involving the entire manufacturing process, from engineering and design through to sales and installation.

J. Duncan McNeil, Stream-Flo's Chairman, President and Founder, described the "Total Technology Transfer" of the BTL/Stream-Flo joint venture as being different from the way other North American companies expand into foreign markets.

## SINGAPORE

## Canadian places high in Triathlon

Battling brilliant sunshine, 32 degree heat, 90 per cent humidity and 220 other triathletes, a Canadian surged across the finish line to capture fourth place in the 1987 ABC Stout Singapore Triathlon.

Before the gruelling 2 km swim, 70 km cycle and 17 km run, Andrew Inkpen – who has been running, cycling and swimming seriously for only a year – was hoping to place in the top 20. He was confident of his running and cycling abilities, but the 29-year-old National University of Singapore lecturer had only learned to swim freestyle a month before.

To Mr. Inkpen's utter amazement, he emerged from the water sixth putting him well ahead of the pack, a lead he was able to maintain throughout the four hour event despite the heat which took its toll on several competitors forcing them to withdraw from heat stroke. Stream-Flo will supply the design, engineering and quality assurance programs including personnel from Canada to supervise the plant's start-up. The transfer of technology will continue until Indonesians occupy all management and manufacturing positions, and are fully capable of designing and manufacturing wellhead and pressure control products to full API (American Petroleum Institute) specifications.

When other oilfield manufacturing companies expand abroad, they often prefer partial assembly to full manufacturing capability.

To show how significant this technology transfer will be in future years, Stream-Flo, in Canada, has recently been awarded API Specification 6A Level 4, the highest level of material traceability and quality control. Mr. McNeil is confident that in time, Indonesia, with Stream-Flo's help, will be manufacturing worldclass wellhead and pressure control equipment.

## Other products wanted

The BTL/Stream-Flo joint venture will probably expand beyond wellheads in the not too distant future. Using Stream-Flo's "Canadian Connection", the joint venture is on the lookout for other products essential to Indonesia's oil and gas industry that can be produced domestically. The BTL/Stream-Flo joint venture could be a major stepping stone in the development of Indonesia's energy future.



Triathlete Andrew Inkpen heading off on the 70 km cycle.