



# AETE Finds Fault

Unique geophysical fault finding after the massive landslide at St. Jean Vianney, Que., in May, was provided by the aerospace engineering test establishment at Uplands.

"Without it the authorities said they did not know how difficult their work would have been," said Lieutenant-Colonel Rip Kirby of base Bagotville.

Lt-Col Kirby was referring to four missions flown by two CF-100s from AETE, the first within two hours of the request being made.

The first camera-equipped CF-100 got ordinary photographic coverage of the area after the fall of land.

The second aircraft, equipped with an infra-red line scan system which can detect streams and pools deep or near the earth's surface, flew three infra-red line scan (IRLS) missions. These scans revealed areas from which 138 earth cores were taken to determine weakened areas and the possibility of further slides.

The photographic mission was flown on the afternoon of 7 May with Major Clive Loubser as pilot and Major E. J. Lewis as camera operator. On 10 and 12 May, Major Loubser with Captain F. C. Van Der Pryt as sensor operator did the first two IRLS runs. The fourth flight and third IRLS was on 15 May with Major Loubser as pilot and Major Lewis again acting as operator.

The scans were then evaluated by Dr. Marc Tanguay of the department of engineering geology at Ecole poly-

technique, Montreal. Dr. Tanguay was assistant consultant to Dr. Jean-Yves Chagnon of the Quebec department of natural resources, engineer in chief at the disaster site.

Major Ernie McLaren, officer commanding photo development at AETE, explained that only the forces in Canada can do IRLS.

He said that basically the system is similar to a television camera sweeping over the ground and that the results, in fact, look exactly like a photograph to an untrained eye.

The IRLS flights at St. Jean Vianney were made at 1,000 feet.

The scans were then read, and are still being read and evaluated, by applying various filter combinations to bring out areas under study. These filter combinations, Major McLaren explained, will in some cases reveal living trees in a brilliant red.

According to Lt-Col Kirby the suggestion to use IRLS was made by Major John Sinclair, an engineer at Mobile Command headquarters.

Additional engineering support at St. Jean Vianney came from teams headed by Capt Jeannot Harvey, CFB Bagotville, and Capt N. Levert of CFB Valcartier.

Lt-Col Kirby is the operations officer at base Bagotville. Following the slide at St. Jean Vianney he acted as military co-ordinator in the area on behalf of Col D. J. Gagnon, base commander.