

Secret Canadian mission maps volatile Afghan landscape

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Capt. David Vennes, crew commander for the classified Afghanistan mapping project, helped guide Canadian pilots on the CP-140 Aurora plane to within a quarter of a degree.

Canada wrapped up a secret mission this week that provides the country's military a greater intelligence role in Afghanistan - literally from a Canadian perspective.

Two Canadian Aurora long-range patrol planes have spent the last month flying over southern Afghanistan on highly precise grid-like routes, snapping quick-fire pictures of the land below.

The idea is to produce the most accurate, up-to-date maps yet of volatile southern Afghanistan -- where Canadian soldiers are based -- to share with coalition partners.

"It's like Google Earth, but far more accurate," said Jim Irvine, project commander. "You can look at the images we produced and get a geographical location."

Google uses relatively low-resolution, non-uniform satellite images, while the Canadian project uses high-resolution pics shot from planes at the same height.

"You need to fly very accurately over hundreds of miles," Irvine said. "It's like a Zamboni, going up and down the ice. But we have to be accurate within tens of metres from the air. That's extremely accurate flying."

Printed out poster-size to represent perhaps a few square kilometres each, the new maps -- which should be ready for distribution in about three weeks -- show amazing detail, turning the curves of Red Desert dunes into art or pinpointing a single tent.

The 60-plus-person Canadian team, which started training for the mission in February, captured more than 23,000 images covering 100,000 square kilometres. And they conducted the photography courtesy of a Canadian-made Applanix DSS camera mounted precisely at the centre of the Aurora, accessible through bomb-bay doors in the floor.

"No Canadian plane has ever done this before," Mr. Irvine said. "Now, we have Canadian capability that we can use in a number of contexts."

The public can't have a peek at the maps. But the accurate pictures can be used for military or humanitarian purposes by coalition partners, including the Afghanistan government.

"We are increasing our contribution on the intelligence side of things," Mr. Irvine said. "And we are helping our coalition allies."

The turbo-prop CP-140 Aurora, about the size of a 737 but with four engines instead of two, can fly at more than 600 km/h yet is built for long distances, complete with on-board kitchen, dining room and bathroom. The crew can fly for up to 17 hours at a time - and are based at a classified Canadian airbase outside of Afghanistan.

Because accurate geographic pictures have a short shelf life, Canadians may again capture Afghanistan up close.

Meanwhile, the work requires serious concentration.

"There's a command given to the pilot every 10 to 20 seconds for seven or eight hours straight," said David Vennes, the crew commander who notes that technical staff on board continually guide one of two pilots by quarters of degrees left, right, up and down.

It's rather like trying to keep the air bubble perfectly aligned in a hand-held level, except at more than 600 km/h high in the air.

"After doing it for about an hour, we have to change the people around," he said. "You have to concentrate hard, for a long time. It has to be accurate."

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