Search enters new phase

**MAPPING SEA FLOOR:**

Autonomous Underwater Vehicle to be deployed as ‘Ocean Shield’ ends operation

**ADIB POURA**

KUALA LUMPUR

newsstr.my

The search effort for the Malaysia Airlines flight MH370 has entered a new phase with the deployment of a mini-submarine, the Bluefin-21, to look for the wreckage of the jetliner on the sea floor after no new confirmed signals were detected since last Tuesday.

Australia’s Joint Agency Coordination Centre head Air Chief Marshal (Ret) Angus Houston, who heads the multi-agency and international search effort, said yesterday they had ceased operation of the nation’s Ocean Shield vessel in the search for signals using the towed pinger locator and would deploy the Autonomous Underwater Vehicle (AUV), Bluefin-21, following the advice of experts.

“Despite the lack of further detection, the four signals previously acquired and taken together constitute a promising lead that we have in the search for MH370, which needed to be pursued vigorously.

“A submersible built by Bluefin Robotics is lowered into the water in Quincy, Massachusetts. A version of the company’s submarine will be used to locate flight MH370 by using its side-scan sonar. AP pic

“Analysis of the four signals has allowed the provisional definition of a reduced and manageable search area on the ocean wall.

“The experts therefore determined that the Ocean Shield will cease searching with the towed pinger locator later today (yesterday) and deploy the AUV as soon as possible,” Houston told a press conference in Perth yesterday.

He said the search effort had surpassed eight days of the black box’s 30-day battery shelf life.

Houston said the underwater search operation for MH370 would adopt the same approach used in the search operation for the Air France flight 447 in 2009, whose wreckage was found at a depth of 3km two years ago.

“The wreckage of the (Air France) aircraft was found 6.5 nautical miles from its last-known position based on the Aircraft Communications Addressing and Reporting System.”

He said the deployment of AUV had the potential to take the mission further towards visual identification since the 750kg-heavy vehicle offered possible opportunity to detect debris from the MH370 on the ocean floor.

“As I have said before, aircraft wreckage needs to be visually identified before we can say with certainty that this is the final resting place of MH370,” he said.

“The Bluefin-21 is equipped with side-scan sonar and once deployed, the vehicle will begin searching the sea floor in the vicinity of the detected signals,” he said, adding that the sonar scanner could transmit an active pulse, which produces a high-resolution, three-dimensional map of the sea floor.

Houston said the 4.9km-long vehicle could operate up to a depth of 4.5km and would take about 24 hours to cover up to 40 sq km of seabed in each trip.

With an ability to travel at a maximum speed of 4.5 knots or less than 96km, Houston said, the search area by the vehicle would be expanded until it detected any leads related to the Beijing-bound Boeing 777 200ER.

“It will take the AUV about two hours for it to get down to the bottom of the ocean and then be on task for 16 hours.

“It will then take two hours for the vehicle to return to the surface and four hours to download and analyse the data collected.”

Houston however, did not allocate any time frame for the underwater search but warned of the ATIV’s limitations and its success of detecting any leads.

“I must stress that it (AUV) is at the limit of its capability as soon as it gets to 4.5km (in depth). It can’t go any deeper than that. Essentially, there are vehicles that can go deeper. And, when the vehicle goes down, you don’t get any indication of how things are going while it’s deployed. You have to wait and recover it before you can download the data that has been picked up.

“I would caution everyone against raising hopes that the deployment of the AUV will result in the detection of the wreckage. It may not,” he said while stressing that it was the best lead that must be pursued vigorously.

Houston also said the underwater search operation would also be a slow and painstaking process because of the condition of the ocean, which he described as new to man.

“Essentially, it’s not sharply mounted and it’s more flat. We understand from other work that was done years ago that that part of the Indian ocean has a lot of silt at the bottom, silt at the bottom that can be layered and deep.”

Houston also revealed that the Ocean Shield had detected an oil slick on Sunday evening at its present search area, about 5.5km from the vicinity of signals detected by the towed pinger locator.

“A sample of about two litres was collected and we have a number of days before it can be landed ashore and conclusively tested.”

Apart from the oil slick, Houston said, the multinational team had not picked up any new leads that would help in the search for the aircraft, which disappeared with 239 passengers and crew members on board on March 8.

“No visual objects (have been found). The only leads that we have, at this stage, are the four transmissions and an oil slick, within the same vicinity.”