DOTS ON MARS MAY BE ALL HOT AIR OR SIGN OF LIFE

Scientists have spotted what look like caves on Mars, and say they could be sheltering life from the planet's harsh environment. The first caves detected beyond the Earth appear as seven mysterious black obts on pictures beamed back by NASA's Mars Odyssey orbiter. Each as large as a football field, they may be openings into natural caverns below the Martian surface.

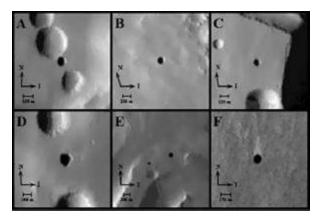
"If there is life on Mars, there is a good chance you'd find it in caves," said Jut Wynne, one of the researchers who noticed the features while working on a US Geological Survey Mars Cave Detection Program.

Jonathan Clarke, a geologist with the Mars Society of Australia, yesterday described the discovery as exciting. One photo taken at night by an infrared imager showed one hole to be unusually warm, suggesting hot air trapped during the day is flowing out.

"I said: 'Wow, that's a cave'," Dr Clarke said. "People have been looking for these for a long time; now we have found them." He agreed such caves would be ideal places to hunt for life sheltering from the bitterly cold, radiation-soaked, dry surface.

"Moisture could collect inside," he said. "If there are gases seeping out, they could provide energy for a whole range of bacteria. A cave is also protection from radiation; the surface of Mars is exposed to high levels of cosmic radiation."

The caves probably formed when tube-shaped lava flows spread across the planet long ago. The outside of the tubes cooled, forming solid walls, while the botter interiors allowed the remaining lava to drain out, forming caverns.



Sydney Morning Herald - 5 April 2007

TINY BLIND ANIMAL HALTS BILLION DOLLAR MINE



A blind spider-like animal has stopped development of a multi-billion-dollar iron ore mine in Australia after an environmental body rejected the project for fear the tiny cave-dweller would become extinct.

Western Australia's Environmental Protection Authority (EPA) rejected the proposal by Robe River, a unit of mining giant Rio Tinto, to develop the iron ore mine near Pannawonica in the Pilbara region after the company unearthed troglobites, which measure just 4 millimeters (0.16 in) in length.

A troglobite is an animal that lives entirely in the dark parts of caves. It has adapted to life in total darkness and may have no eyes or pigmentation, using feelers to explore its way through the dark. Troglobites are unable to live outside their pitch-dark world because they would die from ultraviolet light. Even short exposures to sunlight can be fatal.

"Extensive research and sampling conducted by the proponent has identified a number of new species of troglobitic fauna," EPA chairman Wally Cox said on Thursday. An EPA report into the project found 11 species of troglobites in the area and said mining would extinguish at least five of them. The EPA judged that a proposed mining exclusion zone at the site would be inadequate to protect the tiny animal or aboriginal heritage in the area.

"There is also concern over the long term structural stability of the landform post-mining," said the EPA report.

Rio Tinto said it would appeal against the decision.

"It's a significant project, so we will be appealing," a spokesman said. "Its just part of being in the mining business. We support the EPA process in general."

An appeals report will be sent to the state's environment minister who will make a final decision. Unlike the EPA, which can only consider environmental issues, the minister can take into account social and economic factors.

Robe River already mines iron ore in nearby areas in the Robe River Valley. It currently produces 32 million tons per annum of ore, but the existing deposit will be exhausted by 2010. The new iron ore mine, with an expected 10 year life, is planned as a replacement mine and is forecast to produce 220 million tons.

The West Australian - 29 March 2007

