NASA finds water on moon

By North America correspondent Michael Brissenden

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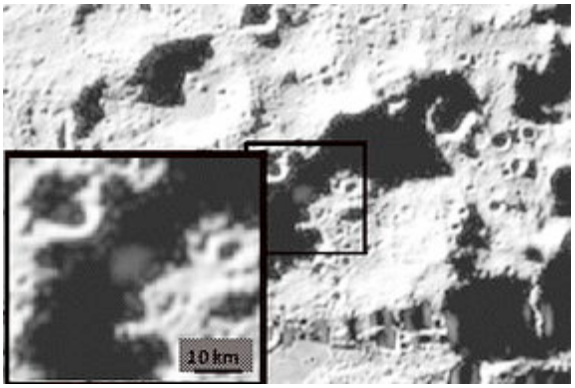

Mission success: a visible camera image showing the plume about 20 seconds after impact. (NASA)

NASA says it has found a significant amount of frozen water on the moon.

The space agency's discovery has raised hopes of one day establishing a permanent lunar base.

NASA scientists say the frozen water was found as a result of last month's dramatic experiment that sent two spacecraft crashing into the moon's surface.

One of the rockets slammed into the permanently shadowed Cabeus crater near the moon's southern pole.

The second rocket found water present in samples taken from the plume of material that billowed up from the bottom of the crater after the impact.

The principal investigator for the $85 million mission, Anthony Colaprete, says the find is significant.

"We found water and we didn't find just a little bit we found a significant amount," he said.

"If you remember about a month ago we were talking about teaspoons going into glasses over football fields. Well now I can say today that in the 20 to 30 metre crater we found, maybe about a dozen of these two gallon buckets of water."

Co-investigator Peter Schultz says the discovery could be important to future planning for moon missions.

"This whole mission was built with the idea to see if we could find water so we didn't have to carry it with us," he said.

"Water is very expensive - $US100,000 per gallon I believe - it's really really expensive stuff to bring up so finding it, having it there we can do things with it.

"We can recycle it, we can clean it, we can use it for fuel or use it for food."

The discovery has put the spotlight once again on NASA's plans to put US astronauts back on the moon by 2020 and possibly establishing a permanent lunar base.

A panel set up by US President Barack Obama to review the plan has found that existing budgets are not large enough to fund a return mission before then.