



PRESS RELEASE

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Survey scientists land at floating Ice Base to study CO2 impact on Arctic Ocean

Catlin Arctic Survey today confirmed its team of scientists have landed at the expedition's Ice Base on the floating sea ice of the Arctic Ocean, ready to begin research into the impact of carbon dioxide on the Arctic Ocean. The four scientists and their support crew are the second team involved in the mission to be deployed onto the ice in the last 24 hours. They will be living and working on a tented base under the guidance of experienced polar experts at a location offshore from Ellef Ringnes Island north of Canada.

Head of Operations for the expedition, Chip Cunliffe said: "We've now safely placed both our teams where we planned for the start of the expedition. Over the next few they will be settling into their routines and getting used to life at temperatures which can reach minus 45 degrees Celsius."

"The scientists and explorers have all spent time in Resolute, preparing and testing kit for the last ten days. There has been a huge amount to do. In terms of getting everyone to this point we have probably shipped in around 3,500 kilos of equipment."

The Survey is a unique collaboration between explorers and research scientists to survey and study in the inhospitable conditions of an Arctic winter. Scientists are increasingly focusing on this phenomenon which is associated with rising levels of carbon dioxide in the atmosphere. There is a need for much more information about this from the Arctic Ocean, especially as CO2 is more readily absorbed in cold water, yet research is scarce in this inhospitable region – notably in winter and early spring.

Yesterday the mission's Explorer Team began its long range trek across the floating sea ice. Led by veteran explorer Ann Daniels, the team of three will be taking samples of seawater from beneath



the ice and capturing data for the science partners.

The academic institutions participating in the Catlin Arctic Survey 2010 include CNRS-Université Pierre et Marie Curie, Laboratoire Oceanographie (Villefranche); Plymouth Marine Laboratory; Institute of Ocean Science (Fisheries and Oceans Canada); University of Exeter; and Bangor University. An international group of scientists based in Europe, Canada and the USA will also be able to use the results of the field studies.

Some scientists believe that, based on current projections, the pH of the world's oceans could reach levels by 2050 not seen on Earth for 20 million years. If this occurs, there could be serious consequences for marine life in the Arctic and elsewhere.

At a press conference last month Dr Carol Turley of the Plymouth Marine Laboratory said: "We understand from models projecting future ocean chemistry that the Arctic Ocean is particularly vulnerable to ocean acidification because cold water absorbs CO₂ more effectively than warm oceans, so much so that it may become corrosive to some shelled organisms within a few decades."

Professor Jean-Pierre Gattuso of CNRS-Université Pierre et Marie Curie, whose researchers are heading for the Ice Base, said: "Ocean acidification is the 'other carbon dioxide problem'. The oceans absorb about a quarter of human-made CO₂. This has been limiting the amount of greenhouse gas in the atmosphere and mitigating climate change. However, the massive amounts of CO₂ absorbed considerably upsets the ocean chemistry by increasing the acidity of sea water. It is certain that it will impact marine ecosystems, although we do not fully understand how all marine species will cope at the levels of acidity projected later in this century".

During the expedition the team will be sending video, reports and photos to show what it takes to capture data under the extreme condition of the Arctic Ocean.



MEDIA CONTACT:

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NOTES TO EDITORS

INTERVIEWS

Pen Hadow, the Survey Director, is available for interview in London. Interviews with the scientists at the Ice Base and the Explorer Team can be arranged via the Media Team.

PHOTO AND VIDEO

- news photos are available from www.catlinarcticsurvey.com/press.aspx
<<http://www.catlinarcticsurvey.com/press.aspx>> Access Passwords can be obtained by calling the media team.
- Broadcast Video footage is available at our FTP site:
<http://filestore.indigopapa.tv/CatlinArcticSurvey2010>
<<http://filestore.indigopapa.tv/CatlinArcticSurvey2010>>

CATLIN ARCTIC SURVEY

In 2009 Hadow, Daniels and Hartley trekked nearly 450 kilometres during the first Catlin Arctic Survey, taking more than 6,000 measurements of the floating sea ice. The data collected by the explorers was subsequently cited by University of Cambridge researchers as further evidence to support an emerging consensus that the Arctic Ocean may be ice-free during summers in around 20 years.

ABOUT CATLIN GROUP LIMITED

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the Catlin Arctic Survey, which aims to produce scientific data to increase our knowledge about the impact of climate change and other changes to the environment.

ABOUT GEO MISSION LTD

Geo Mission Ltd manages and delivers the Catlin Arctic Survey. Founded in 2009 by explorer Pen Hadow, Geo Mission's objective is to advance scientific and public understanding of the natural world. It achieves this by bringing together scientists, explorers and academics to collaborate on pioneering research programmes which are communicated to specialist and global audiences.