

Alpha Ridge Test of Appurtenance (ARTA)

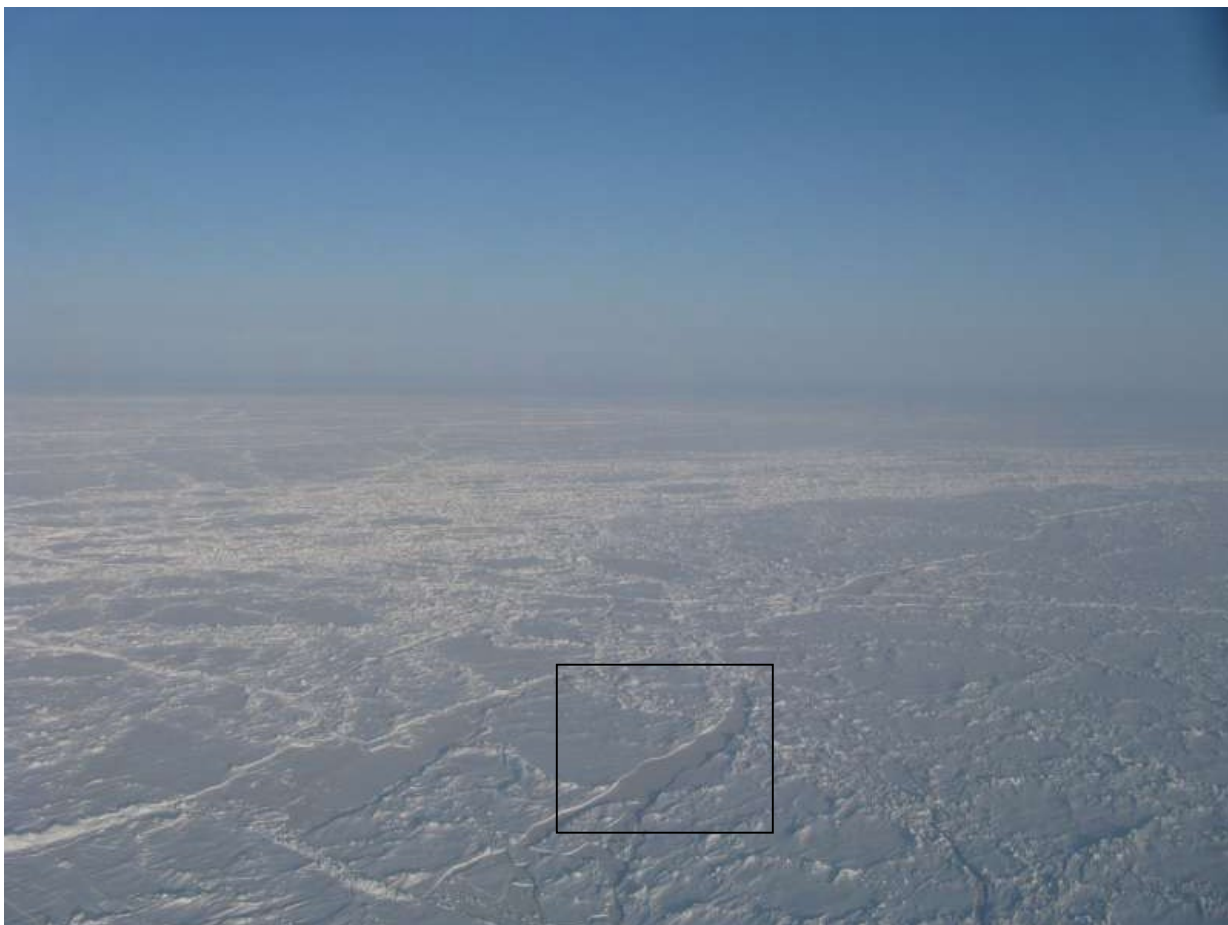
Newsletter #9

2 April.

This morning we finished putting out the last of the 158 charges at the eleven explosive sites. The line of sites starts near the mouth of Nansen Sound at latitude 81 25 and runs almost straight north to latitude 83 24, a distance of about 210 km.

At each location a 10-inch-diameter hole has to be drilled through the ice. The picture below show an example of the ice on the this section of the Arctic ocean. (Ice fog makes the picture hazy.) This ice is mostly first year ice (i.e., ice that has formed this year), and most of this ice has been crushed up. The rest is almost all second-year ice; there is almost no multi-year ice in this area.

The banana-shaped area inside the black square is ice that started to freeze only a month or so ago. A lead of open water (like this) occurs when the ice pulls apart. The water on the lead freezes, and if the thin ice is not crushed by subsequent motion we end up with a refrozen lead like this one, where the ice is not nearly as thick as the rest of the annual ice. Because of its relative thinness we look for this sort of ice for our shot holes. It can be anywhere from 1 to 5 ft thick. The rest of the annual ice is about 6 to 7 ft thick, and the second-year ice is even thicker.



The picture on the right shows a seal's-eye-view of the ice. For safety, the helicopter has landed on thick ice next to the thin ice of the refrozen lead. You can see the freeboard of the thicker ice. If the freeboard of the ice is, say, 1 ft., then the ice thickness is about 10 ft.



The ice of the lead has a sticky wet feel to it. There is still plenty of salt at the surface. You can see that we have been unloading explosives, primacord, rope, etc. Note all the pushed-up ice in the background.

The Twin Otter has been busy bringing out the seismometers to the Icecamp and to the Fuel Cache, and this morning Thomas Funck, John Shimeld and Patrick Potter flew in from Eureka in order to help set them out. Thomas, who is a seismologist, is the straw-boss for this part of the job, just as Tim Cartwright was in charge of deploying the charges. If all goes well they will put out 115 seismometers together with their recording boxes over



a distance of 140 km – the central 140 km of the line. Each helicopter, with two workers, takes out 10 boxes at a time. They take about an hour (plus travel time) to set them out. Today they set out 60 boxes, and they will do the other 55 tomorrow.

Best Wishes, Ron Verrall

We'd like to hear from you. Send your comments to: Name: ronverrallAddress: gmaildotcom

If you have been writing and I haven't been replying – that's because I'm out at the Icecamp, and I don't have access to my email. I'll try to catch up when I next get back to Eureka.