

# Alpha Ridge Test of Appurtenance (ARTA)

Newsletter #10

## 3 April.

Today was a great success. We started by putting out the rest of the seismometers and recording boxes. Then we set off all the charges one by one. This was an interesting exercise in timing. There were four helicopters out, each ready to set off charges, and it was extremely important that they not interfere with each other. Since the reverberations last for some time, it is important that the shots be separated by at least five minutes. Otherwise, both shots would be ruined. So, each helicopter was given three instants per hour at which its shots could be detonated. For example Lloyd and I were given 15 minutes, 35 minutes and 55 minutes after the hour – any hour. We would prepare a shot and then wait until the next allowed firing instant. (I hate to call it a ‘window’ since it has no extent in time.) At the exact moment, as determined by GPS satellite time, the firing box sent a pulse of electricity to the detonator, the detonator fired the primacord, and the primacord set off all the explosives in the water. It was very impressive. The shock wave pounded our feet, and we could feel (and hear) several reflections as the wave bounced back and forth between the ice and the ocean bottom. The primacord running across the ice threw up a cloud of snow when it blew, and, after everything else had settled down, gas started bubbling out of the ice hole. Lloyd and I did two locations, and the other three helicopters looked after the remaining nine shots.

Once all the shots had been detonated, and (importantly) once all the helicopters had been informed of this fact, the 115 recording boxes could be picked up. Each helicopter had about 29 boxes to recover. The picture shows Lloyd preparing to hoist one of the boxes into the helicopter. Each box weighs about 55 lbs, and if you



don't think that hauling those boxes through deep snow is hard work, we have a job for you. Actually, one person did all the real work; a second did all the notekeeping: time, box number, latitude, longitude, etc. Doing the recording took almost as long as recovering the box, but it wasn't nearly as onerous. Guess which one I did. (I'm the old man of the crowd.)

The boxes were all recovered, and they were cached at two places: the southern ones were taken to the Icecamp, and the northern ones were taken to the Fuel Cache, 95 km north of the Icecamp. Some of these boxes have already been picked up by the Skyvan and taken back to Eureka. The rest will doubtless be taken back tomorrow. John Shimeld, Thomas Funck and Patrick Potter have gone back to Eureka to help service the recording boxes. The data has to be removed, and the boxes have to be warmed up and re-battered.

We are very pleased that the first seismic run has been completed. We started setting out explosives on 1 April, and we are all done on the third. Not bad! Not only that, but we managed to set out all the seismic boxes – not just a fraction of them as we did during the LORITA Project in 2006. And, as a further bonus, the ice did not drift from the time we set out the boxes until the time they recorded data. Once we get more explosives out on the ice we can start the northern leg of the ‘cross’. One of the Twin Otters has already started caching fuel at a northern fuel cache, which is about 100 km north of our North Camp.

We have two more helicopters in the camp – bringing the total up to five. One of them worked with Lloyd and me today – pilot John Innis. The other pilot is Jim Barrie (I hope I have the spelling correct). There is also another engineer – Dave Evans. In addition, we have two new bear

watchers.  
Randy and Tom are Inuits from Grise Fiord.

The Skyvan made its first visit today. I must say that it’s not a thing of beauty. It looks like it was welded up out of flat sheets of aluminum. However, it does seem to do the job, and that’s what counts.

The next picture shows the Skyvan unloading barrels of fuel. It’s much like a Hercules or a Buffalo in that the big rear door swings up out of the way to allow large equipment to be loaded. The barrels do look a bit like eggs, don’t they.



I don't believe that I have said much about the North Camp (the Reflection Camp). It's manned by Jorgen Skafte, Mike Gorveatt and Greg Middleton. Alain Belzile and I went out there yesterday to pick up explosives (and fuel). While Steve, the helicopter pilot, refueled, Alain and I walked over to the stash of explosives to do a count. I was wearing only my Carharts (insulated coveralls); I had left my parka in the helicopter thinking that it probably wasn't too cold. Now, Jorge, Mike and Greg are truly tough guys; they always seem to wear the absolute minimum to keep themselves warm. When they showed up all bundled up in parkas, facemasks and big mitts, knew I was in trouble. As we stood around chatting, I got colder and colder and colder; it was very chilly. Oh well, I thought, I'll warm up when we load the helicopter with 38 boxes of explosives. The problem was that these guys are such good hosts that when the helicopter arrived they pitched in and did the bulk of the work.

Because of the cold, they're having a few problems out there at North Camp – mostly with their engines. They drive their skidoo into the kitchen tent every night so that it will start in the morning. The bigger problem is with their generator, which will start only if it's good and warm. I got the impression, though, that things are improving and that they are confident that they can work the bugs out of their systems.

We gripe about the temperature, but the good flying conditions we have had (not one weather day so far) goes hand in hand with cold temperatures. Once the weather warms up, like it did far too early during the LORITA project, the fog rolls in, and the flying gets very problematic. So, we hope that it stays cold. One of the guys who built this camp – Aaron, I think – commented, "It's twenty degrees warmer today than it was when we first arrived, but thirty two below still feels cold."

Several people have asked what the messing facilities are like, so I've included a picture of the interior of the cook tent. There are no windows in this tent; the only light inside is electric, so please forgive the grainy picture. That's Tim and Gerard at the back having their morning coffee.



Best Wishes, Ron Verrall

We'd like to hear from you. Send your comments to: Name: ronverrall Address: 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.