

Mt. Redoubt Revisited...

Author: Ed Criley

(Ed Criley, the author of this article, handled logistics for the U. S. Geological Service in Menlo Park, CA for many years. Unfortunately, Ed passed away in 2010 and this article is included here to honor his memory.)

Maybe you have seen the news stories about Mt Redoubt in Alaska erupting these past few weeks. I was there after the last one, so this is about it. It must have been in the summer of 1991, could have been '90. Mt Redoubt erupted in 1989 and '90.

Did I tell you about another one of my and JVS' adventures to Alaska? (ed note: JVS is Jack Van Shaack.) Bob Page and another Phd, Bernard, wanted to record the location of the magma of Mt Redoubt in Alaska using explosives as the energy source in addition to the earthquakes they were recording with their seismographs.

Mt Redoubt had had an eruption during the year before. Enough ash was erupted into the air to close the Anchorage airport at times. Mt Redoubt is the second volcano in a north south chain on the west side of the Cook Inlet, just across from Kenai and southwest of Anchorage, and extends on into the Alaska chain of volcanoes. In 1951 the northern most one, Mt Spur, erupted enough to throw ash on Anchorage. Mt Iliamna, the next one is way down there in the boonies, and the next one is Katmai National Monument, a lot of old lava flows. The Phds had made arrangements for them and us to stay at the Drift River oil pipeline camp at the northeast end of Mt Redoubt and on the Inlet.

JVS and I flew into Anchorage. We spent a few days gathering enough lamp cord for the shot line and a roller to put it on, other necessary items including explosives while Bob and the others were taking care of the seismographs around Mt Redoubt. Earlier in the summer I was in Seattle checking out the area for a seismic experiment. At a local super-market, I happened upon a big sale of 1968 Inglenook Cabernet Sauvignon (a California wine)... this was 1990 or 91. I remembered from 1984 in Maine (of all places) as it being very good wine, so bought all four bottles. When we were in Anchorage, I found the only one left., so had to have it too. Not that this means anything. JVS and I opened it after our successful excursion to Mt Redoubt.

The mountain was pretty inactive by this time. Its history seemed to be in spurts for a month or so and then goes back to sleep. But still there was always talk.... or in the backs of minds about the location of the pipeline station... what if it actually put out lava, But it had not in historic time so it was just talk mostly, and now with active monitoring of any earthquakes within the volcano, the element of surprise should be minimal.

They had placed about twenty seismographs around the volcano to record the earthquakes and any lava movement within the volcano. JVS and I were asked to shoot in a few ponds around the mountain and in the Crater itself. JVS was in charge of the field operations for the branch, and I co-coordinated all of the seismic refraction field projects, and we both were loaders and shooters.... The so-called "experts"??

We, with the help of a helicopter, loaded six and shot them. We would bundle about six boxes of ammonium nitrate, each box with two thirty pound "sausages", and with a one pound booster added, and with primacord strung through them. It takes a booster to detonate two or three boxes of the explosive and a detonating cap or primacord to detonate the booster and a detonating cap to detonate the primacord.

We usually used the primacord at the explosive package, and attached a cap just before we were ready to shoot; a little safer that way.

The boxes would be taped together, good ol' duct tape; a rope tied around each bundle and a five foot rope with a big loop at the top. The helicopter would hover above and we would attach the rope to his hook. He would fly over to the pond and drop, as close to water as possible, the bundle into an area that we, via, radio would say "drop". The size of the bundle depended upon the depth of the lake or pond. Six hundred pounds were usually the limit the helicopter wanted to fly with. Mostly they only had to fly a few hundred feet. These ponds were only ten feet or less deep so we used only 300 pounds, which even then threw a lot of water out, others such as in Kenya were a hundred or more feet deep. About five hundred feet of shot line was run out to an over looking place to the shooting box.... and "BOOM", all that work shot to hell.

They also wanted to shoot one in the crater..... just east from where the eruption had taken place. If you didn't know better, you would never have believed there had been an eruption. The crater was quite large and the eruption had only been in a vent on the west side of the crater, so where we were to work had not been too affected by it or the snow had covered any traces, so it looked safe. It was quiet, clear, beautiful scenery. I don't remember any steam.

The helicopter put us in a place a few hundred feet away from the site Bob and Bernard had chosen. I didn't know until we had off loaded the explosives, that we were a couple hundred feet from where we were to lower the charges to a ledge about a hundred feet down. We had to carry the stuff to the loading site. Everyone helped to lower, by hand, 1000 pounds of the explosive down about 100 feet onto a snow ledge. Afraid the helicopter might dislodge it if it had to hover there long if we used it. We tried several locations to shoot from. That was probably our biggest challenge.... trying to string out a thousand feet of shot line from a helicopter to a place in the snow field which was not going to collapse on or under us when we shot and not shower a bunch of rocks on us from above.

After a couple tries and broken shot line we located a good solid rock outcrop to shoot from, but we were still a little concerned about a steep wall to our south, that a bunch of rocks would fall on us. I asked the pilot how fast he could get this thing off the ground... he said about 3 seconds. We sat in the back, me with the shot box in my lap and JVS with a pair of wire cutters. The pilot started the helicopter, I pushed the button, JVS cut the shot line and threw it out the window; and we were airborne. JVS thinks we were airborne as he was still cutting the wire. There was snow in the air everywhere, the snow bridge near the shot point collapsed. The air cleared and we were able to see the broken ledge and the snow bridge. It was quite spectacular. We circled around, observing the area, and landed back at our shot site to pick up our equipment and roll up the shotline. Not many rocks fell. Bob and the others were up on the top of the wall, they said it was pretty impressive (we thought it was too),and everyone was happy!ever after.

Working with all these guys (and those in the whole Branch) was joy. They were all interested in their work, and the job at hand.... and the scientists (Phds), men or women, didn't mind getting their hands dirty.