SALSA Field Report: 06-07 Nov 2018. Compiled by Chloe Gustafson

SALSA Geophysics/SALSA EM, Day 8 Update

- The team has completed the “Deep Field Shakedown” and has returned to McMurdo.

06 NOV 2018
- Tuesday morning (local time) we were dropped off at four snow machines ~1 mile outside of McMurdo. From there, we loaded up our field supplies and hit the snow road to our campsite for the night. Meghan and Matt showed the team how to set up the Scott tent and build and snow wall in front of the mountain tent. Meghan also showed us how to build an emergency trench. Many snow blocks were cut.
- Before bed, Chloe and Kerry demonstrated how to set up an MT site in the snow. Electrodes (specifically designed for this project and working in Antarctica) were extremely easy to bury in the snow and Matt dug the fastest magnetometer trench in the history of geophysics; we love setting up MT in the snow. We allowed the instrument to record data overnight.

07 NOV 2018
- In the morning we took down the tents we worked so hard to build and enjoyed some breakfast in our snow kitchen. While drinking our second cup of coffee, the SkyTEM crew flew right over camp and MT site. This flyby was the perfect additional check on how well our magnetometers were working; we could clearly see the waveform transmitted by SkyTEM. Kerry and Chloe reviewed the overnight testing data and declared the test successful.
- We spent the rest of the day out at the crevasse simulator where Meghan taught us how to self-arrest with an ice axe, travel on a rope team, and build a snow anchor/pulley system for crevasse rescue.
Matt checking out our digs for the night. Mountain tent in front, Scott tent in back.

Meghan and Kerry dig out our survival trench. We used the Siglan sled (white sled on the left) as the roof.
Kerry, Matt, and Chloe standing at the center of our MT test site after successfully installing all electrodes and magnetometers. Mt. Erebus decided to come out from behind the clouds for this special occasion.

MT data. The top two plots show the electric fields (N-S and E-W) and the bottom three plots show the magnetic fields (N-S, E-W, Down). The large amplitude signal in all panels shows when SkyTEM flew over the MT site.