

The BASE Newsletter, vol. 3, issue 4









On two consecutive days, we sampled the Ben Lomond (a.k.a. Princeton) and the 22-level tunnels of Agnes Mine, thanks to friendly permission by the operator, Galaxy. Both tunnels traverse at nearly right angle through ca. 2 km thick subvertical strata of the Moodies Hills Block west of Barberton. Because we have no boreholes in this tectonic unit and exposures there are either poor or access difficult, the ca. 60 stratigraphically controlled samples will provide a valuable addition to the BASE cores. While a team from UJ (Nic, Bertus, Hervé) focused on jaspilites and BIFs, the onsite team collected wall rock at regularly spaced intervals.

The section head of education and research of the German Embassy Pretoria, Dr. Kieffer, visited us for a full day. She informed herself on our objectives and the WHS in which we drill, saw the exhibition and core processing facilities, visited the three active drillsites, and then toured the entire length of the R40 Geotrail to the Eswatini border - a full day indeed! Because Dr. Kieffer is not only a diplomat but also a biologist by training, she readily grasped our concepts and questions (metabolisms, environmental parameters, rates in deep time etc.), so that our conversations were profound and efficient.

We continue to run three rigs at Sites 2, 4B and 4C, all drilling NQ diameter cores. As of the time of writing, the rigs at Sites 4B and 4C are at 136 and 112 m MD, respectively, drilling stratigraphically upwards at approx 15 m / day through cross-bedded tuffaceous sandstones at the base of the Lomati Delta. The rig at Site 2, currently at 245 m, penetrated ca. 30 m of shoreline sandstones with abundant early-diagenetic gypsiferous concretionary crusts (shown left) and presently progresses through gravelly, sandy and shaly coastal-plain strata at about 20 m / day. All cores are of very good to excellent quality, and rates are better than predicted. We bring the cores down in the late afternoon and mostly orient, label, slab, photograph and describe them the following day.

Phumi, Christoph, and Rod frequently give talks or interviews and lead tour groups to the highly accessible Site 2, located next to a parking lot on the R40 road. The event to the left shows the informal part of an evening presentation by Christoph to the local Rotary Club chapter. Despite the appearance to the contrary, our team building activities do not usually frequent the local pubs; rather, we either hike on weekends in the beautiful mountains or check out the strata in the vicinity of the drillsites.

Frohes Forschen!

Christoph Heubeck, Nic Beukes and the BASE onsite team