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Dear Ms. Mann,

Below are my preliminary correlations and suggestions for AK-3 drilling project through 1300' (9/2/2016; am). Continuous core logs and selected core photos were available between 174' – 1300' at the time of writing. Core photos remain an important source of information.

Below 800' (i.e., since the last report on 8/31/2016), core appears to be decreasing in alteration overall and is generally less fractured. Leak off test at 810' showed high formation integrity. In particular, the zone between ~960' – 1025' appears relatively fresh and tight (based on sporadic core photos in this interval). Between 1220' and 1277', alteration increased to moderate levels. Below this zone, a fractured (but unaltered) portion of core is present between 1287' – 1295', and photos are not available below this depth. MRT results are not reported on the core logs, but the driller's report of 9/1/2016 indicates at least 300 oF (max temperature reading possible on the MRT used) at 900'. Outflowing mud temperatures are only slightly elevated at this depth, and mud temperatures in the 1270'-1285' altered zone are elevated. Mud temperatures for the 1287'-1295' fractured zone were not available at the time of writing.

The shallowest 100' of the core contains little alteration and was interpreted to be a lithologic cap on the deeper system that occurs between 105' - 670' (with minor alteration and fracture zones at ~780' and 870'; based on core photos and well logs). The actual thickness of the unaltered/tight zone between 960' – 1025' is uncertain due to core photo availability, but fractures do not appear to be present between 960' - 1025' and are modest in the altered zone between 1220'-1285'. The tight/unaltered zone between 960'-1025' may be acting as a second, deeper lithologic cap. This hypothesis is supported by increasing alteration from 1220' - ~1277' and a rise in outflowing mud temperatures between 1270' – 1285'. No mud temperature information is available below 1285, but no loss of circulation was mentioned in the drillers report, suggesting limited distribution of this fracture network.

Overall, the lack of permeability this deep in the well is not promising, but there is reason for hope. Temperatures seem good, and recently received core photos of ~1450' show a thick tuff unit, which is generally prone to fractures and alteration. Ideally we'll see several more layers of tuff interbedded with mass wasting deposits to promote fracturing within units as well as permeability at lithologic contacts.