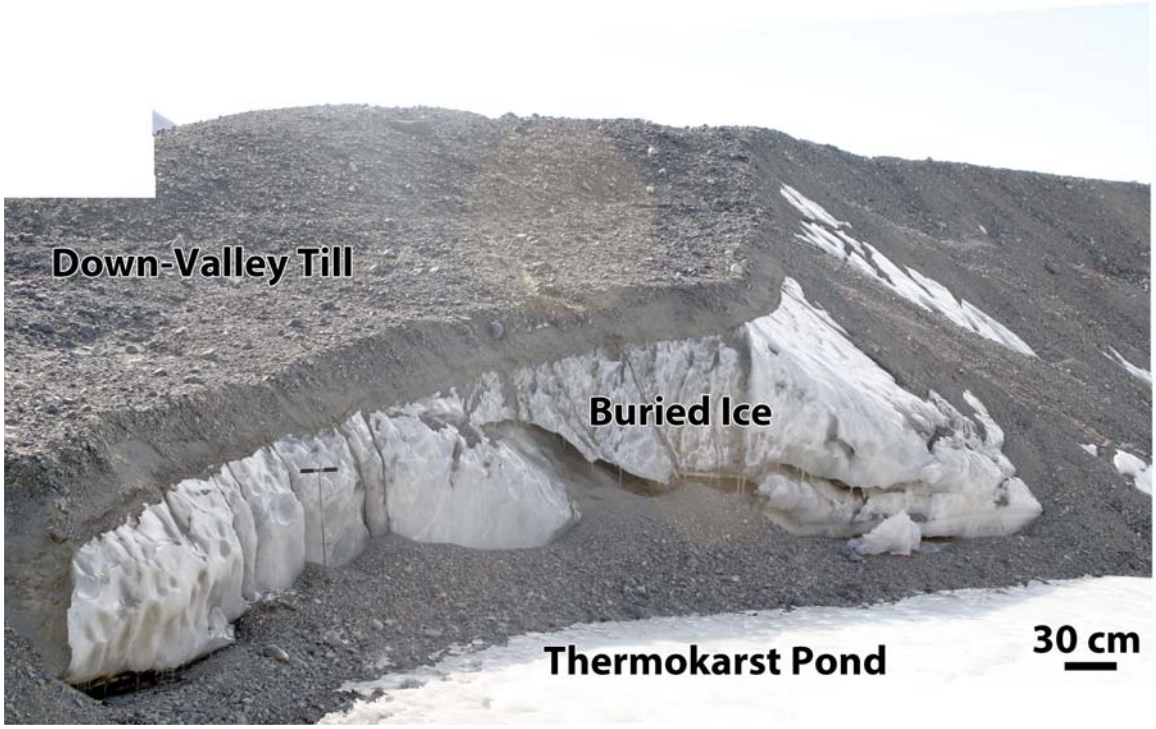
GSA Data Repository Item 2017141
Levy, J.S., Rittenour, T.M., Fountain, A.G., and O'Connor, J.E., 2017, Luminescence Dating of Paleolake Deltas and Glacial Deposits in Garwood Valley, Antarctica: Implications for Climate, Ross Ice Sheet Dynamics, and Paleolake Duration: GSA Bulletin, doi:10.1130/B31539.1.

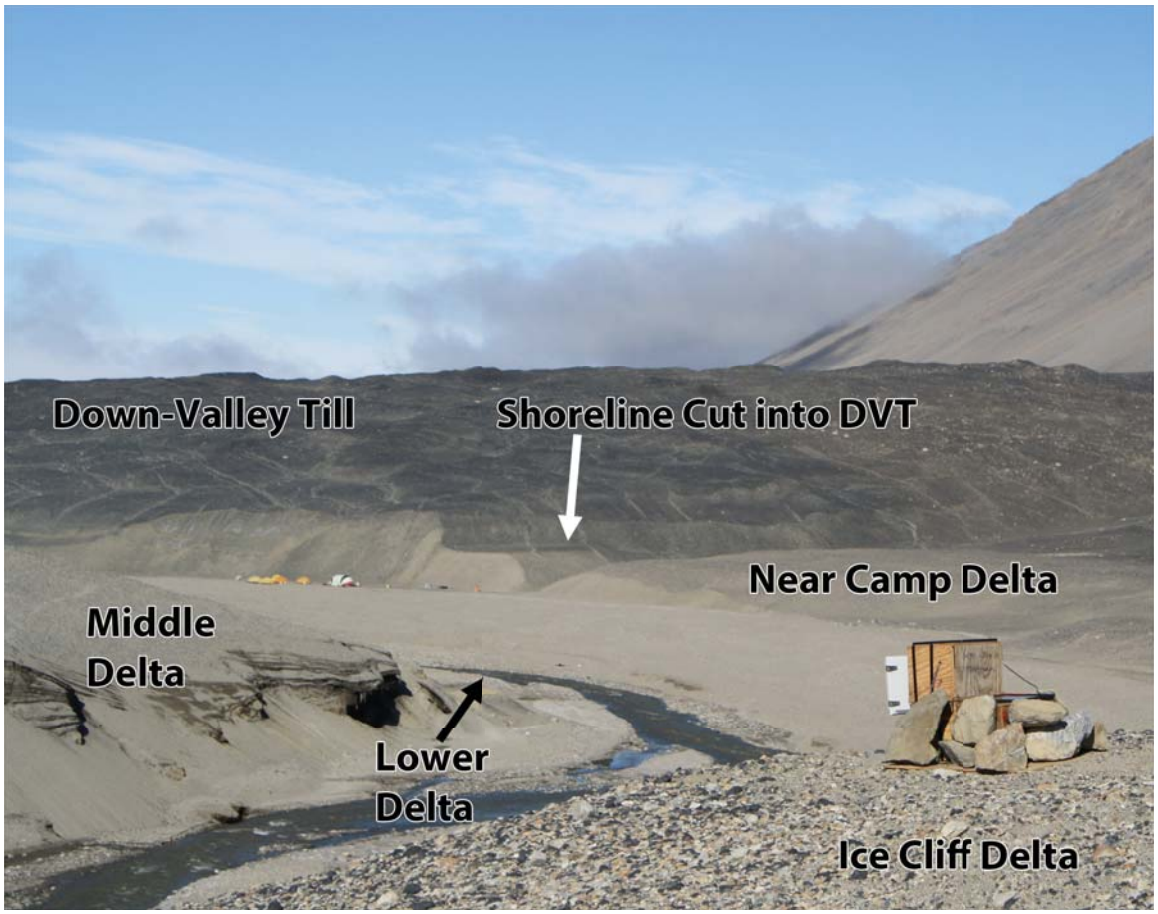
Supplementary Table. Geographic data for luminescence samples

Sample No.	Latitude	Longitude	Elevation (m.a.s.l.)
USU-1143	-78.026	164.141	34
USU-1144	-78.028	164.147	19
USU-1145	-78.024	164.134	46
USU-1146	-78.029	164.152	22
USU-1147	-78.026	164.133	41
USU-1148	-78.023	164.129	52
USU-1149	-78.028	164.162	44
USU-1150	-78.028	164.143	21
USU-1467	-78.022	164.101	73
USU-1468	-78.021	164.088	88

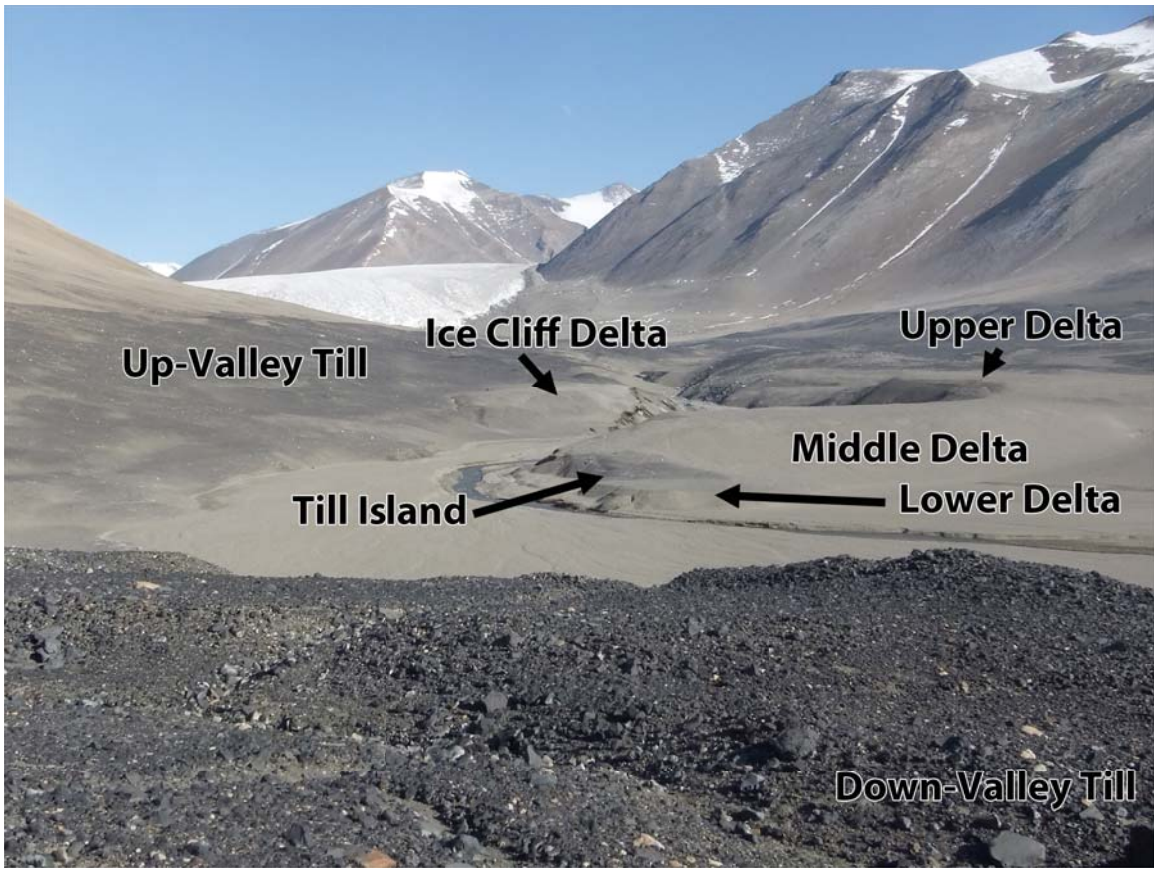
Supplementary Images:



S1. Three-photo mosaic showng stratigraphic relationships between buried Ross Sea Ice Sheet ice and overlying Down-Valley Till. Buried ice is exposed at a thermokarst pond near A' in Fig. 1. The Down-Valley till is a thin diamict overlying intact ice.



S2. Ground view from atop the Ice Cliff Delta, looking downvalley (southeast). Major features of central Garwood Valley, including the Middle, Lower, Near Camp, and Ice Cliff Deltas can be seen, as well as the Down-Valley till, the ice and sediment of which is interpreted to have formed a dam, allowing the paleo-Garwood River to pond. A shoreline cut is present in the Down-Valley till at an elevation shared by the Near Camp and Lower Deltas.



S3. Ground view from the Down-Valley till looking up-valley (northwest) towards the Garwood Glacier. The vantage point is approximately at the center of image S2.

S4-S12: Excavation images for luminescence sampling

S4. Excavation for USU-1143. Arrow shows location of horizontal core.

S5. Excavation for USU-1144.

S6. Excavation for USU-1145.

S7. Excavation for USU-1146.

S8. Excavation for USU-1147.

S9. Close-up view of bedding in USU-1147 excavation.

S10. Excavation for USU-1148. Note abundance of light-toned fine sediment, which may be associated with winnowing of nearby alluvial deposits into the till or by aeolian inflation since ~77 ka.

S11. Excavation for USU-1149. Note that this till does not have a massive light-toned layer like that shown in S7.

S12. Excavation for USU-1150.