Uranium-lead age constraints for the "Taung Child", Australopithecus africanus, from Taung, South Africa.

PHILIP J. HOPLEY^{1,2}, RANDY PARRISH³, ANDY HERRIES⁴, COLIN MENTER⁵ AND BRIAN KUHN⁶

¹Department of Earth and Planetary Sciences, Birkbeck, University of London p.hopley@ucl.ac.uk

²Department of Earth Sciences, University College London ³NERC Isotope Geosciences Laboratory, British Geological Survey, Keyworth, UK

⁴Department of Archaeology, Environment and Community Planning, La Trobe University, Melbourne, Australia

⁵Centre for Anthropological Research, University of Johannesburg, South Africa

⁶Institute of Human Evolution, University of the Witwatersrand, South Africa

Since the discovery of the "Taung Child" in 1924, the type specimen of Australopithecus africanus, in the Buxton-Norlim Limeworks near Taung, the age of the fossil and its environment of deposition have been debated. The exact geological context of the "Taung Child" was lost, but mined remnants of the fossiliferous deposits are preserved within the quarry, and have been interpreted as cave sediments that formed within the Plio-Pleistocene Thabaseek Tufa; either as a younger cave-fill or as contemporaneous carapace caves. We undertook uranium-lead dating, ground penetrating radar, sedimentological and palaeomagnetic analysis of the pinkcoloured deposit from which the Taung Child was derived and demonstrate that it is a calcrete, a carbonate-rich pedogenic sediment, that formed on the palaeo-landsurface. Our reinterpretation of the stratigraphy has implications for the dating, environment and taphonomy of the site, and increases the likelihood of future fossil discoveries within the Buxton-Norlim Limeworks. We have been able to produce at least one U-Pb age for the site and will present a preliminary age estimate for the "Taung Child".