GSA Data Repository Item 2016215
Author, A., and Author, B., 2016, Cambrian–Ordovician orogenesis in Himalayan equatorial Gondwana: GSA Bulletin, doi:10.1130/B31507.1.

SUPPLEMENTARY TABLES

Table DR1. Measurements and descriptions of trace fossil

DETRITAL ZIRCON GEOCHRONOLOGY METHODS

All zircon grains were imaged using reflected and transmitted light microscopy, cathodoluminescence (CL), and scanning electron microscopy (SEM). Sectioned grains were imaged using CL to determine their internal structures and to ensure that the ~20 μm SHRIMP spots were wholly within the youngest single age component (i.e., the rims). The SQUID Excel macro (Ludwig, 2001) was used to process the data. U/Pb ratios were normalized relative to a value of 0.0668 for the Temora reference zircon, equivalent to an age of 417 Ma (Black et al., 2003). Uncertainties given for individual analyses (ratios and ages) are at the 1s level (see GSA Data Repository1). Correction for common Pb was made either using the measured $^{204}Pb/^{206}Pb$ ratio in the normal manner, or for grains younger than ~800 Ma (or those low in U and so radiogenic Pb) the ^{207}Pb correction method has been used (see Williams, 1998). When the ^{207}Pb correction is applied it is not possible to determine radiogenic $^{207}Pb/^{206}Pb$ ratios or ages. In general the

$^{207}Pb/^{206}Pb$ ages have been used in the probability density spectra for areas older than 800 Ma, whereas for zircons <800 Ma the $^{206}Pb/^{238}U$ age is used. The concentration of U, and thereby radiogenic Pb, is also taken into account for selecting preferred ages. A number of areas analyzed have been interpreted to be discordant and this has been based in part on the proximity to the concordia curve (using the total ratios, uncorrected for common Pb), and in part on whether the radiogenic $^{206}Pb/^{238}U$ age is part of a grouping of like ages, or a single outlier significantly younger than the inferred depositional age of the strata. Such interpreted discordant analyses have been excluded from the age spectra. A sixth sample (KD-1) was run at the UTChron laboratory, Department of Geological Sciences, University of Texas, Austin using Laser-Ablation ICP Mass spectrometry (LA-ICP-MS). Mounts were placed into a Helex 9 sample cell, volume c.30 cm^3, and ablated with a 30 μm spot from a Photon Machines AnalyteG2 ATLex 300si ArF Excimer laser. Ablated material was carried by helium gas to a ThermoFisher Element2 double-focusing magnetic sector ICP-MS for isotopic measurements.

REFERENCES CITED

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Williams, I.S., 1998, U-Th-Pb geochronology by ion microprobe, *in* McKibben, M.A., et al., eds., Applications of Microanalytical Techniques to Understanding Mineralizing Processes: Reviews in Economic Geology, v. 7, p. 1–35.

Table DR1. Measurements and descriptions of trace fossil

Trackway Measurements			
External Width (E)	45 mm		
Internal Width (I)	3 mm		
Ratio (E/I)	15		
Repeat Distance (R)	80 mm		
Ratio (E/R)	0.5625		
	Average	**Left Track Row**	**Right Track Row**
Series Length		113 mm	94 mm
Series Overlap	17.5 mm	21 mm 23 mm	14 mm 12 mm
Inter-series Distance	13 mm		

Imprint Descriptions	
Morphology	Ellipsoidal
Orientation	Oblique
Symmetry	Staggered
Track Rows	Simple