

**Table DR1. Langdun Formation lithologic data**

	Site LC1	Site LC8	Site ASC9
Gneiss/leucogranite <sup>1</sup>	0.00	0.00	0.37
Black/gray limestone	0.07	0.69	0.05
Basalt	0.02	0.00	0.05
Sandstone/siltstone	0.76	0.28	0.53
Conglomerate	0.00	0.03	0.00
Purple siltstone	0.02	0.00	0.00
Purple sandstone	0.13	0.00	0.00

Note: Data given as fraction of total. Data collected through random selection of ~50 clasts at each site. Gneiss/leucogranites derive from the Ailao Shan shear zone. Other lithologic associations are as follows: Black and gray limestone = Triassic (T<sub>2</sub>); Basalt = Permian; Conglomerate = Limestone Conglomerate member of the Langdun formation; Purple siltstone = Devonian; Purple sandstone = Sinian (Bureau of Geology, Yunnan, 1990). Sandstones and siltstones could derive from a variety of units and can't be further identified. See figure 6 for locations.