



Figure SM1. **a** Field photograph of tabular cross-beds in quartzite from the Phuljhari Formation; **b** Field photograph of a gradational contact between conglomerate and cross-bedded quartzite; **c** Field photograph of graded-bedding in sandstone intercalated with the conglomerates of the Phuljhari Formation; **d** Field photograph of cross-beds noted in quartzite from the Badampahar Greenstone Belt at Suleipat