

Supplementary Information for
**Stress Transfer Outpaces Injection-Induced Aseismic Slip and Triggers
Seismicity**

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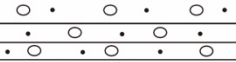
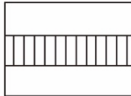
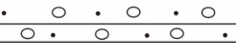
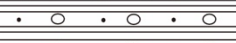
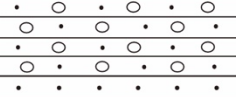
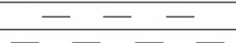
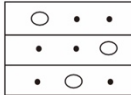
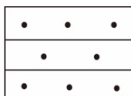
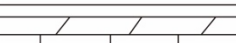
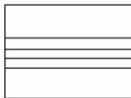
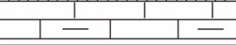
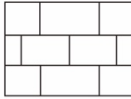
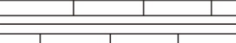
Stratigraphy		Lithology	Thickness (m)	Geologic time (Ma)	Legend	
System	Code					
Quaternary	Q		1500-4000	3	 Gypsum-salt	
Neogene	N			25		
Tertiary	E			80		
Cretaceous	K			140		
Jurassic	J			1500-4000	195	 Pelite
					195	
					205	 Glutenite
					205	
					230	 Sandstone
	270					
Triassic	T				320	 Mudstone
					320	
					320	
Permian	P				320	 Shale
Silurian	S		320			
Ordovician	O		1600-2250		542	 Limestone
Cambrian	C				542	
					551	 Dolomite
Ediacaran	Z			635		
Basement					 Basement	

Fig. S1. Vertical lithology of Weiyuan Shale Gas Field. Hydraulic fracturing is done in the Longmaxi formation (highlighted in purple) in the Silurian basin. Limestone and dolomite layers above and below the Longmaxi formation could act as higher permeability conduits for fluid flow, before encountering more shale layers in the Permian and Ordovician basins that act as permeability barriers. This explains the concentration of earthquakes at certain depths in Fig. 5b.