Supplementary Materials: Evolution Characteristics through Thermo-Rheological Lithosphere of the Liaonan Metamorphic Core Complex, Eastern North China Craton

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Introduction

The supplementary material includes: (1) The lithospheric rheological structures of Liaonan metamorphic core complex (Figure S1), (2) Heat flow map of continental China (Figure S2), (3) Paleo temperature and paleo differential stresses calculated from grain size of dynamically recrystallized quartz of Liaonan metamorphic core complex (Table S1).

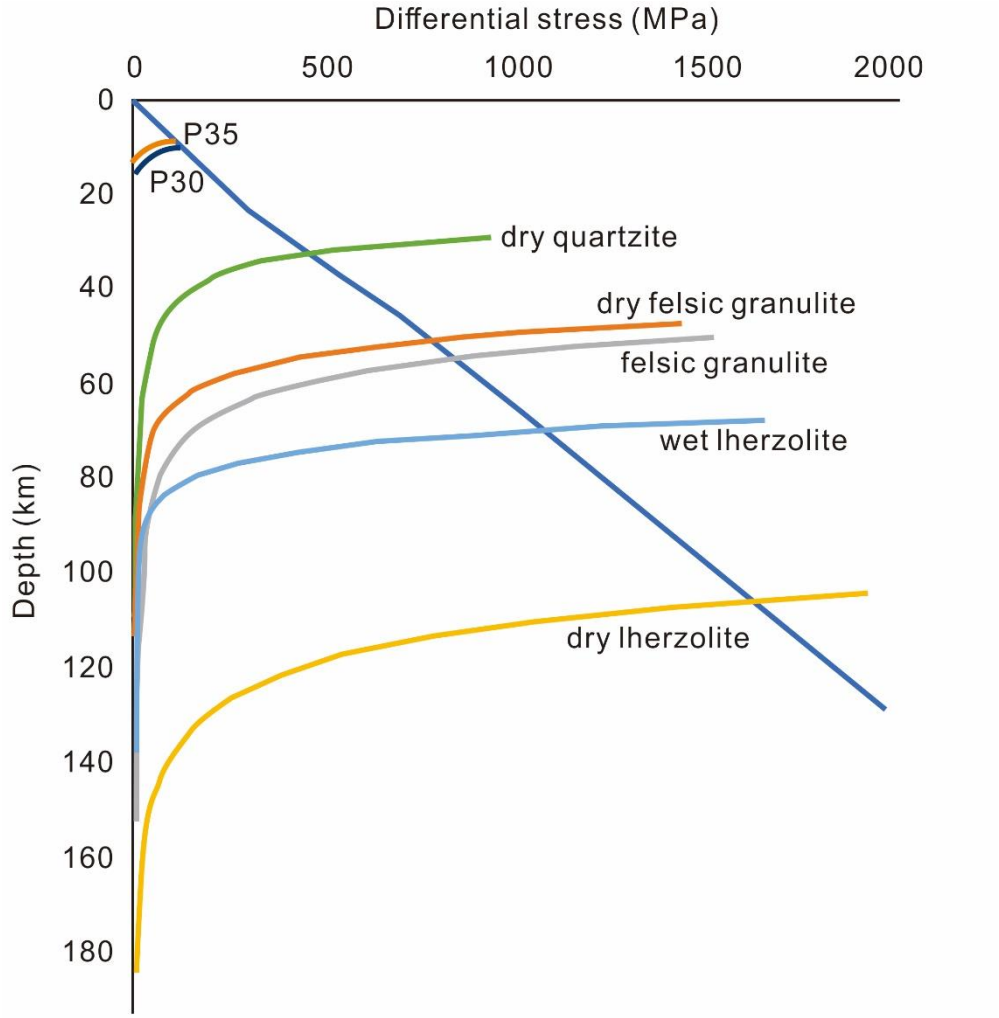

Figure S1. The lithospheric rheological structures of Liaonan metamorphic core complex. Red and orange solid lines represent the Cretaceous rheological structures under 30 °C/km and 25 °C/km, respectively. Other coloured solid lines represent the rheological curves of different rock types. Abbreviations: P30-Cretaceous rheological structure under 30 °C/km; P25-Cretaceous rheological structure under 25 °C/km.

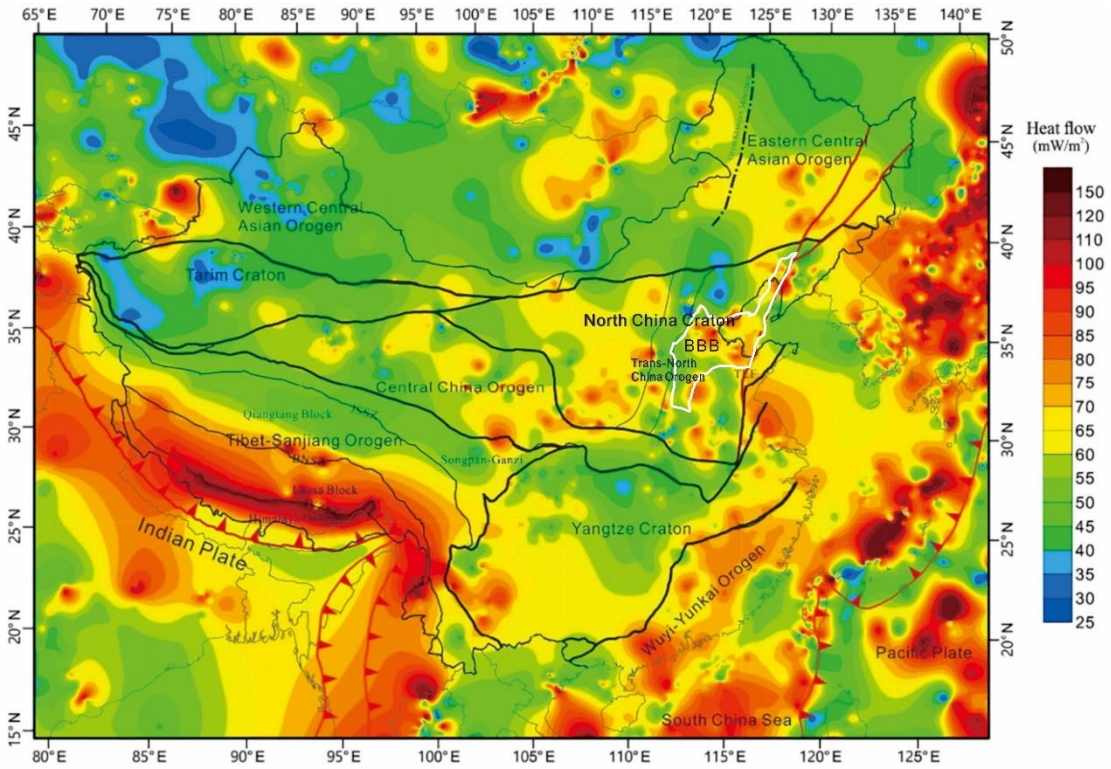

Figure S2. Heat flow map of continental China (Modified after [14]). The white solid line represents the Bohai Bay Basin. Abbreviation: BBB-Bohai Bay Basin.

Table S1. Paleo temperature and paleo differential stresses calculated from grain size of dynamically recrystallized quartz of Liaonan metamorphic core complex (data from [34]).

Sample ID	Grain Size (μm)	Paleo Temperature (°C)	Paleo Differential Stress (MPa)
09060-16	12.6	350	65
09060-11	14.4	360	59
09060-10	19.0	380	47
09060-1	22.7	400	41
09060-3	29.8	420	33
09037-1	24.6	410	39
06003-1	29.8	420	33
SL0939	30.3	420	33
09042-1	47.2	430	23
12033-1	8.6	330	89
P01-10	12.2	350	67
47-29-4	13.1	350	64
12067-1	9.6	340	82
SLL004-1	63.4	460	18
P02-10	11.6	350	70
12065-1	5.5	320	127
12024-1	13.0	350	64
SLL019-2	14.0	360	60
P01-7	69.1	480	17