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Corrigendum: Using acoustic velocities and microimaging to probe microstructural changes caused by thermal shocking of tight rocks

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KEYWORDS

thermal shocking, microstructure, elastic moduli, permeability, time-lapse, microimaging, tight rocks

A Corrigendum on

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In the published article, there was an error in [Figure 9](#) as published. Two of the datasets were mistakenly calculated using the incorrect unit conversion. The correct [Figure 9](#) and its caption appear below.

The following text corrections were also made to reflect the corrected data.

A correction has been made to **Results**, *Time-Lapse Rock Physics Measurements of Thermally Shocked Lithologies*, Paragraph 2. This sentence previously stated:

“The post-thermal shocking SWG k is presented however, and we see that k significantly increased by several orders of magnitude.”

The corrected sentence appears below:

“The post-thermal shocking SWG k is presented however, and we see that k increased by at least an order of magnitude.”

A correction has been made to **Results**, *Time-Lapse Rock Physics Measurements of Thermally Shocked Lithologies*, Paragraph 4. This sentence previously stated:

“[Figure 9C](#) shows that MSA permeability increased significantly upon thermal shocking, regardless of effective pressure. Additionally, the spread in k increased from less than 1 μD to almost 5,000 μD with thermal shocking, meaning that similar to PTB, the pressure sensitivity of k increased with thermal shocking.”

The corrected sentence appears below:

“[Figure 9C](#) shows that MSA permeability increased upon thermal shocking, regardless of effective pressure. Additionally, the spread in k increased from less than 1 μD to almost 9 μD with thermal shocking, meaning that similar to PTB, the pressure sensitivity of k increased with thermal shocking.”

A correction has been made to **Discussion**, Paragraph 10. This sentence previously stated:

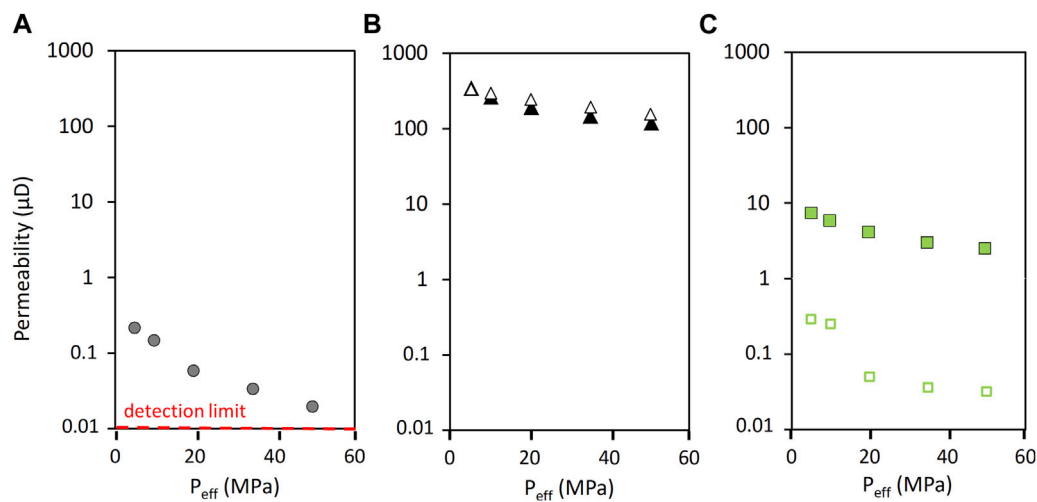


FIGURE 9

Permeability versus P_{eff} for the SWG (A), PTB (B), and MSA (C) lithologies before and after thermal shocking. Smaller, empty symbols represent k data associated with pre-thermal shocking and larger, filled symbols represent k data associated with post-thermal shocking. Permeability for the SWG sample before thermal shocking was below the detection limit of the permeameter (0.01 μD), and therefore is not plotted. Error bars are less than 1% of measured values.

“Thermal shocking was so effective in MSA, that the permeability of the MSA sample increased substantially (Figure 9). Not only did thermal cracks propagate throughout the MSA sample, but they connected to one another allowing for permeability to increase by almost 10 Darcy.”

The corrected sentence appears below:

“Thermal shocking was so effective in MSA, that the permeability of the MSA sample increased (Figure 9). Not only did thermal cracks propagate throughout the MSA sample, but they connected to one another allowing for permeability to increase by almost 10 μD .”

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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