Table 1. Notations

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| Symbol | Definition | Value | Unit |
|  | Biot effective stress coefficient | 0.98 | --- |
|  | Drained thermoelastic effective stress coefficient |  | N⋅m-2⋅K-1 |
|  | Skempton pore pressure coefficient | 0.95 | --- |
|  | Coefficient of volumetric thermal expansion of solid |  | K-1 |
|  | Coefficient of volumetric thermal expansion of porosity |  | K-1 |
|  | Coefficient of volumetric thermal expansion of fluid |  | K-1 |
|  | Coefficient of volumetric thermal expansion for variation in fluid content |  | K-1 |
|  | Drained coefficient of volumetric thermal expansion of porous medium frame |  | K-1 |
|  | Specific heat of the porous medium at reference temperature |  | J⋅kg−1⋅K−1 |
|  | Fluid flux |  | m⋅s−1 |
|  | Heat flux |  | J⋅m−2⋅s−1 |
|  | Permeability coefficient |  | m2⋅Pa−1⋅s−1 |
|  | Thermal conductivity |  | W⋅K−1⋅m−1 |
|  | Mechano-caloric coefficient |  | m2⋅s−1 |
|  | Thermo-osmosis coefficient |  | m2⋅s−1⋅K−1 |
|  | Poisson’s ratio |  | --- |
|  | Drained bulk modulus |  | N⋅m-2 |
|  | Shear modulus |  | N⋅m-2 |

Our results have significant implications and guidance for designing and executing cementing operations under HTHP conditions. It adds another important element to the map of the fundamental understanding for failures