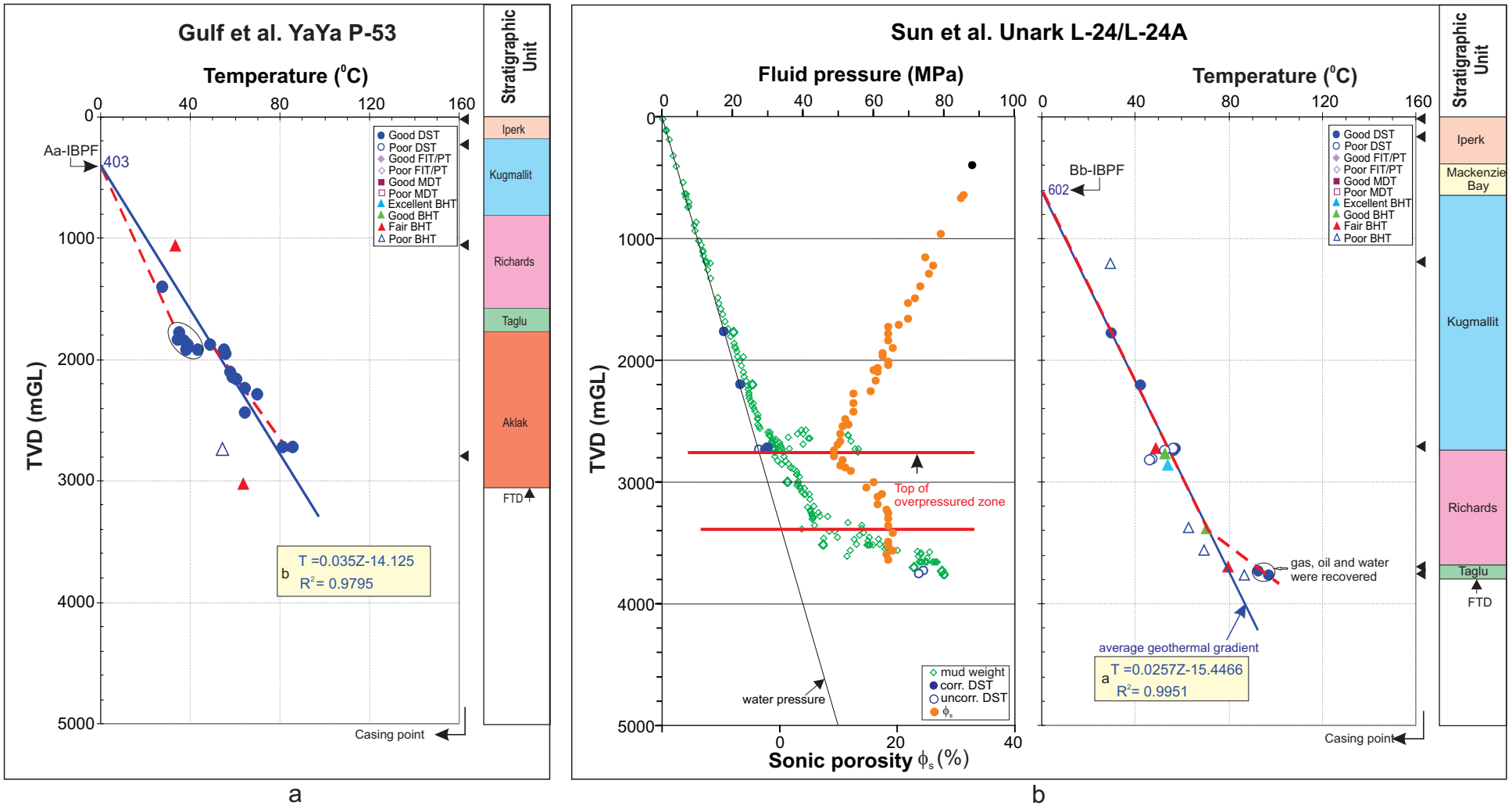

Figure 6. Average geothermal gradients are determined by applying a least-squares fit to the deep temperature data and a constrained regression tied to an independent permafrost base; all circled points are excluded for regression calculation.
a - For the YaYa P-53 well, the circled DST values are abnormally low for an interval where less than 100 m of gas cut mud were recovered; the low temperatures may be related to the Joule-Thomson effect (see text), resulting in an apparent dogleg geothermal gradient (red dashed line).
b - For the Unark L-24 and Unark L-24A wells, circled points show much higher temperatures for an overpressured gas and oil zone; the higher temperatures may be associated with the Joule-Thomson effect (see text), resulting in a dogleg geothermal gradient (red dashed line).