

Paper 26**A comparison of quality of present-day heat flow obtained from BHTs, Horner plots, RFTs, and DSTs of Malay Basin**

DOUGLAS W. WAPLES & MAHADIR RAMLY
c/o PETRONAS Carigali Sdn. Bhd.
Wisma Peladang, Jalan Bukit Bintang
P.O. Box 12407

Reconciling temperature data obtained from measurement of single BHT, multiple BHT at a single depth, RFTs and DSTs is very difficult. Quality of data varied widely and DST data were assumed to be most reliable. Data from 145 wells were used in this study but only 47 wells have DST data.

The BASINMOD software program was used to calculate the present-day heat flow using measured thermal conductivities. The heat flows obtained from the DST data were assumed to be correct and representative throughout the basin. Heat flows were then calculated using (1) uncorrected RFT data, (2) multiple BHT data corrected by the Horner plot method, and (3) single BHT values corrected upward by a standard 10%. All three of these heat flow populations had identical standard deviations to that for the DST data, but with significantly lower mean values. Correction factors were then calculated to give each of the three erroneous populations the same mean value as the DST population.

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Heat flows calculated from RFT data had to be corrected upward by a factor of 1.13 to be equivalent to DST data; Horner plot data corrected by a factor of 1.15, and single corrected BHT data by an additional factor of 1.17. These results suggest that present-day subsurface temperatures calculated using RFT, Horner plot and BHT data are considerably lower than what they should be.

We suspect qualitatively similar results would be found in other areas. Hence, we recommend significant corrections be routinely made until local calibration factors are established.
