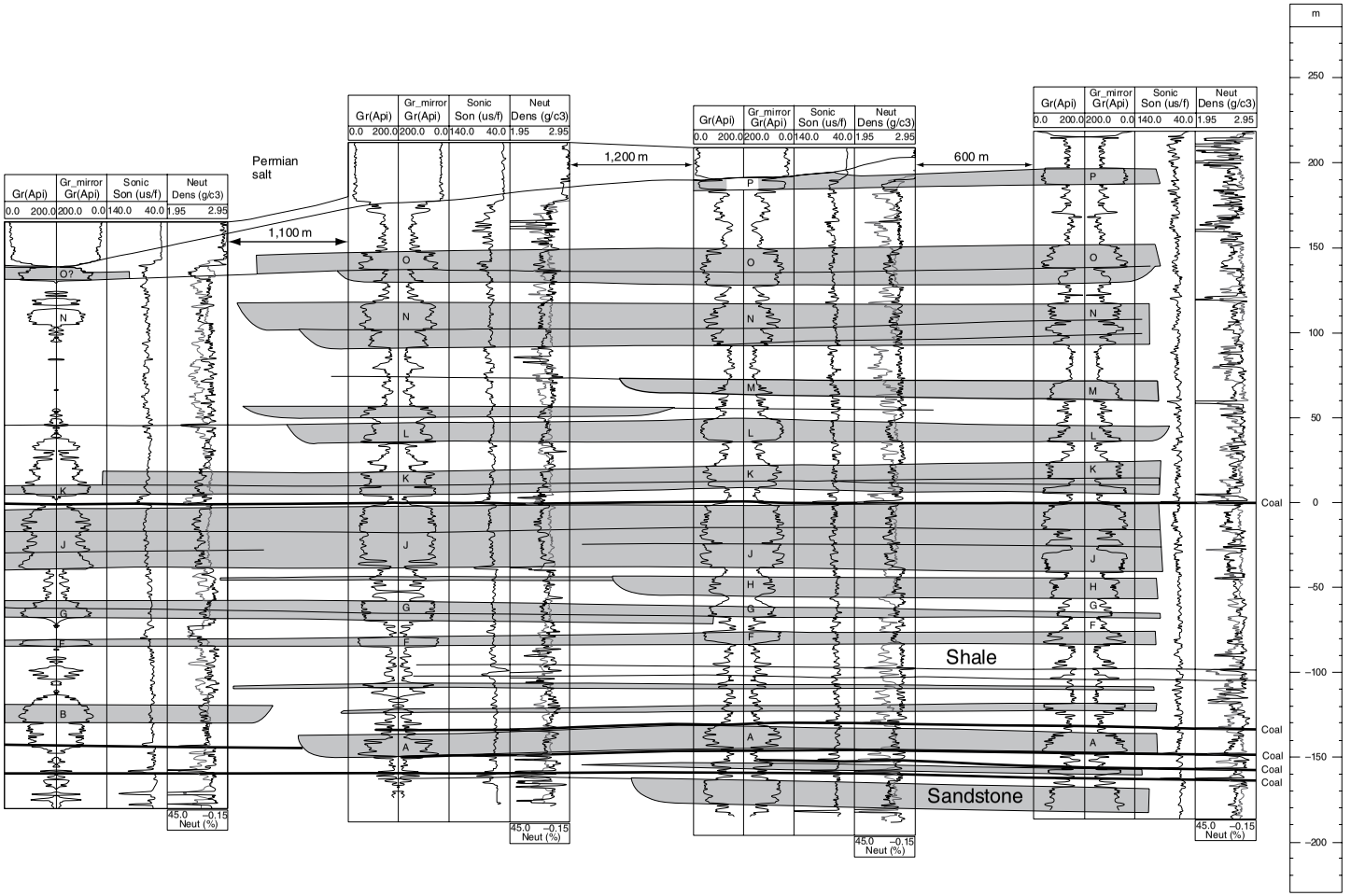

FIGURE 13.52. The channel-belt width is commonly estimated using well-to-well correlation of channel-belt deposits if channel belts are wider than the well spacing. This requires an estimate of the expected channel-belt width from the channel-bar thickness. However, it is difficult to distinguish relatively thick floodplain sands from thin channel-bar deposits and the sandy parts of channel fills. Fine-grained channel-fill deposits are difficult to distinguish from floodplain shale. In this example, the deposits are interpreted as channel-belt deposits (stippled), floodplain sands (stippled), or floodbasin shales (unstippled). The datum used to aid correlation is the coal seam in the middle of the section. Channel-belt deposits (letters A–P) were recognized on the basis of their (large) thickness and gamma-ray (GR) patterns. The correlation of channel deposits was based on estimated widths derived from channel-bar thickness, and hence maximum channel depth. It is not necessary to know whether the channel was meandering or braided to do this. Also, channel fills and floodplain sands help define channel-belt edges (e.g., L and H). Superimposed channel bars are distinguished using GR patterns (e.g., J). Floodplain sandstones are recognized and correlated on the basis of their (small) thickness, expected geometry, and relationship to channel-belt edges. From Bridge (2006).