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ENGINEERING GEOLOGY & GEOTECHNICAL MODELS

ENGINEERING GEOLOGY

Geological Models

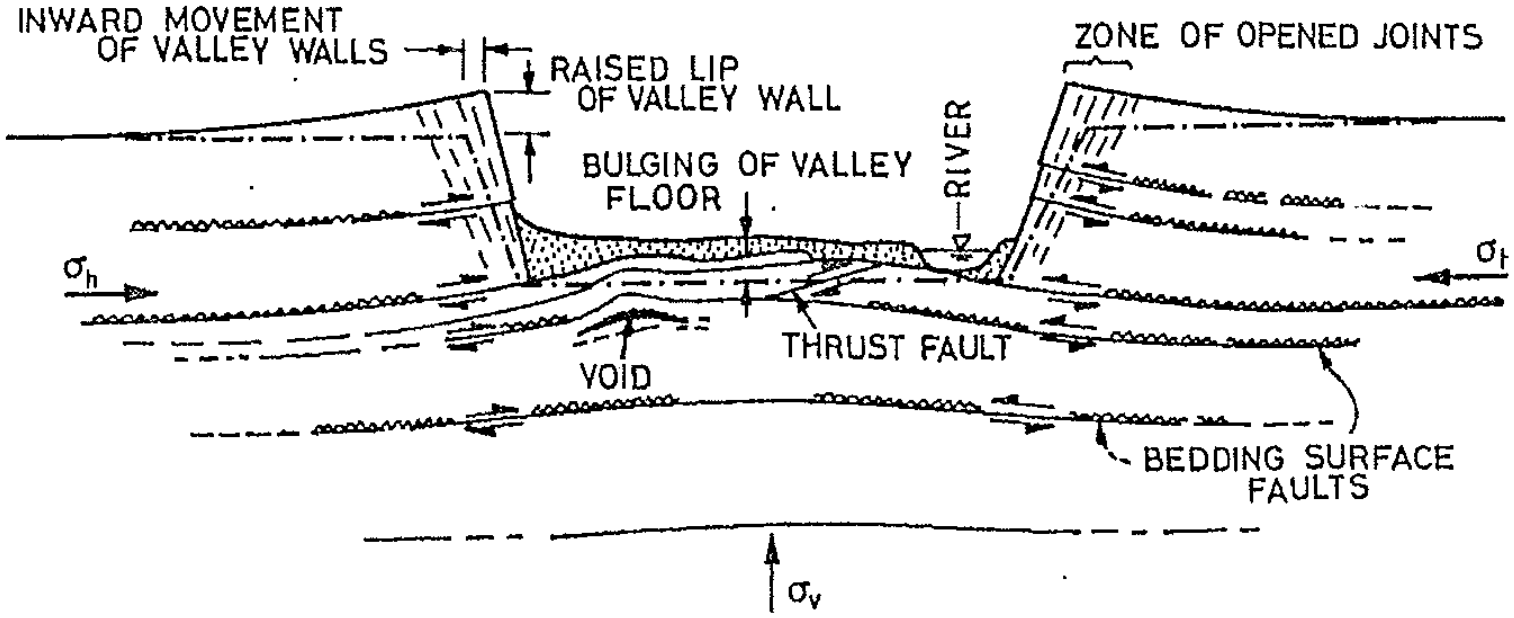
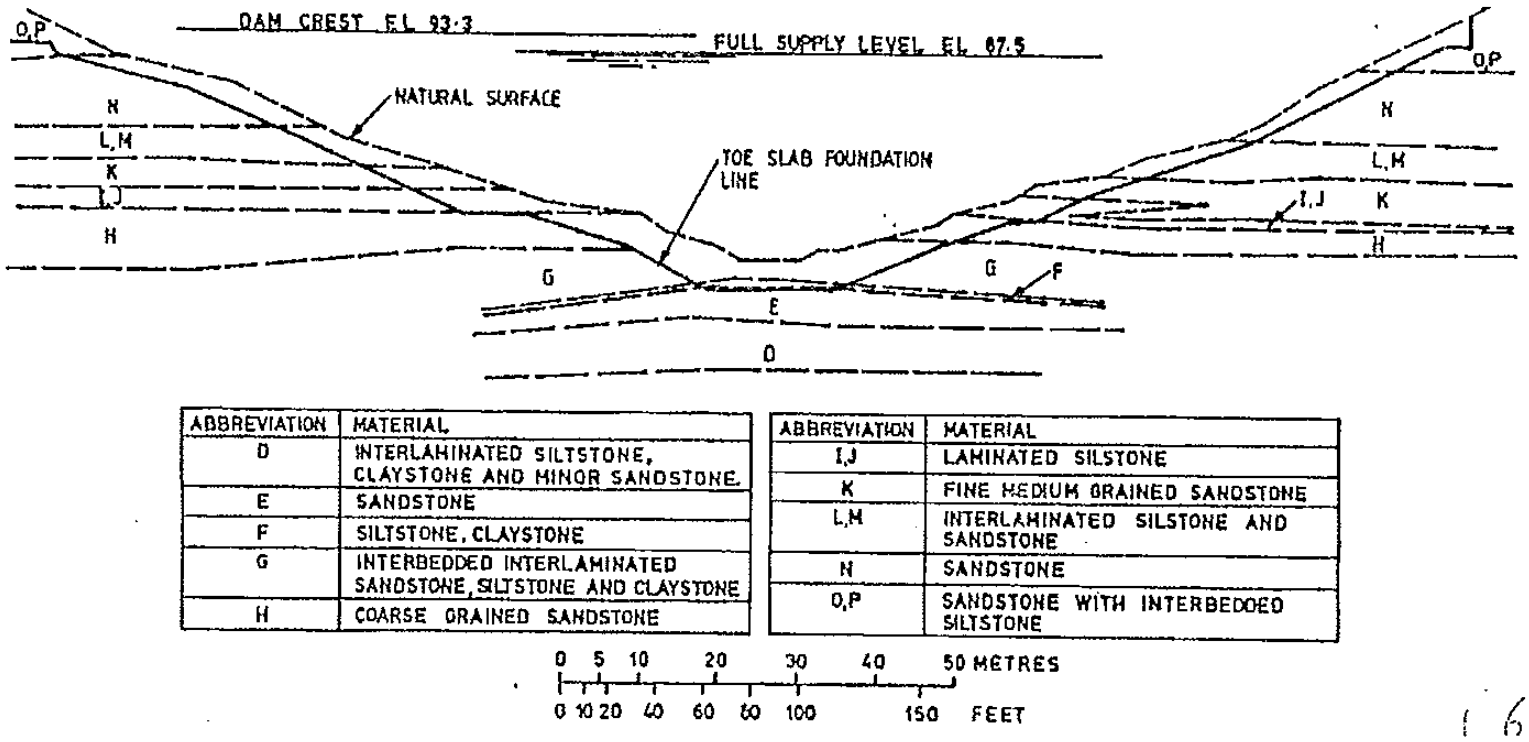


Figure 3.7. Complex valley structures related to stress release in weak, flat-lying rocks (based on Patton & Hendron 1972).



ABBREVIATION	MATERIAL
D	INTERLAMINATED SILTSTONE, CLAYSTONE AND MINOR SANDSTONE.
E	SANDSTONE
F	SILTSTONE, CLAYSTONE
G	INTERBEDDED INTERLAMINATED SANDSTONE, SILTSTONE AND CLAYSTONE
H	COARSE GRAINED SANDSTONE

ABBREVIATION	MATERIAL
I,J	LAMINATED SILSTONE
K	FINE MEDIUM GRAINED SANDSTONE
L,M	INTERLAMINATED SILSTONE AND SANDSTONE
N	SANDSTONE
O,P	SANDSTONE WITH INTERBEDDED SILTSTONE

Figure 3.8. . Cross-section along the grout cap foundation at Mangrove Creek Dam. From MacKenzie & McDonald (1985).

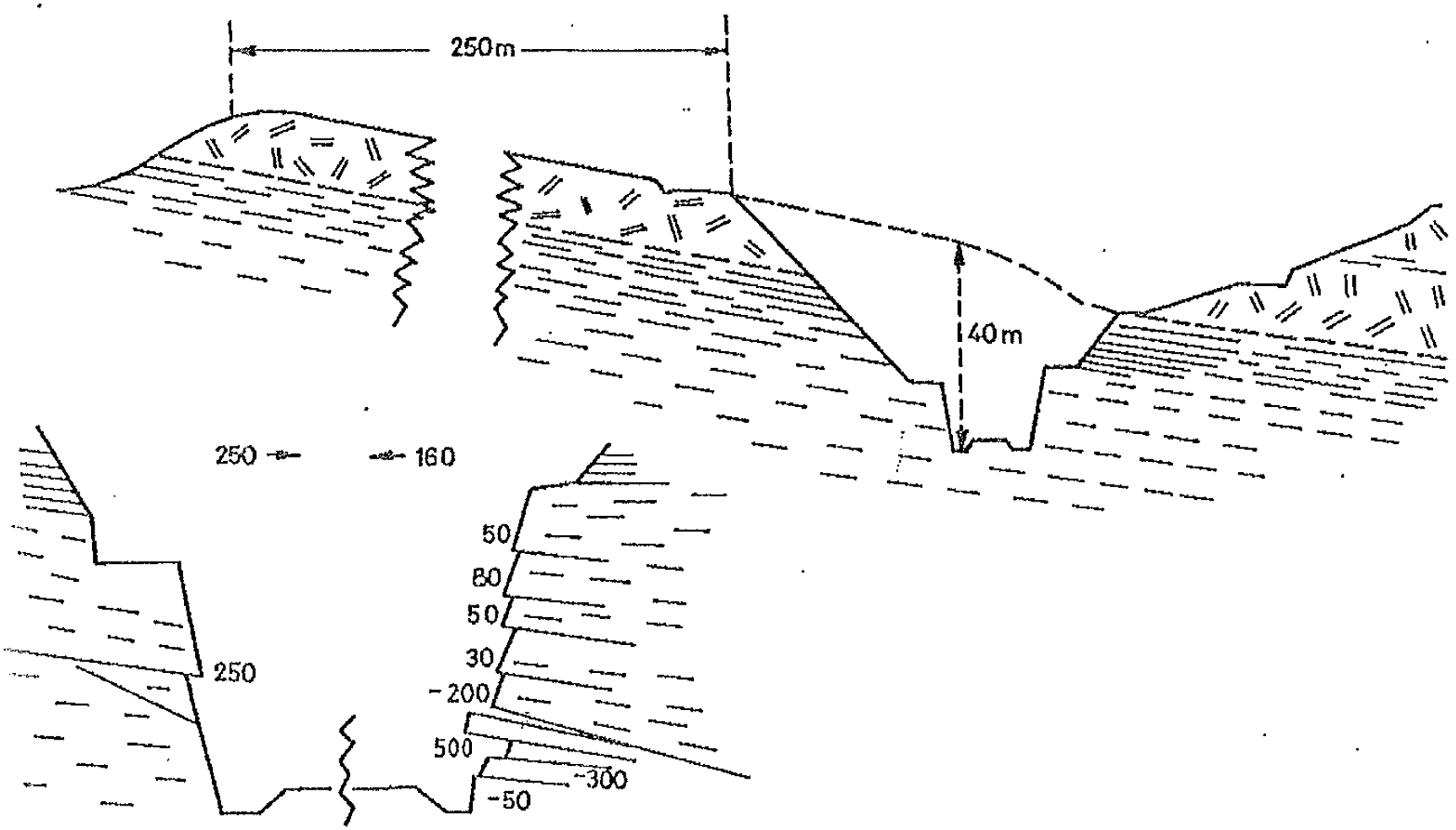


Figure 3.12. Convergence indicated by traces of presplit holes, near base of railway cutting in fresh, strong siltstone.

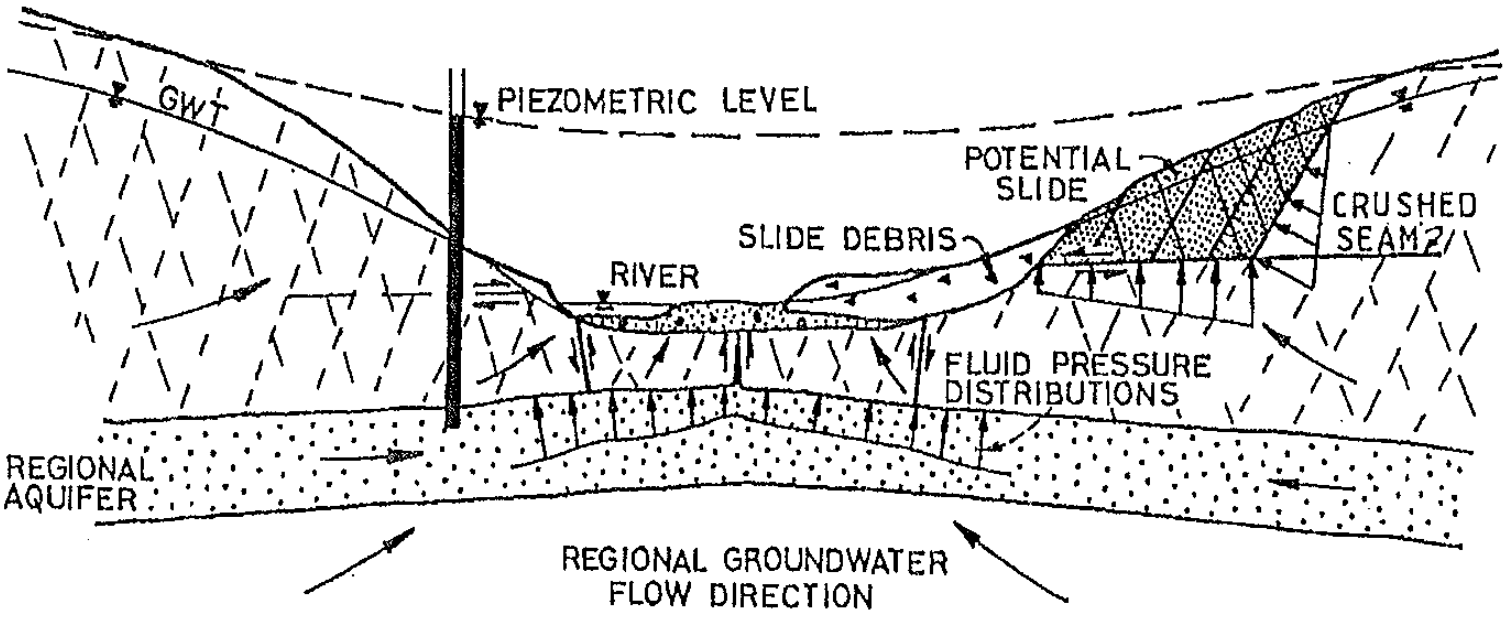


Figure 3.13. Possible effects of high fluid pressures on valleys in groundwater discharge areas (from Patton & Hendron 1972).

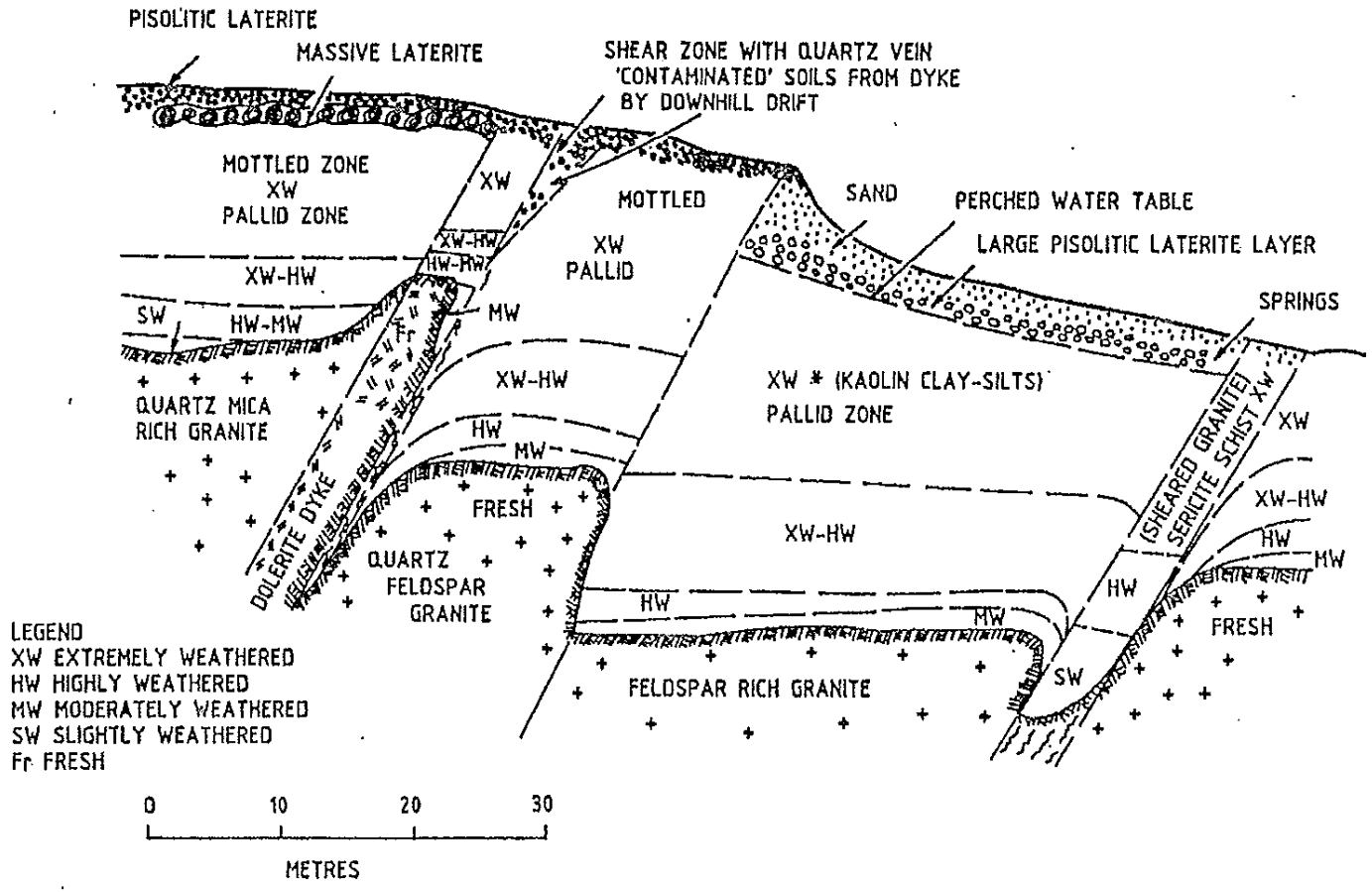


Figure 3.18. Diagrammatic cross section showing weathered profile controlled partly by rock type and partly by sheared zones, Darling Ranges, Western Australia (from Gordon 1984).

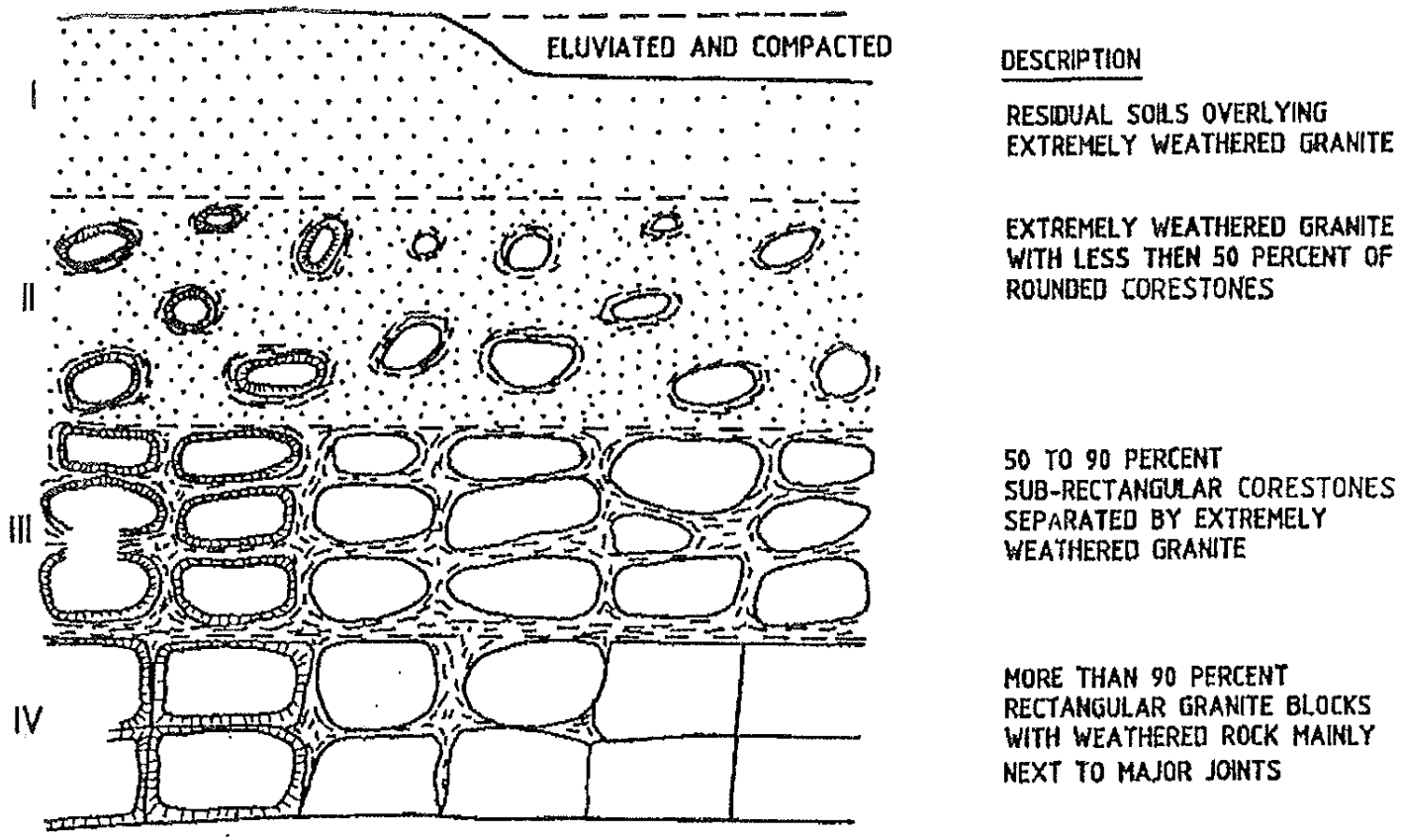


Figure 3.19. Idealised weathered profile in granitic rocks. From Ruxton & Berry (1957).

Figure 3.20. Granitic boulders or corestones showing spheroidal weathering effects. Photo courtesy of Dr. R. Twidale.

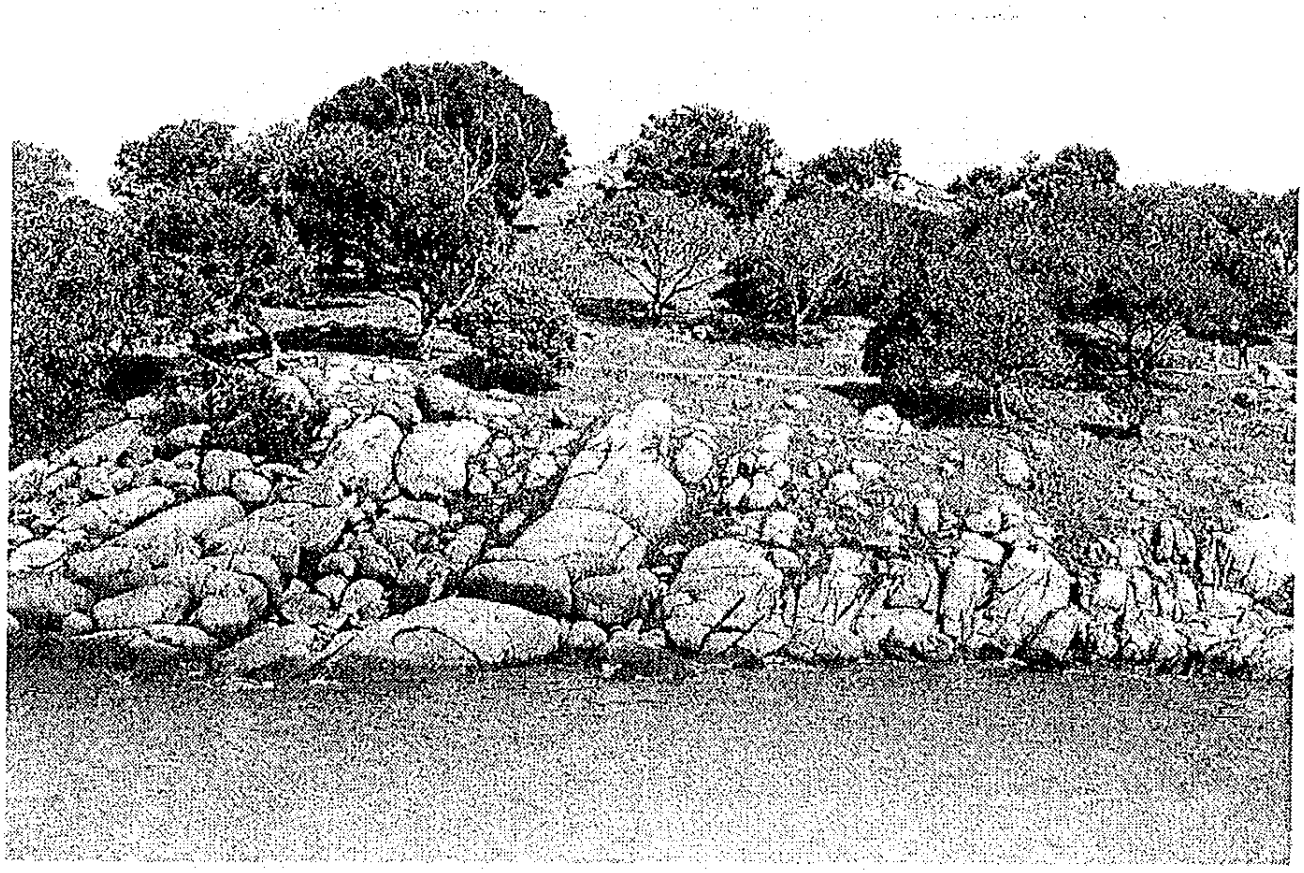


Figure 3.21. Granite corestones and outcrops below granitic soils on Granite Island, Victor Harbor, South Australia

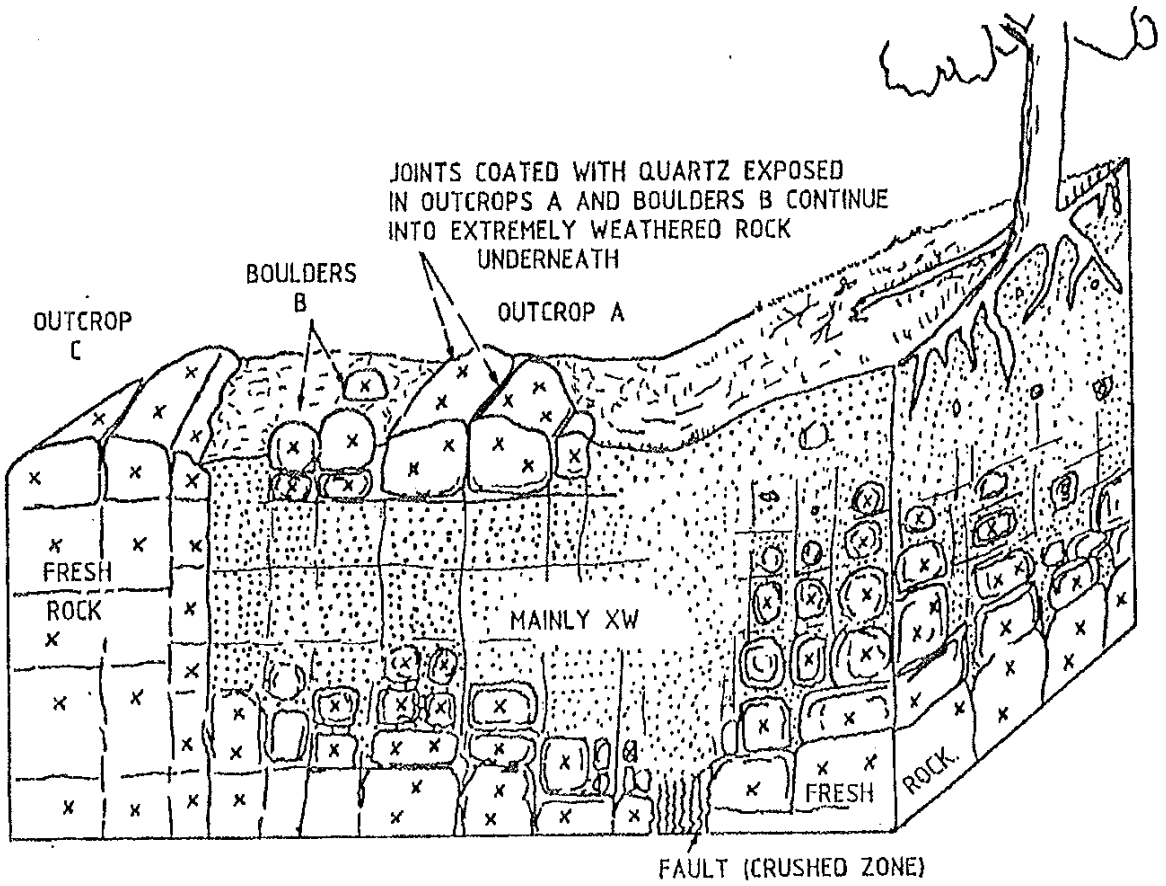


Figure 3.22. Features sometimes seen in weathered masses of granitic and other igneous rocks.

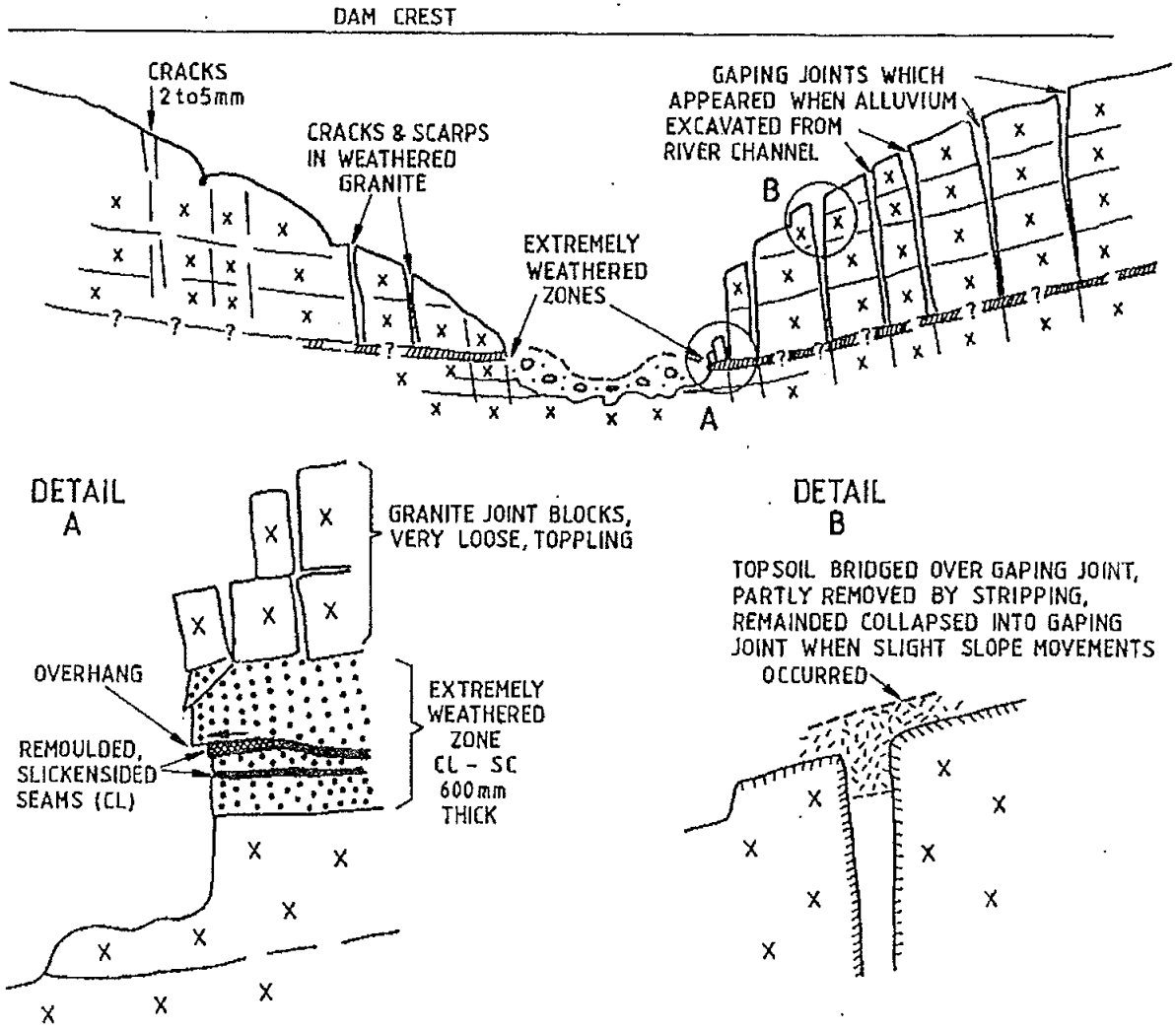


Figure 3.31. Tooma Dam, cross section and sketches through downstream shoulder.

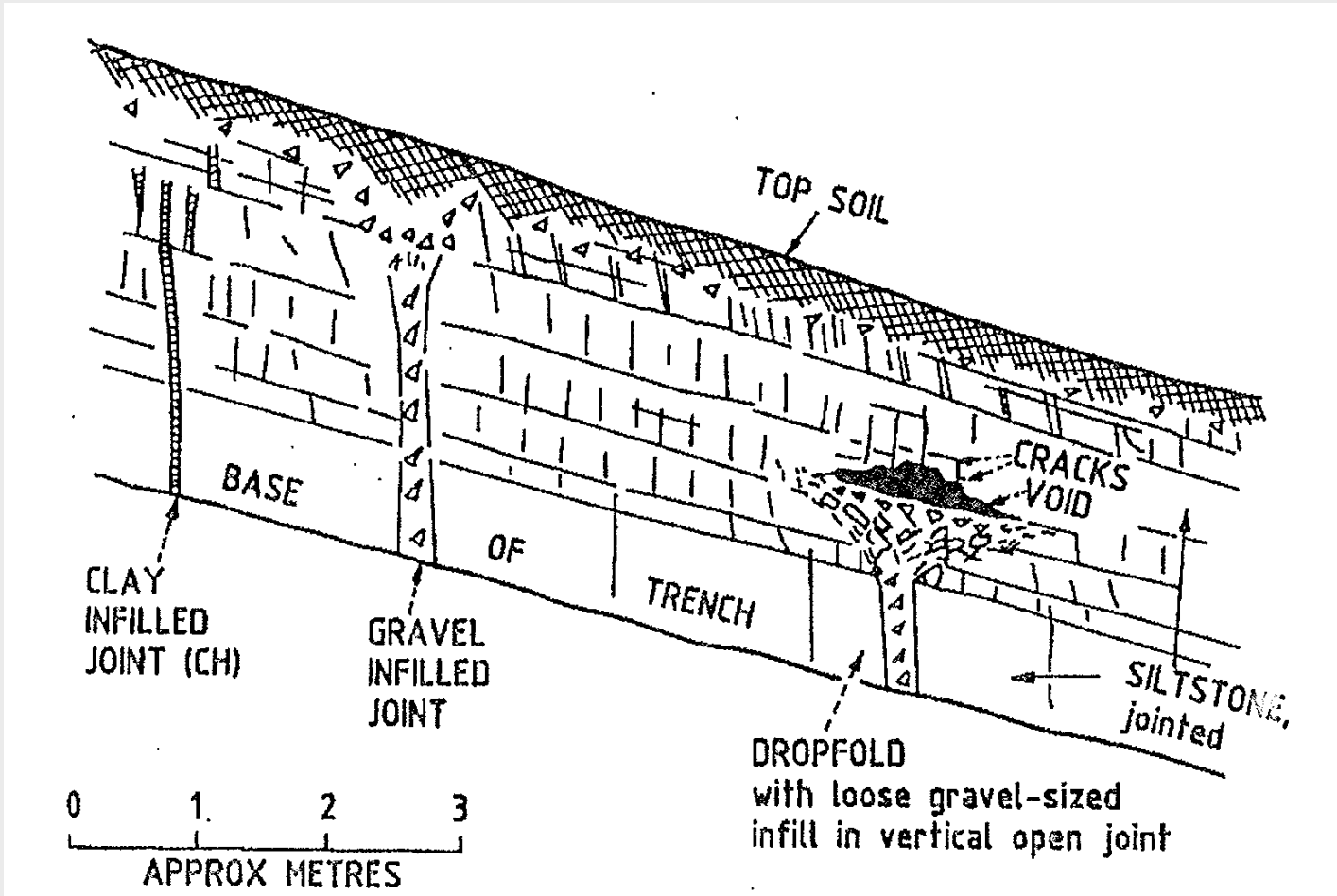


Figure 3.38. Features exposed in trenches on a left bank dipslope at Sugarloaf Dam

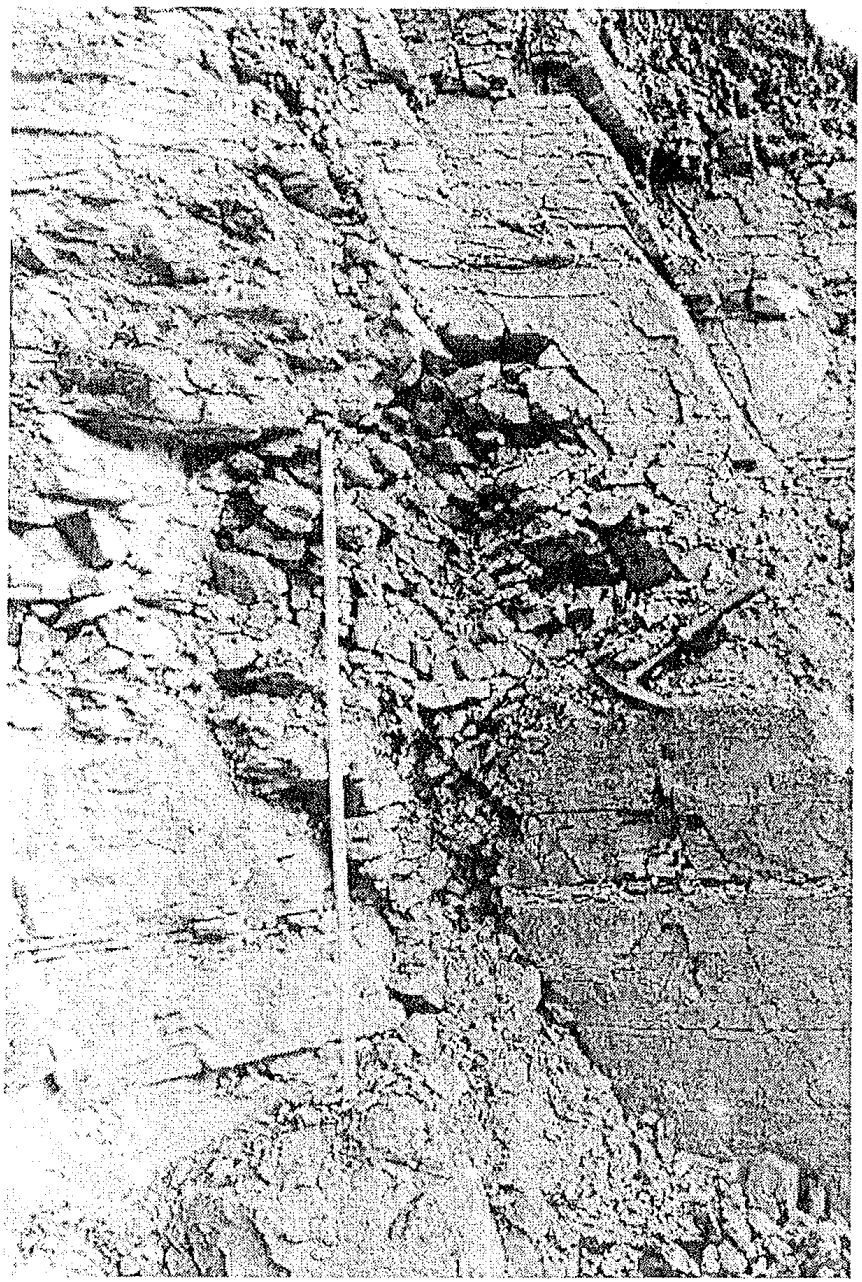


Figure 3.39. Dropfold structure exposed in trench on the left bank of Sugarloaf Dam

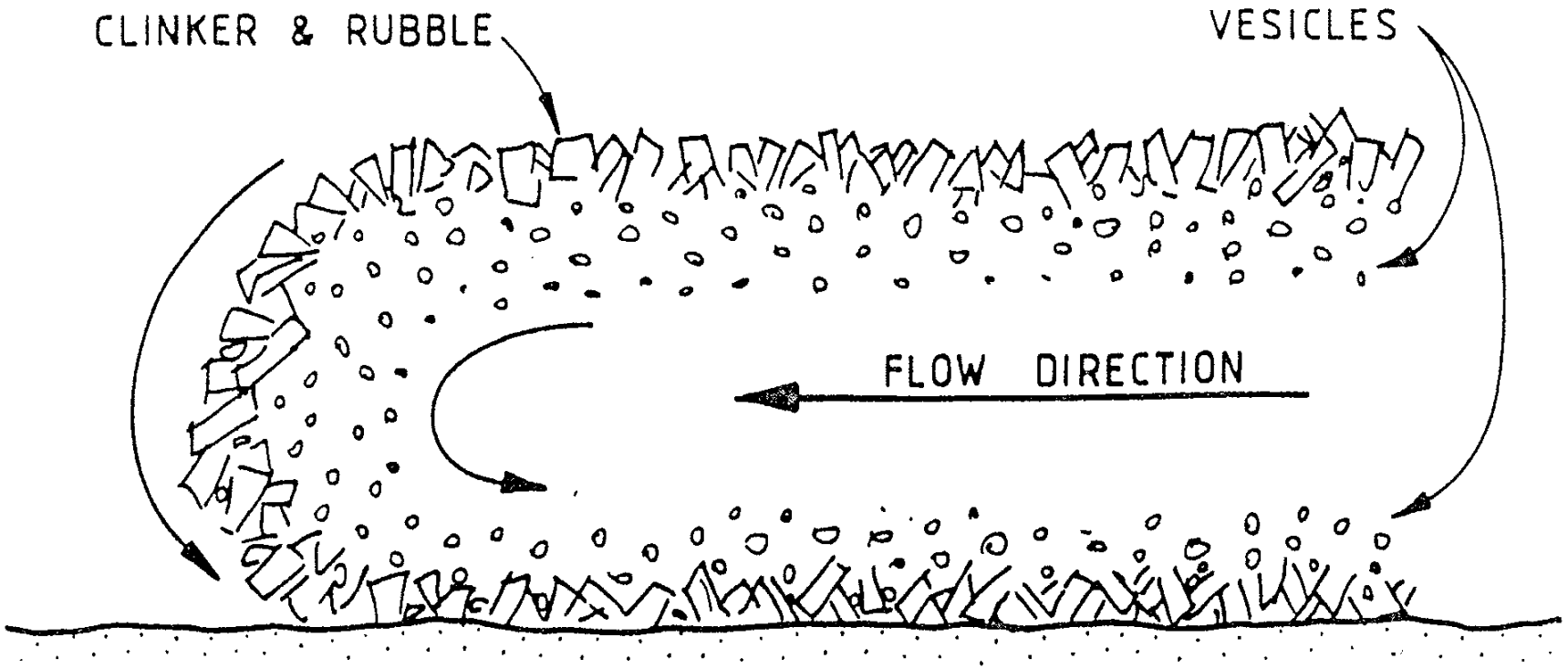


Figure 3.3. Diagrammatic longitudinal section through flowing lava showing the 'caterpillar track' mechanism which results in upper and lower layers of vesicular lava and in some cases clinker or breccia.

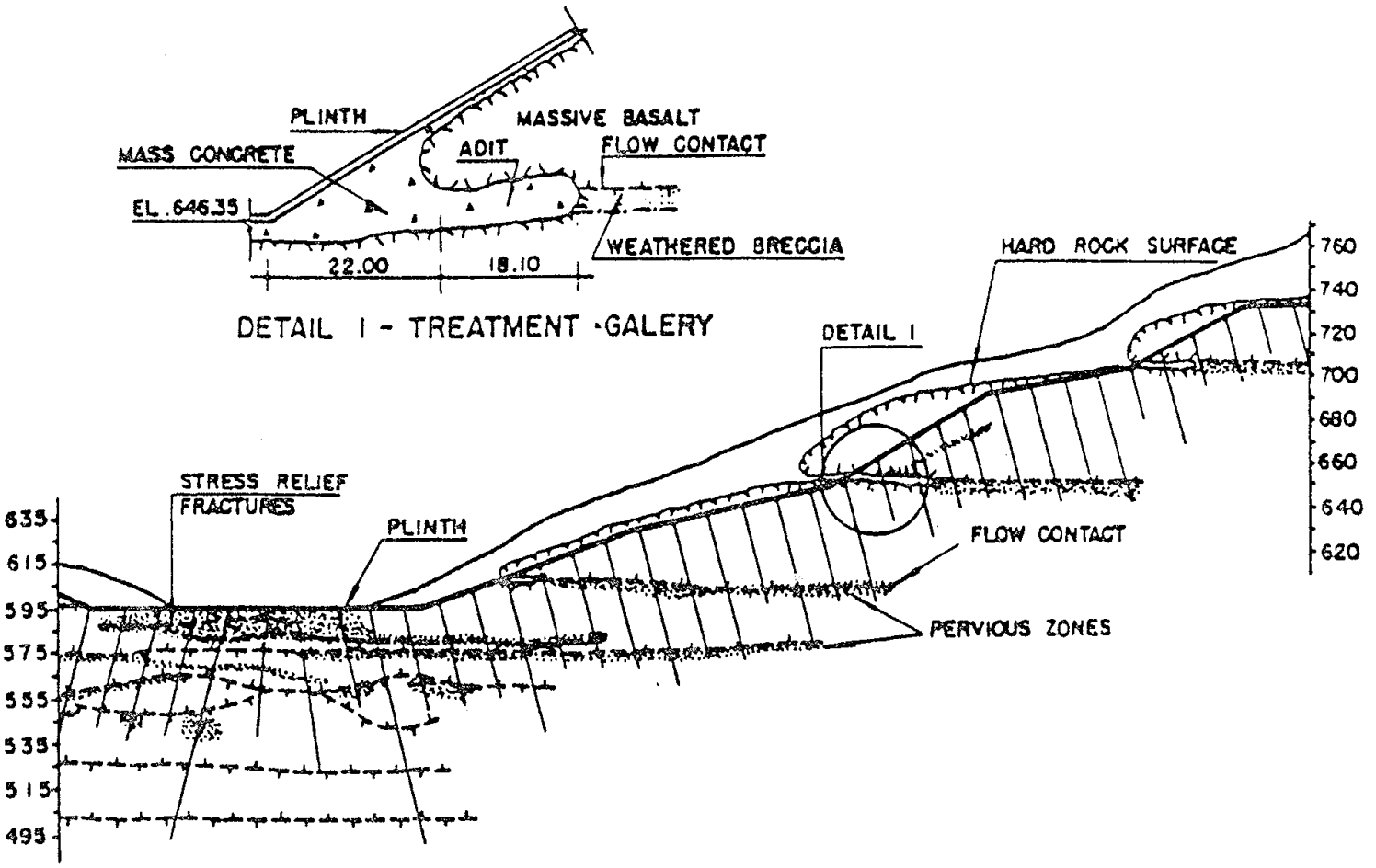


Figure 3.4. Geological section along plinth (right bank) at Foz Do Areia Dam. From Pinto et al. (1985).

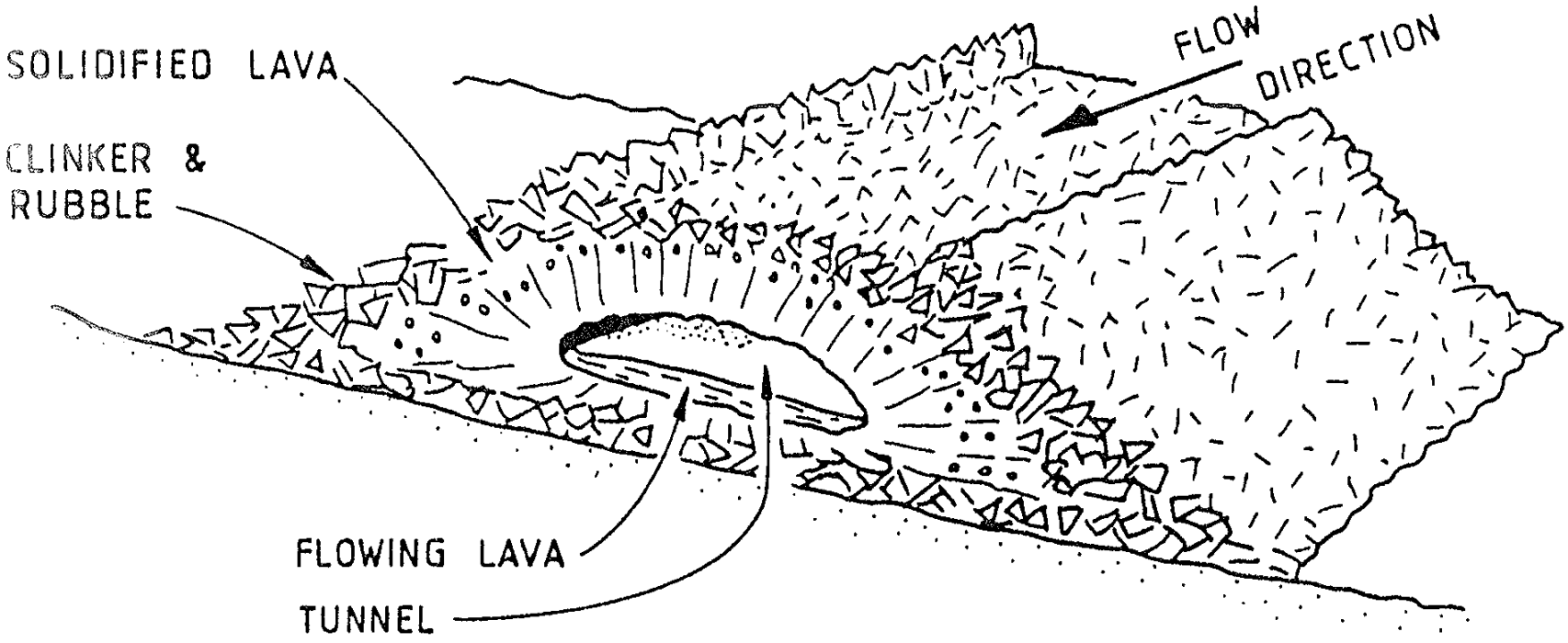


Figure 3.5. Perspective view of, and cross section through a lava flow, showing a lava tunnel developed when the lava flows forward faster than the supply.

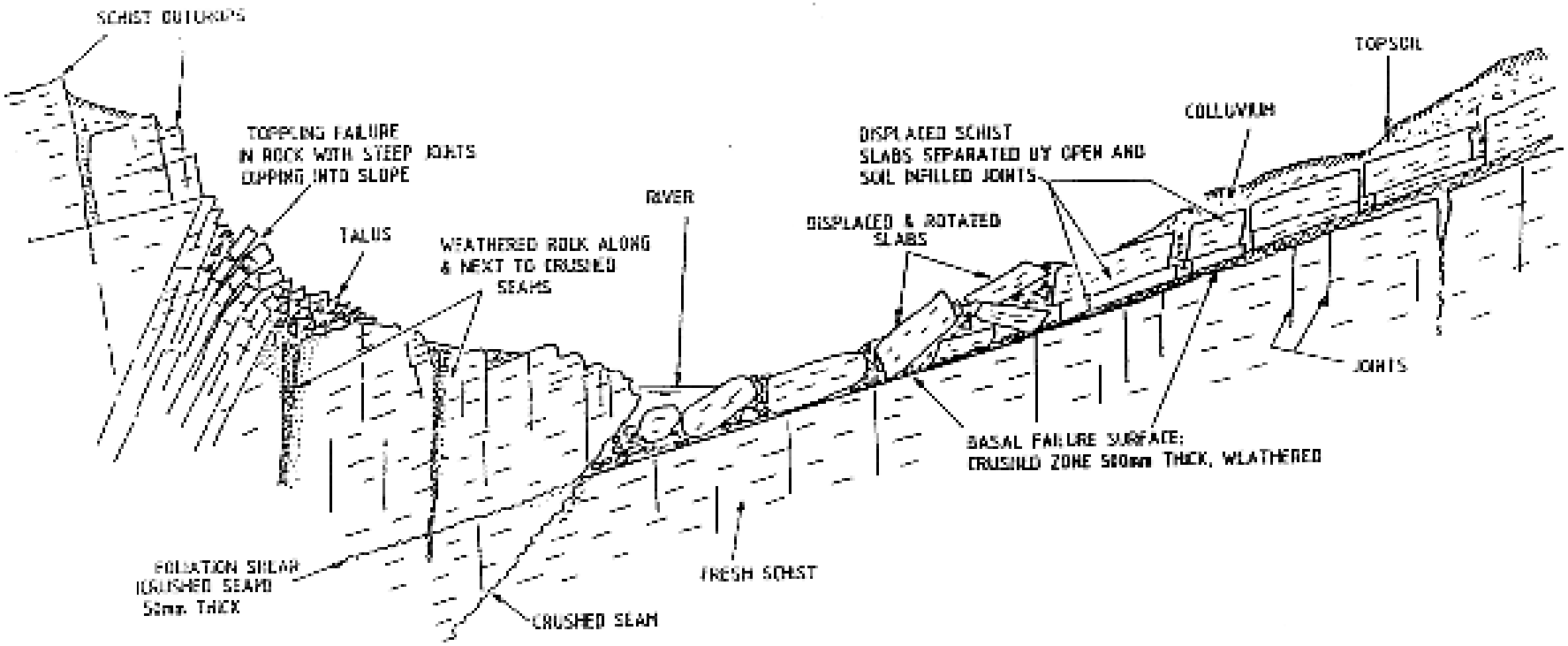


Figure 3.17. Typical valley profile in gently dipping schist affected by past landsliding along a foliation shear.

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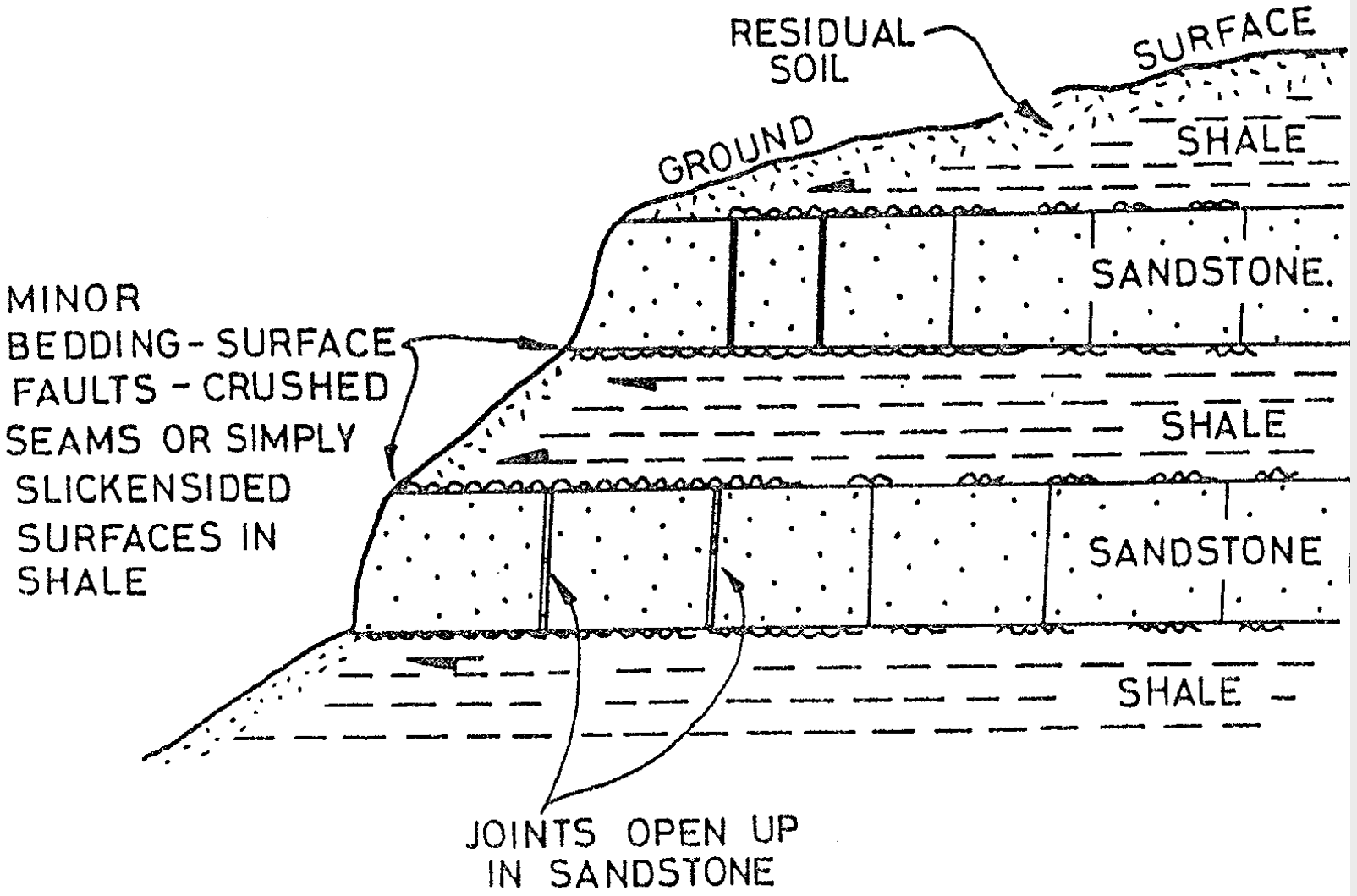

Figure 3.19. Usual ways in which bedding surface faults are formed in mudrocks

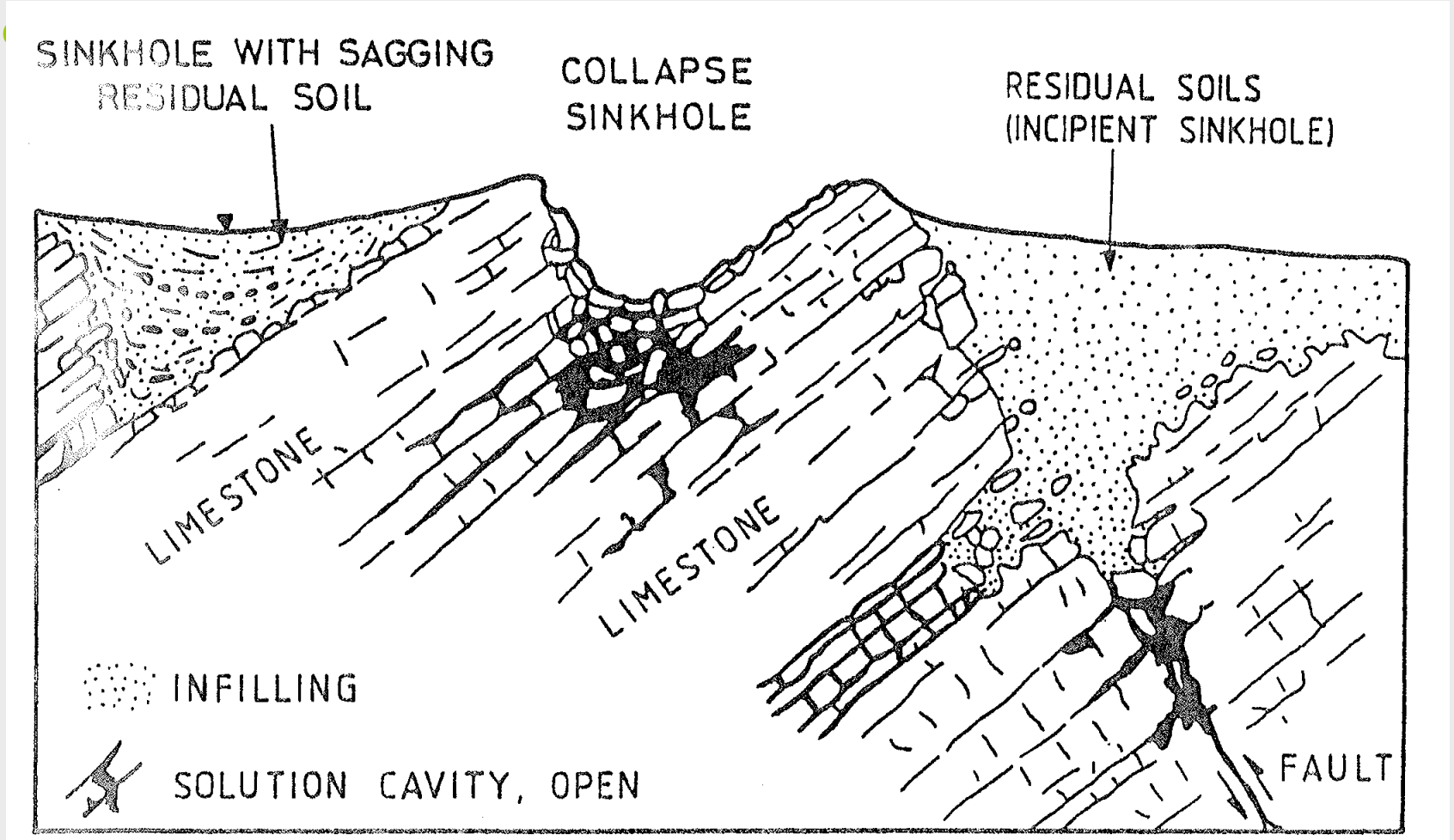

Figure 3.25. A typical weathering profile in dense, relatively pure carbonate rock. (Based on Deere & Patton 1971, Fig. 9)

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