

**SECTION 20 – DANGEROUS FEATURES**

0408. Mountain Roads. In broken country strata are often warped and tilted and faults are common:

- a. Landslips:- Scars caused by old landslips should be looked for especially near steep escarpments. They are often overgrown by vegetation but always indicate areas of potential danger.
- b. Shale slopes:- Shale slopes are always dangerous and should be avoided if possible.
- c. Scree slopes:- Loose materials on scree slopes is liable to slip and bring down rocks, especially in bad weather. A fence above the road is often effective checking incipient movement and inducing the formation of a natural barrier.
- d. Moraines:- These may be identified by boulders and debris left by glacier movement. They are often a source of danger especially when clay is present.
- e. Bare Hillsides:- Hillsides devoid of soil and vegetation permit the unimpeded flow of storm water and snowmelt and increase the danger of washouts.

0409. Springs. Springs are a potential source of trouble. Care must be taken to discover the true position of a spring as well as its apparent site (see Figure 4.5).

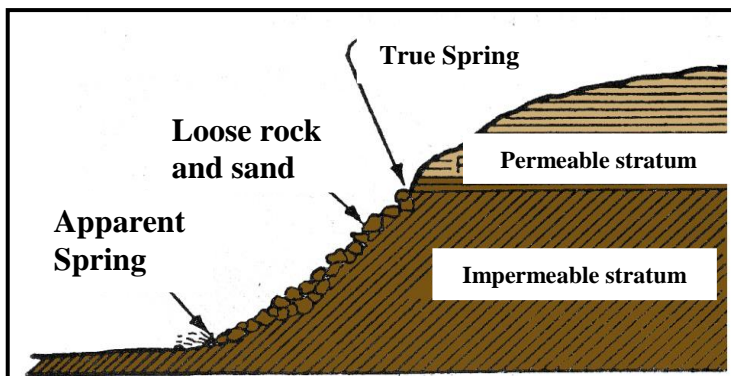


Figure 4-5: True and Apparent Springs

0410. Floodplains. In wide valleys the main floodplain usually consists of clayey loam or peat. This area may sustain traffic after a long spell of dry weather but it will rapidly become impassable when the water table rises. On either side of the actual river bed there is often a slightly higher strip of sandy or gravelly

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material. This strip provides the best going and may remain dry when the main floodplain first becomes saturated.

Careful investigation is necessary in sitting bridge piers and abutments as clay or peat may underlie apparently sound gravel and sliding may occur under load. Boulder clay is particularly dangerous as soundings may indicate solid rock when a boulder of glacial origin is encountered.

0411. Clay. Clay is always dangerous because the particles are plate like in shape and the moisture films surrounding them enable them to slide over each other easily. A particular danger is "circular slip" which may occur in embankments or cuttings. The general effect is shown diagrammatically in Figure 4.6. This proclivity has in some cases been overcome by driving piles or pickets as shown in Figure 4.6 (b).

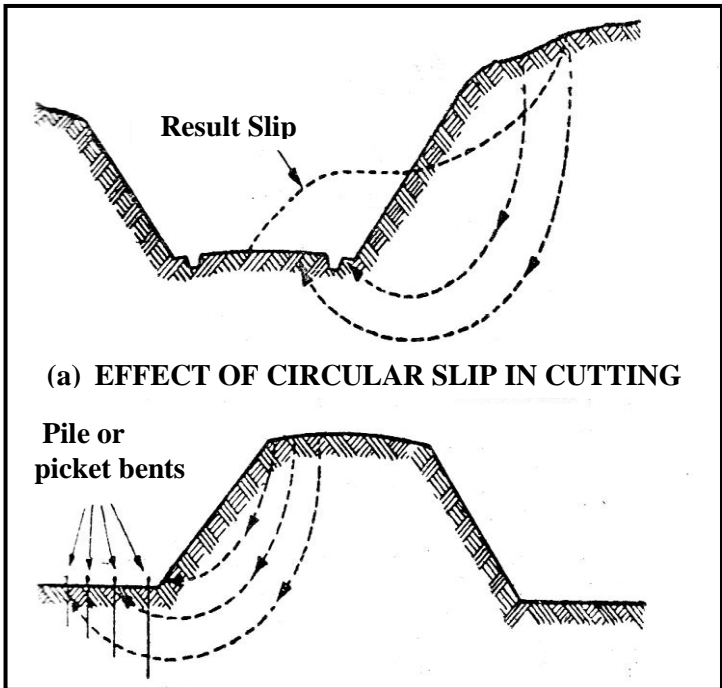


Figure 4-6: "Circular slip" in Clay