

tributaries, have not been as yet tried, and present therefore a promising field to the prospector. As regards the older gold-deposits—rounded quartz, pebble drifts, and conglomerates—Ulrich found no traces of their existence in the part of the country traversed. They might possibly occur on the tops and slopes of the highest hills and ranges, and are not easily recognizable on account of the dense vegetation; but from observations made at Barossa and Echunga, he is more inclined to believe that they are absent; if once in existence, they have since been entirely removed by denudation. Notwithstanding, however, this defect, he considers from the features observed, that this gold-field, as far as regards alluvial drifts and quartz reefs, is a highly promising one, and only requires a rush of enterprising miners for its proper development.

In conclusion, Ulrich mentions that he saw in Stratford's collection of samples of alluvial gold from this field one that much resembles the so-called spider-leg gold, known from some of the northern gold-fields of Queensland; and as this kind of gold occurs there, not only in alluvial drift, but also in felspathic greenstone and elvan dykes, from which the drift-gold is derived, there is a strong probability that such is the case on this gold-field also, and prospectors ought therefore to keep a sharp look-out for and carefully examine any such dykes found.

*Echunga.* Old Echunga diggings.—Here obtain to a great extent the same geological features as observed at Barossa, i.e. a probably Older Pliocene drift-lead, composed of rounded quartz, pebble drift and conglomerate, occupying the tops and slopes of pretty high ranges. Payable and even rich water-worn gold was found in this deposit, and where it has been denuded along the slopes of the hills, and by gullies intersecting it, as, for instance, at the Chapel and Pedlar's hills—enclosing the Poorman's and Christmas leads—two deeper runs of drift separated by a high rise—by Felthouse's Flat and Chapman's Gully, and farther on the Bell's Point lead, by Long Gully—rich surface and alluvial drifts are the result. There is, however, this difference from Barossa, that a great part of the gold washed from these latter deposits (at Felthouse Flat and Chapman's Gully), is not water-worn like the rest, but hackly and crystalline—a circumstance which clearly indicates that, whilst the water-worn portion came from denuded older drift, the hackly one was derived from quartz in the immediate vicinity. Where the workings of Chapman's Gully terminate, at the boundary of private property, there is indeed a strong quartz reef crossing the gully at a strike of N. 25° E., which has been tried in several places, and in which gold is said to have been found, though not in payable quantity. The trials made are, however, neither very judicious nor extensive enough; and Ulrich believes, therefore, that another attempt at opening this reef,