

that the deposit is gold-bearing, as shown by the old workings in the creek leading to the Waitahuna, opposite the township. This has been worked right up to the breccias, and as far as they extend along the creek. Many localities like this cannot be fairly prospected on account of the lack of a sufficient water-supply.

Waitahuna Gully.—This trends north-east and south-west, making junction with the main valley of the Waitahuna about a mile and a half above the Township of Havelock. The valley is nearly straight, and lies along a line of fault which is a continuation of that seen at the Blue Spur and at Weatherstone's. The hill-slopes are very abrupt on the eastern but more moderate on the western side of the valley. Towards the lower end the width of the valley is inconsiderable, being from side to side a few chains only; it is filled, to the point where the stream divides, with tailings from claims on its western side, and the line of fault is continued along the lesser branch to and along the Scandinavian Claim.

A quarter of a mile before reaching the store and post-office an extensive sluicing claim is situated on the east side of the valley. This is being worked in breccia-conglomerate cements, evidently the same in age, and mode of their formation, as those of the Blue Spur. Here, as at the Blue Spur, the deposit dips to the south-east, and forms a basin of deep ground in that direction to the point where the valley is again narrowed. The shallow ground within the present workings shows the surface of the underlying slates plunging at a steeper angle than it does between Monro's and Gabriel's Gully, in the Blue Spur. The material of the conglomerates, though recognisably similar to that of the Blue Spur, is yet somewhat different, there being a greater number of sandstone boulders present in the lower part, while the jasperoid rocks, though plentiful, are not so abundant. The condition of the deposit is also different. It has been subjected to greater pressure, causing a movement of the mass within itself, which has resulted in the polishing and slickensiding of almost every boulder of any size in the lower part of it. Iron or manganese seems to form a slight coating on the surface of these polished boulders, and they shine as though an artist in boot-blackening had devoted his utmost skill to their burnishment. In the middle part of the deposit this is less apparent, and for some 15ft. or 20ft. from the surface the gravels, through the partial decomposition of this cement and their own substance, are of a rusty-brown colour. The ground has been worked from the outcrop towards the south and south-east till the gravels show a face of from 40ft. to 50ft. in height, beyond which it is not followed,—whether on account of the lessening fall of the tail-race or other difficulties, was not ascertained. The area covered by the conglomerate at this place is less than at Weatherstone's, or at the Blue Spur, but the higher dip of the bottom, which, at its least, is from 15° to 20° , must give a great depth of deposit in the middle of the little basin. Washing-up was going on at the time the locality was examined, and the claim-holders appeared to be satisfied with the results. Here, as at the Blue Spur, there is a considerable quantity of free iron-pyrites found in the boxes and tail-race on cleaning up. Part of this may be liberated from the material of the cement, due to the pounding-up of pyritous boulders; but unquestionably the greater part of the pyrites have formed in the sandy or clayey parts of the deposit since it was laid down. To the eastward the conglomerates are clearly limited by the line of fault, already mentioned as running along that side of the valley. To the south and south-west the beds rest upon and rise on to the higher grounds to the north-east and north.

It has been mentioned that, especially in the lower part, sandstone boulders, of moderate or large size, are more abundant here than in the lower beds at Blue Spur. These sandstone boulders appear to have been derived from the near neighbourhood, as on the ridge of hills immediately to the west rocks of identical composition are found *in situ*.

Scandinavian Claim.—This is situated near the head of the south-western branch of the creek and in the line of the lower part of the valley. The area of conglomerate deposit is small. All of it cannot be seen, but apparently the whole may not be more than 7 or 8 acres in extent. The breccia conglomerates appear at the surface over less than half that area, and the exposure is made at the southern end of their development. The fault-line on the eastern side of the deposit is as clearly exposed as at Blue Spur, and in every particular is a counterpart of the slide at that place. At the southern end the workings are limited by the uprising of the older rock, which forms a comparatively even face, trending nearly east-and-west, and with the fault-line forming an angle of about 80° . The general character of the conglomerates is similar to those last described. The conglomerates once occupying the angle described at the southern end of the claim have been washed away to a depth of 50ft., or thereabouts, as measured along the sloping wall of the fault-line, and they have also been removed from the opposite steep slope down to the working-level of the tail-race, which had to be cut through a high barrier of the conglomerates to the north, that, for some reason, has not been removed. The claim is not now working, and there was no one on the ground from whom information could be obtained as to the cause of the suspension of the works. The conglomerates within this area sit upon a ledge, or in a small basin considerably above their level in the deepest part of the area last described. The manner in which this area is closed at the southern end indicates that, as on the north-western side of Monro's Gully, though the line of fault may be, and most certainly is, continued, no breccia gravels come in contact with it for some distance.

Of the cements at Waitahuna Mr. Cox says, "At Waitahuna the cements are, to all intents and purposes, the same as those before described [at Weatherstone's and at the Blue Spur]. On the north-east side of the cement the bed-rock is very steep [the presence of a fault seems to have escaped Mr. Cox's notice], but more shelving on the south-west side. The cement narrows to the east, away from the Whim Claim, but widens out westward, stretching up into the spurs above Maori Gully. At Barr's Sluicing Claim, at the head of the gully, the whole body of the cement down to the main bottom is being removed, while at the Whim Claim they are working on a false bottom, and are only sluicing and not crushing, although it is now proposed to erect a battery in connection with these works. The Somerset Claim is sinking a shaft, which, at the time of my visit,