The field was visited by Sir James Hector, the Director, and Mr. A. McKay (now Mining Geologist), of the Geological Survey; the report of the former as to the richness of the ground was of so favourable a nature that the attention of other parties was directed to this locality.

The following is an extract from Sir James Hector's Progress Report, pages xix. to xxii., "Geological Explorations," 1890–91 :—

"In the Parapara Sluicing Company's ground there are several secondary leads, as distinguished on Plan II. No. 1 is parallel with the present river where it enters on the mud-flats, and occupies a groove or channel along the west side of the long spur that projects into the valley, and which is crossed by the telegraph-line and inland track. This lead has been opened in two places 10 chains apart. Firstly, what are called the "Maori workings," about 60ft. by 60ft. and 20ft. deep, gave 15oz., which is at the rate of about 1dwt. per load. The bottom of the gutter was not reached in this excavation, which is irregular in form, and was evidently very imperfectly worked.

"A special trial was made by slipping down 1ft. from the eastern face, or 50ft. by 20ft. by 1ft., or 120 loads, and this gave 4oz., or $\frac{2}{3}$dwt. per load; but, owing to the very rough bottom and the absence of proper fluming the washing-up was very imperfect. Higher up the gutter a tunnel was put 70ft. by 4ft. by 3ft., and gave 18oz., or about $3\frac{1}{2}$dwt. per load. This is probably the fairest test that has been made. The width of the gutter is about 2 chains, and the length for which it has been traced is about 20 chains. The sides of the gutter dip at about one in three, and its cubic contents is about 150,000 loads, and, taking the yield at 2dwt. per load, it should yield about £60,000 value.

"Following the water-race round the large bend of the river we find it cut into fine-grained mica-schist, succeeded on the west side by carbon-schists, and then by crystalline limestone.

"The east side of the valley now cuts through the old rocks and into heavy beds of white and red quartz-gravels, dipping 70° west to north-west, and constituting the No. 2, or Washbourne's Lead. In the gravels are heavy beds of black soft sandstone, consisting chiefly of mica-sand, pyrites, and graphite. This stratum often resembles coal. The wash at this place is evidently a rewash to the present river valley prior to its complete excavation to the present depth, and it is probably the source of the No. 1 lead.

"This No. 2 lead has been worked in a very irregular manner, and is now difficult of definition; but it may be estimated as 8 chains in length, with a cross-section of 120ft. by 24ft. This will give a cubic contents of nearly 50,000 loads. Five tests were made with the pan, and gave, at per ton, from the white wash, 4dwt.; from the black wash, 1dwt. 6gr.; from the hæmatite, 3gr.; from close to the west side of the lead, 1dwt. 17gr.; and close to the east side, 2dwt. 20gr. Taking for the average 2dwt. per load, this will give, with the above, an estimated value for the No. 2 of £20,000.

"No. 3 lead, 10 chains east of No. 2 lead, is in Peaty Gully, where there is a patch of very rich diggings, up to $\frac{1}{2}$oz. per pan having been taken from the surface-wash. The bottom was on a very tough cement. Where this bottom changes, a black pyritous layer appears like that in the saddle diggings above described. All the old workings average only 2ft. depth of sinking, but, in the line of the main slide or No. 4 level, the bottom is on a brown layer of "pug," covering a hard gravel cement. In this material, some fifty years ago, at 20ft. above the level of the sea, two shafts were sunk—30ft. and 40ft. respectively—into solid wash without reaching any bottom, and the stuff put out yielded on the average 16dwt. per load. Close to these shafts, in a paddock worked by Messrs. Washbourne and Marshall under the surface-gravels and below the brown pug or false bottom, the yield was 2oz. per man per diem. This paddock was bottomed on gravel cement, underlying and older than the black pyritous deposit. So far as seen, with these exceptions, all the old workings in this place have hitherto been in a surface rewash, with seldom more than 2ft. to 3ft. stripping.

"The gravel of No. 3 lead seems therefore to have been dispersed in a thin layer over an area of about 40 acres, and a rough estimate of the contents gave 2,000,000 loads, which, at 2dwt. per ton, would give a value of £800,000.

"No. 4 lead is the ground formerly worked by the Parapara Hydraulic Company. The colour of the gravel is red, and it is evidently a rewash from the main slide accumulated on a steep slope. Fourteen samples from this deposit were tested, with results varying from 2gr. to 9dwt. per ton. The richer samples were taken from the deeper and undisturbed ground, as most of the gold has been removed from the gravel formerly passed through the sluice-boxes, and which now forms the top layer.

"The lead is fan-shaped, and rises at a moderate angle to about 200ft. above the flat, with a width of 350ft. and total length of 600ft. Its cubic contents has been estimated at 1,500,000 loads, which, at 2dwt., would give a value of £600,000.

"The Main Slide Lead, as already explained, is a deposit of auriferous gravel that is contained between more or less vertical walls. Within the new Parapara Company's ground it rises to 300ft. above the river, with a width of about 260ft., as measured in the old Glenmutchkin Workings. On the north or seaward slope no ground has been opened in this lead, but the gravel is seen to be continuous along the surface.

"The easiest way to prove the nature and value of this deposit would be to tunnel through the narrow wall of crystalline limestone from Caldwell's Flat at the lowest possible level. Such a tunnel would prove if the lead really plunges between vertical walls in the manner in which it appears to do in the Glenmutchkin Claim. Assuming that it really does so, then the cubic contents above the water-level would be about five million loads.

"The average richness of this old cement is very difficult to estimate. In the Glenmutchkin Claim two men working with a feeble water-supply are reported to have taken 40oz. with one week's work. The only fair test which I was able to make was by gathering rolled fragments of the cemented conglomerate from the No. 4 lead; and on crushing them they were found to yield very