

and thoroughly prospected all the gullies from the head of Wanganui Mud Flat through to Muddy Creek, and right back over the range to Tomatere Point, Golden Bay, and could find nothing better than 6-inch and 8-inch seams, until I came to the formation running on the strike of the Collingwood Mine, where I found seams from 12 to 15 inches, of better quality. After leaving the mouth of the Pakawau Gorge, the measures dip north-west about the same as Collingwood Coal Mine. From the examination I have made of the field, I hardly expect to find workable seams of coal higher than that lying on top of the first conglomerate; and if you intend prospecting further, I would strongly recommend putting in a drive at the landslip: the driving here would cost very little comparatively, and, should the seam improve to the dip, it could be worked easily and cheaply."

The next search was made in the gullies near to the Collingwood Mine. Mr. Marshall reports:—"The three men you instructed me to employ to prospect for coal in the gullies to the north of the coal mine, have found coal in all the three creeks or gullies, but the thickest seams are in the middle gully, and I made a personal examination of the outcrop on Monday and Tuesday last. I found them in a branch creek. The first outcrop I looked at measured 2 feet 4 inches; further down the creek, coal can be seen 2 feet 6 inches thick; and further down still, 2 feet 8 inches. I cannot say definitely that they are different seams, or simply the outcrop of one seam exposed in different places. They are dipping at a very sharp angle, viz., about 1 in 2, and have from 4 to 10 inches of shale in them, which makes the formation of the seams from 3 feet to 3 feet 6 inches thick. In another branch creek up the gully I found another seam measuring 21 inches of clean coal. The quality is similar to the coal in the drive.

"After being satisfied with the three creeks to the north of the coal mine, I thought I would like to cross the range over to Wanganui Mud Flat. I started from the mouth of our drive on the morning of the 22nd instant. About a quarter of a mile up the creek I found the dip of the measures change from the west to the north-west, and continue so to the sea beach. After leaving our seams, I could find nothing thicker than 6 or 8 inches. The gullies I passed through gave me a fine opportunity of seeing all the measures—sometimes for hundreds of feet in thickness—and a more natural lying country I never travelled before, so free from faults and dykes. The beds dip at an angle of about 1 in 7. On the top of our coal seams I found two beds of conglomerate. I travelled on in nearly a north-west direction, and got on to the flat opposite the Wanganui entrance, leaving 'House Roof Hill' to the south. The features of the country are very rough, but the formations lie very compact and natural. The journey occupied four days."

Mount Rockfort.

The expenditure in this district during the past year has been chiefly for a topographical survey of the coal field, at a cost of £911 11s. 5d., which was absolutely necessary to enable the position and extent of the coal seams to be defined. This survey will form the basis of an accurate mining plan, and greatly facilitate the selection of the best routes of communication for bringing the coal from the less accessible portions of the Mount Rockfort plateau to the shipping place at Westport. No real delay in the development of this coal field has been caused by this preliminary survey, as it will be impossible to ship coal to any large extent until the railway is completed and the wharfage works considerably advanced.

The geological examination of the district has been prosecuted during the past season, and an extension of the bituminous coal measures discovered in the southern direction, of which full particulars will be given in the geological reports.

The tunnel at Waimangaroa, which was made at the base of the spur from Mount Frederick, last year, for 130 feet, was continued for 50 feet further, as there appeared to be some doubt whether or not the proper position of the coal seam had been reached in the first exploration. However, nothing but a seam of soft coal twelve inches thick rewarded the further search.

The following is Mr. W. M. Cooper's report on the progress made towards a complete topographical survey of the Buller Coal Field:—

15th June, 1874.

"I commenced operations on the 14th November, 1873, and up to Christmas was working in that part of the coal field lying between the Whareatea and Waimangaroa Range. I did not return to it again, and the survey of this portion is still incomplete, as, in view of the immediate importance of the survey of the Ngakawau end of the coal field, I was instructed to proceed thither on my return in January. From that time to the present I have been engaged in surveying the block of coal-bearing country extending from the northern slope of Mount Frederick to the River Ngakawau, and reaching inland from the sea to the south branch of the Ngakawau at the north end, and to the main at the south end, and have the following information to give respecting it:—

"1. The ground has been divided into triangles of from twenty to forty chains in the side starting from base line forty chains in length, measured several times carefully with a standard chain. The trig. stations have been made in a permanent manner, so as not likely to be obliterated for a generation, unless purposely. At a few principal points they are constructed in the style shown in sketch A in margin, being circular hills of stones and surrounded by a ditch. In one or two cases where no stones were procurable, a 4-sided framework of logs, filled in with earth, was substituted, as per sketch B. The remainder are built of sods and stones, in the form shown in sketch C, circular and surrounded by a ditch like the

"2. The country was then intersected in all directions by traverse lines run with prismatic compass and chain, and tied on to the trig. stations, the angles being marked by pegs only. By these lines, and the offsets from them, all the features have been minutely taken.

"3. Readings were taken at short intervals with a good aneroid barometer, furnished me by Dr. Hector, which were checked by taking a reading at the camp before going out in the morning and after returning in the evening, and by readings of a mercurial barometer three times a day in Westport being taken and furnished to me by A. D. Dobson, Esq., Provincial Engineer. The heights of the several camps were carefully averaged from a number of observations taken between them and the