

- (15.) On Coal on Koiterangi, Kokatahi, Hokitika.
- (16.) On Coal in the Valley of Coal Creek, Ross, Westland.
- (17.) On Geology of the North Shore of Cook Strait and the Rimutaka Range.
- (18.) On the Geology of the Kaimanawa Ranges, Hawke's Bay.
- (19.) On the Oil-bearing District near Poverty Bay, Auckland (First Report).
- (20.) On the Oil-bearing District near Poverty Bay, Auckland (Second Report).
- (21.) On the Identity of the Quartz Lodes and Shoots of Gold East and West of the Moanatairi Slide, Hauraki Goldfield.
- (22.) On a Copper-deposit in the Ruahine Range, West of Norsewood, Hawke's Bay.
- (23.) On the Geology of the Ruahine Range, Hawke's Bay.
- (24.) On Lignite-belts at Fitzherbert, Lower Manawatu District.

Of these, Nos. 1, 4, 6, and 8 are memoranda in answer to inquiries made, and No. 5 has already been published in the reports of the department for 1900. All the others are reports on districts examined during the year, and which have yet to appear in the annual volume of reports published by the department.

*Puponga and Pakawau Coalfield.*

On the Puponga and Pakawau Coalfield and its extension to the south and west, it may be remarked that the field is likely to prove a valuable one, in which bituminous and-glace coals are found along the eastern margin of the field, while to the westward they gradually change to a more hydrous description of coal. Hitherto comparatively thin seams have been known and worked, but it is evident from the past year's work that thick seams, up to 8 ft. or 10 ft., are to be found along the eastern border of the field, while the more hydrous coals of West Wanganui are also of workable thickness.

*Boring for Coal at Dobson, Grey Valley.*

During the latter part of 1900 I visited Greymouth and Brunnerton for the purpose of locating sites for boreholes, intended to prove the coal-measures west of the fault-line that runs along the western boundary of the Wallsend lease. The problem of workable coal, and the depth at which it can be reached, is of great importance to the miners of Brunnerton and the shipping interests of the Port of Greymouth; and it is generally held that a valuable coalfield will be found under and west of Dobson Flat. I am not oversanguine in this matter, and therefore recommended boring at a point where the possible seam could be proved at a depth approximating 300 ft. from the surface. If coal of workable thickness should be passed through in the shallower bore, the cost of this might be disregarded, and another further west, near Dobson, put down to prove the extension of the seam in that direction.

*On Deep Sinking for Coal at Waimangaroa Railway-station.*

The question of being able to reach workable seams of coal in the hills and under the coastal plain between the Wellington Mine and the mouth of the Waimangaroa River being of great importance, at the instance of the Westport Coal-prospecting Association the locality was visited and reported on. I found that the high dip of the coal-seam in the Wellington Mine, and the continuance of this in the strata overlying to the westward, to reach coal at the railway-station would necessitate a depth of sinking not less than 1,500 ft., which may be regarded as being prohibitory at the present time. I had, therefore, to report unfavourably with respect to the particular locality; but this has raised the question of the reachability of coal at any point between the mouth of the Ngakawau River and Westport, and on this subject I am of opinion that coal could be reached at a moderate depth near the mouth of the Ngakawau River, and that generally the cover is less along the seaboard than midway between the coast-line and the foot of the ranges east of the break or fault-line. The opinion is based on the evidences there are of a synclinal arrangement of the strata, the western side of the syncline being seen between the mouth of the Buller River and Cape Foulwind.

*Supposed Coal-seams in the Kaiata Range, Greymouth.*

The reported coal-seams in this range proved to be a deposit of rolled fragments of coal forming a stratum of variable thickness near the base of the Miocene-Tertiary beds of the Kanieri series. The carbonaceous material varies from pieces 6 in. or 8 in. through to a fine sand, and the larger pieces are often found free in the beds of the creeks, and have led to the belief that the Brunner coal formation extends into this range. The presence of this coal conglomerate, derived by denudation from the coal-seams of the Brunner area, disproves this assumption, and shows clearly that prospecting for coal in this range and in these beds can lead to no satisfactory result.

*Coal on Koiterangi, Kokatahi Plain, Hokitika.*

The Kokatahi Plain and Koiterangi, or Camel-back, Hill were visited at the request of the Westland Pastoral and Agricultural Association. The occurrence of coal on Koiterangi has been known for many years, and recently fresh interest has been displayed in the matter of developments here and at Coal Creek, in the valley of the Kanieri River.

I determined the area of coal-bearing rocks on Koiterangi, and showed that they dipped to the eastward under the plain, but I was unable to see any of the coal outcrops. Previous reports show that the coal is not of more than workable thickness, and analysis proves it to be of a non-bituminous character. The coal in the Kanieri Valley is of a tender description, but of good quality. It occurs in thin seams standing at high angles, and may be regarded as unworkable at the present time.

*Coal in the Valley of Coal Creek, Ross, Westland.*

At the time I visited Koiterangi I was instructed to report on the prospects of coal in Coal Creek, Ross, and visited the locality for that purpose. I found the coal formation on both sides of