

APPENDIX.

DESCRIPTIVE CATALOGUE

OF

EXHIBITS SENT FROM NEW ZEALAND TO THE VIENNA EXHIBITION, 1873.

COAL.

COLLINGWOOD COMPANY—

Block of Bituminous Coal, Collingwood Mine, Nelson; a first-class steam and gas coal. Cretaceous age. 6 seams, 1 to 4 ft. thick.

J. OAKDEN—

Anthracite Glance Coal, from Acheron River, Canterbury. Altered Brown Coal; Eocene age. 4 ft. seam.

M. B. HART, Christchurch—

Glance Coal (laminated), from Malvern Hills, Canterbury (4 specimens). Altered Brown Coal; Eocene age. 6 ft. seam.

BREFFTON COMMITTEE, AJAX COMPANY, Nelson—

Specimen of Coal. Cretaceous age. 10 ft. seam.

NGAKAWAU COMPANY, Mount Rochfort, Nelson—

Bituminous Coal (caking) (2 specimens). Cretaceous age. 16 ft. seam.

PROVINCIAL GOVERNMENT, Nelson—

Bituminous Coal, from Brunner Mine, Nelson. Cretaceous age. 18 ft. seam.

J. C. ROWLEY—

Pitch Coal, from Shag Point, Otago. Eocene age. 8 ft. seam.

WAIKATO COAL MINING COMPANY, Auckland—

Pitch Coal. 18 ft. seam.

FROM COLONIAL MUSEUM—

Type specimens illustrating the classification of New Zealand Coals.

BITUMINOUS COAL (caking)—

Specimen from Brunner Mine, Nelson.

Much jointed, homogeneous, tender and friable, lustre pitch like, glistening, often iridescent; colour black, with a purple hue; powder brownish, cakes strongly; the best varieties forming a vitreous coke with brilliant metallic lustre; average evaporative power of several samples, $7\frac{1}{2}$ lbs. of boiling water converted into steam for each pound of coal. Occurs with grits and conglomerates of upper Mesozoic age. Buller, Grey, and Collingwood Coal Fields on the West Coast of Nelson, in seams from 2 to 20 feet in thickness.

SEMI-BITUMINOUS COAL—

Specimen from Pakawau, Nelson.

Compact, with laminae of bright and dull coal alternately; fracture irregular; lustre moderate; cakes moderately, or is non-caking. Occurs in thin irregular seams in sandstone of upper Mesozoic age. Kawa Kawa and Wangarei, Auckland; Pakawau, Nelson; Mount Hamilton and Waikava, Otago; rarely cakes strongly; evaporative power commonly $6\frac{1}{2}$ lbs.

GLANCE COAL—

Specimen from Hill's Drive, Selwyn, Canterbury.

Glance coal is non-caking, massive, compact or friable, fracture cuboidal, splintery; lustre glistening or metallic; structure obviously laminated; colour black; does not form a caking coke, but slightly adheres. A variety of brown coal altered by faults or igneous rocks, and presenting every intermediate stage from brown coal to an anthracite. Preservation Inlet and Malvern Hills.

PITCH COAL—

Specimen from Upper Buller, Nelson.

Structure compact; fracture, smooth; conchoidal, jointed in large angular pieces; colour brown or black; lustre waxy; does not desiccate much on exposure, nor is it absorbent of water; burns freely, and contains resin disseminated throughout its mass. Waikato and Wanga-roa, Auckland; West Wanganui, Nelson; Shag Point, Otago; Morley Creek, Southland. Evaporative power 4.2 lbs.

BROWN COAL—

Specimen from Kaitangata, Otago.

Rarely shows vegetable structure. Fracture irregular; conchoidal, with incipient laminations; colour dark brown; lustre feeble; cracks readily on exposure to the atmosphere, losing 5 to 10 per cent. of water, which is not reabsorbed; burns slowly; contains resin in large masses. Occurs generally throughout the Islands; evaporative power 4.2 to 5.6 lbs. Saddle Hill, Otago; evaporative power 5 lbs.

GOLD, MINERALS, AND ORES.

ALLUVIAL GOLD FROM THE PROVINCE OF OTAGO.

1. SKIPPER'S, QUEENSTOWN—

From upper terraces, Skipper's Creek, Shotover River, about 1,400 feet above sea level. The creek empties itself into the Wakatipu Basin. Produce of sluicing claim.

2. ARROWTOWN—

From Arrow River, about 1,200 feet above sea level. The river empties into the Wakatipu Basin. Produce of sluicing claim.

3. QUEENSTOWN—

From gullies adjoining and emptying into Wakatipu Lake, which is 1,000 feet above sea level. Produce of sluicing claim.

4. NASEBY (MOUNT IDA)—

Produce of sluicing claim at foot of Mount Ida, on northern side of Maniototo Plains, about 1,400 feet above sea level.

5. PALMERSTON—

Produce of sluicing claim in Shag Valley, 50 to 100 feet above the sea level.

6. NEVIS—

Produce of sluicing claim about 1,400 feet above sea level.

7. TEVIOT—

Obtained by dredging the River Molyneux, about 350 feet above sea level. Coarser gold is also got at different parts of the river.

8. BLUE SPUR, LAWRENCE—

From sluicing claim. The hill or spur is about 150 feet high, and is an outlier of the Pliocene gravels.

9. MANUHERIKIA—

Sluicing claim, about 500 feet above sea level.

10. TEVIOT—

Near the spot where these two nuggets were got, another weighing 18 oz. was lately obtained. Produce of sluicing claim at an elevation of 600 to 700 feet above sea.

11. Specimen of Blue Spur Cement impregnated with gold.

ALLUVIAL GOLD FROM THE PROVINCE OF NELSON AND COUNTY OF WESTLAND.

1. Alluvial gold from Moonlight Creek, Nelson, procured by washing the beds of creeks.

2. Alluvial gold from Waimea, Westland, obtained by washing beds of creeks. Samples taken from district through which the proposed Great Waimea Water Race would run.

3. Fine sea drift, Okarito, Westland, obtained by washing and sluicing the sea beaches.

4. Alluvial from Ross, Westland, obtained by deep-sinking, where the use of steam machinery is found to be necessary.