this coal is comparatively easy. On the map to accompany this report the Kootanie is shown by a plain geological colour, but a section made at any point across it will show several coal seams. The coal outcrops of the Edmonton and Judith River are indicated by a heavy red line; many more may be found, however, than those shown.

The coals of the Judith River are of a slightly higher grade than those of the Edmonton, and the quality, in either formation, goes up as the mountains are approached. This is caused by the pressure due to the folding and twisting of the rocks, which will even, at times, cause a considerable variation in the same seam in a few feet. The Kootanie coals are found as anthracitic coals, semi-anthracites, or bituminous coals, according to the amount of local pressure. At one place on the south branch of Sheep river one of these seams, in a tight fold, has been altered to an impure graphite. The Edmonton coals are all lignites or lignitic coals. A few samples collected give evidence by analyses of being the latter.

COALS.

Kootanie Coals.

The Kootanie coal measures outcrop all around the Moose Mountain ridge; from Gleasons Meadow, along the east side of the ridge through Gleason and Lower Camp; along the northwestern and eastern slopes of Coxcomb mountain, near its summit, and thence to the north end of Forgetmenot ridge; on Jumpingpound creek, north of Coxcomb mountain; on the south branch of Sheep river north of Hoffmann mountain; and in a few other places, as shown on the map to accompany this report.

At the head of Bragg creek, near the old Thorne mine, which is situated on the N.E. ¼ of sec. 8, tp. 23, R. VI., west of the 5th meridian, a section was measured from the conglomerate at the bottom of the Dakota to the Palæozoic. The Thorne mine was worked for the disseminated iron pyrites in the Fernie shales. The iron occurs here in blossoms quite thickly distributed, but of no present economic value whatever. These black shales are quite calcareous in places, and on one of the weathered dumps of the old mine workings were found a great number of specimens of guards of Belemnites, which were very helpful in determining the horizon of this formation. This mine has long since been abandoned, but the remains of an old road still exist, corduroyed in places, up to the old cabins just below the mine workings. The coal measures are very plainly seen on the north side of the creek opposite the mine, but, although deeply covered by wash the seams