

that were made show the dip to be heavy at the surface and gradually flattening as they get under cover. All the exposures I could find show there are no serious eruptions east of the mountains of the west coast and certainly none on the property I explored. I examined as thoroughly as possible the entire property contained in the red lines of the blue print furnished me.

Leaving the mouth of the Honna River and going north we keep in the shale and sandstone formations, until we reach the top of a mountain (height 1200 feet) four miles from the coast, here there is an exposure of coarse pebbly conglomerate, the only conglomerate exposure I found east of the west coast. From here we ascended geologically into the coarse sandstones of the anthracite formation and found the first outcrop on Section 17, where openings were made. About 200 feet up the creek from the tunnel at Camp Anthracite there is another outcrop, but I was unable to get the walls on account of the surface wash and could not spare the men to develop it. From here we still go north, gradually leaving the coarse sandstones, and get into the sand shales and finer sandstones of the other bituminous formations.

The first outcrops found were on Section 20 (Camp Robertson). Here, besides the beds I developed, I discovered coal washings up the creek about 700 yards west of Shaft No. 1. About 500 feet down the creek from the tunnel I found a bed of 8 feet in thickness. This shows a number of sandstone partings I had no time to open it up.

I put a shot in one bench that measured 12 inches in the creek, and at the bottom of the hole it had increased to 16 inches. All these coals are of the oldest bituminous formation, and they are rich in carbon and excellent gas, smithing and coking coals.

About 8 miles further north on Section 36 (Camp Wilson), we get into the darker shales and lighter fine sandstones of the later bituminous formation.

Here I developed two beds, as shown on the columnar sections. The coal is an excellent free burning bituminous; has a large percentage of carbon, and is a good smithing and coking coal. I also discovered another bed in the creek, about 200 feet above the large bed, showing 10 feet of clean coal between the walls. Coming south east from Camp Wilson to a creek on the north west quarter of Section 17, Township 6, I found an exposure of green sandstone, through which were small seams of coal. Following up this stream I met with sandstones and fire clay, similar to those at Camp Wilson, indicating that the beds at Camp Wilson are near to the surface at this point. I also discovered an outcropping of bituminous coal in the Yakoun river on Section 23, Township 9. The exposures here resemble closely those at Camp Robertson, showing that the beds at Camp Robertson are underneath those at Camp Wilson.

Lignites.—Off your property, and about a mile to the north-east, lignites make their appearance and these extend to the north and east coast.

Mr. Robertson informs me that when prospecting on the east coast and, also at Massett, he came upon several beds of lignite. This confirms the statement of Professor Dawson, to which you have called my attention, that "Tertiary rocks holding lignite form a large portion of the northern portion of the Queen Charlotte Islands."

From the great thickness of the bituminous coal bearing sandstones in the interior of Graham Island they must lay at such a depth on the north and east coasts as to be unworkable.

It is evident that the volcanic eruption of the mountain range of the west and south west coasts has raised the measures bearing anthracite and bituminous coals, badly breaking them up in the mountains and bringing them to the surface in the flanks of the foothills which skirt the west and south portions of your property. As the strike is north and south and your property which extends north and south for $11\frac{1}{4}$ miles, is just north and east of the destructive eruptive forces, there is no doubt in my mind but that the anthracite and bituminous beds will be found either at or not much below the surface over the greater portion of your property and also in almost undisturbed condition.