hard to burn. It could not be used unless a certain amount of it were calcined, ground, and added to the raw clay. This would improve its working, drying, and burning qualities.

Laboratory No. 189. Mottled, light red clay, from north bank of Firebag river, ¼ mile above first rapid.

This is a very plastic and rather sticky clay. It burns to a red vitrified body at cone 3, but the shrinkages are rather high. It fuses about cone 10. This clay may be suitable for the manufacture of sewer pipe.

Laborotory Nos. 188, 189, 190, and 191 are alike in many of their physical characteristics, and appear to occur in the same geological horizon—viz., underlying the tar sands, on the Athabaska river, and its tributaries. They are very fine grained sediments, and low in fluxing impurities, No. 190 being exceptionally so, hence they are more refractory than any of the Cretaceous clays from the southern part of the Province.

The samples were too small in size to allow of complete determinations concerning their working and drying qualities, but they appear to be free from the drying defects so common to the Western Cretaceous clays.

These clays are of the stoneware type, being exceedingly plastic, and burning to a light-coloured, dense body, at cone 5, while they retain their shape without softening when fired to much higher temperatures. Their most serious defect is due to the presence of asphaltic carbon, which renders the safe burning of wares made from them a difficult process. Nos. 190 and 191 appear to be free from this impurity, as far as could be told from the small samples, and these clays would be valuable for many purposes.

Up to the present time the possible value of the clays of this part of the Province appears to have been quite overlooked by prospectors and others. The results of the above tests are, therefore, of economic interest, since they furnish the first authoritative statement regarding the class of clays to be found in an entirely new area. Given adequate transportation facilities, these results should encourage careful and detailed prospecting for the higher grades of clays in the northern portion of Alberta.