

A NOTE ON THE TERM BOCANNE

C. H. CRICKMAY

Imperial Oil Limited, Calgary, Alberta, Canada

ABSTRACT. The term *bocanne* was created by Selwyn from a French-Canadian (ultimately Guianan) word for smoke, to refer to naturally burning shale banks.

If one looks through glossaries of geological terms for something to call a burning shale bank, he will be disappointed. The appropriate term has never been gathered in. This failure to have a well known term for it is perhaps to be ascribed to the fact that the phenomenon of a shale outcrop undergoing combustion is common mostly in high latitudes and in the less known regions such as Canada and Russia, though surficially burnt coal seams and carbonaceous shales are known at many localities in the Dakotas, Montana, and elsewhere in the United States. Even in Canada, at the present day, most geologists have never heard of the word *bocanne* (pronounced, bō kōn`), though the term was adopted first by a Canadian geologist, Selwyn (1877, p. 58, 73), to denote the phenomenon *and* the locality of surficial combustion of certain shales. The word has not been widely used, though Dawson (1881, p. 57B, 123B) and McConnell (1891, p. 98D) employed it in their accounts of explorations. In popular periodical literature the word appears (as *bocane*) in a story of travel (Taylor, 1894, p. 131), (as *boucan*) in a book (Cameron, 1910, p. 200), and (correctly as *bocanne*) in a narrative of exploration (Leechman, 1948, p. 14). These are few though representative references. Nevertheless, they demonstrate that the word is used, and it is thus all the more puzzling that no dictionary has yet included it.

Selwyn wrote of the *bocannes* on Smoky River, Alberta—the name of the river having been given in reference to the smoke of burning shale outcrops—as though the word were a recognized geographical or geological term. Am I justified in guessing that he had heard a French-speaking, possibly illiterate, helper on his survey party call the things “*boucanes*” (French-Canadian for clouds of smoke), from the sound of which, and in the absence of the written word, he devised the spelling *bocanne*? In any case, later geologists in northwestern Canada have followed him in this with the same assurance that the word would be understood and with no alteration in the spelling.

Assuming that Selwyn's use of the word was original and that I guess correctly that it was an adaptation of *boucane*, I ask, is it necessary to adopt the spelling of the latter? I think not. *Boucane* is a feminine noun meaning smoke in the air, be it smoke from a forest fire, from burning leaves in the autumn, or from a tobacco pipe. This form of the word, I am told by Dr. Douglas Leechman, to whom I am indebted for much of my information, is firmly imbedded in Canadian French. And there are several cognates. *Boucan* is a masculine noun meaning smoke house or a place (house or not) where North American Indians smoke their meats. *Boucaner* is the related verb, and *boucanage*, the process of

smoking anything. There are even some figurative uses: though *faire de la boucane* means literally *to produce smoke*, it may mean (putting it as Clarence Day's father did) *to raise a devil of a row*. But all these variations are derivative, the ultimate source is not even North American; it is *buccan*, a Tupi word that crept as long ago as the 16th and 17th centuries from Guiana, through the Caribbean islands, to North America and Europe. In the course of this migration it gave us some picturesque additional meanings, for example, the Caribbean *boucan*, a wooden grid-iron used for broiling men and animals. Another cognate from the West Indies is our familiar *buccaneer*, who was first a meat-hunter, then a buccan-tender, and later a pirate. But none of these ramifications touches anything geological. Hence it seems most desirable to preserve *bocanne*, which is distinct in form as in meaning.

To return to tangible shale outcrops and natural mineral fires, a bocanne may cover a few yards only or several hundred; it is usually confined to a bed (or several) which contains the combustible ingredients, and in course of time the action migrates with the bedding and close to the surface. All the bocannes I have examined were in near-horizontal, Cretaceous and Cenozoic formations in river banks; I have been told of others that occurred in hill slopes. It is not accurately descriptive to refer to these occurrences as coal beds on fire: in many of them there is nothing that a miner would dignify by the name of coal, and the action is not exactly to be described as *on fire*.

It is not yet well understood how a bocanne begins. In the first place, the process seems to be entirely superficial. Some unknown action appears to speed up oxidation in isolated surface spots until temperatures of 600 degrees F or more are reached, and smoke and considerable vapor are evolved. This activity spreads, without flames, as oxidation follows the distribution of certain constituents, notably disseminated sulphides and organic matter; in the wake of its spread, the shale or clay remains, having acquired the consistency and red color of common brick. The process may become quenched, and then we have an *extinct bocanne*; thus, with this qualifier, the term is as flexible as volcano.

In conclusion, I say we need to use and to have understood the term bocanne. I hope it will be adopted by our scientific lexicons and with Selwyn's distinctive spelling.

REFERENCES

- Cameron, A. D., 1910, *The New North*: New York, Appleton, 398 p.
 Dawson, G. M., 1881, Report on the exploration from Port Simpson on the Pacific Coast to Edmonton on the Saskatchewan: Canada Geol. Survey, Rept. Prog. 1879-1880, p. 1B-142B.
 Leechman, D., 1948, McConnell's Long Trek: *The Beaver*, Nov. 1948, p. 12-15.
 McConnell, R. G., 1891, Report on an exploration in the Yukon and Mackenzie basins, Northwest Terr.: Canada Geol. Survey, Ann. Rept. 4, p. 1D-163D.
 Selwyn, A. R. C., 1877, Report on exploration in British Columbia: Canada Geol. Survey, Rept. Prog. 1875-1876, p. 28-86.
 Taylor, Elizabeth, 1894, A woman in the Mackenzie delta. Pt. 2: *Outing*, v. 25, p. 120-132.