quent explorations will reveal their existence in sufficient quantity to justify the establishment of furnaces for working them.

Iron is of frequent occurrence, not only in the eastern and southern sections of the district under review, but along its northern boundary also, and on the Pacific coast, and among the mountain ranges. Indeed I am tempted to believe that a very large proportion of the northern part of the continent will ultimately be found to be rich in nearly all of the valuable minerals—the metalliferous districts terminating only with the terminus of land. This hypothesis is strengthened by recent discoveries made in Greenland, which country is in reality but a continuation of the Western Hemisphere. An Anglo-Danish Company is at this time engaged in carrying on mining operations there, and one of the Company's vessels not long since arrived at London having on board valuable specimens of black lead, plumbago, silver, lead, copper and tin ores, native silver, lignite and coal. The presumption is by no means an unwarrantable one, that congeners of all the ores discovered in Green, land exist in greater or less quantity upon the continent, also. That some of them do is a well established fact.

But to return from the field of conjecture, I remark in the next place upon the existence of coal in a large portion of the country. Franchere and Gov. Simpson speak of its outcropping at different places on the Saskatchewan. Lewis and Clark saw bituminous coal between Fort Clark and the falls of the Missouri River. Culbertson also saw coal in the same localities. Wyeth saw large quantities of it on the Yellow Stone. Gov. Stevens' party found the whole country from the falls of the Missouri westward to the mountains, nearly five hundred miles, underlaid with lignite. Bonneville speaks of regions among the mountains near the head waters of the Yellowstone, which abound in anthracite coal. In fact, coal has been traced along the 47th parallel of latitude for a distance of nearly ten degrees of longitude, with a southern outcrop, rendering it more than probable, when considered in connection with the discoveries of coal in the Saskatchewan, the Athabasca, Mackenzie's River, and Great Bear Lake, that a coal field of greater extent than any other in the world exists in the western half of the district of country included in our subject. Further evidence is found to support this hypothesis in the discoveries of coal nearly all around the northern rim of the North American continent by the captains of whaling vessels, and by the hardy explorers who have tempted the Arctic seas in search of a northwest passage, by the presence of both coal and lignite in Greenland, upon Disco Island and upon the Faroe Islands off the coast of Greenland—thus indicating the wonderful economy of nature, or rather the existence of a beneficent Providential design, by which regions destitute of timber are supplied with an easily accessible fuel.

Sir Alexander Mackenzie found bitumen fountains in the valley of the Athabasca, into which he thrust poles twenty feet in length without finding bottom. In Silliman's *Journal* I find an account of a similar lake of pitch, or bitumen, on Trinidad, one of the West India Islands. Silliman says:

> It is believed to be a submerged bed of vegetable matter, undergoing slow distillation by volcanic action underneath. This store of bitumen appears to be inexhaustible. It is used with wood for fuel by the American steamers plying on the Orinoco River. Mixed with pebbles and sand it makes excellent pavements, and ground floors of houses. With ten per cent. of rosin oil it makes good pitch for ships. The Earl of Dundonald has purchased a tract of 26 acres of it, and has instituted experiments to discover, if possible, some means for making it a substitute for India-rubber and gutta percha water-proof or vulcanized fabrics; and he has already made some vulcanized cloth, which, from appearances, bids fair of future success.

Thus, when this vast country comes to be peopled, not only will good soil be found there, but material, in great abundance, for fuel and for manufacturing purposes. Think of a manufactory, away up there on Athabasca River, sending down vulcanized fabrics made from these bituminous fountains, and competing with the India Rubber and gutta percha water-proof clothing of Horace H. Day & Co., of New York!

Lead has been found in the Cascade Mountains. And the Indians of that region have often brought into the posts of the Hudson Bay Company platina and silver ore—though they have never revealed the locality in which they procure it. Gold has recently been discovered at Fort Colville, and men wholly unskilled in the occupation have taken out from ten to twenty dollars per day. Fort Colville is in the Bitter Root range of mountains, in 48° 45′ north latitude. The discoveries already made indicate the existence of an extensive gold-bearing region in Washington Territory; and it is not improbable, that the entire chain of Western Mountains, from the Gulf of California to the mouth of Mackenzie's River, will ultimately be found to contain deposits of this precious metal.

The most extensive systems of salt springs and lakes abound in this region, in different localities, both within the American and the British Possessions, and in some districts the mineral itself is found in great purity and abundance.

Considering the vast amount of minerals already discovered, with scarcely any scientific exploration, the hypothesis is by no means an unreasonable one, that no portion of the continent