formation, composed of sand and loam, from twenty to thirty feet in thickness, brought down by the wash from the high prairies, which rise gradually on three sides. In this alluvium, at various depths, are found the bones of buffalo, deer, and antelope, who have probably made this a resort for salt for long ages past, as they are seen to do at the present time. Underlying this is the Triassic rock, which in Europe furnishes so much salt that it is termed the Saliferous system.

"The incrustation of salt" (the Professor continues) "is frequently three eighths of an inch in thickness. This is scraped up and used in its natural state for salting cattle, &c.; but, for domestic purposes, it is melted by being mixed with about twenty gallons of water to a bushel of salt, when the mechanical impurities, sand, &c., readily settle. The salt is again returned to a solid state by evaporation. The marsh, after scraping, produces a second crop of salt in from five to seven days of dry weather; and after repeated scrapings during the past three years, yields as full a supply as at first. . . . . The marsh receives the drainage of the valley slope about two miles in width and about five miles from the north, and consequently the brine, as it comes from the source below, must be constantly weakened by so large a body of surface water."

While at Salina, Col. Phillips told me much about these salt springs and marshes, and particularly of a very singular spring which rose on the very summit of a conical mound standing on the open plain some forty or fifty feet high. He kindly invited me to return and take a tour with him through that beautiful prairie region, interspersed with salt springs, buttes crowned with iron ore, and gypsum beds sufficient to supply the world. We would need a wagon, a tent, and ten or twelve days' provisions.

Salt will have to be manufactured by solar evaporation in Kansas. The climate is admirably adapted to it; and, indeed, it is not only the most economical method, but the article, when made, is better in quality.

Gypsum abounds in Kansas. One vein of from four to ten feet in thickness crosses both the Big Blue and Little Blue, a few miles above their junction. South of the Smoky Hill at Salina an enormous deposit has been discovered and traced for miles. It it also found in numerous places in the vicinity of the Solomon and Saline rivers. Colonel Phillips marked it on a map in eight or ten places. The quality is quite equal to the Nova Scotia, and some thin veins of pearly whiteness run through the heavy deposits south of the Smoky Hill.

Alum exists and might be manufactured to any extent in Saline county, on the Smoky Hill. It is known to extend through a range of fifteen or twenty miles.

Iron ore is found in considerable abundance in many places west of