

contrived, but had never seen one. He readily comprehended the advantage to be derived from pumping the water into smaller troughs, dug in the retentive clay near the springs, and strengthening the brine by solar evaporation.

It would seem that concentration by freezing was never employed in the Swan River district, though it is stated by residents in Pembina that concentration by freezing was made use of by the Hudson's Bay Company in working the springs near Cashel, North Dakota.

Sufficient information is not available to justify any attempt to estimate, even roughly, the amount of salt that was produced during these years. The minutes of Council of Assiniboia from 1823-1840 show that from fifty to one hundred bushels of salt were bought from the freemen yearly by the Hudson's Bay Company at 7/6 per bushel. Keating<sup>13</sup> states that in the Pembina district, where, he avers, the salt was gathered from the white precipitates around the springs on the Big and Little Saline rivers, the price of the salt was four to six dollars per barrel of eighty pounds, and that one of the residents cleared five hundred dollars in one winter by the salt which he collected. From the statement of Spencer, already quoted, it would appear that in the years prior to 1874 more than one thousand bushels a year had been manufactured at Monkman's Springs. The salt was put into birchbark boxes, called "mocoeks", each holding one hundred pounds and was exported to the various Hudson's Bay Company posts and to the Red River Settlement. The product was decidedly unprepossessing in appearance, being characterized by a distinctly reddish color, and, judging from the chemical analysis of the brine and from its method of manufacture, it must have had as impurities considerable percentages of deliquescent salts. In fact, Keating states<sup>14</sup> that during his stay at Fort Alexander he inquired why salting was not

<sup>13</sup> *Geological Survey of Canada*, Vol. II, p. 36.

<sup>14</sup> *Geological Survey of Canada*, Vol. II, p. 82.