

The analysis gave the following result :—

Chloride sodium.....	36.4971	Sulphate lime.....	4.1511
“ potassium.....	.4179	Carbonate lime.....	.0777
“ calcium.....	.3982	“ iron.....	traces
“ magnesium.....	1.7225	Silica.....	.0126
Bromide magnesium.....	undet		—
Iodide magnesium.....	undet	Total dissolved solid matter by	
Borate soda.....	undet	direct experiment dried at 180° C.	43.4280

“The proportion of magnesium assumed to be present as bromide and iodide, amounts to 0.0596”

Sulphur Coulee, Manitoba.—Water which rises from Cretaceous shales, was obtained by Dr. G. M. Dawson from the so-called Sulphur Spring, in Sulphur Coulee, near its junction with the Pembina River, and submitted for examination to Mr. G. C. Hoffmann, who reports as follows :—Geol. Surv. Rep. II, 1886. p. 13 I :—“The filtered water had a specific gravity at 15.5° C., of 1000.42 and contained 0.862 parts dissolved saline matter, dried at 180° C., in 1000 parts, by weight, of the water.” A qualitative analysis gave the following result :—

Potassa.....	small quantity	Sulphuric acid.....	large quantities
Soda.....	rather large quantity	Carbonic acid.....	“
Lithia.....	very small quantity	Chlorine.....	“
Lime.....	large quantity	Organic matter.....	small “
Magnesia.....	“		

Western Butte, Sweet Grass Hills, Alberta.—In the same volume Mr. Hoffmann gives the following result of the examination of a specimen collected by Dr. G. M. Dawson from a spring at foot hills of Western Butte, Sweet Grass Hills, where the water rises from dark Cretaceous shales. “The water, which as it issues from the spring, is charged with sulphuretted hydrogen, still contained a large quantity of that gas. It contained some suspended and sedimentary matter, consisting of carbonate of lime, a little iron, and separated sulphur, together with argillaceous and organic matter, and some sand. The filtered water had a specific gravity, at 15.5° C., of 1001.36. Total dissolved saline matter, dried at 180° C., equalled 0.857 parts in 1000”

A qualitative analysis gave the following result :—

Potassa.....	trace	Ferrous oxide.....	trace
Soda.....	small quantity	Sulphuric acid.....	small quantity
Lithia.....	very distinct quantity	Carbonic acid.....	very large quantity
Lime.....	fairly large quantity	Chlorine.....	small quantity
Magnesia.....	very “	Hydrosulphuric acid.....	large “
Alumina.....	“ small “	Organic matter.....	small “