

THE RESEARCH COUNCIL ON WATER SUPPLY

Report to the Honorary Advisory Council for Scientific and Industrial Research by the committee on underground waters. The committee consists of Mr. Adams, convenor, Mr. Ross and Mr. Murray.

1. The committee, after a thorough discussion of the question with Principal Murray; R. G. McConnell, deputy minister of mines; D. B. Bowling, of the department of mines; E. F. Drake, of the irrigation branch of the department of the interior, and J. H. Chaffin, of the water power branch of the department of the interior, desires to submit the following statement:

2. There seems to be little chance of securing water from the eastern slopes of the foothills of the Rocky mountains because the strata of the eastern slopes of these hills pitch down very steeply and are faulted off along the margin of the plains and parallel to the face of the mountains. Where in the district a short distance to the east of the mountains, borings have been put down, either salt water or gas has been obtained.

3. It may be that a certain portion of water which falls on the crest of the Belly river anticline—extending from Kerrobert to Viking—may pass underground to the east of this anticline and be obtained by boring in the area bordering this side of the anticline in question. Wells along this district have not as yet been sunk, but even if water is secured it probably will not be found over a wide belt of country and will be of relatively little value seeing that this tract of country is already fairly well supplied with water. To the west of this anticline it is not likely that water can be secured, seeing that the series seems to be cut off by faults in this direction.

4. Further to the east beyond the relatively narrow strip of land, bordering the anticline, in which potable water may be found wherever deep wells have been bored, as for instance at Deloraine, Wilcox or Moose Jaw, these have yielded salt water.

5. The only places where good artesian water has been found is in an area in the southern portion of Alberta, north of the Milk river, about

Foremost. Some flowing artesian wells have already been bored in this area, and the geological survey of Canada is putting down others at the present time.

6. These are, however, waters which rise from borings through the superficial (drift) strata in various parts of the eastern plains. The flow of these waters is determined by the irregular configuration of the drift. The course followed by these underground waters is very irregular, and it is thus impossible at the present time to predict where such supplies of water may be obtained by boring. Mr. McConnell has stated that he will undertake to have an examination of one area in this district, on the east plains, carefully mapped and studied during the coming summer, with a view to ascertaining whether it will be possible to predict the occurrence of water at any particular point from a geological examination of the drift covering the area in question.

7. Apart from true artesian waters it may be noted that there are many springs which occur around the elevated areas, such as the Touchwood hills and Wood mountains. These are merely surface water draining down from higher levels.

8. The committee, therefore, does not think it advisable for the council to take any further action at the present time with reference to the securing of artesian water on the western plains. A further examination, however, may be warranted when the officers of the geological survey have completed their examination of the area to which reference has been made.

The following is a letter received by the Board of Trade from Prof. Murray, Saskatchewan university, who was invited to attend the conference on water supply:

The question of water supply is a matter of vital importance to Western Canada. I regret that it will be impossible for me to be present at your meeting on the 22nd. I am sending you a copy of the report presented to the Advisory Council for Scientific and Industrial Research.