The general direction of these is from North west to South east, very nearly the reverse of that followed by the rivers on the western side of the mountains. The main stream which heads not far from Latitude 47-30. N., is on reaching the valley, deflected by a heavy range which breaks off from the Cascades and curves to the South, separating the waters of the Yakama from the Pisquouse, and the Columbia, and terminating near the mouth of the first. In this forms a basin in which the upper waters of the Yakama are enclosed. Spurs from this range run toward the Cascades, sinking into the general level of the general plateau, or uniting with corresponding offsets of the latter. The main Yakima cuts through four of these spurs at the very base of the range, before again turning to the eastward, and its various branches have eroded from the plateau the valleys through which they run to mud it.

Long horizontal lines of basalt bordering these valleys indicate the original level of the basin, though it would appear that elevation had at some points disturbed it. Traces of lacustrine terraces are also observable, formed probably before the river had completely broken through its barriers.

The basalt is continuous along the base of the Cascades on the line from the Dalles northward to the Columbia at its bend near the mouth of the

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