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George W Heine* (gheine@mathnmaps.com), 200 Sunset Lane, Pueblo, CO 81005. *Leonhard Euler as a Map Maker*. Preliminary report.

To Euler's employers, the production of accurate maps of their domains was probably more important than any of his mathematical works. Yet Euler's "practical" cartographical work may have led to important theoretical advances in both cartography and mathematics. We survey the state of cartography in the eighteenth century and assess Euler's contributions. We discuss the synergy between cartography and mathematics, and speculate on how his work in each may have led to the discovery of results in the other. The talk includes many illustrations. Members of the audience will learn how cartographic examples can enliven subjects such as multivariate calculus and non-Euclidean geometry. (Received September 14, 2000)