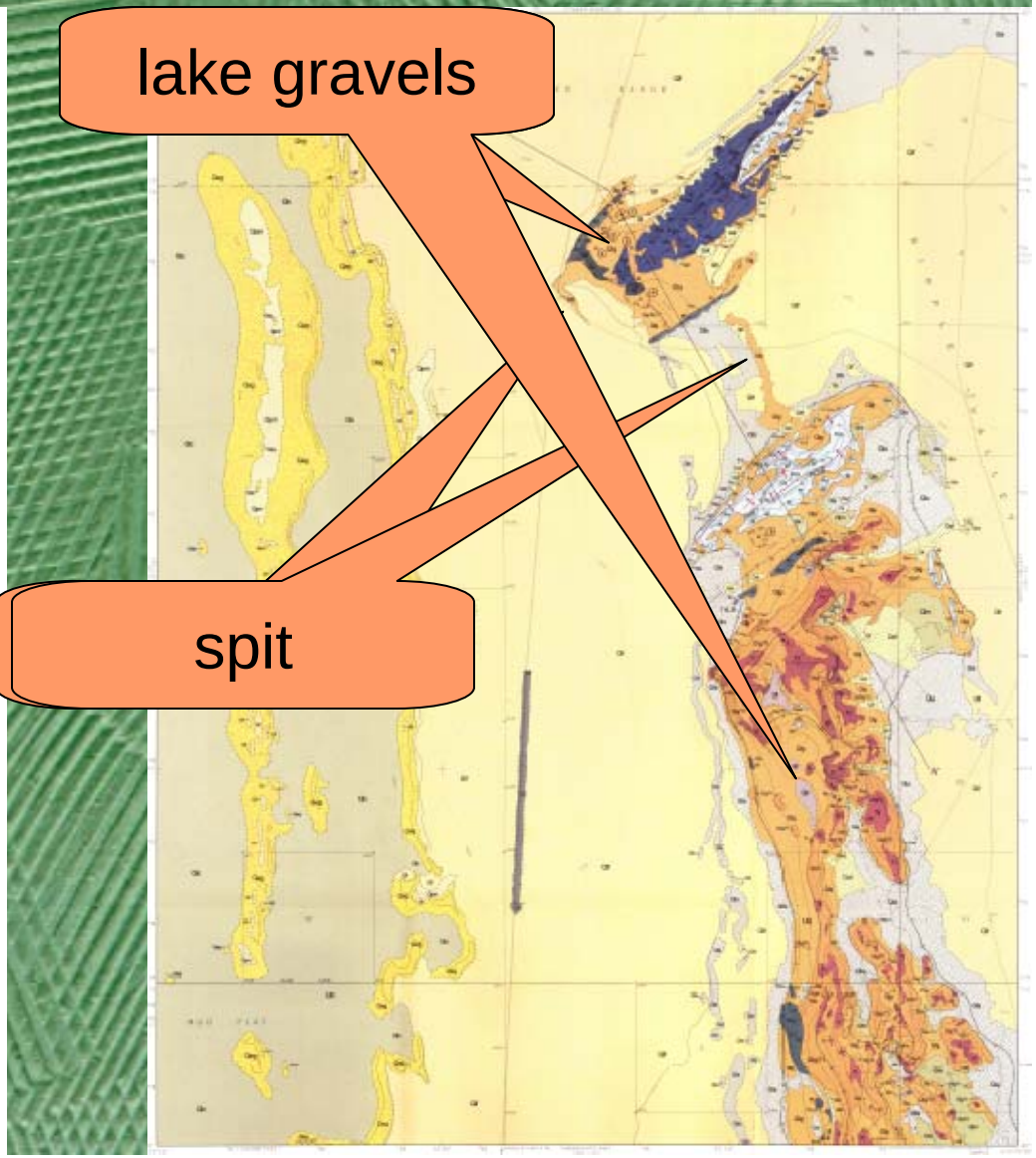
Site Stability

R313-25-22: The disposal facility *shall* be sited, designed, used, operated, and closed to achieve long-term stability of the disposal site and to eliminate, to the extent practicable, the need for ongoing active maintenance of the disposal site following closure so that only surveillance, monitoring, or minor custodial care are required.

Wendover

Grayback Hills



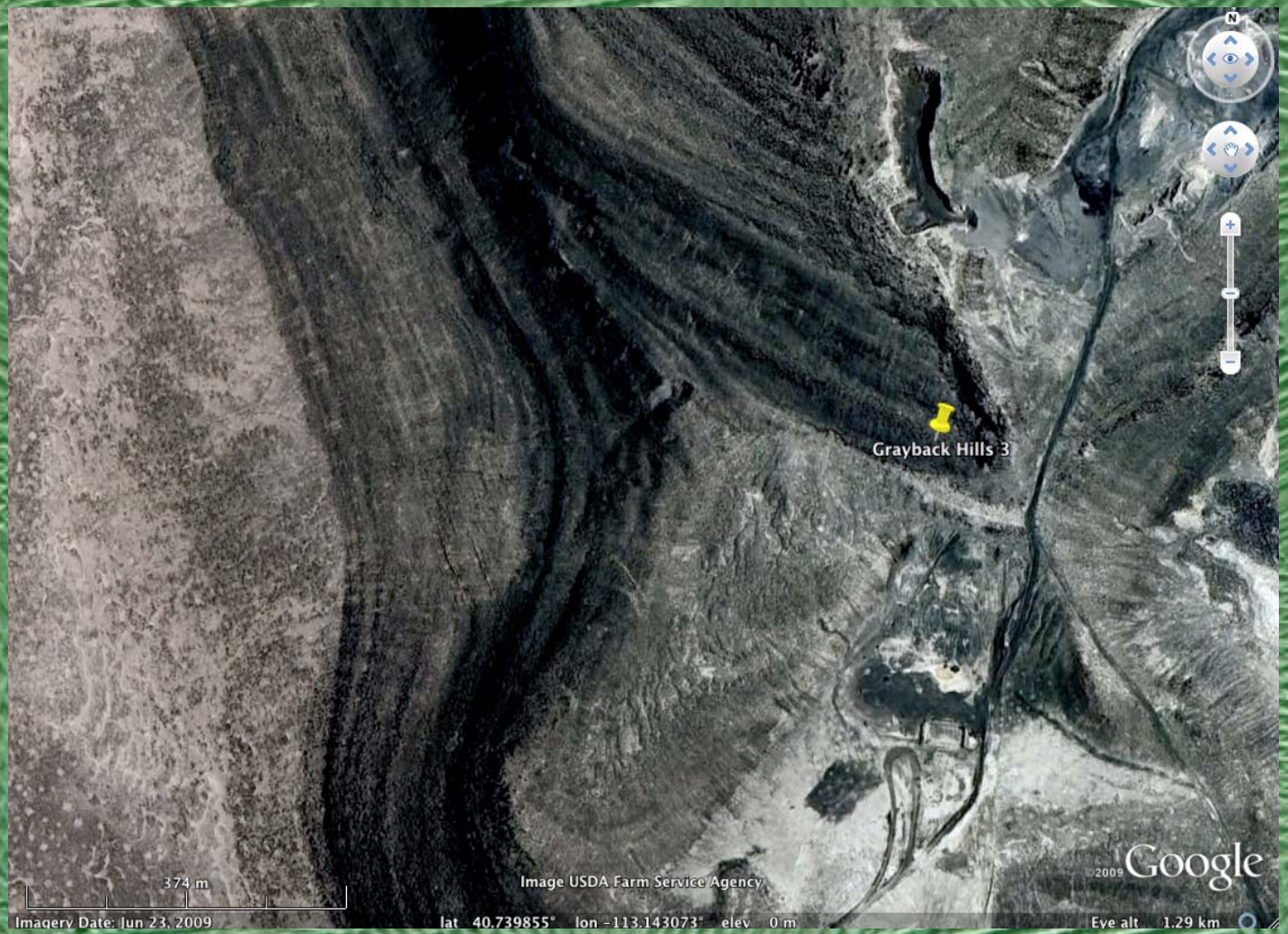
Grayback Hills

Stansbury shoreline
4500’

Grayback Hills

Grayback Hills

Grayback Hills



Grayback Hills

Wind Direction

Morphology and paleoclimatic significance of Pleistocene Lake Bonneville spits

Paul W. Jewell

Department of Geology and Geophysics, University of Utah, Salt Lake City, UT 84112, USA

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Abstract

Pleistocene Lake Bonneville of western Utah contains a variety of spits associated with shorelines and other features that formed between 21,000 and 12,000 ^{14}C yr BP. Field studies in the low-lying mountain ranges of the central portion of Lake Bonneville identified 17 spits of various types. The spits are connected to small mountain ranges and islands, vary in size from 0.02 to 0.5 km^2, and are composed of coarse-grained, well-rounded, poorly-sorted sedimentary material. Sixteen of the 17 spits have a northeasterly to southwesterly orientation implying that winds were from the northwest to northeast, approximately 180° out of phase with modern winds in the eastern Great Basin. Lake Bonneville spit orientation is best explained as the result of persistent northerly winds caused by the high atmospheric pressure cell of the continental ice sheet and passage of low pressure extratropical storms south of the lake. Similar, strong persistent winds are a common feature of modern continental ice sheets and passing low pressure systems. If so, the North American jet stream tracked south of Lake Bonneville as recently as 12,000 ^{14}C yr BP, well past the height of the last glacial maximum.

Keywords: Spits; Lake Bonneville; Pleistocene climate; Jet stream

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