The huge database of geochemically sourced obsidian artifacts from the Ruby Pipeline provides a unique perspective on changing patterns of prehistoric obsidian procurement and conveyance in the northern Great Basin. One of the most striking trends is an increase in obsidian source diversity in the Late Prehistoric period, driven by increased representation of distant obsidian sources. Average transport distances, as quantified both by diagnostic projectile points and by samples of debitage from dated site components, are by far the highest in the Late Prehistoric period. Local sources still dominate obsidian source profiles, as they do in earlier periods, but the increase in the representation of far distant sources is dramatic. The apparent timing of this shift, as well as the very long distances involved, suggests that obsidian may sometimes have been transported by Native traders on horseback.

The Late Prehistoric period shows a chaotic pattern of travel between obsidian sources and sites. Sources from southern Oregon and Idaho are better represented than in previous periods, and western sources such as Massacre Lake are less well represented. Also unlike previous periods, raw material travels just as far as finished tools. One site, 26RH4908, contains obsidian both from Mt. Hicks in eastern California and Oxyhoo, in southern Oregon.

The very high travel distances, the apparent lack of concern over the costs of transporting unfinished obsidian (rather than finished tools), and the focus on northern sources, together suggest that trade on horseback may have played a role in obsidian transport beginning around 1700 AD.

Some sites along the Ruby Pipeline are within easy travel distance to multiple obsidian sources, while others are far from any sources. To allow comparison between obsidian-rich and obsidian-poor areas, average transport distances are expressed here as a procurement premium, which is just the difference between a) the actual distance traveled by the obsidian between source and site, and b) the minimum distance to the closest source from the site. In the example above, if an obsidian sample from Site X was entirely from Source A, the premium would be 0 km. If it was entirely from Source B, the procurement premium would be 30 km, because Source A is 30 km closer.