We describe first results of a spectroscopic probe of selected fields from the Grid Giant Star Survey. Multifiber spectroscopy of several hundred stars in a strip of eleven fields along $\delta \approx -17^\circ$, in the range $12 \alpha 17$ hours, reveals a group of 8 giants that have kinematical characteristics differing from the main field population, but that as a group maintain coherent, smoothly varying distances and radial velocities with position across the fields. Moreover, these stars have roughly the same abundance, according to their MgH+Mgb absorption line strengths. Photometric parallaxes place these stars in a semi-loop structure, arcing in a contiguous distribution between 5.7 and 7.9 kpc from the Galactic center. The spatial, kinematical, and abundance coherence of these stars suggests that they are part of a diffuse stream of tidal debris, and one roughly consistent with a wrapped, leading tidal arm of the Sagittarius dwarf spheroidal galaxy.