Appendix C

Kinematic Analyses of Historical Rockfalls on the Chief

Figure C-1 plots the controlling surfaces of all identified historical failures in Section 4.3.3 that were designated as having failure configurations A, B, or E. These failures have one dominant failure surface which is near parallel to the failure surface. A failure envelope is shown on the stereonet, using a vertical slope as a limit; however, this is not necessarily indicative of critical joints, as the surface of the slope is extremely variable and overhanging in many areas, allowing for failures along joints dipping into the slope.

Figure C-1: Identified controlling planes of planar-type failures (configurations A, B and E) on the Chief
Figure C-2 plots the controlling surfaces of all wedge-type failures identified on the Chief, along with a failure envelope and all possible critical intersections. The intersections of the actual observed failures are highlighted.

Figure C-2: Wedge failure analysis of identified historical rockfalls on the Chief. All possible intersections are shown, with intersections from observed rockfalls highlighted.