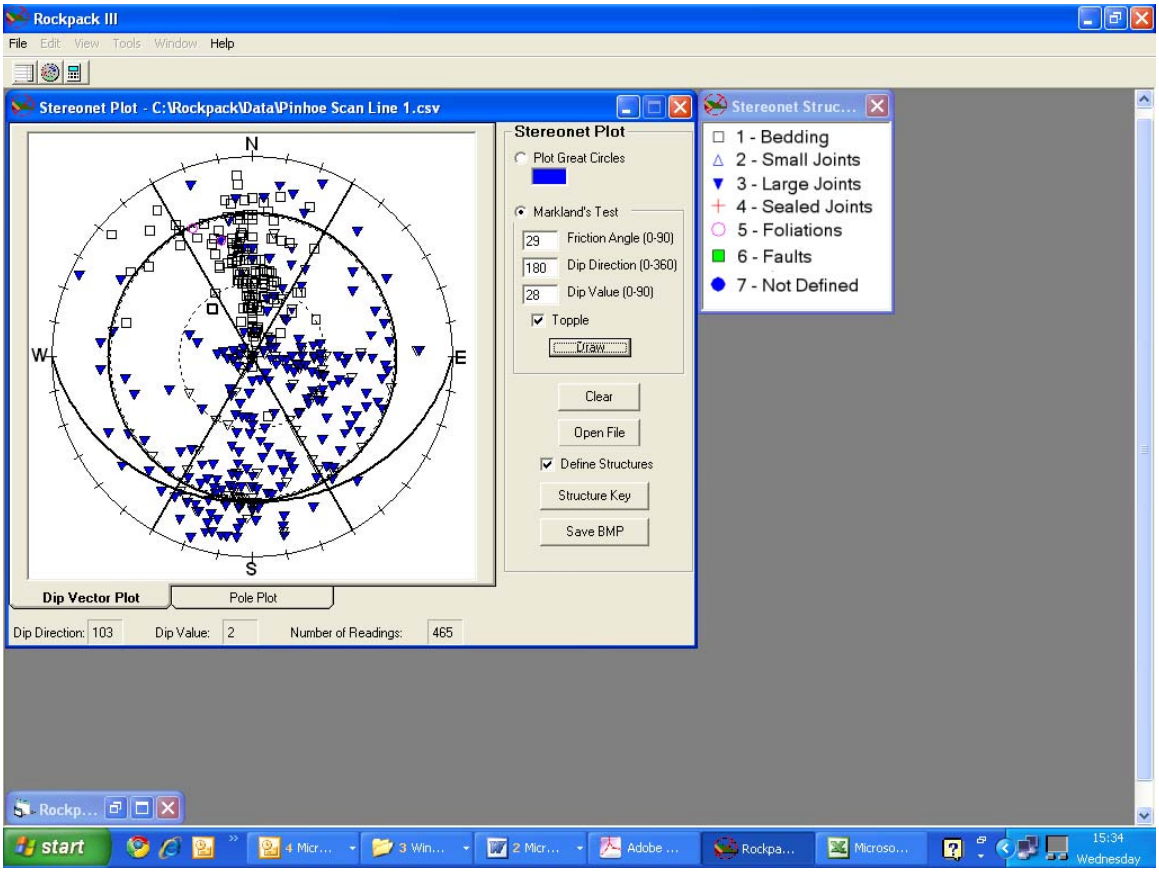
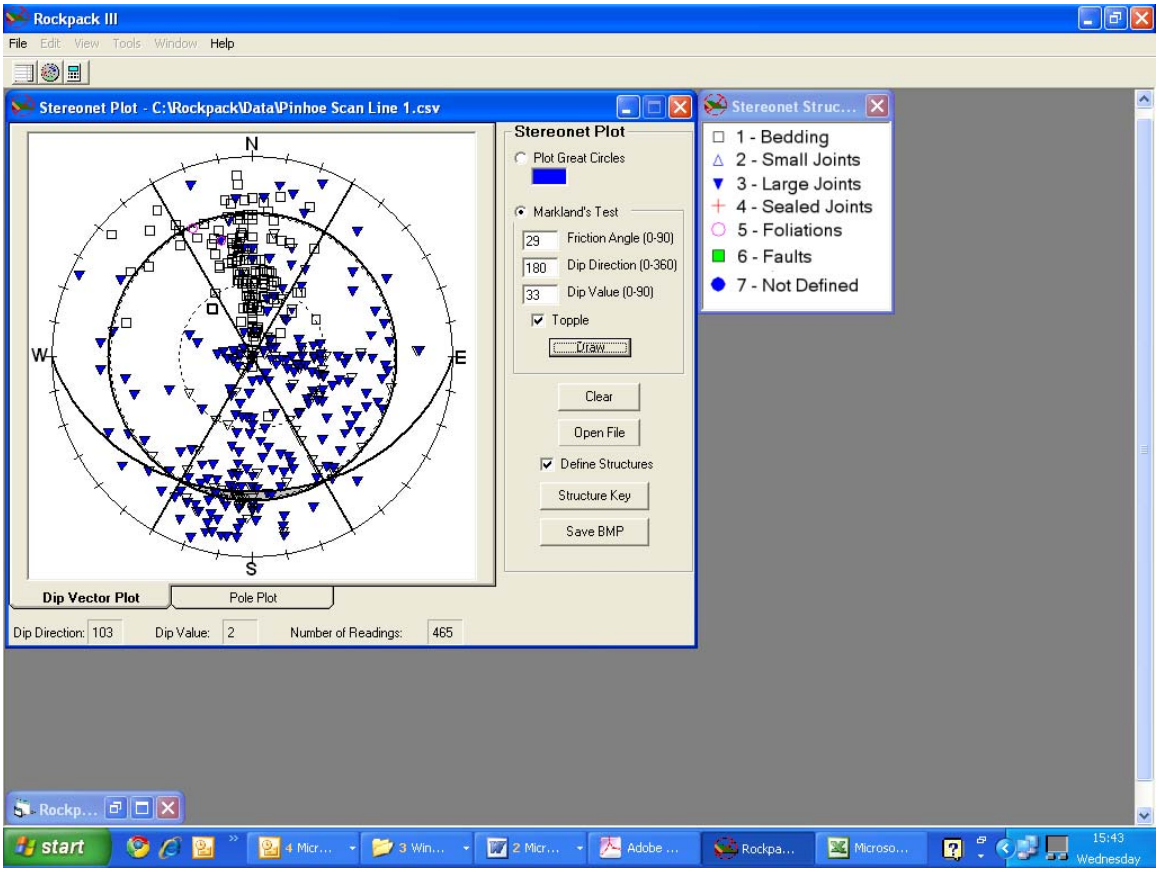
North slope dipping towards 180 degrees (south) in Shale to Sandstone ratios of 9:1 to 4:1, with a corresponding shallow slope angle of 28 degrees.



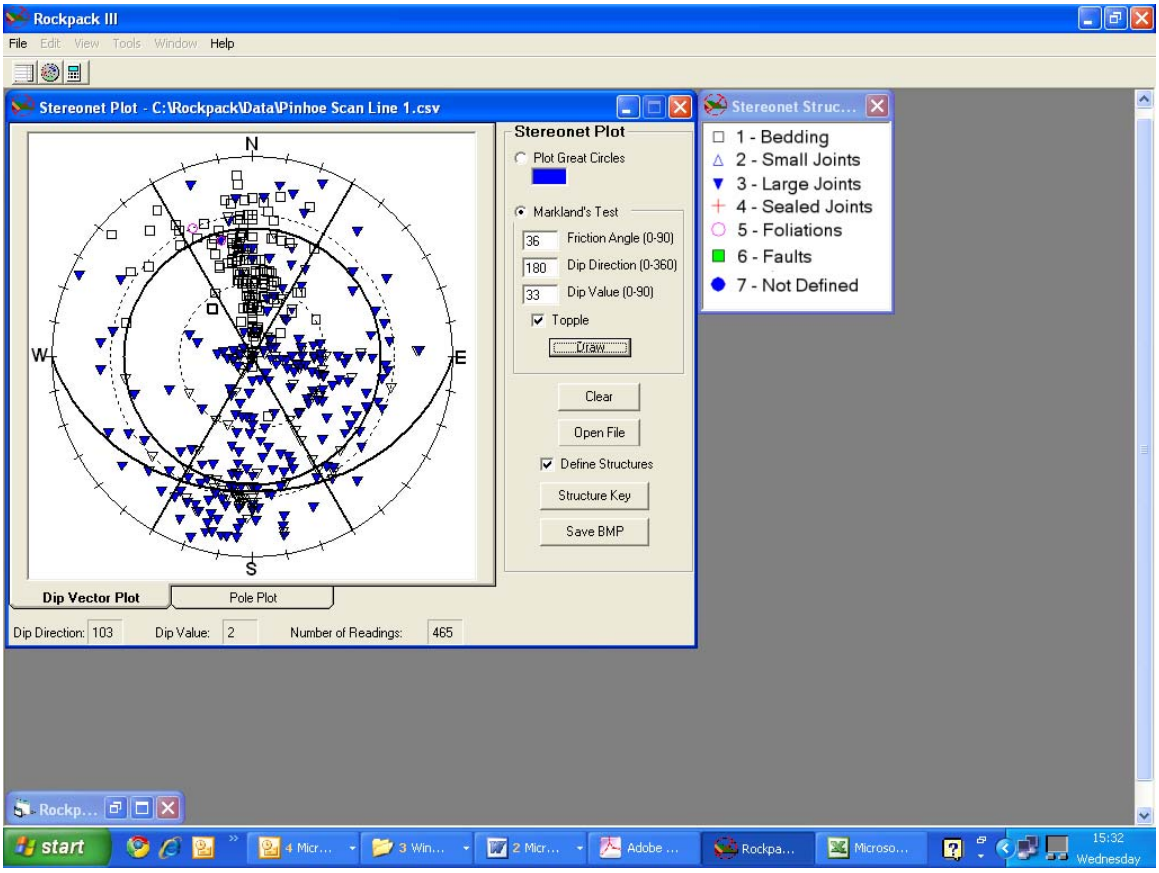
The above stereographic plot indicates the slope represented by Scan Lines 1 and Scan Line 3 has been cut to an angle controlled by the joint set dipping towards the south.

The following stereographic project shows the daylighting of joints that may result in a release surface where the ratio of shale to sandstone ranges from 9:1 to 4:1, with a steeper slope angle of 33 degrees.



The above plot provides a clear explanation or the slope angle observed in the area of Scan Lines 1 and 3.

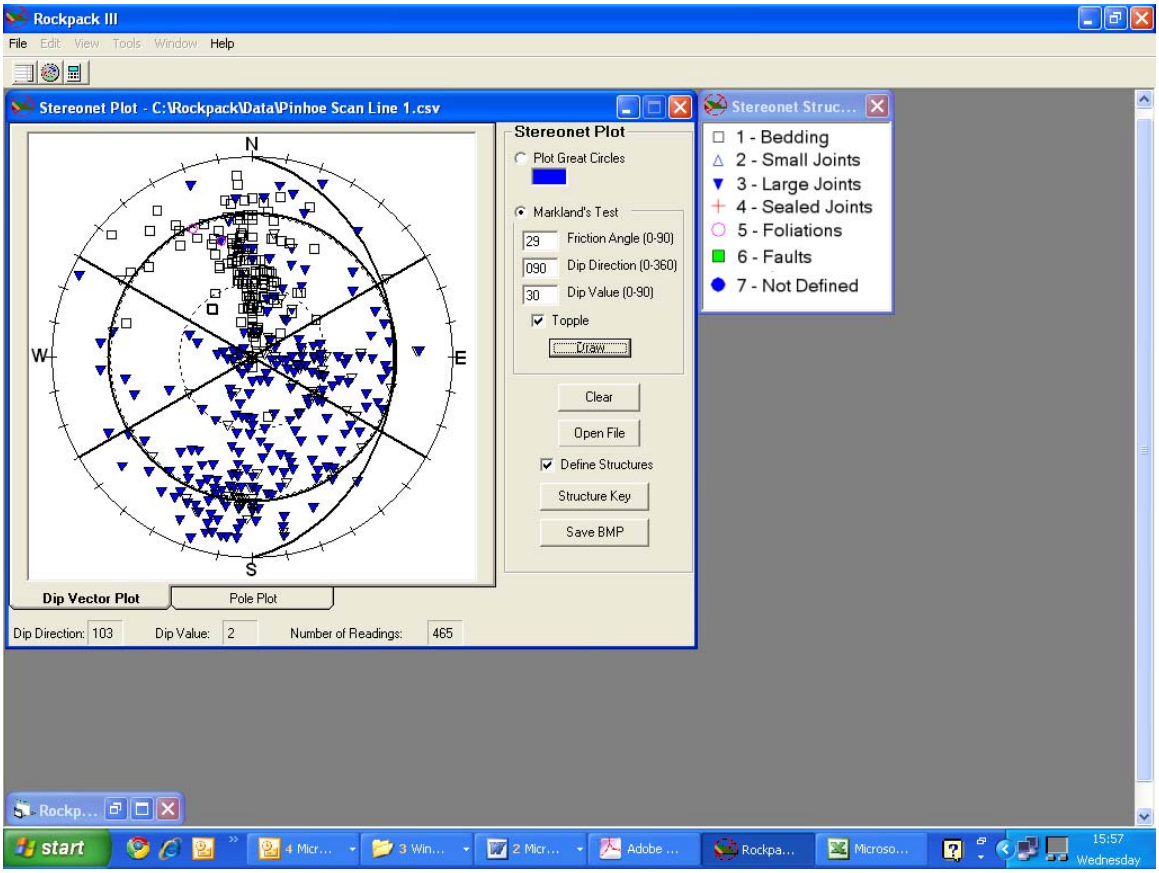
North slope dipping towards 180 degrees (south) in Shale to Sandstone ratios of 7:3 to 3:2, resulting in steeper slope angles of 33 degrees.



The above stereographic projection shows that discontinuity controlled planar failure is unlikely in the slope observed on Scan Line 4.

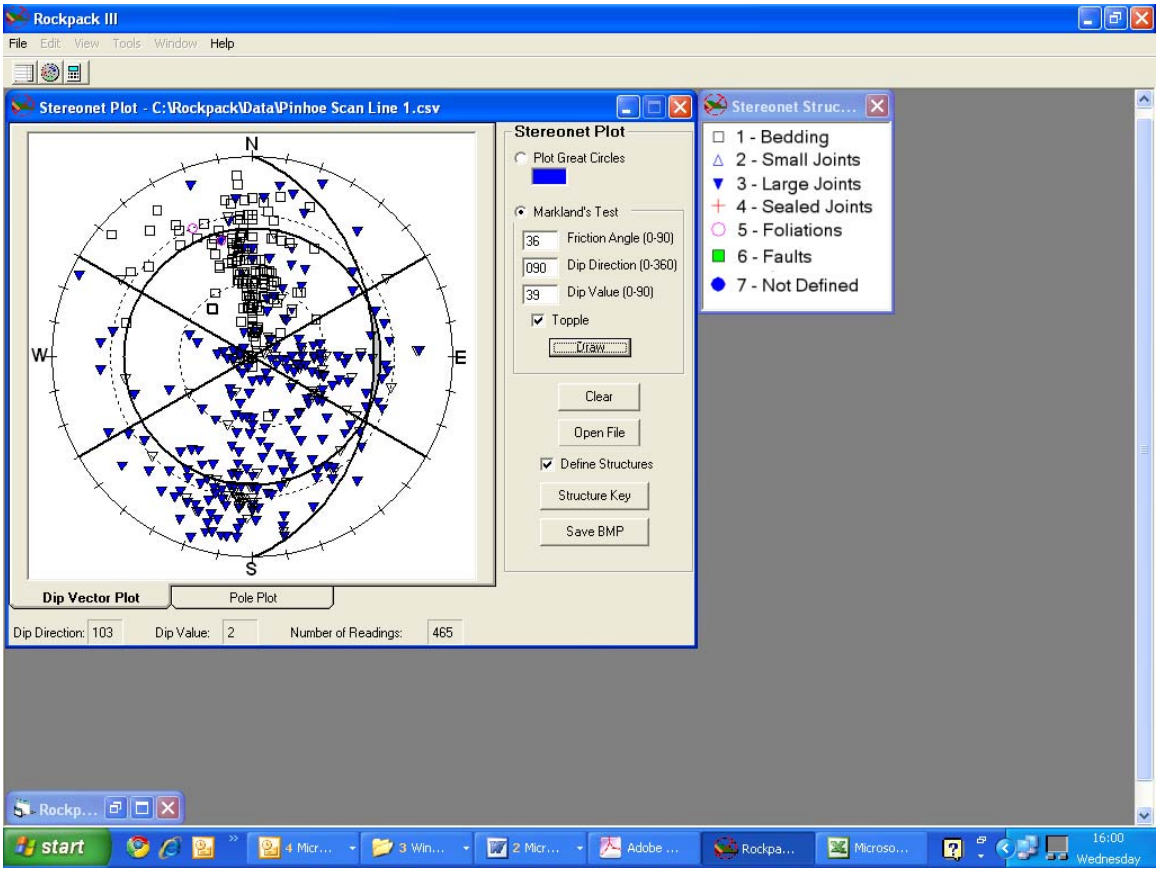
The slope on the west side of the quarry dips towards the east at angles of 30, 39 and 22 degrees on the upper, mid and lower sections of Scan Line 2.

The following stereographic projection shows the likely relationship for the upper slope where the shale to sandstone ratio is 9:1 to 4:1 and the slope angle is 30 degrees.



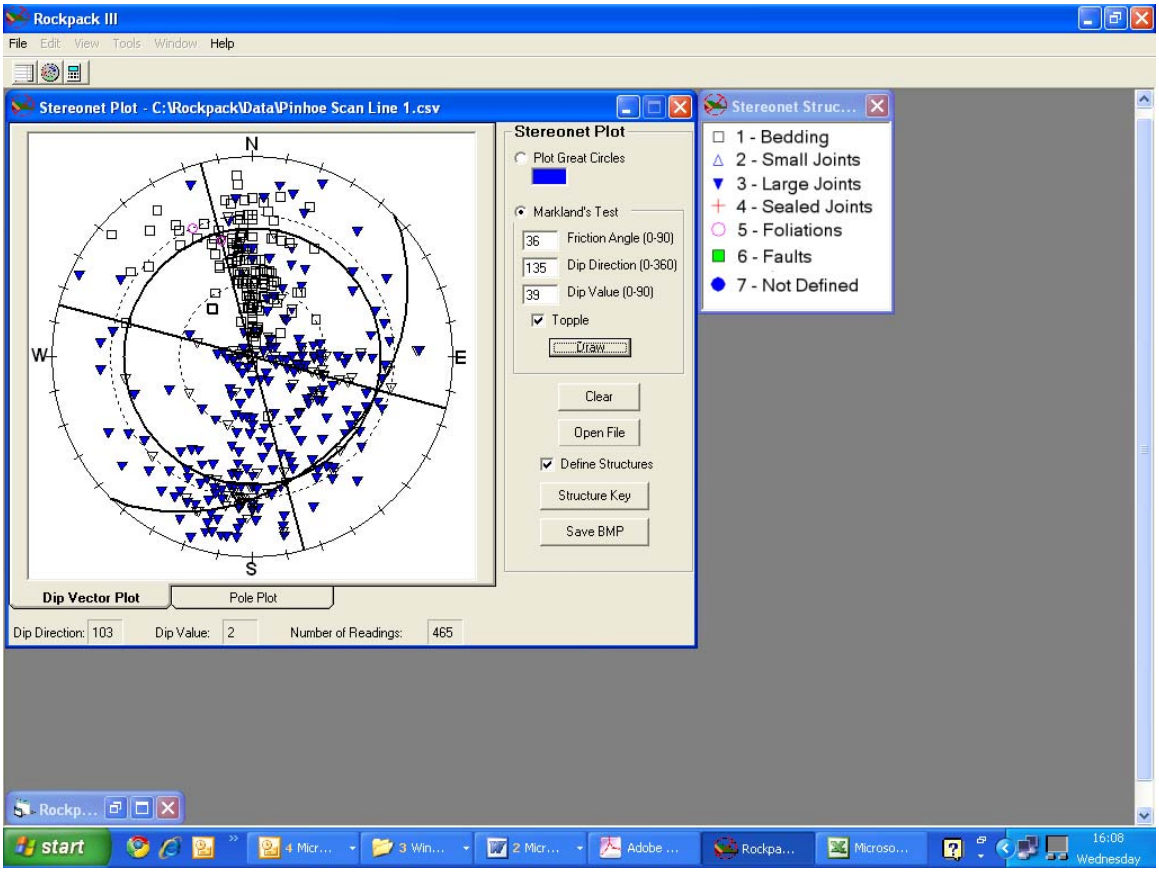
The above table indicates the upper section of slope has been cut at the limit dictated by Joint Set 2 for the likely low proportion of sandstone.

The following stereographic projection shows the likely arrangement on the mid section of Scan Line 2, where the shale to sandstone ratio is likely to enable a steeper slope angle of 39 degrees.



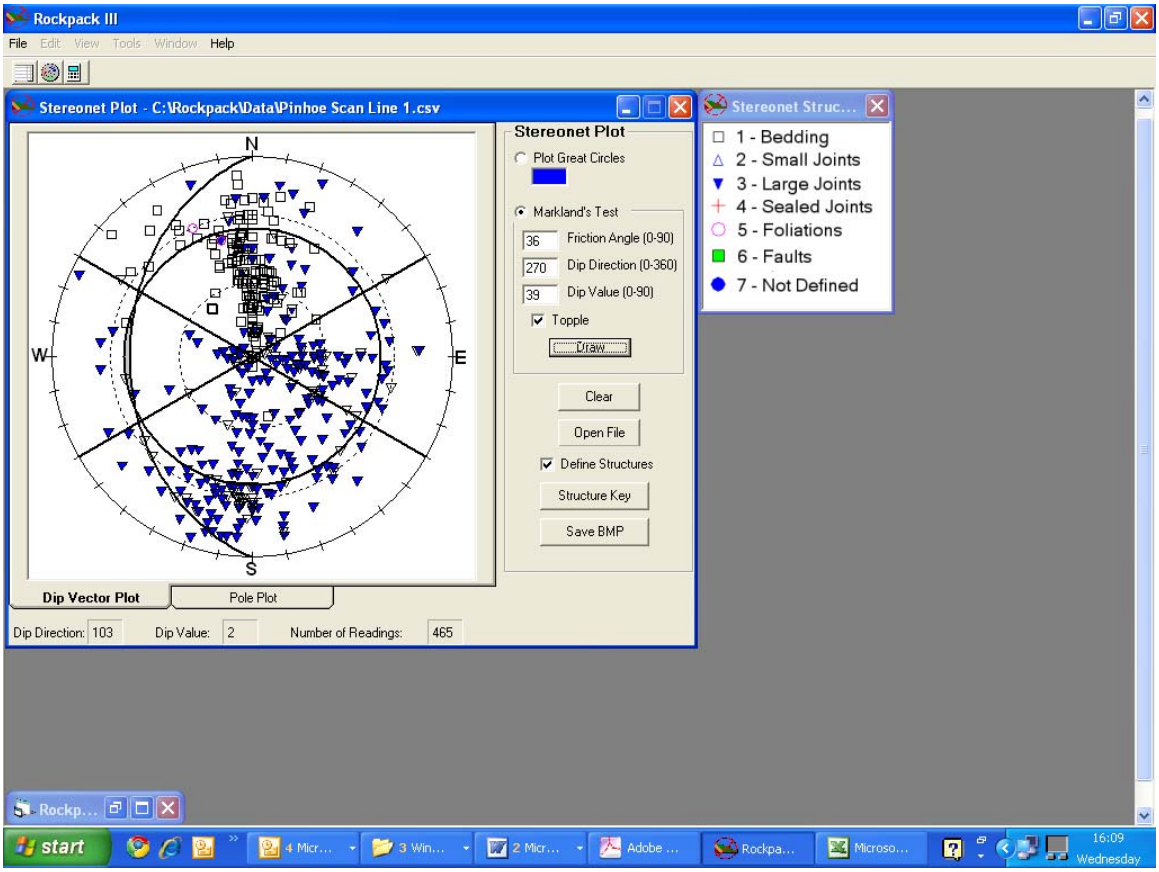
This section of slope is likely to be represented by a greater proportion of sandstone. The frequency of daylighting joints although plotting within the potential failure zone are fairly infrequent compared to the main cluster of steeply dipping joints.

The following stereographic projection represents the west side of the quarry sloping towards 130 degrees. The existing slope is cut at a relatively steep angle of 39 degrees.



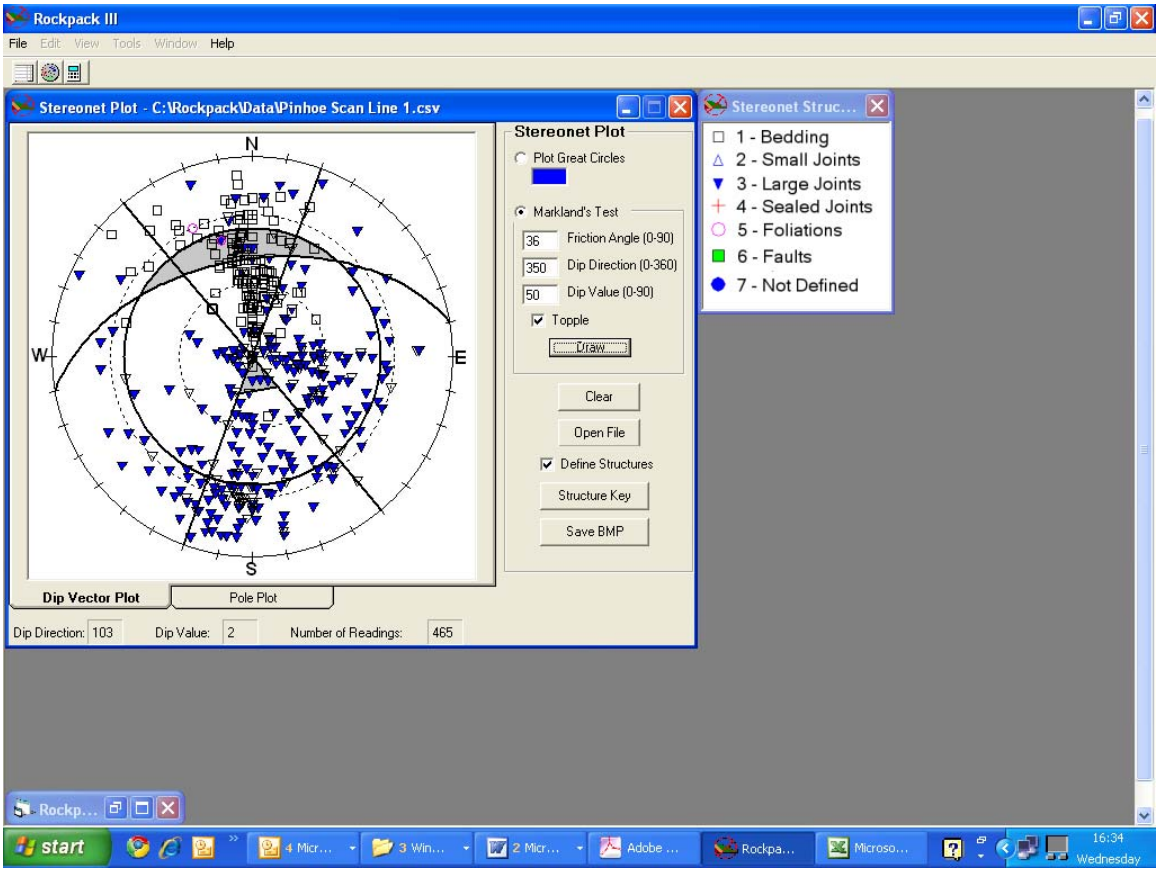
This section of slope is likely to be represented by a greater proportion of sandstone. The frequency of daylighting joints although plotting within the potential failure zone are fairly infrequent compared to the main cluster of steeply inclined joints.

The slopes on the east side of the quarry dip approximately towards 270 degrees i.e. east.



The mapped discontinuities indicates a low probability of failure of the slopes on the east side of the quarry at the existing angles.

The following stereographic projection models the existing south side of the quarry, which dips towards the north (350 degrees) at a steep angle of 50 degrees.



The above plot shows the main bedding plane daylighting out of the slope. The existing slope is controlled by the inverted southern limb of the folded sandstone beds. The potential for the less steeply dipping north limbs of the fold to daylight out of the cut slope exists, if the existing cut slope is pushed further south at similar angles.