Lesson 2
Part 2
STEREOGRAPHIC PLOTTING
Analysis of Structural Geology

- Stereographic Projection
- Orientations Expressed as Dip/Direction
- No Size or Location Data
Projections of Linear/Planar Features
Objectives

- Plot stereonets of dip and dip direction measurements
- Analyze stereoplots to show intersection between planes
- Demonstrate applications to stability analysis
Stereographic Plot of Poles

- 1 pole
- 2 poles
- 3 poles
- 4 poles
- 5 poles

NUM. OF POLES

EQUAL ANGLE

LWR. HEMISPHERE

151 POLES

151 ENTRIES

F Fault
Stereographic Contour Plot of Poles
Symbolic Pole Plot with Contour Overlay

PERSISTENCE

- 0.00 ~ 1.00 [0]
- 1.00 ~ 2.00 [10]
- 2.00 ~ 3.00 [24]
- 3.00 ~ 4.00 [14]
- 4.00 ~ 5.00 [30]
- Others [1]

Equal Area
Lower Hemisphere
79 Poles
79 Entries
Stereoplot of Plane Failure

- Crest of slope
- Great circle representing slope face
- Direction of sliding
- Great circle representing plane corresponding to centre of pole concentration
Stereoplot of Wedge Failure

- Crest of slope
- Great circle representing slope face
- Direction of sliding
- Great circles representing planes corresponding to centres of pole concentrations
Stereoplot of Circular Failure

Great circle representing slope face

crest of slope
Stereoplot of Toppling Failure

- Crest of slope
- Great circle representing slope face
- Great circle representing planes corresponding to centre of pole concentration.
LESSON 2 – GEOLOGICAL DATA COLLECTION and STEREOGRAphic PLOTTING

Learning Outcomes -

- List important geological parameters of discontinuities;
- Plot and analyze structural orientation (stereonet) data.