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The geology of the bewaarkloof area : Pietersburg asbestos field

Dreyer, Cornelius Johannes Burger

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ZONE IN WHICH NORH – SOUTH FOLDING
← IS DEVELOPED. FIBRE IS CONFINED TO THIS →
ZONE

TRANSITION ZONE BETWEEN AMOSITE BEARING FORMATION AND CROCIDOLITE BEARING FORMATION

LOT 120

LOT 245

— MAP 3 —

DISTRIBUTION OF ASBESTOS

BEWAARKLOOF MINE WORKINGS

EGNEP MINES

MALIPS DRIFT SECTION

SCALE 1:3600 (1" = 300')

500 0 500 1000 1500 ENG FEET

HEIGHTS ABOVE MEAN S. LEVEL COORDINATES ON Lo 29° IN ENGLISH FEET

0 100 200 300 METRES

AIR PHOTOGRAPHY 1948/49 COMPILATION 1961/62

BUILDING

HUT

ROAD

TRACK

FIGURE Q



FIGURE T

FIGURE V

X = +8768000

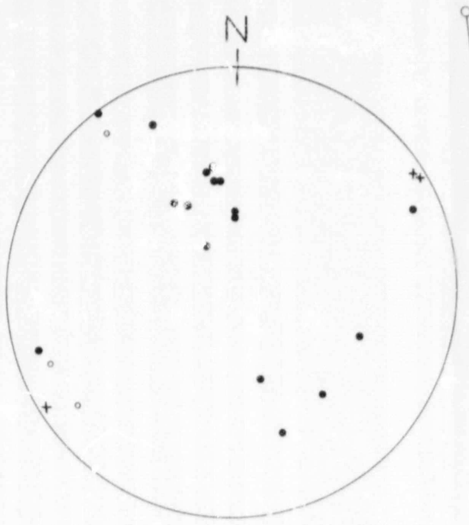


FIGURE P

GEOLOGY OF BEWAARKLOOF

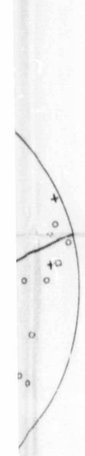
TECTONIC SYNTHESIS IN STEREOGRAPHIC PROJECTION.

SCALE 1:3600 (1" = 300')

500 0 500 1000 1500 ENG. FEET

0 100 200 300 meters

COORDINATES ON 29° IN ENGLISH FEET



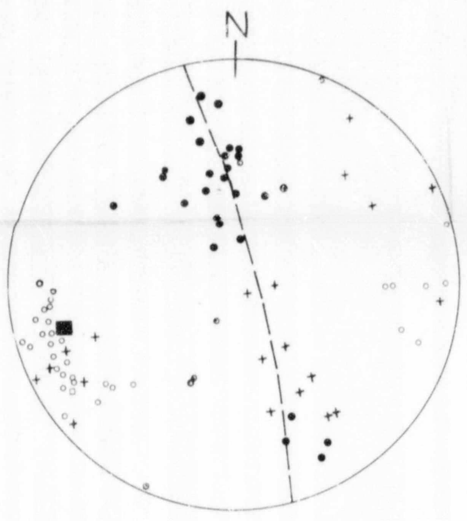


FIGURE O

LEGEND

- Bedding Planes
- Lineations
- Axial Plane
- Plunge of the folds.
- Joints
- Fold Axis

GENERAL

This area has been subdivided into 22 squares, each being a 1000'X 1000' in extent and treated seperately. (Squares located on co-ordinate System)

CONCLUSIONS

1. The poles of the bedding planes fall on a great circle (South plane) indicating regular folding about parallel axes. The azimuth and amount of plunge of the axes can readily be determined on the diagrams as being 255° and 8°W respectively.

2. The poles of most of the lineations are normal to the South plane and coincides with the fold axes. The scatter of these folds are due mainly to the fact that during the end stages of the W15°S set of foldings, a subsequent very mild East — West trending fold set developed.

3. A second main fold trend is further indicated by the poles of the lineations and fold axes. This fold set trends in a general North — South direction. The considerable scatter of the above features in question as well as direct field observations indicate it as effects of the later super — imposed East — West folding.

X = +8772000

4. The plots of the axial planes related to the East — West folds fall on the π circle These planes are vertical or steeply dipping, indicating a near horizontal stress field. A few axial planes are also found at right angles to the above and trend in a general North — South direction.

5. Most of the joints in the area are clearly related to the major East — West fold system. There are two very distinct sets developed viz. an East — West vertical set parallel to the East — West trending fold axes and a second set of tension joints at right angles to it.

6. Finally by combining all the above information related to the East-West fold trend, it is readily seen that the P — max of this fold system is almost horizontal, the P- int. coincides with the fold axes and P — min. is directed at right angles to the fold axes and almost vertical.



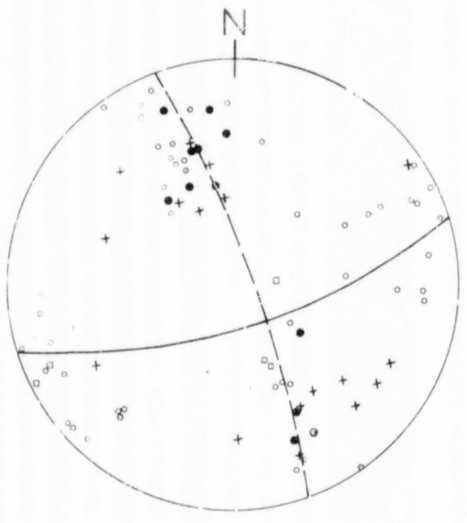


FIGURE N



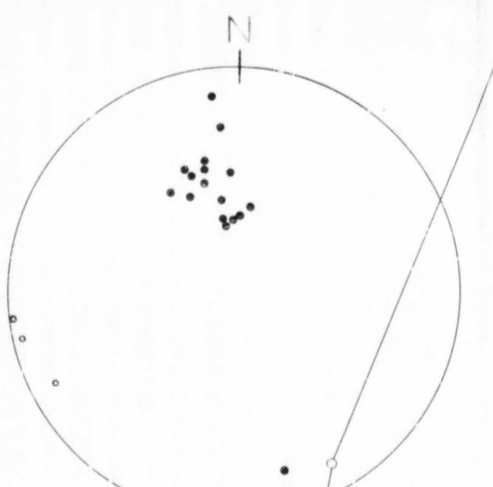


FIGURE M

X = +8776000

EASTERN AREA

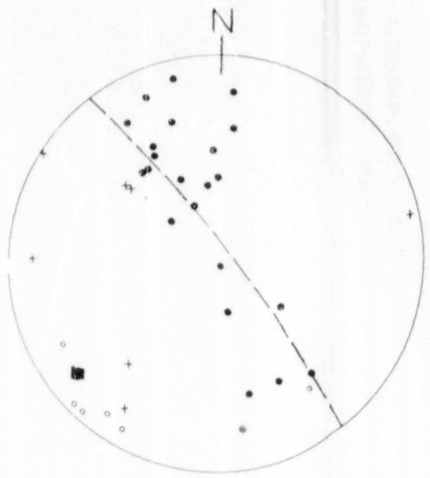


FIGURE C

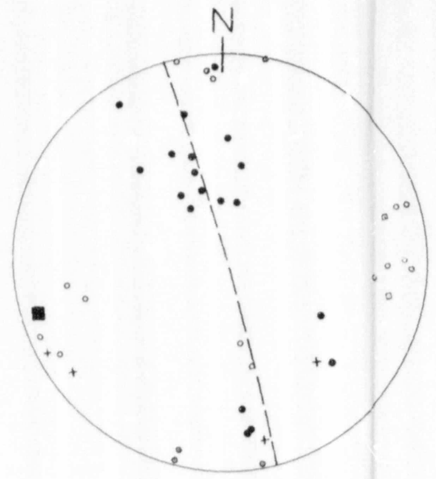


FIGURE I

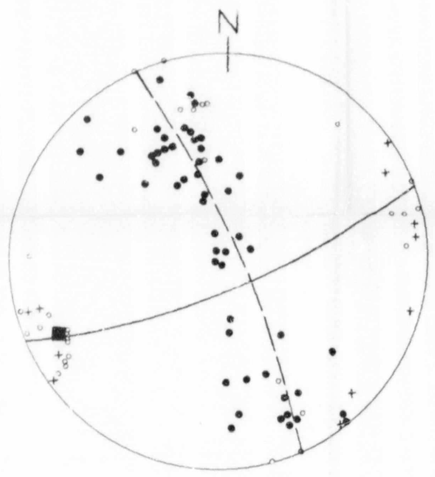


FIGURE A B

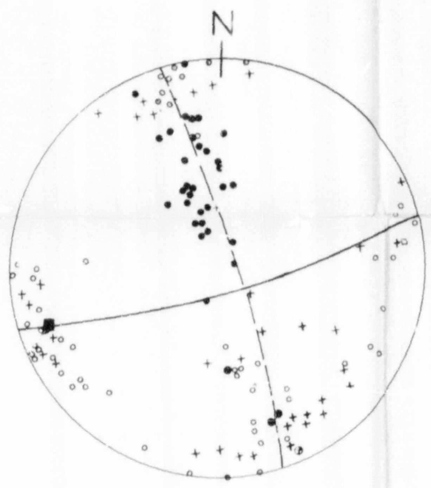


FIGURE H

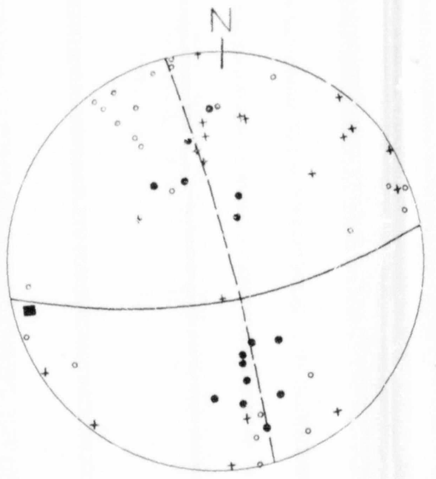


FIGURE G

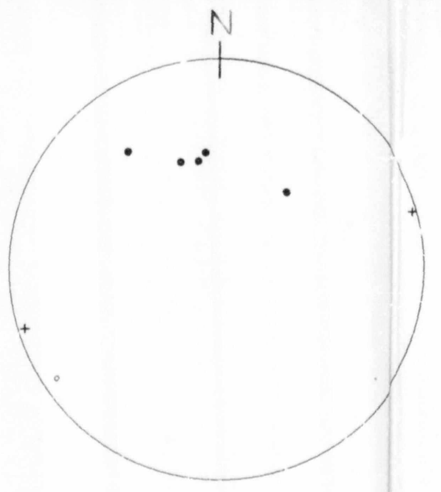


FIGURE F

WESTERN AREA

Y = +266000

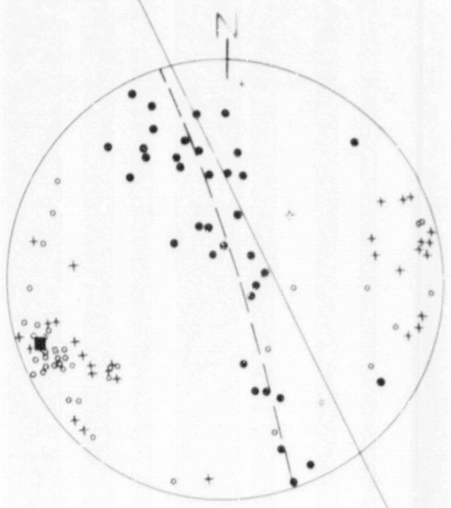


FIGURE S

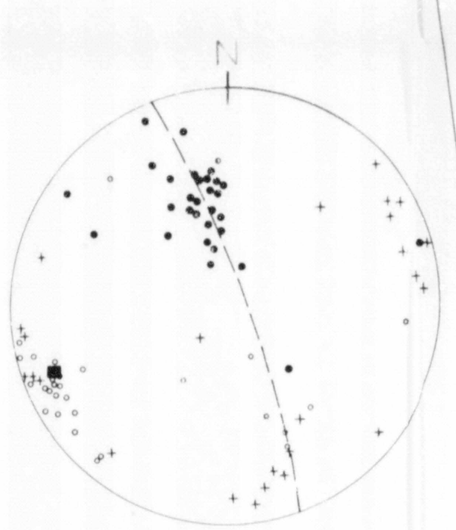


FIGURE R

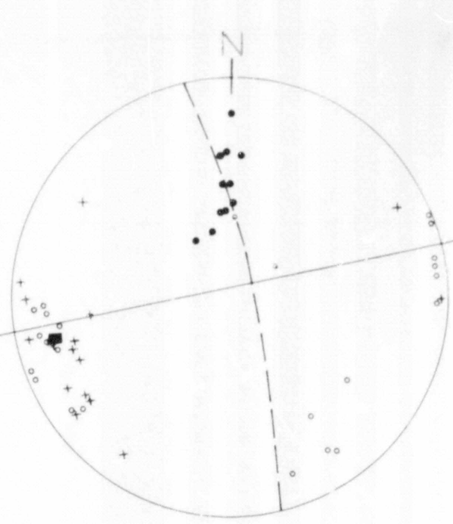


FIGURE U

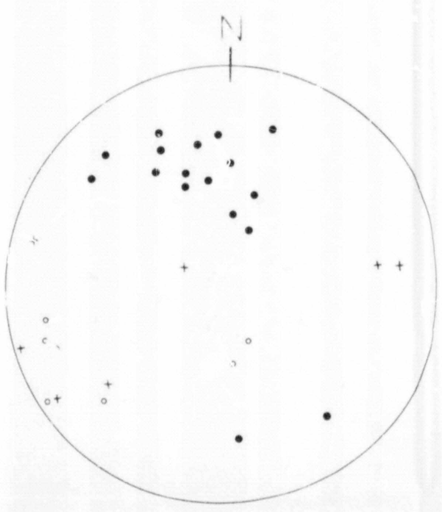


FIGURE Q

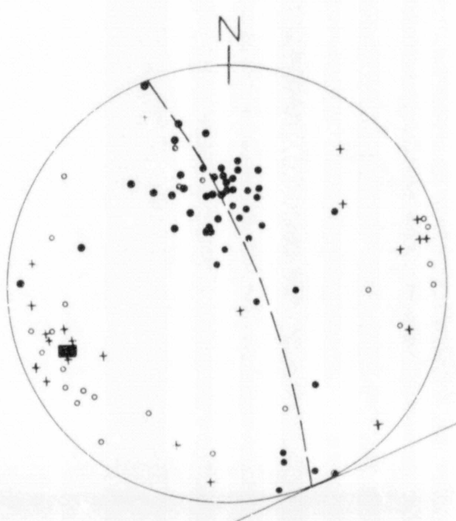


FIGURE T

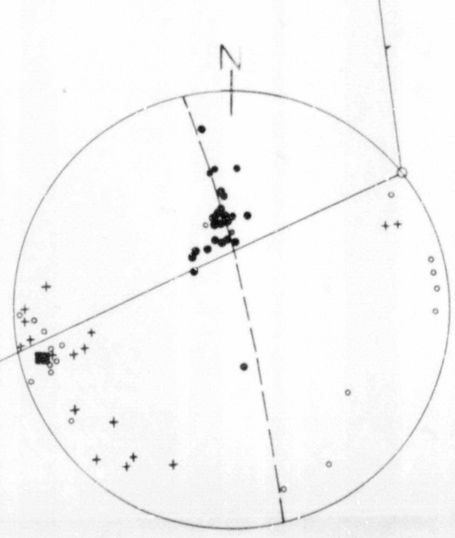


FIGURE V

X = +8768000

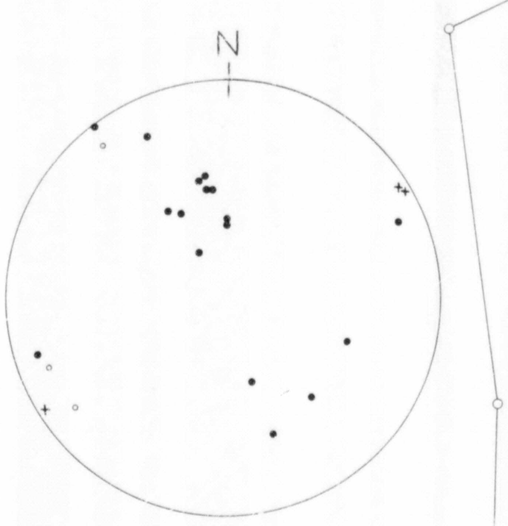
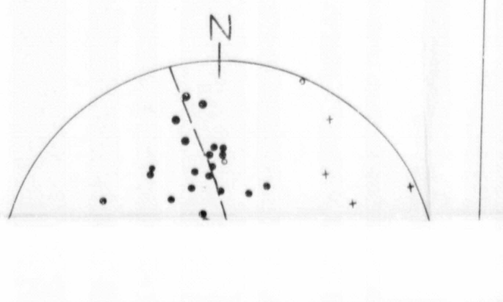


FIGURE P



GEOLOGY OF BEWAARKLOOF

TECTONIC SYNTHESIS IN STEREOGRAPHIC PROJECTION.

SCALE 1:3600 (1" = 300')

500 0 500 1000 1500 ENG. FEET

0 100 200 300 meters

COORDINATES ON Lo 29° IN ENGLISH FEET

LEGEND

- • Bedding Planes
- ○ Lineations
- ◎ Axial Plane
- □ Plunge of the folds.
- \+ Joints
- ■ Fold Axis

GENERAL

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Y = + 262000

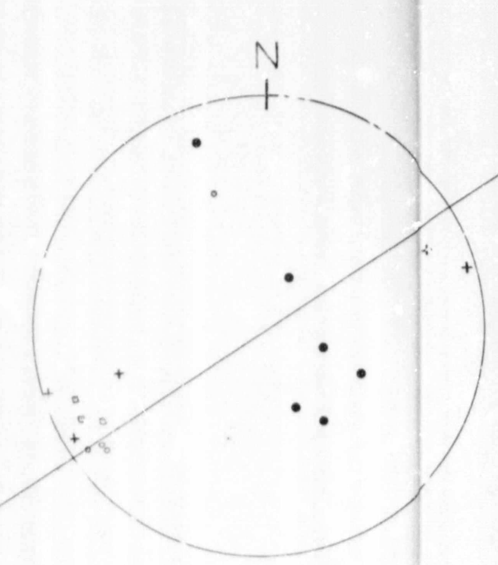


FIGURE L

X = + 876400

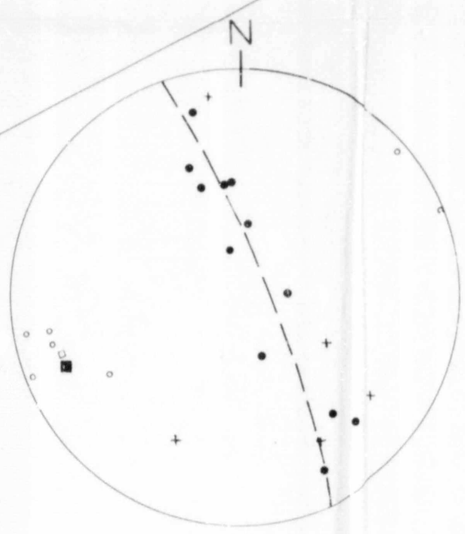


FIGURE E

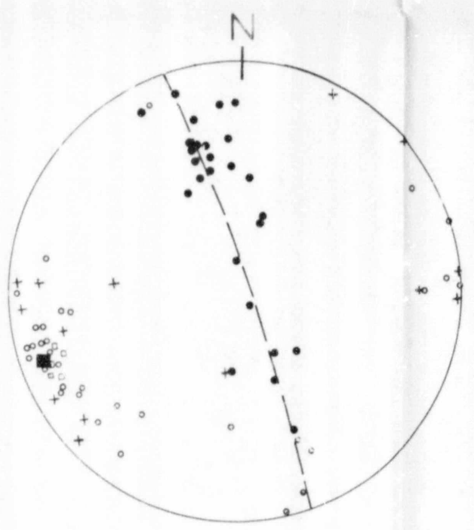


FIGURE K

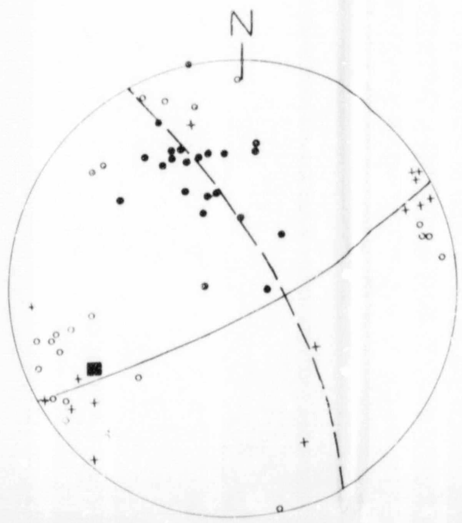


FIGURE D

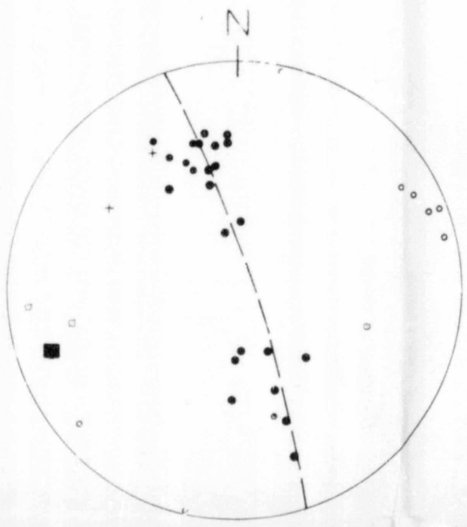


FIGURE J

X = + 878000

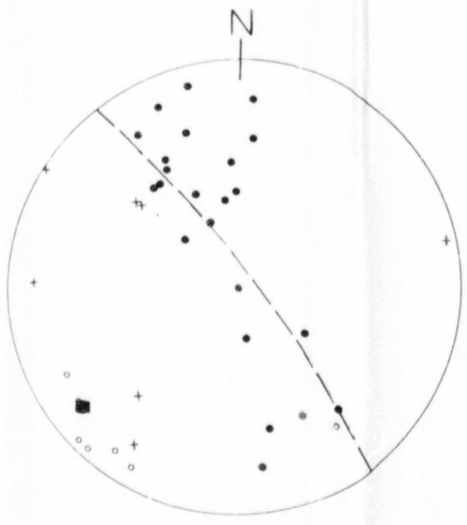


FIGURE C

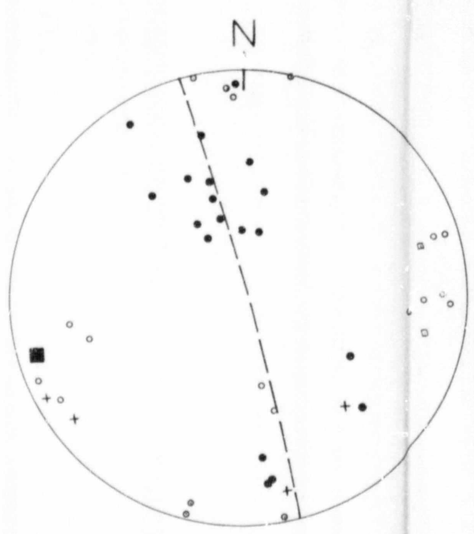
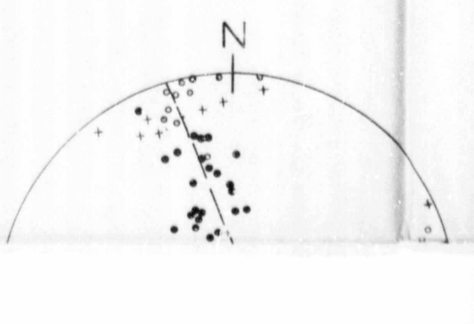


FIGURE I





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