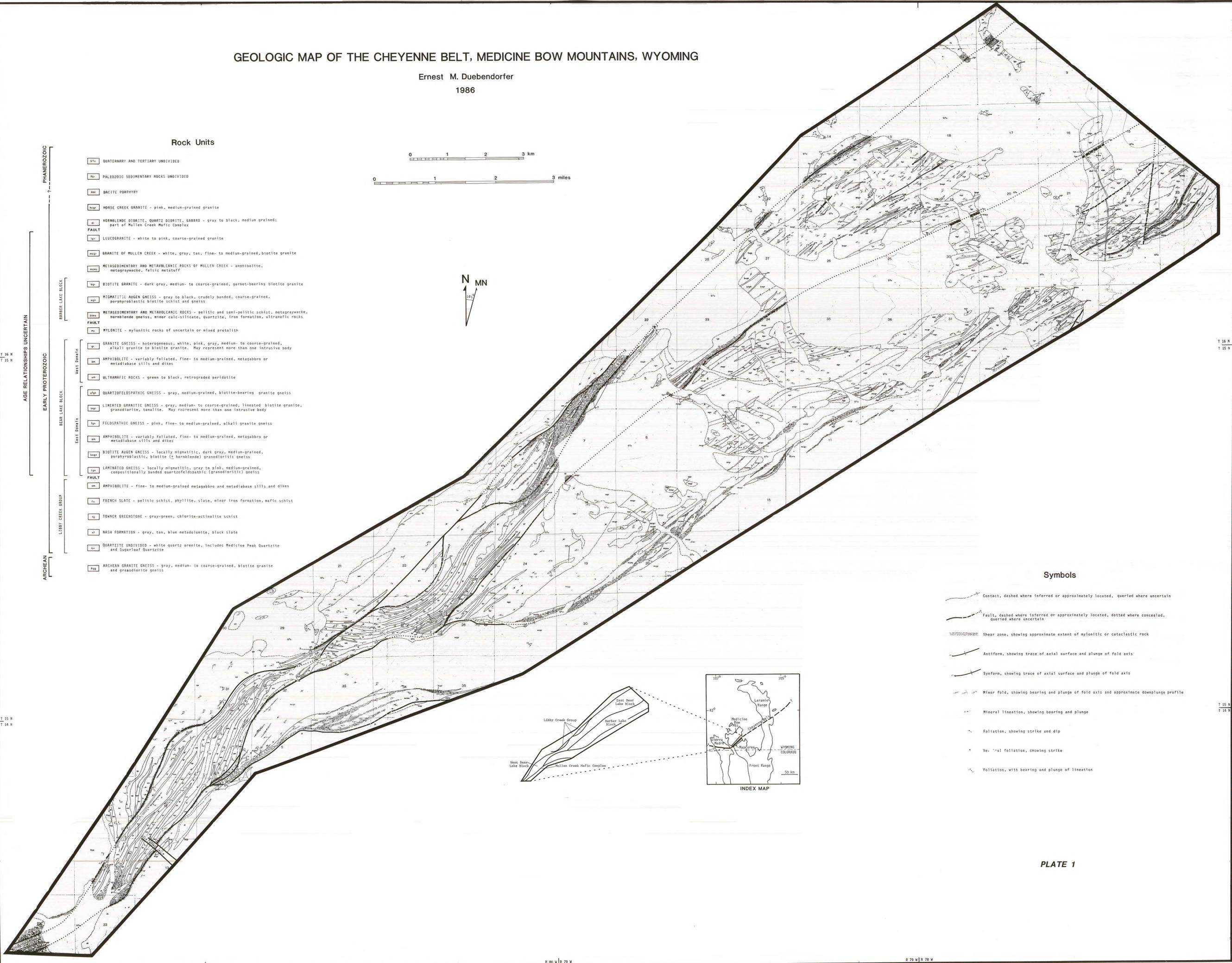


# GEOLOGIC MAP OF THE CHEYENNE BELT, MEDICINE BOW MOUNTAINS, WYOMING

Ernest M. Duebendorfer  
1986

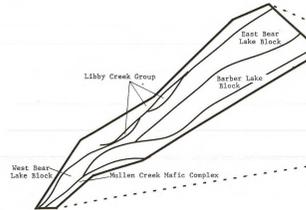
## Rock Units

- |                   |  |   |
|-------------------|--|---|
| PHANEROZOIC       | qtu  | QUATERNARY AND TERTIARY UNDIVIDED   |
|                   | psw  | PALEOZOIC SEDIMENTARY ROCKS UNDIVIDED   |
|                   | pcp  | DIORITE PORPHYRY  |
|                   | hgr  | HORSE CREEK GRANITE - pink, medium-grained granite  |
|                   | di   | HORNBLENDIC DIORITE, QUARTZ DIORITE, GABBRO - gray to black, medium grained; part of Mullen Creek Mafic Complex   |
|                   | FAULT  |   |
|                   | lgr  | LEUCOGRANITE - white to pink, coarse-grained granite  |
|                   | mgr  | GRANITE OF MULLEN CREEK - white, gray, tan, fine- to medium-grained, biotite granite  |
|                   | msm  | METASEDIMENTARY AND METAVOLCANIC ROCKS OF MULLEN CREEK - amphibolite, metagraywacke, felsic metatuff  |
|                   | lgr  | BIOTITE GRANITE - dark gray, medium- to coarse-grained, garnet-bearing biotite granite  |
| lgr               | MIGMATITIC AUGEN GNEISS - gray to black, crudely banded, coarse-grained, porphyroblastic biotite schist and gneiss   |   |
| lms               | METASEDIMENTARY AND METAVOLCANIC ROCKS - pelitic and semi-pelitic schist, metagraywacke, hornblende gneiss, minor calc-silicate, quartzite, iron formation, ultramafic rocks |   |
| FAULT             |  |   |
| my                | MYLONITE - mylonitic rocks of uncertain or mixed protolith   |   |
| EARLY PROTEROZOIC | gr   | GRANITE GNEISS - heterogeneous, white, pink, gray, medium- to coarse-grained, alkali granite to biotite granite. May represent more than one intrusive body |
|                   | am   | AMPHIBOLITE - variably foliated, fine- to medium-grained, metagabbro or metabasite sills and dikes  |
|                   | ur   | ULTRAMAFIC ROCKS - green to black, retrograded peridotite   |
|                   | qgr  | QUARTZOFELDSPATHIC GNEISS - gray, medium-grained, biotite-bearing granite gneiss  |
|                   | lgr  | LINEATED GRANITIC GNEISS - gray, medium- to coarse-grained, lineated biotite granite, granodiorite, tonalite. May represent more than one intrusive body    |
|                   | fgn  | FELDSPATHIC GNEISS - pink, fine- to medium-grained, alkali granite gneiss   |
|                   | am   | AMPHIBOLITE - variably foliated, fine- to medium-grained, metagabbro or metabasite sills and dikes  |
|                   | lms  | BIOTITE AUGEN GNEISS - locally migmatitic, dark gray, medium-grained, porphyroblastic, biotite (L hornblende) granodioritic gneiss                          |
|                   | lgr  | LAMINATED GNEISS - locally migmatitic, gray to pink, medium-grained, compositionally banded quartzofeldspathic (granodioritic) gneiss                       |
|                   | FAULT  |   |
| am                | AMPHIBOLITE - fine- to medium-grained metagabbro and metabasite sills and dikes  |   |
| LIBBY CREEK GROUP | fs   | FRENCH SLATE - pelitic schist, phyllite, slate, minor iron formation, mafic schist  |
|                   | tg   | TOWNER GREENSTONE - gray-green, chlorite-actinolite schist  |
|                   | nr   | NASH FORMATION - gray, tan, blue metadolomite, black slate  |
|                   | qr   | QUARTZITE UNDIVIDED - white quartz arenite, includes Medicine Peak Quartzite and Sugarloaf Quartzite  |
|                   | ag   | ARCHEAN GRANITE GNEISS - gray, medium- to coarse-grained, biotite granite and granodiorite gneiss   |



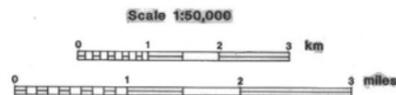
## Symbols

- Contact, dashed where inferred or approximately located, queried where uncertain
- Fault, dashed where inferred or approximately located, dotted where concealed, queried where uncertain
- Shear zone, showing approximate extent of mylonitic or cataclastic rock
- Antiform, showing trace of axial surface and plunge of fold axis
- Synform, showing trace of axial surface and plunge of fold axis
- Minor fold, showing bearing and plunge of fold axis and approximate downplunge profile
- Mineral lineation, showing bearing and plunge
- Foliation, showing strike and dip
- Vertical foliation, showing strike
- Foliation, with bearing and plunge of lineation



STRUCTURE MAP OF THE CHEYENNE BELT, MEDICINE BOW MOUNTAINS, WYOMING

Ernest M. Duebendorfer  
1990

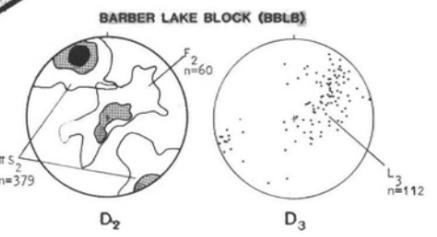
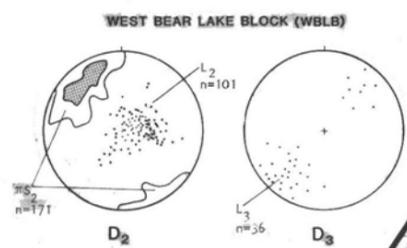
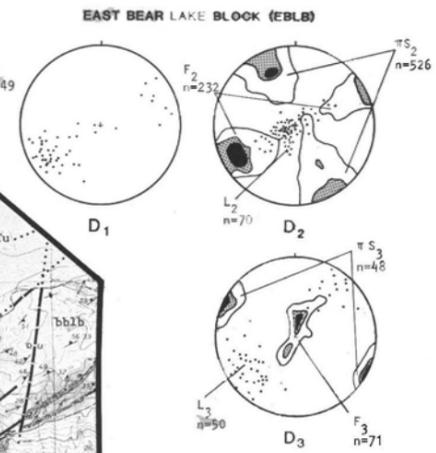
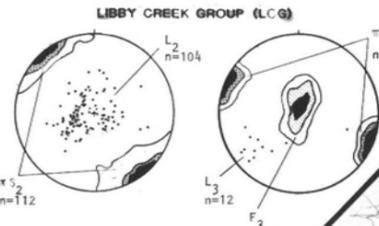
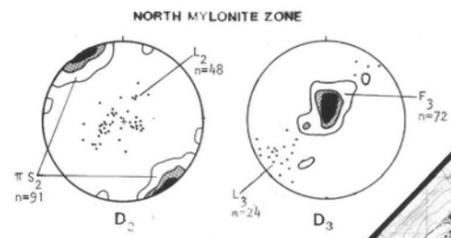


**Structural Domains and Rock Units**

PHANEROZOIC	QTu	QUATERNARY AND TERTIARY UNDIVIDED
	mcc	MULLEN CREEK MAFIC COMPLEX - hornblende diorite, quartz diorite, gabbro, Horse Creek Granite
	gr	GRANITE UNDIVIDED - granite of Mullen Creek and leucogranite
	mcm	METASEDIMENTARY AND METAVOLCANIC ROCKS OF MULLEN CREEK - amphibolite, metagraywacke, felsic metatuff
	bb1b	BARBER LAKE BLOCK - metasedimentary and metavolcanic rocks, migmatitic augen gneiss, biotite granite
	wb1b	WEST BEAR LAKE BLOCK - granite gneiss and amphibolite
	eb1b	EAST BEAR LAKE BLOCK - laminated gneiss, biotite augen gneiss, amphibolite, feldspathic gneiss
	lccg	LIBBY CREEK GROUP - French State, Towner Greenstone, Nash Formation, Medicine Peak Quartzite, Sugarloaf Quartzite(?)
	ag	ARCHEAN GRANITE GNEISS - biotite granite and granodiorite gneiss
	EARLY PROTEROZOIC	AGE RELATIONSHIPS UNCERTAIN
AGE RELATIONSHIPS UNCERTAIN		
ARCHEAN	AGE RELATIONSHIPS UNCERTAIN	
	AGE RELATIONSHIPS UNCERTAIN	

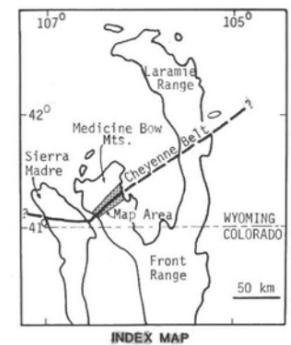
**Stereonet Symbols**

- 1-5% per 1<sup>st</sup> area
- 5-10% per 1<sup>st</sup> area
- over 10% per 1<sup>st</sup> area
- lineation data points
- D** deformational event
- schistosity or anisotropy
- fold axes
- lineations
- number of data points



**Map Symbols**

- Contact, dashed where inferred or approximately located, queried where uncertain
- Fault, dashed where inferred or approximately located, dotted where concealed, queried where uncertain
- Shear zone, showing approximate limits of mylonitic or cataclastic rock
  - ultramylonite
  - mylonite
  - protomylonite
  - cataclastic
  - cataclastic overprint of mylonitic foliation
  - fault breccia
- Antiform, showing trace of axial surface and plunge of fold axis
- Synform, showing trace of axial surface and plunge of fold axis
- Minor fold (F<sub>2</sub>) showing bearing and plunge of fold axis and approximate down-plunge profile
- Minor fold (F<sub>3</sub>) showing bearing and plunge of fold axis and approximate down-plunge profile
- Mineral lineation (L<sub>1</sub>) showing bearing and plunge
- Mineral lineation (L<sub>2</sub>) showing bearing and plunge
- Slickenside lineation (L<sub>3</sub>) showing bearing and plunge
- Foliation, showing strike and dip
- Vertical foliation, showing strike
- Foliation, with bearing and plunge of lineation



T 16 N  
T 15 N

T 16 N  
T 15 N

T 15 N  
T 14 N

T 15 N  
T 14 N

R 81 W | R 80 W

R 80 W | R 79 W

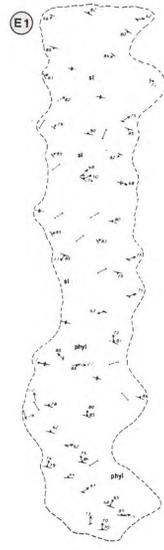
R 79 W | R 78 W

PLATE 2

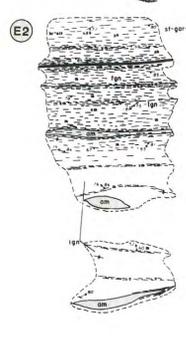
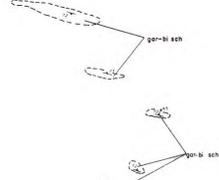
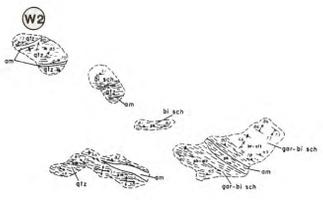
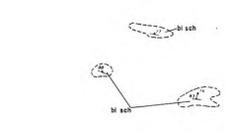
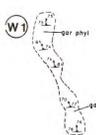


Rock Units

QFSP	Quartzofeldspathic Gneiss
LAG	Linedated Granitic Gneiss
FG	Feldspathic gneiss
AM	Amphibolite
BAG	Biotite augen gneiss
LAG	Laminated gneiss
NORTH MYLONITE ZONE	
MS	Schist
PHY	Phyllite
S	Slate
QTZ	Quartzite
EAST BEAR LAKE BLOCK	
FRENCH SLATE	



West Traverse

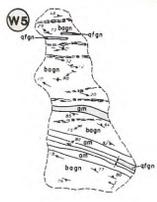


Planar Fabric Folds



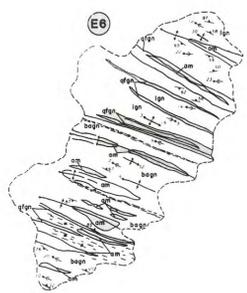
Planar Fabric Folds

Folds Planar Fabric



Map Symbols

- Contact, dashed where approximately located
- Fault
- Shear zone, showing extent of sheared rock
  - u ultramylonite
  - m mylonite
  - pm protomylonite
  - ph phyllonite
  - c cataclastic
  - br fault breccia
  - alt altered rock
- Macroscopic anticline (F<sub>1</sub>; wavelength greater than 10 m), showing bearing and plunge of axis
- Macroscopic synform (F<sub>2</sub>; wavelength greater than 10 m), showing bearing and plunge of axis
- Mesoscopic fold (F<sub>3</sub>; wavelength less than 10 m), showing bearing and plunge of axis and approximate down-plunge profile
- Mesoscopic fold (F<sub>4</sub>), showing bearing and plunge of axis and approximate down-plunge profile
- Crementation (F<sub>5</sub>), showing bearing and plunge of crementation lineation
- Mineral lineation (L<sub>1</sub>), showing bearing and plunge
- Mineral lineation (L<sub>2</sub>), showing bearing and plunge
- Slickenside lineation (L<sub>3</sub>), showing bearing and plunge
- Foliation (S<sub>1</sub>), showing strike and dip
- Vertical foliation (S<sub>2</sub>), showing strike
- Foliation (S<sub>3</sub>), showing bearing and plunge of lineation
- Vertical cleavage (S<sub>4</sub>)



Folds Planar Fabric

