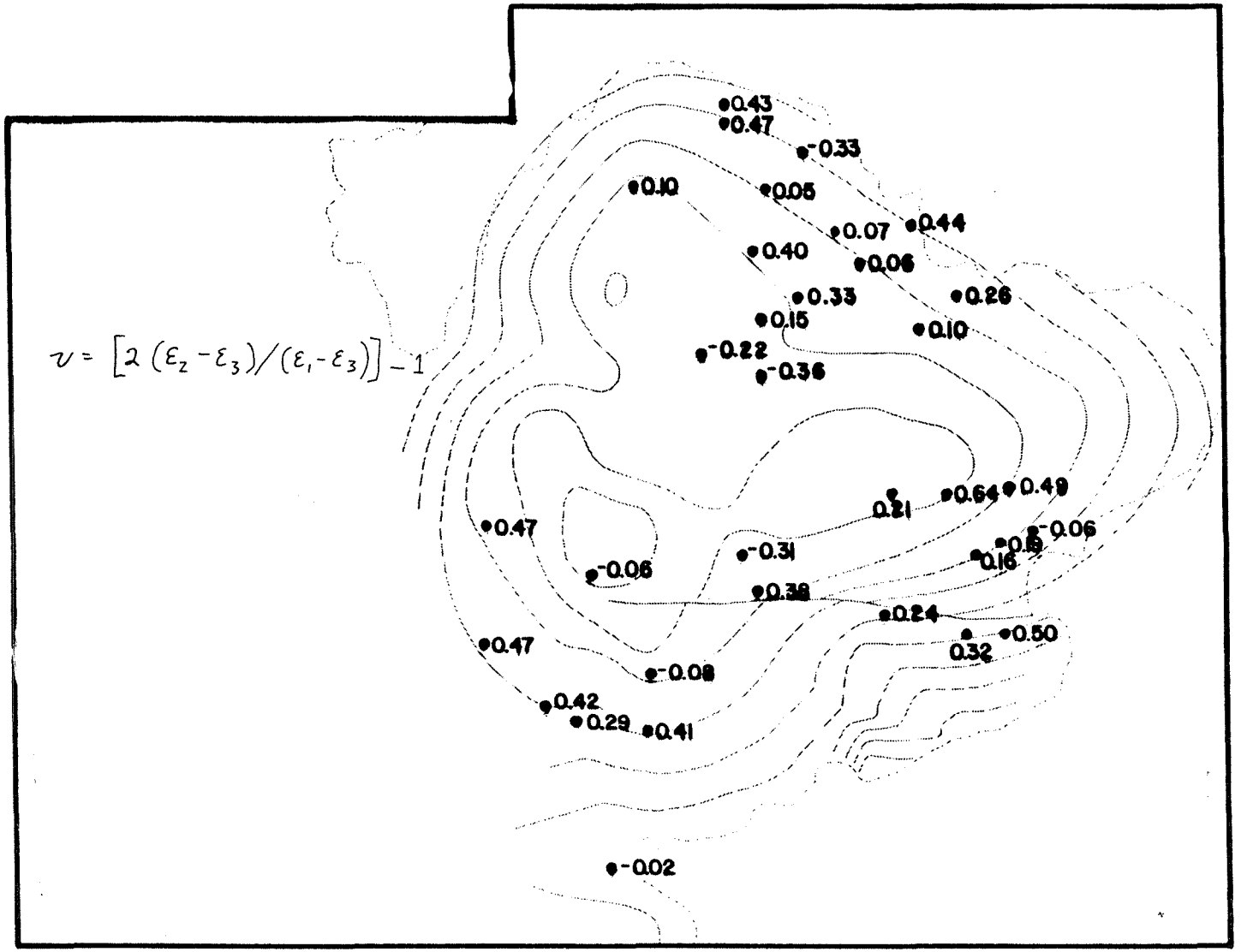
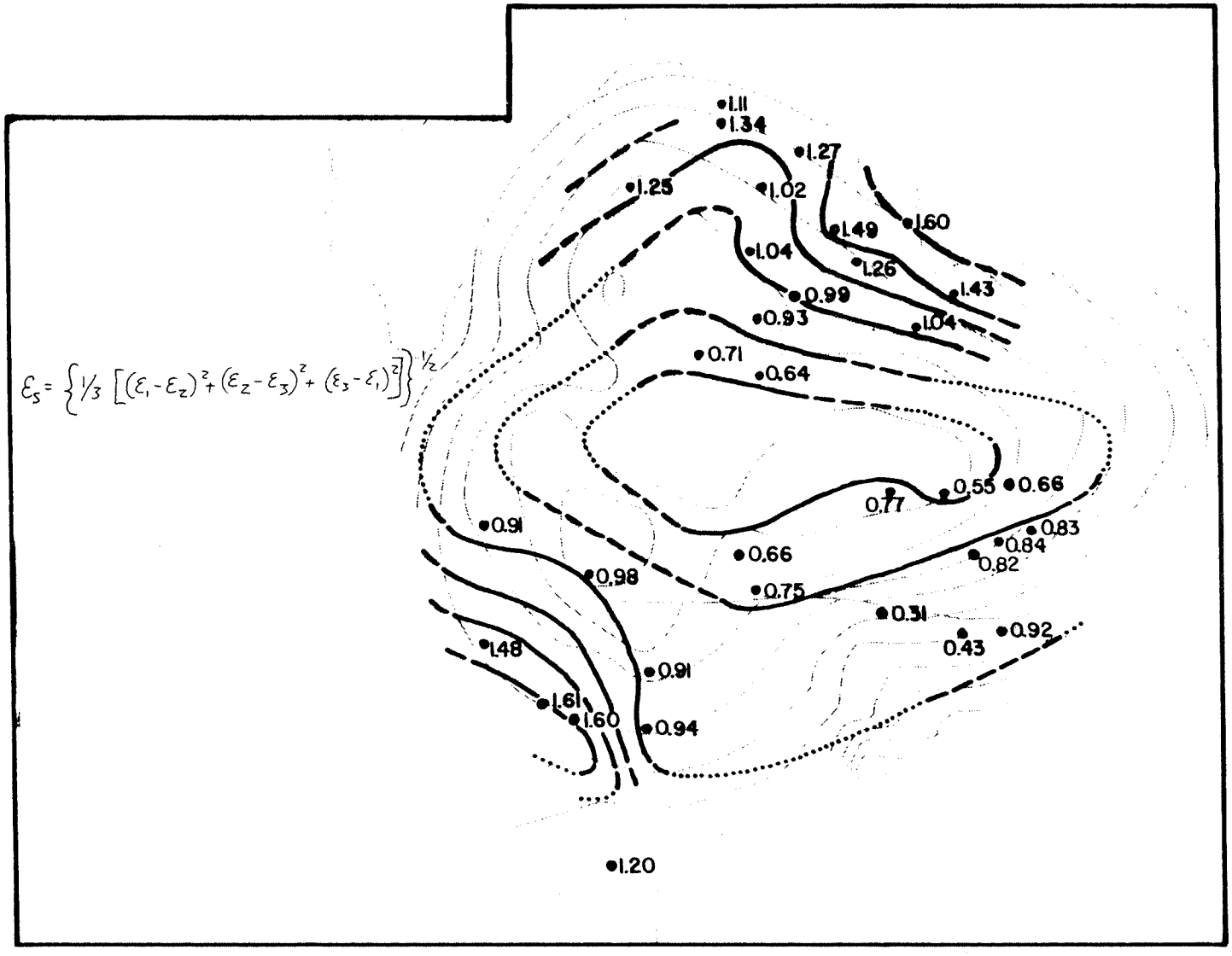
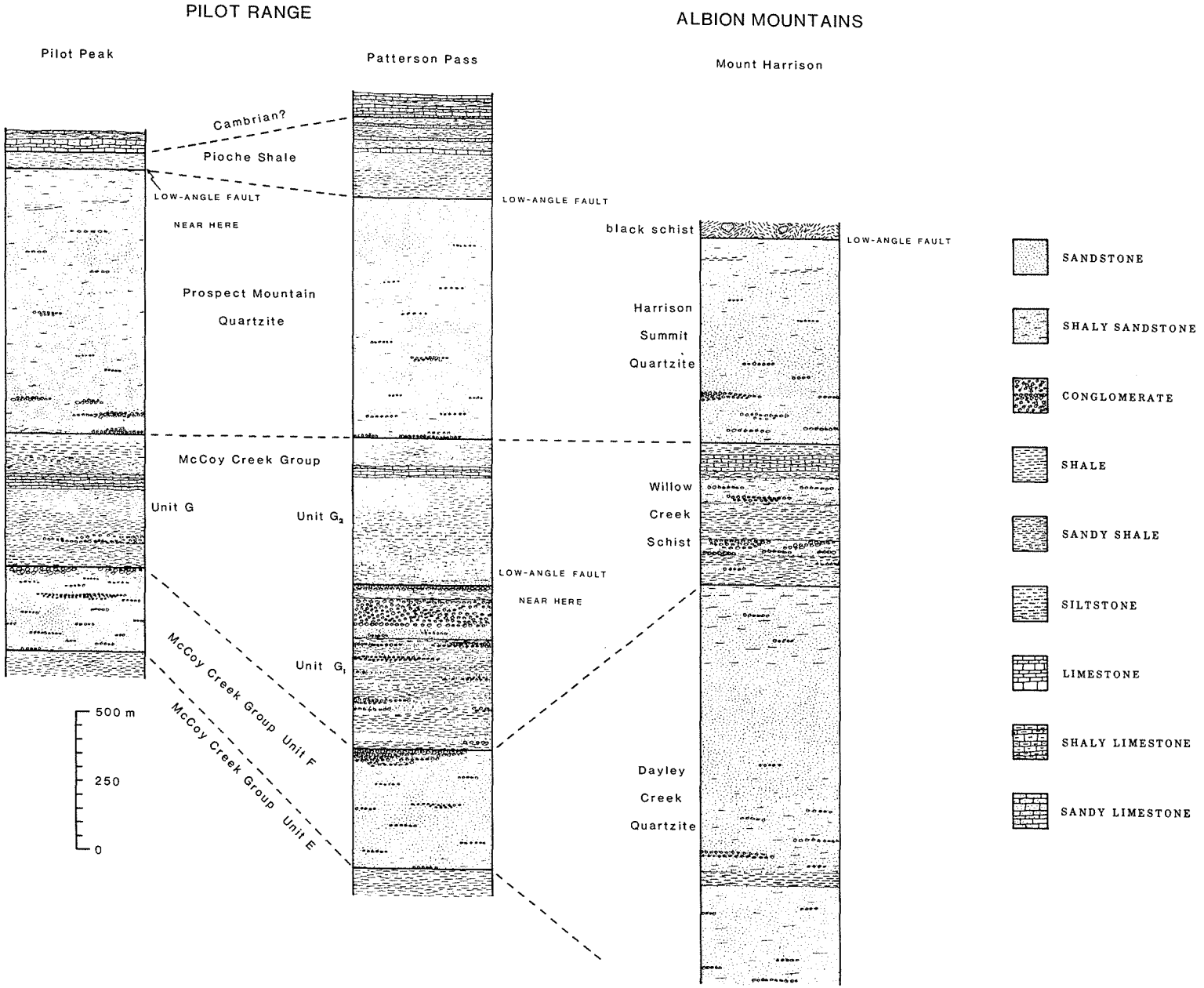
Values of Lode parameter (ν), a measure of shape of the strain ellipsoid, for conglomerate samples. Negative values are prolate shapes, zero indicates plane strain, and positive values indicate oblate (pancake) shapes.

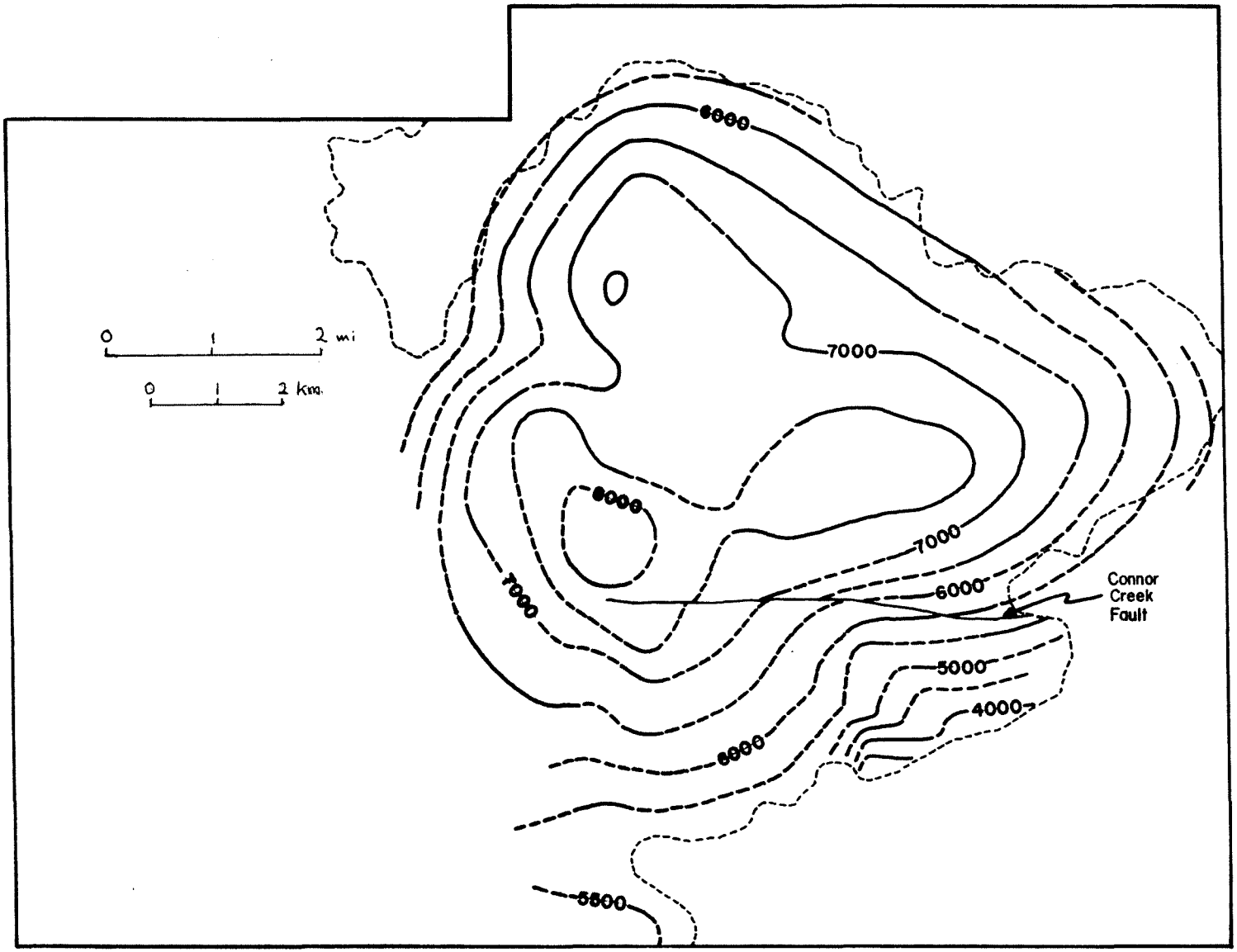


Strain intensity ($\mathcal{E}_s$) for conglomerate samples. Contour interval is 0.20 for strain intensity.

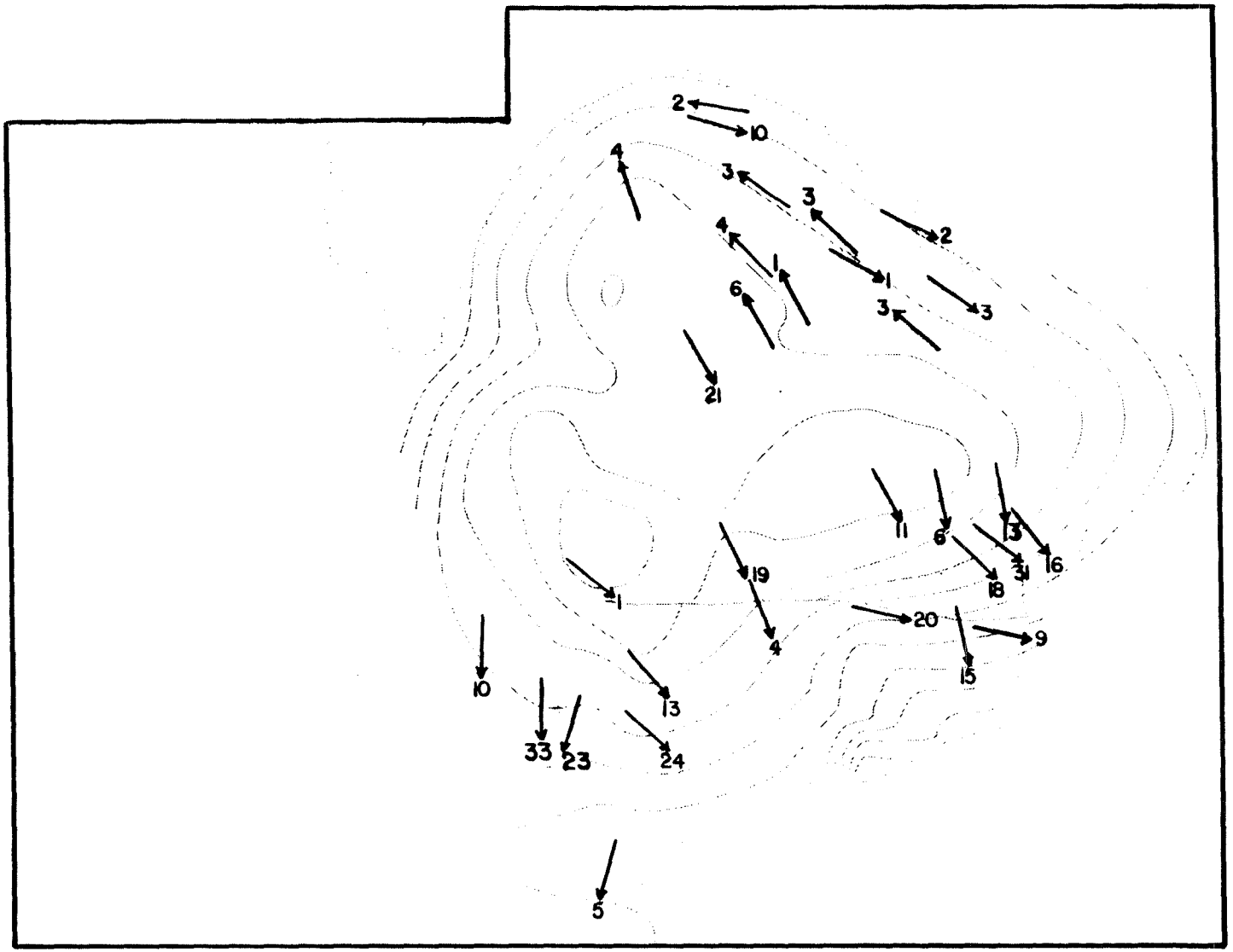



PILOT RANGE
ALBION MOUNTAINS
Pilot Peak
Patterson Pass
Mount Harrison
Cambrian?
Pioche Shale
LOW-ANGLE FAULT
NEAR HERE
Prospect Mountain
Quartzite
McCoy Creek Group
Unit G
Unit G2
Unit G1
McCoy Creek Group Unit F
McCoy Creek Group Unit E
LOW-ANGLE FAULT
NEAR HERE
LOW-ANGLE FAULT
black schist
LOW-ANGLE FAULT
Harrison
Summit
Quartzite
Willow
Creek
Schist
Dayley
Creek
Quartzite
500 m
250
0
SANDSTONE
SHALY SANDSTONE
CONGLOMERATE
SHALE
SANDY SHALE
SILTSTONE
LIMESTONE
SHALY LIMESTONE
SANDY LIMESTONE

Structure contour map of the top of the Green Creek Complex (base of the Elba Quartzite). Contour interval is 500 ft.



Orientations of the direction of maximum extension for 31 samples of Elba Quartzite conglomerate. In all cases the direction of maximum shortening is nearly vertical.



PRE-CENOZOIC STRATIGRAPHY

RAFT RIVER, GROUSE CREEK, AND ALBION MTS.

does not include units in the Quartzite Allochthon of the Albion Mountains and units of restricted occurrence in the Grouse Creek and Matlin Mountains.

TR	Thaynes & Dinwoody
P	various formations
IP-P	Oquirrh Group
M	Chainman-Diamond Peak / Manning Canyon
O	Fish Haven Dolomite
	Eureka Quartzite
	Pogonip Group
€?	Schist of Mahogany Peaks
	Quartzite of Clarks Basin
€?	Schist of Stevens Springs
Z?	Quartzite of Yost
X?	Schist of the Upper Narrows
	Elba Quartzite
W	Green Creek Complex / Adamellite + Older Schist

Albion-Raft River-Grouse Creek Field Trip Participants

Abdulkader, M. Afifi
Allmendinger, Richard W.
Anderson, R. Ernest
*Armstrong, Richard Lee
Basse, Robert
Bentley, Robert D.
Best, M. G.
Boden, Dave
Bruhn, Ronald L.
Bryant, Bruce
Calvert, Ronald H.
Chevillon, Vic
Christie-Blick, Nicholas
Cleary, John
*Compton, Robert R.
Covington, Harry
Crittenden, Max D.
Embree, Glen F.
Ferris, Diane
Fiesinger, Donald W.
Gaskill, Charles H.
Guth, Lawrence R.
Johnson, Mark
Jordan, Teresa E.
Kluth, Charles F.
Koch, Richard J.
Kolesar, Peter
Korner, Lisa A.
LeVeque, Richard
Lingrey, Steven
Link, Paul
Lucchitta, Ivo (2)
*Miller, David M.
Neff, Rod
Newkirk, Steven R.
Reid, Rolland R.
Richard, Stephen
Shackelford, Terry J.
Skipp, Betty
Thomas, Tom
Threlkeld, Bill
*Todd, Victoria R.
Wiel, Sandy
Young, John C.

* Field Trip Leader

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

2 July 1980

Dear Julie,

I've finally gotten around to your request for a preprint of my Albion paper. The office work is always horribly piled up when I return from the field.

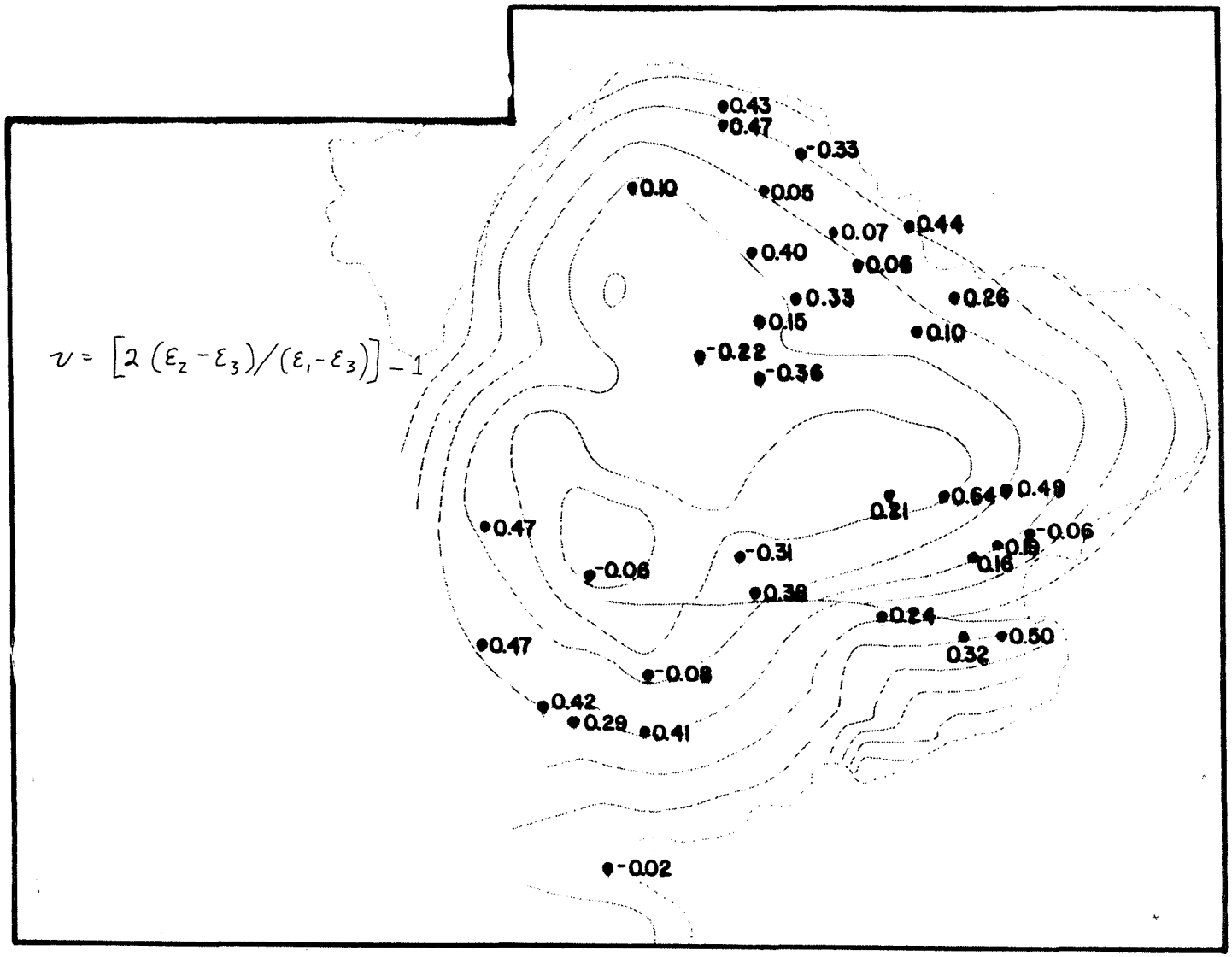
I am interested in any findings that you and your coworkers arrive at with regard to the Albions and the surrounding mountains. I at one point last fall had a lengthy discussion of Albion geology with a fellow from DOE (actually a contract company) who was investigating uranium in the conglomerates. He mentioned that an open-file report on these studies would be completed this spring. Would you please send me this and any other pertinent reports if and when they are published? Thanks very much.

Let me know if maps, etc. I have can be of use to you - I'd be glad to send them.

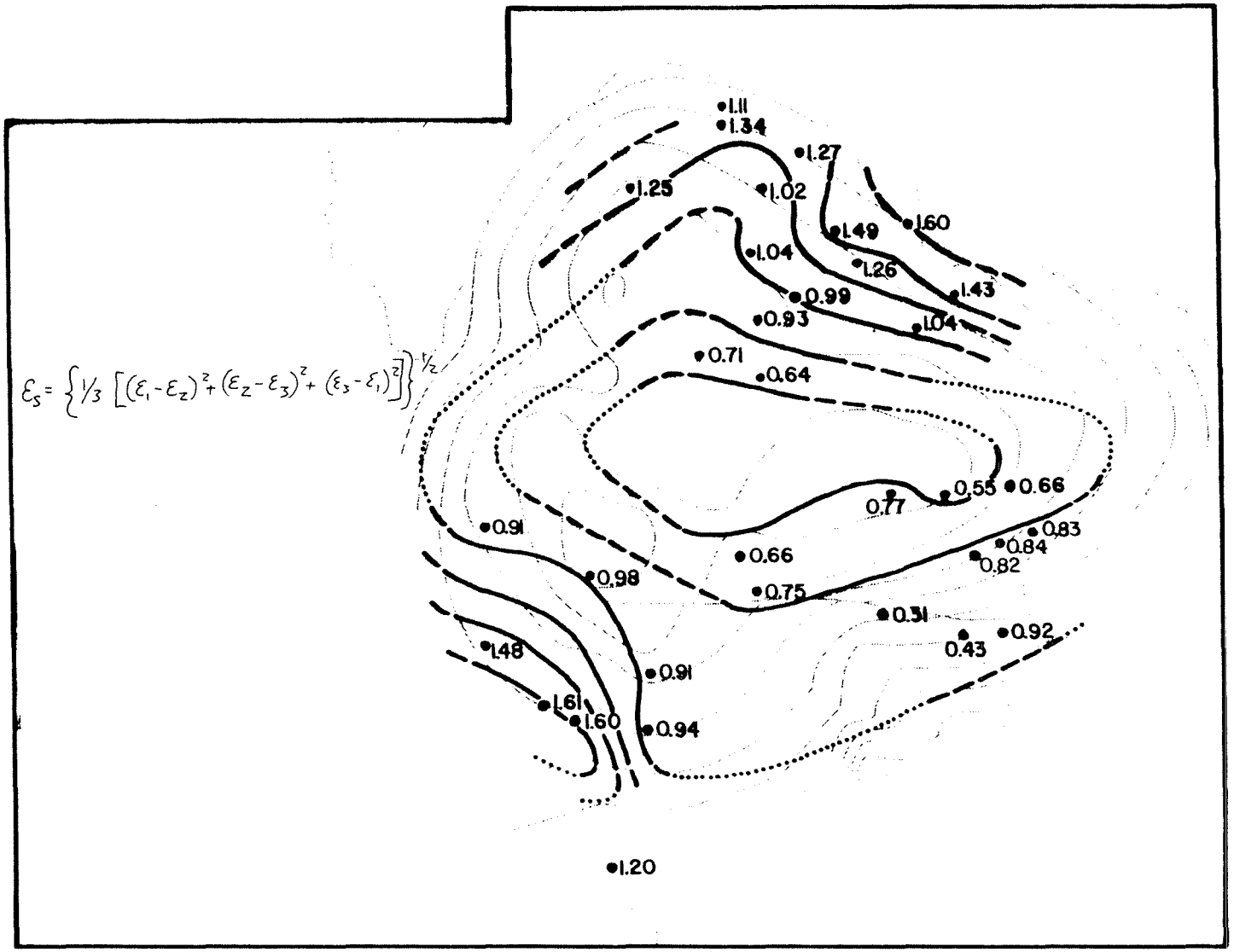
Sincerely yours,

Dave Miller

Values of Lode parameter (ν), a measure of shape of the strain ellipsoid, for conglomerate samples. Negative values are prolate shapes, zero indicates plane strain, and positive values indicate oblate (pancake) shapes.



Strain intensity ($\mathcal{E}_s$) for conglomerate samples. Contour interval is 0.20 for strain intensity.




A
A'
B
B'
C
C'
km
mi


TQb
km
mi

km

mi


Q
TQb
T
q.l
br
M
P
Ø
ЄØ
Є
Єw
pЄ
Tgr
gn
km
mi


NOT MAPPED
Qfu
Qfo
Qfm
Qfy
Qmy
Tlu
Ttu
Tll
Ttm
Qfo?
Qfm?
Qfy?


km
mi


km
mi

Regional Events

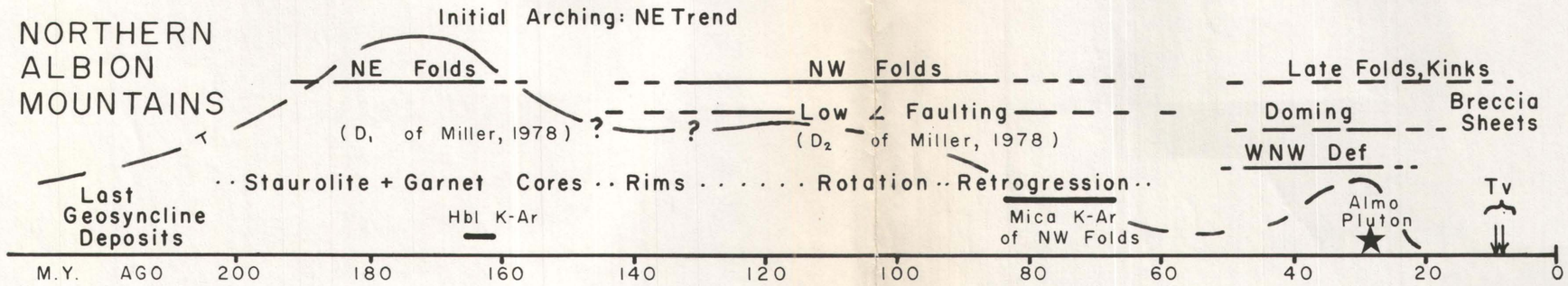
N NEVADA — WNW-Overturned Folds

NE NEVADA — R.M. Mm, Recumbent Folding; W.H. NW-Overturned Folds, Mid Mesozoic Mm; Hi T Mylonitization, Ductile Faulting; P.M. ESE Transport of Allochthons } Denudation, Gravity Slides, Breccias

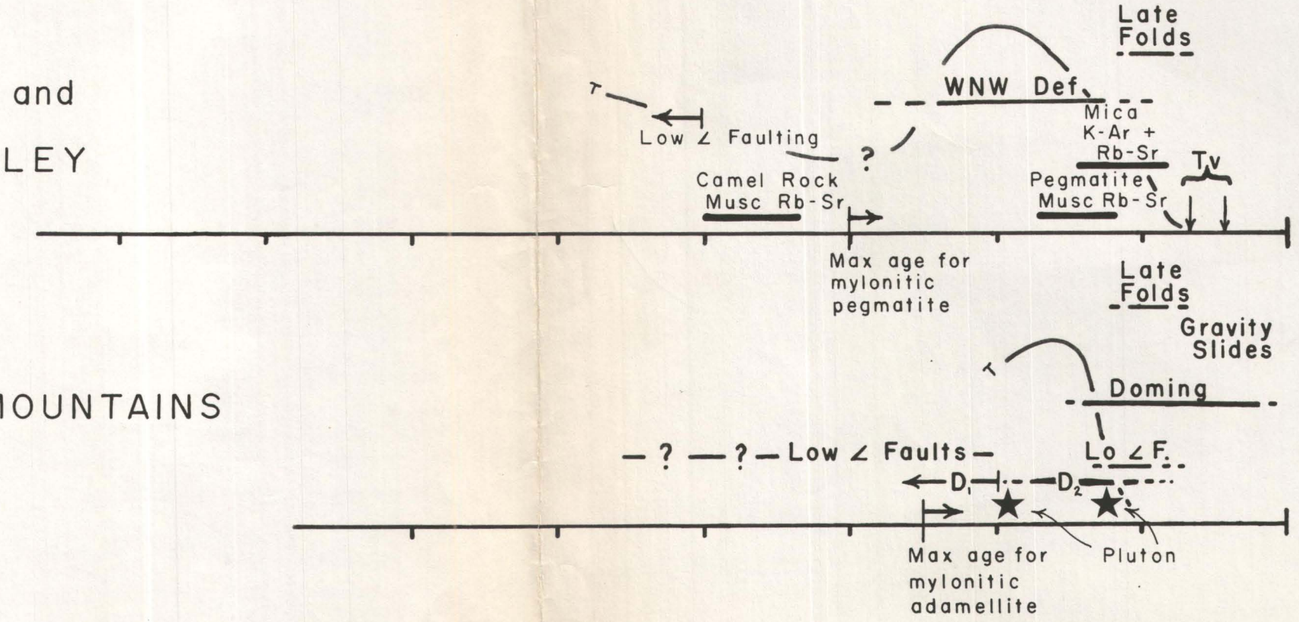
SE IDAHO - N UTAH — Initial Movement on Paris Thrust; Culmination of Thrusting } in S.O.B.

Basin Quadrangle

NORTHERN ALBION MOUNTAINS



MIDDLE MOUTAIN and BIRCH CREEK VALLEY



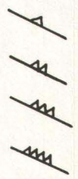
RAFT RIVER and GROUSE CREEK MOUNTAINS

Phases: Metamorphism Transport Denudation

C. STRUCTURAL GEOLOGY

II METAMORPHIC FABRIC

STRIKE AND DIP OF FOLIATION



0-20°
20-40°
40-60°
60-90°

Foliation Attitude

Axial Plane Foliation for NE Trending Folds
Axial Plane Foliation for NW Trending Folds

LINEATION

Lineation Trend with Arrow in Direction of Plunge
a. NE Trending Structures
b. NW Trending Structures

FOLD AXES

Vergence Indeterminant
Clockwise Rotation (Z Fold)
Counterclockwise Rotation (S Fold)

D. METAMORPHIC GRADE

– INDEX MINERALS

MINERAL OCCURRENCE

C	Chloritoid
T	Tremolite
S	Staurolite
K	Kyanite
D	Diopside
F	Sillimanite (Fibrolite)

ISOGRAD

Staurolite – Tremolite

Sillimanite – Diopside

BASIN 30' QUADRANGLE

42° to 42°30' N 113°30' to 114° W

SCALE 1:100,000

A. GENERALIZED GEOLOGY

EXPLANATION

COVER

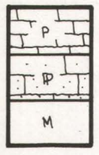
Quaternary Sedimentary Rocks

Basalt of the Snake River Plain

Tertiary Sedimentary and Volcanic Rocks

Breccia Sheets

POST-DEVONIAN ASSEMBLAGE



Permian Limestone and Chert

Pennsylvanian Limestone and Sandy Limestone

Mississippian Black Phyllite, Conglomerate, and Limestone

QUARTZITE ASSEMBLAGE

Ordovician to Devonian Dolomite, Quartzite, and Limestone

Paleozoic (?) Impure Quartzite and Limestone

RAFT RIVER ASSEMBLAGE

Ordovician to Devonian Limestone, Quartzite, and Dolomite

Schist of Mahogany Peaks

White Quartzite (Quartzite of Clarks Basin ?)

Schist of the Upper Narrows to Quartzite of Clarks Basin

Elba Quartzite

Green Creek Complex

INTRUSIVE ROCKS

Almo Pluton

Gneiss of Camel Rock, Middle Mountain, and East Hills

A—A' LINE OF CROSS SECTION

B. STRUCTURAL GEOLOGY

I PRIMARY FEATURES & FOLDS AND FAULTS

STRIKE AND DIP

Horizontal

0-20°

20-40°

40-60°

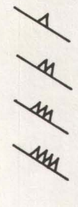
60-90°

} Bedding Attitude in Stratified Rocks

right side up

overturned

} Confirmed by Cross Stratification



0-20°

20-40°

40-60°

60-90°

} Pre-Elba Foliation in Precambrian Green Creek Complex

MAJOR FOLD AXIAL TRACE

ANTICLINE

SYNCLINE

} Arrow Indicates Plunge Direction

MAJOR FAULTS

Low Angle Fault between Raft River and Siliceous Assemblages

Other Low Angle Faults

} Teeth on Upper Plate

High Angle Faults — Teeth on Downdropped Block

GEOLOGIC CROSS SECTIONS

BASIN 30' QUADRANGLE, IDAHO

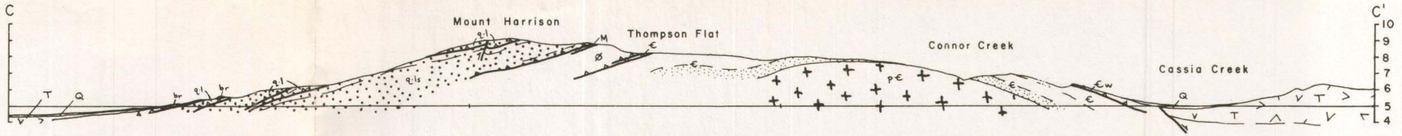
NO VERTICAL EXAGGERATION

MILES

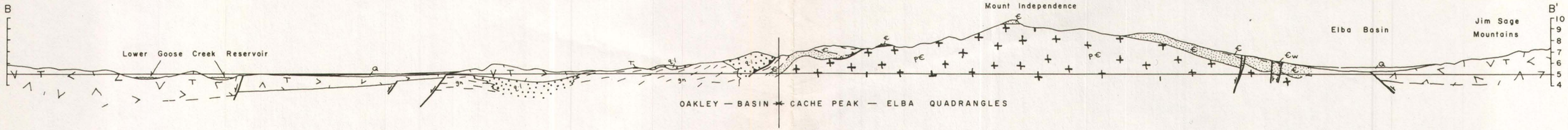
0 6

KILOMETERS

0 10



MOUNT HARRISON — CONNOR RIDGE QUADRANGLES



OAKLEY — BASIN ✳ CACHE PEAK — ELBA QUADRANGLES

ELEVATION ABOVE SEA LEVEL — THOUSANDS OF FEET

BLUE HILL — LYMAN PASS ✳ ALMO — JIM SAGE QUADRANGLES