

Notebook 11.

Middle Appalachian Sections, Revised.

1906.

11

U. S. GEOLOGICAL SURVEY
TRAVERSE BOOK

9-904

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INDEX.

| | |
|--|---|
| Apple Pie Ridge - in section from North Mt. east to Martinsburg | 8 |
| Auburn Wagon Works - in section on west side of Martinsburg - extends west to Knox and east to Martinsburg fault | 7 |
| Beekmantown: | |
| Beekmantown or Upper Knox in section on west side of Martinsburg | 7 |
| Beekmantown, probably in section from North Mt. east to Martinsburg | 8 |
| Beekmantown or Mohawkian gastropoda in section from North Mt. east to Martinsburg | 8 |
| Black River ls.: | |
| In section along Burke Street at Martinsburg, | 1 |
| Black River-Chambersburg in section from North Mt. east to Martinsburg | 8 |
| B. & O.R.R. depot at Martinsburg . | |
| Section along Burke St. at Martinsburg, on Tuscarora Creek, east of depot and cemetery at top of hill | 1 |
| Section at quarries south of depot | 5 |
| Burke Street, Martinsburg - section along, on Tuscarora Creek, east of B. & O. depot | 1 |
| Cemetery top of hill at Martinsburg - section along Burke street, on Tuscarora Creek, east of B. & O. depot | 1 |
| Chambersburg ls.: | |
| In No. II of section along Burke street at Martinsburg | 2 |
| In section at quarries south of B. & O. depot at Martinsburg | 5 |
| Chambersburg-Black River in section from North Mt. east to Martinsburg | 8 |
| Clinton in section from North Mt. east to Martinsburg | 8 |

a folio:
 list of formations adopted in, applicable in Arbuckle
 Mt. region front cover
 Arbuckle, Sylvan, Viola, and Hutton shales and lime-
 stones in Dougherty and Davis sections, Okla. 6-10
 Arbuckle Mt. section at NW. end 12

Conococheague, may be, in section from North Mt.
 east to Martinsburg 8

Cumberland Valley railroad - section in cuts
 along - between depot at Martinsburg and
 quarry north of 7

Dry Run road - in section from North Mt. east
 to Martinsburg 8

Eden sh.:

 In No. IX of section along Burke Street at
 Martinsburg 5

 In section from North Mt. east to Martinsburg 8

Hade - fault plane - in section from North Mt.
 east to Martinsburg 8

Juniata in section from North Mt. east to Martins-
 burg 8

Knox ch.:

 In section at quarries south of B. & O. de-
 pot at Martinsburg 5

 Upper Knox or Beekmantown in section on west
 side of Martinsburg, extends west to Knox
 and east of railroad to Martinsburg fault 7

 Upper and lower Knox in section from North
 Mt. east to Martinsburg 8

Martinsburg, W. Va.:

 Observations in vicinity of 1-5

 B. & O. depot at - section at quarries south
 of 5

 Section in cuts along Cumberland Valley R.R.
 between depot at Martinsburg and quarry
 north of 7

 Section on west side of extends west to Knox
 and east of railroad to Martinsburg fault 7

 Section from North Mt. eastward to 8

Martinsburg sh.:

 In section at quarries south of B. & O.
 depot at Martinsburg 5

 In section from North Mt. east to Martins-
 burg 8

Mohawkian or Beekmantown gastropods in section
 from North Mt. east to Martinsburg 8

In the typical form of Z. Williams

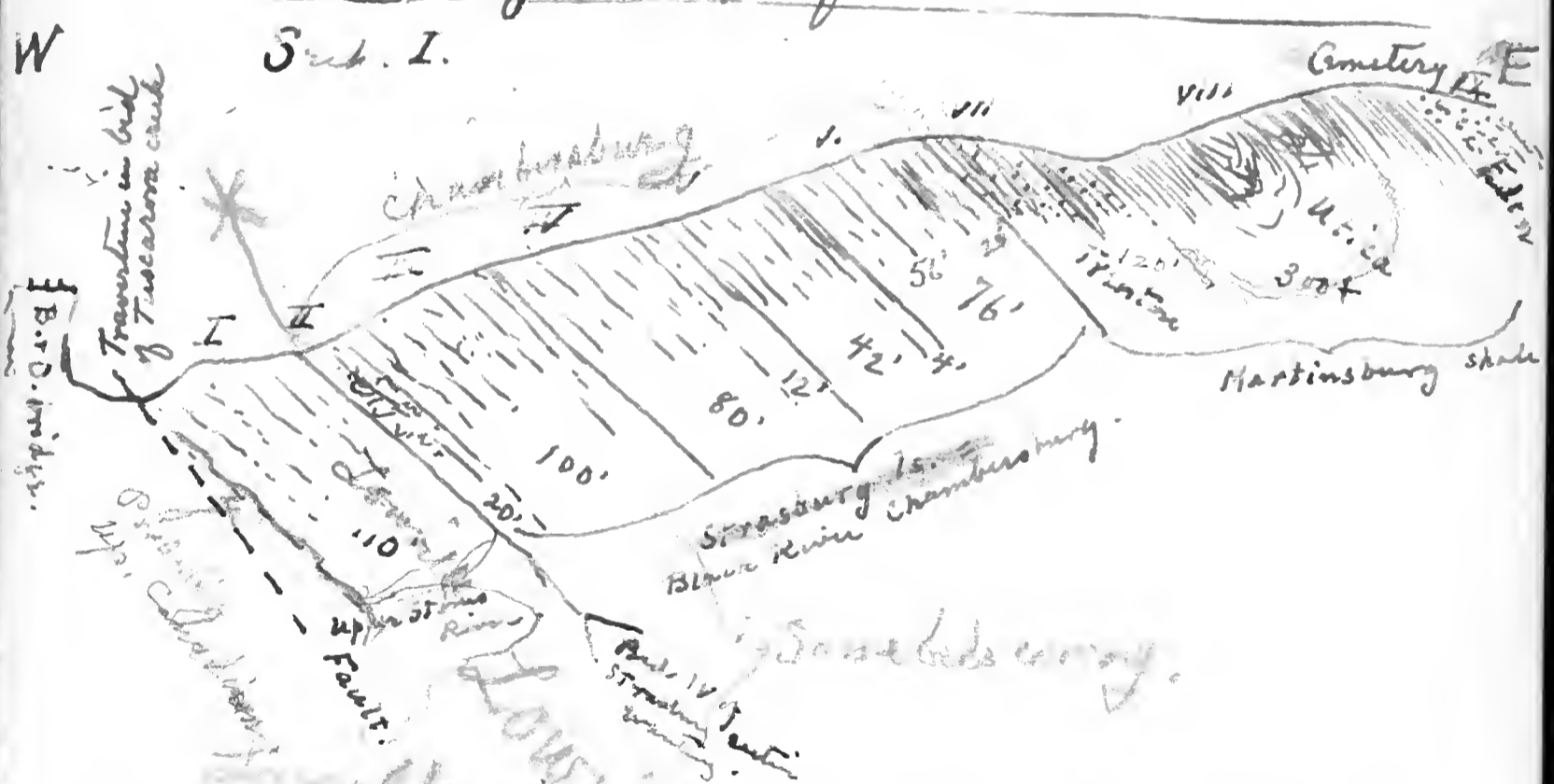
| | |
|--|---|
| North Mt. eastward to Martinsburg - section | 8 |
| Quarries south of Martinsburg B. & O. depot - section at | 5 |
| Quarry north of Martinsburg - section in cuts along Cumberland Valley R.R. between and depot at Martinsburg | 7 |
| Stonehenge in section from North Mt. east to Martinsburg | 8 |
| Stone River ls.: | |
| Upper Stones River in section along Burke St. at Martinsburg | 1 |
| Upper Stones River in quarries south of B. & O. depot at Martinsburg | 5 |
| Stones River in section in cuts along Cumber- land Valley R.R. between depot at Martins- burg and quarry north of | 7 |
| Upper, Lower, and Middle Stones River in section on west side of Martinsburg - extends west to Know and east of railroad to Martins- burg fault | 7 |
| In section from North Mt. east to Martinsburg | 8 |
| Strasburg ls. - in section along Burke Street, Martinsburg | 1 |
| Travertine in bed of Tuscarora Creek at Martins- burg | 1 |
| Trenton ls.: | |
| In section along Burke street at Martins- burg between B. & O. depot and cemetery at top of hill | 1 |
| In section at quarries south of B. & O. depot at Martinsburg | 5 |
| Trenton or Utica in section from North Mt. east to Martinsburg | 8 |
| Tuscarora in section from North Mt. east to Martins- burg | 8 |
| Tuscarora Creek - in section along Burke street, Martinsburg | 1 |

Utica sh.:

| | |
|---|---|
| In section along Burke street, Martins- | |
| burg | 1 |
| In section at quarries south of B. & O. | |
| depot at Martinsburg | 5 |
| Utica or Trenton in section from North | |
| Mt. east to Martinsburg | 8 |

Observations at and in vicinity of
Martinsburg, W. Va.

Section along Turnpike at Martinsburg, W. Va., between
fault just west of B.-D. R.R. depot and (marked)
and cemetery at top of hill east.



I. Upper St. Clair is not well exposed here. Better shown on street - a block or so; where something like 100 ft. comes to surface on east side of fault. Excellent shown in quarries south of town, where the upper 50' - 100' has been extensively quarried and consists of very compact, lithographic, conchoidal, fracturing light drab or brown ls. The upper 100 ft. is more than the lower 100'; the latter including some less dense and apparently slightly magnesian layers. 70% of magnesia seems to increase downward, the rock taking on a dull sheen due to included small crystals of dolomite. Some of the layers are conspicuously banded, which character distinguishes this part of the section from the upper 2/3 of the lower division of the St. Clair. From the basal St. Clair, green beds this upper St. Clair is distinguished by the greater proportion of the dense variety of ls. and the average lighter color of the beds constituting the upper St. Clair. The middle St. Clair in this area contains considerable dolomitic rock and a small amount of chert.



T. cellulorum
Common in lower
Chambersburg ls.



T. springopoides
Common in Middle and upper Stones River
Rare or wanting in lower " "

I cont.

Fossils of bed I are very rare. 100-200 ft. beneath the top however contains at least one species rather abundantly, here as elsewhere. This is the *Tetradium springopoides*, a form distinguished from *T. cellulorum*, which seems to be restricted to the lower Chambersburg, in having the tubes arranged ^{generally} singly and irregularly scattered or more rarely in series resembling *Halysites*, instead of in fascicles of 3-6. (see sketches). Other fossils of this bed are *Girovanella* ϵ and large *Ostracoda*, ~~belonging~~ apparently of both *Lepidodictia* and *Schizophoria*. Both the *Girovanella* and the *Ostracoda* are abundant enough when they occur at all.

Chambersburg ls.
II. Not well exposed on Burke st. as seen south of town above quarries it consists of subgranular, dark ls. with irregular thin seams of earthy matter, the whole appearing rather solid in fresh cuts but breaking up into thin layers under weather. It is sharply distinguished both by color and lithologic character from the top of the underlying light drab quarry rock.

Rather highly fossiliferous, the principal fossil being *Echinospira*. *Nidulites* occurs ~~etc~~ in the upper half. Other fossils are by no means of several species, *Strophomena*, *Dicranotis pectinella*? and other ostracods.

III. Rather dark gray, moderately compact ls., most of it cobbly after weathering. Fossils few, same types as in bed II.

IV. 92', top 12' not exposed. ^{light and} Dark gray to black ls., texture compact, without luster in fresh fractures ^{cobbly}. Fossils not uncommon: *Nidulites*, *Strophomena* cf. *profundum*, *Dalmanella subangulata*? *Thalops*, *Monotrypa* etc.

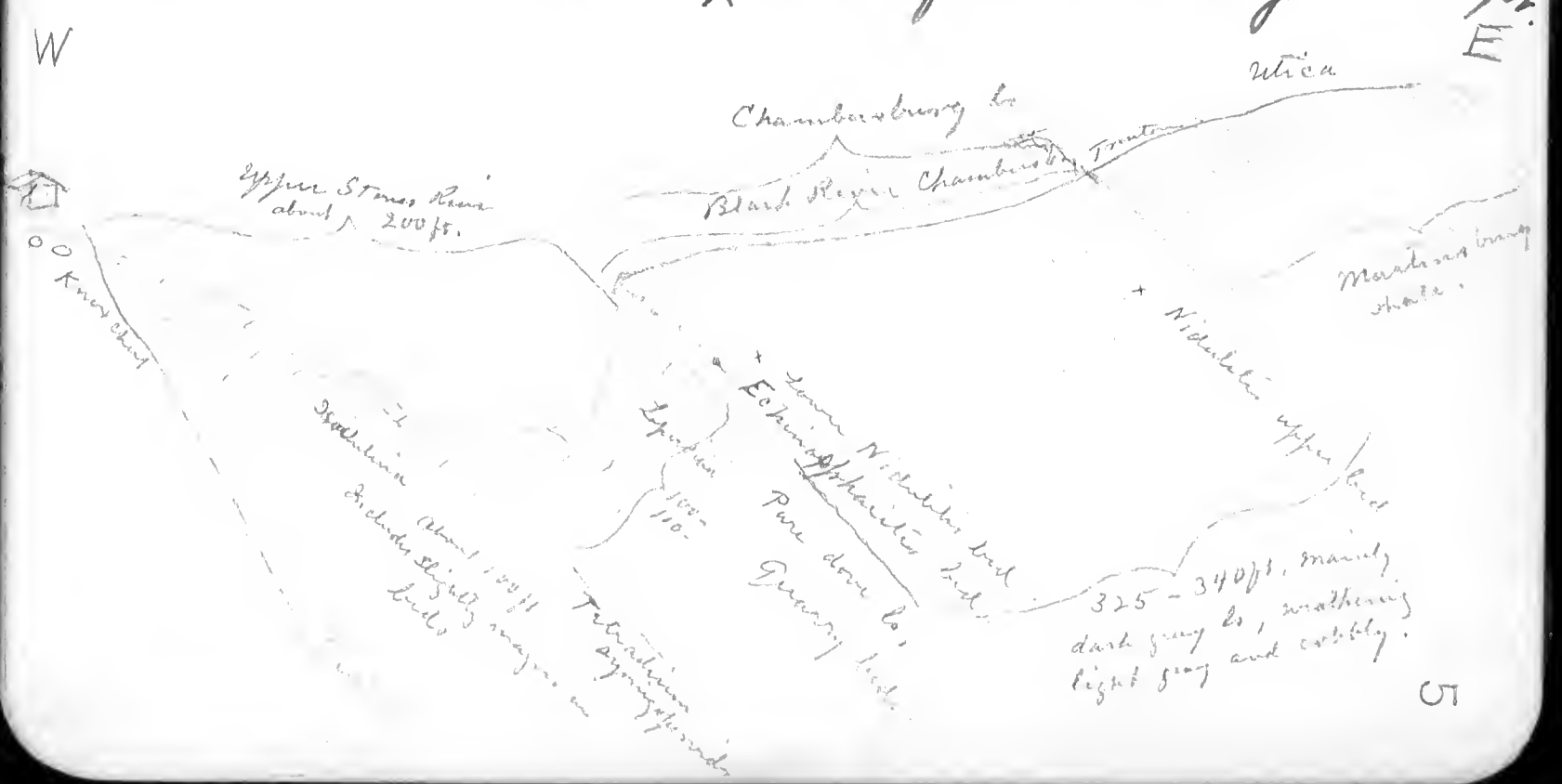
V. Cobbly, dark gray to black, compact or subgranular, the lower part less thin bedded and more prevailingly compact in texture. Fossils rather scarce, about 20 ft above base secured *Pachydictya acuta*? and *Escharopora acuta*? At top a 4 ft. bed of yellow clay shale.

VI. Dark gray to black subgranular ls., weathering cobbly, with 2 or 3 thin layers of shale. Fossils few, but not favorably exposed. *Nidulites* abundant 20 ft. beneath top.

- VII More or less ^{gray to} ~~light~~ calc. black shale interbedded with impure (argill.) slaty ^{black} limestone. Graptolites (*Diplograptus* and *Corynoides*) and *Leptobolus insignis* ^{type} occur apparently throughout but are abundant only in lower 10 feet. Corresponds to bed VIII of Stranding section; and is of Trenton age.
- VIII. Black or dark gray, slightly fissile ^{Utica} shale, weathering light to dark gray and into "shor jags". As usual fossils are few - Graptolites only seen.
- IX. Greenish-yellow, calc. or sandy shales regarded as representing Eden shale. No fossils seen and thickness not estimated.

Sect. II. A similar section to this shown ^{in cuts} along B. & O. R.R. track passing along southern base of cemetery hill. It is notable especially for the finely exposed contact between beds VI & VII. Lower graptolite zone of bed VII very prolific - *Corynoides gracilis* abundant, but in usual poor condition. Spent a few minutes in unavailing search for *Caryocaris*. On account of lack of time paid no attention to underlying ls.

Sect. III. Quarries ^{1/2 m. - 1 m.} south of Martinsburg B. & O. depot.



SECT. IV. Cuts along Cumberland Valley R.R. between depot at Martinsburg and 1/2 blocks north.



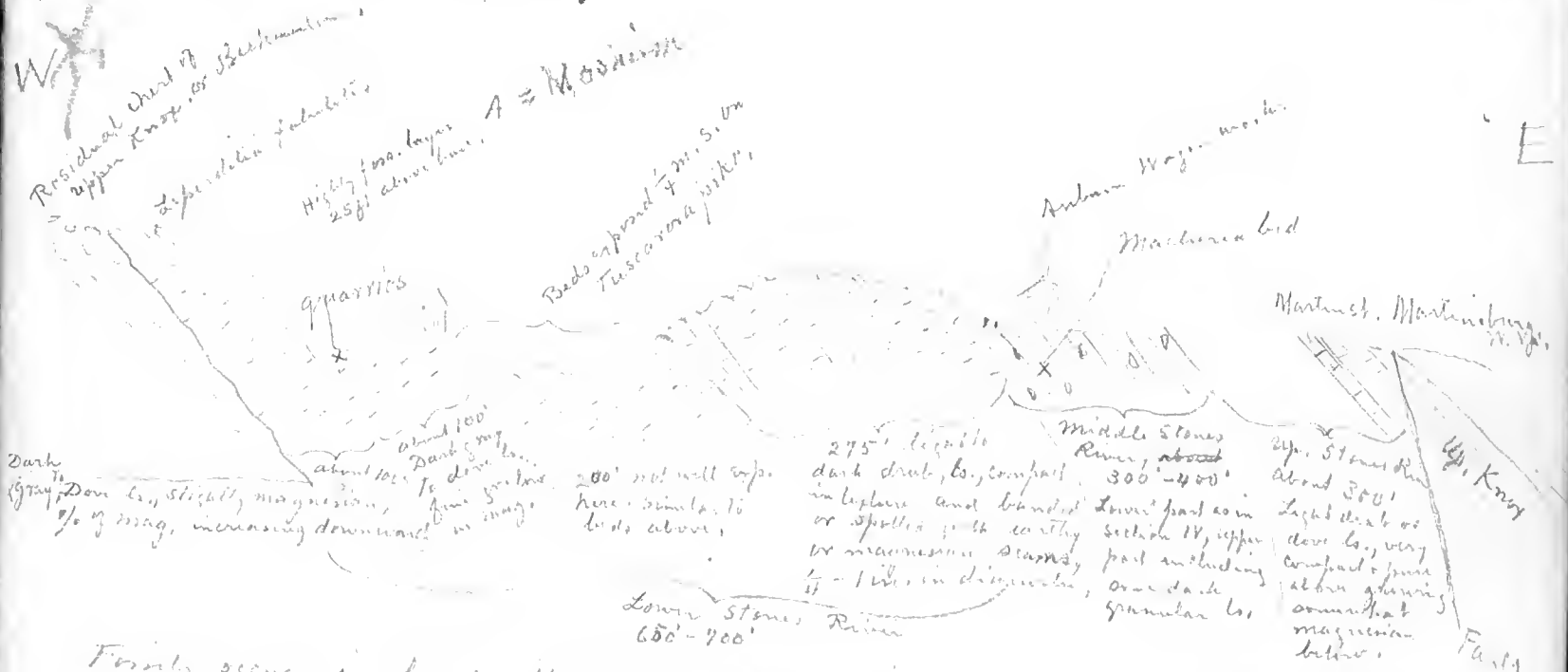
Lower part of middle or Maclurea bed of Stones River. Slightly cherty.

Unshaded beds consist of fine grained, light to dark dove ls., with occasional subgranular, fossiliferous seams. These contain *Maclurea magna*, *Ectomaria* & other fossils - but not abundantly. Most of the fine grained beds, especially the lower ones, are largely composed of a fine ls. conglomerate, often so fine as to simulate oolite.

The shaded beds consist of finely laminar, yellowish ^{mag. ls.} ~~shaded~~ ^{beds}. No fossils in section.

Top of lower Stones River extending westward to beyond quarry & thence to chert of Knott's Field of gastropods showing only in section.

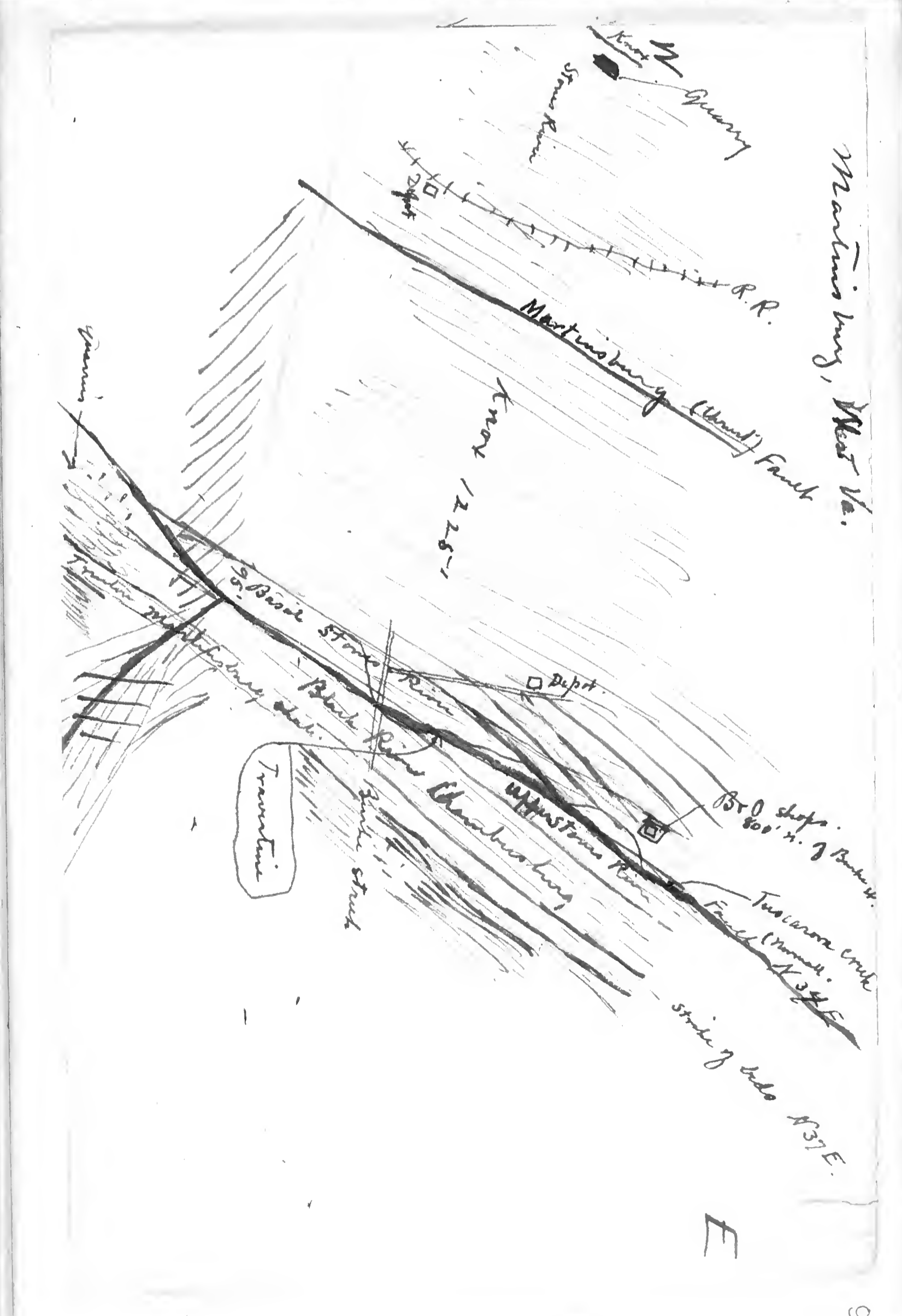
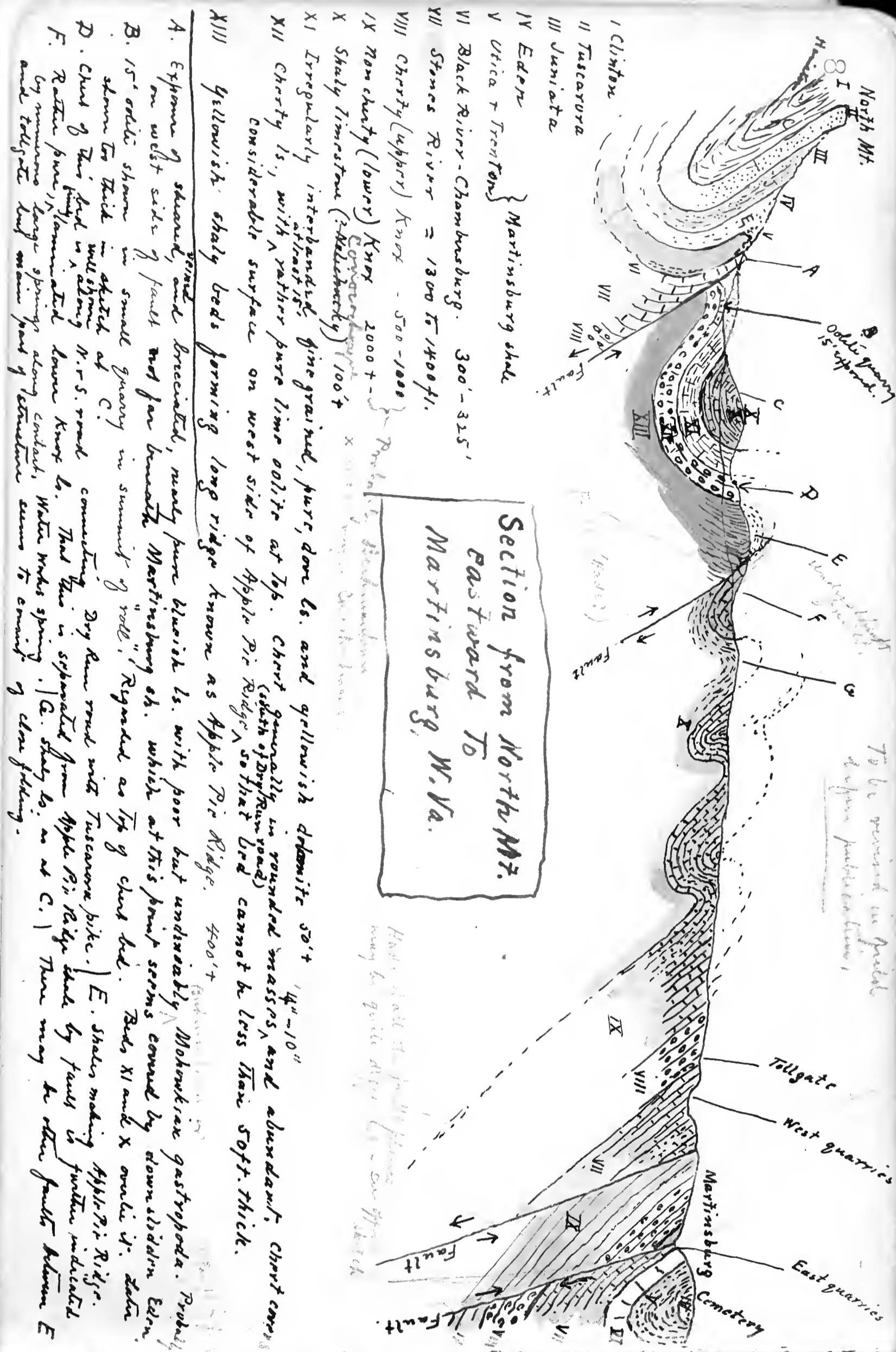
Section V. shown on west side of Martinsburg, (Includes Section IV and extends westward to Knox and east of railroad to Martinsburg fault).



Fossils occur in bands throughout Stones River. Except at the two points marked they occur solely as sections in the rock, and consist chiefly of gastropods, with fewer bryozoa, cephalopods and trilobites. *Bromia*, not observed.

At 4A, = 125 ft. above base, a heavy ls., that on decomposition becomes thickly coated with a chalky substance (common occurrence for fossiliferous Stones Riv. bands) proved to be filled with a small but comparable to large lobed *Solenopora* and fairly good molluscs. Reminds of and fossils should be compared with *Clamer*, Tenn. ↘

Lower Stones River horizon.



- I Clinton
- II Tuscarora
- III Juniata
- IV Eden
- V Utica + Trenton } Martinsburg shale
- VI Black River - Chambersburg. 300' - 325'
- VII Stones River = 1300 to 1400 ft.
- VIII Cherry (upper) Knox - 500 - 1000'
- IX Non-cherty (lower) Knox 2000' - 2500'
- X Shaly limestone (Medley) 100'
- XI Irregularly interbedded, fine-grained, pure, dove ls. and yellowish dolomite 50' + "4"-10"
- XII Cherty ls., with rather pure lime oolite at top. Chert generally in rounded masses, and abundant. Chert con- siderable surface on west side of Apple Pi Ridge. A soft bed cannot be less than 50 ft. thick.
- XIII Yellowish shaly beds forming long ridge known as Apple Pi Ridge. 400' +

A. Exposure of standard, and brecciated, nearly pure bluish ls. with poor but undeniably *Molonicra* gastropoda. Probably on west side of fault and far beneath Martinsburg sh. which at this point seems covered by down-tilted Eden.

B. 15' oolite shown in small quarry in summit of "roll". Reported as top of chert bed. Beds XI and X oolite is. taken down the thick in section at C.

D. Chert of this bed is a shaly N.W.S. rock containing Dry Run red with Tuscarora pipe. E. Shales making Apple Pi Ridge. Rather pure, laminated lower Knox ls. That this is separated from Apple Pi Ridge shales by fault is further indicated by numerous large springs along contact. Water makes spring. G. Shaly ls. as at C. There may be other faults between E and tillage. Long main part of structure seems to consist of down-folding.

To be preserved as fossils of upper part of the lower.

Hardly a fault in the Martinsburg area. See the fault.

Station at Martinsburg



Loc. H.

Section along Sou. Pa. Br. of C.V. RR. between
crossing of Chambersburg - Greencastle pike (4 m. N
of Greencastle) and Conococheague Creek.

Conococheague Cr.



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