













I certify that the above work has been completed, with the exceptions noted.

Title

Date \_\_\_\_\_, 191  
Address \_\_\_\_\_  
Title \_\_\_\_\_

Please do the above work, which I certify is necessary.  
(Signed) \_\_\_\_\_

APPROVED:  
Title \_\_\_\_\_  
Cost { Labor \_\_\_\_\_  
Material \_\_\_\_\_  
Total \_\_\_\_\_

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40  
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Lower Anenheim. - To base D. carleyi zone.  
Upper " - To top Cyclona lss.

20'

Lower Waynesville - Ft. Ancient  
Middle " - Clarksville  
Upper " - Blanchester (to top H. insculpta)

Lower Liberty - Shaly portion

13'

Middle Liberty - Lss. predominant. To top Plectambonites bed.

Upper Liberty - To base Whitewater.

30'

Lower Whitewater - To basal Saluda reef or its equivalent  
Saluda

Upper Whitewater - Top of Saluda type of sediment to base Elkhorn

6'

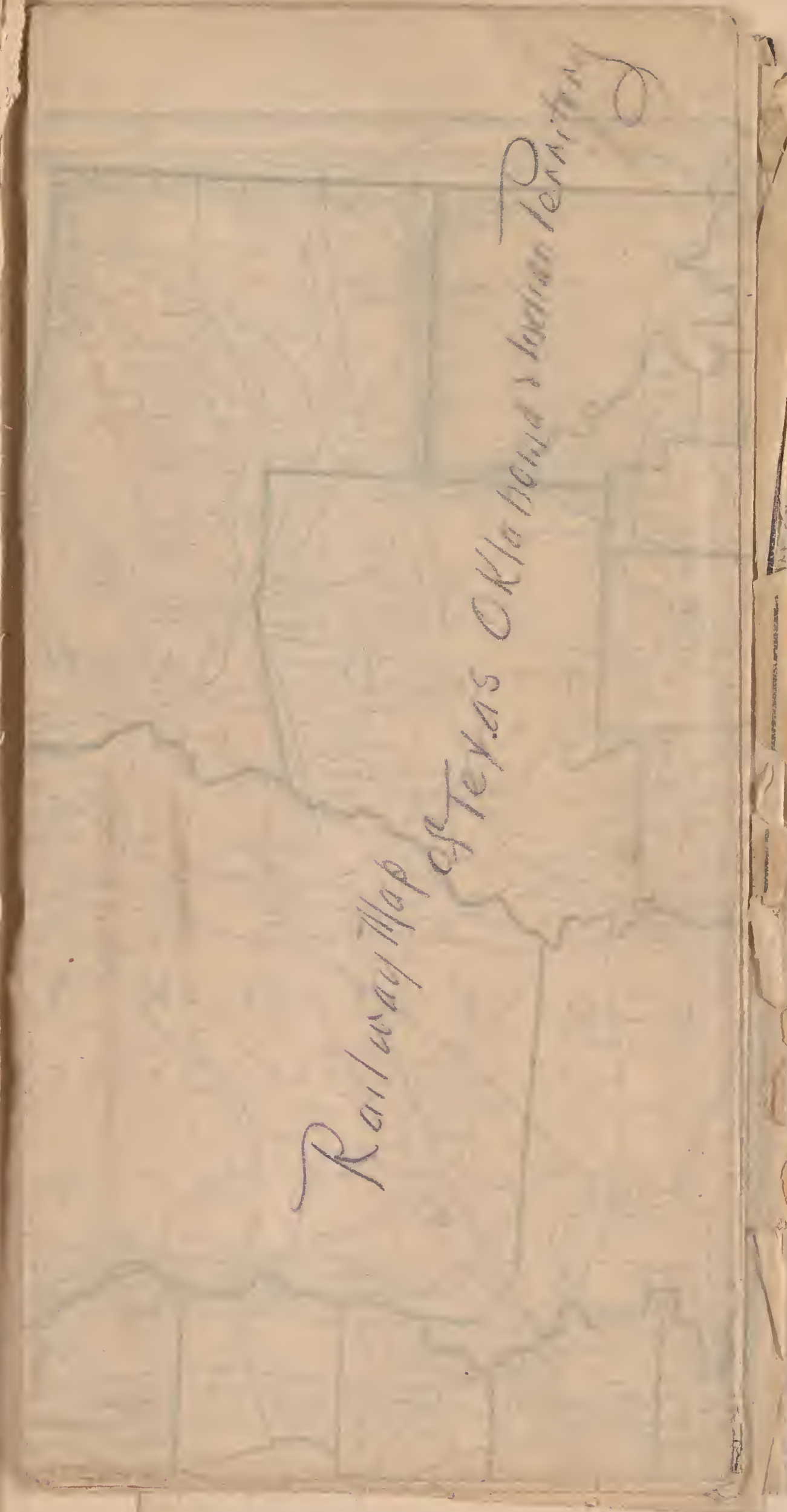
Lower Elkhorn - Basal ± barren shales.

\*\*\*\*

Middle " - ± massive shaly lss.

Upper " - Shales & thin lss.

6' Gyroceras baeri



21  
Dust  
This map shows the location of the section described on page 27. The section is located in the northwestern part of the Oklahoma Territory, near the Texas border. The map shows the course of the railway and the location of the section relative to the surrounding geological features.

See later section p. 27



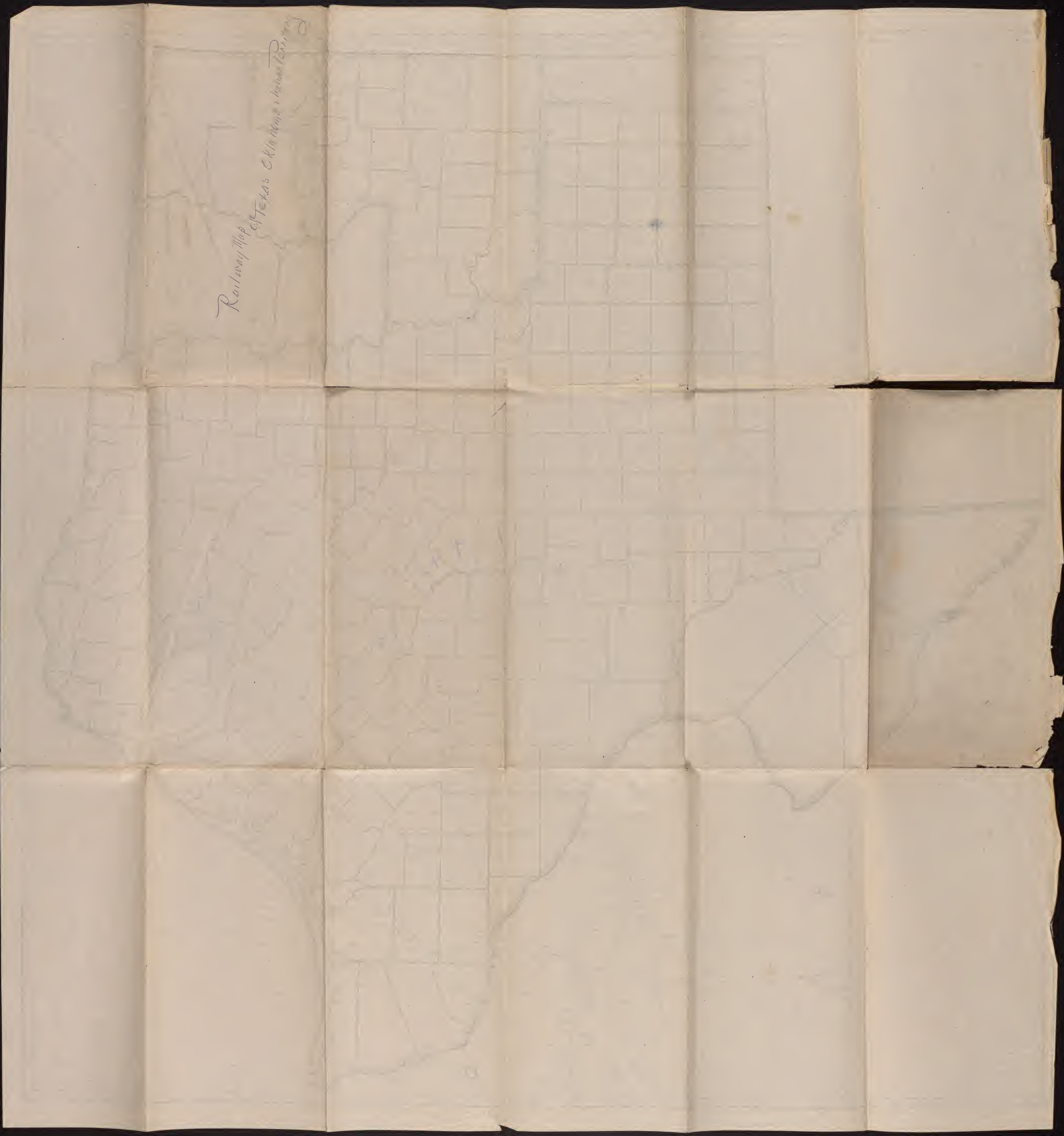








Railway Map  
of Texas Oklahoma & Indian Territory





40  
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Lower Anenheim. - To base *D. carleyi* zone.  
Upper " - To top *Cyclora* lss.

20' Lower Waynesville - Ft. Ancient  
Middle " - Clarksville

Upper " - Blanchester (to top *H. insculpta*)

Lower Liberty - Shaly portion

13' Middle Liberty - Lss. predominant. To top *Plectambonites* bed.

Upper Liberty - To base Whitewater.

30' Lower Whitewater - To basal Saluda reef or its equivalent

Saluda

Upper Whitewater - Top of Saluda type of sediment to base Elkhorn

6' Lower Elkhorn - Basal ± barren shales.

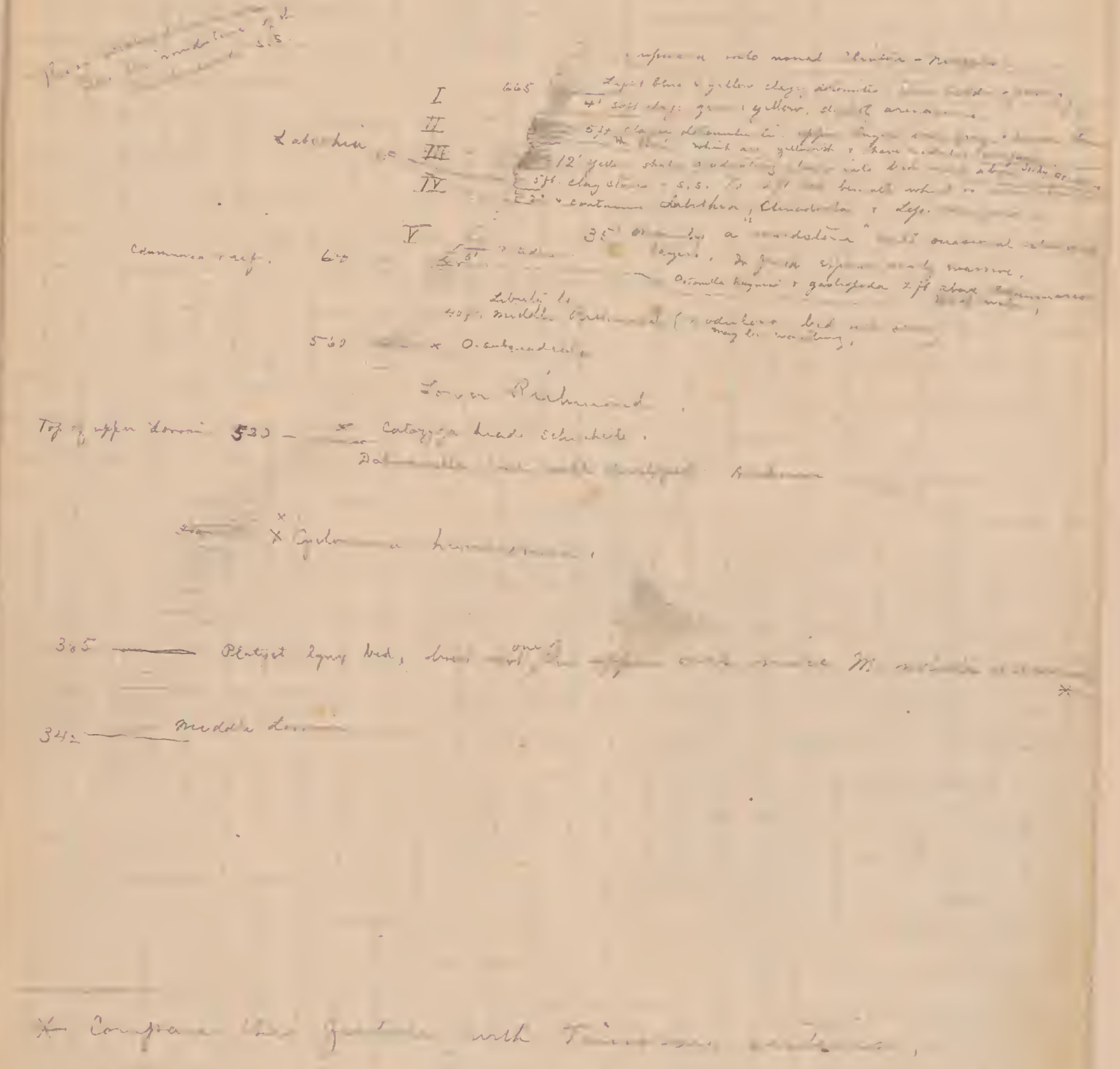
Middle " - ± massive shaly lss.

Upper " - Shales & thin lss.

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6' *Gyroceras baeri*

Sections at Madison, Ind. 21  
Hitz road.



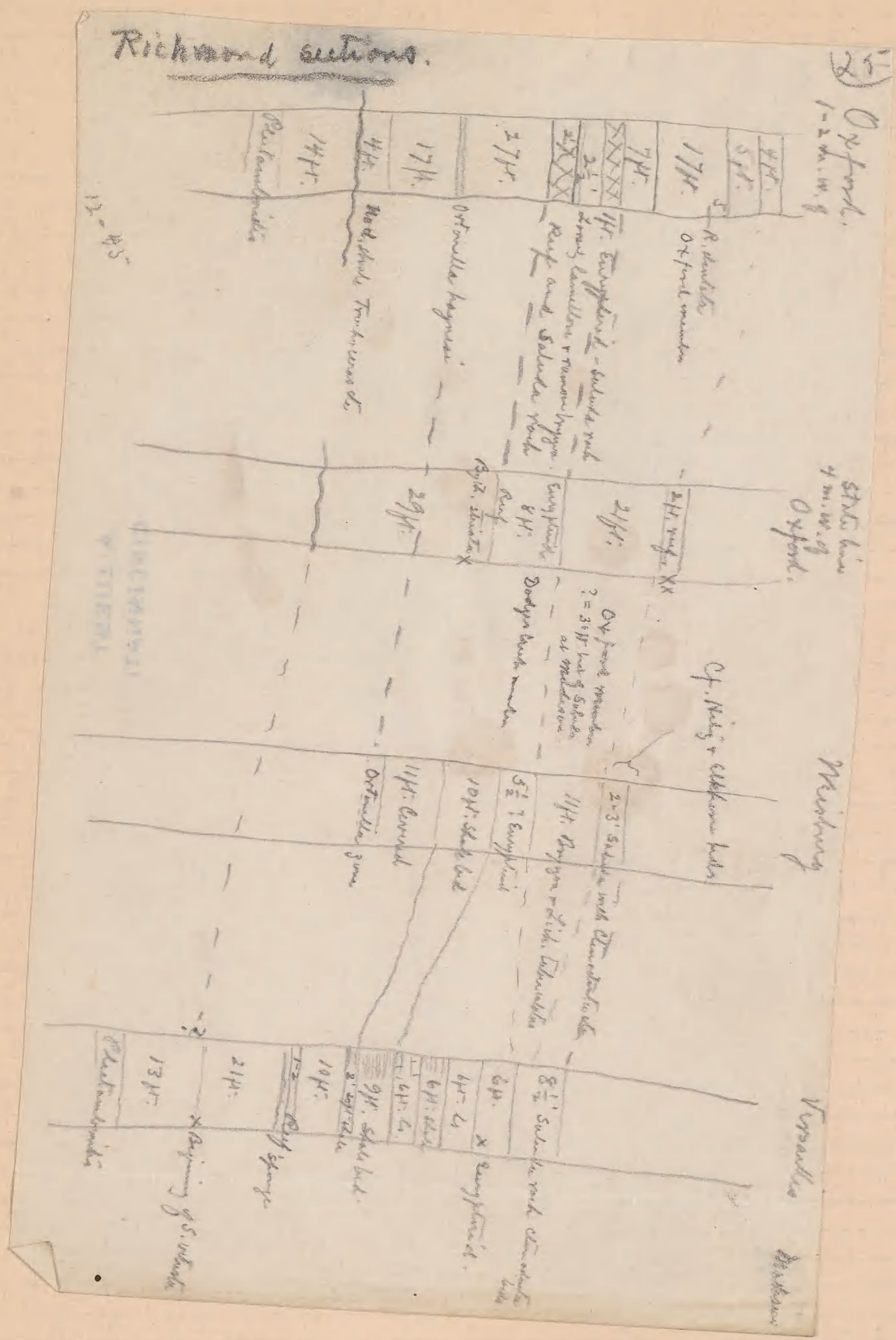
See letter on cover p. 27







Richmond sections.











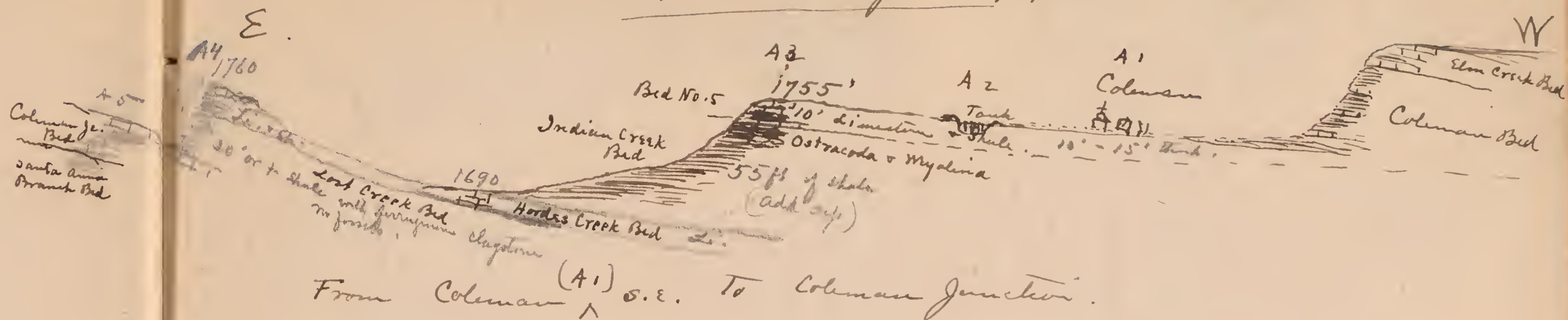






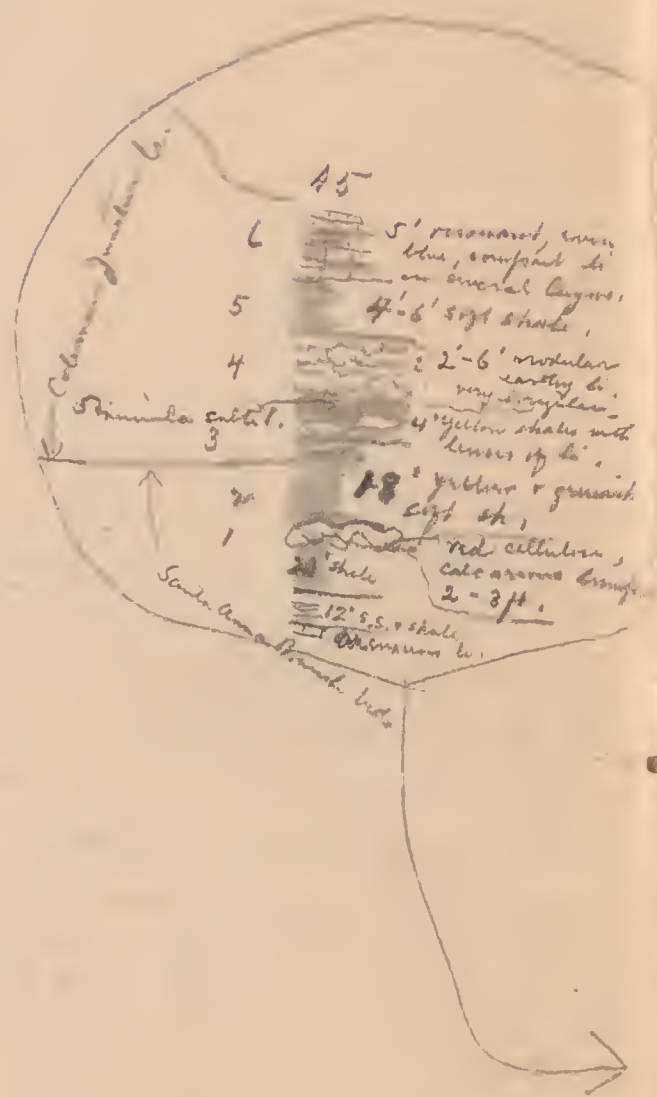




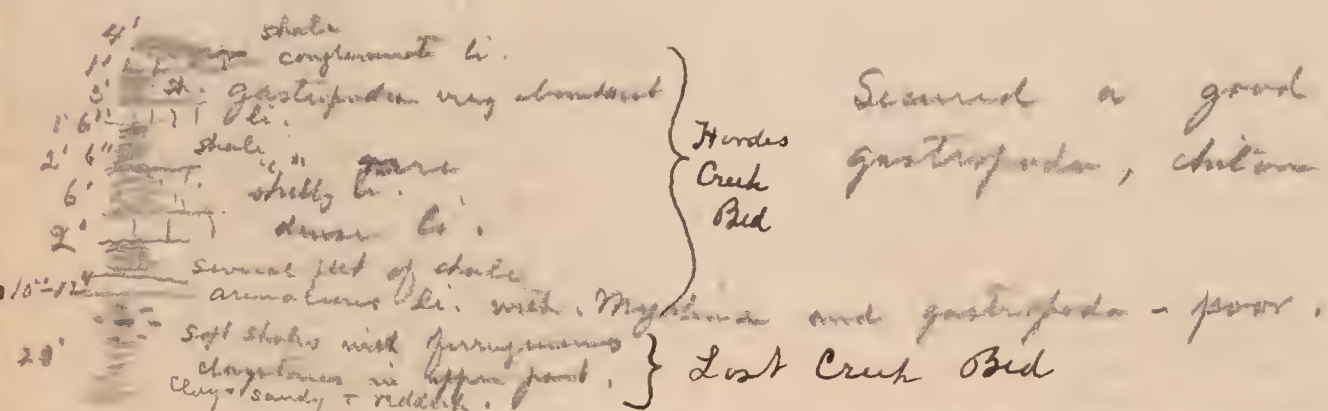


At A 2 the limestone, which forms the floor of the slightly inclined plain upon which the <sup>the n.e. of</sup> Colman is situated, is well exposed in a <sup>small</sup> dug tank. The soil is shallow, rarely over a foot, but the li. shows effect of subaerial decomposition - all broken into blocks with more or less rounded angles. Fossils are not uncommon but, excepting *Fenestellidae*, neither well preserved nor of many species. A *Pro. semireticulatus* is the commonest - a large *Pinea* of which no good specimens were seen, is next. Spines of *Archicrinurus* abundant. <sup>At depth a bed of yellow earthy li. 1'-2' thick, has some fossils - belongs to lower part of this bed.</sup>

A. 3. Here the limestone and underlying shales are exposed in an escarpment. All told I do not believe the li. bed exceeds 8 ft. in thickness but will put its maximum at 10 ft. The li. occurs in 4 or 5 layers 6"-12" thick <sup>is yellowish uneven bedded, mostly with more or less calcareous shale separating them.</sup> Beneath the limestone there are 50 ft. (or more) shales, all but the upper 10 ft. of which is soft, <sup>where fine,</sup> yellowish or greenish. The upper part is more or less massive and in other layers decidedly calcareous. The latter are full of fossils with *Myalina* + sponges while small *Ostracoda* are extremely abundant. No fossils seen beneath this upper part.



A 4



Secured a good lot of fossils in A. 4, especially small *gastropoda*, *Chelona*, *Orthis* + *Myalina* (partly same as A. 3)

- A. 5. No 1 is a very striking bed, seemingly consisting of series of vesicular lumps of <sup>crystalline</sup> origin.
- No 2. No fossils.
- No 3. The shales and li. lenses contain <sup>*Archicrinurus*, *Hysterozoum*</sup> *Semimella*, *Dalmanella*, *Derbya*, *Productus* and a *Strophomena*.
- No 4. is fossiliferous - *gastropoda*, *Archicrinurus* *Septifer* - but good specimens rare.
- No 5. No fossils seen.
- No 6. Contains small *brachiopoda*, ? *Knottella*, *Can. monovata*? Not good.





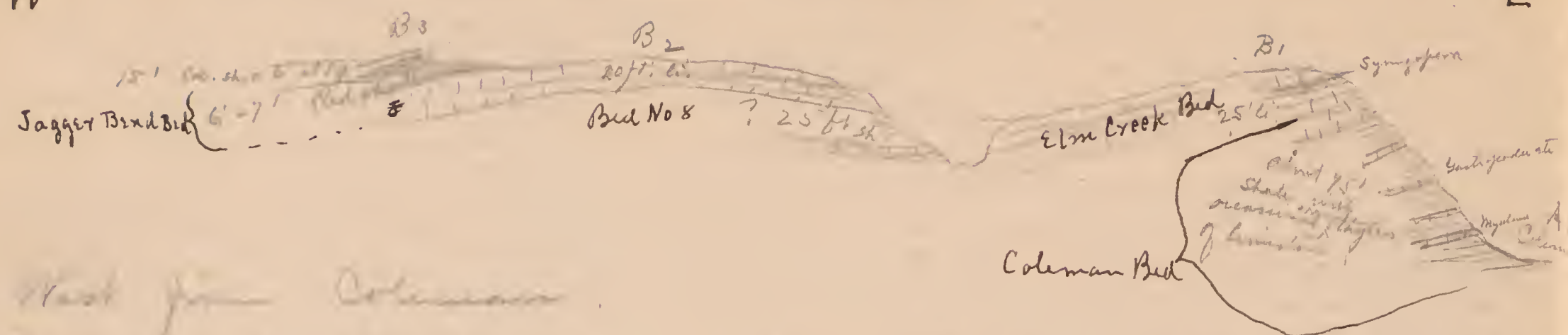


Sep. 29<sup>th</sup> - 1923.  
Very cloudy + rain all afternoon.

2<sup>nd</sup> #

W

E



Rock from Coleman

**B1** This locality proved a disappointment - paleontologically, at least. At base brought to light some *Phylloporis*, a sharp-edged *Myalonia* being fairly good. A small *Naticopsis* also good. Poor *Bullingtonia* found with them. Should also mention a *Nautiloid*.

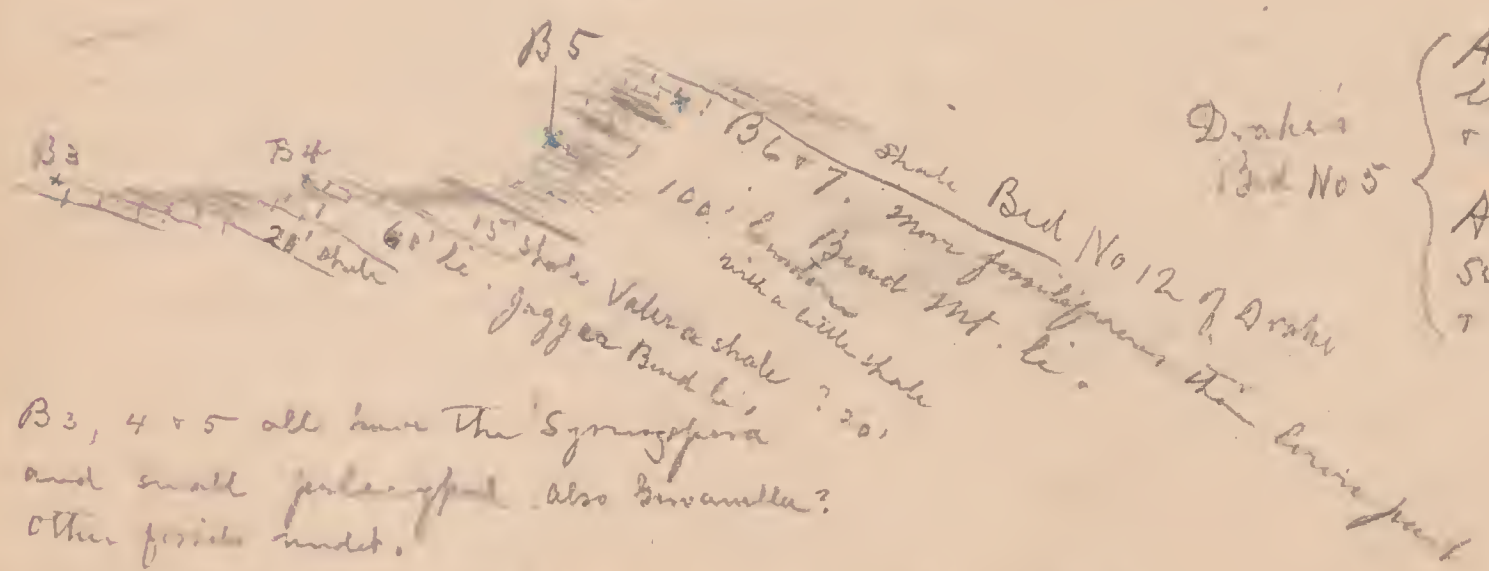
About middle of section a layer with *Murchisonia*? It occurs also in perhaps all of the li. layers but is very poorly preserved.

At top of section about 25ft. of <sup>(Elm Creek li.)</sup> limestone and shale - Reservoir of Coleman W.W. in it - Above middle of this bed found small tubed *Symyopora*. (May be something else as it seems to have two tubular.) A single *Symyopora* about 1 inch long.

**B2**, A long and fine exposure (after interval of 25ft or less of shale) of <sup>yellow limestone</sup> li. above, similar to preceding with no recognizable fossils except the *Symyopora*. This occurs abundantly at two levels - about 3ft from top and 5ft from base. Several layers are made up of comminuted fossils, apparently of some small, murelet-like *Phylloporis*. A 1ft. layer of li. conglomerate near base.

**B3**, Next came a bed of red, arenaceous shale, containing some *Crucaria*. This bed is less than 10ft. thick. Above it are calcareous shales, and finally some heavier li. All parts of this calcareous series contain *Symyopora* abundantly.

Sep. 30  
along railroad from Coleman <sup>south</sup> via Valera, toward Talpa.



B3, 4 + 5 all have the *Symyopora* and small *Phylloporis* also *Symyopora*? Other fossils mult.

B6 was fairly fossiliferous - large *Symyopora*, large *Myalonia* *intermedia* etc. *Pinnac*  
B7 about 10ft higher than B6 and near top of Bed No. li. Same fossils as at B6 with *Bygonia* in addition.

Dishes Bed No 5  
A1a afforded more fossils (a fine lined *Productus*) of the A1 + 2 types + *Bygonia*  
A1b. is a r.r. and afforded large *Symyopora* + numerous *Rhynchopora*. + ? *Sclerobolus*.



Section Valera to Ballinger along Railroad.



Dip S.W. to N.W. about 70ft in 1 mile.

Get total thickness from above figures and difference in altitude shown on topographic sheets.

C3a is part of same ls as C3 + on same creek: C3a where railroad crosses it + C3 several miles farther south.

Fossils mostly funnelled  
+ Septopora, the latter very abundant  
specimens lost. Similar to  
those from C2 but fewer  
+ no Phyllopora.

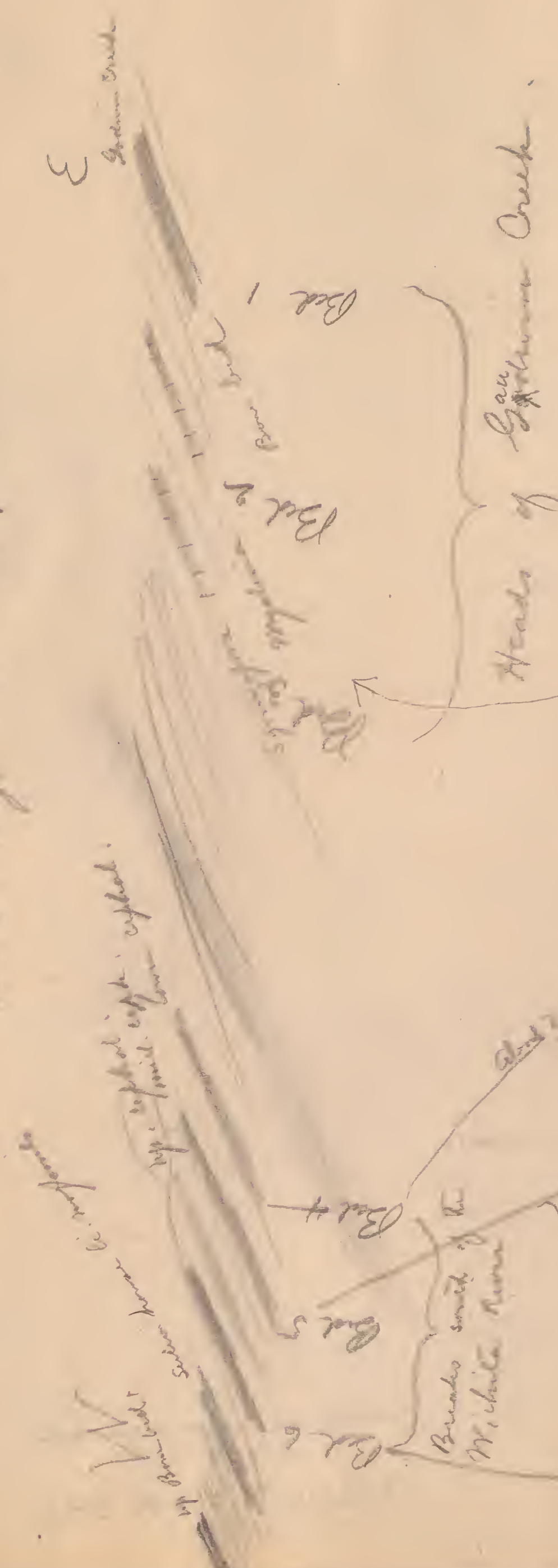


Section from Thurber west along Tex. Pa. R.R.  
to 7 m. west of Ranger, Tex.

- 7 m. w. of Ranger 12 ft ls.
- 15' red clay shale + sandy ls. Fusulina, Stenopora etc.
- 100' shales + a little s.s.
- 4 m. - 5 m. west of Ranger 25' ls. with a little interbedded shale. Very unproductive.
- 50' shale with thin bed of ls. outcropping in town of Ranger, no fossils.
- Crusher + eastward also by 1/2 mile 10' shaly ls. few fossils of same type as in next two ls. beneath.
- 50' sandy sh.
- 20' s.g. gritty s.s.
- 125' mostly olive sh.
- Near Canon Smith 25' ls. containing *Campophyllo*, *Syntrochona* + *Productus longipinus* etc.
- 65' shale
- Top of hill west of 20-25' ls. *Pr. longip.* very abund. *Rhynchonella* bed.
- 80 ft. shales
- Hill west of 0'-4' massive ls. (pink tooth)
- 20 yellow shale
- 10' ls. with large *Myalina* + at top full of small ramose *Bryozoa*.
- 15' shale
- 10-15 ft. ls. full of large-leaved *Productus*
- 10-15 ft.
- Pale Alto cr. *Bryozoa*
- 420 ft. of shales, with a little s.s. and occasional thin bed of ls. in Mt. Marion coal Co. shaft. [See log of shaft.]
- 5.5.
- large *Productus* etc found at Thurber.
- Coal No 2. Thurber + Strawn



N.W. Dip 30-40' per mile



Heads of Galveston Creek

Generalized section in vicinity of Seymour, Tex.  
to show stratigraphic relations of fossil horizons.

Deep creek, about  
8 m. S.E. of Seymour

about 3 m. N.W. of Fuller, Tex.

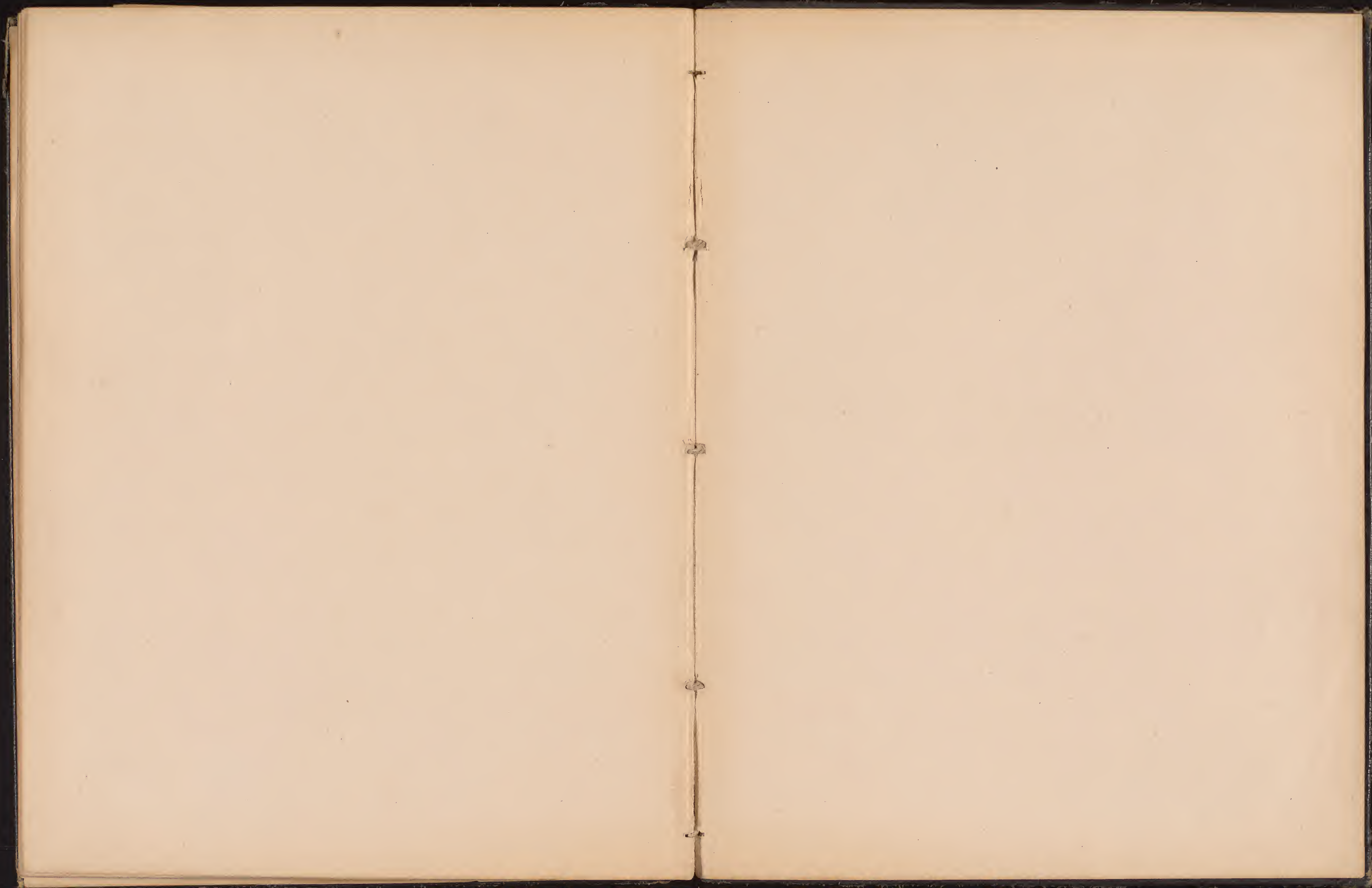
1 m. east of military crossing  
17-18 m. N.W. of Seymour  
road to Harold.

4 m. N. of section house  
12 m. N.W. of Seymour











Elevations in S.W. Wis. Lead region.

<p><b>A</b></p> <p>Amston 849 Albany 818 Argyle 808 Benton 878 Broadhead 798 Brooklyn 978 Bum 1078</p> <p><b>B</b></p> <p>Blunshardsville 758 Bloomington 905 Bustown 762 Big Patch 817 Belmont 828 British Hollow 865</p>	<p><b>C</b></p> <p>Cassville 608 Castle Rock 847 Cross Plains 1198 Edamir, depot, 812 Cadiz 889 Clarno 935 Darlington depot 802</p> <p><b>D</b></p> <p>Dayton 818 Dicksville 934 Ellenboro 689</p> <p><b>E</b></p> <p>Elk Grove 898 Frammer 1168</p> <p><b>F</b></p> <p>Fairplay P.O. 798 Fayette 1053</p> <p><b>L</b></p> <p>Linden — 1028 Liberty Ridge 1144 Lancaster courthouse 1080 Little Grant 828</p>	<p><b>G</b></p> <p>Glenn Haven P.O. 606 Grateford, depot, 783 Hurricane Grove 941 Homer P.O. 978</p> <p><b>H</b></p> <p>Hazel Green 938 Highland P.O. 1161</p> <p><b>J</b></p> <p>Jordan 858 Jonestown — 912 Joda 821</p> <p><b>K</b></p> <p>Kings Mills 723 Mount Hope 1076 Mount Ida 1168 Mountfort. 1093 Mifflin 808</p> <p><b>M</b></p> <p>Meeker Grove 835 Mineral Point depot 935 Martin 865 Monticello 858 Munroe courthouse, 1018</p>
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<p><b>N</b></p> <p>New Diggins 792 North Andover, 838 New California 989 New Glarus 968</p> <p><b>O</b></p> <p>Oakley 918 Patch Grove 1060 Potosi 782</p> <p><b>P</b></p> <p>Platteville P.O. 835 Perry 1034</p>	<p><b>R - W</b></p> <p>Wyalusing 611 Rockville 926 Sinsinawa Academy 926 St. Rose 994 Washburn 841 West Platte Mound 1272 White Oak spruce 928 Shullsburg, Dr. house 1018 Union Mills 794 West Blue Mound 1729 (21224) Wiota — 996</p>	<p>Twin Grove 988 Sylvester 865</p>
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Elevations at Cincinnati & vicinity.

Zero mark, Ohio River	427.4
Low water " " "	429.3
High " " "	498.5



