

31

E. O. Ulrich.

Notebook 31.

Texas (Permo-Carb.) and Indiana. *Richmond sections in*

1905.

1914.

See also Ulrich's Richmond sections

U. S. GEOLOGICAL SURVEY.

9-889

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DEPARTMENT OF THE INTERIOR
 UNITED STATES GEOLOGICAL SURVEY

Repaired Copy

INTERNAL REPAIR REQUISITION

Requisition No. _____

Appropriation Symbol _____

Allotment _____

Expenditure _____

Chapter symbol _____
 (Type N.P.)

Articles or services

Quantity requested

Unit

Unit price

Amount

Excess

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Please do the above work, with I certify is necessary.

Date
Address

(Signed)

Title

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

Title

APPROVED:

Cost
Labor
Material
Total

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40

- 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*



See later section p. 27



40'

Elk Horn,



20'

Barren shales. Elk Horn?



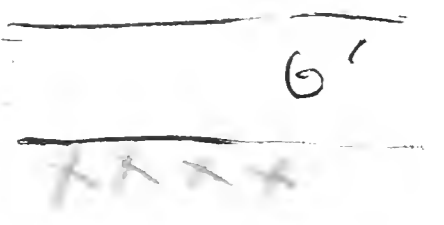
13'

Upper Whitewater
Even bedded with Tentaculites.



30'

Upper Whitewater
Lumpy.



6'

Saluda

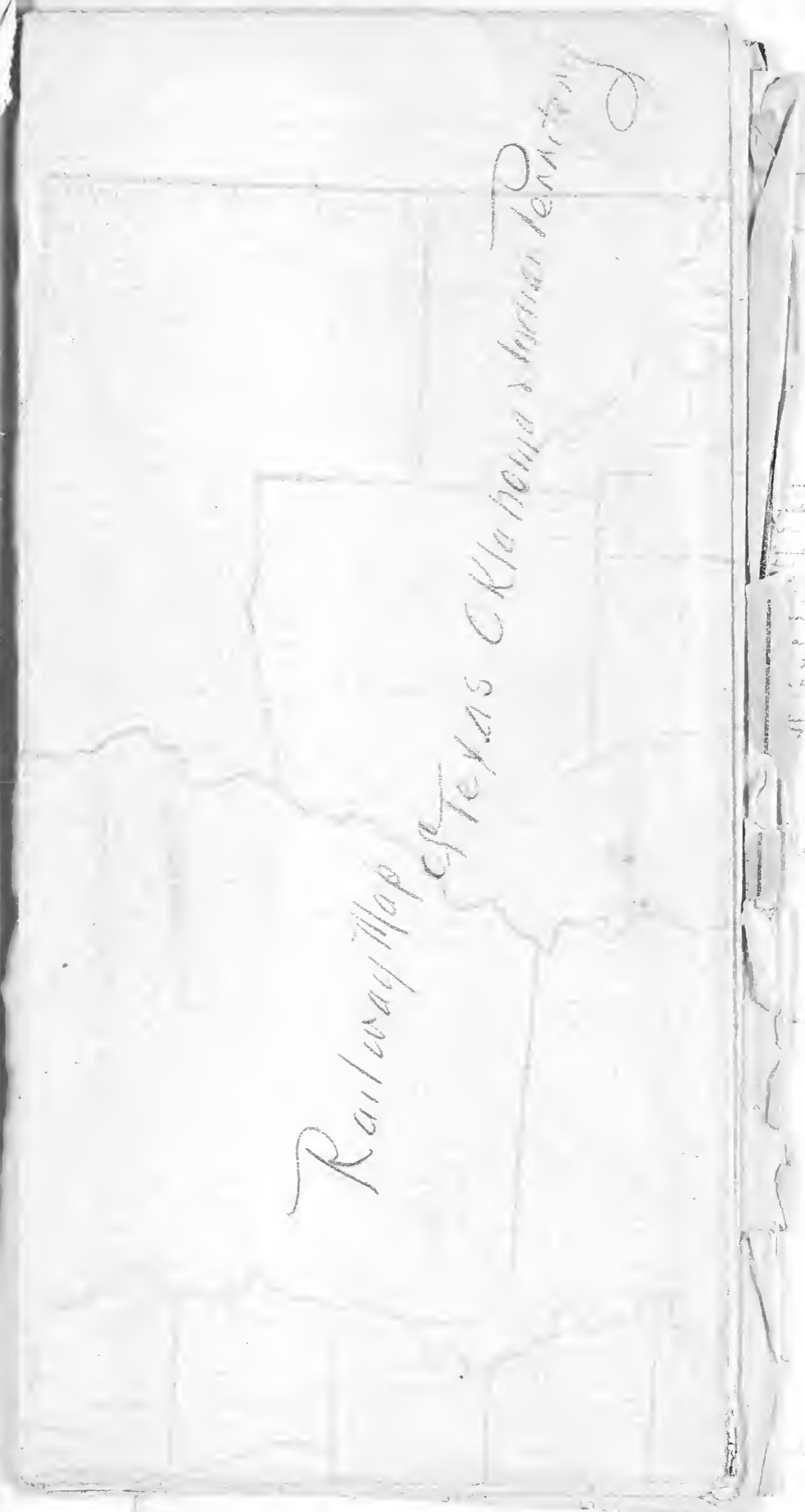
30' Lower Whitewater



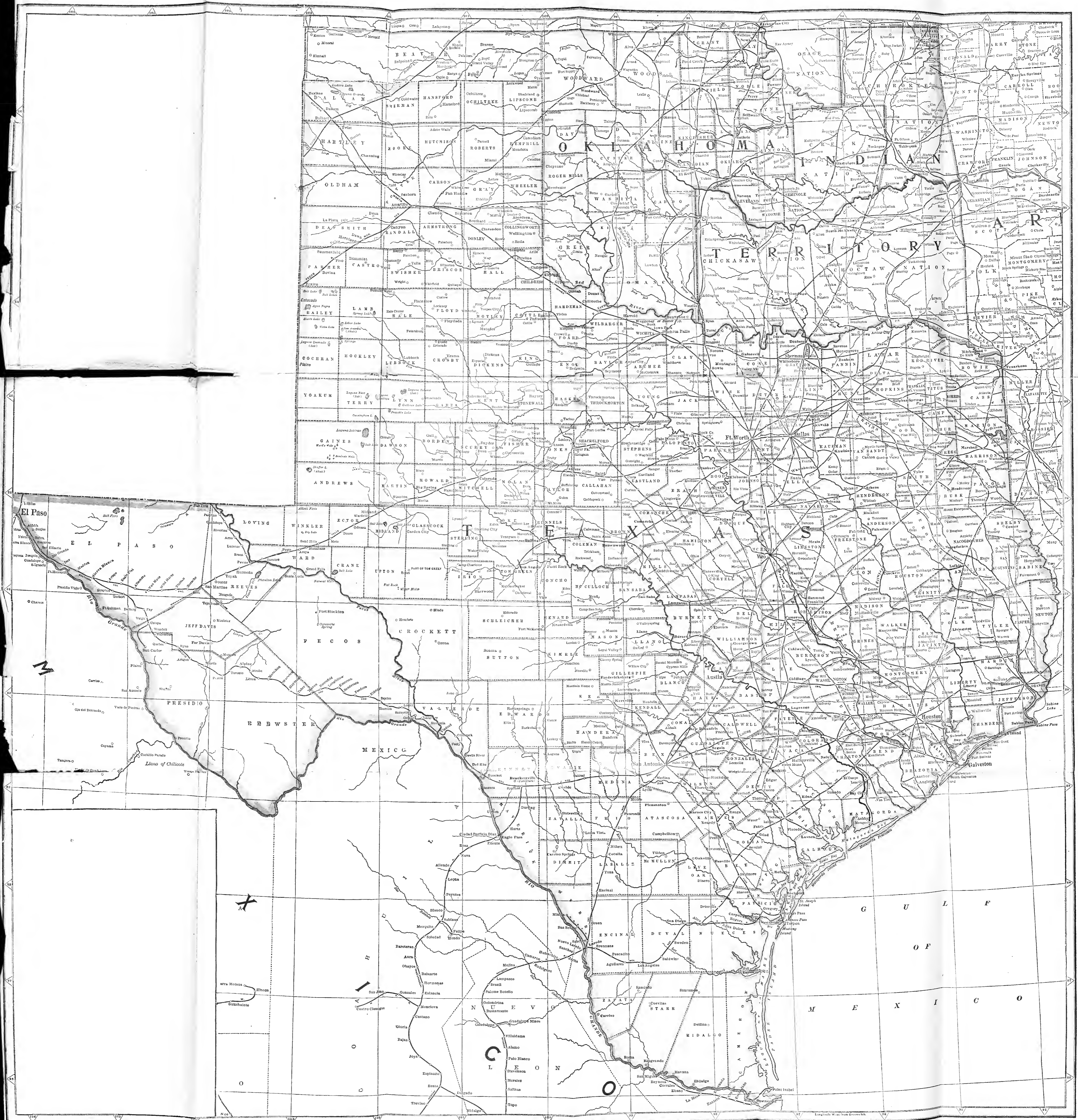
6'

Gyroceras baeri

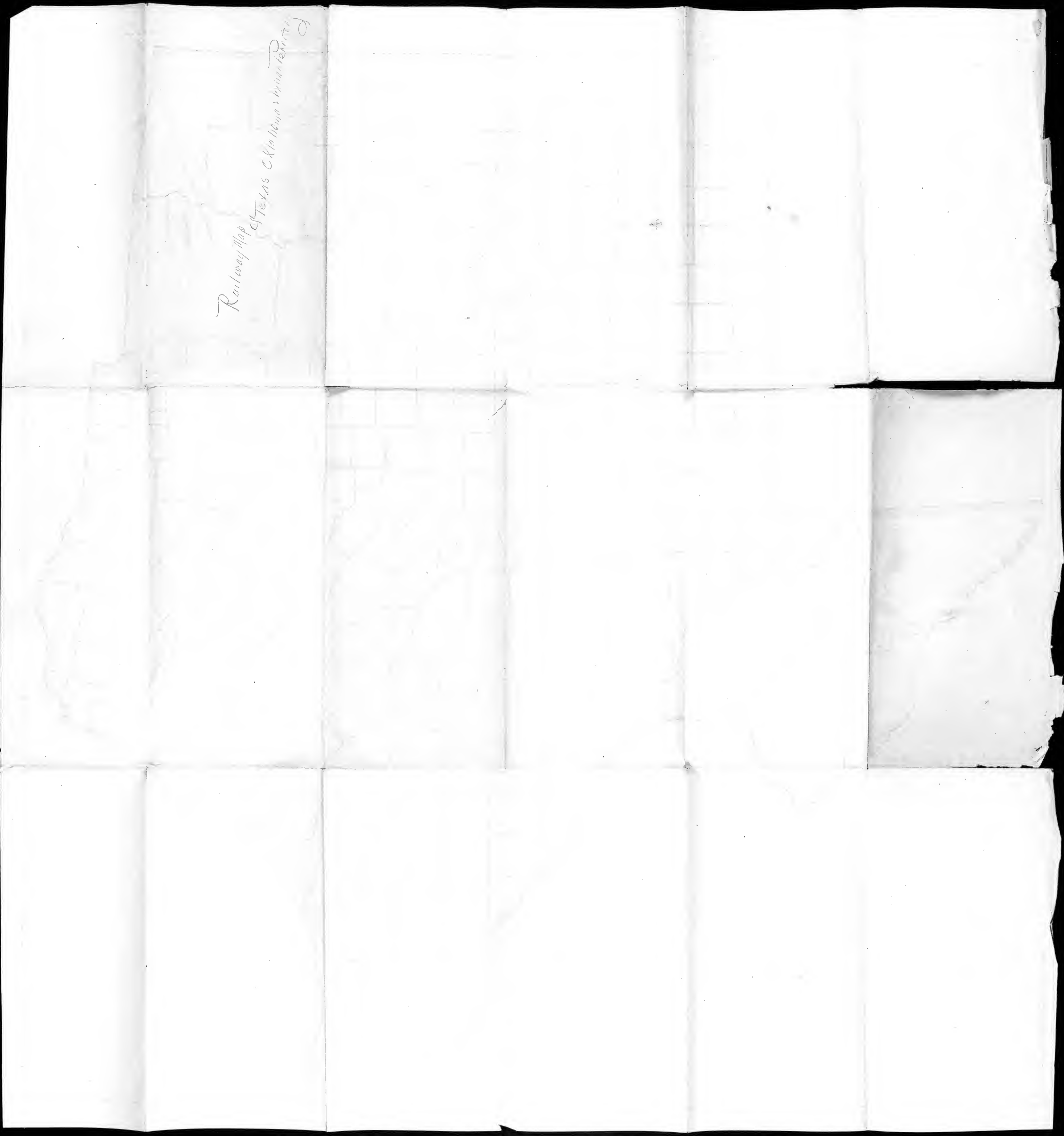
Demolished Foundation - Col. ...
Upper Richmond ...
7 miles ...
Also made by ...
Shelby ...



21
See later section p. 27

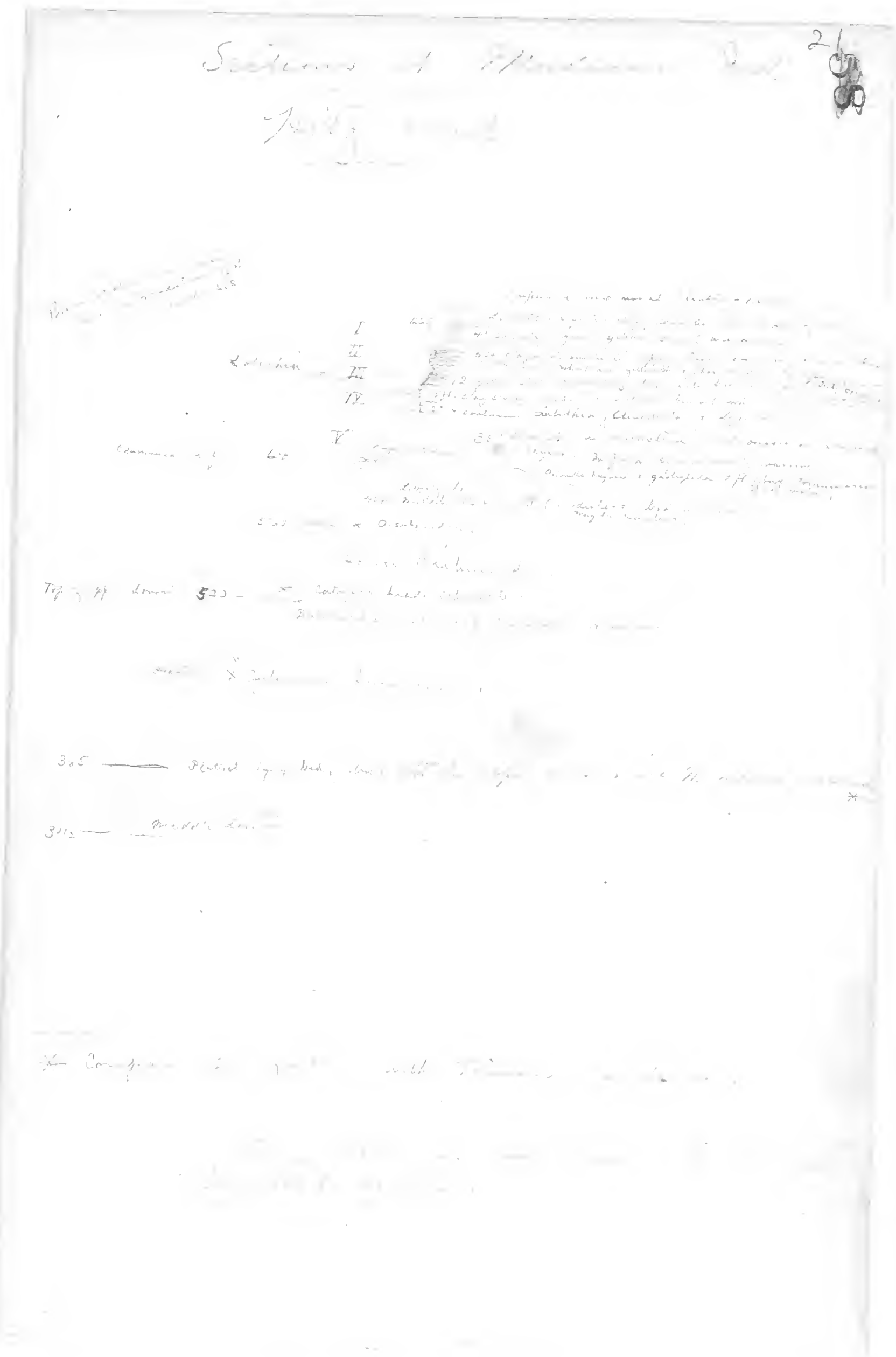


Railway Map of Texas Oklahoma & Indian Territory



40

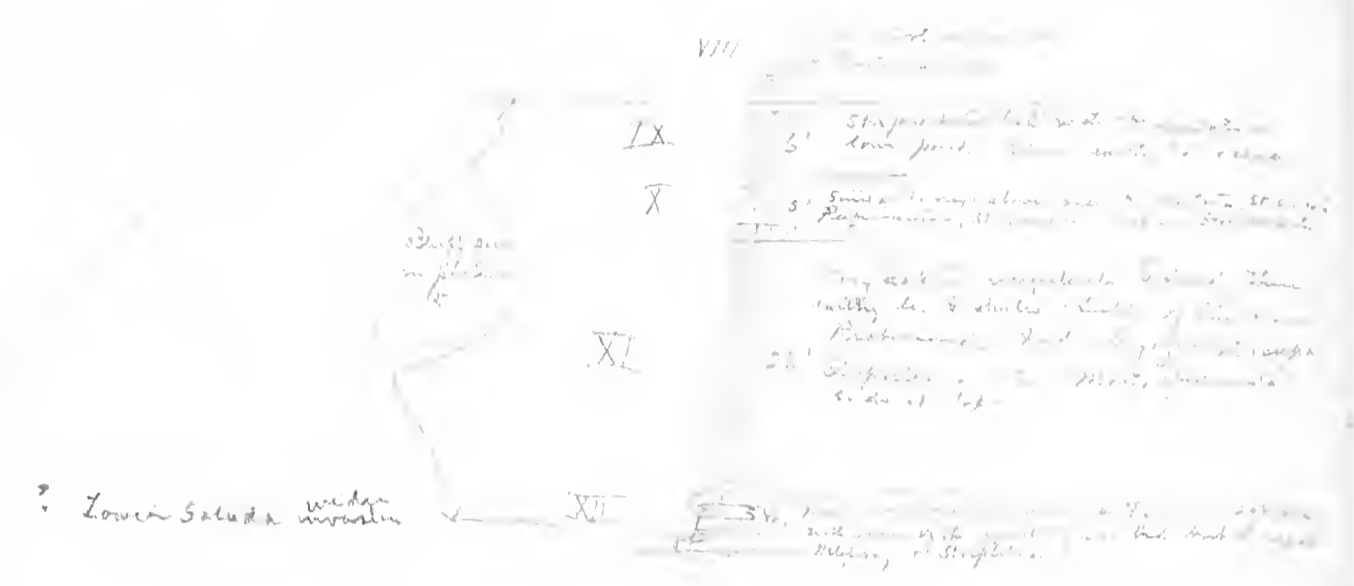
- Lower Anenheim. - To base *D. carleyi* zone.
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- 6' Lower Elkborn - Basal ± barren shales.
- Middle " - ± massive shaly lss.
- Upper " - Shales & thin lss.
- 6' *Gyroceras baeri*



See later section p. 27

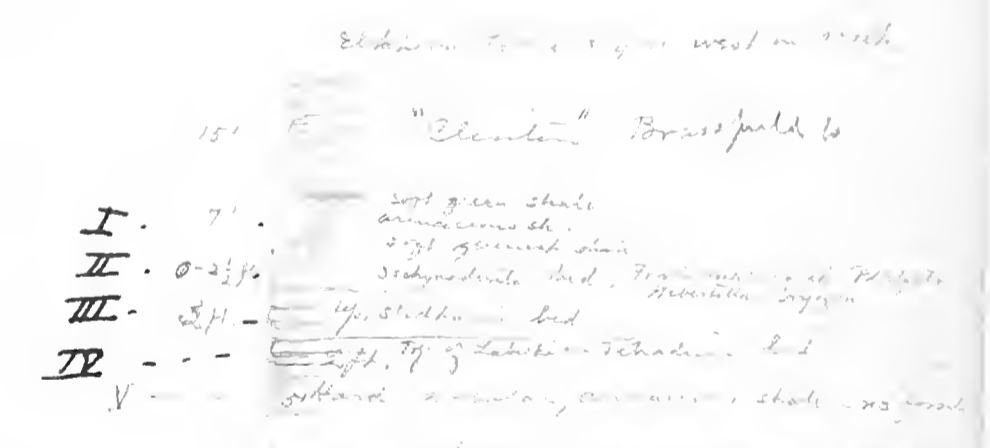
At Richmond Hill
River bluffs.

23

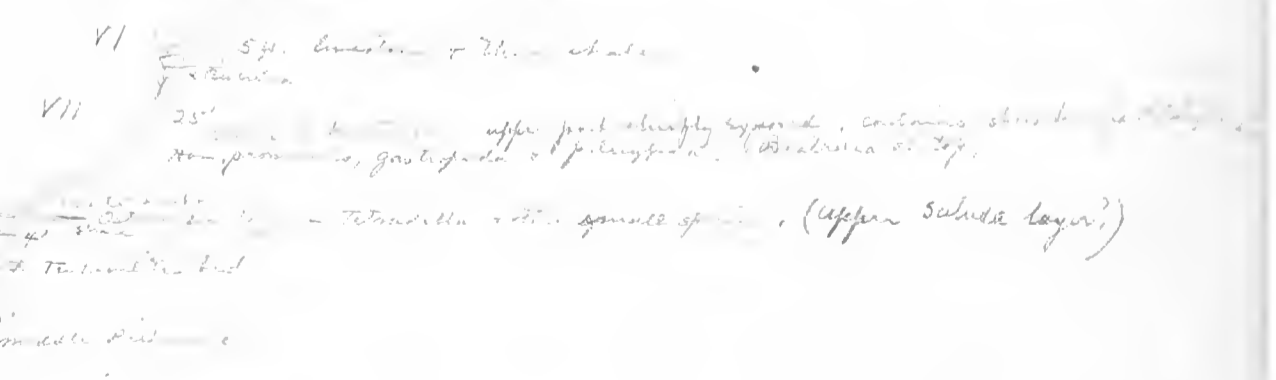


? Lower Solida water

Elkhorn creek.



1 1/2 - 2 m. west of fork.



(upper Solida layer?)

Oct. 3, 1914

St. Ignace, Michigan

(27)

Went 30-40 ft. range of Dalmanella...
10 ft or so of a restricted zone...
and Dal. subquadrata - the latter two found...
possibly from near rocky beds

Madison, Ind.

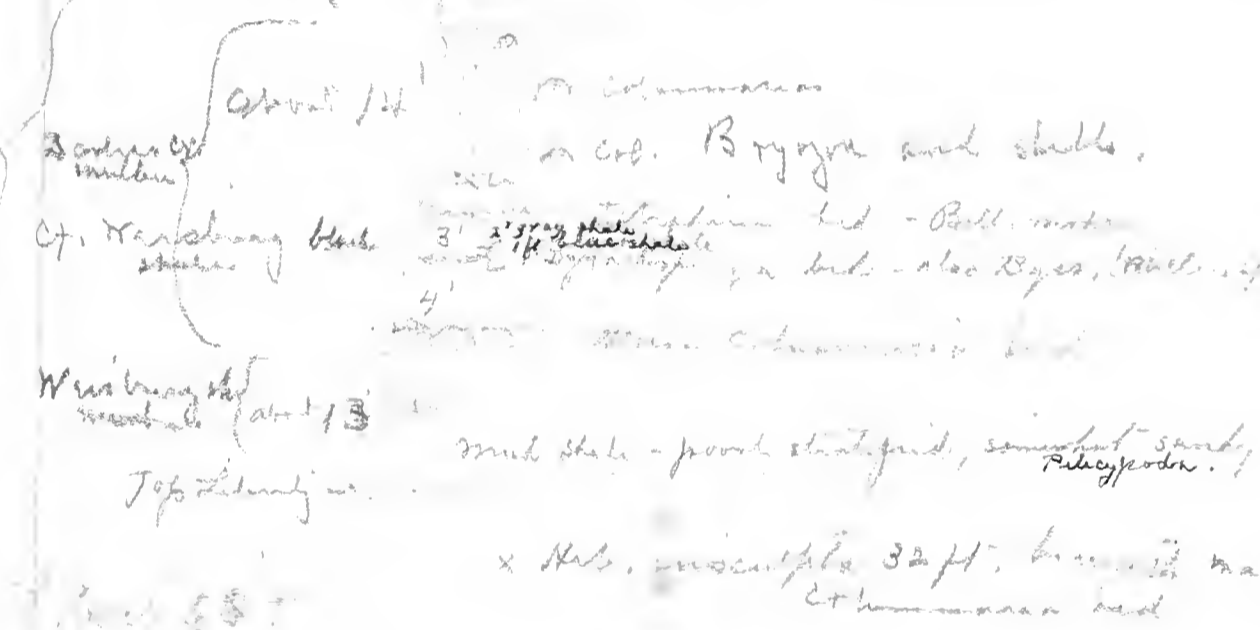
Linnell

1:15 - 2:00

Photo Roll III, 2



Photo Roll III, 2
big cut



Highly fossiliferous... contains more than the...
Oxford zone

Observed no large Platystrophia in...

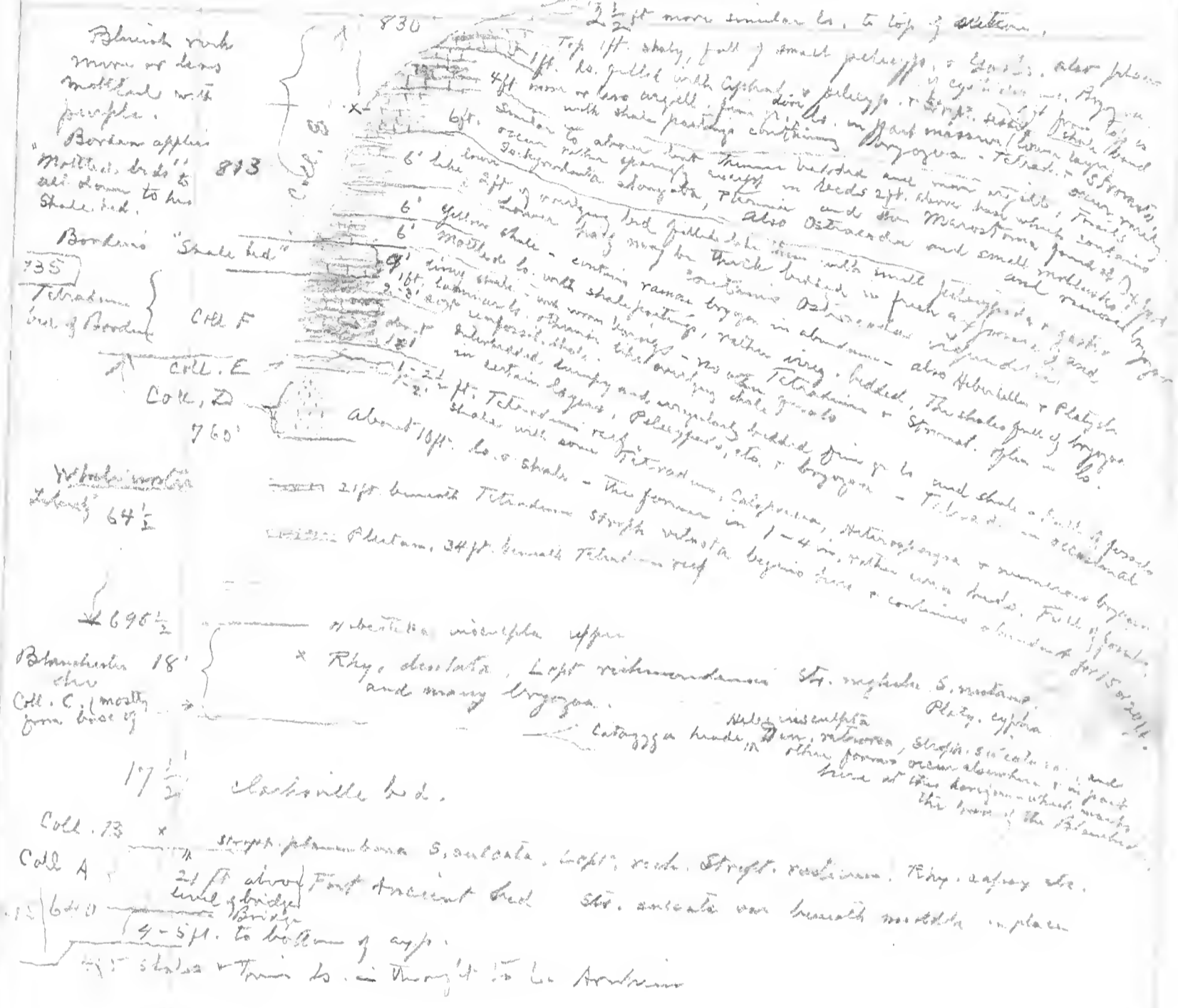
Limestone at base, with Dal. & Raf.

MT section... Platystrophia...
near Raf. to top.

Comp. 50'

Bed 25-40' Platystrophia...
Gyrodonta abundant.

Versailles, Ind. Along road north from square to
 Longway creek. 830 29
 Oct 10th 1913. W.H. Fossils.

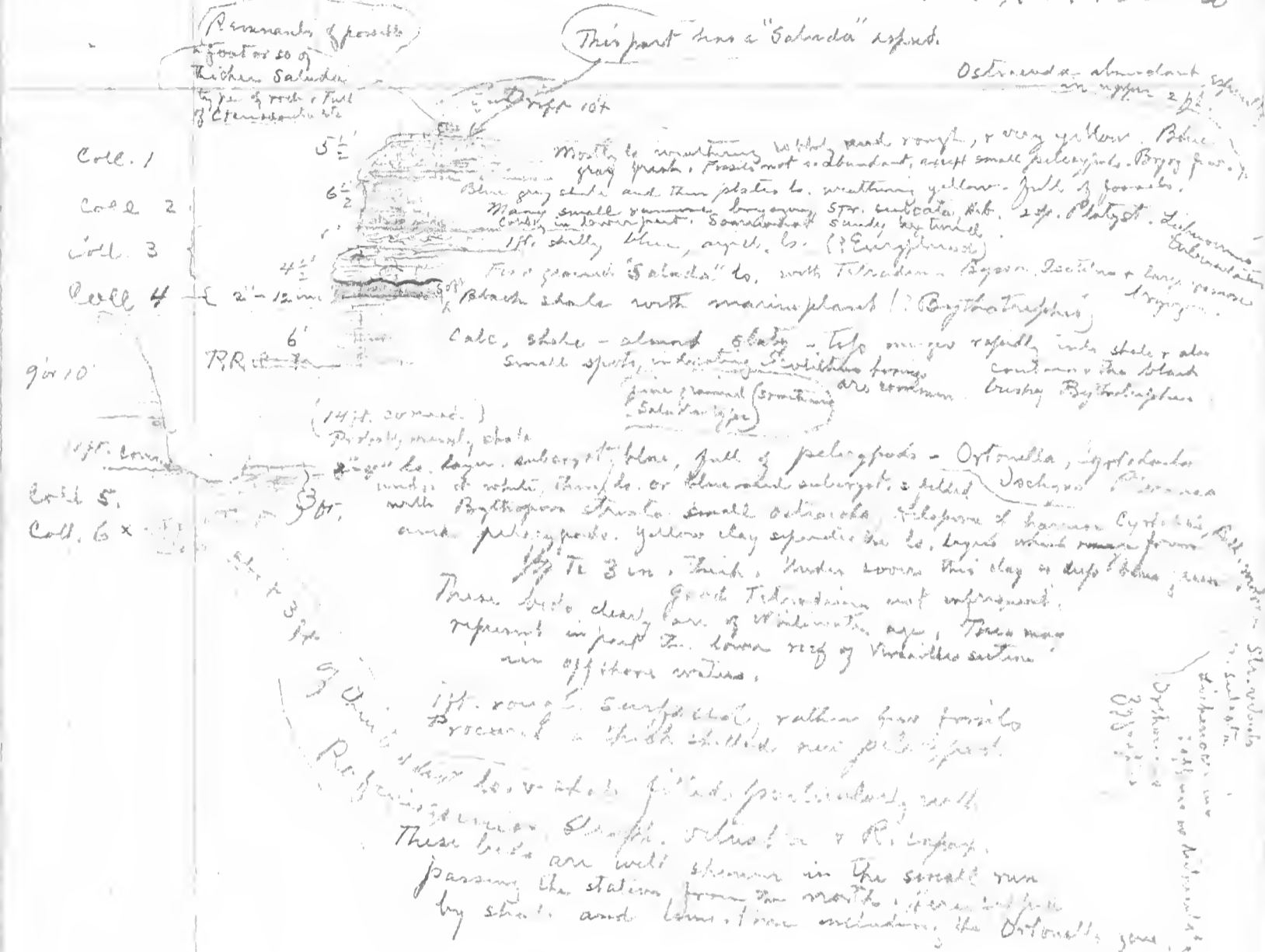


29.

Wesburg, Ind. Sunday Oct. 12, 1913

Wm. A. F. Foerste

31

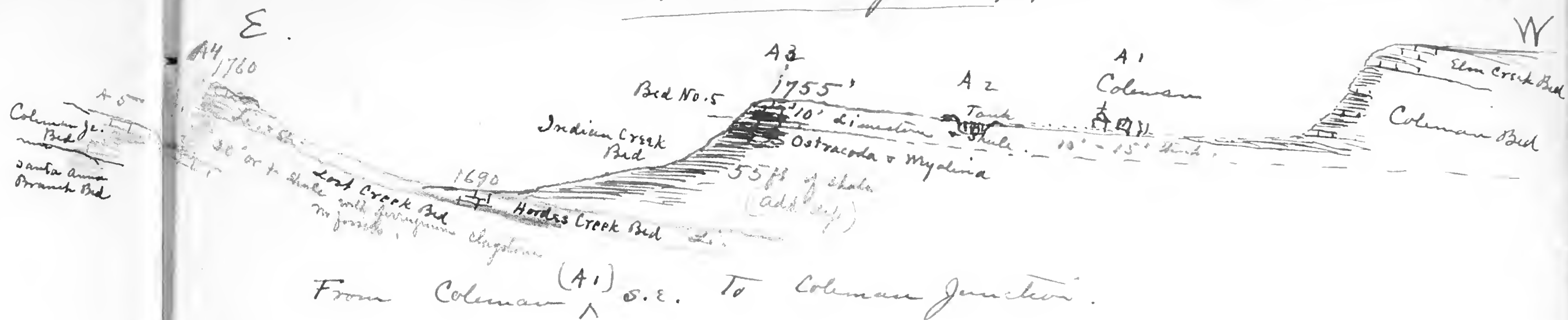


31

Sept. 30 + Oct 1, 1914.
 With Butts.
 Working To Bonnet, Ind.

33

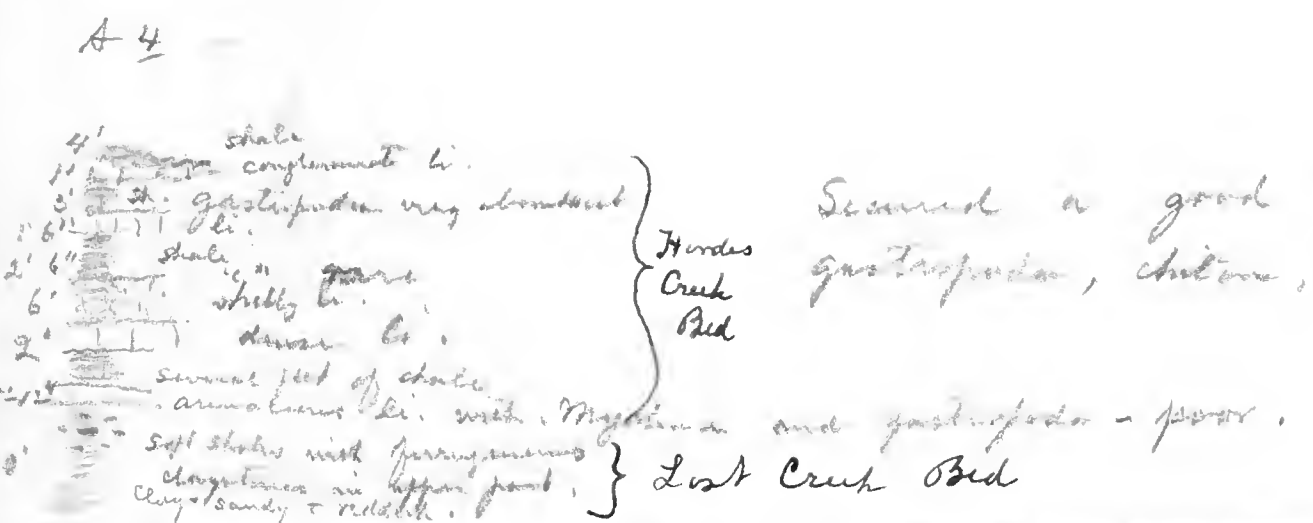
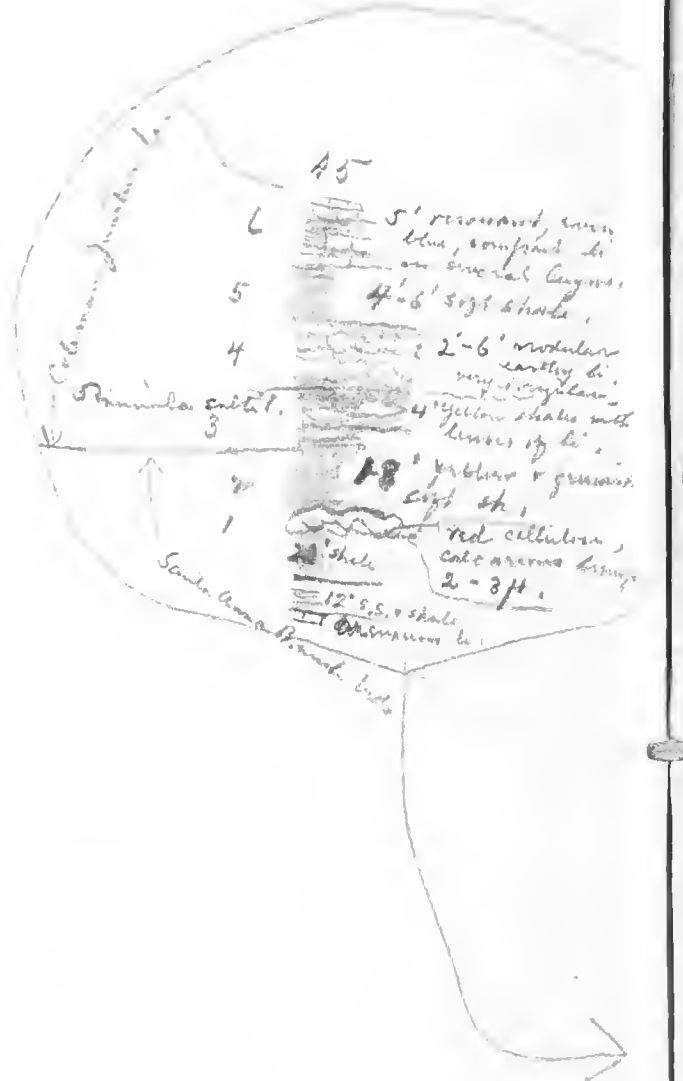
Base *Whitewater* *Ischyrodonta* beds a branch of *Wardens*
 do. use that parting of 2 in layers *Pleurocyclus* con.
 3 ft 2' *Ischyrodonta* *Whitella* *Rhynchotrema* *Strophomena*
 12' *Strophomena* *Rhynchotrema* *Whitella* *Strophomena*
 3'-5' { 2' *Whitella* *Rhynchotrema* *Strophomena*
 3' *Whitella* *Rhynchotrema* *Strophomena*
 4' *Whitella* *Rhynchotrema* *Strophomena*
 5' *Whitella* *Rhynchotrema* *Strophomena*
 3 1/2 - 4' *Whitella* *Rhynchotrema* *Strophomena*
 4' *Whitella* *Rhynchotrema* *Strophomena*
 10' *Whitella* *Rhynchotrema* *Strophomena*
 30' *Whitella* *Rhynchotrema* *Strophomena*
 10' *Whitella* *Rhynchotrema* *Strophomena*
 35-60' *Whitella* *Rhynchotrema* *Strophomena*
 7' *Whitella* *Rhynchotrema* *Strophomena*
 10' *Whitella* *Rhynchotrema* *Strophomena*
 20' *Whitella* *Rhynchotrema* *Strophomena*
 22' *Whitella* *Rhynchotrema* *Strophomena*
Whitella *Rhynchotrema* *Strophomena*
Whitella *Rhynchotrema* *Strophomena*
Whitella *Rhynchotrema* *Strophomena*
Whitella *Rhynchotrema* *Strophomena*



From Colman (A1) S.E. To Colman Junction.

At A 2 the limestone, which forms the floor of the slightly inclined plain upon which the ^{the n.e. of} Colman is situated, is well exposed in a ^{small} dug tank. The soil is shallow, rarely over a foot, but the li. shows effect of subterranean 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 *Prinia* of which no good specimens were seen, is next. Spines of *Archicrinurus* abundant. ^{At depth a layer of yellow sandy li. 1-2' thick, has some fossils - belongs to lower part of this bed.}

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 ^{is yellowish, micaceous bedded, with calcareous shale separating them.} Beneath the limestone there are 50 ft. (or more) shales, all but the upper 10 ft. of which is soft, yellowish, or greenish. The upper part is more or less micaceous 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.



Secured a good lot of fossils in S.E. part, especially small gastropoda, chitons, bryozoa + Myalina (possibly same as L. A. 3)

- A. 5. No 1 is a very striking bed, seemingly consisting of series of micaceous lumps of consistent origin.
- No 2. No fossils.
- No 3. The shale and li. lenses contain *Archicrinurus*, *Hastulites*, *Semianella*, *Dalmanella*, *Dalmanella*, *Derbya*, *Proclitus* and a *Stenotopone*.
- No 4. is fossiliferous - gastropoda, *Archicrinurus*, *Septopora* - but good forms rare.
- No 5. No fossils seen.
- No 6. Contains small brachiopods, ? *Knottella*, *Can. mormoni*? Not good.

Sept 26th 1903



A5. Exposed argillaceous li. breaking up into thin spalls under weather. Color varies from white or gray to blue. Contains *Panama*, *Ammonites*, *Schizophoria* and *Trinitella*. Also *Eumorphodes*.

Between A7 & A8 there are three thin limestone from which no recognizable fossils were seen.

A8. Exposed li. - fossil, shale in a bank and gently ^{abundant} east of Santa Anna. Fossils plentiful. In shales at top of *Trinitella*, *columna*, plates and spines of a *Zeacrinus?* are abundant with a small *Sesamoides*, also common *Panama*, *Trinitella*, *Ammonites* and *Archaeodonta* less common. *Trinitella*, *Siphonaria*, *Panulopsis*, *Polydora*, *Fossilipora* and *Rhynchopora* *leptodes* occur. In the more calcareous parts *Trinitella* (large variety) and large *Dorlogas* abundant. Also a coral a *Siphonaria*-like sponge, and numerous fenestrate *Logozoa*. *Chonetes granulifera* also.

A9. A 1 ft li. exposed in road is full of small *foraminifera* (circled) apparently not found with them in *Murchisonia* or *Trinitella*. No other fossils recognized.

A10. Beds much like those at A8 exposed in bank, only the limestone is lighter colored, replace the top layers which carry few fossils and are nearly white and marble-like. Lower 2/3 with fossiliferous shales of which I took a lot or so for washing. *Trinitella* occurred fairly abundant. *Trinitella* *columna* 1/4-1/2 in dia. and *Archaeodonta* are most abundant fossils. *Chonetes granulifera* not seen, but other brachiopods are.

A11. A 2-3 ft. white, nodular li., reminding of *Cretaceous* rock, exposed about S.S. in R.R. cut. No fossils seen. Limestone + sandstone from escarpment. Between A11 + A10 there are thin limestone, unfossiliferous, separated by 20' to 25' sh. from each.

A12. About 10 ft. of limestone exposed in *Murchisonia* creek. Fossils very few except near base where a thin layer contains numerous *Trinitella* and at top where a shale includes irregular slabs largely made up of same *Trinitella* (*Trinitella*) and an occasional coral of same species as occurs in A5. Appears to be a *Clampophyllon*. The *Panama* occurs only also in *Trinitella?* or concentrically plated *Trinitella*. Exact horizon of coal seam was not seen. As near as we could learn it must be something like 75 ft. beneath A12.

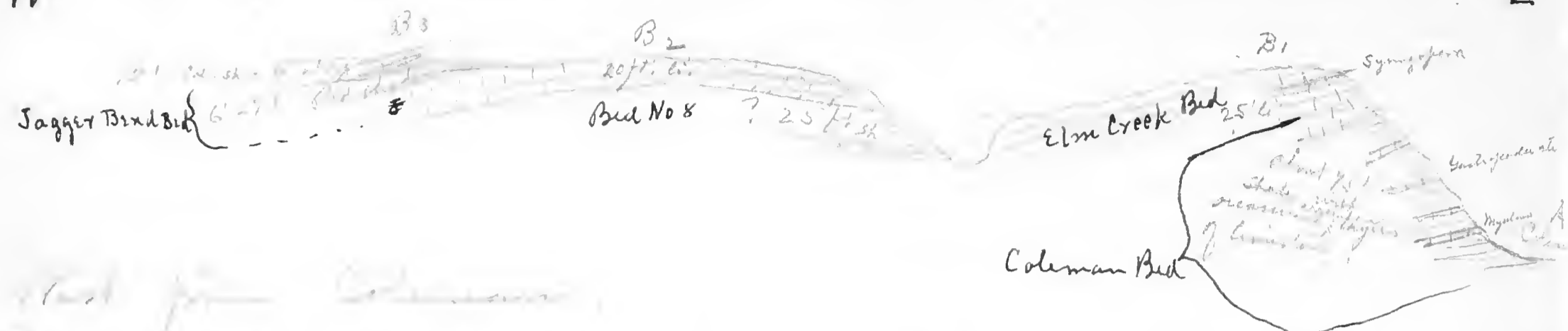
Sept 28th
Rear

Sep. 29th 1933.
Very breezy + rain all afternoon.

2nd #

W

E



Bed from Coleman.

B1. This locality found a disjunct - paleontologically, it has much at least brought to light some phylloporids, a sharp-edged *Mytilus* being fairly good. A small *Naticopsis* also good. Poor *Bullerophoria* and all that. Should also mention of *Nautiloid*.

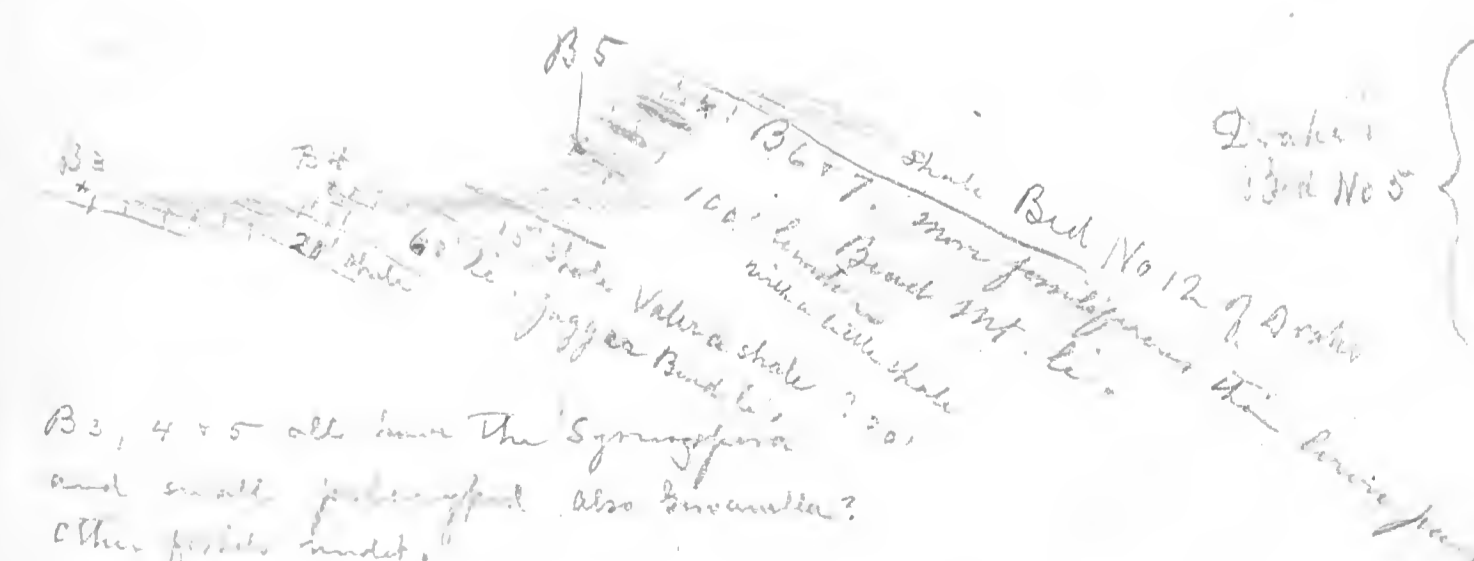
About middle of section a layer with *Murchisonia*? It occurs also in perhaps all of the 1 li. layers but as very poorly preserved.

At top of section about 25 ft. of limestone (Elm Creek li.) and shale - Reservoir of Coleman. In middle of this bed found small tubed *Syngaster* (may be something else as it seems to have two tubular) 2 single *Synonchus* shells, one large.

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

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

Sep. 30
along railroad from Coleman via Valera, toward Talpa.



B5. A1a afforded more fossils (a fine lined *Productus*) of the A102 types + *horizon*.

A1b. is a r.r. and afforded large *Synonchus* + numerous *Rhynchonella* + ? *Stereostrophia*.

B3, 4 + 5 all have the *Syngaster* and small phylloporid also *Synonchus*? Other fossils indist.

B6 was fairly fossiliferous - large *Synonchus*, large *Almonia subcuneata* etc. *Pinna*.

B7. 10 ft higher than B6 and near top of Bed No. 8. Same fossils as at B6 with *Phylloporid* in addition.

Section Valera to Ballinger along Railroad.



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

Get total thickness from about figures and difference in altitude shows on topographic sketch.

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

Fossils mostly fenestellids
& Siphonaria, 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' ls.
 15' red clay shale + earthy ls. Fusulina, Stenopora etc.
 100' shales + a little s.s.

1/2 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.

Center of eastward dip of Carr Shale. Also see page 20. 20' sandy sh.
 20' s.g. gritty s.s.
 125' mostly olive sh.

Near Canon S. 25' ls. containing Campophyllum, Syntetradium + Productus longispinus etc.
 65' shale

Top of hill west of stream to 5 miles west. 20-25' ls. Pr. longisp. very abund. Rhynchonella bed

Hill west of stream 80 ft. shales
 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 lapped Productus
 10-30 ft

Pale Alle 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.]
 s.s.
 large Productus etc found at Thurber.

Coal No 2. Thurber + Stream View

N.W. Dip 30-40' per mile



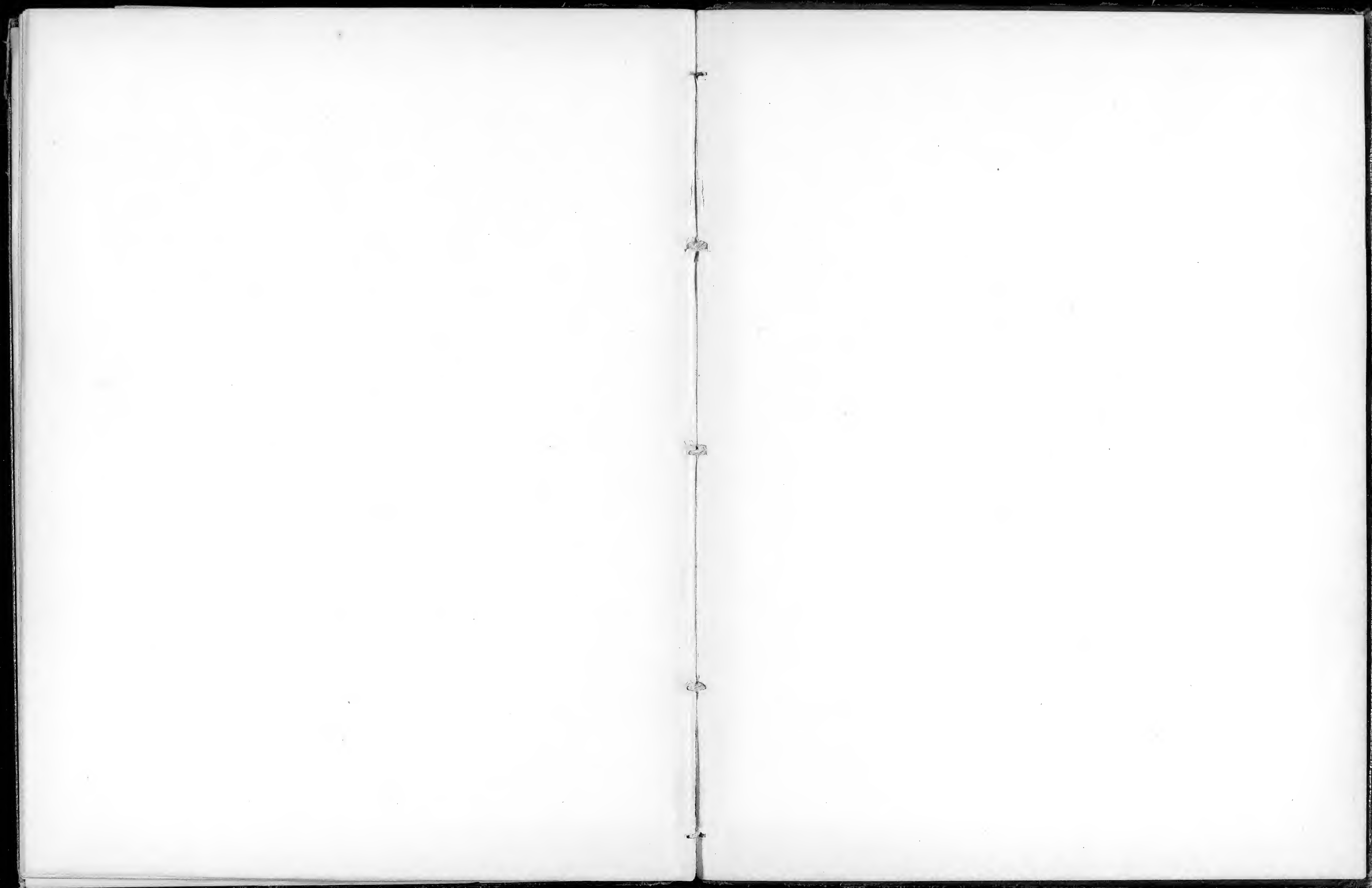
Generalized section in vicinity of Sycamore, Tex.
to show stratigraphic relations of fossil horizons.

Deep creek about
8 m. S. of Sycamore

2 1/2 m. N.W. of Tulsa, Tex.

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

4 m. N.W. of section town
2 m. N.W. of Sycamore



Elevations in S.W. Wis. Lead Region.

<p>A</p> <p>Amston 849 Albany 818 Argyle 808 Benton 878 Broadhead 798 Brooklyn 978 Bum 1078</p> <p>B</p> <p>Blunckardville 758 Bloomington 905 Burlington 762 Big Patch 817 Belmont 828 British Hollow 865</p>	<p>C</p> <p>Cassville 608 Castle Rock 847 Cross Plains 1198 Columbia, depot, 812 Cading 889 Clarno 935 Darlington depot 802</p> <p>D</p> <p>Dayton 818 Dickinson 934 Ellenboro 689</p> <p>E</p> <p>Elk Grove 898 Finnimore 1168</p> <p>F</p> <p>Fairplay P.O. 798 Fayette 1053</p> <p>G</p> <p>Glenn Haven P.O. 606 Grateford, depot, 783 Hurricane Grove 941 Homer P.O. 978 Hazel Green 938 Highland P.O. 1161</p> <p>H</p> <p>Jordan 858 Jonestown 912 Joda 821</p> <p>I</p> <p>King Mills 723 Mount Hope 1076 Mount Ida 1168 Mountfort 1093 Mifflin 808 Meehan Grove 835 Mineral Point depot 935 Martin 865 Monticello 858 Minor, constant 1018</p> <p>J</p> <p>Jordan 858 Jonestown 912 Joda 821</p> <p>K</p> <p>King Mills 723 Mount Hope 1076 Mount Ida 1168 Mountfort 1093 Mifflin 808 Meehan Grove 835 Mineral Point depot 935 Martin 865 Monticello 858 Minor, constant 1018</p> <p>L</p> <p>Linden 1028 Liberty Ridge 1144 Lancaster constant 1080 Little Grant 828</p> <p>M</p> <p>Mount Hope 1076 Mount Ida 1168 Mountfort 1093 Mifflin 808 Meehan Grove 835 Mineral Point depot 935 Martin 865 Monticello 858 Minor, constant 1018</p>	<p>N</p> <p>New Diggins 792 North Andover 838 New California 989 New Glarus 968 Oakley 918 Patch Grove 1060 Potosi 782 Platteville P.O. 835 Perry 1034</p> <p>O</p> <p>Oakley 918 Patch Grove 1060 Potosi 782 Platteville P.O. 835 Perry 1034</p> <p>P</p> <p>Patch Grove 1060 Potosi 782 Platteville P.O. 835 Perry 1034</p>
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Elevations at Cincinnati & vicinity.

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

