

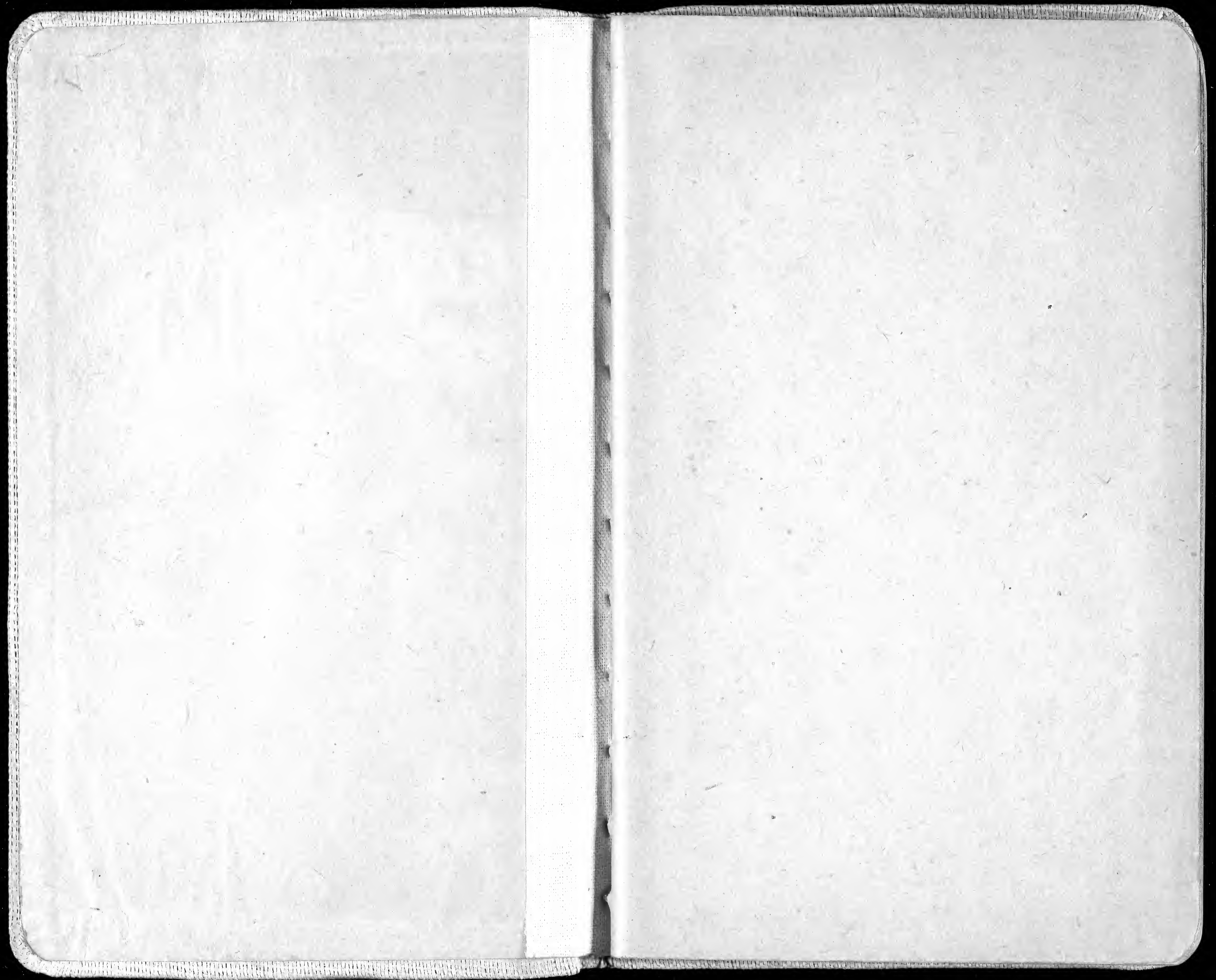
Halbur to Carroll  
1905

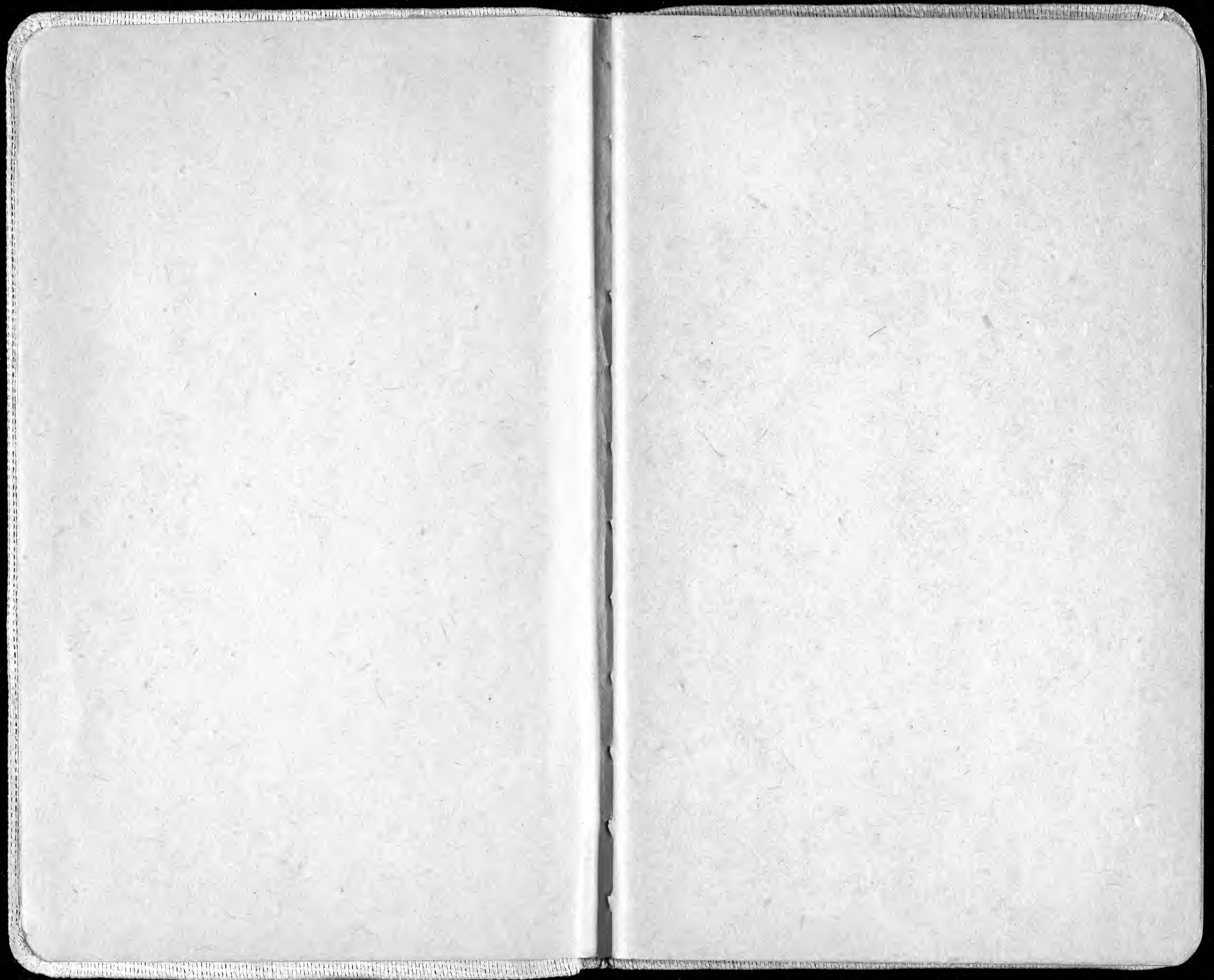
Golfax

Mo. Valley to Fremont  
Clarkson 1905

Hooper

Neola, Shelby &  
Atlantic.  
Lussemburg.





Halbur to Carroll, 1

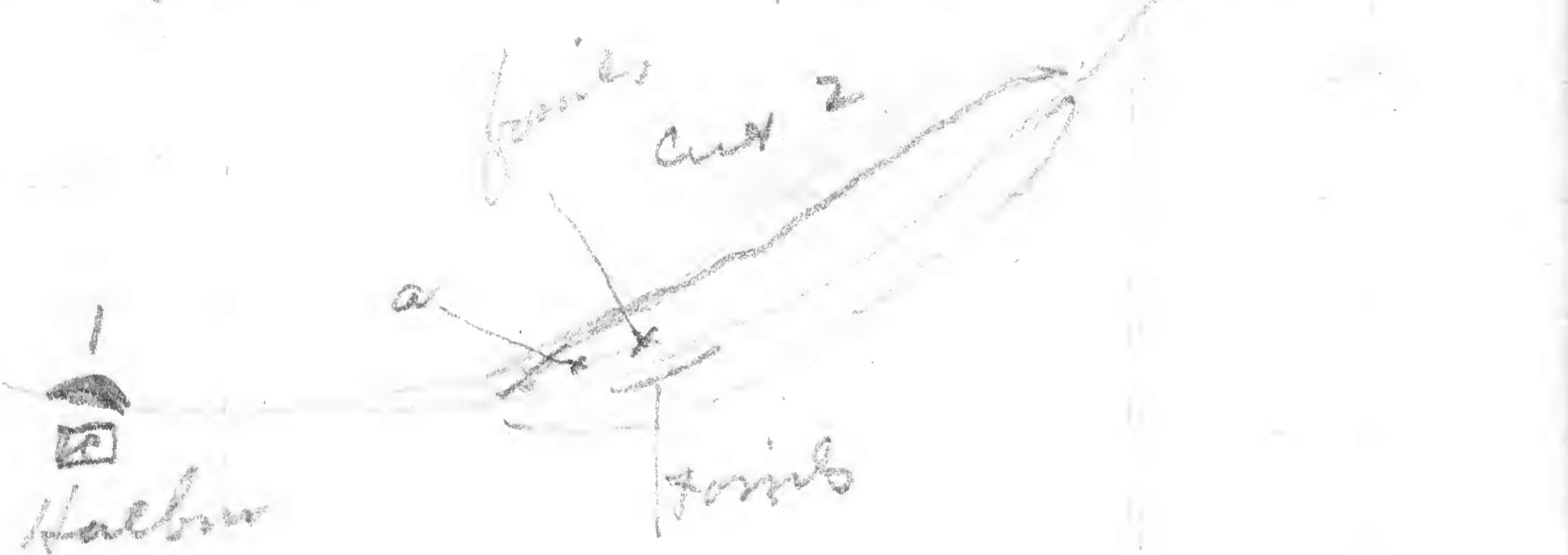
Apr. 17-1905

The country between Carroll and Halbur, - like all that to Council Bluffs, is rolling, and this part is typical Kansan loess. Left Carroll on the C.M. & St. P. at 6:20 AM. and reached Halbur after 7:00.

I followed the Chicago Gr. Western R.R. all the way, and the cuts along this road are numbered in the following notes beginning with No. 1, opposite the depot at Halbur. There are 24 cuts in all.

Cut. 1 Small cut, 8 ft. deep on W. side, opposite depot at Halbun. Yellow loess, without fossils.

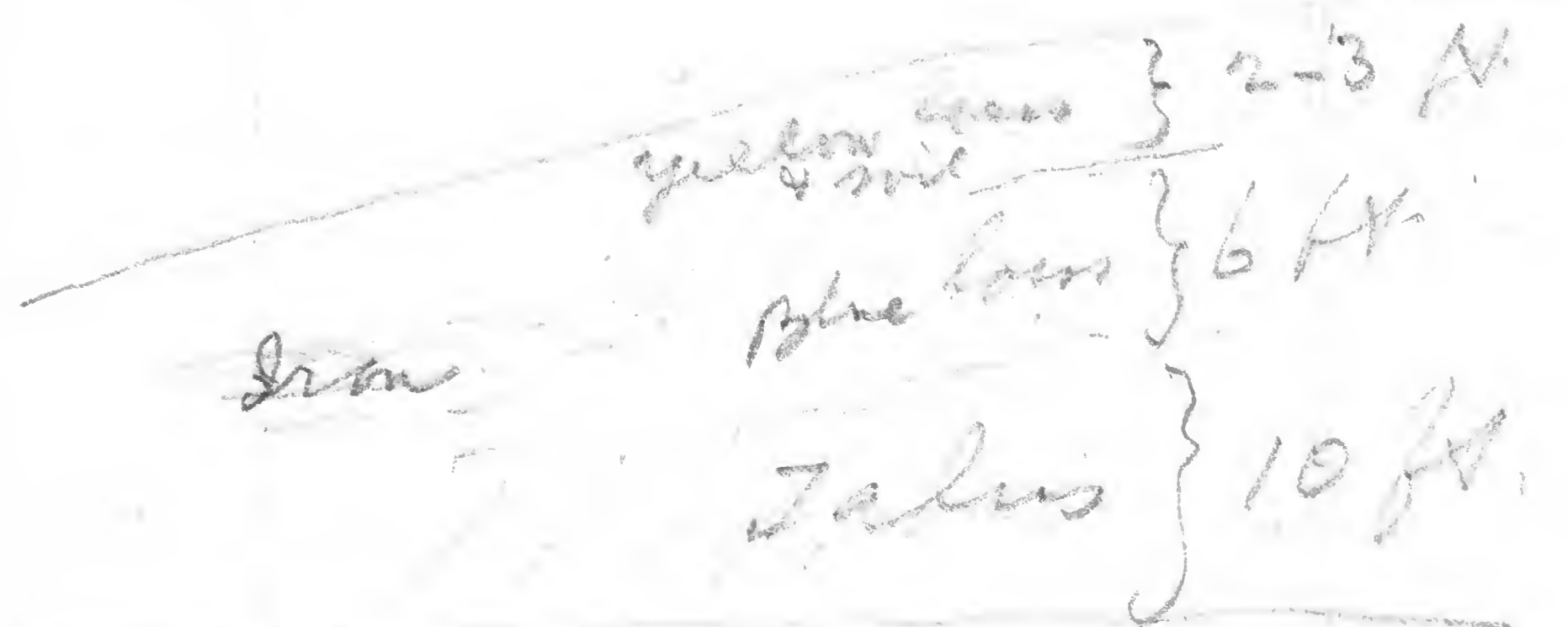
Cut. 2 - Long cut on curve. At (a) about 4 ft. below the surface there is a band of iron streaks, 2 1/2 - 3 ft. deep.



Below this band the loess is blue, with iron tubules and small nodules.

A little East (W.) of (a) the upper yellow loess and soil

are about 2 ft. deep, then a narrow iron band, and then I explored 6 ft. of blue loess, but did not reach the bottom. The lowest 2 ft. of this band contains fossils (see 2 boxes). In this blue loess were large iron tubes and a few nodules characteristic of blue loess. The iron bands at (a) all belong to the blue loess. The "blue" loess throughout is part. K... ..



Cut. no. 2

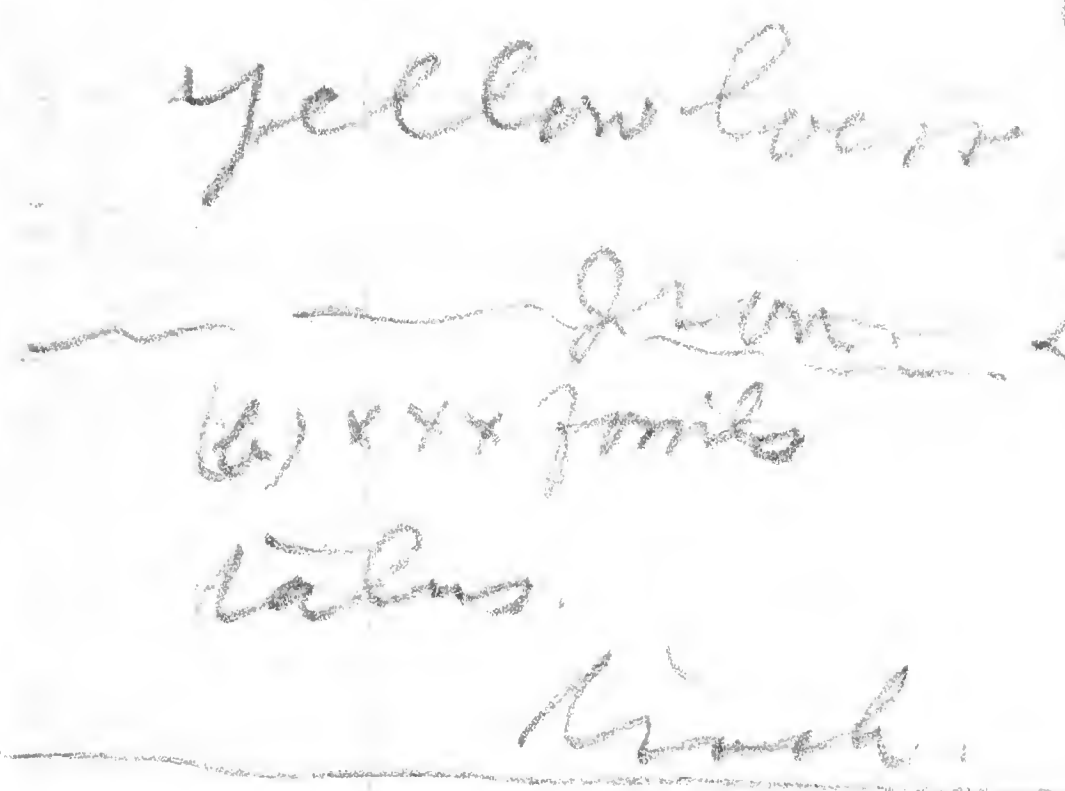


The upper part of the yellow loess is more or less columnar. This is part Wisconsin!

The lower is bryher, but still crumbly. Post-Dowan shows lamination when broken. (It does in all the other cuts, more or less clearly.)

The line between the Post-Wisconsin + Post-Dowan is not sharp, but the

N. + W. side



This yellow loess has root streaks of blue loess - a few fragments of Siamese in yellow loess.

The blue loess has iron tubes, some with blue loess core. It is putty-like, but shows lamination when broken. It does wherever I found it on this trip.

is a marked difference in their appearance. The post-Dowan weathers gray &

solid, and does not break into columns, as the good Wisconsin does.

On the E. side, opposite (b), the blue loam appears about the middle of the cut, and along almost its whole length. The loam is ferruginous. (See shells) Toward the N. end of cut the drift appears half way up or more - 12 ft. from bottom. It looks new.

No. 2 - 5.9, wide, not sharp

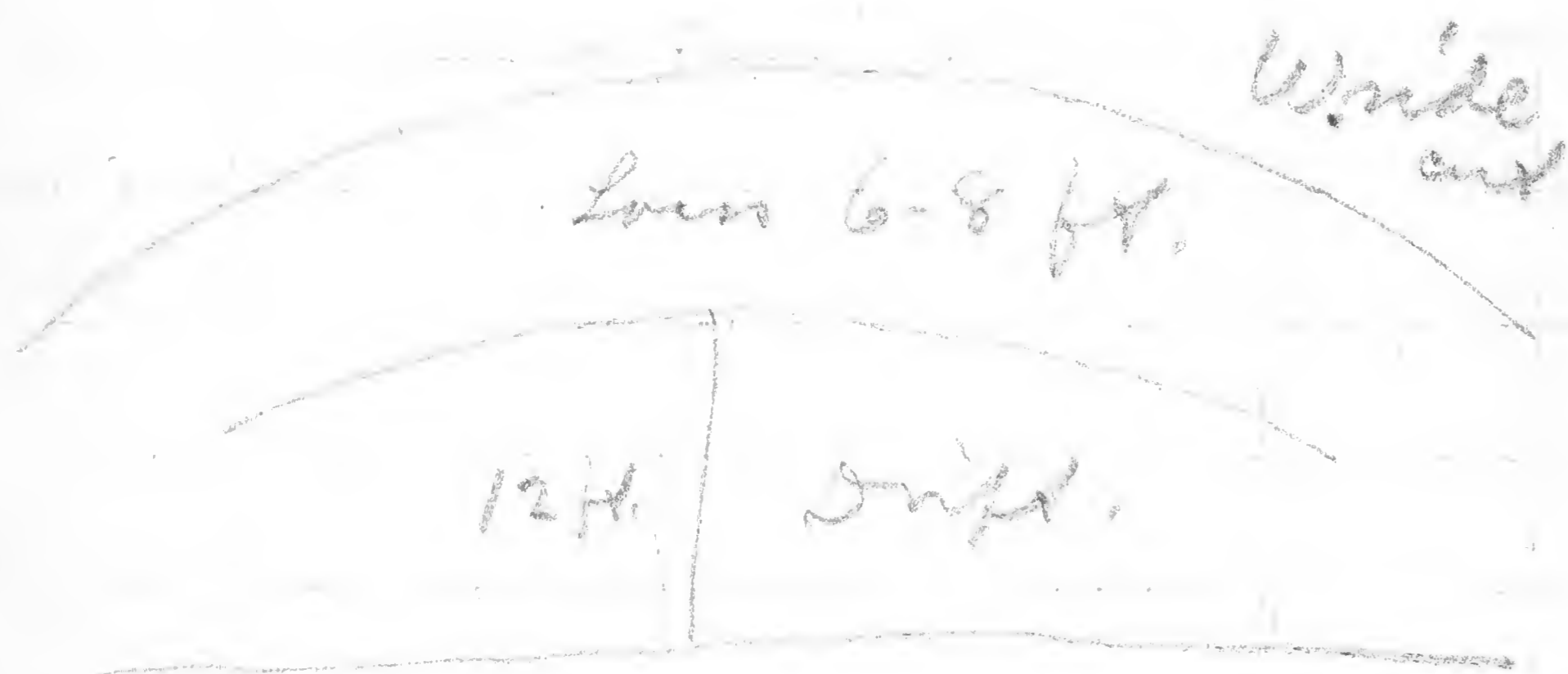
yellow loam

Blue loam

Dribby loam.

X-y is rim band - this is opp. to. - runs out, <sup>later</sup>  
The loam with <sup>later</sup> mill has iron & nodules, y in places black spots - It is not quite like the gummy blue loam, - breaks easily. Not satisfactory  
The yellow loam above (6-8 ft) is columnar bluish even smooth face. (Line between not all - Go back to this, when not frozen, sharp.)

Cut no. 3. is about 4 ft  
connects with 2



Both sides show much drift,  
but loam is chiefly on E. side  
is only 2 or 3 ft. deep.

The drift looks new, and has  
red (iron l.) pebbles, <sup>and blocks</sup> in it.

Also very irregular lime nodules.  
The line, as in no. 2, between  
drift and loam is not sharp,  
and there is no grumbe layer.

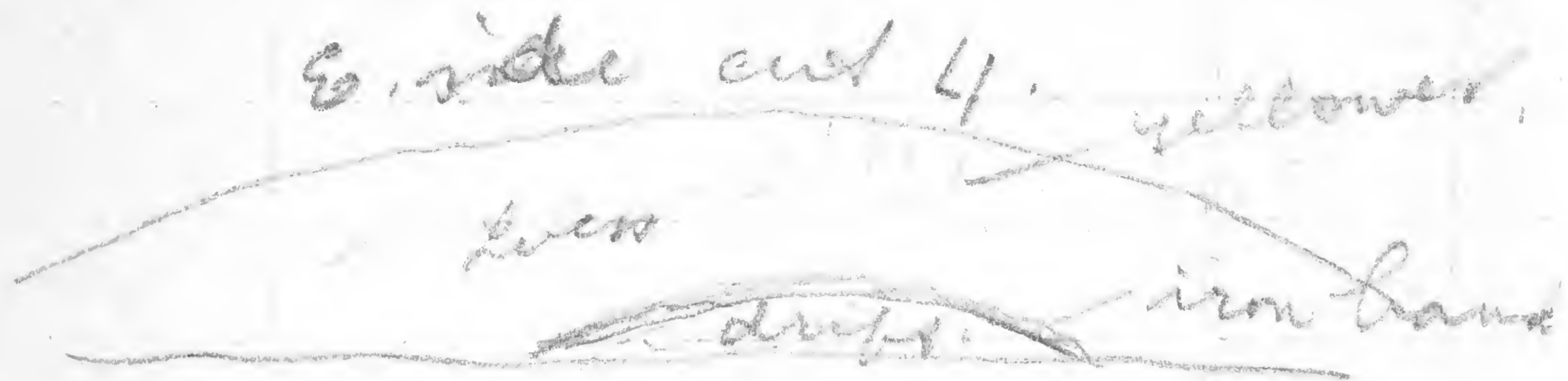
There is again, the same  
imperfect division into two loams.  
The lower has bluish streaks, is

more compact, contains fossils  
and nodules, and does not  
break away into columns.  
The upper is yellow & has columnar  
cleavages.

The loam in cuts 2 & 3 is  
nearly all laminated, especially  
the yellow loam with blue streaks.

Cut no. 4 is small, about  
175 paces N. of no. 3.  
It shows 2 or 3 ft. of drift  
below, and yellowish (not  
very blue, only streaked, - like  
ordinary post-Iowan) loam  
5-7 ft. The upper part is  
yellow. The lower loam  
contains fossils (see box).  
The <sup>lower part of</sup> loam is quite yellow &  
crumbles, but has bluish streaks  
(post-Iowan).





The Helicina oculta in box 4, came from E. side above iron band. The drift on W. side shows also only at S. end. This cut (4) is 160 paces long and 8 ft. deep on W. side & 7 on E. side.



Cut 5 is 130 paces N. of no. 4. It is 100 paces long, 10 ft. deep on W. side & 7 ft. on E. side.



All the loess is yellowish and there are some nodules in the lower, more compact (post-Jowan?) part. No drift appeared. There is a fine limy coating on a considerable part of the older surface of the loess, - especially on the lower, more compact part.

Going N. of cut 5 to mile post no. 428 = 440 paces, and to road under RR = 550 "

From cut 5 to 1 mile board N. of Halbur = 777 paces.

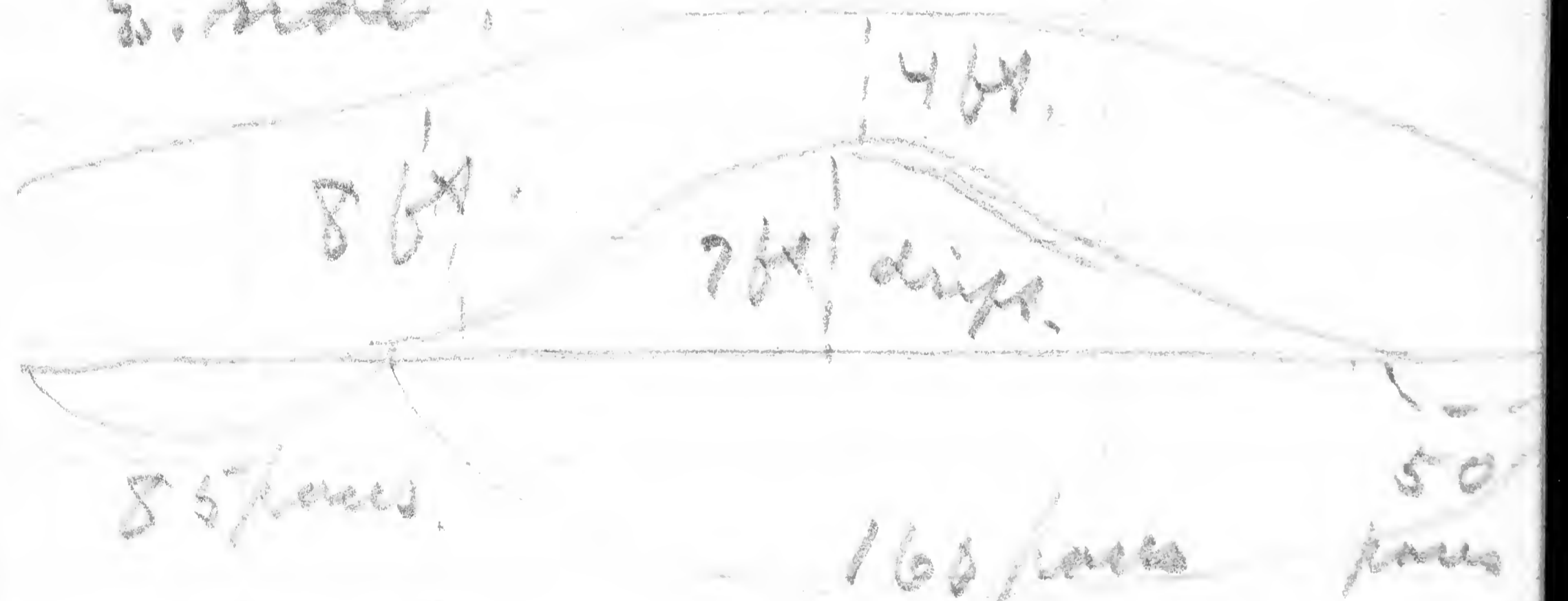
Opposite the mile board on E. side, is a low cut at foot of a longer slope, which seems to be about all drift. It is off the road a little

Cut 6 Begins 160 paces N. of 1-mile board. It is 180 paces long. It is about 7 ft. at deepest point. A long low cut. It shows drift - the reddish fresh Kanon drift of this region - all along, and on this there are about

5 or 6 ft. of loess. The lower part is again more compact, but all is yellow. The lower part contains fossils and nodules.

Cut 7 - is 125 paces from no. 6.

E. side.

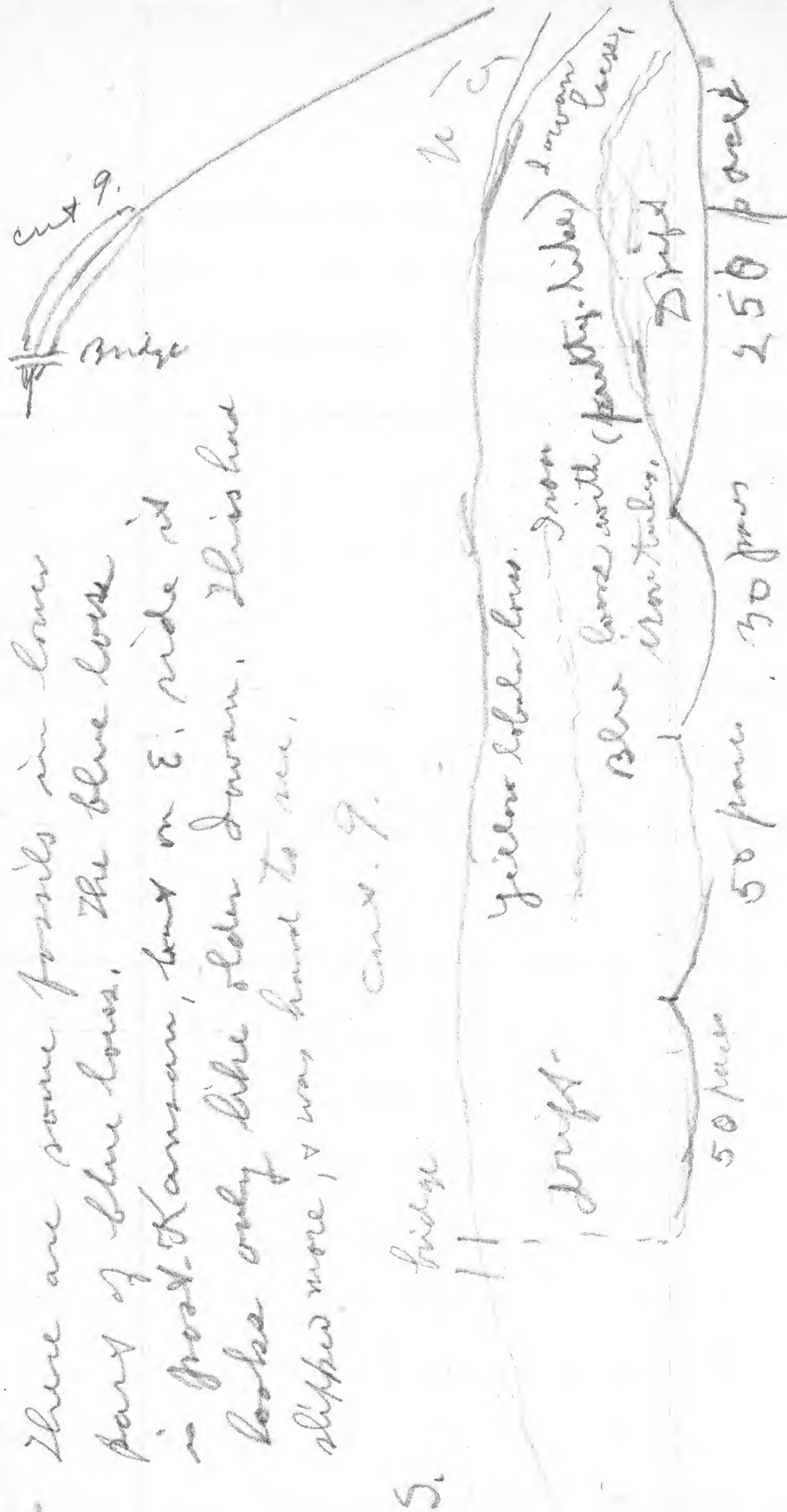


Saw only a few fragments of shells. Loess yellow, all this drift is quite yellow, with occasional blocks of gray Quartzite. See photo - drift

Cut 8 - is 160 paces long and 6 ft. deep. Shows only loess. It is 490 paces N. of cut 7.

Cut 9 - The track is straight from cut 2 (N. end) to beginning of cut 9, 165 paces N. of cut 8, at 427 mile post. (the cut begins about 30 paces S. of this. Overhead bridge 45 paces N. of 427 mile post. Cut 9 is 15 or 16 feet deep, & at about middle shows drift more than 1/2 way up. - Same yellow drift, to within 4 ft. of top in one place. Lime nodules very abundant in drift.

There are some fossils in lower part of blue loess. The blue loess is good Kansan, but on E. side it looks only like older down. This had slipped more, & was hard to see.



S.

Cut 10. - This is 150 paces  
N. of no. 9. It is 160 paces  
long & about 6 ft. deep.

It shows nothing but yellow  
loam, and is overgrown.

Cut 11 The track is straight  
for 820 paces from cut 10,  
then curves E., & 100  
paces further on ~~the next~~  
cut 11 begins.

cut 11

For 100 paces cut 11  
is only about 6 ft. deep,  
then iron band appears  
2 or 3 ft. from top, - the  
rest is obscure.

Fossils abundant in blue  
loam at 300 paces.

The blue loam seems to be  
about 15 ft. deep, only a

few boulders appeared at  
very base of cut at 300  
paces, - where cut is at  
least 20 ft. deep.

The red iron band is  
scattered over 4 or 5 feet, -  
but all this is blue loam -  
belongs to it. The soil  
and yellow loam are  
only about 3 ft. deep  
here.

The drift toward N. end  
thickens.

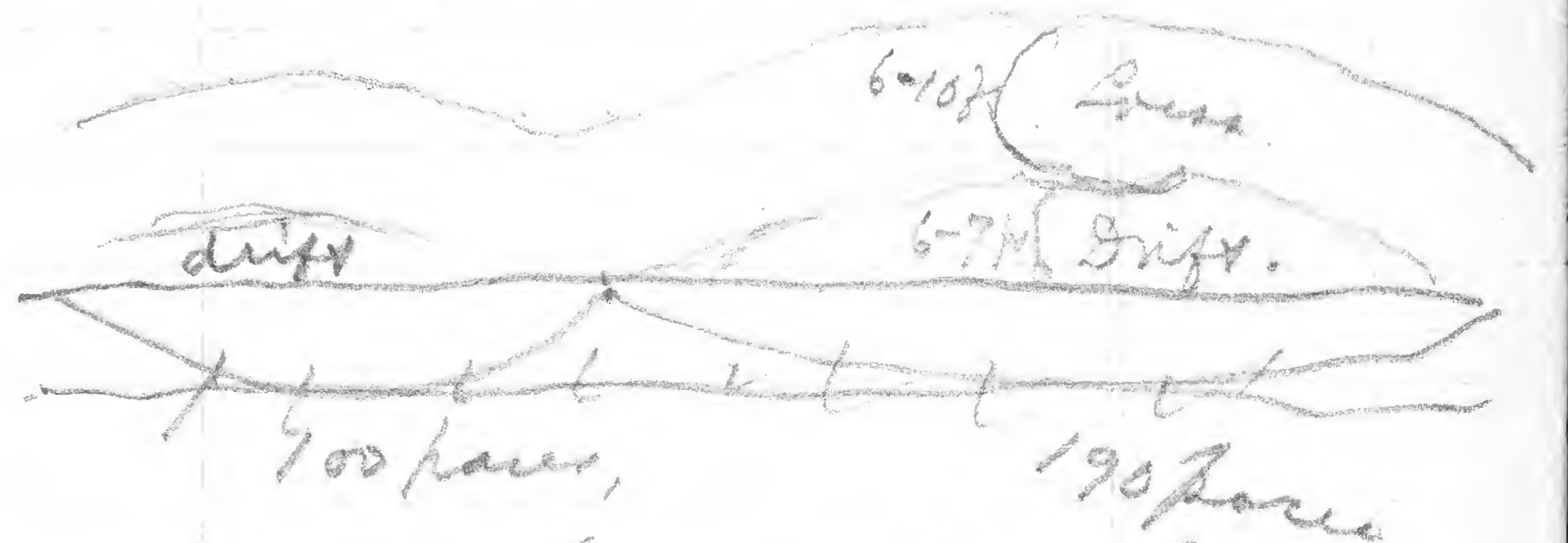
On E. side there are 6-8 feet  
of yellow columnar loam, then  
a red band, and below this  
the blue loam.

Cut has slipped more or less.  
It is 250 paces to road  
under RR. from end of cut 11.



19

Cut 12 begins 385 paces from  
end of cut 11.



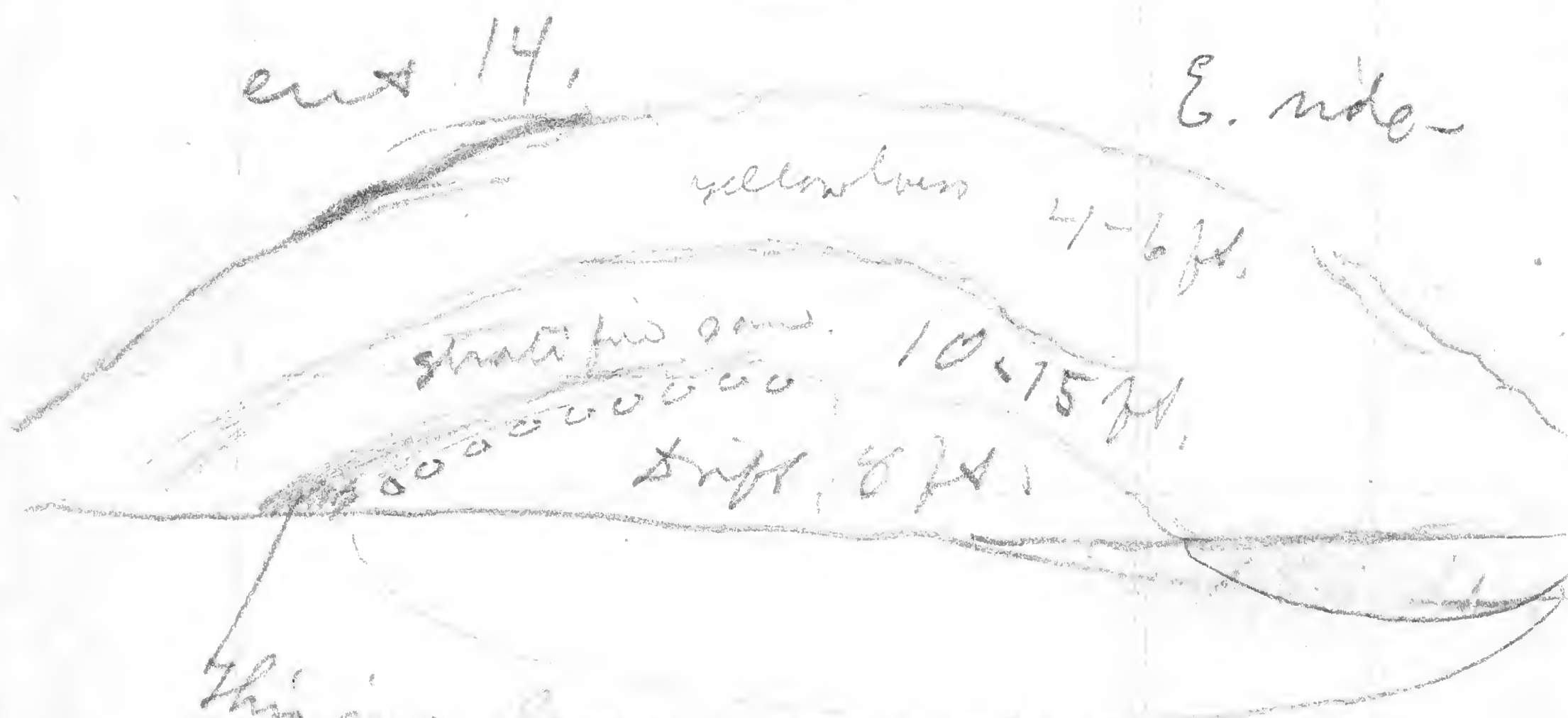
All the loam is frost down,  
but more firm below, (as is  
shown on eroded surface)  
Drift is yellow & has red  
boulders.

(See shells.)

The lower 3 or 4 feet of  
loam is gray, (streaked)  
and has shells.

Cut 13 - is 440 paces N. of cut 12. It is 110 paces long, about 7 ft. deep on W. side and 5 ft. on E. side. Shows little but yellow loess.

Cut 14 is 30 paces N. of cut 13. At 65 paces drift begins  
" 140 " " runs out.  
" 210 " " cut ends.  
(took photo 11/7)



This is a loess which looks like older <sup>part</sup> loess - 1-3 ft.

The sand is more or less interlaminated with loess - like Madison Exp. exposure. The stratification is parallel to the surface. Cut 14 is across a ridge running nearly E. or N. of E.

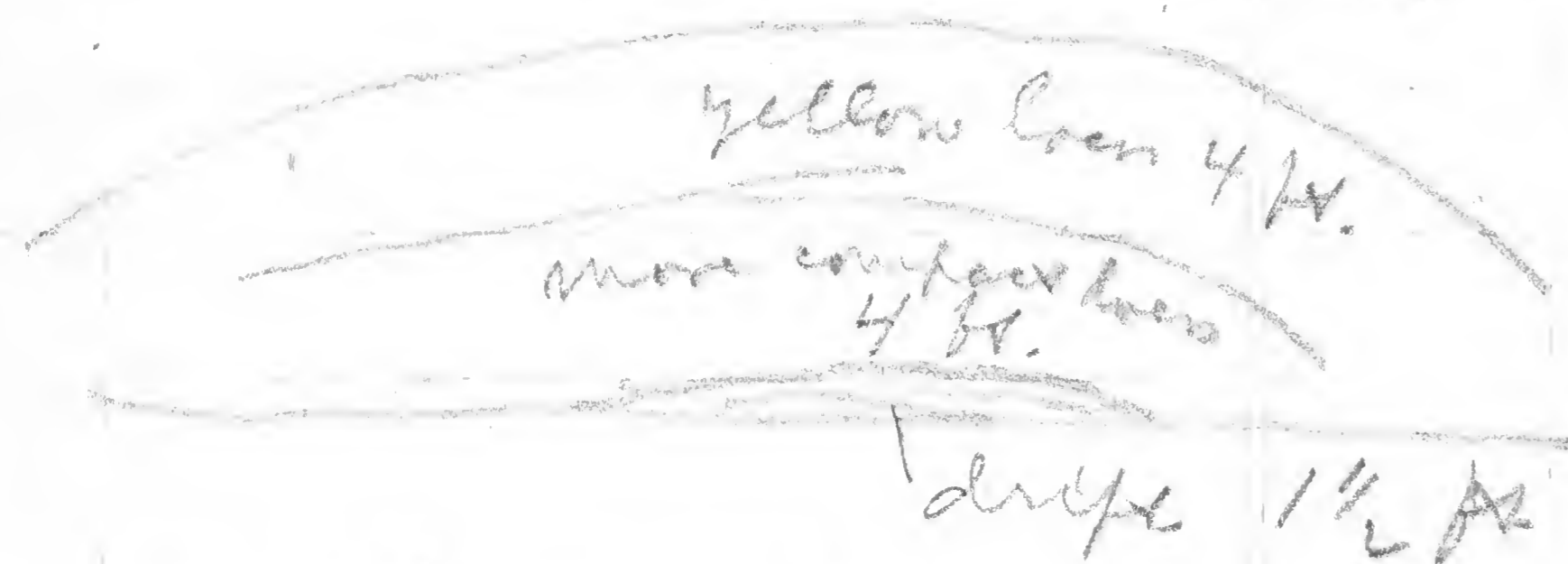
~~Cut 14~~ 15 - at 100 paces N. of cut 14 the track makes a long gradual curve to cut 15. 215 paces N. of cut 14 is mile post 425.

Cut 15 at 295 paces N. of mile post 425 is cut 15, - an insignificant cut 3-5 ft. deep and 45 paces long.

Cut 16 - is 45 paces N. of cut 15.

(Photo looking from cut 16 to cut 14 - plowed field & tracks)

cut 16 - W. side



The lower loess is yellow, but compact, & has shells and nodules. Also blue streaks. It is 100 paces long.

Cut 17 is 240 paces N. of cut 16.

It is 240 paces long and about 10 ft. deep. The greater part is drift, yellow below, blue above. The

drift shows clear to N. end. Contains big red boulders. A wagon road crosses track 80 paces N. of cut 17.

Cut 18, is just N. of road on E. side, and is a gravel pit. Like cut 17 in its make-up. 670 paces N. of road is another road, & on N. side this road,

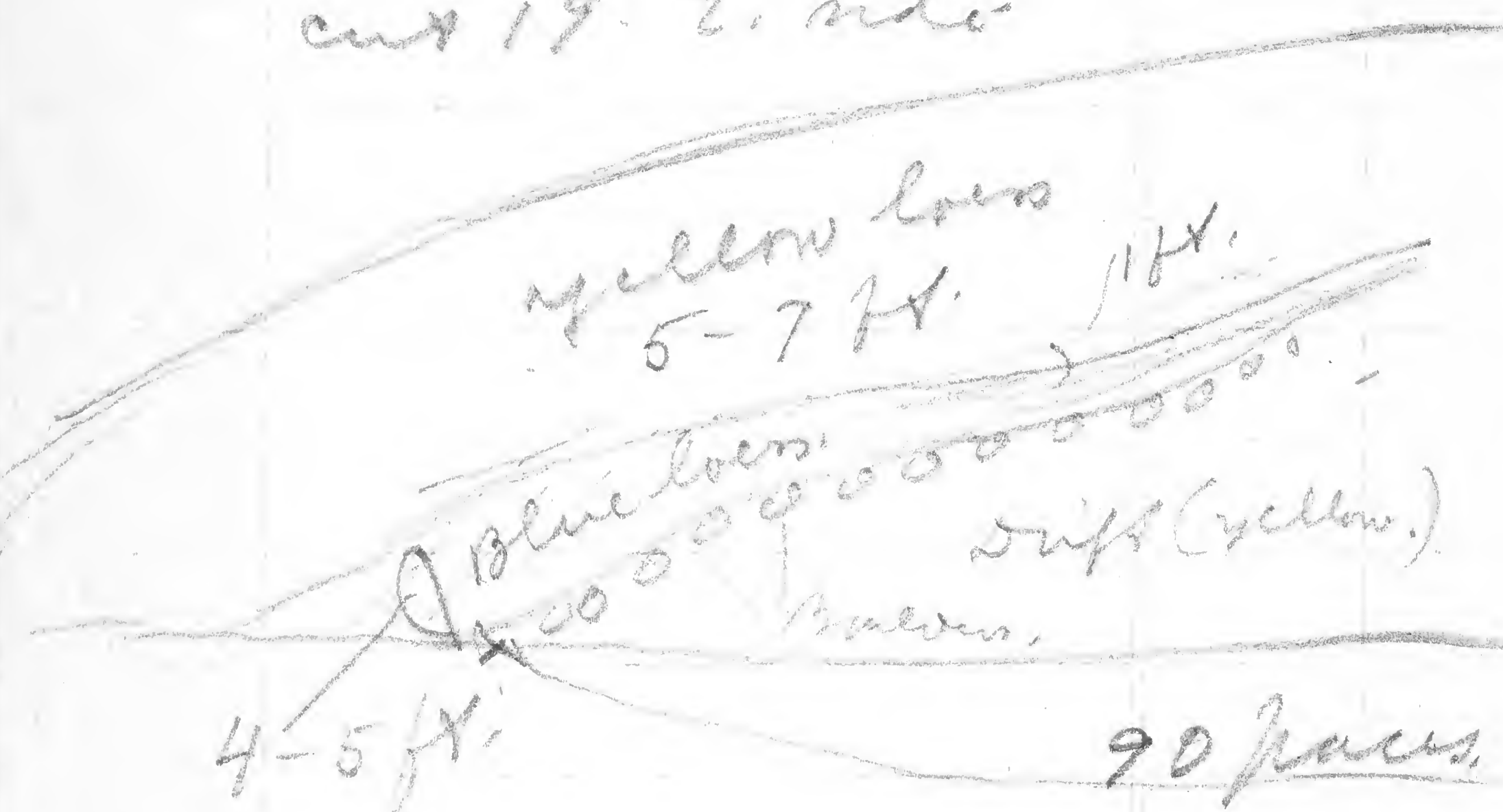


Cut 19 begins. The blue loess in cut 19 shows very large iron tubes (in layers) 4 in. in diam. they end abruptly in a very dark band in top of iron part. Lime nodules above in blue loess. The blue loess is separated for some distance from yellow loess by distinct

They do not extend into loess above.

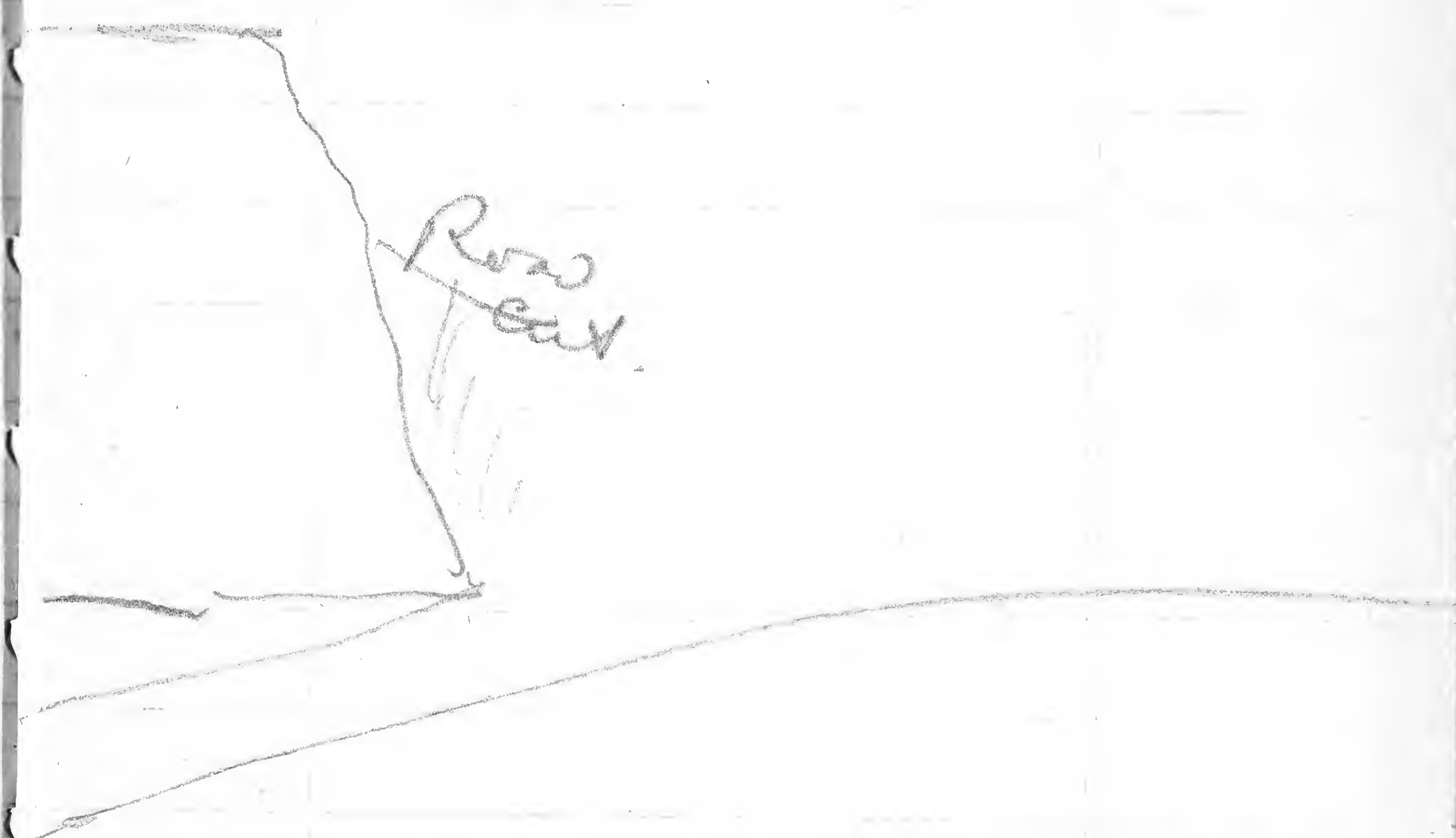
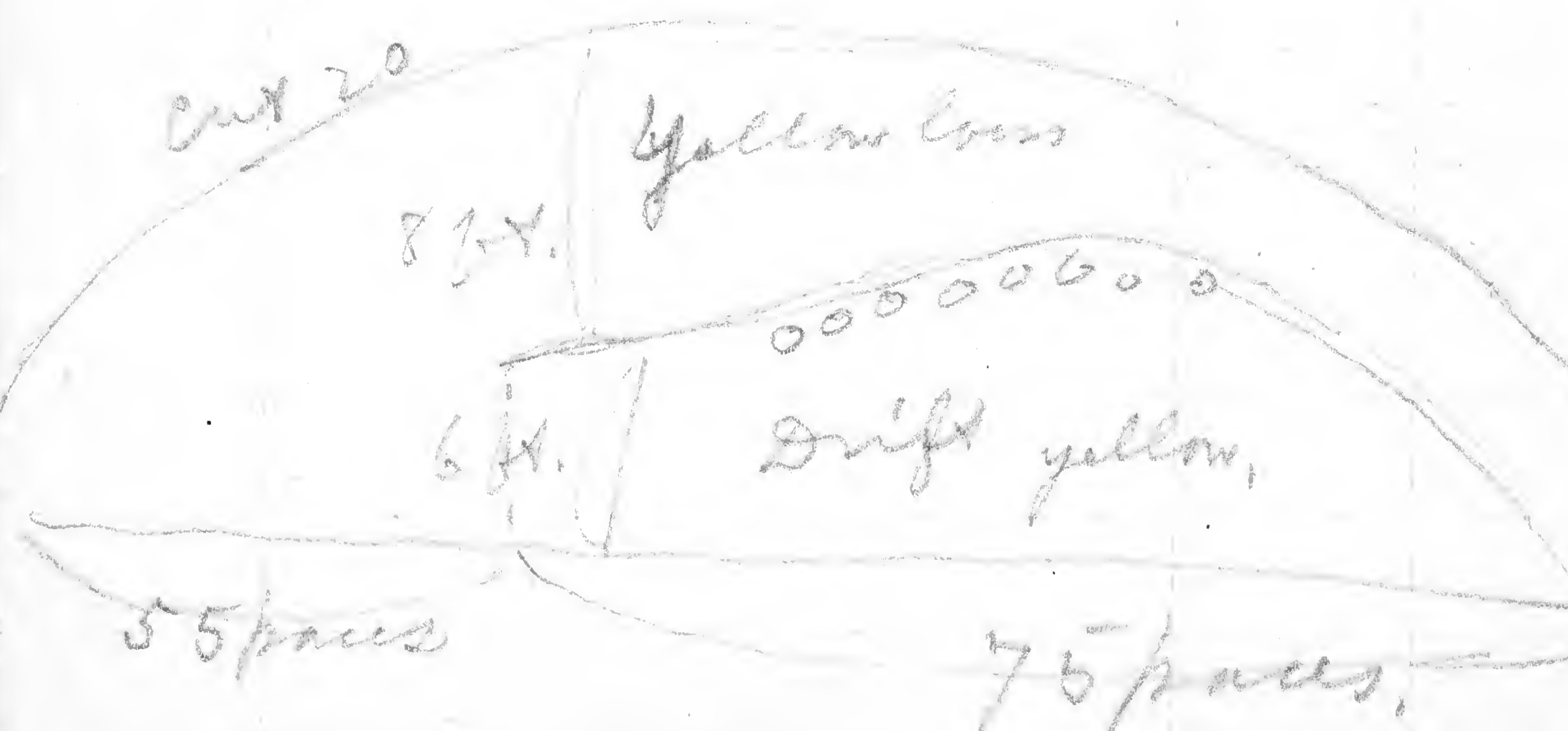
iron band.

cut 19 E. side



cut 20 begins 20 paces N. of cut 19. It is double.

cut 20

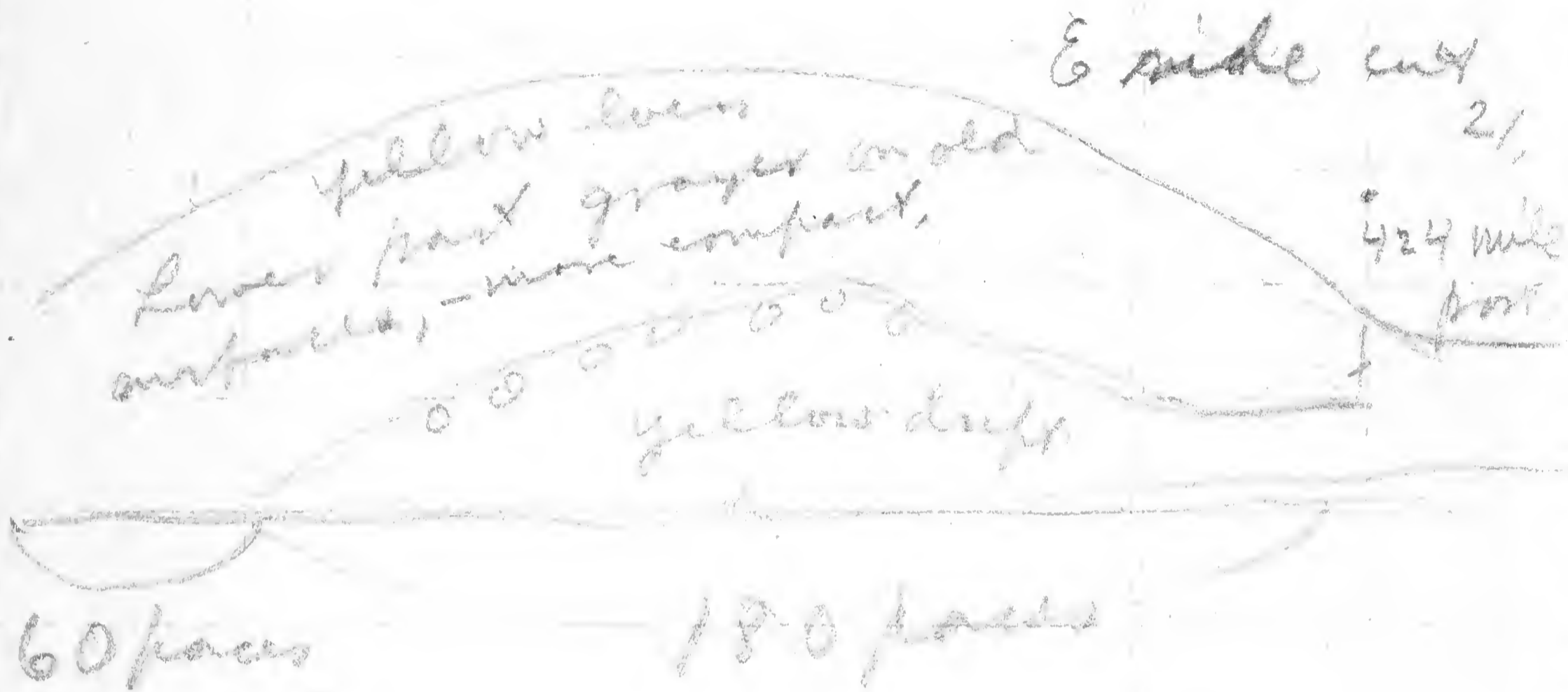


cut 20 ends just opposite mile post 424.

Cuts 20 & 21 are really one, a low cut of 5-6 ft. connecting them.



Cut 21 begins just N. of  
mile post 424.

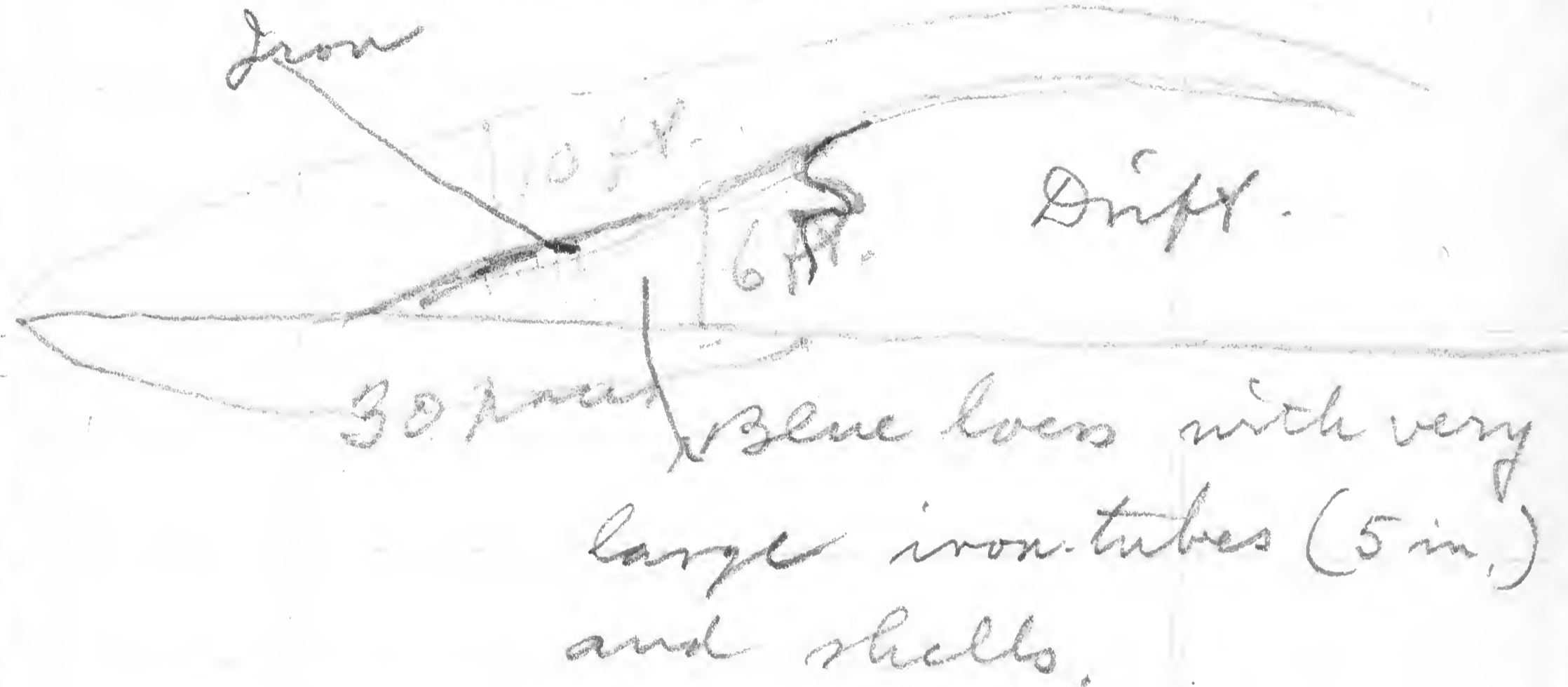


No fossils.

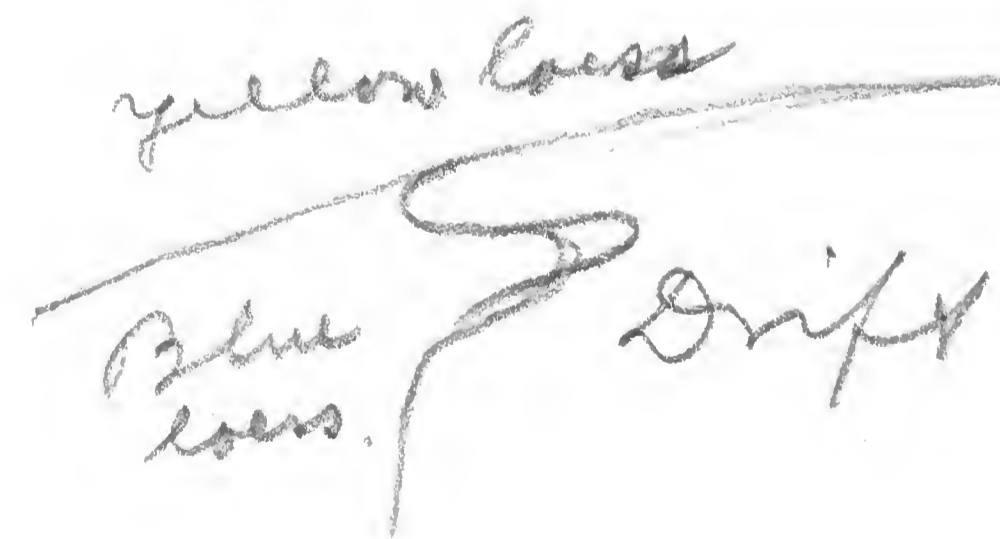
The curve toward E, begins  
at S. end of cut 21, &  
both 21 & 22 are on the curve.

Cut 22 begins 275 paces  
beyond cut 21. It is  
230 paces long - 20 ft. deep -  
mostly drift + a good  
deal of it in streaks.  
The N. end of cut again

has more loess - yellow.  
Cut 23 begins <sup>2</sup> 335 paces  
N. of cut 22. It extends  
to road which crosses tracks.  
W. side cut 23.



Above the iron band is  
yellow loess.  
At 30 paces the following:



Opposite 100 paces from  
S. end the cut is 25 or 30

feet deep. The top 2-3 ft. is yellow loess, with numerous nodules and a few Suc. avara.

Below this, & separated only by slight streaks of iron, is blue loess, which dries to hardness, & which has large vertical iron-tubes and a few fragments of fossils. Then 1-3 ft. of gumbo-iron.

Then drift - yellow & bluish. The gumbo layer shows near top for about 75 paces, nearly horizontal, irregular. The drift below is like that of other cuts - but this time surely Kansan. Cut 23 is 200 paces long

and runs to road.

The blue loess runs out to just a few inches at 150 paces.

It is 795 paces from road to mile post 423.

Along top of cut 23, W. side, the blue loess thins out to about a foot, and there is a very distinct red band below it, about horizontal. Yellow loess almost none at top, but at N. end about 5 feet.

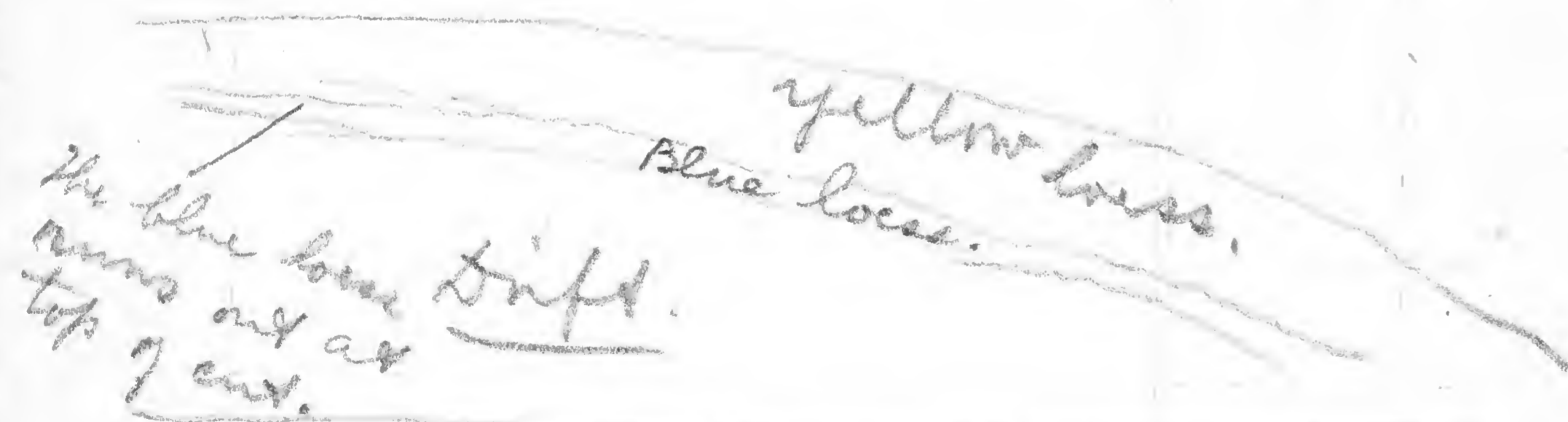
(See next page for continuation.)

Cut 24 is 225 paces N. of 423 mile post.

It is 245 paces long, - mostly drift. It is 20

feet deep, - deeper on W. side.  
 The R.R. runs straight  
 all along here to bridge  
 over C. & W. RR. where it  
 curves East into my old  
 cut just S.W. of Carroll along  
 C. & W. Western R.R., which  
 is cut 25

cut 23 - (err.) (see preceding page.)



There are red streaks between  
 the two loesses. There are very  
 large iron tubes in lower loess, &  
 some smaller ones in upper loess.

cut 25. This is the first  
 cut S. of Carroll on the  
 C. & W., and was previously  
 ( ) described  
 as follows:

Apr 17-1905

Walnuts near Carroll, Ia.  
artificial grove E. of  
C. & N.W. RR. South of  
Carroll.

Those on lower ground  
(protected by hill) are  
15-20 ft. high, those  
on hill (exposed) about  
5 ft. high

Diameter of those on hill  
only a little smaller  
than of those below.  
Those on hill are  
crusky.

See photos, & slides.

Look ~~back~~ <sup>leaves from</sup>  
to ~~back of book~~

Hopper (com.)

Expense 5-

(Byers Brickyard)  
Hopper Brick Mfg. Co.

sand <sup>curves</sup>  
quartz

sand  
floor

Even x  
Even

ratings

a. b. c. is layer of alternating sand & loam. The sand  
ends in all sorts of ways.  
The loam has fossils, and  
and at x, x, x, a lot of  
The upper part of loam is

to top

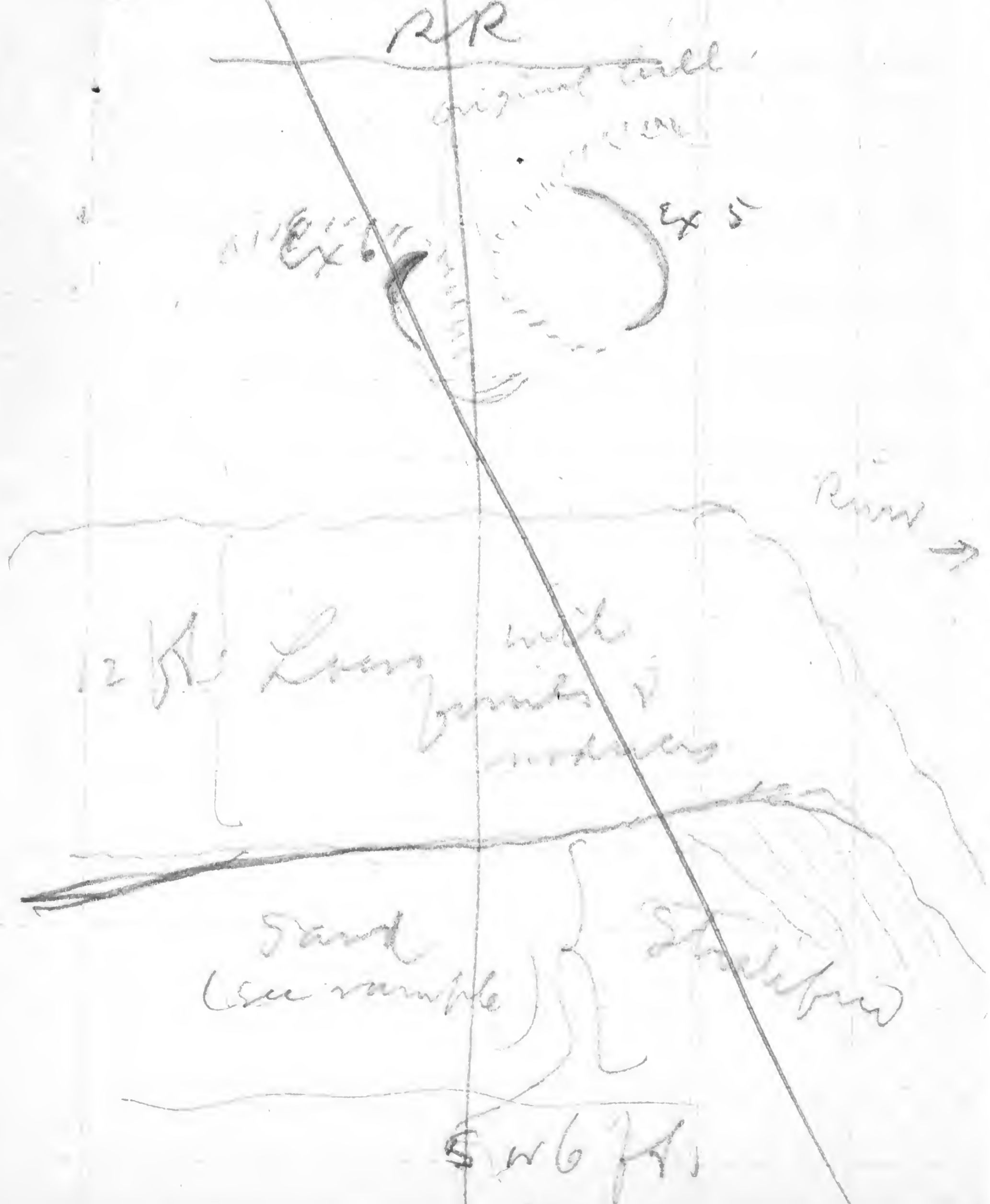
x 20' deep

loam

ratings

possible - see two boxes  
small nodules  
loam composed of yellowish

The upper bedrock is  
waterworn.  
Exp. 6 is on N<sup>o</sup> side  
of Byers' bridge, opp.  
5.



Exp. 6. Shows same laminae  
parallel to the surface.  
Line between loam & sand  
is sharp & sand shows  
some iron just below  
loam (comes bubbly from loam)  
The loam is compact, & alternately  
blue & yellow in narrow  
bands (irregular, - hardly  
bands). A few  
nodules occur in the  
part, but there are  
'pockets' with nodules  
shells are found  
The loam right next to sand  
is quite blue, - but not  
a regular band.  
See fossils.

5/29 - 1906

38

Hooper (con)

Exp. 7

This is a broad flat  
exposed 15 to 20  
ft below old  
surface. The shells  
do not run high  
nor are any found  
in high exposure  
at the end



39

Toward river this  
becomes sandy again  
the sand runs only  
for a short distance  
back along these  
bluffs.

The Peyer's yard  
man says that  
farther back they  
get gravel & coarse  
sand under the  
fine sand & clay.  
75 ft. down (on hill)

The shells are not  
found on sand part

W. Buff. Laminated

40

41



Colfax, Ia.

Apr. 22-1905

no. 1. 2 blocks S. & W.  
of Victoria Hotel.

no. 1. shells. The loess is  
Howard str? blue, with  
iron, but  
upper part seems to be yellow.  
In places an iron band appears.  
Probably two loesses, but could  
not well distinguish.  
4-6 ft. high.

no. 2. 1 1/2 blocks S. of the Grand  
Hotel (1/2 way up the hill)  
Drift shows at base, - also  
iron (Ponchaon?)  
About 2 ft. of blue loess  
was irregularly exposed, but  
bank slopes back higher.  
Found shells.

no. 3. ~~blocks~~ ~~High~~ ~~way~~

~~Howard str?~~  
~~iron~~  
~~band~~  
~~appears~~  
~~in~~ ~~places~~  
~~probably~~ ~~two~~ ~~loesses~~  
~~but~~ ~~could~~ ~~not~~ ~~well~~ ~~distinguish~~  
~~4-6~~ ~~ft.~~ ~~high~~

This is covered with loess  
and iron, with some iron  
bands, but not quite  
up into a yellow loess.  
The loess is probably  
abandoned, & in some  
part of shell sandstone.  
Another iron band  
appears below - but there  
are shells even a few all

through, Gen. Shupelin  
is more common upward,  
then cut to the E. side  
of Washington Ave.

Shells and fossils slightly  
into the rock and less  
than a foot from top, &  
no quite to base.

Hill in or about  
at top - a good  
massive  
Lenticular sandstone  
formation

M. size of - str

cut of

Sand

Lower down 7' white  
fossiliferous

very fine blue layer

Barren

Shells to be found in post-dune

(There in case -  
The lower stone has more, as usual  
may show in drying - like between  
the two stones is quite sharp -  
more or less thin

The post shown is yellow with bluish streaks.

Of Kansas <sup>loam</sup> about 10 ft is exposed from base of hill.

Of brown there is about 5 to 10 ft, the latter is a

loam, yellowish in part & does not show as hard.

The brown top is probably part of brown sand clay.

There were no fossils in Kansas.

Henry Harrington

Cut 5 is in backyard.

From base shown as follows.

soil	3-5 ft	20/8
yellow loam		
Kansas loam		

Water

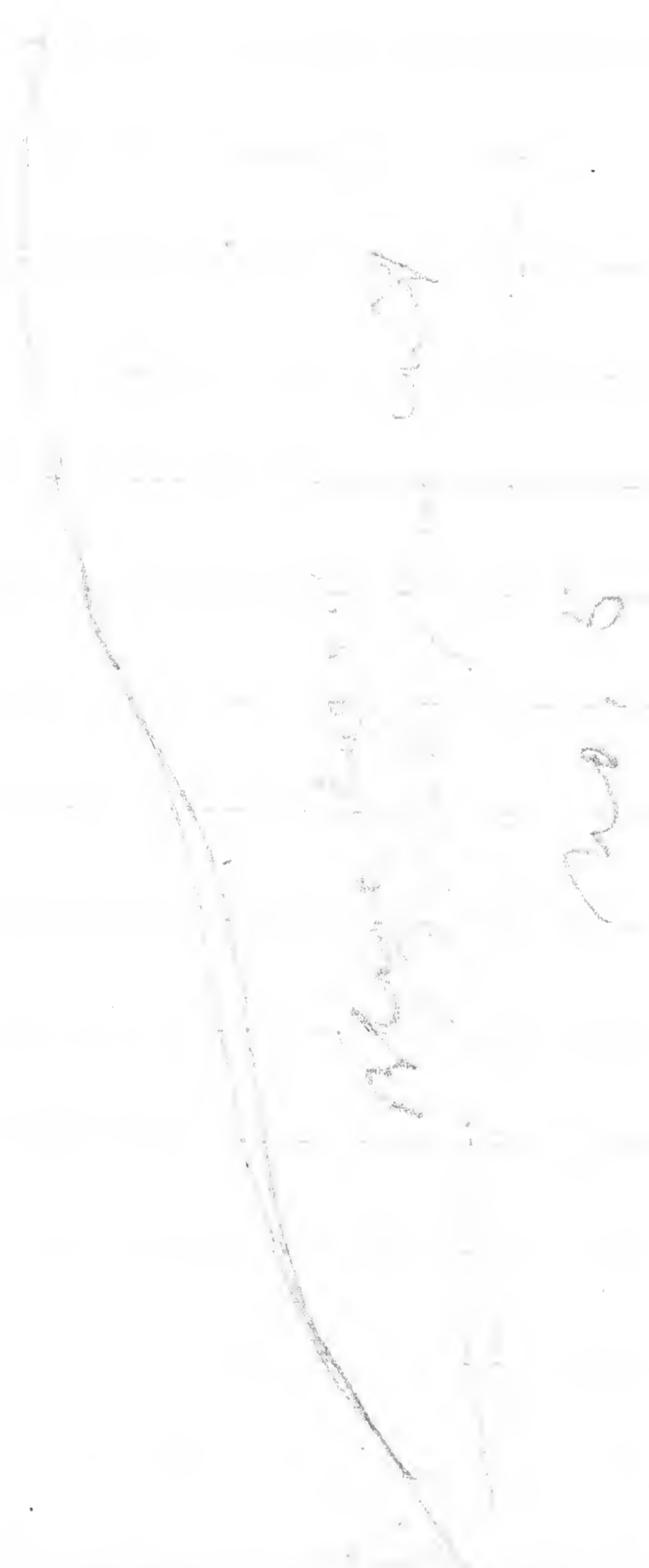
The Kansas loam was shown 2-6 ft.

There is blue clay in sand below this &

under a foot of soil.

This is a red sand below which there is black gumbo.

The Jawa in no 3, 4,  
is more or less laminated  
& contains some lime  
nodules.



M.



S

Cut 6 - shows 4-5  
ft of red gravel  
to the top - then  
black sand below  
This is a recent deposit  
above the 110 ft

cut 6

no. 4

At the 110 ft level, the  
S. side of the hill  
is a black sand  
deposit. It is  
about 3 ft thick  
and above it is  
blue loess - rather on

cut 6 - shows 4-5  
ft of red gravel  
to the top - then  
black sand below  
This is a recent deposit  
above the 110 ft  
level. The blue loess  
is a few feet thick -  
Purcell (large) & S. side  
more in the blue loess  
saw them before  
the hill.

Sand

yellow loess

blue loess

Proterozoic red gravel

Rawson

Trip to Carlson, Neb

May 29-1906

Just outside of Omaha on C. & N.W., a cut shows rock + old building material several feet below surface. Looks as if buried in soil, but undoubtedly recently covered.

Looks like in rock caves along RR cuts especially, as earth was often thrown up on sides, and it soon settles into wind-blown.

A little farther on there appears to be a soil buried in same way.

Just before getting to Hooper we passed knolls covered with sand. There are on top of bluffs which skirt valley.

Hooper

cut 1 in W side of street 1 block S. of

Nickwire hotel & depot (school home stands on ground)

Miss Severin

S.

[School



Hooper

RR. N.

No. 1 - cut in yellow  
loam, streaked with  
bluish bands & just  
under them iron bands.  
(One sample)

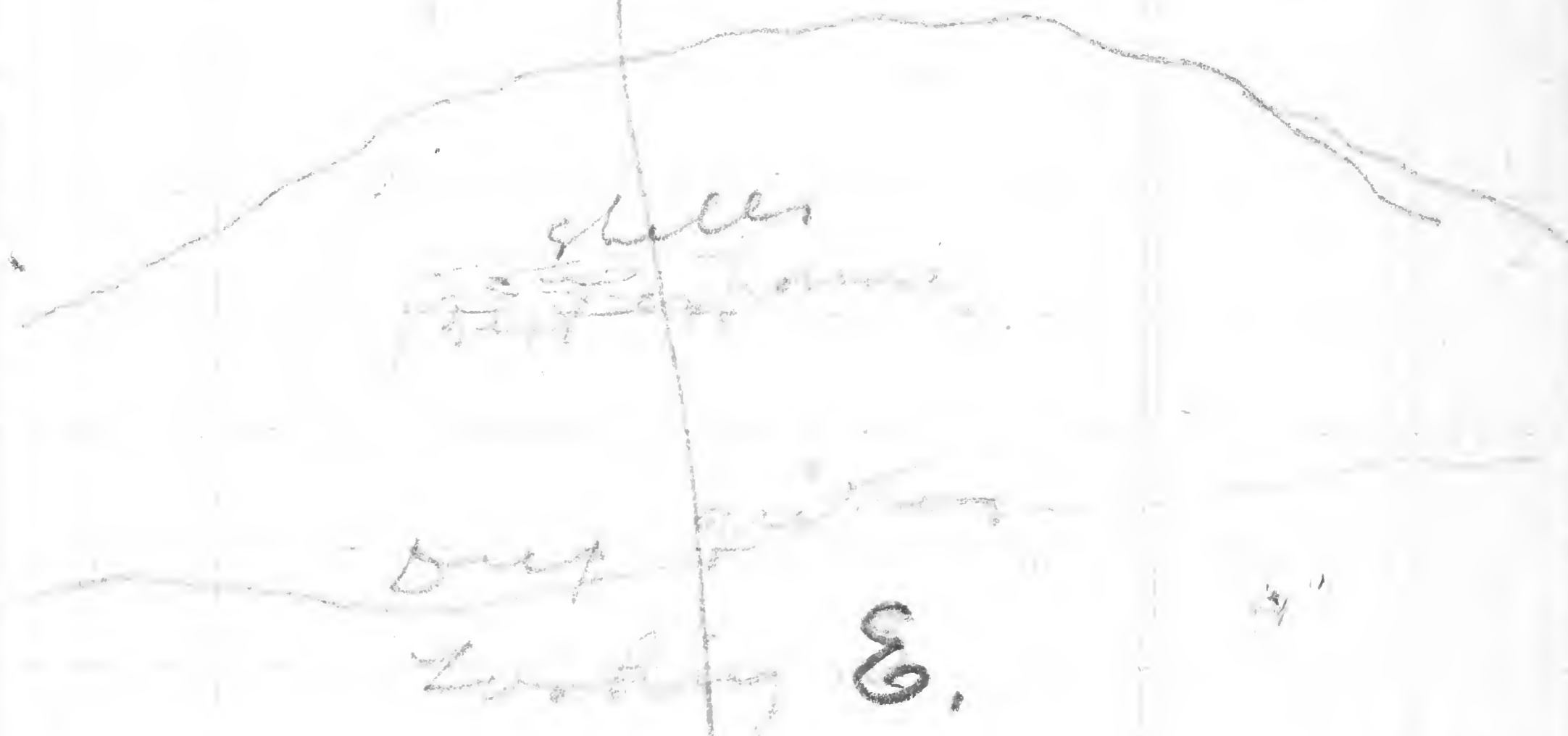
A few nodules &  
shells occur,  
especially in lower  
half.

cut is about 12 ft deep, &  
at least 50 ft. above  
valley.  
School



Looking W. (up track)

cut 2

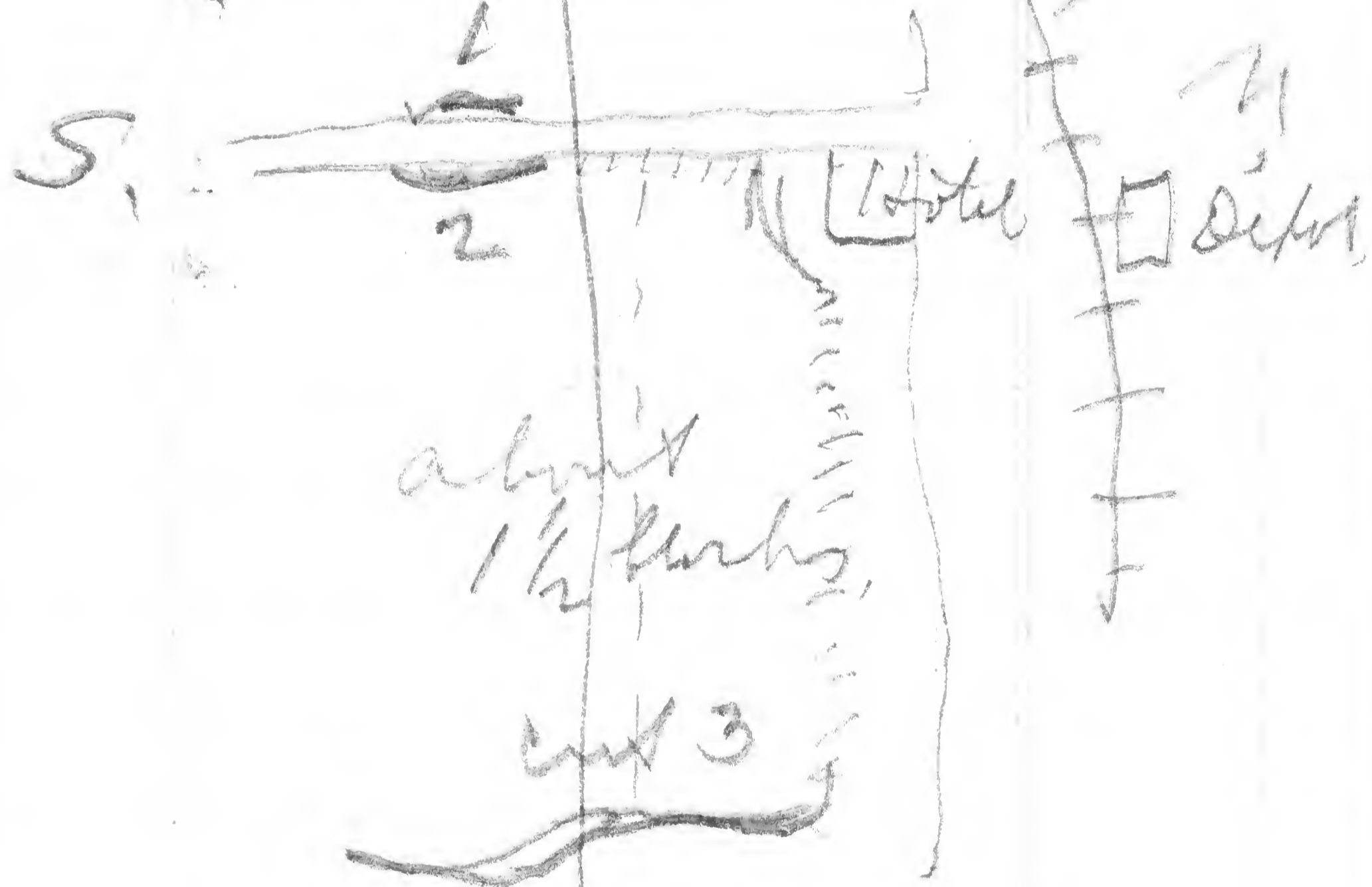


The shells seem to be  
mostly on level with  
shelly part in No. 1.  
In both 1 & 2 there  
is a little lamination,  
but none of it, the  
bluish & iron layers,  
appear as if it  
might have been  
subsequent water  
effects.

There are fine black root  
marks in mud of this - 1 & 2.

The loess above cuts  
1 + 2 is yellow +  
without fossils, - 5-6 ft.

Cut 3 is on E. side  
same hill as 2,



It is about 18 ft  
high, and the lower  
half at least shows  
alternating layers of  
loess + fine gravel.

See photo -

The lamination + inter-  
stratification is irregular.  
Saw no shells in lower  
part.

The upper part seems  
to be more compact  
loess, like in cuts  
1 + 2, and has shells  
(a few) + nodules.

The shells seem to  
come from the  
uppermost 6 or 7 ft.  
only, and it is  
interesting to note  
that it is only in  
this part that bank  
swallows have holes.  
The lower part is  
too sandy.



All the shells in 1, 2 & 3 are very brittle.

Cut 3 - photos

|| | | mes,

---

loess,

alternating

Q

grass

Also more distant view of same.

Evidently the bluffs facing the Elkhorn valley along here were a series of

sand-dunes, now mostly capped with loess.

Byr's yard man said both sides of valley are same, & that sand is on front of bluffs, & some runs out, to the sea.

Back on hill a well showed gravel at about 75 ft.

The bands of sand end in all sorts of abrupt & irregular ways, & the whole deposit is a sanddune formation.

Photo of cuts 1 & 2 from

Foot of hill near  
hotel, looking S,

n-photos.

exposure 4, 3 blocks  
W, & 1 blk S.



cut 4.

a = sand.

b = alternating loess  
& sand.

c = loess.

Further back to left  
loess comes to surface.

loess & alternating?

To left of base  
in cut 4 the loess  
is laminated blue  
& with iron tubules  
& concretions (iron)  
It seems to be merely  
a streak, & not an  
older loess.

Cut 5. is on E. side  
of main bridge  
(1/2 mile from hotel,  
west)

Loess 15-18 ft.

2 W. { alternating loess  
sand light & fine sand  
down dark } see photo 13

The fossils come chiefly from loess just above alternating layers

The loess is horizontally streaked with blue & iron.

The fossiliferous loess shows lamination when broken.

Photo 14  
fossil sand.



see photo 13.

Cut 5

Look back 6 leaves from middle of book/fo

beginning) - for cut 6, etc.

64  
Trip from Missouri  
Valley, Ia. to Fremont Neb,  
and to Scribner, Neb

May, 27-1905

Between the Missouri  
river bridge & Blair

there are several cuts  
showing loess.

From Blair to Arlington

The surface  
shows characteristic Kansan  
topography.

From Arlington to

Fremont is broad flat  
plain. River plain.

65

a big cut between  
Howells & Dodge

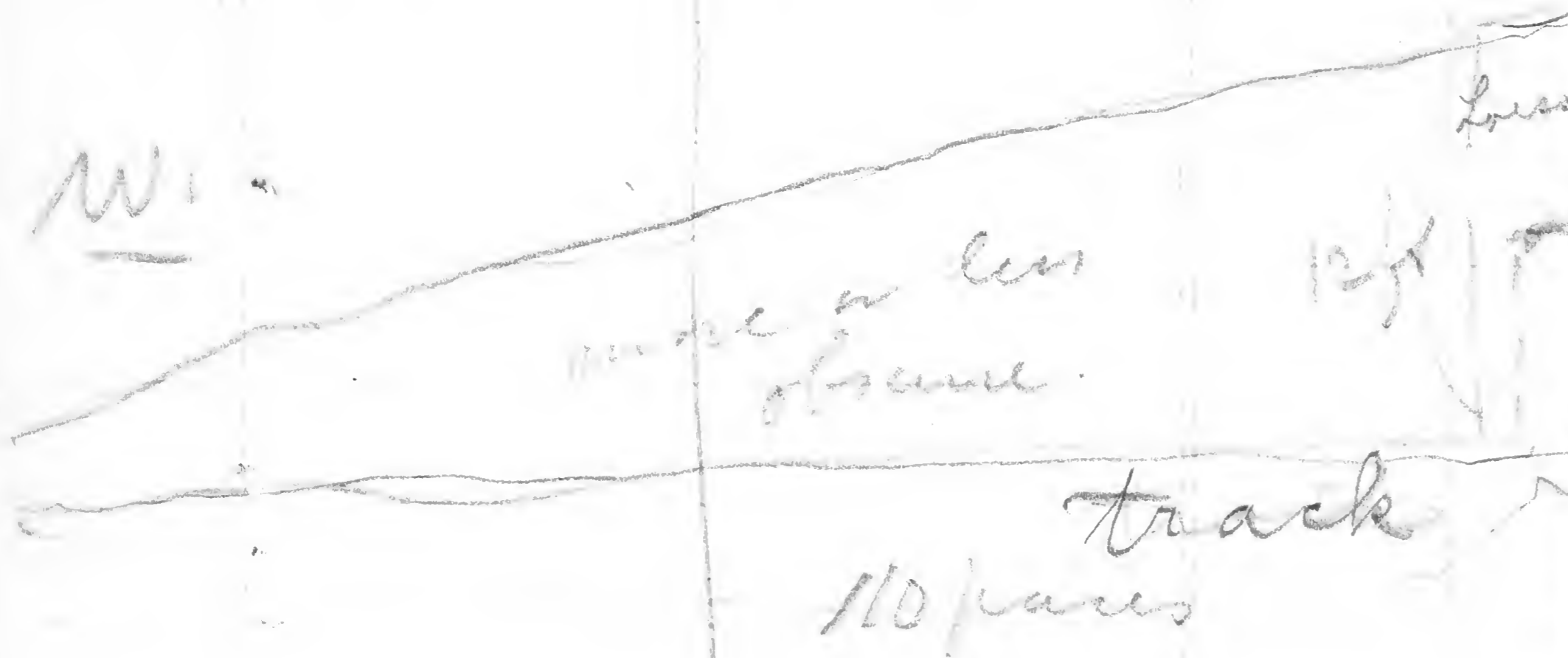
There are also cuts  
between Dodge & Clarkson.

The territory around  
Clarkson is very typical  
rolling Kansan drift,  
with loess on it, & a  
black soil capping  
this.

May 29-1905

Cut west of  
Clarkson, Neb.

W. side of cut N. of  
Clarkson, Neb.



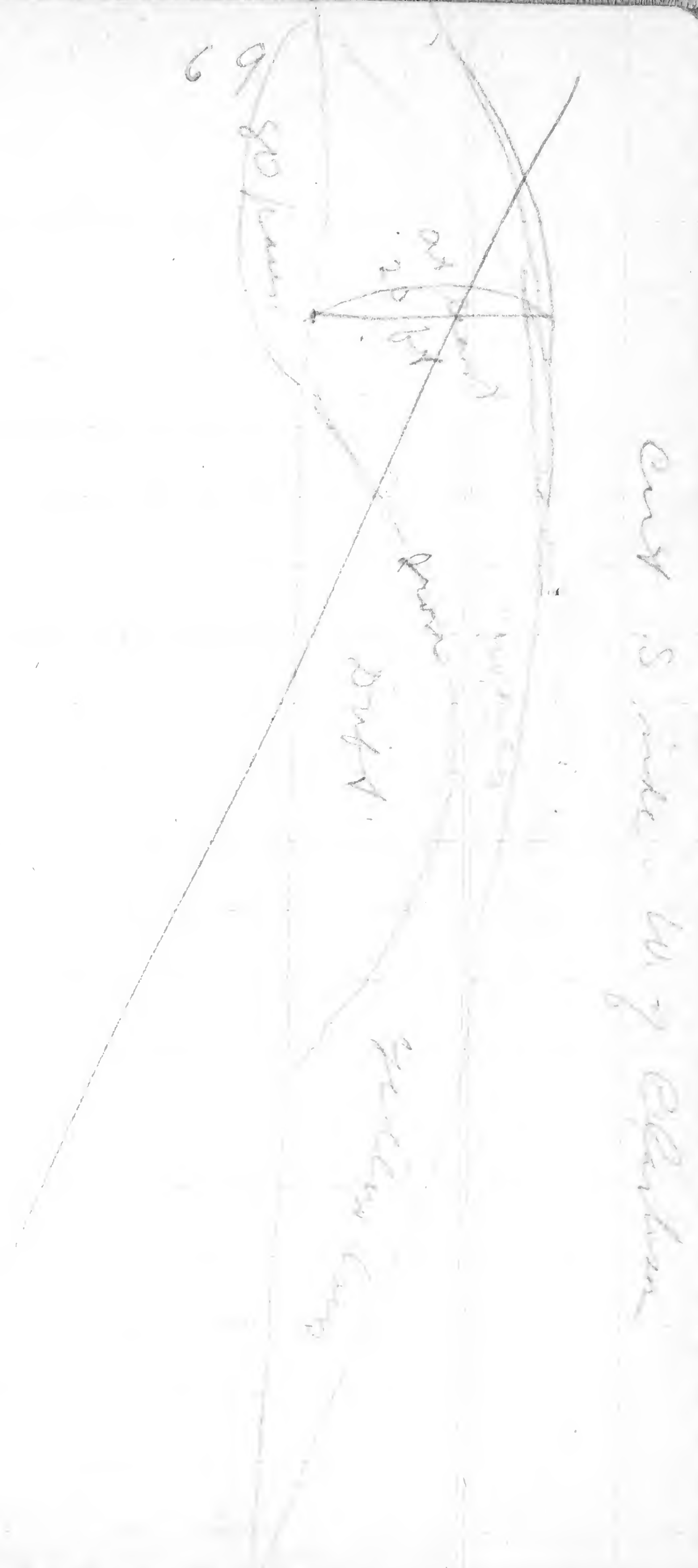
The blue loess in Kansas with  
many lime nodules in places.  
The drift is more or less  
rotten, rather fine  
brown loam is quite distinct,  
from a few in to a foot.  
Slight evidences of sticky  
gumbo over red loam.

20 ft or  
more



There are a great many small  
nodules in the upper or yellow  
loam, - found in the blue loam.  
The iron band on top of drift.

shows some white streaks &  
 some slight evidence of granules.  
 The cut is higher on S. side.  
 There seem to be two  
 sources here also.  
 Both the layers show  
 lamination when  
 broken.  
 Took samples of each  
 from E. and W. side  
 cut 200 yds. Clarksburg.  
 This cut is about  $\frac{3}{8}$  of a  
 mile W. of Clarksburg  
 W.

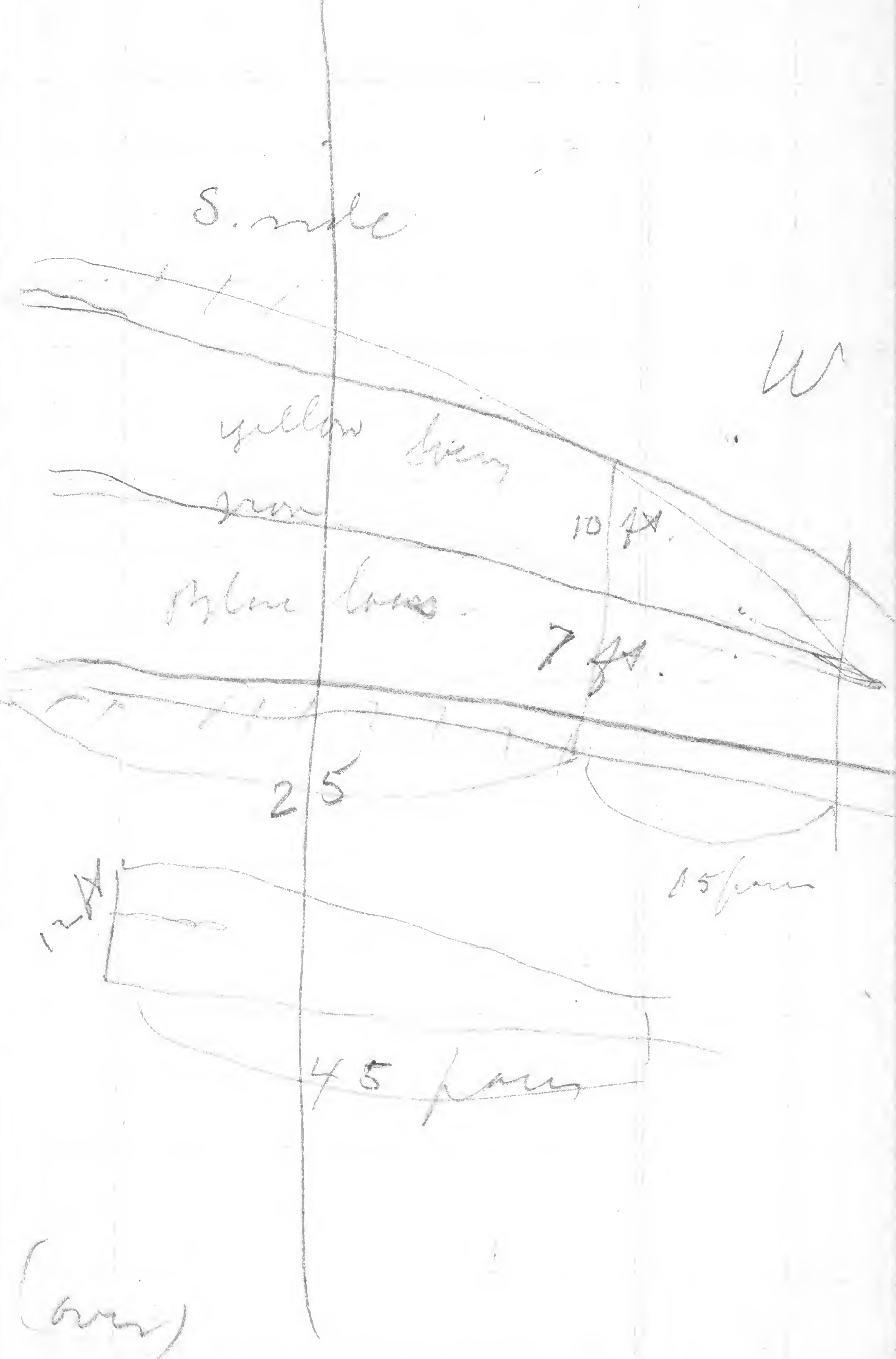


cut S. side W. of Clarksburg

cut 1/2 miles S.E. of  
Clarkson. along Ct + W  
just E. of road.



The upper yellow loess  
has black spots &  
streaks, & very many  
rather small nodules  
(see ex). No fossils.  
There are blue streaks  
of loess - root-like -



(over)

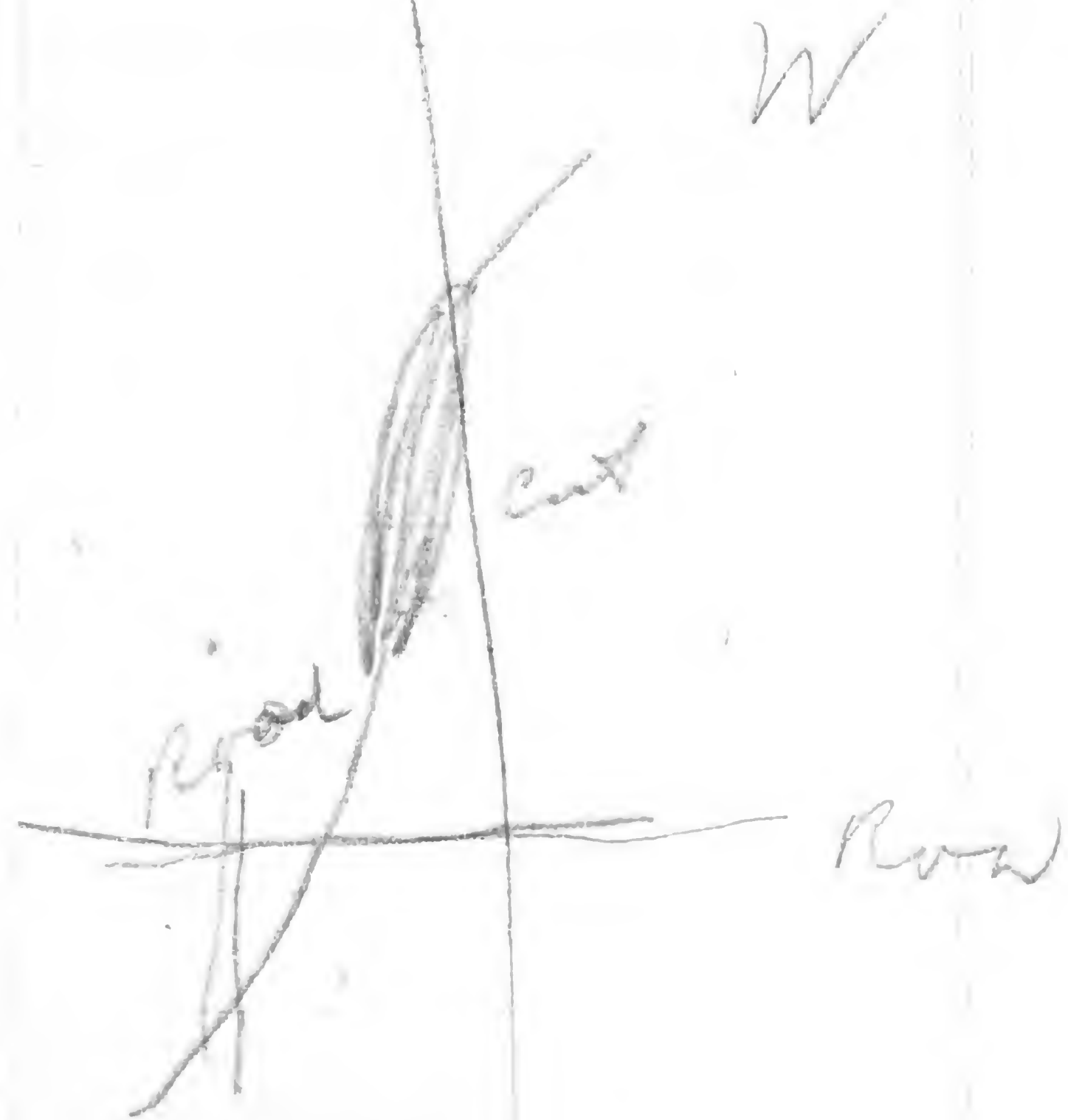
The blue loess is the usual part known, with rather large iron tubes (one spec) & a few nodules. Fossils are very abundant throughout the blue loess. No drift appears here.

Took sample of blue loess near its upper part & yellow loess - at middle.

The lower part of the upper loess becomes more & more blue-streaked downward, & in parts is scarcely different from it.

There are a few small tubules above the iron loam.

The iron-loam is a few inches (3-5) thick & separates the two loesses.





There are two smaller  
 cuts, the larger  
 begins at mile post  
 from station (the mile  
 post is at 5 mi)  
 It shows the yellow  
 loess with some nodules  
 of iron. The smaller one shows  
 a brown quartzite - rather  
 soft, in places thin.  
 The larger side of the big  
 cut is covered with grass.

avoca  
 Neola & Minden - Pottawattamie &  
 Shelby - Shelby co  
 Marne, Atlantic, Omaha - Cass co.

At Koller by bridge  
 pit & also cuts in  
 street

A very large cut along  
 C. & N.W. as it comes  
 into Omaha. This  
 shows particularly fine.

Down

Between Neola & Minden  
 a pretty good cut about  
 2 mi. from Neola  
 about 1/2 mile further  
 another smaller one  
 A little further on  
 another one - the last  
 two more or less grass-covered.  
 Another large one 1/4 mile  
 further on. Partly covered.  
 This is 1 mi. from Minden.

another cut just SW  
of Minden. Clear.

Between Minden and  
Shelby | — ;

2 a big cut about 2 or 3  
miles from Minden.  
*Putnam*

Lots of nodules.  
A mile farther another  
big long one.

Cut at Shelby, E. of  
depot

Another 1/4 mi out,  
very many nodules.

About 2 or 3 miles out  
a fair cut.

Another mile, fair  
cut.

Cuts within 3 mi of  
Avoca (from Neola) is  
in Kansan topography,  
~~quite recent~~  
A small cut about a mile  
W. of Walnut & a larger  
good one about 1/2 a  
mile W. of Walnut.  
About one mile E. of Walnut  
a large cut - fair.  
1/2 mile farther E. a fine  
large cut - and a few  
rods farther another.

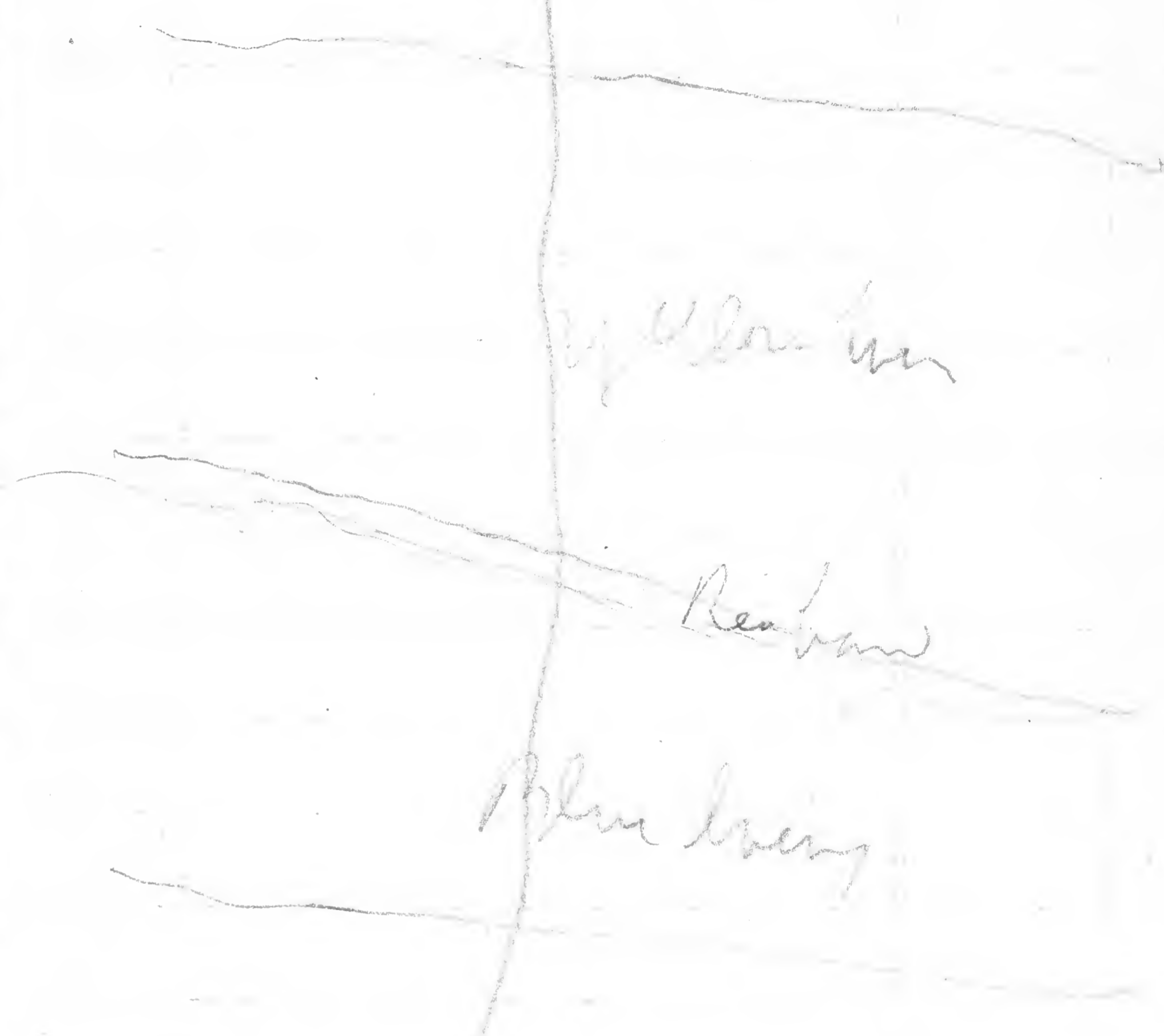
The finest good cuts are between	
Neola to Minden	4 mi.
Minden to Shelby	7 mi.
Shelby to Avoca	8 mi.
Avoca to Walnut	6 mi.
Walnut to Marnie	7 mi.
Marnie to Atlantic	6 mi.

1 mi. another small one,  
just W. of Marnie a big one.  
(see fly leaves at back.)

Luxemburg In

May 13-05

Cut 1 At angle of west road (just  
 N of cross-rod)  $\frac{1}{4}$  of the way  
 up the hill a lens, then  
 of a bench 10 ft  
 high. The lower 2 ft  
 or more is blue loam, with  
 some, but I saw no nodules  
 or fossils. It is clearly  
 post-Blanc, with big  
 tubules etc. The upper  
 loam is the usual  
 post-Dragon. They are  
 separated (where clear)  
 by a striped sand of  
 coarse 4-5 in thick.  
 The upper loam shows  
 no tubules or nodules  
 but has black spots  
 in it of fine nodules



The blue loam could  
 be traced parallel to  
 slope for several rods  
 less than  $\frac{1}{2}$  way up the  
 hill. The blue loam then  
 put to a post or lens  
 + yellow loam as  
 about 5-6 ft. high

shows abundance below  
 very gradually.  
 Then, <sup>with</sup> then is exposed  
 to near top of hill.  
 on top of the drift (+ less  
 than 1/2 way up blue  
 loess runs out) there  
 is a good bit less of  
 bluish (iron) + brown hard pan  
 & on the yellow loess,  
 2/3 of the way up, the drift  
 runs out again, & to  
 top of hill only  
 yellow clay is seen, but  
 the cut is not deep.

The top of the hill is  
 a yellow clay with  
 a <sup>thin</sup> layer of 5 or  
 6 ft.

Cut 2 - along RR - top  
 S. of New Union  
 drift - 1 ft at top  
 typical pattern - 3 ft  
 with coarse tubes &  
 small nodules  
 about 8 ft. yellow  
 down  
 cut in clay.



~~at least 2000~~  
~~the most common~~  
~~of the species~~  
~~found in the same~~  
~~localities as the~~  
~~others.~~  
~~The~~  
~~specimens~~  
~~are~~  
~~very~~  
~~fresh~~  
~~and~~  
~~well~~  
~~preserved~~  
~~to~~  
~~show~~  
~~the~~  
~~early~~  
~~stages~~

~~The~~  
~~specimens~~  
~~are~~  
~~very~~  
~~fresh~~  
~~and~~  
~~well~~  
~~preserved~~  
~~to~~  
~~show~~  
~~the~~  
~~early~~  
~~stages~~  
~~also~~  
~~some~~  
~~of~~  
~~them~~  
~~are~~  
~~very~~  
~~large~~  
~~and~~  
~~well~~  
~~preserved~~  
~~to~~  
~~show~~  
~~the~~  
~~early~~  
~~stages~~



May 15<sup>86</sup> 1905

road of replacement

Question - where are the books?

Ans. I gave them to a friend.

Q. Who is the friend?

Ans. Dr. Jicinovsky.

Q. Mr. Hajek, will you bring the books?  
Ans. (Hajek) - I will not.

87

Wh. Pine	33	rips	17	in. of wood
" "	35	"	15 $\frac{1}{2}$	" "
" "	36	"	18 $\frac{1}{4}$	" "
" "	28	"	13 $\frac{1}{2}$	" "
" "	32	"	12 $\frac{1}{2}$	" "
" "	37	"	17	" "

Dubouque co. Stone from Clayton V

- 16 Pinus strobus
- 24 ✓ Quercus alba
- 25 ✓ " rubra
- 17 ✓ Populus tremula
- 18 ✓ " grandidentata
- 15 ✓ Carya
- 1 ✓ Acer saccharum
- 28 ✓ Jilia americana
- 10 ✓ Fraxinus nigra
- 20 ✓ Prunus serotina
- 11 ✓ Taxus pubescens? (supra)
- 5 ✓ Carya ovata
- 6 ✓ Corylus americana
- 7 C. alternifolia
- 12 ✓ Juglans cinerea
- 8 C. sp.
- 3 ✓ Betula r. papyrifera
- 26 Quercus macrocarpa
- 29 ✓ Helinus americana
- 9 Evonymus atropurpureus

- 21 Prunus virginiana
- 27 Quercus velutina
- 22 Prunus americana
- 2 Acer negundo
- 19 Populus deltoides
- 4 Betula lutea
- 23 ✓ Pycnos ricensis
- 13 ✓ Juglans nigra
- 14 ✓ Juniperus virginiana

29

18 Clayton



Look back to page

Notes (continued)

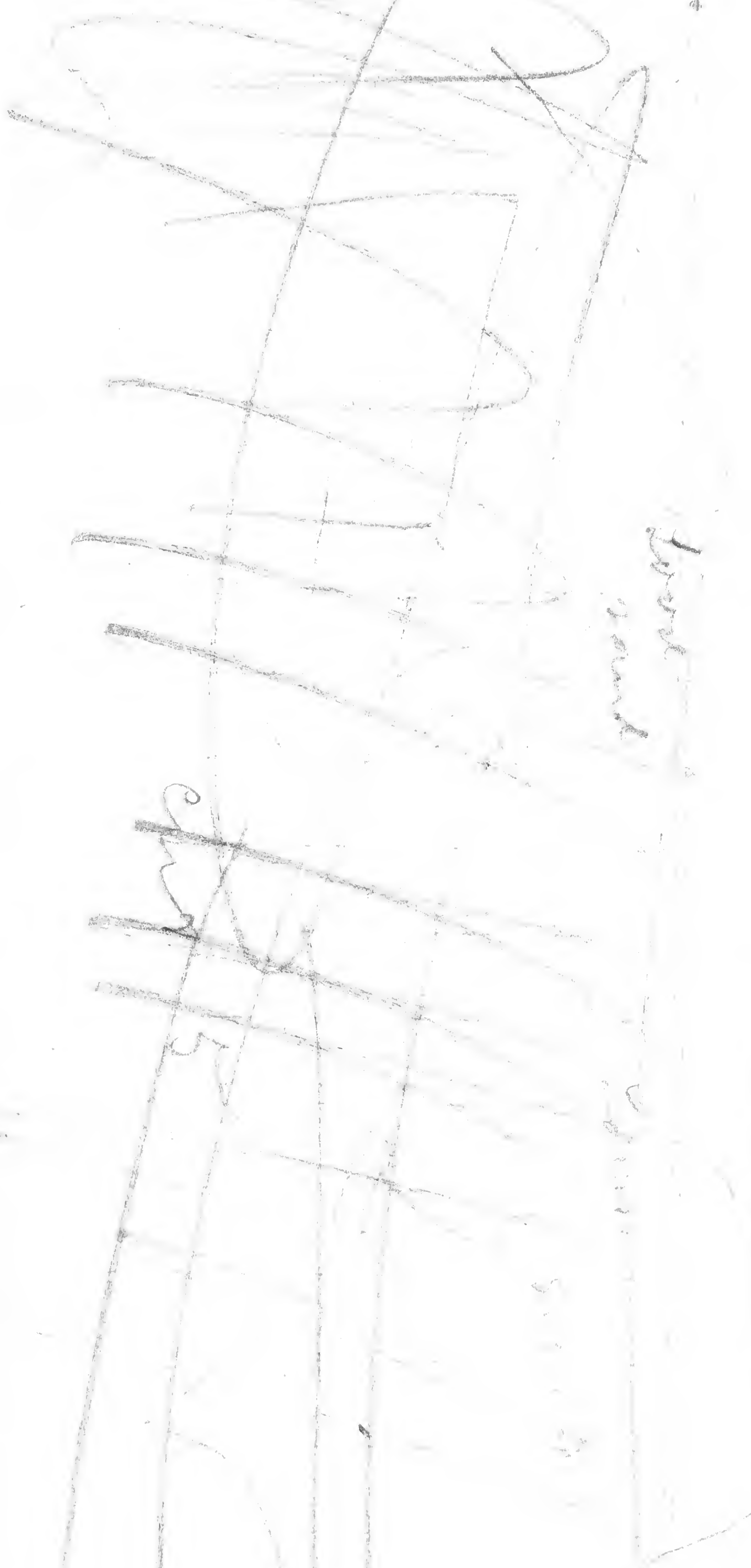
cut 5 is at least  
different

When star is

with a central light  
exposed, alternating  
sand light & dark  
(see part B)

The fossils are chiefly  
from lower part  
above sandy layer  
The sand is generally  
blue & iron stained  
The layer at 5 (some say) shows  
lamination which below

Photo 1



Look back to leaves from  
middle of book (toward front)

Cítyl jeun de Cider Rabier  
 a 8<sup>20</sup> ráno v neděli 30  
 dubna, 1905 a celý jeun  
 do 8.<sup>47</sup> ráno - na  
 Tajemství Hayes  
 Repířel: N 8.<sup>35</sup>  
 jeun. Severe.  
 Hayes Repířel.

The ...  
 ...

Fremont, Neb. is 1192 ft  
 above sea level.

(Mela to Atlantic (con))

May 30-1905

A mile E. of Marne  
 a small cut shows drift  
 only.

A larger one 1/2 mile E.  
 (at overland bridge)  
 also loess, good.

Fine grove of evergreen  
 just E. of Atlantic, S.  
 of ...

2 mi. E. of Atlantic a  
 large cut, but mostly  
 overgrown.

A smaller cut partly  
 overgrown. A better bridge  
 1 mi. E.

To Anita about ...

Darke

He arrives in country but  
who knows how long and  
depth of his stay

To Cleveland, Oct. 22 - 1906

St. Louis to Omaha 8.13  
Omaha to Des Moines 1.97  
Lunch Omaha .25  
Hotel - Harper 1.00

Harper + Johnston 1.05

To Fremont 1.55  
Lunch 1.10  
To Omaha 1.10  
To Cedar Rapids 8.22  
Meal .35  
To Ia City .65

\$ 24.38

Dr. Johnson

p. Longin Folda

p. Mundel

p. ... the sign  
p. ... High school

Settin given in a Red

Bremen 3 Hopkins Man

Je batman p. Muradto

Mr. Noh - Hotel

V Howells

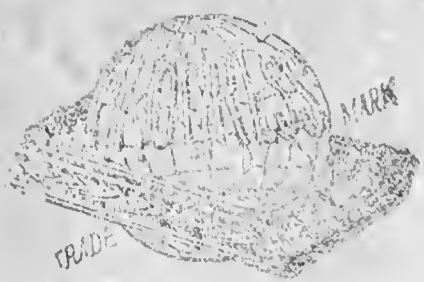
p. Folda

p. Rud. Balaban

p. Fr. Kharbecky batman

Fr. H. Cleveland

8th St. by 32nd



1630

Copy Humboldt  
May 2 Harvesting  
Francis Williamsby

apply at Deussen

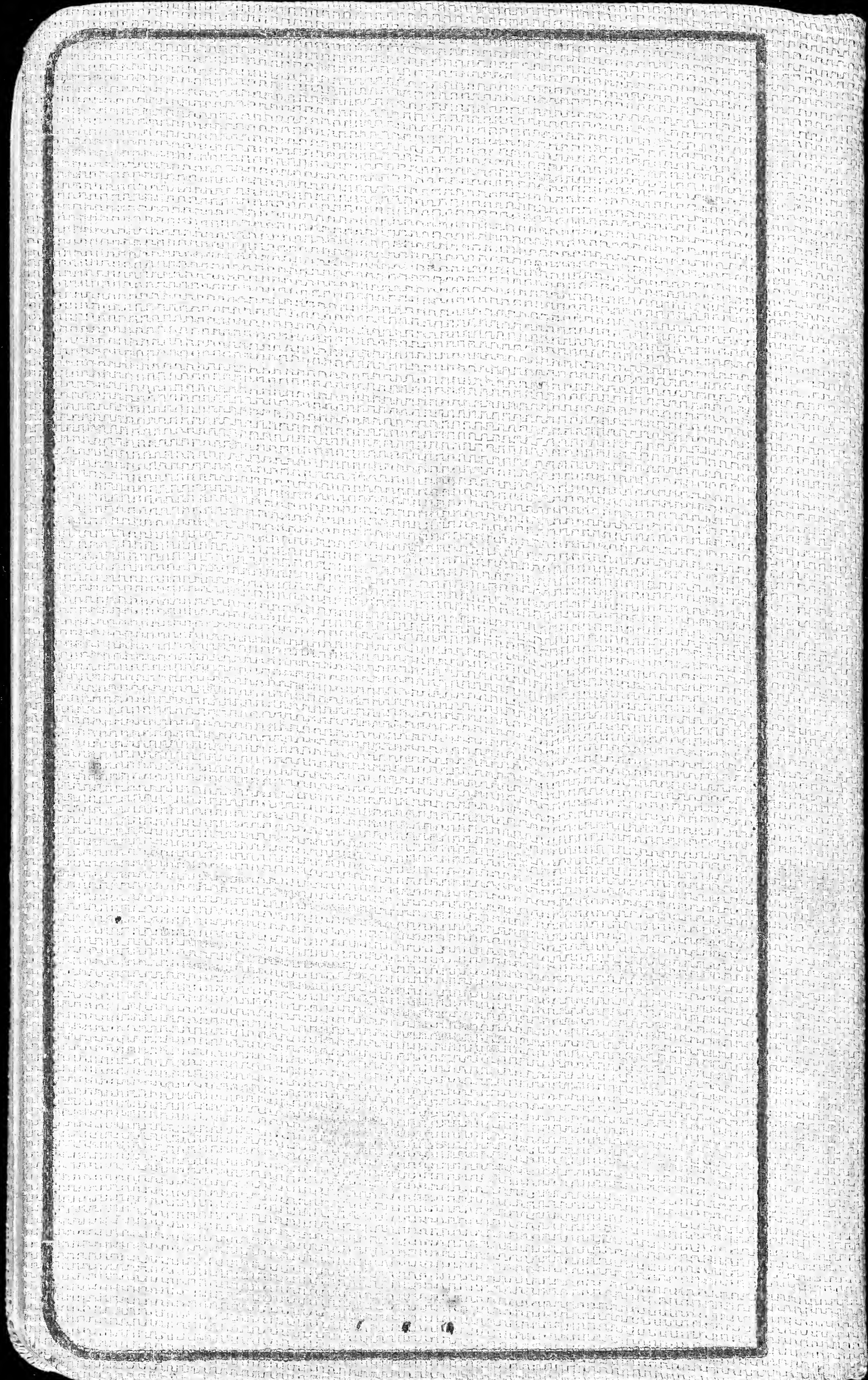
for Dept.

Sec 2 - T. 138 N. R. 26 W. 5<sup>th</sup>

Crown Wing Co

Dept. Calver

Apr 1905



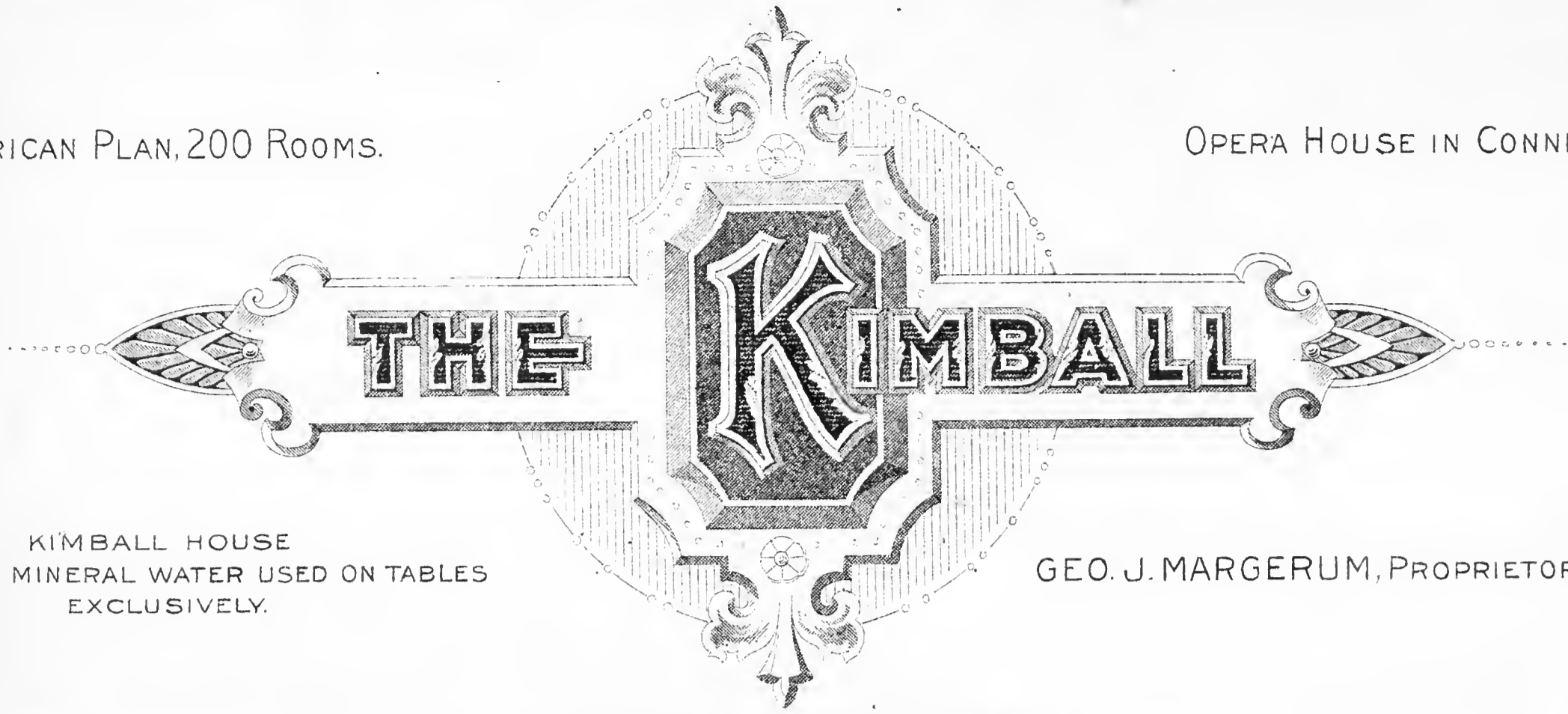
Oct. 13

Visited the lower exposure where  
2<sup>nd</sup> str. Motine, Ill. hits the  
bluff. Found most of the hills made  
up of clayey gravel, not any larger  
boulders, above this was a red  
loess-like layer, varying in thickness but  
probably nowhere over 3 ft. Then a  
layer of fossiliferous loess, contains  
nodules & tubules. This was probably  
6 ft. or thereabouts,  
then a layer of coarser? & very fine  
loess with practically no fossils, only  
here & there a fragment. Then on  
top of all a layer of red loess-  
like clay, a foot or two (or three)  
in thickness. Saved samples,

Look for *Corydina* among the shells.  
They break very easily.  
*Helicoma* is most common fossil.  
The fossils were most uniformly  
distributed, but were collected in places

AMERICAN PLAN, 200 Rooms.

OPERA HOUSE IN CONNECTION.



KIMBALL HOUSE  
ARTESIAN MINERAL WATER USED ON TABLES  
EXCLUSIVELY.

GEO. J. MARGERUM, PROPRIETOR.

DAVENPORT, IOWA,

190

lots of pockets?

The fossils are mostly in lower part, as  
if after while the clay hills have accumulated  
& diminished signs of vegetation & the fossils  
run out. The uppermost layer is the same  
evenly looking stuff that caps the Council  
Bluffs form, only it may be sandier. But it  
is that "crumbly" stuff.