

Thurs. Sep. 1. 1904

Worked about Clondroft with excellent success.

They have had heavy rains up here, and the plants show off well.

Stimulated, snails, etc, were abundant,

especially under gnawing asp logs.

The conifers seem to be less favoured.

There were Apaches in Clondroft again.

They come from the reservation, and are

Geronomos old band.

This was his old field of operations.

In evening changed dress & back.

Friday - Sep. 2 - 1904
 Started down mountain
 at 9:36 AM. after
 packing, etc.
 Set barometer at 8150
 at depot at Condopt.
 Boston square = 7900
 Switchbank = 7300
 Wagon
 Spring Ranch = 7050
 Wooten = 6725
 Mountain Park = 6300
 Highrolls = 6200
 Pinto = 5650
 El Valle = 5200
 La Luz = 4675
 Alamogordo.

Found the large Yucca
 with almost no
 panicle, & no stem
 to plant common
 on rocky ledges
 near Spring ranch.
 After an interesting
 day in the field I took
 the log train at
 Mountain Park &
 reached Alamogordo
 at about 5 PM.
 Crossed plants, etc.

Sat. - Sep 3 - 04
 Spent whole day
 pressing plants.
 Our transportation,
 which had been sent
 to Chicago for extension
 nearly two weeks ago,

4

had not been heard
 met Mr. Wolfinger,
 a merchant (dry
 goods, robes, etc) who
 was born in Webster
 City, Ia., and knows
 Mr. Olson well.
 Learned from him
 that Olson's wife
 died about two
 weeks ago.

5

Sunday, Sept 4, 1904
 No transportation, &
 No. 3. from Chicago
 (yesterday) announced
 for this afternoon
 Delay caused by
 heavy washout
 near Tucuman.
 The C.R. & P. train
 was arrived from
 Tucuman to Frank
 by the C.R. & P. - down
 branch, - then on
 Santa Fe & then
 on Santa Fe Central
 to Francisco
 Train came in at
 about 4.45 P.M.
 Spent evening in changing
 dress.

Monday - Sep. 5.
 Mrs. Martin made
 out new transportation
 over the C.R.D.P.
 & we started at
 10:40 am. for home.
 I was up at 5 AM
 packing and got
 through with a
 safe margin.
 Verbena (Highrolls)

7
 mainly soil
 mostly

Coronilla demissa

Red Cedar & Phoradendron ^{common}

Quercus ^(not)
 (rare)

Cholla - common (in fl.)

Atriplex - 7" ^{Common}

Eutima

Many yellow soap

Bunch grass (Highrolls)

Dryodora ^{not rare}

Rudbeckia ^{(rare) Highrolls}

Alyssum ^(rare)

Salvia ^{(rare) Highrolls}

Large 4-lobed

Quercus - ^{common} low

Prostrated - resinous shrub

Small fl. plant (Highrolls)

Artemisia (low)

Small Portulaca

Blue bushy cactus (medium)

Stems low Yucca

Prof. M. ^{rare} Pinus ponderosa at ^{Common}

Full Malvastrum 2
Opuntia flat

Solanum elaeagnifolium ?

Collected plants at

Tecote -

Gallinas

Common water tank (U. of C.)

Heavy cedar & Pinon
forest at Coma &
nearly to Torrance
at Torrance a
grassy plain.

At Llano very
extensive grassy
plain. No yucca
or other plants.

At Pastura some

yucca elata appeared
on the grassy plain

all this is rolling
country.

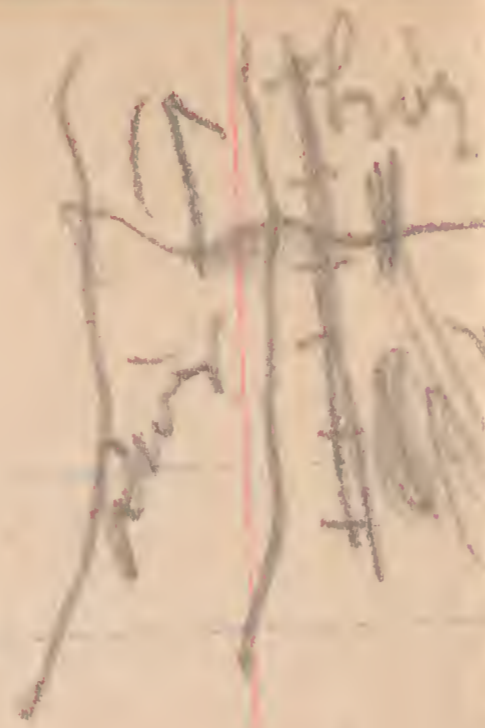
9

As we approached
Santa Rosa, rougher
with outcroppings of
red beds (rock) with
cedars, etc.

10

11

12



Prairie Cr

13

Lower.

stratified sand

(see next page)

S. Pond hole on ridge



Prob. Cemetery



High sandy ridges

Sand (fine)

Crescent

hill

show

outcrop

low hill

W. New Egypt

C. Rapids

Sep. 15-04 ¹⁴ Cedar Rapids

The sandy hill along road to Cemetery shows little sign of stratification, except in lines of moisture. The hill on which the cemetery stands is nearly 100 ft above general flat of Cedar Rapids.

Saw fine sand - saw no pebbles there. The stratified sand is fine, shows distinct fine lamination, especially where weathered, + the fine above shows partial lamination. This is about 50 rods S. of road to cemetery.

15

Just before reaching Prairie creek strike loess - about 6 ft over fine "sugary" sand - is shown on W. side of road.

No fossils.

The lower end of the bank (S.) on W. side shows (from top) about 6 ft. of loess - then for about 1/4 in alternating bands of sand & loess - & then sugary sand. For a foot - then narrow band of loess, stuff 2 or 3 in. then loose sand. The sand etc.

shows more or
less laminations
& stratification.
Base of loam is
about 6 ft
above floor of
bridge & about
20 ft. above Prairie
creek.

On hill S. of C&NW
RR. the loam is at
least 10 ft thick &
grades below into
fine sand.

No fossils.

The sand is quite
laminated with
reddish lines - not
very distinct (thick)
There are also limy

spots in the loamy part
of the sand.

Next ridge a little
S. shows less also

not deep cut -

No fossils - this is
on slope of loam ridge
whose top to south
is higher & sandy.
all along the road
to Western there are
evidences of down
drift. The topography
is rolling, & occasional
hills? appear.

There is one such in
sec 22(?) which seems
to be worthy of investigation.
Mr. Caddle says that along
N. & S. road west - there is
a cut which shows clay

18

not sand.

N. of Hoover creek, in
sec. 22 & 23 the slope
is sandy, & cut (not deep)
along road shows that
fine sand below grades
upward into a clayey
soil (loam-like, but
thin)

Between two schools
in Shrewport on N
side state road
is a gentle slope
(hill) & cut
shows down
capped with
loess-like material
1/2 ft or more deep.
See sample.

Between Western &

19

Shrewport all down
Top of hill W. of
high school shows
sand - grading up
into loamy soil
mostly dark.

Going S. from
Swisher

- 1 - Exposure on E side -
up to 12 or 15 ft.
Lower part sand &
sandy clay.
Upper 1/2 or more
yellow somewhat
sandy, loamy clay
Black soil 6-8 in
mostly fine sand. Few
pebbles below.
Saw below shows ~~loam-like~~
especially where weathered.

The exposure is several
acres long -



There are bands of
gravel (mainly) &
an oxidized layer
in lower part &
clayey below.

The exposure is about
half way between
bottom of creek &

top of hill to E.

2 - a low exposure on
both sides - 2-4 ft.

Upper 1-2 ft. yellow
loamy layer - blue
sandy (not loose)

This lower part is
distinctly stratified & has

3 - 10-15 ft. low - similar
to 2 - lower part

occasionally gravelly
Several smaller cuts, older,
mainly gravelly below & clayey
above. At base of
low ridge. There is
a high ridge at one
end.

4 is a cut varying from
0 to 6 ft. - over
600 ft. long.

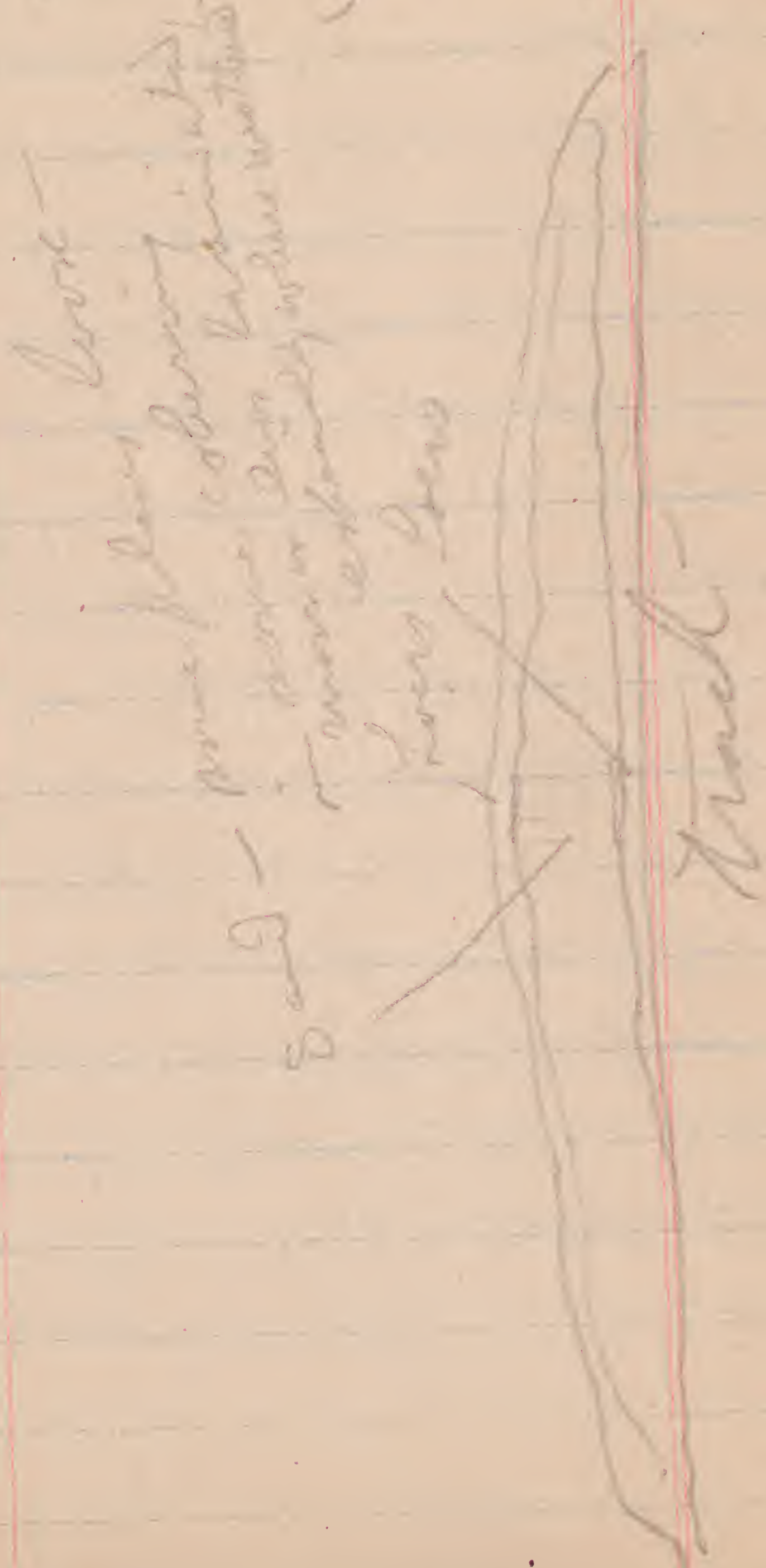
(See next page.)

Upper layer - 1-2 ft. -
dep - a loess - (see sample)

The next layer ^{3-4 ft.} is sandy
some stratification &
considerable iron ^{impurities}, which
is most pronounced
at base of this layer.
Next thin irregular iron layer

22

then a few inches to
2 ft. of loam. (See
sample) - No fossils.



23

The sand is loam in places
especially below &
also a little coarser
below. Fossils as it
goes up. Is it loam?
Position of the loam.
Part loam small
pebbles - 1/4 in. diam.
The loam, loam is
blue, abundantly
streaked with iron.
The upper is usually
reddish - but loam.
This is about across
low ridge which
runs eastward to
higher ridge. Small
creek just S.E. of it.

24

5 - Low cut - 3 to 7 ft -
 about 15 ft long,
 mostly fine sand,
 some laminated &
 parts of it with 1 grain
 & even good sized pebbles
 - several in in diam
 All these exposures
 are yellowish or
 reddish - no
 Kansan.

This cut is just E. of
 front house below
 Bishop's.

This is just S. of creek
 6 - The next small exposure
 on E. side is low &
 shows heavy stuff
 on top of gravelly
 layer below.
 This is 8 or 10 rods

25

of no. 5.
 7 - This is 200 ft. S.E.
 of 6 - It is only
 2 or 4 ft high, with
 gutter cut 1/2 ft.
 & at bottom shows
 old loess - above
 gravelly layer &
 on top heavy layer
 This is E. of track.
 8 - This is over 100 ft
 farther S.E. from 7
 & is 2-6 ft deep
 & about 300 ft
 long.
 Below it just
 shows old loess.
 Then sandy & in places
 gravelly (boulders ^{about} 2+ in
 in diam) & part

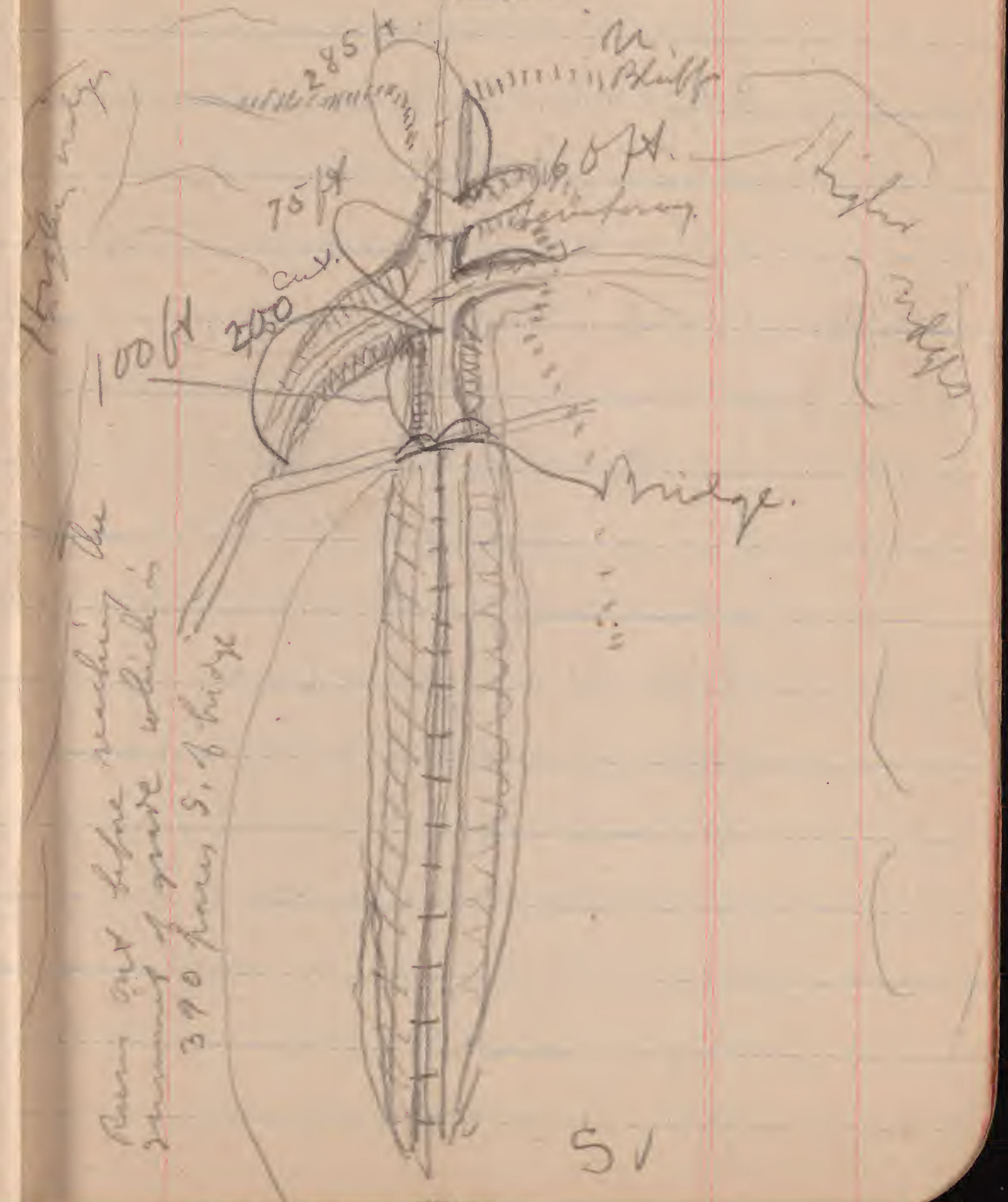
the upper ²⁶ part - may
 seem to have boulders -
 of this very red
 (mass).
 Upper being buff
 1-3 ft. becoming
 sandier below.
 Saw no fossils.

9. about 600 ft
 depth, top of
 new house, is
 a short cut 8+ ft
 deep as far as
 goes, the it is
 laminated sand,
 very above.

150
 100
 50

Friday Sep 18 - 1904

Commenced at cut
 on Interurban in sec.
 27 - Madison Twp. at
 overhead bridge.



Running out before reaching the
 summit of grade which is
 390 ft from S. of bridge

The cut at the bridge
is about 22 ft deep,
It runs out at about
250 paces south of
the bridge -

It runs up gradually
from 0 to about 4 ft.
at the 150 pace mark
S. of bridge. (I count
paces S. from bridge,
but am moving north)
It is mostly black
prairie soil, looking
loamy in places.

at the 150 pace
mark a red layer
appears below. It
is not sandy, but
has much iron, & is
like hardpan.

at 140 paces it is
already 2 ft thick (that
is that much is exposed)
& the black soil is
over 3 ft thick

The line of demarcation
between + black soil
& red layer is not
sharp. This black
soil

Took sample of red layer
at 120.

Sample of black soil
at same place)

at 110 paces the red
layer is exposed over
4 ft & becomes quite
a bluish brown below,
with many red streaks.
There is here a decided

red layer, made up
in large part of iron
tubules, etc., which
is over a ft. thick.

From the 110 place
roughly S. the land
through which cut is
made is a low place
in the prairie.

At 110 the cut is 6 ft
deep.

At 92 passes a
compact sand layer,
stratified, appears.
The cut here is 8 ft deep,
3 of black soil, 5 of
hard pan, loess-like
below, & a trace of
sand.

The sand has much iron
where weathering shows

stratification plainly.
At 80 the sand is
already 3 ft thick &
shows alternately bands
of white sand & iron-
sand.

The transition from the
loamy upper part to
sand is not sharp.
At 60 the sand (hard)
is about 3 1/2 ft &
changes above to loam
in a few inches.

The sand is stratified
in wavy lines, more
or less irregular
(see picture).

The loam above is
more loam-like (see
sample). No
fossils in this upper

loess. The sand
nowhere shows pebbles.
The loess here, when
broken, shows characteristic
lamination.

In the sample of sand,
the darker layer (iron)
are hard.

The cut at 60 paces
is about 12 ft.

The sand extends to base.

This dips down so that
at 45 paces it is

only $1\frac{1}{2}$ deep & shows
alternating bands of
clay (loess) & sand.

The thin bands are
from $\frac{1}{8}$ in to $2\frac{1}{2}$ in thick
& sand about same.

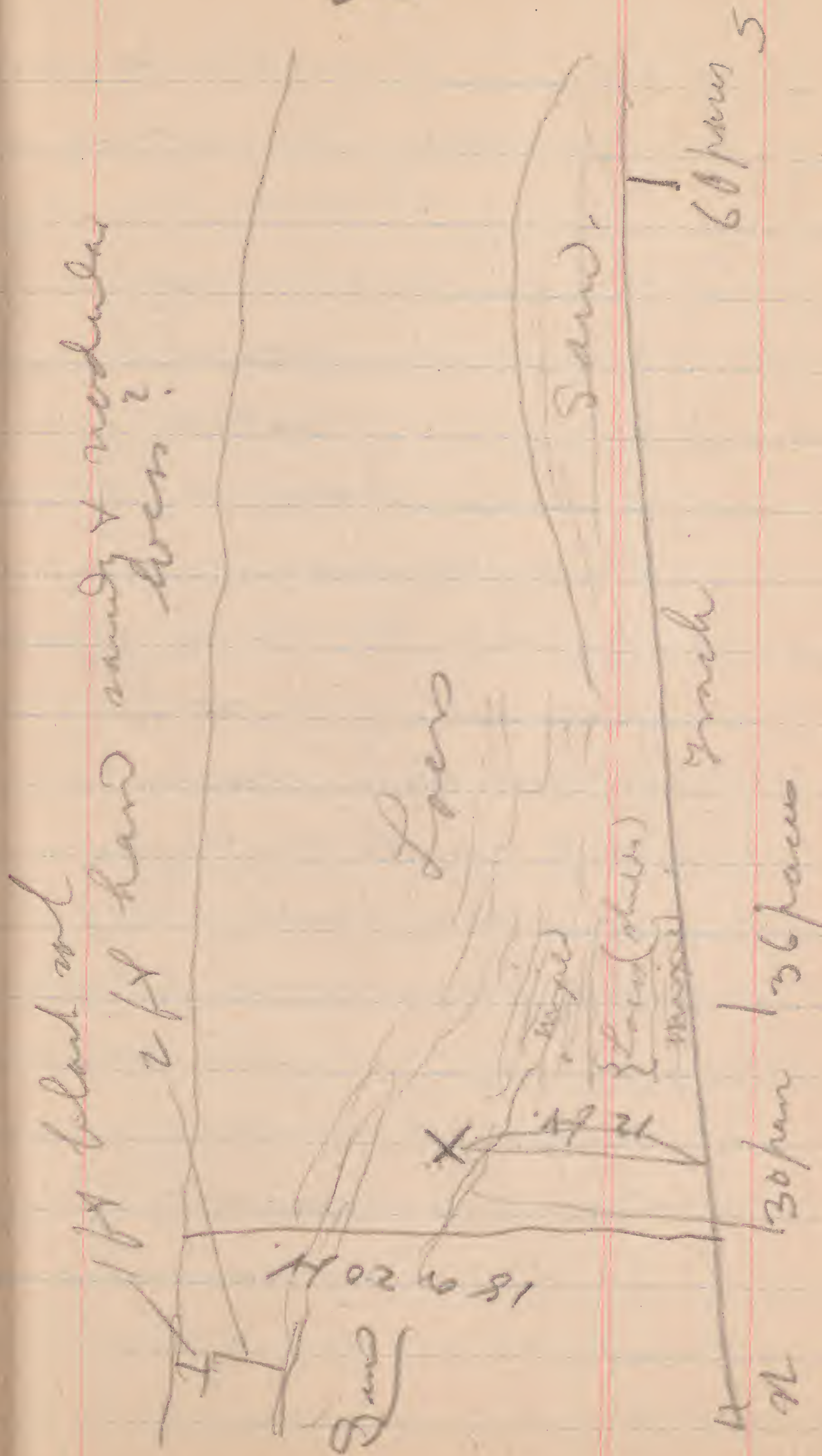
The sand is looser

This is alternating
sand & clay surfaces.
Sand stones from
the present country
at 45 cut is 14 ft
deep & most of it loess
showing bluish streaks &
also iron blotches &
black carbon spots.
At 36 (see plots with
Newspaper (overalls) in it)
The alternating loess
& sand is 6 ft
thick, at a ft
from base, & 2 ft
thick is a loess
layer with fragile
fossils in it. (see
shell & sample of
clay) This is mostly

yellow, with carbon spots all through it. Shells scattered, but more in sand. The lower part again shows alternating bands of fine sand & loam.

There are thin sand streaks even at 60 ft above base in what is mostly loam.

At x on opp. page found a few shells. There are in place, where loam has some bands in it but saw no shells in sand.



N. of the 30 pice
 mark the sand
 seems to run nearly
 to top, except 2
 ft. of nodular loess?
 & 1 ft of soil
 & the talus obscures
 the loess.

On the W. side (all
 preceding is on E. side
 of track) the
 cut is lower &
 less distinct, but
 so far as it shows
 it is about same
 as on E side.

At 25 paces S. of
 bridge on W. side
 Loess is 6 ft deep
 & then alternating

of loess & sand show
 up a foot or more.

Next is talus.
 This loess gets a little
 thicker N. toward to
 bridge.

The track runs from
 bridge to summit S.
 at least 10 or 12 ft.

N. of bridge W. side at
 angle of road (S. side)
 the lower foot or more
 is alternating loess &
 sand & then about
 15 ft. of loess with
 dashes & bands of
 sand - at least
 $\frac{2}{3}$ way up. No fossils
 a few fragments of shells
 seen. None collected.

The same alternation appears along road on W. side - Both N. & S. sides of road show thin + fragments (few of shells)
 It appears as if under the bridge a larger sand dune had been heaped.
 The smaller cut on road east of RR. shows nodular loam above, & alternately bands, with more sand below.
 This lower part is very sandy. 16 ft deep in deepest place
 140 ft long. See sample

I found the shells in alternating loam + sand (less of the latter, about 8-10 ft below top - all along + they were only in clay - the tubular loam (red) 1-2 ft. at top, the more)

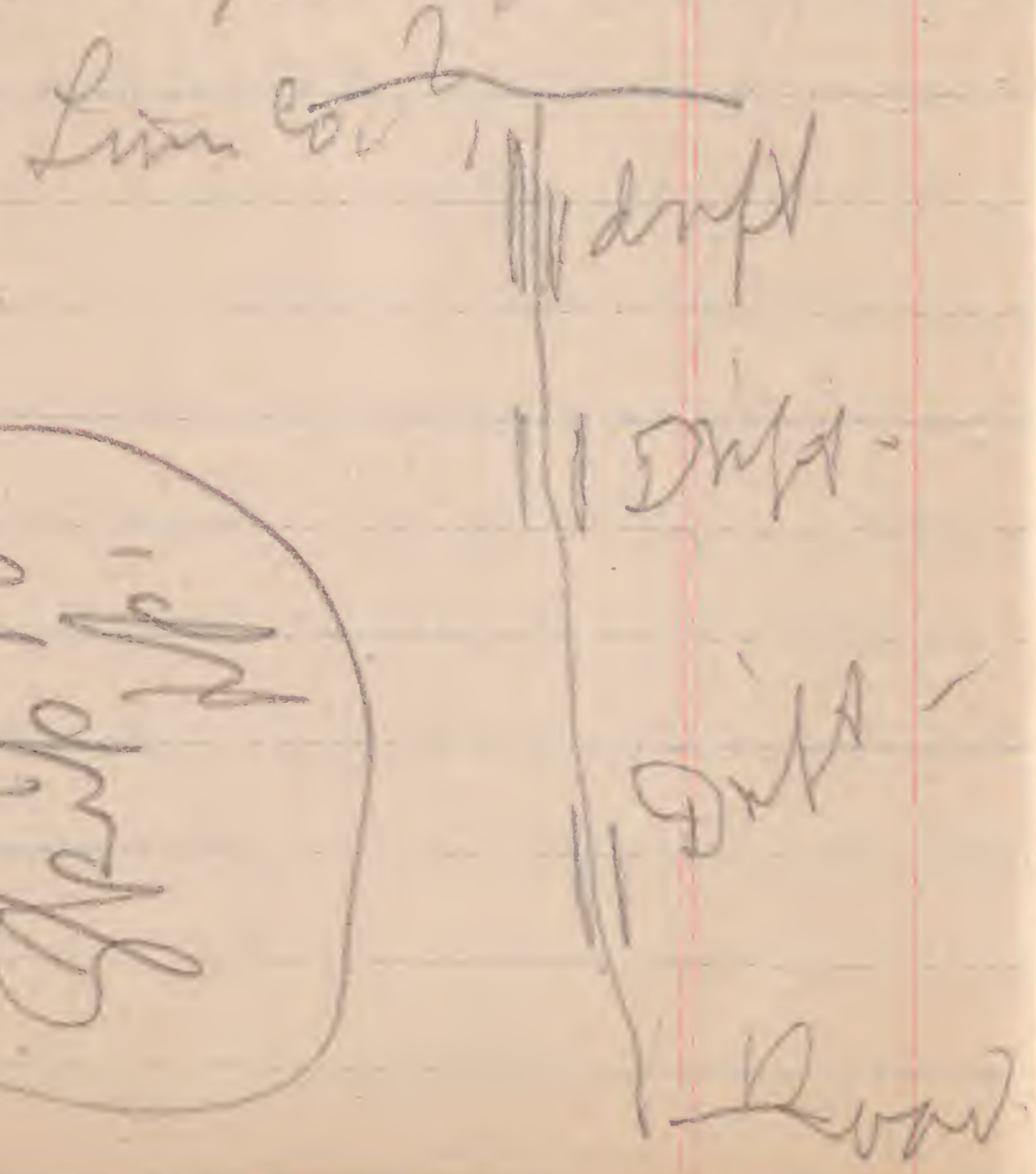
of sand from base of cut on N. side. No pebbles in sand.
 The second cut N. of bridge is about 20 ft deep on E. side (west is low) + is mostly sand with a few loam bands. It is capped with loam - about 3 or 4 ft. There are joints in section all over but evidently all came from top. A few big blocks, dropped from above, showed joints + I got a few on bank above. Other

North view looking E. of S. from S. end
 of bridge. River is about 1000 ft. N.
 of N. end of 2nd and about 1000 ft.

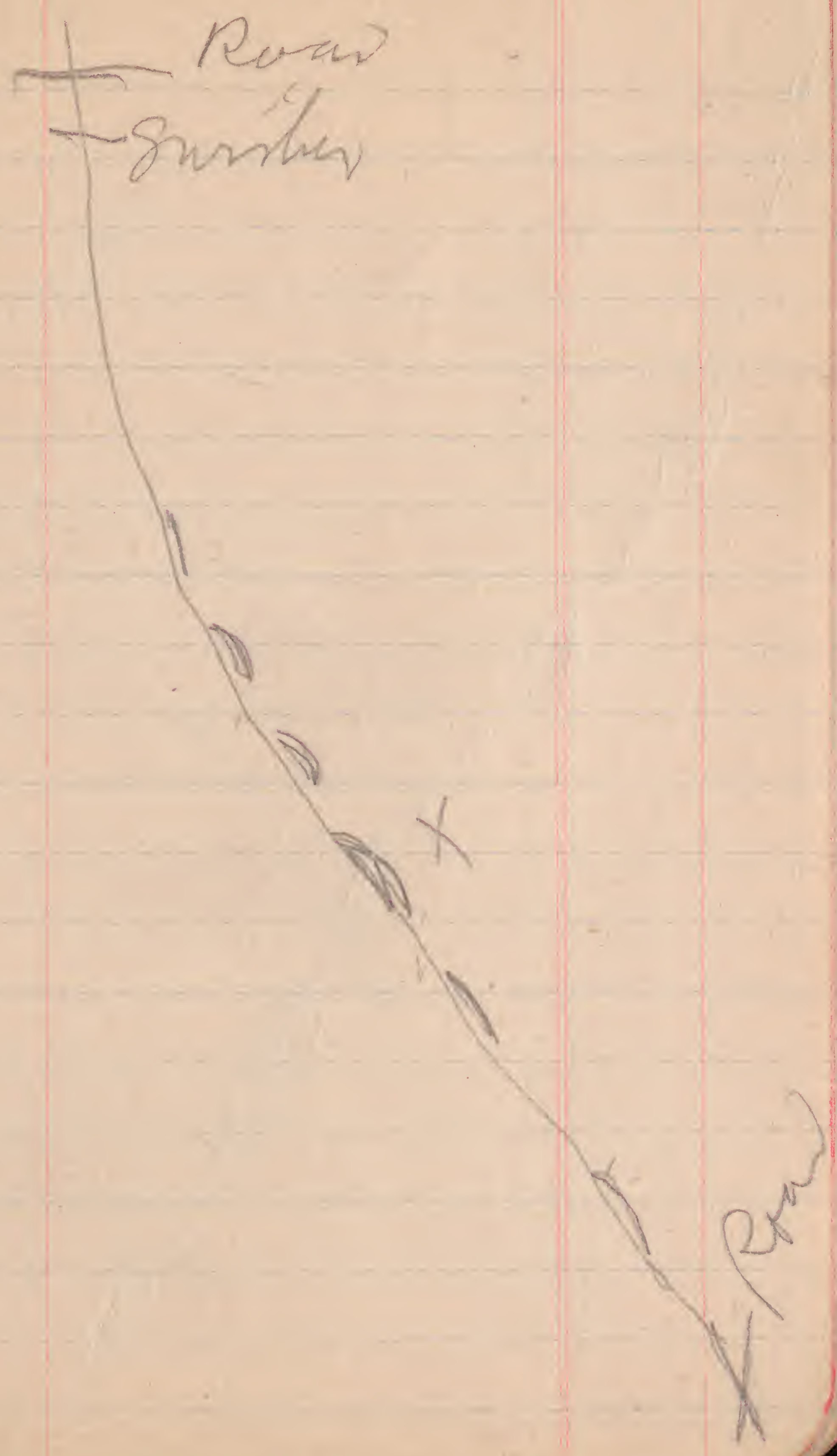
Depth 10
 11
 12

40

(see notes)
 were picked up here.
 The sand is stratified.
 No pebbles.
 On W. side cut is only
 6 ft deep & mostly sand,
 alternating with bands of loam,
 & cobbles with reddish
 lobular loam. Fragments
 of shells are on surface,
 & may come from bands.

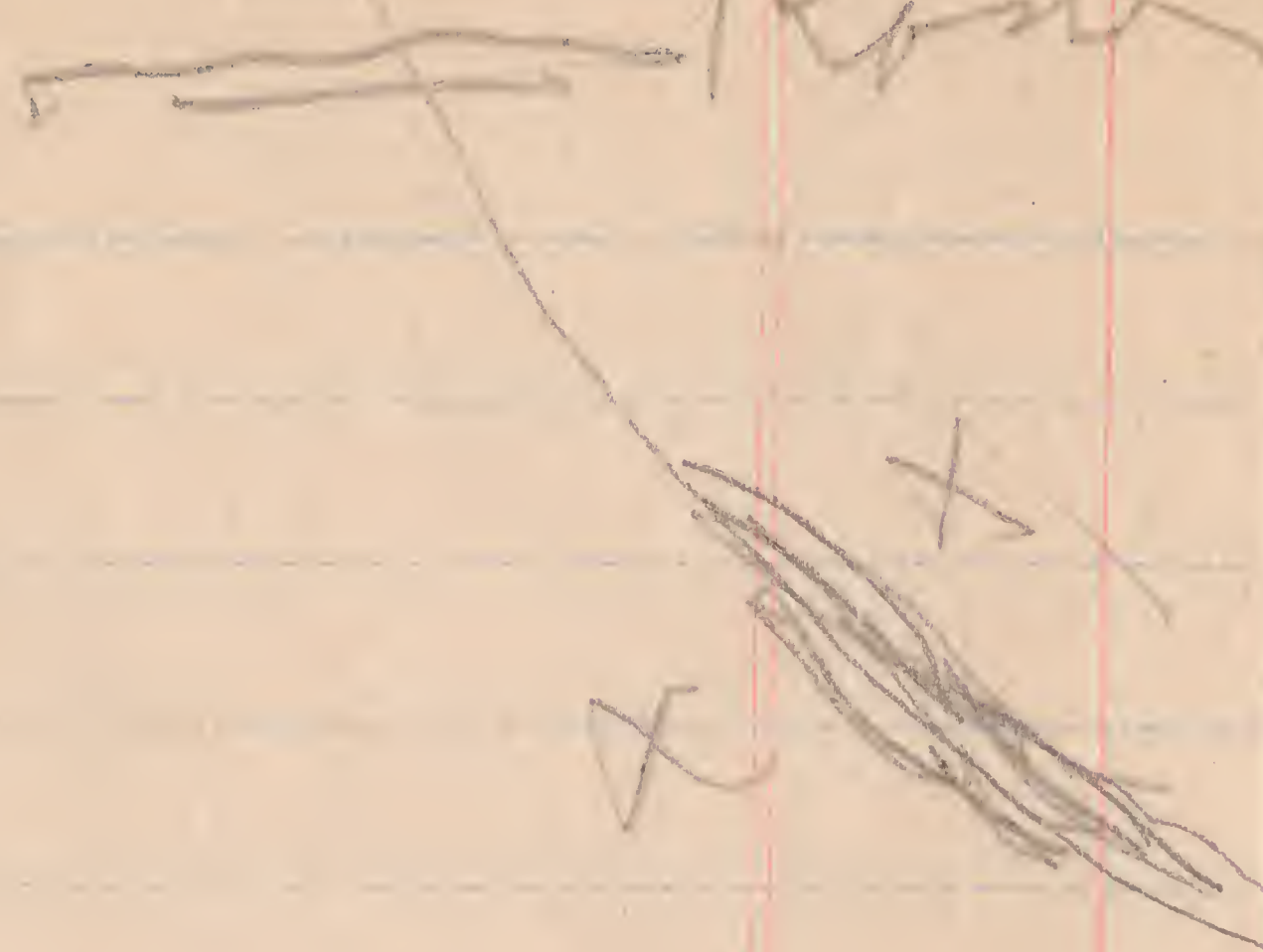


41



42

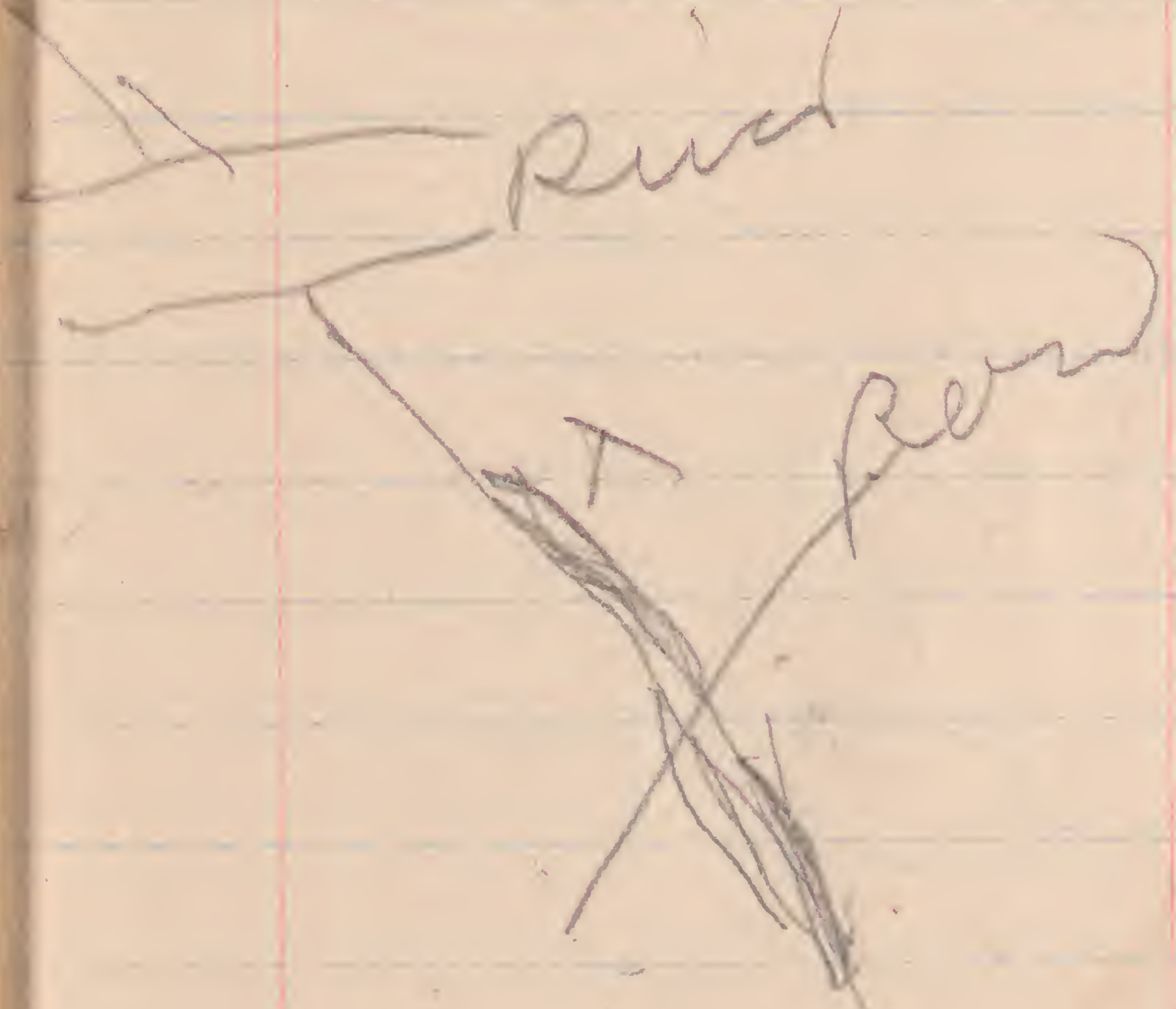
Road



Combal's Road

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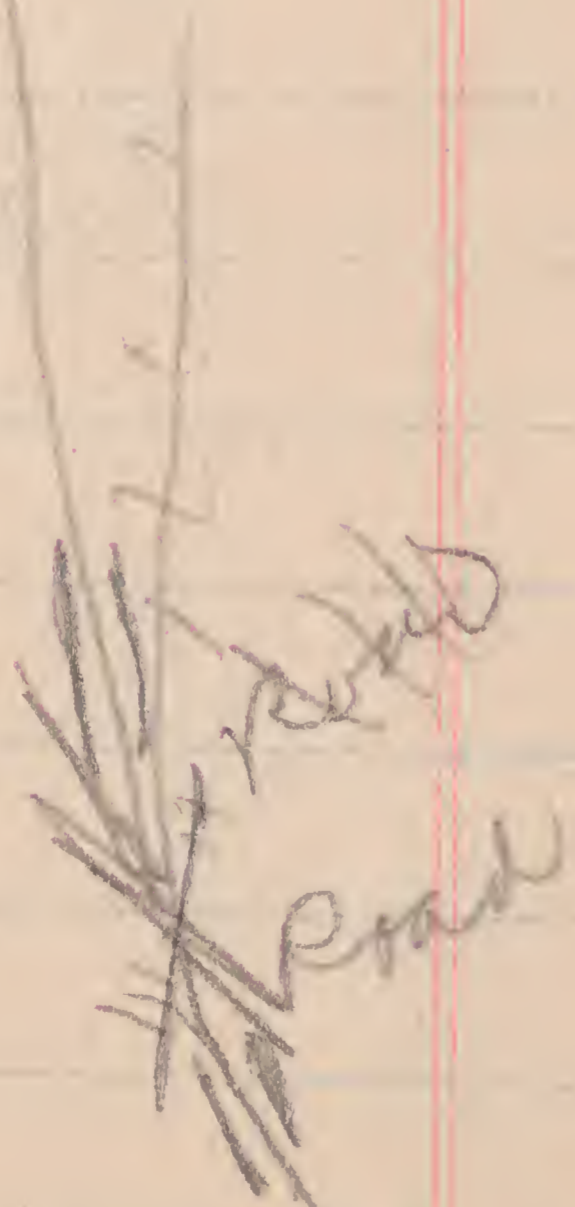
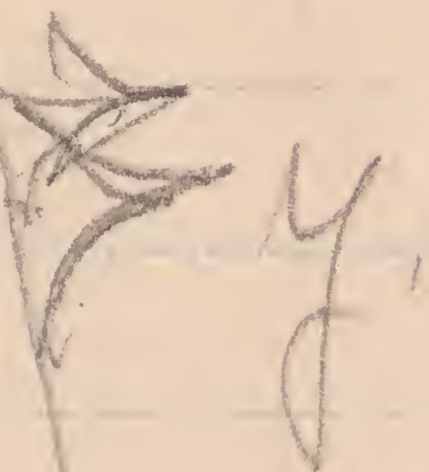
Road



Road
to Govt
Library

44
Joe Gray

Road



road

Dirt
road

Do you



45

Chamblain

Road of N. Lakes

Road Stewart
Join [unclear] #46
This should
be a longer
stretch

R.

drift

drift

drift -
drift (Lavan)

drift -

sandy

Road Stewart

same below

Road

5. 100
More?

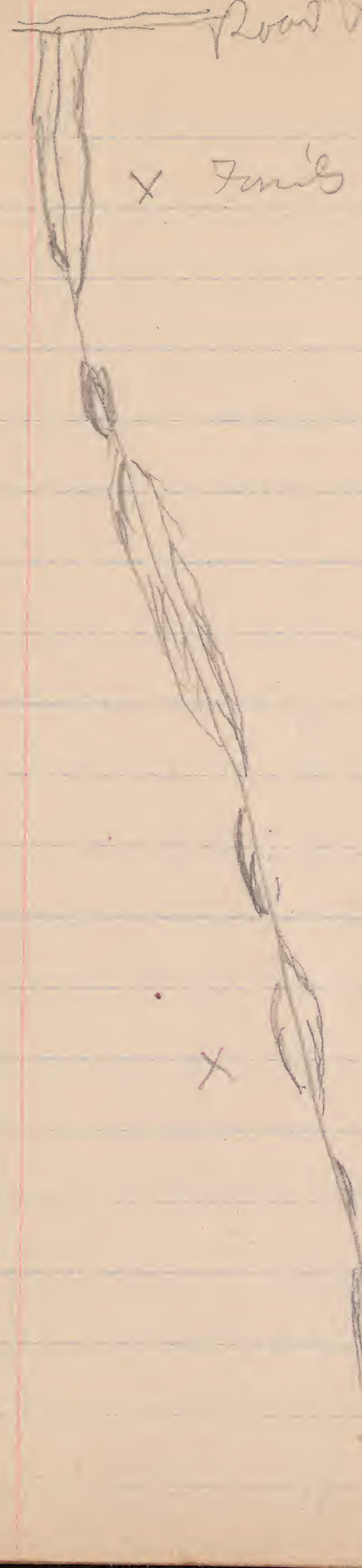
Road

5.

out to hills

48

Road to Kulis



X Fairs

X Duff below

Road

controll

49



Road ↓

Road

2

3

X X

river

(Look ⁵⁰ back 10 pp.)



51

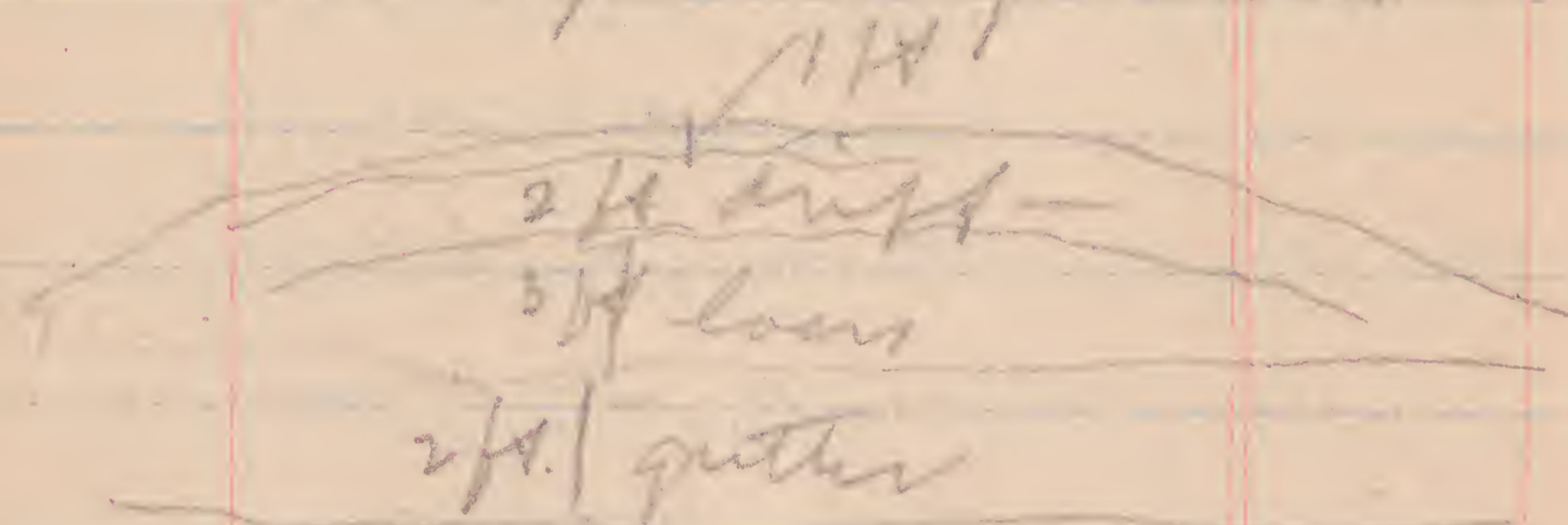
Runs out into low hills
(sandy flat hills)



No. 7. of pseudograpts

The loess below is
characteristic yellowish,
no fossils

The drift layer is about
2 ft deep + shows
pebbles 1/2 in diam down
to grains of sand.



Above drift is a layer
less than 1 ft partly
black & below somewhat
red loess.

No. 6. of pseudograpts
I has 1 1/2 ft of lobular
reddish loess on top, & then
about 3 ft of fine

reddish sand, with
scattered pebbles, some
2 in. in diam. There
are denser bands of
gravel several in
deep. Saw one boulder
3 1/2 in. in diam.
No loess exposed below, -
not deep enough.

No. 5. The lower part
is fine sand - 5 ft.
Then a couple of
feet of reddish
loess with pebbles,
some 4 in diam.
The lobular loess
above was removed.
on E side, cut on
W. side deeper, & sandy to
top (even top one with sand)
One boulder 5 in.

no. 8 - of preceding trip -
 On east side shows
 about 1 ft. of old
 loess, - yellowish -
 then about 4 ft.
 of mostly fine sand,
 with boulders up to
 nearly 3 in. scattered
 through.

Then about 1 ft. of
 sandy, lobular reddish
 loess.

Lower half of sand is
 redder & is divided
 from upper by sharp
 line.

This shows about same
 on W. side.

No. 9 is all sandy
 below it is just W.

of small creek) & is
 about same on both
 sides.

no. 10 (new) A low cut, about
 4 ft., E. of Iowa
 river Park - Shows
 only yellow loess, -
 no fossils.

no. 11 - a few rods below 10
 long, low cut, 5-6 ft.
 shows lobular loess above
 1-2 ft., then sand & some
 gravel, & toward S.
 end on E. side shows
 over a foot of old
 loess.

The W. side is shorter
 & lower, but about
 same.

This is on course.

56

no. 12 - 3 or 4 rods below
no. 11. This is
my old Confal's
no. 2 exposure - where
former loess is
covered with sand.

~~no.~~ At New the loess
loess is about 8 ft
deep, with fossils
scattered through it -
saw two or 3 ft in
top & then wit.
The sand layer gets
thicker to S. end, until
loess disappears, &
the exposure is gravelly
at base at S. end.
I saw no pebbles in
sand directly over
the old loess.

57

no. 13 - is my Confal
first exposure.
Practically all loess
what appears old loess
at base about 1 ft.
Rest yellow loess

no. 14 - S. of road

58

59

Cedar Rapids R

This Receipt is good for so designated. Condition: If issued for Mileage must so indicate by

STEWART	50
MOORE	55
CORALVILLE	60
IOWA CITY	65

EXPRESS ★

BAGGAGE ★

MILEAGE ★

JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
1	2	3	4	5	6	7	8				
9	10	11	12	13	14	15	16				
17	18	19	20	21	22	23	24				
25	26	27	28	29	30	31					
1904	1905	1906	1907	1908							

Cedar Rapids and Iowa City Railway & Light Company.

RECEIPT FOR ONE WAY FARE.

This Receipt is good only on Date Punched, and for a continuous ride between stations so designated. Conductors will punch amount of fare paid.
 If issued for Mileage, Baggage or Express, Conductor must so indicate by punch mark.

Check

Superin

Form A.

Cedar Rapids

This Receipt is good only on Date Punched, and for a continuous ride between stations so designated. Conductors will punch amount of fare paid.
 If issued for Mileage, Baggage or Express, Conductor must so indicate by punch mark.

TURNER PARK	10
ŠONKA	15
KONIGSMARK	20
SWISHER	25
COU FALLS	30
MID RIVER	35
YOUNG	40
NORTH LIBERTY	45

STEWART	50
MOORE	55
CORALVILLE	60
IOWA CITY	65

EXPRESS ★

BAGGAGE ★

MILEAGE ★

JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	2	3	4	5	6	7	8				
9	10	11	12	13	14	15	16				
17	18	19	20	21	22	23	24				
25	26	27	28	29	30	31					
1904	1905	1906	1907	1908							

58

59

Nichols & Bayfield

Apr. 5 - 1905

Wet place Black Birch

Salix amygdaloides

Soft Maple

Cottonwood

Sycamore

Aspen Elm

~~Albion~~

~~Juglans~~

~~Fraxinus~~

~~Prunella~~

~~Spiraea~~

~~Hamamelis~~

~~Quercus~~

~~Spindle tree~~

~~Rhus~~

~~Prunella~~

~~White ash~~

~~Red oak~~

~~Aspen~~

~~Alnus~~

~~Prunella~~

~~Cornus~~

~~Cornus~~

~~Prunella~~

~~Prunella~~

cut. S. of bridge Interurban
Madison

Apr 8-1905
62

at

at
to S.W.



63

64

65

Lve Iowa City 10.56
 " W. Lib. 12.01.
 4.00 7.05
 " Bayfield 3.15 6.50
 " Muscatine 9.30
 " Wilton - 10.13. (arr. 10.40 W. Lib.
 " W. Lib. 11.23.

90

Sulek

Fousek

Vashek

Macháček

Barta

Vani

91

92

Return from

Alamogordo

Sep. 5 - Lunch	80	Supper	1.00 (two)	1.80
" 6 Breakfast	1.05 (two)	Supper	1.20 (two)	2.25
Supper	1.10	Porter	25	1.35
" 7 - cab.	25			

7.25

2.25

1.35

53.60

1529 1/2

