

Quebec, Canada
1919.



POCKET NOTES.



doc. 116

1881
Jan 1st
Feb 1st
Mar 1st
Apr 1st
May 1st
Jun 1st
Jul 1st
Aug 1st
Sep 1st
Oct 1st
Nov 1st
Dec 1st

20 1881

On Sunday Sept 7 I was at Montmorency
and here in the Condit ~~there~~ is now a brick
making plant. No fossils of any kind were seen. The
shales are dark blue, and almost devoid of sandstone.
In two places saw very shallow current ripples with the
crest about 4 inches apart. Their trend was roughly N-S
on the opposite side of the strike of the promontories.

about detail of bedding

The sandstones are dark greenish or color
are coarse of grain and while most is a fine
sandstone, the gravel beds with the ^{layers} pebbles up
to 1/2 inch, though some coming around 1/4 inch,
are in more or less widely separated zones. These
pebble beds lie usually in thin sheets though at
times (towards the bottom) the whole ground ^{is broken into a} ^{series of}
benches ^{or} ^{strata} the pebbles are of fairly well
rounded white (siliceous) and pink ^{or} ^{reddish} ^{quartz}
with ^{occasional} ^{small} ^{pieces} ^{of} ^{pink} ^{bed} ^{rocks}. In
places of ^{these} ^{pebbles} are ^{found} ⁱⁿ ^{the} ^{green}
sandy ^{and} ⁱⁿ ^{pieces} ^{up} ^{to} ^{1/2} ^{inch} ^{or} ^{more} ^{and}
up to 1/2 inch ^{or} ^{more} ⁱⁿ ^{size} ^{and} ^{are} ⁱⁿ ^{the} ^{same} ^{zone}
as ^{the} ^{pebbles}. This ^{is} ^{not} ^{unlike} ^{the} ^{strata}
which ^{are} ^{found} ^{at} ^{the} ^{base} ^{of} ^{the} ^{green} ^{sandstone}
and ^{is} ^{very} ^{similar} ^{to} ^{the} ^{pebbles} ⁱⁿ ^{the} ^{green} ^{sandstone}
in ^{the} ^{fact} ^{that} ^{it} ^{is} ^{very} ^{similar}
in ^{texture} ^{and} ^{is} ^{all} ^{the} ^{way} ^{to} ^{the} ^E

Evidence of pebbles in place.

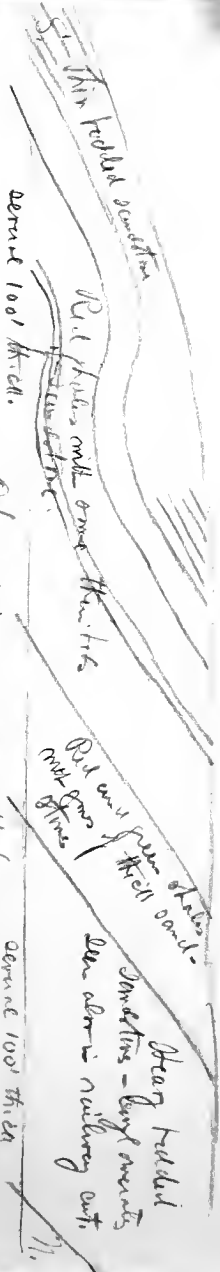
The dip of the sandstone is about 45°



and area, for the same appears to the S.E.
Strike about N.E. - D.P. magnetic.
Towards the top, the same in the cut there.

is a zone of red shale, more or less sandy and
decidedly micaceous (siliceous). A greenish layer first
and then about 8 feet of light red shales, then
some ^{thick} sandstones.

All of these rocks appear to be of a clayey deposition
to be either from a marine deposit. One does not see the
slightest trace of life, not even of burrows or of
prints. The sands are not detrital, they are
sand but they are not white with green mottles,
or that they must have passed down and were
unmixed by the waves. They are more
homogeneous than bedding ^{and channeling} more homogeneous
than any of the other rocks seen in the
cut. The same is true of the sandstone
stone ^{to the south} ^{of the} red shales and green shales
some, no, but they are thin and thin. For the life



Thin bedded sandstone

Red shales with some thin beds

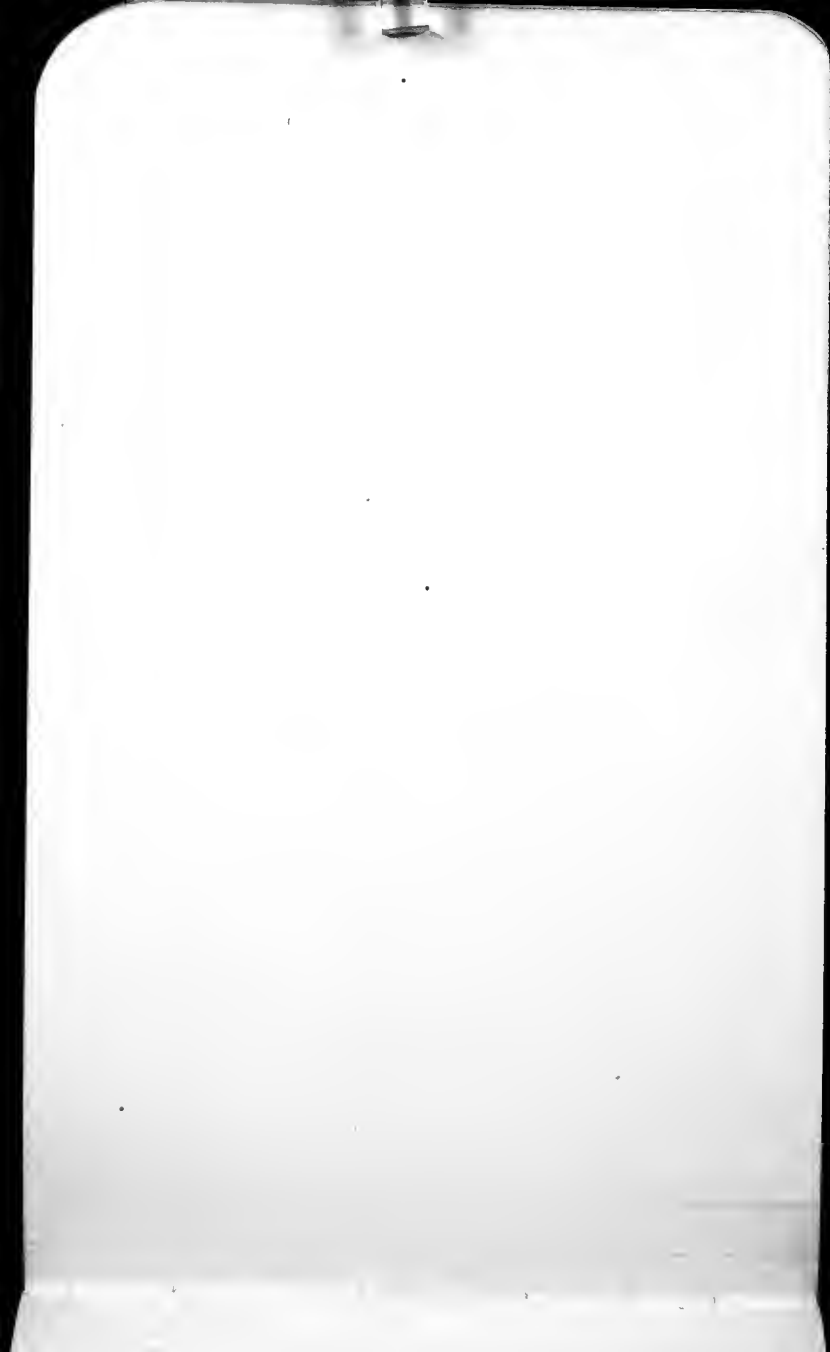
Red and green thin shales and thin sandstone

Heavy bedded sandstone - large masses seen above in railway cut.

approx 100' thick.

approx 100' thick

Chaudwin iron Pratt bank



Grand ... is faulted(?) in Lewis
formation, a series of ^{drift} greenish shales with an abundance
of thin bedded light blue and dove colored limestones.
From the strata one is reminded as if the Lilly may
penetration into the Lewis formation, but the
course may be rather deep. The ... and
... appears to be ...
... since ...
... the ...
... It is in a thin ...
...
... years ago ...

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Justice, Wednesday Feb 10 1864

Quebec, Wednesday Sep. 10 1919

Rained all night and all the morning & the afternoon. Went out with my gun to Lake St. Lawrence. On the first N-S shore of the lake, perhaps 300 yds. from shore, I shot a King Snipe in a very shallow pool of water. It was very tame and came within 100 yds. of the shore. It was very tame and came within 100 yds. of the shore. It was very tame and came within 100 yds. of the shore. It was very tame and came within 100 yds. of the shore.

one pair of King Snipe in a shallow pool of water; they were very tame and came within 100 yds. of the shore. They were very tame and came within 100 yds. of the shore. They were very tame and came within 100 yds. of the shore. They were very tame and came within 100 yds. of the shore.

July 10 1919

Sept. 10-1919

8/10/19

the ridge ... and ... a thick ... of ...
... and ... of
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Sept. 10 1919

eastward

below main st.

stone ^{eastward} ^{below main st.} north there may be seen in
a ^{eastward} ^{below main st.} fully 200 feet more of greenish shales with
reciprocated thin sandstone.

Now, the ^{eastward} ^{below main st.} shown in the most eastern ex-
posure on ^{eastward} ^{below main st.} main street, not less than 325 feet of ^{eastward} ^{below main st.} shales.

Let us now ^{eastward} ^{below main st.} and the ^{eastward} ^{below main st.} added

add at least 30 feet more.

Lower coal	100+	} 368
shales	200	
& coal	68	

Sept. 10-1919

Sep. 10-1919

at mid

distance

main street the thicker

\hat{C} $= \hat{C}$ would aim

is a very fine line at least 20 feet to 25

the \hat{C} is more or less \hat{C} Street? (No)

Apparently it is a brown one, ~~and it is~~ and it is a different \hat{C}

study here near of the Lyngon.

the ship yards

(The next day made this out to be a difference)

\hat{C} (like there seen at one if all was)

then the

Sep. 11 1919

Rained again all night and up to noon today



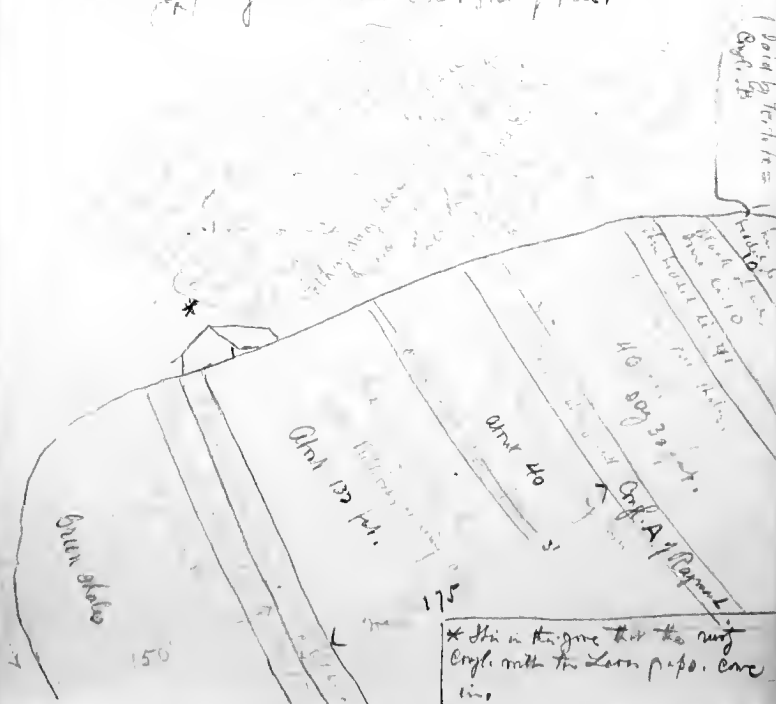
Lester Fault

The effecting of the conglomerate A on lower strata is.

Three feet.

largest quantity of large rocks
found in this. Finest
congl. at top.

and most eastern
In the quarry where main strata goes of hill.



* This is the zone that the roof
congl. with the lower p.p. conc
line

(see other sketch on p. 12, other a view)

Sept. 10-1919.

(one with a sabbat mit the other a cism)

These are... make the obs. ^A...

-a mac.

(up to 10 miles)

The thickness... The thickness... The thickness...

The greater masses of... The greater masses of... The greater masses of...

The famous graphite layers in the first cut... The famous graphite layers in the first cut... The famous graphite layers in the first cut...

W. H. D. 1880

1

Feb. 10. 1919

When these congl. formed there must have been
cliffs in the sea (? fault faces) exposing at least here
Upper Cambrian and Laugan. I am not certain that
the pebbles here at Lerin have Lower Cambrian pieces
if or then also those li. were exposed. In general it
means that Lower Cambrian li. were followed by Upper
Cambrian li. and over the latter came the Laugan sand-
stone. Of Silurian red shales I saw no pieces in the
conglomerate today.

As I do not trust the succession as made
today I will go over it again tomorrow.

The limestone pebbles are too generally distributed
throughout the Lerin to think of them all as of cliff origin.
In places the pebbles are large and such may be at the
base of cliffs when the majority of cases the pebbles
must have had another source.

Sept. 11 - 1919

adobe

at base

the wall was of mud - the

base of the wall is the

same. (The next description that I got came in higher & I
got into as originally thought.

in the ~~long~~ long with

at the 15' level the wall was not more than 20'.

At the 20' level the wall was in the fire

level of the wall considerably higher (over 20'-30' in

height). This is where the wall fell

at the 20' level - probably

It is about 100 yards down the river in the river

area, very much like the ^{other} ~~one~~ ^{one} seen.

with the wall of the

Feb. 11-1919

Don't know 700

upward to 1000. In the area of the site to the left
of the main road, there are some

mill or turned congl. making

This is a coarse grained grey sandstone
with a lot of ^{small} pebbles (substrata)

a
at the base of the hill, there is a layer of
fine grained sandstone, which is

bedded impure limestone with about

ii.

40

There are also some layers of ^{top} to 18 inch long
shales.

Ben walked most all the way to the
Station where the Lilly appears. These first beds of the
Lilly are washed from red shales and marls. The
rest all is red shales. At first it looks as if

Sunday Sept 14 - 1919, Quebec.

Heavy fog broken strands with the wind in the
even light or air. I wonder if it will, ^{was a fine day.} No, it n

Started out to study the limestone conglomerates. Took
a drive to see a Main street at the point where the three
off-sets occur. Beneath the soil, here about 15 feet thick, occurs
a fine black shale about 3 feet thick. Into it has been
tripped some of the same rocks 12 to 18 inches and
the rocks are in a depression around it as if dropped
into the depression. The rocks are of the same
nature as the ones to be seen in the same place. The
bed is one of all sizes of 2 to 20 and some of
them are 12 to 18 inches thick. The
mass of the ^{is 9'} shale occurs. It is a fine black shale
of all sizes, and contains some of the same
as of the same size as 15 to 20 inches and some of
it is larger.

The rocks are not rounded and the same as the blocks.

The Generalized Lewis Formation at Lewis, Quebec, Canada.

As seen on east main street where the road goes up
to hills, and along the Intercolonial Railway east
to the Ship Guards. It is apparently the least dis-
turbed area about Lewis.

The section appears to be descending. The lithology appears
to be changing rapidly from place to place. Evidently
the material is a very shallow sea.

Top of Lewis series unknown. Overlying formation said
to be the Quebec City formation of Trentonian age.
There appears to be no Chazy equivalent here, though
fossils in the Quebec City formation indicate that
the deposit Chazy or rather the Hornau Hill equivalent
(*Leptæa furcata*) was in this general region.

There is apparently a thickness of hundreds of feet above the
the strata here listed whose position cannot be made
out for want of continuity in the section.

Thin bedded li., said by Raymond
to be the same as Congl. B. He
walked it out. Fossils as
seen from base of cliff

Congl. B on first N.-S. street
into main st. 30'

10'

(continued second page over)

Of sandstone I see but one block and of actual shale and
green rocks none. All of the limestones may have been derived
from a single limestone formation, some of the lower ones.

Toward the top the larger blocks disappear and at the top the
2 1/2 ^{thick} of ^{the} ^{thin} ^{bedded} limestone ^{is} ^{made} ^{up} ^{of} ^{small} ^{blocks}
which ^{are} ^{not} ^{as} ^{large} ^{as} ^{the} ^{ones} ^{at} ^{the} ^{bottom}.

^{the} ^{small} ^{blocks} ^{are} ^{not} ^{as} ^{good} ^{as} ^{the} ^{ones} ⁱⁿ
formation ^{being} ^{unconsolidated} ^{hard} ^{mass} ^{of} ^{the} ^{limestone}
at ^{the} ^{base} ^{of} ^{the} ^{hill} ^{one} ^{of} ^{the} ^{limestone} ^{is} ^{made} ^{up} ^{of} ^{small} ^{blocks}
which ^{are} ^{not} ^{as} ^{good} ^{as} ^{the} ^{ones} ⁱⁿ ^{formation} ^{being} ^{unconsolidated} ^{hard} ^{mass} ^{of} ^{the} ^{limestone}

the limestone ^{is} ^{made} ^{up} ^{of} ^{small} ^{blocks} ^{which} ^{are} ^{not} ^{as} ^{good} ^{as} ^{the} ^{ones} ⁱⁿ ^{formation} ^{being} ^{unconsolidated} ^{hard} ^{mass} ^{of} ^{the} ^{limestone}

the limestone ^{is} ^{made} ^{up} ^{of} ^{small} ^{blocks} ^{which} ^{are} ^{not} ^{as} ^{good} ^{as} ^{the} ^{ones} ⁱⁿ ^{formation} ^{being} ^{unconsolidated} ^{hard} ^{mass} ^{of} ^{the} ^{limestone}

the limestone ^{is} ^{made} ^{up} ^{of} ^{small} ^{blocks} ^{which} ^{are} ^{not} ^{as} ^{good} ^{as} ^{the} ^{ones} ⁱⁿ ^{formation} ^{being} ^{unconsolidated} ^{hard} ^{mass} ^{of} ^{the} ^{limestone}

Generalized section continued.

Black shale with thin li. layers	10'	Black shale with local lenses of li. congl.	30'
Li. congl. A	2-6'	Li. congl. A,	3'
Black shales			8 to 10'
Green, hard sh. tending to be in thick and orient at lying (yellow weathering) beds			30'
Black and green sh.			18'
Green and black sh. with hard grey-green lying (yellow weathering) zones			90'
Grey to light-blue thin bedded li. with green and black shales. Apparently the <i>Stemmaria</i> zone of Raymond (if it is not this zone then the <i>Stemmaria</i> beds comes in left above all of this section) has <i>Elkania</i> and graptolites.			15'
Green, hard sh. tending to be lying (yellow weathering)			10'
Hard greenish sh. with some thin yellow weathering harder zones			70'
Green fine sh.			50'
End of sh. quarry on Main Street			
(Continued second page over)			
			<hr/> 361'

very for thick and sucking, and all are more or less rounded.
The quartz pebbles range up to 1/2 inch across but more often are
under 1/8 inch. They are chiefly speckled & have some enclaves.
The sand and quartz pebbles may have been derived from the
same source and enclaves. The grains are once around
entirely smooth surfaces, the pebbles are rounded
planes.

The matrix is a fine, silty, clayey material, a mixture
of sand, silt & clay about 10 parts of sand to 100 parts of silt & clay
with some fine mica. The matrix is a dark, muddy-brown paste. The
pebbles are of various sizes, from 1/8 inch to 1/2 inch, and are
usually rounded. The pebbles are of various materials, some
quartz, some calcareous, some siliceous, some ferruginous, some
argillaceous, some lignitic, some cherty, some shaly, some
sandy, some silty, some clayey, some silty-clayey, some
shaly-silty, some shaly-silty-clayey, some shaly-silty-clayey-sandy,
some shaly-silty-clayey-silty, some shaly-silty-clayey-silty-sandy,
some shaly-silty-clayey-silty-sandy-silty, some shaly-silty-clayey-silty-sandy-silty-silty,
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Generalized section continued.

Green and yellow weathering sh. with an occasional sandstone (These occur from Maine st. down to International Railway tracks). 361' 100'

Green sandy shales down to iron where occur with sandstones or congl. the one called C by Raymond 200'

It seems to be in this zone that occurs the fine graptolite locality in the cut on the International R.R. Here is green shales, thickness maybe 130'

Black micaceous sandy sh. with thin ss. 30'

Below the top occur the large Phyllograptus. Green shales below and black rusty weathering (pyrite) shales above with an abundance of Tetraplex quadriradiatus and Dickograptus 20'

Yellow weathering li congl. with large blocks 20'

This congl. looks most like B and it may actually be it. If so then these beds must go 500 feet higher in the section. Their present position is due to faulting. In other words included the horizon of the Phemardina li or (section continued several pages over) 711

Generalized section continued

711'

Below them in the black shales. Even so the sequence here given will not be altered by the transposition.

Large sandstones, more or less conglomeratic with li. pebbles, large sandy green sh. or even quartz congl. like those of the Lower Litley. Below the slip zones it is composed as follows:

68'

Top heavy bedded coarse grey ss. 8'

Then bedded light blue to grey li. with almost no black shale partings 40'

Lower grey ss. with li. congl. 20' In places the lower half is all blocky li. with a sandy-li. matrix. (This is Logan's conglomerate Coast Ridge)

Green sandy shales down to river

? 200'

It is 80 yards across with the dip 60°

Heavier li. congl. of all with a coarse to fine gravel quartz part. Occurs at the Ship Yards. Appears as one unbedded mass (This is Logan's conglomerate D) bedded about

100'

St. Lawrence River Base of Lewis unseen.
(Continued second page over)

1079'

I saw the embossed piece of fossiliferous limestone.

It is a small elliptical, probably a thin, elliptical in section and probably like the other one but my other type is a different one. The associated fossils are of the same nature as those in the 3 turning, but the fossils are like the other one as they are not in the same position.

I see no crystalline structure in the fossils seen and believe the fossils are in the mass, in banded like the other one. The material is green with some white crystals in bands. I cannot see any of the green in the actual crystals, though they have some of it.

I have seen the fossils in the same position as the

other one, but they are not in the same position as the other one. They are in the same position as the other one, but they are not in the same position as the other one. They are in the same position as the other one, but they are not in the same position as the other one.

Other sections

The undoubted *Stenocardia* li. are in thickness 15'
 Black shales 10'
 Green and yellow sand limy-sandy sh. with
 Black shale zones. Considerable thickness.

At the wooden stairs. Continental anticline.
Stenocardia layers at level of street 15'
 Green and black sh. with thin zones of li. 20'
 From the middle cliff of green sandstone sh. of various
 shades and more or less streaked with black bands
 one-half inch thick. Very rare is there a black sh
 zone. Cliff nearly over 100 feet high. The strata dip
 S. about 50°. There are 110 steps each little higher
 than a lead pencil = 8 inches. This would make 73 feet.

A little farther E on Green st. but W of the three offset
 faults in congl. is this section.

Stenocardia thin li. near top of cliff 15'
 Dark shales 10 to 15'
 Green shales 30'
 (Continued second page over) 60'

Some are well rounded, they are often quite angular and irregularly weathered thin joint thin sandstone. Many stand in rows in the bedding of the sandstone.

They are in beds between 2 and 3 inches thick at an angle of about 45°. They are very well sorted.



Many of the fossils are under 1 inch in length.

Some are well rounded, a few are angular, and some are in rows. They are very well sorted.

They are in beds between 2 and 3 inches thick at an angle of about 45°.

They are very well sorted and are in rows. They are in beds between 2 and 3 inches thick at an angle of about 45°.

They are in beds between 2 and 3 inches thick at an angle of about 45°. They are very well sorted and are in rows.

Other sections continued.

Congl. li. with large boulders	60
Black sh.	6 to 8'
Green sh. as at steps. Probably 50' down to street	4'
	50'
	<hr/> 122'

At the true offset faulting place.

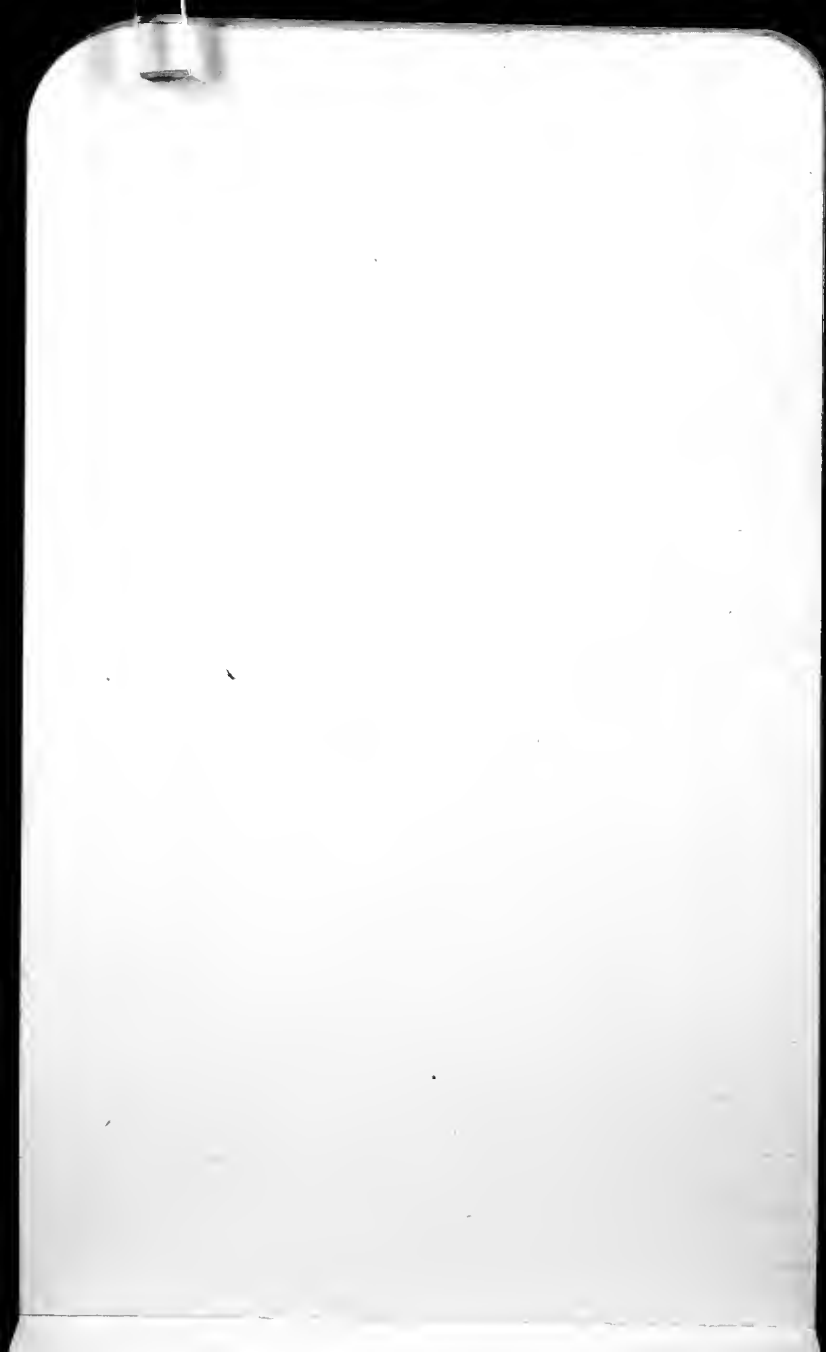
Shinarump beds at top	15'
Black sh.	4'
Green sh.	20'
Black sh.	4'
Green sh.	7'
Green sh. as at steps. Probably 40' seen to street	40'
	<hr/> 90'

looked for channeling, ripple marks, sun
 cradling, and intraformational conglomerate, but saw nothing
 of the kind. Now in the block of shale fragments is there
 a distinct trace of organic markings - trailings, in spite
 of all the evidence the nature of the water of indicates
 they must have been currents to some extent. The
 climate must have been a pluvial one, but if a sea deposit
 was not in evidence, why are these deposits better if
 they were? If they are, the surface of side of a delta
 is not the usual evidence of a delta, but a
 common one. The water must have been
 shallow, and the currents must have
 been at work, but the ice did not get to the bottom of
 the water. The water must have been shallow?
 The only thing that is of any use is
 the fact that the water was the C. em-
 phatic, a considerable percentage of laminations, there is
 a very small amount of the same, it is to
 the in blocks in the adjacent area, as in

There is very little evidence, as far as I know, for the ice interpretation. I think the best explanation will be that previous to the crisis the country was either fractured or folded (rather than the former) and rock slides produced. In general the material got to the sea in small pieces and the constantly rising sea on the land finally consumed most of these rock slides. In the places of their origin they made the local conglomerates, and only in the few most southern zones is the material still preserved as the rock slide material.

above clustered masses, all would have the idea that
sediments in Lower time then was land ice - piedmont
ice - ridge from the limestone masses and the more
rare ^{light} magn. sandstone, with very much a red-panth
quartzite is seen a ^{single} good one lying together
is a very shaly ^(see above) ^{thin} sea the ^{red} ^{stone}
the ^{sediments} ⁱⁿ ^{the} ^{area} and lying
the ^{sediments} ⁱⁿ ^{the} ^{area}. ^{Large} ^{masses} ^{of} ^{quartzite} ^{is} ^{seen}
the ^{sediments} ⁱⁿ ^{the} ^{area} did not ^{make}
make their appearance.

at the time the first west broken lumps of the
sed. in the west making me in a limestone (probably of
the ^{type} that is at least 50 feet long of 40' at thick.
is a ^{thin} ^{stone} ^{shale} ^{and} ^{stone}
smaller masses up to ^{the} ^{size} ^{of} ^{the} ^{stone} ^{seen}
and ^{was} ^{seen} ⁱⁿ ^{the} ^{area}
The whole mass is ^{well} ^{shaded}
the ^{expl.} ^{of} ^{the} ^{expl.} ^{of} ^{the} ^{expl.}
seen and these ^{is} ^{the} ^{type} ^{of} ^{the} ^{expl.} ^{of} ^{the} ^{expl.}
Later got a few more fossils, all typical of the C. or Cyprianian



Farther east along the north eastern ridge one sees another
 quarry and here about the top of the ^{is pea green shale} ~~eastern~~ ^{side}
 before the limestone. They often ~~are~~ ^{are} ~~found~~ ^{found} ~~in~~ ⁱⁿ ~~the~~ ^{the} ~~limestone~~ ^{limestone} ~~at~~ ^{at} ~~the~~ ^{the} ~~same~~ ^{same} ~~level~~ ^{level}
 about the same ^{level} as the ^{bedded} ~~beds~~ ^{beds} on both sides of the
^{is} ^{not} ^a ^{case} ^{of} ^{limestone} ^{being} ⁱⁿ ^{the}
~~limestone~~ ^{limestone} ^{is} ^{marked} ^{into} ^{one} ^{another} ^{during} ^{the} ^{deformation}. ^{It's}
^{result} ^{of} ~~the~~ ^{same} ~~deformation~~ ^{deformation} ^{is} ^{that} ^{the} ^{beds} ^{marked} ^{together} ^{during}
^{the} ^{deformation}. ^{The} ^{beds} ^{have} ^{been} ^{marked} ^{into}
^{one} ^{another} ^{during} ^{the} ^{deformation}.

From a ^{point} ^{on} ^{the} ^{east} ^{side} ^{of} ^{the} ^{ridge} ^{one} ^{sees} ^{the} ^{same} ^{beds}
 but they are ¹⁰⁰ ^{yards} ^{away} ^{from} ^{the} ^{ridge} ^{and} ^{are} ^{at} ^{the} ^{same} ^{level}
 as ^{the} ^{beds} ^{on} ^{the} ^{ridge}.

The ^{same} ^{beds} ^{are} ^{seen} ^{on} ^{the} ^{west} ^{side} ^{of} ^{the} ^{ridge}
 but they are ^{at} ^a ^{higher} ^{level} ^{than} ^{the} ^{beds} ^{on} ^{the} ^{ridge}.
 This ^{is} ^{due} ^{to} ^{the} ^{fact} ^{that} ^{the} ^{beds} ^{on} ^{the} ^{ridge} ^{are} ^{at} ^{the} ^{same} ^{level} ^{as} ^{the} ^{beds} ^{on} ^{the} ^{west} ^{side} ^{of} ^{the} ^{ridge}
 but the ^{beds} ^{on} ^{the} ^{west} ^{side} ^{of} ^{the} ^{ridge} ^{are} ^{at} ^a ^{higher} ^{level} ^{than} ^{the} ^{beds} ^{on} ^{the} ^{ridge}.

Opposite the station the rocks are exposed
in a railway cut some 600 feet long. This
is two miles east of Lewis. A very short distance east
are the red shales of the Silurian.

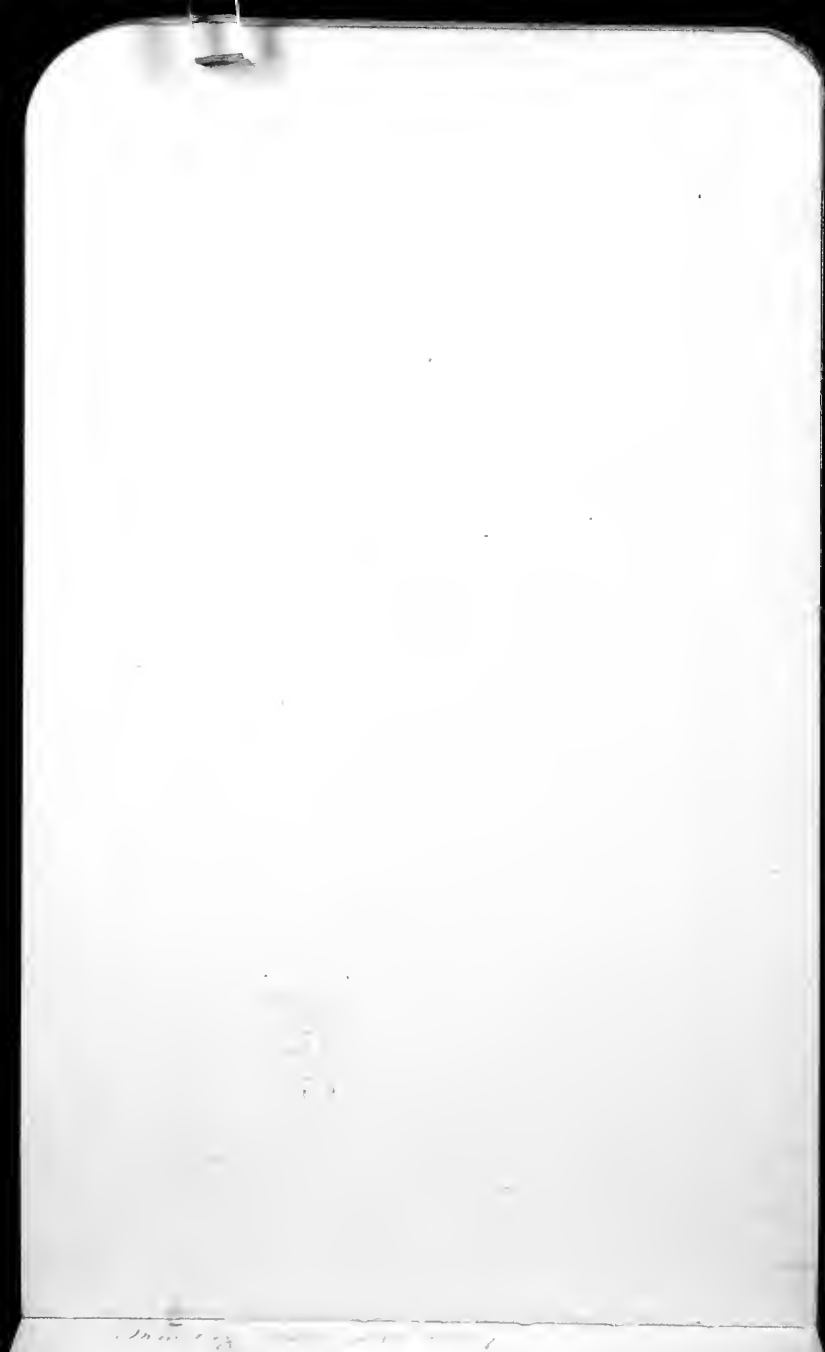
extend east to the ship yards.

Their length does not appear to be more than $\frac{1}{2}$ mile at best.

All the fossils seen are of either Upper Cambrian or Ozarkian age, and I rather think the latter. Of cephalopods I saw at least three. They are circular in section with the septa considerably concave, but none showed the siphon which leads to the view that it may be small. One of the sp. was $\frac{1}{8}$ inch in diameter with an exceedingly slow taper. As no ceph. are known in the Cambrian it would seem that there was here a good development of Ozarkian.

These milky white li. are exceedingly scant in fossils. One of Hoch about 20 feet long that had considerable fossils. It is possible that a ledge Lammere and a deep well would yield some good fossils.

and these limestones had undergone diagenetic change in the formation of bityroidal strobilite. Then on weathering becomes siliceous and very true unimolled algal growths. But they are all inorganic.



Monday Feb 15-1919

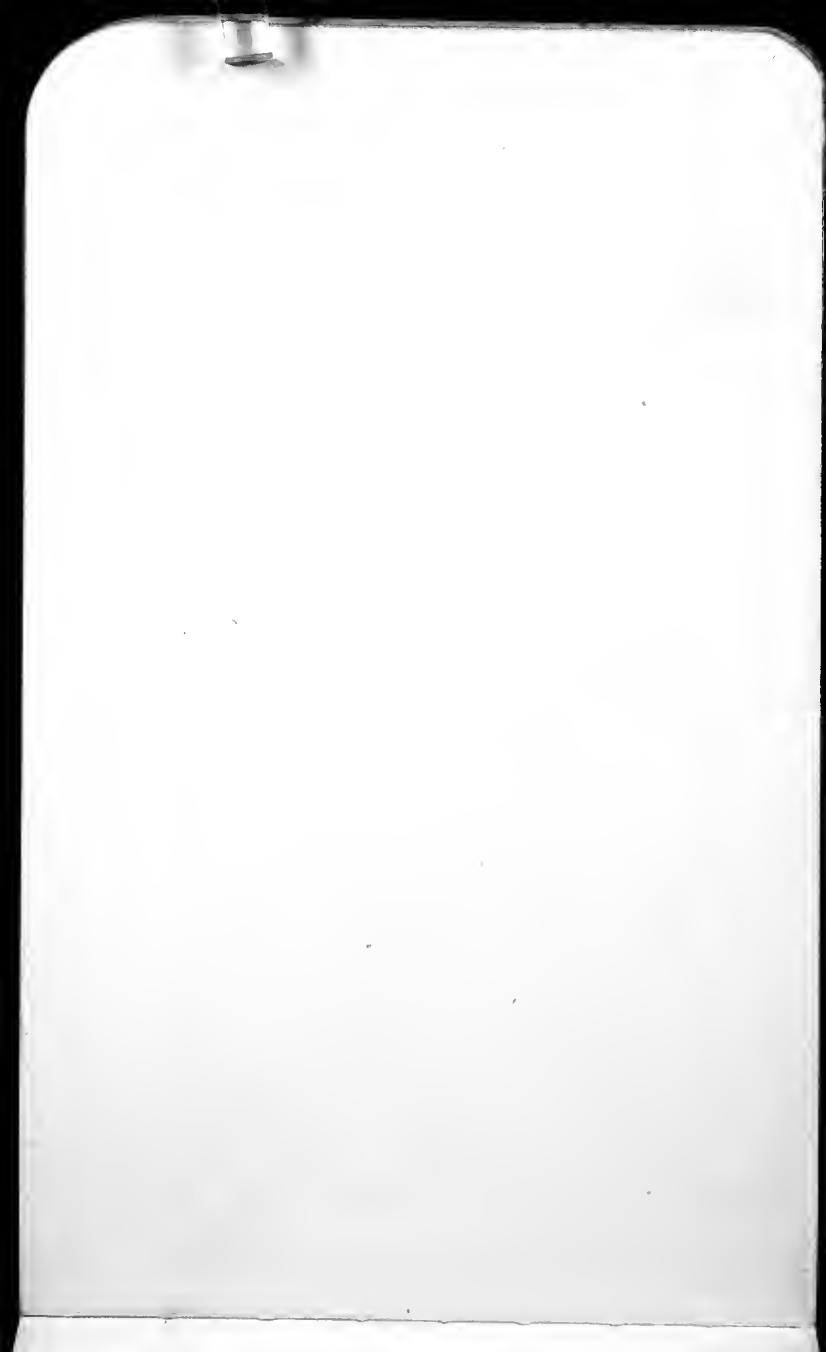
A bright cool morning and I am off for Bic,
170 miles to the east of Lewis. Fare 5.95 = $3\frac{1}{2}$ ¢ per mile.

At St. Charles Junction we are on the St. Lawrence
plain. To the north one can see the ^{uplifted} Laurentides and
to the south the ^{overthrust} scarp of the great fault that borders
the St. Lawrence river. It is probably $2\frac{1}{3}$ miles to the
river and 4 to 5 miles to the fault scarp. The great
St. Lawrence escarpment stands out distinctly in the morning,
and from the air way it does not look as if the part
of an elevated plateau. That it is only a low ridge
is shown by the fact that it is only 160' (at its base) above
the level of the river. It is almost as flat as the prairie
of Indiana and Illinois.

At St. Lawrence, we found a mile or two east of St.
Valerie, 23 miles east of Quebec. The river of the Laurentides is
five feet and to the east per mile.

There is no fault here, and it is part of the Laurentides,
opposite the St. Lawrence. The north coast hills has gone into
the river.

As we approach St. Anne the Kiamas mountains
which, only of the soil way, in the - the Oriskany



They have never been seen all along to the westward.
plain. I think there are nothing more than the basal con-
stone and quartz conglomerate that occurs about the Quebec
Bridge. The beds of these ridges stand nearly vertical and in most
cases the blue out dip ^{slightly} into them. It was a
long time since I have seen gillies and shales and the idea I
get is that we are beneath them in what I have been walking
Langens. [It would seem that the red shales become less as
we go eastward.]

Further east side of the Canadian mountains ridges are
gone. At St. Phillippe de Meru there are again many of
them. They continue all the way to St. Paul; west near
St. Helene. They then are gone.

We have had to the north of the railway a constant
ridge of sandstone on almost to the Bic
distance of 31 miles. At St. Fabien the shales show
slight cleavage.

Stopping at Hotel in Canada, rate \$2.00 per
day. There is another hotel Laval here where
the dreamer seen here to Canada

The dip of the main boulders
is toward the north, the
here to the N.E.

All of the boulders - the flat ones -
are oriented as the long axis
Epl. masses.

Roof

This mass at the roof is 270 yards across.

Many more dip to the south.

The entire mass is of limestone or limestone (JPO) mixed
with sandstone and ...

South

Core
mass



If igneous rocks I see more than then a very dense
 green rock that occurs in boulders up to one
 foot across. The granite is present though the quartz pebbles show that granite was
 present. I also saw one of the well rounded about
 2 by 4 inches is a decidedly siliceous quartzite. These may
 be of Pre-Cambrian age. Later on saw more quartzites and
 in a spot that by the color of Cambrian age.

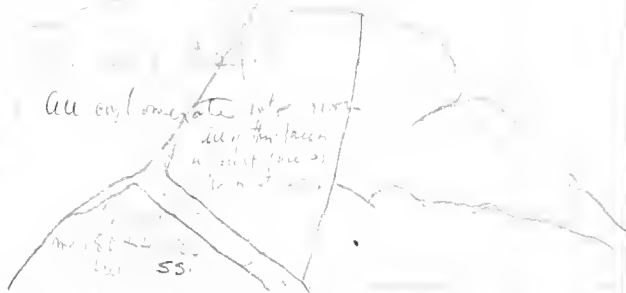
It all is made of material of ... a
 making most of the thickness.
 and ... formation, ...
 ... if ...

...

...

...

[The ...]



220 yards across

Foot ...

Some places ... have moved aside off,
that is ^{are} ~~are~~ by ^{the} ~~the~~ in-pushing ~~of~~ ~~the~~ ~~com-~~
~~ponents.~~

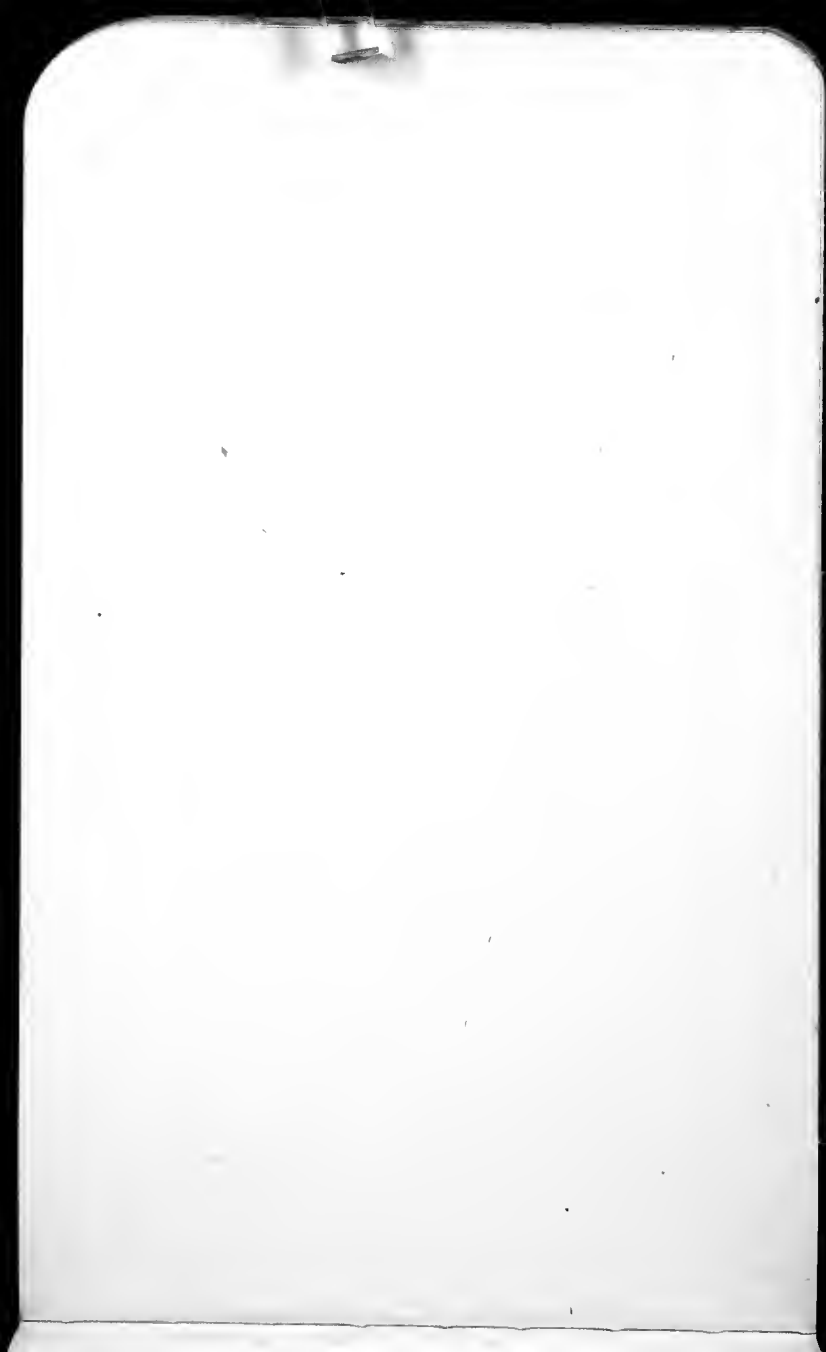
These conglomerate ... probably all is in the
order of cliff ... To the sea was being delivered
great quantities of sharp sand and quartz pebbles and
these made good grinding material to wear on the
rocks. The sandstone and limestone as they fell into
the sea were more or less rounded and angular
is. The fine sand stones of ~~shaly~~ ~~limestone~~

I saw no sandstone boulders larger than 4 to
5 feet across, and the limestone boulders very rarely more
than 3 feet thick. Probably the great majority of boulders are
under one foot in diameter and all are fairly well rounded.
One gets the idea that the pieces are not of these bedded
stratifications as the boulders are not flat ones.

The only way this conglomerate could have formed is a rock slide and probably ^(Later on I gave up this idea) into the sea. As none of the large pieces show deformation or folding it may mean that vertical elevation took place at the close of the Upper Cambrian and from these fault scarps the material broke away and slid into the sea. All of these great conglomerates here make high ridges and appear to be of the same age. They are mostly quartzite.

The smaller pieces are rounded but many of them are too well rounded to be either stream or wave worn. Then too there are no pebbles of any of the other stones as pebbles of quartz and gneiss conglomerates.

The pebbles here are similar to some of the pebbles in the Cambrian that here the pebbles are smaller, but the pebbles are all ^{are} of the same size and are of the same basic composition. (Later I gave up this comparison) Some of the pebbles are conglomerate and the pebbles of either quartzite, quartz, conglomerate or limestone may be of all sizes, rolled round in the sea.



seven rusty layers. One of these sandstones, one or 18" thick, is a fine sandstone, that has not yet been
seen before. There are four or five 3' beds of this
nature. The first is a sandstone, a small kerolite
and the second is a light-colored. These beds are
seen to be of the same age. Being this I did not
go down. Being for the material but found no more.
When we got to the long sandstone we saw
the same kind that had pits but in no other did I see
any fossils. It all had to me like some of the
same kind as we saw at the same place. The
fracture face was loose about the sand side, and got it
clear that it was not far out of place being far from the
side of the sand.

These Lamaine strata continue north for about
1000 feet and of the same and ^{it} also at the same
expressing down ^{to the S.} but not to the north. There is a ^{very S.}
wide shallow valley ^{to the S.} by the road by a long river
to a village. I did not go across this valley, but only 1/2
mile or so. These Lamaine strata adjoin the
Tillies at Gump fault.

The finding of these Lorraine rocks was a great surprise to me as James looking for Lower Cambrian fossils.

All of the Silurian slates and the associated quartzite and conglomerates ^{above Die} are restricted to within a mile or 1 1/2 miles ^{of quartzite} of the ^{W. of Die's} ^{(Summit's box) north} ^{standing in cells arranged} ^{The slates of the Silurian are} more ^{than} are the slates of the Lorraine.

In the afternoon went west about 2 miles to see the quartzite

part of the ^{formation} ^{the} ^{ledge} ^{first}

a sample. 1
 The second just north of the bridge over the river estuary
is a ... and ... to the
It soon rises to a steeper dip.
... and
 here and ...
... reflects still ...
... the samples
... in places in the second estuary
compare to the ... the same one seen before
... at ...
To the north ...
with ...
... the distance
... there is still another ridge to the north. All goes
out to sea.
... side
... 450 ...
... ridge It appears to be ...

always at the ... of the ... It appears the ...
 from the ridge across
 as far across the next stratum to the ... and higher ridges
 or about 900 feet ^{across} just what is in this ridge I do not
 know, but it is a line ^{long} ~~the length of the~~ ~~ridge~~
~~and it is an ...~~
 from this the structure the probable thickness can be
 ... the next day I think there is another stratum to the N. and a
 ... highest ridge to the N. of it. All of these ridges run out to sea.

It rained most of the afternoon and I finally had to
 quit though I could not have gone much farther in account
 of the tide coming in.

After seeing these various quartzite thin afternoon
 and noting that the ... are always connected
 with the ... I am ready to give up the idea of the quartz
 quartzite blocks in the They are in all
 localities the interesting material between the ...
 but does not ... These quartzites are as a rule fine
 grained but very ... they better than in
 ... in a size up to the inch
 and half up to ... In one case - in the red zone - half
 of the material is granular red feldspar ^{of coarse} ...
 the sands of these ... - some being derived from ...

same sort, but is Limestone? And for it was
being stopped the lower and upper limestone in
say 1/2 a mile. ^{Get these as granitic fragments} ^{the conglomerate} ^{fragments}
are in smaller quantity in the center or ^{appears to be} ^{smaller} ^{ridge}
and in general they are reduced in greater quantity to
beasts, under 100 ft. The center or ^{ridge} does not
appear to affect itself among of the other ridges, and its
top is about N.E. at about 30 to 40 ft. or the north.
Later I saw that on the S.W. side the conglomerate
dips almost vertically to the S.W. hence to be and is
therefore an anticline.

Wednesday Sep. 17 - 1919.

A fine clear and warmer beautiful day.

Started in camp to make the sketches of the following pages and to make more of the sea washed conglomerates.

As said before one half of the conglomerates of sandstone pebbles most of which are not unlike the quartzites of the Liley. These pebbles are of green sandstones or even quartzites, shaly sandstone and sometimes a common white and hard quartzite. These quartz pebble conglomerates not at all different from those of the Liley.

The other half of the pebbles are of diverse colored structures and textures, but many of them are with fossils.

The whole is cemented with the Liley sandstones or is a soft, soft, and all the large interstices are filled with soft, white Liley sandstones or quartz pebbles conglomerates.

Finally the whole has been folded, faulted and jointed and is a very fine form of rock of limestone or that are in now horizontal with calcareous veins. The resulting structure, however, for the shape and size of the Liley sandstones against the limestone rock from the appearance of fossil masses. It was thus that we reached here before.

Kordt
Herr

View from north of Die Ferry Creek. Sep. 17-1919

← North Die
Zie
Eating

Building

Towers

MM

High

MM
Mines and Timbers

High A

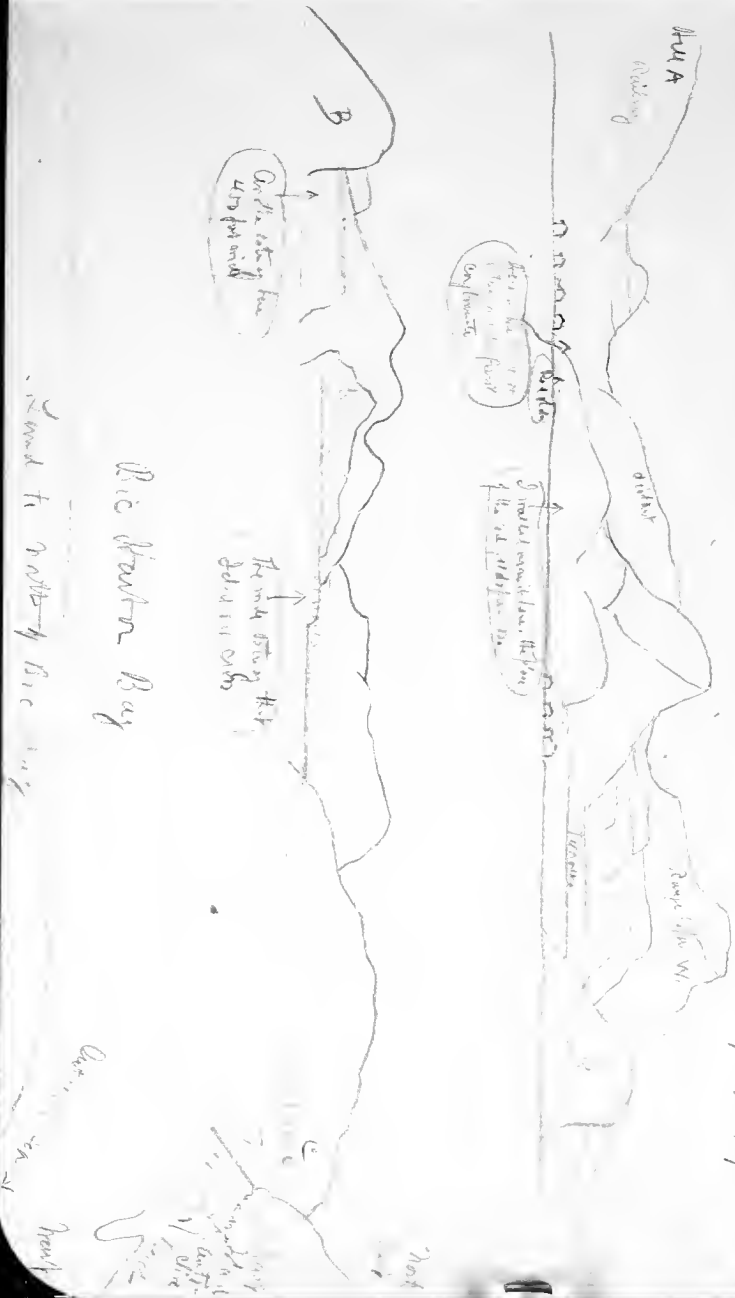
Building

View from
S.W.

Order to S.A.

View as seen from position West end main north, near Bic camp.

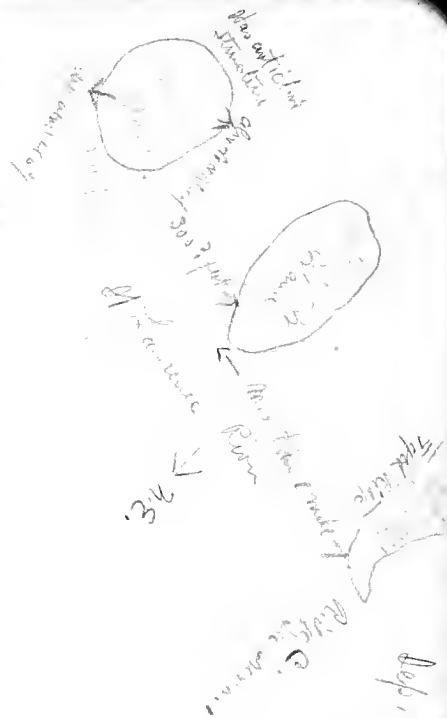
Sept. 17-1919



Lead to north of Bic camp

Bic Hunter Bay

2:45 were when I was
 with S.C. after middle was
 with of 10. 100. 1000



Sep. 17-1919

I suspect the idea that nearly all of these ^{are} anticlines in structure. Many Island is distinct ^{or} and as we place just east of the way are much eroded see sk.

At the west end of the tree little island to the W. of the 7-
 man reef is a fine exposure of the quartzite and congl. dipping about 40-60°
 to the S.W. To the north are coarse green ss. with over the shale zone, then
 quartz pebble congl. and then 130 feet of li. cap. with the local infilling of
 sand layers as at the outer reef. The bottom 1/5 green shale ^{thickness} in 50 ft.

masses beyond... a thin... of the...
Green shales also come in to the N. of these islands

Ship's passage
Four ridges

South

Railroad

Lower

blend
ridges

timber

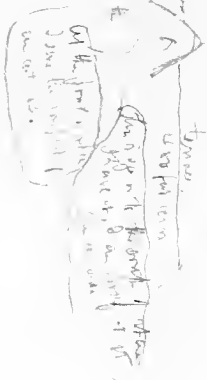
The rising road
to bridge

To the W. of here...
Joins in the...
of a...
the...
the...

and so

thick
ridges

The mud flat seems
rather...
less...
seems.



timber

and so

and so

and so

and so

and so

and so

and so

From the...
ridges...
at base.

The rising road

The high ridge
ridges of the...
N.W.

North

These two banks more or less strike north-south
members and the two outer members at the outer end
appear like a line of strike with ridge member 4. Ridge
exposed out to sea a lot of small named islands
the south ridge less steeply than to the N.W.

Thursday Sep 18 - 1919.

Left B.C. in the 7:00 A.M. train for Loni.

A beautiful clear but cold morning.

When got to Loni it was raining.

Shipped my box of fossils this morning Sep. 19 by
Canadian Express. Charges collect.

Friday Sep. 19- 1919.

Just to the west of St Joseph station on the Intercolonial Railway is shown the following section. The strata at first dip about 30° to the east but soon flatten out and dip probably from 20 to 30 to the SE.

Green sandy shales at west end of one sided cut, 30 feet seen.

Li. congl. 30"

Green shales with thin local lenses of li. congl. 4'

Li. congl. 12" to 18"

Green shales with thick local lenses of li. congl. (12" to 14") 8'

One bed of li. congl. 12'

Dark green sandy sh. with thin ss (2") 2'

Li. congl. 3'

Sandy green sh. 6"

Li. congl. 2'

Green sh. 12"

Li. congl. 5'

Green sh. 18"

Li. congl. 3'

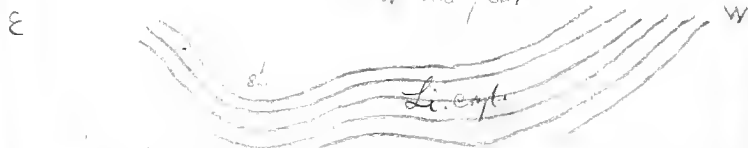
sh. 12"

Li. congl. 2'

Green sh. contains thin lenses

The li. pebbles are here much flatter than usual and lie with the bedding. They are about as round as usual. Some are up to 2' across. Some are sandy grey li., and all are embedded in a sandy matrix. It is not thin.

The structure of the cut is as follows (a diagram) :-



These Li. congl. appear to be in lines of strata with those seen on Sunday to the south of St. Joseph village.

One quarter of a mile to the east here is a low cut in green sandy shale with thin local lenses of green sandstone. All dip to the E. It looks like Lewis formation.

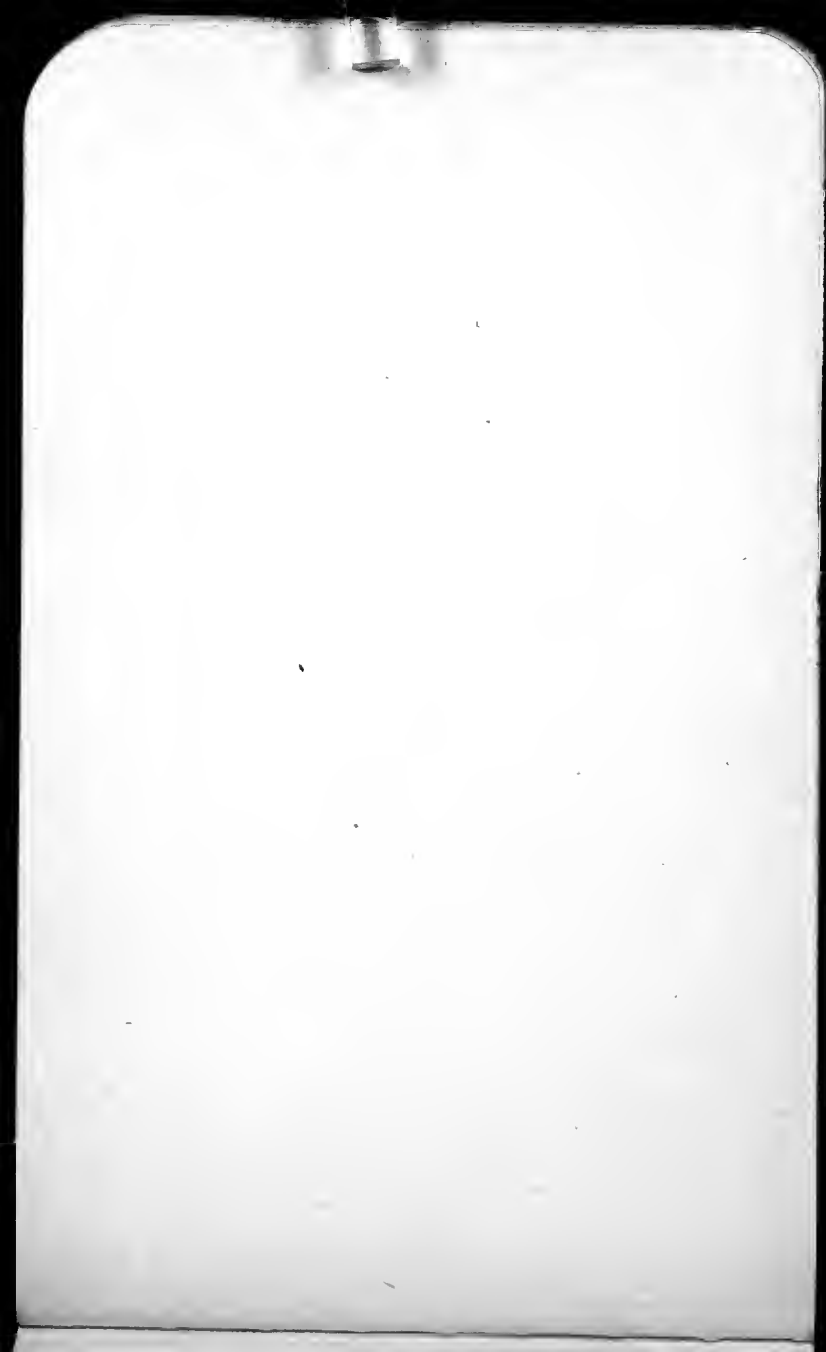
One mile farther east of St. Joseph is a cut at 10 miles from the village. It is a long hill of green sandstone, with the intermediate areas green sandy shale. It still looks Lewis like though Reymond places it in the Lilly.

About $\frac{1}{2}$ mile more east is a long cut where the railway crosses and crosses a river. This is a long series of greenish shale with a few thin zones of red shale. Most of these red shales appear here to be due to weathering. Near the middle of the cut the green shales are interbedded with many thin (1-4") grey fine grained sandstones. A little farther east the green and

Black shales have thin zones of li. congl. These beds are from
6 inches to about 18 inches thick. At the top of the sandstone
I got foliiform graptolites of two species. At the base of the li.
congl. zone I got two specimens of Phyllograptus, and in
another closely adjacent zone a few Tetrapopton and
other forms. This then proves that all of these shales
east of St. Joseph are Lewis and not Silley.

Went back to the hotel at 11:30. Had dinner and
at 3:15 came off for home

There are more brilliant red shales but in thin zones
at the east end of the Jay-Lewis cut. However there
is not enough red shales to make the horizon Silley.





New Haven to Quebec

Sept. 4. R.R. New Haven to Quebec	15.39
Sleepers " "	3.34
" 15 Lewis to Bic	5.95
" 18 Bic to Lewis	5.95
" 19 Quebec to New Haven	14.44
" 19 Sleepers to Springfield	2.75

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Handwritten text, possibly a signature or date, located in the lower-right quadrant of the page.

CANADIAN PACIFIC RAILWAY
HOTEL SYSTEM

Chateau Frontenac Quebec

C SCHUCKERT \$2.50
461 Sept 5 New Haven

ACCOUNTS ARE DUE WHEN PRESENTED

		6	7	8	9	10	11
BROUGHT FORWARD							
ROOM	2.00	2.50 2.00	5.00 2.00	7.00 2.50	10.00 2.50	12.00 2.50	15.00 2.00
RESTAURANT							
ROOM SERVICE							
BAR							
CIGARS AND CIGARETTES							
BAGGAGE							
LAUNDRY							
VALET							
BOOTS							
TELEPHONE							
TELEGRAMS AND CABLES							
CAB AND MOTOR HIRE							
TOTAL							
LESS CASH PAID							
ALLOWANCES							
CARRIED FORWARD							17.00

DUPLICATE ACCOUNT

Paul

Ridge to S of R.F.

7
4
11

Almond
Hick
oaks

Transition

①
S
4

Base
bedding

Red sh.
250'

②
S
4

sh.

antelope

400'

400'

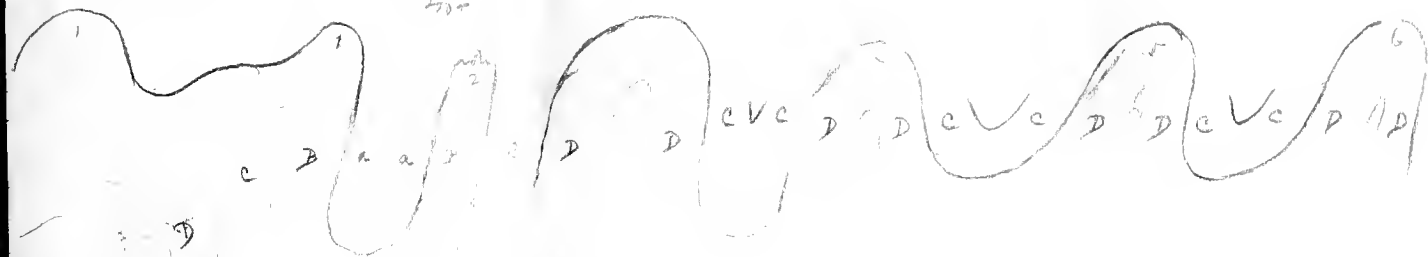
100'

100'

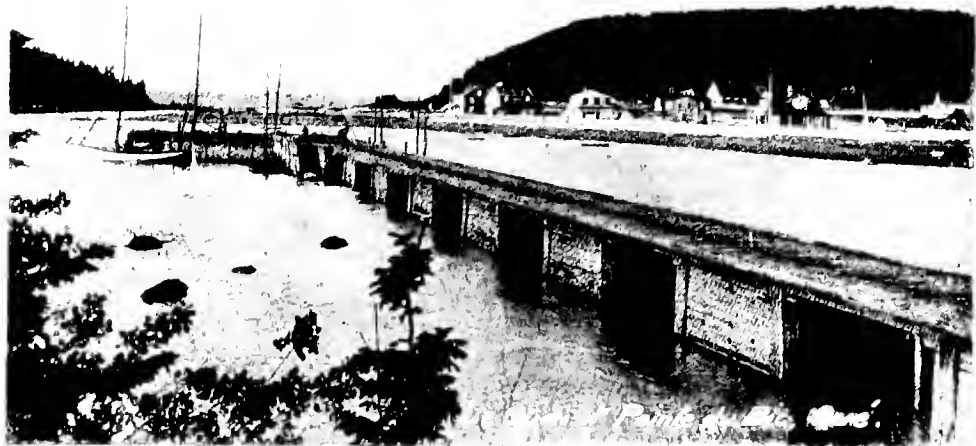
③
S
4

stray

④
low
Rip



Structure west of Bic about 3 miles



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