Section from Belton cloth on line of G. N. N. RR.

At Belton greenish chalcedony marly beds of cal-argillite-like rock dip northwest about 40°.

Blush thinned limestones came in as top of the shale-greenish beds. The limestones were heavy beds 2 to 4 feet thick and quite firm in some layers. No trace of life with the exception of a Stromatolite-like form. The strike and dip of the beds vary but the section appears to be practically unbroken. It to consist of a phantom of the "Castle Brook" of Mr. "Great" McConnell.
The railroad comes in
from along the strike
following the beds of
the middle fork of the
Flathead river. About 2 mi
from Belton some reddish
beds of cal-calcite
appear along with the
greenish beds. There are
about 3,000 to 3,000 feet of
the limestone. A 1/2
m of track extends
north to RR cut to
Nyack. Can't be at 5 P.M.
after a day of almost
constant rain.

East from Nyack,
can't cut a strike of
greenish shaly beds 7/14
mi E, reddish-buffle
and green to deep olive
Bull gray, hanned line.
St. N. 30° E. mag. 12 ft.

with 5'5" E. 30° N.

20 ft. thick

Red beds, calc. argil.

Flaky beds (red)

Greenish calc. argil.

700 ft. passing in ulta-

mately red & green-

bedded beds.

26.00

Track follows strike of beds

about 5° 5' of Myack. On

the N. side of ruin

at least 200 ft. of beds

shown on the side of the

Mtn.
Cretaceous 2 mi. west of Paoli. The road cuts the Cretaceous shales. Sh. E + W. Mag. with 20° W. Plane of plant seen in the shales.

Cattle Mountain

1 1/2 mi. E. of Paoli the red shales - calcarcous calc-spar. after 1. in R. R. cut. Sh. N. 80° W. (mag.)

drift. N. 30°

The Cretaceous being about 1 1/2 E. of Paoli.

create the landlisme 8h S. W. (margin) yest 20 e
N. the beds rocks
are evidently the massi
Castle M.H. Aug's
Mcleanell. The general
strike varies to N. 60°
E, + with decreases to 15°
N. 2 mi. W. of Bear
Creek a symbole + safety
occurs that drains in
the green + red beds
beneath the limestone

{Cal-argil- +

carbonate beds}

These beds extend up to + across Bear Creek.
Cryptocloris about 600 ft. below the lava bed. Cryptocloris occurs abundantly in a thin bed of calcareous sandstone. The specimens average about 8 in. in diameter, a few reach 12 in. Some occur 1 1/2 to 6 in. in depth.
Between Java &
Essex the Black
foot law rises &
the purple & gray
rods appear &
helms above 1 1/2 ms
above Essex the
purple, greenish
& dark shales
beneath the left
Baid rock in Canyon
Great North R.R. Nevada

1. Banded blue + gray
    
2. Dark bluish black
    
    
4. Dark bluish fels.
    
5. Granites banded
    
6.

1600

2500 @ 450 = 1600

500 @ 30 = 250

4750 @ 30 = 2200

5780

700

650
6. Altimately green and purple conglomeration
   of red mica
   layering at
   about 100 feet
   sea green
   1300 @ 200
   $450

   6 1/2
   Green mica
   flakeable
   200
   350.
   6000

No家族. No well defined bore or seam.

Part of Mcleanelle
Castle Mantai 9h?
I plan to introduce the idea of the government's influence on education through the legislation of the English educational system. This influence includes the establishment of public schools and the standardization of educational curricula. The government's role in education is significant, as it shapes the direction and quality of education provided to students. The legislative framework is crucial in ensuring that educational standards are met and that the needs of students are addressed.

For example, the **Education Act** of 1944 established the National Board of Education, which was responsible for the administration of public education. This act aimed to improve the quality of education by providing financial support to schools and ensuring that all children had access to education. The act also introduced the concept of comprehensive education, which aimed to provide a balanced education for all children.

Additionally, the government's role in education extends to the funding of schools. The government provides financial support to schools through grants and subsidies, which helps to reduce the financial burden on families and ensures that all students have access to a quality education. The government's influence on education is evident in the legislative frameworks that have been established over the years, which have shaped the direction and quality of education provided to students.
Granger [Location: In range of St. Aude's Range] East of Kootenay River about four miles (1 km) east of Kootenay Bridge Canal Flats B.C. Canada (location)

From the old Granger ranch at the west foot of the mountains on the Kootenay River.

Altitude: About 4,200 ft

N. E. - S. W.
N.W. S. W. section 10 S. W. section 10

Held large area for mineral face

Section 7-10-23
Castle Mtn.

Mud Creek Canyon

12 m. N.W. S. of Nyack, Mont.

Red & green color

2,800 feet. 2,500 feet. 3,500 feet.

Massive bedded gray limestone. High which on E. side of Cayon, see photographs taken at Nyack.

Sept. 19/95

At the head of Nyack.
Creek a fine amphitheatre is snared out of the Red Beds & superjacent calc-schales & limestone. On the east the rocks form five ridges that come along the Rocky Mtn divide for many miles. There is evidently a fault on the east as the strata rise & end abruptly as far as could be seen. West:

Ten minutes after divide was reached a storm of sheets followed by snow drove us back to the valley below.
Sept. 14th 1908.

An high summit N.W. of Bear creek section house on S.W.N.E.
A wilderness of Alleghenian rocks - in all directions.
The high ridge west of Emptys
& Paola & Paola is formed of the
Blackfort limestone with
interposed red & greenish beds
of the Camp creek series.
South the same series for
15 miles or more - East the
western series (Camp creek) with
the Pincell lava beds &
below the Blackfort limestone.
North the Camp creek
series.
N.E. a high point of
the Blackfort limestone on
the Continental divide.
Fort photography but clouds were heavy.
Algourkein
37. Northern
Pass on Continental
Blende.

Purcell Lava Bed
Purplish green arenaceous shale
Blackfoot limestone

The Purcell lava bed caps the mountain on the north side of the pass. Toward the hills on the south side, below the purple and greenish arenaceous shale thin bedded beds extend to the base of the ridge. On the west slope of the pass the Blackfoot limestone stone is exposed, extends for 5 miles south west from high hills on both sides of the canyon. Bear Creek.
Belton to Nyack
Nov. 10/08

Algontien -

About a mile east of Belton the basal beds of the Holland limestone shallow drift near east 20° N. (mag.) The alternating limestone and silicified shale and argillite continue up on the canyon of the middle fork of Windham river to the west side of Mount Tom where they come called by the Russell laval bed.

There is a beautiful exposures of the Holland limestone along the river railroad.
Fossiliferous Pan

Fossil in Su'ah

On south side of Gunright Pan and above head of lake.

Varied forms of a small Cryptozoon occur abundantly in dark, thin, gray limy shale. Also many small anchicolous sections that often take the appearance of shells. I think they are the concentric laminations of the Cryptozoon. They assume many iridescent forms which might lead to thinking that sections of radulae of gastropods were present.

Near Rifle Cabin we found Cryptozoon abundantly in the argillaceous beds above the Su'ah and below the Paulell lava bed. There for there is nothing
to indicate that the Sigel- or superjacent Knitta is anything more than the Pelticai
series at Algakian.

Obtained some very good specimens of a small species
of Cryptogam 1 to 2 cm in
diameter. Material for
sections and silicified thens
Citadel S. E. of Sunlight Lake. Its section shows beds of redish, greenish, and gray anevacous lava.

Cathedral Mnt. 902 ft.

Red beds about 1/4 way up then redish, greenish, and gray anevacous beds to the top. No Picrocell lava.

Lava 5000 ft.
Aug 7/08

Algonquin.

Gunsight Pass.

At Ruten lake, west of the pass (7000 ft) the chocolate brown, reddish, gray, and greenish thin bedded compact arenaceous rocks of the Grinnell formation outcrop with an easterly dip of about 20°. These extend to the nearly the summit of Gunsight peak, giving a section of 3000 feet. Above the Grinnell beds the phylil limestone shows finely or it slopes eastward to the lower end of Gunsight Lake.

On the north side of the lake the thin extent of the slope of Fusilade mountain to the more intrusive lava flow 2500 feet above the lava 7000 feet where are coarser, reddish brown arenaceous strata similar
to the strata. Grinnell formation continue to the top of the
mountain - 400 feet.

Grinnell - 3600 ft.
Post - Siyeh - 400.
" - 800.
" (lava) - 250.
" - 3600.

Eastward the dip flattens out & the strata rise with
a westerly dip in going to
the rear mountain, and Siyeh peak (See photo.)

Siyeh Peak offers the called
with Pincell lava.
Sept. 22, 1908

Algonquin

Helena Limestone

Examined Helena limestone beneath Cambrian sandstone east of Helena west, in lithological characters and stratigraphic position the Helena limestone is the equivalent of the Blackfoot limestone PA W. of Helena. Arenaceous shales and sandstones appear beneath the Helena limestone and between it and the Cambrian sandstone.

The Blackfoot limestone is the same as the Holland limestone & this reason I have traced the Holland into the Judith limestone, along the line of the Great Northern railway between Coram & the summits.
Sept. 21, 08

At the northwestern Pass over the continental divide the Algonkian Blackford limestone has been thrust eastward over and onto the Cretaceous on the north side of the Pass. At the Pass erosion has removed the Algonkian strata so that the Pan is a half mile wide of the summit in the Cretaceous. The Cretaceous strata extend south of the Pass for several miles forming rounded wooded hills.

Cretaceous

Summit of Pass

The Bow Pass owes its existence to the breaking dawn of the hard Algonkian rocks above the soft Cretaceous shales and sandstone.
Aug 6/28

Taking photo at Sunrise Pass. Air very hazy with smoke.

6x8 film.

1400 feet of Guinness formation from lake just of Pass to summit of ridge, about 1600 ft. All sandy shale, thin bedded sands & quartzite beds, maroon red & greenish in bands.

Placer of Guinness beds on N. side of Pass.

Going to the Sun face, a huge, capped with Sijel hiu.

Hana.

Red beds.
Banded beds of Gneiss as seen in N. slope above Gunright Lake.

Gunright Lake

Renton Lake
Locality 320 - of C.D.W.

Algonkian

Belonia danai Zone of the Alton Limestone. The fragments of the crustaceous ocean in lime muds are found in large numbers and range through about 100 feet of shallow, thin-bedded silicious limestone. Fragments 4 to 5 inches across are frequently found.

Loc.

About 2 mi E. of divide at head of north branch of South Fork of Old Man River near Pincher Creek.

Alberta - Canada.
Algarkwa, July 28, 1908.

Water tan Lake.
At the foot of Water tan lake the Water tan dolomite (daly) outcrops at Cameron Falls, on the west side of the lake. A large anticline exposes about 800 feet of the section. The Altyn limestone underlies the dolomite & dips to the north. This in turn is overlain by the Alp-kenny & Gravelly member formations and at the south end of the lake by the Toadstool limestone. All Valentine creek the low feet of grey siliceous strata above the Toadstool are well exposed + on the (Valentine) formation + on the coast.
Lake of Kootenai near the section shows the Pimoll lava bed covering the Valentine and above that the Sheephead formation and at the summit the Kintla formation.

Cameron (oil) creek section from Cameron falls the Altyn limestone chris clearly to the west and the section is continuous than the Shefford and Grinnell and Liich formations (Daly's section).

The Valentine formation with the superjacent Pimoll lava bed the Shefford and Kintla formations form fold cliffs on the west side of Little Kootenai creek far about ten miles to south of
Waterloo lake. Above the gray jasper cone are clear beds of the Valentine formation. The Pinchell hard sand bed 125 to 225 feet thick is a marked feature for miles. The lava flows slope down to the little Kootenai creek about 1/2 mile up from the southwestern bend of the creek. It also forms a broken ledge along the Continental divide north of Kiff's cabin.

In the Kootenai head section the buff weathering hard arenaceous pahas + sandstones of the Shefford formation cap Kootenai peak and extend westward beneath the deep red beds of the Kirtland formation.
The Kittla forms the higher portion of the western ridges and slopes westward towards Cultus peak and the ridge south of Quartz Lake.

Flathead and West Flathead mountains are capped by the Kittla red beds and form the bottom of the syncline extending southward toward Canyon and Clements mountains.

To the north the grade of Kootenai peak for the eastern interior side of the syncline and the grade of Cultus peak are on the eastern limb both being the red beds of the Kittla formation.

The section of Kootenai peak is roughly
As following

Kittie Red Beds
Shefford Yellow 1000 ft.
Russell Lava Bed 1000 ft. S.A.
Valentine
Puddle & Mudbed
Water & Mud 1000-1500

No limestone was seen with
for 1000 feet below the Russell
Lava Bed.
Algarve, area B.C.

From the high ridge directly east of the divide of the head of the north branch of the Jack of Old Mass river on the eastern slopes to Flathead valley. There is a grand view of the Rocky Mts. from the interior of the range: the back slopes of Castle Mts. Victoria Peak on the east. The north slopes of the Kootla Boundary ranges: the rays of ridges project between, to the south: the mass of broken ridges & peaks to the north until the high summits along Crowe Mts. Vanoz & north to the limit of vision. On the south the red beds of the 5th region can be seen.
long flat top ridges
in Cutte Mts. The great
Siwash limestone rests
on massing cliffs above
the red beds.

The general structure
from Flathead valley
eastward is about as
follows. (See photo July 1906)

An occasional thrust
 fault on a small
 scale is indicated.

A block of strata 5, 12
 thousand feet thick that
is 20 miles undulates along
quadrangular dip. Small
shaly folds. Monoclineal
small domes & facing
each the upturned
edges of a thrust were thrust over the Caleta

The upper limb is confined to the region north of Castell Huá (as seen from the ridge) and occurs on the south side of it. It was not seen in the east of work done passing through Castell Huá. The North Harbour is part of the break is occupied by Pre-Oró Geologic Alaskan formations. See on back.

Fossils passed over fine

outcrops of Altyr limestone but could not find trace of fossils except in the Bellmerí beds. These are about 100 feet thick and contain thousands of fragments.
July 28th, 1898.

A large block of Tijéb limestone occurs on the east of ____________ pass. It is faulted down. The red beds appear from beneath it on the east in the canyon & a hill of lava shows on a dark brown sand about 500 feet in the limestone & conformable with it.
July 15, 1908

Algonquin, B.C. & Alberta.

Two miles south of pass over Continental divide a low anticline of Altna (Newland) limestone occurs with an east & west open. About 200 feet from the base Belthina clania Walt occurs in great abundance and fragrants. It extends almost about 200 feet of thin reddened dark gray, chalk silicious magnesite limestone. Above the limestone & avenues of thin reddened strata continue 5 or 6 hundred feet.

Estimated for Altna: 600.

A. Kennedy

1890
Grinnell

Segal

All the area between the 49th Par. in the south the Flathead valley on the west, the Cretaceous along south of the Cransnest pass route found the north line of the Cretaceous of the east flank of Eastern foothills of the Rocky Mts. is underlain by Algonkian rocks.

No traces of Cambrian (Castle Mt. porics) or Cretaceous limestone were noted in this area. It is the uncalctosed area on Dr. Geo. M. Clausen map of 1886.
24 July 1929
North Fork Blackfoot River,
Montana.

On a general trip up the river examined the various strata, particularly the more massive limestone layers. Practically everywhere these beds, as well as limestones, limestones and strata in the shales, show that they are of algal origin, even though in most of the beds are not rather strongly metamorphosed.

Some of the black shales which appear to be the exact counterpart of much younger black shales, sometimes cycle appearing as oil shales, have fragments and markings that closely resemble the Burgess shale algae.
27 July 1949

Between Phillipsburg and Georgetown, Lake, Montana

The road across this divide was practically all the way in the Belt series. A thick bed of the fine black shale is here exposed.
Crossed the range from the
Bitterroot valley side. All the rocks
there are Archean gneisses,
just below the falls, where the road
follows Parry Creek to the northeast
for a number of miles, several
thousand feet, perhaps, of the Belt
series are encountered, then
the road again traverses the gneiss
Pakoot Road. 
Little Belt Mts. 

12 August 1927
1st. A. S. Beseler

Flathead farms, hills and tanks as usual.

Rhyolite shale exposed well along road. 
Consists of green and purple chips of mottled sandstone layers in mudstone.

Wedges of greenstone with redbed sandstone bands. 

roxburghae capella was not found.

Phil.
Montana Creek, Montana

11 August 1927

mth. R.S. Bassler

Nipple creek.

At the lower end of the bottom (east), lay a quiverite of white sandy shale,

not thick, covered by limy ped

material.

Facing the outcrops across the

flattening horizon, distances, the

thickness of each layer is to be

computed from the 50' dip.

1895' over

Quartet of the usual Flathead type,

onward, changing toward the base

lowered by humite. some 10 to 15'

the humite considerable. forward.

The topmost layers became sandstone.

The exact location are valuable

less fact are may of the others from the

measurements.

igneous rock. (Sample taken) (mth. B)

75'

Micaceous slate. contains thin beds of

purple soft shale.

810'

165'

At 810' the strata is not all well defined,

and the face.

468' over

At 468' a second humite bed

233'

with a few beds in between.

of limestone in the formation of beds

null 4.

70'

Blue pale little homogeneous limestone,

limestone fragments absent. Biopodella 200

near there. Some chert here.

Much igneous intermixture of exposed

10' above.

next sheet.)
more than three-fourths of the entire formation. (Samples taken between the
igneous rocks within the
areas above the road, but the limestone
occurs above these outcrops

20' 100'
Landy shales, not well exposed. Few fossil fragments probably present. Some calcareous

120'

120' 220'
Limestones, thin bedded. Little slate due to poor, well pointed. Some semi-metalline, some
calcite and edgewise pebble conglomerate

330'

330' 430'
Limestones, thin to thick bedded (15'), much pebble and some edgewise. Calcite and
glauconite. Fossil fragments very numerous. Few identifiable fossils can be secured.
Cretaceous fauna.
Contains a few shale partings.

725' 1325'
Limestones. Thin to thick bedded (50'), much pebble
and some edgewise. Calcite and with
glauconite. Fossil fragments very numerous. Few identifiable fossils can be secured.
Cretaceous fauna.

113'

113' 192'
Red beds. Slightly calcareous sandstones in
layers up to 12 inches thick, interbedded
with, simple red and bright green
shales. Unfossiliferous. It contains one
lighter, limestone, layers.
Thin-bedded gray limestone, Devonian.
Cambrian Limestone
North side of Beaver Creek, N.W. end Big Belt Mts., Mont.
Siliceous, slaty, dark shales of the Grayson formation, Belt range.
Sh. N. 42° W. (May)
with S. 45° W. 30°
Flathead Sandstone.

1. Gray, massive, bedded, quartzitic sand with a few conglomerate layers, mixed of small pebbles.
Sh. N. 58° W.
with S. 32° W.
Shale increases to 30° mean to 40°, then back to 35°.
Sh. to N. 50° W.
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At 225 feet the main bedded 1/2 slate occurs, and again at 355 a band of small beds a cave in.
At 640 feet the massive beds of 1/3 red-argillaceous shale.
640

Mottled shale.

2. Thin bedded and muddy shale
with irregular thin
bedded shaly limestone
capping Middle Cambrian
facies. At 180-200 feet,
Intrusive emplacements
cover 100 feet or
than one interstratified
sheets. Fragments of the
shales are well shown
in the emplace in
the North side of Bear
Creek. The emplacement adds
about 120-150 to the thickness.
The emplacement follows the fronting of the layers in the line of \( \frac{6}{7} \) bedding for long \( \frac{3}{20} \) distance. Fish fins were seen in places to leave some such fronting + drop a few feet or disappear altogether. Occasionally it bunked up so as to form as a small localite. In understanding these \( \text{\textit{strata}} \) more or less broken up.
Canhuit (3) Beaver Creek

Total Jan 2 - 695.

Prelple & green argil, shale comes in at about 400 feet.

Limestone
(3). Thin bedded flinty gray

* * *

A. Shetland. 9 pm. 6th. 1st. Luna. 10". e. Lm.

After 165 feet the limestone becomes more massive and grey in color, but it is made of thin layers, grained in massive layers. Above 360 feet, thicker, individual layers alternate and continue.
\[ \begin{align*}
42 \times 83 & = 3486
\
\frac{127}{5} & = 25.4
\
\frac{635}{85} & = 7.4705882352941176470588235294118
\
\frac{365}{180} & = 2.0277777777777777777777777777778
\
\frac{180}{25} & = 7.2
\end{align*} \]

1 = 640
2 = 695
3 = 720
4 = 290
5 = 205

\[ \frac{255}{0} \]
Cambridge (4) Beaver Creek

to the top of the somatini. Fragments of trilobites show here and there but very rarely. Total 3 720 ft.

Shale
Green +purple argil
Shale

A bed of lava irregular, bedded rests on the clay beneath the shale of 4.

5. Massive, bedded grey

Too politic for

passing above to

which grey than

bedded jebel-like

line

M. C. smile

205
Light gray, arenaceous, finely granular or subcrystalline
Ibm. (S. N. 40° W. > 23° S. W).
In the lower 25 feet small
A) lithics occur with broken bits
of trilobites. Above the
strata become more
massive and coarser.
A bed of intrusive
crushed 3 feet thick occurs
near the base — 135.

2685
2 marine bedded, dark steel grey arenaceous.
2-3 weathering to a dirty brownish-grey
(Volstamhorn) color.
Absence fragments of garter Beds. The first at 85 feet a
layer 18 in thick in a
marine layer 3 feet
thick is almost made
up of Stromalophora,
Dakospy - etc.
Absence fragments of
garter beds. The included
layer 16 2 feet of it
again at 350 feet when
In 20.7 Beaver Creek
is a layer of light gray
fine arenaceous lime. A
dark layer above.

Noted. Stromatopora
Sertiptasma Helic Mellis
Lectins of brachiopod
+
\result\text{-}shod.

Lotue of 10

575

120. Light gray arenaceous
lime that fans out
strangly marked even
topped low cliff.

Towards the summit
St. N. 60° W. > 230° SW.

180.

Numerous chalky nodules
occur in association with
bites of Stromatopora, on the
thinner layers near the
top.

\begin{tabular}{ccc}
\text{1} & \text{135} & \text{150} \\
\text{8} & \text{575} & \text{180} \\
\text{E} & \text{180} & \text{890.}
\end{tabular}
December 13th. Beaver Creek.

a. Blush grey limestone with chart nodules & layers of chart in some of the layers. Layer 1-6" is 24" thick. This band begins at a saddle west of the slope on the top of 15.

In a marked feature on the north side of Beaver creek beneath the massive grey cliff.

At 375-400 feet noted Sheep labora.

Strobus brevis. [Diagram]

Testate 2. [Diagram]

At 740 feet abundant. Devonian fauna. Total of 1 a.
1st day:arenaceous sandstone with grayarenaceous sandstone. 
2nd day:granular limestone in massive beds. In places contains chesty nodules, weather rough from jagged cliffs.

X at 1225 feet up corals occur.  
1850-1900 ft up + at the corals face great abundance. Masses of Diplomytilus 2-5 3 full-in diameters. Syringopora etc etc etc.

12

Shales and shales with interbedded bands of gray lυγ sandstone. All about 600 feet of byozoan remains.
are abundant. The section is broken by the Missouri river but on the west side of the river high cliffs of sandstone etc rise fully 1000 feet back from the above the river.
1. Grey very clayey chalcaz (section 602)

This chalcaz is very clayey at 1270 feet up a layer of Pseuido-Strangolatae

At 2 feet thick exists another at 1210 feet

1210.

2. Thin bedded grey lms. interbedded with blue shaly lms. with layers of intermolecular gyps. shales lms. hard layers weather buff. At 220 feet up the blue limestone disease arenaceous layers replacing it. The grey lms. become more arenaceous and give way to sandy beds

285.

5. Brain red shale & thin
bedded sds., alternating
in bands 20 to 40 feet
St. N. 40° W. > 200 S. W.

4. Reddish brown sdy
shales & sds... 770.

No. 4 is the Spokone
formation of the Belt
terrane & underneath the Cambrian Flathead
2d.).

In the first portion of
the section the
Grayson shales give
way to the Cambrian
2d.,
Beth tenure
Clearman river area.
Lewis & Clarke Pass.

Reddish brown 2½ yd. 2½ yd. 700.
(Spokane)

Grey red 2½ yd. 2½ yd. 225.
(Greyson)

Silicon grey lin 285.
(Nevland)

Grey red 2½ yd. 2½ yd. 1210
(Champlin)

2510
Montour Creek Section.

Montour Cr. and its several branches have molded deep canons in the masses of hard silicious shales and sandstones that form the ranges on the north side of the Big Blackfoot Valley, from a little to the west of the Lewis & Clarke join to Montour Cr., and beyond.

Montour Cr. and its principal Eastern branches are blue-lined for about 3 mi. above where the two branches unite. Below the union of the two branches to canon is a mile or more broad, and the stream is engaged principally in moving the detritus washed into it from above.

It has the broad U-shaped characteristic of glaciated valleys. On the E side of the mouth of the canon there is a thick belt of conglomerate, formed of the rocks derived from the drainage basin of Montour Cr.
Montour Cr. 2nd (cont.),

This conglomerate appears to be of Tertiary or pre-Tertiary age, so it lies high above the glaciated plain that extends for 6-10 mi. southward from the mouth of the canyon.

Rock section: at the top of the Lewis & Clarke pass, beneath the Flathead sandstone, there is a series of reddish-brown and granish sandstones, dipping westward. These apparently pass beneath reddish-purple sandstones that form the base of Stonewall Mt., the crest of which is a syncline. The structure was not traced westward of this; but apparently the reddish-brown and granish sandy shales, sandstones, and massive gray and quartzitic sandstones, that disappear thousand feet in thickness in the Montour drainage basin, represent the series that come above the Lewis & Clarke pass section and above the rocks of the Belt Terrane as developed in the Big Belt Mts.
Conglomerate at mouth of Canon of Mortons Creek, Maurice

Conglomerate, several hundred feet thick, forming high hills on the E. side of the canon about 6 mi. N.-NW of Divide, Mont. Matrix of conglomerate a fine yellow sand. Conglomer formed of limestone, bluish gray, buff, and buff motled with irregular wavy threads and branches. Bluish gray limestone; also gray, purple, motled purple and buff, reddish brown, yellow sandstone; also hard purple and buff arenaceous shale. Boulder of limestone 2 ft. across, with very irregular angular occur. Most of the material have evidence of having been deposited within a comparatively short distance of its source.

So far as observed the material appears to have come from formations of the Biltmore.
The drift began at 300.
Then passed over a bar chart worn before reaching the 1st lava bed continuing at 200 for some distance and then gradually moved over to 450.

\[
\begin{align*}
429 & \quad 563, \text{Lava} \\
134 & \quad 44 \\
670 & \\
760 & \\
\end{align*}
\]

\[
\begin{align*}
925 & \\
2430 & \\
3406 & \\
\end{align*}
\]
1. Purple arenaceous shale
with occasional thin beds of greenish shale.
St. N. 60° to 60° W. 7450.

2. The greenish calcareous shale predominates with bands of purple. This great bed of arenaceous shale is without traces of life as far as known.

3. The shaly beds of clay become more siliceous and bonded; these into bonded siliceous beds.
At 760 feet an intrusive sheet of dark intrusive
intrusive claval.
\[
\frac{385}{435} = \frac{115}{35} = \frac{575}{25} = 650
\]
\[
\frac{203}{1015} = \frac{135}{432} = 26
\]
\[
\frac{80}{400} = \frac{457}{760} = 1215
\]
1) \( a = 15 \), \( t = 960 \), \( c = 2 \), \( d = 2430 \), \( \text{July 20} \), \( \text{4022} \).

2) \( a = 435 \) km.

3) \( a = 95 \), \( t = 205 \), \( c = 4 \), \( d = 225 \), \( 6716 \).
of (d) 4. This bundle of greyish-colored arenaceous shale are interbedded at irregular intervals.
St. N. 40° W. > 25° S.W.
Near trace. At about 1000 feet at S. N. 40° W.
> 30°
Greenish shale (arenaceous) + thin beds of red, freedom in rate 65° 4 ft.

1150

2°
Gray, slightly silicious and weathering buff. Shaly to layers about thick, at 230 feet. Blue layers are interbedded at 255, marine layers of intermaterial conglomerate, broken up shaly, blue line. Dolite layer also occurs at several horizontal
R. M.

Total of $2 = 435.

3. Buff clay shale $5

4. Thin bedded grey sand weathering buff - grey, each greenish tint - 205

5. Pseudo-streamform

6. Thin bedded greenish-grey sandy shale up to 160 feet when the color changes to grey weather grey-buff - 225

7. Massive bedded

8. Coarse red with small grey pebbles.
Marine, coarse bedded, coarse sand with small white ytzy pebbles.

2.6.1
Thin bedded sandstone and shale with numerous annelid trails and fragments of Balanites - Draconicus - Hyolithes -

The sandstone = Flathead sandstone

1 ft. = " shale

A few thin beds of lime and then a fault cuts off the section.
\[
\frac{210}{5} = 42 \quad 115 \quad 150
\]

\[
\frac{1050}{1} = 1050
\]

\[
250
\]
Belt terrane
deformation area

Cambrian
Grey sand 510

Siliceous fm (Helena fm) 430

Purple arenaceous sh 1150

Grey + greenish sh+clays 1215

Purple + green arenaceous 2430

Greenish arenaceous shale 960

5755

Sh (Ske of Newland) 15

6745

Eruptive
Limestone

Shee

Sandy Shale / Black Butte Canyon

a. T. C. E.

1. Upper arenaceous shale
2. Camasá
3. Newlandsia
4. Greysonia

Sectors going downward
a. Shale (Arenaceous) grey
b. Thin bedded blush-gray limestone without traces of fossils

c. Blush gray limestone in layers
a bed of algal deposit, Camasá
occurs at this top or a layer 12.5/14 in thick, beneath this a layer 6 in thick
in the algal 
deposited forming 
concentric rings on 
upper surface. Some 
of these are 10 to 14 
feet in diameter with 
the concentric bands 1.5 
2 cm across. Beneath 
the upper surface of 
concentric bands the 
algal deposits form 
very irregular concentric 
rings of irregular 
partitions diminished at 
irregular intervals by 
cross partitions.

thick bedded bluish 
grey compact hand 
flintstone

Bluish-grey limestone 
layer 6 5/8 in thick 
with N. Examined 
major abundant 0-6
6. Same as (d) with a trace of coarse algal debris in an upper thin layer.

7. Algal bed with filling of bluish-grey limestone 20\text{cm}

2/3 layer of bluish-grey limestone with algal remains less abundant than in 1. 9\text{cm}

h. Grey arenaceous shale

The above algal bed is finely exposed on each side of canyon (Black Butte) entering Deep Creek Canyon from the south, just above the Forest Ranger Station 1/2 miles above
Glenwood on Deep Creek +

The lower bed of algal remains is insubstantial for about 1/4 of a mile.

It is made up of one species that shows an almost plant-like growth in places.

See collections.

401 -
Newlanderia major.

Occurs in layer 6 to 8 inches thick that extends far on the east side of Black Butte Canyon which enters Deep Creek Canyon from the south just above the Forest Ranger Station.

The partitions extend from the bottom to top of layer \( \square \) and show concentric rings at upper surface.