



GEOLOGICAL & NATURAL HISTORY SURVEY.

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MUSEUM & OFFICE, SUSSEX ST. OTTAWA.

Maple Cliff July 14th 1888

Dear Sir —

I have just received a letter from your son Dr. G. B. Dawson in which he informs me that you may visit this country in August and asking me to give you what information I can about interesting geological points near the line — The formations that come to the surface in this section of the country are in descending order 1st Tertiary beds capping the Cypress Hills — this is a very irregular formation the rocks composing it consisting of coarse yellowish sands & sands loam — very fine grained sands — fine grained sandy clays — yellowish greyish reddish & pure white clays. Clay pebbles conglomerate & quartzite pebble conglomerate. It also

the highest part of the Cypress Hills plateau
— the only way that you could get to the
Hills would be by hiring a rig & drive at Medicine Hat
as I do not think that you could get over at the
riding (this riding is known better as the 20 mile post) and
driving to the 20 mile post the first day, then if you
had a fair horse and started early you might
get to the Hills and back the same day. ^{It is about 20 miles} You will
find small exposures of clay going up the Hills
and on reaching the summit you will find
about 1/2 mile to the right of the trail a thick bed
of the quartzite pebble conglomerate — but the exposures
here are on the whole rather poor and not very typical
and may not be worth the trouble of getting to
them. Good exposures of these rocks are all south
of the Hills and to reach them you would require to
make about a week's trip and to have a regular
camping outfit — I will be back to this place in
about a month for supplies and if you are in the
country then, and would care to go I might take you
for a short trip to some of the more interesting points in
the Hills — if you send a note to me addressed to
Maple CK as soon as you receive this I may possibly

be able to find you by telegraph when I get
in — a few miles above Medicine Hat
you will find in the railway of the Run good
sections of the Belly R runs (the wells immediately below the
Run shales) with the Saskatchewan R coal seam
at its base and beneath it darker & more earthy
looking wells & the lowest that we have yet found
in this part of the country — By making the
two short trips that I have just mentioned you
would be able to see all the formations that we
have yet found out here with the exception
of some problematical wells in Mill R

Hoping that if you come out you will have
a pleasant trip —

I remain yours Respectfully

J. W. Cornwall

Maple Ck
N. W. S.

{ Principal Dawson
Medicine Hat

P.S. If you find it difficult to get a req at
Medicine Hat, you might inquire for Jimmy Molson
an old Montrealer who is squatted about a mile east
of the town, and he will probably be able to put you in the
way of getting one — also Mr Ewart of Tweed & Ewart's store who is
a relative of Mr McLeod's may be able to be of some service to you J.W.C.

in places holds ^{thick} beds of Quartzite pebbles from one to
24 inches in diameter almost entirely uncrumpled

(2) Underlying the Partian beds and almost
surrounding the Hills comes the Ft Hill
sandstone usually pretty thin and under it the
Ft Pierre shales. These shales underlie nearly the
whole country that the railroad passes over from
Swift Current to the second siding east
Medicine Hat (3) where they are underlain by
the whitish sands and sandy clays of the
Belly River — About half a mile south
of the second siding east of Medicine Hat
there are very fine sections in the valley of
Ross Cr showing the junction between the
Belly River + the Ft Pierre shales. Farther up
the same creek, ^{5-6 miles} you will find good sections of
Pierre shales holding large Ammonites Baculites &c
while if you had time to follow up a trail
that goes to the Hills from this point you would see
fair sections of the Partian wells consisting of about 50' of
crumpled conglomerate underlying sands & clays and forming

W. E. Cunnell