Class MRS.

April 18–19

1964
BW 4  25-28  Leonard & Hess
uncert. King 104  10 ft.

In the ravine there is one
contour interval of about 53'
of shale from conglomerate to
base of conglomerate.  Shale N 83° W
3° N.

The opposite King 104  conglomerate
dike or fault is almost vertical.

731c - fusulinids near top of
figure 2,8-shaped hill at 731
bed of Hess Ranch Horst St.

731a- fusulinids between fault
and top of elliptical knob.

731d - About 20' below e.g.
in Neal Ranch shale, west
of fault at head of Valley

BW 4- to end Hess Horst, E
and at fault

BW 5- 6-6 same veins of
narrow hill at east end Horst
of fusulinellas at 720 E
C 7- to 12- same as BW 5
Examined east end of Horsetooth basal c.g. of Knox Hill is in contact with Neal Ranch shale at N end of valley in which igneous body exists. The shale occupied an elevation of 1 contour = 50' on west side of valley but igneous body is in contact with c.g. at fault. The fault dips down west side of elliptical hill with a zone about 20' wide. A large baked zone is evident and the igneous body is in contact with the shale on the west side but tapers up to the c.g. on the east. The elliptical hill is composed mostly of Ness limestone tipped up 50-60° on the NE slope 80' above. The road is a patch of brochier limestone with Clastophyella probably overlying the Ness unconformably as it does at Long cve 0104. No Clastophyella was seen in the middle part of the elliptical hill but it appears on the north side (cve 72417) and extends some distance to the south.
April 19

1. At 724A (check)

I examined locality 720E and went to see Redcliff Canyon at 726C and others.

April 19

730E Weide Angut Mtn.

A. Thick bedded sandy limestone with hard silicious Brannocks on top. Sponges abundant. Rock dark grey, finely granular. Small products (Elec.ella?) and mostly fragmentary specimens of bryozoans scattered on surfaces. Specimens very abundant on surfaces. G. Thinner bedded some rock in layers 6"-1' mostly the former.

This sequence is in the upper part of Leonard #3.
Leonard #4 - Thick bedded
dark gray sandy limestone
with siliceous surfaces often
covered with sponges and
fragments of fossils. Layer is
about 5' thick. Of 2 or 3
layers. Overlain by clastic beds
and sandstone and fine bedded
As. Ammonites common but
hard to get. Sponges very abundant
730h - 3\'a lumpy bed. 50' below
Leonard #4.

Leonard #4 - Poorly exposed
on surface of hill - consists of
Thin bedded sandy limestone calcarinite
with beds of chalk between with
few recognizable fossils. Dark
gray sandy limestone with
ammonites like those below. Tom
says about 15'. Many sponges in
places. Small pebbles. Rock is
sandly fossils mostly badly
broken.
Bioherm in hill 4801
20' of lime stone on top of
Big Bioherm under 4801.
A 1.1 yellow, siliceous, silt
A- lower 10' of dark gray, clayish,
b. with occasional goniatites
B -30 4 feet brecciated lms.
C -6 or 7' of calcarenite with 2'
silicous skirt on top.
730 K - Ammonite from 5', above
large bioherm in hill 4801.
730 - 7 - Fusulinids from between
bioherms, hill 4801, Decie Ranch.
B15 - to 13 Dugout Mtn and
hill 4801.
C7 - to 29 same.

Leonard #4 is lithologically
and formally like the Leonard
#2 & 3 limestones. Also have the
same goniatites out of
dark gray blocky limestone
in limestone #1 in hill
4801 of the Leonard Hills. This
suggests that from the
sediment simple beds my we
have essentially the
same fauna. I do not
have good bioherm...
collections from these beds but
in all the collecting done
did not turn up clustatella
or the characteristic higher-
fernal species.

The bed #5 has Calceinidites
or shell breccia like those
below but we saw no
gnamatite beds like those
below and it is quite easy
to locate clustatella or other
early Cathedral Mtn. types.

In afternoon visited bioherms
in hill 4801 where I collected
gnamatites, same assemblage
as in limestones #2,3,4. If
it were not for the bioherms
near the top of the 20' above
the big bioherm I would think
it possible that these beds
represent the three 4s. Thinned
down and with intervening
shale pinched out. This is a
possible explanation but
the whole sequence seems
to belong to limestones #1.