October 2, 1935

Dr. Remington Kellogg
Division of Mammals
U. S. National Museum
Washington, D. C.

Dear Dr. Kellogg:

I am very glad to have your letter of September 25 informing me about the marine mammals from Texas. Concerning the questions you raise, I have the following to state: The vertebrae found on the J. H. Giesenschlag place were found loose lying on the surface but so far removed from any Miocene and so far removed from through-going roads that any mix-up with Miocene material seems very highly improbable. I am as sure as I can be under the circumstances that this material comes from very near the place it was found, that is, it comes from a marine lentil in the Yegua formation. The exact locality of this find is J. H. Giesenschlag 276-acre tract in southeast corner of J. Reed Survey, Burleson County, Texas, about six miles airline distance southeast of Stone City on the Brazos River. The description of the other locality in question is Bureau of Economic Geology locality No. 145-T-71, on left bank of Two Mile Creek, from 0 to 100 feet below the first ford above the Two Mile Church and iron bridge, extending from the southwest fence of Emma and E. J. Houston land (said to belong to a Mr. King) for about 100 feet to the ford and downstream from fence on Gary D. Woods 300-acre tract, located probably in Emma and E. J. Houston land, J. L. Landrum Survey, southeastern Leon County, Texas.

The section at this place is as follows:

	Thickness in inches
a. Discontinuous light yellow, hard limestone composed of separate flat ellipsoidal, shrinkage cracked, and some places reheated cores of limestone; cracks or netlike veins show on weathering; and smooth non-cracked enveloping limestone; and cone-in-cone limestone under the cores only. The limestone of cores and envelope is, when fresh, dense, a little glauconitic, gray to greenish blue.	0-18
b. Light chocolate-brown fossiliferous marl, poor in glauconite.	6

	Thickness in inches
c. Intensely green on fresh break, soapy clay with numerous slippage planes.	3-4
d. Light greenish-gray to bluish-gray, fossiliferous marl with little irregularly distributed glauconite; numerous Plicatula.	8
e. Olive, poorly bedded, richly glauconitic and fossiliferous marl; Harpactocarcinus.	4
f. Scattered knobs of red-brown clay ironstone weathered from dense bluish, glauconitic limestone, 8-10" horizontal diameters.	8
g. Same as (e) log with ship worm near top of it.	7
h. Similar to (f) but more crowded and larger average horizontal diameter 6". This layer is shown to be more continuous and thick 50' upstream from ford on left bank, it is there 8" thick.	4
i. Green-brown, weathered, thin-bedded, fossiliferous, glauconitic marl with some limestone nodules.	30

The stratigraphy of these two finds is best illustrated by the following generalized section:

a. Nonmarine sands and clays of the Yegua formation. At the base commonly are hard scarp-forming brown sandstone.

b. Brown shales with some limestone lentils and ironstone ledges containing a marine fauna. These beds are lenticular. The macrofauna occurs in the thicker parts of the lentils.

c. Lignitic non-fossiliferous sands.

d. Black to brown lignitic shales with some marine lentils of glauconite and marl at the base. (Proposed name for this division Two Mile member of Crockett formation; type locality on Two Mile Creek. 145-T-71 and others.)

e. Gray shales and glauconitic marls with an abundant marine fauna. Proposed new name for this member Wheelock member of Crockett formation; type locality Little Brazos River, Brazos County, and some localities near Wheelock.

The vertebra from locality 145-T-71 was in the lower part of the Two Mile member in a marine lentil that is underlain by black to brown lignitic shales. The vertebrae from the Giesenschlag place were found near the top of the unnamed member mentioned under (b) in this section. The Giesenschlag vertebrae, therefore, occur a little more than 100 feet stratigraphically above the vertebra from the locality 145-T-71.

There has been considerable confusion as to the boundary between the Crockett and the Yegua formations. I believe the U. S. Geological Survey places the boundary generally at the base of member (c) of the section. There is at present no way of deciding where the boundary should be placed except by general agreement, and I intend to follow the U. S. Geological Survey in this matter. Therefore, the members (a), (b), and (c) of the section would belong into the basal Yegua and (d) and (e) in the Crockett formation. That would put the locality 145-T-71 into the upper Crockett and the Giesenschlag locality into the lower Yegua.

If you publish on this material please correct my statements on page 98 of University of Texas Bulletin 3101 (B. Coleman Ronich and H. B. Stenzel, Lower Claiborne on the Brazos River, Texas).

We have very rigid ruling on specimens especially such important ones as the vertebra that I sent you last year. However, there is no hurry in returning it immediately as we would not have anybody here to study it anyhow.

Very sincerely yours,

H. B. Stenzel, Geologist

HBS:MJC