

GEOLOGICAL SURVEY OF ALABAMA

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October 30, 2023

Mr. Joseph East
National Center
12201 Sunrise Valley Drive
Reston, VA 20192

Dear Mr. East:

The following serves as a progress report for the period of October 1, 2022, through September 30, 2023, for a project entitled *West Gulf Coastal Plain Stratigraphic Reconciliation Initiative*. The project is a two-year study by the Geological Survey of Alabama (GSA), in conjunction with the Arkansas Geological Survey (AGS), the Louisiana Geological Survey (LGS), the Mississippi Geological Survey (MGS), the Tennessee Geological Survey (TGS), and the Texas Bureau of Economic Geology (TBEG), through funding from the U.S. Geological Survey (USGS) grant number G22AC00494. The principal objective of the project is to coordinate a northern Gulf of Mexico basin Stratigraphic Working Group that will allow participating entities to cooperatively develop a consistent regional stratigraphic nomenclatural framework and advance USGS goals for Geolex and the Geologic Names Committee. The primary project objectives are:

- (1) To promote regional dialog on East Gulf Coastal Plain and West Gulf Coastal Plain stratigraphic nomenclature and equivalency, and
- (2) To create a process for identifying and resolving stratigraphic nomenclature and equivalency issues that exist in the northern Gulf of Mexico basin.

Secondary project objectives include:

- (1) Creating updated versions of regional stratigraphic charts and cross sections,
- (2) Publishing updated versions of the final products, and
- (3) Ensuring that rock unit descriptions in Geolex reflect current knowledge.

Project Year One Accomplishments

This report presents a summary of activities and a review of work accomplished from October 1, 2022, through September 30, 2023. During the current reporting period, the following tasks were accomplished:

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- (1) Initial work on the project was delayed because of the time required to obtain each of the subawards to the Working Group states. Subawards with the Mississippi Geological Survey and the University of Texas-Texas Bureau of Economic Geology were finalized in March 2023. The Tennessee Geological Survey subaward was finalized in June 2023, and the Arkansas Geological Survey subaward was finalized in July 2023. The subaward with the Louisiana State University-Louisiana Geological Survey was finalized with an October 1, 2023, start date. As a result of these delays, a no-cost six month extension was requested in writing in September 2023, and the extension was issued on October 17, 2023, for the period October 1, 2022, through April 1, 2024.
- (2) Despite the delays, an initial Working Group meeting was held in Baton Rouge, Louisiana on July 26, 2023. A copy of the meeting agenda is included as Attachment A. Representatives from each of the participating Working Group states were in attendance, with the exception of the TGS who attended the meeting virtually. The initial meeting had several objectives: (a) to introduce members of the Working Group, (b) to provide an overview of the project, (c) to outline the investigative model utilized by the East Gulf Coast Strategic Reconciliation Working Group to accomplish similar goals, (d) to discuss individual concerns and needs of each of the Working Group participants, (e) to develop an action plan for work to be accomplished, and (f) to establish a timeline for project implementation.
- (3) A follow-up virtual meeting was tentatively scheduled for November-December 2023, and a tentative in-person meeting was scheduled for the Spring of 2024, to be held in southern Arkansas. The purpose of this meeting will be to evaluate the progress of work accomplished to date and to provide an opportunity to visit selected outcrops in proximity to the meeting site. Agreement was reached among the participants that all project work would be completed and products developed within the time frame established by the original award, i.e., September 30, 2024.
- (4) Work accomplished to date by members of the Working Group includes the following:
 - a. Researching historic and current Mesozoic and Cenozoic stratigraphic nomenclature that has been used in Texas, Louisiana, Arkansas, Mississippi, and Tennessee. Discussion during the initial Working Group meeting identified nomenclature differences in the Cenozoic as the primary focus areas for stratigraphic reconciliation.
 - b. Producing a regional stratigraphic correlation chart that incorporates current stratigraphic nomenclature (Attachment B). An item to note from the chart is that some states are “lumpers” and some states are “splitters” in terms of how detailed individual stratigraphic units are defined. This is primarily a reflection of the research focus in individual areas.
 - c. Constructing regional cross sections, using primarily oil and gas wells, to display along and across strike stratigraphic variations. The cross sections

incorporate data from geophysical logs to identify formation tops and structural features and will be used to assess the presence or absence of stratigraphic units across state boundaries and to assist with nomenclature reconciliation.

- d. Initiating field mapping at 1:100,000 to delineate individual formations in the Tertiary Claiborne Group in Arkansas.

In summary, work on the project during the first year was delayed due to contract negotiations between the GSA and individual state entities. A first year six-month project extension was requested and granted, extending the first year project period from October 1, 2023, to April 1, 2024, as a result of these delays. An initial meeting was held and attended by all members of the Working Group in July 2023, despite the staggered project initiation dates for each Working Group participant state. The Working Group identified differences in Cenozoic nomenclature as the primary focus for work to be accomplished during the project. These differences were highlighted in a regional Cenozoic stratigraphic correlation chart produced subsequent to the meeting. Participants in the project are developing regional cross sections, both along strike and across strike, to identify variations in individual stratigraphic units to facilitate nomenclature modifications. Additional virtual and in-person meetings have been tentatively scheduled for late Fall 2023 and Spring 2024 to allow Working Group members to provide updates on work performed, to discuss findings from the work, and to provide an opportunity for field visits to selected outcrops that may be instructive for nomenclature reconciliations.

Please feel free to contact me with questions or comments on this report.

Sincerely,



Gregory M. Guthrie, P.G.
*Director of Science Programs and
Director Groundwater Assessment Program*
Geological Survey of Alabama

Attachment A
West Gulf Coast Stratigraphic Reconciliation Working Group
Initial Meeting Agenda
Louisiana Geological Survey – Baton Rouge, LA
July 26, 2003
8:00 AM-5:00 PM

Welcome Comments

Introductions

Project Overview

Goals

Objectives

Investigative Model Employed by East Gulf Coast Stratigraphic Reconciliation Working Group

Gather information

Identify “problem” units

Digitize geophysical logs

Import geophysical logs into Petra

Map type sections and verify locations

Describe hydrostratigraphy

Field trips

Shared information repository

Discussion

Concerns and Needs

Arkansas

Louisiana

Mississippi

Tennessee

Texas

Plan of Action

Timeline

Discussion

Closing Comments

Adjourn Meeting

