Name: _____

Date: _____ Period: _____

Lab: Ocean Bottom Profile

INTRODUCTION:

Until the 1940's, scientists and oceanographers did not completely understand what was at the bottom of the world's oceans. Thanks to advancements in technology from World War II, scientists gained new tools to help explore and research the oceans more accurately.

Harry Hess, along with other scientists, began to put together evidence to support the idea that the continents were moving. His discovery of mid-ocean ridges helped usher in Plate Tectonics.

OBJECTIVE:

You will also use ocean floor depth data to construct a ocean bottom profile and identify the key features on this specific type of plate boundary.

PROCEDURE:

1. Using a blue colored pencil, draw a horizontal line across the "Ocean Bottom Profile" at a depth of 0 km. This represents the ocean surface (sea level).
2. Construct and ocean bottom profile on the graph titled "Ocean Bottom Profile" using the ocean depth data provided.
3. Color the area below the constructed ocean bottom profile brown. This represent the lithosphere (Earth's crust) under the ocean.
4. Color the area between the blue ocean surface line and the lithosphere blue.
5. Label the following ocean floor features: Mid-Atlantic Ridge, Rift Valley, Continental Shelf, Deep Ocean Floor and draw arrows at the bottom indicate direction of plate movement.

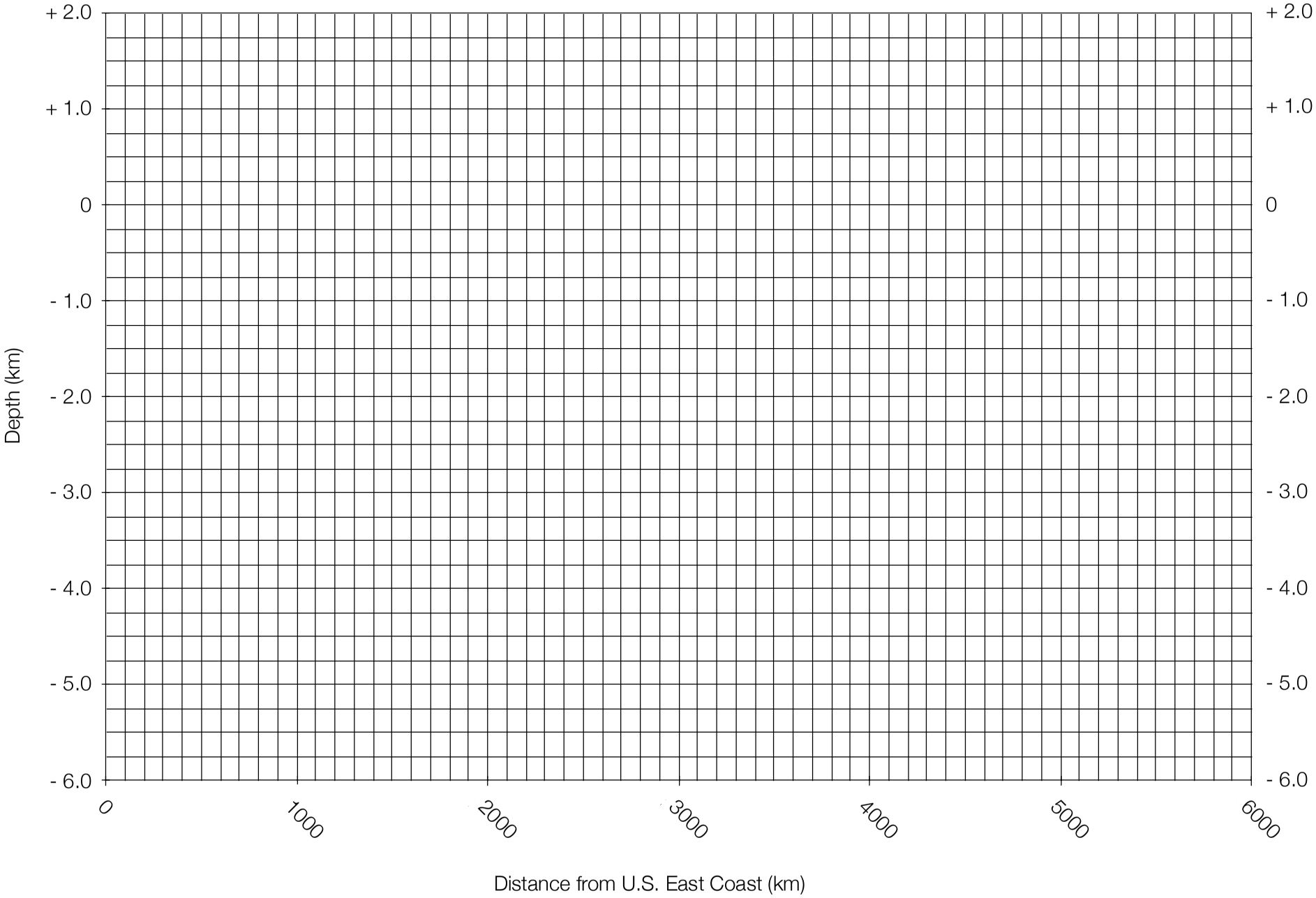
DEPTH DATA

Distance (km)	Depth (km)
0	0
100	-0.25
200	-2.75
400	-3.75
500	-3.75
600	-4.5
2000	-4.5
2500	-4.0

Distance (km)	Depth (km)
2900	-2.75
3000	-1.75
3050	-3.0
3100	-2.5
3200	-3.0
3500	-3.5
3600	-3.75
3650	-3.75

Distance (km)	Depth (km)
4000	-4.0
4500	-4.5
5000	-5.0
5300	-4.5
5800	-3.75
5900	-0.25
6000	0
-	-

North Atlantic Ocean Bottom Profile



Lab: Ocean Bottom Profile

QUICK RESEARCH QUESTIONS:

1. Who first inferred the existence of the Mid-Atlanitic ridge in 1850 and later found it in 1872?

2. What major contribution did Harry Hess make to the geologic community?

2. What is the prominent sea-floor feature that can be found in the middle of the Atlantic Ocean?

3. What type of plate boundary is the Mid-Atlantic ridge and what are its associated motions?

CONCLUSION: Why was finding mid-ocean ridges and later sea-floor spreading an important discovery?