Core Drilling for Oil

Name_____

Phenomenon:

Pulling a core sample out of Earth Analyzing the core samples

An oil company is looking at an area to drill for oil. Since setting up an oil drilling rig is expensive, the company is looking for evidence that oil is present before they place the next oil drilling rig. They decide to take core samples and analyze them like shown in the pictures above. What questions do you have about core sampling?

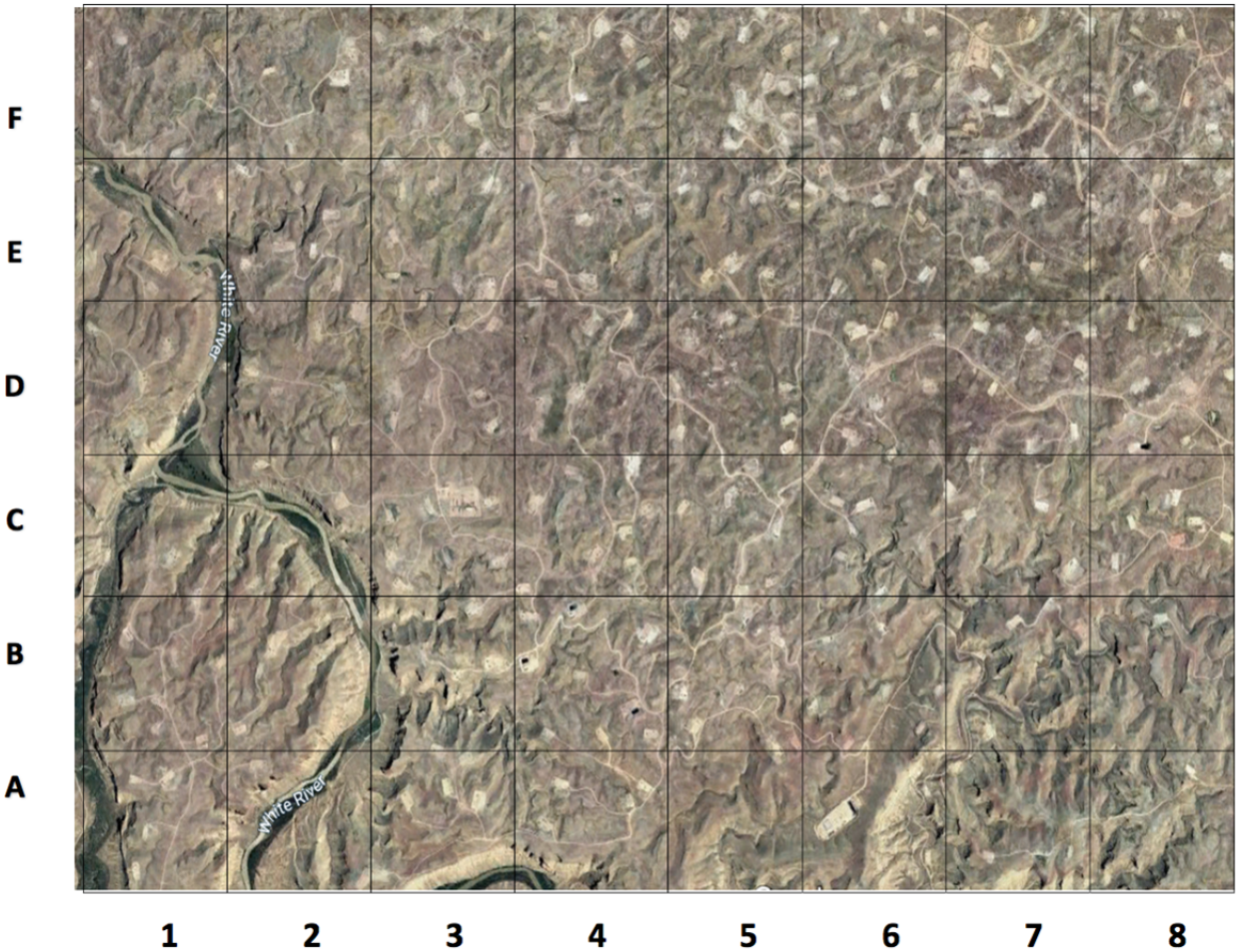
1.

2.

3.

Directions

1. Use the map below to find oil. Where will you drill? Mark four places where your group would like to drill. Remember every time you do a core sample, it cost money. You will only have enough money to drill a few core samples. Make sure you mark off which sections you have chosen on the map.
2. Get the sample from the map in the front of the room and take it to your table.
3. Draw the layers you see. Oil will look like a black layer. You want to find the thickest layer of oil.
4. Use a ruler to measure the thickness of each layer and write it on the chart.


White River
White River
F
E
D
C
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1
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3
4
5
6
7
8

Analyze the Core Samples

Choose one area that you will want to take the core sample. Record the information below. Remember to answer the questions below.

Core Sample #1 Location:	Core Sample #2 Location:	Core Sample #3 Location:	Core Sample #4 Location:
Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.
Interpretation Is this a good place to drill for oil? Why or Why Not?	**Interpretation** Is this a good place to drill for oil? Why or Why Not?	**Interpretation** Is this a good place to drill for oil? Why or Why Not?	**Interpretation** Is this a good place to drill for oil? Why or Why Not?

Now that you have analyzed the 4 core samples, can your group determine where to place the oil drilling rig? If not, where should your group get the next two drilling samples?

Analyze Core Samples #5 and #6. Do you need to get more data? Where should your group get the next two drilling samples (#7 and #8)?

Core Sample #5 Location:	Core Sample #6 Location:	Core Sample #7 Location:	Core Sample #8 Location:
Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.	Color in the sample Measure in millimeters the length of each color. Record the length on the side.
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Now that you have analyzed the 8 core samples, can your group determine where to place the oil drilling rig?

Assessment

1. Why do Oil companies use core samples?

2. What else do you think core samples can provide information about?

3. How did you analyze the core sample?

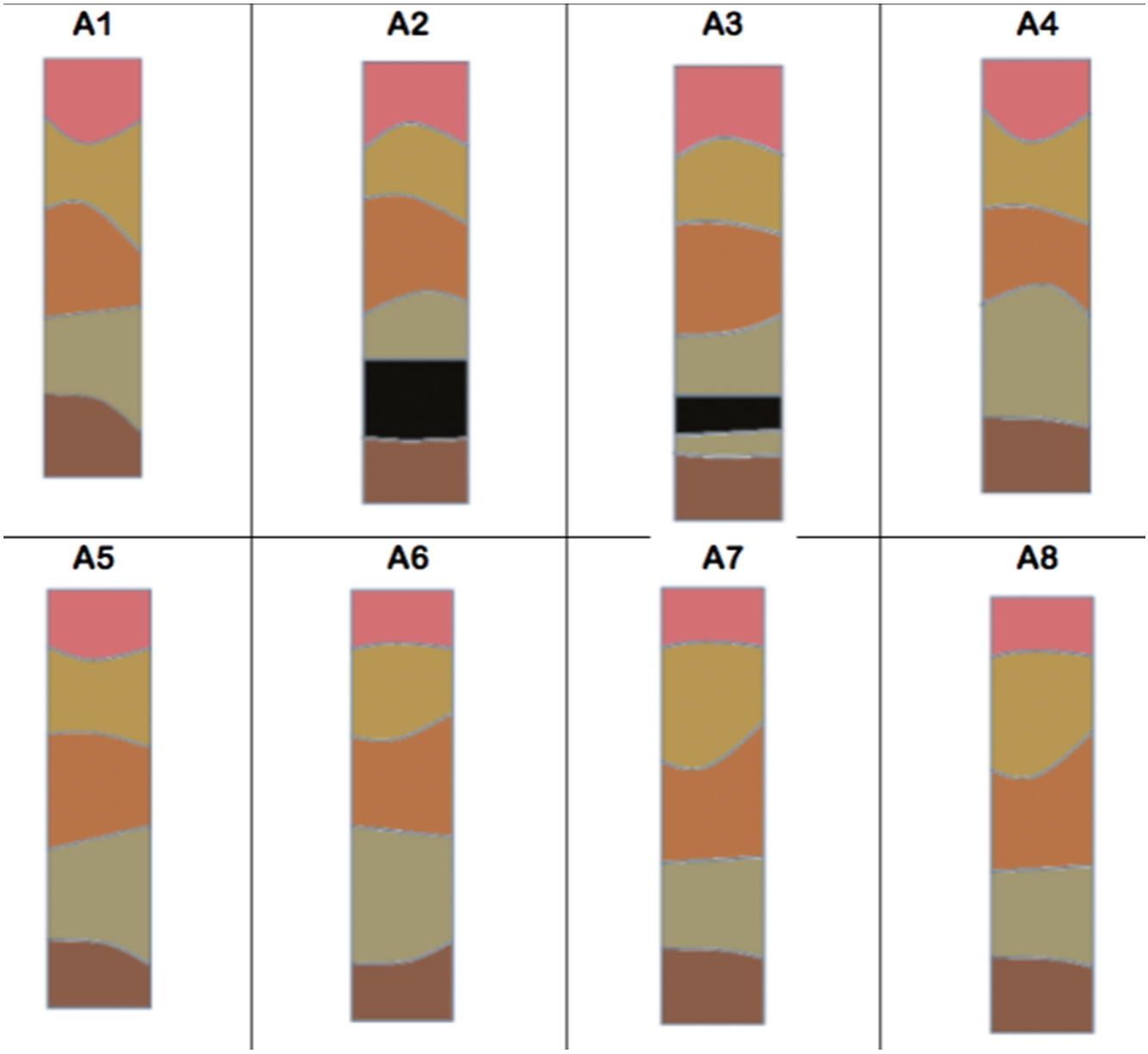
4. Which core sample helped your group decide which would be the best place to drill for oil? Why? Explain your evidence.

Support Materials

Core Drilling for Oil

Map of Ouray, Utah

Core Samples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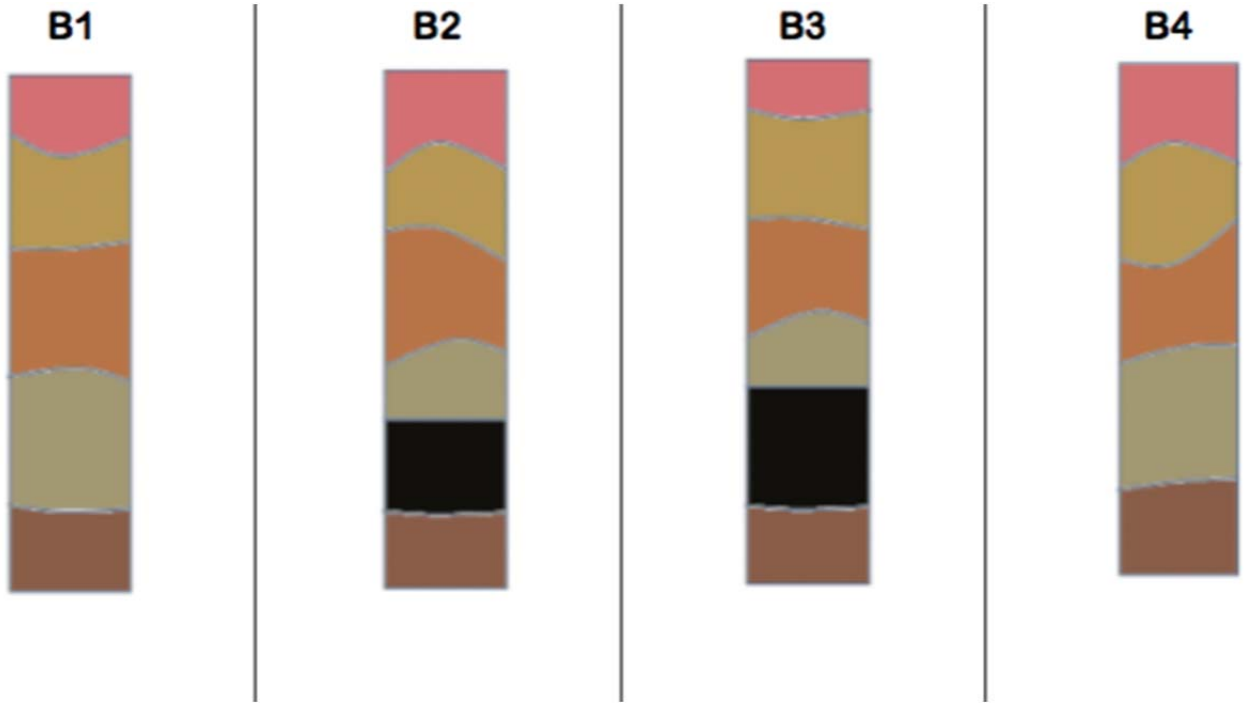
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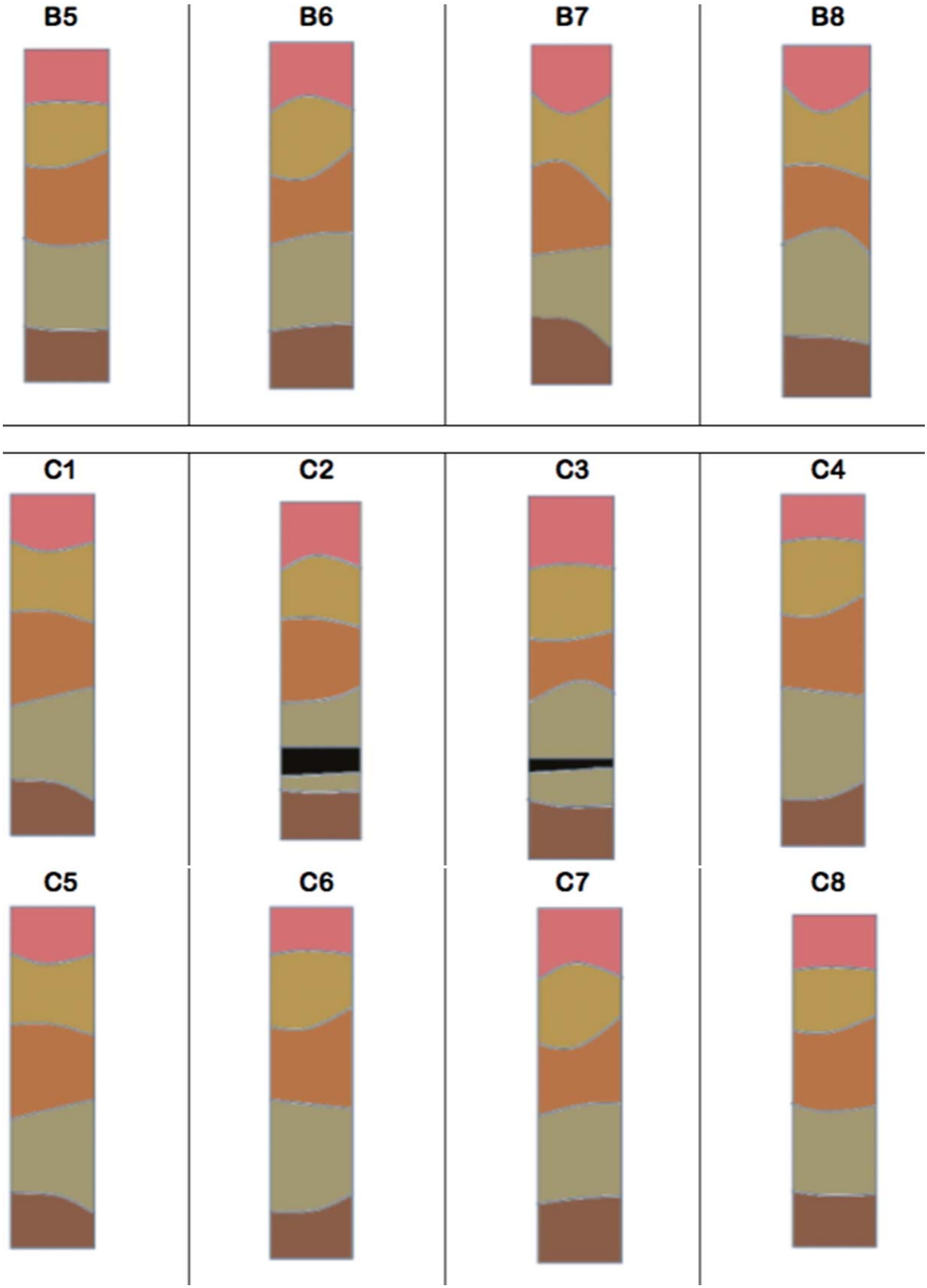
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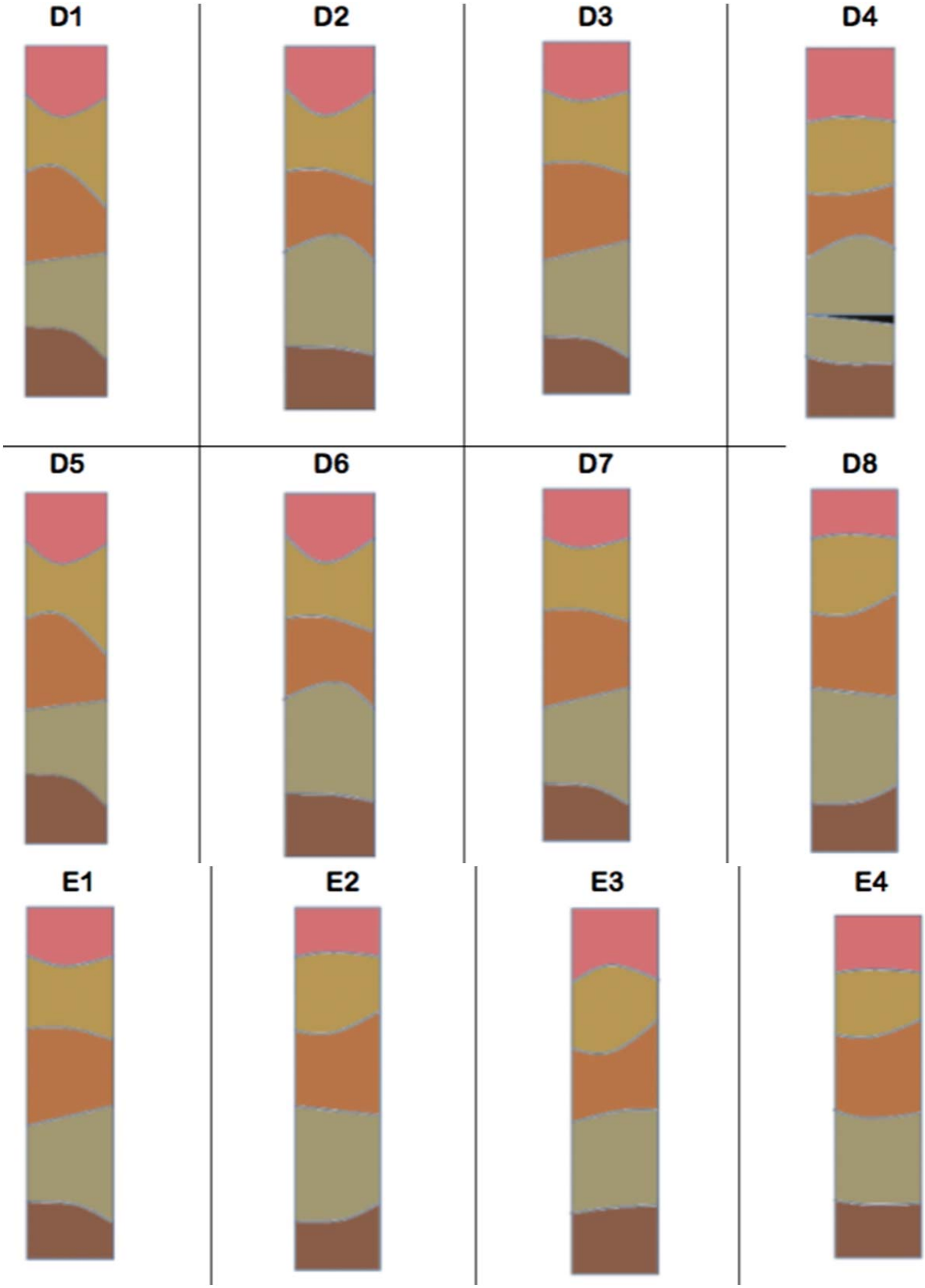
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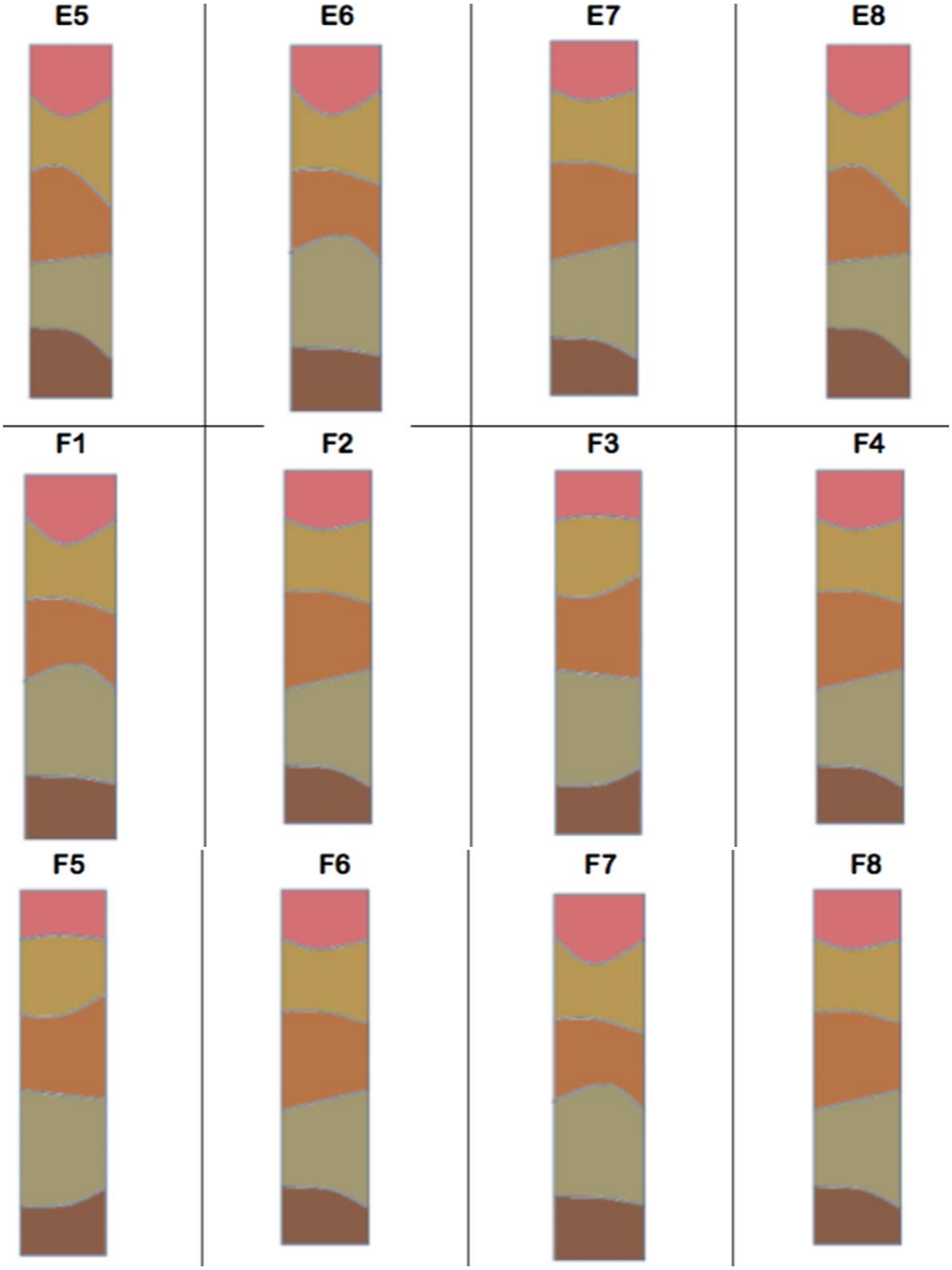
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