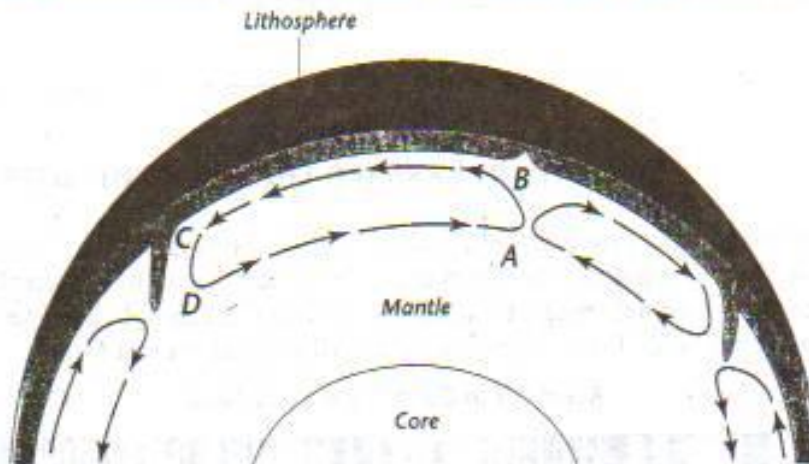


NAME Matt Gowers

DATE 4-25-07

WHAT'S HAPPENING DURING CONVECTION?

The figure below shows a convection cell in the earth's upper mantle. A convection cell is one complete loop of a convection current. Use the figure to answer the questions that follow.



1. What is the name of the upper mantle? _____
2. Where does the heat come from that drives this convection current in the upper mantle?

3. Where is the temperature of the upper mantle material greater, at point B or point C? Explain why?

4. Where is the density of the material greater, at point A or point B? Explain why?

5. What happens to the temperature and density of the material between points B and C?

6. What force causes the convection cell to turn down at point C? _____

7. What happens to the temperature and density of the material between points D and A?

8. What causes the convection cell to turn up at point A? _____

9. How does the convection cell affect the lithosphere above it?

MAGNETIC REVERSALS THROUGH THE AGES

How often does Earth's magnetic field reverse itself? The graph below shows the record geologists have put together for the last 65 million years. In this graph, each dark band represents a "normal" magnetic field, as it is today. Each light band represents a reversed magnetic field. Use the graph to answer the questions that follow.

Reversals in Earth's Magnetic Field



1. Was the Earth's magnetic field "normal" or reversed 65 million years ago?

2. About how long ago was the last time Earth's magnetic field reversed? _____

3. Can you see any pattern in how often Earth's magnetic field reverses? Give reasons for your answer?

4. When would you predict the next reversal would occur? Give reasons for your answer.
