

After the Romans were driven out of Spain in the fifth century, the Rio Tinto mines fell into a centuries-long decline. In the late 19th century, however, a multinational company took over the mines and once again began to produce large quantities of metals. Mismanagement caused the mines to close in 2001, but another company has now purchased the site, hoping to begin operations anew. Meanwhile, archaeologists have unearthed a number of historically valuable items at the mines, including Bronze Age hammer heads, Phoenician oil lamps, and pieces of Roman pottery. These discoveries have helped provide a more detailed picture of early mining operations and the lives of mine workers from different periods.

An unfortunate legacy of the mines, however, is environmental contamination. The two main rivers in the Rio Tinto area are poisoned with heavy metals. In fact, high levels of heavy metals are found in soil and water throughout the region, and scientists have discovered that this pollution can be traced back to the onset of mining around 4,800 years ago. Bernd Lottermoser, an authority on mine pollution, acknowledges mining has damaged the local environment but says it may have only been a contributing factor. He believes natural features of the region's geology have resulted in the release of heavy metals throughout its history. Lottermoser even suggests the unusually colored soil and water resulting from this pollution "may have attracted the very first miners to the region."

(11)

What is one reason the Rio Tinto mines were important while under Phoenician control?

- 1 The Phoenicians were able to use technology they invented at the mines to improve mining operations in other parts of the Mediterranean region.
- 2 The mines provided sufficient quantities of silver to enable a coin-based economy to take hold in the Mediterranean region.
- 3 The Phoenicians could finance their military campaigns in areas of present-day Spain by trading the silver they obtained from the mines.
- 4 The mines enabled the development of metalworking techniques that were used for constructing important temples.

(12)

One result of the Roman takeover of the Rio Tinto mines was that

- 1 excessive mining of copper and silver to increase the empire's wealth eventually led to the closure of the mines.
- 2 clashes between mine workers and Roman soldiers resulted in the mines being temporarily leased to private contractors.
- 3 the mines entered a period of heightened production made possible by efficient, large-scale management.
- 4 laborers had to be brought in from other mines, which negatively affected the output of those mines.

(13)

Archaeologists have gained a clearer historical understanding of the Rio Tinto mines as a result of

- 1 finding evidence of a previously unknown civilization that may have first settled in and mined the area.
- 2 analyzing ancient documents that reveal the amount of heavy metals extracted since the time mining first occurred.
- 3 uncovering possessions at the mines that give clues about the habits of people who once labored in them.
- 4 collaborating with the company that runs the mines to explore parts of them that have not been used since Roman times.

(14)

What is Bernd Lottermoser's view concerning heavy-metal pollution in the Rio Tinto area?

- 1 Humans are partly to blame for the pollution, but it was present before mining started and may be why people began to dig for metals there.
- 2 The Phoenicians were not responsible for the pollution because it stopped after the first inhabitants of the region departed.
- 3 It should not be a major cause for concern because the negative effects it has on the environment will disappear over time.
- 4 It is a small price to pay for the contribution that mining in the area has made to civilizations throughout history.

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## Listening Test

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<b>Part 1</b> <Dialogues>	1 question each	Multiple-choice
<b>Part 2</b> <Passage>	2 questions	Multiple-choice
<b>Part 3</b> <Real-Life>	1 question	Multiple-choice

### Part 1

CD 06

No. 1

- 1 His roommate is not tidy.
- 2 His dormitory is too noisy.
- 3 His roommate criticizes him.
- 4 His dormitory's rules are strict.

CD 07

No. 2

- 1 To report her stolen credit card.
- 2 To cancel her credit card.
- 3 To say she will use her card overseas.
- 4 To ask about a purchase on her statement.

CD 08

No. 3

- 1 Reschedule his fishing trip.
- 2 Leave the party early.
- 3 Go fishing with his neighbors.
- 4 Invite his brother to the party.