

Predicting yield in the identification essay sample



**ASSIGN
BUSTER**

The yield of a metal from a particular mineral or ore is the mass of metal that can be obtained from a particular mass of the mineral or ore, and is often expressed as a percentage. It is possible to use formulae to calculate/predict yields of metals from particular minerals (pure compounds), for ores we have to measure them experimentally. This is because ores are mixtures of the required mineral and unwanted material, and, being mixtures, they have variable composition.

Measurement of the yield from a particular ore body is extremely important in the mining and minerals industry because it determines whether extraction of the metal from that ore is profitable or not. Whenever a new ore body is found, samples must be analyzed to determine the likely yield of the metal from it, and hence to decide whether it is economically worthwhile to mine and process the ore. The price that the metal can be sold for (which can differ depending upon economic conditions) is also a major factor in making that decision.

As seen from above, crucial planning needs to be done prior to opening the mine so that a profit will be made in the end. The total income received from selling the minerals need to be greater than all the costs involved. These costs include, the wages of the miners, surveyors and financial analyzers, the costs of the mining process itself including the clearing of land and digging, the costs of buying and running the vehicles and equipment and finally the costs of the environmental rehabilitation.

recycling of metals
Metal ores are non-renewable resources. They were formed when the Earth was formed and there is no way of forming any more

of them. While we are unlikely to use up all the known reserves of metal ores in the short term, we nevertheless should use them as sparingly as possible so as to make them last for as long as possible.

There are also many benefits for the environment through the recycling of metals. such as Less energy is used in recycling metals than in extracting metal from ore.

Finite natural resources (ore) are conserved.

Less rubbish has to be disposed of (a major consideration in big cities where site for garbage dumps are hard to find) Figures indicate that using recycled raw materials, including metals, cuts CO₂ emissions by some: 200 million tonnes CO₂ emission reduction every year.

Other benefits also arise from recycling, for example, using recycled steel to make new steel enables reductions such as: 86% in air pollution 40% in water use 76% in water pollution bibliography www. wikipedia. org