Exercise

The Mining Company produces gold at a variable cost of USD 300 per ounce. The price of gold is currently USD 325 per ounce, but management is well aware that the price fluctuates, and may be quite different when the production is sold. The management estimates that the price may be USD 250 wit a probability of 0,20, of USD 325 with a probability of 0,55, or USD 450 wit a probability of 0,25. For technical reasons, production may be scheduled at 0 ounces, or 1000 ounces, or 2000 ounces. Determine how many ounces of gold to produce.

A) Structure the decision problem.

B) What method of decision-making should be used here and why?

C) Select the best alternative.

D) How many USD can management of The Mining Company afford to invest into gaining additional information?

E) Draw the decision tree for this problem.

[C) Production of 2000 ounces yields best EMV = 82 500 USD or least expected regret = 20 000 USD]

[D) EVPI = 20 000 USD]