

## Natural Resources CPA

Question #1 (AICPA.061217FAR)

Cantor Co. purchased a coal mine for \$2,000,000. It cost \$500,000 to prepare the coal mine for the extraction of the coal. It was estimated that 750,000 tons of coal would be extracted from the mine during its useful life. Cantor planned to sell the property for \$100,000 at the end of its useful life. During the current year, 15,000 tons of coal were extracted and sold.

What would Cantor's depletion amount be per ton for the current year?

- A. \$2.50
- B. \$2.60
- C. \$3.20

The depletion rate is the sum of the cost incurred to acquire the mineral rights, find the minerals, and develop the site less the salvage value, all divided by the estimated number of units of resource expected to be removed from the site.

The depletion rate per ton is  $(\$2,000,000 + \$500,000 - \$100,000) / 750,000 = \$3.20$ . This rate is applied to the units removed each period to determine depletion for that period.

As such, it allocates the total cost of the obtaining and developing the resource to each unit of resource removed.

- D. \$3.30

Question #2 (AICPA.083737FAR-SIM)

A firm began a mineral exploitation venture during the current year by spending (1) \$40 million for the mineral rights; (2) \$100 million exploring for the minerals, one-fourth of which were successful; and (3) \$60 million to develop the site. Management estimated that 20 million tons of ore would ultimately be removed from the property. Wages and other extraction costs for the current year amounted to \$10 million. In total, 2 million tons of ore were removed from the deposit in the current year. The entire production for the period was sold. Compute cost of goods sold under the successful efforts method.

- A. \$30 million
- B. \$12.5 million
- C. \$10 million
- D. \$22.5 million

The depletion rate =  $[\$40 + (.25)(\$100) + \$60] / 20 = \$6.25/\text{ton}$ . Depletion =  $2,000,000(\$6.25/\text{ton}) = \$12,500,000$ . Because all the ore removed was sold, cost of goods sold includes the entire amount of depletion and the extraction costs. Cost of goods sold =  $\$12,500,000 + \$10,000,000 = \$22,500,000$ . Note, that extraction costs is included in inventory (and therefore, cost of goods sold), but not in the deposit (and therefore, not in depletion).

Question #3 (AICPA.083736FAR-SIM)

A firm began a mineral exploitation venture during the current year by spending (1) \$40 million for the mineral rights; (2) \$100 million exploring for the minerals, one-fourth of which were successful; and (3) \$60 million to develop the site. Management estimated that 20 million tons of ore would ultimately be removed from the property. Wages and other extraction costs for the current year amounted to \$10 million. In total, 2 million tons of ore were removed from the deposit in the current year. The entire production for the period was sold. What amount of depletion is recognized during the current year under the full costing method?

## Natural Resources CPA

A. \$20 million

The depletion rate =  $(\$40 + \$100 + \$60)/20 = \$10/\text{ton}$ . Depletion =  $2,000,000(\$10/\text{ton}) = \$20,000,000$ . Depletion for a period is the cost of the deposit allocated to the inventory removed for the period. In this case, the entire amount is included in cost of goods sold because there is no ending inventory. However, if there had been ore left at the end of the period, the \$10/ton rate would have been applied to the units remaining. That would not change the answer to the question, however.

B. \$12.5 million

C. \$10 million

D. \$21 million

Question #4 (AICPA.083735FAR-SIM)

Choose the best association of terms in the natural resources accounting area with the conceptual framework.

A. Successful efforts method-matching.

B. Full costing method-definition of asset.

C. Depletion-fair value accounting.

D. Successful efforts method-definition of asset.

The successful efforts method capitalizes only the cost of exploration efforts that locate the resource. As such, only those efforts that yield a probable future benefit are capitalized. This is a direct application of the asset definition, which requires that an asset have a probable future benefit.