This IFRS Supplement provides expanded discussions of accounting guidance under International Financial Reporting Standards (IFRS) for the topics in Intermediate Accounting. The discussions are organized according to the chapters in Intermediate Accounting (13th or 14th Editions) and therefore can be used to supplement the U.S. GAAP requirements as presented in the textbook. Assignment material is provided for each supplement chapter, which can be used to assess and reinforce student understanding of IFRS.

**DEPRECIATION**

**Component Depreciation**

As indicated in Chapter 10, companies are required to use component depreciation. IFRS requires that each part of an item of property, plant, and equipment that is significant to the total cost of the asset must be depreciated separately. Companies therefore have to exercise judgment to determine the proper allocations to the components. As an example, when a company like Nokia (FIN) purchases a building, it must determine how the various building components (e.g., the foundation, structure, roof, heating and cooling system, and elevators) should be segregated and depreciated.

To illustrate the accounting for component depreciation, assume that EuroAsia Airlines purchases an airplane for €100,000,000 on January 1, 2011. The airplane has a useful life of 20 years and a residual value of €0. EuroAsia uses the straight-line method of depreciation for all its airplanes. EuroAsia identifies the following components, amounts, and useful lives, as shown in Illustration 11-1.

<table>
<thead>
<tr>
<th>Components</th>
<th>Component Amount</th>
<th>Component Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airframe</td>
<td>€60,000,000</td>
<td>20 years</td>
</tr>
<tr>
<td>Engine components</td>
<td>32,000,000</td>
<td>8 years</td>
</tr>
<tr>
<td>Other components</td>
<td>8,000,000</td>
<td>5 years</td>
</tr>
</tbody>
</table>

Illustration 11-2 shows the computation of depreciation expense for EuroAsia for 2011.

<table>
<thead>
<tr>
<th>Components</th>
<th>Component Amount</th>
<th>Useful Life</th>
<th>Component Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airframe</td>
<td>€60,000,000</td>
<td>20</td>
<td>€3,000,000</td>
</tr>
<tr>
<td>Engine components</td>
<td>32,000,000</td>
<td>8</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Other components</td>
<td>8,000,000</td>
<td>5</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Total</td>
<td>€100,000,000</td>
<td></td>
<td>€8,600,000</td>
</tr>
</tbody>
</table>

As indicated, EuroAsia records depreciation expense of €8,600,000 in 2011, as follows.

Depreciation Expense 8,600,000
Accumulated Depreciation—Airplane 8,600,000

On the statement of financial position at the end of 2011, EuroAsia reports the airplane as a single amount. The presentation is shown in Illustration 11-3.

<table>
<thead>
<tr>
<th>Non-current assets</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplane</td>
<td>€100,000,000</td>
<td></td>
</tr>
<tr>
<td>Less: Accumulated depreciation—airplane</td>
<td>8,600,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>€91,400,000</td>
<td></td>
</tr>
</tbody>
</table>
In many situations, a company may not have a good understanding of the cost of the individual components purchased. In that case, the cost of individual components should be estimated based on reference to current market prices (if available), discussion with experts in valuation, or use of other reasonable approaches.

**Special Depreciation Issues**

We still need to discuss several special issues related to depreciation:

1. How should companies compute depreciation for partial periods?
2. Does depreciation provide for the replacement of assets?
3. How should companies handle revisions in depreciation rates?

**Depreciation and Partial Periods**

Companies seldom purchase plant assets on the first day of a fiscal period or dispose of them on the last day of a fiscal period. A practical question is: How much depreciation should a company charge for the partial periods involved?

In computing depreciation expense for partial periods, companies must determine the depreciation expense for the full year and then prorate this depreciation expense between the two periods involved. This process should continue throughout the useful life of the asset.

Assume, for example, that Steeltex Company purchases an automated drill machine with a five-year life for $45,000 (no residual value) on June 10, 2010. The company’s fiscal year ends December 31. Steeltex therefore charges depreciation for only 6 2/5 months during that year. The total depreciation for a full year (assuming straight-line depreciation) is $9,000 ($45,000/5). The depreciation for the first, partial year is therefore:

\[
\frac{6\frac{2}{5}}{12} \times 9,000 = \$5,000
\]

Sometimes a company like Steeltex modifies the process of allocating costs to a partial period to handle acquisitions and disposals of plant assets more simply. One variation is to take no depreciation in the year of acquisition and a full year’s depreciation in the year of disposal. Other variations charge one-half year’s depreciation both in the year of acquisition and in the year of disposal (referred to as the half-year convention), or charge a full year in the year of acquisition and none in the year of disposal.

In fact, Steeltex may adopt any one of these several fractional-year policies in allocating cost to the first and last years of an asset’s life so long as it applies the method consistently. However, unless otherwise stipulated, companies normally compute depreciation on the basis of the nearest full month.

**IMPAIRMENTS**

The general accounting standard of lower-of-cost-or-net realizable value for inventories does not apply to property, plant, and equipment. Even when property, plant, and equipment has suffered partial obsolescence, accountants have been reluctant to reduce the asset’s carrying amount. Why? Because, unlike inventories, it is difficult to arrive at a fair value for property, plant, and equipment that is not somewhat subjective and arbitrary.

For example, Falconbridge Ltd. Nickel Mines (CAN) had to decide whether to write off all or a part of its property, plant, and equipment in a nickel-mining operation in the Dominican Republic. The project had been incurring losses because nickel prices were low and operating costs were high. Only if nickel prices increased by approximately 33 percent would the project be reasonably profitable. Whether a write-off
Recognizing Impairments

As discussed in the opening story, the credit crisis starting in late 2008 has affected many financial and non-financial institutions. As a result of this global slump, many companies are considering write-offs of some of their long-lived assets. These write-offs are referred to as impairments.

A long-lived tangible asset is impaired when a company is not able to recover the asset’s carrying amount either through using it or by selling it. To determine whether an asset is impaired, on an annual basis, companies review the asset for indicators of impairments—that is, a decline in the asset’s cash-generating ability through use or sale. This review should consider internal sources (e.g., adverse changes in performance) and external sources (e.g., adverse changes in the business or regulatory environment) of information. If impairment indicators are present, then an impairment test must be conducted. This test compares the asset’s recoverable amount with its carrying amount. If the carrying amount is higher than the recoverable amount, the difference is an impairment loss. If the recoverable amount is greater than the carrying amount, no impairment is recorded. \[1\]

Recoverable amount is defined as the higher of fair value less costs to sell or value-in-use. Fair value less costs to sell means what the asset could be sold for after deducting costs of disposal. Value-in-use is the present value of cash flows expected from the future use and eventual sale of the asset at the end of its useful life. Illustration 11-4 highlights the nature of the impairment test.

If either the fair value less costs to sell or value-in-use is higher than the carrying amount, there is no impairment. If both the fair value less costs to sell and value-in-use are lower than the carrying amount, a loss on impairment occurs.

Example: No Impairment

Assume that Cruz Company performs an impairment test for its equipment. The carrying amount of Cruz’s equipment is $200,000, its fair value less costs to sell is $180,000, and its value-in-use is $205,000. In this case, the value-in-use of Cruz’s equipment is higher than its carrying amount of $200,000. As a result, there is no impairment.\[1\]

Example: Impairment

Assume the same information for Cruz Company above except that the value-in-use of Cruz’s equipment is $175,000 rather than $205,000. Cruz measures the impairment

\[1\] if a company can more readily determine value-in-use (or fair value less costs to sell) and it determines that no impairment is needed, it is not required to compute the other measure. \[2\]
loss as the difference between the carrying amount of $200,000 and the higher of fair value less costs to sell ($180,000) or value-in-use ($175,000). Cruz therefore uses the fair value less cost of disposal to record an impairment loss of $20,000 ($200,000 − $180,000).

Cruz makes the following entry to record the impairment loss.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on Impairment</td>
<td>20,000</td>
</tr>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>20,000</td>
</tr>
</tbody>
</table>

The Loss on Impairment is reported in the income statement in the “other income and expense” section. The company then either credits Equipment or Accumulated Depreciation—Equipment to reduce the carrying amount of the equipment for the impairment. For purposes of homework, credit accumulated depreciation when recording an impairment for a depreciable asset.

**Impairment Illustrations**

Presented below are additional examples of impairments.

**Case 1**

At December 31, 2011, Hanoi Company has equipment with a cost of VND26,000,000, and accumulated depreciation of VND12,000,000. The equipment has a total useful life of four years with a residual value of VND2,000,000. The following information relates to this equipment.

1. The equipment’s carrying amount at December 31, 2011, is VND14,000,000 (VND26,000,000 − VND12,000,000).
2. Hanoi uses straight-line depreciation. Hanoi’s depreciation was VND6,000,000 [(VND26,000,000 − VND2,000,000) ÷ 4] for 2011 and is recorded.
3. Hanoi has determined that the recoverable amount for this asset at December 31, 2011, is VND11,000,000.
4. The remaining useful life of the equipment after December 31, 2011, is two years.

Hanoi records the impairment on its equipment at December 31, 2011, as follows.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on Impairment</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>3,000,000</td>
</tr>
</tbody>
</table>

Following the recognition of the impairment loss in 2011, the carrying amount of the equipment is now VND11,000,000 (VND14,000,000 − VND3,000,000). For 2012, Hanoi Company determines that the equipment’s total useful life has not changed (thus, the equipment’s remaining useful life is still two years). However, the estimated residual value of the equipment is now zero. Hanoi continues to use straight-line depreciation and makes the following journal entry to record depreciation for 2012.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation Expense (VND11,000,000/2)</td>
<td>5,500,000</td>
</tr>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>5,500,000</td>
</tr>
</tbody>
</table>

Hanoi records depreciation in the periods following the impairment using the carrying amount of the asset adjusted for the impairment. Hanoi then evaluates whether the equipment was further impaired at the end of 2012. For example, the carrying amount of Hanoi’s equipment at December 31, 2012, is VND5,500,000 (VND26,000,000 − VND12,000,000 − VND3,000,000 − VND5,500,000). If Hanoi determines that the recoverable amount at December 31, 2012, is lower than VND5,500,000, then an additional impairment loss is recorded.

**Case 2**

At the end of 2010, Verma Company tests a machine for impairment. The machine has a carrying amount of $200,000. It has an estimated remaining useful life of five years.
Because of the unique nature of the machine, there is little market-related information on which to base a recoverable amount based on fair value. As a result, Verma determines the machine’s recoverable amount (i.e., the higher of value-in-use and fair value less costs to sell) should be based on value-in-use.

To determine value-in-use, Verma develops an estimate of future cash flows based on internal company information, based on cash budgets (and reflecting cash inflows from the machine and estimated costs necessary to maintain the machine in its current condition). [3] Verma uses a discount rate of 8 percent, which should be a pretax rate that approximates Verma’s cost of borrowing. [2] Verma’s analysis indicates that its future cash flows will be $40,000 each year for five years, and it will receive a residual value of $10,000 at the end of the five years. It is assumed that all cash flows occur at the end of the year. The computation of the value-in-use for Verma’s machine is shown in Illustration 11-5.

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**ILLUSTRATION 11-5**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present value of 5 annual payments of $40,000 ($40,000 x 3.99271, Table 6-4)</td>
<td>$159,708.40</td>
</tr>
<tr>
<td>Present value of residual value of $10,000 ($10,000 x .68058, Table 6-1)</td>
<td>6,805.80</td>
</tr>
<tr>
<td>Value-in-use related to machine</td>
<td><strong>$166,514.20</strong></td>
</tr>
</tbody>
</table>

The computation of the impairment loss on the machine at the end of 2010 is shown in Illustration 11-6.

**ILLUSTRATION 11-6**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying amount of machine before impairment loss</td>
<td>$200,000.00</td>
</tr>
<tr>
<td>Recoverable amount of machine</td>
<td>166,514.20</td>
</tr>
<tr>
<td>Loss on impairment</td>
<td><strong>$33,485.80</strong></td>
</tr>
</tbody>
</table>

The company therefore records an impairment loss at December 31, 2010, as follows.

Loss on Impairment 33,485.80
Accumulated Depreciation—Machine 33,485.80

The carrying amount of the machine after recording the loss is $166,514.20.

**Reversal of Impairment Loss**

After recording the impairment loss, the recoverable amount becomes the basis of the impaired asset. What happens if a review in a future year indicates that the asset is no longer impaired because the recoverable amount of the asset is higher than the carrying amount? In that case, the impairment loss may be reversed.

To illustrate, assume that Tan Company purchases equipment on January 1, 2010, for $300,000, with a useful life of three years, and no residual value. Its depreciation and related carrying amount over the three years is as follows.

<table>
<thead>
<tr>
<th>Year</th>
<th>Depreciation Expense</th>
<th>Carrying Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$100,000 ($300,000/3)</td>
<td>$200,000</td>
</tr>
<tr>
<td>2011</td>
<td>$100,000 ($300,000/3)</td>
<td>$100,000</td>
</tr>
<tr>
<td>2012</td>
<td>$100,000 ($300,000/3)</td>
<td>0</td>
</tr>
</tbody>
</table>

[2] Specifically, the pretax rate is determined taking into account market- and company-specific borrowing rates, adjusted for any risks the market might attribute to expected cash flows for the asset. [4]
At December 31, 2010, Tan determines it has an impairment loss of $20,000 and therefore makes the following entry.

<table>
<thead>
<tr>
<th></th>
<th>20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on Impairment</td>
<td></td>
</tr>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Tan’s depreciation expense and related carrying amount after the impairment is as indicated below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Depreciation Expense</th>
<th>Carrying Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$90,000 ($180,000/2)</td>
<td>$180,000</td>
</tr>
<tr>
<td>2012</td>
<td>$90,000 ($180,000/2)</td>
<td>0</td>
</tr>
</tbody>
</table>

At the end of 2011, Tan determines that the recoverable amount of the equipment is $96,000, which is greater than its carrying amount of $90,000. In this case, Tan reverses the previously recognized impairment loss with the following entry.

<table>
<thead>
<tr>
<th></th>
<th>6,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td></td>
</tr>
<tr>
<td>Recovery of Impairment Loss</td>
<td>6,000</td>
</tr>
</tbody>
</table>

The recovery of the impairment loss is reported in the “Other income and expense” section of the income statement. The carrying amount of Tan’s equipment is now $96,000 ($90,000 + $6,000) at December 31, 2011.

The general rule related to reversals of impairments is as follows: The amount of the recovery of the loss is limited to the carrying amount that would result if the impairment had not occurred. For example, the carrying amount of Tan’s equipment at the end of 2011 would be $100,000, assuming no impairment. The $6,000 recovery is therefore permitted because Tan’s carrying amount on the equipment is now only $96,000. However, any recovery above $10,000 is not permitted. The reason is that any recovery above $10,000 results in Tan carrying the asset at a value above its historical cost.

**Cash-Generating Units**

In some cases, it may not be possible to assess a single asset for impairment because the single asset generates cash flows only in combination with other assets. In that case, companies should identify the smallest group of assets that can be identified that generate cash flows independently of the cash flows from other assets. Such a group is called a **cash-generating unit (CGU)**.

For example, Santos Company is reviewing its plant assets for indicators of impairment. However, it is finding that identifying cash flows for individual assets is very cumbersome and inaccurate because the cash flows related to a group of assets are interdependent. This situation can arise if Santos has one operating unit (machining division) that manufactures products that are transferred to another Santos business unit (packing division), which then markets the products to end customers. Because the cash flows to the assets in the machining division are dependent on the cash flows in the packing division, Santos should evaluate both divisions together as a cash-generating unit in its impairment assessments.

**Impairment of Assets to Be Disposed Of**

What happens if a company intends to dispose of the impaired asset, instead of holding it for use? Recently, Kroger (USA) recorded an impairment loss of $54 million on property, plant, and equipment it no longer needed due to store closures. In this case, Kroger reports the impaired asset at the **lower-of-cost-or-net realizable value** (fair
value less costs to sell). Because Kroger intends to dispose of the assets in a short period of time, it uses net realizable value in order to provide a better measure of the net cash flows that it will receive from these assets.

Kroger does not depreciate or amortize assets held for disposal during the period it holds them. The rationale is that depreciation is inconsistent with the notion of assets to be disposed of and with the use of the lower-of-cost-or-net realizable value. In other words, assets held for disposal are like inventory; companies should report them at the lower-of-cost-or-net realizable value.

Because Kroger will recover assets held for disposal through sale rather than through operations, it continually revalues them. Each period, the assets are reported at the lower-of-cost-or-net realizable value. Thus, Kroger can write up or down an asset held for disposal in future periods, as long as the carrying amount after the write-up never exceeds the carrying amount of the asset before the impairment. Companies should report losses or gains related to these impaired assets as part of operating income in “Other income and expense.”

Illustration 11-7 summarizes the key concepts in accounting for impairments.

**DEPLETION**

Natural resources, often called wasting assets, include petroleum, minerals, and timberlands. Natural resources can be further subdivided into two categories: (1) biological assets such as timberlands, and (2) mineral resources such as oil, gas, and mineral mining. The accounting and reporting requirements for biological assets such as timberlands use a fair value approach and are discussed in Chapter 9. Here, we focus on mineral resources, which have two main features: (1) the complete removal (consumption) of the asset, and (2) replacement of the asset only by an act of nature.
Unlike plant and equipment, mineral resources are consumed physically over the period of use and do not maintain their physical characteristics. Still, the accounting problems associated with these resources are similar to those encountered with property, plant, and equipment. The questions to be answered are:

1. How do companies establish the cost basis for write-off?
2. What pattern of allocation should companies employ?

Recall that the accounting profession uses the term **depletion** for the process of allocating the cost of mineral resources.

**Establishing a Depletion Base**

How do we determine the depletion base for mineral resources? For example, a company like **Total S.A.** (FRA) makes sizable expenditures to find mineral resources, and for every successful discovery there are many failures. Furthermore, it encounters long delays between the time it incurs costs and the time it obtains the benefits from the extracted resources. As a result, a company in the extractive industries, like Total S.A., frequently adopts a conservative policy in accounting for the expenditures related to finding and extracting mineral resources.

Computation of the depletion base involves properly accounting for three types of expenditures:

1. Pre-exploratory costs.
2. Exploratory and evaluation costs.
3. Development costs.

**Pre-Exploratory Costs**

Pre-exploratory expenditures are costs incurred before the company has obtained the legal rights to explore a specific area. For example, **Royal Dutch Shell** (GBR and NLD) may perform seismic testing of possible oil-drilling sites before incurring any substantial costs of exploration. These costs (often referred to as prospecting costs) are generally considered speculative in nature and are expensed as incurred.

**Exploratory and Evaluation (E&E) Costs**

Examples of some types of exploratory and evaluation (E&E) costs are as follows.

- Acquisition of rights to explore.
- Topographical, geological, geochemical, and geophysical studies.
- Exploratory drilling.
- Sampling.
- Activities in relation to evaluating the technical feasibility and commercial viability of extracting a mineral resource.

Companies have a choice as regards to E&E costs. They can either write off these costs as incurred or capitalize these costs pending evaluation. IFRS therefore provides companies with flexibility as how to account for E&E costs at inception. [5]

The reason for the flexibility is that the accounting for these types of expenditures is controversial. To illustrate, assume that Royal Dutch Shell is exploring for oil and determines that the area of exploration has oil reserves. It therefore drills a well to determine the amount of the reserves. Unfortunately, the well drilled results in a dry hole; that is, no reserves are found. Shell then drills more wells and finds some oil reserves, but some others are dry holes. The question is: Should the cost of the dry holes be capitalized? Or should only the cost of the wells that find reserves be capitalized?

Those who hold the **full-cost concept** (full capitalization) argue that the cost of drilling a dry hole is a cost needed to find the commercially profitable wells. Others
believe that companies should capitalize only the costs of the successful wells. This is the successful-efforts concept. Its proponents believe that the only relevant measure for a project is the cost directly related to that project, and that companies should report any remaining costs as period charges. In addition, they argue that an unsuccessful company will end up capitalizing many costs that will make it, over a short period of time, show no less income than does one that is successful.³

**Development Costs**

Once technical feasibility and commercial viability of production are demonstrated, E&E assets are reclassified as development costs. Generally, the development phase occurs when the company has determined that it has a reasonable level of mineral resources in the ground so that production will be profitable. At this time, any E&E assets recognized as assets are subsequently tested for impairment, to ensure that these assets are not carried at an amount above their recoverable amount.

Companies divide development costs into two parts: (1) tangible equipment costs and (2) intangible development costs. Tangible equipment costs include all of the transportation and other heavy equipment needed to extract the resource and get it ready for market. Because companies can move the heavy equipment from one extracting site to another, companies do not normally include tangible equipment costs in the depletion base. Instead, they use separate depreciation charges to allocate the costs of such equipment. However, some tangible assets (e.g., a drilling rig foundation) cannot be moved. Companies depreciate these assets over their useful life or the life of the resource, whichever is shorter.

Intangible development costs, on the other hand, are such items as drilling costs, tunnels, shafts, and wells. These costs have no tangible characteristics but are needed for the production of the mineral resource. Intangible development costs are considered part of the depletion base.

Companies sometimes incur substantial costs to restore property to its natural state after extraction has occurred. These are restoration costs. Companies consider restoration costs part of the depletion base. The amount included in the depletion base is the fair value of the obligation to restore the property after extraction. A more complete discussion of the accounting for restoration costs and related liabilities (sometimes referred to as environmental liability provisions) is provided in Chapter 13. Similar to other long-lived assets, companies deduct from the depletion base any residual value to be received on the property.

**Write-Off of Resource Cost**

Once the company establishes the depletion base, the next problem is determining how to allocate the cost of the mineral resource to accounting periods.

Normally, companies compute depletion (often referred to as cost depletion) on a units-of-production method (an activity approach). Thus, depletion is a function of the number of units extracted during the period. In this approach, the total cost of the mineral resource less residual value is divided by the number of units estimated to be in the resource deposit, to obtain a cost per unit of product. To compute depletion, the cost per unit is then multiplied by the number of units extracted.

For example, MaClede Co. acquired the right to use 1,000 acres of land in South Africa to mine for silver. The lease cost is $50,000, and the related exploration costs on the property are $100,000. Intangible development costs incurred in opening the mine are $850,000. Total costs related to the mine before the first ounce of silver is extracted would be $500 million over a 10-year period (income lower under successful-efforts).
are, therefore, $1,000,000. MaClede estimates that the mine will provide approximately 100,000 ounces of silver. Illustration 11-8 shows computation of the depletion cost per unit (depletion rate).

**ILLUSTRATION 11-8**
Computation of Depletion Rate

<table>
<thead>
<tr>
<th>Total cost – Residual value</th>
<th>= Depletion cost per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total estimated units available</td>
<td></td>
</tr>
</tbody>
</table>

\[
\frac{1,000,000}{100,000} = $10 \text{ per ounce}
\]

If MaClede extracts 25,000 ounces in the first year, then the depletion for the year is $250,000 (25,000 ounces × $10). It records the depletion as follows.

<table>
<thead>
<tr>
<th>Inventory</th>
<th>250,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Depletion</td>
<td>250,000</td>
</tr>
</tbody>
</table>

MaClede debits Inventory for the total depletion for the year and credits Accumulated Depletion to reduce the carrying amount of the mineral resource. MaClede credits Inventory when it sells the inventory. The amount not sold remains in inventory and is reported in the current assets section of the statement of financial position.

Sometimes companies do not use an Accumulated Depletion account. In that case, the credit goes directly to the mineral resources asset account. MaClede’s statement of financial position would present the cost of the mineral resource and the amount of accumulated depletion entered to date as follows.

**ILLUSTRATION 11-9**
Statement of Financial Position Presentation of Mineral Resource

<table>
<thead>
<tr>
<th>Silver mine (at cost)</th>
<th>$1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: Accumulated depletion</td>
<td>250,000</td>
</tr>
<tr>
<td></td>
<td>$750,000</td>
</tr>
</tbody>
</table>

In the income statement, the depletion cost related to the inventory sold is part of the cost of goods sold.

MaClede may also depreciate on a units-of-production basis the tangible equipment used in extracting the silver. This approach is appropriate if it can directly assign the estimated lives of the equipment to one given resource deposit. If MaClede uses the equipment on more than one job, other cost allocation methods such as straight-line or accelerated depreciation methods would be more appropriate.

**Estimating Recoverable Reserves**

Sometimes companies need to change the estimate of recoverable reserves. They do so either because they have new information or because more sophisticated production processes are available. Mineral resources such as oil and gas deposits and some rare metals have recently provided the greatest challenges. Estimates of these reserves are in large measure merely “knowledgeable guesses.”

This problem is the same as accounting for changes in estimates for the useful lives of plant and equipment. The procedure is to revise the depletion rate on a prospective basis: A company divides the remaining cost by the new estimate of the recoverable reserves. This approach has much merit because the required estimates are so uncertain.

\(^4\)The IASB is undertaking a project on the extractive industry. The primary focus are the financial reporting issues associated with mineral and other natural resource reserves. The key question is whether and how to define, recognize, measure, and disclose reserves in the financial statements. See [http://www.iasb.org/Current+Projects/IASB+Projects/Extractive+Activities/Summary.htm.](http://www.iasb.org/Current+Projects/IASB+Projects/Extractive+Activities/Summary.htm)
Liquidating Dividends

A company often owns as its only major asset a property from which it intends to extract mineral resources. If the company does not expect to purchase additional properties, it may gradually distribute to shareholders their capital investments by paying **liquidating dividends**, which are dividends greater than the amount of accumulated net income.

The major accounting problem is to distinguish between dividends that are a return of capital and those that are not. Because the dividend is a return of the investor’s original contribution, the company issuing a liquidating dividend should debit Share Premium—Ordinary for that portion related to the original investment, instead of debiting Retained Earnings.

To illustrate, at year-end, Callahan Mining had a retained earnings balance of £1,650,000, accumulated depletion on mineral properties of £2,100,000, and share premium of £5,435,493. Callahan’s board declared a dividend of £3 a share on the 1,000,000 shares outstanding. It records the £3,000,000 cash dividend as follows.

```
Retained Earnings  1,650,000
Share Premium—Ordinary  1,350,000
Cash  3,000,000
```

Callahan must inform shareholders that the £3 dividend per share represents a £1.65 (£1,650,000 / 1,000,000 shares) per share return on investment and a £1.35 (£1,350,000 / 1,000,000 shares) per share liquidating dividend.

Presentation on the Financial Statements

Companies should disclose the following related to E&E expenditures.

1. The accounting policies for exploration and evaluation expenditures, including the recognition of E&E assets.
2. The amounts of assets, liabilities, income and expense, and operating cash flow arising from the exploration for and evaluation of mineral resources.

The financial statement excerpts for **Tullow Oil plc** (GBR) in Illustration 11-10 highlight the nature of these disclosures.
ILLUSTRATION 11-10
(Continued)

Income Statement unless commercial reserves have been established or the determination process has not been completed and there are no indications of impairment. All field development costs are capitalized as property, plant, and equipment. Property, plant, and equipment related to production activities are amortized in accordance with the Group’s depletion and amortization accounting policy.

(k) Depletion and amortization—discovery fields

All expenditure carried within each field is amortized from the commencement of production on a unit of production basis, which is the ratio of oil and gas production in the period to the estimated quantities of commercial reserves at the end of the period plus the production in the period, generally on a field by-field basis. Costs used in the unit of production calculation comprise the net book value of capitalized costs plus the estimated future field development costs. Changes in the estimates of commercial reserves or future field development costs are dealt with prospectively.

Where there has been a change in economic conditions that indicates a possible impairment in a discovery field, the recoverability of the net book value relating to that field is assessed by comparison with the estimated discounted future cash flows based on management’s expectations of future oil and gas prices and future costs. Where there is evidence of economic interdependency between fields, such as common infrastructure, the fields are grouped as a single cash-generating unit for impairment purposes.

Any impairment identified is charged to the Income Statement as additional depletion and amortization. Where conditions giving rise to impairment subsequently reverse, the effect of the impairment charge is also reversed as a credit to the Income Statement, net of any depreciation that would have been charged since the impairment.

REVALUATIONS

Up to this point, we have assumed that companies use the cost principle to value long-lived tangible assets after acquisition. However, companies have a choice: They may value these assets at cost or at fair value. [6]

Recognizing Revaluations

Network Rail (GBR) is an example of a company that elected to use fair values to account for its railroad network. Its use of fair value led to an increase of £4,289 million to its long-lived tangible assets. When companies choose to fair value their long-lived tangible assets subsequent to acquisition, they account for the change in the fair value by adjusting the appropriate asset account and establishing an unrealized gain on the revalued long-lived tangible asset. This unrealized gain is often referred to as revaluation surplus.

Revaluation—Land

To illustrate revaluation of land, assume that Siemens Group (DEU) purchased land for €1,000,000 on January 5, 2010. The company elects to use revaluation accounting for the land in subsequent periods. At December 31, 2010, the land’s fair value is €1,200,000. The entry to record the land at fair value is as follows.

<table>
<thead>
<tr>
<th>Land</th>
<th>200,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrealized Gain on Revaluation—Land</td>
<td>200,000</td>
</tr>
</tbody>
</table>

The land is reported on the statement of financial position at €1,200,000, and the Unrealized Gain on Revaluation—Land increases other comprehensive income in the statement of comprehensive income. In addition, if this is the only revaluation adjustment to date, the statement of financial position reports accumulated other comprehensive income of €200,000.

Revaluation—Depreciable Assets

To illustrate the accounting for revaluations of depreciable assets, assume that Lenovo Group (CHN) purchases equipment for ¥500,000 on January 2, 2010. The equipment has a useful life of five years, is depreciated using the straight-line method of depreciation,
and its residual value is zero. Lenovo chooses to revalue its equipment to fair value over the life of the equipment. Lenovo records depreciation expense of ¥100,000 (¥500,000 ÷ 5) at December 31, 2010, as follows.

**December 31, 2010**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation Expense</td>
<td>100,000</td>
</tr>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>100,000</td>
</tr>
</tbody>
</table>

(To record depreciation expense in 2010)

After this entry, Lenovo’s equipment has a carrying amount of ¥400,000 (¥500,000 − ¥100,000). Lenovo receives an independent appraisal for the fair value of equipment at December 31, 2010, which is ¥460,000. To report the equipment at fair value, Lenovo does the following.

1. Reduces the Accumulated Depreciation—Equipment account to zero.
2. Reduces the Equipment account by ¥40,000—it then is reported at its fair value of ¥460,000.
3. Records Unrealized Gain on Revaluation—Equipment for the difference between the fair value and carrying amount of the equipment, or ¥60,000 (¥460,000 − ¥400,000).

The entry to record this revaluation at December 31, 2010, is as follows.

**December 31, 2010**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Depreciation—Equipment</td>
<td>100,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>40,000</td>
</tr>
<tr>
<td>Unrealized Gain on Revaluation—Equipment</td>
<td>60,000</td>
</tr>
</tbody>
</table>

(To adjust the equipment to fair value and record revaluation increase)

The equipment is now reported at its fair value of ¥460,000 (¥500,000 − ¥40,000). The increase in the fair value of ¥60,000 is reported on the statement of comprehensive income as other comprehensive income. In addition, the ending balance is reported in accumulated other comprehensive income on the statement of financial position in the equity section.

Illustration 11-11 shows the presentation of revaluation elements.

**ILLUSTRATION 11-11**

---

<table>
<thead>
<tr>
<th>Financial Statement Presentation—Revaluations</th>
</tr>
</thead>
</table>

**On the statement of comprehensive income:**

- Other comprehensive income
  - Unrealized gain on revaluation—equipment ¥ 60,000

**On the statement of financial position:**

- Non-current assets
  - Equipment (¥500,000 − ¥40,000) ¥460,000
  - Accumulated depreciation—equipment (¥100,000 − ¥100,000) 0
  - Carrying amount ¥460,000

- Equity
  - Accumulated other comprehensive income ¥ 60,000

As indicated, at December 31, 2010, the carrying amount of the equipment is now ¥460,000. Lenovo reports depreciation expense of ¥100,000 in the income statement and an Unrealized Gain on Revaluation—Equipment of ¥60,000 in “Other comprehensive income.” Assuming no change in the useful life of the equipment, depreciation in 2011 is ¥115,000 (¥460,000 ÷ 4).

---

5When a depreciable asset is revalued, companies use one of two approaches to record the revaluation. As an alternative to the one shown here, companies restate on a proportionate basis the cost and accumulated depreciation of the asset, such that the carrying amount of the asset after revaluation equals its revalued amount.
In summary, a revaluation increase generally goes to equity. A revaluation decrease is reported as an expense (as an impairment loss), unless it offsets previously recorded revaluation increases. If the revaluation increase offsets a revaluation decrease that went to expense, then the increase is reported in income. **Under no circumstances can the Accumulated Other Comprehensive Income account related to revaluations have a negative balance.**

### Revaluation Issues

The use of revaluation accounting is not an “all or nothing” proposition. That is, a company can select to value only one class of assets, say buildings, and not revalue other assets such as land or equipment. However, if a company selects only buildings, revaluation applies to all assets in that class of assets. A class of assets is a grouping of items that have a similar nature and use in a company’s operations. For example, a company like Siemens (DEU) may have the following classes of assets: land, equipment, and buildings. If Siemens chooses to fair value its land class, it must fair value all land. It cannot selectively apply revaluation accounting to certain parcels of land within the class and report them at fair value and keep the remainder at historical cost. To permit such “cherry-picking” not only leads to a misleading mixture of historical cost and fair value, but also permits a company to maximize its fair value through selective revaluation.

Companies using revaluation accounting must also make every effort to keep the assets’ values up to date. Assets that are experiencing rapid price changes must be revalued on an annual basis; otherwise, less frequent revaluation is acceptable. The fair value of items of property, plant, and equipment is usually their market value determined by appraisal.

Most companies do not use revaluation accounting. A major reason is the substantial and continuing costs associated with appraisals to determine fair value. In addition, the gains associated with revaluations above historical cost are not reported in net income but rather go directly to equity. On the other hand, losses associated with revaluation below historical cost decrease net income. In addition, for depreciable assets, the higher depreciation charges related to the revalued assets also reduce net income.

Companies that choose revaluation accounting often are in highly inflationary environments where the historical cost numbers are badly out of date. In addition, some companies select the revaluation approach because they wish to increase their equity base. Increases in its equity base may help a company meet covenant requirements or provide additional assurances to investors and creditors that the company is solvent.

### Authoritative Literature References

1. Walkin Inc. is considering the write-down of its long-term plant because of a lack of profitability. Explain to the management of Walkin how to determine whether a write-down is permitted.

2. Last year Wyeth Company recorded an impairment on an asset held for use. Recent appraisals indicate that the asset has increased in value. Should Wyeth record this recovery in value?

3. Toro Co. has equipment with a carrying amount of €700,000. The value-in-use of the equipment is €705,000, and its fair value less cost of disposal is €590,000. The equipment is expected to be used in operations in the future. What amount (if any) should Toro report as an impairment to its equipment?

4. Explain how gains or losses on impaired assets should be reported in income.

5. List (a) the similarities and (b) the differences in the accounting treatments of depreciation and cost depletion.

6. Describe cost depletion.

7. Explain the difference between exploration and development costs as used in the extractive industries.

8. In the extractive industries, businesses may pay dividends in excess of net income. What is the maximum permissible? How can this practice be justified?

9. Tanaka Company has land that cost ¥15,000,000. Its fair value on December 31, 2010, is ¥20,000,000. Tanaka chooses the revaluation model to report its land. Explain how the land and its related valuation should be reported.

10. Why might a company choose not to use revaluation accounting?

**QUESTIONS**

**BRIEF EXERCISES**

**BE11-1** Ortiz purchased a piece of equipment that cost $202,000 on January 1, 2010. The equipment has the following components.

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost (in $)</th>
<th>Residual Value (in $)</th>
<th>Estimated Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>70,000</td>
<td>7,000</td>
<td>10 years</td>
</tr>
<tr>
<td>B</td>
<td>50,000</td>
<td>5,000</td>
<td>5 years</td>
</tr>
<tr>
<td>C</td>
<td>82,000</td>
<td>4,000</td>
<td>12 years</td>
</tr>
</tbody>
</table>

Compute the depreciation expense for this equipment at December 31, 2010.

**BE11-2** Tan Chin Company purchases a building for HK$11,300,000 on January 2, 2010. An engineer’s report shows that of the total purchase price, HK$11,000,000 should be allocated to the building (with a 40-year life), HK$150,000 to 15-year property, and HK$150,000 to 5-year property. Compute depreciation expense for 2010 using component depreciation.

**BE11-3** Jurassic Company owns machinery that cost $900,000 and has accumulated depreciation of $380,000. The present value of expected future net cash flows from the use of the asset are expected to be $500,000. The fair value less cost of disposal of the equipment is $400,000. Prepare the journal entry, if any, to record the impairment loss.

**BE11-4** Everly Corporation acquires a coal mine at a cost of $400,000. Intangible development costs total $100,000. After extraction has occurred, Everly must restore the property (estimated fair value of the obligation is $80,000), after which it can be sold for $160,000. Everly estimates that 4,000 tons of coal can be extracted. If 700 tons are extracted the first year, prepare the journal entry to record depletion.

**EXERCISES**

**E11-1 (Component Depreciation)** Morrow Manufacturing has equipment that is comprised of five components (in ¥000).

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost (in ¥)</th>
<th>Estimated Residual (in ¥)</th>
<th>Estimated Life (in years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40,500</td>
<td>5,500</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>33,600</td>
<td>4,800</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>36,000</td>
<td>3,600</td>
<td>8</td>
</tr>
<tr>
<td>D</td>
<td>19,000</td>
<td>1,500</td>
<td>7</td>
</tr>
<tr>
<td>E</td>
<td>23,500</td>
<td>2,500</td>
<td>6</td>
</tr>
</tbody>
</table>
Instructions
(a) Prepare the adjusting entry necessary at the end of the year to record depreciation for the year. Assume that Morrow uses straight-line depreciation.
(b) Prepare the entry to record the replacement of component B for cash of ¥40,000. It was used for 6 years.

E11-2 (Component Depreciation) Brazil Group purchases a tractor at a cost of $50,000 on January 2, 2010. Individual components of the tractor and useful lives are as follows.

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
<th>Useful Lives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires</td>
<td>$6,000</td>
<td>2 years</td>
</tr>
<tr>
<td>Transmission</td>
<td>10,000</td>
<td>5 years</td>
</tr>
<tr>
<td>Trucks</td>
<td>34,000</td>
<td>10 years</td>
</tr>
</tbody>
</table>

Instructions
(a) Compute depreciation expense for 2010, assuming Brazil depreciates the tractor as a single unit.
(b) Compute depreciation expense for 2010, assuming Brazil uses component depreciation.
(c) Why might a company want to use component depreciation to depreciate its assets?

E11-3 (Component Depreciation) Presented below are the components related to an office block that Veenman Company is considering purchasing for €10,000,000.

<table>
<thead>
<tr>
<th>Component</th>
<th>Useful Life</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Indefinite life</td>
<td>€3,000,000</td>
</tr>
<tr>
<td>Building structure</td>
<td>60-year life</td>
<td>4,200,000</td>
</tr>
<tr>
<td>Building engineering</td>
<td>30-year life</td>
<td>2,100,000</td>
</tr>
<tr>
<td>Building external works</td>
<td>30-year life</td>
<td>700,000</td>
</tr>
</tbody>
</table>

Instructions
(a) Compute depreciation expense for 2010, assuming that Veenman uses component depreciation.
(b) Assume that the building engineering was replaced in 20 years at a cost of €2,300,000. Prepare the entry to record the replacement of the old component with the new component.

E11-4 (Impairment) Presented below is information related to equipment owned by Pujols Company at December 31, 2010.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>€9,000,000</td>
</tr>
<tr>
<td>Accumulated depreciation to date</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Value-in-use</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Fair value less cost of disposal</td>
<td>4,400,000</td>
</tr>
</tbody>
</table>

Assume that Pujols will continue to use this asset in the future. As of December 31, 2010, the equipment has a remaining useful life of 4 years.

Instructions
(a) Prepare the journal entry (if any) to record the impairment of the asset at December 31, 2010.
(b) Prepare the journal entry to record depreciation expense for 2011.
(c) The recoverable amount of the equipment at December 31, 2011, is €7,050,000. Prepare the journal entry (if any) necessary to record this increase.

E11-5 (Impairment) Assume the same information as E11-4, except that Pujols intends to dispose of the equipment in the coming year.

Instructions
(a) Prepare the journal entry (if any) to record the impairment of the asset at December 31, 2010.
(b) Prepare the journal entry (if any) to record depreciation expense for 2011.
(c) The asset was not sold by December 31, 2011. The fair value of the equipment on that date is €5,100,000. Prepare the journal entry (if any) necessary to record this increase. It is expected that the cost of disposal is €20,000.

E11-6 (Impairment) The management of Sprague Inc. was discussing whether certain equipment should be written off as a charge to current operations because of obsolescence. This equipment has a cost of $900,000 with depreciation to date of $400,000 as of December 31, 2010. On December 31, 2010, management projected the present value of future net cash flows from this equipment to be $300,000
and its fair value less cost of disposal to be $280,000. The company intends to use this equipment in the future. The remaining useful life of the equipment is 4 years.

Instructions
(a) Prepare the journal entry (if any) to record the impairment at December 31, 2010.
(b) Where should the gain or loss (if any) on the write-down be reported in the income statement?
(c) At December 31, 2011, the equipment’s recoverable amount is $270,000. Prepare the journal entry (if any).
(d) What accounting issues did management face in accounting for this impairment?

E11-7 (Depletion Computations—Minerals) At the beginning of 2010, Callaway Company acquired a mine for $850,000. Of this amount, $100,000 was ascribed to the land value and the remaining portion to the minerals in the mine. Surveys conducted by geologists have indicated that approximately 12,000,000 units of the ore appear to be in the mine. Callaway incurred $170,000 of development costs associated with this mine prior to any extraction of minerals. It also determined that the fair value of its obligation to prepare the land for an alternative use when all of the mineral has been removed was $40,000. During 2010, 2,500,000 units of ore were extracted and 2,200,000 of these units were sold.

Instructions
Compute the following.
(a) The total amount of depletion for 2010.
(b) The amount that is charged as an expense for 2010 for the cost of the minerals sold during 2010.

E11-8 (Revaluation Accounting) Croatia Company purchased land in 2010 for $300,000. The land’s fair value at the end of 2010 is $320,000; at the end of 2011, $280,000; and at the end of 2012, $305,000. Assume that Croatia chooses to use revaluation accounting to account for its land.

Instructions
Prepare the journal entries to record the land using revaluation accounting for 2010–2012.

E11-9 (Revaluation Accounting) Swarkski Company owns land that it purchased at a cost of $400,000 in 2008. The company chooses to use revaluation accounting to account for the land. The land’s value fluctuates as follows (all amounts as of December 31): 2008, $450,000; 2009, $360,000; 2010, $385,000; 2011, $410,000; and 2012, $460,000.

Instructions
Complete the following table below.

<table>
<thead>
<tr>
<th>Value at December 31</th>
<th>Accumulated Other Comprehensive Income</th>
<th>Other Comprehensive Income</th>
<th>Recognized in Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>2009</td>
<td>2010</td>
<td>2011</td>
</tr>
<tr>
<td>€450,000</td>
<td>€360,000</td>
<td>€385,000</td>
<td>€410,000</td>
</tr>
</tbody>
</table>

E11-10 (Revaluation Accounting) Use the information in E11-9.

Instructions
Prepare the journal entries to record the revaluation of the land in each year.

E11-11 (Revaluation Accounting) Falcetto Company acquired equipment on January 1, 2009, for €12,000. Falcetto elects to value this class of equipment using revaluation accounting. This equipment is being depreciated on a straight-line basis over its 6-year useful life. There is no residual value at the end of the 6-year period. The appraised value of the equipment approximates the carrying amount at December 31, 2009 and 2011. On December 31, 2010, the fair value of the equipment is determined to be €7,000.

Instructions
(a) Prepare the journal entries for 2009 related to the equipment.
(b) Prepare the journal entries for 2010 related to the equipment.
(c) Determine the amount of depreciation expense that Falcetto will record on the equipment in 2011.

E11-12 (Impairment) At the end of 2010, Silva Group tests a machine for impairment. The machine is carried at depreciated historical cost, and its carrying amount is $150,000. It has an estimated remaining useful life of 10 years. The machine’s recoverable amount is determined on the basis of a value-in-use calculation, using a pretax discount rate of 15 percent. Management-approved budgets
Reflect estimated costs necessary to maintain the level of economic benefit expected to arise from the machine in its current condition. The following information related to future cash flows is available at the end of 2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Future Cash Flow</th>
<th>Year</th>
<th>Future Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$22,165</td>
<td>2016</td>
<td>$24,825</td>
</tr>
<tr>
<td>2012</td>
<td>21,450</td>
<td>2017</td>
<td>24,123</td>
</tr>
<tr>
<td>2013</td>
<td>20,550</td>
<td>2018</td>
<td>25,533</td>
</tr>
<tr>
<td>2014</td>
<td>24,725</td>
<td>2019</td>
<td>24,234</td>
</tr>
<tr>
<td>2015</td>
<td>25,325</td>
<td>2020</td>
<td>22,850</td>
</tr>
</tbody>
</table>

**Instructions**

**Part I**

(a) Compute the amount of the impairment loss at December 31, 2010.

(b) Prepare the journal entry to record the impairment loss, if any, at December 31, 2010.

**Part II**

In the years 2011–2013, no event occurs that requires the machine’s recoverable amount to be re-estimated. At the end of 2014, costs of $25,000 are incurred to enhance the machine’s performance. Revised estimated cash flows in management’s most recent budget are as follows.

<table>
<thead>
<tr>
<th>Year</th>
<th>Future Cash Flow</th>
<th>Year</th>
<th>Future Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$30,321</td>
<td>2018</td>
<td>$31,950</td>
</tr>
<tr>
<td>2016</td>
<td>32,750</td>
<td>2019</td>
<td>33,100</td>
</tr>
<tr>
<td>2017</td>
<td>31,721</td>
<td>2020</td>
<td>27,999</td>
</tr>
</tbody>
</table>

(c) Prepare the journal entry for an impairment or reversal of an impairment at December 31, 2014.

---

**USING YOUR JUDGMENT**

**FINANCIAL REPORTING**

**Financial Reporting Problem**

**Marks and Spencer plc (M&S)**

The financial statements of M&S can be accessed at the book’s companion website, [www.wiley.com/college/kiesoifrs](http://www.wiley.com/college/kiesoifrs).

**Instructions**

Refer to M&S’s financial statements and the accompanying notes to answer the following questions.

(a) What descriptions are used by M&S in its statement of financial position to classify its property, plant, and equipment?

(b) What method or methods of depreciation does M&S use to depreciate its property, plant, and equipment?

(c) Over what estimated useful lives does M&S depreciate its property, plant, and equipment?

(d) What amounts for depreciation and amortization expense did M&S charge to its income statement in 2008 and 2007?

(e) What were the capital expenditures for property, plant, and equipment made by M&S in 2008, and 2007?

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**BRIDGE TO THE PROFESSION**

**Professional Research**

Matt Holmes recently joined Klax Company as a staff accountant in the controller’s office. Klax Company provides warehousing services for companies in several European cities.

The location in Koblenz, Germany, has not been performing well due to increased competition and the loss of several customers that have recently gone out of business. Matt’s department manager suspects
that the plant and equipment may be impaired and wonders whether those assets should be written down. Given the company’s prior success, this issue has never arisen in the past, and Matt has been asked to conduct some research on this issue.

**Instructions**

Access the IFRS authoritative literature at the IASB website (http://eifrs.iasb.org/). When you have accessed the documents, you can use the search tool in your Internet browser to respond to the following questions. (Provide paragraph citations.)

(a) What is the authoritative guidance for asset impairments? Briefly discuss the scope of the standard (i.e., explain the types of transactions to which the standard applies).

(b) Give several examples of events that would cause an asset to be tested for impairment. Does it appear that Klax should perform an impairment test? Explain.

(c) What is the best evidence of fair value? Describe alternate methods of estimating fair value.