

On June 1, 20X1, Apache Corp. Purchases For \$101,700 A Machine With An Estimated Useful Life Of 3 Years

Introduction

Overview of the Purchase Transaction

On June 1, 20X1, Apache Corp. acquires a new machine at a cost of \$101,700, with the expectation that it will serve the company's operational needs for the next three years. This purchase represents a significant capital expenditure that will impact Apache's financial statements, asset management, and depreciation policies. Understanding the accounting treatment of this asset, the depreciation methods applicable, and the subsequent financial implications is crucial for accurate financial reporting and strategic planning.

Details of the Acquisition

Purchase Price and Cost Components

The total acquisition cost of \$101,700 includes the purchase price of the machine plus any additional costs necessary to bring the asset into usable condition. These may encompass:

- Purchase price of the machine
- Transportation and freight charges
- Installation and setup costs
- Testing and calibration expenses

Any costs incurred after the purchase that are necessary for operational readiness are capitalized as part of the asset's cost basis.

Estimated Useful Life

The machine is expected to have a useful life of three years, which influences how Apache will amortize or depreciate the asset over its lifespan. The company must assess whether this estimate aligns with industry standards, manufacturer specifications, and historical asset performance.

Accounting for the Asset Acquisition

Recording the Purchase

Upon acquisition, Apache will record the asset on its balance sheet at its cost basis, which is \$101,700. The journal entry typically is:

Dr. Machinery (or Equipment)	\$101,700
Cr. Cash (or Accounts Payable)	\$101,700

This entry recognizes the asset and reduces cash or records a liability if purchased on credit.

Initial Recognition and Capitalization

According to accounting standards such as IFRS and GAAP, capital expenditures that provide future economic benefits are capitalized. The asset's cost includes all expenditures necessary to acquire the asset and prepare it for use. This ensures that the company's financial statements reflect the true value of its assets.

Depreciation of the Machine

Importance of Depreciation

Since the machine has a finite useful life, Apache must allocate its cost over the three-year period through depreciation. Depreciation spreads the cost of the asset across the periods benefiting from its use, matching expense recognition with revenue generation.

Depreciation Methods

Common Methods

Organizations can choose various depreciation methods, each with different implications:

1. **Straight-Line Method:** Equal expense amounts allocated each year.
2. **Declining Balance Method:** Accelerated depreciation, higher expense in early years.
3. **Units of Production Method:** Based on usage or output levels.

Applying the Straight-Line Method

For simplicity and consistency, Apache might choose the straight-line method, which calculates annual depreciation as:

$$\text{Annual Depreciation Expense} = \text{Cost of the Asset} / \text{Useful Life}$$

Substituting the values:

$$\$101,700 / 3 \text{ years} = \$33,900 \text{ per year}$$

This means Apache will record \$33,900 of depreciation expense each year for three years.

Depreciation Journal Entries

Each year, the following entry records depreciation:

Dr. Depreciation Expense	\$33,900
Cr. Accumulated Depreciation	\$33,900

Over time, the accumulated depreciation increases, reducing the book value of the asset on the balance sheet.

Financial Statement Impact

Balance Sheet Presentation

The asset is recorded at its original cost minus accumulated depreciation, reflecting its net book value. After the first year, the net book value would be:

$$\$101,700 - \$33,900 = \$67,800$$

By the end of three years, the asset's net book value should be zero if fully depreciated, assuming no residual value.

Income Statement Effects

Depreciation expense appears on the income statement, reducing net income. The consistent annual expense of \$33,900 impacts profitability and tax calculations.

Tax Implications and Considerations

Tax Deductibility of Depreciation

Depreciation expense is tax-deductible, providing a tax shield that reduces taxable income. The company must adhere to tax depreciation rules, which sometimes differ from financial reporting standards, potentially affecting the depreciation schedule.

Accelerated vs. Straight-Line Depreciation for Tax Purposes

Tax authorities often permit accelerated depreciation methods (e.g., Modified Accelerated Cost Recovery System - MACRS in the U.S.), allowing larger deductions in the early years. The company must choose depreciation methods aligning with tax regulations while maintaining consistency in financial reporting.

Implications for Financial Planning and Analysis

Budgeting and Forecasting

The purchase impacts Apache's capital expenditure budgets and cash flow forecasts. Recognizing depreciation expenses helps in projecting future earnings and planning for asset replacements.

Asset Management and Maintenance

Beyond depreciation, Apache must consider ongoing maintenance costs, potential upgrades, and eventual disposal strategies for the machine.

Asset Disposal and Replacement

End of Useful Life

After three years, the machine's book value should be zero (assuming no residual value), indicating it is fully depreciated. The company must then decide whether to replace, upgrade, or dispose of the asset.

Disposal Methods and Accounting

1. **Sale of the Asset:** Record any proceeds, gain, or loss on disposal.
2. **Scrapping or Abandonment:** Recognize any remaining book value as a loss.

3. **Trade-In:** Deduct the book value from the trade-in value when acquiring a new asset.

Conclusion

Summary of Key Points

On June 1, 20X1, Apache Corp.'s purchase of a machine costing \$101,700 with a three-year useful life involves careful accounting treatment. The asset is capitalized at its purchase price, with subsequent depreciation systematically allocated over its useful life. The chosen depreciation method influences annual expenses, tax deductions, and asset valuation. Proper management ensures accurate financial statements, tax compliance, and effective asset utilization.

Strategic Considerations

Beyond the initial purchase, Apache must consider the long-term implications of asset depreciation for financial health, tax planning, and operational efficiency. Regular review of asset performance and depreciation schedules enables informed decision-making and sustainable growth.

Frequently Asked Questions

What is the initial journal entry for Apache Corp. when purchasing the machine on June 1, 20X1?

Debit Machinery \$101,700 and credit Cash \$101,700 to record the purchase.

How should Apache Corp. calculate depreciation expense for the machine in its first year?

Since the machine is purchased on June 1, 20X1, and has a 3-year useful life, depreciation should be calculated for 7 months (June to December 20X1), typically using straight-line depreciation: annual depreciation = $\$101,700 / 3 = \$33,900$; monthly depreciation = $\$2,825$; for 7 months, depreciation expense = $\$19,775$.

What is the annual depreciation expense for the machine?

The annual depreciation expense is \$33,900, calculated by dividing the purchase price (\$101,700) by the estimated useful life (3 years).

How will Apache Corp. record depreciation at the end of each year?

By debiting Depreciation Expense \$33,900 and crediting Accumulated Depreciation \$33,900 annually, adjusting for partial years if necessary.

What is the book value of the machine after one year?

After one full year, the book value = $\$101,700 - \$33,900 = \$67,800$. In the first year, if only 7 months are depreciated, the book value would be $\$101,700 - \$19,775 = \$81,925$.

What are the implications of the machine's useful life on depreciation methods?

A 3-year useful life suggests straight-line depreciation is appropriate, but other methods like declining balance could be considered if the asset's value declines faster initially.

How does the purchase affect Apache Corp.'s financial statements?

The purchase increases assets (Machinery) and decreases cash. Depreciation expense reduces net income over the useful life, impacting the income statement.

What considerations should Apache Corp. keep in mind regarding asset impairment or maintenance costs?

Any impairment losses should be recognized if the machine's recoverable amount falls below its book value. Maintenance costs are typically expensed unless they extend the asset's life or improve its value.

How would the purchase impact Apache Corp.'s cash flow statement?

The purchase outflow will be reported as an investing cash flow under 'Purchase of Property, Plant, and Equipment' for \$101,700 on June 1, 20X1.

Additional Resources

On June 1, 20X1, Apache Corp. made a significant capital expenditure by acquiring a new machine for \$101,700, with an estimated useful life of three years. This purchase reflects the company's strategic investment in operational efficiency and future growth. The acquisition and subsequent accounting treatment of this asset encompass various financial concepts, including asset valuation, depreciation methods, and the impact on financial statements. In this comprehensive review, we explore the details of this transaction, its accounting implications, and its broader significance within Apache Corp.'s financial

strategy.

Introduction to Capital Expenditures and Asset Acquisition

Understanding Capital Expenditures

Capital expenditures (CapEx) refer to the funds used by a business to acquire, upgrade, or improve long-term assets such as property, plant, equipment, or machinery. Unlike operating expenses, which are incurred for short-term needs and reflected immediately in the income statement, CapEx investments are capitalized—meaning they are recorded as assets on the balance sheet and depreciated over their useful life.

The purchase of a machine for Apache Corp. falls squarely into this category. Such investments are crucial for manufacturing companies or those reliant on machinery, as they directly influence production capacity, efficiency, and competitive advantage.

The Significance of Asset Acquisition

Acquiring new machinery signifies a commitment to operational enhancement, often driven by the need for increased production, technological upgrades, or replacement of aging equipment. The purchase price of \$101,700 reflects the fair value of the asset at acquisition, including any costs necessary to prepare the machine for use—such as transportation, installation, and testing.

For Apache Corp., this expenditure is not merely an expense; it is an investment that will generate economic benefits over multiple periods. Proper accounting for this asset influences key financial metrics, including net income, asset base, and return on investment.

Details of the Purchase

Purchase Price and Cost Components

The total cost of \$101,700 comprises several elements:

- Purchase Price: The actual amount paid to the supplier.
- Additional Costs: Expenses such as transportation, installation, testing, and setup that are necessary to get the machine operational.

In accordance with accounting standards (such as U.S. GAAP or IFRS), all costs necessary to bring the asset to its intended use should be capitalized. This ensures an accurate reflection of the asset's value on the balance sheet.

Timing of the Acquisition

The date of acquisition is June 1, 20X1. This date is critical for accounting purposes, as it determines the start of depreciation calculations and affects the fiscal period in which the costs are recognized.

Since the purchase occurs mid-year, Apache Corp. will need to account for depreciation starting from this date, and any financial statements prepared for the fiscal year must reflect the partial year's depreciation.

Estimating the Useful Life and Its Implications

Understanding Useful Life

The estimated useful life of the machine is three years. This estimate reflects the period over which the asset is expected to contribute to the company's revenue generation.

Factors influencing this estimate include:

- Technological obsolescence
- Wear and tear
- Maintenance practices
- Industry standards

Accurate estimation is vital because it affects depreciation calculations, profitability assessments, and asset replacement planning.

Impacts of the Three-Year Useful Life

A three-year lifespan indicates that Apache expects to fully depreciate the asset within this period. This relatively short useful life suggests:

- The machine may be highly specialized or subject to rapid technological obsolescence.
- The company anticipates replacement or upgrade within this timeframe.
- The depreciation expense will significantly impact annual earnings during these years.

Accounting Methods for Depreciation

Choosing a Depreciation Method

Apache Corp. must select an appropriate depreciation method to systematically allocate the cost of the machine over its useful life. Common methods include:

- Straight-Line Depreciation: Allocates an equal amount each year.
- Declining Balance Method: Accelerates depreciation, with higher expenses in early years.
- Units of Production: Depreciates based on usage or output.

Given the simplicity of a three-year period and likely straightforward usage, the straight-line method is often preferred for its simplicity and consistency.

Calculating Depreciation

Using straight-line depreciation:

- Annual Depreciation Expense = Cost of Asset / Useful Life
- First-Year Depreciation (from June 1, 20X1, to Dec 31, 20X1): Since the asset is purchased mid-year, depreciation for the first year will be prorated.

Calculations:

- Annual Depreciation: $\$101,700 / 3 = \$33,900$ per year.
- First-year depreciation (6 months): $\$33,900 / 2 = \$16,950$.
- Subsequent full years: $\$33,900$ each.

This approach ensures that depreciation expense aligns with the period of asset usage.

Financial Statement Implications

Balance Sheet Impact

Upon acquisition, the machine is recorded as a fixed asset at its purchase cost:

- Asset Account (Machinery): $\$101,700$
- Less: Accumulated Depreciation: $\$0$ initially

Over time, accumulated depreciation increases, reducing the book value of the asset:

- After the first year, net book value = $\$101,700 - \$16,950 = \$84,750$
- At the end of three years, the book value approaches zero (assuming straight-line depreciation).

Income Statement Impact

Depreciation expense reduces net income:

- In 20X1, the expense for six months is $\$16,950$.
- For subsequent full years, expenses are $\$33,900$ annually.

This systematic allocation ensures that the costs are matched with the revenues generated by the asset over its useful life, adhering to the matching principle of accounting.

Tax Implications and Financial Strategy

Tax Deductions and Depreciation

Depreciation expense is a non-cash deduction that reduces taxable income. Properly calculated depreciation can lead to significant tax savings:

- Accelerated depreciation methods may be employed for tax purposes, but for financial reporting, straight-line is often used for consistency.
- The timing and method of depreciation can influence cash flows and profitability metrics.

Impact on Financial Ratios and Decision-Making

The acquisition affects various financial ratios:

- Return on Assets (ROA): Initially decreases due to increased asset base but improves over time as depreciation expense is recognized.
- Debt-to-Equity Ratio: If financed through debt, the purchase increases liabilities.
- Profitability Margins: Depreciation expense reduces net income, affecting margins.

Strategically, Apache Corp. must consider how this investment aligns with long-term goals, including capacity expansion, technological competitiveness, and shareholder value.

Broader Business Considerations

Operational Efficiency

Investing in new machinery often aims to:

- Increase production capacity
- Improve product quality
- Reduce operational costs
- Enhance safety and compliance

A well-chosen asset can yield benefits beyond financial metrics, influencing market competitiveness.

Asset Management and Lifecycle Planning

Proper tracking of the machine's depreciation and maintenance is essential for:

- Ensuring optimal operational performance
- Planning for eventual replacement
- Managing maintenance costs

Lifecycle analysis can inform future capital budgeting decisions and investment strategies.

Conclusion: Strategic Significance of the

Acquisition

The purchase of a machine for \$101,700 by Apache Corp. on June 1, 20X1, exemplifies a strategic capital investment with multifaceted accounting and operational implications. Recognizing the asset at its fair value, applying appropriate depreciation methods, and understanding the impact on financial statements are crucial for transparent reporting and effective decision-making.

This transaction not only enhances Apache's operational capacity but also underscores the importance of meticulous financial planning and asset management. Over the three-year useful life, the company will systematically depreciate the asset, aligning expenses with revenues and ensuring compliance with accounting standards. Ultimately, such investments are vital for maintaining competitive advantage, optimizing operational efficiency, and delivering long-term value to shareholders.

As Apache continues to navigate an evolving industry landscape, prudent asset acquisition and management will remain central to its growth strategy, with this purchase serving as a tangible example of its commitment to operational excellence and financial discipline.

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