

Accounting Practices in the Oil and Gas Industry in Malaysia

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The oil and gas exploration and production sector plays an important role in the global economy as one of the world's primary fuel sources. For example, investments in oil and gas reached more than US\$511 billion in 2020 (Fuller, 2024). Financial reporting in the oil and gas sector is challenging because of complex operations, varied accounting practices, and the need to accurately represent exploration, production, and distribution activities (Gray et al., 2019). In the complex and dynamic oil and gas industry, accountants specializing in oil and gas accounting cultivate advanced skills in financial reporting analysis, forecasting, and risk assessment capabilities highly valued by employers globally. Moreover, expertise in this niche area offers a distinct competitive advantage in the job market, where the demand for professionals with specialized knowledge in oil and gas accounting remains consistently high (Vyde, n.d.).

The oil and gas industry in Malaysia operates under a comprehensive set of accounting practices to ensure transparency and consistency in financial reporting. In Malaysia, accounting practices in the oil and gas industry are governed by the Malaysian Financial Reporting Standard (MFRS) 6 *Exploration for and Evaluation of Mineral Resources* issued by the Malaysian Accounting Standards Board (MASB) and the Petroleum Development Act 1974. The standard requires companies to disclose financial information, including revenue recognition, asset valuation, and impairment testing. This standard became applicable to all Malaysian companies in January 2012 (Financial Reporting Foundation, 2012).

Mineral resources comprise oil, natural gas, iron, coal, uranium, and timber and are often known as wasting assets. These assets are indeed non-renewable resources, meaning once extracted and consumed, they cannot be replenished (Kieso, 2020). Several well-known oil and gas companies in Malaysia are Petronas, Shell Plc, BP Pls, Exxon Mobile Corporation, Petron Malaysia and Royal Dutch Shell (Mordor Intelligence, 2024). Oil and gas companies heavily invest in exploration activities with long lead times and durations often uncertain success (Eggert, 1993), and largely impacted by oil and gas prices (Jafarizadeh & Bratvold, 2015).

In the oil and gas industry, accounting practices can differ substantially across companies. Specifically, the treatment of exploration costs may vary, with some firms opting to expense these costs immediately, while others choose to capitalize them on their financial statements. Companies can choose to expense exploration costs immediately, while others prefer to capitalize on them until the project's feasibility is determined. Capitalization is an accounting method in which a cost is included in an asset's value and expensed over the asset's useful life, rather than expensed in the period the cost was incurred (Tuovila, 2024). This method is a recognized approach for accounting exploration which can impact financial reporting and investor perceptions. According to Dhaliwal et al. (1999), firms with fewer assets are preferred to choose the capitalization method for exploration and development costs due to their incentives to reduce earnings variability.

There are two approaches in accounting for oil and gas which are the full cost method and the successful effort method. Indeed Editorial Team (2024), defined the successful efforts method of accounting as a process that allows companies to capitalize only on expenses related to the successful discovery of natural oil and gas. Under this method, any expenditure costs incurred on an unsuccessful attempt to discover these resources, cannot be capitalized. The outcome of this method for unsuccessful discovery resources will reduce the companies' net income for that period due to an increase in expenses. On the other hand, the full-cost method of accounting is a technique that capitalizes on all expenses related to the discovery and production of wells, even if they're unsuccessful. When using this method of accounting, these companies don't immediately report a failed well as a loss.

In addition, Metla (2015) found that the successful effort method provides a comprehensive accounting procedure for capital expenditures related to mineral exploration and evaluation, enabling effective analysis of resource use in the life cycle stage of development. However, Bryant (2003) found that full-cost accounting provides more accurate and value-relevant information for evaluating exploration and development projects, as it includes all costs and demonstrates the true economic value of the projects. Full cost accounting is a financial reporting method that recognizes the total cost of exploring for and drilling a well, regardless of whether the well is successful or not.

This article examines the accounting practices of the oil and gas industry in Malaysia concerning the definition, recognition, measurement, presentation, and disclosure that comply with the accounting standards (Table 1). To better understand the disclosure requirements for the oil and gas industry under MFRS 6, the following table summarizes the key elements.

Table 1: Disclosure Requirement

Particulars	Requirements
Definition, recognition, and measurement	Concepts of definitions, recognition criteria, and measurements for assets, liabilities, income, and expenses as prescribed by the Conceptual Framework for Financial Reporting (Conceptual Framework) are to be applied.
Measurement	At cost
Examples of expenditures included in the initial measurement	The exploration phase of extracting a mineral resource. This phase involves acquiring the right to explore a particular area, followed by a series of studies and activities to evaluate the technical feasibility and commercial viability of extracting the mineral resource. The steps include topographical, geological, geochemical, and geophysical studies, exploratory drilling, trenching, and sampling .
Measurement after recognition	At cost or revaluation model
Presentation	Classification costs of the assets as tangible or intangible according to the nature of the assets acquired and should be consistent.
Disclosure	(a) Accounting policies for exploration expenditures including the recognition of assets. (b) Amount of assets, liabilities, income, and expenses, operating and investing cash flows arising from the exploration for and evaluation of mineral resources.

Source: Financial Reporting Foundation (2012) from Malaysian Accounting Standard Board

On the Scopus website (<https://www.scopus.com/>), the following keyword search string was used in the search engine: “International Accounting Standard 6” OR “IAS6” OR “IFRS6” which is equivalent to MFRS 6 on 14 August 2024 found that only one document of research articles on International Financial Reporting Standard (IFRS) 6 was published in 2020. The author was Al-Salam (2020) who published an article with the title of the “Possibility of adopting the International Financial Reporting Standard (IFRS 6) for achieving transparency in the Iraqi oil industries”. The article aims to identify the key characteristics of Iraqi oil companies. It explores the transparency concept in accounting information within the oil industry and analyses the IFRS 6. The article also compares recent accounting practices in the Iraqi oil industry with the requirements of IFRS 6 and proposes adaptations to enhance transparency in the Iraqi oil sector by aligning it with international reporting standards. Insufficient literature in accounting research indicates that there is a need to examine the accounting practices of mineral resources in other countries such as Malaysia.

Analysis of two annual reports on oil and gas companies in Malaysia was made to examine the accounting practices applied by the companies. The samples chosen were Petronas and Petron Malaysia, the leading oil and gas companies in Malaysia (Petron Malaysia, 2024; Petronas, 2024). Table 2 represents the checklist of disclosures in the notes to financial statements.

Table 2: Checklist of Disclosure Requirements.

Particulars	Petronas	Petron Malaysia
Definition of exploration expenditure	The costs are directly related to exploration well. These costs include license acquisition and drilling costs. According to accounting standards, these costs are initially capitalized as intangible assets until the results of the exploration have been assessed. This means that the costs are not expensed immediately, but rather recorded as assets on the financial position until the outcome of the exploration is known.	Defined based on natural resources such as crude oil and minerals as raw materials can contribute to resource depletion.
Definition of development expenditure	Development expenditure refers to the costs incurred to bring a field to commercial production. This includes costs associated with exploration and development before production begins. These costs are capitalized as incurred, meaning they are recognized as assets in the financial position until the field is operational. This captures the attributable interest and other financing costs involved in the process.	Not stated.
Recognition as an asset	<u>Property, plant, and equipment (PPE)</u> Oil and gas properties Project in progress	<u>PPE</u> Refinery and terminal plants and equipment Capital project in progress <u>Inventories</u> Crude oil Petroleum products
Recognition as revenue	Oil and infrastructure	The sales value of petroleum products refers to the total revenue generated from the sale of petroleum products, excluding the value of any government duties. This figure takes into account government subsidies, which are amounts provided by the government to reduce the cost of petroleum products to consumers.
Measurement	Initial measurement at cost	Historical cost basis.
Amortization method	The unit of production method is a common amortization method used for oil and gas properties. This approach calculates amortization expenses based on the quantity of oil or gas extracted from a property over its useful life.	Not stated, applied PPE depreciation method.

Source: Petron Malaysia, 2024; Petronas, 2024

The practical application of these disclosure requirements can be observed in the financial statements of major Malaysian oil and gas companies, such as Petronas and Petron Malaysia. Table 2 shows the checklist of disclosure requirements based on IFRS 6. The observation indicated that the compliance requirement of the standard has been satisfied by the companies. The analysis of Petronas's annual report specified that the development expenditure inclusive of other financing costs was capitalized as incurred before the beginning of production.

This article concluded that the accounting practices of Malaysian oil and gas companies comply with the requirements of the standard about the definition, recognition, measurement, presentation, and disclosure. The results from the observations will enhance knowledge of mineral resource disclosures in the financial reporting landscape. The financial statement shall comply with the relevant standards when disclosing information in annual reports, and preparers shall be updated on any changes to produce high-quality annual reports that enable users to make use of the relevant information and improve their decision-making.

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