

# **An Analysis of Successful Efforts Versus Full Cost Accounting in the Oil and Gas Industry**

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**Abstract** – Companies involved in the exploration and development of crude oil and natural gas can choose between two accounting approaches: the successful efforts method (“SE”) and the full-cost (“FC”). As these approaches differ in how they treat specific upstream operating expenses, the method of accounting impacts the balance sheet and income statement differently making it difficult to compare companies who use the different methods. The debate over which methodology yields the more appropriate representation of a company’s financial position has yet to be resolved and there continues to be critics and supporters of each.

**Keywords** – Successful Efforts Accounting, Full Cost Accounting, Accounting for Upstream Oil and Gas Activities

## **I. INTRODUCTION**

The accounting method that a company chooses affects how its net income and cash flow numbers are reported. As a result, the accounting method is an important consideration when analyzing companies involved in the exploration and development of oil and natural gas. While companies are required to disclose which method of accounting they used in their notes and financial statements, there continues to be a lack of consensus over which method best achieves the transparency of a company’s earnings and cash flows.

In Statement of Financial Accounting Standard (SFAS)19, the FASB requires that oil and gas companies use the SE method. The Securities and Exchange Commission (“SEC”), on the other hand, allows companies to use the FC method. These two governing bodies have yet to find the ideological common ground needed to establish a single accounting approach.

This analysis evaluates the basis of each accounting methodology and discusses the merits and disadvantages of each.

## **II. ACCOUNTING FOR THE UPSTREAM SECTOR**

In the upstream oil and gas sector, companies are focused on the exploration and exploitation of hydrocarbon assets. Costs incurred in regard to upstream activities encompass all those

associated with finding and producing oil and gas. They can generally be categorized as acquisition, exploration, development and production costs.

- Acquisition Costs – pertain to surface and mineral lease acquisition including, but not limited to, the cost of leasing or purchasing the property, signature bonuses, legal costs and broker fees.
- Exploration Costs – sometimes referred to as “finding” costs, relate to the identification and proving of a prospective location that may contain economically viable oil and gas reserves. This includes geological and geophysical survey costs and the costs to drill exploratory wells.
- Development Costs – are the costs associated with obtaining access to the proved reserves. These include, but are not limited to, drilling development wells, building access roads, installing gathering lines, installing production storage tanks and a myriad of other costs.
- Production Costs – sometimes referred to as “lifting” costs, are the costs to operate and maintain wells and related equipment and facilities after the hydrocarbons have been found, acquired and developed. They may also include transportation costs and depreciation of facilities and support equipment as well as other production costs (Jennings, 2000).

Oil and gas exploration and production is one of the most capital-intensive industries as it requires expensive, specialized equipment and highly skilled labour (Library of Congress).

There are two generally accepted methods to account for costs associated with upstream activities: the SE method and the FC method. The primary difference between the two methodologies is the manner by which costs are accounted for in respect of unsuccessful activities.

Under the SE method of accounting, a company can capitalize only those expenses associated with successfully locating new oil and natural gas reserves. For unsuccessful or “dry hole” results, the company will charge the costs as an operating expense applied against revenues for that period.

As the ultimate objective of an oil and gas company is to produce the oil or natural gas obtained from reserves it has located and developed, proponents of the SE method believe that a company should only capitalize those costs which resulted in a successful effort (i.e. additional reserves). In the case of a dry hole, companies expense costs incurred for the unsuccessful effort as there was no change in the company’s productive assets.

The FC method allows companies to capitalize all expenses related to locating new oil and gas reserves regardless of the outcome.

As the primary activity of an oil and gas company is to locate and develop oil and gas reserves, supporters of the FC method advocate that companies should capitalize all costs they incur in pursuit of that activity (Pruett, 2003). The costs are then written off over the course of a full operating cycle.

### **III. COMPARISON OF THE SE AND FC METHODS**

The effect of choosing one accounting method over another is readily apparent when comparing the financial results involving the income and cash flow statements. Each method highlights the individual costs which fall into the categories of acquisition, exploration, development and production differently. Such a comparison also demonstrates the impact on periodic results caused by differing levels of capitalized assets under the two accounting methods (Vitalone, 2020).

As the financial results of a manufacturing company are impacted by depreciation expense for plant, property and equipment ("PP&E"), so to are the financial results of an oil and gas company affected by periodic charges in regard to depreciation, depletion and amortization ("DD&A").

One of the primary differences between the SE and FC accounting methods is the manner by which costs for unsuccessful wells are accounted for. Under the SE method, the costs for an unsuccessful exploratory well is expensed immediately upon the determination that the well will not produce. Under the FC accounting method, the costs are capitalized and then amortized over the estimated life of the company's oil and gas reserves.

Using the example of the unsuccessful exploratory well, the company using the SE method will expense a higher amount of costs in the earlier life of a field compared to a company using the FC method. This will result in the SE company reporting lower net income when compared to the FC company.

The FC company, on the other hand, will amortize and recognize the costs of the unsuccessful wells later into the life of the field. This is because the FC method amortizes the costs of the unsuccessful well over a longer period (i.e. the expected life of the company's reserves). As a result, the FC company reports a higher net income earlier in the life of the field than does the SE company.

A second difference between the SE and FC accounting method is how costs are accounted for in regard to exploratory costs and the costs of carrying unproved properties. These costs, which include geological and geophysical survey costs, are expensed immediately under the SE accounting method which directly impacts the income statement. Under the FC method, such costs are capitalized and amortized over the estimated life of the company's reserves.

A third difference between the two methods is the published guidance provided by governing accounting organizations. For example, the Financial Accounting Standards Board (FASB) issues guidance in the Accounting Standards Codification ("ASC") for generally-accepted accounting principles ("GAAP"). While the ASC provides guidance to oil and gas exploration companies in regard to the SE method of accounting, it does not provide such guidance in respect of the FC method (Financial Accounting Standards Board). The SEC, on the other hand, does provide guidance on accounting using the FC method (Securities and Exchange Commission, 2011) however they allow publicly traded companies to choose either the full cost or successful efforts method of accounting.

Proponents of the FC method believe that it stimulates investment, especially for smaller companies. This is because the FC method allows those companies to report financial statements which offer a more favorable view of their income and financial position due to the capitalization (rather than expense) of costs associated with unsuccessful exploration activities. In this way, the company's costs per barrel oil equivalent ("BOE") are reduced. The cost per BOE is a key financial metric used by investors when evaluating a company's profitability. Under the SE method, the BOE metric is more variable due to accounting for the costs associated with unsuccessful exploration activities as an expense in the applicable period.

The SE, on the other hand, results in a more conservative approach as the costs associated with unsuccessful activities are expensed as incurred. Furthermore, supporters of the SE method believe that it more directly portrays the relationship between exploration and production. This is because only those costs which are expected to provide an economic benefit in the future are capitalized. By capitalizing only those costs associated with successful efforts, the company's assets will only reflect those that relate to future cash flow.

Proponents of the SE method argue that the capitalization of unsuccessful efforts under the FC method leads to an over-statement of the company's asset valuation as it recognizes the cost of assets which provide no future economic benefit.

A fundamental concept of accounting is the matching principles. The matching principle requires a company to report an expense on its income statement in the period in which the related revenues were earned. Defenders of the SE method argue that it more closely follows the matching principle as it only classifies those costs associated with a future economic benefit as an asset. As a result, the asset base reported by the company more accurately matches the company's cost base to economic performance.

An additional argument in support of the SE method is that it is less prone to manipulation than the FC method for the purpose of mis-stating company performance. Under the FC method, executive and management could influence the profit reported for a company thereby increasing their performance-based compensation (Cooper, 1979).

Supporters believe that the SE method provides a better measurement of assets on the balance sheet than does the FC method. Defenders of the FC method, on the other hand, argue that dry wells are a necessary cost incurred to find productive wells and, therefore, should be recognized as a long-term asset on the balance sheet.

There is a strong argument to be made that the capitalization of unsuccessful costs violates the matching principle as, in the future, these costs will not support the economic benefits. According to Baker, it is difficult to understand how the costs of a formally abandoned property can provide a future benefit. As the costs of dry holes do not provide any future benefit, these costs are losses and should not be postponed (Baker, 1976).

Critics of the FC method believe that it inflates a company's current earnings as the unsuccessful costs are capitalized. As a result, it is difficult for an investor to determine the success of a company's drilling efforts.

Supporters of the FC method argue that using the SE method does not represent an accurate depiction of the economic reality of the petroleum industry (Dyckman, 1979). This is because a large amount of costs are expensed under the SE method and the asset base is minimized. As a result, the earnings for a company would vary significantly from period to period making it less attractive to investors (Pruett, 2003). As a primary activity of petroleum companies is to search for oil and gas, there is an expectation that some efforts will be unsuccessful. In accordance with this view, it would be unreasonable to not include all of the costs associated with locating reserves in the company's asset base.

When FASB Statement No. 19 was issued, there was significant pushback from those companies using the FC method of accounting. That is because it required those companies to change to the SE method of accounting thereby significantly altering their reported financial position. This was particularly troublesome for small, independent companies. In their view, they believed it would drive investors away making them less competitive (Cooper, 1979).

#### **IV. CONCLUSION**

Conceptually, the researcher believes the SE method yields a more appropriate representation of costs associated with upstream activities. As the FC method does not match the costs incurred during a particular period to the revenues generated, the matching principle is violated. This situation does not exist under the SE method as unsuccessful costs are expensed and only acreages capable of production are included in the asset base. In this way, the SE method matches the expenses of a period with the economic benefit.

Furthermore, the researcher believes that the SE method results in a more transparent reporting of a company's financial position. With the FC method, the costs associated with unsuccessful activities are hidden as they are mixed with costs related to successful activities. Consequently, it is not possible to determine how successful a company is in locating reserves.

On the other hand, the FC method is more appropriate from a practical perspective, particularly in regard to smaller companies. This is because it allows these companies to report a more favorable view of their income and financial position, making them more attractive to investment. For larger companies, the costs associated with unsuccessful efforts are commingled with those which were successful, thereby presenting a more stable picture of the company's financial position. Furthermore, the FC method provides a more predictable income tax liability as companies are not expensing large amounts of costs in a period that are not associated to any revenue stream.

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