

ACCOUNTING FOR THE OIL AND GAS INDUSTRY:
ALTERNATIVE COSTING-METHODS EXAMINED

A THESIS
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I. PURPOSE

The purpose of this paper is to examine the alternative ways of accounting for the oil and gas industry.

II. INTRODUCTION

A. Brief history

The question of which accounting method to use occurred as a result of the 1975 Energy Policy and Conservation Act (EPCA).¹ In the act, Congress directed the Securities and Exchange Commission (SEC) to establish uniform financial reporting for the petroleum industry and to ensure that such reporting practices would permit the establishment of a national energy data base. The method decided upon by the SEC was then to be issued, in regulatory form, by December 22, 1977. The SEC in turn called upon the Federal Accounting Standards Board (FASB) to recommend the most suitable technique.²

At the time of the 1975 Act, two primary methods of accounting were employed by the various oil companies: full costing and successful efforts.³ The two methods used conveyed totally different information concerning the asset valuation and

¹"FASB Stands Pat on Successful - Efforts Method," Oil and Gas Journal, 75:84; October 31, 1977.

²"Accounting Method Proposed for Oil and Gas Producers," CA Magazine, 110:9-10; October, 1977.

³David W. Lay, "Petroleum Industry Accounting Reform on the Way," CA Magazine, 110:32; December, 1977.

costing involved in the exploration and development of oil wells. Therefore it was difficult, if not impossible, to compare the year-end results of companies who had used full-costing methods to those who had used successful efforts. As the result of their desire for uniform reporting, the FASB issued an exposure draft which favored the successful efforts method and consequently "unauthorized" the use of full-costing.⁴

Substantial controversy arose over the exposure draft which eventually became FASB #19. Moreover, it seemed as though the Board had misinterpreted the requests of the SEC. The SEC merely wanted to obtain uniformity in financial reports to be filed with the Department of Energy for use in establishing a reliable data base, not the establishment of a generally accepted accounting principle for financial reporting purposes.⁵ Consequently, the SEC rejected both full costing and successful efforts as the ultimate means to achieve comparability within the oil industry.⁶ Instead, they have suggested a new, even more controversial technique - the reserve recognition accounting method (RRA).⁷

B. Definition of terms

Proved Reserves - "upon analysis of geologic and engineering data" the oil and gas in a well

⁴David W. Lay, "Petroleum Industry Accounting Reform on the Way," CA Magazine, 110:32; December, 1977.

⁵Ibid.

⁶Ibid.

⁷Lamme, Nemeth. "RRA: New Requirements are Costly, Demanding," World Oil, 188:93; January, 1979.

can be recovered with reasonable certainty "under existing economic and operating conditions."

Successful Wells - wells which have proved reserves.

Unsuccessful Wells - referred to as dry-holes; a well without proved reserves.

Development Wells - wells drilled in an area with proven reserves to a depth of known production.

Stratigraphic Wells - wells drilled for information without intentions of future development; referred to as test wells.

Service Wells - wells drilled to aid support present production.

Exploratory Wells - wells which are not development, stratigraphic or service wells.⁸

III. REVIEW OF CURRENT LITERATURE

A. FULL COSTING METHOD

1. Theory

The theory behind the fulling costing method is a simple one. All costs associated with the exploration and production of oil and gas are capitalized. These costs are then amortized annually against oil and gas revenues as reserves are produced and sold. By amortizing both the costs of successful wells and unsuccessful wells over several years, the earnings of a company under full-costing will appear larger than had successful efforts been used.⁹

⁸FASB Exposure Draft (Stamford, Conn. July 15, 1977). pp. 125-128.

⁹"FASB Stands Pat on Successful-Efforts Method," Oil and Gas Journal, 75:84; October 31, 1977.

2. Supporters

a. Independent - Smaller Oil Companies

The major supporters of the full-costing method are the companies which use the techniques - the smaller independent oil companies. These companies have currently been responsible for approximately 90% of all of the exploratory oils drilled.¹⁰ Since they drill more wells than the major petroleum companies, they encounter more dry holes than the major oil companies. It is, therefore, crucial for them to be able to capitalize the costs of the dry wells in addition to the successful wells and subsequently to be able to amortize these costs over several years.

b. Congressmen

Several congressmen who have home state interests in accounting methods used by the oil and gas industry have helped support the retention of full-costing methods. Senator William Proxmire (D-Wis) was one of many who wrote and talked with the FASB in the hope that the members of the board would consider the use of both full costing and successful efforts for the oil industry. Senator Floyd K. Haskell (D-Colo) was successful in amending the EPCA to clarify the fact that the establishment of an

¹⁰"A Puzzle for the SEC on Oil Accounting Rules," Business Week, p. 29; August 7, 1978.

accounting principle by the FASB was never the intent of mandate. Rather, the SEC wanted only a suggested method for reporting to the government.¹¹

c. Ad Hoc Committee on Full Cost Accounting

The Ad Hoc Committee was formed in 1972 to help fight for retention of full-costing. The members of the committee, comprised of 33 members from "full-cost independents and natural-gas transmission and distribution companies", have since conceded defeat to the successful efforts method. Their reasoning stems from a fear that the government will intercede if the problem of costing for oil and gas companies is not soon resolved within the private sector.¹²

d. Investment Community

Full Costing's one main stronghold is John S. Shalsty, managing director of Donaldson, Lufkin & Jenrette and president of the New York Society of Security Analysts. Chalsty contends that to deny the option to use full-costing may:

"seriously impede the access of newer, aggressive companies to the public equity market they need for expansion capital. Other companies will seek lower-risk investments for their capital. Some will sell their oil and gas subsidiaries . . . "¹³

¹¹O'Leary Enters Accounting-Methods Fray," Oil and Gas Journal, 75:70; October, 1977.

¹²Ibid.

¹³Ibid.

3. Issues promoting allowance of full costing option

a. Penalized for expansion

It has previously been noted in this paper that the companies using the full-costing method are responsible for the majority of the exploratory drilling. It is therefore imperative that these companies be able to amortize over several years the costs incurred in the exploration and development of both the unsuccessful and successful wells. To follow only successful efforts accounting would mean expensing in the current year all of the costs associated with unsuccessful wells. This would decrease, substantially the net income of these companies - actually penalizing their earnings during an "expanding and successful/ exploration production campaign."¹⁴ Also it is argued that in order to drill one successful well, several unsuccessful wells will be drilled. Therefore, the cost of the one success hinges on the efforts involved to drill many unsuccessful wells. The asset, then, should reflect "the cost of the entire program."¹⁵

b. Understate Earnings

To illustrate how full-costing elimination would reduce net earnings, the following example must be considered:

¹⁴"Accounting Change Controversy Builds," Oil and Gas Journal, 75:42; October 17, 1977.

¹⁵Ibid.

Capitalized Costs	30%
Deferred Income tax	58%
Retained Earnings	31%
Stockholders Equity	16%
Average decrease Net Income	20%
	(Over past 5 years) ¹⁸

Furthermore, 25% of the 36 companies in the survey would be in default of existing loans, two companies would be unable to pay their current dividends declared, and one company would not have been able to secure its preferred stock financing.¹⁹

In consideration of the survey's findings, one can easily observe that the lending institutions will be more hesitant, if not even unwilling, to loan money to these companies. Some independents even suggest that they will be forced out of business because of the expected reduction in available financing.²⁰ Comments published by investment banking firms such as Lehman Brothers, E. F. Hutton & Company, The First Boston Corporation, and Donaldson, Lufkin & Jenrette attest to the fact that the ability of independent companies to obtain financing will be impaired by the elimination of full-costing.²¹

¹⁸"Accounting-Change Controversy Builds," Oil and Gas Journal, 75:41; October 17, 1977.

¹⁹Ibid.

²⁰Ibid.

²¹Collins, Dent, "Market Effects of the Elimination of Full Cost Accounting in the Oil and Gas Industry," Financial Analysts Journal, 34:48; November, 1978.

In an attempt to show the affect of the market's reaction to an APB proposal which suggested the elimination of full-costing method, O'Conner and Collins conducted an examination of the common stock prices of oil and gas companies surrounding the 21-week period of the APB issuance. The analyses divided the 78 firms studied according to the type of accounting method used and according to whether they were primarily integrated or producing companies. The results of their study are shown on page 21 in appendix. Their findings illustrate a substantial decline in the market interest due to the threat imposed by the APB proposal.²²

B. SUCCESSFUL EFFORTS METHOD

1. Theory

In general, the theory behind successful efforts involves capitalizing only those costs which ultimately lead to the production of successful wells. The costs associated with unsuccessful wells are expensed in the year that the well is deemed to be a dry hole.²³ However, FASB's statement #19 specifically stipulates the procedures that are to be followed under successful efforts accounting for financial reporting.²⁴

²²Collins, Dent, "Market Effects of the Elimination of Full Cost Accounting in the Oil and Gas Industry," Financial Analysts Journal, 34:48; November, 1978.

²³"Accounting-Change Controversy Builds," Oil and Gas Journal, 75:41; October 17, 1977.

²⁴"Draft calls for 'Successful Efforts' Oil and Gas Accounting," Journal of Accountancy, 144:20; September, 1977.

b. Reflects true risk on investment

Although the supporters of full-costing stress that eliminating full-costing will hamper their efforts to obtain financing, the Financing Accounting Policy Committee (FAPC) believes that the accounting profession should relate the financial position of a company as realistically as possible. In other words, full-costing should not be used as a means to hide the risks to lenders or investors. Investors have a right to know about a potentially high risk so that they may expect a higher rate of return on their investment. As previously mentioned, some companies will show significant changes in their financial position if they are required to switch to successful methods. The FAPC believes that this action will be helped and stresses that it is important to "distinguish between objective reporting . . . and subjective reporting designed to serve narrow and immediate self-interests."³¹

C. RESERVE RECOGNITION ACCOUNTING (RRA)

1. Theory

The SEC in proposing the use of RRA has suggested a new way of thinking to those in the accounting profession and in the oil industry. Reserve Recognition Accounting deviates substantially from the traditional historic costing methods. The assets on the balance sheet, under

³¹William C. Norby, "Oil and Gas Accounting Revisited," Financial Analysts Journal, 33:20; November, 1977.

the RRA, will be valued at the present value of the companies' proven reserves.³²

Likewise, under the RRA, the income statement will be drastically different. According to the SEC, the profit of an oil company hinges upon the exploration and development of new wells. The RRA emphasizes this by dividing the income statement into three sections. The first section shows the income from sales less the amortization and expenses of the oil and gas produced. The second section, the truly radical section, reports the net present value of the future income from the reserves discovered in the current period. From this amount is subtracted all of the current exploration and development costs incurred. The first and second sections added together reflect the current period's profit or loss. To this subtotal is added the current period change in prior period's estimated reserves to achieve the income or loss before taxes.³³

The principle reason behind the SEC's recommendation of RRA is that "the most critical event in the exploration and development business is the discovery of new oil and gas reserves."³⁴ Therefore, the true value of the companies' assets and true indications of profitability rests

³²Lamme, Nemeth, "RRA: New Requirements are Costly, Demanding," World Oil, 188:93; January, 1979.

³³Ibid.

³⁴Ibid.

in order to achieve the necessary base for RRA, will have to be evaluated at least once. The cost of this change to the industry might, therefore, become devastating.³⁹

IV. PRESENT POSITION OF THREE METHODS

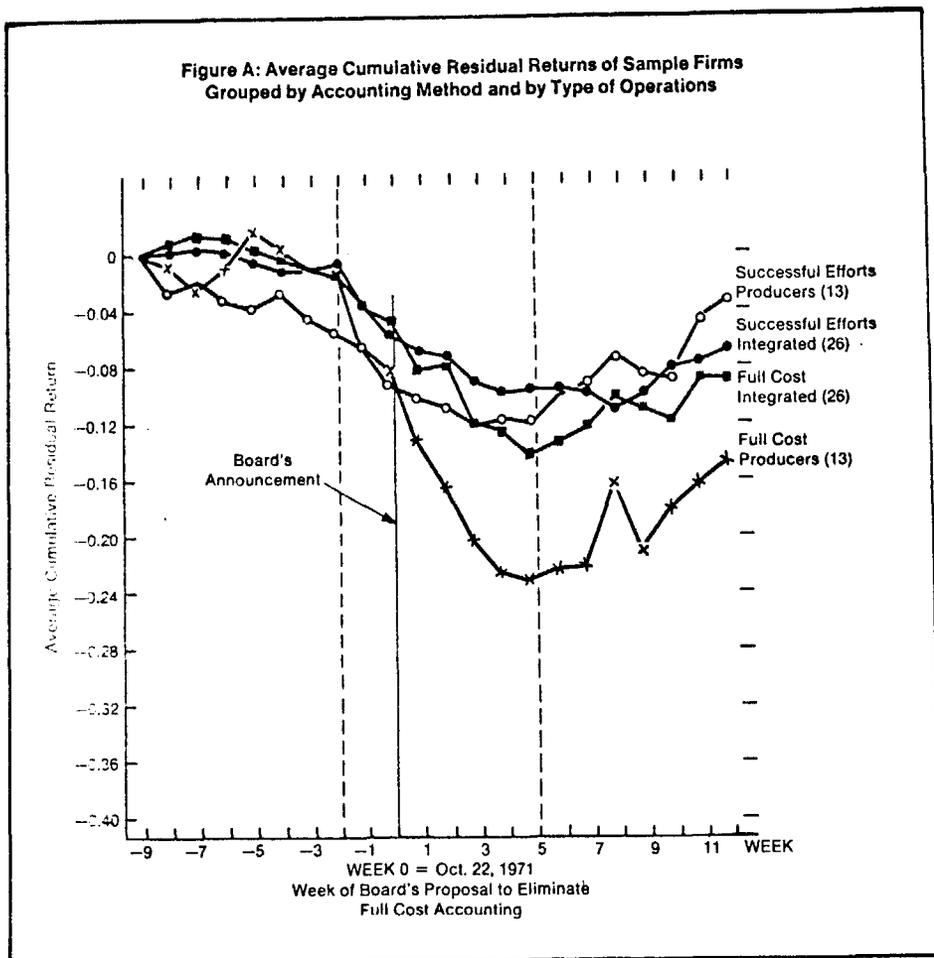
For those companies now using full-cost accounting, they can continue to do so but only as stipulated under a new full-cost standard which requires the companies to show how much of their assets would have been expensed under successful methods.⁴⁰ For companies using successful efforts accounting, they are to follow the standards established by FASB #19.⁴¹ Reserve Recognition Accounting will be required only as supplemental information for the fiscal years 1979-81. The proposed reporting system consists of three main elements: disclosure of reserve quantities and changes there of, calculation of net present value of these reserves and an earnings statement accounting for the results of exploratory and producing activities for the year.⁴² These three statements are illustrated on pages 18, 19, and 20 in the appendix.

³⁹Lamme, Nemeth, "RRA: New Requirements are Costly, Demanding," World Oil, 188:94-6; January, 1979.

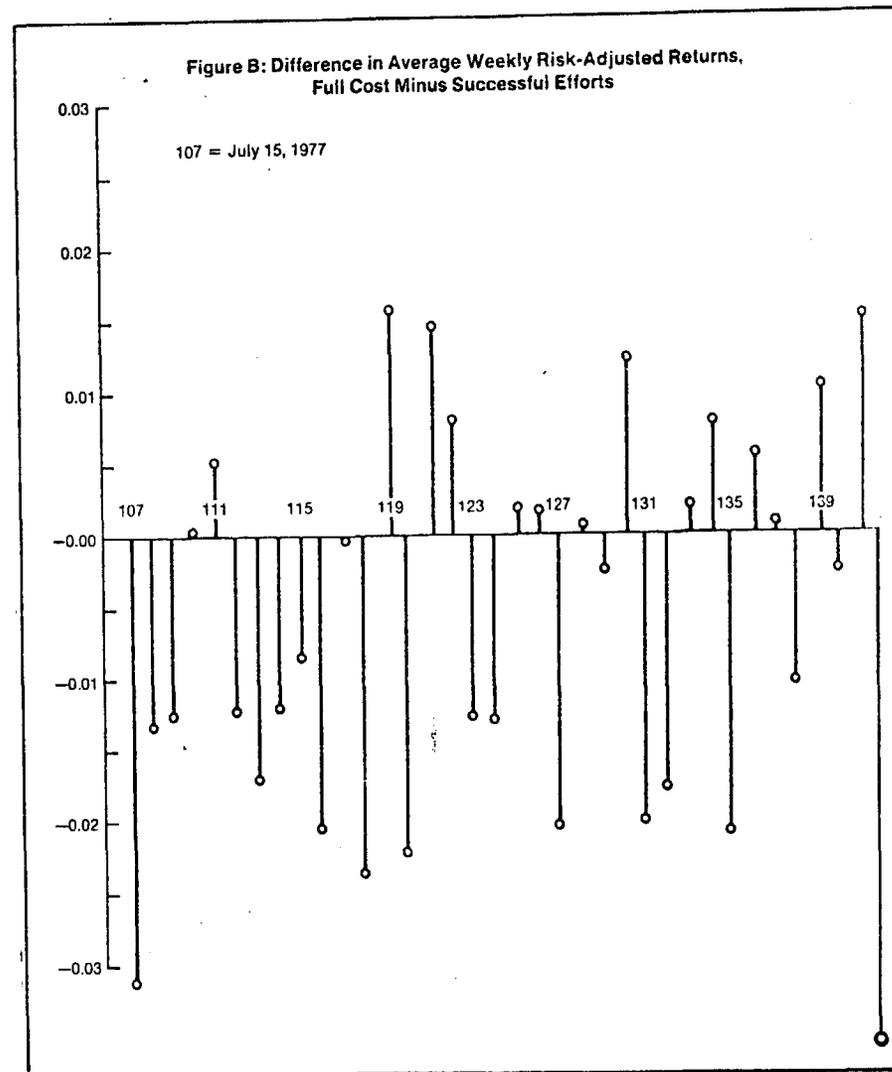
⁴⁰Robert Mims, "A Solution Frought with Problems for Oil and Gas Accounting," Business Week, p. 106; October 9, 1978.

⁴¹Ibid.

⁴²Richard C. Adkerson, "Can Reserve Recognition Accounting Work?" Journal of Accountancy, 148:3:76, September, 1979.



⁴⁶Collins, Dent, "Market Effects of the Elimination of Full Cost Accounting in the Oil and Gas Industry," Financial Analysts Journal, 34:51; November, 1978.



⁴⁷Collins, Dent, "Market Effects of the Elimination of Full Cost Accounting in the Oil and Gas Industry," Financial Analysts Journal, 34:52; November, 1978.

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