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Coming of Age: Initiating the Oilfield into Performance Disclosure

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Articles

COMING OF AGE: INITIATING THE OILFIELD INTO PERFORMANCE DISCLOSURE

*John Burritt McArthur**

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The author was one of the lawyers who litigated the *A.E. Investments ("AEI") v. Davis Oil Co.* case discussed in detail in Part II.A. AEI was a subsidiary of the Aetna Insurance companies. The Aetna case introduced the author to many of the issues discussed in this Article and made him decide that the industry needed substantial improvements to the operator-investor relationship. He discussed many of the *Davis Oil* issues with the late John Jolly, for many years the executive director of COPAS. Mr. Jolly was one of Aetna's experts. He also explored many of the same issues with Aetna's other experts: Joe Abel, Phil Doty, A.L. Lyth, Preston Moore, Donald Hockaday, Everett Holseth, Don Silberman, Victor Stabio, and Mike Zeeb. In addition, he discussed the pros and cons of various positions with Aetna's other lawyers, his partners Mark Wawro and Lee Godfrey, as well as with legal assistant Mike Stinson, and benefited greatly from talking over a variety of related matters with Aetna's in-house managing lawyer, its litigation vice president Peter Mear.

Mr. McArthur also defended certain corporate officers in the Longhorn Oil and Gas litigation discussed in Part II.B. In addition, Mr. McArthur has handled litigation over the measurement of and obligation to pay royalties, the determination of proper well charges by an operator, and a number of take-or-pay cases.

Mr. McArthur has discussed various issues in this Article with Gene Gallegos, Robert Green, Don Hockaday, Everett Holseth, Frank Leggio, A.L. Lyth, Preston Moore, Craig Shephard, Mike Stinson, Don Silberman, Mark Wawro, and Mike Zeeb. None of these, of course, is responsible for the views expressed in the Article, which are solely the author's.

A number of people have provided information cited in these pages. Foremost among them are Gerald Bader, John Bohn, Howard Boigon, Thomas Coghill, Andrew Derman, Frank Douglass, Gene Gallegos, James Irish, Frank Leggio, Bob Minerich, Robert Pezold, Colette Poeppel, David Richman, Jan Riley, Don Silberman, Mike Stinson, Jon Wallis, Mark Wawro, and Mike Zeeb.

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I. INTRODUCTION

MOST oil and gas is discovered by independent operators who sell shares in their projects to outside investors and then administer the process of drilling and development.¹ Nonoperators, the investors in oil and gas programs, need more protection than they currently receive from industry customs and legal standards. Market distortion occurs because oil and gas operators usually do not tell their investors how past programs have done. By not distributing this information, operators deprive investors of the information they need to judge an operator's ability to perform its promises.

This Article is a companion to an already published article on the places where the industry contract fails to give investors necessary accounting information.² Taken together, the two articles give a comprehensive picture of why it remains too easy for operators to exaggerate the economic value of their proposals.

Several common types of investors sign up in oil and gas programs. The traditional investor is a working interest owner who puts up cash in return for an equity interest.³ Other investors buy shares in drilling programs, which may be incorporated as separate entities, or become limited partners in drilling partnerships. They receive partnership or stock inter-

1. In the broadest definition, an operator is "a person (natural or artificial (*e.g.*, corporate)) engaged in the business of drilling wells for oil and gas." HOWARD R. WILLIAMS & CHARLES J. MEYERS, *MANUAL OF OIL AND GAS TERMS* 842 (8th ed. 1991) [hereinafter *WILLIAMS & MEYERS MANUAL*].

The operator's duties in drilling a well are defined in an operating agreement, which is "[a]n agreement between or among interested parties for the testing and development of a tract of land. Typically, one of the parties is designated as the operator The authority of the operator, and restrictions thereon, are spelled out in detail in the typical agreement." *Id.* at 837.

One of the surprising facts about the oil business is that even major oil companies, companies with years of industry leadership, impressive technical staffing, and hundreds of millions of dollars in annual investments, often do not drill their own wells. In many instances they leave the risk-taking to independent operators and wait until at least initial wells have been drilled before purchasing interests. The trade organization of independent producers, the Independent Petroleum Association of America (IPAA), estimates that independent producers drill eighty-five percent of all new wells and produce as much as sixty-four percent of the natural gas in the United States. *Natural Gas Gathering Services Performed by Interstate Pipelines and Interstate Pipeline Affiliates—Issues Related to Rates and Terms and Conditions of Service*, Before the Federal Energy Regulatory Commission 5 (Docket No. RM94-4-000) (Jan. 14, 1994) (comments of the Independent Petroleum Association of America). (This is not true in the most expensive ventures, which often only the majors can afford to finance.)

2. John B. McArthur, *A Twelve-Step Program for COPAS to Strengthen Oil and Gas Accounting Protections*, 49 *SMU L. REV.* 1447 (1996).

3. The "working interest" includes the operator's interest and is, in a somewhat overlapping definition, the "operating interest under an oil and gas lease," the interest of those who have "the exclusive right to exploit the minerals on the land." *WILLIAMS & MEYERS MANUAL*, *supra* note 1, at 1377. Working interests in a well often are stated as a single interest, with the costs to be borne and revenues to be shared stated as a percentage of that interest. *See id.* at 1378. These interests include any equity interest that the operator may own in the property.

ests in legal entities that, in turn, hold title to the ventures' wells. These recommendations apply to these investments as well.

The operator-nonoperator relationship is vital to the health of this industry. The prevalence of joint operations in a free market suggests that joint projects can be more efficient than single-owner drilling on many properties.⁴ Yet the efficiency of any legal form, including joint operations, must include its potential costs. Efficiencies can be outweighed if joint operations too heavily encourage fraud and opportunism. If the contracts are structured too loosely, they encourage operators to pursue short-term advantages even if this destroys the long-term utility of the joint format.

In considering remedies, obviously no contract will prevent all forms of fraud and sharp dealing. Nor does the existence of fraud necessarily prove that a contract is inefficient. Contract reform is always a question of what *feasible* reforms, what cost-effective measures, can reduce disputes and clarify the relationship. This Article argues that plugging certain easily remediable gaps in the current investment contract, the Joint Operating Agreement (JOA), would reduce common forms of fraud. The improvements urged here would bring about a closer alignment between the investors' decisions and the product they thought they were purchasing, all with few additional transaction costs. And they would provide clearer remedies against companies that do cheat investors.

There are several reasons for improving the standard oilfield investment contract. The traditional arguments used in law review articles to

4. The theory that in a free market, in which participants can experiment with legal forms, the pattern of legal relations will reflect the most efficient forms over time, is most identified with the new economic institutionalism of Oliver Williamson. See generally OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985).

John E. Jolly and Jim Buck have suggested a few reasons why joint operations can be more efficient in oil and gas projects than separate operations. The parties may achieve economies of scale in operations; they may be able to pool information, geologic or otherwise; and they may be able to raise enough capital together, even if they couldn't do so separately. JOHN E. JOLLY & JIM BUCK, *JOINT INTEREST ACCOUNTING PETROLEUM INDUSTRY PRACTICE* 2-3 (1988). See also Lewis G. Mosburg, Jr., *An Introduction to the Model Form Operating Agreement*, in *THE PETROLEUM EXPLORATIONIST'S GUIDE TO TITLES, LEASES & CONTRACTS* 405 (Lewis Mosburg ed., 1984):

Current conditions in the oil and gas industry are leading to an increased emphasis on the conduct of operations on a 'joint' basis. Restricted drilling budgets, and less attractive prices and demand, make companies more reluctant to accept farmouts, even to increase their acreage position in existing prospects.

The same pressures may make landowners more eager to enter farmouts rather than drill themselves. The company that farms-in the acreage then needs to figure out how to fund its drilling. Farmout motives are not that different from those spurring joint operation, primarily the spreading of risk:

[T]he owner of such leases may not be in the position currently to develop them, due to budgetary limitations, a need to spread the costs and risks of drilling, or a belief that such leases possess insufficient economic potential compared with other available drilling opportunities.

Mosburg, *Basic Concepts of the Farmout Agreement*, in Mosburg (ed.), *supra*, at 387-88. In addition, many nonoperators have no more interest or experience in drilling wells than the average car buyer has in building cars.

justify reform are the familiar doctrinal arguments of language, purpose, structure, history, and precedent. Some of the arguments this Article advances fall into this closed circle of legal reasoning. In addition, the reforms further two policies that transcend legal doctrine: enhancing the freedom of contracting parties and improving economic efficiency.

Accurate information is a necessary ingredient if market participants are to choose freely. Truth telling increases freedom in market systems. It is in this sense that Charles Fried describes the moral element of contracts: "In order that I be as free as possible, that my will have the greatest possible range consistent with the similar will of others, it is necessary that there be a way in which I may commit myself."⁵

The corollary of contract freedom is the assurance that others will commit themselves in return. It is trust in the future performance of unknown others that releases the bounty of capitalist production. This is why well-functioning markets can so enhance individual possibility. One no longer needs a personal commitment that others will do as they say.⁶

The other reason for concern that investors receive all material information is that accurate choices based on the best available information are necessary to maximize efficiency.⁷ Efficient contract practices are

5. CHARLES FRIED, *CONTRACT AS PROMISE* 13 (1981).

6. Perhaps the most persistent American advocate of the private-contract-exchange-as-freedom theory is Milton Friedman, who has long sponsored the argument that economic freedom is necessary for individual freedom, both because diffusion of economic power prevents the concentration of political power and because voluntary exchange benefits each individual. MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* 8-9, 13-14 (1962). Friedman emphasizes the role of government (and presumably he would add, lawyers) in enforcing contracts as essential to a free society. The major functions of government include "to preserve law and order, to enforce private contracts, to foster competitive markets." *Id.* at 2.

A working model of a society organized through voluntary exchange is a free private enterprise exchange economy—what we have been calling competitive capitalism The basic requisite is the maintenance of law and order to prevent physical coercion of one individual by another and to enforce contracts voluntarily entered into, thus giving substance to 'private'.

Id. at 13-14 (emphasis omitted). "[G]overnment is essential both as a forum for determining the 'rules of the game' and as an umpire to interpret and enforce the rules decided on." *Id.* at 15.

The significance of contract as an instrument of freedom should be old hat to lawyers. Karl Llewellyn stated the same thing as well as anyone since, more than half a century ago:

[I]t is trite that bargain is a tool of change and of growing individual self-determination, as is also any property regime which by increasing individual control increases the scope of experiment, the differentiation of holdings, and the factual effectiveness of the bargains of the wealthy

Karl N. Llewellyn, *The Effect of Legal Institutions on Economics*, 15 *AM. ECON. REV.* 665, 716 (1925).

7. Economists are gradually coming to integrate these social factors, including the legal system, into market analysis. Douglas North, for instance, the 1993 Nobel Prize winner in economics, argues that economists have too long assumed that "institutions do not matter." Douglass C. North, *Economic Performance Through Time 1* (1993 Nobel Prize lecture) (on file with the author). North argues that in a world of transactions costs, contracts and the other institutions the law creates matter a great deal. A legal framework that creates the incentive to acquire new knowledge is "the essential underpinning of modern economic growth." *Id.* at 15. North lists such legal institutions as private property, the joint stock company, insurance, and financial markets as critical innovations supporting the

necessary for healthy economic growth. It still stands as true, albeit tautological, that utility maximizing decisions result when investors make their own exchanges if reasonably full information is available and transaction costs are fairly low.⁸

Contracting practices that hide information subvert the efficiency and trust essential for a functioning free market system. Relaxation of anti-fraud measures may lead to a short-term boom⁹—as “successful” false

expansion of the Western world. “Sustained economic growth in the Western world required the creation of institutions and property rights that served to bring the private rate of return that the individual achieves more nearly in line with the social rates of return.” *Id.*

North writes in a tradition that has roots in Ronald Coase’s analysis of the firm and in Coase’s criticism of classical economists for ignoring the institutional environment within which firms and markets function. *See, e.g.*, RONALD H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 3 (1988) (criticizing neoclassical views that “exchange takes place without any specification of its institutional setting”); *see also id.* at 5 (“In mainstream economic theory, the firm and the market are, for the most part, assumed to exist and are not themselves the subject of investigation. One result has been that the crucial role of the law in determining the activities carried out by the firm and in the market has been largely ignored.”).

For Coase, firms exist to cover those circumstances when the cost of contracting for market exchanges would be too great. *Id.* at 7. Firm size itself is correspondingly limited as the cost of organizing a firm approaches the cost of carrying out transactions in the market. *Id.* at 7, 44-45. In essence, firms are ways of avoiding “the cost of using the price mechanism.” *Id.* at 6. Firms are important to the theory of contract because they “greatly reduce[],” if not eliminate, the need for contracts. *Id.* at 39. Coase argues that the longer the period of contracting, the harder to predict contract exigencies, and the likelier a firm is to emerge. *Id.* at 40.

While Coase’s concern with the institutional structure of market and firm transactions may be unfamiliar to the legal ear, it is very relevant. A focus on the institutional structure of an industry means a focus on its legal organization. Once one decides that the cost of conducting transactions is an important factor, “what becomes immediately clear is the crucial importance of the legal system in this new world.” Ronald Coase, *The Institutional Structure of Production*, reprinted in *THE NATURE OF THE FIRM* 227, 232 (Oliver Williamson & Sidney Winter eds., 1993) (1991 Nobel Prize lecture). The rights to be traded are the ones created by law. “As a result, the legal system will have a profound effect on the working of the economic system and may be said in certain respects to control it.” *Id.* at 233.

8. *See, e.g.*, BRIAN BINGER & ELIZABETH HOFFMAN, *MICROECONOMICS WITH CALCULUS* 366-67 (1985).

9. One can imagine circumstances in which poor information would increase efficiency, but only if people’s perceived preferences did not fit their actual preferences—if they would process accurate information the wrong way, or if the best available information is not accurate. For instance, the investors lucky enough to put their money with Doc Joiner and end up with a piece of the East Texas field might never have spent a dime had he told them the truth and had they known how little basis he had for drilling. *See infra* note 16. In retrospect, they must have thanked their lucky stars that they were tricked into making the investment.

In the short run, frauds may raise more money than honest disclosure. Thus, ironically, they harbor the potential to serve as engines of economic progress. Many successful entrepreneurs are part huckster. It is an open empirical question whether the successful owe their fortune to their deep foresight (which is always their *ex post* theory), or whether they just happen to hold the winning ticket in a very unpredictable lottery.

The problem with building a theory of economic welfare on the unpredictable outcomes of distorted decisions is that there is no reason to believe that decisions based on the wrong information will on average be better than those based on accurate information. Our commitment to economic freedom dictates that each individual be allowed to make his or her own decisions, mistakes and all.

promises lead to an influx of funds—but the long-term effect is predictably negative. Over time the victims suffer losses that only the wrongdoer could foresee. A contract induced by fraud or misinformation is the law's label for welfare minimizing choices.

The utility maximization that is the promise of classical and neoclassical economics rests upon the assumption that informed parties can identify and make many trades beneficial to both sides. The seemingly trivial central welfare theory of neoclassical economics (that trades in which at least one person is better off and no one else worse off are a significant category of potential exchanges) has been an important theory for one reason: The world contains a large number of trades that yield just this kind of welfare gain. This is an empirical assertion, not a theoretical necessity, but the extraordinary flowering of capitalist production seems to prove it true. Fraud threatens this abundance.

As a remedy, standard form contracts do more to enhance utility than just enabling people to trade an existing set of goods and services. In addition, the process of standardization creates its own savings. Model forms impose a regular structure on oil and gas investments. They lower the cost of investing by removing the need to negotiate each deal from the ground up.¹⁰

Moreover, efficiency in open markets relies in good part on learning from mistakes. The market teaches people to make better choices. This education never comes, or is never clear, if investors can't get accurate information on the choices they do make. Otherwise they may suffer losses but not even enjoy the consolation of having received a capitalist education.

10. See Granville Dutton, *Accounting Procedures: Contracts or Controversies?*, 19 ROCKY MTN. MIN. L. INST. 117, 118 (1974) ("Through the use of these model forms, the productivity of those industry employees engaged in negotiating and conducting joint operations is greatly enhanced in that the number of items which must be negotiated and monitored are reduced to a feasible level." Dutton adds that "[i]n addition to diminishing decisions and detailed checking, the model procedures provide a basis for a common vernacular and a uniform connotation of the terms and jargon used in joint interest accounting."); cf. C.M. Kennedy, *Joint Venture Accounting à la COPAS—1962*, 1964 NAT'L INST. PET. LANDMEN 157, 159 (describing "accounting nightmare" and "chore" that would result "if you were required to originate this detail for each operating agreement").

Part of a standard form's efficiency effects may occur simply because everybody uses the same form. Transaction costs can fall sharply because everyone relies on the same operating procedures. Companies orient their services to the accepted standard. Certain issues drop from discussion. Thus there is a social value to having most or all parties use the same forms and channel their needs into the same practices. In this sense, the first technology or contract form to arrive on the scene may be chosen simply because it enjoys increasing returns to scale. See W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 ECON. J. 116 (1989); W. Brian Arthur, *Positive Feedbacks in the Economy*, 262 SCI. AM. 2, 92 (1990). The savings do not mean that the parties chose the form that would *most* reduce costs. "[O]nce random economic events select a particular path, the choice may become locked-in regardless of the advantages of the alternatives." *Id.* at 92.

Organizational theorists as well have noted that organizational forms may spread because new organizations imitate forms already in use. As particular forms of organization spread, other institutions adjust to deal with the known institutional pattern. The organizational form spreads because it is the most common, not because it is the most efficient. The more embedded it becomes, the greater the sunk cost of commitments to the first standard and the greater the cost of innovations (including those that might have been far better if adopted first).

Economies that have no effective means of deterring and punishing those who trade on lies, deception, and careful omission of necessary information put this market mechanism in jeopardy. Trades no longer ensure joint gains. If information has good odds of being untrue and wrongdoing is likely to go unpunished or can only be ferreted out at great cost, it becomes imprudent to trust the contract mechanism. Many will shun the market and turn to much higher-cost procedures, including providing goods or services internally even if it is less efficient. The cost of doing business in such economies will rise sharply; the economy will acquire a new layer of transaction charges to fund protection against the risk of falsehood.¹¹

Increasing disclosure as a remedy will only be more efficient, of course, as long as the benefits exceed their costs. An industry never gets to choose among perfect institutions: faced with limited knowledge and contract structures whose results can only partly be predicted, it has to choose among imperfect solutions.¹² Do the benefits of these reforms

Paul Dimaggio and Walter Powell argue that instead of organizational forms spreading for their efficiency, "we contend, bureaucratization and other forms of organizational change occur as the result of processes that make organizations more similar without necessarily making them more efficient." Paul J. Dimaggio & Walter Powell, *The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*, in *THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS* 64 (Walter Powell & Paul J. Dimaggio eds., 1991). Only one of their four reasons for organizational imitation (competitive isomorphism) involves efficiency.

11. Protection may be purchased in fairly dull ways, like performance bonds, or through exotic suppliers like organized crime. Cf. Amartya Sen, *Moral Codes And Economic Success* 19-21 (Paper Delivered At Annual Meeting Of The British Association, Keele) (Aug. 30, 1993) (discussing the Mafia as "outside organization [that] can deal with breach and provide a socially valued service in the form of strong-armed enforcement").

It is so obvious that it nears tautology that an essential assumption of competitive systems, in the extreme of the "environment of perfect competition," is that "each decisionmaker has *full information about the nature and consequences of his choice*. If information is incomplete rather than full, a decision that appears to be rational may prove to be irrational if the decisionmaker could only have viewed the decision with full information." ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 235 (1988) (emphasis added). The informational basis of fraud, familiar to lawyers as misrepresentation and fraudulent omission, is twofold: "Fraud is a violation of the negative duty not to misinform the other party to a contract. Besides the negative duty, there are circumstances in which the parties have the *affirmative* duty to disclose information." *Id.* at 239.

Fraud is particularly pernicious because it allows the tortfeasor to control the choices of both parties. "Misrepresentation and fraud are also problems that arise because of asymmetric information." *Id.* at 264. The party who lies uses its lying to take control of the exchange, to provide a code in which the apparent exchange will have undisclosed attributes and translate into something quite different after the fact.

12. The awareness that reforms must be practical is why Williamson grounds his analysis on "bounded rationality," with choice occurring in circumstances where thought and attention are scarce resources and no one can gather perfect information. WILLIAMSON, *supra* note 4, at 45-46.

Ronald Coase proposes a different agenda, one that has received increasing attention recently. "Without some knowledge of what would be achieved with alternative institutional arrangements, it is impossible to choose sensibly among them. We therefore need a theoretical system capable of analyzing the effects of changes in these arrangements." COASE, *supra* note 7, at 30; see also Lee Friedman, *Public Institutional Structure and Resource Allocation: The Analysis of Adjustment*, 2 *PUB. POL. ANAL. & MGM'T* 303, 304, 306 (1981) ("The primary limitation of existing theory is the failure to model satisfactorily the

exceed their costs?

The reforms urged here should satisfy a cost-benefit test. Their returns should be significant because they provide the most basic kind of material investment information. The costs, on the other hand, should be relatively low. Meaningful economic calculations of past performance can be instituted using existing information and with little added labor in today's computer age. This Article does not propose that investors or courts be allowed to micro-manage operators. It just asks the operators to let investors know what they are really buying. Is it a pig or a poke? Most of the proposals require just a little more data compilation.

To establish the need for effective performance disclosure, Part II of the Article analyzes investment problems in a number of major industry programs. It discusses false or at least very misleading practices about reserves, successes, and expected economics that have flourished because operators did not have to discuss the results of their prior work. The section analyzes what went wrong in some of the largest operations in American oil and gas history, including the Oklahoma-based Home-Stake partnerships; the John King operations in the sixties; the widespread programs of Marvin Davis and his Denver-based Davis Oil Company; the activity of Longhorn Oil and Gas, whose failure felled Penn Square Bank and Continental Illinois National Bank; and the recent elaborate fraud committed by Prudential Insurance Company and its partner Graham Energy.

Parts III and IV consider remedies, explaining how the Standard Joint Operating Agreement can be modified to make operators disclose prior results. Operators should have to publish the rate of return in each of their prior programs. In addition, COPAS, the industry organization for petroleum accountants, should take the lead in establishing an industry clearinghouse to disseminate accurate, fair, and comparative data on the economics of oil and gas companies.

Part V considers the coverage of investor protection. The discussion urges the industry to prepare modified contracts for partnership and drilling-fund investors. These investors do not make well-by-well decisions on completion, reworking, and subsequent wells, so they do not need provisions for joint-account voting. However, they need just as much protection, if not more, against operator manipulation of reserve estimates, project results, and costs. The industry must incorporate protection over these items into a form that can be attached to drilling partnership agreements, so that all investors come closer to receiving the same standard of care.

Part V also explains why industry investors should have the same rights as nonindustry investors. Some courts seem to think that it is just fine for

phenomenon of organization as a response of boundedly rational decision makers to the uncertainties they perceive . . . Traditional economic advice rests on inadequate conceptions of market possibilities, on the one hand, versus unmitigated speculation about the efficacy of nonmarket arrangements, on the other.”).

operators to indulge in the harshest forms of bargaining as long as experienced oil and gas companies are the only victims. Many industry companies seem to agree, feeling that they need no help protecting their interests. Yet the disclosures recommended here concern information that is uniquely in the operator's possession. The omissions they remedy can cheat any investor, sophisticated or not. There is no reason industry companies, most of whom have responsibilities to stockholders and other interest owners of their own, would not benefit—and need—the same rights as nonindustry investors.

Because opponents of case-method analysis often try to dismiss the problems it unearthed by arguing that the cases are selective and not representative of their industry, Part V also discusses structural reasons for believing that the oil and gas industry is likely to have problems with fraud. These reasons include the difficulty of measuring quality, the need for large fixed investments, and the lack of a ready market for many project interests. The discussion shows why there is good reason to believe that the problems revealed in public disputes are a legitimate indicator that this industry needs new remedies.

II. SOLICITATION BY MISREPRESENTING PAST PERFORMANCE IS A SERIOUS PROBLEM IN THE OIL AND GAS BUSINESS

The disclosure of past economics should be the focus of great attention in the oil and gas industry. This is a point where industry standards suffer a glaring omission. The industry contract lacks any place for the operator to disclose its prior results.

Virtually no oil or gas investment is sold without the operator making a variety of representations about its past and what it portends for the future. Yet operators have no duty to back up their version of history with facts, in writing.

Fraud and incomplete information have flourished in this vacuum. This section studies some of the more troubled investments in an effort to understand what went wrong in the structure of these investments, as well as to illustrate the damage flowing from incomplete standards. The examples lead to the recommendation that the industry force operators to distribute more information about their prior work before the investment begins. In addition, they must distribute ongoing economic information as a project moves through the phases of exploration and development.

A. RESERVE AND PRODUCTION MISREPRESENTATIONS IN THE TRADITIONAL EQUITY INVESTMENTS

Misrepresentations about reserves and expected success are the most visible and colorful cases of oilpatch fraud. This Article uses "misrepresentation" in its broader sense, to include not just fraud but also incomplete and unsupported statements, for instance, a projection of success wholly at odds with a company's prior experience. Even hardened busi-

nessmen can suspend their better judgment when confronted with the magic of summoning liquid wealth from beneath the earth. Reserve misrepresentations have ranged from specific misrepresentations about production in neighboring wells to broader falsehoods about success rates and distributions. They include assurances of sharing the same risk as investors, and the very particular lie of one operator who told investors that he shared their risks by stating that "he made a sacrifice to enter the deal himself, because his wife had to sell her fur coat and Cadillac in order for Jones to raise his half of the money."¹³ The truth was that Jones had more than covered his cost by doubling the lease prices before selling interests to investors, and on top of that was overcharging for the cost of drilling.¹⁴

1. Some Operators Make False Analogies to Nearby Areas

One of the most common reserve manipulations occurs when operators sell interests prospect-by-prospect. It is also one of the simplest, accomplished by asserting that an undrilled well is sure to produce from the same formation, in the same quantities, as a nearby successful well and disguising significant differences between the wells. The Securities and Exchange Commission sued Columbus "Dad" Joiner based on this kind of fraud. Joiner had discovered the massive East Texas field on October 3, 1930.¹⁵ As it turned out, that was about all Joiner discovered. To lure investors into new projects, he circulated promotional letters claiming that:

'Dad' Joiner has gone right into the heart of one of the largest producing areas in all Texas, in his endeavor to make this the supreme achievement of his career. Take a good look at this map—notice how in most every direction—you'll find not just a few, but literally hundreds of producing areas.¹⁶

13. *Nor-Tex Agencies, Inc. v. Jones*, 482 F.2d 1093, 1095 (5th Cir. 1993).

14. *Id.* at 1095-96.

15. The story of Joiner's discovery, and the way it produced the Hunt oil dynasty, is told in DANIEL YERGIN, *THE PRIZE* 244-48 (1991).

16. *SEC v. C.M. Joiner Leasing Corp.*, 133 F.2d 241, 244 n.6, *rev'd*, 320 U.S. 344 (1943). Putting aside for the moment the remote chance of surpassing what will always remain one of the world's major discoveries, it turns out that Joiner had his problems even in his supreme accomplishment: He had sold interests in his East Texas discovery several times over. YERGIN, *supra* note 15, at 247. And in a double irony, Joiner's one great discovery appears to have been based on the bizarre theories of Doc Lloyd, a "trendologist" who chose Joiner's drilling location by mapping all of the major fields in the United States and showing trend lines from them converging on Joiner's site in East Texas. *Id.* at 245. Joiner's successful well had no better theory behind it than his later failures.

Another interesting facet of *Joiner* is the scope of the solicitation. Advertising materials were mailed to at least 1000 people. The majority of the purchases were for \$25 or less, with many of these paid on an installment basis. 320 U.S. at 346.

The classic oil pitch may be those written by C.C. Julian for his Los Angeles-based Julian Petroleum Company in the twenties. Julian used the risk and unreliability of many companies as a means of trying to distinguish his company from others. One of his ads was headed, in bold-faced capitals, "Julian Refuses to Accept Your Money Unless You Can Afford to Lose! Widows and Orphans, This is No Investment For You!" JULES TYGIEL, *THE GREAT LOS ANGELES SWINDLE* 41 (1994). Another included the disclaimer, "If You

Unfortunately, as is too often the case with reserve comparisons, there was little substance to Joiner's analogy. The trial court would find that "what they said was not true, that this particular county was in the center of or in the heart of the highest production area in Texas, it was rather remote from it, though contiguous to a shallow and a smaller production."¹⁷ Conspicuously, Joiner did not give investors any economic information.

2. *Some Operators Make False Analogies to Specific, Particularly Impressive, Wells*

Misleading comparisons to surrounding production tempt many operators who sell programs prospect-by-prospect. A more painstaking misuse of well analogies than Joiner's injured out-of-state investors in *Gilbert v. Nixon*.¹⁸ The falsity centered on individual wells rather than fields. The operator, Nixon, sent a package of data to investors on each project.¹⁹

Nixon's lies were of two types, one of omission and one of misrepresentation. First, his maps omitted nearby dry holes or pretended they were farther from the drill site when they described the project's geologic justification.²⁰ As the number of drilled fields increases—and there are very few new fields discovered in the United States—honest analogies to existing, neighboring production should become an increasingly reliable predictive mechanism. The active market in dry and bottom hole information shows how valuable new drilling information can be. By hiding the bad results of nearby wells, Nixon distorted this data. He prevented investors from learning what Nixon already knew.

Second, Nixon misstated a variety of characteristics of nearby producing wells, even when he put them in the right place on his maps. Depending on the well, he altered the depth of producing formations, the amount of production, and the amount of water in the well. Each distortion concealed negative information while making a new prospect look better than it was.²¹

Can't Afford to Take a Chance, You Can't Afford to Play With Me." *Id.* at 53. Julian mixed this message with promises that made it sound crazy, flooding area newspapers and then the radio with his message.

17. *Joiner*, 133 F.2d. at n.4.

18. 429 F.2d 348 (10th Cir. 1970).

19. *Id.* Nixon had been selling shares in mineral leases in Kansas to the plaintiffs, two wealthy investors who lived in Connecticut, for six years. *Id.* To solicit each sale, Nixon sent a package of information to a petroleum engineer the investors had hired in Denver. The engineer screened the properties. The package Nixon furnished included a geological map, which listed the supposed production of nearby wells. *Id.* at 357. After losing money on 18 prospects in Kansas, the plaintiffs sued, claiming that Nixon had fed them false information. *Id.* at 348.

20. For instance, Nixon failed to show an abandoned, noncommercial producer on one of his maps. *Id.* at 363. On another map, a dry hole was moved half a mile from its actual location, making the proposed site look better than it was. *Id.* at 359.

21. Nixon failed to mention that a "good" producing sand he described as a "direct offset," an immediately adjoining well to a prospect, had declined to a level that no longer was commercial. *Id.* at 359-60. A well he described as a good well was producing salt water and was not likely to be commercial. *Id.* at 360-61. The depth of one dry hole was

3. Some Operators Overemphasize Early Results and Completion Statistics

Comparisons to nearby wells occurred on an even larger scale in the case of Denver's Marvin Davis and his Davis Oil Company. Davis Oil wielded two other popular solicitations. It reported incomplete and tentative geological information before wells had a reliable production history, and it treated the number of wells it completed as a good indicator of economic success. One of the company's primary sales techniques was to tout "completion" ratios that included wells that had lost money. In most companies, a completion is a sign of success. For some unsuccessful companies, however, a completion-based success ratio disguises failure.²²

misstated, so that it would not appear to be from the same formation that Nixon was testing. *Id.* at 361-62. And Nixon used false production reports from an adjoining well to make another of his prospects look better than warranted. *Id.* at 363.

The court remanded each of these problems for the trial court to determine whether the misstatement or omission was material, but it issued a bad decision in another area. It agreed that misrepresentations about the operator's collecting discounts were "not significantly related to the basis on which the transactions were consummated." *Id.* at 358.

The court should have considered the difference these secret profits made in the operator's incentives. It should have let the investors argue that individual well misrepresentations poisoned all of the wells. Instead the court announced a contrary holding:

[A]ppellants must establish more than a general atmosphere of favorable but misleading reports in order to recover their consideration for leases individually submitted on the basis of data directly relating to them when there is found to be no direct geological connection between the leases subject to false reports and those for which recovery is sought.

Id. at 358-59. The problem with this holding is that specific misrepresentations about the high value of certain prospects may induce investors to take shares in many other investments. The specific misrepresentations make all prospects look better. It should be a fact question whether specific misstatements cloaked all of a multi-part investment with fraud. This issue is not as clearly raised in *Gilbert v. Nixon* as might appear, because trial was to the court, so the trial court's conclusions may be conclusions of fact rather than law.

For another example of well-specific misrepresentations, see *Anderson v. Vinson Exploration, Inc.*, 832 S.W.2d 657, 663 (Tex. App.—El Paso 1992, writ denied) (Plaintiff alleged, in claim under Texas Securities Act, that operator overstated per-well production in the field; that operator almost doubled the average by combining two fields, rather than just citing the less productive field where it was proposing to drill, as well as omitting that only 3 of 13 wells in field had projected production; that all wells in an offsetting field had been plugged and abandoned; that the operator had drilled a dry well between the only two good wells in the field; and that four or five oil companies had rejected the project. The nonoperators also alleged that the operator deliberately understated expected costs. *Id.*).

For a brazen way to manipulate results, there is the driller who told investors they had a discovery well when all he was reporting was recaptured frac oil. The driller bought the frac oil and injected it into the well to stimulate production. *Donohoe v. Consolidated Operating & Prod. Corp.*, 982 F.2d 1130, 1134 (7th Cir. 1992). The frac oil apparently stimulated reserve reporting more than the well.

Sometimes the misrepresentation will concern the category into which a well falls. During the boom years, the Bache brokerage house marketed a series of oil and gas projects as being "[p]redominately low risk development drilling." Exhibit 7, Bache Tax Investment Group Fact Sheet at 2, *Invoil Sec.* (No. MDL 585). Even before the project disintegrated, an outside consulting firm retained by Bache would determine that at least six of the eight programs operated by Wells-Battelstein "were, in my view, already destined to be marginal before a bit was ever put into the ground." Exhibit 4, Petro-Enterprises Report at 24, *Invoil Sec.* (No. MDL 585).

22. Completion success ratios are a long-time industry problem.

Many areas in the United States can be drilled by an oil man with productive wells resulting in almost every case. However, many of such fields are char-

Davis Oil was completing many wells that would not even pay the costs of completion. In the case of Davis Oil, using this "success" ratio was misleading.

The details of these practices would come out when one of Davis's major investors, the oil and gas subsidiary of Aetna Life Insurance Company (Aetna), sued the company, its principal Marvin Davis, and two other company officers. Marvin Davis and his Denver-based company were a major oil and gas presence for many years. Davis Oil was selling hundreds of prospects a year by the late seventies and early eighties. At its peak, the company was drilling more wells in the domestic United States than any other company except Amoco and Exxon.²³

To solicit Aetna's investment, Marvin Davis personally had approached the top officers of the insurance company. He promised Aetna's chairman and its chief financial officer that his "track record" was substantially

acterized by drilling which will never result in a profit. Such fields are a bonanza for the unscrupulous oil promoter, who can impress an investor with his marvelous productive-well 'track record,' and even provide a quick distribution of cash flow, while knowing that such wells will never pay out. [The 'SEC box score' using completion statistics] is informative not as an indication of the success of such drilling, but merely to provide information concerning the scope of the sponsor's prior operations. It is for this reason that the SEC requires that such wells be labeled 'productive' rather than 'successful'.

Institute for Business Planning, *Analyzing an Oil and Gas Investment*, in II OBTAINING DRILLING CAPITAL FROM TAX-ORIENTED INVESTORS 568 (Lewis Mosburg ed., 1981).

"The real success of the partnership, however, will not be judged on the success ratio of wells discovered, but on the reserves found." National Tax Shelter Digest, *Anatomy of a Partnership: Oil and Gas Drilling Programs*, in Mosburg (ed.), *supra*, at 13. This may be obvious to careful industry participants, but success ratios will continue to mislead many investors until the industry requires operators to publish the economic results of the wells that make up their success ratios.

23. In information supplied to investor A.E. Investments, Davis claimed to have drilled more wells in the United States than anyone but Amoco and Exxon. Defendants' Ex. 24, Memorandum in Opposition to Defendants' Motion for Summary Judgment at 2, *Davis Oil* (No. 85-M-1821). Although most case records were destroyed when the case settled on the first day of trial, many documents became public earlier when the defendants moved for summary judgment. These documents remain available through the federal court archives in Denver. The exhibits used in the summary judgment briefing are still part of the court record. [Depositions used in the summary judgment briefing will hereafter be cited by deponent name; affidavits by the affiant's name; and exhibits by Plaintiff's or Defendants' exhibit number. All exhibits cited are on file with *SMU Law Review*.]

By the time Marvin Davis left the oil business in the late eighties, he had become a billionaire several times over. He was to buy successively Twentieth Century Fox, the Beverly Hills Hotel, the golf mecca of Pebble Beach, and Spectravision. He also made attempts to acquire such leading American institutions as CBS and Northwest Airlines.

Davis's investor list was a who's who of business, politics, and show business. Investors included major oil companies; show business figures like Lucille Ball and George Lucas; politicians like Henry Kissinger and Gerald Ford; businessmen like Bill Siegel, Marc Rich, and John Gutfreund; and corporations like Northwest Industries of Chicago and Aetna. For a representative listing of the nonindustry investors that Marvin Davis "put in" his wells, see Plaintiff's Exhibit 147.

As the boom crested in the late seventies, Davis began taking more nonindustry investors. Both the size of Davis Oil's operations and the prominence of its investors seemed good reasons to invest. Who would worry about trusting someone whose investors included the former President and Secretary of State, or think that a company could find investors to drill so many wells unless they were making a lot of money?

better than the industry average and that Aetna could do better with Davis Oil than in its other oil and gas investments.²⁴ His chief geologist supplied Aetna with statistics that, he claimed, put Davis Oil ahead "of the top 20 industry performers" in finding new fields, "perhaps the most meaningful measure of an exploratory company's success."²⁵ The statistics were the number of wildcat (new exploratory) wells that Davis completed, compared to the ratios of other big industry companies.

Marvin Davis assured Aetna that he shared their interest by indicating that he would be investing \$150 million of his own money in what he described as an \$800 million program in 1981. This promise that one of the major producing companies in the United States would take the same risks as Aetna was a crucial factor in Aetna's investment decision.²⁶

Aetna soon got a taste of Davis's second selling method. In spite of the scale of his operations, Marvin Davis sold interests well-by-well. To maintain investor commitments, he waged a marketing campaign based on his best wells. He used these wells as examples of investment quality before they generated enough production history for engineers to test his calculations. He issued pronouncements before wells were completed and, on occasion, before they had been spudded. Davis Oil claimed a special ability to read the signs from early production. As actual production disproved the early predictions, the company shifted its predictions of great value to a new set of unfinished or even undrilled wells.

Marvin Davis used the appearance of good early returns to persuade Aetna to give him more money. Aetna's initial commitment to Davis Oil was for \$15 million in the 1981 program. A few months later, Davis ac-

24. Donald Conrad Deposition at 67-68, 103, 122; Roy Hood Deposition 90.

25. The data was compiled by geologist Ed Lafaye and sent to Aetna by Gerald Gray, Davis Oil's chief financial officer. Gerald Gray Deposition at 46-48. The defendants admitted that at an initial investment meeting, they had told Aetna that they had a "good track record"; that they "discussed success rates"; and that they told Aetna they had a "strong technical staff." Defendant's Answer to Third Amended Complaint §§ 13-16. They also admitted that, at a later meeting, Aetna's early wells (the vast majority of which lost a lot of money) "were 'successful' as that term is used in the industry." *Id.* § 28.

It is true that many companies use the number of completed wells as a measure of success. Rational companies should be trying to complete only wells that will pay more than the cost of completion. Most of the wells that Davis Oil completed for Aetna did not even pay the completion costs. A sizable minority of the completed wells had no production at all. See *infra* note 36.

Marvin Davis would agree that the real measure of success is economic success. In his deposition, he admitted that he understood "success" to mean a well that generated more money than it cost to drill and that he was looking for a return of at least 7:1 or 8:1, not just 2:1 or 3:1, when he thought of success. Marvin Davis Deposition at 57-58, 357. By this measure, not *one* of the several hundred wells Davis Oil drilled for Aetna was successful.

26. The president of Aetna's oil and gas subsidiary had received this message at a start-up meeting with the Davis people. Roy Hood Deposition at 74. As Aetna's chief financial officer put it, "I understood that we were going to be investing with Mr. Davis' participation alongside us." Donald Conrad Deposition at 66. Because Davis would be paying his share of completion and development wells, Aetna basically accepted all prospects submitted by Marvin Davis, even a few that had been drilled and turned out to be dry holes before being offered to Aetna, because given Davis's agreement to share the risks, "it would be very unusual for us to somehow decide not to put up money." Scott Katzmann Deposition at 134-35.

cepted a standing invitation to visit Aetna's chairman in Hartford. Finding that Aetna had not spent all the money it had allocated for 1981 oilfield investments, he suggested that Aetna give him another \$100 million. When Aetna's management met to discuss increasing its commitment soon thereafter, Davis phoned Aetna's chief financial officer, had him called out of the meeting, and announced the welcome news of a million-barrel discovery in Wyoming.²⁷ Aetna then raised its commitment by \$60 million.

Marvin Davis's projection on this Dugout Draw well, and a ten-million barrel projection for the field by Davis's chief geologist, would turn out to be based on an initial "drill stem" test. Davis's chief reserve engineer later testified that drill stem tests are not "meaningful" sources of reserve estimates. This measure is unreliable because production ordinarily declines during the early days of a well.²⁸

As Aetna's program went forward, Davis Oil completed many wells. Marvin Davis and his staff presented completed wells as successful discoveries. Company officers repeatedly used completion ratios as a primary measure of success.²⁹ This emphasis diverted attention from what

27. Defendants' Exhibit 98. Marvin Davis worked with his chief geologist Edward Lafaye to distribute projections. The Dugout Draw prospect is one example of this method of operation. A few days after Aetna upped its commitment, LaFaye spoke with Roy Hood, the president of Aetna's oil and gas subsidiary. LaFaye repeated the results of the drill stem test, with Hood reporting back to Aetna that "[t]he indicated potential of this well, based upon this 1,000 barrel per day test, is roughly 1 million barrels of crude oil." *Id.* at 1. Hood would tell his board of Davis's estimate that the play could contain up to 10 million barrels of reserves, with a net pretax value of \$56 million. *Id.*

28. Stephen Smith Deposition at 178.

29. In February 1981, before Aetna had participated in a single well, Davis's chief financial officer Gerald Gray wrote Aetna the background letter on Davis Oil's "success" cited in note 25 *supra*. Gray boasted about Davis's prior results, using the number of wells completed as the measure of success. After arguing that "perhaps the most meaningful measure of an exploration company's success is the statistics on new field wildcats," Gray proceeded to provide Aetna statistics on Davis Oil's recent drilling. He said that Davis Oil completed about 17% of these wells, while "[i]n 1980 the top 20 industry performers completed less than 15%." Plaintiff's Exhibit 38 at 2. The next sentence of Gray's letter called this statistic "the percentage of success." *Id.*

Gray argued that the fact that Davis's completion ratio did not fall as it drilled more wells "indicates the quality of prospects is not being reduced even with extensive industry activity." *Id.* What Davis Oil never told Aetna was that it completed many wells that would not even pay the cost of completion. A completed Aetna well generally would augur an additional loss, not a gain, in the Davis Oil system. *See infra* note 36.

Marvin Davis took steps to reinforce Aetna's belief that a Davis Oil completion was good news. In July 1981, AEI president Roy Hood reported to his directors about the number of "discoveries" based on defendants' completion statistics. Defendants' Exhibit 135 at 1. In August 1981, a contingent from Aetna visited Davis Oil to discuss concerns over inconsistent documentation. They met with, among other people, Marvin Davis, Ed LaFaye, the chief landman Paul Messinger, and senior accounting officer John Aylsworth. Both Davis and LaFaye assured Aetna that Marvin Davis had enough good prospects to invest Aetna's full \$75 million. Davis reassured the group that "Marvin Davis values long-term relationships and he and his people view us as a significant partner." Defendants' Exhibit 41 at 1.

In September, Aetna staff reported to its board about "successful wells" and its "success ratio" based on the Davis measure of completed wells. Defendants' Exhibit 76 at 1. Even in January 1982, when Aetna was considering additional investment, Aetna still was reporting "successful" wells to its board based on Davis reports of completions. Defendants'

would turn out to be the much more important question: Would completed wells make money?³⁰

At first, the Davis Oil completion ratio seemed to document a wonderful investment.³¹ In 1982, Aetna agreed to commit an additional \$30 million. It believed, as any reasonable investor would, that a high percentage of completed wells meant that the decision to invest with Marvin Davis had been a wise decision. Aetna did not know that almost sixty percent of the wells Davis completed for Aetna would not even pay the cost of completion.

Marvin Davis continued to mix high completion ratios with news on his best wells. He repeatedly phoned Aetna's chairman and its chief financial officer with news of million-dollar "successful" discoveries. When Aetna staff began questioning why the completed wells were not beginning to produce a positive return and started receiving negative evaluations from its independent engineers, Ryder Scott, Davis Oil's chief geologist would claim that its experience gave it a better understanding of the industry than overly cautious reserve engineers.³² Discovery uncovered a pattern of predictions that Marvin Davis gave certain other major nonindustry investors that never came true either.³³

Exhibit 75, at 2. Aetna was using Davis's recommended measure of its results, but that measure would not turn out to be a good predictor.

30. Marvin Davis and his chief geologist, Ed Lafaye, personally made these calls to Aetna and, as described in note 33 *infra*, to at least certain other investors. In spite of active participation in the dissemination of this information, the defendants would argue as their sixth and seventh affirmative defenses to Aetna's lawsuit that "[t]he individual defendants did not know and, in the exercise of reasonable care, could not have known of any untruths or omissions of which the plaintiff now complains." They added that "[t]he individual defendants did not know and could not have known of the existence of facts by reason of which liability is alleged to exist." Defendant's Answer to the Third Amended Complaint, *supra* note 25, at 2, *Davis Oil* (No. 85-M-1821).

31. It is no mystery to operators with poor track records that investors, particularly nonindustry investors, will associate high completion ratios with success even if the completed wells have little chance of paying off their costs. Compare MARK SINGER, FUNNY MONEY 107 (1985) (describing how Oklahoma drillers used Sooner Trend as an area

[W]here you punched holes if you were less eager to accumulate oil-and-gas reserves than you were to impress potential investors with your 'success' ratio. The local geology rendered it virtually impossible to drill and not run into oil, but the geology was such that few Sooner Trend wells were truly worth the trouble.)

For additional discussion of the use of completion ratios, see *supra* note 29.

32. For instance, chief geologist Lafaye claimed that "his geologists and geophysicists were of a higher caliber than . . . [the] consulting geologist for Ryder Scott and, therefore, we should have a lot more trust and credence in their own work." Scott Katzmann Deposition at 261.

33. Aetna uncovered evidence that at least some other investors got the same kind of calls that Aetna received from Marvin Davis and geologist Lafaye. Davis and Lafaye called these investors to discuss the latest wells and ask for more money. Had Aetna's lawsuit gone to trial, Aetna would have submitted evidence of such calls through Ben Heineman, the chairman of Northwest Industries and a major investor in many of the same wells as Aetna, and its chief financial officer Richard Newberry; Barrington Parker, an attorney in New York City who invested in Davis Oil properties through an intermediary company, Vale and Company; Pincus Green, one of the managers of Marc Rich and Company when it was one of Davis's largest investors; and William Spencer, the former president and chief administrative officer of Citibank, who had been consulted by another

Davis Oil investor, Greek billionaire Stavros Niarchos. Niarchos also lost money with Davis Oil. Summaries of the upcoming trial testimony of each witness are attached under their own name in Plaintiff AEI's Pretrial Notebook, Pretrial Factual Summary, *Davis Oil* (No. 85-M-1821).

Perhaps most interesting among the other investors was Marc Rich and Company because it maintained written documentation of the calls by Marvin Davis and geologist Lafaye. Davis phoned the highest officers of his corporate investors. These executives generally did not write detailed memos of these calls. Nor did they have an expertise in oil and gas matters that would let them interpret the results reported by Davis. Marc Rich was a fortunate exception to the general lack of documentation.

The following is a summary, quoted from Aetna's pretrial factual statement and based on Marc Rich memoranda, of calls Davis and Lafaye made to Marc Rich and Company. The inside look at one of the industry's best-marketed operations is important because it is one of the few times that this so-often oral industry sales process was captured on paper:

1. *October 9, 1980.* Lafaye calls Shell Island sensational, the type of discovery "Marvin Davis dreams about," projects "conservatively" 25 BCF (billion cubic feet) of gas, but up to 35 BCF and 1.5 million barrels of oil from the first well . . . Lafaye says the total reserves would be 70 BCF to 100 BCF of gas. In addition, the discovery will set up a substantially deeper zone. With this and one other discovery, Lafaye says that Marc Rich had more than paid out its entire investment.

2. *November 5, 1980.* Peter Ryan, a Marc Rich executive, visits Marvin Davis and Ed Lafaye in Denver on October 29, where they tell him that his \$13 million expenditure has already resulted in reserves worth between \$100 and \$125 million with just 40 percent of his money spent. On Shell Island, . . . Davis says he feels the reserves and field have a potential of 200 BCF. Davis says the cash flow will be "tremendous at approximately \$60,000 per day."

3. *November 19, 1980.* Davis speaks with Rich executive Green on November 17, projecting \$85,000 a day for the first Shell Island well and approximately \$300,000 a day including the development wells. Davis "kept referring back to Ed [Lafaye] to get confirmation."

4. *December 4, 1980.* Rich executives Green and Ryan have lunch with Marvin Davis, in which he again gives the \$85,000 a day projection. Davis projects three more wells on the property, now with a per diem cash flow of \$340,000 a day. . . . Davis estimates the Shell Island reservoir at \$150-200 million, \$300-400 million if an additional test is successful.

5. *December 18, 1980.* Davis estimates Shell Island's value at \$700 million, a value that could double if the second zone is found.

6. *March 23, 1981.* A second Shell Island well comes in and Davis calls Rich to say it is "greater than foreseen."

7. *April 1, 1981.* Rich, Green, and Ryan all meet with Marvin Davis the day before in Denver. They go over a Davis reserve analysis which shows reserves of \$148 million from Marc Rich's \$15 million 1980 investment. Davis says these numbers could "double or triple upon complete development of the prospects in question." The first Shell Island well is just going on line. Davis lets Marc Rich know that the numbers he is discussing are conservative, use generally accepted accounting methods, and have been accepted by his bankers.

8. *April 20, 1981.* Marc Rich receives a Davis Oil reserve analysis on its wells, which Marvin Davis had sent and which Marc Rich has discussed with Ed Lafaye. Lafaye says the analysis was done from a "completely independent" point of view and does not include development potential. Although the numbers on some of the wells are down, Lafaye repeatedly states that he feels that the true numbers will be higher and Marvin Davis' prior reserve numbers will hold up. On Shell Island, which had been estimated at 6 million barrels and 150 BCF by Marvin Davis, the report still shows 5.1 million barrels of oil and 71 BCF of gas.

9. *May 14, 1981.* In a conversation on this date, Davis discusses Shell Island "and it was remarkable to see the enthusiasm." The deep well has already found 26 feet of pay dirt, Davis says, and has 600 feet to go.

10. *September 14, 1981.* Peter Ryan sends a memo to the file on September 11 on Davis' observations on certain wells. Davis says the drilling results of Shell Island indicate reserves of 100 BCF. This memorandum also marks the appearance of the Logan Federal well. Davis reports that an Amoco well next to the Logan well has hit 5500 [sic] feet of pay dirt, and contains a billion dollars of product. Davis revises his estimate on the Logan Federal upward from \$240 million to \$1 billion. Davis notes that his well will be drilled on the same structure as the Amoco well.

11. *November 3, 1981.* Marvin Davis calls Marc Rich directly to report that the Shell island No. 4 is a very big well. "It is the biggest since he started in the business. It will yield well over one billion dollars worth of crude and gas."

12. *December 3, 1981.* Peter Ryan receives another Davis reserve analysis. The numbers for the Shell Island wells are down, and when Ryan asks Lafaye why, Lafaye says not to believe even the Davis engineer: "the upper zones contain substantially more than the amounts contained in the November estimates and that these figures would probably be adjusted upward as time goes along." The Shell Island wells are almost half of the reserves, but the report does not include the Logan Federal.

13. *December 3, 1981.* Marvin calls and reports among other things discovering an unexpected pay sand in the Shell Island No. 3.

14. *April 5, 1982.* Marc Rich talks to Lafaye, who reports one of the Shell Island wells producing and says that the Overthrust (Logan Federal) well is drilling and "still looks sensational." Now the Sweetlake well in Section 28 is also moving to the fore. Lafaye says that this new prospect is "two times as good as Shell Island and what Marvin has said about it is not an exaggeration." Lafaye estimates reserves of 50 BCF of gas and 6 or 7 million barrels of oil as reasonable for the first well and estimates that Davis will be able to drill five or six more wells like this first well. A note of the memorandum indicates that Marvin visited on April 6 and "mentioned that the Sweet Lake property is the biggest he has ever hit. He estimates that at \$1 billion \$250 million."

15. *July 13, 1982.* The Overthrust well, still drilling, is described as having 400 feet of pay with another 350 feet to go in a call from Marvin. "He has never seen anything like it in 35 years in the business." By now Marc Rich wants to know when the revenues will begin coming from the phenomenally successful program, just as Aetna was starting to have the same question after a year of investing with Davis Oil. Davis is quick to provide reassurance. "We mentioned to him that we did not see income at the rate one would expect based on his indications and he said that some of the big things are only coming in now. We assume he refers to Sweetlake and Overthrust."

16. *July 28, 1982.* Marvin Davis calls and reports the Logan's log as "sensational." Davis says it only had 500 rather than 700 feet of pay, but he describes the quality as better than expected so the reserves stay the same.

Plaintiff AEI's Pretrial Notebook, *supra*, at 30-33. The final result was that Marc Rich lost \$47 million by investing with Davis Oil. Plaintiff's Exhibit 183, *cited in* Summary of Testimony of Preston Moore. Some of the same prospects figured in Edward Lafaye's May 1982 letter to Aetna, see *infra* note 34, in which Lafaye sought to persuade Aetna to stay in the program by showing it how successful it ultimately would be. For some other views of why Marc Rich lost this money, see Summary of Testimony of Preston Moore, *supra*, at 11-14; Peter Ryan Deposition at 116.

Marvin Davis's reports may sound implausible, but not so much when one asks what investor would have doubted their great fortune had it been Exxon, Shell, or Mobil's top management on the phone reporting these successes. Davis portrayed himself as performing better than these top companies. See *supra* note 25 and accompanying text. The size of his operations and the prominence of his investors seemed to confirm this status. Davis almost certainly was correct that he ran the second or third largest drilling operation in the United States. His investors included a former President, a former Secretary of State, and a roster of business and show business stars. Small wonder that investors did not suspect that their programs would not pay out.

By May 1982, about a year after Davis Oil had drilled the first well with Aetna as a partner, Aetna decided to suspend its funding. Its program still appeared wildly successful by the measure of completed wells, but Aetna was troubled by the lack of revenue. Davis Oil mounted a last ditch effort to keep the money coming. The chief geologist met the head of Aetna's oil and gas subsidiary in Denver and argued that just 6 of Aetna's more than 100 prospects were worth nearly two billion dollars, an estimate he put in writing.³⁴ Anything like this would have been a

34. The two billion dollars were gross returns for all interests, but the clear message was that Aetna's interest in these wells already was worth vastly more than Aetna's total investment. Geologist Lafaye's letter combines several archetypal forms of oilpatch reserve representations, including the discounting of contrary information, very high reserve projections, and claims of certainty for what could only have been estimates.

Lafaye started out by encouraging Aetna to continue ignoring its more cautious outside engineering consultants at the Denver office of Ryder Scott, a firm of reservoir engineers. He wrote:

I want to summarize the potential that the more successful prospects in your program could have. Obviously Rick Marshall, or any consulting firm supplying reserve numbers after only the initial discovery well would not provide these numbers, because it [is] too early in the development of the fields. However, our geologists who have experience and expertise in the respective areas can generate the upside potential based on analogies to existing developed fields and calculations from the discovery and surrounding wells.

Plaintiff AEI's Summary Judgment, Exhibit 143 at 1, *Davis Oil* (No 85-M-1821).

Lafaye then launched into his estimate for Aetna's six "examples." A deep Louisiana gas well, which he analogized to a nearby field, "is worth \$546 million for Oil and \$261 for gas, a total of \$807 million." *Id.* (emphasis added). In a second Louisiana well, Lafaye estimated the value based only on gas, "even though there is a very high probability we will encounter oil as Amoco did, obviously making the prospect more attractive." The conservative gas values "translate[] to a value of \$166 million for the prospect. The number could easily double if we find more oil." *Id.* (emphasis added).

In West Texas, Lafaye claimed to be putting Aetna into a field where "[w]e have five wells and will drill at least fifteen more. . . . [T]he gross value is \$60 million." *Id.* at 2 (emphasis added). In a field Davis was developing in Oklahoma, Lafaye spotted an "anticipated reserve of 20 BCF and 4 million barrels of oil [that] is worth \$195 million." *Id.* (emphasis added). In Utah, seeing a discovery next door to an Aetna prospect, Lafaye prophesied "[r]eserves of 22.5 million barrels is not unreasonable. . . . The value is potentially \$728 million." *Id.* (emphasis added). And in Wyoming, Davis was completing a second well in a field where it "could drill 8 more" and the wells "should yield" 150,000 barrels of oil apiece. "The value of this field is \$48 million." *Id.* (emphasis added).

As the italicized quotations show, Lafaye stated most of his predictions as facts about what a property "is" worth, presumably available to him from his greater expertise, rather than as projections or statements of opinion.

Lafaye summed up: "I hope these six examples will put into perspective how successful your program, when fully developed, will be." *Id.* (emphasis added).

At trial, Aetna expert Preston L. Moore would have explained his view that Lafaye greatly overstated the reserves on each of these wells. See Summary of Testimony of Preston Moore, at 8-16, attached to Plaintiff AEI's Pretrial Notebook, *supra* note 33.

The Davis defendants tried to ensure that the jury never heard about the LaFaye letter. They asked the court to exclude it from evidence. They argued that LaFaye's letter came after Aetna had made its investment commitments, and that in any event Aetna really relied on the reservoir engineers of Ryder Scott (whose advice Lafaye had downplayed, and whose recommendations he urged Aetna to ignore, even in the letter just quoted). Davis Oil Memorandum in Support of Motion in Limine to Exclude Evidence Pertaining to May 12, 1982 Letter from Defendant Lafaye at 1-6, *Davis Oil* (No. 85-M-1821). The trial problem for the defendants, of course, was that the Lafaye letter corroborated Aetna's testimony about their oral representations.

tremendous success, even for a company Aetna's size.

Aetna eventually lost over \$100 million. It received little more than \$60 million in revenue after spending over \$180 million.³⁵ This included Aetna's revenues from the six wells the chief geologist had praised so heavily. Had Marvin Davis been selling quality prospects, Aetna's sample of 200 wells was big enough to enable him to show it. Instead, Aetna's investment with Davis Oil Company was a disaster.

In spite of its occasional big discoveries (a result that the law of averages would guarantee for any company that drilled hundreds of wells a year), Davis Oil was strikingly unsuccessful for investors like Aetna. Had investors received a record of results like Aetna's (and Marvin Davis claimed to put Aetna into his best prospects), they would have known that the wider their sample of Davis Oil wells, the more likely they were to lose money. The average result in this period was a loss. Diffusion of interests was spreading losses, not risks.³⁶

B. MISREPRESENTATIONS IN DRILLING-FUND AND PARTNERSHIP PROGRAMS

The operator sales strategies described thus far used a traditional oil investment vehicle, the joint-project equity interest. Other operators sell shares in partnerships and drilling funds. This type of investment ordinarily is directed at outside investors rather than "industry partners." The funds may buy interests in dozens or hundreds of wells.

35. Michael Zeeb Affidavit §§ 2-3 (July 6, 1990).

36. Completions of Aetna's wells generally meant losing more money. Of Aetna's Davis-operated completed wells, fully 58, or 62%, did not bring in enough money to pay their completion cost. *Id.* § 5. A full 26 of these completed wells grossed less than \$5000; 22, almost one in four, made nothing. *Id.* § 6.

The quality of these prospects can be measured in a variety of ways. None of these emanate from Marvin Davis's calculations, because it turned out that in spite of his claim of being more successful than even major industry companies, Marvin Davis kept no records of finding cost or other economic measures of performance. Marvin Davis Deposition at 266. Thus Davis had no way to measure whether investors in his wells were making money or losing money. Accordingly, he could not know whether his programs were successful.

One way to show how unsuccessful the programs were is to compare Davis Oil's finding cost per equivalent barrel of oil with those of the industry, including the companies with whom Davis compared himself. The major industry companies with whom Davis Oil compared itself in an early letter from his chief financial officer Gerald Grey (and whose records Davis had promised to beat) had finding costs of roughly \$15 a barrel. The costs on Aetna's wells were \$53 a barrel. Supplement to the Summary of Testimony of Donald Hockaday, at 4 (Dec. 26, 1990).

Aetna's drilling expert examined the 135 Davis Oil-operated wells in which Aetna had invested. Of these, 88, more than half, were dry holes; 15 were completed but produced no revenue; 30 produced revenue but did not pay out; and only 2 out of 135 paid back more than their total costs. Supplement to the Summary of Testimony of Preston L. Moore, Table 9 (Dec. 25, 1990). Not one of the 24 Oklahoma prospects operated by Davis on Aetna's behalf, the 6 North Dakota prospects, the 3 Utah prospects, the 61 Wyoming prospects, the 5 Colorado prospects, the 18 Louisiana prospects, or the 3 Montana prospects ever paid back its costs. *Id.* Tables 1-8. Only 2 of the 15 Texas prospects generated more money than they cost. *Id.* Table 3.

The investors never receive title, billings, revenue statements, or other information on individual wells. The investment papers they do receive, prospectuses, subscription agreements, partnership statements, or shareholder reports, are much more general than equity investors' papers. The lack of detail makes it easy for unscrupulous operators to raise large amounts of cash quickly from many investors. Fraud has flourished as misrepresentations about overall programs replace claims about individual wells.

Oil and gas partnerships and drilling funds became very popular over the past few decades because they enable operators to raise large amounts of money through national broker networks.³⁷ The structure solves at least three problems that limit prospect fundraising: (1) it permits the pooling of thousands of investors who have relatively small stakes; (2) it lets operators extend a program beyond a single drilling area; and (3) the larger partnerships offer investors some hope of liquidity because large programs may be big enough to support markets for their shares.³⁸

37. As described by Louis Loss and Joel Seligman:

The last few decades have seen the development of a new method of financing, the 'oil program,' in which the security is not an undivided interest in one well but an interest, under a variety of contractual arrangements, in a joint venture or limited partnership whose function is to develop a *number* of profitable drilling prospects. These programs are sold for the purpose of raising funds to acquire leases on prospect acreage and to drill wells, although producing properties are sometimes acquired as well. . . . Customarily the programs are created at annual or more frequent intervals

LOUIS LOSS & JOEL SELIGMAN, *FUNDAMENTALS OF SECURITIES REGULATION* 182 (3d ed. 1994).

38. Jane Romanov and James Irish, experienced oil and gas transaction lawyers, note that "[t]he 1970s and early 1980s were marked by the emergence of such mechanisms as income and drilling funds, the short-lived penny stock market, the royalty trust, and the master limited partnership." Jane F. Romanov & James L. Irish, *An Overview of Sources of Capital and Structuring Investments in Oil and Gas*, 34 *ROCKY MTN. MIN. L. INST.* 13-1, 13-3 (1988). The "typical" partnership, one structured on JOA-lines, has financial limitations:

[It] is hampered by the minimum investment typically required. The traditional oil and gas partnership requires a sizable investment by the individual partnership, severely narrowing the pool of investors and hence the flow of available capital. Traditional oil and gas partnerships have been project-oriented and short-term, seldom expanding into any exploration and development activities which were not originally the focus of formation. Finally, and perhaps most importantly such partnerships lack liquidity, the investor's partnership interest generally being difficult to sell.

Id. at 13-10. Master limited partnerships, in contrast, could be "structured like a partnership but function as a corporation, enjoying corporate management flexibility and liquidity. . . . Because the units are publicly traded at relatively low prices per unit, the number of investors can be vast. As a result, the MLP has the ability to enjoy a steady flow of capital for acquisition, exploration, and development activities." *Id.* at 13-12.

Writing in 1988, Romanov and Irish were able to write that "despite the recent decline in oil and gas prices, the success of certain drilling fund syndicators reveals that a significant number of individuals continue to desire to participate in exploratory and/or development drilling activity." *Id.* at 13-22.

Of course, these features can create agency problems. When there are a large number of small investors scattered around the country, rather than a few large investors, the investor pool may not have enough cohesion to monitor the operator. When the drilling program is

In spite of differences in structure, partnership investments share the shortcomings of traditional equity investments. The industry has not required partnership operators to disclose their past results. Partnership and fund operators with poor records are free to lure investors with unfounded promises of success.

1. *Longhorn Oil and Gas: Fabricating a Track Record, Concealing Losses, Inflating Reserves*

A good example of the problem, and one of the most famous partnership disasters, was sired by Longhorn Oil and Gas (Longhorn). Longhorn was the operator of a series of partnerships launched by Oklahoma oilman Carl Swan and his sidekick, J.D. Allen. Longhorn was one of the many companies that floated into the industry on the high tide of the late-seventies and early-eighties boom.

Carl Swan had been in the oil business for a long time before he and J.D. Allen brought Longhorn into the big time. By 1977, when he and Allen founded Longhorn Oil & Gas Company, he had twenty-five years of experience in the industry.³⁹ Allen and Swan raised funds throughout the country. They borrowed at least \$90 million in loans originated by Penn Square Bank and farmed out to Continental Illinois National Bank & Trust Company (Continental Illinois), Seattle's Seafirst Bank, and several other banks. The failure of Longhorn and other Penn Square oil and gas fundings ultimately would destroy some of the largest banks in the United States.⁴⁰ Oklahoma-born *New Yorker* staff writer Mark Singer

ongoing, rather than just a few pre-agreed wells, it becomes harder to determine how the project is doing. An operator may plow all of the early revenues back into drilling and it may be years before the investors can draw a bead on their results.

Romanov and Irish catalog a number of other innovative, often short-lived investment packages, including royalty trusts, *id.* at 13-19; acquisition funds, *id.* at 13-24; lease inventory funds, *id.* at 13-25 to -26; and completion funds, *id.* at 13-26.

39. LONGHORN OIL & GAS CO., 1981 PRIVATE DRILLING PROGRAM OFFERING CIRCULAR 23 (1981).

40. When Penn Square Bank failed, it was the costliest bank failure in United States history. SINGER, *supra* note 31, at 179. But Penn Square was only the tip of the iceberg. The young bank never had much capital of its own. Its President, Bill Jennings, realized that even without its own funds, Penn Square could generate millions of dollars in fees if it packaged loans for more substantial participating banks. In many of these loans, the banks might buy 100% of the participation, with Penn Square having no risk but still earning a handsome handling fee. *Id.* at 19-20.

Such no-capital lending permitted extraordinarily rapid business development. Penn Square began its oil and gas department in 1976. It would arrange over \$2.5 billion in loans in a three-year period, only to fail (that is, be declared insolvent by the Federal Deposit Insurance Corporation) on July 6, 1982. *Id.* at 4-5, 15-16, 143.

As the originating bank, Penn Square was supposed to handle most of the documentation, but its screening was often nonexistent. The list of its shoddy practices explains how a bank with virtually no oil and gas experience could source billions of dollars in loans in just three years.

Lending money in the absence of a formal loan application; asking a customer, for the sake of expediency, to sign several blank notes; lending additional funds to meet interest payments; looking a customer in the eye but not looking closely at his financial reports; failing to require borrowers to have their mortgaged oil-and-gas production income sent directly to the bank each

has detailed the Penn Square story in his book *Funny Money*.⁴¹ To most observers, the Penn Square bankruptcy signaled the end of the boom years.

Longhorn exploited the absence of effective past performance documentation in several ways. First, even though its principals had only had a few unsuccessful prior programs, they were able to pretend to have a "successful track record" because they did not have to publish the economics of their prior wells. Revealing even the most minimal facts about their early programs would have disproven their claim to a successful track record.

These efforts to conceal Longhorn's inability to find commercial levels of production were matched by repeated distortions in reserve reports on existing programs as the fraud continued. Longhorn had sponsored two other programs, the 1977 and 1978-I programs, before the programs that wound up in litigation. Longhorn's offering circulars cited these two prior programs and their completion ratios as evidence of success. Omitted was any indication that these programs had lost money and had no chance of turning a profit for investors.⁴² The results of the 1978-I pro-

month; advancing interest payments to upstream banks on behalf of customers who had not yet sent the interest payments to Penn Square

Id. at 123.

Penn Square was a domino falling in a line of weak banks. Abilene National Bank failed six weeks after Penn Square. *Id.* at 153. Next was United American Bank of Knoxville. The following year came First National Bank of Midland, Texas, with triple the assets of Penn Square. *Id.* A ripple of preservative acquisitions would sweep the oil producing states in the years that followed.

Disaster befell the major "participating" banks who had shared Penn Square's deals. Penn Square fed its debased loans to some of the largest banks in the country. Continental Illinois National Bank & Trust Company, the eighth largest bank holding company in the United States, took a billion dollars in Penn Square loans as it increased its total oil and gas lending from \$833 million to \$2.3 billion between December 1980 and June 1982. It ended up risking half of its equity in oil and gas ventures. *Id.* at 55-56, 125, 154. Soon after Penn Square's failure, Continental Illinois took a \$530 million loss. It classified another \$200 million in loans as nonperforming. *Id.* at 207-08. The bank's assets fell from a peak of \$47 billion in 1981 to \$17 billion in 1984. *Id.* at 208. It survived, in much diminished form, only because the government took over its worst assets. *Id.* at 210.

Seafirst, the Seattle bank, had taken oil and gas loans equal to two-thirds of its equity. It invested \$400 million in Penn Square loans, above and beyond numerous other oil and gas loans. Seafirst survived economically but not corporately; it was acquired by the Bank of America. *Id.* at 154-57.

Two other banks suffering major losses from their Penn Square involvement were Chase Manhattan, with over \$200 million in participation, and Michigan National, with somewhat less than \$200 million. *Id.* at 155-56.

41. See generally SINGER, *supra* note 31.

42. The settlement of the *Longhorn* litigation prevented full development of the record and kept many documents from entering the public domain. Fortunately, the plaintiffs' pretrial brief, which includes a 150-page statement of facts, cites many of the core documents produced by Longhorn and the other defendants. Plaintiffs' Pretrial Brief 1-157, *In re Longhorn Sec. Litig.* (W.D. Okla. 1984) (No. MDL 525) [hereinafter *Longhorn Plaintiffs' Pretrial Brief*]. The brief explains quite clearly what went wrong.

As far as prior programs, the plaintiffs alleged that when Longhorn initiated its 1978-II partnerships, it hid from investors the fact that the limited partnerships its principals had sponsored in 1977 and 1978 "had not produced sufficient oil and gas reserves to repay the limited partners the amount of their investments." *Id.* § 76(b). Longhorn did not mention that the results had been so bad that "Swan, Allen and [Longhorn] agreed to reduce the

gram were so poor that investors had complained and Swan and Allen cut their own interests to keep those investors happy; these payoffs were concealed from new investors.⁴³

Second, when Longhorn's banks realized that the programs were not paying their costs, they ignored their lending requirements and continued to loan Longhorn money. The loans sustained Longhorn's image as a going concern as it returned to the market for new investors.

Brochures on Longhorn touted Swan's "successful track record."⁴⁴ This assurance was bolstered at investor meetings with promises that Longhorn had a "favorable track record" and was "one of the best in the business."⁴⁵ Progress reports listed the number of "producing" wells without saying whether any were commercially productive.⁴⁶

When investors complained in litigation that they had not been told that earlier investors lost money, Swan and Allen hid behind the industry's inadequate standards. They argued that "[t]he prior success ratio of the Longhorn partnerships was adequately disclosed in the offering circulars."⁴⁷ Perfectly replicating the absence of effective reporting standards, they claimed that "the financial statements adequately reflected the prior success ratio of previous Longhorn partnerships *to the extent generally accepted accounting principles would warrant including such information in the financial statements of the corporation.*"⁴⁸

Swan and Allen may have been right about the sorry state of industry standards, but they were wrong whether their statements "adequately" reflected their prior failures. Translated from legalese, what they meant was that they, like Marvin Davis, were reporting as a "success" ratio the percentage of completed wells out of all wells drilled. The ratio was affirmatively misleading when used by an operator that routinely completes uneconomic wells. It hid the fact that Longhorn was not finding enough reserves to make anyone money. Yet investors got no better information

amount of their revenue-sharing interests and increase the interests of the limited partners." *Id.* § 76(e).

43. *Id.* § 76(e).

44. *Id.* Exhibit D, prod. no. 178, *Longhorn* (No. MDL-525) (biography of Carl Swan in Longhorn company brochure, citing his "successful track record," which he allegedly joined with "another outstanding independent producer, J.D. Allen"). One statement that was true is from Allen's biography on the following page: "He joined Carl Swan in forming Longhorn and together, they formed a *unique* company." *Id.* at 179 (emphasis added). Longhorn certainly was unique, given its role in the demise of Penn Square Bank and Continental Illinois National Bank, but not unique in the way the defendants represented.

45. The plaintiffs later would complain that "[a]lthough representing that Longhorn had a favorable 'track record,' no disclosure was made of the above-described lack of success in the prior Longhorn programs." Longhorn Plaintiffs' Pretrial Brief, *supra* note 42, § 8b(d). The Company was portrayed as well run, "one of the best in the business," without any mention of its burgeoning problems. *Id.* § 86b(e).

46. For instance, progress reports on the 1978-II, 1979-I, and 1979-II programs allegedly "referred to producing wells without regard to whether they were commercially productive." *Id.* § 79(l). "[M]any" wells were described as "waiting on pipeline construction" when in fact they were known to be dry holes or not commercially productive." *Id.* § 79(m).

47. Defendants' Pretrial Brief at 151-52, *Longhorn* (No. MDL 525).

48. *Id.* at 152 (emphasis added).

because the industry does not require operators to disclose the economics of completed wells.

Misrepresenting past results was only part of the Longhorn problem. Because the company didn't know how to find commercial quantities of oil and gas, it faced the problem of hiding its losses. Longhorn and its lenders worked hand in hand to solve this problem. The Company was lucky because Carl Swan was a director of Penn Square. The bank, which often originated loans without taking a participation in them (thus avoiding any risk for itself), had turned into the most go-go of lenders in the easy-money boom years.

One of Longhorn's allures to investors had been letter-of-credit financing. Investors could put just twenty-five percent down on their unit price and sign a letter of credit for the rest of the money.⁴⁹ Longhorn assured investors that it "had never had a letter called since the previous wells always produced enough oil and served as 'in the ground reserves' against which the bank would loan money thereby returning the letters of credit."⁵⁰ Because banks ordinarily require reserves to be verified by independent engineers and to exceed the amount of the loan—for instance, on paper Penn Square required reserves with a present value of twice the loan amount⁵¹—the fact that banks had not called any letters of credit seemed to confirm Longhorn's ability.

Had the banks called the letters of credit, investors would have smelled trouble. The bad news would have spoiled the market for future investors. Thus the banks had an interest in continuing credit because once the first programs faltered, the banks' only chance to recover their direct loans to Longhorn was if some future program made a large discovery of new reserves, or if extending credit kept the company in operation long enough for prices to rise sharply.

Continental Illinois knew by the summer of 1980 that the 1978-II program did not have the reserves to support its \$1.7 million production loan. Yet Continental issued the loan after Swan and Allen personally guaranteed the borrowing, and the bank released the letters of credit. Longhorn predictably mailed this good news to its investors.⁵² The same thing happened on the 1979-I and 1979-II programs.

49. Longhorn Plaintiffs' Pretrial Brief, *supra* note 42, § 7.

50. Plaintiffs' Opposition to Summary Judgment Motions of L. Fred Smith and Robyn Fulton, Exhibit H, Affidavit of Investor Paul Lichter at 2, *Longhorn* (No. MDL 525).

51. Longhorn Plaintiffs' Pretrial Brief, *supra* note 42, § 143.

52. The plaintiffs alleged that Gary Brednich, a Continental petroleum engineer, told Ken Wilson, Penn Square's Vice-President, about this revenue shortfall in the summer of 1980. *Id.* § 80(j). Later in the summer, Longhorn's Vice-President of Finance, John Lang, would determine that the 1978-II program also would not qualify for loans and discussed this troubling problem with Continental Illinois and Penn Square Bank. *Id.* § 80(k). Yet Penn Square sent Longhorn a letter on September 15, 1980 agreeing to "release the . . . letters of credit" [though the banks now knew Longhorn had not discovered the reserves needed to replace the letters]. *Id.* § 80(m). Two days later, Longhorn circulated the letter to 1978-II investors. *Id.* Investors naturally would assume that the program was doing just fine.

Finally, Longhorn had the problem that it had promised reserve reports. Honest reports would have revealed the coming losses. The company's solution was to inflate its reserves. Longhorn's Vice-President of Finance, rather than a reservoir engineer or geologist, prepared its reserve reports.⁵³ He dramatically overstated results.⁵⁴ This is why the industry needs continuing disclosure of *economic* performance, not just an operator's current reserve estimates.

2. Home-Stake: Running the Ponzi Scheme

If not calling letters of credit is one way for an oil company to conceal failure, another is to pay distributions with new investors' money. This is the classic Ponzi scheme. The operator takes money contributed by the most recent investors and uses it to pay returns to earlier investors. The operator points to the high returns as signs of success, but the returns are not coming from oil or gas. They are just a measure of how quickly the operator has tapped into a producing field of new investors. The operator needs more and more investors to feed its ever-growing hunger for cash.

The Ponzi scheme relies on a common industry practice, commingled accounts. The commingling of investor dollars was critical to the most blatant Ponzi scheme in the industry's history, one run by Tulsa-based Home-Stake Production Company. Like many operators, Home-Stake placed its investors' money in one account. It combined one year's capital with another year's and mixed investor money with its own.⁵⁵ Because the industry has rejected attempts to require operators to escrow each project's money⁵⁶ (the treatment one would expect when one party entrusts its money to another for a specific purpose), Home-Stake was able to use new investor money to keep old investors happy for at least nine years. It did almost no drilling during this period. The company did

53. *Id.* § 89(c).

54. A report on the 1979-I program based almost six million dollars (one-third of the total reserves) on a well that had not earned any reserves from the company's independent reservoir engineers. *Id.* § 88. The misreported well was the Ball No. 6. This report was dated May 15, 1979, but apparently "[was] intended to have been dated May 15, 1980." *Id.*

A May 15, 1980 report on the 1978-II program assigned two-thirds of the reserves, over \$8 million out of \$12.5 million, to a well that gave no indication of being a viable producer. *Id.* § 87 (a)-(c) (discussing Clark Sain No. 8 well). Within a month, the drilling operator would indicate that the well "would not be commercially productive" and "should be plugged and abandoned." *Id.* §§ 79(k), 87(d).

One excuse Longhorn gave for the delay in receiving revenue from what really were marginal wells was that the wells were "waiting on pipeline connections." *Id.* § 92. In reality, the properties didn't have enough gas to produce.

55. Home-Stake's President testified that he was entitled to use investor funds for any corporate purpose, which in his mind included buying an apartment house and a lime plant. Robert Trippet Trial Transcript at 1490, *In re Home-Stake Prod. Co. Sec.* (N.D. Okla. June 30, 1988) (No. MDL 153). [Trial exhibits and transcript pages hereinafter will be cited by, respectively, trial exhibit number and trial transcript page. All exhibits are on file with *SMU Law Review*.]

56. The AAPL considered but rejected a requirement of separate escrow accounts during the 1989 amendments. The industry opposition to the initial amendments to the JOA is discussed in text accompanying note 248 *infra*.

indeed find gushers, but from an eruption of investors, not a stream of oil or gas.

Home-Stake began selling programs in 1960.⁵⁷ Its sales continued into the early seventies, when the government finally brought the enterprise to a stop. The company presented its programs as conservative opportunities. Beginning in 1965, it focused on the secondary recovery of proven oil reserves in California.⁵⁸ Home-Stake described its waterflooding and steamflooding techniques as established, low-risk procedures.⁵⁹ In fact, Home-Stake had no experience with what were very risky technologies. Its chief engineer later testified that he never believed secondary recovery was a low-risk proposition.⁶⁰

Home-Stake matched its optimism about methods with unqualified promises about reserves and economics. Prospects were listed by barrels of oil, recoverable sands, and percentage of reserves in place.⁶¹ Inserting

57. *Home-Stake*, 76 F.R.D. at 341.

58. Plaintiffs' Consolidated Opposition to the Motions of Defendants for Judgment Notwithstanding the Verdict or, in the Alternative, For a New Trial, at 8, *Home-Stake* (No. MDL 153) [hereinafter Plaintiffs' Opposition to JNOV or New Trial].

59. Home-Stake's 1963 Black Book, in a section titled "General," characterized its properties as "low risk and [with] excellent profit potentials" and claimed that these views were shared by "our neighbors," whom it identified as a number of major oil companies. Exhibit RD 9, 1963 Waterflood Program Investor brochure, "General," at 1-2.

A nine-page section that followed on "description and explanation of waterflooding" gave no indication that the procedure was risky and concluded that, "[i]n recent years, due to advances in design, engineering and construction, Home-Stake has used the system very successfully." *Id.* at 9.

In 1969, when Home-Stake had shifted to steamflooding, the company's Black Book brochure contained four pages on this new technique. The description did not mention any risk. Instead, the company claimed that, "[i]n general, steamflooding imposes no particular hardships and presents no unusually difficult operating problems. This is especially true if it is incorporated into a company whose background contains waterflood experience." Exhibit RD 3, 1969 Program, "Physical Aspects of Steamflooding," at 8.

60. The real thinking at Home-Stake about the steamflood process that the company described as established and low risk appeared in an internal memorandum by its chief engineer. Memorandum of Frank Sims, Chief Engineer, to Robert Trippet (Aug. 25, 1970), *Home-Stake* (No. 153-R).

Sims had a message investors never would receive:

Gloom is my feeling too. . . . I never can report anything good. If I'm anything but gloomy, it's frustration.

. . . .
I would really feel bad if I honestly thought we had a chance and blew it. My only consolation is that the steamflood idea in Cat Canyon, as far as our properties were concerned, was a high-risk gamble to start with. In other words, the fact that it was mismanaged cost us time and money but I really don't believe it was in the cards to make a killing anyway.

Id. at 1-2.

The plaintiffs' experts were more blunt. They testified that the California properties Home-Stake acquired for secondary oil recovery could not develop commercial production "through any form of existing steam recovery technique." Appellees' Brief at 7, *Home-Stake* (No. 153-R) (citing Trial Transcript at 597-609, 620-24) [hereinafter *Home-Stake* Appellee's Brief].

61. The first prospect in the 1963 program, the Searight Waterflood Project, was listed with a

[P]rimary recovery from the Seminole sand calculated at 300 barrels per acre-foot, which is 41% of the oil in place, with the waterflood recovery to be 135 barrels per acre-foot. In developing all of our productive acreage the

unreasonably certain reserve estimates into rate of return formulas predictably led to extraordinarily high projected returns. The 1963 Program's brochure promised "per annum profit not considering taxes at 24% per annum. In other words, the changes raise the total ultimate profit from 289% to 292% The per annum profit after considering taxes is reduced slightly from 64% to 62%."⁶² In the 1969 Program, with Home-Stake never having had a year of successful production, the company listed a total-life profitability of 302% before taxes, 764% after taxes.⁶³ A company vice-president claimed that the after-tax numbers were the "only realistic view."⁶⁴

Home-Stake was phenomenally successful in prospecting for investors. Ironically, even as the company failed year after year to find reserves, its pool of investors grew. But Home-Stake did only the slightest amount of drilling. In its later years, while raising tens of millions of dollars a year, it basically was not drilling at all.⁶⁵

secondary recovery for the 85.5% working interest is calculated at 3,655,000 barrels of oil for the Hunton reservoir and 2,065,000 barrels of oil for the Seminole Sand Reservoir.

Exhibit RD 9, *supra* note 59, at 2 ("Searight Waterflood Project, Engineering Report").

In 1969, just before the SEC became reinvolved, the 1969 program issued similar materials. Home-Stake had moved from waterflooding to steamflooding, but its optimism was unabated. For the first prospect in the later program, the engineering report reassured investors that "[f]rom the present wells, sufficient data are available to establish good geologic control on the Project reservoir." *Id.* at 2. "The combined mechanisms have demonstrated overall oil recoveries in excess of 55 percent of the original oil in place in various applications of the pattern steamflood technique." *Id.* The report claimed that "it has been determined that the Upper Pliocene Sand Reservoir can be developed over 1,247 surface acres with 136,864 acre-feet of net sand, having an average thickness of 110 feet. The oil reserves obtained from the Los Coches Project and attributable to the 1969 Program are calculated at 30,327,840 barrels of oil." *Id.* at 3.

62. Letter from R. S. Trippet, President, Home-Stake Prod. Co., to "Our Participants" 3-4 (Sept. 16, 1963) (on file with *SMU Law Review*).

63. HOME-STAKE PRODUCTION CO., BUDGET, NET COST AFTER TAX SAVINGS AND PROFITABILITY 16 (1969).

64. *Id.* at 15.

65. A chart submitted by the plaintiffs showed that the 1965-1969 prospectuses projected 895 wells, but Home-Stake drilled only 80. The magnitude of the disparity indicates just how far Home-Stake was from the viable operator it pretended to be:

PROGRAM	PREDICT NO. OF WELLS	ACTUAL NO. OF WELLS
1965	240	18
1966	260	25
1967	170	23
1968	105	9
1969	120	5

Nor did the wells Home-Stake actually drilled do much to help—a number were spudded just to make a show of progress, not to find oil. See *infra* note 67 and accompanying text.

Of the more than \$20 million subscribed to the 1968 and 1969 Programs, Home-Stake spent only \$500,000 on oil and gas activity. Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 15 (citing Chief Engineer Frank Sims Trial Testimony at 414-16 and Exhibits RDs 666, 667 (1968 and 1969 prospectuses)).

Investors fared little better when Home-Stake did spend their money on industry activity. The 1968 program acquired California leases that its engineers had rejected in 1967; in 1969 Home-Stake acquired leases it had rejected in both 1967 and 1968.⁶⁶ Some of the wells the company did drill were just drilled to 500 feet, even though the target producing zones lay between 2700 and 3200 feet.⁶⁷

As the years went on, there was less and less money for drilling. Home-Stake diverted ever more cash to pay distributions to its spiraling number of investors. None of its programs were generating significant revenue.⁶⁸

Home-Stake's California engineer, Charles Greer, grew so sick of soliciting money for oil recovery but not spending the money on oil that he resigned. Greer wrote President Robert Trippet to say that he was resigning because of the company's business ethics. But his baby-splitting solution was to submit a bid for the office equipment and offer to continue doing exactly the same job as a consultant. In other words, his resignation was designed to shield him from responsibility, but protect his income. His comments went to the heart of Home-Stake's problem:

1) I have not been able to rationalize the morality of soliciting funds for a turnkey development contract, such as the fifty or sixty million dollars solicited for the California Projects, and not actually devoting the appropriate fraction of this amount for the intended purpose, or some acceptable substitute therefor.

2) In the face of the overwhelming evidence indicating that the California Project funds evidently, either are not available, or are not going to be devoted for the intended purpose, the California effort obviously can only attenuate into a dead end, to which effort I am not now prepared to exclusively relegate myself.

3) In view of the fact, that I do not possess legal expertise, nor do I have access to the records, I cannot be sure that these problems are not serious. In the event they are, I would presume that I would sustain personal liability, as an officer of the Corporation.

Resignation Letter of Conrad Green to Robert Trippet 1 (Ex. 958, Sept. 28, 1971) His letter ended with a bizarre flourish reiterating his ethical solution: "To finally summarize: I am physically sick; morally depressed; fearful of uncontrollable legal liability; but enamored with my task. My best judgment dictates that I resign as an officer of Home-Stake but it allows me to perform my previous services on a contract basis." *Id.* at 4. Greer's compromise gives "contracting out" a new meaning.

The 1970 and 1971 programs, designed to develop oil in Venezuela, did little better. Home-Stake spent only \$4.3 million of the \$18,820,000 1970 budget and barely \$2 million of the \$13,949,000 1971 budget. *Home-Stake Appellees' Brief*, *supra* note 60, at 8 & n.4 (citations omitted). A company engineer calculated that Home-Stake spent only 6.83% of the funds budgeted for 1968 and 1969. Memorandum from Conrad Greer, chief engineer, Home-Stake Prod. Co., to R.S. Trippet, president, Home-Stake Prod. Co. (Nov. 24, 1971). Of three projects in the 1968 and 1969 programs, Greer calculated that Home-Stake had spent only 6.67% of the budget on one, 9.8% on a second, and nothing on a third. *Id.* at 1-2.

66. Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 11, *Home-Stake* (No. 153-R).

67. *Id.* at 15-16. Not only did the chief engineer claim he did not know why the company drilled these shallow wells, he could not even explain why they set casing before the wells reached target depths. Frank Sims Trial Transcript at 464-65 (June 22, 1988). Sims somewhat poetically called the wells "commencements of wells." *Id.* at 465.

68. The cash flow problem was exacerbated because Home-Stake, like Longhorn in later years, required investors to pay only part of the equipment costs (in Home-Stake's case, just 30%). The remainder would be funded by nonrecourse borrowing on program properties. *Id.*

To maintain the fiction that cash payouts reflected real wealth, and not rerouted investor dollars, Home-Stake juggled its books. Home-Stake had the opposite problem of operators who pad overhead expenses. It had to absorb operating expenses so that it could pretend investors were being paid from revenues. The bookkeepers prepared accurate schedules that invariably showed a loss. Chief executive officer Trippet would reclassify many expenses and write in enough production revenue so that the projects would appear to pay out.⁶⁹ In this way Home-Stake converted five years of operating losses, \$3.2 million in all, into \$11.2 million in paper gains.⁷⁰ Later programs included a "previous program" table that listed distributions on earlier programs as evidence of how successful the company had been.⁷¹

69. For instance, Trippet had written onto one quarterly schedule: "Make this a plus by absorbing \$40,000 of operating exp. Then add enough pro. rev. to bring total pay per unit up to \$175.26 per unit. . . . Re-classify all absorption plus all add-on as development exp." Exhibit 3413/1 at 2, *Home-Stake* (No. 153-R).

Trippet admitted that he started making "arbitrary reclassifications as early as 1966." Robert Trippet Trial Transcript at 1403. He argued that it was "arbitrary as to the particular dollars and cents but not the concept and not the general amounts." *Id.* at 1510.

Trippet's excuse was that someone in his accounting department was "miscoding" development costs as operating expenses, quarter after quarter. *Id.* at 1615. He "fixed" this problem "every quarter." *Id.* at 1616. He claimed that he knew these operating expenses really were development costs "[b]ased upon my detailed knowledge of our California operations and my 27 years of experience in the oil industry" and that his reclassifications were designed to prevent investors from being double-billed. *Id.* at 1617.

Trippet never explained why, if he believed expenses were being miscoded, he didn't have the problem corrected at once. His inaction was like a bank knowing funds are being embezzled but not bothering to look for the thief. Nor did Trippet explain the fact that the recoding just happened to push Home-Stake from a loss to a gain in every quarter.

70. *Home-Stake* Appellees' Brief, *supra* note 60, at 10.

71. *Id.* at 80-81. The list of necessary misrepresentations goes on and on. Home-Stake took advantage of accounting regulations that permit some companies to claim an asset value from certain expenditures, if the expenditure is supported by expected reserves. Home-Stake was able to hoist its books into the black by listing millions of dollars in "equipment installation receivables." Unfortunately, the company had not discovered reserves to pay for these expenditures. The details of this accounting fraud are explained in Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 54-59, 68-69, *Home-Stake* (No. 153-R).

Home-Stake had to misstate its level of activity. Though it was not performing the steamflooding promised, it would list inactive properties as being "operated." Trippet explained that this fiction "[d]epends on your definition of the word 'operated.' Whoever wrote this had a broader definition than just the operation of wells on the property. I presume . . . what he meant was that development work outside the boundaries of the lease was being carried on which would later be applied to the lease." Robert Trippet Trial Transcript, at 1472, *Home-Stake* (No. 153-R). "Operated" meant that the company was doing "research work." *Id.* at 1530.

Investors received periodic reports on the percentage of their program "completed." Engineer Sims estimated the percentage completed—"I did not compute them; I just estimated them"—without looking at accounting or other records. Frank Sims Trial Transcript, at 541, *Home-Stake* (No. 153-R). He "just picked it out of the air." *Id.* at 569. He had quite a free hand: "Nobody quarreled with me on them very often except the auditors, and they would say what they had to say, and then they would turn around and leave." *Id.* at 546-47.

To conceal the dismal failure of the original properties, Home-Stake added five more properties to supplement revenues. This shift was referred to as "the old switcheroo." Robert Trippet Trial Transcript, at 1532, *Home-Stake* (No. 153-R). The company kept this

Because his need for cash was so urgent, Trippet divided investors into classes. He paid each class on a different basis, depending upon how likely he thought they were to invest money in the future. Each received a different percentage of the "full pay" amount.⁷² By the end of 1971, three of the early programs had, respectively, nineteen, twenty-one, and twenty-three classes of investors. Investors who discovered that they had been paid less than other investors were told the difference was a computer error and would be corrected.⁷³ Investors were paid to keep them

shift in properties secret "[b]ecause it would have jeopardized our participants' tax deductions, which was the last thing they wanted us to do." *Id.* at 1570.

In 1970, the SEC forbid Home-Stake from using 1970 funds to pay prior program distributions, requiring that the company instead put its funds in escrow. This put an end to the Ponzi structure on which the company had relied. Home-Stake tried to borrow more money, but had to shut down its California operations, which it never resumed. Yet the rescission offer prospectus listed the California properties as still being operated. Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 39, *Home-Stake* (No. 153-R) (citing Exhibit RD 659).

Some of the deception is hilarious. Home-Stake knew that investors like to touch the merchandise. They respond well to tangible evidence. On-site promotion is a time-honored and successful marketing strategy for many companies. But with virtually no operations, Home-Stake did not have the normal indicia of a successful oil company. The company came up with a solution: "Home-Stake went to the extreme extent of purchasing a large volume of irrelevant engineering logs, maps, charts, and other accouterments of a real oil company in order to stock their offices in California." *Id.* at 45-46. To give investors that hands-on experience, it constructed a well with a special "squitter" that would emit oil so investors could have their picture taken next to their production. *Id.* at 45; see Frank Sims Trial Transcript, at 475. Surface irrigation pipes were repainted to look as if they were moving oil and markers were scattered on the ground to pretend that they sat on top of large (but in fact nonexistent) underground facilities. Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 45-46, *Home-Stake* (No. 153-R). Engineer Sims proposed the tromp d'oeil to Trippet in Exhibit 3036, a memorandum dated February 5, 1969. Rather than paint irrigation pipes, he proposed erecting drilling rigs on various parts of the property:

Our 1968 Program locality shows up as almost devoid of anything of interest. And due to the flatness of the terrain, it is perfectly obvious we have done practically nothing. . . . One idea that occurred to me would be to take four of the old derricks . . . and set them on four corners which are a mile or two apart so that it will define the area. The trouble is that it would make it even more obvious that little work has been done actually. Perhaps we could put the derricks one half mile apart.

Frank Sims Trial Transcript, at 480, *Home-Stake* (No. 153-R). The ultimate solution was to ask farmers "if they could paint their irrigation standpipes that were scattered throughout the pepper fields." *Id.* at 482. This made the area look as if it had production. Investors were told that much of the production was underground. *Id.* at 482-83. Home-Stake also trucked production from lease to lease. *Id.* at 493-94.

72. See Plaintiffs' Opposition to J.N.O.V. or New Trial, *supra* note 58, at 22-24, *Home-Stake* (No. 153-R) (summarizing this testimony).

73. It proved impossible to keep some investors from learning that they were not getting the same payment as others. One investor found out because there were two "Tausigs" and Home-Stake got them mixed up. Robert Trippet Trial Transcript, at 1428-29, *Home-Stake* (No. 153-R). Home-Stake paid charitable groups less than investors "who might invest more." *Id.* at 1429-30. Trippet tried to explain this practice as based on equipment suppliers not viewing charities as good credit risks. Trippet peddled this rationalization to a donor who had donated his interest to Harvard. *Id.* at 1430-31. Putting aside the detail that investors were not to provide collateral for equipment in the first place, Trippet had the problem that Harvard was, and is, the most heavily endowed university in the United States and one of our more substantial corporations, public or private. It is not going to fail in a dozen lifetimes.

happy or if they appeared likely to invest more money.⁷⁴

A requirement that operators calculate and disclose the projected economic returns might not have caught the Home-Stake fraud in its first year or two, when most of the projection necessarily would have turned on future reserves. As the failure of the older projects became clear, however, not even haphazard projections could have obscured the certainty of loss. Moreover, if Home-Stake had been required to list results for each of its programs, not just the investors' own programs, by the late sixties it would have had to list dismal losses on projects that were largely completed (including the projects in which it secretly settled claims).

It is of course theoretically true that any operator can make up reserves and so defeat disclosure requirements, even under tighter standards. But it could only do so by producing clear written evidence of fraud. Moreover, the fact that some operators might unlawfully subvert any new requirement would not prevent the majority of operators from preparing and distributing honest, meaningful information. The honest companies would share the industry's incentive to make sure that operators who do misuse performance standards are identified.

3. *Prudential: Converting the Ponzi Scheme into a High Art Form*

A current example of an operator who exploited the absence of performance standards comes from the recent fraud involving one of the most respected companies in American business, Prudential Insurance Company. Both in number of investors and dollars invested, Prudential ran one of the largest operations in industry history.⁷⁵ It shared its management duties with Graham Energy, a Metairie, Louisiana operator.

The two general partners had extraordinary success with a series of oil and gas partnerships in the mid and late eighties. They lured over 150,000 investors into their thirty-seven oil and gas partnerships.⁷⁶ The investors

74. Trippet said he was entitled to restructure distributions because once the money came in, it was company money. "I believed that I was entitled to pay it out any way I saw fit" *Id.* at 1630. He claimed he had advice of counsel supporting his position. *Id.* And he paid more to people who might invest more:

People that we wanted to keep happy and to some extent some other subjective standards, for example, some participant whom I know needed the money or they were going to help us or not. So there were a number of subjective factors. There weren't really any objective standards. We just played it by ear quarter to quarter.

Id.

75. The Petro-Lewis investments described later in this section concerned a larger total investment than Prudential's, but during most of the years of investment the Petro-Lewis programs seem to have given investors what they were promised. It was only in the last year or two, as the market declined, that Petro-Lewis concealed the true state of its operations. Prudential, in contrast, never had the success that it claimed for years in oral and written statements.

76. For the number of investors, see Memorandum, Prudential-Bache Direct Investment Group 1 (Aug. 8, 1988) (on file with the *SMU Law Review*). [Note: All Prudential-Bache documents cited from the Graham Energy litigation are on file with *SMU Law Review*.]

spent more than \$1.5 billion.⁷⁷ Yet the projects as a group never came close to turning a profit.⁷⁸

In a fitting end, Prudential paid what may have been over a billion dollars in penalties.⁷⁹ Graham has been fined and expelled from the National Association of Securities Dealers for not disclosing its fees.⁸⁰ Why the Securities and Exchange Commission has allowed Prudential to stay in the securities business is not at all clear.

Prudential and Graham bought proved reserves. In this way, the partnerships supposedly avoided the risks of exploratory drilling. Prudential and Graham claimed that they could drive hard bargains with cash-poor operators who had to sell out.⁸¹ The fire sale of proven—already discovered—reserves supposedly would minimize risk.

77. *Id.*

78. The programs have not yet turned a profit, strictly speaking, but some might do so someday if interest discounting is ignored. Oil and gas reserves can dribble in for a long time.

By 1993, the \$1.5 billion invested had produced \$650 million back, less than half of the initial investment. Scot J. Paltrow, *Partners in a Troubled Venture*, L.A. TIMES, June 22, 1993, at A16. One expert estimated that the overall "return," though obviously varying by program, will be a 40% "profit" after 25 years. *Id.* As the present value of a dollar received 25 years later is discounted to almost nothing by the unpleasant side of the mystery of compound interest, it would be hard for the general partners to contend with a straight face that this should be counted as a positive return. It certainly is not a return that would have snared a single investor (unless they happened to find a profit-averse, utility minimizing investor, who treated investments like variations on Giffen goods: the more it costs the better it sells) had it been predicted at the start of the programs. Demand would be low if not nonexistent.

79. *Government To Defer Prosecution Over PSI Limited Partnership Sales*, 26 Sec. Reg. & L. Rep. (BNA) 1468 (Nov. 4, 1994).

The full cost of the settlement was much greater than the penalties assessed. Prudential finally agreed to pay \$110 million to settle the consolidated class lawsuit, on top of \$491 million the investors received when the partnerships were sold. *Prudential Agrees to Pay \$110 Million to Resolve Class Action by Investors*, 27 Sec. Reg. & L. Rep. (BNA) 1447 (Mar. 15, 1995). In addition, Prudential agreed to an open-ended \$330 million settlement fund that encompassed its over 700 limited partnerships (not just oil and gas partnerships), plus a \$10 million civil penalty, \$26 million to the states, and \$5 million to the National Association of Securities Dealers. *Id.* The initial agreement was for Prudential to put up \$330 million, but with the agreement that it would add more money if needed as claims were filed. By late 1994, almost all of the initial \$330 million had been spent and the company had put in "an equivalent amount." Karen Donovan, *Prudential's Victims Hit Roadblocks*, NAT'L L.J., Dec. 5, 1994, at A1. And Prudential paid yet another \$120 million to investors not covered by the prior settlements. *Prudential Agrees to Pay \$100 Million to Resolve Class Action by Investors*, 27 Sec. Reg. & L. Rep. (BNA) 1447 (Mar. 15, 1995). One of Prudential's spokesmen estimated the cost of its overall partnership litigation as \$1.5 billion. *Id.*

80. Scot J. Paltrow, *As Energy Funds Stumbled, Companies Reaped Benefits*, L.A. TIMES, June 23, 1993, at A13.

81. Prudential and Graham marketed at least 37 partnerships. All 37 shared the same purpose and structure. As an example of their goals, the internal "Fact Sheet" designed to give brokers information on the Series VI "Prudential-Bache Energy Income Fund" explained how many oil and gas companies "found themselves saddled with debt and short of capital." PRUDENTIAL-BACHE DIRECT INVESTMENT GROUP, PRUDENTIAL-BACHE ENERGY INCOME FUND SERIES VI P-23 FACT SHEET 7 (Aug. 1988). These companies were selling off their assets. "This capital crunch in the oil and gas industry is creating special opportunities for investors who bring new capital to the 'oil patch.'" *Id.* It was the "relatively low cost of entry" by buying these properties that "can help create the potential for attractive cash distributions." *Id.*

Prudential and Graham said they had three more reasons why the investments might be an even better deal. First was the march of technology. Advances in recovery methods were likely to let the partnerships extract more oil and gas than planned when they bought the properties. Second, development drilling might turn up more reserves. Finally, because the general partners allegedly bought properties by basing offers on existing oil and gas prices, any price increase supposedly would produce another windfall gain.⁸²

The prospectuses included the pro forma disclosure that the investment was risky.⁸³ The instructions given to brokers, however, were very differ-

Prudential's 1986 Broker Guide, distributed over the signature of Prudential-Energy's President James Darr, hyped the same claim. "Reduced product prices and lower fuel consumption has placed tremendous economic pressure on many energy companies, creating a severe liquidity squeeze and causing many of them to sell their properties at distress prices." PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, BROKER GUIDE 4 (Apr. 7, 1986 draft) [hereinafter BROKER GUIDE]. The happy result was that "it's become cheaper to acquire existing reserves than to go out and discover new reserves." *Id.* at 26.

82. Prudential listed each of these reasons in the internal "Broker Guides." Not only was risk supposedly spread by avoiding exploratory properties and buying proven reserves in many geographic areas, but the investment had good "growth potential" for the reasons mentioned in the text. The partnerships allegedly "pay for only a fraction of the proven reserves [in] a field when a property is first acquired, [but] a great deal more of the oil trapped below may be ultimately drawn out." *Id.* at 6. Improved enhancement could occur because "industry scientists and engineers are constantly searching" for improved technologies. *Id.* And, of course, prices were likely to rise "based on historical cycles." *Id.* (Prudential did not explain why these advantages had not been incorporated into the price they paid for the properties.)

A brochure Graham Securities Corporation prepared for brokers, titled, tellingly, "How To Prospect And Sell" but referring to prospecting for investors rather than oil and gas, hummed the same tune. It gave the same three reasons for brokers to reel off to investors: "potential price escalation [sic]"; "enhanced recovery—new technology in recovering more reserves"; and "field development—adding more reserves than we initially paid for." GRAHAM SECURITIES CORPORATION, HOW TO PROSPECT AND SELL 2 (undated brochure).

Prudential's investor pamphlet for its Energy Income Partnerships II described the "[a]cquisition of what we consider to be undervalued producing oil and gas properties, . . . [s]haring in any upside potential that may arise from technical advances which improve the recoverability of oil and gas reserves," and "[b]enefit from any energy price increases" as reasons to buy into the partnerships. PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES II at 2 (undated brochure). Price increases and future field developments were two ways, "beyond the immediate income from current oil and gas production," that investors "could" profit. *Id.* at 3.

Regarding price, the kind of thinking that Prudential popularized is represented by the space given to one of its Vice-Presidents, John Corbin, in the Graham Royalty Summer 1987 "Energy Digest" broker circular. Corbin explained that "reserves are selling near what appears to be the bottom of their market cycle." GRAHAM ROYALTY, INC., ENERGY DIGEST BROKER/DEALER CIRCULAR 6 (Summer 1987) [hereinafter GRAHAM CIRCULAR]. Asked to sum up what he would emphasize to investors, he argued that the critical point was timing: "It isn't essential to invest at the very bottom of the market in order to make a profit, but you want to get as close as possible . . ." *Id.*

83. Even the partnership brochures would footnote their page-long lists of what generally were 10% plus distributions with the disclaimer that "[t]his is historical information only and no assurance can be given as to the level of annualized cash distributions to be received by investors in these or any other oil and gas income partnerships in the future." PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, SERIES III at 9 (undated). When this disclaimer appears after a listing showing program after program paying a high return year after year, with no indication that the programs were not generating the payments, that a great deal of the money was

ent. They were to present the partnerships as essentially risk-free. The party line included assurances that “[i]t is currently anticipated that properties acquired by the Partnerships will return, at the property level, 15% to 20% of their purchase price annually—thus returning their purchase price within . . . the first five or six years.”⁸⁴ These aggressive returns were to begin flowing within ninety days of a partnership’s closing.⁸⁵ High returns looked even better because of low costs. Depending on the program, between 91% and 93-94% of partnership funds would go directly into “property acquisitions and the payment of property acquisition fees.”⁸⁶ The general partners would get only “1%” of cash distributions until the initial investment had been paid back, and then only 20%.⁸⁷

Prudential and Graham designed their message to appeal to the most vulnerable. They pinpointed retired people.⁸⁸ A secret broker guide defined the pool of buyers “[w]ho should invest” as including “[c]lients

borrowed internally, and that some of the remainder was simply returning the investors’ capital contribution, one can hardly be surprised that investors assumed the chance of success was high. That is what Prudential and Graham worked hard to make them believe.

Investors received periodic “partnership profiles” that did provide the future net cash flow and the return per \$10,000 investment. To give an example, the May 1991 report on the P-25 partnership showed that the total discounted value of a \$10,000 investment would be only \$14,331, and \$10,725 if discounted at 15%. PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS P-25, PARTNERSHIP PROFILE 11 (May 1991). This was not much of a return on an investment with an expected payout life of 39 years, *id.* at 2, with 92% of the reserves remaining to be produced, *id.* at 5, but Prudential overshadowed these numbers with its message about the apparently high returns in virtually every partnership.

The prospectuses listed some information on prior projects, but the listing was not complete, and the returns listed only what had been paid out to date, *see infra* note 112 and accompanying text, leaving investors without information on the true economic value of the programs. They did not list the value of projects that already had terminated, nor did they project the lifetime returns of the projects that were included. Prudential and the plaintiffs disputed whether investors even received the prospectuses before investing. Paltrow, *supra* note 78, at A16.

84. BROKER GUIDE, *supra* note 81, at 17; *see also id.* at 13 (listing investment objectives as “[t]o acquire properties that are capable of returning 15% to 20% annually at the property level and will return the purchase price to the Partnership within the first five to six years.”).

85. PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, SERIES III, *supra* note 83, at 5.

86. *Id.* at 8.

87. *Id.* at 5. This point was illustrated with a chart showing “0% to Managing General Partners [until] [r]eturn of [i]nvested [c]apital.” *Id.* Some later programs allowed a 1% payment before payback of initial capital, with a bump-up at that point to 20%. *See, e.g.,* PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, Series VI, at 9.

88. In later litigation, a number of brokers would claim that they too were victims duped by the false information flowing from Prudential and Graham. Some brokers invested, put family members into the partnerships, or both. Paltrow, *supra* note 78, at A16.

The problem with treating brokers as equal victims is that it assumes that a broker has no responsibility for his or her sales pitch. The broker is the flesh-and-blood person who makes the sale. Many of these brokers exploited the programs. Their fees of 5% and up, and Prudential and Graham’s total take which may have been as much as 27% of the nearly \$1.5 billion invested, were higher than the 3% to 5% collected on ordinary stock and bond sales and the 1% commission on municipal bonds. Paltrow, *supra* note 80, at A12 (describing fees). Brokers collected these fees by parroting what Prudential told them. This was easy money. Brokers who later claimed they did not know what was going on were, if that was true, milking the program in conscious ignorance of its value.

seeking regular income,” “[m]unicipal bond investors,” and “Keogh and IRA investors.”⁸⁹ Brochures emphasized the involvement of Prudential’s staff and signaled that this “may be a suitable investment for retirement programs.”⁹⁰ A few pages later, under the enlarged caption “For Investors Planning Their Retirement,” one brochure showed a happy, relaxed couple enjoying a secure golden age as they strolled on a beach.⁹¹

Investors may not have needed this much assurance because of Prudential’s involvement. Sales materials stressed the direct role of the “largest nongovernmental insurance company in the world,” a company “providing insurance and annuity coverage to more than 50 million people in the United States and Canada,” a company that was the “largest money manager” in the United States with \$112 billion in assets.⁹² Investors could rest comfortably on the written promise that Prudential was putting its expertise at their disposal.⁹³

And Prudential unleashed the shared risk promise: the company supposedly was risking its money, not just its name. Prudential said it was putting up ten percent of the total investment capital.⁹⁴ The appearance,

89. BROKER GUIDE, *supra* note 81, at 13. An August 8, 1988 “DI Sales Action Worksheet” included “CD Buyers” in the list of people “Who Should Buy This Product.” PRUDENTIAL BACHE ENERGY PRODUCTION, INC., DI SALES ACTION WORKSHEET 2 (Aug. 8, 1988) [hereinafter DI SALES ACTION WORKSHEET].

90. PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES II at 6 (undated brochure).

91. PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES III at 4 (undated brochure). By Series V, another relaxed couple was sitting in lawn chairs, barefoot and fishing. They presumably were funding their leisure with loot earned by the efforts of hard-working Prudential agents slaving away in Newark skyscrapers to maximize investor returns. PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES V, at 5 (undated).

Another broker guide asked, “How’s it look out there prospecting the pension market?” gave detailed reasons why “once you get in, it’s great,” and explained the selling points to emphasize to a “medium-sized pension fund.” GRAHAM RESOURCES, ENERGY DIGEST 4 (June/July 1985).

92. PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES III, *supra* note 83, at 7 (undated). The caption on the bottom of the cover read, “For Investors Concerned About Their Financial Future.”

The Broker Guide added that “Prudential-Bache is very experienced with oil and gas investments” and had “more than \$500 million of direct investments in the oil and gas industry.” BROKER GUIDE, *supra* note 81, at 18. Prudential-Bache Energy Production, Inc., the company running these partnerships along with Graham, was peopled by a staff “of professionals” from both Prudential and Prudential-Bache. *Id.* The oil and gas investments were managed by Prudential’s capital market group in Newark, which “currently has oil and gas holdings of over \$5 billion.” *Id.* Those investments were “evaluated and structured” by the capital markets’ professional staff. Then they were submitted to “the Senior Management of the Group and the Finance Committee of Prudential’s Board of Directors.” *Id.* Investors were promised that the same procedure was followed when Prudential put its own money into this program. Prudential’s “expert staff” personally was managing the properties. *Id.*

93. *Id.*

94. The general partners stressed this form of insurance carefully. As one of three reasons why the program was low risk, they gave brokers the talking point that “Prudential Insurance is the largest investor in their own program—they are investing 10% or potentially \$20,000,000 [in one program] of their own money in their own program—wouldn’t you agree Pru is putting their money where their mouth is?” GRAHAM SECURITIES CORP., HOW TO PROSPECT AND SELL 2 (undated) (emphasis added). After the broker noted that

false as it turns out, was that Prudential would be taking the same front-line risks as the investors.⁹⁵

The general partners restricted the flow of risk information. One of their early scripts appeared in an internal June/July 1985 *Energy Digest*, which listed "15 Ways to Improve your Selling Technique."⁹⁶ Among the pressure tactics were standard backroom methods: "Ask for the order—quick and often"; "Use the ABC technique: Always Be Closing"; "Condition the client to say 'yes.'"⁹⁷ The advice systematically steered clients away from questions about the investment, away from their concerns, and toward the salesman's single-minded goal of closing the deal.⁹⁸ The focus was on "benefits" rather than "features" because "benefits appeal to the emotions; [thus,] you're likely to strike a more responsive chord."⁹⁹ The final recommendation captured the overall tone:

15. Play off the hot button. Everyone has a hot button, i.e., one thing that will really light them up. As soon as you spot it, start pushing. If a client keeps mentioning friends who have hit it big in

the investor had to receive its initial investment back before the general partner "shares in the revenues," he or she was to ask, "Wouldn't you agree that's a commitment from Prudential?" *Id.* (emphasis added).

95. For more assurance, investors were told that Graham, the experienced energy manager and a co-general partner with Prudential, had a staff with over 500 years collective experience in the industry, had raised at least \$500 million in separate programs, and would supply one percent of the investment funds itself. *BROKER GUIDE*, *supra* note 81, at 18. Partnership brochures would tout Graham as "one of the nation's largest oil producers based on production managed." *E.g.*, *PRUDENTIAL-BACHE ENERGY PRODUCTION, INC., ENERGY INCOME PARTNERSHIPS, SERIES VI*, *supra* note 87, at 13 (undated). They noted that "it is significant that some of the world's leading financial institutions have made a substantial investment in the Company." *Id.* They did not mention that Graham had not been successful in prior programs.

96. *GRAHAM RESOURCES, ENERGY DIGEST 5* (June/July 1985).

97. *Id.* The "[c]ondition the client to say 'yes'" tactic claimed that "[a] series of little confirmations can lead to the big yes. Example: 'You're interested in income, aren't you?'; 'We do agree that 12% is attractive, am I right?'; 'I'm impressed with this company, aren't you?'" and so on. *Id.*

This item followed one of the allegedly joking suggestions, which was "4. Learn hypnosis." *Id.* Prudential certainly hoped for a hypnotic effect: repetition continued until the mark took the deal to reduce tension. All of the techniques aimed at turning listeners into investing fools, committing asset after asset to Prudential's offerings.

A slightly more sophisticated version of the same recommendation was "10. Probe, question and confirm." *Id.* at 6. The client defined his or her need, then the broker would aggressively confirm the client's stated goals (irrespective of what they were) in terms Prudential used to characterize its investment and use these sorties to "keep [the conversation] on track and moving toward the close." *Id.* The chase was on.

98. Not only were brokers taught how to push clients toward "yes"; in addition, they manipulated sales discussions to avoid client concerns. Brokers stressed only features that the client liked. In item 6, "Look for areas of agreement," brokers were told to "[b]uild your presentation on areas of agreement. Stress points where you and your client share the same opinion, *play down areas of conflict* and work the positive aspects through to closing." *Id.* at 5 (emphasis added).

To further reduce client concern, brokers were to "14. K.I.S.S. Keep It Simple Stupid. Don't complicate a subject. Keep your discussion on the most basic level possible. Never try to impress people with your expert knowledge and always talk in terms that they can understand." *Id.* at 6 (that is, hide life's pesky little complexities like risk, losses, and failure).

99. *Id.*

the market, stress profit. If a client talks about friends who've managed to hold on to a profit despite really bad conditions, stress safety. Play off the hot button and you'll close faster.¹⁰⁰

Other broker literature gave instructions on how to push investors for more money at their most susceptible time, just after they received distribution checks.¹⁰¹

To encourage brokers, the general partners used investor money to shower salesmen with gifts, including hunting trips to Louisiana and bonus trips to Europe, Hawaii, and other exotic destinations.¹⁰² Some of the material designed to encourage aggressive selling, like the "\$uper-Broker" cartoon about a broker who shifts a conservative grandmotherly investor into oil and gas programs, are such caricatures that they could have been written by plaintiffs' counsel.

100. *Id.*

101. A broker document bearing production number 005061 urged calling customers just after they had received a distribution check. Brokers were to seize the moment to pitch for new funds. Under a heading titled "CAN YOUR INVESTORS HANDLE GOOD NEWS?", the text read that "As soon as you've stopped congratulating each other on how smart you both were, take the opportunity to a) recommend an additional investment in a Prudential-Bache Energy Income Fund or b) recommend an investment in another product to balance out their portfolio." The rest of the page was covered with testimonials from brokers on how they used distribution checks to generate more sales. SALES MEMORANDUM OF PRUDENTIAL-BACHE 1 (undated) (on file with *SMU Law Review*).

A May 9, 1987 letter from Graham bearing production number EG-022815 continued the happy theme. It instructed brokers to "Find out What [sic] rate of return would make him happy." Sales letter of Graham Resources 1 (May 9, 1987) (on file with *SMU Law Review*). These instructions were a far cry from the proper broker function of explaining the rate of return the investment is likely to bring, its accompanying risks, and then letting the investor decide if the parameters are acceptable. Investors were to be told that \$10,000 meant they were buying about 2000 barrels of oil which "is worth \$36,000 at today's price." *Id.* (emphasis added). Their partnership "is going to distribute 13% on an annualized basis." *Id.* (emphasis added).

Investors were urged to sell any bonds and put the proceeds into energy partnerships. And, of course, Graham sang the same boisterous refrain: "Hit your client's hot button when you sell. . . . You better have some enthusiasm in your voice or you won't sell anything." *Id.*

Graham Securities Corporation's undated "How To Prospect and Sell" brochure reduced the investment to what Prudential called "WMTY: Which Means To You." GRAHAM SECURITIES, *supra* note 82, at 1. The bullet points included telling investors that "Your \$10,000 is safe"; "Your \$10,000 will generate approximately \$1600 in cash flow [annually]. . . . Wouldn't you like to have an additional \$1600 a year to spend?" *Id.* at 3 (emphasis added).

When this kind of risk-obliterating representation was added to the fact of Prudential's participation, its alleged willingness to acquire 10% of the investment, and its apparent patience to wait for returns until investors had their capital back, *see supra* notes 93-94 and accompanying text, it is small wonder that over 150,000 investors put their money, over \$1.5 billion of it, with Prudential.

102. The rewards included a four day trip if brokers sold \$250,000 in interests within a short bonus period; a longer trip if the sales totaled \$300,000; and two trips if sales exceeded \$500,000. *See, e.g.*, GRAHAM RESOURCES, ENERGY DIGEST 2 (June/July 1985). Apparently no expense was spared on the trips. Excess-maximizing Prudential-Bache Energy President James Darr spent \$34,000 on a London trip, including \$15,000 for seats on the Concorde for his wife and daughter, a chauffeured car at \$1500 a day, and \$11,500 (more than many investors' capital payment) for two suites at the Berkeley Hotel. Paltrow, *supra* note 78, at A1. The total cost for the trip, which included 100 brokers, was \$1.2 million. *Id.* at A12. This was only one of five foreign incentive trips. *Id.*

The significance of the Prudential programs is that the lack of applicable disclosure standards allowed Prudential to flourish so easily and for so long. It let Prudential portray a dramatically unprofitable program as successful. For its part, Graham apparently had a perfect record of failure when Prudential picked it to operate the programs. Graham had been unable to make money for its prior investors.¹⁰³ Prudential's selection of Graham could not have been inadvertent; Prudential had been sued in and lost a lawsuit over an early eighties oil and gas investment in which the claims had turned in good part on Prudential's failure to screen and monitor operator quality.¹⁰⁴

103. In a 1985 SEC filing, Graham had to admit that it had not been able to generate profits for investors in prior drilling. Paltrow, *supra* note 78, at A16. One of Graham's former executives would testify that "[t]hey had as bad a record in the exploration business as there was in the industry." *Id.*

Far and away the likeliest conclusion that investors would have drawn from looking at Graham's prior record, had it been available, was that they would lose a great deal of money. This certainly was a conclusion that Prudential would have drawn if it had done any real due diligence. This brings to center stage the obvious question, "Why, when the results from the existing partnerships were so poor, did Prudential-Bache continue to sell the program so enthusiastically?" *Id.* at A12. At least for the reporter posing the rhetorical question, the answer lay in the extraordinary fees that Prudential, its brokers, and Graham reaped from their investor harvest. It is hard to find any other reason for their persistence in soliciting more money even after they knew that the initial programs were sure to fail. For an extended argument that personal greed was the motivation that degraded Prudential's Oil and Gas investments, as well as its other direct-equity investments, see KURT EICHENWALD, *SERPENT ON THE ROCK* (1996).

104. Prudential had been put on notice of its failure to monitor oilfield operators in litigation arising out of its sale of 11 partnership units between 1979 and 1982. The investment was "managed" by Invoil Securities and operated mainly by Welles-Battlestein, Inc. of Houston. Invoil had 26 partnerships in all. Of these, most failed: 19 went into bankruptcy, one was dissolved, and one had no assets. Plaintiffs' Settlement Conference Statement at 1, *Invoil Sec.* (No. MDL 585). [All exhibits from the *Invoil* cases are cited by their exhibit number to the settlement conference statement and are on file with *SMU Law Review*.]

Prudential's later conduct with Graham is more egregious because it was already operating beyond the pale during the Invoil investments. In an Invoil broker document captioned "Common Statements of Resistance," Bache listed as a source of "Resistance" investor statements that "one shelter is too risky" and "I can do better on my own." Exhibit 1, Bache Tax Shelter Profile at 5. The Bache answer was that its programs were diversified for risk, that it had a separate investment department (an office without a phone, apparently), that "[d]ecisions are often verified by independent consultants," and "[o]ut of 500 shelters one may be approved." *Id.* at 5.

Question: How can one tell if the driller is reputable? Answer: Bache researches each program. The programs, management, and financial and technical expertise, are reviewed, along with their track record and proposed sites. Only one out of five hundred programs is accepted by Bache.

Id. at 9.

Actually, Bache's research was quite an achievement. To have screened 500 companies only to find one with no proven track record, on the brink of financial collapse, and with no experience at producing real returns for investors, was a feat indeed. The more likely truth is that Bache was looking for an operator that would let it collect a very high fee in return for doing almost nothing. Invoil and Welles-Battlestein may have been the first companies that came along fitting the bill.

The extraordinary achievement of picking only 1 out of 500 proposals, yet unerringly finding a sure loser, continued with Graham. This is the way the Prudential's Broker Guide described the general partners' efforts:

To maintain its enterprise, Prudential spread false information about its "track record" and about its cash payouts. No industry standards prevented the distribution of misleading data or required corrective measures.

Two of the major points used by Prudential and Graham to illustrate their track record were the number of investors and the funds invested. The emphasis was on the volume of commitment, not on whether this activity would make anybody money.¹⁰⁵ The message, of course, was that Prudential never could have raised so much money from so many people without having a quality project. After all, size is one reward for effi-

Graham Royalty's experts constantly monitor and evaluate potential acquisitions choosing only the best opportunities for further scrutiny. And while several hundred properties may be reviewed annually, most fail to meet the Partnerships' strict acquisition standards. In fact, only a scant 4% of the properties considered to date have passed these strict standards and been acquired.

BROKER GUIDE, *supra* note 81, at 7. This is what Prudential was training brokers to tell their customers. The abysmal results of the programs suggest that Prudential spent the money as quickly as it came in the door. Prudential and Graham pocketed their front-end fees and spent their time looking for the next set of investors, not for the next quality property.

On May 6, 1982, just as the Graham partnerships were getting going, an independent consultant on the Invoil program determined that only 3 of the 11 Prudential programs had a chance of being successful. The consultant warned that it was "essential that [Prudential] develop and maintain a system providing ready availability of information on the operators' drilling and production performance at all times." Exhibit 4, Petro-Enterprises Report, *supra* note 21, at 4 *Invoil* (No. MDL 585). This report was so damning that Bache would move to exclude it at trial. See Plaintiff's Surrebuttal in Opposition to Prudential-Bache's Motion in Limine, *Invoil* (No. MDL 585). The consultant found a predominance of marginal prospects in projects developed by Welles-Battlestein and that many wells were "destined to be marginal before the bit was ever put into the ground." Exhibit 4, at 24. There is no sign that Prudential took any of these warnings to heart or did anything to improve its monitoring before the Graham fiasco.

105. On August 8, 1988, for instance, one of Prudential-Bache Direct Investment Group's top 10 reasons brokers were to pitch to investors was the partnerships' allegedly "extensive track record," which turned out to be a recital of program size: "More than 37 Partnerships and 150,000 investors. In excess of \$1.5 billion invested in oil and gas reserves. Nation's largest sponsor of oil and gas direct investment partnerships." DI SALES ACTION WORKSHEET, *supra* note 89, at 3. There was not one word about the only track record that would matter in the end: whether the programs had produced an economic return.

The prospectuses were no more accurate. In the March 9, 1984 supplement to the prospectus for the Energy Income Partnerships II, for instance, the section on management described the number of Prudential oil and gas partnerships and their total \$458 million investment without indicating whether investors would make or lose money. PRUDENTIAL-BACHE ENERGY PRODUCTIONS, INC., ENERGY INCOME PARTNERSHIPS II PROSPECTUS 43-44 (Mar. 9, 1984) [hereinafter PRUDENTIAL PROSPECTUS].

The materials did list some quite low returns to date for a few prior Prudential Energy funds and some Graham funds, but only for projects formed in the past few years. See *id.* at 58. Investors were not told the lifetime projections for these projects. Nor did they learn that Prudential and Graham were having trouble covering distributions in the projects on the list. Investors had no way to tell whether the low payouts were because the programs were failures, as they turned out to be, or reflected an initial lag in programs that had located large volumes of reserves. When the prospectus described "past results," it did not tell readers whether any of the prior programs were expected to be profitable. See *id.* at 58.

ciency in well-functioning markets.¹⁰⁶ Ironically, in Prudential's case, the larger the program, the less equipped Prudential and Graham were to find enough good properties, yet the less likely were investors to suspect that the investment was not well-conceived.¹⁰⁷

The second kind of track record, cash "distributions," was even more misleading. Prudential and Graham urged investors to compare cash distributions and to use this "return" on their capital as the benchmark for measuring success.¹⁰⁸ (This interpretation reinforced the comforting message that partnership interests were like certificates of deposit and savings accounts.) The partnership documents forbid using borrowed or investor capital to pay distributions, so production revenue should have been the only source of distributions.¹⁰⁹

Every internal training document included the high cash distributions of early programs as a major selling point.¹¹⁰ Later programs stressed the record of the first partnerships, many paying fifteen percent a year.¹¹¹ As partnerships closed and successors rushed down the chute, investors received updated lists of distributions in an impressive twelve-to-fifteen percent range. By the late eighties, partnership brochures were listing

106. For a discussion of the exit mechanism and a consideration of how much firms that rely on sales volume alone to measure their success can miss, see ALBERT O. HIRSCHMAN, *EXIT, VOICE, AND LOYALTY* 3-30, 106-26 (1970).

107. Program size was far more likely linked to the scope and effectiveness of Prudential-Bache's broker network and to the marketability of Prudential's old and respected name. As one broker wrote after describing how he conducted seminars and one-on-one meetings, "I think this is one of the main reasons for the Pru-Bache/Graham team's success: we reach a large number of people. That's the secret to selling an investment vehicle like the Energy Income Partnerships and the Energy Growth Partnerships. . . ." GRAHAM CIRCULAR, *supra* note 82, at 5. One can see the overall flaw in the program in these short remarks: success is success in selling, not finding oil and gas. The general partners' true efforts were devoted to selling the most interests, not to finding the best properties.

108. The United States attorney, announcing Prudential's agreement to pay a \$330 million criminal penalty, cited the company's likening these depleting assets to a certificate of deposit and its using words like "yield," as if the income was a return on specific capital, in describing why the government sued. *Government to Defer Prosecution over PSI Limited Partnership Sales*, 26 Sec. Reg. & L. Rep. (BNA) 1468 (1994).

The accounting expert in one of the later cases would cite the repeated use of terms like "distribution," "rate of return," "yield," and "return on investment," as well as marketing partnership interests as conservative investments that should be considered alternatives to CDs and bonds, when he described the core misconduct. Report of William F. Jordan I (Jan. 4, 1994) [hereinafter Jordan Report].

109. "The prospectuses and sales material consistently stated that the distributions would come from cash flow." *Id.* at 3. Some of the provisions prohibiting borrowing in order to fund distributions are cited on the same page of the Jordan Report.

Jordan concluded that "what was so misleading about publicizing the cash distributions" is that "they were irrelevant. What was relevant was the profits, which were never disclosed in the prospectus format." *Id.* at 7. Instead profit information was only published, in later time periods, in 10-K filings which, of course, investors often did not read. *Id.*

110. One of the recommended selling tactics was to ask the client "for someone else who might like a 14% return." Sales letter of Graham Resources, *supra* note 101. The logical fallacy in pitches like this is that they assume what should be proven, namely, that the investment will in fact generate the promised return each year.

111. See, e.g., PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, SERIES III, *supra* note 83, at 9-10.

high annual returns from more than a dozen partnerships.¹¹² Naturally, the payments seemed to confirm all the rosy predictions.¹¹³

The general partners knew that their cash payouts concealed the partnerships' disintegrating health. As an example of how bad things really were, in 1988, when Prudential marketed its Series III partnerships, it listed twelve earlier partnerships as having had distributions in the twelve-to-fifteen percent range.¹¹⁴ Yet as early as February and March of 1984, *four years before* and well under a year after the first partnership,¹¹⁵ Graham and Prudential already were discussing the problem that the first five partnerships had not generated enough money to pay distributions.¹¹⁶ They made distributions regardless, with their eyes on the crush-

112. See, e.g., *id.* at the chart following page 8.

113. *Id.*

114. See *id.* and *supra* note 112 and accompanying text.

115. The first partnership listed in the brochure, PB-1, had only been formed in September 1983. PRUDENTIAL PROSPECTUS, *supra* note 105, at 58. The prospectus omitted the problems of its predecessor Bache organization in earlier investments like its *Invoil* projects entirely. See *supra* note 104.

116. On February 10, 1984, Graham's senior vice-president of finance, Mark W. Files, was writing to its top officers including chief financial officer Anton H. Rice and senior vice-president Alfred Dempsey on the problem of paying distributions. Files was worried that the partnerships were not generating enough money to pay distributions. He claimed that "one related matter which was never completely discussed was that relating to distribution philosophy; i.e., should we let the chips fall where they will, or should we attempt to smooth out the distributions, provided, of course, Graham does not have to do any advancing to achieve that." Memorandum from Mark W. Files, senior vice-president of finance, to Anton Rice et al. (Feb. 10, 1984) (on file with *SMU Law Review*).

A year later, in early 1985, Files was documenting the shortfalls of the first three programs. Graham had decided to keep paying a 15% "distribution," even though the programs were not generating that kind of cash. Files discussed how to cover Graham's tracks:

John [Graham] agreed that 15% was the appropriate percentage for the P-1 distribution. He was, however, concerned about the level of our subsidy to all those partnerships. He asked that we arrange for bank lines of credit to those partnerships, *and camouflage, to the extent we can, the purpose of the use of proceeds.*

Memorandum from Mark W. Files, senior vice-president of finance, to Anton Rice, chief financial officer (Jan. 9, 1985) (on file with *SMU Law Review*).

The same memorandum noted that Graham had to sell at least \$16 million in new interests *every month* to maintain its overhead payments, which it was having to recover from the investments. *Id.* at 2.

On July 3, 1985, Files wrote Matthew J. Chanin, vice president and director of Prudential Energy Production, a Prudential subsidiary, and a vice president in the Capital Markets Department of Prudential Insurance Company. Files showed borrowing needs of over six million dollars to maintain distributions on the first four funds. Letter from Mark W. Files, senior vice president of finance, to Matthew Chanin, vice president and director of Prudential Energy Production (July 3, 1985) (on file with *SMU Law Review*).

Graham and Prudential began to talk (secretly, of course, and not with their investors) about how to deal with the cash shortage. On September 4, 1986, Paul F. Giffin of Graham told its president and CEO John Graham that for three of the first five programs, "the bottom line is that there will be no cash available for distribution." In the other two, "a minimal 1%-2% distribution could be squeezed out." Memorandum from Paul Giffin to John Graham et al. (Sept. 4, 1986) (on file with *SMU Law Review*). Yet Prudential and Graham continued paying distributions in the 12-15% level. In 1988, they *still* would be maintaining payouts and citing the early programs as reasons for investors to buy new ones. Compare the PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, SERIES III, *supra* note 83, at the chart following page 8.

ing impact that low distributions or, worst of all, no distributions, would have on new sales.¹¹⁷

Until late 1991, Prudential account statements listed paid-in investor capital as the "value" of the investment, as if investors had this principal in the bank.¹¹⁸ Investors assumed that the distributions were over and above their principal capital contribution. In fact, the general partners were merely recycling some of the investors' seed money.

The identification of payouts as "distributions" and as a "return" hid the fact that far from earning a "return" on principal, investors merely were getting their money back (after millions had been deducted in fees). Moreover, the use of paid-in capital to pay distributions contradicted promises that the general partners would not borrow to pay distributions.¹¹⁹

Investors responded efficiently to the first accurate economic information they received. The November-December 31, 1991 "Client Statement" indicated that "[b]eginning with this statement, the reported face value of your direct investments will not be included in the calculation of Net Worth."¹²⁰ The net worth fell to zero.¹²¹ Investors immediately contacted attorneys and soon sued.¹²²

117. In 1986, Graham was mulling over how to "begin preparing the market for the elimination of, or virtual elimination of, distributions on the P-1 through P-5 programs." Memorandum from Paul F. Giffin to John J. Graham et al. (Sept. 4, 1986) (on file with *SMU Law Review*). That would have been the honest approach, one based on the actual performance of the partnerships. But candor would have given the market the information it needed to value future offerings. That was just the problem, of course. If the market worked efficiently, the value of new partnerships would have plummeted.

Instead of stopping payments, Graham and Prudential propped up distributions for early programs and used those payments as selling points to new investors. In 1989, Graham's Kerry L. Kungel calculated the lifetime partnership results. He concluded that Graham and Prudential had "a number of partnerships where actual return of original cash investment will be hard to achieve." Memorandum from Kerry L. Kungel to John Graham (Mar. 13, 1989) (on file with *SMU Law Review*). Kungel argued that "[w]e need to think through very carefully the implications on future marketing efforts of having 120,000 investors with these attendant IRR's and the long-term strategic direction of the Company." *Id.*

An accounting expert for the investors would claim that "[i]n the first full year of operation (the second year of existence), 22 partnerships distributed cash in excess of operating cash flow. On average, the partnerships distributed 50% more than what was produced in operating cash flow." Jordan Report, *supra* note 108, at 3. As in any Ponzi scheme, internal borrowing and new investors funded the positive returns.

Prudential and Graham's fudging of the books was not confined to small rewritings at month's end or a little trimming here and there. By 1990, they had used at least \$18 million in borrowed funds to pay distributions. In addition, they paid many millions more in distributions by drawing down the investors' capital contributions. Paltrow, *supra* note 78, at A17.

118. *See infra* note 122 and accompanying text.

119. *E.g.*, PRUDENTIAL-BACHE ENERGY INCOME PARTNERSHIPS, SERIES II, at 2, 28 (Mar. 9, 1984).

120. PRUDENTIAL-BACHE ACCOUNT STATEMENT (Nov.-Dec. 1984).

121. *Id.*

122. Until the November 1, 1991 reporting period, the investor's paid-in capital had been listed under a column titled "value." *See, e.g.*, October 1991 Client Account Statement. This same amount appeared in the upper left-hand corner of the statement as the security's "net worth." *Id.* Thus an investor would expect that in addition to cash distributions, the partnerships were preserving the investment corpus.

Investors never got some of the most basic, necessary facts to understand their risks. Thus Prudential did not list the results of its at least twelve other limited partnerships, programs not in the Graham series. Some of those programs went into bankruptcy. Such a listing would have revealed severe problems in prior operations.¹²³

Even worse, the information provided did not give a realistic picture of the current investments as they proceeded. What was missing was the expected lifetime rate of return and the present value of the programs. In an early 1985 brochure, for instance, the earliest program had been funded at year's-end 1980, the latest at year's-end 1983.¹²⁴ Revenues may be delayed by waiting for a connecting pipeline, renegotiation of purchase agreements, future development drilling, and other factors. While an investor reading the "summary of ventures-investors" would see that investors had received little cash return, they would also see programs paying out between twelve and fifteen percent and that Prudential was promising returns like this in new ventures. Investors understandably could believe that Prudential could not have paid such returns unless it was finding a lot of oil and gas

Investors needed realistic current value calculations. Almost any knowledge in this area would have raised warning flags. There is no need to speculate about whether accurate information was available at reasonable cost, because Prudential's internal documents discussed the impending disaster clearly from the very beginning.¹²⁵

The absence of a requirement that expected rates of return and present value be disclosed left the general partners free to say even less about Graham's unimpressive past. The offering prospectus said that Graham had organized 12 programs, that it had raised \$125,048,000 from 2000 investors, and that 45% of the 301 wells drilled "have produced or are currently producing recoverable amounts of oil and gas or are completed wells which have been shut-in pending construction of, or connection to, surface production facilities and, in some cases, negotiation and execution of gas sales contracts."¹²⁶ This volume information was meaningless without its economic context. Investors needed to know the dollars behind the facade. The reporting concealed a record that one of Graham's former officers characterized as "as bad a record in the exploration busi-

In the November 1 to December 31, 1991 period, the designation "value" was changed to "face amount." November 1-December 31, 1991 Client Account Statement. The statement contained the comment that "[b]eginning with this statement, the reported face value of your direct investments will not be included in the calculation of New Worth. Therefore, the opening and closing new worth balances have been adjusted to reflect this change." *Id.* The reported "net worth" fell to zero. The comments on the change ended with the ominous reminder that "[f]ace amounts do not represent current market value." *Id.*

123. For a discussion of the Wells-Battlestein debacle, see *supra* note 104.

124. PRUDENTIAL PROSPECTUS, *supra* note 105, at 58.

125. See *supra* note 116.

126. See PRUDENTIAL PROSPECTUS, *supra* note 105, at 59.

ness as there was in the industry."¹²⁷

4. *The John King Organization: Manipulating Cash Surrender Values*

It is child's play for unscrupulous drilling fund operators to manipulate reports of current earnings, payouts, and completions in the absence of any requirement that they honestly describe their past economic performance and provide ongoing economic reports on existing projects. The John King organization in Denver played a similar game by manipulating cash surrender values. Some oil and gas programs give investors an added level of protection by agreeing to repurchase investor shares after the project has gotten underway. The offer usually goes into effect a year or two after commitment and is limited to a set percentage of partnership funds. The offer should set a fair price for interests in widely held partnerships.

A program's agreement to repurchase interests can provide significant protection. The *King* plaintiffs alleged that "[t]he cash surrender value as will be shown was the distinctive selling point of IARF, the item that gave IARF and RRE a competitive edge over similar drilling funds"¹²⁸ But this is true only if repurchase prices are based on economic values.

Cash surrender values would become "the source of the biggest problem for Defendants."¹²⁹ The prospectus included a formula for surrender prices that gave investors good reason to view the repurchase price as a real measure of value. The price was to be determined by adding ninety-five percent of cash on hand, prepaid expenses, the market value of proven reserves (set by an independent engineer), and eighty percent of the net book value of all other assets, after deducting debts.¹³⁰ At least some investors were told that the cash surrender value was only forty percent of the "anticipated ultimate future net cash receipts," so they could assume that the price was much less than the value of their interests.¹³¹

It did not take the King group long to abandon this formula. The problem was that it would produce very low buyback prices (reflecting the low value of the investor interests). The lower the surrender price, the clearer the message that this was a really bad investment. Publicizing the failure probably would have put King out of business.

King instead repurchased interests for more than they were worth. One adjustment was to increase total reserves automatically by three

127. See *supra* note 103.

128. Statement of Plaintiffs re Relevancy of Documents at 140, *In re King Resources Co. Sec. Litig.* (D. Colo. Dec. 13, 1975) (No. C-3873) [hereinafter Plaintiffs' Statement of Relevancy].

129. *Id.*

130. *Id.* at 143-44 (citing Exhibit 1238 (IARF August 1, 1969 Prospectus at 11)).

131. See *id.* at 165 (citing Exhibit 345 (Letter from James T. Van Norden, Vice-President of Denver Corporation, to David Harris, investor); Exhibit 337 (Letter of James T. Van Norden, Vice-President of Denver Corporation, to Harry M. Meyers, Jr., investor)).

percent each year.¹³² King's company IARF justified this subterfuge by telling its board that "[i]t has been shown by two different studies that, historically, reserves have been understated by approximately 3% each year for all producing properties in the United States."¹³³ IARF did not mention that no one had shown that the King companies underestimated *their* reserves, that the SEC does not permit this kind of inflation adjustment, and that investors had no way to know that King was adding this automatic annual increase.

The three percent adjustment was the smaller problem. The bigger one was the fact that, contrary to engineering standards, King was increasing its independent estimates "by reason of additional reserves which we have been informed management believes are present or which might be obtained by waterflooding or other secondary recovery procedure."¹³⁴

King did nothing to distribute an accurate economic picture.

5. *Petro-Lewis: Concealing Failure Occurring After Periods of Success*

The Prudential-Graham and King offerings belong to a larger club of successfully marketed partnerships that endured in spite of a complete failure to generate positive returns. One last example of how the partnership structure can shield project failures by making payouts, if unconstrained by economic measures of value, is the Petro-Lewis case. Petro-Lewis is different from the other examples because for many years, it was successful in the true currency: it produced commercial quantities of oil and gas. The plaintiffs did not allege that early operations were anything but above-board. The problems arose when Petro-Lewis decided to sell new programs after they no longer made economic sense. The example shows how the lack of an effective *continuing* reporting requirement can sustain operators after their market has vanished.

In a fifteen-year period, from 1970 to 1984, Petro-Lewis sold over 150 partnerships, attracting 183,000 investors and 2.6 billion investor dollars.¹³⁵ It was the largest fund in the peak years of the late seventies and early eighties.¹³⁶ Just as Prudential would do later, so Petro-Lewis set out

132. *Id.* at 177 (citing Exhibit 2695 (Letter of Arthur Young to IARF (Apr. 10, 1970 draft)); for the final letter, see Exhibit 2265).

133. *Id.* at 180 (citing IARF Sept. 23, 1969 board minutes).

134. *Id.* at 177 (citing Arthur Young comments in Exhibit 2695).

135. Joint Affidavit Of Plaintiffs' Co-Lead Counsel In Support Of The Proposed Settlement Of The Consolidated Action at 5, *In re Petro-Lewis Sec. Litig.* (D. Colo. Dec. 13, 1984) (No. 84-C-326) [hereinafter *Petro-Lewis Settlement Affidavit*].

For some other discussions of the Petro-Lewis disaster, see *In re Petro-Lewis Sec. Litig.*, Fed. Sec. L. Rpt. § 91,899 (1984); Sanders v. Robinson Humphrey/American Express, Inc., 634 F. Supp. 1048 (N.D. Ga. 1986), *aff'd in part, rev'd in pertinent part sub nom.* Kirkpatrick v. J.C. Bradford & Co., 827 F.2d 718 (11th Cir. 1987).

136. In the boom years of 1979 and 1980, Petro-Lewis raised more outside investor money than any of the 93 other public oil and gas programs listed in Resource Programs, Inc., *The RPI Survey: A Report on the Oil and Gas Program Industry*, in Mosburg (ed.), *supra* note 22, at 6-8. In 1978, Petro-Lewis raised \$98.7 million, while number two, Can-Am Drilling Programs, raised \$60.5 million. In 1979, the figures were \$239.4 for Petro-Lewis and \$77.2 for Can-Am. In 1980, the respective figures were \$338.5 million for Petro-

to acquire producing properties.¹³⁷ For a number of years, it paid handsome dividends as oil prices shot up from \$1.80 to \$34.00 a barrel.¹³⁸

The company aimed at a broad market by offering "small" investors a chance to participate. Investment units were as cheap as \$2500, and only \$2000 for IRA accounts.¹³⁹ To maximize the number of investors, the company enlisted a sales force of over 8500 brokers in 355 "national and regional broker-dealer organizations."¹⁴⁰ Sustaining this staff may explain in part why Petro-Lewis's overhead rose to a debilitating \$100 million a year.¹⁴¹

The programs had structural flaws that would become apparent when oil prices faltered. First, the investor dollar was heavily burdened. Even though Petro-Lewis acquired producing properties, it and its brokers collected ten percent as a handling fee, fifteen percent of the remaining proceeds for operating, plus fifteen percent of the remaining "income and expenses."¹⁴² And with the properties already carrying royalty obligations, the investors could end up having little revenue to show for themselves. Precious little of the investment dollar would go to work for investors.

Second, the partnerships borrowed heavily, using reserves as collateral. The investors later alleged that "[t]he Company had leveraged nearly every acquisition with bank debt (between 30 percent and 50 percent of the purchase price of each property was typically represented by debt)."¹⁴³ This kind of heavy borrowing can obscure the true value of a partnership because it sustains very high short-term distributions. The price becomes clear when the principal has to be repaid. This is the point when failure becomes impossible to hide.

Petro-Lewis's banks imposed tighter borrowing limits after Penn Square Bank was pushed into bankruptcy in the summer of 1982. Instead of stopping new fundraising, cutting expenses, and trying to batten down

Lewis and \$115.0 million for Can-Am. *Id.* Petro-Lewis was far and away the leader of the funds.

The rapid increase in Petro-Lewis funds, coming during a period when many companies were entering the business and all experienced intense competition, is one reason to suspect that Petro-Lewis never would have been able to maintain quality without careful, deliberate measures to increase its staff at the same level of quality.

137. In the sometimes small world of oil and gas, this is not the only overlap between the two partnerships. Prudential purchased millions of dollars in Petro-Lewis properties, thus putting a little money back into the hands of Petro-Lewis plaintiffs. The dismal results of the Prudential programs suggests that Prudential probably overpaid for the Petro-Lewis properties, in essence acquiring another company's problems (and charging the Prudential investors a fee for the transfer). In addition, Prudential Insurance and Graham singled out one major purchase from Petro-Lewis for themselves. This property segregation inevitably suggests that they were cherry-picking among the prospects. Paltrow, *supra* note 80, at A12.

138. Petro-Lewis Settlement Affidavit, *supra* note 135, at 6.

139. *Id.* at 3.

140. *Id.* at 3-4.

141. *Id.* at 5.

142. *Id.* at 4.

143. *Id.* at 7.

the accounting hatches, Petro-Lewis paid more in distributions than it was earning. In 1982, with receipts of \$76 million, the Company paid \$142 million in distributions.¹⁴⁴

Petro-Lewis covered the shortfall with increased borrowing. In early 1983, the company falsely denied a *Wall Street Journal* report of cash flow problems. It continued selling units, unloading over \$115 million of a new \$450 million offering.¹⁴⁵ If the writing was not on the wall now, it was by year's end. In December, Petro-Lewis had to agree to pay its banks between eighty-five and ninety-five percent of the "net cash flow of partnerships formed before November 1982."¹⁴⁶ Eleven class action lawsuits quickly followed in the first half of 1984, some on behalf of partnership investors, some on behalf of securities investors who had bought Petro-Lewis stock.¹⁴⁷

As these examples show, the partnership format can accommodate widespread fraud and deception. The form facilitates mass marketing because it is suited to nationwide broker networks with aggressive selling techniques. The brokers often will know little or nothing about oil and gas. The speed with which Prudential rose from nowhere is good testament to the power of this form. Gone are details about particular wells, gone is the need to enter contracts with rights of consent and audit, gone is the chance for face-to-face meetings with the operator. At least in the standard equity format, getting operating agreements and other investment documents signed is likely to require a meeting with someone who can explain the drilling process. There is a chance that investors will have somewhat more knowledge before proceeding.

Each of these large-scale programs suffered the same basic problem. At their start, neither industry contracts nor standards required accurate disclosure of the operator's prior results. Thus investors had no counterweight to the operator's unrestrained word. As it became clear that the early projects were losing money, the operators were able to initiate new programs because they had no obligation to present effective, meaningful reports on the old programs or on the economics of the new. The concealment injured new investors, but it also damaged existing investors because they never received notice that their investment was in trouble.

To some extent these problems escaped detection because some of these operators lied. Prudential borrowed to cover cash distributions, even though its investor materials promised that it wouldn't. Home-Stake pretended to drill wells that it never drilled. The John King organization violated its cash repurchase formula in spite of the clarity of that standard. Nonetheless, even in the face of willful fraud, investors could have identified and avoided many of these failing programs if these companies made even half-hearted efforts to comply with the standards pro-

144. *Id.* at 7-8.

145. *Id.* at 9-10.

146. *Id.* at 10.

147. *Id.* at 11.

posed here. And even if they faked their disclosure numbers, they would have provided investors with much clearer proof of fraud, enabling them to recover their money in litigation.

The ability to operate losing partnerships without detection reflects substantial flaws in industry requirements. An efficient market should punish companies whose investors always lose money. Yet for the market to work, investors must register their economic votes carefully. And to vote their interests, they need enough information to identify successful companies. No reporting is going to be meaningful unless the operator provides the best available information on the projected *lifetime* results of the project. Disclosure requirements limited to the last few years of cash distributions will do little to indicate the true outlook. Completion statistics disguised as "success ratios," cash distributions masquerading as revenue proceeds, occasional discoveries obscuring average losses—each manipulation flourishes only because there is no requirement to present the current discounted value of known reserves. This is the test of economic viability for an oil and gas investment. Yet it is conspicuously missing from industry contracts and customs. Operators who point to the distributions, completions, volumes, and discoveries of their other partnerships need to be forced to add the most important data: What is the real expected economic value of those projects?

Moreover, there is no duty that an operator update investors on their programs. Oil and gas wells require heavy up-front investments that are paid out over many years. More is needed here too.

Injecting fresh actuarial air will cure a lot of what ails oilpatch investing. The next two sections describe the disclosures that can correct this investor-dependent industry's failure to require basic investment information.

III. THIS INDUSTRY NEEDS PERFORMANCE DISCLOSURE, PAST AND PRESENT

In considering rules to improve industry behavior, it is important to remember that no rule is going to stop all forms of fraud and sharp dealing. And many rules that might reduce misconduct can be so intrusive that their costs outweigh their benefits. That is why, for instance, when faced with the trading fraud that sparked the Great Depression, the Roosevelt administration rejected having the government determine the merit of stock issues. Instead, it persuaded Congress to make securities sellers give investors more facts and to punish those who responded with false and misleading data.

The ease with which certain operators whose investors consistently lost money nonetheless stayed in business year after year illustrates the price the oilpatch has paid for failing to develop standards on the basic risks and likely returns of operator offerings. It is unusual, to say the least, that such an investor-dependent industry has failed to make operators present their prior performance. It is time for the oil and gas industry, an indus-

try whose growth has been fueled by outside money from its earliest days, to adopt the basic disclosure standards of an investment contract.

Industry companies tend to resist reform because they worry about added burdens when they are operators. Another reason for resistance is the tendency to circle the wagons by treating suggestions for reform as tests of industry loyalty. This kind of characterization sidelines many new ideas. Too often serious proposals are derailed by being labeled as operator-nonoperator, producer-pipeline, or producer-royalty owner issues. The merits get lost in the process. Narrowing reform proposals to polarized classifications prevents rational consideration of measures that might strengthen the industry. In fact, industry companies would be major beneficiaries of performance disclosure.

A. INVESTORS NEED TO KNOW HOW WELL THE OPERATOR HAS PERFORMED FOR OTHER INVESTORS

The measure most needed to avoid the problems described in the last section would be to make operators tell investors how their earlier investors have done. Operators should have to disclose the prior economic results of programs they already have conducted.

Disclosure should group programs by year, because variations in drilling costs, acreage availability, and energy prices can produce different results in different time periods. Like anyone selling an investment, operators would have to provide other details as needed to make the information accurate. The operators should present the discounted present values of past and ongoing programs and should list their rates of return to facilitate comparison with other programs and with investments outside the oilpatch.

Has the operator ever produced the results it is predicting? When and how often? Does its track record suggest a small chance of a big success but a big risk of losses, a high probability of a positive return, or almost no chance at all? Put another way, can the operator prove the expertise for which it seeks handsome fees?

One of the constants of oilpatch life is how much operators and promoters say about the prospects for success. Whoever is marketing a prospect—the operator, a broker, another investor—one thing never changes: they virtually always make promises about how the operator has done before. And investors understandably rely on this information. But the industry contract is deafeningly silent on the facts that would let investors test these claims. As a result, what is often the most intense and material part of the sale is usually anecdotal, oral, and very hard to prove if the project turns out badly. Those omitting information include many operators who have long been in the business, have substantial track records, and could produce the details with a flick of their finger on a computer keyboard.

Part II described the kind of salesmanship that can mar oilpatch ventures. Those operators sold their programs so easily because they did not

have to give investors readily available facts on their prior records. Operators disseminate unsupported claims of being ahead of industry standards, assert that proposed wells are similar to nearby producing wells (with differences between the wells carefully omitted), prophesy future returns on too little information, and predict major discoveries from preliminary drill-stem tests. Davis Oil raised its "success" by including completed wells that lost money. Prudential and Graham, Home-Stake, and Petro-Lewis perpetuated the market for their partnerships by making distributions unhinged from reserves and from any expected future discoveries. Operators like Nixon compared (and distorted) the results of nearby wells rather than simply describing their own past history.

It is a bad joke to pretend that items like the number of wells completed, nearby wells, and prior distributions are meaningful information without regard to overall economics. Yet operators will continue to play with this kind of information unless constrained by new industry standards. For instance, the predecessor to the Prudential entity that so badly misinformed its investors in the Graham partnerships had been caught selling earlier programs using a "well activities table" that simply listed the "productive" versus "dry" wells. These statistics made it look as if the programs had a roughly forty percent success rate, when in fact they were near bankruptcy.¹⁴⁸ Unfazed, Prudential did not make any greater effort to use economic predictors when it built its program with Graham Energy.

Each kind of bait is likely to work only in the absence of factual benchmarks. Prudential, John King, and Home-Stake, for instance, were running money-losing operations (at least as far as their investors were concerned) for a number of years. A fair listing of their prior results would have put investors on notice to think twice, and then think again. The information would not have deterred all investors, but all would have understood the risks they faced.

It is no accident that the Prudential programs stopped in their tracks as soon as the general partners admitted that the "value" had fallen below the initial investment amounts. Investors sued in months. Who would

148. BACHE TAX INVESTMENT GROUP FACT SHEET, INVOIL HORIZON DRILLING FUND, Exhibit 7, at 6 (Nov. 5, 1981).

While publishing only this largely irrelevant "success ratio" for its investors, Prudential itself was looking closely at the only data of significance, the *economic* results of the program. An internal memorandum dated three days earlier discussed broker concerns "regarding lack of success and poor reporting on previous programs." Memorandum from Ed Devereaux, Tax Investments Div., Bache, to Dennis Mamon, Tax Investments, Bache (Nov. 2, 1981) (on file with *SMU Law Review*). Prudential commissioned an independent study of its progress. The conclusion, published in May 1982 using much of the data available at the time Prudential was hawking its well-activity success ratio, was that many of the wells never should have been drilled. Petro-Enterprises Report, *supra* note 21, at 24. That is the difference between a realistic economic measure, one that every oil company conducts or should conduct internally, and such vague data as completion ratios. Completion statistics are a starting point, as they may pinpoint companies that are far above or below industry averages (but not always even that), but they must be followed by full economic analysis to be meaningful.

have invested had they known that Graham, Prudential's chosen operator, reported only losses on its prior programs? How many investors would Marvin Davis have attracted had he claimed, as he did when investor Aetna sought the information in discovery, that he could not produce records showing whether his investors had made money or not?

It is fair to expect any regulation to justify itself in terms of its costs. Yet it should not be hard for an operator to compile its economic record. In spite of standard morning-after disclaimers, operators can tell easily—competent operators already know—how many wells they have completed, how many produced in paying quantities, and how many paid out. Operators know their investors' total costs (because the operator prepared the bills for those costs), and they should have a monthly record of production and revenue. Operators must calculate costs, revenues, and income for tax purposes. In this day of computers, storing this information for investors should be simple and inexpensive. Yet this information is almost never offered.

B. THE OIL BUSINESS IS SUFFICIENTLY PREDICTABLE TO USE PRIOR ECONOMIC PERFORMANCE

Mandatory disclosure of the operator's economic performance presumes that *average* results will not vary wildly from year to year. The predictive force of past performance is well understood by operators, who generally rely on some version of their history as they seek new investors. Demonstrated past skill and experience are variables on which one oil company should be distinguished from another. Companies in the oil business learn over time, so more experienced companies should do better on average and an operator with a better record should do a better job on average even among other companies with the same experience.

The industry's failure to make operators list prior economic results lets operators play the predictability game. When wells come up dry, operators become infatuated with the supposed unpredictability of drilling. It becomes a "You-don't-know-what-you've-got-till-it's-gone" business. The scientific industry in evidence during the solicitation period can disappear overnight.

The careful operator will insert a pro forma warning in its small print that drilling is risky. Yet to clinch the deal, it will brag about its position in the industry and, anecdotally, about its prior successes. It has an incentive to increase the level of assurance as much as needed for closure.

In Prudential's broker scripts, for instance, not one word suggests warning investors that they might lose their money, of the odds that they would not earn any return at all, or of any other risk. Instead Prudential looked for investors' "hot button." The oral sales proceeded as if the disclaimers didn't exist. Later, though, when investors began to lose money, Prudential discovered the small print in the prospectus never discussed during solicitation.

The same contrast between pro forma disclosures and specific, aggressive misrepresentations about past performance—all pitched toward making investors believe the operator's past is a reason to invest in its future—marred the King projects,¹⁴⁹ Longhorn Oil and Gas's defenses,¹⁵⁰ and Home-Stake's partnerships.¹⁵¹ Because the industry has avoided meaningful economic measures, virtually every oil and gas project is able to exploit the gap between its prior results and its oral sales representations.

The *Davis Oil* case shows how quickly the investment benchmark can shift. When Marvin Davis solicited Aetna, his results were ahead of top industry performers and his completion record was presented as proof of what he could do.¹⁵² At least when one investor's enthusiasm flagged,

149. King and promotions like his are interesting because they are predictable but in the worst way: the operators know that investors are on average going to lose money. Over time they could even calculate average rates of loss. This issue came up in John King's battles with the IRS. King secured certain tax benefits by classifying his oil and gas investments as "transactions for profit." *King v. United States*, 545 F.2d 700, 708 (10th Cir. 1976). Given King's record of fraud and failure—indeed, the seeming certainty of failure—the IRS quite understandably argued that by the time King made the challenged investments, "at that time he must be found to have known that he was purchasing largely worthless dry holes." *Id.* at 709.

The court disagreed. It held that the evidence supported the trial court finding that King made his investments in hopes of profits. To the court, failure did not disprove King's profit-motive. "The oil and gas business is very speculative" and "[t]he number of unprofitable ventures clearly outnumbers the profitable ventures." *Id.* at 708-09.

This was hardly the government's point. It was arguing that King had to know, from his past record, that *his* particular projects were doomed to failure. There was no reasonable basis to expect a profit even in the industry's ordinary risk-discounted terms. The trial court had discounted such evidence by noting that while King had access to lease files "and could perhaps, have obtained advance information with respect to the properties subject to the tenders, there is no evidence that he did so." *Id.* at 709 n.3.

The Tenth Circuit is correct that the IRS could not start with a presumption that every losing oil and gas investment was not entered for profit. But it seems just as surely wrong to give no weight to the argument that in the King investments, which in their later years produced quite a record of losses, King had no reasonable basis to expect profits from his operations, at least, not from the oil and gas portions of those operations.

150. After loading investors with representations about its success and place as one of the "best in the business," the *Longhorn* defendants argued on appeal that these statements should be ignored because "each offering circular advised each potential investor that no person had been authorized to give any information or to make any representations in connection with the offering" other than those in partnership writings. Defendants' Pretrial Brief, *supra* note 47, § 9, at 3.

On risk, they had similar claims:

Each prospective investor was advised that oil and gas drilling is highly speculative and that no assurances could be given that any production would be obtained Due to the extremely high risk in exploring for oil and gas [one forgets that Longhorn had promised that 75% of its wells would be development wells], it is impossible to predict 'success in the future,' a fact fully disclosed in the offering circulars.

Id. at 3, 153 (emphasis added).

151. Home-Stake inflated its past record in a different way. The company drilled so few wells that there wasn't much it could say about its past drilling experience. The company hoped to raise new funds from some of its existing investors, so it divided investors into classes and paid those investors that were more likely to invest again. In addition, it settled litigation quickly so that new investors would not learn of earlier problems. *See supra* notes 72-74 and accompanying text.

152. *See supra* note 25 and accompanying text.

Davis Oil volunteered how well drilling was going, how much it had discovered, and how much more it knew about oil properties than even skilled outside petroleum engineers.¹⁵³ This was a predictable, scientific organization, a collection of experts.

When Aetna's program turned out to be a bust, entirely different from the front-end predictions, Marvin Davis donned his wiser but sadder role. Now drilling was another matter entirely: "You can't look underground"; "It's like a horserace."¹⁵⁴ The belief that skill and experience can reduce risk and that oil exploration is a professional activity, beliefs Davis used to market prospects, became the province of fools. Now Davis claimed to drill by his "gut feeling," guided by his "nose for oil," a matter of "intuitiveness."¹⁵⁵ This post-operations realism, of course, would not have attracted a single investor. The denial reached the height of absurdity when the company's lawyers moved to exclude all evidence of the dismal results of Davis Oil's Aetna programs, results which were exactly the opposite of its predictions, on the ground that the results of an oil and gas program are *of no relevance* to the value that oil and gas properties had before they are drilled.¹⁵⁶

153. See *supra* notes 27-33 and accompanying text.

154. Marvin Davis Deposition at 50, 55; see also *id.* at 87, 263, 386. Now Marvin Davis claimed that his unique ability was his "smell for oil." *Id.* at 55.

155. *Id.* at 249-50.

156. If Marvin Davis truly believed that the past has no bearing on the future and his prior performance no weight in predicting his future achievements, then he had no business marketing his programs by urging investors to credit his allegedly above-average success rates. What he should have been saying is that, "This business is utterly unpredictable, so you should ignore the results that any company has achieved in the past."

The "it's-so-risky-that-no-one-can-predict, you-just-never-know" theory permeated Davis's response to Aetna's lawsuit. One of Davis's defenses was that "[p]laintiff was fully aware of and assumed the risks of investment in its oil and gas ventures." Defendants' Answer to the Third Amended Complaint, *supra* note 25, at 3. When Aetna asked for records on the results Davis had produced for other investors (to test whether he really was successful), defendants refused because they found the argument that anyone could believe promises that they would earn a reasonable rate of return on an oilpatch investment "ludicrous on its face to anyone with even a limited knowledge of the risks inherent in wildcat drilling." Defendants' Opposition to AEI's Motion to Compel Production of Documents at 8 n.8. In fact, it was just such a "ludicrous" theory, that a large experienced operator can generate predictability by its risk spreading and superior experience, that Davis used to market his prospects.

As defendants got closer to trial, the campaign continued. They tried to exclude evidence one of Aetna's experts had advanced, using Davis's dismal results, to show that Davis's performance was "far below normal industry standards." They argued that an engineer "cannot determine the quality of these speculative prospects based solely on their ultimate production." Memorandum in Support of Defendants' Motion to Strike Plaintiff's Supplements to Summaries of Testimony of Donald Hockaday and Preston Moore at 11.

This argument was a reprise of defendants' failed attempt in the prior summer to exclude all evidence of the poor performance of Aetna's wells. In this Alice-in-Wonderland world, the failure of properties to produce, by a company that promised it would find production with its properties, was not a relevant factor. In their motion in limine, the defendants moved to exclude all evidence "of the ultimate financial or drilling results of AEI's investments with Davis Oil." Davis Oil Memorandum in Support of Motion in Limine to Exclude Evidence of the Ultimate Financial or Drilling Results of AEI's Investments with Davis Oil at 4-5. They argued: "The simple fact is that the value of a prospect changes dramatically, either upwards or downwards, as a result of the drilling of a well. The actual outcome of the well is *irrelevant* to the speculative value that a purchaser would pay for the

The “risky business” defense is about as relevant to an oil and gas investment as the tax-deduction defense (you wanted tax benefits, so the jury should ignore the fact that you lost all your money because the IRS let you deduct some of your loss)¹⁵⁷ and the rising-price defense (you thought prices would go up, so it must be falling prices that robbed you of your expectancy, not, heaven forbid, our worthless properties).¹⁵⁸

opportunity to drill the well . . .” *Id.* (emphasis added). Evidence of the properties’ value after the end of 1982 (barely a year after Aetna’s first well was drilled) “is simply too remote and unfairly prejudicial to be allowed.” *Id.* at 9.

“[W]here the results of drilling have been disappointing, the jury will find it difficult, if not impossible, to consider the initial opportunity for profit that determines the true value of an undrilled prospect.” *Id.* at 5.

The defendants did not explain how a superior staff and a company with an above-average track record could generate such statistically significant, disastrous results. For a comparison of Davis’s results to overall industry results, see *supra* note 36.

157. In *Davis Oil*, the defendants’ second defense was that Aetna should be precluded from suing for rescission because it had failed to tender “the value of any tax deductions or benefits it has received from any federal, state, local, or foreign [?] taxing authority.” Defendants’ Answer to the Third Amended Complaint, at 1 (Second Defense).

The *Longhorn* defendants tried this tax argument: “In the case of each and every investor, the purpose of that person’s investment in the separate and distinct opportunities was fulfilled in all respects. Each investor received tax deductions and credits, the result of which allowed that party to shelter or defer income.” Defendant’s Brief at 100, *Longhorn* (No. MDL-525). According to the defendants, the venture they had marketed as a means to finding oil and gas was anything but that:

The limited partnerships were successful in the sense that wealthy investors who participated in the programs achieved tremendous tax benefits. . . . The purchasers of these interests are wealthy individuals who were seeking primarily a tax shelter, and only very secondarily to invest in oil and gas exploration.

Id. at 100, 153, 227. Putting aside the fact that none of the *Longhorn* documentation said anywhere that “we offer a really big tax deduction and a really small chance of ever finding oil or gas,” this defense doesn’t make economic sense. Given that only part of the investment, at best, could have qualified as a tax credit, the most that the rest would have covered would be a deduction. All a deduction does is allow one to reduce taxes by a percentage of a qualifying loss. No rational investor would seek out a program “primarily” for a tax deduction, because this would be like hunting for an opportunity to lose money. It certainly is true that the opportunity to deduct costs reduces the real cost of a program, but losses still are losses.

In *Home-Stake* the same defense cropped up in the argument that the court erred in its failure to “find that tax benefits, which included intangible drilling cost, were the primary motivation of investors.” Defendants’ Brief in Support of J.N.O.V., at 69, *Home-Stake* (No. 153-R). This argument was particularly misplaced in *Home-Stake* because the company had not spent most of the money that investors were encouraged to deduct as costs.

The deductibility problem suggests the next flaw in the argument. If investors prevail on their claims of fraud, the IRS is going to require them to repay their losses (which have now been reversed). For this reason it makes no sense to deduct tax benefits from actual damages. See *Randall v. Loftsgaarden*, 478 U.S. 647 (1986).

158. For instance, Graham Resources’ chief executive officer John Graham told the *Los Angeles Times* as late as 1993 that “all of the funds’ promises to investors would have come true if—as most in the oil industry expected—prices had revived.” Paltrow, *supra* note 78, at A17. Of course, an opportunity that “will make you money only if commodity prices increase steadily” is not exactly the low-risk, sure-high-yield, like-a-CD investment Prudential promised its customers.

The *Longhorn Securities Litigation* defendants claimed this defense *sotto voce* when they plead that their lack of success was due only to their failure to discover enough production “during a highly competitive period for exploration that was followed by a decline in the price of oil and gas.” Pretrial Order, Final Contentions of the Parties, Defendants’ Contentions at 9, *Longhorn* (No. MDL 525).

If an operator ever does say, "I don't have any idea what we're going to find, because I don't think the past predicts the future in this business at all, so my prior record is irrelevant and I'm not even going to tell you what it is," it would have a basis to raise the risky-business defense. If an operator says, "I think we're going to lose money, a lot of money, but I know you'll really like this project because you can deduct your losses (thus losing only a percentage of the total loss)," it would have a legitimate gripe if an investor who took deductions later complained. And if a late-seventies operator said, "There aren't many good properties out there anymore, the industry is experiencing diminishing returns on its acreage and both acreage and drilling costs have gone through the roof, so you should expect to lose money unless prices triple," it could argue that investors could not prove reliance just because they lost money.

Not a single oil investment has been launched with such warnings. Operators may file risk disclaimers, but they have nothing to do with why people invest. The disclaimers are too general ("Oil and gas drilling is inherently risky. Many factors can affect the outcome of a drilling program. Prices may change, . . .")¹⁵⁹ to distinguish between programs or other investments. In this economy, what industry isn't risky? Even IBM and U.S. Steel, to say nothing of public utility stocks, have turned out to carry unexpected long-term risks.

What investors need is specific information about *their* operator's ability to conduct business in an environment of general risk. People spend their money with one company and not another because they believe the company will be successful. If the operator's statements are truthful but general risks come to fruition anyway, then these are indeed the risks of the business. But fraud arises if the operator pretends it has navigated those risks successfully in the past, though its previous investors actually did poorly. Before investors make their decision, they are entitled to accurate, truthful disclosure in the currency of importance—project economics.

A duty of disclosure assumes that past performance is very material because skill has predictive value. The happy, retrospective disclaimer that "Oh, you just never know" does not fit the oil business any more than it fits other businesses. Each well may have a good deal of risk, and some fields are more risky than others, but risks are diffused as operators drill more wells. Over time, operators with higher levels of skill do better than the less skilled.

159. In the Prudential prospectuses, for instance, there were pages of disclaimers. The "Risk Factors" included, among others, risks of property selection, availability, competition and regulation, diversification, financial limits, limited liquidity, conflicts of interest, lack of control over some properties, and a variety of tax risks. PRUDENTIAL PROSPECTUS, *supra* note 105, at 4-10. And these were the risks before the prospectus even got to its express listing of "risks inherent in purchasing producing properties," which included dangers from prices, costs, and deliverabilities, and the fact that "[r]eservoir engineering, geophysics and geology are not exact sciences." *Id.* at 10. Very few investors have any means of quantifying such risks. It becomes all the more important for investors to have some way to factually compare how different operators have done before they take their plunge.

An operator's past record is evidence of its ability to spot productive acreage; of its care in drilling and maintaining costs; and of its diligence in protecting investor interests. Each program will have different geologic aspects and thus different risks, but investors still need to know the operator's overall level of performance before balancing the particular risks. The average level of return will drive expected results, supplemented by the variability of individual wells and fields. It is no accident that oil companies exhibit discernible long-term trends in their finding costs, one significant measure of their efficiency.¹⁶⁰ Why publish these costs if the past does not bear meaningfully on the future?

The industry's failure to develop effective measures of performance rests, in part, on the widespread view that the industry is unpredictable. This idea is heavily embedded in industry myth. Even though the industry contains a large international network of experts whose job it is to pinpoint and narrow the risks of drilling, using several generations of accumulated scientific knowledge, industry participants often act as if major companies are farmers dropping a bit a hundred feet or so in the backyard. It is not just fringe companies who exhibit this myth.

The idea that the oil business is somehow unknowable, rather than a business with risk that experts can handicap, is tantamount to saying that its many layers of experts, from engineers to geologists, from petroleum accountants to oil executives, do not know what they are doing at the most fundamental level. This fiction ignores the tens of thousands of professionals who narrow and define the risks of drilling. For instance, there are almost 25,000 United States members of the American Association of Petroleum Geologists (AAPG). The AAPG devotes itself "to advanc[ing] the science of geology, especially as it relates to petroleum, nat-

160. The predictability of oil returns is the basis for the most famous civil damage award in American history, the \$11 billion judgment that Pennzoil won against Texaco. Pennzoil's damage model was simplicity itself. Pennzoil took its own quite low finding cost, assumed it would do the same in the future, calculated how much cheaper it was per barrel to acquire the reserves controlled by Getty than to fund new exploration even at its low costs, and multiplied the billions of reserves it would have owned had the acquisition gone through times its anticipated savings. The result is history. For a summary of the damage model, see *Texaco v. Pennzoil*, 729 S.W.2d 768, 860-61 (Tex. 1987), *cert. denied*, 485 U.S. 994 (1988).

Another example of proper reliance upon the predictability of oil and gas projections is the over half-a-billion dollar judgment recovered by TransAmerican Natural Gas Corporation in its take-or-pay litigation against El Paso Natural Gas Company. After the jury found that El Paso had repudiated its take-or-pay contract, TransAmerican was left with the job of proving the gas it would have produced in the many remaining years of its contract. TransAmerican had been engaged in an active drilling program until El Paso stopped buying its gas, thus drying up the funds used for drilling. TransAmerican showed the jury the average number of new wells it had planned to drill, and the average reserves, decline curves, drainage, and success ratio of its past drilling in the same area. Although El Paso called the wells that TransAmerican projected it would drill "phantom" wells, the jury awarded the damages sought by TransAmerican to the penny, including damages from wells not yet drilled. A discussion of the damage model and the predictability of this kind of reserve evidence can be found in TransAmerican's brief on appeal, Brief of Appellee §§ III.B-C, *El Paso Natural Gas* (No. 01-88-0847-CV).

ural gas, other subsurface fluids, and mineral resources.”¹⁶¹ Its members, along with their nearly 7000 overseas counterparts, understand that “[g]eology is a profession,”¹⁶² not a gambling club. Well logs, seismic know-how, subsurface mapping, core samples—the many components of the science of petroleum prediction bespeak a sophisticated activity.

Another 50,000 industry professionals belong to the Society of Petroleum Engineers (SPE), an organization whose goal is “to enable today’s energy professionals to do a better job.”¹⁶³ In the SPE’s view, “[t]echnology is the foundation of the international oil and gas industry.”¹⁶⁴ The foundation is not a pack of cards or set of dice. To enhance scientific ability, the SPE publishes technical manuals on everything from log reading and drilling practices to the reservoir characteristics of many formations.¹⁶⁵ Since 1982, the SPE has been joined by the Society of Petroleum Evaluation Engineers (SPEE), a body of “specialists in the evaluation of petroleum and natural gas properties.”¹⁶⁶ One of the “principal goal[s]” of the SPEE has been the “standardization of oil and gas reserve definitions.”¹⁶⁷

COPAS has joined the quest for objective, efficient measures of performance. It has begun a periodic listing of comparative performance data.¹⁶⁸ The current edition has twenty-one measures of performance.¹⁶⁹ Each measure has advantages and disadvantages, but COPAS spends its time treating prediction as a reality to be improved. It is not wasting its time pretending that meaningful information is unavailable or defeated by something in the nature of the industry.

Operators bill investors for the services of these experts because they know that their industry rests on a large, accumulated body of knowledge about where to find oil and gas and how to get it out of the ground. It is this experience that investors seek when they go looking for an experienced industry company.

Were the oil business not at all predictable, its instability would doom such well-accepted ventures as the accounting standards for oil and gas companies. The Financial Accounting Standards Board (FASB), working with the SEC, developed a set of supplemental disclosure guidelines for

161. AAPG CONST. art. II (1993). The membership numbers are taken from the May 1995 membership list, furnished to the author by the AAPG.

162. *Id.* art. IV.1.(a).

163. SPE, A VITAL LINK FOR THE PETROLEUM INDUSTRY (undated brochure) (on file with *SMU Law Review*).

164. *Id.*

165. For a sample of the level of scientific detail at large among industry professionals, if not among operators when hauled into court, see SPE, 1994/1995 ENERGY RESOURCES CATALOG (listing current publications).

166. SPE BROCHURE (undated) (furnished to author by SPEE) (on file with *SMU Law Review*).

167. *Id.*

168. See, e.g., COPAS, OIL & GAS PERFORMANCE MEASURES: A RESEARCH PROJECT BY THE FINANCIAL REPORTING COMMITTEE (1st ed. May 24, 1994).

169. *Id.* at 3-4.

oil and gas companies.¹⁷⁰ The guidelines follow the path one would expect. On the revenue side, companies list proved reserves, including factors that could generate unexpected changes.¹⁷¹ This data has to be updated at least once a year.¹⁷² The company displays reserves at existing prices, but with adjustments for any contractually-set price changes.¹⁷³ To convert this information into an economic value, the expected cost of development is netted from the reserves, with the result being a net discounted value.¹⁷⁴ (Unfortunately, the SEC has limited the supplemental requirements to publicly traded oil and gas companies, thus excluding most joint-account equity investments, joint ventures, and limited partnerships, the most common drilling ventures.)¹⁷⁵

Federal disclosure standards for publicly traded oil and gas companies rest on the belief that there are reasonable ways to predict the future for oil and gas programs.¹⁷⁶ Investors still need to apply ordinary principles of risk discounting. If an operator proposes development drilling where

170. FASB, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 69 (1982) (disclosures about oil and gas producing activities) [hereinafter FASB No. 69].

171. *Id.* paras. 10-17. Paragraph 16 provides that "[i]f important economic factors or significant uncertainties affect particular components of an enterprise's proved reserves, explanation shall be provided." It gives as examples unusually high costs, the need for a pipeline or other major facilities before production can begin, and contract obligations to sell reserves at below-contract prices. *Id.* para. 16.

172. *Id.* paras. 7-8.

173. *Id.* para. 30. An example would be a long-term contract with a price escalator clause. If the contract contains a periodic market redetermination provision that moves with market fluctuations, presumably the company should use the current price and also discuss the information on expected changes.

174. *Id.* paras. 30-33. "Additional information necessary to prevent the disclosure of the standardized measure of discounted future net cash flows and changes therein from being misleading also shall be provided." *Id.* para. 34.

175. FASB has "eliminate[d], for enterprises that are not publicly traded," its requirements of disclosing cost and reserve information. *Id.* para. 2.

176. A minority dissented from the FASB standards on grounds that clarify the predictability assumption built into the majority's decision to require future net cash flow valuations. The dissenters were comfortable with disclosing proved reserves, capital and incurred costs, and results of producing activities by geographic area. *Id.* at 13. These measures, they found, "help to fill a void caused by the absence of reliable measurements of the costs of finding and developing oil and gas reserves and the lack of a relationship between those costs and the revenues and cash inflows resulting from their disposition in the normal course of business." *Id.*

The dissenters parted company over converting this information into a discounted net cash flow index, a measure that they believed was "completely lacking in reliability." *Id.* They feared projections into the future because such projections depend upon "management's forecasts of future production quantities, not only for the immediate future but for the entire period required to exhaust the existing estimated quantity of proved reserves." *Id.* at 14. This in turn could depend upon such highly variable factors as future energy demand, the development of substitute fuels, and the political stability of oil and gas producing nations. *Id.*

It seems obvious that most of these variables are likely to affect future price fluctuations, a risk that investors knowingly assume. Thus providing the information listed by FASB No. 69 hardly seems remarkable, even in the face of these objections. Almost any kind of forecast will have the same problem.

The dissenters seem to have been speaking from a larger philosophical position. In their view, financial reporting generally should be tied "largely . . . [to] the financial effects of transactions and events that have already happened." *Id.* As for the future, "it is impossible to verify the future." *Id.* Yet this information would have no value if events that "al-

its drilling is exploratory, investors can consider the difference this makes. The operator should better its record. Conversely, if it is exploring outside a formation where it made one great discovery but drilled dozens of dry holes, that too would have to be disclosed. With the FASB No. 69 data, investors can make such judgments equipped with core investment data as their guide.

FASB No. 69 does not assume that an operator's results will always be the same. It merely rests on the belief that past results are a good and readily available predictor. This is necessary background information with which investors should be armed. If the current projections deviate markedly from past results, investors will have the information to ask why, and to weigh the evidence, *before* putting their money down.¹⁷⁷

C. REGULATION THROUGH FULLER INFORMATION IS CONSERVATIVE REGULATION

Mandatory data disclosure is the primary form of regulation for state and federal securities markets. The decision to tame market disorder by

ready have happened" were not a guide to the future—if this information lacked predictive value, investors could leave the past to historians.

To the dissenters, who happily did not carry the day and deprive investors of cash flow analysis (which is the true economic translation of reserve and cost information), "[t]hose who use the information provided by financial reporting may try to predict the future, but that is the essence of investment decisionmaking, not the objective of financial reporting." *Id.* "Only if a user reflects his or her own set of expectations in predicting future activities and results of various enterprises is comparability possible. . . . Predicting the future is the users' responsibility; it is not an appropriate objective of financial reporting." *Id.*

The dissenters' position, taken seriously, is that it is not possible to make an objective comparison of oil and gas investments. Never mind that banks, oil companies, institutional investors, and everyone else connected with the oilpatch think that they can make rational decisions. There is no reason to think that oil prediction is more of an exact science than business investment generally, but this does not mean that investing is a shot in the dark. The fact that the investment data that can be generated will not fit all investors' needs exactly is a fact of life in the oil industry, but it is a fact of life in other industries, too. The solution to information imperfection is not, as the dissenters suggest, to provide no information, but to provide the best information in the most meaningful format and make sure investors are told the limits of what is conveyed.

177. An example of factors to consider is whether the promoter has the same management as before.

"Track record" is much like the two sides of the coin. One side says, "Track record has no bearing on future programs." Frequently, this is precisely the case. Past performance—generated by different people, in a different area with a different drilling philosophy, under a different program structure, with a different drilling budget—has little or no bearing on a current partnership. To the extent that some of these same characteristics are present, however, prior performance can be an indicator of future expectations.

Arthur J. King, *A Way To Get Rich Quick, Maybe*, reprinted in II Mosburg (ed.), *supra* note 22, at 575-77.

Another problem is growth in program size. Companies that do well while small may be unequipped to spend larger volumes of money. Operators often tout size as a sign of success. "Bigger is better. More dollars, more diversification." King, *supra*, at 578. Yet in fact, "experience tells us that fund raising ability can outrun drilling budgets, and the 'bigger pieces of the same pie' (larger interests in the same well) approach can negate the argument for increased diversity." *Id.* at 579.

requiring fuller information is a conservative and limited regulatory intervention. It assumes that the market is providing insufficient information or information in the wrong form. Part V.B. discusses several reasons why oil and gas markets may fail to generate enough information.¹⁷⁸

178. Justice Breyer recited the standard reasons for markets not producing accurate information in STEPHEN BREYER, *REGULATION AND ITS REFORM* (1982). He developed four reasons. First, market incentives may be skewed, as with nonexcludable information that is costly to gather but whose distribution cannot be limited once it is published. *Id.* at 27.

The second reason is fraud. "The rationale for government action to prevent false or misleading information rests upon the assumption that court remedies and competitive pressures are not adequate to provide the consumer with the true information he would willingly pay for." *Id.* This certainly proved true in many of the oil and gas operations described in this article, in which the minimal protection generated under existing industry standards and court remedies failed to prevent the infliction of great harm on nonoperators.

Third, buyers may not have the ability to evaluate information in the form presented. *Id.* at 27-28. To the extent that ability is a function of the presentation of information, this problem can be partly remedied by specifying a better format for disclosure. The need for information may be reduced as specialists develop new analytic techniques.

Finally, supply side imperfections, like monopoly power, may prevent firms from receiving the right incentives to provide information. *Id.* at 28.

There is a literature trying to prove that markets are as "efficient" in the provision of information as in the provision of other items and thus should provide as much information as is desirable without any government intervention. The originating article is George Stigler, *The Economics of Information*, 69 J. POL. ECON. 213 (1961). Behind Stigler's skepticism about the need for regulation is his belief that markets spontaneously generate the information they need. As markets grow in size, both dollar size and the number of traders, "there will appear a set of firms which specialize in collecting and selling information. They may take the form of trade journals or specialized brokers." *Id.* at 220. Stigler also treats advertising as "an immensely powerful instrument for the elimination of ignorance—comparable in force to the use of the book instead of the oral discourse to communicate knowledge." *Id.*

The trouble with Stigler's argument is that it ignores the proof that many markets have not provided enough information to be self-regulating. Theory, which is always an approximation and simplification, should not blind theorists to reality. The solution to the reality of fraud-in-the-marketplace is not to close one's eyes and create theories of why the evidence two feet away isn't really there. The Great Crash is exhibit A of the ease with which "perfect" free markets can succumb to opportunism, bad information, and people's inability to demand sufficient information to protect themselves. Louis Loss surely is correct in noting that Stigler-like microeconomic arguments have "an unreal quality." LOSS & SELIGMAN, *supra* note 37, at 28. "Generally, the critics have ignored or underestimated the evidence concerning securities fraud, excessive underwriters' or insiders' compensation, or public confidence in the securities markets, all of which persuaded Congress in 1933, 1934, and 1964 to create the legislative basis for the present mandatory corporate disclosure system." *Id.* at 29.

Congress often makes mistakes of course, but there was no mistaking the Great Depression. Moreover, the history of unregulated markets is full of evidence that they do not generate enough information to protect buyers from fraud and, in the long run, to protect the market itself from fraud-fueled booms followed by crashes. The initial damage can spread rapidly as it reverberates through the larger economy. In the words of public policy, fraud can have major negative externalities. See, for instance, the collapse brought to the early French market by the Mississippi Company scheme and the similar English experience from the South Seas Bubble. CHARLES MACKAY, *EXTRAORDINARY POPULAR DELUSIONS AND THE MADNESS OF CROWDS* 1-88 (1932). One of the United States' supreme contributions to market fraud was to serve as the backdrop for the Ponzi scheme. The entertaining stories of Charles Ponzi's various schemes, tragic stories for his victims, are told in DONALD H. DUNN, *PONZI! THE BOSTON SWINDLER* (1975).

An industry in which operators routinely provide *no* record of their prior economic performance invites fraud. Entry is far too easy for the unscrupulous and the incompetent. Something impedes the flow of basic facts. It is quite easy to modify the industry contract to ensure that core facts are disclosed.

The purpose of forcible disclosure is to make sure that sellers, who have access to a lot of inside information, produce enough inside information so that buyers can make informed choices. In this sense, information provision is a pro-competitive, not anti-competitive, reform.

[S]ince freely functioning markets require adequate information—which disclosure helps provide—disclosure, like antitrust, can be viewed as augmenting the preconditions of a competitive marketplace rather than substituting regulation for competition.¹⁷⁹

Under the federal securities laws,¹⁸⁰ Congress requires that sellers share material information but leaves buyers with the burden of reviewing the data and assuming the risks of investment. This was Congress's solution to the fraud and data manipulation that plagued financial markets in the late twenties and led to the Great Crash of 1929.¹⁸¹ To police

Part of the difference between those who want no regulation and those who accept government intervention seems to be that some market boosters could care less about the victims of fraud. One would expect that those preaching the virtues of free markets would lionize investors who enter the economic jungle, take risks, spur innovation, and drive the economy forward, because entrepreneurship is the essence of capitalism's strength. But look at Stigler's view of securities regulation: "The paramount goal of the regulations in the security markets is to protect the innocent (but avaricious) investor." Stigler, *supra*, at 725. It is this "avaricious" investor, the agent of capital activated by Adam Smith's self-love rather than altruism, who provides the motor for the supposedly efficient capitalist system.

Charles Mackay in his famous history of the South Sea Bubble is no more sympathetic with its victims, many of whose lives were ruined by the collapse in shares:

[N]obody blamed the credulity and avarice of the people—the degrading lust of gain, which had swallowed up every nobler quality in the national character, or the infatuation which had made the multitude run their heads with such frantic eagerness into the net held out for them by scheming projectors. These things were never mentioned. The people were a simple, honest, hard-working people, ruined by a gang of robbers, who were to be hanged, drawn, and quartered without mercy.

MACKAY, *supra*, at 72.

Credulous and avaricious people? Avaricious investors? The condemnation has not advanced much in a century. The fact that securities sellers are able to make false statements intended to induce buyers' reliance, and succeed in doing so, is no reason for rewarding the defrauder for its sophistication or punishing the victim for its gullibility. Between the two parties, the profits of the wrongdoers depend upon their knowing victimization of the buyer. Fraud damages both the immediate victim and, if repeated and not punished, over time will subvert the market system which it exploits. Nothing in logic or economics suggests any reason why perpetrators should be rewarded and their victims punished.

179. BREYER, *supra* note 178, at 161.

180. Another regime of disclosure arises from the duty to produce information under the good faith bargaining standard in the National Labor Relations Act. This duty recognizes that talking is meaningless if one party refuses to produce facts to discuss.

181. Bowing to political pressure, Congress did exempt state and municipal sellers from securities regulation, LOSS & SELIGMAN, *supra* note 37, at 267-72, and it exempted small offerings not publicly offered—in essence, trading among groups who should know each other—from the registration requirements, *id.* at 307-21.

the new duty, Congress imposed penalties on those making false and misleading statements.

Disclosure does not restrict individual choice. Investors can assume any level of risk they prefer. Operators still can offer properties with hopelessly dismal chances. They still can load programs to the gills with fees and charges. All disclosure requires is that operators not conceal what they know. It does not dictate the investor's choice.¹⁸²

In spite of the understandably widespread distrust of financial markets following the Great Crash, in 1933 and 1934 Congress rejected having the government pass on the merits of proposed stock offerings. President Roosevelt announced that the federal government would not enter the business of approving issues (a form of regulation used by some of the states). Instead, it would ensure that securities were "accompanied by full publicity and information and that no essentially important element attending the issue shall be concealed from the buying public."¹⁸³

To understand just how moderate this reform was, one need only recall the devastation of the thirties. Fully half of the \$50 billion in securities issued after the First World War (between 1920 and 1933) became worthless.¹⁸⁴ The listed value of New York Stock Exchange offerings was \$89 billion on September 1, 1929; by 1932 the total value had plummeted to \$15 billion.¹⁸⁵ In Kansas, a state that did enter the business of approving securities, only 100 out of the first 1500 applicants received licenses.¹⁸⁶

182.

[The] standards governing disclosure, however, do not restrict conduct beyond requiring that certain information be provided. The freedom of action that disclosure allows vastly reduces the cost of deviations from the policy planner's ideal. At worst, too much information or the wrong information has been called for.

BREYER, *supra* note 178, at 163. Disclosure "does . . . [not] restrict individual choice as much as do the other classical forms of regulation." *Id.* at 161.

While one objection to any regulation is cost, the limited incursion of information disclosure makes this objection less telling for disclosure reforms.

[D]isclosure regulation does not require regulators to finetune standards as precisely. The regulators need less information from industry, there are fewer enforcement problems, there is less risk of anticompetitive harm, and there is greater probability of surviving judicial review.

Id. at 163.

One very real cost is when disclosure results in the publication of proprietary information. In the case of an operator disclosing its economic track record or the accounting structure of its pending programs, the information is not proprietary information in the ordinary commercial sense. It may be private, but it is not information that the operator sells for a profit. The reason some operators keep this information secret is that it would undercut their sales pitch.

For an example of information that ordinarily is viewed as proprietary but that may fall under disclosure regulation, see the discussion of dry hole information and Kansas's filing requirements, *infra* note 289.

183. James M. Landis, *The Legislative History of the Securities Acts of 1933*, 28 GEO. WASH. L. REV. 29, 30 (1959).

184. LOSS & SELIGMAN, *supra* note 37, at 25; Edward Gadsby, *Historical Development of the SEC—The Government View*, 28 GEO. WASH. L. REV. 6, 9 (1959).

185. LOSS & SELIGMAN, *supra* note 37, at 25.

186. Gadsby, *supra* note 184, at 8.

The damage of the Great Depression reminds us that ineffective fraud enforcement invites costs far greater than the losses to the immediate buyer and seller. A network of contracts too easily penetrable by fraud will infect the system of trust that underlies contract exchange. As the fraud spreads, it will damage the social fabric of exchange as well as the parties to individual bargains.

The Depression shattered confidence so badly that firms stopped investing, banks refused to loan, and unemployment rose to the worst levels in American history. The Gross National Product fell from \$182 billion in 1929 to \$127 billion by 1933.¹⁸⁷ Unemployment jumped from 3.2% in 1929 to 8.7% in 1930, 15.9% in 1931, 23.6% in 1932, and 24.9% in 1933.¹⁸⁸ One in four workers was out of work in an economy with far lower labor force participation than today. The most affected industries, groups, and regions experienced unemployment rates over fifty percent.¹⁸⁹ It would take World War II to force the "natural" rate below fifteen percent.¹⁹⁰ About the only positive results were the regulatory blanket that Congress imposed on the securities, utility, banking, and labor markets and a somewhat deeper understanding of how markets work and how to control their excesses.¹⁹¹

With securities regulation coming as it did during our greatest market failure,¹⁹² the fact that information regulation was a limited reform was understood by all. As William Douglas, then an advisor to President Roosevelt, wrote:

There is nothing in the Act which would control the speculative craze of the American public, or which would eliminate wholly unsound capital structures . . . All the Act pretends to do is to require the "truth about securities" at the time of issue, and to impose a penalty for failure to tell the truth. Once it is told, the matter is left to the investor.¹⁹³

187. LESTER V. CHANDLER, *AMERICAS' GREATEST DEPRESSION 1929-1941* 21 (1970).

188. *Id.* at 34.

189. *Id.* at 23, 33-47.

190. *Id.* at 34.

191. The puzzle of why lower wages did not spur businesses to re-employ workers, and low interest rates did not increase business borrowing, led Keynes to, first, his theory of the liquidity trap, and, second, to his well-elaborated theory of the need for government intervention to spur demand in times of economic crisis. See JOHN M. KEYNES, *THE GENERAL THEORY OF EMPLOYMENT INTEREST AND MONEY* (1936).

192. John Kenneth Galbraith is correct that the full causes of the Depression remain uncertain. JOHN K. GALBRAITH, *THE GREAT CRASH* 171 (1979). Galbraith discusses a variety of economic weaknesses—the "bad distribution" of income, bad corporate and banking structures, the foreign exchange balance, and the "poor state of economic intelligence" in his list of the reasons for economic decline. *Id.* at 177-86. Yet the immediate drop in output and employment following the crash and the crash's effect on business and consumer confidence put the market fall at the heart of the disaster. To quote Galbraith's somewhat distancing prose, "any satisfactory explanation of the events of the autumn of 1929 and thereafter must accord a dignified role to the speculative boom and ensuing collapse." *Id.* at 89-90.

193. William O. Douglas & George E. Bates, *The Federal Securities Act of 1933*, 4 *YALE L.J.* 171, 171 (1933); accord Gadsby, *supra* note 184, at 9 ("Inasmuch as the act is thus premised upon the principle that full disclosure of all pertinent financial and other material

The theory behind requiring a full presentation of clear, easily understood information is that investors will learn to make better decisions if they get the basic facts. The information must be clear yet sufficiently detailed to give a meaningful picture of the proposed project. As with all economic indices, the burden of knowing how to use data and the development of sophisticated methods of analysis stays with investors.

The effects of this information will not necessarily be uniform (driving out all bad programs and enhancing all the good ones). Some investments may be obvious losers if the operator's prior failures are disclosed. Others, however, will merely appear more risky; some investors will drop out, others will stick with the program but demand concessions on price and other terms. Over time, investors and market analysts should be able to define risks more carefully.

Perceptive observers in the thirties realized that requiring disclosure would create a market in securities information. The inexpensive availability of detailed corporate data supported the growth of investment firms.¹⁹⁴ Correspondingly, the stunting of performance measures is one

data should be made to the prospective investor in order that he can make a sound investment decision, the Commission has no power to evaluate any proposed security offering nor to prevent the sale of a security under a properly filed and fully truthful and frank registration statement."); THOMAS HAZEN, *FEDERAL SECURITIES LAW* i (Federal Judicial Center 1993) ("After considerable debate, Congress decided not to adopt the merit regulation approach of the state acts, opting instead for a system of full disclosure. The theory behind the federal regulatory framework is that investors are adequately protected if all aspects of the securities being marketed are fully and fairly disclosed, leaving no need for more time-consuming merit analysis.").

As Loss and Seligman state, "there is the recurrent theme throughout these statutes of disclosure, again disclosure, and still more disclosure. Substantive regulation has its limits. But '[t]he truth shall make you free.'" LOSS & SELIGMAN, *supra* note 37, at 8. For Loss and Seligman's summary of how the Act ended up so predicated upon disclosure, see *id.* at 22-33. As they note, William Douglas initially was a strong *opponent* of the limited remedy of mere disclosure. *Id.* at 26 & n.12 (citing William Douglas, *Protecting the Investor*, 23 *YALE REV.* 521 (1934)).

The disclosure model did not spring full-blown from the minds of the New Deal drafters. The Act built on existing thinking about corporate disclosure. Gadsby, *supra* note 184, at 6-7. Another influence was Brandeis's widely read argument for disclosure in LEWIS D. BRANDEIS, *OTHER PEOPLE'S MONEY* (1914). See LOSS & SELIGMAN, *supra* note 37, at 25 (calling Brandeis "the man who left the greatest mark on the disclosure philosophy of the initial federal securities regulation in this country . . .").

194. Then-Professor Douglas listed these effects in his typically clear prose.

[E]ven the whole truth cannot be told in such simple and direct terms as to make investors discriminating. A slow educational process must precede that. Those who need investment guidance will receive small comfort from the balance sheets, statistics, contracts, and details which the prospectus reveals. Thus the effects of such an Act, though important, are secondary and chiefly of two kinds: (1) prevention of excesses and fraudulent transactions, which will be hampered and deterred merely by the requirement that their details be revealed; and (2) placing in the market during the early stages of the life of a security a body of facts which, operating indirectly through investment services and expert investors, will tend to produce more accurate appraisal of the worth of the security if it commands a broad enough market.

Douglas & Bates, *supra* note 193, at 171-72.

Skeptics of regulatory intervention have to argue that markets should develop their own standards of information flow. See *supra* note 178. This is because "full" information or something reasonably close to it is a necessary predicate for an effective market. Theorists

sign of the oil and gas industry's relative immaturity. As the industry develops a better sense of how to measure performance, the most competent operators should benefit. Their projects will come to be seen as less risky and worth a higher price.¹⁹⁵

Some will argue that markets would generate this kind of information if demand was sufficient. The absence of even basic economic information, however, suggests that some market failure is preventing that from occurring. This information has "public good" characteristics that would make it difficult for an entrepreneur who gathered the data from earning the return it deserves. The information is non-rival—one party's use does not limit another's—and largely non-excludable. It is hard to prevent one buyer from sharing it with others.¹⁹⁶ (Dry and bottom hole information seemingly escape this problem because the circle of buyers on any well is limited, so monitoring unauthorized resales is easier.)¹⁹⁷

Not every investor will use more information, and not all who do will use it well. Over time, however, sophisticated investors will develop better methods of analysis. Increased information will stimulate demand for company measures. This is the same process by which SEC reporting requirements encouraged development of investing theories based on a wide variety of profit and asset information.

This Article's emphasis on seeking clear, relatively simple economic information continues in the same direction as recent SEC reforms. The Commission recently has recognized that the often contorted risk-emphasizing language of many disclosure forms, which can list every possible thing that could go wrong, may distort more than it enlightens. In the words of Chairman Arthur Levitt, "the Commission's passion for disclosure has interacted with portfolio managers' thirst for flexibility and law-

like George Stigler do not explain why, if markets should function efficiently to provide *accurate* information for investors, so many worthless securities could have been sold before the Great Crash (investor folly? irrational desire for risk?). Nor does his theory explain why it should be so easy for companies like Prudential and Home-Stroke to defraud investors. Even if investors are greedy, no one would invest in a program that was consistently generating losses—which was the case in these investments—if they had full information. Something in the nature of the product, including the factors listed in Part V.B. *infra*, is preventing the oil and gas market from operating as it should.

195. Competent operators are the often unacknowledged victims of an industry that has failed to develop widely accepted measures of risk. These operators are forced to compete against less skilled operators who disguise their poor records with loose talk of completion ratios, investment volume, and cash distributions, all short-term measures that can be hard to discredit in the absence of more detailed financial information but that often mean little about the true merit of the venture. Let the market get used to effective measures of performance. It should begin to differentiate and reward the best operators more effectively than it has in the past.

196. For a discussion of oil and gas market imperfections, see *supra* Part V.B. The classic articles on public goods are Paul A. Samuelson, *The Pure Theory of Public Expenditures*, 36 REV. ECON. & STAT. 387, 387-89 (1954); Paul A. Samuelson, *A Diagrammatic Exposition of the Theory of Public Expenditures*, 37 REV. ECON. & STAT. 350, 350-56 (1955); see also EDITH STOKEY & RICHARD ZECKHAUSER, *A PRIMER FOR POLICY ANALYSIS* 305-08 (1978); HARVEY ROSEN, *PUBLIC FINANCE* ch. 5 (3d. ed. 1992).

197. *Cf. infra* note 289.

yers' instinct for ironclad liability protection."¹⁹⁸ The unfortunate result "has been prospectuses that are more redundant than revealing."¹⁹⁹ To improve disclosure, the SEC has been encouraging prospectuses written in plainer language, with a better presentation of information, and the development of "profile prospectuses" that display "a concise summary of salient points."²⁰⁰ The recommendations in section IV make the same emphasis on simple, clear information.

D. DECISION THEORY SUPPORTS THE ARGUMENT THAT INVESTORS NEED MORE FRONT-END INFORMATION

Research into organizational behavior supports the importance of providing objective historical information at the start of an investment. University of California psychologist Daniel Kahneman and Professor of Business Dan Lovallo have summarized the recent research into attitudes toward business risk.²⁰¹ This research offers several reasons why investors start out overly optimistic.

Kahneman and Lovallo describe what they term "isolation errors," which occur because "forecasts of future outcomes are often anchored on plans and scenarios of success rather than on past results, and are therefore overly optimistic."²⁰² Business forecasting tends toward an "inside view," the approach "overwhelmingly preferred in intuitive forecasting."²⁰³ The inside approach "focus[es] on the case at hand, by considering the plan and the obstacles to its completion."²⁰⁴ As they describe it,

An inside view forecast draws on knowledge of the specifics of the case, the details of the plan that exists, some ideas about likely obstacles and how they might be overcome. In an extreme form, the inside view involves an attempt to sketch a representative scenario that captures the essential elements of the history of the future.²⁰⁵

The oilfield corollary to the inside view is trying to predict the exact path—days of drilling, problems encountered, and so on—of each well.

The smarter approach is the outside view, which is "essentially statistical and comparative, and involves no attempt to divine future history at any level of detail."²⁰⁶ In the context of oil and gas, this would involve looking at the operator's record, or even industry averages in a particular area. Kahneman and Lovallo argue that the outside view is nearly certain to be a more accurate predictor.²⁰⁷ The reason lies in the great difficulty

198. Remarks of chairman Arthur Levitt at the Second Annual Symposium for Mutual Fund Trustees and Directors, at 5, Washington D.C., April 11, 1995.

199. *Id.*

200. *Id.*

201. Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 MGMT. SCI. 17 (1993).

202. *Id.*

203. *Id.* at 26.

204. *Id.* at 25.

205. *Id.*

206. *Id.*

207. *Id.* at 25-27.

of predicting the exact path on which any complex action will play out. Even if the inside analysis, the plan that the investor thinks is the most likely, happens to fix on the single most likely outcome, that will be only one of a number of possible outcomes.

In an oilwell project, for instance, drilling a producing well may be the single likeliest result, but the likelihood may be only twenty percent. The operator might slip up and allow the lease to lapse; drain the joint account with secret discounts; misread geological information and drill a dry hole; suffer a blowout; be unable to connect a gas well to a pipeline; and on and on.

Although some scenarios are more likely or plausible than others, it is a serious error to assume that the outcomes of the most likely scenarios are also the most likely, and that outcomes for which no plausible scenarios come to mind are impossible. In particular, the scenario of flawless execution of the current plan may be much more probable a priori than any scenario for a specific sequence of events that would cause a project to take four times longer than planned. Nevertheless, the less favorable outcome could be more likely overall, because there are so many different ways for things to go wrong.²⁰⁸

Kahneman and Lovallo offer a number of reasons why businesses incline toward the inside, risk-surmounting view. One is the "massive evidence" in psychological studies that people "are generally overconfident in their assignments of probability to their beliefs."²⁰⁹ Overconfidence shows up not only in the inaccuracy of ratings that one's beliefs are accurate, but in studies that entrepreneurs overestimate their probabilities of success. The tendency to minimize risk is accentuated by the "delusions of control" among managers who "commonly view risk as a challenge to be overcome, and believe that risk can be modified by 'managerial wisdom and skill.'"²¹⁰ Third, there may be a process of natural selection within the corporate structure, but with the selection perversely favoring the least fit. If investments have to survive an adversarial review process, it may be that only projects with highly exaggerated projections will survive, even if these are the projects most likely to fail.²¹¹ Exaggerating likely returns and downplaying expected risks are even likelier in corporate cultures where pessimism is viewed as disloyalty, as a lack of faith in the corporation's capacity to compete. Finally, corporations may adopt optimistic plans believing that this is the best way to spur employees to

208. *Id.* at 25.

209. *Id.* at 26.

210. *Id.* at 27 (citations omitted).

211. *Id.* at 27-28. One irony of this tilt toward riskier projects is that well-considered projects that have a realistic prospect of a solid return get shoved aside for unrealistic projects offering very high but implausible returns. Corporations may forego chances for gradual but consistent growth and waste their capital in projects more likely to result in losses.

higher performance.²¹²

Any tendency to focus on an optimistic inside analysis means that operators start out with an advantage. Investors need the "outside" data of their operator's prior drilling record (which incorporates all risks that affected the prior programs, not just those the operator cares to discuss). If the predicted future is much better than the operator's past, even many of the dumbest or most optimistic investors will ask more questions.

E. THE LAWS OF FRAUD, FIDUCIARY DUTY, AND SECURITIES REGULATION DO NOT ADEQUATELY DETER FRAUD

One reason that investors need more contract protection is that tort remedies have failed to do the job. Tort law has not deterred enough fraud. The law of fiduciary duty, for instance, appears to have had little or no deterrent effect on operators. One reason may be that the standard applied to operators remains unclear. Many courts and some commentators treat the operator as a fiduciary,²¹³ but others leave the issue to the

212. *Id.* at 28. Bad faith may be demoralizing, which in turn can reduce performance. So, too, optimism may increase effort, which can increase productivity.

The same factors may work on an aggregate scale. For instance, assume a society that can pick among a group of ten \$1000 investments, each of which has a 20% chance of success. Losers are really losers and get nothing, winners make \$3000. While the risk discounted expected return is a mere \$600 (a 20% chance of \$3000 and 80% chance of nothing), all 10 investors may make the investment if each believes that he or she can surmount those risks by greater skill. If an investor thinks that its skill raises its odds of success to 50%, for instance, it will expect to earn \$1500 on its \$1000.

The gamble becomes even more interesting with the possibility of technological advance. If the investments are in a new technology, then the 2 investors of 10 who earn \$3000 also identify which of competing technologies will make a major gain in productivity. In the next round, unless the new technology is patentable, all 10 investors adopt variants of the new technology, and they produce \$30,000 with their ten \$1000 investments. If the technology earns a higher return because it is three times as productive as prior techniques, there may be a permanent social gain in efficiency even if the market quickly brings the short-run 300% return back to the competitive rate of profit.

213. The two major commentators on this area of oil and gas law, and certainly the dominant theorists in the area, both concluded, a generation apart, that the operator relationship has fiduciary attributes. See Howard R. Williams, *The Fiduciary Principle in the Law of Oil and Gas*, 13 INST. ON OIL & GAS L. & TAX'N 201, 274-75 (1962):

Wherever the owner of an interest in oil and gas has a power with respect to another person's interest in oil and gas, the courts are quick to imply a *duty* in connection with the exercise of such power. Power begets responsibilities and duties. A fiduciary principle becomes applicable. . . . It appears a safe prognosis to declare that to an increasing extent we may expect fiduciary principles to be applied to various relationships involving interests in oil and gas.

Ernest E. Smith, *Duties and Obligations Owed by an Operator to Nonoperators, Investors, and Other Interest Owners*, 32 ROCKY MTN. MIN. L. INST. 12-1, 12-14 (1986) (citations omitted):

One can, I think, safely start with the assumption that in the absence of other factors modifying the relationship, the operator owes a fiduciary duty to the nonoperators with respect to the ventures contemplated by their agreement. This general assumption is justified both by the broad proposition that anyone who undertakes to act on behalf of another is, in a general sense, a fiduciary for that person and by the joint venture analysis.

Accord Howard L. Boigon, *Liabilities and Relationships of Co-Owners Under Agreements for Joint Development of Oil and Gas Properties*, 37 INST. ON OIL & GAS L. & TAX'N 8-1,

8-20 (1986) (“[I]n states other than Texas the conduct of operations under a typical joint operating agreement or other comparable arrangement will likely lead to findings of fiduciary responsibilities between the co-owners”); cf. Howard L. Boigon, *The Joint Operating Agreement in a Hostile Environment*, 38 INST. ON OIL & GAS. L. & TAX’N 5-1, 5-5 (1987) (“The JOA, even in its unaltered form, has been construed by the courts in most states—with the notable exception of the Texas courts—to create something more than a passive cotenancy or a mere service contractor relationship.”); Christopher Lane & Catherine J. Boggs, *Duties of Operator or Manager to Its Joint Venturers*, 29 ROCKY MTN. MIN. L. INST. 199, 209 (1983) (“The problem . . . that [joint operation] relationships pose is that as soon as any element of control or voice in operational decisions is shared, all the characteristics of the joint venture or mining partnership are present: (1) joint ownership; (2) co-operation/joint operation; and (3) agreement to share profits and losses. Absent a contractual provision to the contrary, it is highly likely that a court would hold that a joint venture or mining partnership exists.”).

Behind these comments lies a substantial body of law. A number of courts have defined the operator as a fiduciary as a matter of law using joint venture analysis. See, e.g., *Blackstock Oil Co. v. Caston*, 87 P.2d 1087, 1089 (Okla. 1939), followed in *Britton v. Green*, 325 F.2d 377, 383 (10th Cir. 1963). For other cases finding the operator to be a fiduciary under joint venture analysis but using a more fact-intensive analysis, see *Nor-Tex Agencies, Inc. v. Jones*, 482 F.2d 1093, 1098 (5th Cir. 1973), cert. denied, 415 U.S. 977 (1974); *In re Mahan & Rowsey, Inc.*, 35 B.R. 898, 901 (Bankr. W.D. Okla. 1983); *Oklahoma Co. v. O’Neil*, 440 P.2d 978, 984-85 (Okla. 1968). For a “mining partnership” theory that appears identical in application to the joint venture test in spite of the nominal added requirements of a “community of interest” and mutual agency, see *Sparks Bros. Drilling Co. v. Texas Moran Exploration Co.*, 829 P.2d 951, 954 (Okla. 1991); *Oklahoma Co.*, 440 P.2d at 984.

A separate and perhaps even more common route has been to find a fiduciary duty to the extent of the obligations imposed by the JOA. Here the lead case is *Reserve Oil, Inc. v. Dixon*, 711 F.2d 951, 952-53 (10th Cir. 1983). For cases following *Reserve Oil* in areas beyond its distribution-of-shares issue, see *Doheny v. Wexpro Co.*, 974 F.2d 130, 134-35 (10th Cir. 1992) (citing *Reserve Oil*’s holding that the “contract created a trustee type relationship”); *Envirogas, Inc. v. Walker Energy Partners*, 641 F. Supp. 1339, 1345 (W.D.N.Y. 1986) (cautioning against reading *Reserve Oil* to automatically find operator a trustee, “since it is based upon the specific operating agreements at issue in that case [ignoring the standardization of most operating agreements and not discussing whether its agreement was the standard agreement],” but still finding it a “useful analogy” and concluding in ruling on injunction that “it appears likely from all of the terms of the contract” as well as parties’ relationship that defendant was a fiduciary); *Mahan & Rowsey*, 35 B.R. at 898; *Andrau v. Michigan Wisconsin Pipe Line Co.*, 712 P.2d 372, 375 (Wyo. 1986) (*Reserve Oil* contract created “narrow trustee-type” duty in distribution of shares).

Several other cases read *Reserve Oil* as applying a separate line of cases that make operators in unitized properties fiduciaries, although one would go blind before finding a word in *Reserve Oil* that depended upon the unitized nature of the properties. (And, in addition, one would have to ignore the reason the court did give for its decision, namely that the contract gave rise to the duties the court found.) For such uses of *Reserve Oil*, see *Shearn v. Ward Petroleum Corp.*, 808 F. Supp. 1530, 1532 (W.D. Okla. 1992); *Leck v. Continental Oil Co.*, 800 P.2d 224, 228-29 (Okla. 1989).

Still other courts have read a fiduciary duty into the operating agreement without citing *Reserve Oil* or providing much elaboration of their reasoning. See, e.g., *First Nat’l Bank & Trust Co. v. Sidwell Corp.*, 678 P.2d 118, 120-21 (Kan. 1984) (confirming constructive trust imposed after trial to court); *Texas Oil & Gas Corp. v. Hawkins Oil & Gas, Inc.*, 668 S.W.2d 16, 17 (Ark. 1984) (finding relationship of trust and confidence as a result of execution of joint operating agreement in case over operator’s secret acquisition of leases after learning of failure of title in subject property); *Rankin v. Naftalis*, 557 S.W.2d 940, 944-46 (Tex. 1977) (joint ownership and enterprise created fiduciary duty of “limited joint venturers” to extent of joint property, but did not extend to operator’s acquiring adjoining lease for another property); *Beadle v. Daniels*, 362 P.2d 128, 130-31 (Wyo. 1961) (operating agreement created fiduciary duty that prevented operator from charging investors higher price on pumping equipment than operator had paid).

In addition to these cases about the general operator relationship, a number of courts have defined subcategories of operators whom they treat as fiduciaries. For instance, many jurisdictions define unit operators, operators of properties forcibly combined under state

jury or impose a lower standard like contract good faith.²¹⁴ And even courts that find a fiduciary duty may limit it to the express terms of the

statutes for conservation or other reasons, as fiduciaries as a matter of law. See *Young v. West Edmond Hunton Lime Unit*, 275 P.2d 304, 309 (Okla. 1954); *Leck*, 800 P.2d at 229. For cases citing *Young* with approval or at least seemingly accepting the rule that unit operators are fiduciaries, see *Reserve Oil*, 711 F.2d at 953 n.4; *Shebester v. Triple Crown Insurers*, 974 F.2d 135 (10th Cir. 1992); *Garfield v. True Oil Co.*, 667 F.2d 942, 944 (10th Cir. 1982); *Shearn*, 808 F. Supp. at 1532 (citing *Young*, as well as *Reserve Oil*, *Leck*, and *Olansen*, for proposition that "a unit operator stands in a fiduciary or trustee-like status as to the interest owners in a well"); *Teel v. Public Serv. Co.*, 767 P.2d 391, 396 & n.9 (Okla. 1985) (citing *Young* for general proposition that when cotenants name one of themselves as operator, "they become coadventurers in the enterprise and stand in a fiduciary relationship to one another"); *Shutts v. Phillips Petroleum Co.*, 732 P.2d 1286, 1298 (Okla. 1987) (citing *Young* for rule that the unit is "the agent and trustee of all royalty owners" and finding the duty breached); *Pritchett v. Forest Oil Corp.*, 535 S.W.2d 708, 710 (Tex. Civ. App.—El Paso 1976, writ ref'd n.r.e.) (describing *Young* as holding that "the unit organization and its operator were held to occupy a position similar to that of a trustee for the benefit of all those interested in the oil production, either as lessees or royalty owners," but then blessing operator's concealment of accurate reserve information from royalty owner who was thinking of selling interest by holding that duty to provide reserve data did not fall within the operator's fiduciary duty); see also *Olansen v. Texaco, Inc.*, 587 P.2d 976, 984-85 (Okla. 1978); *Andrau*, 712 P.2d at 373-74.

Many jurisdictions treat an operator who holds "executive rights," the right to control the mineral development of the property, as a fiduciary. The leading case is *Manges v. Guerra*, 673 S.W.2d 180, 181-82 (Tex. 1984). For later cases following *Manges*, see *Dearing, Inc. v. Spiller*, 824 S.W.2d 728, 732-34 (Tex. App.—Fort Worth 1992, writ denied) (finding executive who hid competing offers at time of lease renewal was a fiduciary); *Mims v. Beall*, 810 S.W.2d 876, 879-80 (Tex. App.—Texarkana 1991, no writ) (upholding actual and punitive damages against executive rights holder who accepted unusually low royalty but also took overriding royalty that it argued did not have to be shared with royalty owners); *Comanche Land & Cattle Co., Inc. v. Adams*, 688 S.W.2d 914, 915-16 (Tex. App.—Eastland 1985, no writ) (executive breached fiduciary obligation by entering joint venture rather than royalty arrangement so that it could avoid paying royalties).

Two other executive rights cases imposed a fiduciary duty by straightforward application of agency and trust principles. See *Teas v. Twentieth Century-Fox Film Corp.*, 178 F. Supp. 742, 749-50 (N.D. Tex. 1959) (executive acts as trustee for royalty owners and could not enter lease that redefined additional payment just so that nonexecutive would not share it); *Donahue v. Bills*, 305 S.E.2d 311, 312-13 (W. Va. 1983) (holding executive power to be an agency coupled with an interest and concluding that executives "will be held to strict fiduciary standards");

Courts also apply fiduciary duties to operators serving as grubstake holders, a kind of exploratory operator. See *Webster v. Knop*, 312 P.2d 557, 560 (Utah 1957); see generally 2 HOWARD WILLIAMS & CHARLES MEYERS, OIL AND GAS LAW § 436, at 515 & n.3 (1989).

On top of these formal duties, all operators who use partnership formats are fiduciaries as a matter of law. See, e.g., *In re Longhorn Sec. Litig.*, 573 F. Supp. 255, 271 (W.D. Okla. 1983). Another very large group of fiduciary operators are those who have settled relations of trust and confidence with their investors. This is an "informal" fiduciary relationship, one whose elements of trust and confidence must be proven factually to the jury. E.g., *Crim Truck & Tractor Co. v. Navistar Int'l Transp. Corp.*, 823 S.W.2d 591, 594 (Tex. 1992).

214. Joint venture or trust-type theories have widest sway in cases decided under Oklahoma law. Texas courts, in contrast, repeatedly have held that the JOA alone does not create a fiduciary duty. See, e.g., *Norman v. Apache Corp.*, 19 F.3d 1017, 1023-24 (5th Cir. 1994); *Ayco Dev. Corp. v. G.E.T. Serv. Co.*, 616 S.W.2d 184, 185 (Tex. 1981); *Luling Oil & Gas v. Humble Oil & Ref. Co.*, 191 S.W.2d 716 (Tex. 1945); *Crowder v. Tri-C Resources, Inc.*, 821 S.W.2d 393, 399 (Tex. App.—Houston [1st Dist.] 1991, no writ); *Taylor v. GWR Operating Co.*, 820 S.W.2d 908, 911-12 (Tex. App.—Houston [1st Dist.] 1991, writ denied); *Hamilton v. Texas Oil & Gas Corp.*, 648 S.W.2d 316, 320-21 (Tex. App.—El Paso 1982, writ ref'd n.r.e.). The cases usually cite but then gingerly distinguish *Rankin v. Naftalis*, 557 S.W.2d 940, 944-46 (Tex. 1977), a case in which the operator was found to be a

JOA.²¹⁵

Moreover, whatever fiduciary duty once existed will be restricted in at least some courts because in 1989, the AAPL amended the JOA to disclaim a fiduciary duty. It is not clear whether this disclaimer will be en-

fiduciary, but only after nonoperators proved all elements, including the shared "control" element, of a joint venture.

Texas provides by statute that "[o]peration of a mineral property under a joint operating agreement does not of itself establish a partnership." TEX. REV. CIV. STAT. ANN. art 6132b, § 7(5) (Vernon 1970). This seemingly straightforward clause, however, is not as sweeping as it may seem. It is designed to limit nonoperator liability to third parties for the operator's conduct, see *Johnston v. American Cometra, Inc.*, 837 S.W.2d 711, 715 (Tex. App.—Austin 1992, writ denied), not to shield the operator from its own investors. The statute prevents supply companies, drilling contractors, and others who do business with operators from suing every investor individually if the project goes bad and the operator does not pay them. It does not settle the level of duty that runs from operator to investor.

The *Manges* fiduciary rule for executive rights holders cited in note 213 *supra* has found dissenters, even within the Texas lower courts, some of whom simply refused to follow *Manges*. These courts even include a court in the same jurisdiction that decided *Manges*. Just a few years later, a Texas court of appeals tried to redefine *Manges* as a special case where the operator engaged in self-dealing and argued that the general rule was one of good faith, not a broad fiduciary duty. *Pickens v. Hope*, 764 S.W.2d 256, 265-69 (Tex. App.—San Antonio 1988, writ denied). An even stronger authority came out in favor of the good faith rule when Professor Smith wrote an article arguing that *Manges* should not be construed as creating a per se fiduciary rule. Ernest E. Smith, *Implications of a Fiduciary Standard of Conduct for the Holder of the Executive Right*, 64 TEX. L. REV. 371, 372 (1985). Louisiana has limited the executive holder's duty to one of good faith by statute, a standard that increases the prior duty but falls short of a tort duty. See LA. REV. STAT. ANN. § 31:109 (West 1989). See also *Pilcher v. Turner*, 530 So.2d 198, 200-01 (Ala. 1988) (defendants not required to share bonus and delay payments, and no trust relationship); *Schroeder v. Schroeder*, 479 N.E.2d 391, 397-99 (Ill. App. Ct. 1985) (surveying standards and adopting rule of "utmost good faith").

Courts that use fact-based tests, whether under a joint venture analysis or another theory, obviously make the precise duty governing the operator more difficult to predict. Such uncertainty removes much of the deterrence that a clear fiduciary duty would provide. Consider, for instance, how Professor Smith's concluding summary of the actual state of the law compares with his initial remarks cited at note 213 *supra*:

The above examples should, however, demonstrate the problem with attempting to define and apply a single general standard of conduct to all situations in which a controversy may occur. . . . A court in interpreting an operator's duties should not lose sight of such customs and usages, including the reasons underlying the operating agreement in question. Such an approach suggests that the appropriate standard applicable to the operator may range from strict compliance with contractual obligations to observance of strict fiduciary duties, depending upon the language of the operating agreement and the context of the dispute.

Smith, *supra* note 213, at 12-57. In other words, the supposed rule may be no rule at all.

For three articles opposing a fiduciary duty, see Gary Catron, *The Operator's 'Fiduciary' Duty to Royalty and Working Interest Owners*, 64 OKLA. BAR J. 2761 (1993); Henry J. Eyring, Note, *The Oil and Gas Unit Operator's Duty to Nonoperating Working Interest Owners*, 1987 B.Y.U. L. REV. 1293 (1987); Sharon K. Schooley, Note, *Fiduciary Protection of Nonoperating Oil and Gas Interests Against the Acts of an Operator*, 18 TULSA L.J. 496 (1983).

215. For some cases applying the JOA to limit the fiduciary duty, see *Dime Box Petroleum Corp. v. Louisiana Land & Exploration Co.*, 717 F. Supp. 717, 723 (D. Colo. 1989), *aff'd*, 938 F.2d 1144 (10th Cir. 1991); *Frankfort Oil Co. v. Snakard*, 279 F.2d 436 (10th Cir.), *cert. denied*, 364 U.S. 920 (1960); *In re Mahan & Rowsey, Inc.* 35 B.R. 898 (Bankr. W.D. Okla. 1983).

forceable.²¹⁶ At a minimum, however, the amendment expands the confusion in an already troubled area.

Investors who are cheated can fall back on the common law of fraud. Yet fraud claims are an uncertain route to recovery in these cases. Many of the crucial representations will be oral. Should a prospect turn out poorly, the operator will say that the Statute of Frauds bars claims²¹⁷ and will wax philosophic about the risks of the business, while developing amnesia about exactly what it said.²¹⁸ The investor is left with the difficult job of establishing that the operator made the oral representations *and* that they were sufficiently specific to be actionable.

The law of fraud has not proven equal to this task, just as it had not proven sufficient to deter the abuse that preceded federal securities regulation.²¹⁹ Some representations are clearly false, as when an operator

216. For arguments that a blanket disclaimer is not likely to be enforced, see Lane & Boggs, *supra* note 213, at 228-38 (urging parties wanting to disclaim duty to disclaim specific duties or acts, because disclaimer of overall duty likely to be ineffective).

217. The defense that "you didn't catch me in writing" is as inevitable in a fraud case as is "you didn't rely on me," or, better yet, "you should have known." The defenses will appear as quickly as the defense lawyer can hit the "list defenses" button on the computer. Thus in the *Davis Oil* case, the ninth defense was "To the extent that plaintiff seeks relief on the basis of contracts or agreements that are not in writing, such relief is barred by the applicable statutes of frauds and the applicable rules governing the proof of obligation." Defendants' Answer to the Third Amended Complaint, *supra* note 25, at 3. The fourteenth defense (out of sixteen) was that "Plaintiff's claims are barred in whole or in part by those provisions of the Exploration and Operating Agreements between the parties that govern the statement, payment, audit, and adjustment of bills rendered to non-operators." *Id.* at 4.

In *Longhorn*, the defendants argued that they could be liable only for the written statements in their offering circulars.

As each offering circular explicitly stated, only those statements contained within the offering circular itself were authorized by the Longhorn defendants. Any statements allegedly made to any plaintiff which were not included in the offering statement were not authorized by the Longhorn defendants. If made, such statements were made without the knowledge and authorization of those presenting the programs and were not and could not be relied upon by any of the plaintiffs.

Pretrial Order, Final Contentions of the Parties, Defendants' Contentions, at 7, *Longhorn* (No. MDL 525).

The written-document defense can be raised directly by pleading the statute of frauds and asserting that there can be no liability for statements outside some written document (and trying to keep the jury from hearing evidence of oral promises). It is also integral to defenses like waiver, estoppel, or assumption of the risk when they are based on written warnings. Consider, for instance, Prudential and Graham's position that "all the risks were fully disclosed to investors" and that their 200-page prospectuses "explicitly warn[ed] that fluctuating oil prices created significant risk and that 'no assurance can be given that partnership payout will be achieved.'" Paltrow, *supra* note 78, at A16. One would not lose any money betting that had the Prudential case gone to trial, (1) the company would have tried to exclude all statements that deviated in the slightest from these warnings; and (2) even if everything came in, it would have argued that the small print was what investors really relied upon.

218. *E.g.*, *supra* notes 152-56 and accompanying text (describing one such metamorphosis).

219. Before the Securities Acts of 1933 and 1934, "[s]atisfaction of the common-law requirements of fraud raised almost insurmountable barriers to recovery. The road of investors has not been an easy one owing to the common-law insistence on scienter, reliance, and causation." Douglas & Bates, *supra* note 193, at 174. The common law obviously had

misstates the location of dry holes or claims false production rates. In other circumstances, however, as when the operator is projecting what a well will produce, the law has a harder time. Fraud is a misstatement of fact or a promise to act that is contrary to present intention. Is it fraud when an operator, having portrayed itself as an expert, tells investors what a well "will" or "could" do? Here the common law stumbles into a vast gray area between representations that are clearly false and those that are "mere" statements of opinion, with the standard of care increasing as the operator claims more expertise.²²⁰ Moreover, the common law

not provided enough protection, because common law torts had not prevented the energetic circulation of worthless securities that fueled the market's downward spiral in 1929. The same deficiencies in the judgmental nature of common law fraud, with its requirement of "reasonable" reliance (rather than simple reliance, period) on even the most deliberate and outrageous lies, have prevented common law fraud from keeping the industry free of deception. Fraud can even put a premium on making outrageous lies, to lay the predicate for the defense that "no one would have relied on my crazy statements."

Defendants have nothing to lose by arguing that the investor understood the risks and decided to take them, but that when the investment fared poorly (the risks occurred), the investor looked around for an excuse to get its money back. That is the justification for having a reliance standard—it is not fair to restore the money of someone who would have invested anyway and would have pocketed the winnings happily if the project turned out well. Yet if operators believe that investors would not rely on the operator's prior economic results, they should just produce this information. Past performance would be useful to those partners who do want to measure the operator's efficiency, and producing that information (assuming it is reported truthfully) would give the operator (not the investor) much more protection in the event of litigation.

The next note discusses some of the problems with the common law of fraud as an oilpatch remedy.

220. For instance, what does it mean when an operator promises that an investment in its program "could be recovered within two years[?]" *Nor-Tex Agencies, Inc. v. Jones*, 482 F.2d 1093, 1095 (5th Cir. 1973)(emphasis added). This kind of statement often is discounted under common law fraud as an unactionable statement of opinion. (In *Nor-Tex*, the investor apparently sued only under the securities laws, perhaps because it had given up on fraud, perhaps for limitations reasons, perhaps because it felt certain of proving a cheaper case under the strict liability sections of those laws.)

Does it make a difference if the operator says that "the engineers advise us that at the end of ten years the Number Two well *should* still be producing at seven barrels per day[?]" *Woodward v. Wright*, 266 F.2d 108, 113 (10th Cir. 1959) (emphasis added). The *Woodward* trial court "left no doubt of his opinion that the claim could not be sustained under common law fraud and deceit." *Id.* at 116 n.1. Surely the boundary of fraud lies somewhere in this neighborhood. It should be crossed under any interpretation when an operator represents that the value of a well "is" this or that amount.

Under the law of fraud, plaintiffs who received even the most direct misstatements face the added hurdle of proving that they relied on the statements. *See, e.g., Gilbert v. Nixon*, 429 F.2d 348 (10th Cir. 1970) (remanding the variety of misrepresentations described in notes 20-21 and accompanying text for the jury, but dismissing damages on every well for which there was not a specific misrepresentation). Operators will argue that the investor really was gambling on rising prices, a hedge against inflation, or some other factor that never came up at the time of sale.

Even in cases involving a clear scam, like the Seventh Circuit lawsuit in which the driller reported recovered frac oil as production, completed noncommercial wells, and announced traces of gas as a "commercial gas field" in wells drilled for oil, courts applying aggressive summary judgment standards may have trouble implementing the dictates of fraud law. In *Donohoe v. Consolidated Operating & Prod. Corp.*, 982 F.2d 1130 (7th Cir. 1992), a case involving these problems and more, the Seventh Circuit affirmed *summary judgment* for two promoters, even though they republished the driller's false reports, because "they were finance types who did not have the technical skills to evaluate an oil well in the field." *Id.* at 1137. The court relied on the dishonest driller, and admitted it.

Under proper legal standards, the promoters still should have had to show that they did not know the frauds, and were not reckless in not knowing, when they republished the driller's false statements. What skills were the promoters selling, if they were so ignorant of the business they were urging on their investors? The Seventh Circuit applied a summary judgment standard under which "we need only draw *reasonable inferences* in favor of the non-movant, not every possible inference." *Id.* (emphasis added). In other words, Seventh Circuit judges enjoy sitting in the jury box. Though paid to decide only questions of law, they sua sponte decide the facts too, for free. (But with the results proving yet again that there is no such thing as a free lunch.) When judges begin weighing the reasonableness of inferences in circumstantial evidence cases, the rush for docket control has begun taking precedence over the cause of justice.

The fact that investors might have gotten really rich had the promises been true, and worse yet, at very low cost to themselves if they were able to fund their investment with a letter of credit, often incites a feeling that somehow many boom-period oil and gas investments were too good to be true and their investors have little room to complain. In *Funny Money*, after documenting the extraordinarily casual and unprofessional banking and drilling practices that led to billions of dollars in disastrous programs, Mark Singer nonetheless calls the bankruptcy laws "a lawyers' relief fund" and describes the resulting litigation with sarcastic overtones:

If a Penn Square connection existed, the natural thing to do was to holler fraud and sue. Everybody and his dog sued Longhorn Oil & Gas, Carl Swan, and J.D. Allen. If a drilling fund operator—or the FDIC or an upstream bank that had lent money to a drilling fund operator—tried to call an investor's letter of credit, the investor rushed to court and demanded a restraining order. Litigants spread all over the map

SINGER, *supra* note 31, at 149, 171-72.

Tellingly, Singer spends no time describing what Swan and Allen said when they lied to their investors. It is easy for Singer to poke fun at investor gullibility. Anyone can pretend with Singer to be smart enough to avoid an investment that has turned out poorly, as long as he does not have to justify what the to-him likable Carl Swan promised investors who might be risking their life's savings. It may well be true that, had the world turned out the way the Carl Swan and J.D. Allen predicted, their investors would have made money in an unseemly, easy way. And we could all be jealous. But this is irrelevant to the fact that people like Carl Swan and J.D. Allen held themselves out as experts in an industry with its own technical knowledge, launched factual predictions that had no basis in fact, and made those predictions because they knew that investors were relying on them. Indeed, the representations were calibrated to induce investor reliance.

Swan and Allen said what they did precisely because they knew they were being believed and their statements taken as fact. If they want to defend themselves later on the basis that no one could reasonably have believed the world could be this friendly, and so investors should not have been so dumb as to trust them, they should have had to make this factual argument to the jury and to explain why, then, they made their dumb statements.

While some courts and observers may feel superior to investors whom the wisdom of hindsight shows made the wrong decision, at least two other arguments should prevent this kind of rush to judgment. First, it is well established that when the defendant holds itself out as an expert, even statements of opinion can be actionable. RESTATEMENT (SECOND) OF TORTS § 542(a) (1977) (fraudulent representation of opinion can be actionable, *inter alia*, when maker "purports to have special knowledge of the matter that the recipient does not have," a description that fairly summarizes many operators' sales approach). Virtually all of the operators discussed in this Article held themselves out at the moment of investment as possessing special knowledge, to be received and relied upon. Wearing the cloak of authority, they issued statements that directly contradict such trite conclusions as no one can predict well costs, reserves, and future prices. In these cases, the jury should be deciding whether the operator should be held to its earlier promises and whether promotional literature and oral promises were designed to overwhelm the unmentioned small-print disclaimers that doubtless found their way into some nook or cranny of the operator's promotional material.

Second, even if an operator makes a statement of opinion, these statements are still being presented as well-grounded predictions. The investors should at least be able to conduct discovery to determine whether there was *any* basis for the prediction. What did

can exculpate even successful, intentional frauds if it finds deficiencies in the victim; tortfeasors get off scot free if the operator shows that reliance was not "reasonable" (that is, who would be dumb enough to even think I would tell the truth?). This rule of decision can allow operators to keep ill-gotten gains from investors that they have cheated very deliberately.

The severity of the doctrine of fraud, applied in an industry that sells products inherently difficult to measure and compare, makes it important to force operators to publish realistic information at the outset. The discord between what some operators say when they are soliciting and their disclaimers in times of post-mortem can be narrowed by requiring accurate track-record information.

Securities law has its own deficiencies. Unfortunately, securities standards have not been adopted in a way that would ensure effective reporting for most operators. Though securities requirements should apply to many oil and gas investments,²²¹ they often are ignored.²²² Worse, the

the operator know but omit? For instance, in *Calpetco 1981 v. Marshall Exploration, Inc.*, 989 F.2d 1408, 1418-19 (5th Cir. 1993), the trial court rejected misrepresentation claims that only wells with a "prospect" of a 3:1 return would be drilled. Surely the outcome for such a claim should vary depending upon whether the operator had any basis to expect such a return or had ever achieved it in the past. The same operator's apparently true statement that prior programs had "yielded annual percentages of successful wells varying from seventy-five to ninety percent" was understandably not viewed as a misrepresentation, *id.* at 1417, although presumably the investor should be able to prove otherwise if the operator had shifted drilling to riskier areas or if "successful" meant merely completions rather than economic successes.

In *Calpeico*, both the trial court and court of appeals seem to have erred in dismissing out of hand another alleged misrepresentation, that wells would have average producing lives of 10 to 20 years. The lower court wrote that "a sophisticated investor should not be able to rely on somebody telling them how long an oil well is going to produce, if it is going to produce." *Id.* at 1418. Why not? Different oil fields have distinct producing characteristics. It can be hard to predict the durability or total production from any given well, but it is fairly easy for experts to predict the average life or production of wells in a known field. What should not be lost sight of is that the operator is already making predictions about success in virtually every oil and gas project. If the operator was willing to predict 10 to 20 year well lives, surely the investors have a right to know the basis for this prediction. If it was pulled out of the air, such conduct would constitute fraud unless the operator tells investors that its predictions are pure speculation.

221. In *Parvin v. Davis Oil Co.*, 655 F.2d 901 (9th Cir. 1979), *cert. denied sub nom. Davis Oil Co. v. Panin*, 455 U.S. 965 (1980), the investor Parvin had fought Marvin Davis and Davis Oil for a dozen years until finally receiving a ruling that its investment was a nonexempt security and that Davis had to repay the investor.

The status of oil and gas investments as securities is often ignored, but virtually all undivided interests in oil and gas property—the most common form of equity investment—are securities. This is also true of drilling partnerships and drilling funds. Thus securities law principles already should apply directly to many oil and gas investments. Unfortunately, the special oil and gas disclosure principles apply only to publicly traded oil and gas companies. See *supra* note 175 and accompanying text.

222. Some states have tighter regulations. In 1975-76, the Oklahoma Securities Commission conducted a broad ranging survey of 1171 oil and gas operators who had sold 67,083 prospects over a 25-year period, all involving fractional oil and gas interests. Bruce Day, *Securities Regulation of the Sale of Fractional Interests in Oil and Gas Leases: Is There an Answer for the Small Producer?*, reprinted in II Mosburg (ed.), *supra* note 22, at 213, 215. It is generally accepted that these interests do fall under securities regulation. *Id.* Its finding was that only 44 had used a schedule D filing; 121 tried to comply with the small offering exemption; 29 registered in the states where they sold interests; 66 relied on the private offering exemption; and only 16 had been subject to enforcement. *Id.* at 223. It

SEC and FASB did not include the most common investment forms, joint equity ventures and limited partnerships, when they required publicly traded oil and gas companies to publish discounted-reserve values.²²³

There are many reasons not to wait for tort standards to grow stronger. One is that the industry will fight any new tort exposure. Fortunately, the shortcomings discussed in this Article concern a limited number of basic facts that investors need for rational decisionmaking. This information can and should be incorporated into the standard industry contract.

F. DISCLOSURE IS NOT PERFECT, BUT IT WILL IMPROVE INDUSTRY STANDARDS

Another criticism of disclosure is that the information doesn't matter; those who invest are too eager to put their money in the oilpatch or with a particular operator to study the operator's history anyway. One response to this argument is that operators would not be so reluctant to produce their prior results if they thought that the information would not affect their investors. The reality is that most investors would think again were they shown an operator whose investors habitually lose money. The fact that investors may not press for this information today is a product of an industry that traditionally refuses to provide it anyway.

No requirement of disclosure will be so iron-clad that it will prevent all operators from lying. Prudential and Graham, for instance, borrowed to sustain cash distributions even though their prospectuses promised that they wouldn't. Home-Stake exaggerated reserves when it was not even drilling the promised wells. John King inflated values by buying back properties for more than they were worth in violation of its cash surrender formula.

If these companies had to project economic returns, they might inflate reserves to make their programs look good. They could build false values into net value discounting. But the recommended new standards would force the operators to make their representations in writing, thus ending the unfortunate litigation over whether oral promises were made (and enforceable) and should have been relied on.

Only those willing to tell blatant lies would be able to manipulate investors. And even if some operators keep cheating under tighter standards, the presence of an industry standard would ensure fairer treatment by most companies. Better standards would improve the behavior of the great majority of industry companies that function honestly, but currently do not provide any performance data.

seems no exaggeration to conclude that, at least until the early eighties, "[i]t appears that the independent oil and gas industry has in practice, at least insofar as it was represented by these responses, almost completely ignored the registration requirements, and exemptions therefrom, of both federal and state securities laws." *Id.* at 224. "The industry has apparently operated in substantial violation of the law for 35 years with no significant enforcement action being maintained until the 1975-1976 onslaught of Schedule D abuses." *Id.* at 225.

223. See *supra* note 175.

IV. THE MECHANICS OF DISCLOSURE

The frame of reference through which oilpatch fraud should be analyzed is the existing industry contract. It may seem a contradiction in terms to discuss a contract as a subject for institutional reform. After all, the strength of the contract process is its flexibility in each new negotiation. Contracts should be simple tools for the unique, party-specific negotiated path of future relations. Societies provide contract enforcement mechanisms to support a flowering of freedom, not further rigidification.

As discussed in Part I, though, form contracts facilitate repetitive transactions at minimal cost. Most parties don't want to blaze their own trail in the forest of possible outcomes in every negotiation. Standardized contracts reduce costs because they avoid constant negotiations. Embodying a collective learned experience, industry contracts avoid rehashing the same issues. Moreover, an industry contract can fix the treatment of many issues that the parties might never consider until a problem arises, perhaps years after contracting.²²⁴ They store principles for a range of disputes that never would arise over a single contract or in the life of any two contracting parties.

Model contracts reflect the underlying balance of power between the ordinary parties (and for a standard contract to have utility, there must be repeated exchanges between similar parties). To some extent, if fairly drafted, form contracts can limit the advantage that a more skilled negotiator might extract if it negotiated each term.²²⁵

224. One of the problems that emerges in almost every contract case is that at least one party, often both, has not read its contract. The parties can end up fighting over clauses that both might have written differently had they paid attention. Lewis Mosburg has a characteristically colorful description of this problem:

Far too often in oil and gas transactions, parties will scribble their signatures to a lengthy agreement without bothering to thoroughly and carefully review the terms of the document In addition, even when dealing with a very legitimate company you will frequently find that the contract contains "fishhook" clauses: provisions that, upon a quick reading, seem to give you just the rights and impose just the obligations to which you have agreed, but which, upon a more careful study, actually say something far different.

Lewis Mosburg, Jr., *Basic Principles of Oil and Gas Contracts*, in Mosburg (ed.), *supra* note 4, at 383. Mosburg believes that "a key reason why so many exploration deals are poorly structured from the standpoint of both parties is the slavish adherence to 'standard' deals." *Id.* at 382.

Mosburg is right that a form like the JOA, *infra* note 227, is designed as a "plain vanilla" contract that may need modification for special circumstances. *Id.* at 434-35. That people could negotiate better deals if they were more careful, however, does not mean that the terms of standard contracts are not vitally important. Most people don't negotiate every deal. In many oilfield investments, the deal will be presented without opportunity to negotiate or sold to nonindustry parties who do not have the knowledge to negotiate effectively. Thus it is particularly important for the form contract to be fair and to remove as far as possible the "fishhook" clauses that are certain to defeat the expectations of one party.

225. Assuming that the form contract reflects a fair balance of interests—and this Article argues that in critical areas, particularly by omission, the JOA and COPAS favor operators at the great expense of investors—then a form contract may limit the power of more skilled and leveraged bargainers in at least two ways. The added gains an experienced operator might extract in a separate bargain with each investor may not exceed the expected cost of the bargaining. (This expected cost would be measured not only in time, but

This section focuses on the model contract for the operator-investor tie. This contract is not an investment contract by any stretch of the imagination. It is far closer to a procedural manual, with some sharp limits on nonoperator rights thrown in to boot. The section explains how to modify these standards to ensure elementary disclosure of economic results.

A. TODAY'S FORM CONTRACT, THE JOA, NEEDS TIGHTER CONTROLS

The touchstone for reform in oil and gas investing is the JOA, the contract that the industry uses in its standard investment.²²⁶ The successive versions of this contract have done a lot to standardize oil and gas operations in the last few decades.²²⁷

The JOA is a well-tested operations manual, with provisions that limit the operator's exposure on many of its decisions.²²⁸ But it is not con-

also in opening up areas that the bargainer might prefer never get discussed.) Second, the form contract begins with a presumption of correctness, as it is an industry pronouncement, and deviations from the form may raise general questions of trustworthiness that the weaker party otherwise would never think of raising. Too many deviations warn that something is wrong with the operator and can kill the deal altogether.

226. See MODEL FORM OPERATING AGREEMENT (AAPL 1989) [hereinafter 1989 JOA].

227. It is widely recognized that the JOA, which in its standard format includes the COPAS form as Exhibit C, is the controlling document for oil and gas investments. See, e.g., ANDREW DERMAN, THE NEW AND IMPROVED 1989 JOINT OPERATING AGREEMENT: A WORKING MANUAL 1 (1991) (the AAPL procedures govern "tens of thousands" of wells); Boigon, *The Joint Operating Agreement in a Hostile Environment*, supra note 213, at 5-2 (JOA is "typically used to govern joint exploration and development of oil and gas properties"); Boigon, *Liabilities and Relationships of Co-Owners Under Agreements for Joint Development of Oil and Gas Properties*, supra note 213, at 8-3 to -4 (The JOA is "the instrument which both attorney and client ordinarily anticipate utilizing to conduct joint development operations."); William Keefe, *The Oil and Gas Joint Operating Agreement: Unraveling Some Knots*, 36 ROCKY MTN. MIN. L. INST. 18-1, 18-2 (1990) ("[The] model form is used in nearly every domestic, multiple party venture for the onshore drilling of oil and gas; ERNEST E. SMITH ET AL., INTERNATIONAL PETROLEUM TRANSACTIONS (1993). No other instrument employed in the exploration and production business receives acceptance even approaching that accorded the A.A.P.L. paradigm."); Patricia Moore, *Joint Operating Agreements—Is There Really a Standard that Can Be Relied Upon?*, 5 E. MIN. L. INST. 15-1 (1984) ("As complex as the oil and gas industry appears to be, and as diverse as arrangements between oil and gas companies tend to be when dealing with the drilling of a joint interest well, it is amazing that for over a quarter of a century the industry (majors and independents alike) has relied upon a Model Form Operating Agreement to cover the drilling and subsequent operation of joint venture wells."); J.O. Young, *Oil and Gas Operating Agreements: Producers 88 Operating Agreements, Selected Problems, and Suggested Solutions*, 20 ROCKY MTN. MIN. L. INST. 197, 199 (1975) (A.A.P.L. Form 610 "has gained such general acceptance, even by major companies, that it may be considered a Standard Operating Agreement.")

Even as drilling shifts overseas, these forms retain their significance because of the continuing lead of American companies in the world industry and their propagation of contract forms that have proven valuable in domestic operations. Consider, for instance, the grounding of the model form that Andrew Derman proposes for international operations in the standard domestic form. See ANDREW DERMAN, INTERNATIONAL OIL AND GAS JOINT VENTURES: A DISCUSSION WITH ASSOCIATED FORMS (1992).

228. There are four major liability limitations in the JOA, all protecting operators at the expense of their investors.

First, the operator is exculpated from liability "for losses sustained or liabilities incurred except such as may result from gross negligence or willful misconduct" 1989 JOA, supra note 226, art. V.A.

structed to protect nonoperators, particularly not nonindustry nonoperators. It remains primarily a repository of solutions for technical drilling problems.

The longest article in the JOA, article VI, establishes procedures under which participants vote on major well operations (for instance, completing, reworking, and abandoning a well) and going nonconsent.²²⁹ This article absorbs seven pages, over a third of the JOA. The second longest provision, article VII, is about "expenditures and liability of parties." This article consumes four more pages (so together these two articles fill two-thirds of the JOA) and deals with payment details like liens, security, cash advances, defaults, rental and other payments, and taxes. Article VII does have one of the few provisions defining the general operator-investor relationship, but it tries to disclaim every relationship that might create a fiduciary obligation.²³⁰

Article V defines the operator's general duty. It makes the operator the parties' expert, giving it "full control of all operations on the Contract Area."²³¹ In addition, it imposes a standard of reasonable prudence that exculpates the operator from liability unless it acts with gross negligence or willful misconduct.²³²

Second, beginning with the 1989 JOA, the operator is relieved of a fiduciary duty under any of the variety of relationships that might give rise to such a duty. The JOA provides that in "their relations with each other under this agreement, the parties shall not be considered fiduciaries or to have established a confidential relationship." *Id.* art. VII.A.

Third, again effective in 1989, any liability for overrunning cost estimates is limited to violations of a good faith standard; barring bad faith, the "[o]perator shall not be held liable for errors in such estimates." *Id.* art. V.D.8.

Finally, in the COPAS exhibit, billings receive far more protection than statutes of limitation would provide, as they will "conclusively be presumed to be true and correct" unless the investor takes exception within two years of the end of the calendar year on the invoice date. COUNCIL OF PETROLEUM ACCOUNTANT SOCIETIES, ACCOUNTING PROCEDURE JOINT OPERATIONS art. I.4 (1995) [hereinafter 1995 COPAS].

The JOA's operator-orientation is evident in other places too. For instance, the first draft of the 1989 amendment to the JOA proposed defining operators as "a trustee of any funds of the Non-Operators advanced or paid to him" and that "such funds shall not be deemed the funds of Operator for any purpose but shall be applied strictly to their intended purpose," DRAFT JOA, art. V.D.4 (Nov. 19, 1987); that operators escrow funds separately for each program if agreed by a majority of nonoperating interest owners, *id.* art. VIII.B.3; that the operator act as trustee when it spends program funds; *id.* art. V.D.4; that it disclose affiliate use, *id.* art. V.D.1; and that investors have more liberal operator-removal provisions (allowing removal of operator owning less than 50% interest without cause by majority vote), *id.* art. V.B.1. Each of these amendments was rejected after industry members objected. *See generally* note 248 *infra*.

229. After a brief space to identify the initial well, the remainder of pages 5 through 9 define procedures for approving a subsequent well or deepening or sidetracking an existing well. The provisions include portions on who pays what costs and the order of operations. Next come sections on completion, reworking and plugging back, "other" operations, and abandonment. Page 11 has space for the parties to elect their gas balancing treatment. *See* 1989 JOA, *supra* note 226, art. VI.

230. *See id.* art. VII.

231. *Id.* art. V.

232. *Id.* art. V.B.1. The rest of this section puts some limits on the just-defined operator power, including creating a right of removal, endowing investors with a right of reasonable access, making operators provide cost estimates when asked for them, and limiting billing for affiliate services. *Id.* art. V.B., D.1, D.5-6.

The rest of the JOA contains more technical provisions. Many are routine clauses like the force majeure clause and the successor clause. The only other substantive limitation on operator privileges in the JOA is one that requires sharing acreage or cash contributed to owners in the Contract Area.²³³

The COPAS (Council of Petroleum Accountancy Societies) "exhibit" is appendix C to the JOA. COPAS is the industry's standard accounting form, though the JOA controls in cases of conflict.²³⁴

Many oil and gas investments include a third agreement, an exploration agreement. The industry has not developed a standard exploration agreement to counterbalance the JOA and COPAS.²³⁵ Exploration agreements may list the cost of acreage, how the operator tabulated the cost, and other acreage information. They may describe the drilling area and the handling of geological data and other threshold issues. Exploration agreements probably will become less common as the JOA incorporates more acreage detail.²³⁶

These are the standard forms for equity investors in one or a group of wells. They have been constructed with a heavy emphasis on operator concerns. The contracts betray the fact that none arose as efforts to provide full investor protection. Fundamental investor problems stay untouched. The operator does not have to show how well it did finding oil and gas in the past. The JOA does not list the operator's finding cost history, how investors did in its prior programs, or any other measure of how well the operator can perform the job it seeks.

Investors in oil and gas partnerships tend to receive, if anything, even less information than equity investors. Partnership investors ordinarily

233. The JOA has a standard "Acreage or Cash Contribution" clause requiring anyone receiving a "contribution" to share it with the other well participants. *Id.* art. VIII.C. Article VIII.C provides that "if any party contracts for a contribution of cash toward the drilling of a well or any other operation on the Contract Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be applied by it against the cost of such drilling or other operation." For acreage, "[i]f the contribution be in the form of acreage, the party to whom the contribution is made shall promptly tender an assignment . . . in proportion said Drilling Parties shared the cost of drilling the well." *Id.*

234. *Id.* art. II.

235. Exploration agreements are sufficiently less common and less standard that they are not defined in WILLIAMS AND MEYERS' MANUAL, *supra* note 1. One reason is that when a group of property owners is ready to develop acreage, they often will define their rights in the operating agreement. Exploration agreements are more commonly entered to drill a well if needed to develop geologic information before tying down the terms of development, or to take steps toward development before all of the participants are known. CARLOS SALAZAR, HANDBOOK ON DRAFTING OIL AND GAS EXPLORATION AGREEMENTS 2-4 (ABA Natural Resources, Energy, and Environmental Law Section Monograph No. 14 1991); *see also id.* at 33-40 (discussing issues surrounding when operating agreement may become effective).

236. For a detailed discussion of these and other common provisions in exploration agreements, *see SALAZAR, supra* note 235.

The JOA has incorporated more acreage information by requiring disclosure of burdens on the subject properties; it has room to go because it does not require disclosure of the acreage economics. For an explanation of this argument, *see McArthur, supra* note 2, at 1483.

sign a contract that almost certainly won't include a COPAS exhibit. They may receive a prospectus or brochure describing the purpose of the investment, saying something about risk, and outlining the investment's structure in very general terms. The contract rarely describes how investors fared in prior partnerships. They may never know the names and locations of their wells. They will not receive information on bills and charges to particular wells. There is no standard Uniform Limited Partnership agreement for oil and gas wells.

Operators may incorporate large programs or structure them as drilling funds instead of as limited partnerships. Shareholder agreements will not have accounting provisions with the level of detail of the JOA and COPAS. As in the case of large partnerships, the agreements will give very little information on specific wells. Part II.B. already has shown how vulnerable drilling funds can be to wide-scale frauds that injure thousands of investors.

Though the JOA as the industry contract does devote many pages to items operators want for smooth operations, including limits on their liability, it has done little for investor concerns. The JOA has remained incomplete for at least two reasons. One is immaturity. The JOA is a relatively youthful legal form. The AAPL issued the first JOA in 1956. The current JOA is the 1989 Rocky Mountain Model Form, recommended for wells drilled in the continental United States.²³⁷

The more fundamental cause of incompleteness, however, is the limited pool of drafters and their industry orientation. The JOA is a product of the AAPL, one of the oilpatch's core organizations. The first JOA was tied directly to industry concerns. This 1956 form was a composite created by twenty-six oil companies as a "synthesis" of seventeen companies' existing forms.²³⁸

The AAPL's "mission is to promote the highest standards of performance for all land professionals, to advance their stature and to encourage sound stewardship of energy and mineral resources."²³⁹ Landmen are professionals engaged in "landwork," a range of activities whose common denominator is some relation to the properties on which the operator drilled.²⁴⁰ Virtually all landmen work for industry companies.

237. For the history of the JOA, see Young, *supra* note 227, at 199-202.

238. Mosburg, *supra* note 4, at 408.

239. AAPL SERVICES FOR MEMBERS, AAPL MISSION STATEMENT (undated brochure) (on file with *SMU Law Review*).

240. The current AAPL brochure titled *The Choice Of Land Professionals* lists six major activities encompassed by "landwork":

- Negotiating for the acquisition or divestiture of mineral rights.
- Negotiating business agreements that provide for the exploration for and/or development of minerals.
- Determining ownership in minerals through the research of public and private records.
- Reviewing the status of title, curing title defects, and otherwise reducing title risk associated with ownership in minerals.
- Managing rights and/or obligations derived from ownership of interests in minerals.

The AAPL is not a group with primary loyalty to investors. Landmen have many obligations, but serving investors is not chief among them. The publication of "model form contracts and leases," of which the JOA is but one, is just one of twenty-three services the AAPL performs for its members.²⁴¹ Most of its activities develop and police professional standards.²⁴² Its Standards of Practice confirm that landmen's "primary" obligation is to serve their employers' interest.²⁴³ The same primacy of

- Unitizing or pooling of interests in minerals.

AAPL, *THE CHOICE OF LAND PROFESSIONALS* (undated brochure) (on file with *SMU Law Review*).

241. AAPL SERVICES FOR MEMBERS, *supra* note 239.

242. *Id.* Like most professional organizations, the landmen have as at least one of their purposes narrowing the supply of landmen. The AAPL hopes to develop higher levels of practicing. Raising landmen productivity while also reducing the supply of qualified professionals will enhance job security and income. The first 23 functions listed in the AAPL's roster of services are full of talk about higher standards, with the vital "higher salaries/day rates for CPLs" in a section titled "Additional member benefits." *Id.*

Income protection is precisely what classical and neoclassical economists would predict as the reason for a profession to close the drawbridge behind its current members. This certainly was Adam Smith's view:

It is to prevent this reduction of price, and consequently of wages and profit, by restraining that free competition which would most certainly occasion it, that all corporations, and the greater part of corporation laws, have been established. . . . The government of towns corporate was altogether in the hands of traders and artificers; and it was the manifest interest of every particular class of them, to prevent the market from being over-stocked, as they commonly express it, with their own particular species of industry; which is in reality to keep it always under-stocked.

ADAM SMITH, *AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS* 140-41 (R.H. Campbell et al. eds, Oxford Univ. Press 1976) (1776); *see generally* MILTON FRIEDMAN, *PRICE THEORY: A PROVISIONAL TEXT* (1962) ("Whenever there is licensure, it is almost invariably in the hands of the existing members of the occupation, who almost as invariably seek to use it to limit entry." *Id.* at 161. "In particular, differences in return between such broad classes of occupations as professional and nonprofessional seem considerably larger than can be explained in terms of differences in costs, non-pecuniary advantages or disadvantages, and the like." *Id.* at 222).

Professional organizations also need to promote group cohesion by defining and providing meaning for the group. Thus at times their vision may float far from the island of group self-interest into the sea of the larger culture. The AAPL is no exception to this broader quest for meaning: "Under all is the land. Upon its wise utilization and widely allocated ownership depend the survival and growth of free institutions and of our civilization." AAPL STANDARDS OF PRACTICE (undated brochure) (on file with *SMU Law Review*) [hereinafter AAPL STANDARDS].

While one can question whether our civilization truly depends upon the "wise utilization and widely allocated ownership" of land—and, for that matter, whether ownership is wisely allocated in a society in which the top one percent of the population owns over 36% of the wealth, EDWARD N. LUTTWAK, *THE ENDANGERED AMERICAN DREAM* 163 (1993)—this kind of functionalism with blinders helps maintain social order. It lets a wide variety of professional groups view their contributions as essential to the survival and direction of society. (There apparently can be unending differentiation of critical functions. Civilization would not last long if garbage piled up, so garbage collection is essential to the survival of the civilization.)

243. AAPL Standard of Practice No. 3 embodies this primacy:

In accepting employment, the land professional pledges himself to protect and promote the interests of his employer or client. *This obligation of absolute fidelity to the employer's or client's interest is primary*, but it does not relieve the land professional of his obligation to treat fairly all parties to any transaction, or act in an ethical manner.

representing the industry shows up in the AAPL *Code of Ethic's* pronouncement that "It shall be the duty of the Land Professional at all times to promote and, in a fair and honest manner, *represent the industry to the public at large.*"²⁴⁴ This duty has the purpose of "establishing and maintaining the good will between the industry and the public and among industry parties."²⁴⁵

To state the obvious, that the JOA does not give investors the protection they need in undertaking an oil and gas investment, is not to deprecate the many benefits the JOA brings to investors as well as to operators. This standard contract, the product of thousands of hours of unpaid labor by industry volunteers, has produced substantial order out of the chaos that would exist without it. The JOA establishes a basic actual-cost framework for the standard investment. It creates a package of accounting procedures to help nonoperators monitor their investment. And it identifies key decisions on which operators must get investor permission before proceeding. The world that would exist without the JOA would be far, far less investor friendly.

Yet even though the AAPL has an incentive not to produce a form that is anti-investor on its face, one so pro-operator that only crazy or truly ignorant investors would agree to use it, the organization does not have an incentive to insert clauses whose sole purpose is investor protection. Nor does it have an incentive to side with investors when the two sides have conflicting interests, for instance, on such questions as whether operators should be bound by the cost estimates they prepare (as opposed to the current standard, under which they may be exculpated for even the wildest inaccuracies as long as they prepare the estimate in "good faith"),²⁴⁶ should have to escrow joint account funds, and should have to describe their past performance no matter how bad.

The difficulty in getting the AAPL to adopt investor-protecting measures is demonstrated by the reaction to some quite narrow reforms pro-

AAPL STANDARDS, *supra* note 242, No. 3 (emphasis added). Standard No. 2 does impose a duty "to protect the members of the public with whom he deals against fraud, misrepresentation, and unethical practices. He shall eliminate any practices which could be damaging to the public or bring discredit to the petroleum or mining industries." *Id.* No. 2.

One can argue that this fraud-avoiding standard should be enough to ensure that landmen act in the interests of investors, whenever investors could be at risk for fraud. Yet that this duty to the public is not a fully effective duty is demonstrated by the fact that the AAPL-generated industry contract, the JOA, ignores the threshold investment issue of the disclosure investors deserve to know before they invest—the information needed to measure the operator's likely performance and test its statements, and the need for an overall disclosure of the sources of operator profit and incentives in the joint project. As one would expect, the general exhortation to make sure the public is not cheated, like an attorney's general duty to serve as an officer of the court and further certain judicial-system purposes, does not in practice overcome the more specific duty to the employer-client. In addition, rules do not equal behavior, and the fact that landmen's incentives push them toward employers and against investors only makes the problem worse.

244. AAPL CODE OF ETHICS § 1 (undated brochure) (emphasis added) (on file with *SMU Law Review*).

245. *Id.*

246. AAPL, JOINT OPERATING AGREEMENT (1987); *see also* 1989 JOA, *supra* note 226.

posed for the 1989 JOA. The first draft included a number of measures that would have made life safer for nonoperators. Among these were easier removal of operators (removal without cause by majority vote); disclosure of affiliate use; escrow accounts for each investment; a trustee-like duty in spending joint account money; a requirement that the operator pay its share of joint costs when investor advances were due; and more stringent AFE provisions with an AFE on every well, apparently including the first well.²⁴⁷

Major industry companies reacted sharply to these proposals. A number refused to use the new form.²⁴⁸ As a result, not one of these

247. See *supra* note 228.

248. For a sample of these comments, see the following letters:

Letter from Thomas Furtwangler, Land Manager, Arco, to AAPL (Jan. 27, 1988) (on file with *SMU Law Review*):

From a review of the agreement there appears to be broad based modifications to the 1982 form which significantly alter long-standing relationships and traditions, and reach far beyond ARCO's understanding for the scope of the 1988 Agreement.

Based upon ARCO's internal reviews, the proposed agreement is inconsistent with our basic business strategies and philosophies. If the final agreement remains substantially similar to the existing proposal, ARCO will make every effort to avoid its use and will continue using the 1982 form.

Letter from Omer Humble, Land Coordinator, Exxon, to AAPL (Jan. 27, 1988) (on file with *SMU Law Review*):

The proposed 1988 610 form contains many provisions which would greatly increase the administrative burden on Operators. Many of these changes are incompatible with Exxon Company, U.S.A.'s preferred operating practices.

As a whole, we believe the new form adds too many additional administrative burdens on the Operator and changes too many current industry operating practices. This proposed form would necessitate the negotiation of so many modifications that it is unlikely that our company would adopt it for standard use.

Letter from George Potter, Senior Counsel, Hunt Co., to AAPL (Jan. 29, 1988) (on file with *SMU Law Review*):

The consensus of the Hunt personnel reviewing the draft of the proposed form, however, is that the form seems somewhat biased in favor of the Non-Operator party. We are afraid that adoption of a form biased in this direction will not be well received in the industry and may restrict the utility of the 1988 Form.

Letter from C.M. Van Zandt, Land Manager, Louisiana Land & Exploration, to AAPL (Jan. 26, 1988) (on file with *SMU Law Review*):

This form appears to us to introduce many new concepts which we do not feel fall within the general definition of industry standard practice.

Since we view the primary purpose of the model form Operating Agreement as being to provide a standard which basically enjoys universal acceptance, we believe the current proposal containing all its conceptual modifications will not be readily adopted by the industry as an improvement to the AAPL.

Letter from J.K. Bramwell, Land Manager, Phillips Petroleum Co., to AAPL (Mar. 8, 1988) (on file with *SMU Law Review*): "After an extensive review by numerous disciplines within Phillips Petroleum Company, we regret to inform the association that Phillips cannot support the far-reaching changes proposed for the Model Form AAPL 610 Operating Agreement."

Letter from Thomas Lynch, Chief Counsel, Sun, to AAPL (Jan. 27, 1988) (on file with *SMU Law Review*): "Sun will be unable to use the revised form and we will resist the

efforts of others to use it when we are a party. Accordingly, we urge the AAPL not to approve the proposed changes." [To make sure it applied pressure where pressure was needed, Sun copied its comments to many of the most powerful members of the AAPL: Exxon, Amoco, Chevron, Arco, Conoco, Mobil, Phillips, Shell, and Texaco.] Letter from A.R. Kuhn, Regional Land Manager, Union Pacific Resources, to AAPL (Jan. 28, 1988) (on file with *SMU Law Review*):

[I]t is our opinion that the product is much too complex and very unwieldy, and we urge that publication in the present form not occur.

It is my own belief that most of the major revisions being proposed will be unacceptable to at least one owner in nearly all of our deals so that negotiations will be more complicated and lengthened. I am afraid too that costs of legal representation will rise as few operators will be comfortable with these proposals or variations of these proposals without special advice.

The Kilroy Company submitted comments through a landman who had been a member of the 1982 committee. Letter from Winston Davis, Land Manager, Kilroy Co., to Council on Petroleum Accounting Standards (Dec. 16, 1987) (on file with *SMU Law Review*). It argued that in prior revisions, the AAPL had "attempted to retain the fundamental concepts and basic intent of John H. Folks and the other drafters of the original 1956 form." *Id.* It dismissed the many new proposals for the 1989 JOA as proposals that had been either "analyzed at length, debated, and rejected by both the 1977 and 1982 Committees as being beyond the intended, general scope of the form" or, if not hashed over before, as being "so totally foreign to the fundamental concepts inherent in all prior AAPL-endorsed Operating Agreements as to have never been considered for adoption." *Id.*

The Company then gave what is probably a fairly representative definition of the industry's view of the purpose of the JOA:

For 31 years the AAPL Form 610 has retained its general form and character and, in so doing, has made an immeasurable contribution to the industry. The form has been refined and updated by committees and subcommittees composed of AAPL members from both majors and independents, representing each geographic area of industry activity. Each such revision has reflected what was considered by clear committee consensus to be the *then existing practices* of "industry" in general. The form has never created "new" industry practices or served as a vehicle for company or personal preferences, "pet" provisions, or regional bias.

Id. (emphasis added).

Amerada Hess submitted its comments through the former chair of the 1982 Special Forms Committee, Mr. Charles Sanford. Letter from Charles Sanford, Land Manager Onshore, Amerada Hess, to AAPL (Jan. 27, 1988) (on file with *SMU Law Review*) [hereinafter Sanford Letter].

As a Land Manager, I would not propose or accept the 1988 O/A as now drafted. The 1988 O/A has many new provisions which are detrimental to the Operator (and maybe even administratively and operationally impossible to abide by as Operator), including but not limited to ease by which an Operator could be removed.

By comparison, Sanford praised the 1982 Committee and its deliberations, in which he claimed that "only serious consideration and discussions were given to those proposals which appeared to have wide industry support." *Id.* at 2.

Sanford, too, was offended by many parts of the new form. He traced its deficiencies to a failure in the process used for revision. As he recounted the way amendments were made in 1982, that committee began with a representative membership "of six (6) working landmen who then averaged well over 20 years of experience from Denver, Midland, Houston, Fort Worth, New Orleans, and Tulsa." *Id.* That committee solicited industry comments by word of mouth and by publishing an article in *Landman*, the AAPL's periodical.

Mr. Sanford claimed that of the comments received during the 1982 revisions, "only serious consideration and discussions were given to those proposals which appeared to have wide industry support and which (without regional connotation and for special situations) could be included in a Model Form Agreement." *Id.* The form accrued legitimacy because "[o]ver the years, the Model Form Operating Agreements have been used thousands of times, passed the test of time, are widely understood by the users and, considering their widespread use, have provoked a minimum of litigation." *Id.* To enjoy the

changes was adopted. Many companies said that the JOA should document only common industry practices, meaning those of operators. Such an approach, of course, leaves out improvements that might help investors.

One can tell from comments like these that the AAPL is not likely to adopt disclosure rules just because nonindustry investors would benefit from more information. The organization has not found an effective way to give voice to nonindustry investors. If the AAPL fears a few added accounting restrictions, it will be much more offended at a broad-based requirement of disclosing prior economic results. Yet this disclosure is necessary to restore the proper level of nonindustry funding to the industry. Many experienced industry companies also would benefit from more information. It is only insularity and short-sightedness that prevents industry companies from admitting that they too could use more knowledge about the past performance of the companies in whose projects they invest.

B. OPERATORS MUST DISCLOSE RETURN-BASED MEASURES OF PRIOR INVESTOR RESULTS

Establishing that oil companies should disclose their economic history, though a big step, is not the only step on the path to meaningful disclosure. The industry also must decide the kind of disclosure that investors need.

The industry's failure to make companies publish their results has stunted the growth of performance measures, but there are some starting points. One is the disclosure already required of publicly traded oil and gas companies.

The securities laws require publicly traded oil and gas companies to distribute two kinds of information: general economic information and reserve-based information. Sellers of oil and gas securities must give buyers a current balance sheet and their profits and losses for the prior two years and list their distributions and payments to the security holders for the prior three years.²⁴⁹ This standard presumes that investors deserve clear information about the offeror's economic track record *before* they make their investment. It treats past performance as necessary, material data for current decisions.

In addition to general securities requirements, some securities sellers face FASB No. 69, requiring that they give a more complete picture of company performance. These standards recognize the need to provide more company-specific data.

value inherent in a widely accepted form, he suggested that "the final 1988 Agreement contain as few changes as possible in order to adhere to the historical acceptance of an agreement which has proved to be widely understood, successful, useful, practical, and appreciated." *Id.* at 3. The form most fully satisfying under an "as few changes as possible" standard would, of course, be the prior form.

249. 15 U.S.C. § 77ll (1994) (Schedules A(25) and (26)).

COPAS provides an alternative source of disclosure requirements in its "evergreen" report of "performance measures."²⁵⁰ This new report, first issued in 1994, surveys the major performance indices available to the industry.²⁵¹ The report will be updated and reissued periodically.

Thus far, COPAS has identified two primary sources for performance information: data published by major oil companies and an array of performance measures used by eighteen different sources of comparative oilfield information. These sources range from Arthur Andersen to *Forbes* and *Fortune*, from Standard and Poor's and Value Line to market analysts like John Herold and McDep Associates.²⁵²

The first COPAS listing includes over a dozen performance measures. Most fall into one of two categories: measures of return on investment or measures based on reserve value. Like the SEC requirements, the COPAS measures are oriented toward publicly traded oil and gas companies. They exploit the market information made available by federal securities requirements. The same information is not available on many joint equity oil and gas investments and many limited partnerships. Thus these measures require adjustment to fit prospect and drilling fund projects. A few measures, like the ratio of the market price of stock to appraised value, do not have any obvious application to programs that ordinarily are not widely traded.

Drilling programs also need a different form of disclosure than ordinary securities programs because drilling programs have different timing than many corporate business cycles. Assuming that long-term trends are capitalized into stock prices, a few prior years' costs, revenues, and profits may be a good starting place for analyzing a publicly traded company with continuous operations. The purchase and sale of stock ties performance to the price of market securities. All of the risks converge on the stock price.

There is no similar measure for most drilling programs. Most oil and gas projects are sold once. If an exchange market exists for the shares, it is likely to be the nonmarket cash surrender value offered by the operator. Operators can manipulate prices in this captive market easily.²⁵³

250. OIL AND GAS PERFORMANCE MEASURES, *supra* note 168.

251. *Id.*

252. *See id.*

253. At one extreme, Home-Stake Production provided a grudging market as it bought out investors unhappy enough to have sued. A federal court had certified a class action for 99 purchasers in the Home-Stake 1960 program and 173 purchasers in the 1961 program. *Geo. H. McFadden & Bro., Inc. v. Home-Stake Prod. Co.*, 295 F. Supp. 590 (N.D. Okla. 1968). Home-Stake quickly settled with the class representative without providing notice to class members. The company's president, Trippet, said that, to the best of his recollection, he "just paid money to the representative plaintiff and nobody else heard about the case or got anything, . . . to the best of my recollection." Robert Trippet Trial Transcript at 1554, *Home-Stake Prod.* (No. MDL 153-R).

The King companies executed a more formalized buyback in their cash surrender program, which they used to inflate the apparent value of their programs. The Article describes the way this repurchase worked *supra* in notes 128-34 and accompanying text.

Accurate information faces another hurdle because there can be such a long lead time between drilling and the final result. Even large oil and gas programs with fixed terms do not have the continuous adjustment that characterizes stock prices. A program reaches its first moment of truth when the formation is tested, but still can require a number of years to confirm the true results, as evidenced by Prudential's ability to sustain the appearance of success in seventeen woefully failing programs for years.

Because of timing variations in the life of many oil and gas programs, an uncertainty compounded in drilling fund investments when the operator markets a group of wells scattered across various areas, the standard securities disclosure of a few prior years' results will mean little. Early returns can appear high but disguise a quickly depleted reservoir. Alternatively, slow returns may hide a lucrative program just waiting connection to a gathering system or a field. Or initial drilling may discover marginal wells but development wells then reach the heart of the field. This kind of timing problem led to FASB No. 69's requirement of projecting discounted net cash flows.²⁵⁴ This information gives a better estimate of an oil and gas company's achievements. It just needs to be adjusted to joint account and drilling fund formats.

Most of the performance measures listed by COPAS use return-based measures. The measures include "total" return and return on appraised assets, on assets, on investment, on capital, and on stockholders' equity.²⁵⁵ Of these measures, the return on equity may be most easily fitted to the standard oilfield format. Return on equity is a measure of "management's performance in earning a return on the resources the owners have committed."²⁵⁶ "For an owner (stockholder) of a company, ROE is one of the most widely used measures of economic effectiveness on how management is utilizing their invested capital."²⁵⁷ The "Senior Management of many companies use ROE as a primary measure of performance for a company."²⁵⁸

Equity investors want to know the average return on the investor dollar. The important return is the net to investors. Investors considering an oil company's next project need to know what they are likely to make on their money.

ROE measures can be fitted to programs by requiring operators to report the return they have paid prior investors. Operators need to show how the investors did in prior programs, rather than how the operator did or just the total, 8/8ths results, because the profits reaped by an operator

254. FASB No. 69, *supra* note 170, ¶ 30.

255. See generally COPAS, OIL & GAS PERFORMANCE MEASURES, *supra* note 168. These measures are explained, and their relative values discussed, at pages 22-43 (total return), 44-50 (total appraised return), 88-92 (return on assets), 93-95 (return on investment), 96-103 (return on capital employed), and 104-11 (return on equity).

256. *Id.* at 104.

257. *Id.* at 110.

258. *Id.*

may merely reflect its skill at exploiting investors. Gross costs and revenues ordinarily will include these operator returns. Success at the 8/8ths level can include fees that maximize only the operator's profits. What is relevant are the investors' returns in prior programs.

Moreover, just as oil and gas companies have to update their projections under FASB No. 69, so too the operator should have to update its projections on prior programs. Downward revisions may be the best warning that something is wrong in today's project too.

Operators should not be heard to complain about having to calculate this information. If they cannot tell investors how their predecessors have done, they have no business claiming the ability to generate profits.²⁵⁹

The "return" to investors should be calculated as an annual rate of return, because even dismally poor oil and gas programs may return several times their costs over twenty or thirty year lives. Total undiscounted returns that include revenues paid over many years may disguise abject failure when the investor considers the time cost of money. Moreover, annual rates-of-return are easy to match to investments outside the industry. Operators should provide this information so that their offerings can be compared to benchmarks like certificates of deposit and bank accounts. The quickest way for investors, particularly nonindustry investors, to understand how a project has done is to put its results in the same form as the other investments competing for their money.

A common response to arguments for disclosure is that oil and gas programs are so varied that it is misleading to compare them. Programs drilled in the eighties will not look like those in the nineties. Wildcat programs have different economics than development programs and exploration in well-mapped areas. Taken literally, the argument is that the oil business is not sufficiently comparable for investors to choose between projects. The arguments are disproven every day as companies rank programs and choose the ones they prefer.

Energy pricing, drilling costs, technology, and the availability of acreage can vary with the position in the energy cycle. Thus companies may need to group results by year, or in certain multi-year periods, so that investors can separate uncharacteristic periods from the rest. Of course risks and returns vary by geology and political factors as well. Financial accounting standards handle such problems by requiring additional disclosure of the division of reserves between the home country and foreign

259. In the *Davis Oil* case, for instance, in spite of Marvin Davis' many representations about how well he could do for investors, he and his Company refused to identify any investor in Davis Oil wells who "received a net positive return in cash of [sic] otherwise" in the years 1978 through 1983, and would not even discuss the rate of return that Davis Oil or its partners had made on their investment. Defendants' Objections to Plaintiff's Second Set of Interrogatories, Specific Objections to Interrogatories Nos. 24 and 32, *Davis Oil* (No. 85-M-1821). Had Marvin Davis had a successful, money-making business for even a minority of his investors, he should have been eager to identify partners who made money in order to rebut Aetna's claim that Davis Oil was grossly unsuccessful.

countries, and of other factors affecting risks.²⁶⁰ While not a simple problem, this is the kind of comparability issue that accountants and investment advisors already face. It is no reason to provide no information.

The requirement of accurate economic information will not supplant other disclosure. Investors in single prospects still need to know the geology of the surrounding wells, not just the operator's prior economic output. Omitting such detailed information may be actionable under the law of fraud, of fiduciary duty, or securities fraud.²⁶¹ These new economic disclosures are not to replace current requirements, but would supplement them where they are so clearly defective.

No one would argue that past results mean the same thing for every company, any more than the same earnings would mean the same thing

260. FASB No. 69, *supra* note 170, ¶ 12 and Appendix C, ¶ 92. The need for separate listings of foreign reserves makes sense because foreign drilling contains risks of expropriation, arbitrary taxation, and war and insurrection to a degree that (one hopes) does not exist for domestic production.

The topic of foreign risk encompasses what must be one of the funniest nondisclosures in the industry's history. One of the John King companies, Royal Resources, issued a prospectus indicating that it intended to drill primarily in the United States and Canada, but that it "reserves the right to conduct operations in any other countries." Plaintiffs' Statement of Relevancy, *supra* note 128, at 267. King did not disclose that the Royal partnerships would invest almost six million dollars in another King entity, Midbar, which was created as a joint venture between King and the Israeli government to drill in and around the Sinai and the Gulf of Suez. *Id.* A minor concealed problem was that Royal picked up interests in certain wells that were known to be dry holes. *Id.* The major problem, however, was the failure to disclose the risk of joining an Israeli venture drilling on Egypt's doorstep. As the plaintiffs put it in telling understatement, "the risks involved in Jews, or anyone connected with Jews, drilling in the Suez Canal or in the Sinai Peninsula, are much higher than the average wildcat." *Id.* at 266.

The risk was not merely theoretical. The Egyptians sent frogmen to attack the drilling rig while it was being towed into location in the Gulf of Suez. They damaged it and the barge so severely that the operator never drilled any of the proposed wells. *Id.* at 268, 278.

Even peace would have had unique risks that the investors deserved to know. If a peace treaty ceded the drilling area to Egypt, it would be an open question whether the venture had a legal right to its wells. *See id.* at 270.

The sale of known dry holes to the Royal partnerships also raised a series of accounting red flags, *id.* at 292-93, as well as a plaintive memorandum from the president of Royal in which he lamented that "I cannot figure out what this partnership would be buying." *Id.* at 293.

261. Perhaps the most painstaking analysis of an operator who systematically cheated his investors by omitting information on nearby projects is *Gilbert v. Nixon*, 429 F.2d 348 (10th Cir. 1970). Operator Nixon both omitted nearby dry holes or moved them when they fell too close to his proposed properties and misstated a wide variety of characteristics of nearby producing wells (for instance, not mentioning declines in production or water in the production) to make his project appear better than it really was. *Id.* at 359-63.

Another example comes from *Anderson v. Vinson Exploration, Inc.*, 832 S.W.2d 657, 663 (Tex. App.—El Paso 1992, writ denied). In *Anderson*, the operator allegedly exaggerated the per-well production in the field, doubled average expected production by including results from an adjoining field, and omitted the fact that only 3 of 13 wells in the field had achieved projected production. The operator also neglected to mention that an offsetting field had all wells plugged and abandoned, that it had drilled a dry well between the only two good wells in field, and that four or five oil companies had rejected the project. *Id.*

Cf. Cowles v. Dow Keith Oil & Gas, Inc., 752 F.2d 508, 512 (10th Cir. 1985) (upholding trial court's finding that omitting geological information was not "material" for small operator drilling very shallow, 1000-foot wells, but agreeing that "geological and similar data might be 'material' if Dow Keith were a 'big operator drilling deeper holes'").

for different companies on the New York Stock Exchange, or that past results will exactly match the same company's future performance. But the fact that other variables affect results and that basic disclosure may require additional information in no way disproves the point that past economic results are the foundation for careful investment analysis. This is very important information that the operator can distribute cheaply. Investors deserve to have this information before deciding whether to proceed.

The financial reporting of the securities laws can be relevant to oil and gas investing, too. For instance, if the operator is not earning a profit from new reserves but only from drilling, it is running a churning enterprise. Investors would be well-advised to stay away from this company. Or the company may be so precarious that it is unlikely to finish the project.²⁶² Thus if the industry ultimately falls in line with ordinary securities practices, it may make operators produce pro forma balance sheets for a few prior years. Or it may not; after all, investors in equity and partnership programs are not buying a share in the operator itself. At a minimum, however, whatever the ultimate decision on additional performance measures, the operator should have to publish its own economics, including total-life projections based on current prices of the overall success of programs that are not yet completed.

Even if the mandatory disclosure is limited to (1) the economics the operator has produced for other investors and (2) the economics of the current investment, the information necessitated by this standard will vary with the operator's investment structure. For Prudential, this would have meant listing its results in its earlier oil and gas programs, as well as the returns in the new partnerships. For Davis Oil, it would have meant producing results for hundreds of separately marketed prospects.²⁶³ For Doc Joiner, it presumably would have included the East Texas field and his unsuccessful projects. The information needs to be presented in enough detail that investors can see the average return and the variability of the returns.

A flow of economic evidence will not arm investors with all the information they need to make a rational decision. A rational investor also will consider how oil has done against other industries. Oil and gas investors risk changes in energy supply and demand (both variables that are likely to show major discontinuities in coming years). This is part of the oilpatch gamble. Here the operator has less advantage in gathering infor-

262. Had Prudential produced the balance sheet of operator Welles-Battelstein in its Invoil programs, the ledger would have shown an operator on the brink of financial ruin. Sure enough, not long after the investment the operator went into bankruptcy, dragging with it a pool of commingled, unescrowed funds. *See supra* note 104. Investors would have had clear warning of this risk had they received financial statements.

263. What should concern investors most is the overall average (their likeliest expected return) and the variation among programs (the degree of risk that they will achieve that average). Davis might propose an overall average rather than individual well results, but it should have to get nonoperators to amend the COPAS form after explaining why it will not provide detailed information.

mation, however, and there is no reason to require the operator rather than its investors to collect the information.

C. OPERATORS MUST DISCLOSE THE PRIOR PERFORMANCE OF EACH "OPERATING" ENTITY

Many heavily promoted projects like the Prudential partnerships suffer from layers of promoters. It can be very hard to tell whose experience and decisions are setting the direction of the business. An experienced marketer like Prudential may take a cut of the earnings, but arrange for another company to run day-to-day affairs, including locating the properties to be drilled. With both companies general partners, no one knows who is minding the store. (The answer in the Prudential-Graham partnerships seems to have been no one.)

To protect investors, both the promoter and the operator should have to reveal their economic information. For a promoter like Prudential, disclosure will mean listing the results of investors in the other programs it has marketed. For an operator like Graham Energy, the information will cover the other programs it has run.

Multiple disclosure is needed for several reasons. First, more than one company will be taking fees from the project. The investors have a right to see how each operator has performed.

Second, a project with two or more general partners, one the promoter and one the field operator, relies on the skill and expertise of each. Each should add value to the final product. The promoter presumably is investigating many operators and using its expertise to select the best companies. This is the kind of screening that Prudential had promised for its five percent fee when, in an early program, it claimed to have chosen only 1 in 500 operators.²⁶⁴ (Prudential never explained how the company in the top 0.2% of its 500 companies wound up being one that never had produced money for its investors.) If the promoter has chosen only programs that lost money, that is highly relevant information. If the promoter's financial disclosure shows it is earning money regardless of what happens to the project, that too says something about its likely level of care.

At the same time, information on the field company is as necessary as information on the promoter. Even assuming that Prudential in the early eighties had a perfect record of identifying the best operators, investors still would want to know that by choosing Graham, Prudential had selected a company with no record of success. Graham might ruin even good properties with bad field decisions. Its record still would say, stay away. Had investors known that Graham was a company whom a former executive described as having one of the worst records in the industry, far fewer people would have lost their money.²⁶⁵

264. See *supra* note 104.

265. See *supra* note 103.

D. INVESTORS NEED TIMELY ECONOMIC UPDATES

It is not enough to give investors a detailed history before their investment begins, although that is the most important reform. In addition, they need ongoing, truthful economic information about their project.

One of the major risks of oil and gas investing is that a successful operator may grow complacent and let quality slide. In periods of great demand, for instance, with funds surging into the industry, operators may exhaust the best properties. Standard economic thinking predicts that returns will decline as operators are forced to turn to increasingly poor leases. Companies will experience decreasing returns as they advance on the margin of production for a given technology.

Alternatively, even in a time of ample properties, an operator who enjoys striking success may expand its marketing and attract more money than it can invest efficiently. Or a good company may find its employees bid away by wealthier rivals and lose the staff that produced its good results. The skills needed to create a going concern can be very different from the skills needed to drill one good well. Success can breed its own curse, or rather, a curse for investors but sometimes easy pickings for the operator. Even legitimate companies may decay over time and turn into operations that churn investor dollars. Thus ongoing information is necessary; the returns in the first few years will be only the first indication of whether the promoter can live up to its promises.

The programs discussed in Part II illustrate some of these problems. Home-Stake and Prudential never ran a profitable business. Ongoing reporting would have picked up their failure within, at worst, a few reporting periods. Moreover, both operators capitalized on the appearance of success, an appearance supported solely by the size of their operations, without having any means to find enough quality prospects. Because the industry left it free to pick the information it would give investors, Prudential increased cash distributions and presented its inflated payments as signs of success. The Petro-Lewis programs started out well, but disintegrated when prices fell. Davis Oil never produced a record of overall returns on its projects, but it seemed to keep shifting to a new group of savior wells.

In order to let investors monitor their interests, operators should be required to update their economic analysis of each prior venture at least annually, and include an economic summary of the current investment. The projections should include total project economics, calculated for the investors' interests, at existing prices and at projected prices. Similar annual updating of prior cash flow estimates is required under FASB No. 69 for publicly traded oil and gas companies.²⁶⁶

266. FASB No. 69, *supra* note 170, ¶ 7. While FASB No. 69 does not require interim financial statements, if those statements are issued they "shall include information about a major discovery or other favorable or adverse event that causes a significant change from the information presented in the most recent annual financial report concerning oil and gas

Had Prudential and Home-Stake provided this kind of update, they would have had to show that none of their projects were likely to pay returns. Even if the general partners provided no information on failed earlier projects and exaggerated hopes for the first year or so on their new ones, any reasonable estimate of future returns would have fallen once there was a little production. The failures were obvious quickly. It is telling that investment stopped, and litigation began, as soon as Prudential corrected its account statements to show investors that they would take a loss on their investments. The same medicine could have balanced Davis Oil's emphasis on completions instead of on economically viable wells and on optimistic early projections rather than long-term results.

Operators should have to prepare reports using existing prices as well as expected prices because investors have a right to know how they will fare if prices do not change. One of the most popular defenses raised by operators who sold programs during the boom years was that their investors counted on rising prices. The subtext was that investors didn't care about prospect quality or whether the operator lifted some extra fees because they relied on such a dramatic price increase. Some investors may indeed be willing to gamble on \$90 a barrel oil or \$10 an mcf gas, but they deserve to know what will happen if prices do not rise. The SEC has adopted this approach and requires economic results to be published using current prices.²⁶⁷

E. COPAS SHOULD BE A CLEARINGHOUSE FOR OPERATOR PERFORMANCE

One reason federal securities regulation has been effective is that the economic reports of publicly held companies are inexpensively available through the SEC's offices in Washington, D.C. These reports now can be accessed on the Internet through the SEC's Edgar system. This detailed corporate information has been a necessary ingredient in the growth of the investment analysis industry.

For the oil and gas industry to develop effective measures of performance, investors need the tools to compare operators cheaply and easily. The JOA should make operators file annual reports on each program, including discounted lifetime economic projections, at a central location maintained by COPAS. They should have to give this information to

reserve quantities." *Id.* ¶ 9. In other words, when companies talk, they have a duty to make sure that what they say is accurate.

267. FASB No. 69 requires oil and gas companies to use year-end prices in calculating future cash flows. *Id.* ¶ 30. These prices shall be adjusted so that "[f]uture price changes shall be considered only to the extent provided by contractual arrangements in existence at year-end." *Id.* ¶ 30(a). While this paragraph may seem to prohibit making projections that incorporate expected price trends not already embodied in contracts, FASB No. 69 adds that "[a]dditional information necessary to prevent the disclosure of the standardized measure of discounted future net cash flows and changes therein from being misleading also shall be provided." *Id.* ¶ 34. This provision would not permit a company to replace year-end prices with expected price trends, but it should require operators to supplement calculations when they expect a significant variation in prices.

their investors at the same time. Operators who refuse would have to delete the clause from their JOAs, thus giving notice that they cannot or will not meet a simple industry standard. The deletion may lead investors to pursue the information more avidly or to switch companies.

Some operators will refuse to participate, but those with good records have every incentive to publicize their success. They should want to spread accurate measures of performance. If investors could compare companies more accurately, the pattern of spending would track patterns of performance more closely. Good operators would find it easier to raise money. Bad operators would lose investors or be forced to lower prices and profits to a level that reflects the riskier nature of their product. The industry's high achievers have an incentive to publicize their results and to educate investors about the importance of a company's *economic bona fides*.

Once this kind of information becomes available, the industry should uncover more precise ways to relate past performance to future outcomes. COPAS should experiment with a variety of additional measures to supplement economic returns, including completion ratios and finding costs. For instance, properly used completion ratios do measure efficiency, but only of operators who generally complete wells that are likely to make money. The catch, of course, is that the operator must not be completing wells simply to pump up its record.

Another widely used performance measure is finding cost. Finding cost is the cost incurred to discover each barrel of oil and mcf of gas. The SEC does not require companies to disclose finding costs, but publicly traded companies have to provide the reserve estimates and accrued costs that are needed to make this calculation. One accepted source of finding-cost data is the annual reserve report co-published by Arthur Andersen & Co. and Cambridge Energy Research Associates, which lists an annual industry average for publicly traded oil and gas companies.²⁶⁸ Unfortunately, not only is the Andersen report limited to publicly traded companies, but

268. FASB No. 69 disclosures do not require companies to distinguish between evaluated and unevaluated properties, or between additions from exploration and from purchase, making it very difficult to compare efficiencies between companies. ARTHUR ANDERSEN & CO., OIL AND GAS RESERVE DISCLOSURES 1982-1986 S-38-40 (1987). One sign of the difficulty is the way that Arthur Andersen carefully stays away from direct comparisons: "For these reasons and the deficiencies in public disclosure of cost and reserve data, despite the need for relevant finding cost information on specific companies for specific years, we have elected to not publish surrogate finding cost on a company-by-company basis in the survey." *Id.* at S-40. One suspects that Arthur Andersen, like any major company, might be afraid of litigation from companies disgruntled with their ranking, although the solution to that problem would seem to be for Andersen to publicize its analytic method and invite companies to provide better information. Then its report, which would simply be making a mathematical calculation from each operator's published data, would involve little risk.

Even without company-specific finding costs, the Andersen data does offer the beginning of a meaningful performance measure. And one hopes it is the beginning of things to come, as is suggested by Andersen's defense of the concept of such performance rankings: "[b]ecause of these complexities, attempts to relate costs with discoveries are considered by some to be futile. Experience indicates, however, that analysts and companies will con-

concerns over data integrity persuaded Andersen to limit its report to a single industry-wide statistic. It does not publish company-by-company finding costs. Thus its numbers have limited use, even though they let investors see how their company stacks up to the average company.²⁶⁹

Finding costs can be a good way to compare efficiency, even though costs will vary with the period of discovery and must be treated carefully for this reason. Historical costs may be the best measure of long-term relative performance. Recent costs may provide the best estimate of the likely outcome of today's new project.²⁷⁰ Arthur Andersen separates

to develop comparative finding cost statistics in assessing the relative efficiency of companies in this important aspect of the industry's operations." *Id.* at S-39.

For the most famous use of finding costs, see the discussion of *Texaco v. Pennzoil*, *supra* note 160.

269. Two other measures of performance in the Andersen reserve report, "ploughback" ratios (which measure how much money a company reinvests to find new reserves), and reserve replacement (how well a company is replacing its reserves), are not really relevant to the fixed-expenditure programs in drilling fund and general partner formats. See generally, ARTHUR ANDERSEN, *supra* note 268, at S-34 to S-37.

If one is comparing ongoing oil and gas companies, it can make some sense to look at these measures, all well-suited to organizations like major oil companies that in essence run a continually replenished drilling program. These ratios test whether a company is reinvesting enough money to maintain its historical level of performance. The risk is that it may be milking short-term returns while failing to maintain the base upon which the stock value is based.

In contrast, in the ordinary equity project, in which one exploratory well is drilled and then, if the venture strikes oil or gas, development wells follow, the "ploughback" will be limited to the wells necessary to develop any discovery. It is contemplated by all parties that their venture will end with a narrowly defined project. So too with drilling funds and drilling partnerships, which often have either a dollar limit or a set time for accepting investors and are closed at the end of a fixed term. Here, too, it would not make sense to continually measure a reinvestment that the parties never planned to undertake. For the same reason, the Arthur Andersen reserve replacement ratio, which shows whether a company is maintaining its reserve base, is not as relevant to this kind of investment.

Most drilling projects are designed to drill in certain geographical areas or, as is the case of many drilling partnerships, to invest a set amount of money. While there may be developmental drilling beyond the initial activity, it usually is limited to developing the fields discovered in the initial project. The parties expect each investment to be depleted over time as reserves are produced. These programs are not comparable to oil and gas companies, which in essence earn their rate of return by balancing new exploration and development with reserve sales and by trying to maintain a large current inventory of reserves at all times.

270. Variations in finding cost can be quite great even if all companies are operating efficiently. One expects costs to vary with demand, which in turn varies with the expected price in the period when reserves will be produced. If prices are high and expected to remain high, input costs will rise as drilling increases and demand rises in the input markets. In addition, higher output prices lead operators to drill prospects with lower reserve potential, as the increase in price extends the margin of potentially profitable properties. The average output per dollar spent should fall. Thus it is quite to be expected (and in theory could have been a sign of market efficiency in both periods) that the median finding cost for additions to reserves was \$18.22 per barrel in 1982, had fallen to \$10.34 in 1986, ARTHUR ANDERSEN & CO., *supra* note 268, at S-40, and fell even more to a weighted average cost of just \$6.28 by 1993, ARTHUR ANDERSEN & CO., OIL AND GAS RESERVE DISCLOSURES 13 (1994).

An efficient operator that was active during the boom years but has not been doing much drilling recently would appear to have very high costs, yet it might be far more efficient than the average company. On the other hand, a company that only began business a few years ago in this time of low costs might have lower finding costs than its average

new reserves from the cumulative cost to let readers measure efficiency at current prices as well as historical efficiency.

COPAS has experience as an information clearinghouse. It developed a computerized equipment pricing database for operators to use as a baseline for equipment pricing. "To achieve an acceptable industry guideline for pricing material by standardizing and simplifying material pricing, it is recommended that the GEISCO/COPAS Computerized Equipment Pricing System (CEPS) be used as a basis for pricing material."²⁷¹ Though CEPS has generated disputes over its selection of prices,²⁷² COPAS's role in providing standard information does suggest that it can play a primary role in promulgating industry standards.

The absence of information on company performance is far greater than it ever was on equipment pricing. As a result, COPAS will perform a far greater service if it builds a database for comparing company performance.

COPAS has taken a first step with its publication of current performance measures. Whether the organization will have the courage to actually rank companies remains to be seen. The industry orientation of prior COPAS and JOA reforms does not make one optimistic. Yet the industry should welcome COPAS's involvement because it ensures that industry companies will keep control over the measures.

V. CONCLUDING POINTS: SCOPE, THE USE OF CASE METHOD DIAGNOSIS

This section deals with two questions that flow naturally from this kind of discussion of performance standards. First, who besides ordinary equity investors needs protection? Second, is the case method of diagnosing problems a legitimate method of analysis?

A. DRILLING FUNDS AND INDUSTRY COMPANIES NEED PROTECTION TOO

The financial and reserve portions of the standard industry contract should apply to large partnerships and drilling funds. These programs differ from joint-equity programs primarily because their investors do not

competitors, even though the newcomer is less successful at finding reserves economically. Such a company is just lucky not to have high-cost older reserves on its books.

271. *Computerized Equipment Pricing System*, COPAS Interpretation No. 15 (May 20, 1986). The goal in developing the CEPS pricing system, stated most optimistically, is "to increase pricing accuracy, audit efficiency and to provide for a consistent and equitable pricing method as it adapts itself at all times and to all situations." JOLLY & BUCK, *supra* note 4, at 144.

272. The CEPS system has come under fire lately, but not because COPAS has assumed a role of trying to publicize information needed for rational decisions in the industry. The attack is that the pricing system does not accurately reflect market prices, a criticism of the specific measure used rather than of COPAS's centralized role. See Susan Richardson & Corby Considine, *Revolutions in the Oil Patch*, TEX. LAW., Oct. 9, 1995, at 32 (citing two Texas cases over CEPS prices that "appear to be in excess of the prevailing price of tubular goods" and may be more than operators actually paid).

make well-by-well decisions on whether to complete wells or to drill development wells.

A high level of protection is important in partnership and drilling fund investments because these investors are less likely to be industry investors and tend to have less structural protection. Operators like Prudential, Petro-Lewis, and Longhorn used these investment packages to raise millions of dollars rapidly. Direct regulation of these investments is very difficult. It is impractical to have face-to-face meetings, contract negotiations, and individual consents in programs with so many investors.²⁷³ Operators wanting to solicit pools of private capital nationally would find it very difficult to conduct broad fundraising in the equity form. The lack of detail attracts operators to partnership and fund formats.

Partnership and drilling programs also are harder to regulate because each program will drill multiple wells, yet investors will not receive information on each well. Nor is there ordinarily any well-by-well audit power. The longer a program, the more the wells, the wider their dispersal, and the more their investors, then the fewer opportunities to scrutinize the investment and the greater the difficulty of organizing investors to conduct such scrutiny. The opportunity to uncover fraud is lower than in the equity format.

Cases like *Prudential* and *Petro-Lewis* show that an accurate track record and a fair description of the operator's past performance are at least as essential to the health of these investments as they are to equity investors. Otherwise operators could easily portray a "success ratio" or level of distributions that is not justified by drilling results.

In partnership investments, the general partner selects the mix of prospects and makes completion and development decisions. Investors participating as limited partners face no choice comparable to the consent and nonconsent decisions of equity investors and so do not need the JOA's shelter in these areas.²⁷⁴ Clauses about the operator's controlling wellsite activity, the completion decisions, the penalties for going nonconsent, and the procedures for drilling subsequent wells are not relevant. The other areas of the standard agreement, however, are as vital to the well-being of drilling fund and partnership investors as to equity owners.

273. There is a countervailing concern, namely, that the fiduciary duties of partnership forms will restrict the operator's freedom to strike special deals. This may be the reason that Marvin Davis, who attracted hundreds of investors and drilled hundreds of wells, stuck to the equity format for his projects. See also *Donohoe v. Consolidated Operating & Prod. Corp.*, 982 F.2d 1130, 1140 (7th Cir. 1992) (refusing to find equity investments "integrated" securities, and so upholding exemption from registration requirements).

274. One of the standard clauses in the JOA gives investors the right to decide whether to "consent" to completing a well once it has reached the target depth, and whether to consent to participate in development wells after the operator drills the test well. The customary provision for going nonconsent is to lose one's right to any revenue until the participating investors collect several times the costs attributable to the interest, a forfeiture that can be as much as 300% of the cost. *DERMAN*, *supra* note 227, at 51, 53. Some forfeiture provisions are higher, 500% or even 800% of costs. *Id.* at 53. Or the agreement may be drafted so that those who choose not to participate in certain decisions relinquish their interest entirely. For sample provisions, see *id.* at 143-45.

The AAPL should issue a condensed form to meet the needs of these investors. With luck, the effort to adapt the JOA to all forms of industry investment will encourage many parties who currently invest under sketchy contracts to demand the shelter of the standard forms.

Another issue of scope is somewhat ironic. It can be difficult to discuss reforming the industry contract rationally because too many industry participants take any suggestion for reform, as well as any claim that particular clauses need reshaping, as an attack on the industry. They convert narrow questions into the broader, different, and emotional issue of industry loyalty. The tendency to turn proposals into loyalty tests lay behind the proclivity of many participants in take-or-pay disputes to define all related issues as pipeline-producer fights. The same approach would try to fit the proposals in this Article to an industry (meaning "operator")-nonindustry dichotomy. Such divisions blind many experienced participants to the fact that their own companies would benefit from more information. They could use accurate cost and performance data just as much as nonindustry companies.

A common response to reform proposals is that maybe nonindustry investors need more protection, but industry companies know how to protect themselves.²⁷⁵ They do not need help or want the expense of new standards. The theme that industry companies act at their own peril, ca-

275. This is the reaction from many established industry hands. See, e.g., Letter from Donald J. Silberman to John McArthur 1 (Aug. 10, 1994) (on file with *SMU Law Review*):

[The JOA and COPAS] are the models, almost always modified, designed to be used by and between industry partners who are all assumed to possess the expertise necessary to function with less-than-perfect disclosure guidelines. Neither set of documents demands full and adequate disclosure which may be necessary for the nonindustry investor, nor does either set adequately restrict the latitude for chicanery by a larcenous operator.

See also Letter from Robert J. Green to John McArthur (Mar. 27, 1995) (on file with *SMU Law Review*) ("I can sense a distinct dichotomy between Operator/Promoter-Investor deals and "Industry Partner" deals. . . . Perhaps we need two JOA forms!").

The same emphasis on the JOA as an agreement among industry parties characterizes the work of Ernest Smith, who in several influential writings has urged courts to use a "good faith" rather than fiduciary standard in deciding cases that involve the operator-nonoperator relationship. See generally Ernest Smith, *Joint Operating Agreement Jurisprudence*, 33 WASHBURN L.J. 832 (1994); see also Smith articles cited in *supra* notes 213-14. In Smith's view:

Nonoperators are never marginal farmers and ranchers and are rarely lacking either in financial resources or in formal education. With possible exception of some "promoted" prospects, such as those in the late seventies and early eighties, the parties to an operating agreement are either oil or gas companies or experienced investors.

Smith, *supra*, at 840.

Though not addressing the fiduciary question, this Article urges a higher standard of disclosure by contract and industry practice for several reasons. First, it assumes that the number of investors who do not have real oil and gas expertise is higher than Smith suggests, and includes a number of generally sophisticated investors and companies that lack experience with oilfield practices. This is a very specialized industry, and it should not be a trap for the unwary. Second, the operator has easy and often exclusive access to a lot of information unavailable to nonoperators, so that it has effective control over relevant information even when dealing with industry companies. Third, industry companies themselves would benefit from more information. The industry company that assumes it already knows all it needs to know about an operator is likely to be its own worst enemy.

veat emptor above all, appears repeatedly in cases as well.²⁷⁶

Most industry hands balk at the idea of requiring disclosure. They tend to admit that the industry might need a few special rules for nonindustry investors, but that's all. Why would an experienced oil company, a company that has decided to invest in a prospect, need an Exxon, a Chevron, or an Apache to tell it about its past performance? After all, hasn't the industry investor already determined the merits of the property?

The treatment of industry companies has become more important as joint ventures among various industry companies have become more common. Cooperation among industry companies is one of the defining characteristics of the oil and gas industry. Joint ventures by industry participants have a long history.²⁷⁷ The joint project can be structured to share expertise and services or as a way for a single operator to raise a large pool of funds. As private funds drifted away from the oilfield, service companies joined more industry projects too.²⁷⁸

Proponents of take-your-lumps theories never explain what interest is served by allowing frauds that can be defeated by inexpensive disclosure, even if the victims are long-established companies.²⁷⁹ It may be true that

276. One of the best examples of lower protection for industry companies arose in an accounting dispute. In the *LL&E* litigation, one of the reasons the court gave for absolving LL&E for its buyback agreements was that the management of the investing victim were "sophisticated and experienced oil and gas people" and so "knew or should have known" of LL&L's inventory practices. *Dime Box Petroleum Corp. v. Louisiana Land & Exploration Co.*, 717 F. Supp. 717, 723 (D. Colo. 1989), *aff'd*, 938 F.2d 1144 (10th Cir. 1991). The court used the plaintiff's "position as a corporation sophisticated in oil and gas matters" as a reason to reject a fiduciary duty and to limit the operator's obligation narrowly to the JOA. *Id.* at 722 (citing *Frankfort Oil Co. v. Snakard*, 279 F.2d 436 (10th Cir.), *cert. denied*, 364 U.S. 920 (1960)).

Operators often use a variant of this argument by claiming that "industry practice" justifies what they have done. When used to shield improper activity, this defense is one of the classic techniques of "neutralization" or rationalization identified by students of white-collar crime. One such technique "involves transfer of responsibility from the offender to a large and often vaguely defined group to which he or she belongs." James Coleman, *Toward an Integrated Theory of White-Collar Crime*, 93 AM. J. SOC. 406, 413 (1987). The way the excuse works, when challenged a perpetrator claims that "everybody else is doing it too." *Id.*

The other excuses will ring just as familiar to anyone who has done much commercial fraud litigation, in or out of the oilpatch. They are: (1) claiming that the fraud did not hurt anyone; (2) shifting attention by arguing that the rule or law violated is unjust or unnecessary; (3) arguing that the practice is necessary to survive in the industry; (4) the everybody-does-it defense already mentioned; and (5) asserting that the perpetrator deserves the money. *See id.* at 411-14.

277. As Irish and Romanov note, "[t]he oil and gas industry has long relied on joint ventures with other industry partners to conduct exploration and development activities. Typically, each partner to the venture contributes what he uniquely possesses, whether it be acreage, cash, or technical skills." Romanov & Irish, *supra* note 38, at 13-26.

"In the typical industry joint venture, the parties agree to the sharing of costs of exploration, development, and operations in exchange for an interest in the proceeds of production Typically, one party may contribute acreage while another provides technical and operating expertise and/or capital." *Id.* at 13-26 to 13-27.

278. *Id.* at 13-28.

279. A number of economists would argue that companies in long-term relations have an incentive not to cheat each other, and tend to develop means of avoiding the problems that might afflict those with less frequent contact. *E.g.*, WILLIAMSON, *supra* note 4, at 70-

industry investors are likelier to perform their own geologic analysis, to ask questions, to uncover the true facts, and to customize their contracts. Industry companies are likelier to be repeat customers, thus justifying maintaining professional staffs and giving them more leverage (because they pose a realistic threat of switching to another company). Yet the operator still can amass performance and cost information much more easily than industry investors and the information is just as material to that investor as to a nonindustry investor.

There are two reasons why industry companies would be better served by full performance disclosure. First, there are some industry deals in which the nonoperating companies do not thoroughly research the proposed investment. Too often industry companies assume that all major players drill and develop properties with the same high level of competence. Past performance data would help check hasty investment decisions.

Second, the geology of a field is only one factor in prospect success. Success still depends on the operator's skill in drilling and developing as well as the property's characteristics, and upon the operator's honesty. An unsuccessful record is one indicator that the operator may be cheating on accounting or that it just may not be competent enough to carry out the joint program.

To the extent that industry companies need to know how the operator has done in the past, that information is primarily in the operator's possession. It is easier and cheaper for the operator to compile its record than for the industry partner to try to estimate this information.

B. THE CASE METHOD CAN DIAGNOSE STRUCTURAL PROBLEMS

This Article has based its recommendations on problems that appeared in some large, well-known oil and gas programs. It has derived its reforms from these examples. The case method is a solution to the familiar problem that the incidence of fraud is impossible to document precisely.

Case method studies are familiar to lawyers because they are the method of the common law. Common law reasoning assumes that good rules of law can be developed by detailed study of the cases that come before courts.²⁸⁰ These are by definition "pathological cases"—they are cases where a severe problem exists that the parties have been unable to solve. Yet presumably unresolved disputes are places where rules of law

72. Experienced companies should have the means, personal contacts, and leverage (because they can threaten to remove future business) to raise their level of protection. All this may be true, but it does not explain why they, too, should not be protected by the simple steps of disclosure discussed in this Article, which would give them better information at the start of their investment.

280. While not exactly discussing the problem of law as a mode of forming public policies, the most recent thorough defense of case-based pictures as a legitimate method of social decisionmaking is ANTHONY KRONMAN, *THE LOST LAWYER* (1993). The classic defense in American law is that great but flawed attempt to prove that judges are not really making policy, BENJAMIN CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* 15 (1921).

are needed most. Decided cases are one way to determine the kind of problem that exists and at least the direction of the need for reform. While this kind of thinking is easy to criticize as a way of formulating social rules,²⁸¹ it can be a rational way to isolate the dynamics of problems that do not lend themselves to wide surveying and documentation.

Moreover, while it is popular to object that the oilpatch remains an honest, handshake deal industry,²⁸² the cases are certain to understate, not overstate, the true extent of fraud. Litigated cases will understate the number of deceptive practices because the problems are hidden. Nor will

281. For some discussion of the limits of the traditional case-method approach of lawyers, see Jon O. Newman, *Rethinking Fairness: Perspectives on the Litigation Process*, 94 YALE L.J. 1643 (1985). Newman notes that “[a]s lawyers we are taught to consider the dispute at hand and not the operation of the legal system in which the dispute arises and is resolved.” *Id.* at 1650. Maurice Rosenberg quite similarly complains that the “tendency of legally-trained minds to prefer thinking to counting is legendary. So is the lawyer’s preference for learning by watching for the vivid case rather than tabulating the mine-run cases.” Maurice Rosenberg, *Federal Rules of Civil Procedure in Action: Assessing Their Impact*, 137 U. PA. L. REV. 2197, 2211 (1989). *Accord*, HAROLD ROTHWAX, GUILTY 47 (1996) (“One of the problems with the way law is made is that rules are announced piecemeal as each case arises, but each particular case does not necessarily give us much guidance regarding the multiple types of situations that can arise,” and finding a “patchwork quality to the law, [so that] future cases simply add weight to the same faulty premises.” *Id.* at 64, 72.).

Thurman Arnold attacked the case-narrowed focus of common law courts with characteristic eloquence a generation ago. Thurman Arnold, *Trial by Combat and the New Deal*, 47 HARV. L. REV. 913, 918-19 (criticizing incompleteness of rules that emerge “only from contests,” without court having investigatory function); 920-22 (challenging adversary model as means for social planning and mocking idea that courts can design good rules “if only a small section of that conduct is considered at a time”); 937 (complaining about individual lawsuits as occasion for testing regulatory schemes) (1934); *see generally* Paul Brest, *Plus Ça Change*, 91 MICH. L. REV. 1945, 1946, 1951 (1995) (“Law and society . . . has not flourished to nearly the same degree as scholarship that can be done without ever leaving one’s office. . . . The legal academy seems especially uninterested in empirically based research designed to improve the systems for administering civil and criminal justice”); Richard A. Posner, *The Decline of Law as an Autonomous Discipline 1962-1987*, 100 HARV. L. REV. 761, 769 (1987) (“Some fields that had once seemed to promise important applications to law, such as psychology, linguistics, and sociology, have not made much recent progress toward improving our understanding of law.”).

282. DERMAN, *supra* note 227, at 75. In his discussion of whether the operator should be treated as a fiduciary, Derman muses that this issue may have arisen so rarely owing to the trust that once joined operator and partner:

Perhaps this is because the parties in the oil industry realize that due to the nature of the business, they will have to work together in the future and, consequently, they generally conduct their affairs in a fair, equitable manner. As business gets tougher, will industry alter its course of conduct? The “good old boy” syndrome has begun to erode. Consequently it is more critical now to carefully structure expected behavior and, whenever possible, this should be done in writing.

Id. at 75; *accord*, Silberman, *supra* note 275, at 1 (“Unfortunately you are right to state that oil and gas exploration and development activities can no longer be carried out with a verbal commitment. I think this is a reflection of our present society in general. Not only are ethics more loosely interpreted in business, but everyone has become more litigious.”).

It is hard to find anyone with much experience in the oilpatch who doesn’t lament the passing of the old days. Scratch a true oilman, and a longing for the past nearly always comes to the surface. JOLLY & BUCK, *supra* note 4, at 1 (“These informal agreements quite often consisted of little more than a pat on the back and a handshake.”).

litigation examples prove the relative incidence of different types of fraud and sharp dealing. Fraud is, after all, secret by its very nature. Cheating sees the light of day only if it is discovered and is not resolved privately.²⁸³ The fraud that will appear most common will be the practices that are hardest to hide. Many frauds are not discovered. In other cases, a violation may be so egregious (if discovered) that operators will settle all claims in that category quickly. They will refund the complaining investors' money, but at a price. The settlement is hush money. The settlers have to agree to maintain the veil of secrecy that blinds less vigilant investors (so the operator gets to keep the secret profits earned on their money).²⁸⁴

The point of analyzing the structure of investor problems from examples is not to suggest that fraud characterizes the majority of this industry, with its hundreds of operators and billions of dollars in annual drilling. Legitimate companies are themselves victims of too-loose standards. Loose regulation invites cheaters and degrades the industry. If better disclosure were required, legitimate companies would get more business and incompetent and venal operators less. Driving out the unscrupulous would benefit the many companies that are not in the business of fraud.

283. The first reason that the litigated cases understate the scope of true disputes is that most businessmen prefer to resolve problems short of litigation. The classic statement of this factor is Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963). The fact that organizations and their formal rules sit in the midst of a larger structure of informal patterns of behavior that must be understood is a commonplace of organizational analysis. See, e.g., Mark Granovetter, *Economic Action and Social Structure: The Problem of Embeddedness*, 91 AM. J. SOC. 481 (1985) (criticizing both undersocialized model of neoclassical economics and oversocialized model of certain sociological theorists for ignoring concrete social patterning within which interactions occur); John Meyer & Brian Rowan, *Institutionalized Organizations: Formal Structure as Myth and Ceremony*, in WALTER POWELL & PAUL DIMAGGIO, *THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS* 41 (1991) (note especially pages 42-44, discussing differences between social action and rational structures assumed in many theories).

The second reason that the cited cases are sure to understate the incidence of fraud is that there is no reason to believe that more than a small minority of frauds are discovered. Given the damage to business reputation that accrues to a company known to do business by fraudulent means, and the availability of punitive damages for the various intentional torts that can be based upon clear cases of fraud, a fraudulent scheme is most likely to be a "rational" business strategy only if the perpetrator expects the scheme to remain secret. One can devise a number of rules that fraudulent operators should follow. They should prefer to draw investors from different geographic regions, as long as the benefit from lowering the risk of shared information exceeds the logistics cost. They should prefer investment forms like the traditional prospect equity investment over funds that pool all investors together, as long as the reduction in shared information exceeds the marketing economy of scale available to large partnerships. Their attraction to fraud should rise the larger the pool of potential investors (increasing the likelihood that victims can be discarded and replaced with new blood) and the more difficult they think it is for investors to communicate with each other.

284. During the long-running fraud perpetrated by Home-Stake Production Company of Tulsa, for instance, the company was sued twice before finally being put out of business. The first litigation was settled quickly before the company had to submit a class action notice to its investors; the second, involving the SEC, was also settled without Home-Stake ever having to disclose the absolutely dismal results of its operations. See *In re Home-Stake Prod. Co. Sec. Litig.*, 76 F.R.D. 337, 342 (N.D. Okla. 1975).

Yet any industry offering great power and wealth will attract fraud. Fraudulent and deceptive oil and gas sales practices were so common by the late twenties that they were one of the major concerns leading to the Securities Act of 1933 and the Securities Exchange Act of 1934. In the words of the Supreme Court, oil and gas investments "were notorious subjects of speculation and fraud."²⁸⁵ That notoriety led Congress to include undivided interests in oil and gas, "that form of splitting up a mineral interest which had been most utilized for speculative purposes," in its definition of a "security."²⁸⁶

Even without complete measures of fraud, it is clear that industry standards and contracts have proven too easily penetrable by companies intent upon fraud and deception. The abuses have not been limited to fringe operators: violators have included some of the largest and most prominent companies in the industry. The industry's vulnerability includes its openness to the rapid growth and to the prolonged operation of programs that consistently lose money. Operators who want to cheat have had a relatively easy time doing so.

Part II demonstrated, both by the dollars at stake and by the prominence of some of the companies involved (which include some industry leaders by any measure), that bad information has been a real problem in the industry. As a result, whatever its precise incidence, cheating is not rare enough. The ease of commission, depth of injury, and the relative cheapness of disclosure justify reform even in the absence of more precise knowledge about the scope of injury.

Moreover, the oil and gas industry is susceptible to fraud and deceit for a number of structural reasons: low barriers to entry; infrequent investments; high uncertainty; and the lack of a viable market to foster competitive pressures. The first factor reducing industry stability is its market structure. The exploration end of the industry has relatively low barriers to entry and permits rapid entry and exit. Many fortunes have been built upon a few mineral interests or a drilling rig or two.²⁸⁷ The common use of contracts like farmout agreements, leases, and executive rights contracts, in which mineral owners find others to share the risk of loss (or assume it entirely), reduces barriers to entry. Such risk spreading devices have allowed thousands of people to enter the business with little or no capital.²⁸⁸ Similarly, an agreement selling dry hole and bottom hole in-

285. *SEC v. Joiner Corp.*, 320 U.S. 344, 352 (1943).

286. *Id.* (citing 15 U.S.C. § 77b (1)).

287. The path of some of the earliest and most famous oilmen, like Doc Joiner and the Hunt dynasty described by Daniel Yergin, *supra* note 15, at 244-48, were repeated in the late seventies as drillers like Carl Swan, who began working at the very bottom as a field hand, and J.D. Allen, who spent his formative oilpatch years living in his car and dealing leases on the road, *see* SINGER, *supra* note 31, ch. 5, became major figures in the industry. The mythology of the oil millionaire is no myth. Uncounted, of course, are the greater number of oilfield gamblers who never had a successful strike and whose histories never get written.

288. This is how Robert Heffner, the Oklahoma oilman, bootstrapped capital for his series of deep Oklahoma gas wells. Heffner traded pieces of acreage for drilling commit-

formation has risk-spreading effects.²⁸⁹ Industry cost and risk-shifting provisions can produce very fine divisions of risk. For an industry that

ments from such companies as Lone Star Gas Company, El Paso Natural Gas Company, and Apache Corporation. *Id.* at 76-77. He peaked when Mobil agreed to undertake \$200 million in drilling and pay another \$32 million into Heffner's company GHK, in return for half of his interest in a 135,000-acre project. *Id.* at 81.

The luxurious variety of oilpatch investment forms defies the transactions cost prediction that a single dominant form will emerge as the market rewards and handicaps the various forms for their efficiency properties. The farmout creates what is called a "carried interest," an interest whose owner is "carried" by others as they pay to drill the well. There are at least three standard forms of carried interest: (1) the *Manahan* interest, under which the landowner assigns all of its property but gets back half (or some other percentage) under a right of reversion after drilling costs are recouped; (2) the *Herndon* type, in which the owner assigns a portion of its mineral interest, plus a production payment covering the cost attributable to its retained interest, with the latter assigned back after the driller recoups its costs; and (3) the *Abercrombie* type, in which a party assigns part of its interest and gives a mortgage against development costs on the rest of its interest. See generally *United States v. Cocke*, 399 F.2d 433, 436-37 (5th Cir. 1968), *cert. denied*, 394 U.S. 922 (1969); *Estate of Weinert v. Comm'r*, 294 F.2d 750, 750 n.1 (5th Cir. 1961); 2 WILLIAMS & MEYERS, *supra* note 213, § 424.1, at 439-44. The interests are named for the lucky taxpayers whose cases defined the tax treatment of their respective tax vehicles.

The farmout is only the first place where a division of interest occurs. Upon receiving a farmout, the recipient can drill and pay for all costs or, as is quite common, find new investors to pay for them. For instance, if the operator persuades investors to sign up on a third-for-quarter deal, the operator will receive a quarter interest but neither it nor the original landowner will pay any part of the drilling cost. Alternatively, the operator may assign its interest to another operator, merely keeping a royalty as the price of its transactions service.

289. A dry hole agreement is one in which adjoining landowners or other interested parties agree to pay a fixed amount (there is no reason the agreement could not be for a percentage of well costs, although presumably that would involve landowners more in the affairs of the operator than they would like) in return for the geologic information learned while drilling the well. 3 WILLIAMS & MEYERS, *supra* note 213, §§ 612-14. The less frequent bottom hole agreement requires payment, and information sharing, whether the well is dry or not.

Presumably there are two reasons why it is common to limit this information to dry holes: (1) if the operator completes a producer, it is easy to determine the depth and production from state records, causing the information to lose some of its value; and (2) if the well is a producer, the operator is more willing to take its risk on recouping well costs from production. Thus the dry hole agreement limits, but does not extinguish, certain kinds of risk. One also expects the agreements to be more common on wildcat wells, the first wells drilled in new formations, than in drilled areas where other information is already available. For instance, in the *Hartman* case discussed below, the driller was able to secure an agreement just on the first well and two others among more than 50 wells he drilled in the same Kansas field.

While dry hole payments tend to be less than the cost of drilling (if adjoining landowners had to pay more than a well cost, they might as well drill instead of buying this information), the value of the information should depend on the information publicly available, the cost of drilling alternative wells, the likelihood that the test well might be pooled or unitized with the landowners if successful, how much acreage adjoins the well, and the expected geology of that acreage. The payments can be substantial. See, e.g., *Stone v. W.G. Nelson Exploration Co.*, 51 So. 2d 279, 281 (Miss. 1951), in which the operator had been "reimbursed" \$25,700 on a \$45,000 well; \$50,000 on a \$130,000 well, \$44,000 on a \$65,000 well; and \$67,500 on a \$103,000 well.

One of the interesting things about dry hole agreements is that the information retains value only if it remains private. Many states require fairly extensive reporting of drilling results. One might justify this on grounds of ensuring competition. The benefits to surrounding landowners and to drillers of the new geologic data generally will outweigh the driller's loss from having to give up this information. The conflict between drillers' desire for confidentiality and the State's interest in sharing information should increase as states

has not existed for much more than a century, it is extraordinary how many legal forms the oilfield has developed to spread the risk and cost of operations.²⁹⁰ And whether cause or effect, the low level of vertical inte-

expand reporting requirements for environmental reasons. This conflict flared into the open in *Hartman v. State Corp. Comm'n*, 529 P.2d 134 (Kan. 1974).

Hartman drilled the first well in the Damme field in Kansas in 1951. He drilled 49 more wells in the same field by the time of his litigation. *Id.* at 137. Kansas passed a law requiring anyone drilling oil or gas wells to file formation samples, electric logs, and driller's logs. *Id.* at 136-37. The information would be confidential for a year, with an option to extend that period by one more year, and with exceptions for "economic hardship," lack of necessity, or if "[t]he length of the period of confidential custody is not sufficient to satisfy the needs of the developing operator." *Id.* at 137.

Over the years Hartman spent \$125,000 for the wells and \$200,000 on seismographic testing. *Id.* at 138. He refused to enter some dry hole agreements because he did not want to disclose some of his drilling results. *Id.* Hartman objected to the Kansas filing because "the information obtained by applicant in drilling was paid for by him, it belongs to him, he expects to use it and does not want to give it to competitors in the area; to do so would be an economic disadvantage." *Id.* (He also attacked aspects of the filing and disclosure procedures.) Predictably, four major oil companies with interests in the area intervened to urge the Kansas Supreme Court to uphold the state rule. They wanted something for nothing. A year after Hartman's filing, Kansas would release information for which they might have otherwise paid Hartman and other operators.

The Corporation Commission and the Kansas Supreme Court rejected Hartman's bid to keep his information secret. The record contained testimony that the regulations were "an excellent compromise which satisfied the state's need for information and yet did not unduly add to the cost of doing business." *Id.* The supreme court listed some of the environmental reasons why such information was needed, reasons that are likely to be treated with increasing seriousness in the coming years:

[A]nyone who drills a well to extract minerals not only gains mineral resources and information, he also produces a hole which under certain circumstances can be detrimental to the public health and safety; blowouts related to the oil and gas industry have occurred in recent years in Kansas; information from holes in the particular areas was inadequate to determine the source of the problems or the solutions; at least seven major surface collapses have occurred which resulted from corrosion of casing caused by underlying salt solutions; where information is inadequate new holes have to be drilled in the area to secure adequate knowledge; such information is necessary for the protection of fresh water resources and for correction of and protection from blowouts and surface collapses; electric logs are used with other geological data to acquire knowledge of rock pathology and changes in fluids, which is essential to the study of blowouts.

Id. at 139.

Both dry hole and bottom hole agreements understandably need to be quite specific about the depths covered, the zones to be tested, and even about what testing means. *E.g.*, *Arkansas La. Gas Co. v. Sears*, 400 S.W.2d 595, 597-98 (Tex. Civ. App.—Amarillo 1966, no writ) (rejecting effort to avoid paying \$5000 dry hole contribution on "8000 feet Granite Wash Test" well because a Hamm Zone at 5000 feet was not tested: the Hamm Zone was not mentioned in the contract; operator had not supplied information but never refused to supply it and the plaintiff never asked for it); *Humphrey v. Placid Oil Co.*, 142 F. Supp. 246, 248-56 (E.D. Tex. 1956), *aff'd*, 244 F.2d 184 (5th Cir. 1957) (purchaser agreed to pay \$25,000 for "testing," in contract specifying logs and other materials to be furnished, 142 F. Supp. at 258, but refused to pay when operator would not agree to set pipe, perforate it, and sand frac eight zones at expected cost of an additional \$75,000 on a well that had cost \$121,000 to drill to agreed depth; payment required even though well was completed as a producer (because of buyer's anticipatory repudiation before production began). 244 F.2d at 187. For a harsh dissent condemning requirement of dry hole payments on apparently producing well, see *id.* at 190 (Hutcheson, J., dissenting)).

290. While there are a number of ways to demonstrate the richness with which the industry has learned to split risks, one example is the minuteness of the divisions. Consider, for instance, just how far risks had been spread in a class action in which the repre-

gration in this industry, which at its peak had thousands of independent contractors who drilled wells and provided every variety of well service, reduces further the capital needed to enter the business.

The industry's vulnerability is exacerbated because the gains can be so disproportionate to the cost. Ease of entry can only be measured relative to expected profits. Whenever vast wealth is available and so dependent on chance, fraud will not be far behind. And oil and gas drilling is a gambler's business on a worldwide scale.²⁹¹ Drilling probably has been this century's most frequently played high-stakes industrial game. The variability of risk may fall in large programs, but each well is a ticket to an enchantingly speculative journey. The jackpot nature of drilling and the lure of huge profits always have attracted a fair share of hucksters, con artists, and careless promoters—all circulating within the larger ranks of legitimate operators.²⁹² The chance at life-altering riches has been incentive enough to produce a steady stream of new oilmen, willing to risk all for a chance at fortune.

With entry so easy relative to potential profits, it is no surprise that the industry experiences a turnover among independent operators. Their turnover is a counterweight to the stability of the major oil companies. Independents do most of the drilling and take most of the risk, but when successful often sell their production to the majors. One easy indication of the ease of penetration is the number of new companies in the boom years of the late seventies and early eighties who had not been substantial participants in prior years.²⁹³ The rise of new companies without track

sentative's overriding royalties formed, respectively, 0.00092024, 0.00130200, 0.0225000, 0.01968700, 0.00229500, and 0.000862 in certain wells. *Vinson v. Texas Commerce Bank*, 880 S.W.2d 820, 822-23 (Tex. App.—Dallas 1994, no writ).

291. If reserves were fully predictable, one would expect any premium of expected lifetime returns from a mineral interest over national market averages to be capitalized into the cost of acreage. Because given wells can be quite risky (with the risk varying with the nature of the formation, the amount of prior drilling, the skill of the operator, and other factors), the history of independent drilling—often by companies without enough capital to spread risk by drilling a lot of wells—is a story of many marginal and bankrupt operators and the survivors who leave their mark.

292. An interesting question of industrial organization is whether the industry would have its current structure if drilling yielded exactly the same gains, but with reserves spread evenly over drilling projects, and each well likely to yield a rate of return roughly similar to a market interest rate, rather than many wells being dry holes but others coming in as gushers that had to pay for a multitude of failures.

293. It is striking how quickly some companies have been able to attract investors in the oilpatch without a substantial track record. Many would not have raised funds so quickly if the industry had even minimal standards of relative performance. Longhorn Oil and Gas, for instance, was just a few years old at its peak. Its principals had worked in the industry for a number of years, but results vary significantly with organizational structure and purpose, so it was therefore important that Longhorn itself was a new company.

The rise of Prudential was even more abrupt. Until these partnerships, Graham's limited industry involvement had not been successful. Prudential had some oilfield involvement, including some extremely unsuccessful ventures like its Invoil project, but nothing to suggest that it could produce a successful billion-dollar program.

The oilfield has a number of companies that can make money spending over a billion dollars. These companies should have been collecting and spending these dollars. Had the industry developed effective performance measures, the investors who had to bail out of

records makes it harder for investors to uncover accurate information before investing.

The nature of oilfield investing suggests other reasons why it will be hard to protect investors from fraud. Transactions-cost economists trying to measure how well private contracting can provide goods and services (instead of vertically integrated firms doing the work) focus on three aspects of exchange as of particular importance: frequency, uncertainty, and "asset specificity."²⁹⁴ Infrequent and uncertain purchases with little liquidity are high-risk propositions. Oil and gas investments suffer from each risk.

Frequency is important because a free market relies on frequent purchases to steer companies away from incompetent and unreliable companies and toward those that deliver what they promise. Every purchase is a vote in a market election. Not surprisingly, those who vote often have more to say about their leaders. Small, frequent purchases give buyers more control than large, infrequent investments.²⁹⁵ In theory, free markets should drive unsuccessful companies out of business. In practice, this application of buyer sovereignty works only if buyers make enough purchases to learn to discriminate between good and bad companies.

A number of oilpatch investors are infrequent buyers, particularly in boom periods. A substantial number buy one or just a few investments in a lifetime. Major oil companies on the other hand may make hundreds of investments each year, but the presence of a significant number of investors who only make a few major purchases means that the industry has a pool of investors who are unlikely to choose among operators effectively. Most of their experience will be with a few operators. They will be committed before they have a chance to learn much about the industry.

The high turnover of independent operators makes repeat purchases from the same operator less frequent and, combined with infrequent-purchase investors, has helped unscrupulous companies feather their nests. One might expect that having a number of companies without established reputations or good will would put a premium on operators who do have good track records. Yet Part II illustrated how easily other operators have flourished.

High uncertainty is a second contract factor that facilitates decep-

Prudential might still be putting money with the country's leading oil and gas companies, who in turn could be operating on a larger scale within the continental United States.

294. WILLIAMSON, *supra* note 4, at 52-63.

295. "Sharp dealing is far more likely when the contractual partners never expect to see each other again than when they have an interest in continuing to trade." COOTER & ULEN, *supra* note 11, at 244. If contact is rare, it becomes harder to monitor a relationship and, accordingly, to prevent fraud.

Of course, at least some level of trust is necessary for a fraud to succeed. Some would argue that trust is necessary for the most efficient frauds. See Granovetter, *supra* note 283, at 491-93. It certainly is true that people are at their most vulnerable when their guard is down. The law offers a whole body of cases, the fiduciary duty cases, in which a tort violation is predicated upon a closer than usual relation between the parties.

tion.²⁹⁶ When there is great uncertainty, there are few anchors on the truth. At the outset of an oil and gas investment, it is very hard to evaluate what the seller is offering. One of the most important ingredients is going to be the operator's skill and honesty, yet most investors have to take these variables on faith. Lacking information on the operator's history, they have little choice.

Another ingredient, expected reserves, will be excruciatingly difficult to estimate. Investors cannot line up undivided, undrilled mineral interests and compare them to other properties like stereos on a shelf or cars on a lot. Moreover, expected costs, which if too high will kill even the most prolific well, are hard to predict and easy to distort. In the standard investment, few of the project's costs are known at the time of investment.²⁹⁷ The final bill will depend on geologic and engineering factors and the operator's skill.²⁹⁸

Uncertainty increases because of the separation of ownership. When operators sell working interests by well or by groups of wells, each well may have a separate joint account with different investors. In theory,

296. Judged by the tests of frequency, complexity, and certainty, oilwell drilling would appear to be a good candidate to keep in house. Characterizing investments on a contract-firm scale, however, obscures the more complex world in which many long-term relationships remain market-based contractual relationships. Outside financing and contracting serve interests beyond avoiding fraud, including diffusing risk and increasing flexibility to shift the point of investment to different regions of the country and world.

297. An exception from the investor's perspective is the turnkey contract, in which the investor's bill does not depend on actual cost but is a predetermined amount. Yet even the turnkey amount is ordinarily based on a projection of expected drilling costs, plus a risk premium for the operator. Conceptually, the turnkey price should be actual cost adjusted (upward) for the risk of overruns.

Many costs will be known if the operator has firm bids on all major drilling expenses. Even here, however, unexpected engineering problems can multiply the cost of the well several times over. Furthermore, unless the investment carries a turnkey price, each investor will be obligated to pay its proportionate share of the increased cost.

A partnership in which limited partners contribute a set amount or a public corporation with an annual budget may stop drilling wells when costs absorb the total budget. Here too, however, overruns reduce the economic potential of the project. Overruns result in fewer wells than expected being drilled, rather than additional bills for the investors. This lost opportunity is just as much a real cost as is a bill for more money.

298. Costs are even more complicated because so many service companies are involved. The operator has to buy goods and services from many companies on each well. Even large independents and majors rarely run their own drilling rigs; instead, they routinely hire other companies to do most of the work. Parts and equipment can be supplied by major parts houses or by smaller regional parts houses. Services as diverse as well logging, mud supplies, and trucking and road clearing are traditionally contracted separately. Each service can vary sharply in price and quality. Hundreds of vendors and contractors can work on a single well. The operator may make thousands of accounting decisions. This complex marketplace creates wide-ranging freedom to strike unusual and secret deals.

One result of the diffusion of service companies is that major oil companies can shift operations rapidly from one section of the country to another or around the world. The majors minimize their sunk investment in the drilling process. They use the market to externalize the risk of regional and cyclical decline. Such market reliance also appears if operators find that the market regulates cost and efficiency more reliably than they can duplicate in-house. The industry's striking lack of integration and its reliance on outside contracting has meant that a substantial part of industry cycles, including the decade-long depression from which the industry still suffers, has fallen on supply houses and drillers, many of whom are out of business.

each of a large operator's dozens or hundreds of wells can have different investors. The operator may bury a complex self-dealing pattern in the arrangement of individual wells. The investors may not know each other because operators often keep investor names as secret as possible. Moreover, investors have no easy way to combine their resources and knowledge.

In other large programs, investors will be jumbled into a single annual program. In boom years, the program might drill dozens or even hundreds of wells. Each investor becomes the working interest owner in a tiny fraction of each well. Alternatively, the program may retain title to the wells and each investor gets a small stock or partnership share in the whole. These nonoperators probably will not have any operating agreement. They never see invoices or other detailed accounting on the wells in which they invest. They almost certainly will not know the reserves or costs attributable to specific wells, even though the operator may use details on a few of the best wells as marketing devices. Finally, they are unlikely to audit their investment or to have an express right to audit specific well expenditures. In these cases there is no oversight to limit the operator's decisions.

The reason the investors' lack of control is so damaging is that information and power is "asymmetric"²⁹⁹—it is tilted toward the operator. The operator knows a lot more than its investors. It ordinarily has more geologic and engineering expertise; it alone knows its past record in finding reserves and meeting its drilling-cost estimates; only it knows its internal procedures; and only it knows just how honestly it will act. This asymmetry is magnified by the control the standard industry contract gives the operator. The JOA provides that the operator "shall conduct and direct and have full control of all operations on the Contract Area."³⁰⁰ The operator must determine the expenditures that are prudent and must perform in a "good and workmanlike manner."³⁰¹ The operator enjoys the choice of which operations to perform on the well, when, with which vendors, and at what price. It can do whatever it likes as long as it is not reckless or grossly negligent; investors are not allowed to sue for mere negligence.³⁰²

299. In Williamson's thinking, "[i]t is generally conceded that if information is asymmetrically distributed between the parties to an exchange, then the exchange is subject to hazards." OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTI-TRUST IMPLICATIONS* 31 (1975). Williamson forges on and argues that not asymmetry alone, but asymmetry with "the high costs of achieving information parity" and "the proclivity of parties to behave opportunistically" is the problem. *Id.* Problems of opportunism, which give rise to the need for detailed contract protections in the first place, are accentuated if asymmetry exists. *Id.* at 32.

300. 1989 JOA, *supra* note 226, art. V.A.

301. Article V.A. requires the operator to conform to the standard of a "reasonable prudent operator" and to perform in a "good and workmanlike manner." *Id.* In addition, COPAS traditionally defined joint operators as including "necessary and proper" activities. 1994 COPAS, art. 1. This portion of the definition has been removed in the 1995 COPAS. *See* 1995 COPAS, art. 1.

302. 1989 JOA, *supra* note 226, art. V.A.

A final factor is "asset specificity." Economists stress this factor because they understand that investments that are not readily marketable bring higher risk.³⁰³ Someone owning an untradable asset has very little leverage when dealing with the others involved in the investment. While the marketability of oil and gas investments varies greatly, many are not very liquid. The traditional equity interest is shared by a small number of coventurers. There is no active market for these properties. Once an investor has put its money down, it depends largely upon the operator to make or break the investment.

These factors—ease of entry, infrequent purchases for many players, turnover among operators, uncertainty and complexity, and lack of liquidity—raise the industry's susceptibility to fraud and deception. Each makes it more important that operators be forced to give a full description of their wares up front. Transaction-cost economists predict that investments with these features will be hard to regulate. The examples in this Article show that prediction is right.

VI. PROTECTION IS LONG OVERDUE

The point of contract reform is not to restrict the operator's freedom. It is to inject full information into the investment bargain, making sure the operator bargains fairly. This is particularly important because the operator has such better access to information. Additionally, its shield from ordinary negligence liability widens its sphere of protected action.

These changes will make life harder for some operators. In the long run, though, they will help restore investor confidence and pave the way for the return of outside capital. The changes should not hurt honest, competent operators. To the contrary: the changes will benefit honest companies because they will provide investors with a better understanding of their investment and make legitimate claims of fraud less frequent.

In the long run, higher standards can enhance the industry's image, provide stability, and increase its ability to raise funds. Many investors, including sophisticated institutional investors, were hurt badly by sharp practices during the boom years of the late seventies and early eighties. These investors left the industry. Adoption of clear, investor-oriented standards can help restore their confidence and with it the flow of investment capital.

303. Williamson claims that asset specificity is the most critical of the three drivers in his system for determining whether goods and services are located in the market or through internal, firm provision: "[t]hus it is the condition of asset specificity that distinguishes the competitive and governance contracting models." WILLIAMSON, *supra* note 4, at 42. The asset specificity that the firm faces does not translate precisely into the decisions facing parties who have decided to enter a contract, but the analogy would seem to be to the "sunk" nature of the investment—once an investor commits its money, there is no going back and little market in which to transfer its risk to others. Thus the initial exchange brings the focus of all risks throughout the contract period to bear on the initial contract formation. *Id.* at 90-96.

The development of a fair, effective industry investment contract has an importance beyond national boundaries. The same contracts will be exported by American companies as they manage their operations in the rest of the world.³⁰⁴ And they will be imported by foreign courts that look to American common law in developing their law of oil and gas, particularly oil producing, common-law jurisdictions like Canada and Australia. Moreover, oil and gas precedent often sets standards that apply to other extractive industries, just as early oil and gas law often borrowed from the longer-established law of mining.

Even left to itself, however, the domestic American industry has a vital interest in adopting proper levels of investor protection. The direct costs of fraud and self-dealing have fallen on hundreds of thousands of investors, even if one considers only the examples given here. The rapid drilling decline of the mid and late eighties, caused in part by the withdrawal of unhappy investors, threw hundreds of thousands of people out of work³⁰⁵ and dismantled a substantial part of a leading industry in our economy. The industry still employs many people. It is the primary determinant of heating costs and transportation patterns and a major factor in the national standard of living. Each of these interests offers an added reason for concern with development of a proper investment standard.

The industry needs to tell investors more about their expected returns. Investors should get fair information on the operator's prior history before the investment begins. The investor should have enough information to determine how the operator has done for other investors in the currency of commercial oil and gas reserves. The investment should be "transparent." Its inner workings should be clear to all who are invited to join.

The improvements discussed here would put operators on the right track. They confirm and renew the industry's focus on the efficient discovery and production of oil and gas. Creating liquid wealth is the real business of oilmen.

304. In an interesting part of the process of formalizing exchange patterns, Andrew Derman, one of the foremost commentators on the model JOA for domestic use, has applied his experience to develop a JOA for international oil and gas investments. *DERMAN, supra* note 227. For another sign of the export of oilpatch legal forms as evidenced by the shift in attention among oilfield experts, see the international focus in Ernest E. Smith, *From Concessions to Service Contracts*, 27 *TULSA L.J.* 493 (1992). This spread of American oilpatch patterns seems to fit a theory of organizational change in which successful institutions spread as participants in an industry "mimic" the patterns of pre-existing institutions that are perceived to function successfully. See generally Paul J. DiMaggio & Walter W. Powell, *The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*, 48 *AM. SOC. REV.* 147 (1983).

305. Two authors cite congressional testimony that the oil and gas industry lost 400,000 jobs in recent years, "more jobs than were lost in the automobile, textile, steel and electronics industries." Donald F. Santa, Jr. & Patricia J. Beneke, *Federal Natural Gas Policy and the Energy Policy Act of 1992*, 14 *ENERGY L.J.* 1, 13-14 (1993).