

THE SECURITIES AND EXCHANGE COMMISSION  
and  
THE PETROLEUM EVALUATION ENGINEER

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The Structure of the Securities and Exchange Commission

The Exchange Act of 1934 created and established the Securities and Exchange Commission. The Commission, as now organized is divided into three principal divisions. The Division of Trading and Markets conducts much of the investigative and enforcement work for the Commission, has regulatory responsibility with respect to stock exchanges, administers the registration requirements of investment advisors and broker-dealers, and exercises surveillance over them. Registrations under the Public Utility Holding Company Act of 1935 and the Investment Company Act of 1940 are administered by the Division of Corporate Regulation, which also partially administers the Investment Advisers Act of 1940. All registrations of public offerings, reports, and proxy material under the Securities Act of 1933 and the Securities Exchange Act of 1934 (except with respect to registered investment companies), are reviewed by the Division of Corporation Finance, the largest division of the Commission. This Division is subdivided into 15 branches, each with a Branch Chief and its own group of analysts, attorneys, and accountants. An Assistant Director supervises each group of three branches. The Office of Engineering, composed of three sections, Oil and Gas, Mining, and Valuation, is attached to this Division.

At the present time registration statements, reports, and proxy material required under the 1933 and 1934 Acts are filed with the Division of Corporation Finance. After fees have been paid, and a filing has been accepted, it is assigned to a Branch. When received in the Branch, it is assigned to an analyst or attorney for examination and review. If the filing pertains to oil and gas, a copy is sent to the Sec-

Reference and illustrations at end of paper.

tion of Oil and Gas for examination and review. Such filings may provide for an offering of stock, bonds, debentures, warrants, units of participation in drilling programs, or fractional undivided interests in oil and gas rights, or they may involve mergers, proxies, partnership interests, investment contracts, or exchange offers.

Application of the Securities Act of 1933

The term "security" is considered by the average person to mean stocks, bonds, warrants, debentures, notes, or evidences of indebtedness. The 1933 Act not only includes such terms in its definitions of a security, but also considers certificates of interest, participations in any profit-sharing arrangement, fractional undivided interests in oil, gas, or other mineral rights, investment contracts, participations in joint ventures, and limited partnership interests, to be securities. The Act also includes other less common securities in its definition.

The offer and sale of securities by use of the United States mail, or by use of any means or instruments of transportation or communication in interstate commerce, come under the jurisdiction of the 1933 Act.

A registration statement, including the familiar prospectus which is to be provided to the prospective investor, becomes a public document when filed. However, no sale of the involved security may be made until the statement has become effective.

The Securities Act, enacted as Federal law in 1933, provides for full and fair disclosure of all material information about any security offered to the public, and by such provision attempts to eliminate any misrepresentation or fraud connected with its offer and sale.

The purpose of registration is to provide the prospective investor with a prospectus which discloses or sets forth the important facts about the security and the company offering the security. In this way the prospective investor can make a realistic appraisal of the merits of the security or securities being offered and can exercise an informed investment decision.

If proper disclosure is made, and the rules of registration have been followed, the Securities and Exchange Commission cannot deny registration or otherwise bar the public offer and sale of a security, whether or not the price or other terms of the security are fair, or the issuing company offers a reasonable possibility of success for the security investment.

The registration of any security does not protect any investor from loss of the price he pays for the security. Nor does the Securities and Exchange Commission either approve or disapprove a security for merit or for lack of merit. The Commission has no power to do so, and it is unlawful to represent otherwise in the sale of any security.

On the other hand, the Commission does have authority to refuse or suspend the effectiveness of any registration statement, if it finds that the material statements made are misleading, inaccurate, or incomplete, or that material information has been omitted from the prospectus.

The accuracy of the information provided about a security is not guaranteed by registration, nor does the effectiveness of the registration statement mean that the Commission has approved the disclosure provided, or passed upon the merits of the security in any manner.

If a purchaser of a security suffers a loss, and if he can prove that the purchase was made upon information which included incomplete or inaccurate material statements, or failed to include material facts, the Act provides him with a legal recourse for recovery of his investment. Likewise, the purchaser of an unregistered security, not subject to an available exemption, is provided with a civil remedy for the return of the amount of his purchase.

The 1933 Act provides for certain exemptions from the registration requirements for the offer and sale of a security.

An exemption from registration means that the issuing company does not have to meet the formal requirements for the filing or registration statements, and is not subject to all of the civil obligations and liabilities of the Securities Act of 1933. However, it should be emphasized that the issuing company who may qualify for an exemption cannot ignore the Act, or the Commission. The terms and conditions which must be met in qualifying for certain exemptions, such as provided for mainly under Regulations A and B, may require the filing of certain information with the Commission and the subjection of such security offers and sales to the requirements of the Act.

The so-called private offering exemption prob-

ably is claimed more frequently than any other. But the question as to whether an offering is private or public depends upon the facts of each particular case. The private offering exemption should not be claimed until it is fully clear from the facts of the particular case that the exemption is available. Securities Act Release #4552 provides detailed discussion of this exemption.

Intrastate offerings are also exempted from the registration requirements of the Act. Offerings of this type must be made only to residents of a single state. The great difficulty of establishing the claim for an intrastate exemption must be emphasized, however.

If oil and gas leases or properties are involved, they must be located in the same state as the residence of the issuer and all offers and sales of the security also must be made to residents of that same state. If the issuer is a corporation, that corporation must be incorporated and doing business within the state. Securities Act Release #4434 provides a detailed discussion about this exemption.

Certain small public offerings have been accorded an exemption from registration if the information about such offerings is filed with the Commission and provided to prospective investors. An exemption under Regulation B is available where the offering involves fractional undivided interests in oil and gas rights in the United States and where the initial amount to be raised is not over \$100,000. An exemption under Regulation A is available, subject to certain restrictions, where the amount to be raised in any 12-month period is not over \$300,000 and where the offering is for such securities as stocks, bonds, units of participation in joint ventures, and limited partnership interests. Full details about the exemptions available under Regulation A and Regulation B can be obtained from the Washington, D. C. office or from any one of our Regional offices.

The anti-fraud provisions of the Securities Act apply to offerings made pursuant to the exemptions, as well as to the securities covered by the registration requirements.

### Role of the Section of Oil and Gas

One of the responsibilities of the Section of Oil and Gas is the examination and review of registration statements and other filings which pertain to oil and gas. Usually, this review is focused on the business and property sections of the prospectus, but occasionally involves the consideration of information provided in other parts of the prospectus which have a

bearing on the business and properties disclosure. Oil and gas program filings, as well as those types of exchange offers which involve oil and gas property interests, are reviewed in their entirety. However, the Branch to which a filing is assigned not only is in charge of it, but also provides a full and specific review.

All filings made under Regulation B are recorded and reviewed only by the Section of Oil and Gas. At the present time such filings are related chiefly to single well promotions. Although Regulation A offerings are filed with and reviewed by the Regional offices, such filings are also reviewed by the Oil and Gas Section if they involve oil and gas activities of any consequence.

Another responsibility of the Section of Oil and Gas is to review all estimates of reserves placed in registration statements and other filings made with the Commission. This entails, of course, a review of the estimates made by the engineer, including his decline curves, production data, volumetric calculations, maps, and other data, so that the staff can obtain some idea as to the reasonableness of the reserve figures set forth in the prospectus.

The Oil and Gas Section is also involved in those investigations where oil and gas securities and activities are concerned. Whenever and wherever there is a need for oil and gas expertise, the Section may be required to provide help. This type of involvement may range from investigations about stop orders, suspensions, sales literature, and stock market problems, to help with civil and criminal actions.

Members of the Oil and Gas staff may also appear as expert witnesses, give testimony in affidavit form, or may advise with the Commission attorneys in the examination of witnesses or in the taking of depositions and preparation of briefs on matters pertaining to oil and gas.

In effect, the staff of the Section of Oil and Gas serve as advisers to the staff of the Commission, including the Regional and Branch offices, on all matters pertaining to oil and gas.

#### Role of the Evaluation Engineer

The petroleum evaluation engineer has a heavy role in the making of reserve studies, preparing reserve estimates, making oil and gas property appraisals and valuations, and other associated studies and reports. Adequate consideration is required of the engineer as to the information and problems associated with these studies and reports.

The engineer also has the responsibility for providing his client advice and guidance in the field of reserve estimates and the evaluation of oil and gas properties. Such advice and guidance may be associated with the acquisition of working capital, or with the purchase or sale of properties, either directly or through the purchase or sale of a company, or with mergers and trades, or with the financing of such activities, through loans, production payments, or similar arrangements. This advice and guidance also involves consulting with his client about any problems encountered and considered, as well as any problems indicated for the future.

The evaluation engineer may serve as an expert witness, or may advise with the attorneys of his client in the examination of witnesses, or may give testimony in affidavit form, or may provide his expertise in other related legal matters.

The engineer's role may also involve his expertise in the field of public financing through the registration of equity and debt securities for offer and sale to the public, or it may involve the exchange of such a security for producing property interests. If his client is considering a public financing, or is in the process of issuing securities, the engineer should be able to advise as to the materiality of the problems encountered in his field of expertise. It is not enough for the engineer to have an expertise as to oil and gas production, the estimation of reserves, appraisals, present worth, and fair market value of properties. He also should be knowledgeable enough about the securities laws to advise any client who may be a registrant, or the registrant's attorney, or accountant, as to those problems which are concerned with the reserves and the property and business interests involved in any public offering, or which may be associated with press releases, and other similar activities.

The evaluation engineer not only should be aware that he has a public responsibility connected with any estimation of reserves, or any appraisal, to be used in a security offering, but that he definitely has a role under the law for the protection of the public interest. It would appear that this role, both directly and indirectly, is the heaviest of the responsibilities to be borne by the engineer.

#### Relation of the Evaluation Engineer to the Securities and Exchange Commission

The evaluation engineer, who prepares reserve estimates and other data which are to be included in registration statements or other filings with the Securities and Exchange Commission, should be aware of his responsibilities under the Act, and should demonstrate a willingness and ability to accept such responsibility. Furthermore, the engineer should be willing and able to make evident the reliability of his information and his reliability as a trained and professional engineer. The engineer must be held accountable for his information and work, for the advice he provides, and for his expertise, and must bear the same liability under the law as any other professional involved in the preparation of a registration statement. In this connection, the engineer should be aware of Section 11 (a) (4) of the Securities Act of 1933, which provides that:

"In case any part of the registration statement, when such part became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated there in or necessary to make the statements there in not misleading, any person acquiring such security (unless it is proved that at the time of such acquisition he knew of such untruth or omission) may, either at law or in equity, in any court of competent jurisdiction, sue . . . every accountant, engineer, or appraiser, or any person whose profession gives authority to a statement made by him, who has with his consent been named as having prepared or certified any part of the registration statement, or as having prepared or certified any report or valuation which is used in connection with the registration statement, with respect to the statement in such registration statement, report, or valuation, which purports to have been prepared or certified by him; . . ."

The engineer should also provide full cooperation to his client, the client's attorneys and accountants, and to those members of the Commission staff who will review his work. But even though he has a responsibility to his client in regard to the work which he performs for that client's the engineer also should bear in mind that he has a direct responsibility to the public and has a very definite role in the protection of the public interest.

In return, the engineer has the right to expect cooperation, courtesy, respect, fair treatment, and fair dealing in his relations with the Commission and its staff.

### Reserves

Since the evaluation engineer usually is in-

involved in the reserve estimates in registration statements, a few comments about reserves would appear appropriate.

The reserve terminology and the definitions for such terminology as developed by the American Petroleum Institute, and as used by industry, generally are followed by the Oil and Gas staff and serve as its guide. Likewise, the reserve terminology used in this paper follows the API standards.

Proved reserves, that is, the total amount of estimated net proved future recoverable reserves, expressed in barrels and in mcfs, are usually included in equity and debt filings, in proxy statements and mergers, in filings covering the purchase of property, in exchange offers, particularly those where property interests are exchanged for stock, and in other types of filings where it is necessary to have knowledge as to the amount of the estimated proved future recoverable reserves owned by a registrant. Such reserves are part of the property disclosure and are included for the sole purpose of describing the properties owned. No value is attached to such figures and no value should be included or indicated. Such reserves are not included in drilling program filings, because the securities offered do not include any estimated proved future recoverable reserves, nor are they now included in single well ventures under Regulation B, or S-10 filings, except where the offer and sale of the securities involves an interest in the reserves as part of the property description.

The future recoverable reserves to be included in a prospectus, or other type of filing, are limited to estimated proved reserves, either developed or undeveloped, net to the registrant interest.

The proved undeveloped reserve estimates usually include tested behind-the-pipe formations capable of production and/or offset locations to production. Usually the reserve estimates attributable to such tested formations and locations are reviewed by the Oil and Gas staff to determine the reasons for inclusion, and the reasonableness of the estimates made.

Future recoverable reserves not to be included in a prospectus are those commonly considered to be probable, those that are classified as possible, and those of a secondary recovery nature, where no response to secondary recovery operations has yet been experienced. Of course no reserve estimate should be included in a registration statement, or other filing, unless the security being offered will have a direct interest in or bearing on the

reserve property.

The Oil and Gas staff usually requires that certain types of supplemental information be provided to help them in their review of the property reserve estimates. Such information commonly includes decline curves, which should be plotted to the date of the reserve estimate, production data by months and years, together with cumulative figures, maps of the properties involved, and any other pertinent data used in making estimates. This information should be prepared in such a manner as to be readily understood. The detailed reserve estimates which are supplied for review usually are presented in report form or in person. The report can be sent in for study but should be so arranged that the facts concerning the property reserve estimates can be quickly reviewed. Sometimes it is helpful to have the engineer appear in person, not only for the purpose of presenting the information and the data necessary for the review, but to make himself available for any questions which the staff may have about the properties, or the methods used in making determinations of an unusual nature. This personal approach is helpful particularly for the review of volumetric calculations.

The responsibility of the engineer in all cases is to provide a clear presentation of the reserve study made, to provide to the staff adequate data upon which the reserve estimates are based, and also to indicate to the staff all problem areas, or areas in which problems may arise in the future. The engineer who makes the reserve study must bear this obligation and responsibility and should make available to the staff for their consideration his concern with any present problems, or any area of indicated future problems.

#### Suggested Form for Showing Data

The staff of the Oil and Gas Section not only is limited in size, and hardly sufficient for the tasks assigned, but has a definite limited time which it should spend on any one filing. Any help received for any review job is greatly appreciated. The supplemental information usually supplied as back-up material for reserves is about as varied as the engineers who prepare the material. Some of the material is easy to review and understand, some is so arranged as to defy understanding in any reasonable time. Hours and sometimes days are required to ferret out the information needed. We have never made any requirement as to a form for the presentation of data but have found from experience

that certain arrangements of the information can speed up our review materially and contribute to a quicker comprehension of the material.

Based on this experience, we suggest that the engineer present his supplemental reserve information to us in the following tabular arrangement and form. Columnar sheets are satisfactory and either pencil or ink figures may be used.

Commencing at the left the columns should be headed as follows, and the appropriate information should be arranged under such columnar headings, or captions --

(1) State; (2) County; (3) Field; (4) Lease; (5) Number of Wells (stated separately for oil and for gas); (6) Estimated Ultimate Recovery; (7) Gross Production, subdivided into sub-columns (a) Cumulative, (b) Last 12 Months, and (c) Last Month; (8) Gross Reserves, subdivided into sub-columns (a) Producing, (b) Behind Pipe, and (c) Undeveloped Locations; (9) Ratio of Reserves to Production (based on last month); (10) Net Interest; (11) Net Reserves, subdivided into sub-columns (a) Producing, (b) Behind Pipe, and (c) Undeveloped Locations. (Exhibit I)

For any given lease, the oil production and oil reserves, expressed in barrels, can be stated on the first line, and the gas production and gas reserves, expressed in mcfs, can be stated one line below. Where condensate is involved, appropriate information can be stated on the third line. If preferable, separate tabulations can be prepared for oil and for gas, with condensate appropriately disclosed with gas, or separately.

The dates should be stated for the reserve estimates as well as for the production provided.

The use of a form such as this would be of great benefit and greatly appreciated. We believe the engineer has the responsibility for the preparation of his data in a form that can be easily understood and quickly reviewed.

By now, you may suspect that we lean heavily on decline trends, and reserve-production ratios. We do to the extent that they are useful tools to point out problem areas, or unusual situations which may require more information, or a more complete understanding of the basis of the reserve estimates submitted, or even an adjustment in the estimate made.

#### Problems

It may be helpful for you to be aware of some of the problems concerning the estimation of reserves and their use in the registration of securities to be offered and sold to the public.

The use of estimated reserves for promotional purposes, that is, for the raising of public

money and the public financing of registrant activities and registrant projects, requires the exercise of extreme care. The engineer involved in reserve estimates for such purposes should be aware of the many possibilities of misleading the public through errors in calculations, errors in judgment, errors in methods, errors in usage, and in the fact that the estimated figures are not of themselves as accurate as the public usually is inclined to believe, and many times are less precise than the engineer would care to admit.

These possibilities for misleading the public alone offer sufficient reason for the restricted usage of reserve estimates. Such restriction also protects the engineer. As stated before, only proved developed and undeveloped reserve estimates can be used, and then only in the sense that they represent a description of the properties involved.

Too many engineers try to include probable reserves, and secondary reserves which have not yet responded to secondary operations. Other engineers are far too generous with the number of undeveloped locations they include as a proved reserve. Under such circumstances, the estimated reserves included in a prospectus, or submitted for inclusion, may contain about everything but the kitchen sink. The engineer presenting such a reserve estimate to the public should be aware of his own liability and responsibility under such circumstances.

The failure of engineers to properly characterize the type of reserve estimate included in public statements and releases can and sometimes does mislead the public. Qualifying statements to the client are not sufficient. The client must be warned that reserve estimates when publicly released must be characterized for what they are. Occasionally the Commission has had to take action to circumvent, as well as to discourage, the use of reserve estimates in public statements which were not properly qualified for public understanding. Engineers should be conversant with the Appellate Court decision in the Sun-Sunray merger case where an attempt was made to consider a probable reserve as a proved reserve and to force its inclusion in a prospectus. Engineers also should have understanding as to the principles underlying Securities Act Release #5016 concerning the publicity given to certain aspects of the petroleum discoveries on the North Slope of Alaska.

Serious consideration perhaps should be given to the inclusion of some kind of an economic factor in the definition of a proved reserve in order to protect the public interest.

The calculation of estimated future recoverable revenues is a projection of income, and as such is not to be included in a prospectus for public offerings. A projection of income from proved future recoverable reserves is fraught with many misleading possibilities to the public investor.

The term "value" should be used with extreme care and in its narrowest sense, when applied to reserves. The public, particularly, has little concept of the proper usage of the word when applied to reserves. Many professional people also are misled by it, and many times consider the term to be synonymous with "present worth". Engineers should exercise unusual care in its usage and should always advise others as to its proper usage.

Lately, reserve problems have arisen in the field of accounting. Research Study #11, recently published by the American Institute of Certified Public Accountants, Inc., on the extractive industries, among other recommendations for changes in the method of oil and gas accounting, has made a recommendation that reserve estimates and related data be included in the financial statements, at least as supplementary information for evaluation purposes. Serious consideration should be given by engineers to these recommendations because they may lead to certain pressures on evaluation engineers and engineering firms to certify in some manner to their reserve estimates.

Due to the many possibilities for error in an estimate and the unpredictability of old Mother Nature, the engineer who succumbs to such pressure may be involved in the serious situation of furnishing misleading statements to the public with its resultant liability problem to him.

Also, unreliable or bad estimates can cause or lead to unreliable accounting results. Such estimates can cause earnings to be over or understated, which eventually will have to be retracted and rectified. Bad estimates, under such circumstances, can place management in a very unnecessary and uncomfortable position -- a position of liability brought about sometimes by pressure to satisfy that human emotion known as "pride of ownership".

The problem of protecting the public is never ended. It is hoped that this review of the mutual responsibilities of the Securities and Exchange Commission and the evaluation engineer will serve to coordinate our efforts in meeting our responsibilities.

**EXHIBIT I  
RESERVE TABULATION SHEET**

State County Field Lease	Number of Wells		Estimated Ultimate Recovery	Gross Barrels or MCF		
				Production		
				Cumulative	Last 12 Mo.	Last Mo.

(For Example:

Texas Lea County Hackberry Field Boxberger	3	—	300,000	200,000	10,000	900
	—	2	2,000,000 M 20,000 C	400,000 M 5,000 C	20,000 M 100 C	—0— —0—

**RESERVE TABULATION SHEET (Cont'd)**

Gross Barrels or MCF			Reserve to Production Ratio	Net Interest	Net Barrels or MCF		
Developed Producing	Reserves Behind Pipe	Undeveloped Locations			Developed Producing	Reserves Behind Pipe	Undeveloped Locations
100,000	13,600	25,000	111	0.65625	65,625	8,940	16,400 )
1,600,000 M	—0—	—0—	shut-in		1,050,000 M	—0—	—0—)
15,000 C	—0—	—0—	shut-in		9,850 C	—0—	—0—)

(Suggestions: Use suffix "M" to designate gas.  
Use suffix "C" to designate condensate where shown separately.  
This form, or, where more fitting, some similar form with  
appropriate and similar sub-divisions, can be used,  
provided that the information required by this form is  
included.)