Oil & Gas accounting;

Rudy C. Schreider

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What producers must know about:

- Reserve recognition accounting
- S-X and S-K disclosures
- Reserves presentation in financial statements
- Interest capitalization under SFAS No. 34
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Richard M. Pollard
Executive National Services
Director—Energy
AUGUST 31, 1978
Accounting Series Release (ASR) No. 253 – introduces new rules for financial accounting and reporting by oil and gas producing activities.
Staff Accounting Bulletin (SAB) No. 23 – rescinds SAB No. 16 (which required disclosure of the impact of SFAS No. 19) and provides guidance on determination of replacement cost information for oil and gas producers.

DECEMBER 19, 1978
ASR No. 257 – amends ASR No. 253 to provide more conformity with other industry terminology and practices, and to add certain exemptive provisions.
ASR No. 258 – establishes final rules for full cost accounting practices of oil and gas producers.
Release No. 33-6008 – amends Regulation S-K, to standardize disclosure requirements for oil and gas reserves and operations.

FEBRUARY 23, 1979
ASR No. 261 – permits producers to change to either acceptable accounting method.
Release No. 33-6029 – deletes requirement for full costers to disclose “as-if” successful efforts information.

SEPTEMBER 24, 1979
ASR No. 269 – establishes rules for supplemental disclosures of oil and gas producing activities on RRA basis; amends earlier disclosure requirements and the safe harbor provision of ASR No. 253.
ASR No. 270 – postpones audit requirement for certain oil and gas reserve information for fiscal years ending before December 26, 1980.

SEPTEMBER 25, 1979
SAB No. 35 – answers questions pertaining to estimations of quantities of proved reserves, computation of future net revenues, and other disclosures of reserve information, and provides an example of income tax calculations under RRA.

DECEMBER 17, 1979
SAB No. 36 – answers questions pertaining to disclosure requirements for limited partnerships and Canadian registrants.
In December of 1977, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards (SFAS) No. 19, “Financial Accounting and Reporting by Oil and Gas Producing Companies,” which mandated one form of the successful efforts accounting method. At about the same time the SEC requested comments and held public hearings on accounting practices of oil and gas producers. The result of the SEC’s review and evaluation was ASR No. 253 which concluded that:

- Traditional accounting methods do not provide sufficient information on financial position and operating results of oil and gas producers;
- Information supplemental to the primary financial statements is needed to assess the financial position and operating results of producers and to permit comparison of companies in the industry;
- An accounting method based on valuation of proved oil and gas reserves would provide significant useful information, and steps should be taken to develop such a method; and
- In the circumstances, requiring either successful efforts or full cost as a uniform method of accounting is unwarranted.

Accordingly, the SEC proposed an alternative method of accounting known as Reserve Recognition Accounting (RRA) under which the following items would be reflected in the financial statements: (1) proved oil and gas reserves as assets in the balance sheet, (2) changes in proved reserves in the income statement and (3) all costs associated with additions to proved reserves or determined to be nonproductive, also in the income statement.

The Commission did recognize that development and implementation of RRA would take place over several years, with step-by-step introduction and testing of each phase. The feasibility of the method would have to be assessed, since precise estimates of proved oil and gas reserves are not possible, and standards for reliable valuation of reserves would have to be established.

The first step was issuance of ASR No. 253, which added Rule 3-18 to Regulation S-X (Rule 3-18 was subsequently amended by ASR Nos. 257, 258, 269 and 270). One of the new disclosures required in financial statements is the present value of future net revenues from estimated production of proved oil and gas reserves; the information is to be disclosed in filings with the Commission that cover fiscal years ending after December 25, 1979. A detailed discussion of this disclosure requirement and other specific disclosures mandated by new Rule 3-18 is presented in Chapter I—also presented are suggested formats of presentation and a suggested information-gathering approach.

Concurrent with the release of ASR No. 253, the SEC issued Release No. 33-5969, the initial proposal for a supplemental earnings summary for oil and gas producing activities prepared on the basis of reserve recognition accounting. Actual disclosure requirements, differing significantly from the initial proposal, were adopted upon issuance of ASR No. 269, which, like ASR No. 253, is effective for fiscal years ending after December 25, 1979. Chapter II contains a detailed discussion of the rules in ASR No. 269 and presents a simplified example of how the rules are to be applied.

Release No. 33-6008—the next major step in the development of RRA—incorporated into Regulation S-K requirements for the disclosure of reserve quantities, estimated future net revenues from production of proved oil and gas reserves, and the present value of these future net revenues. The S-K disclosures, which are broader than those required by Regulation S-X,
are intended to provide a more complete profile of an oil and gas producing company. Such disclosures are described in Chapter III, which also contains suggested formats of presentation and a suggested information-gathering approach.

The rules set forth in ASR Nos. 253, 257 and 269 are complex; thus, the SEC has released SAB Nos. 35 and 36 to interpret the rules with respect to specific questions. These interpretations have been incorporated into the discussions of the applicable chapters where practical.

The requirements of Rule 3-18 are the current “final” rules relating to RRA—the accounting method is still being evaluated. The primary problem for companies and their auditors in development of RRA continues to be the uncertainty involved in the estimation of proved oil and gas reserves. Two professional groups have taken steps to address that problem. The Society of Petroleum Engineers has issued a release entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserve Information,” and the Oil and Gas Reserve Data Committee of the American Institute of Certified Public Accountants has issued a proposed audit and accounting guide entitled “Oil and Gas Reserve Information Required by Regulation S-X.” Both releases indicate the extreme complexity of ensuring that reserve estimates are reasonable. Chapter IV summarizes the steps that must be taken to provide assurance as to reasonableness of the reserve estimation.

Compounding the oil and gas producing industry’s financial accounting and reporting problems is Statement of Financial Accounting Standards (SFAS) No. 34, “Capitalization of Interest Cost,” issued by the Financial Accounting Standards Board (FASB) in October 1979. A summary of the Statement and a discussion of its impact on the oil and gas producing industry are included in Chapter V.

Like our first booklet, entitled “Oil and Gas Accounting,” published by Touche Ross & Co. in 1979, this booklet is not meant to be all-inclusive. It does, however, provide a starting point for the research needed to comply with the accounting and reporting requirements for industry financial executives and their advisors.
The SEC's Regulation S-X sets forth the requirements for the form and content of financial statements filed with the Commission. It includes rules on applicable accounting principles and practices, independent accountants' reports, consolidated and combined financial statements, form and content of required schedules and rules applicable to various specialized industries, one of which is the oil and gas producing industry.

The unique financial statement disclosure requirements for oil and gas producing companies are given in Rule 3-18 of Regulation S-X. These disclosure requirements apply to registration statements for filings under the Securities Act of 1933 (e.g., Forms S-1, S-2, S-10, Regulations A and B) and to periodic reports filed under the Securities Exchange Act of 1934 (e.g., Forms 10-K, 8-K, etc.). Certain entities are exempt from these disclosure requirements. They are any company exempted by the Department of Energy from any record-keeping or reporting requirements pursuant to Section 11(c) of the Energy Supply and Environmental Coordination Act of 1974 as amended, or any company which for its two most recent fiscal years has met all three of the following conditions (see Test 1 in Exhibit I-2):

<table>
<thead>
<tr>
<th>Entities Exempted from Disclosure Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10% of:</td>
</tr>
<tr>
<td>1. Gross revenue is from oil and gas operations,</td>
</tr>
<tr>
<td>2. Net income after taxes is from oil and gas operations, and</td>
</tr>
<tr>
<td>3. Total assets is the sum of the present value of estimated future net oil and gas revenues and the net capitalized costs of unproved property.</td>
</tr>
</tbody>
</table>

In addition, limited partnerships are exempted by SAB No. 36 from including disclosures on Form 10-K relating to estimated future net revenues, present values and changes therein, and supplemental summaries of oil and gas activities specified by paragraphs (k)(6), (k)(7) and (k)(8) of Rule 3-18 if reserve value information is available to the limited partners pursuant to the partnership agreement and the limited partnership is not the subject of an exchange offer or merger.

SAB No. 36 also requires Canadian oil and gas companies to disclose differences between their current accounting methods and those prescribed by the SEC in Rule 3-18 and to make all disclosures specified by paragraph (k) of Rule 3-18.

The SEC definition of oil and gas producing companies outlined in Rule 3-18 encompasses all aspects of exploration and production, from acquiring leases to the sale of the end product at the outlet valve or field storage tank. The definition excludes transportation and marketing of oil and gas and production of other natural resources. Therefore, it includes most or all of what the industry identifies as exploration and production companies or divisions.

The disclosures required under Rule 3-18 are contained in paragraph (k) of the rule and deal with eight specific items to be disclosed. Suggested formats for presentation of these disclosures are included in Exhibits I-1 and II-1. A checklist of Regulation S-X disclosures is shown in Exhibit I-2.

The following discussion of disclosures required by Rule 3-18 is only a guideline to assist in preparation of the information. Not all possible situations are discussed. Thus, companies that have unique or unusual operations or specific circumstances...
which do not seem to fit into the general guidelines discussed here or in Regulation S-X should consult with legal counsel, accountants and/or the SEC to determine that proper disclosures are being made.

REQUIRED DISCLOSURES

1. Method of Accounting

The company must disclose on the face of its balance sheet whether it uses the successful efforts accounting method or the full cost method. The two methods are outlined in the Touche Ross & Co. publication, "Oil and Gas Accounting," issued in 1979.

2. Capitalized Costs

The aggregate amount of capitalized costs and of accumulated depreciation, depletion, amortization and valuation allowances must be disclosed as of the end of each fiscal year ending after December 25, 1979 for which a full set of financial statements is submitted to the SEC. This would include filings on Form 10-K and any filings under the 1933 Act. The disclosures must list separately capitalized costs for unproved properties, if significant. The cost of support equipment and facilities may be listed separately or included in capitalized costs of proved or unproved properties, as appropriate. If the company's share of oil and gas reserves of its investees is reported (see 5 below), its share of its investees' capitalized costs must also be disclosed.

Reporting by Geographic Area

These capitalized costs must be segregated by geographic area in accordance with paragraph (k)(5)(ii). This breakdown by geographic area requires separate reporting for home country and each foreign geographic area (countries or groups of countries) containing significant reserves.

Accumulation of Capitalized Cost Information

The aggregate capitalized cost and accumulated depreciation information can normally be obtained directly from the general ledger. The detail information by property type and geographic area may be available from the existing general ledger or subsidiary ledgers. If not, it must be generated through specific detail analysis, and the accounting system should be modified to routinely provide this information in the future.

3. Costs Incurred in Oil and Gas Producing Activities

The amount of each of the following types of costs must be disclosed for each geographic area for which reserve quantities are disclosed (see 5 below) and, if applicable, for any other foreign geographic area without proved reserves for each year ending after December 25, 1979, for which an income statement is required:

Cost Categories
(A) Property acquisition costs
(B) Exploration costs
(C) Development costs
(D) Production (lifting) costs
Categories (B), (C) and (D) should include only depreciation of support equipment and facilities used in those activities rather than expenditures to acquire such equipment and facilities. Production costs should not include depreciation, depletion or amortization of capitalized acquisition, exploration or development costs. The aggregate amount of depreciation, depletion, amortization and valuation provisions of oil and gas producing activities, segregated by the same geographic areas must be disclosed. If the company's share of oil and gas reserves of its investees accounted for by the equity method is reported (see 5 below), its share of its investees' costs of oil and gas producing activities must also be disclosed.

**Acquisition Costs**

*Property acquisition costs* are costs incurred to acquire property and include lease bonuses, options to purchase or lease, brokers' fees, legal costs and any other related costs.

**Exploration Costs**

*Exploration costs* are costs incurred in identifying and examining areas considered to have prospects of containing oil and gas reserves and include prospect costs, costs of drilling exploratory wells and exploratory-type stratigraphic test wells, geological and geophysical costs, delay rentals, ad valorem taxes on undeveloped properties, legal costs for title defense, maintenance of land and lease records, dry hole and bottom hole contributions, and depreciation and applicable operating costs of support equipment and facilities.

**Development Costs**

*Development costs* are costs incurred to obtain access to proved reserves and to prepare facilities to extract, treat, gather and store oil and gas, and include costs to gain access to and prepare well locations for drilling, including surveying, clearing ground, draining, road building, etc.; costs to drill and equip development wells, development type stratigraphic test wells and service wells including the costs of platforms, casing, tubing, pumping equipment and the wellhead assembly; costs to build production facilities such as lease flow lines, separators, treaters, heaters, production storage tanks, etc.; costs of providing improved recovery systems; and depreciation and applicable operating costs of support equipment and facilities.

**Production Costs**

*Production (lifting) costs* are costs incurred to operate and maintain wells and related equipment and facilities and include labor to operate the wells and related equipment and facilities; repairs and maintenance; materials, supplies and fuel used in the operation of the wells; property taxes and insurance on proved properties, wells and related facilities and equipment; taxes, e.g., severance, production, ad valorem and “windfall profits” (some companies are considering showing these taxes separately under this category); and depreciation and applicable operating costs of production support equipment and facilities.

**Accumulation of Costs by Category**

The identification of certain of these costs and their accumulation into these four cost categories may be possible through the existing general ledger or subsidiary ledgers. Other of these costs, such as depreciation of
support equipment and facilities which require allocation to several cost
categories, may require separate analysis. If necessary, the accounting
system should be modified to routinely provide this information in the
future.

4. Net Revenues from Producing Oil and Gas

For each full fiscal year ending after December 25, 1979, for which an in­
come statement is required, net revenues from oil and gas production must
be disclosed for each geographic area for which reserve quantities are
disclosed (see 5 below), for each of the following:

(A) Proved developed oil and gas reserves,
(B) Reserves related to long-term supply contracts with foreign
governments where the company acts as producer, and
(C) The company's proportional interest in reserves in investees
accounted for by the equity method.

Net Revenues

Net revenues are defined as gross revenues less production (lifting) costs
discussed in Item 3 above. Gross revenues include amounts received
attributable to the company's net working interests, royalty interests, oil
payments interests, net profits interests, etc. They exclude royalty
payments and net profits disbursements; they should not include deduc­
tions for production or severance taxes. We anticipate that the "windfall
profits" tax will be handled in the same manner as the production or
severance tax. Sales or transfers to affiliates should be separately disclosed
and are to be valued as if based upon an arm's-length transaction.

Accumulation
of Revenue
Information

These disclosures may require separate, manually prepared schedules,
utilizing lifting cost information generated for Item 3 above and gross
revenues from the accounting system. If gross revenues are recorded in the
accounting system net of production and severance taxes, the amount of
these taxes should be accumulated from subsidiary ledgers, invoice infor­
mation or remittance advices and added back to revenue. If gross revenues
include royalty payments and/or net profits disbursements, these amounts
should be accumulated throughout the year and deducted from gross
revenues.

5. Estimated Quantities of Proved Oil and Gas Reserves

Net quantities of proved reserves and of proved developed reserves of
crude oil (including condensate and natural gas liquids) and natural gas
must be reported as of the beginning and end of each fiscal year ending
after December 25, 1979, for which an income statement is required, but
may be unaudited for fiscal years ending before December 26, 1980.
Changes in net quantities of proved reserves during the year must be
disclosed separately for each of the following:

Disclosure of
Type of Change
in Net Quantities

(A) Revisions of previous estimates
(B) Improved recovery
(C) Purchase of minerals in-place
(D) Extensions, discoveries and other additions
(E) Production
(F) Sales of minerals in-place

Disclosure by Geographic Area

Net quantities of proved reserves and the changes in them (as required above) must be separately reported for the company's home country and for each foreign geographic area (individual countries or groups of countries) where reserves are located.

Net Quantities

Net quantities of reserves include those relating to operating and nonoperating mineral interests in properties, including fee ownership, lease, royalty interests and production payments payable in oil and gas. Net quantities exclude reserve interests of others in properties owned by the company. They also exclude oil and gas subject to purchase (by the company) under long-term agreements, including such agreements with foreign authorities. However, quantities of oil and gas subject to such agreements with foreign authorities as of each year-end and the net quantity of oil and gas received under such agreements must be separately reported if the company acts as the producer of those reserves.

Determination of Reserves for Consolidated Statements and Investments

For consolidated financial statements, 100% of the net reserve quantities of both the parent company and its consolidated subsidiaries (whether or not wholly owned) must be included. If the financial statements include investments which are proportionately consolidated, the proportionate share of reserve quantities of the investee's reserves must be included. If the financial statements include investments accounted for by the equity method, the investee's reserve quantities must be excluded; but the company's share of the investee's reserve quantities must be separately reported as of year-end.

This reserve information must come primarily from the company's reserve report and engineering department or from an independent engineer retained by the company to prepare such information. Care should be taken to ensure that the specific requirements on type of reserves, prices, escalation, contract terms, "windfall profits" tax, date of reserve reports, etc., are considered in the preparation of this report (see Chapter IV). Consult SAB No. 35 for SEC interpretations in answering specific questions relating to estimates of quantities of proved reserves.

Disclosure of Significant Economic Factors

Any important economic factors or significant uncertainties which affect particular components of proved reserves must be disclosed. Examples include unusually high anticipated development or lifting costs, the need to build a major pipeline or processing facilities before production could begin, or contracts to sell a significant portion of the reserves at less than prevailing market prices. All oil reserves must be disclosed in barrels; gas reserves must be disclosed in cubic feet.
6. Future Net Revenues from Estimated Production of Oil and Gas Reserves

Future net revenues from estimated production of oil and gas reserves must be disclosed for each geographic area and for each period for which quantities of oil and gas reserves are disclosed (see 5 above) for each of the following (may be unaudited for fiscal years ending before December 26, 1980):

(A) Proved oil and gas reserves,
(B) Proved developed oil and gas reserves,
(C) Proved oil and gas reserves applicable to long-term supply or similar agreements with foreign governments where the company acts as producer, and
(D) The company's share of proved oil and gas reserves of investees accounted for by the equity method.

Calculation of Estimated Future Net Revenues

Estimated future net revenues must be calculated as follows: (1) by multiplying current oil and gas prices (with consideration of price changes only where provided by contractual arrangement) by estimated future production of proved oil and gas reserves as of the latest balance sheet date, and (2) subtracting from this amount estimated future expenditures (based on current costs) of developing and producing these proved reserves. The basis used to compute current prices and costs must be disclosed.

These amounts must be presented separately for the first three succeeding years, and the remainder in a single amount.

Present Value and Discount Factor

The present value of estimated future net revenues using a discount factor of ten percent must be disclosed for each geographic area and each of the categories for which estimated future net revenues are to be reported.

Disclosure of Value of Undeveloped Acreage

Although Regulation S-K prohibits disclosure of estimated quantities and value of probable or possible oil and gas reserves, the SEC (in SAB No. 35) allows disclosure of the value of undeveloped lease acreage as follows:

"In addition to proved reserves, the estimated (or appraised) value of leases or parts of leases to which proved reserves cannot be attributed is $XXX."

The basis for the estimated value should be disclosed. This disclosure is often relevant to companies that have significant overriding royalty positions or leases that have significantly appreciated.

Information Source

The information relating to the estimated future net revenues and to the present value of estimated future net revenues may also come from the company's reserve report and engineering department or from an independent engineer retained by the company to prepare this information.
# Exhibit I-1

## S-X DISCLOSURE FORMATS

### CAPITALIZED COSTS

(As of the end of each period for which a complete set of annual or interim financial statements is presented)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Equity Investees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved Properties</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Unproved Properties</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Support Equipment and Facilities</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Depreciation, Depletion, and Amortization</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Valuation Allowance</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
</tbody>
</table>

## COSTS INCURRED IN OIL AND GAS PRODUCING ACTIVITIES

(For each year for which an income statement is required)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Equity Investees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Acquisition Costs</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Exploration Costs</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Development Costs</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Production Costs</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Depreciation, Depletion, and Amortization</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Valuation Provisions</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
</tbody>
</table>

## NET REVENUES FROM OIL AND GAS PRODUCTION

(For each full fiscal year for which an income statement is required)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenues from Oil and Gas Production Related to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proved Developed Oil and Gas Reserves</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Reserves Applicable to Long-Term Supply or Similar Agreements with Foreign Governments in Which the Company Acts as Producer</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Proportional Interest in Reserves of Investees Accounted for by the Equity Method</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
</tbody>
</table>
ESTIMATED QUANTITIES OF OIL AND GAS RESERVES  
(As of the beginning and the end of each full fiscal year for which an income statement is required)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oil Gas</td>
<td>Oil Gas</td>
<td>Oil Gas</td>
<td>Oil Gas</td>
</tr>
<tr>
<td>Proved Developed and Undeveloped Reserves:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning of Year</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Revision of Previous Estimates</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Improved Recovery</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Purchases of Minerals-in-Place</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Extensions, Discoveries, and Other Additions</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Production</td>
<td>(X) (X) (X) (X)</td>
<td>(X) (X) (X) (X)</td>
<td>(X) (X) (X) (X)</td>
<td>(X) (X)</td>
</tr>
<tr>
<td>Sales of Minerals-in-Place</td>
<td>(X) (X) (X)</td>
<td>(X) (X) (X) (X)</td>
<td>(X) (X) (X) (X)</td>
<td>(X) (X)</td>
</tr>
<tr>
<td>End of Year</td>
<td>X X X X X</td>
<td>X X</td>
<td>X X</td>
<td>X X</td>
</tr>
</tbody>
</table>

Proved Developed Reserves:
Beginning of Year
End of Year
Reserves Applicable to Long-Term Supply Agreements with Foreign Governments in Which the Company Acts as Producer:
Proved Reserves at End of Year
Received During the Year
Company’s Proportional Interest in Reserves of Investees Accounted for by the Equity Method, End of the Year

ESTIMATED FUTURE NET REVENUES FROM PRODUCTION OF OIL AND GAS RESERVES SPECIFIC GEOGRAPHIC AREA
(As of the date of the latest balance sheet presented)

<table>
<thead>
<tr>
<th></th>
<th>Proved Developed and Undeveloped</th>
<th>Proved Developed</th>
<th>Long-Term Supply Agreements with Foreign Governments (Company Operated)</th>
<th>Equity Investees (Proportional Share)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remainder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
</tbody>
</table>
PRESENT VALUE OF ESTIMATED FUTURE NET REVENUES
FROM PRODUCTION OF OIL AND GAS RESERVES
(As of the end of each full fiscal year for which an income statement is required)

<table>
<thead>
<tr>
<th>Description</th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved Developed Reserves</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Proved Developed and Undeveloped Reserves</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Reserves Applicable to Long-Term Supply Agreements with Foreign Governments (Company Operated)</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Reserves of Equity Investees (Proportional Share)</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>Total</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
</tbody>
</table>

Management must also disclose any additional information which it believes is necessary to prevent the above information from being misleading.

Additional disclosure requirements of Rule 3-18 relating to "Summary of Oil and Gas Producing Activities" and "Summary of Changes in Present Value of Estimated Future Net Revenues," as well as the inclusion of certain Rule 3-18 disclosures under the SEC's "Safe Harbor Provision," are discussed in detail in Chapter II.
REGULATION S-X CHECKLIST—OIL AND GAS PRODUCING COMPANIES

I. Exemptions
Does the Company qualify as exempt from disclosures required by Rule 3-18(k)? These disclosures may be omitted if:
A. Test 1 (page 15) is met, or
B. The Company is exempted from DOE accounting or reporting requirements pursuant to Section 11(c) of the Energy Supply and Environmental Coordination Act of 1974, as amended.
C. The filing entity is a limited partnership and meets certain other criteria (see III below).

II. Disclosures—Rule 3-18
A. Method of Accounting (k)(1)
1. Is the method of accounting (i.e., successful efforts or full cost) disclosed on the face of the balance sheet? In addition, generally accepted accounting principles (Statement of Financial Accounting Standards No. 25, paragraph 8) require disclosure of the method of accounting for costs incurred and the manner of disposing of capitalized costs.

B. Capitalized Costs (k)(2)
1. Are capitalized costs disclosed as of the end of each period for which a full set of financial statements is presented for:
   a. Proved properties?
   b. Unproved properties (if significant)?
   c. Support equipment and facilities (separately or in 1 or 2 above as appropriate)?
   d. Accumulated depreciation, depletion and amortization?
   e. Valuation allowances (if significant)?
2. Are these disclosures properly segregated by geographic area in accordance with Rule 3-18(k)(5)?

C. Costs Incurred in Oil and Gas Producing Activities (k)(3)
1. Are the following types of costs disclosed for each year for which an income statement is required:
   a. Property acquisition costs?
   b. Exploration costs?
   c. Development costs?
   d. Production costs?
   e. Depreciation, depletion and amortization?
   f. Valuation provisions?
2. Are these disclosures properly segregated by geographic area in accordance with Rule 3-18(k)(5)?

3. Has depreciation of (rather than expenditures for) support equipment and facilities been included in type b, c and d costs in item C.1.?

4. Has depreciation, depletion or amortization of type a, b or c costs in item C.1. been properly excluded from production costs?

D. *Revenues from Producing Oil and Gas (k)(4)*

1. Are disclosures made of "net revenues" from production for each fiscal year for which an income statement is required for the following categories, if significant:
   a. Proved developed oil and gas reserves?
   b. Reserves related to long-term supply contracts with foreign governments where the Company acts as producer?
   c. The Company’s proportional interests in reserves in investees accounted for by the equity method?

2. Are production costs deducted from gross revenue to arrive at net revenue?

3. Do gross revenues properly exclude royalty payments and net profits disbursements?

4. Are gross revenues reported without deductions for production or severance taxes?

5. Are sales and transfers to affiliates disclosed separately and valued on an arm’s-length transaction basis?

E. *Proved Reserve Quantities (k)(5)*

1. Are net quantities of proved reserves and proved developed reserves disclosed as of the beginning and end of each fiscal year for which an income statement is required?

2. Are changes in quantities of proved reserves during the year disclosed for the following:
   a. Revisions of previous estimates?
   b. Improved recovery, if significant?
   c. Purchase of minerals-in-place?
   d. Extensions, discoveries and other additions?
   e. Production?
   f. Sales of minerals-in-place?

3. Are these disclosures segregated by geographic area in accordance with Rule 3-18 (k)(5)?

4. Are quantities of reserves subject to purchase (by the Company) under long-term supply contracts with foreign governments?
where the Company acts as producer, segregated and disclosed separately?

5. Do the reserves that are disclosed include reserves of the parent and wholly-owned subsidiaries? Are reserves of investees accounted for under the equity method shown separately?

6. Have other disclosures been made as appropriate for any other important economic factors or significant uncertainties which affect the reserve disclosures?

F. Future Net Revenues from Estimated Production of Oil and Gas Reserves (k)(6)

1. Have future net revenues from estimated production of oil and gas been disclosed for each geographic area for which quantities of reserves were disclosed in E. above for the following:
   a. Proved oil and gas reserves?
   b. Proved developed oil and gas reserves?
   c. Proved oil and gas reserves applicable to long-term supply agreements with foreign governments where the Company acts as producer?
   d. The Company's share of reserves of investees accounted for by the equity method?

2. Has the present value of estimated future net revenues been disclosed for each of the categories in 1. above?

3. Has the discount factor of ten percent been used in calculating these present values?

4. Have current oil and gas prices and costs been used in the preparation of the items disclosed in 1. above?

5. Have estimated future net revenues been disclosed separately for the three succeeding years individually and the remainder as a single amount?

G. Summary of Oil and Gas Producing Activities (k)(7) (Discussed in Chapter II)

1. Have disclosures been made for each of the last five fiscal years ending after December 25, 1979, for the following:
   a. Additions to estimated proved reserves for the current year (using current prices as of the end of that period and a ten percent discount rate)?
   b. Changes in prices?
   c. Other revisions?
d. Accretion of discount (applying a ten percent discount rate to the beginning-of-year present value amount)?

e. Costs incurred, including impairments, which include the following:
   (1) Acquisition costs, when it is determined that the property has proved reserves or is impaired?
   (2) Exploration costs incurred during the year, except for drilling costs of uncompleted exploratory wells?
   (3) Development and production costs incurred in the current year associated with current extensions and discoveries and with nonproductive activities?

f. Present value of estimated future development and production costs (using current-cost dollar amounts)? (May be deducted in determining additions or shown as a separate item.)

g. Significant gains or losses on the sale of unproved properties?

h. Provision for income taxes, representing the difference between the beginning and end-of-year computations, arrived at by applying current statutory tax rates to the excess of the present value of estimated future net revenues over the current tax basis, giving effect to applicable permanent differences and the addition of the current tax provision for oil and gas producing activities?

2. Have only oil and gas producing activities been included in the summary?

3. Have proved reserves applicable to long-term supply agreements with foreign governments in which the entity acts as producer been included as a separate line item in the summary, unless exclusion can be justified?

4. Has the proportionate share of proved reserves of investees accounted for by the equity method been included as a separate line item in the summary unless the reserves are insignificant to the registrant’s operations?

5. Has a narrative description of the nature of any operations excluded from the summary been provided?
6. Has the pre-tax profit contribution for oil and gas producing activities as shown in the primary financial statements corresponding to the pre-tax amount as shown in the summary been reported?
7. Have the aggregate costs that have been deferred pending determination of proved reserves been disclosed for the following categories:
   a. Property acquisition costs?
   b. Costs of uncompleted exploratory wells?
   c. Major development costs?
8. Have the valuation allowance amounts provided during the period related to properties and the aggregate amount of such allowances at the end of the current period been disclosed?

H. Summary of Changes in Present Value of Estimated Future Net Revenues (k)(8) (Discussed in Chapter II)
Have disclosures been made for each of the last five fiscal years ending after December 25, 1979, of the changes resulting from each of the following:
1. The total of additions, revisions and accretion of discount, computed in accordance with paragraph (k)(7), less related estimated future development and production costs?
2. Purchases of minerals-in-place?
3. Previously estimated future development costs incurred during the year?
4. Sales of oil and gas and value of transfers, net of production costs?
5. Proceeds from sales of reserves-in-place?

III. Limited Partnerships
A. Is the filing entity a limited partnership?
B. Is the limited partnership the subject of a merger or exchange offer under which various limited partnerships are to be combined under a single entity?

NOTE: If the filing entity is a limited partnership which is not the subject of a merger, disclosures relating to estimated future net revenues, changes therein, and supplemental summary of oil and gas activity (paragraphs (k)(6), (k)(7) and (k)(8) of Rule 3-18) may be omitted if reserve value information is available to the limited partners pursuant to the partnership agreement.
C. Where an offering of limited partnership interests occurs, have disclosures as specified by paragraphs (k)(5) and (k)(6) of Rule 3-18 that pertain to the general partner's balance sheet been made?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet</td>
<td>Income Statement</td>
</tr>
</tbody>
</table>

**Test 1**

Regulation S-X provides an exemption from disclosures required under Rule 3-18(k) if the following tests are met. Tests must be met for the two most recent fiscal years, based on the Company's annual consolidated financial statements.

<table>
<thead>
<tr>
<th>Current Year</th>
<th>Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total consolidated revenues (A)</td>
<td></td>
</tr>
<tr>
<td>Gross revenues from sales or transfers of oil and gas (B)</td>
<td></td>
</tr>
<tr>
<td>Percentage of (B) to (A) (C)</td>
<td></td>
</tr>
<tr>
<td>Consolidated income before extraordinary items (D)</td>
<td></td>
</tr>
<tr>
<td>Income after taxes (before extraordinary items) from oil and gas producing activities* (E)</td>
<td></td>
</tr>
<tr>
<td>Percentage of (E) to (D) (F)</td>
<td></td>
</tr>
<tr>
<td>Present Value of Estimated Future Net Revenues* (G)</td>
<td></td>
</tr>
<tr>
<td>Net capitalized costs of unproved properties (H)</td>
<td></td>
</tr>
<tr>
<td>Total Assets (I)</td>
<td></td>
</tr>
<tr>
<td>Percentage of (G) plus (H) to (I) (J)</td>
<td></td>
</tr>
</tbody>
</table>

Is (C), (F) or (J) greater than 10% for the current year? (yes/no)

Is (C), (F) or (J) greater than 10% for the prior year? (yes/no)

**If the answer to either of the above questions is yes, all disclosures are required.**

*Includes amounts applicable to investees accounted for under the equity method.*
ASR No. 269, issued by the SEC on September 24, 1979, adopted a requirement for oil and gas producers to include in their financial statements a supplemental summary of oil and gas producing activities prepared on the basis of RRA. The Release revised certain disclosure requirements of paragraph (k)(6) of Rule 3-18 of Regulation S-X (which have been incorporated in Chapter I), and added paragraphs (k)(7), (k)(8), and (k)(9) (which are discussed in this Chapter). The provisions are effective for financial statements for fiscal years ending after December 25, 1979. The information required by the Release can be presented in either a note or a separate schedule, and may be unaudited for fiscal years ending before December 26, 1980.

The actual text of the amendments of Regulation S-X, as prescribed in ASR No. 269, is short. The work resulting from the amendments, however, can be complicated.

**Reserves Added in Current and Prior Years**

Paragraph (k)(6)(ii) of Rule 3-18 is the first to be amended by the Release. No longer is disclosure required of the portion of the present value of estimated future net revenues attributable to proved reserves added in years prior to the current year and proved reserves added during the current year. The categories for which estimated future net revenues are required to be disclosed are discussed in Chapter I.

**Safe Harbor Provision**

Paragraph (k)(6)(v) of Rule 3-18 relating to a safe harbor provision covering the disclosure of future net revenues from estimated production has been deleted. This safe harbor provision has been redesignated as paragraph (k)(9) and expanded to cover disclosures related to a supplemental summary as prescribed by ASR No. 269. The actual wording of the amended safe harbor provision is as follows:

Disclosures made pursuant or supplemental to the requirements of paragraphs (k)(6), (k)(7) and (k)(8) of this section relating to future net revenues from estimated production of proved oil and gas reserves, the present value of estimated future net revenues, and the summaries of oil and gas producing activities and changes in present value of estimated future net revenues, shall be deemed not to be an untrue statement of a material fact; a statement false or misleading with respect to any material fact; an omission to state a material fact necessary to make a statement not misleading; or the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business or an artifice to defraud; as those terms are used in the Securities Act of 1933, the Securities Exchange Act of 1934, or the Public Utility Holding Company Act of 1935, or rules and regulations thereunder, unless such information (i) was prepared without a reasonable basis; or (ii) was disclosed other than in good faith.

It would appear that those involved in making such disclosures would be protected from most lawsuits and liability related to reliance on such information. Thus, it must be stressed that complete and informative documentation be main-
tained of all procedures performed in arriving at the related disclosure information. This documentation will aid in the establishment of a reasonable basis and good faith in the preparation of the information.

**Formats of Summaries**

ASR No. 269 requires a supplemental summary of oil and gas producing activities prepared on the basis of RRA [Rule 3-18 (k)(7)] and requires a summary of changes in the present value of future net revenues [(k)(8)]. The SEC has stated it will use the experience gained from presentation of these supplemental summaries as a basis for deciding whether use of RRA should be required in the financial statements of oil and gas producers. Therefore, it has adopted a flexible approach to presentation to encourage experimentation and permit adaptation to individual company situations. ASR No. 269 shows two illustrative formats, which are acceptable, but not prescribed. The first suggested format (Exhibit II-1) consists of two separate summaries in financial statement type presentation and is conducive to comparative reporting. The second suggested format (Exhibit II-2) combines the two summaries in an integrated display that also includes cash flow information and a summary of deferred costs. This format, although more complex, allows for RRA information and historical cost information to be related.

**Summary Information**

Under ASR No. 269, a summary of the following items must be presented for each of the last five years (not required for years ending before December 26, 1979):

(A) Additions and revisions to the present value of estimated future net revenues (“total additions”) with separate identification of:

1. Additions (including extensions and discoveries)
2. Revision of previous estimates, with separate disclosure of amounts attributable to price changes, and
3. Accretion of discount, and

(B) Costs associated with the additions and revisions to proved oil and gas reserves, together with all nonproductive costs (“current period expenses”).

(C) An income tax provision must be deducted from the difference between (A) and (B).

The following rules apply in the preparation of this information.

**Additions**

1. Additions to estimated proved reserves represents estimated future revenues from reserves added during the current period. These additions must be computed by applying current oil and gas prices (as of the end of the period) to estimated future production of proved reserves added during the period, and discounting the result at ten percent. These additions may be shown either gross or net of the present value of related estimated future development and production costs. If presented gross, the related future costs must be reported separately as current period expenses.

**Revisions**

2. Revisions should include the effects resulting from changes in estimates during the period, including changes in quantities, rates of production, and differences between beginning-of-year valuations and actual proceeds or costs. Amounts attributable to current year price changes should be reported separately. Significant gains on sales of reserves-in-place must be disclosed.
Major factors (e.g., changes in estimated future costs, quantities, rates of production, etc.) causing other revisions must be described in narrative form. For properties where the difference between purchase price and the present value of estimated future net revenues has been either capitalized or deferred, subsequent upward or downward revisions of the present value of these properties should be offset against the amount capitalized or deferred.

3. Accretion of discount is the change in present value resulting from the passage of time, i.e., the present value of a dollar to be received at a specified future date is greater at the end of the year than at the beginning of the year. ASR No. 269 suggests that accretion of discount be computed by applying a 10% discount rate to the beginning of year present value amount as a reasonable approximation for performing more detailed calculations. For example, the present value of one dollar to be received in two years, using a 10% rate, is .826. After one year, the present value of the same dollar is now .909, for it is now to be received in one year rather than two years. The difference between .909 and .826, being .083, is the accretion of discount. If an oil and gas producer has several properties with estimated future production extending over many years, the calculation of the accretion of discount can be very cumbersome. Therefore, ASR No. 269 suggests that the accretion of discount can be computed by applying the 10% discount rate to the beginning-of-year present value amounts. This calculation will provide a reasonable approximation of the accretion in discount and will eliminate a significant amount of work. Accretion of discount must be shown as a separate line item in the summary.

The sum of the above items represents the current year's increase in the present value of economic benefits of the Company's oil and gas producing activities. From this amount certain associated costs should be deducted. The following rules apply in their calculation.

1. Costs incurred, including impairments, represent nondiscounted costs. Included in this category are:

   a. Property acquisition costs are to be expensed when the property is determined to have proved reserves, or when impaired [pursuant to Rule 3-18(c) and (d)]. For properties being evaluated, major leasehold costs may be allocated between initial discoveries of proved reserves and reserves expected to be proved.

   For certain acquisitions the purchase price may differ from the present value of estimated future net revenues. Where appropriate, the purchase price may be allocated between proved and unproved properties. Any remaining difference between purchase price and present value should be capitalized or deferred. Capitalized amounts should be offset against subsequent upward revisions to present value of the properties or expensed upon impairment. Deferred amounts should be amortized over the properties' estimated life if not earlier offset against downward revisions of the properties' present value.

   b. Exploration costs (e.g., geological and geophysical costs, carrying costs of undeveloped land, etc.) are to be expensed currently, except for uncompleted exploratory wells, the costs of which are to be deferred until determination of whether or not proved reserves were found. Upon such determination, the deferred costs are to be expensed.
c. Development costs (including the present value of estimated future development costs not deducted from additions to proved reserves) associated with either current extensions and discoveries or nonproductive activity should be period expenses. For major development projects (e.g., installing offshore drilling platforms or improved recovery programs, etc.), a portion of the development costs may be deferred until the proved reserves added by the project can be determined, or impairment is ascertained.

d. Production costs represent those costs incurred in the current period applicable to production of reserves added during the year. (The production costs relating to previously discovered reserves are included in present valued costs in previous years.)

2. Present value of estimated future development and production costs represents those costs anticipated to be incurred in future periods relating to the reported estimated future revenues as shown in the "Additions to estimated proved reserves" line item. These costs must be computed using current cost amounts. The computed future costs are then discounted using a 10% rate.

3. Significant gains or losses on the sale of unproved properties [recognized in accordance with Rule 3-18(h)] must be reported separately in the summary.

The tax provision represents the tax expense associated with net income from reserves added during the period plus the tax effects of adjustments to prior estimates of net income related to previously discovered reserves and is to be computed as follows:

1. As of the end of the current period, current statutory tax rates are applied to the excess of the present value of estimated future net revenues over the current tax basis of the related properties and any related carryforwards. Applicable permanent differences, such as excess statutory depletion and investment tax credits, must also be considered.

2. The similarly computed amount as of the beginning of the year is to be deducted from the amount as of the end of year.

3. The tax provision for oil and gas producing activities of the current period is then added to the computed amount of No. 2 above.

The summary should not include other oil and gas operations (e.g., distribution, marketing, etc.), other business segments' operations or extraordinary items. However, corporate administrative and interest expense may be allocated to oil and gas producing operations and reported separately. Proved reserves subject to long-term supply agreements with foreign authorities where the company acts as producer should be included, unless circumstances justify exclusion. Operations of investees accounted for by the equity method should be included. Any excluded operations should be described in narrative.
The following must also be disclosed:

1. The pretax profit contribution reflected in the primary financial statements for the oil and gas producing activities corresponding to the pretax amount reported in the supplemental summary.

2. The aggregate property acquisition costs, costs of uncompleted exploratory wells and major development costs that have been deferred pending determination of proved reserves.

3. The amount of any valuation allowances provided during the period with respect to properties in 2 above, and the aggregate amount of such valuation allowances at year end.

ASR No. 269 has also added paragraph (k)(8) to Rule 3-18. This paragraph requires that a summary of changes in present value of estimated future net revenue from proved oil and gas reserves be presented for each of the last five fiscal years ending after December 25, 1979. In essence the summary is a reconciliation between the total present value of estimated future net revenues at the beginning and end of each period. The text of ASR No. 269 discussing this reconciliation is as follows:

Changes resulting from each of the following shall be shown separately: (i) The total of additions, revisions and accretion of discount, computed in accordance with paragraph (k)(7) of this section, less related estimated future development and production costs; (ii) purchases of minerals-in-place; (iii) previously estimated future development costs incurred during the year; (iv) sales of oil and gas and value of transfers, net of production costs; and (v) proceeds from sales of minerals-in-place.

Items i, ii, and iii are increases in the present value of estimated future net revenues at the beginning of the period. Items iv and v are decreases in the computed present value amount. The net increase or decrease is then added to or subtracted from the present value amount for the beginning of the period, resulting in the revised end-of-period present value amount.

The development of RRA information is a complex, lengthy process. To provide a better understanding of the requirements of ASR No. 269, the case example in Exhibit II-3 illustrates the application of these rules to a simplified fact situation.
### S-X DISCLOSURE FORMATS FOR RESERVE RECOGNITION ACCOUNTING

**SUMMARY OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING**

(As presented in ASR No. 269)

Year Ended December 31, 1979

(Thousands)

#### ADDITIONS AND REVISIONS TO ESTIMATED PROVED OIL AND GAS RESERVES:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additions to estimated proved reserves, gross</td>
<td>$1,110</td>
</tr>
<tr>
<td>Revisions to estimates of reserves proved in prior years:</td>
<td></td>
</tr>
<tr>
<td>- Changes in prices</td>
<td>$683</td>
</tr>
<tr>
<td>- Other</td>
<td>($239)</td>
</tr>
<tr>
<td>- Accretion of discount</td>
<td>$749</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$2,303</td>
</tr>
</tbody>
</table>

#### EVALUATED ACQUISITION, EXPLORATION, DEVELOPMENT AND PRODUCTION COSTS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs incurred, including impairments</td>
<td>$577</td>
</tr>
<tr>
<td>Present value of estimated future development and production costs</td>
<td>$873</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$1,450</td>
</tr>
</tbody>
</table>

#### ADDITIONS AND REVISIONS TO PROVED RESERVES OVER EVALUATED COSTS

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
</table>

#### PROVISION FOR INCOME TAXES

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
</table>

RESULTS OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
</table>

**Note:** The amounts presented in Exhibits II-1 and II-2 are taken directly from ASR No. 269 and are not based on the foregoing example.

### CHANGES IN PRESENT VALUE OF ESTIMATED FUTURE NET REVENUE FROM PROVED OIL AND GAS RESERVES

(As presented in ASR No. 269)

Year Ended December 31, 1979

(Thousands)

#### INCREASES:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additions and revisions</td>
<td>$2,303</td>
</tr>
<tr>
<td>- Less related estimated future development and production costs</td>
<td>$873</td>
</tr>
<tr>
<td>Net additions and revisions</td>
<td>$1,430</td>
</tr>
<tr>
<td>- Purchase of reserves in place</td>
<td>$483</td>
</tr>
<tr>
<td>- Expenditures that reduced estimated future development costs</td>
<td>$337</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$2,250</td>
</tr>
</tbody>
</table>

#### DECREASES:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales of oil and gas and value of transfers, net of production costs of $231</td>
<td>$967</td>
</tr>
<tr>
<td>Sales of reserves in place</td>
<td>$238</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$1,205</td>
</tr>
</tbody>
</table>

**NET INCREASE**

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
</table>

BEGINNING OF YEAR

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
</table>

END OF YEAR

<table>
<thead>
<tr>
<th>Amount (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNDS FLOW</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Additions to estimated proved reserves, gross</td>
</tr>
<tr>
<td>Revisions to estimates of reserves proved in prior years:</td>
</tr>
<tr>
<td>Changes in prices</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Interest factor</td>
</tr>
<tr>
<td>Subtotal</td>
</tr>
<tr>
<td>Evaluated acquisition, exploration, development and production costs:</td>
</tr>
<tr>
<td>Costs incurred, including impairments</td>
</tr>
<tr>
<td>Present value of estimated future development and production costs</td>
</tr>
<tr>
<td>Expenditure that reduced estimated future development costs</td>
</tr>
<tr>
<td>Sales of oil and gas and value of transfers, net of production costs of $231</td>
</tr>
<tr>
<td>Sales of reserves in place</td>
</tr>
<tr>
<td>Purchase of reserves in place</td>
</tr>
<tr>
<td>Subtotal</td>
</tr>
<tr>
<td>Provision for income taxes</td>
</tr>
<tr>
<td>Net change or amount</td>
</tr>
<tr>
<td>Balance—beginning of year</td>
</tr>
<tr>
<td>Balance—end of year</td>
</tr>
</tbody>
</table>
APPLICATION OF RESERVE RECOGNITION ACCOUNTING—A CASE EXAMPLE

FACTS

An oil and gas producing company began operations on January 1, 19X1. During the first year, the company:

1. Acquired lease “A” for $10,000.
2. Acquired lease “B” for $15,000.
3. Incurred geological and geophysical (G & G) costs on leases “A” and “B” in the amounts of $25,000 and $50,000, respectively.
4. Incurred intangible drilling costs (IDC) of $100,000 on lease “A,” with the well being a dryhole.
5. Incurred drilling costs of $200,000 on lease “B,” $25,000 of which was tangible equipment with a 3-year life and $175,000 was IDC.
6. The estimated proved reserves discovered on lease “B” are to be produced over three years as follows:
   
<table>
<thead>
<tr>
<th>Year</th>
<th>Production (bbl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X2</td>
<td>40,000</td>
</tr>
<tr>
<td>19X3</td>
<td>30,000</td>
</tr>
<tr>
<td>19X4</td>
<td>24,000</td>
</tr>
</tbody>
</table>

7. Current market price for crude oil is $40 per bbl. Estimated lifting costs are $5 per bbl.
8. It is anticipated that future tangible development costs of $20,000 will be incurred in 19X2 with a 2-year life and estimated restoration costs (net of salvage value) of $35,000 will be incurred in 19X4.
9. The statutory tax rate is 46% and the investment tax credit (ITC) rate is 10% of the qualified investment. Only \( \frac{2}{3} \) of the cost of the investment qualifies if the life is less than 7 years and at least 5 years, \( \frac{1}{3} \) qualifies if the life is less than 5 years and at least 3 years, and no credit is allowed if the life is less than 3 years.

During 19X2 the following occurred, which represent changes from 19X1. The other items did not change from 19X1.

1. bbl rather than the estimated 40,000 bbl are produced from lease “B.”
2. The price received per barrel is $42 rather than the estimated $40.
3. Lifting costs are $6 per bbl rather than the estimated $5 per bbl.
4. Revised estimates in future production are:
   
<table>
<thead>
<tr>
<th>Year</th>
<th>Production (bbl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X3</td>
<td>35,000</td>
</tr>
<tr>
<td>19X4</td>
<td>26,000</td>
</tr>
</tbody>
</table>

5. Actual development costs incurred are $22,000 rather than the estimated $20,000.
6. A $2,000 delay rental is paid for lease “A.”

Note: The amounts shown in brown italics are amounts given as FACTS in the problem.

SOLUTION

The summaries of oil and gas producing activities on the basis of RRA and the summaries of changes in present value of estimated future net revenue from proved oil and gas reserves for the years 19X2 and 19X1 would appear as follows (see Schedules a through k following, for calculations of amounts as indicated):
## SUMMARY OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING

### Year Ended December 31,

<table>
<thead>
<tr>
<th></th>
<th>19X2</th>
<th>19X1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADDITIONS AND REVISIONS TO ESTIMATED PROVED OIL AND GAS RESERVES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions to estimated proved reserves, gross</td>
<td>$—0—*</td>
<td>$3,166,560a</td>
</tr>
<tr>
<td>Revisions to estimates of reserves proved in prior years:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in prices</td>
<td>158,328e</td>
<td>—0—†</td>
</tr>
<tr>
<td>Other</td>
<td>294,335f</td>
<td>—0—†</td>
</tr>
<tr>
<td>Accretion of discount</td>
<td>272,628g</td>
<td>—0—†</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>725,291</td>
<td>3,166,560</td>
</tr>
<tr>
<td><strong>EVALUATED ACQUISITION, EXPLORATION, DEVELOPMENT AND PRODUCTION COSTS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs incurred, including impairments</td>
<td>2,000h</td>
<td>390,000b</td>
</tr>
<tr>
<td>Present value of estimated future development and production costs</td>
<td>—0—*</td>
<td>440,285c</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>2,000</td>
<td>830,285</td>
</tr>
<tr>
<td><strong>ADDITIONS AND REVISIONS TO PROVED RESERVES OVER EVALUATED COSTS</strong></td>
<td>723,291</td>
<td>2,336,275</td>
</tr>
<tr>
<td><strong>PROVISION FOR INCOME TAXES</strong></td>
<td>332,714i</td>
<td>1,069,253d</td>
</tr>
<tr>
<td><strong>RESULTS OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING</strong></td>
<td>$390,577</td>
<td>$1,267,022</td>
</tr>
</tbody>
</table>

*These items are not applicable due to no new producing wells being drilled in 19X2.
†These items are not applicable in the first year of operations.

### CHANGES IN PRESENT VALUE OF ESTIMATED FUTURE NET REVENUE FROM PROVED OIL AND GAS RESERVES

<table>
<thead>
<tr>
<th></th>
<th>19X2</th>
<th>19X1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCREASES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions and revisions</td>
<td>$725,291†</td>
<td>$3,166,560a</td>
</tr>
<tr>
<td>Less related estimated future development and production costs</td>
<td>—0—</td>
<td>440,285c</td>
</tr>
<tr>
<td>Net additions and revisions</td>
<td>725,291</td>
<td>2,726,275</td>
</tr>
<tr>
<td>Purchase of reserves in place</td>
<td>—0—</td>
<td>—0—</td>
</tr>
<tr>
<td>Expenditures that reduced estimated future development costs</td>
<td>22,000</td>
<td>—0—</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>747,291</td>
<td>2,726,275</td>
</tr>
<tr>
<td><strong>DECREASES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales of oil and gas and value of transfers, net of production costs of $264,000 in 19X2</td>
<td>1,584,000§</td>
<td>—0—§</td>
</tr>
<tr>
<td>Sales of reserves in place</td>
<td>—0—</td>
<td>—0—</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>1,584,000</td>
<td>0—</td>
</tr>
<tr>
<td><strong>NET INCREASE (DECREASE)</strong></td>
<td>(836,709)</td>
<td>2,726,275</td>
</tr>
<tr>
<td><strong>BEGINNING OF YEAR</strong></td>
<td>2,726,275</td>
<td>—0—</td>
</tr>
<tr>
<td><strong>END OF YEAR</strong></td>
<td>$1,889,566</td>
<td>$2,726,275</td>
</tr>
</tbody>
</table>

†There were no additions to estimated proved reserves in 19X2.
§There were no sales of this nature in 19X1 or 19X2.
CASE EXAMPLE SOLUTION 19X1

Schedule a

Additions to estimated proved reserves, gross

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ESTIMATED PRODUCTION</th>
<th>CURRENT PRICE</th>
<th>SALES</th>
<th>P.V. FACTOR AT 10%</th>
<th>PRESENT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X2</td>
<td>40,000 bbl</td>
<td>$40</td>
<td>$1,600,000</td>
<td>.909</td>
<td>$1,454,400</td>
</tr>
<tr>
<td>19X3</td>
<td>30,000 bbl</td>
<td>40</td>
<td>1,200,000</td>
<td>.826</td>
<td>991,200</td>
</tr>
<tr>
<td>19X4</td>
<td>24,000 bbl</td>
<td>40</td>
<td>960,000</td>
<td>.751</td>
<td>720,960</td>
</tr>
</tbody>
</table>

Present value of additions to estimated proved reserves, gross

$3,166,560

Costs incurred, including impairments

Lease “A”:
- G & G costs: 25,000
- Drilling costs: 100,000

Lease “B”:
- Acquisition costs: 15,000
- G & G costs: 50,000
- Drilling costs: 200,000

Cost incurred: $265,000

*Acquisition costs for Lease “A” are not included as no proved reserves have been related to the lease, and there is no impairment of the lease in 19X1.

Schedule c

Present value of estimated future development and production costs

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ESTIMATED PRODUCTION</th>
<th>LIFTING COST PER BBL</th>
<th>TOTAL COST</th>
<th>P.V. FACTOR AT 10%</th>
<th>PRESENT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X2</td>
<td>40,000 bbl</td>
<td>$5</td>
<td>$200,000</td>
<td>.909</td>
<td>$181,800</td>
</tr>
<tr>
<td>19X3</td>
<td>30,000 bbl</td>
<td>5</td>
<td>150,000</td>
<td>.826</td>
<td>123,900</td>
</tr>
<tr>
<td>19X4</td>
<td>24,000 bbl</td>
<td>5</td>
<td>120,000</td>
<td>.751</td>
<td>90,120</td>
</tr>
</tbody>
</table>

Production Costs:
- 19X2: $181,800
- 19X3: 123,900
- 19X4: 90,120

Development Costs:
- 19X2: 18,180

Restoration Costs:
- 19X4: 26,285

Present value of estimated future development and production costs

$440,285
**Schedule d**

Provision for income taxes
Net present value of reserves at end of year (additions of $3,166,560 a less present value of future costs of $440,285 c) $2,726,275

Less tax basis of properties:
- **Lease “A”**:
  - Acquisition costs $10,000
  - G & G costs $25,000
  Total $35,000
- **Lease “B”**:  
  - Acquisition costs $15,000
  - G & G costs $50,000
  - Tangible equipment $25,000
  Total $90,000

Ending tax basis
- Future taxable income $2,601,275
- Tax rate 46%
- Future income tax $1,196,586

ITC
- Net future income tax $1,196,586
- Less net future income tax prior year $0
- Current provision for future income tax $1,196,586

Current tax:
- Revenue $0
- IDC—Lease “A” (100,000)
- IDC—Lease “B” (175,000)
- Taxable income (loss) (275,000)
- Tax rate 46%
- Current income tax benefit before ITC $125,000

ITC—Tangible drilling costs, Lease “B”:
- ($25,000 x 1/3 x 10%) (833)
- Current income tax benefit $127,333
- Provision for income taxes $1,069,253

*No ITC is allowed on the tangible development costs to be incurred in 19X2 as their life is less than the 3-year ITC requirement.

**CASE EXAMPLE SOLUTION 19X2**

**Schedule e**

Revisions to estimates of reserves proved in prior years—changes in prices
Changes in price per bbl:
- Actual sales price $42
- Estimated sales price (40)
Increase in estimated selling price $2

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ESTIMATED PRODUCTION</th>
<th>INCREASE PER BBL</th>
<th>TOTAL CHANGE</th>
<th>P.V. FACTOR AT 10%</th>
<th>P.V. OF CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X2</td>
<td>40,000 bbl</td>
<td>$2</td>
<td>$80,000</td>
<td>.909</td>
<td>$72,720</td>
</tr>
<tr>
<td>19X3</td>
<td>30,000 bbl</td>
<td>2</td>
<td>60,000</td>
<td>.826</td>
<td>49,560</td>
</tr>
<tr>
<td>19X4</td>
<td>24,000 bbl</td>
<td>2</td>
<td>48,000</td>
<td>.751</td>
<td>36,048</td>
</tr>
</tbody>
</table>

Changes in prices $158,328
Schedule f

Revisions to estimates of reserves proved in prior years—other

<table>
<thead>
<tr>
<th>(1) YEAR</th>
<th>(2) REVISED FUTURE PRODUCTION</th>
<th>(3) REVISED PRICE PER BBL</th>
<th>(4) REVISED FUTURE SALES</th>
<th>(5) P.V. FACTOR AT 10%</th>
<th>(6) PRESENT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X3</td>
<td>35,000 bbl</td>
<td>$42</td>
<td>$1,470,000</td>
<td>.909</td>
<td>$1,336,230</td>
</tr>
<tr>
<td>19X4</td>
<td>26,000 bbl</td>
<td>42</td>
<td>1,092,000</td>
<td>.826</td>
<td>901,992</td>
</tr>
</tbody>
</table>

Present value of future production costs:

<table>
<thead>
<tr>
<th>(1) YEAR</th>
<th>(2) REVISED FUTURE PRODUCTION</th>
<th>(3) REVISED PRICE PER BBL</th>
<th>(4) REVISED FUTURE PRODUCTION</th>
<th>(5) P.V. FACTOR AT 10%</th>
<th>(6) PRESENT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X3</td>
<td>35,000 bbl</td>
<td>6</td>
<td>210,000</td>
<td>.909</td>
<td>190,890</td>
</tr>
<tr>
<td>19X4</td>
<td>26,000 bbl</td>
<td>6</td>
<td>156,000</td>
<td>.826</td>
<td>128,856</td>
</tr>
</tbody>
</table>

Present value of future restoration costs:

<table>
<thead>
<tr>
<th>(1) YEAR</th>
<th>(2) REVISED FUTURE PRODUCTION</th>
<th>(3) REVISED PRICE PER BBL</th>
<th>(4) REVISED FUTURE PRODUCTION</th>
<th>(5) P.V. FACTOR AT 10%</th>
<th>(6) PRESENT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X4</td>
<td>35,000 bbl</td>
<td>.826</td>
<td></td>
<td></td>
<td>(28,910)</td>
</tr>
</tbody>
</table>

Net present value of future reserves

1,889,566

Actual net cash flow for 19X2 before income taxes:

19X2 Revenues (44,000 bbl × $42) 1,848,000
19X2 Lifting costs (44,000 bbl × $6) (264,000)
19X2 Development costs (22,000) (1,562,000)

Revised estimated net P.V. of reserves at beginning of 19X2
Estimated net P.V. of reserves at beginning of 19X2 as computed in 19X1

(2,726,275)

Total revisions for 19X2
Changes in prices
Accretion of discount
Other revisions

725,291
(158,328) e
(272,628) g

$ 294,335

Schedule g

Accretion of discount:

P.V. of future net revenue at beginning of 19X2 $2,726,275
Discount rate 10%

$ 272,628

Schedule h

Costs incurred, including impairments (delay rental)

$2,000
### Schedule i

Provision for income taxes:
- **Net present value of reserves at end of year:** $1,889,566\(^d\)
- **Less tax basis of properties:**
  - Basis at beginning of 19X2: $125,000\(^d\)
  - Development costs: 22,000
  - Amortization: (61,600)\(^k\)
- **Ending tax basis**
  - Future taxable income: 85,400
  - Tax rate: 1,804,166 × 46% = 829,916
- **Net future income tax:** (1,196,586)\(^d\)
- **Less net future income tax, prior year:** (366,670)

Current tax:
- **Revenue (44,000 bbl × $42):** 1,848,000
- **Lifting costs (44,000 bbl × $6):** (264,000)
- **Delay rental:** (2,000)
- **Amortization (61,600)\(^k\):**
  - **Taxable income:** 1,520,400
  - **Tax rate:** × 46% = 699,384
- **Current income tax payable before ITC:** 699,384
- **ITC:** —0—

**Current income tax payable:** 699,384

**Provision for income taxes:** $332,714

---

*No ITC is allowed on the tangible development costs incurred in 19X2 as their life is less than the 3-year ITC requirement.*

### Schedule j

Sale of oil and gas, net of production cost:
- **Revenue:** $1,848,000\(^i\)
- **Production (lifting) costs:** (264,000)
- **Sale of oil and gas, net of production costs:** $1,584,000

### Schedule k

Amortization of property costs
- **Costs:**
  - Cost basis at beginning of 19X2: $125,000\(^d\)
  - Development costs: 22,000
- **Total:** $147,000

Production:
- **19X2 Actual:** 44,000 bbl
- **19X3 Revised Estimate:** 35,000
- **19X4 Revised Estimate:** 26,000
- **Total:** 105,000 bbl

**Cost per barrel:** $1.40
**Production in 19X2:** 44,000 bbl
**Amortization:** $61,600
Regulation S-K provides the requirements for non-financial statement portions of registration statements under the Securities Act of 1933 and other filings under the Securities Exchange Act of 1934. These requirements are covered in Regulation S-K in six major topics:

<table>
<thead>
<tr>
<th>Topics of Regulation S-K</th>
<th>1. Description of business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Description of property</td>
</tr>
<tr>
<td></td>
<td>3. Directors and executive officers</td>
</tr>
<tr>
<td></td>
<td>4. Management remuneration and transactions</td>
</tr>
<tr>
<td></td>
<td>5. Legal proceedings</td>
</tr>
<tr>
<td></td>
<td>6. Security ownership of certain beneficial owners and management</td>
</tr>
</tbody>
</table>

Item 2 has been amended by the SEC in Release No. 33-6008 to standardize disclosure requirements relating to oil and gas reserves and operations. This amendment is effective for fiscal years ending after December 25, 1978 for initial filings made on or after January 29, 1979.

The purpose of property description disclosures (Item 2) is to provide investors with information as to the "suitability, adequacy, productive capacity and extent of utilization of the facilities used by the registrant." Detailed descriptions of individual properties or metes and bounds legal descriptions are not required.

The instructions of Regulation S-K require disclosure of the location and general description of the material physical properties of the company and its subsidiaries and identification of the industry segment(s) which use the properties described. Also required are disclosures as to major encumbrances against the properties and the nature of ownership if the properties are not held in fee. Therefore, any oil and gas leases and the nature of those leases (working interest, overriding royalty interest, or landowner's royalty interest) must be disclosed. The company must also disclose any significant fee property or leases pledged as collateral for notes, mortgages or other borrowings. Disclosure of estimates of probable or possible reserves and any estimated value thereof is prohibited.

If reserve estimates are referred to in the document being filed with the SEC, the company should consult the staff of the Office of Engineering, Division of Corporate Finance, of the SEC. That office may request that a copy of the full report of the engineer or other expert who estimated the reserve be furnished as supplemental information but not as a part of the filing.

If the reserve estimates or valuations of reserve estimates are represented as being based on estimates prepared or reviewed by independent consultants, those independent consultants must be named in the filing.

Limited partnerships and joint ventures engaged in drilling or income programs in oil and gas production do not have to make the disclosures required by Item 2(b), discussed below. Also, companies which meet all three qualifications for
exemption under Regulation S-X, discussed in Chapter I, do not have to make the disclosures required by Item 2(b) discussed below.

The discussion below of required disclosure under Item 2(b) of Regulation S-K is intended only as a guideline to assist in preparation of the information to be disclosed. Therefore, not all possible situations will be discussed. If the company has unique or unusual operations or specific circumstances which do not seem to fit into the general guidelines discussed here or in Regulation S-K, it should consult with appropriate legal counsel, accountants and/or the SEC to determine that proper disclosures are being made. Suggested formats for presentation of these required disclosures, which have not been shown in Exhibit I-1, have been included in Exhibit III-1. A checklist of Regulation S-K disclosures is shown in Exhibit III-2.

REQUIRED DISCLOSURES

1. Reserves and Present Value of Estimated Future Net Revenue

As of the end of each of the last five fiscal years ending after December 25, 1978, disclosure must be made of estimated net quantities of reserves by geographic area as defined in Chapter I, Item 5 for each of the following:

<table>
<thead>
<tr>
<th>Disclosure Categories for Reserves and Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Proved oil and gas reserves</td>
</tr>
<tr>
<td>(B) Proved developed oil and gas reserves</td>
</tr>
<tr>
<td>(C) Oil and gas applicable to long-term supply or similar agreements with foreign governments or authorities where the company acts as producer</td>
</tr>
<tr>
<td>(D) The company’s share of reserves of investees accounted for by the equity method.</td>
</tr>
</tbody>
</table>

The present value of estimated future net revenues must be disclosed for each of the categories above by the same geographic areas. Both the reserve quantity information and present value information should be obtained from the company’s reserve report or that of the independent consultant retained to prepare it. Care should be taken to insure that the reserve report is properly classified to disclose the information necessary by geographic area and category. Major discoveries or favorable or adverse events which caused a significant change in estimated proved reserves since the end of the last fiscal year, along with an estimate of the proved reserves associated with that event, must be disclosed; or in the absence of such event, a statement must be made to that effect.

Special disclosures are also required relating to nationalization or takeover by foreign governments, foreign government restrictions on disclosure of reserves or foreign government disclosure requirements for reserves other than proved. If the company is involved in any of these special situations it should refer to Regulation S-K [Items 2(b)(1)(ii)(b) and (c)] and seek assistance to determine that proper disclosure is made.

If the company reports estimated total proved net reserves to any other governmental authority or agency, which differs from the total reserve estimate in the SEC filing by five percent or more, the amount of reserves
reported, the name of the agency or authority, and an explanation of the reasons for the difference must be disclosed. If there were no such reports or the difference did not exceed five percent, a statement to that effect must be included.

2. Production

Net Quantities

Net quantities of oil and gas produced must be disclosed by the same geographic area as used for reserves in 1 above for each of the last five fiscal years ending after December 25, 1978, along with separate disclosures of the net quantities of each received relating to reserves under category (C) of Item 1 above.

Net production includes only production owned by the company and produced to its interest less royalties and production due others. Where reporting net production before royalties is more appropriate (e.g., foreign production), that fact should be noted. Any material natural gas liquids production from processing plant ownership rather than leasehold ownership should be reported separately. Natural gas production should include only marketable production on an "as sold" basis. Flared gas, injected gas and gas consumed in operations should be omitted. Recovered gas-lift gas and reproduced gas should not be included in production until sold. These production figures should come from company records maintained on a perpetual basis to generate production information for dollar amounts and volumes by the appropriate geographic area and category.

Average Sales Price and Production Costs

Average sales price (including transfers) per unit of oil produced and of gas produced and average production cost (lifting cost) per unit of production must be disclosed for each of the last five fiscal years ending on or after December 25, 1978 by the same geographic areas for which production is reported. The average sales price should be calculated by dividing total sales dollars received for oil or gas by the number of units sold of each. Transfer prices shall be valued on an arm's length transaction basis. The average production cost should be calculated by using production costs as disclosed pursuant to Chapter I, Item 3. These costs should be divided by units of production. Where properties contain both oil and gas reserves, common units of production should be calculated by conversion on the same basis as is used in computing amortization, i.e., either relative energy content or gross revenue method. If the company follows the successful efforts method of accounting, the relative energy content method must be used without considering their relative sales values. [See Rule 3-18(e)(3).] Where the company follows the full cost method of accounting, the gross revenue method may be used when more appropriate. [See Rule 3-18(i)(3)(iii).]

3. Drilling Activity and Acreage

Productive Wells and Developed Acreage

Total gross and net productive wells and total gross and net developed acres must be disclosed separately for oil and gas as of the end of the most recent fiscal year or as of a reasonably current date. The information on developed acres should be shown by the geographic areas for which production data are required pursuant to 2 above. This information should be
obtained from well files or from perpetual information maintained by the company.

Multiple completions in the same bore hole must be counted as one well, and number of wells with multiple completions should be disclosed in a footnote. Gross wells or acres are defined as a well or acre in which a working interest is owned. A well should be classified as an oil well if any one of its multiple completions discovers material oil reserves. A net well or acre exists when the sum of fractional ownership working interests in gross wells or acres equals one. The number of net wells or acres is the sum of the fractional working interests owned in gross wells or acres expressed as a whole number and fraction thereof. Productive wells are defined as producing wells or wells capable of production (shut-in).

**Undeveloped Acreage**

Total gross and net undeveloped acreage, both leases and concessions, if any, by appropriate geographic area must be disclosed as of a reasonably current date or last fiscal year-end along with an indication of acreage concentrations (leaseplays), and, if material, minimum remaining terms of leases and concessions. Undeveloped acreage is defined as lease acres on which wells have not been drilled or completed to a point that would permit production of commercial quantities of oil and gas regardless of whether or not that acreage contains proved reserves.

**Net Productive and Dry Exploratory Wells**

The number of net productive and dry exploratory wells drilled and the number of net productive and dry development wells drilled for each of the last five fiscal years ending after December 25, 1978 must be disclosed, by appropriate geographic area. A dry well (hole) is an exploratory or development well found to be incapable of producing quantities of oil or gas to justify completion of the well. The number of wells drilled refers to the number of wells (holes) completed (i.e., either permanent equipment for oil and gas production installed or abandoned) during the fiscal year, regardless of when drilling was initiated.

**Present Activities**

Present activities (e.g., wells in process of drilling, waterfloods in process of installation, pressure maintenance operations) of materially important oil and gas operations must be disclosed by appropriate geographic area as of a reasonably current date or most recent fiscal year-end. This includes both gross and net wells in the process of drilling (including wells temporarily suspended). This disclosure should include only wells actually being drilled and not wells planned or committed but not commenced by the "as of" date.

**4. Commitments**

Where the company is obligated to provide fixed and determinable quantities of oil and gas in the future under existing contracts or agreements, material information concerning estimated supply availability must be disclosed. Such disclosures must include:

1) The total quantities of oil and gas subject to delivery commitments,
2) Identification of the principal sources of oil and gas and the total available amounts expected to be received from each source and from all sources combined,

3) Steps taken to ensure available reserves and supplies are sufficient to meet such commitments.

Such information should be furnished as to current and future reserves and supplies and should be provided for an appropriate period of one to five years. Available amounts are those estimated quantities of oil and gas which can be produced from proved developed reserves using presently installed equipment under existing economic and operating conditions or which can be delivered to the company under long-term contracts or agreements. If applicable, disclosure should be made by appropriate geographic area. Where the company was unable to meet any significant delivery commitments within the last five years, the event's circumstances and impact on the company must be described. Other relevant factors significant to the company's situation should be disclosed. (See Regulation S-K, Item 2(b)(8)(iii) for further discussion.)

S-K DISCLOSURE FORMATS

OIL AND GAS PRODUCTION
(For each of the last five fiscal years ending after December 25, 1978)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
<th>Total</th>
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<tr>
<td><strong>Net Quantities Produced</strong></td>
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<td>Oil</td>
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<td>Gas</td>
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<tr>
<td><strong>Net Quantities Received Applicable to Long-Term Supply Agreements with Foreign Governments (Company Operated)</strong></td>
<td>XX</td>
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AVGAGE SALES PRICE AND PRODUCTION COST PER UNIT
(For each of the last five fiscal years ending after December 25, 1978)

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<th></th>
<th>Domestic</th>
<th>Foreign Geographic Area I</th>
<th>Foreign Geographic Area II</th>
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<td><strong>Sales Price per Unit:</strong></td>
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<td>Oil</td>
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<td>Gas</td>
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<td><strong>Production Cost per Equivalent Unit:</strong></td>
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<td>Oil</td>
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<td>Gas</td>
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### DRILLING ACTIVITY AND ACREAGE
(As of the end of the most recent fiscal year)

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<td><strong>Undeveloped Acres:</strong></td>
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<td>Leases</td>
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<td>Gross</td>
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<tr>
<td>Concessions</td>
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<tr>
<td>Gross</td>
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<td>Net</td>
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<td>XX</td>
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(For each of the last five fiscal years ending after December 25, 1978)

|                          |          |                           |                           |       |
| **Net Exploratory Wells Drilled:** |          |                           |                           |       |
| Productive               | XX       | XX                        | XX                        | XX    |
| Dry                      | XX       | XX                        | XX                        | XX    |
| **Net Development Wells Drilled:** |          |                           |                           |       |
| Productive               | XX       | XX                        | XX                        | XX    |
| Dry                      | XX       | XX                        | XX                        | XX    |

(As of the end of the most recent balance sheet date)

|                          |          |                           |                           |       |
| **Wells in the Process of Drilling:** |          |                           |                           |       |
| Gross                    | XX       | XX                        | XX                        | XX    |
| Net                      | XX       | XX                        | XX                        | XX    |
REGULATION S-K CHECKLIST—OIL AND GAS PRODUCING COMPANIES

A. General
1. Have a general description and location of material physical properties, including identification of the industry segment in which the property is used, been disclosed [item 2.(a)]?
2. Have major encumbrances against those properties, if any, been disclosed [item 2.(a)]?
3. Has the nature of ownership of the oil and gas properties been disclosed (i.e., leases, assignments, overriding royalty interests or working interests) [item 2.(a)]?
4. Did the Company contact the staff of the Office of Engineering, Division of Corporation Finance, of the SEC, if reserve estimates are being reported, to determine if the staff will require a reserve report as supplemental information [item 2.(a), instruction 4.(i)]?
5. Has an independent consultant been used in preparation of reserve information and, if so, has he been named in the filing [item 2.(a), instruction 4.(ii)]?
6. Is the Company exempt from disclosures required by item 2.(b) because it is a limited partnership or joint venture [item 2.(b), instruction 1], or because it meets certain size criteria [Rule 3-18(k)]? (See Test 1 in Exhibit I-2.)

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<th>No</th>
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B. Reserves and Present Value of Estimated Future Net Revenue
1. Has disclosure been made as of the end of each of the last five years ending after December 25, 1978, of net quantities of reserves for the following [item 2.(b)(1)(i)]:
   a. Proved oil and gas reserves?
   b. Proved developed oil and gas reserves?
   c. Oil and gas applicable to long-term supply agreements with foreign governments where the Company acts as producer?
   d. The Company's share of reserves of investees accounted for by the equity method?
2. Have disclosures been made, for each of the quantities reported under B.1., above, of the present value of estimated future net revenue in accordance with Rule 3-18(k)(6) [item 2(b)(1)(ii)]?
3. Have these disclosures been properly segregated by geographic area in accordance with Rule 3-18(k)(5) [item 2(b)(1), instruction (a)]?
4. For foreign reserves, have the special considerations relating to nationalization or restrictions placed on disclosure been properly disclosed [item 2(b)(1), instructions (b) and (c)]?
5. Have all major events or discoveries or other favorable or adverse events having a significant effect on the reserves during the year, or lack thereof, been properly disclosed [item 2(b)(1), instruction (d)]?
C. Reports to Other Federal Authorities or Agencies
Has disclosure been made of any reserve information reported to other Federal agencies, along with the agency name and a reconciliation of any differences in the reported reserves in excess of five percent [item 2.(b)(2)]?

D. Production
1. Have net quantities of oil and gas produced and net quantities of oil and gas received under long-term agreements with foreign authorities where the Company acts as operator been disclosed for each of the last five fiscal years [item 2.(b)(3)(i)]?
2. Have average sales price per unit of oil produced and of gas produced and average production cost per unit of production been disclosed for each of the last five fiscal years ending after December 25, 1978 [item 2(b)(3)(ii)]?
3. Are the geographic areas for the information disclosed under 1 and 2 no larger than those defined in item 2(b)(1) [item 2(b)(3)(iii)]?
4. Have production costs per unit been calculated based on production costs as defined by Rule 3-18(k)(3) [item 2.(b)(3), instruction (e)]?
5. Has natural gas liquids production obtained through processing plant ownership rather than through leasehold ownership been disclosed separately, if material [item 2(b)(3), instruction (b)]?

E. Drilling Activity and Acreage
1. Have total gross and net productive wells separately for oil and gas and total gross and net developed acreage been disclosed as of the end of the most recent fiscal year by geographic area, as defined by item 2(b)(3) [item 2(b)(4)]?
2. Have multiple completions been counted as only one well and has the number of multiple completion wells been disclosed [item 2(b)(4), instruction (a)]?
3. Have total gross and net undeveloped acreage for both leases and concessions been disclosed by appropriate geographic area [item 2(b)(5)]?
4. Have any acreage concentrations and minimum remaining lease terms, if material, been disclosed [item 2(b)(5)]?
5. Has disclosure been made of the number of net productive and dry exploratory wells drilled and the number of net productive and dry development wells drilled for each of the last five fiscal years ending after December 25, 1978, by appropriate geographic area [item 2(b)(6)]?
6. Have the Company’s present activities, such as wells in process of being drilled, gross and net, been disclosed as of the end of the most recent fiscal year by appropriate geographic area [item 2(b)(7)]?
7. Have disclosures been made of any failure to meet any significant delivery commitments in the last five years [item 2(b)(8)(iv)]?
8. If the Company is obligated to provide fixed and determinable quantities of oil or gas in the future under existing contracts, has material information concerning estimated availability of oil and gas from present future sources been disclosed [item 2(b)(8)]?
As shown in Chapter II, estimates of proved reserves are playing a significant role in the development of future financial accounting and reporting principles for the oil and gas producing industry. The importance of reserve estimates is not new to the industry, nor is the auditor’s role as it pertains to reserves. Historical financial statements prior to ASR Nos. 257 and 258 included provisions for depreciation, depletion and amortization which, for the most part, were based on the ratio of current production to total estimated production (reserves). Lending institutions and investors use reserve estimates as a primary consideration in providing capital to the industry. Also, management’s decisions affecting the future activities of oil and gas producing companies are based in part on reserve estimates. However, now that the value of such reserves may actually be incorporated into financial statements, reserve estimation and the need to ensure that such estimates are reasonable assume even greater importance.

The Society of Petroleum Engineers (SPE) has issued a release entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserve Information.” The major topics of this release are:

1. The basis and purpose of developing standards pertaining to the estimating and auditing of reserve information, and limitations thereof
2. Definitions of selected terms
3. Professional qualifications of reserve estimators and reserve auditors
4. Standards of independence, objectivity and confidentiality for reserve estimators and reserve auditors
5. Standards for estimating proved reserves and other reserve information
6. Standards for auditing proved reserves and other reserve information.

Obviously the standards are complex. Portions of the release are highlighted in this chapter to impart a general understanding of the engineers’ view of reserve estimation and its complications; however, the release itself should also be read in detail. Copies may be obtained from the SPE, Book Order Department, 6200 N. Central Expressway, Dallas, Texas 75206

Section 2.2 of the SPE release defines a “reserve estimator” as one responsible for estimating and evaluating proved reserves and other reserve information. A “reserve auditor” is defined as one responsible for the conduct of an audit with respect to reserve information estimated by others. The suggested qualifications of the reserve estimator are:

1. A minimum of three years’ practical experience in petroleum engineering or petroleum production geology, with at least one of those years being in the estimation and evaluation of reserve information, and
2. Either (a) a degree in petroleum engineering, geology, or other discipline of engineering or physical science obtained from a college or university, or (b) a registered or certified professional engineer’s or geologist’s license, or the equivalent thereof, obtained from an appropriate governmental authority or professional organization.
The suggested qualifications for a reserve auditor are stricter than those for a reserve estimator, in that a minimum of ten years' experience is suggested, with at least five years being in the estimation and evaluation of reserve information.

Article IV of the SPE release deals with independence of reserve estimators and objectivity of reserve auditors. Section 4.1 of the article states:

In order that users of Reserve Information may be assured that the Reserve Information was estimated or audited in an unbiased and objective manner, it is important that Reserve Estimators and Reserve Auditors maintain, respectively, the levels of independence and objectivity set forth in this Article IV. The determination of the independence and objectivity of Reserve Estimators and Reserve Auditors should be made on a case-by-case basis. To facilitate such determination, the Society has adopted (i) standards of independence for consulting Reserve Estimators and consulting Reserve Auditors and (ii) standards of objectivity for Reserve Auditors internally employed by Entities to which the Reserve Information relates. To the extent that the applicable standards of independence and objectivity set forth in this Article IV are not met by Reserve Estimators and Reserve Auditors in estimating and auditing Reserve Information, such lack of conformity with this Article IV shall be set forth in any report or opinion relating to Reserve Information which purports to have been estimated or audited in accordance with these Standards.

Like engineers, accountants are also concerned with assuring that reserve estimates are reasonable. The Oil and Gas Reserve Data Committee of the Auditing Standards Board of the American Institute of Certified Public Accountants (AICPA) has issued an exposure draft of a proposed audit and accounting guide entitled “Oil and Gas Reserve Information Required by Regulation S-X.” The profession recognizes that, in the majority of cases, the accountant does not have the knowledge or experience necessary to estimate and evaluate oil and gas reserves. Thus the accounting auditor (auditor) should use the work of an independent consulting reservoir engineer as part of his auditing procedures to obtain sufficient, competent evidential matter concerning an entity’s reserve information. Accordingly, the AICPA guide describes auditing procedures that the auditor should consider in reviewing reserve information supplied to him.

The auditor may obtain the required audit evidence by any of the following procedures:

1. Reliance on the estimates of an independent consulting reservoir engineer who has estimated substantially all of the company’s reserve information.
2. Reliance on the opinion of a consulting reservoir engineer who has studied and evaluated the methods used by the company to estimate and document its reserve information—in this case the engineer would test the company’s work as he deems necessary.
3. Reliance on the company-developed reserve information if a consulting reservoir engineer reestimates a majority of the company’s reserve data and the auditor concurs with the scope of the engineer’s testing.
Regardless of whether the information is developed internally or externally, the AICPA guide requires the auditor to test the accounting-related information used in the reserve information calculations. The listing of properties, production data, ownership percentages and reserve value information (e.g., prices, costs and discount factor) should be reviewed and tested in detail.

The auditor should also inquire about the consulting reservoir engineer; he should be satisfied as to the engineer's professional qualifications, reputation and relationship to the company. Inquiries of other auditors, engineers, users of the engineer's services (e.g., banks or other oil and gas producers) and the reservoir engineer himself will all be helpful in this task. Ordinarily, the company should obtain the services of a consulting reservoir engineer who is unrelated to it, thus avoiding the question of independence.

To ensure that reasonable reserve estimates are included in the financial statements, the company, the consulting reservoir engineer and the auditor should reach an understanding as to the nature of the work to be performed by the engineer. The guide suggests that the understanding be documented and include:

1. The scope of work,
2. Timing of the work,
3. Coordination of the work with the auditor,
4. Nature of the report to be generated,
5. Availability of information to the engineer, and
6. Use of the report by the auditor.

Exhibit IV-1 is a list of action steps to be performed in establishing the understanding among the parties involved. Exhibit IV-2 is a checklist of audit procedures to be considered in testing a reserve report. Exhibit IV-3 provides an example of a letter that the company can send to the engineer which serves not only as a confirmation of reserve information, but also provides pertinent information about the engineer and the review performed. Exhibit IV-4 presents an example of a typical reserve report, with an explanation of the report's information.
CHECKLIST TO COORDINATE PREPARATION AND REVIEW OF THE RESERVE REPORT

A. If the reserve report is prepared internally and not certified by an independent consulting reservoir engineer, have the following been considered:

1. Qualifications of the personnel doing the work?
2. Independence of the personnel doing the work (actual and implied)?
3. Acceptability of the report by third parties, i.e., bankers, independent accountants, SEC staff, underwriters, attorneys and board of directors?

Note: These factors will be the basis that the independent accountants use in determining the amount of reliance they may place on the report without having an external review.

B. With respect to the reserve report have the following been accomplished:

1. A complete list of producing properties as of the date of the reserve report, usually the balance sheet date (interim date may be used if updated through the balance sheet date)?
2. A complete list of individual producing wells or field data such as decline curves, production history, latest selling prices, long-term contracts or contracts with escalation, operating costs, ownership data, prior reserve data, tax data, and undeveloped reserve data behind pipe or on offset locations?
3. A development budget for proved undeveloped reserves and underlying support data including AFE contracts, cash flow projections, etc.?
4. A meeting between interested parties (company personnel assigned to project, independent accountants and independent engineers) to coordinate information flows, timing, form and content of report, reconciliation between reports and method of resolving discrepancies?

Note: If the reserve report is to be internally generated without outside review, an independent engineer or other qualified person will be supplied by the independent accountant to review the reserve report. Sources of referrals on the external engineer are bankers, accountants, attorneys, underwriters, industry contacts and the Society of Petroleum Engineers.
CHECKLIST OF AUDIT PROCEDURES TO BE CONSIDERED IN TESTING A RESERVE REPORT

A. Read and be familiar with the AICPA audit guide on oil and gas reserve information and the SPE guide “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserve Information.”

B. Ascertain if an independent engineer is to be used or if reserve information is to be internally generated.

C. Meet with interested parties (company personnel assigned to project, independent engineers) to coordinate information flows, timing, form and content of report, reconciliation between reports and method of resolving discrepancies.

D. If the reserve information is to be generated externally:
   1. Obtain the independent engineer’s reserve report.
   2. Confirm the independence of the report with the engineers and obtain a summary analysis from them.
   3. Obtain representation from the independent engineers that information is in compliance with requirements of SFAS No. 19 and ASRs.
   4. Review the independent engineer’s report and evaluate any material changes in reserves by region or property from that reported the prior year.
   5. Discuss overall reserve position and causes for significant reserve fluctuations with appropriate company personnel and obtain management’s representations as to appropriateness of current estimates.
   6. In operations analysis, compare actual current year production, prior estimated production for current year, and prior year actual production and explain significant variations.
   7. Determine, review and evaluate for reasonableness the assumptions utilized in the preparation of the reserve study.
   8. On a test basis, agree the basic data (mineral interest, production, operating cost, sales price, etc.) furnished the independent engineer by the client to appropriate company records (division orders, run tickets, operating statements, remittance advices, etc.)
   9. For properties selected, compare reserve estimates in the current year to those of the prior years.

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10. Discuss the Company's oil and gas reserves with the independent engineer and consider the internal controls over data and computations as practiced within the engineer's organization.

11. Manually check computations in the independent engineer's report, on a test basis, using the client's data and assumptions.

Note: Present value calculations under the engineer's reports must be tested on a property-by-property basis. The present values are also calculated based on a continuous compounding formula and exact amounts on a month-to-month basis are not easily calculated; however, the reasonableness of the amounts should be tested and evaluated.

12. Obtain additional financial statement disclosures to be prepared by engineers, review for reasonableness and test check information.

E. If the reserve information is to be generated internally:
   1. Perform the steps as outlined in D. above.
   2. Consider the factors as outlined in the proposed AICPA audit and accounting guide, "Oil and Gas Reserve Information" as quoted below:
      a. The qualifications of reserve estimators.
      b. The degree to which reserve estimators are free from bias due to their own collateral duties, or the duties and responsibilities of their immediate supervisors.
      c. The extent to which projected performance is compared to actual performance, and the promptness with which action is taken when there are unexpected differences.
      d. The regularity with which reserve determinations are reviewed for possible revision as a result of new information about reserves, especially with respect to new properties or external events that might significantly affect the estimates (e.g., significant changes in allowable prices for production pursuant to Federal regulations).
      e. The extent and quality of internal audit involvement.
      f. Materiality of oil and gas reserves to the financial statements taken as a whole.
      g. Relative size of the properties.
      h. Results of testing properties in prior periods.
      i. Changes in production history when compared to estimated production.

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SAMPLE LETTER TO CONSULTING RESERVOIR ENGINEER

Dear Consulting Reservoir Engineer:

Our auditors, Touche Ross & Co., are making an examination of our financial statements for the year ended December 31, 19XX. In connection therewith, they wish to obtain direct, independent confirmation from you of the Company's estimated mineral reserves, the related information in your reports, and the assumptions utilized in preparing the reserve estimates as of (Reserve Report Date).

I. Please provide responses to the following inquiries:

A. Registration certificate held by you as a professional petroleum engineer, and number of years as a qualified reserve estimator and/or auditor.

B. Financial relationships, if any, between you or your associates, and XYZ Oil and Gas Corporation, including investments in the Company's securities, indebtedness to or from the Company, and participation in joint venture operations in which the Company is also a participant.

C. Limitations and/or restrictions, if any, placed upon you by officials of the Company in your evaluation of the Company's estimated mineral reserves and the preparation of your reports thereon.

D. Any information obtained by you subsequent to your report dated (Reserve Report Date) that would have a material effect on the various amounts and classifications of reserves reported upon.

E. Are your fees contingent in whole or in part on the results of your report? If so, disclose the nature of your agreement with the Company.

F. Amount of outstanding fees owed to you by the Company.

G. Please indicate any services performed by you for the Company during the year other than an independent evaluation of reserves.

II. In order to comply with recent Securities and Exchange Commission releases (Accounting Series Release Nos. 253, 257, 258, 269, and 270), the following criteria must be met. Please indicate below whether or not these criteria have been satisfied.
A. A 10% discount rate was used to derive the present value of revenues and costs.

B. Prices used to determine revenues were the latest prices received for the minerals and were not escalated for an inflation factor. (Prices that increase per contracts and are fixed and determinable may be used.)

C. Costs are not escalated for an inflation factor and are determined on current amounts.

D. Estimated future costs include anticipated development and restoration costs (if material).

If economic circumstances indicated that use of units of revenue was a more appropriate basis for computing amortization, please discuss.

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III. Please complete, sign and return this letter along with the following information directly to our auditors, Touche Ross & Co.:

A. A copy of your independent reserve study.

B. A description of information furnished to you by the Company and the procedures performed by you to verify the accuracy of this information. If applicable, please describe what action you took when the Company's projections differed significantly from your projections.

C. An opinion by you attesting to the reasonableness of the estimates of our Company's proved reserves and the other reserve information and that such estimates were prepared in accordance with generally accepted petroleum engineering and evaluation principles.

Thank you for your cooperation and attention to this matter.

Very truly yours,

Company Official

Touche Ross & Co.

Gentlemen:

I have reviewed the above-noted information, and my responses to the Company's inquiries, to the best of my knowledge, are correct and complete.

(Consulting Reservoir Engineer)

By: ________________________________

Title: ______________________________

Certificate #: _______________________

Date: ______________________________
### EXAMPLE OF A RESERVE REPORT

**Well No. 1**

<table>
<thead>
<tr>
<th>Period End</th>
<th>Gross Bbls</th>
<th>Net Bbls</th>
<th>Value @ $XX/Bbl</th>
<th>Ad Valorem &amp; Production Tax</th>
<th>Total Operating Costs</th>
<th>Company's Working Interest Costs</th>
<th>Future Net Income @ 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>19X1</td>
<td>XX</td>
<td>XX</td>
<td>$ XX</td>
<td>XX</td>
<td>$ XX</td>
<td>$ XX</td>
<td>$ XX</td>
</tr>
<tr>
<td>19X2</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
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<td>XX</td>
</tr>
<tr>
<td>19X3</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
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<td>XX</td>
</tr>
<tr>
<td>19X4</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Total</td>
<td>XX(1)</td>
<td>XX(2)</td>
<td>$ XX(3)</td>
<td>$ XX</td>
<td>$ XX(4)</td>
<td>$ XX(5)</td>
<td>$ XX(6)</td>
</tr>
</tbody>
</table>

Net Revenue Interest .XXXX
Working Interest .XXXX
Ad Valorem and Production Tax XX %
Operating Cost $XXXX/mo.
Oil Price $XXXX/bbl
Gas Price $XXXX/mcf

1. Net barrels are calculated by multiplying gross barrels by the Company's net revenue interest. It is the net barrel amount that is used in the "Quantities of Oil and Gas Reserves" disclosures as shown in Exhibit I-1.

2. These amounts are calculated by multiplying net barrels by the price per barrel. These net revenues are disclosed in "Net Revenues from Oil and Gas Production" as shown in Exhibit I-1.

3. The ad valorem and production tax percentage is applied to the net revenue amounts, as discussed in (2). This calculated amount is then subtracted from net revenues to arrive at the amounts of this column.

4. The amounts are calculated by multiplying the Company's working interest percentage by the total operating cost amounts.

5. The future net income amounts are the difference between the amounts of (3) less the amounts of (4). These future net income amounts are disclosed in "Estimated Future Net Revenue from Production of Oil and Gas Reserves" as shown in Exhibit I-1.

6. The present value amounts represent future net income discounted at 10%. These present value amounts are disclosed in "Present Value of Estimated Future Net Revenue from Oil and Gas Reserves" as shown in Exhibit I-1.
In October 1979, the FASB issued Statement of Financial Accounting Standards (SFAS) No. 34 entitled “Capitalization of Interest Cost.” The Summary of this release states:

This Statement establishes standards for capitalizing interest costs as part of the historical costs of acquiring certain assets. To qualify for interest capitalization, assets must require a period of time to get them ready for their intended use. Examples are assets that an enterprise constructs for its own use (such as facilities) and assets intended for sale or lease that are constructed as discrete projects (such as ships or real estate projects). Interest capitalization is required for those assets if its effect, compared with the effect of expensing interest, is material. If the net effect is not material, interest capitalization is not required. However, interest cannot be capitalized for inventories that are routinely manufactured or otherwise produced in large quantities on a repetitive basis.

The interest cost eligible for capitalization shall be the interest cost recognized on borrowings and other obligations. The amount capitalized is to be an allocation of the interest cost incurred during the period required to complete the asset. The interest rate for capitalization purposes is to be based on the rates on the enterprise’s outstanding borrowings. If the enterprise associates a specific new borrowing with the asset, it may apply the rate on that borrowing to the appropriate portion of the expenditure for the asset. A weighted average of the rates on other borrowings is to be applied to expenditures not covered by specific new borrowings. Judgment is required in identifying the borrowings on which the average rate is based.

SFAS No. 34 is effective for fiscal years beginning after December 15, 1979, to be applied prospectively.

Several questions have been raised as to how the Statement affects the oil and gas producing industry. As a partial response to these questions, the FASB has issued a proposed interpretation of SFAS No. 34, dated January 28, 1980, entitled, “Applying FASB Statement No. 34 to Oil and Gas Producing Operations Accounted for by the Full Cost Method.”

The proposed interpretation states:

For purposes of applying Statement 34 to oil and gas operations accounted for by the full cost method, assets whose costs are being currently depreciated, depleted, or amortized are assets in use in the earning activities of the enterprise and are not qualifying assets as defined in paragraph 9 of Statement 34 for capitalization of interest cost. Unusually significant investments in unproved properties and major development projects that are not being currently depreciated, depleted, or amortized and on which exploration or development activities are in progress are qualifying assets for capitalization of interest cost.
To the extent that the full cost pool is already being depreciated, depleted or amortized, the company must determine which assets represent “unusually significant” projects. Reference to “unusually significant” projects under the full cost method is made in Rule 3-18(i)(3)(ii)(A) and (B), which states:

The cost of unusually significant investments in unproved properties and major development projects may be excluded from capitalized costs to be amortized, subject to the following:

(A) Costs of acquiring and evaluating unproved properties may be excluded only if the costs incurred are unusually significant in relation to the aggregate costs to be amortized (e.g., the costs of acquiring major offshore leases). All costs of acquiring such properties and related exploration costs shall be excluded from the amortization computation until it is determined whether or not proved reserves are attributable to the properties. Until such a determination is made, the properties shall be assessed individually to ascertain whether impairment has occurred (see paragraph (c) of [Rule 3-18]). If the results of the assessment indicate impairment, the amount of the impairment shall be added to the costs to be amortized.

(B) Costs of major development projects may be excluded from amortization only if unusually significant development costs must be incurred prior to ascertaining the quantities of proved reserves attributable to the properties under development (e.g., the installation of an offshore drilling platform from which development wells are to be drilled, the installation of improved recovery programs, and similar major projects undertaken in the expectation of significant additions to proved reserves). In such cases, a portion of the development costs identified with such a project may be excluded from the costs to be amortized until the proved reserves added as a result of the project are ascertained or until it is determined that impairment has occurred.

Although the interpretation does not deal with companies using the successful efforts method, it appears that the general criteria would apply. Accordingly, assets that are not being depreciated, depleted or amortized are qualifying assets for purposes of capitalization as long as exploration or development activities involving these assets are in progress.

The provisions of the interpretation would be applied when the provisions of SFAS No. 34 are first applied.

Throughout SFAS No. 34 it is stated that judgment will be needed in the application of the Statement’s provisions. This will be especially true for oil and gas producers, given the complexities of the industry.