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No. 85/99

September 16, 1985

TO COUNTY ASSESSORS:

MINIMUM ASSESSMENTS AND THE USE OF MULTIPLIERS IN  
APPRAISAL OF MARGINAL PRODUCING PETROLEUM PROPERTY

Over the last several years, there has been considerable discussion about the use of unit multipliers in the appraisal of hydrocarbon properties. Recently we have had more questions arise on this subject, in particular as to how such multipliers may relate to a "minimum assessed value" for oil-producing property. The purpose of this letter is to restate the Board's opposition to the use of any appraisal techniques or policies that establish "minimum assessments."

The preferred methods of valuing most producing hydrocarbon property are the income and sales approaches. In the case of the latter approach, there are two limiting factors. First, a general lack of sales activity and, second, the difficulty of adjusting for the wide variation of characteristics typical of these properties.

An exception, of course, is the sale of a subject property and, in event the sale meets the definition of market value, it will be given considerable weight in the appraisal process.

As a result, the income approach is the most commonly applied method of valuation for producing hydrocarbon properties.

The unit multiplier technique is typically regarded as part of the market data approach; a unit multiplier is developed from analysis of current sales. The unit multiplier under discussion in this letter is derived from sales of working interests in petroleum properties. For each sale, the purchase price of the working interest is divided by the daily income attributable to the working interest to arrive at a unit figure representing Price Per Daily Working Interest Dollar (PPDWID).

Example 1: Derivation of the Price Per Daily Working Interest Dollar (PPDWID).  
 Assume the situation of a 7/8's working interest, production of one barrel per day, a price per barrel of \$26 and a sale of the working interest of \$10,000. The PPDWID multiplier is computed as follows: First, adjust the price per barrel of oil for the working interest share, i.e.,  $1 \times \$26 \times .875 = \$22.75$ . The sale price divided by the working income equals the PPDWID:  $\$10,000 \div \$22.75 = 440.00$ .

Example 2: Application of the Price Per Daily Working Interest Dollar (PPDWID). The property being valued produces a daily working interest income of \$100.00, the PPDWID as derived is 440.00. The working interest income times the PPDWID equals the value of the property -  $\$100.00 \times 440.00 = \$44,000.00$ .

On occasions in our review of assessment practices we have noticed the unit multiplier is used to establish a minimum assessed value. This occurs when the lowest (minimum) unit multiplier derived is applied to value marginal oil-producing properties across a broad spectrum without regard to the comparability of the sale property to the subject. This represents an arbitrary application of the multiplier.

The proper technique is to consider the attributes and characteristics of the comparable properties to those of the subject and to make a selection within the range of unit multipliers to account for differences. Based upon this comparison, the PPDWID will be applied against the working interest income to value the subject property. In the instance of very dissimilar sale and subject properties, the multiplier should not be used at all.

The validity of the multiplier technique rests on the assumption that the unit multiplier employed in the formula will be applicable to every property appraised by use of that multiplier. Given the many variables which exist among oil-producing properties (well depths and location, cost of production, age of wells, differences in decline rates, differences in productivity, allocation of purchase price to current production, remaining economic life, reserves, and many other factors), the appraiser must be very cautious and very selective in the use of a common unit multiplier as a primary value indicator.

If a unit multiplier is applied selectively to appraise only those properties determined to be highly comparable to the sale or sales from which the multiplier has been derived, then the technique is and should be given great weight in the appraisal process. Where market data are insufficient, use of the Price Per Daily Working Interest Dollar Multiplier should be avoided.

Sincerely,



Verne Walton, Chief  
Assessment Standards Division

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