Oil and Gas Property Tax Valuation

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How are Residential, Land and Commercial Properties appraised for property tax purposes?

The Texas Property Tax Appraisal Process for residential, land and commercial properties can be summarized in a few sentences, although numerous factors can complicate the valuation. Essentially**, a mass appraisal system,** based on the classing of similar properties, **is utilized to determine a market value**. Recent sales of similar properties, along with any cost and income data, are considered to establish a market value (the amount a property would sell for) as of January 1.

How do Oil and Gas Interest Valuation Differ?

Oil and gas valuation for property tax purposes can be more complex than other types of properties. The appraisal district contracts with a specialized appraisal firm that obtains **current data on oil and gas production by lease, starting price per barrel, and typical lease operating expense data**. The economic life of a well is projected using these numbers.

Who is the Operator, the Royalty Owner, the Overriding Royalty Interest Owners, and Lease Operating Expenses*?*

The **Operator** of a lease is a company contracted with the mineral owners to drill wells. The company operating the lease is responsible for all costs and equipment associated with the lease. The owners of the mineral interests in the land are the **Royalty Interest Holders**. They allow the operator to produce the minerals for a portion of the earnings. The royalty owners receive no credit for the lease operating expenses and are not taxed on the equipment. **Overriding Royalty Interest** is treated like a royalty interest for property tax purposes. Overriding royalty interest generally involves investors who buy into a lease. **Lease Operating Expenses** are the **day-to-day costs of operating the lease**. We develop and use the prior year's average monthly adjusted expense unless the lease operator provides their actual expenses.

What is a Lease or a Unitized Field?

A **Lease number** is assigned by the Texas Railroad Commission. It may involve one single gas well or a number of oil wells on a specified tract producing from the same reserves. A **Unit or Unitized Field** is a group of leases within one field or part of a common source of supply. **Unitization** refers to field or reservoir-wide development. The operator will unitize all the production and pay royalties based on percentage ownership in the entire unit rather than individual leases.

How do you derive Market Value Using Discounted Cash Flow Analysis (DCF)?

The DCF Method is versatile and widely used to appraise income producing property. It is the preferred method to evaluate mineral interests. It involves **forecasting the anticipated net income each year** attributable to the future sale of oil and gas reserves. Each annual cash flow is discounted to present value for the property's remaining economic life. All the present values are added to obtain the total market value of the property interest. This **Income Approach Method** is the predominant evaluation technique used by actual buyers and sellers in the marketplace. It is also used for property tax assessment purposes.

Market value is calculated using the three key factors in oil and gas appraisal**: Production, Prices, and Costs.** The **Production** is obtained from the Texas Railroad Commission and the Texas Comptroller's Severance Tax information. Graphing the historic production assists in determining the decline curve of the production on January 1. **A projected production curve throughout the economic life of the lease determines the point at which it will be no longer economical to produce the lease in the future.**

The Price required to be used by appraisal districts is referred to in the **Texas Property Tax Code Section 23.175.** Amended beginning tax year 2016, the **starting price** is derived by the **forecasted price for Year One being equal to last year's average monthly price multiplied by a "Price Adjustment Factor" (PAF). This PAF is equal to the percentage increase or decrease projected for oil and gas prices for the next calendar year** by the U.S. Energy Information Administration (EIA) in their most recently published Annual Energy Outlook (AEO).

Costs are the day-to-day expenditures of operating the lease or the lease operating expenses. We develop and use the prior year's average monthly adjusted expense unless the lease operator provides their actual expenses

Why not just use last year's production income as the value?

Using last year's income as the value for property tax purposes would not be legal or constitutional. "Fair Market Value" is statutorily defined in the Property Tax Code, Section 1.04(7). In Texas, all property is appraised "as of" January 1 of each tax year for property tax purposes, per Texas Property Tax Code, Section 23.01(a). Property tax is also called **an "ad valorem" tax, which is a Latin phrase meaning "according to value."** Ad valorem does not mean "according to last year's income."

When appraising an income producing property, such as a mineral interest, historical **income is useful for the purpose of determining a projected production curve.** However, it may not be all that meaningful relative to all potential future income that is always the basis of value to either a buyer or seller of that property. For example, a well may have produced only a short time the previous year (say, they may be new or maybe had temporary mechanical problems). This situation will naturally generate less income for that year than a buyer or seller would consider "normal" for future operations.

Future Income Potential indicates Market Value.

A mineral interest typically produces income payable to the owner of the interest for many years. If a well or lease is still producing as of January 1, the market value of this interest will always reflect **the future income potential**, and not the income received in the prior year. In most cases this income potential reflects a forecast for the producing life of the well or lease to last several more years.

The mineral interest value for any particular year indicates the future, as of January 1, because that is the way buyers and sellers of these properties view them (as investment properties). Each **new tax year brings a completely new outlook of what the future may hold**. This does not make the previous values wrong; it only shows that the calculation can change over time, depending on the changing variables.

The appraisal district appraises mineral interests each year to the best of our ability, with **the latest information** available and with the **price forecast provided to us**. The income approach, as applied to a mineral interest, demands an "educated guess" or the appraiser's opinion as to what the future income will be in the property. **The discounted cashflow appraisal shows how many years the appraisal district forecasts the net income, after expenses, to be positive for the working interest owners.** This future time period of projected profitability**, the economic limit,** is the appraisal district's best educated guess as to how much longer the lease is going to produce.