WARDLAW APPRAISAL

2019 TAXPAYER INFORMATION FOR

MINERAL INTEREST OWNERS

OF OIL AND GAS PROPERTY

This information sheet is provided to explain how your mineral interest is appraised for Texas ad valorem property tax purposes. Minerals are classified as real property in Texas. Each property (lease) is appraised separately and the value is allocated to each owner based on your decimal interest ownership in the lease. The appraised value represents the **fair market value** of the property (the lease/wells) as of January 1 of each year. The fair market value generally represents a reasonable value for which you might consider selling your interest.

The appraised value is calculated by projecting the future income of the property. Your previous year's income is not a legal basis for the appraisal.

The projected future income calculation is called a discounted cash flow analysis and uses the following information:

1) INITIAL PRODUCTION RATE:
   Normally the actual January 2019 monthly production (Barrels or MCF per month). Monthly production information is publicly available from the Texas Railroad Commission online production records.
2) RATE OF DECLINE:
   A decimal number representing the initial annual % rate the production is projected to fall off. This 'decline rate' is established from the prior historical trend of the lease or from similar leases.
3) PRICE OF OIL AND GAS
   The actual 2018 oil or gas price received from each lease is multiplied by a 'Price Adjustment Factor' (Oil=79.2%, Gas=100.7%) and the resulting prices are used for the first appraisal year. The prices use in years 2-6 are escalated by 0.807% per year for oil and by 0.186% per year for gas. Prices are held flat after the sixth year. The average 2018 oil and gas prices are obtained from either Texas Comptroller severance tax records, Operator data or royalty owner information.
4) LEASE OPERATING EXPENSES (LOE)
   Average monthly lease operating costs from the preceding year as submitted directly by the operator are used if available. Otherwise, reasonable operating costs for the area are used and calculated as a function of depth and number of wells.
5) PRODUCTIVE LIFE OF THE WELL
   Monthly income is calculated until the revenue received by the working interest is less than the monthly lease operating expense. We assume an operator won't continue to produce the lease once they begin to lose money.
6) SEVERANCE TAX EXPENSE
   Severance taxes are deducted from the monthly lease income. The normal rates are: Oil=4.6%, Gas=7.5%.
7) EQUIPMENT VALUE
   The salvage value of lease equipment (personal property) is added to the working interest (only) as a capital asset. The value is calculated as a function of the depth and number of wells on the lease.
8) DISCOUNT RATE
   Income you receive at some time in the future is not as valuable as income you could receive today. Discount rate factors have been determined and used to calculate a reduced present value of the future income calculated in the appraisal.

Using all the gathered appraisal information on the lease including the factors identified above, the future income from the lease is calculated over its economic life and then discounted to determine the appraised value. The calculations follow the basic steps described below:

1) Projected future gas, condensate and oil production rates are calculated using standard petroleum engineering methodology, based primarily on projection of historical production performance.
2) Future monthly revenues are calculated by multiplying projected production volumes by the oil and gas prices, deducting the severance taxes, and then separating out the working interest (87.5%) and royalty interest (12.5%) portions of the revenue.
3) The monthly working interest net revenue (cash flow) is calculated by subtracting the monthly operating expenses from the projected monthly revenue. When the monthly working interest net revenue is less than the monthly operating expense the projection stops. Monthly operating expenses are not deducted from the royalty interest monthly income.
4) The future monthly income is discounted to establish its present (1/1/2019) value. The sum of the discounted future revenues from each month of the well's projected life is the **fair market appraised value** of the well.

After the fair market appraised value of the well has been calculated, the value is distributed equally to each mineral interest owner based on the ownership type and percentage.

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