



**2021 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 2021 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 2020 oil or gas production price received from each lease is multiplied by a 'Price Adjustment Factor' (Oil=115.4%, Gas=151.6%) and the resulting value is used as the price for the first appraisal year. The prices used in the second through sixth year (2-6), escalate the first-year price by .061% per year for oil and by -1.05% per year for gas. Prices are held flat after the sixth year. The average 2020 oil and gas production prices are obtained from Texas Comptroller severance tax records, Operator data, royalty owner information and Railroad Commission production data.
- 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 1/1/2021 value. The sum of the discounted future revenues from each month of the well's projected life is the January 1, 2021 **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.



2021 AD VALOREM OIL & GAS PRICE ADJUSTMENT FACTORS & ESCALATION RATES

2021 PRICE ADJUSTMENT FACTOR CALCULATION			
U.S. ENERGY INFORMATION ADMINISTRATION ANNUAL ENERGY OUTLOOK - JANUARY 2021			<i>PAF Ratio</i>
	YEAR		(2021/2020)
	2020	2021	
CRUDE OIL (\$/BARREL)			
West Texas Intermediate Spot Average	\$38.758	\$ 44.720	1.154
NATURAL GAS (\$/MMBTU)			
Henry Hub Spot	\$2.066	\$3.133	1.516

2021 PRICE ESCALATION RATES*	
CRUDE OIL	
% =	.061%
NATURAL GAS	
% =	-1.05%
* These price escalations are used in years 2-6 (2022-2028) of the appraisals	



WARDLAW RESERVES AND VALUES REPORT

Description of Fields and Parameters

EXAMPLE

Major Oil Company

Lease Name: BIG SKY #1 Lease Code: W79561 Lease ID: 27026

000001	BIG SKY #1 ; LPD ID: TXG04 000001 ; Type: OIL						Field & Reservoir			Prolific - Strawn		Status:	ACT
	Init. Rate	Decline 1	Decline 2	Oil	Gas	Lease		Oil Res	Gas Res	Net WI Value	WI Value	RI Value	
	mcf/Bbl	Exp-N1-Mths	Exp-N2	\$/Bbl	\$/mcf	Op Exp	Life of Well:	Bbls	Mcf	& Pct	7/8 Value	1/8 Value	
Primary:	1,000	.50 - .00 - 12	.75 - 1.00	\$50.57	3.13	\$5,000	Year 1:	12,315	125,070	0.75	\$485,246	\$109,392	
Secondary:	10,000	.50 - .00 - 12	.75 - .50			\$1.50		8,909	89,086	\$375,854			

REPORT FIELD

KEY FIELD DESCRIPTION

LEASE & WELL IDENTIFICATION INFORMATION

Major Oil Company	The Operator Name
Lease Name: Big Sky Unit	The Wardlaw Division Order / Lease Name. This can identify either a) an individual lease producing under one RRC#, b) or a group of leases (RRC#s) which all have identical ownership. This name may not be exactly the same as the Railroad Commission lease name.
Lease Code: W79561	CAD Division Order (DO) / Lease Identifier. This DO/lease code corresponds to the DO/Lease Name described above. This number should appear on your notice.
Lease ID: 13067	Wardlaw DO / Lease Identifier. Primarily for internal use by Wardlaw
00001	Railroad Commission (RRC) Lease ID Number
Big Sky	Railroad Commission Lease Name
#1	Railroad Commission Well #
LPD ID: TXO04 000001	Combined Unique Lease Identifier: TX-Texas + O-Oil Well + 04-RRC District 4 + 000001 -RRC Lease ID
Type: OIL	Well Type - Either Gas or Oil

APPRAISAL INPUT PARAMETERS

Primary:	If Well Type = GAS, then this row displays the GAS appraisal input parameters. If Well Type = OIL, then this row displays the OIL appraisal input parameters.
Secondary:	If Well Type = GAS, then this row displays the OIL appraisal input parameters. If Well Type = OIL, then this row displays the GAS appraisal input parameters.
Init Rate (MCF/Bbl)	The initial (January) MONTHLY production rate used in the appraisal. Units are MCF for gas production or Bbls for oil production. This well is appraised using 1,000 Bbls oil production and 10,000 MCF gas production in January 2020.
Decline 1 EXP-N1-Mnths	The specific parameters identifying the initial rate ('decline rate') at which we predict the well production drop off going into the future. Most wells only have decline parameters under Decline 1.
EXP	The initial effective annual exponential decline rate. .50 = 50 % decline. This effectively means the production is initially projected to drop 50% per year.
N1	If the number here is not .00, then the decline is 'hyperbolic' meaning the rate of decline decreases slightly from one year to the next. 'N1' is the exponent used in the hyperbolic decline equation. In the sample case, N1=1.10. The larger this number is, the more the decline decreases each year.
Mnths	The number of months producing at this rate. If this number is '00' then the well produces at this rate for its entire life. In the sample case the well is projected to produce for 12 months at the initial decline rate.
Decline 2 EXP-N1	A second (future) decline stage for the well. This stage begins the month after the 'Decline 1' expires. The property will decline at this rate for the remainder of the well's life. The parameter format replicates 'Decline 1'. The sample property has a Decline 2 rate of 0.80 = 80%.
Oil \$/Bbl	The prior year (2020) average oil price. The 2021 appraisal initially uses 115.4% of this price. (Price mandated by the Texas Property Tax Code)
Gas \$/mcf	The prior year (2020) average gas price. The 2021 appraisal initially uses 151.6% of this price. (Price mandated by the Texas Property Tax Code)
Lease Op Exp	The top row is the MONTHLY fixed lease operating expense(LOE). For this well the fixed LOE is \$5000/month. If the lower row is greater than 0, then there is also a variable monthly LOE rate. The variable rate is multiplied times the primary production rate each month to determine the monthly variable LOE cost. The sample property has a variable cost of \$2 x 1,000 Bbl = \$2,000 per month. Total monthly LOE = Fixed LOE + Variable LOE.

APPRAISAL RESULTS

Oil Res / Bbls	The projected recoverable oil reserves. <i>Life of Well:</i> Oil produced over the well's entire remaining economic life. <i>Year 1:</i> The total calendar year 2021 projected oil production.
Gas Res / MCF	The projected recoverable gas reserves. <i>Life of Well:</i> Gas produced over the well's entire remaining economic life. <i>Year 1:</i> The total calendar year 2021 projected gas production.
Net WI Value & Percent	The calculated actual WI value and ownership in the lease. The calculated appraised value is the portion of the well's total value attributable to the working interest. These fields may show a value of 0 if there is more than one tract in the lease.
WI Value - 7/8 Value	The calculated Working Interest (Operator's) value for a theoretical 87.5% working interest lease.
RI Value 1/8 Value	The calculated Royalty Interest value for a theoretical 12.5% royalty interest lease. The total appraised value of the well equals the WI 7/8 Value + RI 1/8 Value. The Net RI Value equals the total appraised value of the well minus the Net WI Value.



LAWS, RULES AND DOCUMENTS RELATING TO THE TAXATION OF OIL AND GAS INTERESTS

Texas Constitution Article VIII. Taxation and Revenue

§1.(b) "All real property...shall be taxed in proportion to it's value..."

Sections of the Property Tax Code Relating to Oil and Gas Taxation:

Real Property – PTC § 1.04.2 Definitions

"Real property" means: (A) land; (B) an improvement; (C) a mine or quarry; (D) **a mineral in place**; (E) standing timber; or (F) an **estate or interest**, other than a mortgage or deed of trust creating a lien on property or an interest securing payment or performance of an obligation, in a property enumerated in Paragraphs (A) through (E) of this subdivision.

PTC § 23.01. Appraisals Generally (Assessment Date)

(a) Except as otherwise provided by this chapter, all taxable property is appraised at its **market value as of January 1**.

PTC § 1.04.7 Definitions

"Market value" means the price at which a property would transfer for cash or its equivalent...if: (A) exposed for sale in the open market... (B) both the seller and the purchaser know of all the uses... (C) both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the other...

PTC § 23.01. Appraisals Generally

(b) The **market value of property shall be determined by the application of generally accepted appraisal methods and techniques**. If the appraisal district determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice. The same or similar appraisal methods and techniques shall be used in appraising the same or similar kinds of property. However, **each property shall be appraised based upon the individual characteristics that affect the property's market value, and all available evidence that is specific to the value of the property shall be taken into account** in determining the property's market value.

PTC § 32.07. Personal Liability for Tax

(a) ... property taxes are the personal obligation of the person who owns or acquires the property on January 1 of the year for which the tax is imposed ... A person is not relieved of the obligation because he no longer owns the property.

PTC § 23.175. Oil or Gas Interest.

(a) **...oil or gas in place is appraised by a method that takes into account the future income from the sale of oil or gas to be produced from the interest, the method must use the average price of the oil or gas from the interest for the preceding calendar year multiplied by a price adjustment factor as the price at which the oil or gas produced from the interest is projected to be sold in the current year of the appraisal.** The average price for the preceding calendar year is calculated by dividing the sum of the monthly average prices for which oil and gas from the interest was selling during each month of the preceding calendar year by 12. If there was no production of oil or gas from the interest during any month of the preceding calendar year, the average price for which similar oil and gas from comparable interests was selling during that month is to be used...

(b) The comptroller by rule shall develop and distribute to each appraisal office appraisal manuals that specify the formula to be used in computing the limit on the price for an interest used in the second through the sixth year of an appraisal and the methods and procedures to discount future income from the sale of oil or gas from the interest to present value.

(c) **Each appraisal office shall use the formula, methods, and procedures specified by the appraisal manuals developed under Subsection (b).**

PTC § 25.12. Mineral Interest.

(a) Except as provided by Subsection (b) of this section, each separate interest in minerals in place shall be listed separately from other interests in the minerals in place in the name of the owner of the interest.

Texas Property Tax Code: Texas legal statutes regulating assessment and taxation of property.

Available online at: <http://www.window.state.tx.us/taxinfo/proptax/96-297-11.pdf>

Comptroller's Manual for Discounting Oil & Gas Income

Available online at: <http://www.window.state.tx.us/taxinfo/proptax/ogman/>



ROYALTY OWNER FREQUENTLY ASKED QUESTIONS OIL AND GAS APPRAISAL

1. Why is my value so high? I didn't get that much in revenue from the operator.

The appraised value is not based on a prior year's income. It is an opinion of the fair market value of your property and is based on the projected future income. *(The fair market value represents the value that your property could sell for if you were willing to walk away from all future income.)*

2. How did you arrive at my appraised value?

There are a number of parameters used to develop your mineral property appraisal. There is a starting production rate (the operator reports the production monthly to the Texas Railroad Commission. We review that information and determine a representative January start rate), the rate of decline (how fast is the well's production dropping – determined from a review of the historical production trend), the previous year's average oil and gas prices (whichever is applicable) adjusted by the price adjustment factor. Other factors include lease operating expenses (developed from operator records), severance tax rates, and discount rates. See the "Taxpayer Information for Mineral Interest Owners of Oil and Gas Property" for more detailed information.

3. Why do I have to pay property taxes on my mineral interest?

Your mineral interest is considered real property in the State of Texas and is subject to ad valorem taxation. ("ad valorem" is Latin for 'according to value').

4. I received a notice of appraised value (or tax statement) and it's in the wrong name. How do I get it corrected to the right owner?

You will need to inform us and provide our office with the information in writing. If you sold your mineral interest, simply send us a request in writing (letter or e-mail) to let us know who you sold it to and their address. If you inherited it from someone, identify who it was assessed to originally (the person's name) and to whom it should be conveyed along with an address. If there is more than 1 heir, indicate if the interest was split evenly, or, if not, how it should be split.

5. My address has changed. How do I get it corrected?

You may send us a request in writing (letter or e-mail) and indicate the old address and the new address. Please see our contact information at the bottom-right corner of the page.



6. My notice of appraised value has a different percentage than my check stub shows. Why would they be different?

If you are being assessed at a different royalty interest than what shows on your revenue check, please contact our office so that we can research, identify, and correct the problem. If you know that you have sold or bought interest that would account for the difference, please let us know.

7. My mother's (father/uncle/etc.) estate was settled and my attorney said he filed all the necessary paperwork. Why hasn't it been changed at the appraisal district?

Information filed in the courthouse often doesn't make its way directly into our records. We receive detailed ownership information from the lease operators in the form of a 'division of interest listing'. If your interest has changed due to a sale or conveyance since the last time we received and updated the division order listing, we may not have most current information. Simply call our office or send us the information in writing so we can make the necessary changes and get the information to the appraisal district.

8. If I give you the information to change the ownership on my interest, do I need to call the appraisal district and the tax offices, too?

No, you do not need to make any other call pertaining to your mineral interest. We provide the appraised value and ownership information to the appraisal district. They send that information to their taxing entities. However, any ownership information pertaining to real estate must be provided to the appraisal district directly.

9. Will my value in my mineral property go down if the production goes down?

Production rate is only one of the factors in a mineral appraisal. If production rates go down but prices go up, the appraised value of your property could increase.

10. Am I paying all the taxes on this property?

No, the entire value of the well is proportionately divided among all the royalty, overriding owners and the working interest owner (operator) depending on their interest percentage and interest type.