



MORRIS COUNTY APPRAISAL DISTRICT

BIENNIAL REAPPRAISAL PLAN FOR TAX YEARS 2015-2016

The 2015-2016 Reappraisal Plan of the Morris County Appraisal District was approved by the Morris County Appraisal District Board of Directors on August 28, 2014 by Resolution 2014-005, after a public hearing was held on said reappraisal plan in accordance with 6.05 (i) of the Texas Property Tax Code.

STATE OF TEXAS §
COUNTY OF MORRIS §

Resolution No. 2014-005

MORRIS COUNTY APPRAISAL DISTRICT
RESOLUTION TO APPROVE
BIENNIAL REAPPRAISAL PLAN
2015-2016

WHEREAS, Section 6.05(I) of the Texas Property Tax Code requires that the District Board of Directors biennially approve a written plan for periodic reappraisal of all property within the boundaries of the district, according to Section 25.18 of the Texas Property Tax Code, and

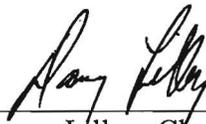
WHEREAS, the District Board of Directors has notified the presiding officer of the governing body of each taxing unit participating in the District a written notice of the time, date and place of the public hearing, and

WHEREAS, the District Board of Directors has held a public hearing August 28, 2014 to consider any amendments to the written plan, and there were none,

NOW THEREFORE, be it Resolved that Morris County Appraisal District Board of Directors adopts the written reappraisal plan for years 2015-2016.

RESOLVED FURTHER that the Chief Appraiser of the District is authorized and directed to deliver copies of the approved, written reappraisal plan in compliance with Section 6.05(I) of The Texas Property Tax Code to the presiding officer of the governing body of each taxing unit participating in the District and to the state comptroller of public accounts within 60 days of the approval date.

Approved this 28th day of August, 2014,

By: 

Danny Lilley, Chairman

Morris County Appraisal District

2015-2016

BIENNIAL REAPPRAISAL PLAN

January 1, 2015-December 31, 2016

Chief Appraiser

Summer Golden, RPA

BOARD OF DIRECTORS

Danny Lilley, Chairman

Scott Pollan, Vice Chairman

Kenneth Mac Allen, Secretary

Ray Thigpen, Member

Jean Garner, Member

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Executive Summary

Morris County Appraisal District is a political subdivision of the State of Texas, Established in 1980. This reappraisal plan and report required by S.B. 1652 is generated to provide the citizens of Morris County a better understanding of the district's procedures, responsibilities, activities, results and effects of those activities. The ultimate goal is to obtain an effective and positive result when analyzed by the Property Tax Division of the Comptroller's Office with the annual Property Value Ratio Study Report. This report establishes the position of equity and uniformity for the appraisal districts in the tested property categories.

Morris County Appraisal District is governed by a Board of Directors appointed by the taxing entities. The Board of Directors hires the Chief Appraiser as administrator of the appraisal district. The Property Tax Code is the governor of the legal, statutory, and administrative requirements of the appraisal district.

The appraisal district is required to appraise all property in its district's boundaries for the purpose of local taxation at market value as of January 1 except otherwise provided by Sec. 23 of the Tax Code. Various types of property exemptions are determined by the appraisal district office such as homestead exemptions, charitable or religious exemptions, partial and absolute exemptions and agricultural productivity valuations.

Appraisals are generated with computer assisted mass appraisal programs using recognized appraisal techniques and methods. We compare our data gathered from recent cost guides and market sales data. The district follows the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards known as the Uniform Standards of Professional Appraisal Practices (USPAP) to the extent they are applicable.

The purpose and requirement for the written reappraisal plan and periodic reappraisal resulted from the passage of S.B. 1652 which amends the Tax Code as follows:

The Written Plan

According to Section 6.05 of the Tax Code subsection (i):

"To ensure adherence with generally accepted appraisal practices, the Board of Directors of an appraisal district shall develop biennially a written plan for periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10th day of the hearing, the secretary of the board shall deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time, and place of hearing. Not later than September 15,

of each even numbered year, the board shall complete its hearings, make amendments, and by resolution finally approve the plan. Copies of the approved plan shall be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 day of the approval date.”.

The Plan for periodic Reappraisal

Section 25.18 of the Tax Code (a) and (b) implements the following:

- (a) “Each appraisal office shall implement the plan for periodic reappraisal of Property approved by the Board of Directors under Section 6.05 (i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every **three years**.
 - (1) Identify properties to be appraised through physical inspection or by Other reliable means of identification, including deeds or other legal documentation, aerial photographs, land based photographs, surveys, maps and property sketches;
 - (2) Identifying and updating relevant characteristics of each property in the appraisal records;
 - (3) Defining market areas in the district;
 - (4) Identifying property characteristics that affect property value in each market area
 - (a) The location and market area of the property;
 - (b) Physical attributes of the property;
 - (c) Legal and economic attributes;
 - (d) Easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances or legal restrictions;
 - (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determine the contribution of individual characteristics;
 - (6) Apply the conclusions reflected in the model to the characteristics of the properties being appraised and;
 - (7) Review the appraisal results to determine value

In addition to periodic reappraisals, all personal property accounts are visited on an annual basis, timber and agricultural valuations are also calculated on an annual basis. Ratio analysis are conducted to define reappraisals in rural areas, populated city areas, commercial and residential properties. (Daingerfield-Lone Star ISD, Pewitt ISD, Hughes Springs ISD, Morris County, Northeast Texas Community College, City of Daingerfield, City of Omaha, City of Naples & City of Lone Star).

Appraisal District Personnel Resources

The Appraisal Districts Board of Directors, and the Chief Appraiser plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities and postal services.

The Chief Appraiser of the Appraisal District is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. This is performed with the assistance, guidance, and authority of the Appraisal District Board of Directors.

The district's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Board of Tax Professional Examiners. Support functions including records maintenance, information and assistance to property owners, and hearings are coordinated by personnel in support of the Property Tax Code requirements.

As outlined in the approved 2015 Appraisal District Budget, the appraisal district staff currently consists of 7 employees:

- 1 - Chief Appraiser
- 2 - Appraisers
- 1 – Mapper/Deed Clerk
- 1 – Secretary / Bookkeeper
- 2 – Collection Clerks

Staff Education and Training

All personnel within the Morris County Appraisal District that are required to be registered with the Texas Department of Licensing & Regulation and are required to take courses to achieve the status of the Registered Property Tax Professional field within five years of employment as an appraiser. These requirements are set forth in the property tax code.

Training, Testing and five years of field experience are non-negotiable, locally funded by the CAD, and must be to the standards required of the Department of Licensing and Regulation.

Only after the five year training period and the successful completion of all required state examinations will a State License be awarded.

After receipt of their license, personnel must receive additional training of a minimum of 40 hours of continuing education units every five years. Failure to meet these minimum standards results in the termination of the employee. **All appraisers are properly registered and meet all state requirements.**

All appraisal personnel receive extensive training in data gathering processes including data entry. Procedures used in field work and statistical analyses of all types of property to ensure equality and uniformity of appraisal of all types of property. On-the-job training is delivered by the Chief Appraiser for new appraisers and will meet regularly with staff to introduce new

procedures and regularly monitor appraisal activity to ensure that standardized appraisal procedures are being followed by all personnel.

Revaluation Decision (Reappraisal Cycle)

The Morris County Appraisal District reappraises all property every 3 years by designated area of the district. The reappraisal year is a complete appraisal of properties in the designated area. During a reappraisal, a decision is made on every property and an appraisal notice is sent to all taxpayers. 2015 is a non-reappraisal year, 2016 will be a reappraisal of the south end of the county including the Daingerfield-Lone Star ISD & Hughes Springs ISD Morris County portion. All Business Personal Property accounts will be appraised and reviewed annually.

Reappraisal Year Activities

The goal for valuation of all property is to appraise all taxable property at "fair market value." The Property Tax Code defines Fair Market value as the price at which a property would transfer for cash or its equivalent under prevailing market conditions if: exposed for sale in the open market with a reasonable time for the seller to find a purchaser; both the seller and the purchaser know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use; and both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

1. Performance Analysis- the equalized values from the previous tax year will be analyzed with ratio study to determine the appraisal accuracy & appraisal uniformity overall and by the market area with property reporting categories. Ratio studies will be conducted in compliance with the current Standard on Ratio Studies on the International Association of Assessing Officers (IAAO).
2. Analysis of Available Resources- Staffing and budget requirement for tax year 2015 are detailed in the 2015 budget, as adopted by the board of directors. Staffing and budget requirements for the tax year 2016 will be addressed in the 2016 budget to be adopted by the board of directors in accordance with Section 6.06 of the Property Tax Code.

The Board of Directors of the Morris County Appraisal District will contract Mineral, Industrial, Utilities & related Personal Property Appraisals for the 2015-2016 Appraisal Years. (Attached hereto in the Appendix)

Planning and Organization- A calendar of events with critical completion dates will be prepared for each area. This calendar will identify key events for appraisal, mapping and records, administrative and information systems. A calendar is prepared for tax years 2015-2016. Goals for field activities will be established and incorporated in the planning and scheduling process. (Attached hereto in the Appendix)

3. Mass Appraisal System- Computer Assisted Mass Appraisal (CAMA) system revisions are completed by the Information Systems Software Provider. System revisions and procedures are performed by the Provider. The Morris County Appraisal District contracts with the firm Pritchard & Abbott, Inc. for these services.
4. Identifying and updating relevant characteristics- Field and office procedures will be reviewed and revised as required for data collection. Activities scheduled for each appraisal year include new construction, demolition, remodeling, reinspection of certain market areas as needed, periodic reinspection of the universe of properties, and field or office verification of sales data and property characteristics. Re-inspection of properties is to be completed using physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land based photographs, surveys, maps and property sketches.
5. Pilot Study of Tax Year- new and/or revised mass appraisal models are tested each year. Ratio studies, by market area, are conducted on proposed values each year. Proposed values in each category are tested for accuracy and reliability in selected market areas.
6. Valuation by Tax Year- using market analysis of comparable sales and locally tested cost data, valuation models are specified and calibrated in compliance with supplement standards from the International Association of Assessing Officers (IAAO) and the Uniform Standards of Professional Appraisal Practice (USPAP). The calculated values are tested for accuracy and uniformity using ratio studies.
7. Mass Appraisal Report- each appraisal year the Texas Property Tax Code requires Mass Appraisal Report to be prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar. The Mass Appraisal Report is completed in compliance with Standard Rule 6-8 of USPAP. The signed certification by the Chief Appraiser is compliant with Standard Rule 6-9 of USPAP. This written reappraisal plan is attached to the report by reference.
8. Value Defense- the Appraisal District has the burden of proof regarding protests related to appraisal or market value as well as unequal appraisals. Inspection and/or disclosure of evidence and materials will comply with Section 41.461 Property Tax Code.

2015 and 2016 Reappraisal Plan

Revaluation Decision

The Morris County Appraisal District reappraises all property every 3 years by designated area of the district. The reappraisal year is a complete appraisal of properties in the designated area. During a reappraisal, a decision is made on every property and an appraisal notice is sent to all taxpayers in the designated area. All Business Personal Property accounts will be appraised and reviewed annually.

Tax Year 2015

Non-Reappraisal Year, all accounts with recheck codes will be reappraised. Codes include: new construction, new mobile homes, remodels & verification of destruction of improvement and/or removal. All Business Personal Property accounts will be appraised and reviewed annually

Tax Year 2016

Tax Year 2014 is scheduled for a reappraisal for properties on the south end of the county including the Daingerfield-Lone Star ISD & Hughes Springs ISD Morris County portion. All Business Personal Property accounts will be appraised and reviewed annually

Performance Analysis

In each tax year 2015 and 2016 the previous tax years equalized values are analyzed with ratio studied to determine appraisal accuracy and appraisal uniformity overall and by market area within state property reporting categories. Ratio studies are conducted in compliance with the current Standard on Ratio Studies from the International Association of Assessing Officers. Mean, Median & Weighted Mean ratios are calculated for properties in each reporting category to measure the level of appraisal accuracy and coefficient of dispersion (COD) will be calculated to measure appraisal uniformity by property reporting category. In each appraisal year this analysis is used to develop the starting point for establishing the level and accuracy of appraisal performance. Any reporting category that may have been previously excluded from reappraisal, due to lack of data, will be readdressed. If sufficient market data has been discovered and verified, the category will be tested and analyzed to arrive at an indication of uniformity or equity of existing appraisals.

Analysis of Available Resources

Staffing and budget requirements for tax year 2015 are detailed in the 2015 appraisal district budget, as adopted by the board of directors and attached to the plan as reference. This reappraisal plan may be adjusted as needed to reflect the available staffing in the appraisal year 2016 and the anticipated staffing for the appraisal year 2016. Staffing and budget restraints

can impact the cycle of real property inspection and personal property on-site review that can be accomplished in the 2015-2016 time period.

Existing appraisal practices, which are continued from year to year, are identified and methods utilized to keep these practices current as specified. In each reappraisal year, real property appraisal value tables are tested against verified sales data to ensure they represent current market data. Personal Property density schedules are tested and analyzed based on rendition and prior year hearing documentation and inspections.

Information Systems (IS) support is detailed with year specified functions identified and system upgrades scheduled. Computer generated forms are reviewed for revisions based on year and reappraisal status. Legislative changes are scheduled for completion and testing. Existing maps and data requirements are specified and updates scheduled.

Planning and Organization

A calendar of events with critical completion dates are prepared for each major work area. This calendar identifies all key events for appraisal, clerical, customer service and information systems. A separate calendar is prepared for tax years 2015 and 2016. Production standards for field activities are calculated and incorporated in the planning and scheduling process. This plan encompasses the normal processes carried out each year by the district, therefore catastrophic events or significant legislative action may be a detrimental effect to the District's operations and require changes to this plan.

2015 Calendar of Key Events, See Appendix

2016 Calendar of Key Events, See Appendix

Mass Appraisal System

Computer assisted Mass Appraisal (CAMA) system revisions are completed by the Information Systems Software Provider. System revisions and procedures are performed by the Provider. Morris County Appraisal District contracts with the firm Pritchard & Abbott, Inc. for these services.

Real Property Valuation

Revisions to cost models, income models and market models are specified, updated and tested each year, as information is available.

Cost Schedules will be tested with market data (sales) to insure that the appraisal district is in compliance with the Texas Property Tax Code, Section 23.011. Replacement cost new tables as well as depreciation tables will be tested for accuracy and uniformity using ratio studies and compared with cost data from local building costs and recognized industry leaders, such as Marshall & Swift.

Land Tables are updated using current market data (sales) and then tested with ratio studies. Value modifiers are developed for property categories by market area and tested on a pilot basis with ratio study tools.

Income, expense and occupancy data will be updated in the income models for each market area or property type and cap rate studies will be completed using current sales data. The resulting models will be tested using ratio studies.

Personal Property Valuation

Schedules are updated using data during previous tax year from renditions and hearing documentation. Valuation procedures are reviewed modified as needed and tested.

Noticing Process

Section 25.19 appraisal notice forms are provided by the IS Provider. The Provider reviews and edits for updates and changes required by legislative mandates and reviewed by Appraisal District staff before mailing. The district publishes, in the local newspaper, information about the notices and how to protest. The district makes available the latest copy of the Comptroller's pamphlet *Taxpayer's Rights and Responsibilities*.

Hearing Process

Protest hearing scheduling for informal and formal Appraisal Review Board hearings will be reviewed and updated as required. Standards of documentation are reviewed and amended as required. The appraisal district hearing documentation is reviewed and updated to reflect the current valuation process and requirements. Production of documentation is tested and compliance with Tax Code is insured. All formal ARB protests will be entered in the computer and related material printed for protest folders.

Data Collection Requirements

Field and office procedures are reviewed and revised as required for data collection. Projects for each tax year include the definition of market areas, new construction, demolition, remodeling, re-inspection of problematic market areas, and re-inspected of the universe of properties on a specific cycle, and office (or field) verification of sales data and property characteristics.

New Construction/Demolition

New Construction field and office review procedures are identified and revised as required. Field production standards are established and procedures for monitoring tested. Sources of building permits are confirmed. Municipal and county offices provide, as available, notification of utility hookups, septic system installation, development permits, demolition orders, etc. Process of verifying demolition of improvements is specified.

Remodeling

Market Areas with extensive improvement remodeling are identified, verified and field activities scheduled to update property characteristic data. Official Public Records provide indications of properties that may be undergoing enhancement through Deeds of Trust, Mechanics Liens, etc. Property identified as having remodel or improvement updates will be scheduled for onsite inspection to verify property characteristic data.

Re-Inspection of Problematic Market Area

Real property market areas, stratified by property classification, will be tested for low or high sale ratios, and high COD (coefficients of dispersion). Market areas that fail any or all of these test will be reviewed. Field reviews will be scheduled to verify and correct property characteristics data. Additional sales data will be researched and verified in order to assess whether the market area is correctly defined and stratified.

Re-Inspection of the Universe of Properties

The International Association of Assessing Officers' Standard on Mass Appraisal of Real Property, specifies that the universe of properties should be re-inspected on a cycle of 4 to 6 years. The re-inspection includes physically viewing the property, photographing (if possible), and verifying the accuracy of the existing data. The field appraiser has an appraisal card of each property to be inspected and makes notes of changes, depreciation, remodeling, additions, etc. The re-inspection requirements for 2015-2016 Tax Years are identified and scheduled in the reappraisal plan.

Field or Office Verification of Sales Data and Property Characteristics

Sales information must be verified and property data (characteristics), contemporaneous with the date of sale, must be captured. Valid statistical analyses for direct and indirect equalization using sales ratios require the appraisal data to reflect the condition of the property at the time of sale.

Market Areas

Morris County's neighborhoods or market areas consist of one (1) Independent School District & two (2) overlapping Independent School Districts that encompass the whole county with (4) Cities. Cities are a mixed use town with a variety of commercial properties. Lone Star Lake which is located in the Daingerfield Lone Star ISD creates a specific market area. Areas within the counties boundaries are rural, open-space, timberland and farms. Being a rural East Texas county, many homes, small farms, hay and cattle operations and timber growing operation make up a large portion of the tax base. Another specific area is the subdivision, "Edgemont" located in the City of Lone Star. This neighborhood has had problems that have effected the market in an adverse manner. An economic factor of 7% has been placed in this market area. Within these areas there are subsets that may be characterized as being in a stage of **growth, stability or decline**.

The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new

homes tends to induce population shift from older homes to newer homes or historic homes becoming modernized with newer home trends.

In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities.

The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Rural properties with different uses; recreational, agriculture, or vacant for example may create specific market subsets, with characteristics specific to each that help define it and drive its value.

The appraiser is responsible for determining the highest and best use of property.

Highest and Best Use

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses.

Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis.

Example:

It may be determined in a transition area that older, non-remodeled homes are economic mis-improvements, and the highest and best use of such property is the construction of new dwellings.

Constant attention must be paid to the set market areas, to insure uniformity and accuracy of appraisals, but also to the subsets of these since they may change from year to year.

Production standards for field activities and results are tested on an annual basis with the use of sales data gathered through buyer and seller questionnaires mailed by the appraisal district, verbal contact with citizens of Morris County, and confirmations of sales activity in warranty

deed or county clerk's recorded documents. Just as with the annual Property Value Study performed by the Comptroller's Property Tax Division the use of sales and recognized auditing and sampling techniques are used to determine the level and uniformity of property tax appraisal in this district. This process utilizes statistical analysis of sold properties (sales ratio) and appraisals of unsold properties (appraisal ratios) as a basis for assessment ratio reporting. The reported measures include the median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median and price-related differential (PDR) for properties overall and by state category. The ratio study includes stratified samples to improve sample representation for measuring uniformity.

Pilot Study

New and/or revised mass appraisal models are tested each year. Ratio studies, by market category, are conducted on proposed values each tax year. Proposed values on each category are tested for accuracy and reliability. Actual test results are compared with anticipated results and those models not performing satisfactorily are refined and retested. The procedures used for model specification and model calibration are in compliance with *Uniform Standards of Professional Appraisal Practice*, Standard Rule 6.

Valuation by Appraisal Year

Using market analysis of comparable sales and locally tested cost data (if available), valuation models (value per square foot schedules) are specified and calibrated in compliance with supplemental standards from the *International Association of Assessing Officers* and the *Uniform Standards of Professional Appraisal Practice*. The calculated values are tested for accuracy and uniformity using ratio studies. Performance standards are those as established by the *IAAO Standard on Ratio Studies*. Property Values in all market areas are analyzed and updated as necessary each appraisal year.

Residential Real Property

Ratio Studies will be conducted on neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy level and uniformity of value. The valuation process for residential property normally begins in August. Land analysis, sales outlier review, neighborhood sales analysis, and finalization of proposed estimates of value will be worked from August thru mid April.

Valuation Methods Used:

Sales Comparison Approach (also referred as Market Approach)

In this method of valuation, similar properties recently sold in the current market are analyzed and compared with the property being appraised. Sales data is run by classification and location. Adjustments are made for differences in such factors as time of sale, location, type, age and condition of the improvements. Review the sales ratio for uniformity or equity of existing appraisals and if any adjustments need to be made. In comparing of classes of houses and/or age factors, classes can be identified which may require adjustments up or down.

Cost Approach

In the method of valuation, an estimate is made of current costs of reproduction or replacement of the improvements. This is known as the cost per square foot and is adjusted to reflect depreciation from all forms (physical, functional and economic obsolescence) and is added to the value of the land.

Model used to estimate the present value:

$$RCN(\text{replacement cost new}) - DEPRECIATION = RCNLD (\text{replacement cost new less depreciation} + LV (\text{land value}) = \text{MARKET VALUE}$$

Costs tables are developed based on information obtained from mechanics liens on local costs and Marshall & Swift Valuation Guide. Folders have been set up for a better comparison and study which includes ratio study and mechanic lien information.

Income Approach

In the method of valuation, a value of an investment property reflects the quality and quantity of income it is expected to generate of its life. In other words, value is the estimated present value of future benefits, namely income and proceeds from the sale of the property. The appraiser must estimate income from a property and capitalize the income into an estimate of current value. Morris County is unable to use this process due to lack of information. We are limited to cost modeling with sales & costs- not income.

Model used to estimate the present value of income expected in the future is represented by the following formula known as IRV. (VALUE=INCOME/RATE OR, INCOME= RATE X VALUE OR, RATE= INCOME/VALUE)

$$\begin{aligned}
& \text{POTENTIAL GROSS RENT} \\
& \underline{- \text{VACANCY \& COLLECTIONS}} \\
& \text{EFFECTIVE GROSS RENT} \\
& \underline{+ \text{OTHER INCOME}} \\
& \text{EFFECTIVE GROSS INCOME} \\
& \underline{- \text{ALLOWED EXPENSES}} \\
& \text{NET OPERATING INCOME} \\
& \underline{/ \text{CAPITIALIZATION RATE}} \\
& \text{MARKET VALUE}
\end{aligned}$$

The income approach is most suitable for types of properties frequently purchased and held for the purpose of producing income, such as apartments, commercial buildings and office buildings. It is not conducive to the valuation of single-family residential properties that are seldom rented, or where market demand factors such as personal preference or location unduly influence the market.

Special Inventory Residential Property

Residential improved and vacant property, when qualified as inventory, will be appraised in compliance with the Texas Property Tax Code Section 23.12 (a).

In general, the district would use its own land estimates and the actual itemized construction, labor and material costs, plus other indirect costs to estimate market value as of the assessment date. The market values of improved inventory will be reviewed annually and inventory consideration will be eliminated when ownership transfers to the property owner.

Vacant residential inventory, when appropriate, will be valued using a discounted cash flow formula that considers value relative to the income or cash flow, the interest or discount rate and the number of years the property is likely to be held. As with improved inventory, full market value will be applied once the vacant land is absorbed and ownership transfers for the purpose of residential construction.

(Morris County Appraisal District does not have any special inventory residential properties at this time.)

Agriculture and Timber Land

The appraisal of agriculture or timber land is governed by Chapter 23 of the Property Tax Code. The appraised value of qualified open-space or timber land is determined on the basis of the category of land, using accepted income capitalization methods applied to average net to land.

Schedules for valuing qualified land have been developed for various agriculture uses and types of timber production. These schedules are reviewed annually and update using data from sources such as Texas Forest Service and Texas Agriculture Extension Service as well as local landowners engaged in leasing land for agriculture use.

Commercial Real Property

All commercial properties including but not limited to retail properties, apartments, warehouses, medical offices, golf courses, office buildings, mobile home parks will be valued by the cost approach, income approach or sales comparison approach as deemed most appropriate pursuant Section 23.0101 of the Texas Property Tax Code. Ratio studies will be performed to test the level and uniformity of appraisal within the specific property use categories.

Valuation Methods Used:

Sales Comparison Approach (also referred as Market Approach)

In this method of valuation, similar properties recently sold in the current market are analyzed and compared with the property being appraised. Sales data is run by classification and location. Adjustments are made for difference in such factors as time of sale, location, type, age and condition of the improvements. Review the sales ratio for uniformity or equity of existing appraisals and if any adjustments need to be made. In comparing of classes of houses or age factors, classes can be identified which may require adjustments up or down.

Cost Approach

In this method of valuation, an estimate is made of current costs of reproduction or replacement of the improvements. This is known as the cost per square foot and is adjusted to reflect depreciation from all forms (physical, functional and economic obsolescence) and is added to the value of the land.

Model used to estimate the present value:

$$\text{RCN (replacement cost new)-DEPRECIATION= RCNLD (replacement cost new less depreciation) + LV (land value) = MARKET VALUE}$$

Costs tables are developed based on information obtained from mechanics liens on local costs and Marshall & Swift Valuation Guide. Folders for each class have been set up for a better comparison and study which includes ratio study and mechanic lien information.

Income Approach

In this method of valuation, a value of an investment property reflects the quality and quantity of income it is expected to generate of its life. In other words, value is the estimated present value of future benefits, namely income and proceeds from the sale of the property. The appraiser must estimate income from a property and capitalize the income into an estimate of current value. Morris County is unable to use this process due to lack of information. We are limited to cost modeling with sales & costs- not income

Model used to estimate the present value of income expected in the future is represented by the following formula known as IRV.

$$\text{VALUE=INCOME/RATE OR, INCOME= RATE X VALUE OR, RATE= INCOME/VALUE}$$

The income approach is most suitable for types of properties frequently purchased and held for the purpose of producing income, such as apartments, commercial buildings and office buildings. It is not conducive to the valuation of single-family residential properties that are seldom rented, or where market demand factors such as personal preference or location unduly influence the market.

Business Personal Property

These property types will be valued annually by the appraisal district staff. The Personal Property Appraiser engages in an annual canvas field review to identify new businesses to be added to the roll, movement of existing businesses to different locations or business closings and data review of current property characteristics in property records. Once pertinent data is updated in the field, property rendition forms will be sent to owners in order that they may declare their taxable personal property according to current law. The information obtained from renditions will be utilized by the district to develop an estimate of value. Generally, estimates of value developed for personal property will be produced by mid to late April of each appraisal year. The notices of appraised value for these properties are generally mailed in mid May.

Valuation Methods Used:

Sales Comparison (Market Approach)

Business Personal Property is typically sold as part of the business as a whole and not by itself, which makes this approach unsuitable for valuing most personal property. This approach is only suitable for the valuation of certain types of vehicles, heavy equipment and airplanes. Value estimates for vehicles will be provided by independent sources and based on data furnished by market reports. These types of properties will be appraised using market guides such as NADA book values or Just Texas values.

Cost Approach

Actual values from renditions are used when applying values for inventory. The total cost is used as the basis for market value because cost is a good indicator of what a purchaser would pay for a similar inventory to go into business at the same level of trade. Property listings, furniture, fixtures, machinery and equipment is used from rendition for original costs then depreciated for age based on type of equipment, age, condition and use. If replacement cost is used, we estimate the replacement cost of each item and estimate the actual physical depreciation of each item. In striving for uniform value of personal property, consideration must be given to such factors as new replacement cost, age, physical condition and allowance for depreciation of each item of property. Percent good depreciation tables are provided by the Property Tax Division of the State Comptroller's office each year and are followed.

Cost per square foot method is used when rendition information is not available or undetermined. The type of business, quality and density of inventory, furniture and fixtures, machinery and equipment are serving in a useful capacity, they bear a value. Specific procedures and guidelines must be used as basis for determining the fair value of the various types of property in order to attain and preserve uniformity.

Income Approach

Any information of income can be used to verify valuation. Morris County is unable to use this process due to lack of information. We are limited to cost modeling with sales & costs- not income

Mineral, Industrial, Utility and Related Personal Property

The Morris County Appraisal District will contract with an appraisal firm with specific expertise for the valuation of minerals, heavy industrial, utilities, railroads, pipeline properties and related personal property. These properties will be reappraised annually by the firm using recognized methods and techniques as required by the *Uniform Standards of Professional Appraisal Practice*.

Mass Appraisal Report

Each tax year the tax code requires the Mass Appraisal Report. This is prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar on or about May 15. The Mass Appraisal Report is completed in compliance with Standard Rule 6-8 of the *Uniform Standards of Professional Appraisal Practice*. The signed certification by the Chief Appraiser is compliant with Standard Rule 6-9 of *USPAP*. This written reappraisal plan is attached to the Mass Appraisal Report by reference.

Value Defense

Evidence to be used by the appraisal district to meet its burden of proof for market value and equity in both informal and formal appraisal review board hearings will be developed. Inspection and/or disclosure of evidence and related materials will comply with Section 41.461 of the Property Tax Code. A variety of evidence is utilized by the district depending on the property type of the subject of the protest. In addition, the district updates the evidence supplied to an owner, agent, or Appraisal Review Board to be contemporaneous with the valuation procedures utilized. Some examples of evidence may be used include, but not limited to:

1. Property sales information
2. Property sale adjustment grids
3. Property equity adjustment grids
4. Gross Rent/Income Multiplier data

5. Performa and actual Income data
6. Property characteristics data including photos, if applicable
7. Aerial photography
8. Cost Approach reports, if applicable
9. Property Rendition, if applicable
10. Published Reports regarding cost, market or income data
11. Schedules and Models Utilized
12. Any other Information collected by CAD

Performance Test

According to Chapter 5 of the TPTC and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Division (PTD) conducts a property value study (PVS) of each Texas school district and each appraisal district. As part of this study, the code requires the Comptroller to: use sales and recognized auditing and sampling techniques; review each appraisal district's appraisal methods, standards and procedures to determine whether the district used recognized standards and practices (MSP review); test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and, determine the level and uniformity of property tax appraisal in each appraisal district.

The methodology used in the property value study includes stratified samples to improve sample representativeness and techniques or procedures of measuring uniformity. This study utilizes statistical analyses of sold properties (sale ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting.

For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median and price-related differential (PRD) for properties overall and by state category.

The preliminary results of this study are released February 1 in the year following the year of appraisement. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) the following July. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions.

Appendix

CALENDAR OF KEY EVENTS

APPRAISAL RELATED ACTIVITY OR EVENT

AUGUST

- Begin appraisal field work for Residential and Commercial property rechecks.
- Begin data collection of sales, cost and income for model calibration.
- Review ratio study, identify key areas for review.
- Roll appraisal year.

SEPTEMBER

- September 1 - Statutory Appraisal Date for certain Inventory Properties (Sec. 23.12).
- Labor Day - District office closed.
- Begin review of Business Personal Property (BPP) valuation models.
- September 15 - Statutory deadline for MCAD BOD to approve Operation Budget.
- Invoices for 4th Quarterly Budget Allocations mailed to taxing units.

OCTOBER

- Submit for approval, 3rd Quarter Change Dockets, to the ARB.
- Taxing units mail tax bills.
- Columbus Day - District office closed.

NOVEMBER

- Annual Texas Rural Chief Appraiser's Conference.
- Hold Ag Advisory Board meeting and send out questionnaire.
- Veteran's Day and Thanksgiving Holidays - District office closed.

DECEMBER

- 6 month Employee Performance Reviews - reviewed with staff.
- Christmas Holidays - District office closed.
- Mail BPP, Residential Homestead Exemptions, Special Valuation Applications, and other exemption applications that require annual filing.
- Invoice for 1st Quarterly Budget Allocation mailed to taxing units.

JANUARY

- Continue Appraisals.
- Begin BPP appraisals for all of county.
- Submit for approval, 4th Quarter Change Dockets, to the ARB.
- January 1 - Statutory appraisal date for most categories of taxable properties.

FEBRUARY

- Begin working on BPP Renditions.
- President's Day - District office closed.
- Annual TAAD Conference.
- Continue running sales ratio reports.
- Refine sales analysis and mass appraisal schedules.
- Statistically test schedules.
- Complete data entry of all reappraisal and maintenance changes.

MARCH

- Completion of field work including BPP, commercial and residential.
- Finalize RE schedule changes.

- Execute mass appraisal/maintenance activities.
- Invoice for 2nd Quarterly Budget Allocations mailed to taxing units.
- Run Error Edits in preparation for 25.19 Notices of Appraised Value.
- Release to Pritchard & Abbott, Inc. for printing of 25.19 Notices of Appraised Value.
- Prepare for mailing 25.19 Notice of Appraised Value.

APRIL

- Submit for approval, 1st Quarter Change Dockets to the ARB.
- Mail notices of appraised value for single-family residence homestead properties (Sec. 25.19).
- Notify the taxing units of the form in which the appraisal roll will be provided to them (Sec 26.01).
- Property owners to file renditions and property information reports unless they request a filing extension in writing (Sec 22.23).
- Submit Certified Estimated Value to taxing units.
- Begin Operating Budget preparations.
- Last day for property owners to file these applications or reports with the CAD:
 - Some exemption applications (Sec. 11.43).**
 - Notice to chief appraiser that property is no longer entitled to an exemption not requiring annual application (Sec. 11.43);
 - Applications for special appraisal or notices to chief appraiser that property no longer qualifies for 1-d and 1-d-1 agricultural land, timberland, restricted-use timberland, recreational-park-scenic land and public access airport property (Sec. 23.43, 23.54, 23.75, 23.84, 23.94, 23.9804);
 - Railroad rolling stock reports (Sec. 24.32);
 - Requests for separate listing of separately owned land and improvements (Sec. 25.08);
 - Requests for separate listing of separately-owned standing timber and land (Sec. 25.10);
 - Requests for separate listing of undivided interest (Sec. 25.11);
 - Requests for joint taxation of separately owned mineral interest (Sec. 25.12).
- Begin informal hearings with property owners/agents.

MAY

- Mail notices of appraised value for properties other than single-family residence homesteads (Sec. 25.19).
- Period when chief appraiser must publish notice about taxpayer protest procedures in a local newspaper with general circulation (Sec. 41.41, 41.70).
- Property owners to file renditions and property information reports if they requested an extension in writing. For good cause, chief appraiser may extend this deadline another 15 days (Sec. 22.23).
- Prepare appraisal records and submit to ARB (Sec. 25.01, 25.22).
- Memorial Day - District office closed.
- Hold informal hearings with property owners/agents.

JUNE

- Invoice for 2nd Quarterly Budget Allocations mailed to taxing units.
- Hold Formal Protest hearings with ARB.
- 6 month Employee Performance Reviews - reviewed with staff.
- Submit proposed budget to BOD and taxing units.

JULY

- July 4th - District office closed.
- Submit for approval, 2nd Quarter Change Dockets to ARB.

- July 20 - Date ARB must approve appraisal records, but may not do so if more than 5 percent of total appraised value remains under protest.
- July 25 - Last day for Texas Comptroller to certify apportionment of railroad rolling stock value to counties, with supplemental records after that date (Sec. 24.38).
- July 25 - Last day for chief appraiser to certify appraisal roll to each taxing unit (Sec. 26.01) (Creates Appraisal Roll).



PRITCHARD & ABBOTT, INC.
VALUATION CONSULTANTS

S.B. 1652* BIENNIAL REAPPRAISAL PLAN

**FOR THE ANNUAL APPRAISAL FOR
AD VALOREM TAX PURPOSES OF
MINERAL, INDUSTRIAL, UTILITY AND
RELATED PERSONAL PROPERTY**

For Tax Years:

2015 and 2016

Originally Printed: July 1, 2014

*Senate Bill 1652 passed by the Texas Legislature, 79th Regular Session in 2005, amending Section 6.05 of the Texas Property Tax Code, by adding Subsection (i).



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POLICY STATEMENT OF PRITCHARD & ABBOTT, INC., ON THE
REAPPRAISAL OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY

In 2005, the Texas Legislature, in 79th Regular Session, authorized in S.B. 1652 the amending of section 6.05 of the Texas Property Tax Code by adding Subsection (i), as follows:

“Requires the board of directors of an appraisal district (board), to ensure adherence with generally accepted appraisal practices, to develop biennially a written plan for the periodic appraisal of all property within the boundaries of the district according to the requirements of 25.18 (Periodic Reappraisals) and requires the board to hold a public hearing to consider the proposed plan. Requires the secretary of the board, not later than the 10th day before the date of the hearing, to deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time, and place for the hearing. Requires the board, not later than September 15 of each even-numbered year, to complete its hearings, make amendments, and by resolution finally approve the plan. Requires copies of the approved plan to be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date.” (Bill Analysis per Senate Research Center)

Pritchard & Abbott, Inc., (P&A), a privately held company engaged primarily, but not wholly, in the ad valorem tax valuation industry endorses Uniform Standards of Professional Appraisal Practice (USPAP) as the basis for the production of sound appraisals. Insofar as the statutory requirement to appraise groups (or a “universe”) of real and personal property within an established period of time using standardized procedures--and subjecting the resulting appraisals to statistical measures--is the definition of mass appraisal, P&A subscribes to USPAP Standard 6 (Mass Appraisal, Development and Reporting) whenever applicable in the development and defense of values. When circumstances clearly dictate the use of single property appraisal procedures, P&A adheres to the spirit and intent of the remaining USPAP Standards within all appropriate, practical, and/or contractual limitations or specifications.

The USPAP definition of “appraiser” is one who is expected to perform valuation services competently and in a manner that is independent, impartial, and objective. USPAP Advisory Opinion 21 states that this expectation (by clients and intended users of appraisal reports) is the basis that creates an ethical obligation to comply with USPAP, even if not legally required.

The majority of property types that P&A typically appraises for ad valorem tax purposes are categorized as unique, complex, and or “special purpose” properties (mineral interests, industrial, utility, and related personal property). These categories of properties do not normally provide sufficient market data of reliable quality and/or quantity to support the rigorous use of all USPAP-prescribed mass appraisal mandates (Standard 6), particularly with regards to some, but not all, of the model calibration and statistical performance testing confines. However, P&A does employ elements of mass appraisal techniques with regards to the definition and identification of property characteristics and model specification and application.

Residential real estate property appraisers most frequently apply mass appraisal methods within the sales comparison (market) approach to value. Through the use of standardized data collection (i.e., actual market sales), specification and calibration of mass appraisal models, tables, and schedules are possible. Through ratio study analysis and other performance measures, a cumulative summary of valuation accuracy can thus be produced in order to calibrate the appraisal model(s). Where sufficient data of reliable quality exists, mass appraisal is also used for other types of real estate property such as farms, vacant lots, and some commercial uses (e.g., apartments, offices, and small retail).

P&A will clearly state or otherwise make known all extraordinary assumptions, limiting conditions, hypothetical assumptions, and/or jurisdictional exceptions in its appraisals as they are conveyed to our clients. The client and all intended users should be aware the appraisals are by definition “limited” versus “complete.” In addition, all appraisal reports, unless otherwise contracted for by the client, will be of a “summary” nature vs. “self-contained” whereas concise explanations of appraisal methods and results are emphasized for purpose of transparency, brevity and clarity. *The use of limited appraisals in conjunction with summary reports in no way implies non-compliance with USPAP.* P&A believes, with its vast experience and expertise in these areas of appraisal, that all values rendered are credible, competent, uniform and consistent; and most importantly for ad valorem tax purposes, achieved in a cost-efficient and timely manner.

Per previous ASB comments under Standard 6-2(b) [*scope of work... special limiting conditions*]:

“Although appraisers in ad valorem taxation should not be held accountable for limitations beyond their control, they are required by this specific requirement to identify cost constraints and to take appropriate steps to secure sufficient funding to produce appraisals that comply with these standards. Expenditure levels for assessment administration are a function of a number of factors. Fiscal constraints may impact data completeness and accuracy, valuation methods, and valuation accuracy. Although appraisers should seek adequate funding and disclose the impact of fiscal constraints on the mass appraisal process, they are not responsible for constraints beyond their control.”

In any event, however, it is not P&A’s intent to allow constraints, fiscal or otherwise, to limit the scope of work to such a degree that the mass appraisal results are not credible within the context of the intended use(s) of the appraisal.

PREAMBLE

The purpose of USPAP is to establish requirements and conditions for ethical, thorough, and transparent property valuation services. Valuation services pertain to all aspects of property value and include services performed by appraisers and other professionals including attorneys, accountants, insurance estimators, auctioneers, or brokers. Valuation services include appraisal, appraisal review, and appraisal consulting. The primary intent of these Standards is to promote and maintain a high level of public trust in professional appraisal practice.

It is essential that professional appraisers develop and communicate their analyses, opinions, and conclusions to intended users of their services in a manner that is meaningful and not misleading. The importance of the role of the appraiser places ethical obligations upon those who serve in this capacity. These USPAP Standards reflect the current standards of the appraisal profession.

These Standards are for both appraisers and users of appraisal services. To maintain a high level of professional practice, appraisers observe these Standards. However, these Standards do not in themselves establish which individuals or assignments must comply. The Appraisal Foundation nor its Appraisal Standards Board is not a government entity with the power to make, judge, or enforce law. Compliance with USPAP is only required when either the service or the appraiser is obligated to comply by law or regulation, or by agreement with the client or intended users. When not obligated, individuals may still choose to comply.

USPAP addresses the ethical and performance obligations of appraisers through DEFINITIONS, Rules, Standards, Standards Rules, and Statements. USPAP Standards deal with the procedures to be followed in performing an appraisal or appraisal review and the manner in which each is communicated. A brief description of the USPAP Standards are as follows:

- **Standards Rules 1 and 2:** establish requirements for the development and communication of a real property appraisal.
- **Standards Rule 3:** establishes requirements for the development and communication of an appraisal review.
- **Standards Rules 4 and 5:** retired in 2014.
- **Standards Rule 6:** establishes requirements for the development and communication of a mass appraisal.
- **Standards Rules 7 and 8:** establish requirements for the development and communication of a personal property appraisal.
- **Standards Rules 9 and 10:** establish requirements for the development and communication of a business or intangible asset appraisal.

Section 23.01(b) [*Appraisals Generally*] of the Texas Property Tax Code states:

"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...." (underline added for emphasis)

Consequently, USPAP Standards Rule 6 is assumed to be the applicable standard for ad valorem tax purposes in Texas, if mass appraisal practices are in fact being used to appraise the subject property. USPAP Advisory Opinion 32 suggests several USPAP standards other than Standard 6 can or should apply in ad valorem tax work. However, it appears that an appraiser engaged in ad valorem tax work in Texas is not specifically required by law to follow these USPAP standards if in fact mass appraisal practices have not been used to appraise the subject property. In this case it could be deemed appropriate to invoke the Jurisdictional Exception Rule which is applicable when there is a contradiction between the requirements of USPAP and the law or regulation of a jurisdiction. Please see the P&A Policy Statement on USPAP as provided elsewhere in this report for a more detailed discussion regarding this matter.

ETHICS RULE

Because of the fiduciary responsibilities inherent in professional appraisal practice, the appraiser must observe the highest standards of professional ethics. This Ethics Rule is divided into three sections:

- Conduct;
- Management;
- Confidentiality.

This Rule emphasizes the personal obligations and responsibilities of the individual appraiser. However, it should be noted that groups and organizations *which are comprised of individual appraisers engaged in appraisal practice* effectively share the same ethical obligations. To the extent the group or organization does not follow USPAP Standards when legally required, individual appraisers should take steps that are appropriate under the circumstances to ensure compliance with USPAP.

Compliance with these Standards is required when either the service or the appraiser is obligated by law or regulation, or by agreement with the client or intended users, to comply. Compliance is also required when an individual, by choice, represents that he or she is performing the service as an appraiser.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice.

Honesty, impartiality, and professional competency are required of all appraisers under USPAP Standards. To document recognition and acceptance of his or her USPAP-related responsibilities in communicating an appraisal, appraisal review, or appraisal consulting assignment completed under USPAP, an appraiser is required to certify compliance with these Standards.

CONDUCT

An appraiser must perform assignments with impartiality, objectivity, and independence, and without accommodation of personal interests.

An appraiser must perform ethically and competently in accordance with USPAP and not engage in conduct that is unlawful, unethical, or improper. An appraiser who could reasonably be perceived to act as a disinterested third party in rendering an unbiased appraisal, review, or consulting service must perform assignments with impartiality, objectivity, and independence and without accommodation of personal interests; in short, the appraiser must not perform an assignment with bias.

An appraiser must not advocate the cause or interest of any party or issue, or accept an assignment that includes the reporting of predetermined opinions and conclusions.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice, must not engage in criminal conduct, and must not perform an appraisal assignment in a grossly negligent manner.

An appraiser is required to avoid any action that could be considered misleading or fraudulent. In particular, it is unethical for an appraiser to use or communicate a misleading or fraudulent report or to knowingly permit an employee or other person to communicate a misleading or fraudulent report.

An appraiser must not use or rely on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value.

If known prior to accepting an assignment, and/or if discovered at any time during the assignment, an appraiser must disclose to the client, and in each subsequent report certification:

- any current or prospective interest in the subject property or parties involved; and
- any services regarding the subject property performed by the appraiser within the three year period immediately preceding acceptance of the assignment, as an appraiser or in any other capacity.

The appraiser can agree with the client to keep the mere occurrence of a prior appraisal assignment confidential. If an appraiser has agreed with the client not to disclose that he or she has appraised a property, the appraiser must decline all subsequent assignment that fall with the three year period. In assignments in which there is no report, only the initial disclosure to the client is required.

Presumably all parties in ad valorem tax appraisal will be aware of the ongoing yearly nature of the appraisal assignments performed by valuation consulting firms like Pritchard & Abbott, Inc.--i.e., it will not be confidential-- so that this particular conduct instruction is more or less a moot point (regarding the three year period discussed) if the prior service is in fact the ad valorem tax appraisals performed in previous tax years.

MANAGEMENT

The payment of a fee, commission, or a thing of value by the appraiser in connection with the procurement of an assignment must be disclosed. This disclosure must appear in the certification and in any transmittal letter in which conclusions of value are stated; however, the disclosure of the amount paid is not required. Intra-company payments to employees of groups or organizations involved in appraisal practice for business development do not require disclosure.

It is unethical for an appraiser to accept compensation for performing an assignment when it is contingent upon the reporting of a predetermined result, a direction in assignment results that favors the cause of the client, the amount of a value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the appraiser's opinions and specific to the assignment's purpose.

Advertising for or soliciting assignments in a manner that is false, misleading, or exaggerated is unethical. Decisions regarding finder or referral fees, contingent compensation, and advertising may not be the responsibility of an individual appraiser, but for a particular assignment it is the responsibility of the individual appraiser to ascertain that there has been no breach of ethics, that the assignment consulting assignment has been prepared in accordance with USPAP Standards, and that the report can be properly certified when required by USPAP Standards Rules 2-3, 3-3, 5-3, 6-9, 8-3, or 10-3.

An appraiser must affix, or authorize the use of, his or her signature to certify recognition and acceptance of his or her USPAP responsibilities in an appraisal, appraisal review, or appraisal consulting assignment. An appraiser may authorize the use of his or her signature only on an assignment-by-assignment basis.

In addition, an appraiser must not affix the signature of another appraiser without his or her consent. An appraiser must exercise due care to prevent unauthorized use of his or her signature. However, an appraiser exercising such care is not responsible for unauthorized use of his or her signature.

CONFIDENTIALITY

An appraiser must protect the confidential nature of the appraiser-property owner relationship.

An appraiser must act in good faith with regard to the legitimate interests of the client in the use of confidential information and in the communication of assignment results.

An appraiser must be aware of, and comply with, all confidentiality and privacy laws and regulations applicable in an assignment.

An appraiser must not disclose confidential factual data obtained from a property owner to anyone other than:

1. The client;
2. Persons specifically authorized by the client;

3. State appraiser regulatory agencies;
4. Third parties as may be authorized by due process of law; or
5. A duly authorized professional peer review committee except when such disclosure to a committee would violate applicable law or regulation.

It is unethical for a member of a duly authorized professional peer review committee to disclose confidential information presented to the committee.

When all confidential elements of confidential information are removed through redaction or the process of aggregation, client authorization is not required for the disclosure of the remaining information, as modified.

RECORD KEEPING RULE

An appraiser must prepare a workfile for each appraisal, appraisal review, and consulting assignment. The workfile must include the identity, by name and type, of any intended users; true copies of any written reports, summaries of any oral reports or testimony, and all other data, information, and documentation necessary to support the appraiser's opinions and conclusions and to show compliance with this rule and all other applicable USPAP Standards.

A workfile preserves evidence of the appraiser's consideration of all applicable data and statements required by USPAP and other information as may be required to support the findings and conclusions of the appraiser.

A photocopy or an electronic copy of the entire actual written appraisal, review, or consulting report sent or delivered to a property owner or review committee satisfies the requirements of a true copy. Care should be exercised in the selection of the form, style, and type of medium for written records, which may be handwritten and informal, to ensure they are retrievable by the appraiser throughout the applicable retention period.

A workfile must be in existence prior to and contemporaneous with the issuance of a written or oral report. A written summary of an oral report must be added to the workfile within a reasonable time after the issuance of the oral report.

A workfile must be made available by the appraiser when required by due process of law. An appraiser must have custody of his or her workfile, or make appropriate workfile retention, access, and retrieval arrangements with the party having custody of the workfile. An appraiser having custody of a workfile must allow other appraisers with workfile obligations related to an assignment appropriate access and retrieval for the purpose of:

- submission to state appraiser regulatory agencies;
- compliance with due process of law;
- submission to a duly authorized professional peer review committee; or
- compliance with retrieval arrangements.

An appraiser who willfully or knowingly fails to comply with the obligations of this Record Keeping Rule is in violation of the Ethics Rule.

SCOPE OF WORK RULE

For each appraisal, appraisal review, and appraisal consulting assignment, an appraiser must:

1. Identify the problem to be solved;
2. Determine and perform the scope of work necessary to develop credible assignment results; and
3. Disclose the scope of work in the report.

An appraiser must properly identify the problem to be solved in order to determine the appropriate scope of work. The appraiser must be prepared to demonstrate that the scope of work is sufficient to produce credible assignment results.

Scope of work includes, but is not limited to:

- the extent to which the property is identified;
- the extent to which tangible property is inspected;
- the type and extent of data researched; and
- the type and extent of analyses applied to arrive at opinions or conclusions.

Appraisers have broad flexibility and significant responsibility in determining the appropriate scope of work for an appraisal, appraisal review, and appraisal consulting assignment. Credible assignment results require support by relevant evidence and logic. The credibility of assignment results is always measured in the context of the intended use.

PROBLEM IDENTIFICATION

An appraiser must gather and analyze information about those assignment elements that are necessary to properly identify the appraisal, appraisal review or appraisal consulting problem to be solved. The assignment elements necessary for problem identification are addressed in the Standards Rule 6-2:

- client and any other intended users;
- intended use of the appraiser's opinions and conclusions;
- type and definition of value;
- effective date of the appraiser's opinions and conclusions;
- subject of the assignment and its relevant characteristics; and
- assignment conditions.

This information provides the appraiser with the basis for determining the type and extent of research and analyses to include in the development of an appraisal. Similar information is necessary for problem identification in appraisal review and appraisal consulting assignments. Assignment conditions include:

- assumptions;
- extraordinary assumptions;
- hypothetical conditions;
- laws and regulations;
- jurisdictional exceptions; and
- other conditions that affect the scope of work.

SCOPE OF WORK ACCEPTABILITY

The scope of work must include the research and analyses that are necessary to develop credible assignment results. The scope of work is acceptable when it meets or exceeds:

- the expectations of parties who are regularly intended users for similar assignments; and
- what an appraiser's peers' actions would be in performing the same or a similar assignment.

Determining the scope of work is an ongoing process in an assignment. Information or conditions discovered during the course of an assignment might cause the appraiser to reconsider the scope of work. An appraiser must be prepared to support the decision to exclude any investigation, information, method, or technique that would appear relevant to the client, another intended user, or the appraiser's peers.

An appraiser must not allow assignment conditions to limit the scope of work to such a degree that the assignment results are not credible in the context of the intended use. In addition, the appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

DISCLOSURE OBLIGATIONS

The report must contain sufficient information to allow intended users to understand the scope of work performed. Proper disclosure is required because clients and other intended users may rely on the assignment results. Sufficient information includes disclosure of research and analyses performed or not performed.

JURISDICTIONAL EXCEPTION RULE

If any applicable law or regulation precludes compliance with any part of USPAP, only that part of USPAP becomes void for that assignment. When compliance with USPAP is required by federal law or regulation, no part of USPAP can be voided by a law or regulation of a state or local jurisdiction. *When an appraiser properly follows this Rule in disregarding a part of USPAP, there is no violation of USPAP.*

In an assignment involving a jurisdictional exception, an appraiser must:

- identify the law or regulation that precludes compliance with USPAP;
- comply with that law or regulation;
- clearly and conspicuously disclose in the report the part of USPAP that is voided by that law or regulation; and
- cite in the report the law or regulation requiring this exception to USPAP compliance.

The purpose of the Jurisdictional Exception Rule is strictly limited to providing a saving or severability clause intended to preserve the balance of USPAP if one or more of its parts are determined as contrary to law or public policy of a jurisdiction. By logical extension, there can be no violation of USPAP by an appraiser who disregards, with proper disclosure, only the part or parts of USPAP that are void and of no force and effect in a particular assignment by operation of legal authority.

It is misleading for an appraiser to disregard a part or parts of USPAP as void and of no force and effect in a particular assignment without identifying the part or parts disregarded and the legal authority justifying this action in the appraiser's report.

"Law" includes constitutions, legislative and court-made law, and administrative rules (such as from the Office of the Texas Comptroller of Public Accounts) and ordinances. "Regulations" include rules or orders having legal force, issued by an administrative agency. Instructions from a client or attorney do not establish a jurisdictional exception.

A jurisdictional exception prevalent in Texas is that appraisers are seeking to establish "fair market value" as defined by the Texas Property Tax Code instead of "market value" as found in the USPAP definitions section.

MASS APPRAISAL, DEVELOPMENT AND REPORTING (General Discussion)

In developing a mass appraisal, an appraiser must be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce and communicate credible mass appraisals.

Standard 6 applies to all mass appraisals of real and personal property regardless of the purpose or use of such appraisals. It is directed toward the substantive aspects of developing and communicating competent analyses, opinions, and conclusions in the mass appraisal of properties, whether real property or personal property. Mass appraisals can be prepared with or without computer assistance. The Jurisdictional Exception Rule may apply to several sections of Standard 6 because ad valorem tax administration is subject to various state, county, and municipal laws. The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for purposes of ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes:

- identifying properties to be appraised;
- defining market areas of consistent behavior that applies to properties;
- identifying characteristics (supply and demand) that affect the creation of value in that market area;
- developing a model structure that reflects the relationship among the characteristics affecting value in the market area;
- calibrating the model structure to determine the contribution of the individual characteristics affecting value;
- applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- reviewing the mass appraisal results.

The Jurisdictional Exception Rule may apply to several sections of Standard 6 because ad valorem tax administration is subject to various state, county, and municipal laws.

As previously stated in the P&A Policy Statement (pages 2 and 3 of this report), it may not be possible or practicable for all the mass appraisal attributes listed above to be rigorously applied to the many types of complex and/or unique properties that P&A typically appraises. Often there are contractual limitations on the scope of work needed or required. More prevalently, these types of properties do not normally provide a reliable database of market transactions (or details of transactions) necessary for statistically supportable calibration of appraisal models and review of appraisal results. Generally these two functions are effectively accomplished through annual extended review meetings with taxpayers (and clients) who provide data, sometimes confidentially, that allows for appraisal models to be adjusted where necessary. Nevertheless, and notwithstanding whether P&A implicitly or explicitly employs or reports all attributes listed above, in all cases P&A at the minimum employs tenants of “generally accepted appraisal methods” which are the genesis of USPAP Standards.

Per USPAP guidelines, P&A will make known all departures and jurisdictional exceptions when invoked (if an appraisal method or specific requirement is applicable but not necessary to attain credible results in a particular assignment).

The various sections of Standard 6 are briefly summarized below:

- **Standard 6-1:** Establishes the appraiser’s technical and ethical framework. Specifically, appraisers must recognize and use established principles, methods and techniques of appraisal in a careful manner while not committing substantial errors of fact or negligence that would materially affect the appraisal results and not give a credible estimate of fair market value. To this end appraisers must continuously improve his or her skills to maintain proficiency and keep abreast of any new developments in the real and personal property appraisal profession. This Standards Rule does not imply that competence requires perfection, as perfection is impossible to attain. Instead, it requires appraisers to employ every reasonable effort with regards to due diligence and due care.
- **Standard 6-2:** Defines the introductory framework requirements of developing a mass appraisal, focusing on the identification and/or definition of: client(s), intended users, effective date, scope of work, extraordinary assumptions,

hypothetical conditions, the type and definition of value being developed (typically "fair market value" for ad valorem tax purposes), characteristics of the property being appraised in relation to the type and definition of value and intended use, the characteristics of the property's market, the property's real or personal attributes, fractional interest applicability, highest and best use analysis along with other land-related considerations, and any other economic considerations relevant to the property.

- **Standard 6-3:** Defines requirements for developing and specifying appropriate mass appraisal data and elements applicable for real and personal property. For real property, the data and elements include: existing land use regulations, reasonably probable modification of such regulations, economic supply and demand, the physical adaptability of the real estate, neighborhood trends, and highest and best use analysis. For personal property, the relevant data and elements include: identification of industry trends, trade level, highest and best use, and recognition of the appropriate market consistent with the type and definition of value.
- **Standard 6-4:** Further defines requirements for developing mass appraisal models, focusing on development of standardized data collection forms, procedures, and training materials that are used uniformly on the universe of properties under consideration. This rule specifies that appraisers employ recognized techniques for specifying and calibrating mass appraisal models. Model specification is the formal development of a model in a statement or mathematical equation, including all due considerations for physical, functional, and external market factors as they may affect the appraisal. These models must accurately represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics. Models may be specified incorporating the income, market, and/or cost approaches to value and may be tabular, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics. Model calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model.
- **Standard 6-5:** Defines requirements for collection of sufficient factual data, in both qualitative and quantitative terms, necessary to produce credible appraisal results. The property characteristics collected must be contemporaneous with the effective date of the appraisal. The data collection program should incorporate a quality control procedure, including checks and audits of the data to ensure current and consistent records. This rule also calls for calls for an appraiser, in developing income and expense statement and cashflow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction. Terms and conditions of any leases should be analyzed, as well as the need for and extent of any physical inspection of the properties being appraised.
- **Standard 6-6:** Defines requirements for application of a calibrated model to the property being appraised. This rule calls for: the appraiser to recognize methods or techniques based on the cost, market, and income approaches for improved parcels; the appraiser the value sites by recognized methods or techniques such as allocation method, abstraction method, capitalization of ground rent, and land residual; the appraiser to develop value of leased fee or leasehold estates with consideration for terms and conditions of existing leases, and, when applicable by law, as if held in fee simple whereas market rents are substituted for actual contract rents; the appraiser to analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the appraiser to analyze anticipated public or private improvements located on or off the site, and analyze the effect on value, if any, of such anticipated improvements to the extent they are reflected in market actions.
- **Standard 6-7:** Defines the reconciliation process of a mass appraisal. Specifically, appraisers must analyze the results and/or applicability of the various approaches used while ensuring that, on an overall basis, standards of reasonableness and accuracy are maintained with the appraisal model selected (underline added for emphasis). It is implicit in mass appraisal that, even when properly specified and calibrated models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy.
- **Standard 6-8:** Defines requirements of a mass appraisal written report (elements of which are further detailed in the next three sections of this report that discuss P&A appraisal procedures with regards to specific categories of property).
- **Standard 6-9:** Defines requirements for appraiser certification of the mass appraisal written report.

**REAPPRAISAL PLAN OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY
PRITCHARD & ABBOTT, INC.
TAX YEARS 2015 AND 2016**

The following sections of this report discuss in detail the various elements of the mass appraisal written report as required by USPAP Standard 6-8, with regards to P&A appraisal of Mineral Interests, Industrial-Utility-Personal Property, and Real Estate.

REAPPRAISAL OF MINERAL INTERESTS

Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "summary" nature versus "self-contained," whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.

INTRODUCTION

Definition of Appraisal Responsibility (Scope of Effort): The Mineral Valuation Department of Pritchard & Abbott, Inc. ("P&A" hereinafter), is responsible for developing credible values for mineral interests (full or fractional percentage ownership of oil and gas leasehold interest, the amount and type of which are legally and/or contractually created and specified through deeds and leases, etal.) associated with producing (or capable of producing) leases. Mineral interests are typically considered real property because of their derivation from the bundle of rights associated with original fee simple ownership of land. Typically all the mineral interests that apply to a single producing lease are consolidated by type (working vs. royalty) with each type then appraised for full value which is then distributed to the various fractional decimal interest owners prorata to their individual type and percentage amount.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

Intended users of our reports are typically the client(s) for which we are under direct contract and taxpayers or their agents who own and/or represent the subject property being appraised. Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

This section of P&A's Biennial Reappraisal Plan is not applicable to any mineral or mineral interest property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall Biennial Reappraisal Plan should be referenced.

P&A makes the **Extraordinary Assumption** that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

P&A is typically under contract to determine current market value or "fair market value" of said mineral interests. Fair market value is typically described as the price at which a property would sell for if:

- exposed in the open market with a reasonable time for the seller to find a purchaser;
- both the buyer and seller know of all the uses and purposes to which the property is, or can be, adapted and of the enforceable restrictions on its use; and

- both the buyer and seller seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other. [Exigencies are pressing or urgent conditions that leave one party at a disadvantage to the other.]

For ad valorem tax purposes the effective date is usually legislatively specified by the particular State in which we are working - for example, in Texas the lien date is January 1 per the Texas Property Tax Code. For ad valorem tax purposes, the date of the appraisals and reports are typically several months past the effective date, thereby leaving open the possibility that a retrospective approach is appropriate under limited and prescribed circumstances (information after the effective date being applicable only if it confirms a trend or other appraisal condition that existed and was generally known as of the effective date).

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

Legal and Statutory Requirements: In Texas, the provisions of the Texas Property Tax Code and other relevant legislative measures involving appraisal administration and procedures control the work of P&A as an extension of the Appraisal District. Other states in which P&A is employed will have similar controlling legislation, regulatory agencies, and governmental entities. P&A is responsible for appraising property on the basis of its fair market value as of the stated effective date (January 1 in Texas) for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All mineral properties (interests) are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a **Jurisdictional Exception** supercedes the definition of "market value" as found in USPAP definitions.

NOTE: IN TEXAS, P&A BELIEVES THE PROPERTY BEING APPRAISED AND PLACED ON THE TAX ROLL IS THE INTEREST AND NOT THE OIL OR GAS MINERAL ITSELF, PER PROPERTY TAX CODE SECTION 1.04(2)(F). WHILE OIL AND GAS RESERVES CERTAINLY HAVE VALUE, THE FACT IS THAT IT IS THE INTERESTS IN THESE MINERALS THAT ARE BOUGHT AND SOLD, NOT THE MINERALS THEMSELVES. THE SALE OF MINERALS AS THEY ARE EXTRACTED FROM THE SUBSURFACE OF THE LAND WHERE THEY RESIDE AS MINERALS IN PLACE "MONETIZES" THE INTEREST AND THUS GIVES THE INTEREST ITS VALUE. WHENEVER P&A REFERS TO "MINERAL PROPERTIES" IN THIS REPORT OR IN ANY OTHER SETTING, IT IS THE MINERAL INTEREST, AND NOT THE MINERAL ITSELF, THAT IS THE SUBJECT OF THE REFERENCE.

Administrative Requirements: P&A endorses the principals of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A also endorses, and follows when possible, the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). In all cases where IAAO and/or USPAP requirements cannot be satisfied for reasons of practicality or irrelevancy, P&A subscribes to "generally accepted appraisal methods and techniques" so that its value conclusions are credible and defensible. P&A submits annual or biannual contract bids to the Appraisal District Board of Directors or the Office of the Chief Appraiser and is bound to produce appraisal estimates on mineral properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined or allowed through IAAO or USPAP requirements are specified by the Texas Property Tax Code or at the specific request or direction of the Office of the Chief Appraiser.

Appraisal Resources

Personnel: The Mineral Valuation Division staff consists of competent Petroleum Engineers, Geologists, and Appraisers. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation within the allowable time frames prescribed by the Texas Department of Licensing and Regulation (TDLR) and/or other licensing and regulatory agencies as applicable.

Data: For each mineral property a common set of data characteristics (i.e. historical production, price and expense data) is collected from various sources and entered into P&A's mainframe computer system. Historical production data and price data is available through state agencies (Texas Railroad Commission, Texas Comptroller, et al.) or private firms who gather, format and repackage such data for sale commercially. Each property's characteristic data drives the computer-assisted mass appraisal approach to valuation.

Information Systems: The mainframe systems are augmented by the databases that serve the various in-house and 3rd-party applications on desktop personal computers. In addition, communication and dissemination of appraisals and other information is available to the taxpayer and client through electronic means including internet and other phone-line connectivity. The appraiser supervising any given contract fields many of the public's questions or redirects them to the proper department personnel.

VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of oil and gas properties is not an exact science, and exact accuracy is not attainable due to many factors. Nevertheless, standards of reasonable performance do exist, and there are usually reliable means of measuring and applying these standards.

Petroleum properties are subject to depletion, and capital investment must be returned before economic exhaustion of the resource (mineral reserves). The examination of petroleum properties involves understanding the geology of the resource (producing and non-producing), type of reservoir energy, the methods of secondary and enhanced recovery (if applicable), and the surface treatment and marketability of the produced petroleum product(s).

Evaluation of mineral properties is a continuous process; the value as of the lien date merely represents a "snapshot" in time. The potential value of mineral interests derived from sale of minerals to be extracted from the ground change with mineral price fluctuation in the open market, changes in extraction technology, costs of extraction, and other variables such as the value of money.

Approaches to Value for Petroleum Property

Cost Approach: The use of cost data in an appraisal for market value is based upon the economic principle of substitution. The cost approach typically derives value by a model that begins with replacement cost new (RCN) and then applies depreciation in all its forms (physical depreciation, functional and economic obsolescence). This method is difficult to apply to oil and gas properties since lease acquisition and development may bear no relation to present worth. Though very useful in the appraisal of many other types of properties, the cost approach is not readily applicable to mineral properties. [Keep in mind that the property actually being appraised is the mineral interest and not the oil and gas reserves themselves. Trying to apply the cost approach to evaluation of mineral interests is like trying to apply the cost approach to land; it is a moot point because both are real properties that are inherently non-replaceable.] **As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., does not employ the cost approach in the appraisal of mineral interests.**

Market Approach: This approach may be defined as one which uses data available from actual transactions recorded in the market place itself; i.e., sales of comparable properties from which a comparison to the subject property can be made. Ideally, this approach's main advantage involves not only an opinion but an opinion supported by the actual spending of money. Although at first glance this approach seems to more closely incorporate the aspects of fair market value per its classical definition, there are two factors that severely limit the usefulness of the market approach for appraising oil and gas properties. First, oil and gas property sales data is seldom disclosed (in non-disclosure states such as Texas); consequently there is usually a severe lack of market data sufficient for meaningful statistical analysis. Second, all conditions of each sale must be known and carefully investigated to be sure one does have a comparative indicator of value per fair market value prerequisites.

Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets in addition to oil and gas reserves are involved; this further complicates the analysis whereby a total purchase price must be allocated to the individual components - a speculative and somewhat arbitrary task at best. In the case of oil and gas

properties, a scarcity of sales requires that every evidence of market data be investigated and analyzed. Factors relative to the sale of oil and gas properties are:

- current production and estimated declines forecast by the buyer;
- estimated probable and potential reserves;
- general lease and legal information which defines privileges or limitation of the equity sold;
- undeveloped potential such as secondary recovery prospects;
- proximity to other production already operated by the purchaser;
- contingencies and other cash equivalents; and
- other factors such as size of property, gravity of oil, etc.

In the event that all these factors are available for analysis, the consensus effort would be tantamount to performing an income approach to value (or trying to duplicate the buyer's income approach to value), thereby making the market approach somewhat moot in its applicability. As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of mineral interests.

Income Approach: This approach to value most readily yields itself to the appraisal of mineral interests. Data is readily available whereby a model can be created that reasonable estimates a future income stream to the property. This future income may then be converted (discounted) into an estimate of current value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield. If the land or improvements are of any residual value after the cessation of oil and gas production, that value should also be included (if those components are also being appraised).

The relevant income that should be used is the expected future net income. Assumptions of this method are:

- Past income and expenses are not a consideration, except insofar as they may be a guide to estimating future net income.
- That the producing life as well as the reserves (quantity of the minerals) are estimated for the property.
- Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the income approach to value in the appraisal of mineral interests.

DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data is data from the Railroad Commission of Texas as reported by operators. As a monthly activity, the data processing department receives data tapes or electronic files which have updated and new well and production data. Other discovery tools are fieldwork by appraisers, financial data from operators, information from chief appraisers, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new wells and other useful facts related to property valuation.

Another crucial set of data to obtain is the ownership of these mineral interests. Typically a mineral lease is fractionated and executed with several if not many owners. This information is typically requested (under a promise of confidentiality concerning owners' personal information) from pipeline purchasers and/or other entities (such as operators) who have the responsibility of disbursing the income to the mineral interest owners. Another source of ownership information is through the taxpayers themselves who file deeds of ownership transfer and/or correspond with P&A or the appraisal district directly.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures for mineral properties are generally accomplished globally by the company; i.e., production and price data for the entire state is downloaded at one time into the computer system. Appraisers also

individually gather and record specific and particular information to the appraisal file records, which serves as the basis for the valuation of mineral properties. P&A is divided into four district offices covering different geographic areas. Each office has a district manager, appraisal and ownership maintenance staff, and clerical staff as appropriate. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser.

VALUATION ANALYSIS (MODEL CALIBRATION)

Appropriate revisions and/or enhancements of schedules or discounted cash flow software are annually made and then tested prior to the appraisals being performed. Calibration typically involves performing multiple discounted cash flow tests for leases with varying parameter input to check the correlation and relationship of such indicators as: Dollars of Value Per Barrel of Reserves; Dollars of Value Per Daily Average Barrel Produced; Dollars of Expense Per Daily Average Barrel Produced; Years Payout of Purchase Price (Fair Market Value). In a more classical calibration procedure, the validity of values by P&A's income approach to value is tested against actual market transactions, if and when these transactions and verifiable details of these transactions are disclosed to P&A. Of course these transactions must be analyzed for meeting all requisites of fair market value definition. Any conclusions of this analysis are then compared to industry benchmarks for reasonableness before being incorporated into the calibration procedure.

INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process. P&A's discounted cashflow software dynamically generates various benchmark indicators that the appraiser reviews concurrent with the value being generated. These benchmarks often prompt the appraiser to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are dollars of value per barrel of oil reserve, years payout, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values, either before or after Notices of Appraised Value are prepared. Operators routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as individual lease operating expense and reserve figures. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as an extension of the Office of the Chief Appraiser.

PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for mineral properties. School jurisdictions are given an opportunity to appeal any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

CALENDAR OF EVENTS/DELIVERABLES TO CLIENT

As an appraisal contractor, the calendar of events and/or deliverables is largely dependent upon the client's needs and requirements. That said, P&A generally follows the property tax calendar as promulgated by the Property Tax Assistance Division (PTAD) whereas certain work activities must be accomplished by certain deadlines as specified by the Property Tax Code. P&A's contracts typically involve compensation being received from the client only after completion of certain events or deliverables. For example, the CAD may make quarterly payments per the following schedule:

- February, after completion of personal property field inspections;
- May, after completion and mailing of Notices of Appraised Value;
- August, after completion of Appraisal Review Board hearings; and

- November, after Certification of values.

The timetable regarding the sections described above is generally as follows:

- **Data Collection/Validation** occurs beginning in the Fall (October) prior to a tax year and continues into the Spring of that same tax year;
- **Valuation Analysis (Model Calibration)** occurs in the Spring (March - May) of a tax year and continues into the Summer (June - August) of that same tax year;
- **Individual Value Review Procedures** occurs concurrent, more or less, with Valuation Analysis; and
- **Performance Tests** occurs later in the tax year after certification of values.

REAPPRAISAL OF INDUSTRIAL, UTILITY, AND RELATED PERSONAL PROPERTY

Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "summary" nature versus "self-contained," whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.

INTRODUCTION

Definition of Appraisal Responsibility: The Engineering Services Department of Pritchard & Abbott, Inc. (P&A) is responsible for developing fair and uniform market values for industrial, utility and personal properties.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

Intended users of our reports are typically the client(s) for which we are under direct contract and taxpayers or their agents who own and/or represent the subject property being appraised. Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

This section of P&A's Biennial Reappraisal Plan is not applicable to any Industrial, Utility, or related Personal Property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall Biennial Reappraisal Plan should be referenced.

P&A makes the **Extraordinary Assumption** that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

Legal and Statutory Requirements: The provisions of the Texas Property Tax Code and relevant legislative measures involving appraisal administration and procedures control the work of P&A as a subcontractor to the Appraisal District. P&A is responsible for appraising property on the basis of its market value as of January 1 for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All industrial, utility and personal

properties are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a **Jurisdictional Exception** supercedes the definition of "market value" as found in USPAP definitions.

Administrative Requirements: P&A follows generally accepted and/or recognized appraisal practices and when applicable, the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A, when applicable, also subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). P&A submits annual or biannual contract bids to the Office of the Chief Appraiser and is bound to produce appraisal estimates on industrial, utility and personal properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined through IAAO or USPAP requirements are specified by the Texas Property Tax Code and/or at the specific request or direction of the Office of the Chief Appraiser.

Appraisal Resources

Personnel: The Engineering Services Department and P&A's appraisal staff consists of appraisers with degrees in engineering, business and accounting. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation as prescribed by the Texas Department of Licensing and Regulation (TDLR).

Data: A set of data characteristics (i.e. original cost, year of acquisition, quantities, capacities, net operating income, property description, etc.) for each industrial, utility and personal property is collected from various sources. This data is maintained in either hard copy or computer files. Each property's characteristic data drives the appropriate computer-assisted appraisal approach to valuation.

Information Systems: P&A's mainframe computer system is composed of in-house custom software augmented by schedules and databases that reside as various applications on personal computers (PC). P&A offers a variety of systems for providing property owners and public entities with information services.

VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of industrial, utility and personal properties is not an exact science, and exact accuracy is not attainable due to many factors. These are considered complex properties and some are considered Special Purpose properties. Nevertheless, standards of reasonable performance do exist, and there are reliable means of measuring and applying these standards.

The evaluation and appraisal of industrial, utility and personal property relies heavily on the discovery of the property followed by the application of recognized appraisal techniques. The property is subject to inflation and depreciation in all forms. The appraisal of industrial and personal property involves understanding petroleum, chemical, steel, electrical power, lumber and paper industry processes along with a myriad of other industrial processes. Economic potential for this property usually follows either the specific industry or the general business economy. The appraisal of utility properties involves understanding telecommunications, electrical transmission and distribution, petroleum pipelines and the railroad industry. Utility properties are subject to regulation and economic obsolescence. The examination of utility property involves the understanding of the present value of future income in a regulated environment.

The goal for valuation of industrial, utility and personal properties is to appraise all taxable property at "fair market value". The Texas Property Tax Code defines Fair Market value as the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- both the seller and the purchaser know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use; and

- both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

Approaches to Value for Industrial, Utility, and Personal Property

Cost Approach: The use of cost data in an appraisal for market value is based upon the economic principle of substitution. This method is most readily applicable to the appraisal of industrial and personal property and some utility property. Under this method, the market value of property equals the value of the land plus the current cost of improvements less accrued depreciation. An inventory of the plant improvements and machinery and equipment is maintained by personally inspecting each facility every year. As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the cost approach to value in the appraisal of industrial, utility, and personal property.

Market Approach: This approach is characterized as one that uses sales data available from actual transactions in the market place. There are two factors that severely limit the usefulness of the market approach for appraising industrial, utility and personal properties. First, the property sales data is seldom disclosed; consequently there is insufficient market data for these properties available for meaningful statistical analysis. Second, all conditions of sale must be known and carefully investigated to be sure one does have a comparative indicator of value. Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets and intangibles in addition to the industrial, utility and personal property are involved. The complexity of these sales presents unique challenges and hindrances to the process of allocation of value to the individual components of the transaction.

In the case of industrial, utility and personal properties, a scarcity of sales requires that all evidence of market data be investigated and analyzed. Factors relative to the sale of these properties are:

- plant capacity and current production; terms of sale, cash or equivalent;
- complexity of property;
- age of property;
- proximity to other industry already operated by the purchaser; and
- other factors such as capital investment in the property.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of industrial, utility, and personal property.

Income Approach: This approach to value most readily yields itself to all income generating assets, especially utility properties. Data for utility properties is available from annual reports submitted to regulatory agencies whereby future income may be estimated, and then this future income may be converted into an estimate of value. The valuation of an entire company by this method is sometimes referred to as a Unit Value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value estimate is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield.

The relevant income that should be used in the valuation model is the expected future net operating income after depreciation but before interest expense (adjustments for Federal Income Taxes may or may not be required). Assumptions of this method are:

- Past income and expenses are a consideration, insofar as they may be a guide to future income, subject to regulation and competition.
- The economic life of the property can be estimated.
- The future production, revenues and expenses can be accurately forecasted. Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., employs the income approach in the appraisal of industrial and utility property only when quantifiable levels of income are able to be reliably determined and/or projected for the subject property. P&A does not employ the income approach in the appraisal of personal property.

DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data for industrial and personal property is through fieldwork by the appraisers and commercially/publicly available schedules developed on current costs. Data for performing utility appraisals is typically provided by the taxpayer or is otherwise available at various regulatory agencies (Texas Railroad Commission, Public Utilities Commission, FERC, et al.). Other discovery tools are financial data from annual reports, information from chief appraisers, renditions, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new industry and other useful facts related to property valuation.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures have been established for industrial and personal properties. Appraisers gather and record information in the mainframe system, where customized programs serve as the basis for the valuation of industrial, utility and personal properties. P&A is divided into multiple district offices covering different geographic zones. Each office has a district manager and field staff. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser. Additionally, P&A's Engineering Services Department provides supervision and guidance to all district offices to assist in maintaining uniform and consistent appraisal practices throughout the company.

VALUATION ANALYSIS (MODEL CALIBRATION)

The validity of the values by P&A's income and cost approaches to value is tested against actual market transactions, if and when these transactions and verifiable details of the transactions are disclosed to P&A. These transactions are checked for meeting all requisites of fair market value definition. Any conclusions from this analysis are also compared to industry benchmarks before being incorporated in the calibration procedure. Appropriate revisions of cost schedules and appraisal software are annually made and then tested for reasonableness prior to the appraisals being performed.

INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process. P&A's industrial, utility, personal property programs and appraisal spreadsheets afford the appraiser the opportunity to review the value being generated. Often the appraiser is prompted to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are original cost, replacement cost, service life, age, net operating income, capitalization rate, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values either before or after Notices of Appraised Value are prepared. Taxpayers, agents and representatives routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as investment costs and capitalization rate studies. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as a representative of the Office of the Chief Appraiser.

PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for utility properties. School jurisdictions are given an opportunity to appeal

any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

CALENDAR OF EVENTS/DELIVERABLES TO CLIENT

As an appraisal contractor, the calendar of events and/or deliverables is largely dependent upon the client's needs and requirements. That said, P&A generally follows the property tax calendar as promulgated by the Property Tax Assistance Division (PTAD) whereas certain work activities must be accomplished by certain deadlines as specified by the Property Tax Code. P&A's contracts typically involve compensation being received from the client only after completion of certain events or deliverables. For example, the CAD may make quarterly payments per the following schedule:

- February, after completion of personal property field inspections;
- May, after completion and mailing of Notices of Appraised Value;
- August, after completion of Appraisal Review Board hearings; and
- November, after Certification of values.

The timetable regarding the sections described above is generally as follows:

- **Data Collection/Validation** occurs beginning in the Fall (October) prior to a tax year and continues into the Spring of that same tax year;
- **Valuation Analysis (Model Calibration)** occurs in the Spring (March - May) of a tax year and continues into the Summer (June - August) of that same tax year;
- **Individual Value Review Procedures** occurs concurrent, more or less, with Valuation Analysis; and
- **Performance Tests** occurs later in the tax year after certification of values.

