

UPSHUR COUNTY APPRAISAL DISTRICT
RE-APPRAISAL PLAN
FOR
TAX YEARS 2015 & 2016
AS ADOPTED BY THE BOARD OF
DIRECTORS

August 19, 2014

DIRECTORS

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INTRODUCTION

Scope of Responsibility

The Upshur County Appraisal District has prepared and published this appraisal plan to provide our Board of Directors, citizens and taxpayers with a better understanding of the District's responsibilities and activities. This report has several parts; a general introduction and sections describing the appraisal effort by the appraisal district.

The Upshur County Appraisal District (CAD) is a political subdivision of the state of Texas created effective January 1, 1980. The provisions of the Texas Property Tax Code govern the legal, statutory, and administrative requirements of the appraisal district. A Board of Directors, appointed by the taxing units within the boundaries of Upshur County Appraisal District, constitutes the district's governing body. The chief appraiser, appointed by the Board of Directors, is the chief administrator and chief executive officer of the appraisal district.

The appraisal district is responsible for the local property tax appraisal and exemption administration for 19 jurisdictions or taxing units in the district. Each taxing unit, such as the county, cities, school districts, and emergency service districts, sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals and estimated values by the appraisal district allocate the year's tax burden on the basis of each taxable property's market value. We also determine eligibility for various types of property tax exemptions such as those for homeowners, the elderly and disable, disabled veterans, charitable or religious organizations and agricultural and timber productivity valuation.

Except as otherwise provided by the Property Tax Code, all taxable property is appraised at its "market value" as of January 1st. Under the tax code, "market value" means 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 buyer 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 the buyer seek to maximize their gains and neither is in a position to take advantage of the needs of the other.

The Property Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec 23.230, productivity (Sec 23.41), real property inventory (Sec 23.12), dealer inventory (Sec. 23.121, 23.124 and 23.127), nominal (Sec 23.18), or restricted use properties (Sec 23.83) and allocation of interstate property (Sec 23.03). The owner of personal property inventory may elect to have the inventory appraised at its market value as of September 1st of the year pre-ceding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1st.

The Texas Property Tax Code, under Sec 25.18, requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. The district's current policy is to conduct a general re-inspection and taxable property every three years. Appraised values are reviewed annually and are subject to change. Business personal properties, minerals and utility properties are appraised every year.

The appraised value of real estate is calculated using specific information about each property. Using computer-assisted mass appraisal programs, and recognized appraisal methods and techniques, we compare that information with the data for similar properties, and with recent cost and market data. The district follows the standards of the International Association of Assessing Officer (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable.

Personnel Resources

The office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The administration department's function is to 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 appraisal department is responsible for the valuation of all real and personal property accounts. The property types appraised include commercial, residential, business personal, mineral, utilities and industrial. The district's appraisers are subject to the provisions of the Property Taxation Professional Examiners. Support functions including records maintenance, information and assistance to property owners, and hearings are coordinated by personnel in support services.

The appraisal district staff consists of 11 employees with the following classifications:

- 1 – Official/Administrator (executive level administration)
- 4 – Appraisers
- 1 – Cartographer
- 5 – Administrative Support (executive, customer service, clerical and other)

Staff Education and Training

All personnel that are performing appraisal work are registered with the Texas Department of Licensing and Regulation and are required to take appraisal course to achieve the status of Registered Professional Appraiser within five years of employment as an appraiser. After they are awarded their license, they must receive additional training of a minimum of 30 hours continuing education units every two years. Failure to meet these minimum standards results in the termination or demotion of the employee.

Additionally, all appraisal personnel receive extensive training in data gathering processes including statistical analysis of all types of property to ensure equality and uniformity of appraisal of all types of property. On-the-job training will be delivered by the senior appraiser staff and there will be regular meetings to introduce new procedures and monitor appraisal activity to ensure that standardized appraisal procedures are being followed by all personnel.

Data

The district is responsible for establishing and maintaining approximately 30,000 real and personal property accounts covering 593 square miles within Upshur County. This data includes property characteristics, ownership, and exemption information. Property characteristics data on new construction is updated through an annual field review effort; existing property data is maintained through a field review. General trends in interest rates, new construction trends and cost and market data are acquired through various sources, including internally generated questionnaires to buyers and sellers, and market data centers and vendors.

The district has a geographic information system (GIS) that maintains cadastral maps and various layers of data and aerial photography as well as Pictometry.

Information on certified values and property characteristics data is available on the district's software vendor's website, www.trueautomation.com.

Shared Appraisal District Boundaries

In 2008, the Legislature adopted HB1010 which cut appraisal district lines at county lines. There are no more shared property issues.

Information Systems

Essential to the process and goals of the appraisal program, is reliable, consistent and competent data processing support. It is for this reason that the Upshur CAD Board of Directors foresaw the need to purchase new computer software for implementation in 2005. It is critical that the utmost level of computer support and response time be maintained for a timely completion and a successful reappraisal.

Ida Montgomery

New Diana ISD by Neighborhood Code: Parcel Count 2815 Neighborhood codes: S06 & LLE with Subsets S06-1, S06-2, S06-3, S06-4

Start Date: Sept 2, 2014-----End Date: Dec 31, 2014

	Start	Finish
S06 Diana ISD (Northwest Quadrant)	9/2/2014	9/30/2014
Diana ISD & LLE (Northeast Quadrant)	10/01/2014	10/30/2014
S06 Diana ISD (Southeast Quadrant)	11/01/2014	11/30/2014
S06 Diana ISD (Southwest Quadrant)	12/01/2014	12/31/2014

Maintenance Schedule for 2015 Start Date: Jan 2, 2015 End Date: March 15, 2015

Mobile Home Parks
Gilmer ISD (Southeast)
Gladewater ISD & City of Gladewater
Rundowns (Gate hangers, Re-checks from Reappraisal)

Jennifer Jackson

Start date – August 18, 2014 – Ore City ISD, City of Ore City and Pittsburg ISD

Neighborhoods: S03
New Mountain
Snow Hill Community
S07OC
Subsets S03-1, S03-2, S03-3, S03-4

End date – December 30, 2014

Maintenance Schedule (re-checks, new structures, gate hangers, removed structures and taxpayer requests outside of planned re-inspection area)

Start date – January 2, 2015

– Mobile Home Parks in Union Hill ISD, Pittsburg ISD
Union Grove ISD
Ore City ISD and City of Ore City – follow up
Gilmer ISD (Northeast, Northwest and Southwest)

January 12, 2015 – Gilmer ISD (Northeast, Northwest and Southwest)

February 2, 2015 – Union Hill ISD, Pittsburg ISD and Union Grove ISD

March 2, 2015 – Ore City ISD, City of Ore City and Pittsburg ISD

End date – March 16, 2015

TAX YEAR 2016 REGION A

Tax year 2016 is a reappraisal/re-inspection year for properties in Gilmer ISD, and the portion of Pittsburg ISD that adjoins Gilmer ISD.

The re-inspection timelines for each appraiser’s market areas are as follows:

Ida Montgomery

Start September 4, 2015 ----- End December 31, 2015

Gilmer ISD Southeast neighborhood/market Areas

Total Parcel count 5271

	Start	Finish
SO2SE (Gilmer SE)	09/04/16	11/30/16
BS (Barton Springs)	09/15/16	09/16/16
S413 (Princess Jean Anne)	10/01/16	10/02/16
S175L (Glenwood Acres)	12/03/16	12/07/16
S175H (Glenwood Acres)	12/10/16	12/14/16
S175M (Glenwood Acres)	12/17/16	12/21/16

Maintenance Schedule (re-checks, new structures, remove structures outside of planned re-inspection area)

Begin January 2, 2016 and end by March 15, 2016

Mobile Home Parks
Gladewater ISD
City of Gladewater

New Diana ISD

Jennifer Jackson

Start date – September 5, 2015 – Gilmer ISD Northwest, Gilmer ISD Northeast, Gilmer ISD Southwest and Pittsburg ISD

Neighborhoods: S02NE
S02NW
S02SW
Friendship Community
McFadden
Valley View Gilmer ISD Southwest
S07GN

End date - December 23, 2015

Maintenance Schedule (re-checks, new structures, remove structures outside of planned re-inspection area)

Start date - January 2, 2016

Mobile Home Parks in Union Hill ISD, Pittsburg ISD, Union Grove ISD, Ore City ISD, City of Ore City and Gilmer ISD (Northeast, Northwest and Southwest)

January 16, 2016 – Gilmer ISD (Northeast, Northwest and Southwest)

February 6, 2016 – Union Hill ISD, Pittsburg ISD and Union Grove ISD

March 6, 2016 - Ore City ISD, City of Ore City and Pittsburg ISD

End date - March 17, 2016

Amanda Thibodeaux

Start- September 1, 2015 End- December 31, 2015

2015- All parcels in City of Gilmer

Market areas	Start	End
C11 Low (Low End Market)	09-01-2015	10-01-2015

PAT (Patterson Addition)	10-01-2015	10-08-2015
S184 (The Groves Addition)	10-09-2015	10-12-2015
S265 (North Park Subdivision)	10-13-2015	10-15-2015
S378 (Western Hills Subdivision)	10-30-2015	11-02-2015
S279 (Old Town Gilmer)	11-03-2015	12-31-2015

Maintenance Schedule (re-checks new structures, gate hangers, removed structures and taxpayer requests outside of planned re-inspection area)

January 2, 2016 to March 15, 2016

Harmony ISD S05

Big Sandy ISD & City of Big Sandy (S01 & C39)

TAX YEAR 2017 Region B

Tax year 2017 is a reappraisal/re-inspection year for properties in Union Hill ISD, portion of Pittsburg ISD that adjoins Union Hill ISD, Union Grove ISD and Big Sandy ISD.

PLANNING AND ORGANIZATION

A calendar of key events with critical completion dates is prepared for each major work area. This calendar identifies all key events for appraisal, clerical, and information systems. A separate calendar is prepared for tax years 2015 and 2016.

2015 and 2016 General Calendar of Events

August

- Start new year reappraisal and re-inspection process
- Collect data, permits, mechanic liens, deeds, etc. all month
- Load property data onto field devices as needed

September

- Begin field inspections
- Collect data, permits, mechanic liens, deeds, etc. all month
- September 1 – Current year’s taxable values of inventories may be determined as of this date, at property owner’s written option (Sec.23.12)

- September 15 – Last day for CAD board to adopt CAD budget , unless district has changed its fiscal year (Sec. 6.06) and reappraisal plan in even year

October

- Continue field inspections
- Collect data, permits, mechanic liens, deeds, etc. all month

November

- Continue field inspections
- Collect data, permits, mechanic liens, deeds, etc. all month

December

- Conclude primary field inspections
- Collect data, permits, mechanic liens, deeds, etc. all month
- December 27 – 31 Prepare and mail personal property renditions

January

- Begin maintenance field inspections (new construction, demolition and remodeling)
- Collect data, permits, mechanic liens, deeds, etc. all month
- Mail special-use applications for new owners and property possibly not eligible for current year after December deed work completed
- Mail Exemption applications for new owners after December deed work completed
- Mail Mobile Home Park letters after December deed work completed
- January 1 – Date renditions period begins; continues through April 15 for those property owners not requesting a filing extension (Sec. 22.23)
- January 1 – Date that half of appraisal review board (ARB) members begin 2-year term (Sec. 6.41)
- January 31 – Last day for chief appraiser to deliver applications for special appraisal and exemptions requiring annual applications (Sec. 11.44, 23.43)
- January 31 – Last day for motor vehicle, boats, and outboard motors, heavy equipment and manufactured housing dealers to file dealer’s inventory declarations (Sec. 23.121, 23.124, 23.1241, 12.127)
- Begin updating Cost Manuals

February

- Continue maintenance field inspections (new construction, demolition and remodeling)
- Collect data, permits, mechanic liens, deeds, etc. all month
- Value analysis, ratio studies, schedule building, testing and adjusting begins

March

- Complete maintenance field inspections (new construction, demolition and remodeling)
- Collect data, permits, mechanic liens, deeds, etc. all month
- Final test all residential schedules with sales ratios for accuracy, run parcel edit, correct errors and check homestead ceilings

April

- Collect data, permits, mechanic liens, deeds, etc. all month
- April 1 – Mail category A appraisal notices
- April 15 – Last day for property owners to file renditions and property information reports unless they requested a filing extension in writing (Sec. 22.23)

May

- May 1 – Time that chief appraiser must publish notice about taxpayer protest procedures in the newspaper (sec. 41.41, 41.70)
- May 1 – Mail non category A real property appraisal notices
- May 1 – 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)
 - Application 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)
 - Requests for separate listing of separately owned land and improvements (Sec. 25.08)
 - Requests for proportionate taxing of a planned unit development property (Sec. 25.09)
 - Requests for separate listing of separately owned standing timber and land (Sec. 25.10)
 - Requests for separate listing of undivided interests (Sec, 25.11)
 - Requests for joint taxation of separately owned mineral interests (Sec. 25.11)
- May 15 – Last day for property owners to file renditions and property information reports if they requested in writing an extension. For good cause, chief appraiser may extend this deadline another 15 days (Sec. 22.23)
- May 15 – Mail personal property/mineral appraisal notices
- May 31 – Last day for property owners to file protest with ARB (or by 30th day after notice of appraised value is delivered, whichever is later) (Sec. 41.44)
- May 31 – Last day for taxing units to file challenges with ARB (or within 15 days after ARB receives appraisal records, whichever is later) (Sec. 41.04)
- May 31 – Last day for religious organizations to amend charters and file new applications for Sec. 11.20 exemption (or within 60 days of exemption denial, whichever is later) (Sec. 11.421)

June

- Give estimate of value to taxing entities
- June 15 – Last day for chief appraiser to submit recommended next year's budget to CAD board and taxing units (unless taxing units have changed CAD's fiscal year) (Sec. 6.06)

- Hearings begin
- June 30 – Last day for taxing units to adopt local option percentage homestead exemptions (Sec. 11.13)
- June 30 – Last day for private schools to amend charters and file new applications for Sec. 11.21 exemption (or within 60 days of exemption denial, whichever is later) (Sec. 11.422)
- June 30 – Last day for CADs to report formation of reinvestment zones and tax abatement agreements to the Texas Comptroller (Sec. 312.005)

July

- July 20 – ARB must approve records, but may not do so if more than 5 percent of total appraised value remains under protest (Sec. 41.12)
- July 25 – Last day for chief appraiser to certify appraisal roll to each taxing unit (Sec. 26.01)

MASS APPRAISAL SYSTEM

Real Property Valuation

Revisions to cost models, income models, and market models are specified, updates and tested each year.

Cost schedules are tested with market data (sales) to insure that the appraisal district is in compliance with Texas Property Tax Code, Section 23.011. Replacement cost new tables as well as depreciation tables are tested for accuracy and uniformity using ratio study tools and compared with cost data from recognized industry leaders, such as *Marshall and Swift*.

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

Personal Property Valuation

Density schedules are updated using *Marshall and Swift Valuation Guide* and local renditions to update costs. Valuation procedures are reviewed and modified as needed and tested.

Notice Processing

25.19 – Appraisal notice forms are reviewed and edited for updates. Updates include the latest copy of *Property Taxpayer Remedies* in English and Spanish. Upshur CAD will mail notices between April 1 and May 17.

Hearing Process

Protest hearing scheduling for informal and formal Appraisal Review Board hearing is 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. Production of documentation is tested and compliance with HB 201 is insured. Upshur CAD utilizes an automated formal hearing scheduling process and appeals begin with the mailing of notices in May and will continue until all appeals are heard.

The Appraisal Process

The field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and personal property by any method requires a comprehensive physical description of personal property, and land and building characteristics. This appraisal activity is responsible for administering, planning and coordinating all activities involving data collection and maintenance of all commercial, residential and personal property types located within the boundaries of Upshur County and the jurisdictions of this appraisal district. The data collection effort involves the field inspection of real and personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to field inspect residential, commercial, and personal properties in the district every three years. Attached to the back of this document is a parcel count breakdown and inspection schedule for a three year period. This will separate approximately 28,200 parcel count into 8,700 to 10,000 parcels for each appraisal year. These accounts will further be divided by three appraisers.

Properties will be identified through physical inspection, or other reliable means including deeds or other legal documentation, aerial photographs, land based photographs, surveys, maps, and property sketches. Characteristics of each property will be updated in the appraisal records.

Market areas will be defined by:

- Location and economic attributes
- Physical attributes of properties such as size, age, and condition
- Easements, covenants, leases, special assessments, ordinances, or legal restrictions

The appraisal activities are conducted by 3 in-house appraisers. The data used by the field appraisers includes the existing property characteristic information contained in the computer assisted mass appraisal system (CAMA). The data is printed on property cards or personal property data sheets. Other data includes maps, sales data, fire and damage reports, building permits, photos and actual cost and market information.

For tax year 2016, the appraisal district will do a re-inspection and reappraisal of all real and personal properties in Gilmer ISD, and the portion of Pittsburg ISD that adjoins Gilmer ISD in Upshur County. Each property will be physically examined with appraisers driving or walking in front of each improvement. Appraisers will note condition of property and changes that might

have occurred since the last on-site check. Exterior pictures will be taken or updated as necessary. Every subdivision will be statistically analyzed to ensure equity and uniformity based on sales during the previous year.

Commercial properties will be inspected for depreciation and change. Photos will be taken. Construction replacement costs and depreciation will be reviewed based on *Marshall and Swift Valuation Guides*. We will work towards re-classing our commercial property classes to better coincide with *Marshall and Swift* classification guides. The income approach to value is also utilized to appraise income producing properties such as shopping centers, apartment complexes, motels and other types of property that typically sell based on net operating income.

Business personal properties will be visited and quality and density observations noted. Renditions will be mailed to each business. New businesses will be discovered using permits, sales taxpayer numbers issued by the Comptroller's office, vehicle registration information supplied by *Just Texas*, newspaper ads and visual inspections. Businesses are in the process of being categorized using SIC codes. Rendition laws provide additional information on which to base values of all BPP accounts.

Attached is the re-appraisal plan issued by Capitol Appraisal Group Inc (CAGI) outlining their efforts to reappraise minerals, utilities, pipelines and industrial properties.

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property on a CAMA (Computer Assisted Mass Appraisal) system. The information contained in CAMA includes site characteristics, such as land size and topography, and improvement data, such as square foot of living area, year built, quality of construction and condition. Field appraisers are required to use a property classification system that establishes uniform procedures for the correct listing of real property. All properties are coded according to a classification system. The approaches to value are structured and calibrated based on this coding system and property description and characteristics. The field appraisers use property classification references during their initial training and as a guide in the field inspection of properties. The type of information contained in the BPP file includes personal property such as business inventory, furniture and fixtures, machinery and equipment, with details such as cost and location. The field appraisers conducting on-site inspections use a personal property classification system during their initial training and as a guide to correctly list all personal property that is taxable.

Sources of Data

The sources of data collection are through property inspection, new construction field efforts, data mailer questionnaires, hearings, sales validation efforts, newspapers and publications, and

property owner correspondence. A principal source of data comes from taxing jurisdictions that require property owners to take out a building permit. We also use septic system inspection forms obtained from Northeast Municipal Water District. Data surveys of property owners requesting market information and property description information is also valuable data. Various income and rental surveys will be sent to determine operating income and expenses for investment and income producing property.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently the property owner provides reliable data to allow correction of records without having to send an appraiser on-site.

Accuracy and validity in property description and characteristics data is the highest goal and is stressed throughout the appraisal process from year to year. Appraisal opinion quality and validity relies on data accuracy as its foundation.

The field appraiser is responsible for the data entry of his/her fieldwork into the computer file. This responsibility includes not only data entry but also quality assurance. The majority of the data collected in the field is input by the computer staff with supervision by the field appraiser.

PERFORMANCE ANALYSIS

In each year, 2015 and 2016, the previous year's equalized values are analyzed with ratio studies 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, and weighted mean ratios are calculated for properties in each reporting category to measure the level of appraisal (appraisal accuracy). The mean ratio is calculated in each market area to indicate the level of appraisal accuracy by property reporting category. In the reappraisal year this analysis is used to develop the starting point for establishing the level of accuracy of appraisal performance. In the no-appraisal year this analysis is used to indicate the uniformity or equity of existing principals.

ANALYSIS OF AVAILABLE RESOURCES

Staffing and budget requirements for tax year 2015 are detailed in the 2016 appraisal district budget, as adopted by the board of directors and attached to the written biennial plan by reference. This reappraisal plan is adjusted to reflect the available staffing in tax year 2015 and the anticipated staffing for tax year 2016. Staffing will impact the cycle of real property re-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 are specified. Information systems support is detailed with year specific functions identified and system upgrades scheduled. Computer generated forms are reviewed for revisions based on year and reappraisal status. Legislative changes are schedule for completion and testing. Existing maps and data requirements are specified and updates scheduled.

RESIDENTIAL VALUATION PROCESS

Residential appraisers are responsible for estimations equal and uniform market values for residential improved and vacant property. An individualized set of data characteristics for each residential dwelling and multiple family units in this district are collected in the field and data entered into the computer. The property characteristic data drives the application of computer assisted mass appraisal under the cost, market, and income approaches to property valuation.

Land Analysis

Residential land valuation analysis is conducted prior to neighborhood sales analysis. The value of the land component to the property is estimated based on available market sales for comparable and competing land under similar usage. A comparison and analysis of comparable land sales is conducted based on a comparison of land characteristics found to influence the market price of land located in the neighborhood. A computerized land tables file stores the land information required to consistently value individual parcels within neighborhoods given known land characteristics. Specific land influences are considered where necessary, and depending on neighborhood and individual lot or tract characteristics, to adjust parcels outside the neighborhood norm for such factors as access, view, shape, size and topography. The appraisers use abstraction and allocation methods to insure that estimated land values best reflect the contributory market value of the land to the overall property value.

Area Analysis

Data on regional economic forces such as demographic patterns, regional location factors, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and cost are collected from private vendors and public sources and provide the field appraiser a current economic outlook on the real estate market. Information is gleaned from real estate publications and sources such as continuing education in the form of IAAO and TDLR approved classes.

Neighborhood and Market Analysis

Neighborhood analysis involves the examination of how physical, economic, governmental, and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of

the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on various market areas within each of the political entities known as Independent School Districts. Analysis of comparable market sales forms the basis of estimating market activity and the level of supply and demand affecting market prices for any given market area, neighborhood or district. Market sales indicate the effects of these market forces and are interpreted by the appraiser into an indication of market price ranges and indications of property component change considering a given time period relative to the date of appraisal. Cost and market approaches to estimate value are the basic techniques utilized to interpret these sales. For multiple family properties the income approach value is also utilized to estimate an opinion of value for investment level residential property.

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A “neighborhood” for analysis purposes is defined as the largest geographic grouping of properties where the property’s physical, economic, governmental and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood with similar characteristics has been identified, the next step is to define its boundaries. This process is known as delineation. Some factors used in neighborhood delineation include location, sales price range, lot size, age of dwellings, quality of construction and condition of dwellings, square footage of living area and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood’s individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a state of growth, stability or decline. 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. In the period of stability the forces of supply and demand are about equal. Generally, in the stage of stability, 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.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood

group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhood, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis.

Highest and Best Use Analysis

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 analyses are done to decide the type of residential use on a neighborhood basis. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties. Highest and best use rule does not apply to homestead property.

Cost Schedules

All residential parcels in the district are valued with a replacement cost estimated from identical cost schedules based on the improvement classification system using a comparative unit method. The district's residential cost schedules are estimated from *Marshall & Swift*, a nationally recognized cost estimator service. These cost estimates are compared with sales of new improvements and evaluated from year to year and indexed to reflect the local residential building and labor market. Costs may also be indexed for neighborhood factors and influences that affect the total replacement cost of the improvements in a smaller market are based on evidence taken from a sample of the market sales. The cost schedules are reviewed regularly as a result of recent state legislation requiring that the appraisal district cost schedules be within range of plus or minus 10% from nationally recognized cost schedules.

A review of the residential cost schedule is performed annually. As part of this review and evaluation process of the estimated replacement cost, newly constructed sold properties representing various levels of quality of construction are considered. The property data characteristics of these properties are verified and photographs are taken of the samples. CAD replacement costs are compared against *Marshall & Swift*, a nationally recognized cost estimator, and indicated replacement cost abstracted from these market sales of comparably improved

structures. The results of this comparison are analyzed using statistical measures, including stratification by quality and reviewing of estimated building costs plus land to sale prices. As a result of this analysis, a new regional multiplier or economic index factor and indications of neighborhood economic factors are developed for use in the district's cost process. This new economic index is estimated and used to adjust the district's cost schedule to be in compliance with local building costs as reflected by the local market.

Sales Information

Residential improved and vacant land sales, along with commercial improved and vacant land sales are maintained in a sales information system. Residential improved and vacant sales are collected from a variety of sources, including: district questionnaires sent to buyer and seller, field discovery, protest hearings, builders, and realtors. A system of type, source, validity and verification codes has been established to define facts related to a properties purchase or transfer and to help determine relevant market sale prices. Neighborhood sales reports are generated as an analysis tool for the appraiser in the development and estimation of market price ranges and property component value estimates. Abstraction and allocation of property components based on sales of similar property is an important analysis tool to interpret market sales under the cost and market approaches to value. These analysis tools help determine and estimate the effects of change, with regard to price, as indicated by sale prices for similar property within the current market.

Monthly time adjustments are estimated based on comparative analysis using paired comparison of sold property. Sales of the same property were considered and analyzed for an indication of price change attributed to a time change of influence. Property characteristics, financing, and condition of sales were compared for each property sold in the pairing of property to isolate only the time factor as an influence on price.

Statistical Analysis

Upshur County Appraisal District performs statistical analyses annually to evaluate whether estimated values are equitable and consistent with the market. Ratio studies are conducted on each of the residential neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy – level and uniformity of value. Appraisal statistics of central tendency generated from sales ratios are evaluated and analyzed for each neighborhood. The level of appraised values is determined by the weighted mean ratio for sales of individual properties within a neighborhood, and a comparison of neighborhood weighted mean reflects the general level of appraised value between comparable neighborhoods.

The district, through the sales ratio analysis process, reviews every neighborhood annually. The first phase involves neighborhood ratios studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the district an excellent means of judging the present level of appraised value and

uniformity of the sales. The appraiser makes a preliminary decision as to whether the value level in a neighborhood needs to be updated or whether the level of market value in a neighborhood is at an acceptable level.

Market and Cost Reconciliation and Valuation

Neighborhood analysis of market sales to achieve an acceptable sales ratio or level of appraisal is also the reconciliation of the market and cost approaches to valuation. Market factors are developed from appraisal statistics provided from market analyses and ratio studies are used to ensure that estimated values are consistent with the market and to reconcile cost indicators. The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not particularly specified in a purely cost model.

The following equation denotes the hybrid model used:

$$MV = LV + (RCN - AD)$$

Whereas, in accordance with the cost approach, the estimated market value (MV) of the property equals the land value (LV) plus the replacement cost new of property improvements (RCN) less accrued depreciation (AD). As the cost approach separately estimates both land and building contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales. Thus, demand side economic factors and influences may be observed and considered. These market, or location adjustments, may be abstracted and applied uniformly within neighborhood to account for location variances between market areas or across a jurisdiction. Whereas, in accordance with the market approach, the estimated market value of the property equals the basic unit of property, under comparison, times the market price range per unit for sales of comparable property. For residential property, the unit of comparison is typically the price per square foot of living area or the price indicated for the improvement contribution. This cost related factor is most appropriately measured by sales of similar property. The market approach, when improvements are abstracted from the sale price, indicates the depreciated value of the improvement component, in effect, measuring changes in accrued depreciation, a cost factor. The level of improvement contribution to the property is measured by abstraction of comparable market sales, which is the property sale price less land value. The primary unknown for the cost approach is to accurately measure depreciation affecting the amount of loss attributed to the improvements as age increases and condition changes. This evaluation of cost results in the depreciated value of the improvement component based on age and condition. The evaluation of this market and cost information is the basis of reconciliation and indication of property valuation under this hybrid model.

When the appraiser reviews a neighborhood, the appraiser reviews and evaluates a ratio study that compares recent sales prices of properties, appropriately adjusted for the effects of time, within a delineated neighborhood, with the value of the properties' based on the estimated depreciated replacement cost of improvements plus land value. The calculated ratio derived from the sum of the sold properties' estimated value divided by the sum of the time adjusted sales prices indicates the neighborhood level of appraisal bases on sold properties. This ratio is compared to the acceptable appraisal ratio, 96% to 100%, to determine the level of appraisal for each neighborhood. If the level of appraisal for the neighborhood is outside the acceptable range of ratios, the adjustments to the neighborhood are made.

If reappraisal of the neighborhood is indicated, the appraiser analyzes available market sales, appropriately adjusted for the apparent effects of time, by market abstraction of property components. This abstraction of property components allows the appraiser to focus on the rate of change for the improvement contribution to the property by providing a basis for calculating accrued depreciation attributed to the improvement component. This impact on value is usually the most significant factor affecting property value and the most important unknown to determine by market analysis. Abstraction of the improvement component from the adjusted sale price for a property indicates the effect of overall market suggested influences and factors on the price of improvements that were a part of this property, recently sold. Comparing this indicated price or value allocation for the improvement with the estimated replacement cost new of the improvement indicates any loss in value due to accrued forms of physical, functional, or economic obsolescence. This is a market driven measure of accrued depreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales that indicate the trending of this rate of change over certain classes of improvements within certain neighborhoods. Based on this market analysis, the appraiser estimates the annual rate of depreciation for given improvement descriptions considering age and observed condition. After an acceptable level of appraisal is achieved within the sale sample, the entire neighborhood of property is recalculated utilizing the indicated depreciation rates taken from market sales. This depreciation factor is the basis for trending all improvement values and when combined with any other site improvements and land value, brings the estimated property value through the cost approach closer to actual market prices as evidenced by recent sales prices within a given neighborhood.

COMMERCIAL PROPERTY VALUATION PROCESS

In addition to the processes listed above for residential property valuation, each commercial property will be subjected to:

- The income approach to value
- Appraised value comparison for same class of occupancy code
- Sales comparison

The income approach to value is applied to those real properties which are typically viewed by market participants as “income producing”, and for which the income methodology is considered a leading value indicator. This is calculated using like properties’ typical:

- potential gross rent
- minus vacancy and collection loss allowance
- plus secondary income such as parking, vending, laundry, reimbursements or miscellaneous income
- minus allowable expenses based on prudent management
- divided by a capitalization rate that includes return rates, income multipliers and discount rates

Capitalization analysis is used in the income approach models to form an indication of value. This methodology involves the direct capitalization of net operating income as an indication of market value for a specific property. Sales of improved properties from which an actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time.

BUSINESS PERSONAL PROPERTY VALUATION PROCESS

Business personal property is classified and utilizes a four digit numeric code, called Standard Industrial Classification (SIC) codes that were developed by the federal government to describe property. These classifications will be used by Upshur CAD to classify personal property by business type.

The district’s property characteristic data will be collected through a field data collection effort coordinated by the district and from property owner renditions. Each year reevaluation activities will permit district appraisers to collect new data via an annual field inspection. This project will result in the discovery of new business, changes in ownership, relocation of businesses and closures of businesses not revealed through other sources. Tax assessors, local newspapers, and the public often provide the district information regarding new personal property and other useful facts related to property valuation.

Vehicles

An outside vendor provides Upshur CAD with a listing of vehicles within the jurisdiction. The vendor develops the listing from the Texas Department of Transportation Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

Upshur County Appraisal District’s primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either developed from property owner reported historical cost or from CAD developed valuation models. The trending

factors used by the CAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by the CAD are also based on published valuation guides.

THE MASS APPRAISAL REPORT

Each tax year the tax code required Mass Appraisal Report is 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 the 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*. The written appraisal plan is attached to the Mass Appraisal Report by reference.

Document 1

Value Defense Procedures for Informal Meetings and Formal Hearings

Industrial Real Property

Informal hearings are conducted by phone, mail, or in person by Capitol Appraisal Group appraisers. Appraisers may present sales data or data specific to the property in defense of our values. Income, expense and capitalization data are reviewed and presented if available. If the taxpayer wishes to pursue a dispute further, the appraiser guides them through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. Any income and expense information derived from the market is accumulated and developed into charts containing general data. No confidential income, expense or other information received from taxpayers on specific accounts will be released. Equity evidence is generated by Capitol using programs and tools it has developed to compare other properties to the subject property. Applicable appraisal reports and research data applicable to the property are also included in this packet.

Utilities

Informal hearings are conducted by phone, mail, or in person by Capitol Appraisal Group appraisers. Appraisers may present sales data or data specific to the property in defense of our values. Income, expense and unit appraisal data (when applicable) are reviewed and presented if available. If the taxpayer wishes to pursue a dispute further, the appraiser guides them through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. No confidential income, expense or other information received from taxpayers on specific accounts will be released. Equity evidence is generated by Capitol using programs and tools it has developed to compare other properties to the subject property. Applicable appraisal reports and research data applicable to the property are also included in this packet.

Oil and Gas Property

Informal hearings are conducted by phone, mail, or in person by Capitol Appraisal Group appraisers. Mineral operators and third party agents with the proper fiduciary in place may also view the parameters used in the appraisal of their oil and gas properties on Capitol's web site at www.cagi.com. Other taxpayers with an interest in a mineral lease may request a copy of their appraisals at the same web site. Appraisers may present recent production data and sales prices to compare with the actual income received by the taxpayer in defense of our values. Income, expense and capital expense data are reviewed and presented if available. If the taxpayer wishes to pursue a dispute further, the appraiser guides them through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. Since oil and gas leases have multiple owners, all owners who pursue a formal protest on the same property will be scheduled at the same time for a hearing. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. No confidential income, expense or other information received from taxpayers on specific accounts will be released. Capitol uses its MINARB procedure to generate copies of the appraisal reports and product pricing data for the current and prior tax years. These reports are also included in this packet.

Industrial Personal Property

Informal hearings are conducted by phone, mail, or in person by Capitol Appraisal Group appraisers. Appraisers may present general data specific to the property in defense of our values. Renditions other than that of the subject property will not be released. If the taxpayer wishes to pursue a dispute further, the appraiser guides them through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. Capitol provides copies of appraisal reports generated by its Industrial Personal Property System for inclusion in the packet. As previously stated, no confidential renditions of competing properties will be provided as evidence.

Client Plan

In the event that the client's value defense plan differs with the plan of Capitol Appraisal Group, the client's plan will be followed and supersedes the provisions of the Capitol Appraisal plan.

Value Defense Procedures for ARB Hearings

Industrial Real Property

If the taxpayer wishes to pursue a dispute beyond informal proceedings, the appraiser guides him through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. Any income and expense information derived from the market is accumulated and developed into charts containing general data. No confidential income, expense or other information received from taxpayers on specific accounts will be released. Equity evidence is generated by Capitol using programs and tools it has developed to compare other properties to the subject property. Applicable appraisal reports and research data applicable to the property are also included in this packet.

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Oil and Gas Property

If the taxpayer wishes to pursue a dispute beyond informal proceedings, the appraiser guides him through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. Since oil and gas leases have multiple owners, all owners who pursue a formal protest on the same property will be scheduled at the same time for a hearing. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. No confidential income, expense or other information received from taxpayers on specific accounts will be released. Capitol uses its MINARB procedure to generate copies of the appraisal reports and product pricing data for the current and prior tax years. These reports are also included in this packet.

Industrial Personal Property

If the taxpayer wishes to pursue a dispute beyond informal proceedings, the appraiser guides him through the initial phase of the formal protest procedures.

When taxpayers are scheduled for formal hearings they receive an ARB procedures pamphlet and a copy of *Taxpayer's Rights, Remedies, and Responsibilities* published by the State Comptroller's Office. If protest hearing evidence is requested, the appraisal district has 14 days prior to the protest hearing to respond with characteristics and values of comparable properties regarding value disputes. Capitol provides copies of appraisal reports generated by its Industrial Personal Property System for inclusion in the packet. As previously stated, no confidential renditions of competing properties will be provided as evidence.

Client Plan

In the event that the client's value defense plan differs with the plan of Capitol Appraisal Group, the client's plan will be followed and supersedes the provisions of the Capitol Appraisal plan.

3 Copy of Reappraisal Plan Provided by Contractor

See four files in Operating Procedures folder
Reappraisal Plan subfolder

Calibration Models

BUSINESS PERSONAL PROPERTY

APPRAISED BY CAPITOL APPRAISAL GROUP

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal-to-sales ratios are the preferred method for measuring performance and are used when possible. However sales for some types of personal property are very infrequent. Furthermore, many market transactions occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Lastly, Capitol Appraisal Group's industrial appraisal methods and procedures for real and personal property are subject to review by the Property Tax Division of the Texas Comptroller's office. The Comptroller's review as well as appraisal-to-sale ratios and comparisons with single-property appraisals indicate the validity of the models and the calibration techniques employed. Commercial personal property appraised by Capitol Appraisal Group, LLC is not subject to a methods and procedures review however it is included in the Property Tax Division's annual ratio study with satisfactory results.

Calibration Models

UTILITY, RAILROAD, AND PIPELINE PROPERTIES

APPRAISED BY CAPITOL APPRAISAL GROUP

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal to sales ratios are the preferred method for measuring performance, however sales are very infrequent. Furthermore, market transactions normally occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Appraisal results are tested annually by the Property Tax Division of the Texas Comptroller's Office. The Comptroller's review as well as comparisons with single-property appraisals indicate the validity of the models as well as the calibration techniques employed.

Calibration Models
OIL AND GAS RESERVES
CAPITOL APPRAISAL GROUP

Review and Testing

Each year we review the estimated market value for each mineral property appraised according to its year-to-year value change and also to industry expected payouts and income indicators. We also examine income projected to be received with the previous year's income and test that income against the lease's appraised value. Market value for income producing properties is a multiple of its monthly or annual income. Our experience through the years indicates that values typically vary within in a range of 2-5 times income, provided all appropriate income factors have been appropriately identified. Periodic reassignment of properties among appraisers and review of appraisals by a more experienced appraiser also contribute to the review process.

Application of appraisal-to-sales ratios is another method for measuring performance. However, single property sales or sales of interest(s) within a property remain difficult to obtain due Texas' disclosure laws. Furthermore many market transactions are normally for multiple properties in multiple areas and include both real and personal property, tangible and intangible. We access licensed databases providing statistical data for company and property sales to compare our efforts. We also measure our performance through comparison of valid single-property market transactions, if any, that are submitted for staff review. Lastly, Capitol Appraisal's mineral appraisal values are subject to review each year in the Property Value Study conducted by the Property Tax Division of the Texas Comptroller of Public Accounts. The Property Tax Division's review as well as comparisons to industry transactions and to single-property market value sales (when available), indicate the validity of the models, techniques and assumptions used.

Calibration Models
INDUSTRIAL PROPERTY
APPRAISED BY CAPITOL APPRAISAL GROUP

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal-to-sales ratios are the preferred method for measuring performance, however sales are very infrequent. Furthermore, market transactions normally occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Lastly, Capitol Appraisal Group's industrial appraisal methods and procedures are subject to review by the Property Tax Division of the Texas Comptroller's office. The Comptroller's review as well as comparisons with single-property appraisals indicate the validity of the models and the calibration techniques employed.

Document 5

CAD Procedure for Identifying New Utility Properties and Producing Wells

Appraisal of industrial properties is limited to those properties indicated in the contract with the appraisal district unless the appraisal district requests the appraisal of other properties. Newly discovered properties will be discussed with the appraisal district to confirm they are to be appraised by Capitol Appraisal.

Utility, Railroad and Pipeline Property

Utility, railroad and pipeline properties that are susceptible to inspection are identified by inspection. The appraiser may also refer to other documents, both public and also confidential to assist in identification of these properties.

Oil and Gas Property

As subsurface mineral properties lie within the earth, they cannot be physically identified by inspection like other real property. However, the inability to directly inspect does not appreciably affect the ability to identify and appraise these properties. To identify new properties, CAG uses the following procedure:

1. Obtain a list from the Texas Railroad Commission of all leases currently producing or permitted in the CAD. Obtain permit plat for leases contained within the county.
2. Obtain a list of leases currently producing or permitted in neighboring counties with common borders and map relative location of leases to county's border. Obtain permit plat to determine if leases may have lease boundaries extending into county.
3. Using plats of leases with partial or all lease boundaries within the county, create a list of potential additional property to be added to the appraisal roll.
4. Compare list of potential leases with all currently producing leases in the CAD on January 1st of current tax year to determine any lease duplication.
5. Check to see if the lease was completed prior to January 1st or producing before January 1st of current tax year.
6. If lease has not previously been added to the CAD's appraisal roll, do so and obtain ownership.

Document 7A
MASS APPRAISAL REPORT
INDUSTRIAL PROPERTY
APPRAISED BY CAPITOL APPRAISAL GROUP
2015 - 2016

Overview

This type of property consists of processing facilities and related personal property. Capitol Appraisal Group, LLC is contracted to reappraise this type of property according to the scope of work in the normal course of business of the client consistent with the Uniform Standards of Professional Appraisal Practice guidelines. The completed appraisals are all retrospective in nature. The purpose of the appraisals is to estimate market value as of January 1 in accordance with the definition of market value established in the Texas Property Tax Code (Sec. 1.04). "Market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- A. exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- B. 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
- C. 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.

The effective date of the appraisals is January 1 of the year for which this report is submitted unless the property owner or agent has applied for and been granted September 1 inventory valuation as allowed by Section 23.12(f) of the Texas Property Tax Code. The date of this report is April 20 of the tax year for which it is submitted.

The client for the mass appraisal is the Texas appraisal district named on the last page of this report. The intended users of this report are the client and the property owners of the client appraisal district.

The appraisal results will be used as the tax base upon which a property tax will be levied. The properties are appraised in fee simple in conformance with the Texas Property Tax Code Sec. 25.06. This is a jurisdictional exception to the Standards Rule 6-5 © Comment of the Uniform Standards of Professional Appraisal Practice 2008. A listing of the industrial properties appraised by Capitol Appraisal Group, LLC for the appraisal district is available at the appraisal district office. Industrial properties are normally re-inspected annually.

Documents relevant to an understanding of these appraisals include the confidential rendition, if any, filed with the appraisal district by the owner or agent of the property; other reports described in the Texas Property Tax Code; asset lists and other confidential data supplied by the owner or agent; the General Appraisal Manual adopted by the Texas Comptroller of Public Accounts; Property Assessment Valuation published by the International Association of Assessing Officers and adopted by the Texas Comptroller of Public Accounts; and Engineering Valuation and Depreciation by Marston, Winfrey, and Hempstead; and the Texas Property Tax Code.

Capitol's industrial appraisal staff includes licensed engineers as well as experienced appraisers who are knowledgeable in all three approaches to value. Industrial appraisal staff stays abreast of current trends affecting industrial properties through review of published materials, attendance at conferences, course work, and continuing education. All industrial appraisers are registered with the Texas Board of Tax Professional Examiners.

Assumptions and Limiting Conditions

All appraisals are subject to the following assumptions and limiting conditions:

1. Title to the property is assumed to be good and marketable and the legal description correct.
2. No responsibility for legal matters is assumed. All existing liens, mortgages, or other encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management.
3. The appraisers developing these appraisals are not requested to give testimony or attendance in court by reason of the appraisals, unless directed by, employed by, and provided legal counsel by the Appraisal District.
4. The appraisers do not necessarily inspect every property every year.
5. All sketches on the appraisal documents are intended to be visual aids and should not be construed as surveys or engineering reports unless otherwise specified.
6. All information in the appraisal documents has been obtained by members of Capitol Appraisal Group's staff or by other reliable sources.
7. The appraisals were prepared exclusively for ad valorem tax purposes. As such some valuation formulas may be required by the property tax code as opposed to generally accepted appraisal practices.
8. The appraisers have inspected as far as possible, by observation, the improvements being appraised, however, it is not possible to personally observe conditions beneath the soil or hidden structural components within the improvements. Therefore no representations are made as to these matters unless specifically considered in an individual appraisal.

Data Collection and Validation

Data on the subject properties is collected as part of the inspection process and through later submissions by the property owner. Submitted data may be on a rendition form or in other modes which require confidentiality. Subject property data is verified through previously existing records and through published reports. Additional data are obtained and verified through published sources, regulatory reports, and through analysis of comparable properties, if any. Due to the unique nature of many industrial properties there is no standard data collection form or manual.

Valuation Approach and Analysis

Industrial properties are appraised using replacement/reproduction cost new less depreciation models. Replacement costs are estimated from published sources, other publicly available information, and comparable properties. Reproduction costs are based on actual investment in the subject or comparable properties adjusted for typical changes in cost over time. Depreciation is calculated on the age/life method using typical economic lives and depreciation rates based on published sources, market evidence, and the experience of knowledgeable appraisers. Adjustments for functional and economic obsolescence may be made if utilization and income data for the subject property justify such. Income Approach models (direct capitalization and discounted cash flow) are also used when economic and/or subject property income information is available. Capitalization and discount rates are based on published capital costs for the industry of the subject property. A market data model based on typical selling prices per unit of capacity is also used when appropriate market sales information is available.

Because cost information is the most readily available type of data, the cost approach model is always considered and used. If sufficient data is available either of both of the other two models may also be considered and used. The market data and income approach models may need to be reduced by the value of the land in order to arrive at a value of improvements and personal property.

Model calibration in the cost approach involves the selection of the appropriate service life for each type or class of property. Further calibration can occur through the use of utilization or through-put data provided by the owner or agent. Income approach calibration involves the selection of the cost of capital or discount rate appropriate to the type of property being appraised as well as adjusting the projected income stream to reflect the individual characteristics of the subject property. Model calibration in the market data approach involves adjusting sales prices of comparable properties to reflect the individual characteristics of the subject property.

The mathematical form of each model is described below.

Cost Approach

$$\begin{aligned} & \text{RCN} \\ & -\text{PD} \\ & -\text{FO} \\ & \underline{-\text{EO}} \\ & =\text{Cost Indicator of Value} \end{aligned}$$

Where:

RCN = Replacement or Reproduction Cost New

PD = Physical Depreciation

FO = Functional Obsolescence

EO = Economic Obsolescence

Income Approach

$$\begin{aligned} & \text{PGR} \\ & -\text{VCL} \\ & -\text{FE} \\ & \underline{-\text{VE}} \\ & \text{NOI} \end{aligned}$$

$$\text{NOI/R} = \text{Income Indicator of Value}$$

Where:

NOI = Net Operating Income

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses

VE = Variable Expenses

R = Discount Rate or Cost of Capital

A variation of the income model is:

NOI for year 1 x DF for year 1 = PW of year 1 NOI

NOI for year n x DF for year n = PW of year n NOI

Net Reversion x DF for year n = PW of Reversion

Sum of PW's for all years 1 - n = Income Indicator of Value

Where:
DF = Discount Factor
PW = Present Worth
n = Last year of holding period

Market Data Approach

ASPCP/U = PU
PU x SU = Market Data Indicator of Value

Where:
ASPCP = Adjusted Sales Price of Comparable Property
U = Unit of comparison
PU = Price per Unit of comparison
ASPU = Adjusted Sales Price per Unit of comparison
SU = Subject Property's number of Units of comparison

In reconciling multiple model results for a property the appraiser considers the model results that best address the individual characteristics of the subject property and that are based on the most reliable data while maintaining equalization among like properties. Final results for each property may be found on the appraisal district's appraisal roll.

Land valuation for industrial properties is the responsibility of appraisal district staff as is the highest and best use analysis of the site. Sites are analyzed for highest and best use as though they were vacant. Highest and best use analysis of the improvements is based on the likelihood of the continued use of the improvements in their current and/or intended use. An appraiser's identification of a property's highest and best use is always a statement of opinion, never a statement of fact.

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal-to-sales ratios are the preferred method for measuring performance, however sales are very infrequent. Furthermore, market transactions normally occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Lastly, Capitol Appraisal Group's industrial appraisal methods and procedures are subject to review by the Property Tax Division of the Texas Comptroller's office. The Comptroller's review as well as comparisons with single-property appraisals indicate the validity of the models and the calibration techniques employed.

Document 7B
MASS APPRAISAL REPORT
BUSINESS PERSONAL PROPERTY
APPRAISED BY CAPITOL APPRAISAL GROUP
2015 - 2016

Overview

This type of property consists of tangible personal property owned by a business or individual for the purpose of producing an income. The Uniform Standards of Professional Appraisal practice define personal property as "identifiable portable and tangible objects which are considered by the general public as being "personal," e.g. furnishings, artwork, antiques, gems and jewelry, collectibles, machinery and equipment; all property that is not classified as real estate.". The Texas Property Tax Code (Sec. 1.04(5)) defines tangible personal property as "...personal property that can be seen, weighed, measured, felt, or otherwise perceived by the senses but does not include a document or other perceptible object that constitutes evidence of a valuable interest, claim, or right and has negligible or no intrinsic value." The Texas Property Tax Code (Sec. 1.04(4)) defines personal property as "...property that is not real property."

Capitol Appraisal Group, LLC is contracted to reappraise this type of property according to the scope of work in the normal course of business of the client consistent with the Uniform Standards of Professional Appraisal Practice guidelines. The completed appraisals are all retrospective in nature. The purpose of the appraisals is to estimate market value as of January 1 in accordance with the definition of market value established in the Texas Property Tax Code (Sec. 1.04). "Market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- A. exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- B. 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
- C. 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.

A separate definition of the value of inventory is found in the Texas Property Tax Code (Sec. 23.12(a)), "...the market value of an inventory is the price for which it would sell as a unit to a purchaser who would continue the business." Additionally, some inventories may qualify for appraisal as of September 1 in accordance with the provisions of Texas Property Tax Code Section 23.12(f).

The effective date of the appraisals is January 1 of the year for which this report is submitted unless the property owner or agent has applied for and been granted September 1 inventory valuation as allowed by Section 23.12(f) of the Texas Property Tax Code. The date of this report is April 20 of the tax year for which it is submitted.

The client for the mass appraisal is the Texas appraisal district named on the last page of this report. The intended users of this report are the client and the property owners of the client appraisal district.

The appraisal results will be used as the tax base upon which a property tax will be levied. A listing of the personal property appraised by Capitol Appraisal Group, LLC for the appraisal district is available at the appraisal district office. Personal property is normally re-inspected annually.

Documents relevant to an understanding of these appraisals include the confidential rendition, if any, filed with the appraisal district by the owner or agent of the property; other reports described in the Texas Property tax Code; asset lists and other confidential data supplied by the owner or agent; Property Assessment Valuation published by the International Association of Assessing Officers and adopted by the Texas Comptroller of Public Accounts; and Engineering Valuation and Depreciation by Marston, Winfrey, and Hempstead; and the Texas Property Tax Code.

Capitol's personal property appraisal staff includes licensed engineers as well as experienced appraisers who are knowledgeable in all three approaches to value. Personal property appraisal staff stays abreast of current trends affecting personal property through review of published materials, attendance at conferences, course work, and continuing education. All personal property appraisers are registered with the Texas Board of Tax Professional Examiners.

Assumptions and Limiting Conditions

All appraisals are subject to the following assumptions and limiting conditions:

1. Title to the property is assumed to be good and marketable and the legal description correct.
2. No responsibility for legal matters is assumed. All existing liens, mortgages, or other encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management.
3. The appraisers developing these appraisals are not Requested to give testimony or attendance in court by reason of the appraisals, unless directed by, employed by, and provided legal counsel by the Appraisal District.
4. The appraisers do not necessarily inspect every property every year.
5. All sketches on the appraisal documents are intended to be visual aids and should not be construed as surveys or engineering reports unless otherwise specified.
6. All information in the appraisal documents has been obtained by members of Capitol Appraisal Group's staff or by other reliable sources.
7. The appraisals were prepared exclusively for ad valorem tax purposes. As such some valuation formulas may be required by the property tax code as opposed to generally accepted appraisal practices.

Data Collection and Validation

Data on the subject properties are collected as part of the inspection process and through later submissions by the property owner. Submitted data may be on a rendition form or in other modes which require confidentiality. Subject property data is verified through previously existing records and through published reports. Additional data are obtained and verified through published sources, regulatory reports, and through analysis of comparable properties. Due to the multitude of personal property types there is no standard data collection form or manual.

Valuation Approach and Analysis

Personal property is appraised using replacement/reproduction cost new less depreciation models. Replacement costs are estimated from published sources, other publicly available information, and comparable properties. Reproduction costs are based on actual investment in the subject or comparable properties. Depreciation is calculated on the age/life method using typical economic lives and depreciation rates based on published sources, market evidence, and the experience of knowledgeable appraisers. Adjustments for functional and economic

obsolescence may be made if utilization and income data for the subject property justify such. Income Approach models (direct capitalization and discounted cash flow) are also used when economic and/or subject property income information is available. Capitalization and discount rates are based on published capital costs for the industry of the subject property. A value estimate derived from an income approach model in which the operating income of a business was capitalized must be reduced by the value of any real property in order to arrive at the value of the operating personal property. A market data model based on typical selling prices per item or unit of capacity is also used when appropriate market sales information is available. In the case of some personal property types, such as licensed vehicles, market data from published pricing guides is used to construct a market value model. In other cases, models are based on sales information available through published sources or through private sources.

Because cost information is the most readily available type of data, the cost approach model is always considered and used. If sufficient data is available either of both of the other two models may also be considered and used. The market data and income approach models may need to be reduced by the value of the land in order to arrive at a value of improvements and personal property.

Model calibration in the cost approach involves the selection of the appropriate service life for each type or class of property. Further calibration can occur through the use of utilization or through-put data provided by the owner or agent. Income approach calibration involves the selection of the cost of capital or discount rate appropriate to the type of property being appraised as well as adjusting the projected income stream to reflect the individual characteristics of the subject property. Model calibration in the market data approach involves adjusting sales prices of comparable properties to reflect the individual characteristics of the subject property.

The mathematical form of each model is described below.

Cost Approach

$$\begin{array}{r} \text{RCN} \\ -\text{PD} \\ -\text{FO} \\ \hline -\text{EO} \\ \hline =\text{Cost Indicator of Value} \end{array}$$

Where:

RCN = Replacement or Reproduction Cost New

PD = Physical Depreciation

FO = Functional Obsolescence

EO = Economic Obsolescence

Income Approach

$$\begin{array}{r} \text{PGR} \\ -\text{VCL} \\ -\text{FE} \\ \hline -\text{VE} \\ \hline \text{NOI} \end{array}$$

NOI/R = Income Indicator of Value

Where:

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses

VE = Variable Expenses
R = Discount Rate or Cost of Capital

A variation of the income model is:

NOI for year 1 x DF for year 1 = PW of year 1 NOI
NOI for year n x DF for year n = PW of year n NOI
Net Reversion x DF for year n = PW of Reversion
Sum of PW's for all years 1 - n = Income Indicator of Value

Where:
NOI = Net Operating Income
DF = Discount Factor
PW = Present Worth
n = Last year of holding period

Market Data Approach

ASPCP/U = PU
PU x SU = Market Data Indicator of Value

Where:
ASPCP = Adjusted Sales Price of Comparable Property
U = Unit of comparison
ASPU = Adjusted Sales Price per Unit of comparison
SU = Subject Property's number of Units of comparison

In reconciling multiple model results for a property the appraiser considers the model results that best address the individual characteristics of the subject property and that are based on the most reliable data while maintaining equalization among like properties. Final results for each property may be found on the appraisal district's appraisal roll.

Highest and best use analysis of personal property is based on the likelihood of the continued use of the personal property in its current and/or intended use. An appraiser's identification of a property's highest and best use is always a statement of opinion, never a statement of fact.

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal-to-sales ratios are the preferred method for measuring performance and are used when possible. However sales for some types of personal property are very infrequent. Furthermore, many market transactions occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Lastly, Capitol Appraisal Group's industrial appraisal methods and procedures for real and personal property are subject to review by the Property Tax Division of the Texas Comptroller's office. The Comptroller's review as well as appraisal-to-sale ratios and comparisons with single-property appraisals indicate the validity of the models and the calibration techniques employed. Commercial personal property appraised by Capitol Appraisal Group, LLC is not subject to a methods and procedures review however it is included in the Property Tax Division's annual ratio study with satisfactory results.

Document 7C
MASS APPRAISAL REPORT
UTILITY, RAILROAD, AND PIPELINE PROPERTIES
APPRAISED BY CAPITOL APPRAISAL GROUP
2015 - 2016

Overview

This type of property consists of operating property, excluding land, owned by utility, railroad, and pipeline companies, and related personal property and improvements. Capitol Appraisal Group, LLC is contracted to reappraise this type of property according to the scope of work in the normal course of business of the client consistent with the Uniform Standards of Professional Appraisal Practice guidelines. The completed appraisals are all retrospective in nature. The purpose of the appraisals is to estimate market value as of January 1 in accordance with the definition of market value established in the Texas Property Tax Code (Sec. 1.04). "Market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- A. exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- B. 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
- C. 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.

The effective date of the appraisals is January 1 of the year for which this report is submitted unless the property owner or agent has applied for and been granted September 1 inventory valuation as allowed by Section 23.12(f) of the Texas Property Tax Code. The date of this report is April 20 of the tax year for which it is submitted.

The client for the mass appraisal is the Texas appraisal district named on the last page of this report. The intended users of this report are the client and the property owners of the client appraisal district

The appraisal results will be used as the tax base upon which a property tax will be levied. The properties are appraised in fee simple in conformance with the Texas Property Tax Code Sec. 25.06. This is a jurisdictional exception to Standards Rule 6-5 (c) comment of the Uniform Standards of Professional Appraisal Practice 2008. A listing of the utility, railroad, and pipeline properties appraised by Capitol Appraisal Group, LLC for the appraisal district is available at the appraisal district office. Such utility, railroad, and pipeline properties that are susceptible to inspection (e.g. compressor stations, pump stations, buildings, and power plants) are normally re-inspected at least every three years.

Capitol's utility, railroad, and pipeline appraisal staff includes licensed engineers as well as experienced appraisers who are knowledgeable in all three approaches to value. The appraisal staff stays abreast of current trends affecting utility, railroad, and pipeline properties through review of published materials, attendance at conferences, course work, and continuing education. All appraisers are registered with the Texas Board of Tax Professional Examiners.

Assumptions and Limiting Conditions

All appraisals are subject to the following assumptions and limiting conditions:

1. Title to the property is assumed to be good and marketable and the legal description correct.
2. No responsibility for legal matters is assumed. All existing liens, mortgages, or other encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management.
3. The appraisers developing these appraisals are not Requested to give testimony or attendance in court by reason of the appraisals, unless directed by, employed by, and provided legal counsel by the Appraisal District.
4. The appraisers do not necessarily inspect every property every year.
5. All sketches on the appraisal documents are intended to be visual aids and should not be construed as surveys or engineering reports unless otherwise specified.
6. All information in the appraisal documents has been obtained by members of Capitol Appraisal Group's staff or by other reliable sources.
7. The appraisals were prepared exclusively for ad valorem tax purposes. As such some valuation formulas may be required by the property tax code as opposed to generally accepted appraisal practices.
8. The appraisers have inspected as far as possible, by observation, the improvements being appraised, however, it is not possible to personally observe conditions beneath the soil or hidden structural components within the improvements. Therefore no representations are made as to these matters unless specifically considered in an individual appraisal.

Data Collection and Validation

Data on the subject properties is collected as part of the inspection process and through later submissions by the property owner. Submitted data may be on a rendition form or in other modes which require confidentiality. Subject property data is verified through previously existing records and through published reports. Additional data are obtained and verified through published sources, regulatory reports, and through analysis of comparable properties. Due to the varied nature of utility, railroad, and pipeline properties there is no standard data collection form or manual.

Valuation Approach and Analysis

For all pipelines a value is calculated using a Replacement Cost New Less Depreciation (RCNLD) model. This involves first calculating the cost of building a new pipeline of equal utility using current prices. The Replacement Cost New (RCN) is a function of location, length, diameter, and composition. Depreciation is then subtracted from RCN to produce the final value estimate. Depreciation is defined as the loss of value resulting from any cause. The three common forms of depreciation are physical, functional, and economic. Physical depreciation is accounted for on the basis of the age of the subject pipeline. Functional and economic obsolescence (depreciation) can be estimated through the use of survivor curves or other normative techniques. Specific calculations to estimate abnormal functional and/or economic obsolescence can be made on the basis of the typical utilization of the subject pipeline.

After deductions from RCN have been made for all three forms of depreciation the remainder is the RCNLD or cost approach model indicator of value.

In addition to the RCNLD indicator, a unit value model may also be used for those pipelines for which appropriate income statements and balance sheets are also available. Generally, this model is used for those pipelines that by regulation are considered to be common carriers. The unit value model must be calculated for the entire pipeline system.

The unit value model typically involves an income approach to value and a rate base cost approach. The income approach is based on a projection of expected future typical net operating income (NOI). The projected NOI is discounted to a present worth using a current cost of capital that is both typical of the industry and reflective of the risks inherent in the subject property. The unit value model cost approach is typically an estimation of the current rate base of the subject pipeline (total investment less book depreciation allowed under the current form of regulation). An additional calculation is made to detect and estimate economic obsolescence. Any economic obsolescence is deducted from the rate base cost less book depreciation to achieve a final cost indicator. The unit value model may also include a stock and debt approach in lieu of a market data approach. The stock and debt approach involves finding the total value of the owner's liabilities (equity and debt) and assuming that they are equal to the value of the assets. The two (or three, if the stock and debt approach is included) unit value indicators are then reconciled into a final unit appraisal model indicator of value. The unit value must then be reconciled with the RCNLD model indicator of value for the entire pipeline system being appraised. The final correlated value of the system can then be allocated among the various components of the system to determine the tax roll value for each pipeline segment.

Utility and railroad properties are appraised in a manner similar to pipeline except the RCNLD model is not used. For all three types of property (utility, railroad, and pipeline) the appraiser must first form an opinion of highest and best use. If the highest and best use of the operating property is the current use under current regulation, the unit value model is considered highly appropriate. If the highest and best use is something different, then the RCNLD model may be more appropriate.

Compressor stations, pump stations, improvements, and related facilities are appraised using a replacement cost new less depreciation model.

Model calibration in the RCNLD model involves the selection of the appropriate service life for each type or class of property. Further calibration can occur through the use of utilization or through-put data provided by the owner or agent. Model calibration in the unit value cost approach involves the selection of the appropriate items to include in the rate base calculation and selection of the best measure of obsolescence, if any. Income approach calibration involves the selection of the cost of capital or discount rate appropriate to the type of property being appraised as well as adjusting the projected income stream to reflect the individual characteristics of the subject property. Model calibration in the stock and debt approach involves allocating sales prices of debt and equity to reflect the contribution to value of the operating property of the subject company.

The mathematical form of each model is described below.

RCNLD Approach

$$\begin{aligned} & \text{RCN} \\ & -\text{PD} \\ & -\text{FO} \\ & -\text{EO} \\ & =\text{RCNLD Indicator of Value} \end{aligned}$$

Where:

RCN = Replacement or Reproduction Cost New
PD = Physical Depreciation
FO = Functional Obsolescence
EO = Economic Obsolescence

Unit Cost Approach

$$\begin{array}{r} \text{OC} \\ -\text{AD} \\ \hline -\text{EO} \\ \hline \end{array} = \text{Unit Cost Approach Indicator of Value}$$

Where:

OC = Original Cost

AD = Allowed Depreciation

EO = Economic Obsolescence

Unit Income Approach

$$\begin{array}{r} \text{PGR} \\ -\text{VCL} \\ -\text{FE} \\ \hline -\text{VE} \\ \hline \end{array} \text{NOI}$$

$$\text{NOI/R} = \text{Income Indicator of Value}$$

Where:

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses

VE = Variable Expenses

R = Discount Rate or Cost of Capital

A variation of the income model is:

$$\begin{array}{l} \text{NOI for year 1} \times \text{DF for year 1} = \text{PW of year 1 NOI} \\ \text{NOI for year n} \times \text{DF for year n} = \text{PW of year n NOI} \\ \text{Net Reversion} \times \text{DF for year n} = \text{PW of Reversion} \\ \text{Sum of PW's for all years 1 - n} = \text{Income Indicator of Value} \end{array}$$

Where:

NOI = Net Operating Income

DF = Discount Factor

PW = Present Worth

n = Last year of holding period

Stock and Debt Approach

$$\begin{array}{r} \text{MVE} \\ +\text{MVD} \\ \hline \end{array} = \text{Market Value of Assets}$$

Where:

MVE = Market value of Equity

MVD = Market value of Debt

In reconciling multiple model results for a property the appraiser considers the model results that best address the individual characteristics of the subject property while maintaining equalization among like properties. Final results for each property may be found on the appraisal district's appraisal roll.

Land valuation for utility and pipeline properties is the responsibility of appraisal district staff as is the highest and best use analysis of the site. Sites are analyzed for highest and best use as though they were vacant. Highest and best use analysis of the improvements is based on the likelihood of the continued use of the improvements in their current and/or intended use. Railroad corridor land is included in the appraisal of the operating property. The highest and best use of railroad corridor land is presumed to be as operating property. An appraiser's identification of a property's highest and best use is always a statement of opinion, never a statement of fact.

The rate-base cost approach, stock and debt approach, and income approach models must be reduced by the value of the land in order to arrive at a value of improvements, personal property, and other operating property.

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. The periodic reassignment of properties among appraisers or the review of appraisals by an experienced appraiser also contributes to the review process. A computer-assisted statistical review of property value changes is also conducted.

Appraisal to sales ratios are the preferred method for measuring performance, however sales are very infrequent. Furthermore, market transactions normally occur for multiple sites and include both real and personal property, tangible and intangible, making analysis difficult and subjective. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Appraisal results are tested annually by the Property Tax Division of the Texas Comptroller's Office. The Comptroller's review as well as comparisons with single-property appraisals indicate the validity of the models as well as the calibration techniques employed.

Document 7D
MASS APPRAISAL REPORT
OIL AND GAS RESERVES
CAPITOL APPRAISAL GROUP
2015 - 2016

Overview

Capitol Appraisal Group, LLC (CAGL) contracts with Appraisal Districts and other governmental entities to appraise all oil & gas subsurface, producing, mineral interests within the purview of the entity. The contractual purpose is to estimate market value as defined in Section 1.04 of the Texas Property Tax Code as of January 1 of each year and report these values to the entity. The results of our work are used as part of the tax base upon which property taxes are levied. Each mineral interest is listed on the appraisal roll separately from other interests in the minerals-in-place in conformance with the Texas Property Tax Code Sec. 25.12. Subsurface mineral rights are not susceptible to physical inspection. This condition creates the need to invoke the **Departure Provision** as Requested by the 2003 edition of the Uniform Standards of Professional Appraisal Practice Standards Rule 6-7 (f). However, the inability to physically examine the subsurface mineral rights does not appreciably affect the appraisal process or the quality of the results.

Assumptions and Limiting Factors

All appraisals are subject to the following:

1. Title to the property is assumed to be good and marketable and the ownership interest and legal description is assumed to be correct.
2. No responsibility for legal matters is assumed. Properties are appraised as if free and clear of any encumbrance and operated under responsible ownership and competent management.
3. Not every property is inspected every year.
4. All information in the appraisal documents has been obtained by Capitol Appraisal Group's employees or through other reliable sources.
5. The appraisals were prepared exclusively for ad valorem tax purposes. As such some valuation formulas may be required by the property tax code as opposed to generally accepted appraisal practices.

Data Collection

Data on the properties appraised are collected from regulatory agencies, such as the Texas Railroad Commission and the Texas Comptroller of Public Accounts, from submissions by the property operator or owner(s), or from other sources. **Submitted data from operators, taxpayers and/or their agents on the appraised properties are considered "rendition statements" and, as such, are confidential data, subject to Sec. 22.27 of the Texas Property Tax Code.** Additional data are obtained through published sources, regulatory reports, public investment reports, licensed data services, service for fee organizations and through comparable properties, if any. The state of Texas is a non-disclosure state and thus many forms of information, pertinent to the value of the properties, are not available to the appraiser.

Valuation and Analysis

The Income Method of Appraisal, as described in Section 23.012 of the Texas Property Tax Code, is the principal appraisal method used. The Market Data Comparison Method of Appraisal (section 23.013) and the Cost Method of Appraisal (section 23.011) are considered. Industry averages of reserve replacement cost and acquisition cost are used for comparative purposes. The non-disclosure nature of the laws of Texas makes market data comparison unreliable. However, if within the scope of Capitol's work assignment market sales disclosures on interests are available, then those data is considered. The nearly exclusive reliance on the income approach, using the discounted cash flow (DCF) technique adjusted for specific property risk and market conditions, is typical of the oil and gas industry. Fee for service organizations are used for survey data with respect to price expectations and discount rates, and licensed data services are used for Industry indicators detailing costs, income, acquisitions costs in dollars per barrel of oil equivalent (\$/BOE), finding and development costs (\$/BOE) and reserve replacement costs (\$/BOE) for over 100 E&P companies.

Due to the demands of Section 23.175 of the Texas Property Tax Code and the Texas Constitution, Capitol Appraisal Group, LLC takes great care to not appraise properties in excess of their fair market value. We analyze a segment of the Petroleum Producing E&P market, determining the impact on their stock and debt value of the pricing requirements of Sec. 23.175 and also the pricing that could be reasonably anticipated from the market. Capitol Appraisal Group LLC's opinion of oil and gas prices is guided by the market's anticipation of those prices through the futures market, oil and gas stock prices and oil and gas industry indexes. A base discount rate is developed using the Securities and Exchange Commission (SEC) 10k Standard Measure of Value, Before Federal Income Tax (BFIT), for a grouping of 20 Exploration and Production (E&P) companies, and then matching their 10k Standard Measure of Value (BFIT), reserves and costs, through a discounted cash flow (DCF) technique. This reserve and cost match is used with Capitol's developed pricing scenario and Section 23.175 pricing directives to determine a discount rate necessary to equal the stock and debt value of the companies, as of January 1 for a given tax year.

The Weighted Average Cost of Capital (WACC) technique is also performed for a subset of these companies grouped according to the Petroleum Producing Industry Exploration and Production companies used in the *The Valueline Investment Survey*. These separate pricing scenarios and the resulting discount rates derived from using the aforementioned stock and debt techniques are applied to the universe of oil and gas properties we appraise. In seeking to avoid appraising any oil and gas property **above** its fair cash market value, Capitol Appraisal employs a market adjustment factor (MAF) to its base discount rate in order to apply property specific risk(s). These factors, which create a wide range of discount rates for the properties that Capitol appraises, are necessary to equitably evaluate disparate leases with respect to remaining reserves, price and costs. By performing two DCF income approach appraisals on each property, Capitol Appraisal provides clients with our opinion of market value, while always endeavoring to guard against appraising a mineral lease at greater than its fair cash market value. [A **jurisdictional exception** to the Discounted Cash Flow technique, as this process is described in the Statement on Appraisal Standards #2, 2003 edition of the Uniform Standards of Professional Appraisal Practice, must be taken. Section 23.175(a) of the Texas Property Tax Code both specifies the directives concerning oil and gas pricing that appraisal districts in Texas must follow and also that each appraisal district must adhere to procedure and methodology contained in manuals developed by the Property Tax Division (PTD) of the Texas Comptroller of Public Accounts. Because adherence to this Property Tax Code directive, without discretion, can result in values greater than fair cash market value, we must express caution.]

The resulting oil and gas lease value is then allocated to each owner on the lease based upon his fractional mineral ownership interest. Royalty and working interests have different impacts on their respective values, since only working interests bear the costs of lease operation. Therefore royalty mineral interest owner's values are allocated from 100% of the appraised royalty value of the lease, according to their fractional royalty interest, while the working interest owner's value(s) are allocated from 100% of the determined working interest value of the lease, according to their fractional working interest.

Review and Testing

Each year we review the estimated market value for each mineral property appraised according to its year-to-year value change and also to industry expected payouts and income indicators. We also examine income projected to be received with the previous year's income and test that income against the lease's appraised value. Market value for income producing properties is a multiple of its monthly or annual income. Our experience through the years indicates that values typically vary within in a range of 2-5 times income, provided all appropriate income factors have been appropriately identified. Periodic reassignment of properties among appraisers and review of appraisals by a more experienced appraiser also contribute to the review process.

Application of appraisal-to-sales ratios is another method for measuring performance. However, single property sales or sales of interest(s) within a property remain difficult to obtain due Texas' disclosure laws. Furthermore many market transactions are normally for multiple properties in multiple areas and include both real and personal property, tangible and intangible. We access licensed databases providing statistical data for company and property sales to compare our efforts. We also measure our performance through comparison of valid single-property market transactions, if any, that are submitted for staff review. Lastly, Capitol Appraisal's mineral appraisal values are subject to review each year in the Property Value Study conducted by the Property Tax Division of the Texas Comptroller of Public Accounts. The Property Tax Division's review as well as comparisons to industry transactions and to single-property market value sales (when available), indicate the validity of the models, techniques and assumptions used.

Document 8

Procedure for CAD Verification of Services Provided by Appraisal Contractor

1. Verify lists of properties provided by the contractor agree with CAD's lists.
2. Verify appropriate methods of appraisal are used for each type of property [market, cost, income].
 - a. Inquire if there has been any change in agreed appraisal methodology or application.
 - b. Any variations from USPAP guidelines shall be documented and reviewed the following year.
3. Verify that complete and correct data resources, including market data, are used appropriately for each type of property.
 - a. Inquire if there are added or deleted sources.
 - b. If so, document reason for change and track affected properties.
4. Verify that contractor follows laws and statues applicable for all properties being appraised, including rendition compliance.
 - a. Verify that Property Tax Code [P. T. C.] 1.04 (7) is met for all relevant properties such that both the appraisal approach and its conclusions meet the definition of fair market value.
 - b. For minerals verify compliance with P. T. C 23.175 for mineral properties:
 - Use of Comptroller's Manual for Discounting Oil and Gas Income
 - Use of average product prices for the year prior to Jan 1
5. Verify agreed scheduling of:
 - a. Preliminary appraisal report summarizing progress in completing the year's appraisals.
 - b. Mail dates:
 - Notices of Appraisal
 - Last date to file a protest
 - ARB meeting dates
 - c. Compilation of Certified Estimate of Value in accordance with P. T. C. 26.01 (e)
 - d. copies of all appraisal and supporting data in agreed format

6. Verify timely receipt and correct format of following information:

a. Value

- preliminary appraised value
- preliminary appraisal roll
- certified roll including all documentation

b. Reports

- new property listing
- list of renditions
- protests and waives of protest
- pending protest list
- value change report

5 Contractor's procedures for appraising oil and gas property

See in Appraisal Standards folder

Property Appraisal Manuals subfolder

Procs for appraisal of Oil&Gas file

6 Contractor's procedures for identifying new property

Industrial Real Property

Industrial properties are identified as part of the appraiser's physical inspection process each year and through submitted data by the property owner. The appraiser may also refer to legal documents, photography and other descriptive items.

Industrial Personal Property

Through inspection the appraiser identifies personal property to be appraised. The appraiser begins with properties from the previous tax year and identifies new properties from visual identification and/or publications, newspaper articles, or information obtained through the interview of property owners. The appraiser may also refer to other documents, both public and confidential, to assist in identification of these properties. Such documents might include, but are not limited to, the previous year's appraisal roll, vehicle listing services and private directories.

Utility, Railroad and Pipeline Property

Utility, railroad and pipeline properties that are susceptible to inspection are identified by inspection. The appraiser may also refer to other documents, both public and confidential, to assist in the identification of these properties.

Oil and Gas Property

As subsurface mineral properties lie within the earth, they cannot be physically identified by inspection like other real property. However, the inability to directly inspect does not appreciably affect the ability to identify and appraise these properties. To identify new properties, CAG obtains monthly oil and gas lease information from the Railroad Commission of Texas [RRC] to compare against oil and gas properties already identified. The situs of new properties is determined using plats and W-2/G-1 records from the RRC, as well as CAG's in-house map resources.

**Procedure for Evaluating Results
of Contractor's Property Discovery for all property other than Oil and Gas**

1. Review renditions and compare to appraisal roll.
2. Review local news articles.
3. Have chief appraiser or another appraiser ride with contract personnel during inspection process.
4. Meet with contract personnel and go over any discrepancies.
5. Stay aware of what is going on in the area and meet with contractor about new projects.
6. Review contractor's appraisal roll and discuss any discrepancies.

**Procedure for Evaluating Results
of Contractor's Oil and Gas Property Discovery**

1. Obtain a list from the Texas Railroad Commission of all new leases currently producing in the CAD.
2. Choose a sample of leases or if time permits list all new leases producing on January 1st. of current tax year.
3. Check to see if the lease was completed prior to January 1st or producing before January 1st of current tax year.
4. Compare to list of new leases currently producing or completed prior to January 1st of current tax year. If discrepancies exist contact contractor to discover why lease may be left off tax rolls. Some reasons may include but are not limited to: incorrect RRC reporting data, lease being listed under its permit number on current tax roll, or lease being currently listed under a prior RRC lease number.
5. If contractor has accounted for all new production and leases, the CAD has complied with the MAP requirement.

**Capitol Appraisal Group, LLC
Formal and Informal Procedures**

It is the Capitol Appraisal policy to follow the formal and informal procedures as established by each individual client. Those policies will supercede the below referenced general practices used by this company if there is a conflict.

Informal

Informal meetings with agents or taxpayers/owners on utility properties occur either on the telephone or in the offices of Capitol Appraisal if requested by the agent or owner. This procedure may also take place upon filing of a protest and is useful to finalize issues such as allocations and ownership.

Formal Meetings

Formal meetings with agents or taxpayers/owners take place at the physical location as directed by the appraisal district. Discussions with the agents or taxpayer/owners may take place prior to the scheduled meeting time with the Appraisal Review Board. A deadline for timely action is dictated by the appraisal district. Prior to the deadline and in the absence of the agent or taxpayer/owner being physically present there may be telephone conversations to discuss the protested issues. Failure to resolve the protested issue(s) and no representation by the agent or taxpayer/owner will result in the recommendation to affirm the noticed value and "no show" the agent or taxpayer/owner.

Affidavits used for evidence are presented to the Appraisal Review Board as scheduled by the appraisal district.

Document 6A

Industrial Real Property Mass Appraisal Procedure and Timeline

Although valuation is set for either January 1 of the tax year or September 1 of the previous calendar year prior to the current tax year, the appraisal process begins in September of the previous year and continues through August of the tax year.

September 1 of previous year to March 31 of the current tax year

Discovery and listing. This includes physical inspection of existing properties to appraise and discovery of potential new properties to appraise. New potential properties are reported to the appraisal district to determine if Capitol Appraisal will value the property for the current tax year.

April 1 until complete

Appraisal of properties both market value and taxable value. Deadlines for completion of appraisals and sending out value notices are based upon individual deadlines set by the appropriate appraisal district. Every effort is made to appraise every property timely so that values can be included in certification. Properties not included in certification are reported to the appraisal district and the appraisal process continues until final value is reached. Supplementing the tax roll with those properties is based upon the timeline established by the appraisal district.

July 25

Appraisal roll is certified. Every effort is made to ensure all properties have a final valuation by this date. Exceptions may include properties with late renditions, extensions, or other allowable justifications which preclude final valuation by July 25.

July 26 to August 31

Review current tax year methods and procedures, and begin general property classification research for the next tax year. Special reports for the appraisal districts are created at this time as requested.

Document 6B

Industrial Personal Property Mass Appraisal Procedure and Timeline

Although valuation is set for either January 1 of the tax year or September 1 of the previous calendar year prior to the current tax year, the appraisal process begins in September of the previous year and continues through August of the tax year.

September 1 of previous year to March 31 of the current tax year

Discovery and listing. This includes physical inspection of existing properties to appraise and discovery of potential new properties to appraise. New potential properties are reported to the appraisal district to determine if Capitol Appraisal will value the property for the current tax year.

April 1 until complete

Appraisal of properties both market value and taxable value. Deadlines for completion of appraisals and sending out value notices are based upon individual deadlines set by the appropriate appraisal district. Every effort is made to appraise every property timely so that values can be included in certification. Properties not included in certification are reported to the appraisal district and the appraisal process continues until final value is reached. Supplementing the tax roll with those properties is based upon the timeline established by the appraisal district.

July 25

Appraisal roll is certified. Every effort is made to ensure all properties have a final valuation by this date. Exceptions may include properties with late renditions, extensions, or other allowable justifications which preclude final valuation by July 25.

July 26 to August 31

Review current tax year methods and procedures, and begin general property classification research for the next tax year. Special reports for the appraisal districts are created at this time as requested.

Document 6C

Utility, Railroad and Pipeline Property Mass Appraisal Procedure and Timeline

Although valuation is set for either January 1 of the tax year or September 1 of the previous calendar year prior to the current tax year, the appraisal process begins in September of the previous year and continues through August of the tax year.

September 1 of previous year to March 31 of the current tax year

Research and capitalization rate development. For properties valued via the income approach data is obtained and analyzed for calculation of a capitalization rate appropriate to a specific property type.

October to December

Submission of appraisals to the Property Tax Assistance Division (PTAD) of the Comptroller's office and preparation of value defense for any properties included in their ratio study. Defense documentation and appraisal analysis of the PTAD appraisal is prepared and submitted to the appraisal district or the representative of the taxing jurisdictions whichever is appropriate.

April 1 until complete

Appraisal of properties both market value and taxable value. Deadlines for completion of appraisals and sending out notice of value are based upon individual deadlines set by the appropriate appraisal district. Every effort is made to appraise every property timely so that values can be included in certification. Properties not included in certification are reported to the appraisal district and the appraisal process continues until final value is reached. Supplementing the tax roll with those properties is based upon the timeline established by the appraisal district.

July 25

Appraisal roll is certified. Every effort is made to ensure all properties have a final valuation by this date. Exceptions may include properties with late renditions, extensions, or other allowable justifications which preclude final valuation by July 25.

July 26 to August 31

Review current tax year methods and procedures, and begin general property classification research for the next tax year. Special reports for the appraisal districts are created at this time as requested.

Document 6D
Oil and Gas
Mass Appraisal Procedures and Timeline

Capitol Appraisal Group, LLC (CAGL) contracts with Appraisal Districts and other governmental entities to appraise all oil and gas subsurface, producing, mineral interests within the purview of the law.

October-December:

SEC 10(k) data gathered for use in discount rate study.

A base discount rate is developed using the Securities and Exchange Commission (SEC) 10k Standard Measure of Value, before Federal Income Tax (BFIT), for a grouping of Exploration and Production (E&P) companies, and then matching their 10k Standard Measure of Value (BFIT), reserves and costs, through a discounted cash flow (DCF) technique. This reserve and cost match is used with Section 23.175 pricing directives to determine a discount rate necessary to equal the stock and debt value of the companies, as of January 1 for a given tax year. This analysis is calibrated with a WACC for the same companies that are used in the stock and debt analysis. Management determines an appropriate base discount rate to be used.

January:

Discount rate study finalized

November-March:

The appraiser commences the annual appraisal cycle with identification of new property and determination of situs.

“Minerals in place” and an estate or interest in the same, are classified by the state of Texas as real property. They cannot be physically identified by inspection like other real property. However, the inability to directly inspect does not appreciably affect the ability to identify and appraise these minerals in place and estates or interests in the same. CAGL obtains monthly oil and gas lease production information from the Railroad Commission of Texas [RRC] and compares it to existing oil and gas properties already identified and appraised. New properties are identified in this process by comparing existing data to new information obtained from the RRC.

The appraiser determines the validity of new properties and then determines the situs of these new properties by obtaining plats, W-2/G-1 records obtained from the RRC, and using in-house mapping resources.

January-March:

Appraisers begin entering detailed new property information.

Along with RRC lease specific information, the appraiser enters the lease's legal description, its situs, and detailed lease information obtained from the RRC. This process of discovery and entry into the appraisal system continues year round to identify assessable properties that are obtained because of delays in the RRC reporting system.

February:

Comptroller's 23.175 pricing data and market condition factors are obtained and incorporated into the appraisal system.

February-April:

Properties are appraised and values are posted on the CAG web site for clients, operators and agents to review and submit information.

Appraiser(s) access production declines for leases to be appraised. Based on the appraiser's decline rate analysis and review of previous year's appraisal parameters and current Comptroller pricing data, the estimated value for the current appraisal year is determined.

Preliminary appraised values are available from the CAG web site www.cagi.com following appraiser and supervisor review.

April-May:

Preliminary appraisals reviewed.

Appraisers review operating expenses, product prices, new or revised information about production submitted by operators and agents before Notifications of Value are mailed to taxpayers.

May-July:

Notified values formally & informally reviewed.

Appraisers work with taxpayers following Notification of Value and continue to review information submitted by royalty owners, operators and agents. The ARB process is part of this review

Documents 9A-J

Contractor's Appraisal Documentation Delivered to the CAD

Note: Appraisal formats subject to change

Industrial

Unit Pipeline	9A
Investor-owned Electric	9B
Investor-owned telephone8	9C
Electric Coop	9D
Telephone Coop	9E
Plant Summary	9F

Oil and Gas

Oil lease #1	9G
Oil lease #2	9H
Gas Property #1	9I
Gas Property #2	9J

2010

DOCUMENT 9A

SAMPLE PIPELINE COMPANY

UNIT APPRAISAL

10/5/2010

INCOME APPROACH

YEAR	AFTER TAX NOI	NET PLANT IN SERVICE		NOI / AVG of prev yr and current yr NPIS
2004	18,111,707	84,791,838		
2005	18,726,411	497,538,026		0.0643
2006	56,177,093	535,687,803		0.1087
2007	66,740,951	851,292,542		0.0962
2008	84,283,848	1,236,732,019		0.0807
2009	146,430,277	1,820,553,365	1.472067786	0.0958

PROJECTIONS OF NOI

MOST RECENT YEAR				146,430,277
FIVE YEAR AVERAGE				74,471,716
FIVE YEAR WEIGHTED AVERAGE				93,372,682
TREND ON 3 YR RETURN ON NPIS			0.0907	165,117,335
LINEAR REGRESSION ON NOI	CORR. COEFF. =		0.96	159,526,062
LIN. REGRESS. ON NOI/NPIS	CORR. COEFF. =		0.98	200,947,084
PROJECTED TYPICAL NET OPERATING INCOME				120,000,000
NET INCOME ATTRIBUTABLE TO CWIP (SEE P. 3)				24,277,319
TOTAL NET INCOME TO CAPITALIZE				144,277,319
CAPITALIZATION RATE				0.1085
VALUE INDICATED BY INCOME APPROACH				1,329,202,314

NET INCOME ATTRIBUTABLE TO
CONSTRUCTION WORK IN PROGRESS
NOT IN THE RATE BASE

TOTAL CONSTRUCTION WORK IN PROGRESS				364,645,300
CONSTRUCTION WORK IN PROGRESS IN RATE BASE				0
CONSTRUCTION WORK IN PROGRESS NOT IN RATE BASE				364,645,300
DISCOUNTED FOR	3	YEAR(S) AT A RATE OF :	0.1085	267,677,257
PROJECTED NET INCOME FROM CWIP				24,277,319

COST APPROACH

UTILITY PLANT	1,904,925,695
CONSTRUCTION WORK IN PROGRESS	364,645,300
TOTAL UTILITY PLANT	2,269,570,995
ACCUMULATED DEPRECIATION AND AMORTIZATION	93,270,899
NET UTILITY PLANT	2,176,300,096
GAS STORED - BASE GAS	0
SYSTEM BALANCING GAS	0
GAS STORED UNDERGROUND - NON-CURRENT	0
GAS STORED - SYSTEM GAS	0
GAS STORED - CURRENT	7,453,749
PLANT MATERIAL AND OPERATING SUPPLIES & STORES EXPENSE UNDISTRIBUTED	1,444,820
NET BOOK VALUE	2,185,198,664
ECONOMIC OBSOLESCENCE (SEE BELOW)	874,079,466
VALUE INDICATED BY COST APPROACH	1,311,119,199

CALCULATION OF ECONOMIC OBSOLESCENCE

HISTORICAL RATE OF RETURN (5 YEAR AVG.)	0.0907
CURRENT DESIRED RATE OF RETURN	0.1085
INDICATED FRACTION NON-OBSOLESCE	0.8356
MOST RECENT RATE OF RETURN	0.0958
CURRENT DESIRED RATE OF RETURN	0.1085
INDICATED FRACTION NON-OBSOLESCE	0.8825
PROJECTED RATE OF RETURN	0.0659
CURRENT DESIRED RATE OF RETURN	0.1085
INDICATED FRACTION NON-OBSOLESCE	0.6073
APPRAISER'S OPINION OF FRACTION NON-OBSOLESCE	0.6000
FRACTION OBSOLETE	0.4000
ECONOMIC OBSOLESCENCE	874,079,466

CORRELATION

INCOME INDICATOR OF VALUE	1,329,202,314
COST INDICATOR OF VALUE	1,311,119,199
CORRELATED UNIT VALUE	1,315,000,000
MARKET VALUE /ORIGINAL COST	0.5771
MARKET VALUE/NET BOOK VALUE	0.6018
REPLACEMENT COST NEW OF SOFTWARE	0
MARKET VALUE OF SOFTWARE	0
MARKET VALUE TO ALLOCATE	1,315,000,000
MARKET VALUE /ORIGINAL COST (EXCLUDING SOFTWARE)	0.5771
MARKET VALUE/NET BOOK VALUE (EXCLUDING SOFTWARE)	0.6018

ALLOCATION

PLANT IN SERVICE

NET PLANT IN SERVICE	1,811,654,796
NET BOOK VALUE	2,185,198,664
PERCENT TO PLANT IN SERVICE	0.8291
CORRELATED UNIT VALUE	1,315,000,000
PERCENT TO NET UTILITY PLANT	0.8291
UNIT VALUE OF PLANT IN SERVICE	1,090,210,284

TEXAS PLANT IN SERVICE

	TEXAS	TOTAL CO.	% TO TEXAS
NET PLT IN SRVC	1,811,654,796	1,811,654,796	1.0000
GRS PLT IN SRVC	1,904,925,695	1,904,925,695	1.0000
CONCLUSION			1.0000
UNIT VALUE OF PLANT IN SERVICE			1,090,210,284
PERCENT TO TEXAS			1.0000
UNIT VALUE OF TEXAS PLANT IN SERVICE			1,090,210,284

TEXAS GATHERING & TRANSMISSION PIPE

	TEXAS PIPE	TEXAS PLANT IN SERVICE	% TO PIPE
NET INVESTMENT	1,343,744,175	1,811,654,796	0.7417
GROSS INVESTMENT	1,397,895,771	1,904,925,695	0.7338
		CONCLUSION	0.7378
UNIT VALUE OF TEXAS PLANT IN SERVICE			1,090,210,284
% TO PIPE			0.7378
UNIT VALUE OF TEXAS PIPE			804,332,157
REPLACEMENT COST NEW LESS DEPRECIATION OF TEXAS PIPE			970,647,820
CORRELATED MARKET VALUE OF TEXAS PIPE			800,000,000
PTD's SCHEDULE 1 VALUE OF TEXAS PIPE			640,872,407
RATIO OF CORRELATED VALUE TO SCHEDULE VALUE (ENS)			1.2483

CAPITOL APPRAISAL GROUP, LLC

2010

DOCUMENT 9B

SAMPLE ELECTRIC IOU COMPANY

UNIT APPRAISAL

Appraiser

CAPITOL APPRAISAL GROUP, LLC

INCOME APPROACH

YEAR	NET OPERATING INCOME*	NET PLANT IN SERVICE*		NOI/NPIS OF PRV. YR. & CURRENT YR.
2004	68,027,209	685,658,796		
2005	61,265,796	706,760,852	1.030776	0.0894
2006	56,814,104	685,850,642	0.970414	0.0804
2007	32,745,832	732,197,728	1.067576	0.0477
2008	50,477,347	749,480,314	1.023604	0.0689
2009	46,565,398	824,721,310	1.100391	0.0621

*INCLUDES M&S AND STORED GAS.

PROJECTIONS OF NOI

MOST RECENT YEAR			46,565,398
THREE YEAR AVERGAE			43,262,859
FIVE YEAR AVERAGE			49,573,695
THREE YEAR WEIGHTED AVERGAE			45,566,120
FIVE YEAR WEIGHTED AVERAGE			47,191,192
FIVE YR. AVG. RETURN ON NPIS		0.0697	57,492,045
LINEAR REGRESSION ON NOI	CORR. COEFF. =	(0.71)	38,852,429
LIN. REGRESS. ON NOI/NPIS	CORR. COEFF. =	(0.00)	49,560,383
PROJECTED TYPICAL NET OPERATING INCOME			48,000,000
NET INCOME ATTRIBUTABLE TO CWIP (SEE P. 3)			2,258,138
TOTAL NET INCOME TO CAPITALIZE			50,258,138
CAPITALIZATION RATE			0.0994
VALUE INDICATED BY INCOME APPROACH			505,450,487

CAPITOL APPRAISAL GROUP, LLC

NET INCOME ATTRIBUTABLE TO
CONSTRUCTION WORK IN
PROGRESS
NOT IN THE RATE BASE

TOTAL CONSTRUCTION WORK IN PROGRESS			82,283,128
CONSTRUCTION WORK IN PROGRESS - MAINTENANCE			46,669,321
CONSTRUCTION WORK IN PROGRESS NOT IN RATE BASE			35,613,807
DISCOUNTED FOR	1	YEAR(S) AT A RATE OF :	0.0994
PROJECTED NET INCOME FROM CWIP			2,258,138

COST APPROACH

UTILITY PLANT	1,357,257,700
CONSTRUCTION WORK IN PROGRESS	82,283,128
TOTAL UTILITY PLANT	1,439,540,828
NET NUCLEAR FUEL	0
ACCUMULATED DEPRECIATION AND AMORTIZATION	552,521,228
NET UTILITY PLANT	887,019,600
MERCHANDISE	0
FUEL STOCK	9,645,377
PLANT MATERIAL AND OPERATING SUPPLIES	10,339,461
LIQUIFIED NATURAL GAS HELD FOR PROCESSING	0
NET BOOK VALUE	907,004,438
ECONOMIC OBSOLESCENCE (SEE BELOW)	380,941,864
VALUE INDICATED BY COST APPROACH	526,062,574

CAPITOL APPRAISAL GROUP, LLC

CALCULATION OF ECONOMIC OBSOLESCENCE

HISTORICAL RATE OF RETURN (5 YEAR AVG.)	0.0697
CURRENT DESIRED RATE OF RETURN	0.0994
INDICATED FRACTION NON-OBSOLESCE	0.7011
MOST RECENT RATE OF RETURN	0.0621
CURRENT DESIRED RATE OF RETURN	0.0994
INDICATED FRACTION NON-OBSOLESCE	0.6248
PROJECTED RATE OF RETURN	0.0582
CURRENT DESIRED RATE OF RETURN	0.0994
INDICATED FRACTION NON-OBSOLESCE	0.5853
APPRAISER'S OPINION OF FRACTION NON-OBSOLESCE	0.5800
FRACTION OBSOLETE	0.4200
ECONOMIC OBSOLESCENCE	380,941,864

CAPITOL APPRAISAL GROUP, LLC

STOCK AND DEBT APPROACH

EQUITY	
NO. SHARES	403,554,634
\$ / SHARE	30.26
EQUITY VALUE	12,211,563,225
PERCENT TO COMPANY	0.0816
ALLOCATED EQUITY VALUE	995,860,423
LONG -TERM DEBT	368,964,682
TOTAL STOCK AND DEBT VALUE	1,364,825,105

CORRELATION

INCOME INDICATOR OF VALUE	505,450,487
COST INDICATOR OF VALUE	526,062,574
STOCK & DEBT INDICATOR OF VALUE	1,364,825,105
DISCOUNTED CASH FLOW INDICATOR OF VALUE	591,713,506
APPRAISER'S OPINION OF MARKET VALUE	510,000,000
MARKET VALUE /ORIGINAL COST	0.3494
MARKET VALUE/NET BOOK VALUE	0.5623
TOTAL VALUE OF TRANSMISSION AND DISTRIBUTION	343,397,389

ALLOCATION

ORIGINAL COST OF DIST. SYSTEM INCL. INVEST IN GENERAL PLANT	624,524,151
ORIGINAL COST OF TRANSMISSION SYSTEM	411,838,471
ORIGINAL COST OF PRODUCTION PLANT	295,065,069
ORIGINAL COST OF INTANGIBLE PLANT	22,895,904
TOTAL ORIGINAL COST	1,354,323,595

DISTRIBUTION PLANT

ORIGINAL COST OF DIST. SYSTEM INCL. INVEST IN GENERAL PLANT	624,524,151
ORIG. COST OF LAND AND LAND RIGHTS	1,103,824
ORIG. COST OF STRUCTURES AND IMPROVEMENTS	111,337
ORIG. COST OF STATION EQUIPMENT	74,929,157
ORIG. COST OF LAND AND LAND RIGHTS IN GENERAL PLANT	1,876,687
ORIG. COST OF STRUCTURES AND IMPROVEMENTS IN GENERAL PLANT	24,144,259
ORIGINAL COST OF INTANGIBLES	387,073
DIST. PLANT EXCL. SUBSTATIONS AND LAND	521,971,814
MARKET VALUE/ ORIGINAL COST	0.3494
MARKET VALUE OF DIST. EXCL. SUBSTATIONS AND LAND	182,391,876
TOTAL METERS	192,937
MARKET VALUE PER METER	945

TRANSMISSION PLANT

ORIGINAL COST OF TRANSMISSION SYSTEM	411,838,471
ORIG. COST OF LAND AND LAND RIGHTS	11,235,765
ORIG. OF STRUCTURES AND IMPROVEMENTS	1,365,537
ORIG. COST OF STATION EQUIPMENT	189,158,884
ORIG. COST OF LAND AND LAND RIGHTS IN GENERAL PLANT	570,685
ORIG. COST OF STRUCTURES AND IMPROVEMENTS IN GENERAL PLANT	7,342,067
ORIGINAL COST OF INTANGIBLES	6,962,453
TRANS. PLANT EXCL. SUBSTATIONS AND LAND	195,203,080
MARKET VALUE/ ORIGINAL COST	0.3494
MARKET VALUE OF TRANS. EXCL. SUBSTATIONS AND LAND	68,209,538

	LINE TYPE	ORIG. COST	M.V./O.C.	MARKET VALUE	NO. MILES	MKT. VAL. PER MILE
	69 KV	73,552,521	0.3494	25,701,354	2,619.35	9,812
	138 KV	81,868,172	0.3494	28,607,080	1,458.78	19,610
	345 KV	39,801,908	0.3494	13,907,925	222.53	62,499
	115 KV	0	0.3494	0	0.00	0
	161 KV	0	0.3494	0	0.00	0
TOTALS		195,222,601		68,216,359	4,300.66	

SUBSTATIONS

ORIGINAL COST DIST. SUBSTATIONS	75,040,494
ORIGINAL COST TRANS. SUBSTATIONS	190,524,421
TOTAL ORIGINAL COST OF SUBSTATIONS	265,564,915
MARKET VALUE/ ORIGINAL COST	0.3494
MARKET VALUE OF SUBSTATIONS	92,795,975
TOTAL SUBSTATION KVA CAPACITY	9,279,606
VALUE PER KVA	10.00

Total T & D Value 343,397,389

* ACKNOWLEDGEMENT OF NEW VALUE FOR AD VREM TAXATION *

THE ABOVE LISTED NEW VALUES ARE RECOMMENDED BY TAP PRaiser FOR THE DISTRICT AND ACCEPTED BY THE AGENT/OWNER FOR THE PAYER AS 2008 VALUES. THE AGENT/OWNER HEREBY WITHDRAWS PROTEST AND WAIVES THE RIGHT TO FURTHER NOTIFICATION OF VALUES.

TO BE VALID THIS SIGN-OFF MUST BE EXECUTED AND RETURNED TO CAPITOL BY MIDNIGHT PRIOR TO YOUR ARB HEARING.

DISTRICT	CAPITOL	TAXPAYER/AGENT	BRA
Date	Date	Date	Date

APPENDIX A

DISCOUNTED CASH
FLOW
2010

ASSUMPTIONS:		NOI	46,565,398
		Income Taxes - Federal (409.1)	10,992,511
FIT RATE :	0.35000	EBFIT (NOI + INCOME TAXES)	57,557,909
DISC RATE:	0.09943		
GROWTH RA	0.04355	Interest on Long-Term Debt (427)	19,501,675
		Depreciation Expense (403)	42,404,799
		UTILITY PLANT	1,357,257,700
		Capital Expenditures %	3.00%
		Capital Expenditures	40,717,731

(000'S)

	2009	2010	2011
EBFIT (LESS DEPREC)	57,558	60,064	62,680
INTEREST	19,502	19,502	19,502
EARN. BF. TAX	38,056	40,563	43,179
FED INC TAX	(13,320)	(14,197)	(15,112)
NET INC AFTER FIT	24,737	26,366	28,066
INTEREST	(19,502)	(19,502)	(19,502)
DEPREC	42,405	42,405	42,405
CAP EXP	(40,718)	(40,718)	(40,718)
CASH FLOW	45,925	47,555	49,255
DISC FACT	0.95371	0.86746	0.78900
P.W.	43,799	41,251	38,862
	2012	2013	2014
EBFIT (LESS DEPREC)	65,410	68,258	71,231
INTEREST	19,502	19,502	19,502
EARN. BF. TAX	45,908	48,757	51,729
FED INC TAX	(16,068)	(17,065)	(18,105)
NET INC AFTER FIT	29,840	31,692	33,624
INTEREST	(19,502)	(19,502)	(19,502)
DEPREC	42,405	42,405	42,405
CAP EXP	(40,718)	(40,718)	(40,718)
CASH FLOW	51,029	52,881	54,813
DISC FACT	0.71765	0.65274	0.59371
P.W.	36,621	34,517	32,543

CAPITOL APPRAISAL GROUP, LLC

	2015	2016	2017
EBFIT (LESS DEPREC)	74,333	77,570	80,948
INTEREST	19,502	19,502	19,502
EARN. BF. TAX	54,831	58,068	61,447
FED INC TAX	(19,191)	(20,324)	(21,506)
NET INC AFTER FIT	35,640	37,745	39,940
INTEREST	(19,502)	(19,502)	(19,502)
DEPREC	42,405	42,405	42,405
CAP EXP	(40,718)	(40,718)	(40,718)
CASH FLOW	56,829	58,933	61,129
DISC FACT	0.54001	0.49117	0.44675
P.W.	30,689	28,947	27,310

2018

EARN. BF. TAX	84,473
INTEREST	19,502
EARN. BF. TAX	64,972
FED INC TAX	(22,740)
NET INC AFTER FIT	42,232
INTEREST	(19,502)
DEPREC	42,405
CAP EXP	(40,718)
CASH FLOW	63,420
DISC FACT	0.40635
P.W.	25,771

	RVRSN	TOTAL PW
EBFIT (LESS DEPREC)		
INTEREST		
EARN. BF. TAX		
FED INC TAX		
NET INC AFTER FIT		
INTEREST		
DEPREC		
CAP EXP		
CASH FLOW	618,690	
DISC FACT	0.40635	
P.W.	251,404	\$ 591,714

SAMPLE TELEPHONE COMPANY
DOCUMENT 9C

1/1/10 APPRAISAL

Appraiser

CAPITOL APPRAISAL GROUP, LLC

INCOME APPROACH

	ADJUSTED NOI excludes Pension Gains & Equip Sales		NPIS		NOI/NPIS
2004	27,609,661		213,294,189		0.129444
2005	31,403,708	114%	198,144,756		0.158489
2006	31,663,733	101%	181,767,566	92%	0.174199
2007	30,279,656	96%	166,977,937	92%	0.181339
2008	34,468,837	114%	152,788,425	92%	0.225598
2009	40,010,863	116%	136,460,682	89%	0.293204
		144.92%			
1. Prior Year			40,010,863		40,010,863
2. Simple 3 Year Average			34,919,785		34,919,785
3. Weighted 3 Year Average			219,249,919		36,541,653
4. Adjusted Weighted 3 Year Average			34,007,885		31,777,005
5. Linear Regression on NOI			34,047,670	0.81	34,391,486
6. Linear Regression on NOI/NPIS			34,053,193	(0.81)	39,571,184
7. Typical Return on Plant					37,606,141
8. Linear regression on NOI vs. Access Lines				(0.85)	39,582,694
PROJECTION less allowance for equipment sales:					38,158,859
					35,000,000
INCOME ATTRIBUTED TO CWIP					0
Total Income to be Capitalized					35,000,000

INCOME APPROACH

SUBSCRIBER
ACCESS LINES

20043	167,000	
2005	162,000	97%
2006	156,489	97%
2007	151,717	97%
2008	147,248	97%
2009	139,353	95%
		83.44%



Market Value Estimate – Income Approach

	Projection		Cap. Rate	=	Market Value	
Tangible NOI	27,465,176	/	0.1146	=	<u>239,718,500</u>	
Less V. S.	5,706,117	/	0.1146	=	49,803,501	0.16
Less DSL	1,828,707	/	0.1146	=	15,961,115	
System NOI	35,000,000	/	0.1146	=	305,483,115	

COST APPROACH

Plant in Service	\$566,897,345
Construction WIP	2,998,765
Non-Op Plant	
Subtotal	569,896,110
Miscellaneous Physical Property	0
Materials and Supplies	643,038
Total Operating Property	570,539,148
Less Depreciation Reserve:	
Depreciation & Amortization Reserve	430,436,663
Amortization Reserve	0
Depreciation Reserve	0
Total Depreciation Reserves & Plant Adjustments	430,436,663
NET BOOK	140,102,485
LESS: Software @ Net	0
INDICATED OBSOLESCENCE	150,000,000
COST APPROACH INDICATOR (INCLUDING INTANGIBLES)	290,102,485
Other Intangibles (trade name from D&T Appraisal)	9,300,000
Work Force	5,000,000
Buildings	24,099,934
COST APPROACH (EXCLUDING INTANGIBLES)	251,702,551

FINAL VALUE ESTIMATE

Income Approach Estimate (Excluding Intangibles)	\$239,718,500
Cost Approach Estimate (Excluding Intangibles)	251,702,551
AUS RCNLD STUDY	\$240,679,972
Income Approach System (Include Intangibles)	\$305,483,115
Cost Approach (Including Intangibles)	290,102,485

After careful consideration of this information, the total system value of SAMPLE COMPANY A excluding intangibles is as follows:

FINAL VALUE ESTIMATE	\$240,000,000
FINAL VALUE ESTIMATE SYSTEM (Including Intangibles)	\$305,483,115
MARKET VALUE TO COST	42.07%
MARKET VALUE TO NB	171.30%

* ACKNOWLEDGEMENT OF NEW VALUE FOR AD VALO
 THE ABOVE LISTED NEW VALUES ARE RECOMMENDED BY THE DISTRICT AND ACCEPTED BY THE AGENT/OWNER FOR THE
 DISTRICT AND ACCEPTED BY THE AGENT/OWNER FOR THE
 THE AGENT/OWNER HEREBY WITHDRAWS PROTEST AND WAIVES
 REM TAXATION *
 APPRAISER FOR THE
 PAYER AS 2010 VALUES.
 THE RIGHT TO FURTHER
 NOTIFICATION OF VALUES.
 TO BE VALID THIS SIGN-OFF MUST BE EXECUTED AND RETURNED TO CAPITOL
 BY MIDNIGHT PRIOR TO YOUR ARB HEARING.

District	Capitol	Taxpayer/Agent	ARB
Date	Date	Date	Date

ALLOCATION

(A)	Total System Value		\$240,000,000
(B)	Texas Utility Plant in Service	\$566,897,345	
(C)	System Gross Utility Plant	\$566,897,345	
(D)	Texas Apportionment Factor (B)/(C)		100.00%
(E)	Texas Net Utility Plant	\$140,102,485	
(F)	System Net Utility Plant	\$140,102,485	
(G)	Texas Apportionment Factor (E)/(F)		100.00%
(H)	Average Apportionment Factor [(D)+(G)]/2		100.00%
		-	
(I)	Texas Value (H) * Total Market Value		\$240,000,000
(J)			
(K)	Buildings & Land		\$24,099,934
(L)	Total Land and Buildings (J)+(K)		\$24,099,934
(M)	Original Cost		\$570,539,148
(N)	Percentage Attributable to Land and Buildings (L)/(M)		4.22%
	Other Intangibles (trade name from D&T Appraisal)		9,300,000
	Work Force		5,000,000
	Value to Allocate [(I)-(I*N)]		\$215,562,248
	Total Rendered Value		171,000,000
	ratio of Value to Allocate to Rendered Value		1.2606
	Ratio of Value to Allocate to Original cost		0.3782

NET OPERATING INCOME ATTRIBUTED TO CONSTRUCTION WORK IN PROGRESS

(A) Total Construction work in progress	\$2,998,765
Less:	
(B) Short term plant in rate base	\$0
(C) Modernization - Long term plant replacing plant in rate base	\$2,998,765
(D) Construction Work in Progress not in rate base	\$0
(E) Capitalization Rate	11.46%
(F) Present value of (D) discounted for one period at capitalization rate	\$0
(G) Net operating income attributed to construction work in progress adjusted for 80% market penetration	\$0

COST APPROACH OBSOLESCENCE

(A)	Total Net Plant In Service	\$136,460,682
(B)	Required Rate of Return	11.46%
(C)	Prior 3 Year's Net Operating Income - Avg.	34,919,785
(D)	Required Net Operating Income (A)*(B)	\$15,634,657
(E)	Income Shortfall (D)-(C)	(\$19,285,128)
(F)	Capitalization Rate	11.46%
(G)	Indicated Obsolescence	(\$168,322,312)

Method 2

(A)	Projected Net Operating Income	35,000,000
(B)	Total Net Plant In Service	\$136,460,682
(C)	Rate of Return (A) / (B)	25.65%
(D)	Expected Rate of Return (Capitalization Rate)	11.46%
(E)	Percent Good (C)/(D)	223.86%
(F)	Percent Obsolescence Equals (100.00%) - (E)	-123.86%
(G)	Total Economic Obsolescence (B)*(F)	(\$169,022,433)
	SAY	(150,000,000)

Allocation of Capital Charge

Capital Charge - the annual return required on all corporate assets used in the production of the economic income associated with the subject intangible asset.

Net Plant In Service 144,624,554	Cost of Capital 11.46% =	Required Return \$ 16,570,014
Vertical Svces Revenue (VS NOI / co. exp ratio) 14,428,016	Total Operating Revenues 172,550,486	Percent of VS Revenue 8.36%
Allocated Capital Charge on Supporting Assets		\$1,385,522
Estimated Vertical Services NOI		7,091,639
Vertical Services NOI Less Capital Charge		\$5,706,117

Capitol Appraisal Group, LLC

2010

DOCUMENT 9D

SAMPLE ELECTRIC COOP COMPANY

UNIT APPRAISAL

Unit # 000

Appraiser

Capitol Appraisal Group, LLC

DATA YEAR: 2010

INCOME APPROACH

YEAR	NET OPERATING INCOME	NOI GROWTH	NET PLANT IN SERVICE	NPIS GROWTH	NOI/NPIS NOI - CURR YR NPIS - PRV YR
2004	4,625,201		81,787,622		
2005	5,661,681	0.2241	85,798,675	0.0490	0.0692
2006	4,748,314	-0.1613	92,154,509	0.0741	0.0553
2007	4,460,508	-0.0606	100,759,381	0.0934	0.0484
2008	4,928,287	0.1049	109,974,664	0.0915	0.0489
2009	4,458,440	-0.0953	115,898,957	0.0539	0.0405
MOST RECENT YEAR					4,458,440
THREE YEAR AVERAGE					4,615,745
FIVE YEAR AVERAGE					4,851,446
THREE YEAR WEIGHTED AVERAGE					4,615,400
FIVE YEAR WEIGHTED AVERAGE					4,703,012
FIVE YR. AVG. RETURN ON NPIS				0.0525	6,082,869
LIN. REGRESS. ON NOI		CORR. COEFF. =		(0.39)	4,183,493
LIN. REGRESS. ON NOI/NPIS		CORR. COEFF. =		(0.62)	4,261,525
PROJECTED TYPICAL NET OPERATING INCOME					3,700,000
NET INCOME ATTRIBUTABLE TO CWIP (SEE BELOW)					0
TOTAL NET INCOME TO CAPITALIZE					3,700,000
CAPITALIZATION RATE					0.1398
VALUE INDICATED BY INCOME APPROACH					26,460,653

INCOME ATTRIBUTABLE TO CONSTRUCTION WORK IN PROGRESS

CONSTRUCTION WORK IN PROGRESS			2009		0
DISCOUNTED AT:	0.1398	FOR	1	YEAR(S)	0
PROJECTED NET INCOME FROM CWIP					0

Capitol Appraisal Group, LLC

COST APPROACH

TOTAL UTILITY PLANT IN SERVICE (C1)	146,384,363
CONSTRUCTION WORK IN PROGRESS (C2)	0
TOTAL UTILITY PLANT	146,384,363
DEPRECIATION (C4)	30,485,407
NET UTILITY PLANT	115,898,957
MATERIALS & SUPPLIES (C21)	179,002
NET INVESTMENT	115,719,955
ECONOMIC OBSOLESCENCE (SEE BELOW)	89,821,691
COST APPROACH INDICATOR OF VALUE	25,898,263

CALCULATION OF ECONOMIC OBSOLESCENCE

HISTORICAL RATE OF RETURN (5 YEAR AVG.)	0.0525
CURRENT DESIRED RATE OF RETURN	0.1398
INDICATED FRACTION NON-OBSOLESCE	0.3753
MOST RECENT RATE OF RETURN	0.0405
CURRENT DESIRED RATE OF RETURN	0.1398
INDICATED FRACTION NON-OBSOLESCE	0.2899
PROJECTED RATE OF RETURN	0.0319
CURRENT DESIRED RATE OF RETURN	0.1398
INDICATED FRACTION NON-OBSOLESCE	0.2283
APPRAISER'S OPINION OF FRACTION NON-OBSOLESCE	0.2250
FRACTION OBSOLETE	0.7750
ECONOMIC OBSOLESCENCE	89,821,691

Capitol Appraisal Group, LLC

CORRELATION

INCOME APPROACH INDICATOR OF VALUE	\$26,460,653
COST APPROACH INDICATOR OF VALUE	\$25,898,263
APPRAISER'S OPINION OF MARKET VALUE	\$26,000,000
MARKET VALUE/ ORIGINAL COST	0.1776
MARKET VALUE/ NET BOOK VALUE	0.2243

* ACKNOWLEDGEMENT OF NEW VALUE FOR AD VALOREM TAXATION *** *

THE ABOVE LISTED NEW VALUES ARE RECOMMENDED BY THE APPRAISER FOR THE DISTRICT AND ACCEPTED BY THE AGENT/OWNER FOR THE TAXPAYER AS 2010 VALUES. THE AGENT/OWNER HEREBY WITHDRAWS PROTEST AND WAIVES THE RIGHT TO FURTHER NOTIFICATION OF VALUES.

TO BE VALID THIS SIGN-OFF MUST BE EXECUTED AND RETURNED TO CAPITOL BY MIDNIGHT PRIOR TO YOUR ARB HEARING.

DISTRICT	CAPITOL	TAXPAYER/AGENT	ARB
DATE	DATE	DATE	DATE

Capitol Appraisal Group, LLC

ALLOCATION

DISTRIBUTION PLANT

ORIGINAL COST OF DISTRIBUTION SYSTEM (E14E)	122,565,286
ORIGINAL COST OF LAND AND LAND RIGHTS (E1E)	123,409
ORIGINAL COST OF STRUCTURES AND IMPROVEMENTS (E2E)	916,416
ORIGINAL COST OF STATION EQUIPMENT (E3E)	11,720,471
DIST. PLANT EXCL. SUBSTATIONS AND LAND	109,804,991
MARKET VALUE/ ORIGINAL COST	0.1776
MARKET VALUE OF DIST. EXCL. SUBSTATIONS AND LAND	19,502,969

TYPE	MARKET VALUE	NO. UNITS		MKT VAL/UNIT
METERS	19,502,969	31,056	(R10L)	\$628
MI. OF LINE	19,502,969	4,217	(B6B+B7B)	\$4,625

TRANSMISSION PLANT

ORIGINAL COST OF TRANSMISSION SYSTEM (E33E)	11,818,671
ORIGINAL COST OF LAND & LAND RIGHTS (E26E)	16,336
ORIGINAL COST OF STRUCTURES AND IMPROVEMENTS (E27E)	170,820
ORIGINAL COST OF STATION EQUIPMENT (E28E)	4,458,909
TRANS. PLANT EXCL. SUBSTATIONS AND LAND	7,172,606
MARKET VALUE/ ORIGINAL COST	0.1776
MARKET VALUE OF TRANS. EXCL. SUBSTATIONS AND LAND	1,273,960
MILES OF TRANSMISSION LINE (B5B)	104
MARKET VALUE PER MILE OF LINE	\$12,281

SUBSTATIONS

ORIGINAL COST OF SUBSTATIONS - DIST.	12,636,887
ORIGINAL COST OF SUBSTATIONS - TRANS.	4,629,729
ORIGINAL COST OF SUBSTATIONS - TOTAL	17,266,616
MARKET VALUE/ ORIGINAL COST	0.1776
MARKET VALUE OF SUBSTATIONS	3,066,803
TOTAL SUBSTATION KVA CAPACITY	269,025
MARKET VALUE PER KVA	\$11

Capitol Appraisal Group, LLC

CAP RATE

COST OF EQUITY					
MODIFIED DCF - DIVIDEND YIELD	$Ke = (Div/P) + G$	0.1630			
DIVIDEN / PRICE = ((CASH PATRONAGE + REDEMPTIONS) / TOTAL PATRONAGE CAPITAL)		0.1571			
GROWTH RATE = [1 - (CASH PATRONAGE / NET INCOME)] * (NET INCOME / PATRONAGE CAPITAL)		-0.0570			
GROWTH RATE - GROWTH OF NPIS		0.0724			
GROWTH RATE - GROWTH OF NOI		0.0023			
CALCULATED GROWTH RATE		0.0059			
CASH PATRONAGE		7,000,090			
REDEMPTIONS		0			
TOTAL PATRONAGE CAPITAL		44,570,184			
NET INCOME		4,458,440			
MODIFIED DCF - EARNINGS	$Ke = (E/P) + G$	0.1059			
NET INCOME		4,458,440			
TOTAL PATRONAGE CAPITAL		44,570,184			
CALCULATED GROWTH RATE		0.0059			
BUILD UP METHOD	$Ke = Rf + Rp + SIZE PREMIUM$	0.1570			
RISK FREE RATE (TREASURY)		0.0400			
EQUITY RISK PREMIUM (PRATT / WASATA)		0.0550			
SIZE PREMIUM (IBBITSONS)		0.0620			
MODIFIED CAPM	$Ke = Rf + (b * ERP)$	0.1391			
RISK FREE RATE (TREASURY)		0.0400			
EQUITY RISK PREMIUM (PRATT / WASATA)		0.0550			
BETA (SEE BELOW)		1.8024			
BETA					
RETURN ON ASSETS		0.0525			
S & P AVERAGE RETURN ON ASSETS		0.0946			
CALCULATED BETA		1.8024			
AVERAGE COST OF EQUITY		0.1413			
OPINION OF COST OF EQUITY		0.1413			
COST OF DEBT					
ELECTRIC UTILITY BOND		0.0818			
COST OF DEBT		0.0818			
CAPITAL STRUCTURE					
TOTAL DEBT		61,388,492			
TOTAL ASSETS		133,029,617			
PERCENT DEBT		0.4615			
PERCENT EQUITY		0.5385			
WEIGHTED COST OF CAPITAL					
	CAPITAL STRUCTURE	COST	WEIGHTED COST	FLOTATION COST	ADJ WEIGHTED COST
EQUITY	0.5385	0.1413	0.0761	0.0360	0.0789
DEBT	0.4615	0.0818	0.0377	0.0150	0.0383
					0.1173

CAPITOL APPRAISAL GROUP

2010
DOCUMENT 9E
SAMPLE TELEPHONE COOP COMPANY

APPRAISAL

UNIT # 000

Appraiser

CAPITOL APPRAISAL GROUP

DATA YEAR: 2010

INCOME APPROACH

NOI PROJECTION NO. 1		
NET OPERATING REVENUES (B7B)	2009	\$3,585,327
NET OPERATING REVENUES (B7B)	2008	\$3,606,611
NET OPERATING REVENUES (B7B)	2007	\$3,263,862

PROJECTED NET OPERATING REVENUES		\$3,485,267
TYPICAL INVESTOR-OWNED TELEPHONE CO. EXPENSE RATIO		0.8100
PROJECTED EXPENSES		\$2,823,066
PROJECTED NOI BASED ON TYPICAL INVESTOR-OWNED EXP. RATIO		\$662,201

NOI PROJECTION NO. 2		
NET PLANT IN SERVICE	2010	\$7,324,320
TYPICAL INVESTOR-OWNED TEL. CO. RETURN RATE ON NPIS		0.1010
PROJECTED NOI BASED ON INVESTOR-OWNED RETURN RATE		\$739,756

NOI PROJECTION NO. 3		
NET OPERATING REVENUES (B7B)	2010	\$3,585,327
TOTAL OPERATION & MAINTENANCE EXPENSE (B14B)		\$2,873,408
TOTAL OPERATING TAXES (B20B)		\$74,428
NET OPERATING INCOME BEFORE FED. INCOME TAXES	2010	\$637,491
NET OPERATING INCOME BEFORE FED. INCOME TAXES	2009	\$861,211
NET OPERATING INCOME BEFORE FED. INCOME TAXES	2008	\$1,848,531

PROJECTED NOI BEFORE FEDERAL INCOME TAXES		\$1,354,871
PROJECTED EFFECTIVE FEDERAL INCOME TAX RATE		0.00
PROJECTED NOI AFTER FEDERAL INCOME TAXES		\$1,354,871

INCOME PROJECTIONS

NOI PROJECTION NO. 1	\$739,756
NOI PROJECTION NO. 2	\$739,756
NOI PROJECTION NO. 3	\$1,354,871

APPRAISER'S OPINION	\$900,000
INCOME ATTRIBUTABLE TO CWIP (SEE BELOW)	\$0
TOTAL INCOME TO CAPITALIZE	\$900,000
CAPITALIZATION RATE	0.1322
INCOME APPROACH INDICATOR OF VALUE	\$6,807,893

CAPITOL APPRAISAL GROUP

INCOME ATTRIBUTABLE TO CONSTRUCTION WORK IN PROGRESS

CONSTRUCTION WORK IN PROGRESS		2010	\$0
DISCOUNTED AT:	0.1322	FOR 1	\$0
TYPICAL INVESTOR-OWNED ELECTRIC CO. RETURN RATE ON NPIS		YEAR(S)	0.1010
PROJECTED NET INCOME FROM CWIP			\$0

CAPITOL APPRAISAL GROUP

COST APPROACH

TELECOMMUNICATIONS PLANT-IN-SERVICE (A20)	\$12,539,923
PROPERTY HELD FOR FUTURE USE (A21)	\$0
CONSTRUCTION WORK IN PROGRESS (A22)	\$0
TOTAL UTILITY PLANT	\$12,539,923
DEPRECIATION (A24)	\$5,215,603
NET UTILITY PLANT	\$7,324,320
MATERIALS AND SUPPLIES (A7+A8)	\$200,601
NET INVESTMENT	\$7,524,921
PERCENT NON-OBSOLETE (SEE BELOW)	0.9000
COST APPROACH INDICATOR OF VALUE	\$6,772,429

CALCULATION OF ECONOMIC OBSOLESCENCE

RETURN RATE BASED ON NOI PROJECTION NO. 1	0.1010
CURRENT DESIRED RATE OF RETURN	0.1322
INDICATED FRACTION NON-OBSOLETE	0.7640
RETURN RATE BASED ON NOI PROJECTION NO. 2	0.1010
CURRENT DESIRED RATE OF RETURN	0.1322
INDICATED FRACTION NON-OBSOLETE	0.7640
RETURN RATE BASED ON NOI PROJECTION NO. 3	0.1850
CURRENT DESIRED RATE OF RETURN	0.1322
INDICATED FRACTION NON-OBSOLETE	1.3993
RETURN RATE BASED ON PROJECTED NOI	0.1229
CURRENT DESIRED RATE OF RETURN	0.1322
INDICATED FRACTION NON-OBSOLETE	0.9295
CO-OP'S NET PLANT / ORIG COST	0.5841
TYPICAL I.O.U. NET PLANT / ORIG COST	0.6230
CO-OP'S IOU-ADJUSTED NET PLANT / ORIG COST	0.9375
TYPICAL I.O.U. NET PLANT / MARKET VALUE	0.8250
CO-OP'S I.O.U.-ADJUSTED FRACTION NON-OBSOLETE	0.7735
TYPICAL INVESTOR-OWNED ELECTRIC PERCENT NON-OBSOLETE	0.8250
COMPTRROLLER'S PERCENT NON-OBSOLETE PRIOR YEAR	1.1375
APPRAISER'S OPINION OF FRACTION NON-OBSOLESCENT	0.9000

CAPITOL APPRAISAL GROUP

CORRELATION

INCOME APPROACH INDICATOR OF VALUE	\$6,807,893
COST APPROACH INDICATOR OF VALUE	\$6,772,429
APPRAISER'S OPINION OF MARKET VALUE	\$6,800,000
MARKET VALUE/ ORIGINAL COST	0.5337
MARKET VALUE/ NET BOOK VALUE	0.9037

CAPITOL APPRAISAL GROUP

ALLOCATION

CENTRAL OFFICE EQUIPMENT

ORIGINAL COST OF CENTRAL OFFICE SWITCHING (D2E)	\$1,193,274
ORIG. COST OF OPERATOR SYSTEMS (D3E)	\$0
ORIG. COST OF CENTRAL OFFICE TRANSMISSION (D4E)	\$683,810
ORIGINAL COST OF CENTRAL OFFICE EQUIPMENT	\$1,877,084
ALLOCATED CWIP	\$0
TOTAL ORIGINAL COST	\$1,877,084
MARKET VALUE/ ORIGINAL COST	0.5337
MARKET VALUE OF CENTRAL OFFICE EQUIPMENT	\$1,001,856
NO. CENTRAL OFFICE EQUIPMENT ACCESS LINES (GET+GFT)	2,907
VALUE PER COE ACCESS LINE	\$345

MAIN STATIONS

ORIGINAL COST OF INFOR ORIG/TERM ASSETS (D5E)	\$0
ORIG. COST OF CABLE & WIRE FACILITIES (D6E)	\$10,380,881
ORIGINAL COST OF OTHER TANGIBLE ASSETS (D7E)	\$0
TOTAL OUTSIDE PLANT ORIGINAL COST	\$10,380,881
ALLOCATED CWIP	\$0
TOTAL ORIGINAL COST	\$10,380,881
MARKET VALUE/ ORIGINAL COST	0.5337
MARKET VALUE OF OUTSIDE PLANT	\$5,540,588
TOTAL NO. MAIN STATIONS (C4C)	2,907
MARKET VALUE PER MAIN STATION	\$1,906

Document 9F

V A L U A T I O N O P I N I O N

2010 PRELIMINARY REPORT

OF

FACILITIES AT

ABC LARGE INDUSTRIY COMPANY

V A L U A T I O N S U M M A R Y

REALTY IMPROVEMENTS	17,389,600
PERSONAL PROPERTY	17,623,800
	=====
TOTAL PRESENT WORTH, EXCLUDING LAND	35,013,400

CERTIFICATION: THIS APPRAISAL IS INTENDED TO REFLECT THE FAIR MARKET VALUE OF THE REALTY IMPROVEMENTS AND PERSONAL PROPERTY FOR SUBJECT PROPERTY, EXCLUDING LAND, AS OF JANUARY 1, 2010. THIS OPINION IS TO BE USED BY OUR CLIENT, TEXAS APPRAISAL DISTRICT, ITS CHIEF APPRAISER AND A.R.B., IN THEIR CONSIDERATIONS OF MARKET VALUE FOR PURPOSES OF AD VALOREM TAXATION. OWNERSHIP AND SITUS ARE NOT ASSURED.

APPRAISED BY:

APPRAISER, ENGR.
CAPITOL APPRAISAL GROUP, LLC

PRINTED: 10/08/10 12:04:10

ABC LARGE INDUSTRIY COMPANY
2010 PRELIMINARY REPORT

REALTY IMPROVEMENTS VALUATION SUMMARY

CATEGORY	REPLACEMENT COST	VALUATION FACTOR	PRESENT WORTH
1. PROCESS GROUP	49,590,000	.194	9,598,100
2. UTILITIES	19,340,100	.183	3,539,500
3. RECEIVING, SHIPPING, AND STORAGE	6,942,600	.182	1,261,400
4. SERVICE FACILITIES.	11,681,200	.184	2,144,400
5. GENERAL BUILDINGS	4,408,000	.192	846,200
6. OFF SITE FACILITIES			
7. RESEARCH AND DEVELOPMENT			
	-----		-----
SUB-TOTAL	91,961,900		17,389,600
8. CONSTR. IN PROGRESS			
9. OUT OF SERVICE	22,040,000	.000	
10. NEW UNITS			
	-----		-----
SUB-TOTAL	22,040,000		
	=====		=====
IMPROVEMENTS TOTAL	114,001,900		17,389,600

ABC LARGE INDUSTRIY COMPANY
2010 PRELIMINARY REPORT

PERSONAL PROPERTY VALUATION SUMMARY

CATEGORY	REPLACEMENT COST	VALUATION FACTOR	PRESENT WORTH
1. AUTOS & TRUCKS	2,360,000	.430	1,014,800
2. FF&E	250,000	.485	121,300
3. COMPUTERS	150,000	.143	21,500
4. SUPPLIES & PARTS	1,026,000	.750	769,500
5. MOB MACH/TOOLS	327,800	.600	196,700
6. INVENTORY	15,500,000	1.000	15,500,000
	=====		=====
PERSONAL PROPERTY	19,613,800		17,623,800

ABC LARGE INDUSTRIY COMPANY
2010 PRELIMINARY REPORT

THE OPERABLE FACILITY HAS A SERVICE LIFE OF 27.8 YEARS
AND THE DOLLAR AVERAGE REMAINING LIFE IS 1.1 YEARS THE
ESTIMATED INTEREST RATE FOR AN INVESTMENT IN THIS TYPE OF
PLANT IS 8.6%. NORMALLY, A PLANT IN THIS RANGE OF INVEST-
MENT WOULD BE LOCATED ON A SITE VALUED AT \$ 8,110,000.

TYPE VALUE	VALUATION SUMMARY	
	VALUE	CONSIDERATION
REPLACEMENT	114,001,900	
PHYSICAL	39,900,600	74,101,300
FUNCTIONAL	21,733,500	18,167,100
LOC & EXT OBSO	17,389,600	4,343,900

THE PERSONAL PROPERTY INDEXES FOR THIS PLANT ARE:

CLASSIFICATION	I	B	F
1. AUTOS & TRUCKS	2.3600	1,000.0000	.4300
2. FF&E	.2500	1,000.0000	.4850
3. COMPUTERS	.1500	1,000.0000	.1430
4. SUPPLIES & PARTS	1.2000	.7500	.7500
5. MOB MACH/TOOLS	1.1500	.2500	.6000
6. INVENTORY	15.5000	1,000.0000	1.0000
PROCESS UNITS	20.0000	20.0000	.0000
OVERALL PLANT FACTORS 123-999		1.0000	1.1020
			.8000

DOCUMENT 9G

OIL LSE Sample #1-Smaller

MAP111
10/06/10 13.55

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DNCF TECHNIQUE

PAGE 1

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777011 WELL: PRIMARY PRODUCT: OIL APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999 COUNTY: 777
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 COMMENT: SAMPLE OIL LSE #1-SML
LEASE NAME: A E SMITH MODIFICATION USER: CHAR

HISTORICAL PRODUCTION:

DATE OF FIRST PRODUCTION: 41/10/01

-----RAILROAD COMMISSION PRODUCTION-----						
DATE	OIL (BBL)	GAS (MCF)	WATER (E)-B/D	%WC-WT	FLOW	LIFT WELLS
PRIOR	1123821		162			
1999	16133				6	6
2000	14603				6	6
2001	13668				6	6
2002	10161				6	6
2003	9016				5	5
2004	7720				5	5
2005	8922				5	5
2006	9071				5	5
2007	11892				5	5
2008	13024				5	5
JAN	949				5	5
FEB	673				5	5
MAR	1115				5	5
APR	1063				5	5
MAY	1003				5	5
JUN	936				5	5
JUL	841				6	6
AUG	577				6	6
SEP	791				6	6
OCT	924				7	7
NOV	855				7	7
DEC	1400				7	7
2009	11127				7	7
TOTAL	1249158		162			

PROJECTION PARAMETERS:

PROJECTION DATE: 11/01/01 LIMIT DATE: 00/00/00
ANNUAL OIL PRODUCTION: 11127 OIL RESERVE LIMIT:
ANNUAL GAS PRODUCTION: GAS RESERVE LIMIT:
NUMBER OF PRODUCING WELLS: 7 NUMBER OF INJECTION WELLS: 1

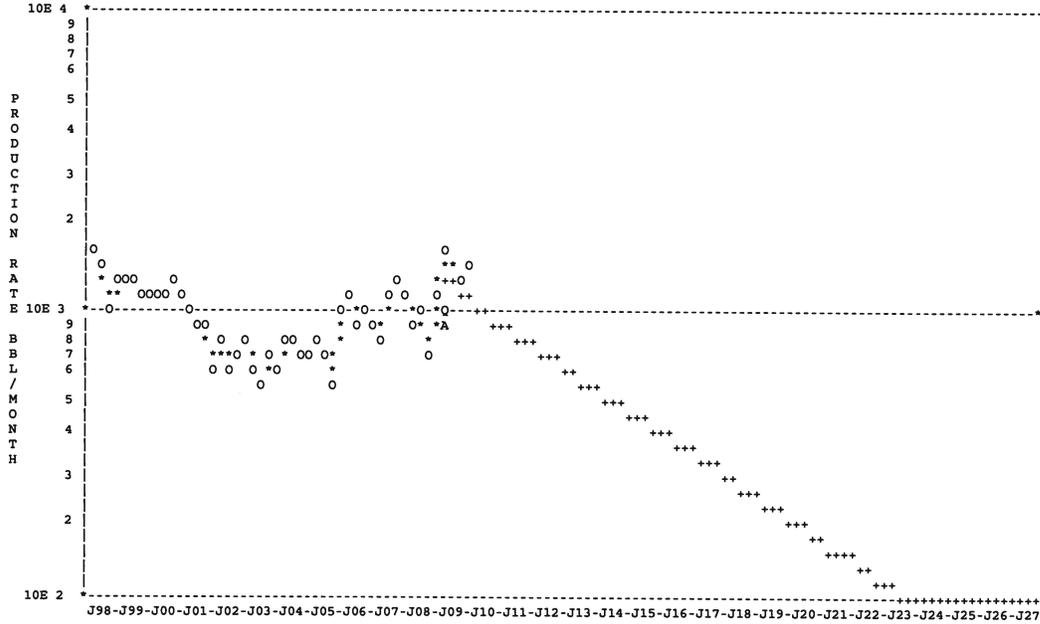
DECLINE PARAMETERS:

-----CALCULATED PARAMETERS-----	-----APPRAISER PARAMETERS-----
OIL GAS	P START-RATE DECL-% N-FACT MOS
DATE: 07/07/01 07/07/01	O 45.0 25.00 12
DAILY-A: 30.5	B 15.00
DECL-%: 35.53 35.53	
N-FACT:	

SECONDARY PRODUCT RATIO: SECONDARY PRODUCT RATIO:

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777011 WELL: PRIMARY PRODUCT: OIL APPRAISAL AS OF: 10/01/01
FIELD (RES): 99999 999 COUNTY: 777 MODIFICATION DATE:
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION TIME:
LEASE NAME: A E SMITH COMMENT: SAMPLE OIL LSE #1-SML MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --			CALC DECLINE: OIL GAS			-- 2010 MONTHLY PRODUCTION --					
PRIOR	1123821	162		MGN	OIL(BBL)	GAS(MCF)	WLS	DATE:	07/07/01	07/07/01	MON	OIL(BBL)	GAS(MCF)	WLS	
1999	16133		6	JAN	949		5	DAILY-A:	30.5		JAN	1544		7	
2000	14603		6	FEB	673		5	DECL-%:	35.53	35.53	FEB	1484		7	
2001	13668		6	MAR	1115		5	N-FACT:			MAR	1478		7	
2002	10161		6	APR	1063		5	----- APPRAISER DECLINE -----			APR	1296		7	
2003	9016		5	MAY	1003		5	P	START-RATE DECL-%	N-FACT	MOS	MAY	1326		7
2004	7720		5	JUN	936		5	O	45.0	25.00	12	JUN	1227		7
2005	8922		5	JUL	841		6	B		15.00		JUL	1267		7
2006	9071		5	AUG	577		6					AUG	1268		7
2007	11892		5	SEP	791		6					SEP	1352		7
2008	13024		5	OCT	924		7					OCT	1440		7
2009	11127		7	NOV	855		7					NOV			7
2010	13682			DEC	1400		7					DEC			7



MAP111
10/06/10 13.55

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DDCF TECHNIQUE

PAGE 4

CLIENT: 777 SAMPLE COUNTY APPR DIST

RRC: 99 777011 WELL:

PRIMARY PRODUCT: OIL

APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999

COUNTY: 777

MODIFICATION DATE:

IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3

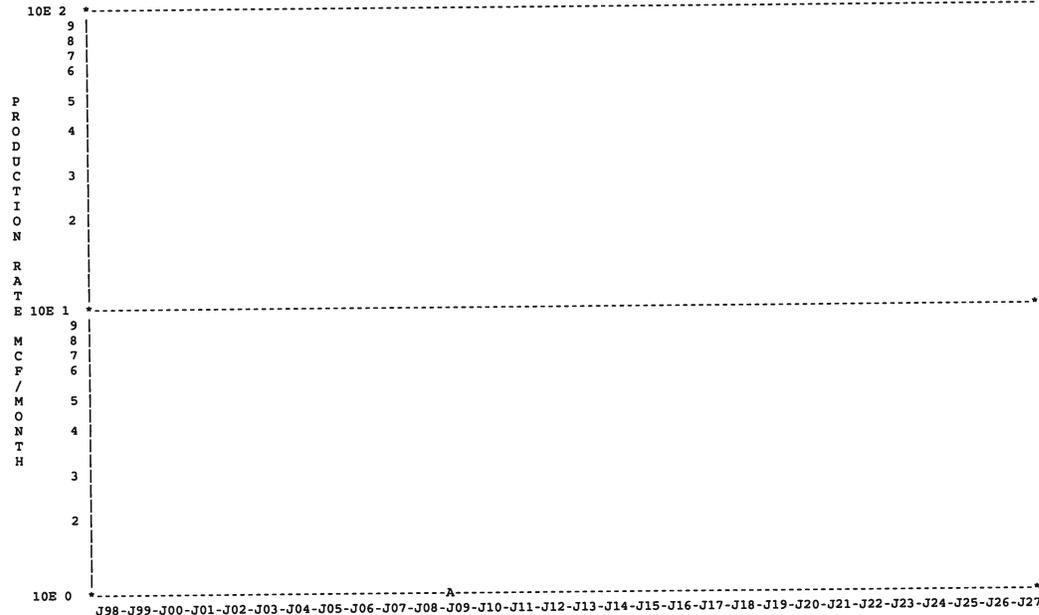
MODIFICATION TIME:

LEASE NAME: A E SMITH

COMMENT: SAMPLE OIL LSE #1-SML

MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	MON	OIL(BBL)	GAS(MCF)	WLS	CALC DECLINE:	OIL	GAS	MON	OIL(BBL)	GAS(MCF)	WLS
PRIOR	1123821	162		JAN	949			DATE:	07/07/01	07/07/01	JAN	1544		
1999	16133		6	FEB	673			DAILY-A:	30.5		FEB	1484		7
2000	14603		6	MAR	1115			DECL-%:	35.53	35.53	MAR	1478		7
2001	13668		6	APR	1063			N-FACT:			APR	1296		7
2002	10161		6	MAY	1003			----- APPRAISER DECLINE -----			MAY	1326		7
2003	9016		5	JUN	936			P START-RATE DECL-% N-FACT MOS	45.0	25.00	JUN	1227		7
2004	7720		5	JUL	841			O	15.00		JUL	1267		7
2005	8922		5	AUG	577			B			AUG	1268		7
2006	9071		5	SEP	791						SEP	1352		7
2007	11892		5	OCT	924						OCT	1440		7
2008	13024		7	NOV	855						NOV			
2009	11127		7	DEC	1400						DEC			
2010	13682													



DOCUMENT 9H

OIL LSE Sample #2-Larger

MAP111
10/06/10 13.55

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DDCF TECHNIQUE

PAGE 1

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777002 WELL: PRIMARY PRODUCT: OIL

APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3
LEASE NAME: HUGH KELKER

COUNTY: 777
COMMENT: OIL SAMPLE #2 --LG

MODIFICATION DATE:
MODIFICATION TIME:
MODIFICATION USER: CHAR

HISTORICAL PRODUCTION:

DATE OF FIRST PRODUCTION: 48/06/01

DATE	RAILROAD COMMISSION PRODUCTION		WATER (E)-B/D	%WC-WT	FLOW	LIFT	WELLS
	OIL (BBL)	GAS (MCF)					
PRIOR	16008540	3803197					
1999	46797	24076	94965	67	1	4	5
2000	32629	12793	77798	70	1	5	6
2001	31256	13091	33968	52	1	5	6
2002	28777	12535	31046	52	1	5	6
2003	26339	12354	24472	48	1	5	6
2004	27390	13510	31046	53	1	5	6
2005	28852	13754	33238	54	1	5	6
2006	29559	12400	23741	45	1	5	6
2007	20790	11571	1461	7	1	5	6
2008	22477	11550	2557	10	1	5	6
JAN	1694	869			1	5	6
FEB	1541	861			1	5	6
MAR	1566	809			1	5	6
APR	1504	931			1	5	6
MAY	2439	1565			1	5	6
JUN	1875	1169	3	1	1	5	6
JUL	1815	972	8	1	1	5	6
AUG	1932	1214			1	5	6
SEP	1999	740	69	2	1	5	6
OCT	2133	668	13	1	1	5	6
NOV	2446	1210			1	5	6
DEC	3162	1751			1	5	6
2009	24106	12759	33968	58	1	5	6
TOTAL	16327512	3953590					

PROJECTION PARAMETERS:

PROJECTION DATE: 11/01/01 LIMIT DATE: 00/00/00
ANNUAL OIL PRODUCTION: 24106 OIL RESERVE LIMIT:
ANNUAL GAS PRODUCTION: 12759 GAS RESERVE LIMIT:
NUMBER OF PRODUCING WELLS: 6 NUMBER OF INJECTION WELLS:

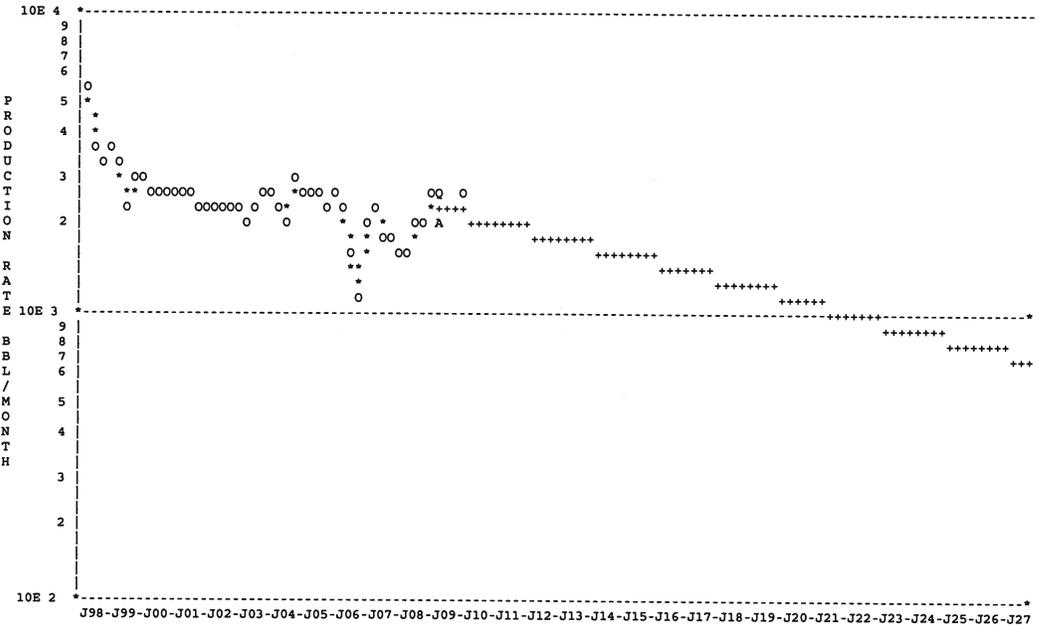
DECLINE PARAMETERS:

---CALCULATED PARAMETERS---		---APPRaiser PARAMETERS---	
DATE	OIL GAS	P	START-RATE DECL-% N-FACT MOS
DATE:	98/01/01 98/01/01	0	75.0 6.00
DAILY-A:	66.0 34.9		
DECL-%:	6.06 6.06		
N-FACT:			

SECONDARY PRODUCT RATIO: 529 SECONDARY PRODUCT RATIO:

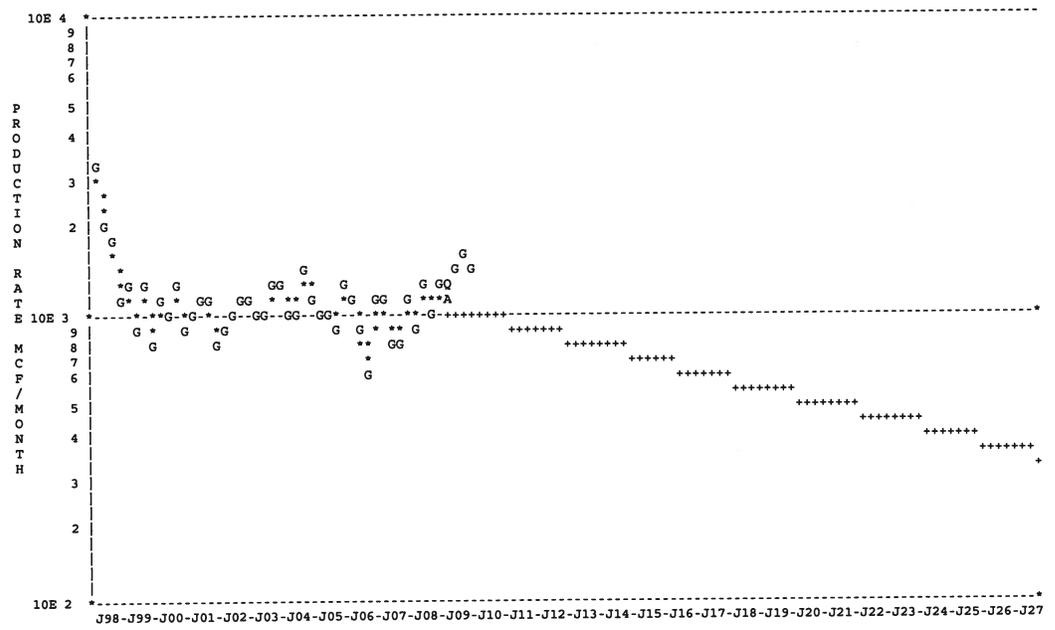
CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777002 WELL: PRIMARY PRODUCT: OIL APPRAISAL AS OF: 10/01/01
FIELD (RES): 99999 999 COUNTY: 777 MODIFICATION DATE:
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION TIME:
LEASE NAME: HUGH KELKER COMMENT: OIL SAMPLE #2 --LG MODIFICATION USER: CHAR

DATE	OIL (BBL)	GAS (MCF)	WLS	-- 2009 MONTHLY PRODUCTION --			CALC DECLINE: OIL GAS			-- 2010 MONTHLY PRODUCTION --				
PRIOR	16008540	3803197		MON	OIL (BBL)	GAS (MCF)	WLS	DATE:	98/01/01	98/01/01	MON	OIL (BBL)	GAS (MCF)	WLS
1999	46797	24076	5	JAN	1694	869	6	DAILY-A:	66.0	34.9	JAN	2829	1655	6
2000	32629	12793	6	FEB	1541	861	6	DECL-%:	6.06	6.06	FEB	2189	1328	6
2001	31256	13091	6	MAR	1566	809	6	N-FACT:			MAR	2309	787	6
2002	28777	12535	6	APR	1504	931	6	----- APPRAISER DECLINE -----			APR	2623	1438	6
2003	26339	12354	6	MAY	2439	1565	6	P START-RATE DECL-% N-FACT MOS			MAY	2364	1359	6
2004	27390	13510	6	JUN	1875	1169	6	O	75.0	6.00	JUN	2114	1269	6
2005	28852	13754	6	JUL	1815	972	6				JUL	2271	1723	6
2006	29559	12400	6	AUG	1932	1214	6				AUG	2336	1439	6
2007	20790	11571	6	SEP	1999	740	6				SEP	2120	1495	6
2008	22477	11550	6	OCT	2133	668	6				OCT	2539	1403	6
2009	24106	12759	6	NOV	2446	1210	6				NOV			
2010	23694	13896		DEC	3162	1751	6				DEC			



CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777002 WELL: PRIMARY PRODUCT: OIL APPRAISAL AS OF: 10/01/01
FIELD (RES): 99999 999 COUNTY: 777
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3
LEASE NAME: HUGH KELKER COMMENT: OIL SAMPLE #2 --LG MODIFICATION DATE:
MODIFICATION TIME:
MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --	CALC DECLINE:	OIL	GAS	-- 2010 MONTHLY PRODUCTION --
PRIOR	16008540	3803197	5	MON OIL(BBL)	DATE:	98/01/01	98/01/01	MON OIL(BBL)
1999	46797	24076	5	JAN 1694	DAILY-A:	66.0	34.9	JAN 2829
2000	32629	12793	6	FEB 1541	DECL-%:	6.06	6.06	FEB 2189
2001	31256	13091	6	MAR 1566	N-FACT:			MAR 2309
2002	28777	12535	6	APR 1504	----- APPRAISER DECLINE -----			APR 2623
2003	26339	12354	6	MAY 2439	P START-RATE DECL-% N-FACT MOS			MAY 2364
2004	27390	13510	6	JUN 1875	O 75.0 6.00			JUN 2114
2005	28852	13754	6	JUL 1815				JUL 2271
2006	29559	12400	6	AUG 1932				AUG 2336
2007	20790	11571	6	SEP 1999				SEP 2120
2008	22477	11550	6	OCT 2133				OCT 2539
2009	24106	12759	6	NOV 2446				NOV 1403
2010	23694	13896	6	DEC 3162				DEC 1403



DOCUMENT 9I

GAS LSE Sample #1-Smaller

MAP111
10/06/10 13.53

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DDCF TECHNIQUE

PAGE 1

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777004 WELL: PRIMARY PRODUCT: GAS

APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3
LEASE NAME: LAZY LINDA

COUNTY: 777
COMMENT: SAMPLE GAS LSE-SML

MODIFICATION DATE:
MODIFICATION TIME:
MODIFICATION USER: CHAR

HISTORICAL PRODUCTION:

DATE OF FIRST PRODUCTION: 86/12/01

-----RAILROAD COMMISSION PRODUCTION-----							
DATE	OIL (BBL)	GAS (MCF)	WATER (B/D)	FTP	FLOW	LIFT	WELLS
PRIOR	98202	14147992					
1999	1476	378102	12	900	1		1
2000	6717	1139201	30	950	1		1
2001	6618	1218292	30	550	1		1
2002	6678	1138126	40	380	1		1
2003	5675	935663	29	252	1		1
2004	4269	795303	51	240	1		1
2005	2876	601597	40	250	1		1
2006	2231	598200	56	100	1		1
2007	1349	477221		140	1		1
2008	1223	472678	37	80	1		1
JAN	22	29304			1		1
FEB	197	36798			1		1
MAR	156	38188			1		1
APR	292	39689			1		1
MAY	84	40934			1		1
JUN	167	36969			1		1
JUL	162	42031			1		1
AUG	134	29926			1		1
SEP	90	10870			1		1
OCT							
NOV	63	12018	13	60	1		1
DEC	228	47049			1		1
2009	1595	363776	13	60	1		1
TOTAL	138909	22266151					

PROJECTION PARAMETERS:

PROJECTION DATE: 11/01/01 LIMIT DATE: 00/00/00
ANNUAL OIL PRODUCTION: 1595 OIL RESERVE LIMIT:
ANNUAL GAS PRODUCTION: 363776 GAS RESERVE LIMIT: 1750000
NUMBER OF PRODUCING WELLS: 1 NUMBER OF INJECTION WELLS:

DECLINE PARAMETERS:

-----CALCULATED PARAMETERS-----			-----APPRAISER PARAMETERS-----		
	OIL	GAS	P	START-RATE	DECL-% N-FACT
DATE:	00/01/01	00/01/01	G	1250.0	15.00
DAILY-A:	4.8	1086.5			
DECL-%:	14.07	14.07			
N-FACT:					

SECONDARY PRODUCT RATIO: 4 SECONDARY PRODUCT RATIO:

MAP111
10/06/10 13.53

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DMCF TECHNIQUE

PAGE 2

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777004 WELL: PRIMARY PRODUCT: GAS APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999 COUNTY: 777 MODIFICATION DATE:
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION TIME:
LEASE NAME: LAZY LINDA COMMENT: SAMPLE GAS LSE-SML MODIFICATION USER: CHAR

ECONOMIC PARAMETERS:	PRODUCING WELLS:	1	BASE DISCOUNT RATE:	1.1300
OIL PRICE:	INJECTION WELLS:		AD VALOREM TAX BURDEN:	2.00
OIL GRAVITY:	DEPTH:	11000	ECONOMIC LIFE:	7
OIL GRAVITY ADJUSTMENT:	OPERATING COST (\$/WELL):	20285	P-TO-I (7/8-1/8):	3.5 3.5
GAS PRICE:	*** SECTION 22.27 RESTRICTION ***		PAYOUT (7/8-1/8):	3.8 3.8
GAS PRICE PARITY:	EQUIPMENT COST (\$/WELL):	7882	R/P RATIO (OIL-GAS):	4.7 4.5

CASH FLOW ANALYSIS:

START DATE	---PRODUCTION---		-----PRODUCT PRICES-----				-7/8 REVENUE(M\$)-		---OP COST(M\$)---		--UNDISC INCOME--		---DISCOUNTED INCOME---	
	OIL (BBL)	GAS (MCF)	OIL	NET	GAS	NET	OIL	GAS	DIRECT	CAP EXP	7/8(M\$)	1/8(M\$)	7/8(\$)	1/8(\$)
10/01/01	1625	421127	39.75	37.92	6.04	5.59	54	2060	20		2093	302	1952171	281584
11/01/01	1396	357998	45.97	43.86	6.59	6.10	54	1911	19		1945	281	1577245	227553
12/01/01	1200	304332	57.16	54.53	7.47	6.91	57	1840	19		1878	271	1324229	191118
13/01/01	1035	259364	74.55	71.12	8.24	7.62	64	1729	20		1773	256	1087387	157113
14/01/01	888	219831	84.49	80.60	9.34	8.64	63	1662	21		1704	246	908352	131352
15/01/01	762	186877	94.43	90.09	10.44	9.66	60	1580	21		1618	234	750219	108596
16/01/01	656	158864	104.37	99.57	10.92	10.10	57	1404	22		1439	209	580130	84150

7562	1908393	<-----	SUB-TOTAL	----->	409	12185	143			12451	1799	8179733	1181466	
7562	1908393	<-----	TOTAL	----->	409	12185	143			12451	1799	8179733	1181466	
												8	2763	
													8182496	1181466
													7364247	1063319
													7424498	1071908
													7364247	1063319

	IN PLACE	DAILY AVG
7/8 \$/BBL:	34.69	54658
7/8 \$/MCF:	4.27	6523
7/8 \$/BOE:	28.37	43340

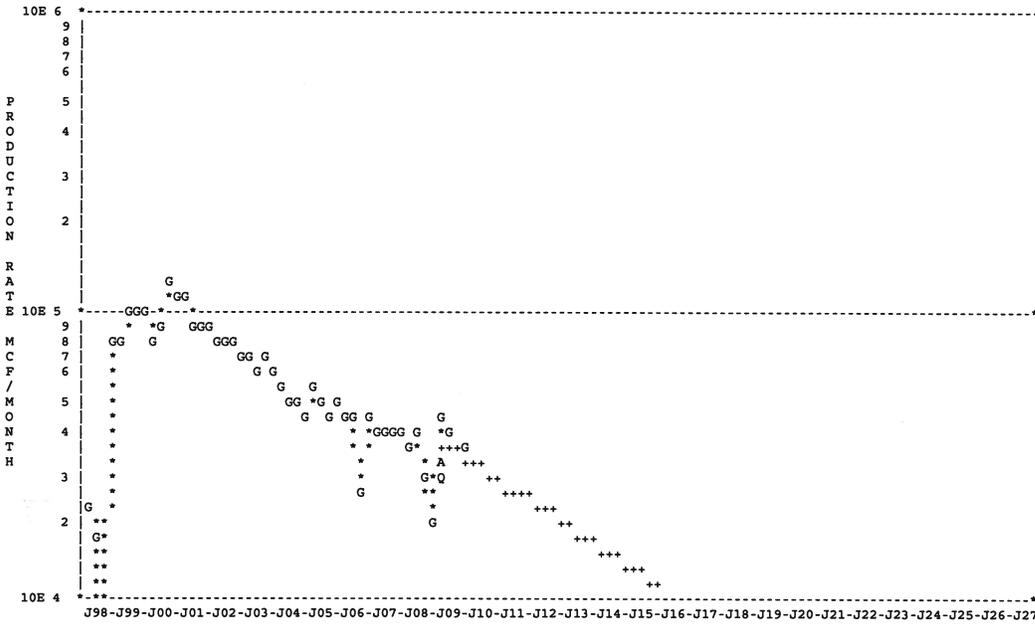
DIVISION ORDER TOTAL WORKING INTEREST & VALUE: .825000 6938920
*** SECTION 22.27 RESTRICTION ***

JURISDICTIONS: SAMPLE COUNTY 1.0000
SAMPLE ISD 1.0000

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777004 WELL: PRIMARY PRODUCT: GAS APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999 COUNTY: 777
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION DATE:
LEASE NAME: LAZY LINDA COMMENT: SAMPLE GAS LSE-SML MODIFICATION TIME:
MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --			CALC DECLINE: OIL GAS			-- 2010 MONTHLY PRODUCTION --				
PRIOR	98202	14147992		MON	OIL(BBL)	GAS(MCF)	WLS	DATE:	00/01/01	00/01/01	MON	OIL(BBL)	GAS(MCF)	WLS
1999	1476	378102	1	JAN	22	29304	1	DAILY-A:	4.8	1086.5	JAN	227	46713	1
2000	6717	1139201	1	FEB	197	36798	1	DECL-%:	14.07	14.07	FEB	145	39738	1
2001	6618	1218292	1	MAR	156	38188	1	N-FACT:			MAR	32	42709	1
2002	6678	1138126	1	APR	292	39689	1	----- APPRAISER DECLINE -----			APR	167	40399	1
2003	5675	935663	1	MAY	84	40934	1	P START-RATE DECL-% N-FACT MOS			MAY	78	37741	1
2004	4269	795303	1	JUN	167	36969	1	G	1250.0	15.00	JUN	159	40099	1
2005	2876	601597	1	JUL	162	42031	1				JUL	83	37813	1
2006	2231	598200	1	AUG	134	29926	1				AUG	141	37367	1
2007	1349	477221	1	SEP	90	10870	1				SEP	98	35619	1
2008	1223	472678	1	OCT							OCT	125	35437	1
2009	1595	363776	1	NOV	63	12018	1				NOV			
2010	1255	393635	1	DEC	228	47049	1				DEC			



CLIENT: 777 SAMPLE COUNTY APPR DIST

RRC: 99 777004 WELL:

PRIMARY PRODUCT: GAS

APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999

COUNTY: 777

MODIFICATION DATE:

IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3

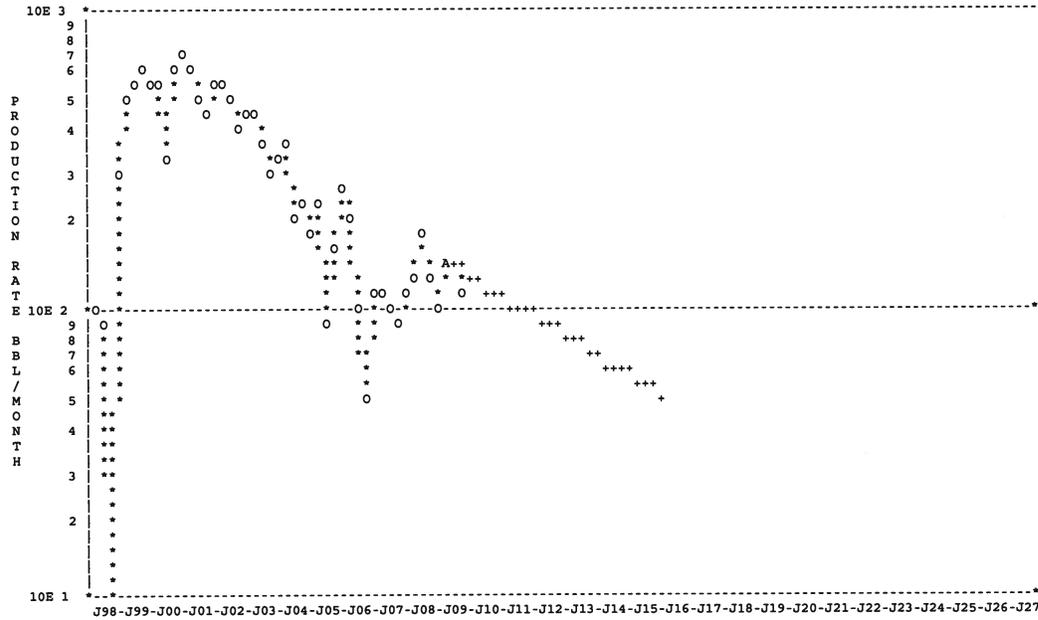
COMMENT: SAMPLE GAS LSE-SML

MODIFICATION TIME:

LEASE NAME: LAZY LINDA

MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --	CALC DECLINE:	OIL	GAS	-- 2010 MONTHLY PRODUCTION --
PRIOR	98202	14147992		MON OIL(BBL) GAS(MCF) WLS	DATE:	00/01/01	00/01/01	MON OIL(BBL) GAS(MCF) WLS
1999	1476	378102	1	JAN 22 29304 1	DAILY-A:	4.8	1086.5	JAN 227 46713 1
2000	6717	1139201	1	FEB 197 36798 1	DECL-%:	14.07	14.07	FEB 145 39738 1
2001	6618	1218292	1	MAR 156 38188 1	N-FACT:			MAR 32 42709 1
2002	6678	1138126	1	APR 292 39689 1	----- APPRAISER DECLINE -----			APR 167 40399 1
2003	5675	935663	1	MAY 84 40934 1	P START-RATE DECL-% N-FACT MOS			MAY 78 37741 1
2004	4269	795303	1	JUN 167 36969 1	G 1250.0 15.00			JUN 159 40099 1
2005	2876	601597	1	JUL 162 42031 1				JUL 83 37813 1
2006	2231	598200	1	AUG 134 29926 1				AUG 141 37367 1
2007	1349	477221	1	SEP 90 10870 1				SEP 98 35619 1
2008	1223	472678	1	OCT				OCT 125 35437 1
2009	1595	363776	1	NOV 63 12018 1				NOV
2010	1255	393635	1	DEC 228 47049 1				DEC



DOCUMENT 9J

GAS LSE Sample #2-Larger

MAP111
10/06/10 13.55

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DDCF TECHNIQUE

PAGE 1

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777003 WELL: PRIMARY PRODUCT: GAS
FIELD (RES): 99999 999 COUNTY: 777
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3
LEASE NAME: FLYING ARROW COMMENT: SAMPLE GAS LSE --LG

APPRAISAL AS OF: 10/01/01
MODIFICATION DATE:
MODIFICATION TIME:
MODIFICATION USER: CHAR

HISTORICAL PRODUCTION:

DATE OF FIRST PRODUCTION: 86/06/01

DATE	RAILROAD COMMISSION PRODUCTION		WATER (B/D)	FTP	FLOW	LIFT	WELLS
	OIL (BBL)	GAS (MCF)					
PRIOR	253	33236764					
1999		1599264	23	322	1		1
2000	2	1380913	28	288	1		1
2001		1201564	39	306	1		1
2002		758541	14	263	1		1
2003		823634	14	300	1		1
2004	4	591383	11	300	1		1
2005		280666	2	300	1		1
2006		192861	2	300	1		1
2007		183998	3	300	1		1
2008		177500	1	320	1		1
JAN		14132			1		1
FEB		15285			1		1
MAR		14972			1		1
APR		15605			1		1
MAY		12575	3	830	1		1
JUN		11876			1		1
JUL		12207			1		1
AUG		12153			1		1
SEP		10424			1		1
OCT		12252			1		1
NOV		11985			1		1
DEC		11254			1		1
2009		154720	3	830	1		1
TOTAL	259	40581808					

PROJECTION PARAMETERS:

PROJECTION DATE: 11/01/01 LIMIT DATE: 00/00/00
ANNUAL OIL PRODUCTION: OIL RESERVE LIMIT:
ANNUAL GAS PRODUCTION: 154720 GAS RESERVE LIMIT:
NUMBER OF PRODUCING WELLS: 1 NUMBER OF INJECTION WELLS:

DECLINE PARAMETERS:

---CALCULATED PARAMETERS---		-----APPRAISER PARAMETERS-----	
	OIL	GAS	P START-RATE DECL-% N-FACT MOS
DATE:	98/01/01	98/01/01	G 400.0 15.00
DAILY-A:		423.6	
DECL-%:	23.39	23.39	
N-FACT:			

SECONDARY PRODUCT RATIO: SECONDARY PRODUCT RATIO:

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777003 WELL: PRIMARY PRODUCT: GAS APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999 COUNTY: 777 MODIFICATION DATE:
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION TIME:
LEASE NAME: FLYING ARROW COMMENT: SAMPLE GAS LSE --LG MODIFICATION USER: CHAR

ECONOMIC PARAMETERS: PRODUCING WELLS: 1 BASE DISCOUNT RATE: 1.1300
OIL PRICE: 96.27 INJECTION WELLS: AD VALOREM TAX BURDEN: 2.00
OIL GRAVITY: 40.0 DEPTH: 15200 ECONOMIC LIFE: 24
OIL GRAVITY ADJUSTMENT: OPERATING COST (\$/WELL): 13082 P-TO-I (7/8-1/8): 4.1 4.1
GAS PRICE: 7.10 *** SECTION 22.27 RESTRICTION *** PAYOUT (7/8-1/8): 4.5 4.6
GAS PRICE PARITY: 1.00 EQUIPMENT COST (\$/WELL): 6547 R/P RATIO (OIL-GAS): 6.5

CASH FLOW ANALYSIS:

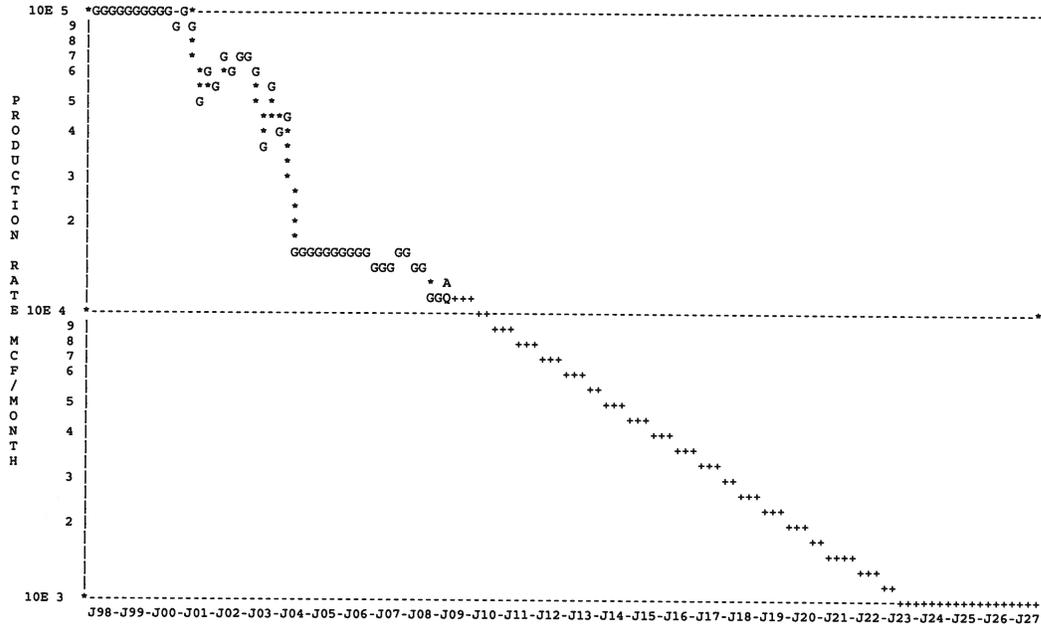
START DATE	---PRODUCTION---		-----PRODUCT PRICES-----		-7/8 REVENUE (M\$)-		---OP COST (M\$)---		--UNDISC INCOME--	--DISCOUNTED INCOME--		
	OIL (BBL)	GAS (MCF)	OIL NET	GAS NET	OIL	GAS	DIRECT	CAP EXP	7/8 (M\$)	1/8 (M\$)	7/8 (\$)	1/8 (\$)
10/01/01	134761	36.00	34.34	4.29	3.97		468	13	455	67	424331	62361
11/01/01	114559	41.63	39.72	4.68	4.33		434	12	422	62	341870	50278
12/01/01	97385	51.76	49.38	5.30	4.90		418	12	405	60	285646	42058
13/01/01	82996	67.51	64.40	5.85	5.41		393	13	380	56	232890	34413
14/01/01	70346	76.51	72.99	6.63	6.13		377	13	364	54	194006	28739
15/01/01	59802	85.51	81.58	7.41	6.85		358	14	345	51	159761	23740
16/01/01	50836	94.51	90.16	7.75	7.17		319	14	305	46	122829	18368
17/01/01	43324	103.96	99.18	7.96	7.36		279	15	264	40	92661	13973
18/01/01	36721	108.12	103.15	8.17	7.56		243	15	228	35	69436	10578
19/01/01	31217	111.36	106.24	8.37	7.74		211	16	196	30	51911	8006
20/01/01	26537	114.14	108.89	8.57	7.93		184	16	168	26	38744	6063
21/01/01	22614	116.42	111.06	8.76	8.10		160	17	144	23	28812	4589
22/01/01	19169	117.58	112.17	8.94	8.27		139	17	122	20	21209	3454
23/01/01	16296	118.76	113.30	9.12	8.44		120	18	103	17	15582	2606
24/01/01	13852	119.95	114.43	9.29	8.59		104	18	86	15	11341	1960
25/01/01	11805	121.15	115.58	9.45	8.74		90	19	72	13	8214	1478
26/01/01	10006	122.36	116.73	9.61	8.89		78	19	59	11	5847	1108
27/01/01	8505	123.58	117.90	9.76	9.03		67	20	47	10	4113	832
28/01/01	7232	124.82	119.08	9.90	9.16		58	20	38	8	2836	624
29/01/01	6163	126.07	120.27	10.04	9.29		50	21	29	7	1911	469
	864126						4552	322	4230	650	2113950	315697
	16657						139	90	49	20	2487	955
	880783						4691	412	4279	670	2116437	316652

EQUIPMENT ADJUSTMENT: 7 213
 VALUE AT BASE DISCOUNT RATE: 2116650 316652
 VALUE AT MAF ADJUSTMENT: 90/97 2053151 307152
 SECTION 23.175 VALUE: 1846443 275009
 TOTAL APPRAISED VALUE: 1846443 275009
 AVERAGE ANNUAL ROR: 19 19
 DIVISION ORDER TOTAL WORKING INTEREST & VALUE: .825000 1736440
 *** SECTION 22.27 RESTRICTION ***

JURISDICTIONS: SAMPLE COUNTY 1.0000
 SAMPLE ISD 1.0000

CLIENT: 777 SAMPLE COUNTY APPR DIST RRC: 99 777003 WELL: PRIMARY PRODUCT: GAS APPRAISAL AS OF: 10/01/01
FIELD (RES): 99999 999 COUNTY: 777 MODIFICATION DATE:
IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3 MODIFICATION TIME:
LEASE NAME: FLYING ARROW COMMENT: SAMPLE GAS LSE --LG MODIFICATION USER: CHAR

DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --	CALC DECLINE:	OIL	GAS	-- 2010 MONTHLY PRODUCTION --
PRIOR				MON OIL(BBL) GAS(MCF) WLS	DATE:	98/01/01	98/01/01	MON OIL(BBL) GAS(MCF) WLS
1999	253	33236764	1	JAN 14132 1	DAILY-A:	423.6		JAN 11602 1
2000	2	1380913	1	FEB 15285 1	DECL-%:	23.39	23.39	FEB 10651 1
2001		1201564	1	MAR 14972 1	N-FACT:			MAR 11644 1
2002		758541	1	APR 15605 1	----- APPRAISER DECLINE -----			APR 10865 1
2003		823634	1	MAY 12575 1	P START-RATE DECL-% N-FACT MOS			MAY 11379 1
2004	4	591383	1	JUN 11876 1	G 400.0 15.00			JUN 11028 1
2005		280666	1	JUL 12207 1				JUL 11516 1
2006		192861	1	AUG 12153 1				AUG 10856 1
2007		183998	1	SEP 10424 1				SEP 11283 1
2008		177500	1	OCT 12252 1				OCT 11193 1
2009		154720	1	NOV 11985 1				NOV
2010		112017	1	DEC 11254 1				DEC



MAP111
10/06/10 13.55

CAPITOL APPRAISAL GROUP, INC.
DETAILED MINERAL APPRAISAL
INCOME APPROACH: DDCF TECHNIQUE

PAGE 4

CLIENT: 777 SAMPLE COUNTY APPR DIST

RRC: 99 777003

WELL:

PRIMARY PRODUCT: GAS

APPRAISAL AS OF: 10/01/01

FIELD (RES): 99999 999

COUNTY: 777

MODIFICATION DATE:

IND OPERATOR: 999999 NOMINATOR NOT REQUIRED / SWR 3

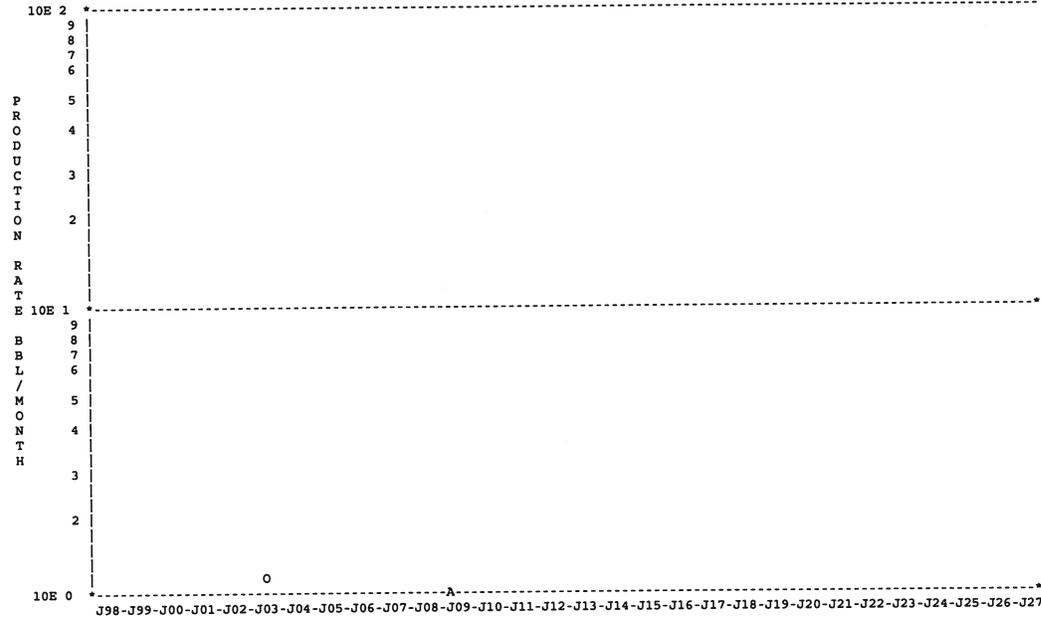
MODIFICATION TIME:

LEASE NAME: FLYING ARROW

COMMENT: SAMPLE GAS LSE --LG

MODIFICATION USER: CHAR

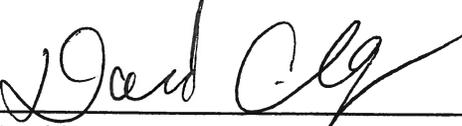
DATE	OIL(BBL)	GAS(MCF)	WLS	-- 2009 MONTHLY PRODUCTION --	CALC DECLINE:	OIL	GAS	-- 2010 MONTHLY PRODUCTION --
PRIOR	253	3226764	1	MON OIL(BBL) GAS(MCF) WLS	DATE:	98/01/01	98/01/01	MON OIL(BBL) GAS(MCF) WLS
1999		1599264	1	JAN 14132 1	DAILY-A:		423.6	JAN 11602 1
2000	2	1380913	1	FEB 15285 1	DECL-%:	23.39	23.39	FEB 10651 1
2001		1201564	1	MAR 14972 1	N-FACT:			MAR 11644 1
2002		758541	1	APR 15605 1	----- APPRAISER DECLINE -----			APR 10865 1
2003		823634	1	MAY 12575 1	P START-RATE DECL-% N-FACT MOS			MAY 11379 1
2004	4	591383	1	JUN 11876 1	G 400.0 15.00			JUN 11028 1
2005		280666	1	JUL 12207 1				JUL 11516 1
2006		192861	1	AUG 12153 1				AUG 10856 1
2007		183998	1	SEP 10424 1				SEP 11283 1
2008		177500	1	OCT 12252 1				OCT 11193 1
2009		154720	1	NOV 11985 1				NOV
2010		112017	1	DEC 11254 1				DEC



**UPSHUR COUNTY APPRAISAL DISTRICT
RESOLUTION TO ADOPT
2015 and 2016 REAPPRAISAL PLAN**

Whereas, according to Section 25.1(c) and Section 6.05(i) of the *Texas Property Tax Code*, the Board of Directors of an Appraisal District *shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18(c) and Section 6.05(i) shall hold a public hearing to consider the proposed plan.*

Therefore, on this the 19th day of August, 2014, the Board of Directors of Upshur County Appraisal District does approve and adopt the attached reappraisal plan for years 2015 and 2016.



David Clay, Chairman



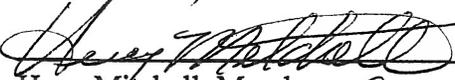
Sherron Laminack, Secretary



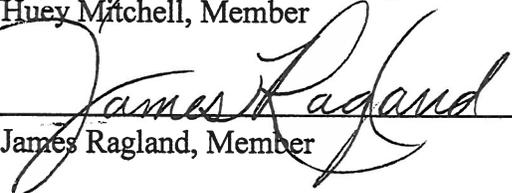
Peter J Sullivan, Member



Jared Maddox, Member



Huey Mitchell, Member



James Ragland, Member

