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COAL RESERVES SHOULD BE THE SUBJECT OF EQUITABLE AD VALOREM TAXATION

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There has been a good deal of controversy in the State press and on national television concerning coal ownership and production in the nation in general and West Virginia in particular. A portion of this controversy centers around the question of whether coal property and coal reserves are being assessed in the same proportion to their current market value as are surface properties of similar current market value. In the United States District Court for the Southern District of West Virginia, a civil rights action has been filed against the State Tax Commissioner and four county assessors, alleging that coal properties in the four subject counties are assessed far lower in relation to their current market value than are surface properties and that this unequal assessment constitutes unequal protection in the administration of the State's property tax law. In the West Virginia Supreme Court of Appeals, a mandamus petition has been filed which prays that the court order the State Tax Commissioner and the Fayette County assessor to show cause why each should not be compelled to bring about a system of coal appraisal and assessment to put coal properties on an equal footing with surface properties of similar current market value.

These two cases parallel a national pattern which, for all practical purposes, began with the landmark case of *Serrano v. Priest.*[1] The petitioners in that case attacked the financing of public education in California by the property tax on the grounds that the per-pupil revenue generated for education in wealthier school districts far exceeded the per-pupil revenue of poorer districts. Therefore, the quality of education depended directly on the market value of the real estate, that is, on the affluence of the residents.

In Texas, a federal court, in the case of *Rodriguez v. San Antonio Independent School District,*[2] held that the Texas system of financing public education by means of the property tax violated the fourteenth amendment of the United States Constitution. The

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[1]5 Cal. 3d 584, 487 P.2d 1241, 96 Cal. Rptr. 601 (1971).

[2]337 F. Supp. 280 (W.D. Tex. 1971), *rev'd* 411 U.S. 1 (1973). *See* Comment, 76 W. VA. L. REV. 72 (1973).

fact situation was similar to that in the *Serrano* case. Even though the United States Supreme Court later reversed and remanded the *Rodriquez* case, these cases set the basic nationwide pattern for the attack on inequality of assessment, as well as the inequality of school revenue.

The major decision of the West Virginia Supreme Court of Appeals in the area of equality of assessment is *In re Kanawha Valley Bank.*[3] In that case, the Kanawha County assessor was assessing the shares of stock of the Kanawha Valley Bank at one hundred percent of their current market value. The assessor admitted for the record that residential property in his county was assessed at no more than thirty-five percent of its current market value. Article X, § 1 of the West Virginia constitution reads in part as follows:

> "No one species of property from which a tax may be collected shall be taxed higher than any other species of property of equal value . . . ."

The court applied this constitutional provision to the fact situation and found the assessor's method to be unconstitutional.

It was during this time that the Legislature passed a bill authorizing the first statewide reappraisal of property. Under this provision, the State Tax Commissioner was to make or cause to be made an appraisal in each county of all non-utility real property and of all non-utility personal property,[4] which was to be based

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[3]144 W. Va. 346, 109 S.E.2d 649 (1959).

[4]W. VA. CODE ANN. § 18-9A-11 (1971 Replacement Volume), provides as follows:

> In conjunction with and as a result of the appraisal herein set forth the tax commissioner shall have the power, and it shall be his duty, to establish a permanent records system for each county in the State, consisting of:
>
> (1) Tax maps of the entire county drawn to scale or aerial maps, which maps shall indicate all property and lot lines, set forth dimensions or areas, indicate whether the land is improved, and identify the respective parcels or lots by a system of numbers or symbols and numbers, whereby the ownership of such parcels and lots can be ascertained by reference to the property record cards and property owner's index;
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> (2) Property records cards arranged geographically according to the location of property on the tax maps, which cards shall set forth the location and description thereof, the acreage or dimensions, description of improvements, if any, the owner's name, address and date of acquisition, the purchase price, if any, set forth in the deed of acquisition, the amount of tax stamps, if

upon "true and actual value."[5] The Tax Commissioner entered into contracts with various private appraisal and mapping firms to accomplish the statewide reappraisal program by the July 1, 1967, date specified by law. The duties of the Tax Commissioner in connection with the reappraisal program were completed, with respect to surface properties, by July 1, 1967. However, for in-place coal, the functions did not commence until July 1, 1971.

There are those who will allege that there is no fair and equitable way to place a value, for ad valorem tax purposes, upon coal that has not yet been produced. However, the West Virginia Code indicates that the Legislature considers coal and other mineral properties to be the type of property subject to annual assessment provided for by the general statute.[6] Speaking to the assessment of different estates, the Code reads in part as follows:

> When any person becomes the owner of the surface, and another or others become the owner of the coal, oil, gas, ore, limestone, fireclay, or other minerals or mineral substances in and under the same, or of the timber thereon, the assessor shall assess such representative estates, or any undivided interest therein, to the respective owners thereof, or to groups of same requesting such group assessment, at their true and actual value, according to the rule prescribed in this chapter. When any person or persons are, or become, the owner or owners of any undivided interest or interests in land, or in the surface, coal, oil, gas, ore, limestone, fireclay, timber or other estate or estates therein, the owner or owners of such undivided interest or interests shall have their land, or estate or interest or undivided interest in such land, or in such estate in land, entered on the land books of the county in which it or a part of it is situated, and cause himself to be charged with the taxes legally levied on such interest or undivided interest . . . .[7]

Since the Code requires the Tax Commissioner to make or cause to be made an assessment of all non-utility real estate,[8] and since

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any, on the deed, the assessed valuation, and the identifying number of symbol and number, shown on the tax map; and (3) Property owner(s) index consisting of an alphabetical listing of all property owners, setting forth brief descriptions of each parcel or lot owned and cross-indexed with property record cards and the tax map . . . .

[5] *Id.* § 11-3-1 (1966).

[6] *Id.*

[7] *Id.* § 11-4-9 (1966).

[8] *Id.* § 18-9A-11 (1971 Replacenent Volume).

the Code recognizes coal as an estate in land,[9] it is the duty of the Tax Commissioner to cause a systematic appraisal to be made of all coal located beneath the surface.

In early 1970, the State Tax Commissioner directed that a systematic program of valuing mineral reserves be started for all minerals in West Virginia, Because the United States Geological Survey, showing the location of coal seams by outcroppings and coredrillings, has proved a generally reliable tool over the years, not only to government but also to industry, it was decided that the appraisal program would best begin with coal properties.[10] The identification and quantification process for coal reserves is relatively simple on a small scale and is made difficult and time consuming only by the large geographical area to be processed.[11]

To recommend to each assessor a temporary method of assessing coal property in his county, the Tax Department, in early 1970, devised a weighted average value method for coal property appraisal. The system devised was quite simple and fairly unsophisticated. Taking the information contained in the United States Geological Survey as to seams, seam thickness, BTU content, and outcropping location, the Tax Department devised a weighted average value for an acre of coal in each of the State's forty-four "coal counties." Using only two variables—seam thickness and BTU content—a value-per-ton-per-seam was developed. Then, by taking the average seam thickness for each seam in each district, a

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[9]*Id.* § 11-4-9 (1966).

[10]Because comparatively little is known about oil and gas reserves, these properties are appraised by capitalizing the income of producing wells. W. VA. TAX COMM'R, W. VA. ASSESSOR'S MANUAL G-54 to G-56 (1971).

> The value of any given gas field cannot be accurately determined without a complete geological survey. Since the cost of such a survey is prohibitive for property tax purposes, the alternative, from the standpoint of accuracy and fair treatment of individual taxpayers, is to base the valuation of the property upon the income it produces, which is the basis used for other income-producing property. This is accomplished by the capitalization of annual income.

Id. at G-54.

[11]In fact, a recent study by the West Virginia Legislature concluded, based on information provided by the West Virginia Geological Survey, that an accurate survey of the State's four primary coal seams would take three years. The second part of such a study, covering other major seams, has been estimated as requiring up to seven more years to complete. Such a study was begun by the Geological Survey this year, and it has been suggested that the study's funding be increased so that the time period for its completion may be substantially shortened. SUBCOMM. ON COAL MINING, JOINT COMM. ON GOV'T AND FIN., W. VA. LEG. ch. 1, at 3-4 (1974).

tonnage-per-acre-per-seam was developed. Using an average of five cents-per-ton value, the future worth of an acre of coal property was calculated by combining the value-per-acre of each seam within the acre and dividing the total value by the number of seams in the tax district. This weighted average was to represent the appraised value of the coal property. The assessed value was to be the same equalization percentage that the assessor applied to the appraised value of surface property to obtain his assessment. This method relied heavily on each individual assessor's knowledge of the coal property in his county, since the Tax Department, at that time, was unable to supply any identifying material, such as subsurface tax maps or property record cards showing the owner and characteristics of each tract of property. This method also failed to supply to the assessor any information as to mined-out or abandoned acreage. Of course, such information is vital to an equitable assessment. This was information the assessor had to learn himself from the reports and contacts made with coal producers. The weighted average method was presented to the county assessors at the Tax Commissioner's annual meeting of county assessors held in June, 1971. This information was subsequently made an amendment to the *West Virginia Assessor's Manual.* The first possible tax year during which the weighted averages could have been used was the tax year 1972.

Beginning July 1, 1971, the Tax Department began a systematic program of mapping and identifying coal ownership. To value coal properties adequately, three tasks must be accomplished. First, the ownership of mineral property must be identified, including physically mapping ownership boundaries. Second, the amount of coal present on each parcel and tract (where no outcrop, the probable amount) must be quantified and indicated. Third, a method of valuation must be devised to include the many variables affecting coal value, *i.e.,* seam thickness, cover, accessibility to transportation, BTU content, ash content, sulfur content, and economic conditions, employing the quantification as a base.

To begin mineral ownership identification, present tax maps are used. These maps indicate surface ownership boundaries only and are in constant use for "normal" property appraisal. The surface maps do not, in any way, indicate the owner of the minerals for those properties where the surface ownership has been divided from the mineral ownership.

The Tax Department's mineral mapping program consists of the reconstructing of approximately ten thousand tax maps on a

scale of one inch equals four hundred feet to approximately six hundred and fifty tax maps on a scale of one inch equals two thousand feet. Then the Geological Survey maps are enlarged to the same two thousand foot scale. With the maps on the same scale, the property features can be matched and the coal outcroppings traced onto the property maps so that the surface boundary lines are imposed over the coal outcroppings.

The next step is sales and deed research, performed to determine the boundaries of mineral ownership, which may differ from surface lines because of the sale of undivided interests in coal-only or mineral-only property and the consolidation of contiguous tracts. Owners of more than ten thousand acres of coal, either as a separate interest or as a part of fee ownership, are given a special color code. Owners of smaller tracts are coded numerically. A mineral property record card (computer sheet style) is made for each mineral tract. Included on these cards is information from the West Virginia Department of Mines concerning mined-out areas. Owing to this feature, the Tax Department's proposed program provides more equitable treatment than the weighted average method, which makes no allowance for mined-out areas.

The second task, identification and quantification of coal by parcel, is accomplished by multiplying each seam's dimensions by the average seam's thickness as reported by the United States Geological Survey. A tons-per-acre figure can then be derived from the cubic measurement for each seam in each parcel. A method for performing the third task, valuation of quantified coal reserves, is now being formulated pursuant to a contract between the State Tax Department and Mr. Don Bondurant, a mining engineer on the staff of West Virginia University's Appalachian Center. Mr. Bondurant's basic theory, when stripped of complex mathematical equations and regression analysis, is stated in effect by the following example: Last year's coal production in Boone County was approximately fourteen million tons, and the assessor says that the prevailing royalty rate in his county is in the neighborhood of twenty-five cents per ton. If this is true, then the royalties paid for the coal in Boone County last year would approximate 3.5 million dollars. If one thinks of this royalty income as an investment in a risky industry, and capitalizes the investment at fifteen percent per year, the value of coal reserves in Boone County (non-produced) might be worth some 23.3 million dollars in future royalty payments. That is the simple part of the equation; the difficult part comes in assigning that total value among each and every owner of coal property in Boone County whose name appears on

the mineral map index. This cannot be done equitably merely by dividing each individual acreage into total county acreage. Therefore, Mr. Bondurant is devising a system of mathematical equations which relate many factors effecting potential value of coal in place, such as seam thickness, cover, accessibility to transportation, BTU content, ash content, sulphur content, economic conditions, size of parcel, environmental demands, and other factors.

Once the three tasks have been accomplished, the data can be key-punched, and programs can be written so that the entire state coal appraisal can be processed and printed by the State Computer Center in Charleston. This method will allow annual adjustments for fluctuations in the market value of coal, the royalty rate paid for coal leases, and the newly mined-out areas. Although many coal property owners fear the contrary, the so-called Shafer-Bondurant method which is now being processed may, in many cases, result in an equal or lower appraised value per acre of coal than does the weighted average method. This is so because of the inclusion of mined-out data and because of the application of many variables which may act to reduce an average acre appraisal price for coal.

There have been some suggestions that the property tax on coal be removed, with a severance tax of some sort substituted in its place. These suggestions appear to be based on the theory that such action would stimulate the growth of the State's coal industry.[12] However, as long as the taxation of all property, including minerals, remains a statutory duty, the West Virginia State Tax Department will continue to devise and refine methods to arrive at fair, reasonable, and equitable values. The appraisal of coal reserves is a very new science. Capitalization of production income and the weighted average methods are currently the only appraisal techniques employed in the United States. The Shafer-Bondurant system, now under development, should prove to be a new and strong innovation in valuing coal reserves for ad valorem tax purposes.

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[12] *Id.* ch. 12, at 3.

APPENDIX A

VALUATION OF COAL—1971 SUPPLEMENT TO THE WEST VIRGINIA ASSESSOR'S MANUAL

GOAL—To standardize and make uniform coal assessment procedures among the various coal counties of West Virginia.

OBJECTIVE—To attain systematic, defensible appraised value per acre of coal property which may be applied to a taxing district or county.

Coal is the accumulation of plant remains modified by chemical, biological and physical processes. The degree of modification which such deposits undergo will determine their quality or rank in the coalification process. An indication of a coal seam's rank in the coalification process is its heat potential as expressed in BTU content. Thus, the BTU content is one factor in this valuation method.

Another factor is seam thickness. As stated in "Coal Valuation" (page G-61), the thicker the seam the more valuable the seam. The highest quality coal is considered to be at least six feet thick and have a 15,000 BTU content.

A source for the location of the minable seams, the average BTU content per seam, the number of "coal acres" (i.e. the actual surface plane area) per district per seam and the average thickness per seam per district is the *West Virginia Geological Survey*.

Using a maximum value of 5¢ per ton for unmined or "in-place" coal, the first step in determining a value per ton is to assign equal weights to seam thickness and BTU content. That is, the number of BTU's per seam determines 50% of the 5¢ value and the thickness per seam per district determines the remaining 50% of the 5¢ value. By then assigning a rank percentage to each possible thickness and each possible BTU content that portion of 50% of the maximum 5¢ per ton value for each factor can be determined.

Figure 1

EXAMPLES OF RANK PERCENTAGES AND THEIR VALUES

12,000 BTU'S	40%	of 50% of 5¢	.010 Value
13,000 BTU'S	60%	of 50% of 5¢	.015 Value
14,000 BTU'S	80%	of 50% of 5¢	.020 Value
15,000 BTU'S	100%	of 50% of 5¢	.025 Value
1 Foot Thickness	0%	of 50% of 5¢	.000 Value
2 Feet Thickness	20%	of 50% of 5¢	.005 Value
4 Feet Thickness	60%	of 50% of 5¢	.015 Value
6 Feet Thickness	100%	of 50% of 5¢	.025 Value

Note: All thickness factors above six feet are considered to be 100%.

The value per ton is the summation of the BTU content value and the thickness value. For example, Alma Coal in Scott District, Boone County, is 3.0 feet thick ($.01 value) and has 14,500 BTU'S ($.0225 value) is worth $.0325 per ton ($.01 + $.0225).

A matrix can be constructed to include all the values per ton at a specific BTU content and thickness:

Figure 2

Value Per Ton Matrix

BTU'S in 000's / Thickness	12.0	12.5	13.0	13.5	14.0	14.5	15.0
1.0	.0100	.0125	.0150	.0175	.0200	.0225	.0250
1.5	.0125	.0150	.0175	.0200	.0225	.0250	.0275
2.0	.0150	.0175	.0200	.0225	.0250	.0275	.0300
2.5	.0175	.0200	.0225	.0250	.0275	.0300	.0325
3.0	.0200	.0225	.0250	.0275	.0300	.0325	.0350
3.5	.0225	.0250	.0275	.0300	.0325	.0350	.0375
4.0	.0250	.0275	.0300	.0325	.0350	.0375	.0400
4.5	.0275	.0300	.0325	.0350	.0375	.0400	.0425
5.0	.0300	.0325	.0350	.0375	.0400	.0425	.0450
5.5	.0325	.0350	.0375	.0400	.0425	.0450	.0475
6.0	.0350	.0375	.0400	.0425	.0450	.0475	.0500

There are assumed to be 1500 tons of coal per foot of the seam per acre. A foot acre of solid coal represents approximately 1800 tons; however, 1500 tons is used for appraisal purposes to take into account the loss caused by normal preparation and marketing.

Taking the value per ton for a seam from the "Value Per Ton Matrix" (Figure 2), and using the thickness of the seam in conjunction with 1500 tons per foot acre of coal, a value per coal acre can be derived. Reusing the previous coal seam example, the formula for a value per coal acre is:

Value per ton X Thickness X Tons per foot acre = per coal acre

.0325 X 3. X 1500 = $146.00

A matrix can be constructed to include all the values per coal acre at a specific BTU content and thickness:

Figure 3

Value Per Coal Acre Matrix

BTU'S in 000's Thickness	12.0	12.5	13.0	13.5	14.0	14.5	15.0
1.0	15	19	22	26	30	33	54
1.5	28	34	39	45	50	56	62
2.0	45	52	60	67	75	82	90
2.5	65	75	84	93	103	112	121
3.0	90	101	112	123	135	146	168
3.5	118	131	144	157	170	183	196
4.0	150	165	180	195	210	225	240
4.5	185	202	219	236	253	270	286
5.0	225	243	262	281	300	318	337
5.5	268	288	309	330	350	371	391
6.0	315	337	360	382	405	427	450
6.5							
7.0					472	498	
7.5							
8.0					540	570	
10.0					675		

The final step in this coal valuation method is to determine a value per acre in each taxing district. This value per acre is based upon the total amount of coal acres located within each taxing district, each seam's value per coal acre and number of coal acres for each seam located within each taxing district. The number of coal acres for each seam is divided by the total number of coal acres in the district. These quotients indicate what percentage of the total coal acres in the district each seam's coal acres represent.

For example, there are 127,008 total coal acres in Scott District and 37,396 coal acres of Alma Coal in Scott District. Therefore, of the total coal acres in Scott District, 30% (37,396 divided by 127,008) is in Alma Coal.

The percentage each seam contributes to the total number of coal acres is also the weight that each seam's value per coal acre contributes to the total value per acre in the taxing district. The weighted value per seam is each seam's percentage multiplied by that seam's value per coal acre. Continuing the example, Alma Coal is valued at $146.00 per coal acre in Scott District and this seam contains 30% of the total coal acres in the district; therefore, Alma Coal's weighted value is $43.80 (30% × $146.).

The weighted value per acre for the taxing district is the summation of these weighted seam values within each district. The following chart demonstrates this procedure:

Scott District, Boone County

Seam	Thickness in feet	BTU (000)	Ton Value	Acre Value	Coal Acres	%	Weighted Value
Alma	3.0	14.5	.0300	$146.	37,696	30	$43.80
Campbell Creek	3.0	14.5	.0300	$146.	9,856	18	$11.68
Coalburg	2.5	14.5	.0300	$112.	31,936	25	$28.00
Lower Kittanning	4.5	14.0	.0375	$253.	9,344	7	$17.71
Stockton-Lewiston	4.5	14.0	.0375	$253.	12,128	10	$25.30
Winifrede	2.5	14.5	.0300	$112.	26,048	21	$23.52
District Total					127,008	100%	$150.01
							Weighted Value Per Acre

Note: A seam having less than one percent of the total coal acres in a district is discounted completely.

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