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DEPARTMENT OF AGRICULTURAL ECONOMICS

# Kansas Oil Property Taxation in Relation to Farm Taxes[1]

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## INTRODUCTION

The purpose of this study is threefold: First, to expand the limited information on the assessment of, and taxes borne by, oil producing property in Kansas; second, to compare the relative public charges on oil producing property and on agricultural property; third, to consider a severance tax. The taxation of oil producing property may appear somewhat removed from the study of the taxation of farm property. Actually there is a close connection between the taxation of the two forms of property because the goal in any taxing system is an equitable distribution of the tax burden on all forms of property on the basis of ability to pay. If the burden of taxes is unequally placed, no satisfactory solution can be found without studying the whole picture.

Two sources of basic data were used in the study. One was the "Oil and Natural Gas Schedule" on file in the offices of county clerks or county assessors. The other was the tax rate and assessed valuation records on file in the offices of county superintendents of schools and county clerks.

Included in the above data were the total oil production for the tax year, March, 1935, through February, 1936, the gravity

**Acknowledgment.**—Dr. Harold Howe, professor of Agricultural Economics, Kansas State College, contributed much to this circular by way of suggestions, criticism, and interpretation of data.

[1] Contribution No. 104 from the Department of Agricultural Economics.

of the oil, and the assessed value of the leasehold and equipment of each oil operator in each school district. The price per barrel of oil was obtained from the offices of the Oil Proration Bureau of the State Corporation Commission located in Wichita, Kansas.

The oil prices used are shown in Table I. These prices were weighed according to the number of months a certain price was obtained by producers. For example, for ten months of the period studied, or until January 1, 1936, the price per barrel of oil of 40 gravity and above was $1.08. For the two remaining months the price for oil of this gravity was $1.18. Multiplying the $1.08 by 10, the $1.18 by 2, and dividing the total by 12 gives the average for the year, or $1,096.

TABLE I.—AVERAGE PRICE PER BARREL OF CRUDE OIL MARCH 1, 1935-MARCH 1, 1936.

| Gravity | Average Price |
|---|---|
| Below 31 | $ .896 |
| 31 - 31.9 | .916 |
| 32 - 32.9 | .936 |
| 33 - 33.9 | .956 |
| 34 - 34.9 | .976 |
| 35 - 35.9 | .996 |
| 36 - 36.9 | 1.016 |
| 37 - 37.9 | 1.036 |
| 38 - 38.9 | 1.056 |
| 39 - 39.9 | 1.076 |
| 40 and above | 1.096 |

The Department of Agricultural Economics cooperated with W. E. Sheffer in making a study of oil property taxation[2]; and the basic statistical data in this circular are the same as were used by him. While it is necessary to repeat some of the essential facts reported in Sheffer's work, it is to be understood that the present study supplements rather than duplicates his work.

## THE OIL INDUSTRY IN KANSAS

Rinehart[3] states that in 1860 a well was drilled to 275 feet at the Baptist Mission, one mile east of Paola in Miami county. This well was estimated to have pumped one barrel daily but it produced so much water it was abandoned. Even with this early start, development was slow and, as shown in figure 1, annual production was only 500 barrels in 1889. In 1916 production in the Butler county area hit its stride and Kansas jumped to third place in rank as an oil producing state the next year. However, discovery of rich fields in Texas in 1919 put Kansas back into fourth place the position it held until 1936 when Kan-

[2] Dr. Sheffer, Superintendent of Schools, Manhattan, Kansas, prepared a manuscript on this general subject. It is a bulletin issued by the Kansas Congress of Parents and Teachers (Volume I, number 6) entitled **A Proposal for Levying a Severance Tax on Petroleum in Kansas.** This bulletin was released December 26, 1936.

[3] Rinehart, Ira. **Kansas Oil.** Tulsa. Rinehart Oil News. 1936.

sas dropped to fifth place with Louisiana in fourth place. Texas, Oklahoma, and California rank first, second, and third, respectively, at present (1938). Since 1932, production in Kansas has been increasing rapidly and reached an all-time peak in 1937 of approximately 69 million barrels.

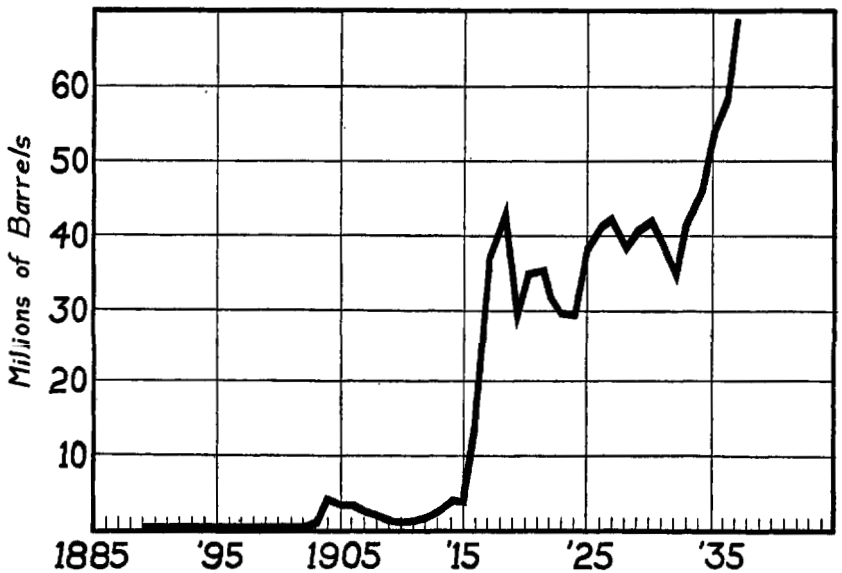


**FIG. 1.—Oil production in Kansas in millions of barrels by years, 1889-1937.**

Source: Kesler, L. W. **Oil and Gas Resources of Kansas in 1927.** University of Kansas Bul. 11, 1928, and McIntyre, James. Production in 1937 exceeded all past performances of the nation. The Oil and Gas Journal, 36:63. January, 1938.

Figure 2 shows that oil production in the state is centered chiefly in a comparatively narrow belt extending south and east of Ellis county. The heaviest production is in the area known to geologists as the Ellsworth arch extending north and west from Hutchinson. The older oil region of the state, part of which still produces heavily, lies to the east and south of Hutchinson.

Kansas is considered primarily an agricultural state. However, figure 3 shows that the farm value of only two agricultural commodities — wheat, and cattle and calves — ranked above the value of the oil produced in the state for the five-year period, 1931 to 1935.

In discussing the oil industry in Kansas, one of its current problems should be mentioned. At present the oil industry is burdened with excessive stocks of oil in storage. In Kansas the problem is further complicated by a tremendous increase in potential production with but little increase in the market for oil.

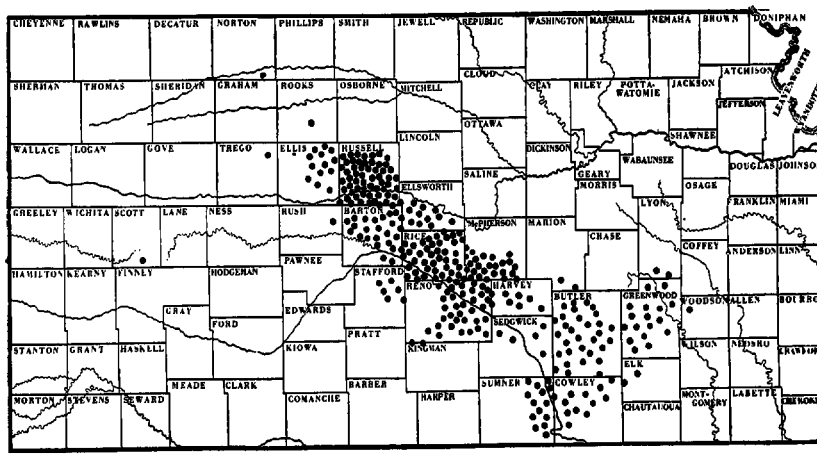


FIG. 2.—General location of oil production in Kansas in 1937 (1 dot = 200,000 barrels).

Source: Ver Wiebe, Walter A. **Oil and Gas Resources of Western Kansas.** Mineral Resources Circular No. 10. University of Kansas. April 1, 1938, and Dalrymple, Dal. Record discovery year in Kansas, state peak of production. The Oil and Gas Journal, 36:112-120. January, 1938.

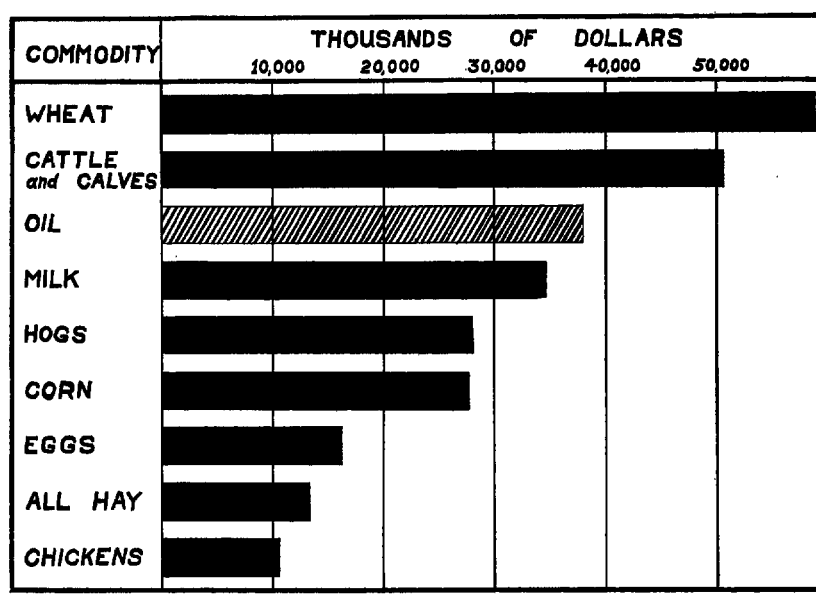


FIG. 3.—Comparison of the 1931-1935 average annual farm value of leading agricultural commodities and oil produced in Kansas.

Source: **Farm Value, Gross Income and Cash Income from Farm Production, 1934-1935.** U. S. D. A. Bur. of Agri., August, 1936; **Farm Value, Gross Income and Cash Income from Farm Production, 1931-1932-1933.** U. S. D. A. Bur. of Agri. Econ., September, 1934; and letter from A. G. White, Chief Econ., Petroleum Economics Division, Bureau of Mines, to the author, July 18, 1938.

There is reason to believe that the present situation is at least partially, if not largely, of a temporary nature. Even so, consideration of the taxation of the industry is likely to be biased by the present unsatisfactory conditions. Such a biased consideration would be unfortunate because the taxation of any industry tends to be permanent in character and should, therefore, be considered with normal or average conditions in mind.

## PRESENT METHOD OF ASSESSING OIL PRODUCING PROPERTIES IN KANSAS

Kansas laws provide the same method of taxation for oil properties as for other tangible property. This means that, for a given taxing district, the same tax levies are applied to oil property as to land or buildings. A complete description of the present method of taxing oil property in Kansas is not included because it merely follows the usual steps in the administration of the general property tax; namely, assessment, equalization, establishment of the tax rate, and collection. Instead only certain parts of assessment peculiar to the oil industry will be mentioned.

The general statutes of Kansas[4] prescribe in the following words the method to be used in assessing oil and gas properties in Kansas:

"That in determining the value of oil and gas wells or properties the assessor shall take into consideration the age of the wells, the quality of oil or gas being produced therefrom, the nearness of the wells to market, the cost of operation, the character, extent and permanency of the market, the probable life of the wells, the quantity of oil or gas produced from the wells, the number of wells being operated and such other facts as may be known by the assessor to affect the value of the property."

These instructions are too indefinite to be of much practical value to the assessors of oil property. In actual practice, this statute has been expanded by the adoption of a "Kansas Price Schedule of Oil and Gas Properties" at an annual, unofficial, meeting of oil assessors and representatives of oil and gas companies. The State Tax Commission does not sponsor or even recognize this meeting. This schedule gives the value of different sizes and kinds of equipment and gives instructions for figuring the assessed value of the leasehold. A copy of the 1938 schedule with instructions for its use is included.

### KANSAS PRICE SCHEDULE OF OIL AND GAS PROPERTIES FOR 1938

On the statements inclosed please render as required by law your assessment of oil and gas properties for the year 1938.

All properties must be listed and valued as of March 1. Casing in the well and pipe under-ground must be listed with the equipment. All automobiles, trucks and buildings on the leaseholds must be listed and valued at actual value as of March 1.

New stock and yard stock must be listed at not less than 75% of the stock account as shown by the books on March 1.

[4] Corrick, Franklin, ed. **General Statutes of Kansas.** Topeka State Printer. 1935.

**For valuation of the property follow as nearly as possible the schedule given below; but it is to be understood adjustments shall be made up or down based upon local conditions in the judgment of the assessor; such as flush production salt water, or inversely, the absence of same may merit additional value.**

### Boilers

| | |
|---|---|
| 25 H. P., each | $140.00 |
| 30 H. P., each | 200.00 |
| 40 H. P., each | 225.00 |
| 75 H. P., each | 420.00 |
| 100 H. P., each | 480.00 |
| 125 H. P., each | 540.00 |

### Cable

| | |
|---|---|
| Wire Drg., per ft. | .11 |
| Manila Rope, 2 ", per ft. | .14 |
| Manila Rope, 2¼", per ft. | .16 |
| Manila Rope 2½", per ft. | .18 |
| Bull Rope, per ft. | .14 |

### CASING AND TUBING

### Lap-Weld Casing

| | |
|---|---|
| 5 3/16", 17 lbs., per ft. | .26 |
| 6 1/4 ", 13 lbs., per ft. | .22 |
| 6 5/8 ", 17 lbs., per ft. | .27 |
| 6 5/8 ", 20 lbs., per ft. | .30 |
| 6 5/8 ", 24 lbs., per ft. | .36 |
| 8 1/4 ", 20 lbs., per ft. | .33 |
| 8 1/4 ", 24 lbs., per ft. | .39 |
| 8 1/4 ", 28 lbs., per ft. | .45 |
| 8 1/4 ", 32 lbs., per ft. | .51 |
| 10 ", 32 lbs., per ft. | .52 |
| 10 ", 35 lbs., per ft. | .56 |
| 10 ", 40 lbs., per ft. | .65 |
| 12 1/2 ", 50 lbs., per ft. | .83 |
| 15 1/2 ", 70 lbs., per ft. | 1.47 |
| 20 ", 90 lbs., per ft. | 2.13 |

### Seamless Steel Casing

| | |
|---|---|
| 5 3/16", 20 lbs., per ft. | .41 |
| 6 5/8 ", 24 lbs., per ft. | .50 |
| 8 1/4 ", 28 lbs., per ft. | .62 |
| 8 1/4 ", 32 lbs., per ft. | .70 |
| 10 ", 40 lbs., per ft. | .90 |
| 10 ", 45 lbs., per ft. | 1.00 |
| 12 1/2 ", 50 lbs., per ft. | 1.33 |
| 15 1/2 ", 70 lbs., per ft. | 2.38 |

### Drilling Pipe

| | |
|---|---|
| Drilling Pipe, 4½", per ft. | .44 |
| Drilling Pipe, 5 ", per ft. | .60 |
| Drilling Pipe, 6 ", per ft. | .65 |

### Line Pipe

| | |
|---|---|
| 2", per ft. | $ .05 |
| 3", per ft. | .10 |
| 4", per ft. | .20 |
| 6", per ft. | .44 |
| 8", per ft. | .54 |

### Tubing

| | |
|---|---|
| 2", 4 lbs., per ft. | .07 |
| 2", 4½ lbs., per ft. | .08 |
| 3", 8½ lbs., per ft. | .10 |
| 3", 10 lbs., per ft. | .11 |

### ENGINES

### Steam Engines

| | |
|---|---|
| Old Style, all sizes | 100.00 |
| New Style, all sizes | 200.00 |

### Gas Engines

| | |
|---|---|
| 6 H. P. | 70.00 |
| 15 H. P. | 100.00 |
| 20 H. P. | 120.00 |
| 25 H. P. | 170.00 |
| 35 H. P. | 200.00 |
| 40 H. P. | 280.00 |
| 80 H. P. | 630.00 |

### Oil Engines

| | |
|---|---|
| 6 H. P. | 60.00 |
| 15 H. P. | 150.00 |
| 20 H. P. | 200.00 |
| 25 H. P. | 250.00 |
| 35 H. P. | 350.00 |
| 40 H. P. | 400.00 |
| 50 H. P. | 500.00 |
| Diesel Power Units and Engines at value. | |

### Motors (Electric)

| | |
|---|---|
| 10 H. P. | 60.00 |
| 20 H. P. | 120.00 |
| 30 H. P. | 180.00 |
| 40 H. P. | 240.00 |
| 50 H. P. | 300.00 |

### Pumps

| | |
|---|---|
| 3 x2 x 3 | 30.00 |
| 4½x2¾x 4 | 50.00 |
| 4½x3 x 4 | 60.00 |
| 5½x3 x 5 | 70.00 |
| 6 x4 x 6 | 80.00 |
| 10 x8 x10 | 200.00 |
| 10 x8½x10 | 200.00 |
| 10 x4½x10 | 225.00 |
| 10 x6 x10 | 250.00 |
| 18 x5 x18 (Hi-Pressure) | 680.00 |
| 7 x3 x 8 (Hi-Pressure) | 400.00 |
| 9 x3 x10 (Hi-Pressure) | 480.00 |
| 12 x3½x12 (Hi-Pressure) | 600.00 |
| 10 x6 x12 (Mud Hog) | 1640.00 |

### Water Pumping Outfit

| | |
|---|---|
| Pump Jack, Water | 15.00 |
| 4 H. P. | 100.00 |
| 6 H. P. | 170.00 |
| 10 H. P. | 250.00 |
| 15 H. P. | 275.00 |

### Derricks and Rigs

| | |
|---|---|
| Standard Steel Derrick only | 240.00 |
| Standard Wood Derrick only | 100.00 |
| Rig Fronts, Standard Steel Drilling | 560.00 |
| Rig Fronts, Standard Wood Pumping | 110.00 |
| Rig Fronts, Standard Wood Drilling | 510.00 |
| Rig Front | at value |
| Individual Pumping Unit (reduction gear) | at value |
| Individual Pumping Unit (countershaft) | at value |

### Rods

| | |
|---|---|
| Sucker, per ft. | .03 |
| Pull, per ft. | .03 |

### Tanks

| | |
|---|---|
| Wood, per bbl. | .20 |
| Steel, per bbl. | .20 |
| Oil Separators | 100.00 |

### Tools

| | |
|---|---|
| Cable, per string | 1700.00 |
| Cleaning, Out—per string | at value |
| Rotary, Electric | at value |
| Rotary, Steam | at value |
| Rotary, Diesel | at value |
| Sand Reel, large | at value |
| Sand Reel, small | at value |
| Pulling Machines | at value |
| Powers, Bandwheel, Cog, etc. | at value |
| Belting | at value |
| Fresh Crude Oil at posted price $ | |

Leasehold assessments for oil wells shall be based on the average daily production for the last 12 months preceding March 1, at the unit price of $400 per barrel for 40 gravity oil. A reduction of $10.00 will be made for each degree of gravity under 40. However, adjustments will be made on the scheduled value, up or down, as local conditions warrant, such as noted in Section 79-331 of the Revised Statutes of Kansas for 1935, as follows:

> "That in determining the value of oil and gas well's or properties the assessor shall take into consideration the age of the wells, the quality of oil or gas being produced therefrom, the nearness of the wells to market, the cost of operation, the character, extent and permanency of the market, the probable life of the wells, the quantity of oil or gas produced from the wells, the number of wells being operated, and such other facts as may be known by the assessor to affect the value of the property."

The above is your authority for the adjustments such as flush production, excessive salt water, distance from market, probable life of the wells, and any other factors that may affect the price a willing seller would take from a willing buyer for the lease as a whole.

In arriving at the true value in money of gas leaseholds, the same shall be arrived at by taking 40 per cent of the 'average daily production times 365 times the price per thousand feet prevailing at the well. Adjustments shall be made, up or down, as local conditions warrant, such as rock pressure, amount of water produced, and open flow gauge, as specifled in Section 79-331 Revised Statutes of Kansas, 1935.

Give all the information the blanks require, and any additional information necessary to determine the fair reasonable cash value of the entire lease.

Give the legal description of the land, and the correct names and addresses of the royalty owners thereon as the pipe line sheets give them.

If possible, make your return on or before April 10, 1938.

LESTER MATTHEW, Chairman of the Oil and Gas Committee of The County Clerk's Association.

The oil operators generally fill out an oil and gas well schedule on which they give what they consider to be the value of their property, including both leasehold and equipment. However, in assessing oil property the assessor may check the oil operator's valuation. He generally checks the equipment by visiting the oil fields. The production may be checked against the production sheets of the Kansas Corporation Commission. However, in a letter from the Kansas Corporation Commission the statement was made that "very few oil assessors and county clerks write for our production figures."[5]

Although a complete survey of the officials who assess oil property was not made, a study of a few of the counties indicated that the township assessor may have nothing to do with assessing such property. In the larger oil counties a regular oil assessor is appointed. The statutes[6] authorize this procedure providing, "That in any county in the state in which there may be 200 or more producing oil wells, and having an assessed valuation of $100,000,000 or more, the county commissioners may, by resolution duly passed and recorded, appoint a county assessor." This official assesses all oil property in the county

[5] Letter from E. G. Dahlgren, Director of Conservation Division, State Corporation Commission, to the author, January 15, 1938.

[6] Corrick, Franklin, ed. **General Statutes of Kansas**, Topeka State Printer. 1935.

In the smaller oil counties, the county clerk has, in some cases, assumed all the responsibility for assessing the oil property. Thus, the limited information available indicates that a large percentage of the oil property in Kansas is assessed by men who cover entire counties. From the data available, it was not possible to determine how uniformly these officials assess oil property.

The State Tax Commission is of the opinion that the departure of actual assessment procedure from the method prescribed in the statutes has resulted in less uniformity than would exist otherwise.[7] This is undoubtedly true and should be corrected. The assessment of oil property in Kansas could be improved by providing more definite statutory regulations to be followed universally, and some plan for state supervision of oil assessors.

In addition to the general property tax, the Kansas Corporation Commission has been imposing a small fee per barrel on crude oil or petroleum marketed or used. This fee is used for the purpose of administering laws, rules, and orders relating to the production, sale, and conservation of crude oil. The usual fee has been one-tenth of a cent per barrel but it was increased temporarily to one-fifth of a cent per barrel on October 30, 1937. Also, the Division of Sanitation of the State Board of Health has been charging a small fee to prevent stream pollution by oil wells. For the year 1934-35 this charge was placed at one twenty-fifth of one cent per barrel.

### TAX RATES ON KANSAS OIL PRODUCING PROPERTY IN COMPARISON WITH RATES IN OTHER STATES

Since oil property in Kansas is taxed by the general property tax, it is necessary to express this tax in terms of a certain percentage of the value of the oil produced before the Kansas rate can be compared with the rates in other states. This conversion is possible from the data in Table II. While the data in this table do not account for all of the oil produced in the skate, it is believed that they do account for a sufficiently large percentage (61 percent) of the total state production for 1935 to represent the oil industry accurately.

By dividing the total taxes levied, $515,655, by the total value of the oil produced, $34,336,667, the general property tax can be converted to its equivalent in terms of a severance tax, or 1.5 percent. On the other hand, Oklahoma, which in 1936 produced about three and one-half times as much oil as Kansas, taxed oil at the rate of 5 percent or three and one-third times the Kansas rate. This 5 percent tax has even greater significance in view of certain statements in the Oklahoma statute imposing this tax: ". . . The State Board of Equalization upon its own initiative, may, and upon complaint of any person who claims that he is taxed too great a rate hereunder, shall, take

[7] Letter from State Tax Commission to the author, January 3, 1938.

TABLE II.—QUANTITY AND VALUE OF OIL PRODUCED, ASSESSED VALUATION OF, AND TAXES LEVIED AGAINST OIL PROPERTY IN CERTAIN COUNTIES IN KANSAS. *a*

| County | Number of barrels produced, March 1, 1935 to March 1, 1936 | Value of oil produced, March 1, 1935 to March 1, 1936 | Assessed valuation as of March 1, 1936 | Taxes levied for 1936 |
|---|---|---|---|---|
| Barton | 443,154 | $ 469,303 | $ 540,416 | $ 6,251 |
| Butler | 2,583,182 | 2,579,974 | 2,965,311 | 52,450 |
| Chautauqua | 356,462 | 348,612 | 458,624 | 8,563 |
| Cowley | 755,036 | 800,339 | 1,073,590 | 16,716 |
| Elk | 438,781 | 453,778 | 575,646 | 8,416 |
| Ellis | 309,624 | 292,764 | 309,604 | 3,300 |
| Franklin | 69,472 | 75,838 | 100,911 | 1,898 |
| Kingman | 238,447 | 261,227 | 191,832 | 2,281 |
| Lyon | 47,780 | 49,476 | 97,015 | 1,381 |
| Marion | 436,153 | 424,337 | 472,059 | 8,692 |
| McPherson | 5,013,156 | 5,234,580 | 4,991,512 | 65,092 |
| Reno | 5,134,302 | 5,440,306 | 4,983,029 | 10,243 |
| Rice | 7,604,040 | 8,334,027 | 9,670,599 | 153,686 |
| Russell | 3,823,121 | 3,904,303 | 3,637,767 | 61,918 |
| Sedgwick | 1,747,903 | 1,915,702 | 2,175,141 | 35,577 |
| Stafford | 418,838 | 443,527 | 201,317 | 2,405 |
| Sumner | 3,190,638 | 3,308,454 | 3,205,439 | 75,806 |
| Totals | 32,610,069 | $34,336,657 | $35,649,612 | $515,655 |

*a* The number of barrels of oil produced and the assessed value of the property concerned were obtained from data sheets filled out from the "Oil and Natural Gas Schedules" in the county clerk's office in the various oil counties. The fact that the data were incomplete in some instances accounts for differences between the total production of a county and the production shown above. One data sheet was filled out for each operator in each school district. The value of the oil produced was obtained by multiplying the average price per barrel of oil for the year March 1, 1935 to March 1, 1936 for the gravity given by the production indicated. The taxes levied were calculated by multiplying the total 1936 tax rate for the school district where the oil was produced, by the assessed value of the oil property. The above data have been published. Sheffer, W. E. **A Proposal for Levying a Severance Tax on Petroleum in Kansas.** The Congress of Parents and Teachers. Bul. 6, 1936.

testimony to determine whether the taxes herein imposed are greater or less than the general ad valorem tax for all purposes would be on the property of such producer subject to taxation in the district or districts where the same is situated. . ."[8] In other words, the 5 percent severance tax is intended to be equal to what the oil industry would pay if taxed by the general property tax. To date no oil operator has availed himself of the above provision.[9] This is a pertinent point since in 1934 the taxes per $100 of farm real estate in Oklahoma were 92 cents and in Kansas $1.17.[10]

Texas, the leading oil state in the country with a production in 1936 of 424 million barrels, levies a severance tax in addition to the property tax. The rate is 2.76 cents a barrel, provided the market value of the oil does not exceed one dollar per barrel. If the oil is worth more than one dollar per barrel, the rate becomes 2.75 percent of the market value. The State of Texas col-

[8] House Bill 87. Oklahoma City, Oklahoma Tax Commission. 1935.
[9] Letter from Oklahoma Tax Commission to the author. June 4, 1937.
[10] Jackson, Donald. **A Graphic Summary of Farm Taxation.** U. S. D. A. Misc. Pub. 262, 17 pp., 1937.

lected $14,459,843 from this tax during the year ending August 31,1937.

Arkansas levies a severance tax of 2.6 percent in addition to the property tax on real estate and corporeal property. Louisiana levies a severance tax of 4 to 11 cents per barrel, depending on the gravity, in addition to the property tax on real estate and other real property. No comparison of the cost of oil production can be made for the states mentioned because of lack of data.

## TAX BURDEN ON KANSAS OIL PRODUCING PROPERTY IN COMPARISON WITH KANSAS AGRICULTURAL PROPERTY

### Value of the Product in Comparison with the Assessed Value of the Producing Property for Oil and Agricultural Property

Agricultural property was selected for comparison with oil producing property because agriculture is the most important industry in Kansas, and because comparable data are available. The gross income from Kansas farm crops, livestock, home-used products, and government payments amounted to $282,-625,000 in 1935.[11] The data for 1936 are used because they are most nearly comparable with the data on the value of the oil produced, which is the value from March 1, 1935, to March 1, 1936.

The assessed valuation figures are for 1936 because they represent most nearly the assessor's estimate of the value of the property involved in production in 1936. The assessed value of farm land in Kansas in 1936 was $1,040,044,117.[12] The assessed value of farm improvements was given as $131,898,843, which includes the assessed value of the houses of the operators and should be adjusted for that item. In 1930, the dwellings of the farmers of the United States constituted approximately 55 percent of the total investment in farm buildings. In Kansas, according to the closing inventory of 1935 for 139 owned and partly-owned Farms in the Northern and Southern Farm Bureau-Farm Management Associations, the value of the houses was 10 percent less than the census figure for the United States, or approximately 46 percent of the value of all buildings. When the assessed value of all improvements is reduced 46 percent for this item, the figure is $72,544,364, which represents the assessed value of all buildings directly concerned with agricultural production.

The assessed value of tangible personal property outside cities, and exclusive of property owned by public service corporations, was $218,653,196 in 1936. If the assessor's rolls in Riley county may be considered representative of Kansas conditions, approximately 90 percent, or $196,787,876, of this is

[11] **Farm Value, Gross Income and Cash Income from Farm Production, 1934-1935.** U. S. D. A. Bur. of Agr. Econ. August, 1936.

[12] **Kansas Municipalities,** 23:25. January, 1937.

connected directly with agricultural production, and should be added to the figure already given for assessed value of farm land and improvements. Consequently, the assessed valuation of farm land, improvements exclusive of the house, and tangible personal property directly connected with agricultural production, was $1,309,376,357 in 1936; the value of farm products in 1935 was approximately $282,625,000. Table II shows that for 1936 the oil industry was assessed at $35,649,612; and the value of the oil produced in 1935 was $34,336,657.

These figures show that the value of the product of the agricultural industry in 1935 was 21.6 percent of the assessed valuation of its properties directly connected with production; and that the annual product of the oil and gas industry was 96.3 percent of the assessed value of its properties.

### The Average Tax Rate on Oil Producing Property in Comparison with the Rate on Agricultural Property

The comparison of tax bases, however, omits an item of equal importance; namely, the tax rate. It is logical to suppose that in those districts which contain oil the tax rates would tend to be lower than in districts without oil. This would be true because the oil would increase the assessed value of the district. With a larger tax base, lower tax rates probably would raise the required funds even though the necessary expenditures for local government might increase because of the oil production. This assumption was tested by comparing the average tax rates in the oil producing districts with the average tax rate on farm real estate. The rate on farm real estate was used for comparison because almost all of the oil produced in Kansas is produced outside city limits.

The average total tax rate on oil producing property in Kansas in 1936 was 14.47 mills. This figure was calculated from data in Table II by dividing the total taxes levied, $515,656, by the total assessed valuation of the oil property, $35,649,612. The average tax rate on all farm property in 1936 was 17.36 mills, 2.89 mills more than on oil property. This figure was obtained by dividing the total taxes levied against all farm property directly connected with agricultural production in 1936 by the total assessed value of these items for that year. As explained previously, it was necessary to adjust these assessed values; consequently, before making the division indicated, it was likewise necessary to make proportionate adjustments in the Tax Commission's figures on taxes levied.

### Taxes Levied on Oil Producing Property in Comparison with the Taxes Levied on Agricultural Property per $100 Gross Income

The data thus far have shown that there are two factors — assessed value and tax rate — affecting the comparison of the tax burden on oil producing property with the burden on agri-

cultural property, By expressing the taxes paid per $100 of product produced, the combined effect of both factors is shown.

To obtain this figure the taxes levied on all farm property directly connected with agricultural production in 1936 ($22,733,193) were divided by the gross value of the product for 1935 ($282,626,000). This gave $8.04 as the taxes levied per $100 of farm product produced. As stated previously, the present tax on the oil property involved in production was 1.5 percent of the value of the product produced, or $1.50 on $100 worth of product produced. These data are presented graphically in figure 4.

In this comparison there were several vulnerable points which should be noted. Because of lack of data, it was necessary to use the gross value of the product produced rather than the net profit, which would have been a better basis for estimating the tax burden. Although no data are available, it is undoubtedly true that the rate of depreciation is greater in the case of the oil industry but that the expense for labor in relation to the value of the product produced is greater in the case of agriculture. These factors may not cancel each other, but in any event it seems reasonable that on the average, the profit per $100 of product would be as high in the oil industry as in agriculture.

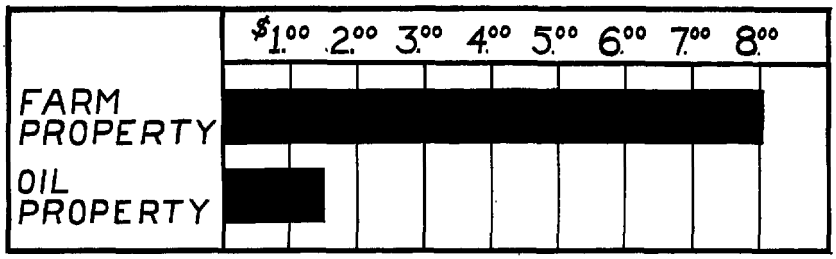


FIG. 4.—Taxes levied on farm property and on oil property per $100 gross income.

Another vulnerable point is that the data available allowed a comparison for only one year. It might be argued that 1935 was a poor year for agriculture in Kansas and therefore the taxes per $100 of product would be higher than normal. It is true that the income was considerably lower than it was during the best years before the depression; however, the 1935 gross income ($282,625,000) is not far below $3,25,620,000, which was the average annual gross income for the 10 years, 1926-1935. Or, it might be contended that the price received for oil in **1935** was high, making the gross income from the oil industry high, and thereby showing lower than normal taxes per $100 worth of product produced. However, the price per barrel received by Kansas oil producers in 1935 was $1.03, while the ten-year (1926-

1935) average price, was $1.21.[13] The assessed value and tax rates vary from year to year but they vary in the same direction for both agriculture and oil; therefore, the relationship between the two would be essentially the same. Considering all the facts, it appears that studies for other years would give approximately the same results.

## THE SEVERANCE TAX AND THE TAXATION OF OIL PRODUCING PROPERTY IN KANSAS

It has been suggested frequently that a severance tax on oil be adopted in Kansas. As Jensen[14] has pointed out, the severance tax is known by other names, such as the gross production tax, the privilege tax, and the occupation tax. **The severance tax may be defined as a levy upon natural resources at the time they are severed or removed from the land at a fixed percentage of their market value, a fixed amount per unit produced, or a fixed percentage of the net proceeds.** This tax may be in lieu of part or all of the general property tax, or may be in addition to the general property tax. As stated before, Oklahoma levies a tax on only the value of the oil produced and is therefore an example of a state levying a severance tax in lieu of the general property tax. Texas offers an example of a severance tax levied in addition to the general property tax.

Although the constitutional amendment adopted in 1924 permits the Kansas legislature to classify mineral products for taxation; it is not believed that this could be interpreted to include the equipment used in production; therefore, a severance tax in Kansas in lieu of all of the general property tax now levied would probably not be constitutional. This means that, as far as Kansas is concerned, a severance tax might be levied in addition to the present general property tax, or in lieu of the present general property tax on the leasehold. In the latter case the equipment would be taxed as it is at present.

### Bills Proposing a Severance Tax, 1915-1937

Eighteen bills proposing a severance tax on minerals have been introduced in the Kansas legislature 'since 1915. In addition, three bills, proposing a privilege tax upon many businesses, included mining in their list of businesses to be taxed. The contents of 16 of these bills are summarized in Table III. This summary shows that six bills proposed a severance tax on all minerals, seven on oil and gas only, and three on oil alone. One of the bills did not set a definite tax rate to be used but stated that the rate should be the average rate of taxation in the state in the preceding year. Twelve of the bills stated that the rate should be a certain percentage of the gross value

[13]Letter from A. G. White, Chief Economist, Petroleum Economics Division, Bureau of Mines, to the author. July 18, 1938.

[14]Jensen, Jens P. **Government Finance.** New York: Crowell Pub. Co. 1937.

TABLE III.—SUMMARY OF BILLS PROPOSING A SEVERANCE TAX ON MINERALS THAT HAVE BEEN INTRODUCED IN THE KANSAS LEGISLATURE, 1915-1937. *a* (Table III. Continued page 15.)

| Year | Bill No. | Minerals included | Tax rate | Tax base | Relationship to present taxes | Use of funds obtained |
|---|---|---|---|---|---|---|
| 1917 | H. B. 857 | Oil and gas | Average rate of taxation in state preceding year | Gross value | In addition to *b* | State general fund |
| 1921 | H. B. 514 | All minerals | 2 percent | Gross value | In addition to *b* | 50% to state general fund, 12.5% to county general fund and 37.5% to common school districts in oil counties |
| 1923 | H. B. 426 | All minerals | 2 percent | Gross value | In addition to *b* | 50% to state general fund, 12.5% to county general fund and 37.5% to common school districts in oil counties |
| 1925 | S. B. 6 | All minerals | 2 percent | Gross value | In addition to *b* | State general fund |
| 1925 | H. B. 47 | All minerals | 3% on oil and gas, 1% on other minerals | Gross value | In addition to | Two thirds to state general fund, one sixth to common school districts and one sixth to general fund of oil county |
| 1925 | H. B. 93 | All minerals | 3% on oil and gas, 1% on other minerals | Gross value | In addition to | Two thirds to state general fund, one sixth to common school districts and one sixth to general fund of oil county |
| 1927 | H. B. 527 | All minerals | 2¢ per barrel 2¢ per ton for other products | Barrels or tons produced | In addition to *b* | Road fund of oil county |
| 1927 | H. B. 532 | Oil and gas | 3 percent | Gross value | In lieu of | 50% to state general fund, 50% to oil counties |
| 1929 | S. B. 368 | Oil | 3¢ per barrel | Barrels produced | In addition to *b* | State general fund |

*a* Does not include House Bill 554, 1917, or Senate Bill 40, 1923, because copies were not available in State Library.

Does not include House Bill 229, 1935, or Senate Bill 92, 1933, or Senate Bill 267, 1935, because they proposed a privilege tax upon many businesses besides mining.

*b* If law did not state how this tax related to existing general property tax, it was assumed that it was in addition to present general property taxes.

TABLE III.—SUMMARY OF BILLS PROPOSING A SEVERANCE TAX ON MINERALS THAT HAVE BEEN INTRODUCED IN THE KANSAS LEGISLATURE, 1915-1937. *a* (Table III. Concluded.)

| Year | Bill No. | Minerals included | Tax rate | Tax base | Relationship to present taxes | Use of funds obtained |
|---|---|---|---|---|---|---|
| 1929 | H. B. 360 | Oil | 3¢ per barrel | Barrels produced | In addition to *b* | State general fund |
| 1931 | H. B. 29 | Oil and gas | 2 percent | Gross value | In lieu of present tax on leasehold | Two thirds to state aid school fund. Of the remainder, one fourth to county general fund and three fourths to common school districts of oil county |
| | | | | Gross value | | |
| 1935 | S. B. 254 | Oil | 2 percent | Gross value | In addition to *b* | No provision |
| 1937 | H. B. 579 | Oil and gas | 2 percent | Gross value | In addition to | State aid school fund |
| 1937 | H. B. 228 | Oil and gas | 4 percent | Gross value | In lieu of present tax on leasehold | 10% to general fund of oil county, 90% to state school aid fund |
| 1937 | S. B. 188 | Oil and gas | 3 percent | | In lieu of present tax on leasehold | Two thirds to state aid school fund. Of the remainder, one fourth to county general fund and three fourths to school districts of oil county |
| 1937 | S. B. 383 | Oil and gas | 2½ percent | Gross value | In addition to | State aid school fund |

*a* Does not include House Bill, 554, 1917, or Senate Bill 40, 1923, because copies were not available in State Library.

Does not include House Bill 229, 1935, or Senate Bill 92, 1933, or Senate Bill 267, 1935, because they proposed a privilege tax upon many businesses besides mining.

*b* If law did not state how this tax related to existing general property tax, it was assumed that it was in addition to present general property taxes.

of the product produced, while three stated that the rate was to be so many cents per unit produced. The most frequent as well as lowest percentage rate proposed was 2 percent, while the highest was 4 percent. Four bills proposed a 3 percent rate, and two proposed a tax of 3 cents per barrel. In all, except for the three bills proposing a tax on the basis of the number of units produced, the gross value of product produced was to be taken as the tax base. One point of interest in regard to these bills was that eight failed to state how the proposed tax was to relate to the present taxes. In these eight cases, it was assumed that the proposed tax was to be in addition to present taxes. In addition to those eight bills, four stated definitely that the proposed tax was to be in addition to present taxes, making a total of 12 bills of this type. Three stated that the proposed tax was to be in lieu of present taxes on the leasehold but that equipment would be taxed as at present. One stated that the proposed tax was to be in lieu of all present taxes.

In only one case did the bill fail to state how the revenue obtained was to be used. One bill proposed that all the revenue go to the county from which it was obtained, while six bills proposed that all the revenue go to either the state general fund or the state-aid school fund. Eight bills proposed some plan of dividing the revenue obtained between the state and the county from which the revenue was obtained.

### Proper Relationship of a Severance Tax to Present Taxes in Kansas from the Theoretical Viewpoint

The preceding discussion indicates that, if a severance tax were to be adopted in Kansas, its proper relationship to the taxes already imposed would be a moot question. It is a point of first importance, and one that received careful consideration in this study. The effect of a severance tax on the conservation of oil and the incidence of such a tax are not discussed at this point because they probably would not be influenced by the relation of a severance tax to the present general property tax.

Those proposing a severance tax in addition to the present ad valorem tax believe in one or both of two propositions: First, that the industry is undertaxed at present and that additional taxes should be imposed in the form of a severance tax. Second, that underground resources are the heritage of the state and that the people of the entire state should share in the benefits.

Those who propose a severance tax in lieu of part of the present general property tax believe that the proposed tax is better fitted or adapted than the one which they propose to replace. Apparently, they also believe in the two propositions mentioned above, since most of the proposals that have been made impose a higher tax than the one now in existence and make some provision for all of the state to share in the benefits.

Thus, the only difference between the two proposals, so far as Kansas conditions are concerned, is the question of whether or not the general property tax should be used to tax the leasehold.

Regardless of whether the general property tax, the severance tax, or both are used to tax the leasehold, the fundamental basis for tax payments is the amount of oil produced. In the case of the general property tax the tax tends to be regressive in character; that is, as the leasehold becomes larger, the tax rate tends to be lower. This is true because with a larger tax base a lower tax rate would raise the necessary funds for the taxing district. However, a certain degree of regressiveness probably would not work any severe injustice because the general property tax rate is generally low.

If the proposed severance tax were in addition to the present tax on the leasehold, the crude oil would be taxed by the state through the 'severance tax, and, by local government through the general property tax. Such concurrent taxation could be avoided if the severance tax were in lieu of the present tax on the leasehold.

**Proper Relationship of a Severance Tax to Present Taxes in Kansas from the Administrative Viewpoint**

The administrative problems of both forms of taxes must also be considered. If a severance tax were levied in lieu of the present tax on the leasehold, the task of assessing the leasehold would be eliminated, which would mean a saving in time and money. This would at the same time, eliminate the possibility of any inequality in assessing leaseholds. On the other hand, if a severance tax were levied in addition to present taxes, the local community tax base would not be disturbed. There would be no administrative problem of allocating part of the tax collected to the taxing districts affected. Instead, what the state did collect could be used as the state saw fit. It might be used advantageously to reduce the general property tax levy for state purposes. Under this type of severance tax, it would be necessary to continue to assess the leasehold, but this probably could be done easily and accurately from the data on production which would be collected in administering the severance tax.

If a severance tax were levied instead of the present property tax on the leasehold, the tax base of the oil communities would be decreased; and, to avoid financial difficulties in some communities, it probably would be necessary to prorate part of the tax collected to the taxing districts concerned. While certain local communities may be wasteful in the use of their tax funds, it is doubtful if this extravagance is so widespread as to justify a general reduction in their tax base by exempting the leasehold from the general property tax without some compensation.

The above statements regarding the necessity of prorating part of the proceeds from a severance tax to the local districts, if the severance tax were in lieu of the general property tax on the leasehold, are based on the assumption that, in some local taxing units, the increase in the tax base due to the introduction of oil equipment would not be sufficient to compensate for the necessary increase in the cost of local government services because of the oil production; and that the percentage of the total assessed value of the oil property due to the value of the leasehold varies widely among local taxing units, and some oil communities would suffer a relatively greater loss of tax base than others. No data are available on the increased cost of local government because of oil production to test the validity of the assumption, but data which follow illustrate the second statement.

**Relation of the Assessed Value of the Leasehold to the Assessed Value of All Oil Property by School Districts.**— The schedules obtained in the oil counties gave complete data for 141 school districts. These data were used in calculating the per-

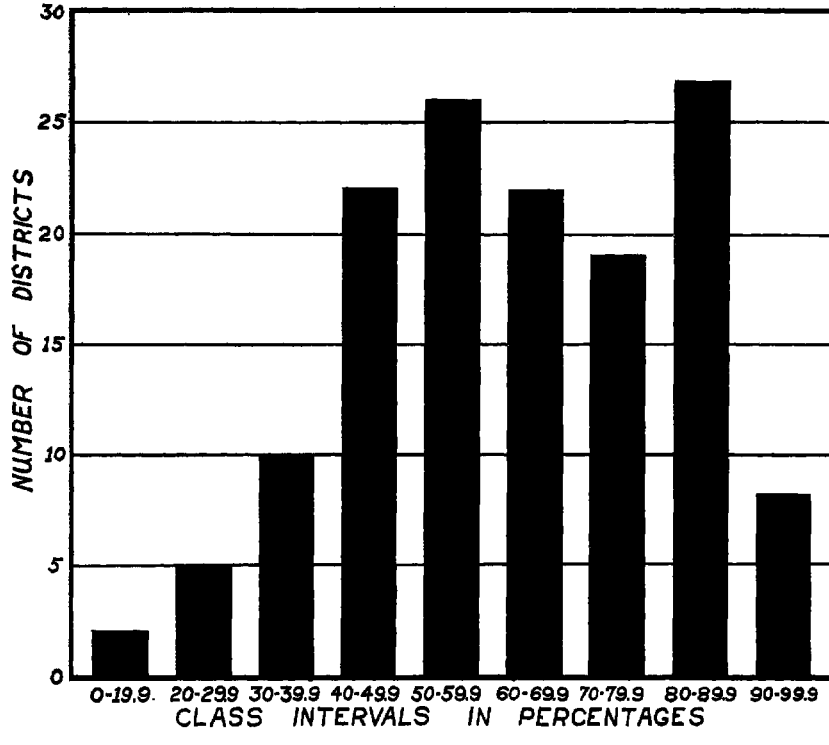


FIG. 5.—Percentage that the assessed value of the leasehold was of the total assessed value of the oil property in 141 school districts in Kansas in 1936.

centage of the total oil valuation in each district that would be removed by a severance tax levied in lieu of the present tax on the leasehold. These percentages were obtained by dividing the assessed value of the leasehold by the total assessed value of all oil property. The data are presented graphically in figure 5.

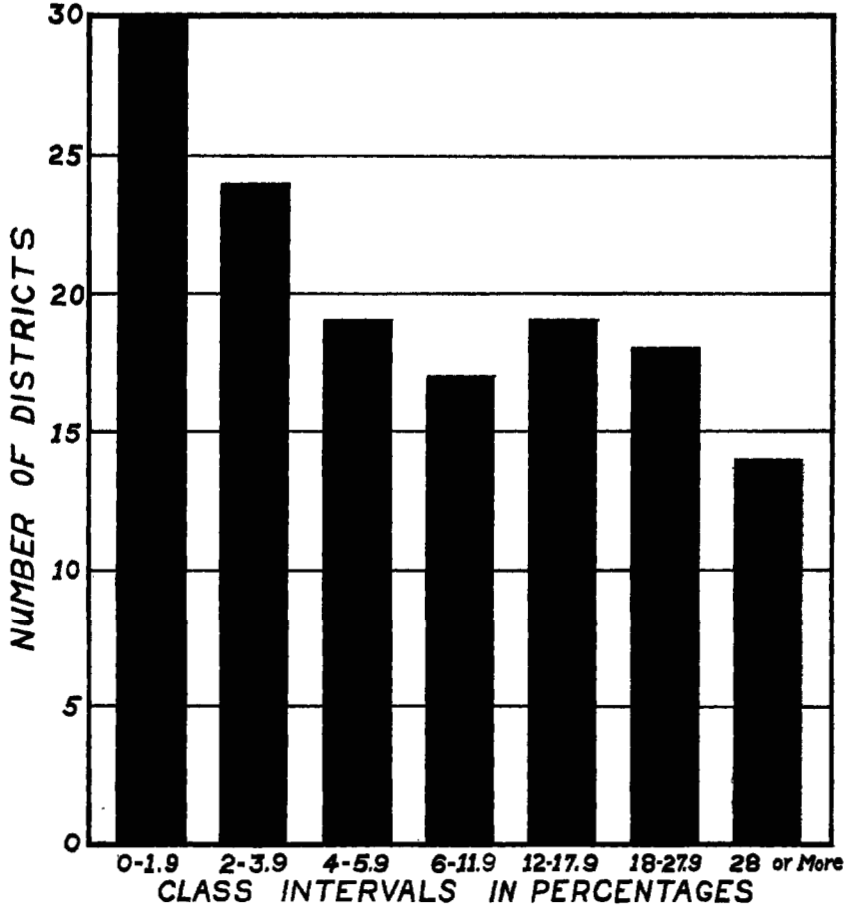


FIG. 6.—Percentage that the assessed value of the leasehold represents of the total assessed value of all property in 141 school districts in Kansas for 1936.

This figure shows that in two of the districts studied the assessed value of the leasehold was less than 20 percent of the total assessed value of all oil property in the district, while the assessed value of the equipment comprised the remainder of the assessed value of the oil property. At the other extreme, in eight of the districts the assessed value of the leasehold was 90 per-

cent or more of the total assessed value of all oil property. In the lower one-fourth of the school districts studied, the assessed value of the leasehold was 48.4 percent, or less, of the total oil valuation, while in the upper one-fourth of the districts the assessed value of the leasehold was 79.5 percent, or more, of the total oil valuation. In one half of the districts, the assessed value of the leasehold was between 48.4 and 79.5 percent of the total oil valuation. The percentage varied from 16.54 percent in one school district to 94.2 percent in another. Thus, the percentage of the total oil valuation that would be removed from each school district by a severance tax levied in lieu of the present tax on the leasehold varies widely. This is a significant point for if the leasehold were removed, there would not be the same relative reduction in the assessed value of oil property in each school district.

**Relation of the Assessed Value of the Leasehold to the Assessed Value of All Property by School Districts. —**The amount of the tax base that would be removed in each school district by this type of severance tax was calculated by dividing the assessed value of the leasehold by the total assessed value of all property in the district. Figure 6 shows the results of these calculations.

This figure indicates a wide variation among school districts in the amount of tax base that would be removed by a severance

TABLE IV.—THE ASSESSED VALUE OF ALL PROPERTY AND THE ASSESSED VALUE OF OIL PROPERTY IN 141 SCHOOL DISTRICTS IN 1936.

| County | Number of school districts | Total assessed value of all property | Total assessed value of oil property | | |
|---|---|---|---|---|---|
| | | | Leasehold | Equipment | Total |
| Barton | 6 | $2,331,652 | $ 237,300 | $ 46,338 | $ 283,638 |
| Butler | 10 | 3,844,571 | 181,604 | 90,683 | 272,287 |
| Chautauqua | 25 | 2,928,300 | 253,611 | 114,549 | 358,160 |
| Cowley | 33 | 17,750,975 | 613,480 | 446,584 | 1,060,064 |
| Elk | 12 | 2,406,399 | 231,978 | 96,253 | 328,231 |
| Ellis | 1 | 345,696 | 122,160 | 30,535 | 152,695 |
| Franklin | 5 | 1,030,905 | 16,550 | 42,000 | 58,550 |
| Kingman | 2 | 874,162 | 142,432 | 49,200 | 191,632 |
| Lyon | 3 | 461,848 | 43,475 | 53,540 | 97,015 |
| Marion | 6 | 2,546,430 | 177,434 | 63,554 | 240,988 |
| McPherson | 20 | 14,187,846 | 3,708,324 | 1,260,297 | 4,968,621 |
| Reno | 2 | 641,107 | 76,035 | 12,005 | 88,040 |
| Rice | 5 | 3,712,019 | 1,780,083 | 221,536 | 2,001,619 |
| Sedgwick | 5 | 3,088,540 | 651,396 | 162,293 | 813,689 |
| Stafford | 3 | 769,613 | 76,177 | 15,030 | 91,207 |
| Sumner | 3 | 985,655 | 50,555 | 29,555 | 80,110 |
| Totals | 141 | $57,905,718 | $8,362,594 | $2,733,952 | $11,096,546 |

tax levied in lieu of the present tax on the leasehold. While 30 school districts in the study would have less than 2 percent of their tax base removed, 14 school districts would have 28 percent or more of their tax base removed. In the lower one-fourth of the school districts studied, the assessed value of the lease-

hold was 2.33 percent or less or the total district valuatlon; while, in the upper one-fourth of the districts, the assessed value of the leasehold was 16.87 percent or more of the total district valuation. In one-half of the districts, the assessed value of the leasehold was between 2.33 percent and 16.87 percent of the total district valuation. The percentage varied from .03 in one district to 89.68 in another.

The actual figures on the assessed value of all property and the assessed value of oil property for the 141 school districts are given by counties in Table IV. This table shows that, considering all the school districts studied, the assessed value of the leasehold was, on the average, 75.4 percent of the total assessed value of the oil property, and that it was 14.4 percent of the total assessed value of all property in the district.

**Method of Allocating Part of the Severance Tax to the Local Taxing Districts.**—In the event that a severance tax is levied in lieu of the present tax on the leasehold and if it is considered necessary to return part of the tax collected to the local districts, there would be an administrative problem involved. The Tax Code Commission[15] recommended that, if such a tax were adopted, two-thirds of the amount collected be retained by the state and one-third be returned to the county. Of the one-third to be returned, one-fourth should go to the county general fund; and the remaining three-fourths should be distributed to rural elementary school districts in proportion to the number of pupils of school age enrolled in the district. While this plan would provide some relief, it hardly would be satisfactory to those particular taxing units which had lost a considerable portion of their tax base because they would not receive any special dispensation to compensate for their direct loss.

Some plan for returning a certain percentage of the tax collected to the particular taxing units from which it was collected would be more satisfactory for the taxing units affected than the plan proposed by the Tax Code Commission, but such a plan probably would involve more administrative detail. There still would be the problem of just what percentage should be returned and to what taxing units it should go. Even returning a certain percentage to the taxing units concerned would not result in all taxing units being affected in the same manner.

Table V illustrates the effect on the tax rate for two hypothetical school districts of returning 10 percent of a 3 percent severance tax levied in lieu of the present tax on the leasehold. In the one school district an increase of 3.75 percent in the tax rate would be necessary to give the district the same amount of money for school purposes as it had without the severance tax. In the other district, a slightly smaller rate than the original would be required. While this difference in the effect on the tax

[15]**Report of the Kansas Tax Code Commission.** Topeka State Printer. 1929.

TABLE V.—AN EXAMPLE OF THE EFFECT ON THE TAX RATE IN TWO HYPOTHETICAL BUT REPRESENTATIVE SCHOOL DISTRICTS OF RETURNING 10 PERCENT OF A 3 PERCENT SEVERANCE TAX LEVIED IN LIEU OF THE PRESENT TAX ON THE LEASEHOLD. *a*

| School District | (1) Total district valuation | (2) Total value of oil produced | (3) Assessed value of leasehold | (4) District value after leasehold removed (1-3) *b* | (5) Present tax rate for school purposes | (6) Taxes levied at present (5x1) *a* | (7) 10% of 3% severance tax .10x.03x(2) | (8) Amount levied on prop. left (6-7) | (9) Tax rate required on prop. left (8÷4) *c* | (10) Change in tax rate (9-5) *d* | (11) Change in tax rate in percent (10÷5) *e* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | $150,000 | $20,000 | $20,000 | $130,000 | 4 mills | $600 | $60 | $540 | 4.15 mills | .15 mills | 3.75% |
| B | $300,000 | $30,000 | $30,000 | $270,000 | 2.5 mills | $750 | $90 | $660 | 2.44 mills | -.06 mills | -2.4% |

*a* Procedure for calculating data for columns 6, 4, 9, 10, 11 in this table: (a) The total assessed valuation of the school district was multiplied by the tax rate to determine the taxes levied for school purposes, (b) the assessed value of the leasehold was subtracted from the total assessed value of the district to determine the total assessed value of the district after the leasehold was exempt from the general property tax, and (c) the total taxes levied minus the amount of the severance tax returned was divided by the total assessed value obtained in (b) to determine the tax rate necessary to raise the same amount of money as was raised before the leasehold was exempt. It was necessary to assume that the district would need the same amount of money after a severance tax was enacted as before. (d) The original tax rate was subtracted from the calculated tax rate to determine the increase or decrease in tax rates because of the severance tax. (e) The figure obtained in (d) was then expressed as a certain percentage of the original tax rate.

rates in the two school districts is not great, it is another factor to be considered in the problem of properly allocating a severance tax to the local districts.

### Incidence of the Severance Tax

The nature of crude oil production is one important factor which would tend to prevent a severance tax, with a rate comparable to that in nearby states, from being shifted to the consumer of the refined products. After the well has been drilled, the cost of pumping the oil is comparatively low. Thus, even though a severance tax should be imposed, the oil producers could, in most cases, still afford to pump the oil. In view of this, the price of crude oil would not be increased because the supply would not be affected materially. The contention might be made that, while present operators would continue to produce, the tax would retard future development; thus, eventually, the supply would be reduced. This, however, is hardly in accord with the speculative element in crude oil production. If a good well were located, the profits to be realized would be so large that the fact a severance tax would have to be paid undoubtedly would not receive serious consideration in deciding whether or not a well should be drilled. In other words, the desire to speculate is so great that there would probably not be any curtailment of drilling as a result of the tax. Neither does it seem reasonable that a severance tax would curtail the leasing of land for oil development. After the well had been drilled, it would in most instances be more profitable to pump what oil there was rather than to forfeit the investment.

The fact that the crude oil production in Kansas is only a small percentage (approximately 5 percent in 1936) of the total crude oil production in the United States is another factor which would make it difficult to shift a severance tax on oil in Kansas.

The usual reasoning followed in arguing that the tax would be shifted under competitive conditions is somewhat as follows: Whether or not a tax can be shifted depends upon the ability of those taxed to increase the price of their product. Since there is nothing about the imposition of a severance tax that would ordinarily increase the demand for crude oil, the only way that the price could be increased would be by reducing the supply. The addition of a severance tax would increase the cost of production to all operators so that those producers who were marginal operators before imposition of the tax would be forced out. With some of the producers removed, it is assumed that supply would be reduced and price increased.

While no data are available to prove the contention, it is probably true that within reasonable price limits the amount of the refined products of crude oil that will be purchased does not vary a great deal. This somewhat inelastic demand for such

products would tend to assist the producers in their attempt to shift the tax by increasing the price. Producers would be aided further in their attempt to shift the tax by the fact that, if the usual severance tax on crude oil were added to the price of gasoline, it would not raise the price more than a fraction of a cent per gallon. The effect of monopoly upon the possibility of shifting a severance tax was not considered because oil probably is not produced under monopolistic conditions at present. Neither was the fact that some oil producers are also oil refiners considered as it was not believed that this fact would alter materially the general conclusion.

In conclusion, while it is conceivable that a severance tax may be shifted, the nature of crude oil production and the fact that Kansas produces only a small share of the total crude oil indicate that, should such a tax be adopted, moat of it would be paid by the oil producers.

### Effect of the Severance Tax on the Conservation of Oil

In Kansas a severance tax on oil would have little, if any, effect on the conservation of oil although whatever effect it did have would be in the direction of conservation. As indicated previously, a severance tax probably would not result in any material reduction in the supply of crude oil and, therefore, would have but little effect on its conservation. The problem of oil conservation is much wider than the boundaries of Kansas, and any one proposing a tax with conservation as its objective must take this fact into consideration.

### Financial Results of the Severance Tax

The importance of production, price, and tax rate on the yield of a severance tax is shown in Table VI. For example, this table shows that a tax of 1 percent, with a production of 60 million barrels and a price of $1.00 per barrel, would yield $600,000, while a tax of 5 percent, with a production of 80 million barrels and a price of $1.50 per barrel, would yield $6,000,000, or ten times as much revenue. Assuming an annual production of 70 million barrels and an average price for crude oil of $1.26 per barrel, the revenue from a 3 percent severance tax would be $2,626,000. This is approximately one-half of the amount levied on property in Kansas for the state general fund and soldiers' compensation fund in 1936. If this $2,625,000 were used to reduce the general property tax, it would lower the average total tax rate slightly more than one mill provided the total assessed value of all property was approximately the same as in 1937.

TABLE VI.—THE ANNUAL YIELD OF A SEVERANCE TAX AT DIFFERENT LEVELS OF PRODUCTION, PRICES, AND TAX RATES.

| Rate of gross produce tax | $1 per barrel | $1.25 per barrel | $1.50 per barrel |
|---|---|---|---|
| **60 Million Barrels** | | | |
| 1 percent | 600,000 | 750,000 | 900,000 |
| 2 percent | 1,200,000 | 1,500,000 | 1,800,000 |
| 3 percent | 1,800,000 | 2,250,000 | 2,700,000 |
| 4 percent | 2,400,000 | 3,000,000 | 3,600,000 |
| 5 percent | 3,000,000 | 3,750,000 | 4,500,000 |
| **70 Million Barrels** | | | |
| 1 percent | 700,000 | 875,000 | 1,050,000 |
| 2 percent | 1,400,000 | 1,750,000 | 2,100,000 |
| 3 percent | 2,100,000 | 2,625,000 | 3,150,000 |
| 4 percent | 2,800,000 | 3,500,000 | 4,200,000 |
| 5 percent | 3,500,000 | 4,375,000 | 5,250,000 |
| **80 Million Barrels** | | | |
| 1 percent | 800,000 | 1,000,000 | 1,200,000 |
| 2 percent | 1,600,000 | 2,000,000 | 2,400,000 |
| 3 percent | 2,400,000 | 3,000,000 | 3,600,000 |
| 4 percent | 3,200,000 | 4,000,000 | 4,800,000 |
| 5 percent | 4,000,000 | 5,000,000 | 6,000,000 |

## SUMMARY

The oil industry in Kansas was started in 1860, but it did not become important until 1916 when the Butler county field came into production. In 1937, production reached an all-time peak of 69 million barrels, and indications are that production will continue to increase. The value of only two agricultural commodities — wheat, and cattle and calves — ranked above the value of the oil produced in Kansas for the five-year period, 1931-1935.

The procedure of taxing oil property follows the usual steps in the administration of the general property tax; namely, assessment, equalization, establishment of the tax rate, and collection. The statutes do not outline any specific procedure for determining the assessed value of oil property, and the State Tax Commission attempts to uphold the statutory provisions as far as possible. However, because of the inadequacy of these statutes, some county clerks and assessors have adopted an extra-legal method of assessing oil property. At unofficial meetings of oil assessors and representatives of oil and gas companies, a Kansas price schedule is adopted which gives the value of different sizes and kinds of equipment and gives instructions for figuring the assessed value of the leasehold. In the larger oil counties a regular oil assessor assesses all oil property in the county, but in the smaller oil counties, the county clerk may assume all such responsibility.

The assessment of oil property in Kansas could be improved by providing more definite statutory provisions to be followed universally as to the method employed, and some plan for state supervision of oil assessors. The State Tax Commission is of the opinion that the departure of actual assessment procedure from the statutes has resulted in less uniformity than would exist otherwise. This undoubtedly is true and should be corrected.

When the present general property tax on oil producing property is expressed in terms of a severance tax, the rate in 1935 was 1.5 percent. In Oklahoma, the severance tax which is in lieu of the general property tax is 5 percent. In Texas, the severance tax which is in addition to the general property tax is 2.75 cents per barrel if the price of crude oil is less than one dollar; if the price is more than one dollar, the rate 2¾ percent of the market value. In Kansas, the tax per $100 of gross income from oil producing property in 1936 was $1.50; while, on $100 of gross income from farm property, the tax was $8.04.

Eighteen bills proposing a severance tax on minerals have been introduced in the Kansas legislature since 1916. These bills have been summarized in Table III according to the minerals included, the tax rate, the tax base, the relationship of the proposed tax to the present taxes, and the use of the funds obtained.

An important point in considering a severance tax is its relationship to the present taxes on oil producing property. It is generally assumed from the constitutional amendment adopted in 1924 that the leasehold could be exempt from the present general property tax if a severance tax were adopted but that equipment could not be exempt. The desirability of exempting the leasehold from the present general property tax if a severance tax were adopted was considered. While the exemption of the leasehold would eliminate the task of assessing the leasehold, avoid concurrent taxation, and tend to correct the regressive nature of the general property tax, it probably would create the administrative problem of properly allocating part of the collected severance tax to the local government districts whose tax base would be depleted if the leasehold were exempt.

It seems that little, if any, of a severance tax in Kansas would be shifted to the consumer of the refined products of the crude oil. This would tend to be true because the speculative nature of crude oil production would tend to prevent reduction in the supply and, therefore, any increase in price. With no appreciable reduction in the supply, a severance tax would have little effect on the conservation of oil.

The volume of production, the price of crude oil, and the tax rate, all affect the yield of a severance tax. The revenue from a 3 percent severance tax in Kansas would be $2,625,000 if the total production were 70 million barrels and the average price for crude oil was $1.25 per barrel.