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PROPERTY TAX ON OIL RESERVES, ALASKA

A

GOVERNMENT PROJECT REPORT

Presented to the

University of Alaska in partial fulfillment

of their requirements

for the degree of

MASTER OF PUBLIC ADMINISTRATION

By

James R. Deagen

Juneau, Alaska

May 1975

AGO 530365

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May 9, 1975

Mr. James R. Deagen
RR 4, Box 4071
Juneau, AK 99803

Dear Mr. Deagen:

I am very pleased to congratulate you on your recent completion of your study, Property Tax on Oil Reserves, Alaska. It is easily one of the best studies which a student in this program has turned in to meet the requirements for a graduate degree in public administration.

Very shortly I will be contacting the President of the Southeast Alaska Chapter of the American Society for Public Administration to discuss the prospects of publishing and distributing your study with him and the association's Executive Board. For purposes of publication further editing may be necessary and, given the time-frame in which we would be operating, I would estimate that it would be four to six weeks before we could distribute the paper to interested readers.

In the meantime let me assure you that, under the formal terms of the research grant which the University of Alaska extended to you, the paper is your property to dispose of as you so wish. Under the terms of the grant you have met your obligations to the University of Alaska and to the Alaska Department of Revenue by providing copies of your paper to both agencies.

Sincerely,

Robert E. Newton
Associate Professor and
Program Coordinator

REN:sh
cc: President, S.E. AK Chap., ASPA
Commissioner, Revenue
Provost, University of Alaska, S.E.
Director, Student Services

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TO

Gallagher
(Eppenbach)

Martin
(Fackler)

Motley
(Hubbard)

Edenso

Poland
Huber ✓
Orsini
Rader
Butrovich
Meland
Rodey

Anderson
Cowper
Brown

Bradner
Miller

PREFACE

Taxation of oil in place evolved as a subject of interest to me because it was an obvious revenue producing option for the people of the North Slope as well as the State. Only after embarking on the study did I discover the ad valorem property tax to be a volatile subject of considerable contemporary interest. This interest was growing within the legislative and executive branches of Alaska State Government.

Thomas K. Williams of the Alaska Department of Law provided help far beyond the call of duty. John R. Messenger also of the Law Department was very helpful and attempted to keep me advised of impending testimony and the legal issues involved. Two of the nation's foremost experts on the subject of ad valorem oil property taxation, Robert H. Paschall of California and Edward S. Pritchard Jr. of Texas were very interested and helpful. Extensive useful information was supplied by E. Lee Bryant of Marathon Oil Company.

To these and more than thirty additional people who are listed in the bibliography, I wish to extend my sincere appreciation for the help and advice.

In acknowledging the assistance of these people, it should be made clear that they provided much valuable information and many insights, but I take full responsibility for the synthesis of observations and conclusions.

Finally, I would like to express appreciation to Dr. Robert E. Newton of the University of Alaska and Dr. Charles L. Schroth of the Alaska Depart-

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ment of Revenue. Their guidance was invaluable. To Jeri who deciphered my nearly unintelligble scribbling - a very special thank you.

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TAXING OIL IN PLACE

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INTRODUCTION

Taxing oil in place in the United States historically has provided a local government source of revenue. In oil producing regions, the local taxing entities have reaped the bounty, and in the localities with no oil, naturally no revenues have accrued from this source.

This paper examines the oil taxing procedures of the 16 states with the highest current production, (see Table 1 & 2). All of these were contacted for information on oil taxation. Thirteen replied. The remaining states with minor production would not be able to provide additional significant information. Companies with extensive oil exploration and producing equipment in Alaska were queried concerning their view of this type of tax. In particular, their analysis of ad valorem tax equity in comparison with the various forms of severance taxes was sought. Possibly this was not a realistic query, since the impact of the tax on each company has significantly more importance than the eventual spread of the taxes paid by that company. Taxes paid to all forms of government by the oil companies is included in this analysis. The paper then examines the general field of property taxation showing Alaska as relying on this form of taxation less than any other state. Finally, the paper concludes with a review of some of the expert testimony presented to the Resources Committee of the Alaska State Legislature concerning oil property taxes, and a look at the alternative methods of obtaining revenue to cover the "shortfall" in State of Alaska revenue for the 1976-78 period.

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TABLE 1
OIL PRODUCTION LEVELS OF THE 16 HIGHEST OIL PRODUCING STATES

OIL PRODUCING RANK	STATE	OIL PRODUCTION (1,000 b/d)				Per Cent Change From:	
		Feb. 75	Aug. 74	Feb. 74	Feb. 73	Feb. 74	Feb. 73
1	Texas	3,339	3,596	3,654	3,538	- 9%	- 6%
2	Louisiana	1,943	1,970	2,132	2,388	- 9%	-19%
3	California	877	886	914	943	- 4%	- 7%
4	Oklahoma	490	490	498	535	- 2%	- 9%
5	Wyoming	374	418	420	353	-11%	+ 6%
6	New Mexico	267	272	268	295	--	-10%
7	ALASKA	201	202	189	194	+ 6%	+ 4%
8	Kansas	176	181	176	193	--	- 9%
9	Mississippi	135	143	151	163	-11%	-17%
10	Utah	108	109	98	73	+10%	+48%
11	Colorado	105	107	102	110	+ 3%	- 5%
12	Florida	99	104	90	77	+10%	+29%
13	Montana	91	97	97	93	- 6%	- 2%
14	Illinois	78	79	81	94	- 4%	-17%
15	North Dakota	54	54	55	56	- 2%	- 4%
16	Michigan	53	47	42	37	+26%	+43%

Source: Oil & Gas Journal: February 25, 1974, August 19, 1974 and February 17, 1975

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TABLE 2
OIL PRODUCTION, VALUE AND RESERVES BY STATE

Rank As Oil Producer	State	Value of Crude Oil Produced in 1972 (Millions of $)	Crude Oil Produced Barrels Per Day Average Per Well in 1972	Average Drilling Cost Per Well in 1971 (Thousands of $)	Proven Reserves December 1972 (Millions of bbls.)	State Rank In Proven Oil Reserves (End of 1972)
1	Texas	$4,536.1	20.7	$ 85.4	15,036	1
2	Louisiana	3,201.7	93.3	284.1	7,164	3
3	California	944.3	23.6	66.6	3,680	4
4	Oklahoma	710.1	7.7	79.3	1,638	5
5	Wyoming	432.1	43.3	93.5	1,041	7
6	New Mexico	376.8	22.5	88.8	1,085	6
7	ALASKA	235.4	1,019.4	1,396.3	10,097	2
8	Kansas	259.6	5.0	21.8	846	8
9	Mississippi	192.5	65.2	210.3	327	10
10	Utah	80.7	78.8	294.1	278	11
11	Colorado	109.2	48.0	53.3	342	9
12	Florida	53.7	320.0	NA	217	13
13	Montana	103.9	28.8	44.9	246	12
14	Illinois	121.0	3.9	17.1	176	15
15	North Dakota	67.6	35.9	78.9	211	14
16	Michigan	41.6	9.4	61.6	81	21

Source: Statistics adapted from information published by the Independent Petroleum Association of America in Publication, The Oil Producing Industry in Your State, 1973 Edition.

CHAPTER I

OIL TAXES IN THE MAJOR PRODUCING STATES

The oil producing states utilize a wide variety of methods in taxing oil. A few states tax oil and gas property solely on the basis of its value: California, Illinois and Ohio (see Table 3).

The largest oil producing state, TEXAS, has a severance tax as well as a property ad valorem tax. The physical structure, the reservoir, everything involved in the oil and gas production process, is included in the ad valorem tax.

The State of Texas has no strong ad valorem tax coordinating and regulating function concerning oil properties although they do have a small ad valorem tax staff within the State Comptroller office.

The comptroller retains the responsibility for designing prescribed forms, auditing tax roles (but only with respect to collection of State taxes) and providing a manual for assessors. The current edition, which has been in use many years, includes regulations, opinions of the attorney general, excerpts from statutes, and instructions in assessing procedure. It is not a cost manual for appraisers.

About 200 of the 254 Texas counties have oil or gas productive capacity. Texas has a myraid of local jurisdictions: cities, independent school districts, junior college districts, hospital districts, navigation districts, and more. As of 1972, Texas had 3,624 local govern-

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TABLE 3
TAXES ON OIL - 16 MAJOR PRODUCING STATES

RANK AS OIL PRODUCER	OIL PRODUCING STATE	AD VALOREM TAX ON OIL PROPERTY	SEVERANCE OR PRODUCTION TAXES % OF WELLHEAD VALVE	SEVERANCE OR PRODUCTION TAXES % OF MARKET VALUE	CONSERVATION TAX (MILL RATE PER BARREL)	SEVERANCE, PRODUCTION & CONSERVATION TAXES COLLECTED (in thousands of $) 1972	1973
1	Texas	yes	--	4-6%	1.87	$307,368	$334,797
2	Louisiana	in lieu	6.25 - 12.5%	--	--	236,485	259,455
3	California	yes	none	none	.63	1,554	1,407
4	Oklahoma	in lieu	--	5-7%	2.50	73,342	71,457
5	Wyoming	yes	1-3%	--	.40	5,075	16,130
6	New Mexico	no	--	3.75%	1.40	13,536	15,695
7	ALASKA	no	5-8%	--	1.25	12,341	10,893
8	Kansas	yes	none	none	1.50	687	711
9	Mississippi	in lieu	6%	--	3.00	13,143	13,666
10	Utah	yes	2%	--	1.50	1,432	1,530
11	Colorado	in lieu	(3-5% of gross income)		1.00	524	795
12	Florida	in lieu	--	5%	--	2,250	10,240
13	Montana	yes	--	3-4%	3.75-7.5	2,668	2,692
14	Illinois	yes	none	none	--	0	0
15	North Dakota	in lieu	--	5%	--	3,306	3,140
16	Michigan	in lieu	--	2%	(1-10 mills)	929	1,076

Source: Statistics adapted from three sources: 1) the Independent Petroleum Association of America, The Oil Producing Industry in Your State, 1973 edition, 2) Correspondence from the Tax Department of most of the states listed, and 3) the American Petroleum Institute State and Local Oil and Gas Severance and Production Taxes, Jan. 1974, updated to October 1974.

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ment units, 3,005 of which had property taxing power (in 1972, Alaska had 125 units, all having taxing power). Most of these taxing bodies are responsible for the administration of the property tax which, of course, includes the assessment of oil and gas reserves. Property taxes comprised approximately 60 per cent of all locally raised revenue. Unlike the California and Kansas underlying philosophy on this taxation (the value of the right to produce income from oil and gas) in Texas, they are more direct: the physical property itself is taxed (all of it).

Most of the taxing jurisdictions contract with three industrial evaluation appraisal firms located in Texas. Nearly all the large oil producing properties in Texas are appraised by two of these firms: Pritchard & Abbott and Thomas Y. Pickett. Pritchard & Abbott is the largest (Alaska has current contract with this firm). Like California, assessments require competent reservior engineering as well as consideration of the historical record of value of production and potential value.

The property tax system in Texas does not provide equity in local government finance. This becomes particularly evident in the field of education. In Texas, the "Rodriguez Decision" has created interest in the property tax in education and other fields.

> The current system of financing public education in Texas discriminates on the basis of wealth by permitting citizens of affluent districts to provide a higher quality education for their children, while paying lower taxes, (and) this court concludes...that the plaintiffs have been denied equal protection of the laws under the Fourteenth Amendment to the United States Constitution.
>
> Rodriguez et. al. vs. San Antonio Independent School District et al.[1]

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[1]Advisory Commission on Intergovernmental Relations, The Property Tax in a Changing Environment (Washington, D.C., Government Printing Office, March 1974) p. 252.

Even though the Rodriguez decision was not upheld by the U.S. Supreme Court, it has stimulated considerable interest and debate among Texas tax administrators and property tax opponents. In Texas a reasonable, but politically untenable alternative would be a statewide property taxation program supplanting the local property tax.

Besides the ad valorem tax on oil property, Texas assesses a straight 4.6 per cent severance tax. The ad valorem tax combined with the severance tax balances the comparative advantages of the sliding scale severance tax. The varying range of the ad valorem tax on top of the severance tax probably puts the local Texas tax at about 4.7 to 10.0 per cent. Ed Pritchard, of Pritchard & Abbott appraisal engineers, contends the average of both Texas taxes is slightly higher than the average of Alaska's sliding severance. The Texas tax on gas is higher, which when combined with oil taxes definitely places Texas taxes higher than in Alaska. The oil companies (particularly SOHIO, ARCO, and Union) contend the current Alaska sliding severance is equal or higher than the Texas combined taxes. The hard data to compare the two states is not yet available, however, it is safe to conclude that on oil only, current Alaska taxes and Texas taxes are close, but when combined with gas severances Texas is higher.

Of the total Texas ad valorem taxes collected, the state received 17 per cent of ad valorem taxes collected from the municipal taxing bodies in 1974. This will decline to 12 per cent for FY '75, and 10 per cent for future years, according to current Texas statutes. This minor proportion of ad valorem taxes collected for the state is dedicated to higher education (mainly the University of Texas). Although the State of Texas has a small

ad valorem tax-unit, they are totally dependent on the county assessors and other municipal taxing entities, most of which are, in turn, dependent on the industrial property appraisal firms.

Second to Texas in oil production is LOUISIANA which produces about ten times the Alaska level. The severance tax on flush wells in Louisiana has recently been raised to 12 1/2 per cent, the highest rate of any state. Although the tax is not in essence a sliding scale severance, oil wells are classified and subsequently taxed under three different classes. The 12 1/2 per cent rate applies to oil wells producing at a "full rate." The second well classification is an "incapable oil rate" which is taxed at 6 1/4 per cent of value and the third classification, "stripper oil rate" which is taxed at 3 1/8 per cent of value. Owen Van Manning of the Louisiana Department of Revenue defines the "incapable" and "stripper" wells:

> An incapable oil well is a well certified by the Department of Revenue as incapable of producing more than an average of 25 barrels of oil per day and also produces 50 per cent or more saltwater. A stripper well is a well that has been certified as incapable of producing more than an average of ten barrels of oil per day.[2]

The Louisiana severance tax brought in $388 million in FY '74, nearly all from oil and gas. Oil production, however, has declined, down nine per cent from the year before and down 19 per cent from 1973. The relationship, if any, of higher state taxes to reduced production is not known by this writer.

Refineries and manufacturers of petroleum products are subject to an additional tax, a graduated occupational license tax based on gross

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[2]Owen Van Manning, letter of November 6, 1974.

receipts.

A minor ad valorem tax on wellhead and downhole equipment is administered at the local level. There is no property tax on oil reserves. The severance tax is "in lieu" of property tax on reserves. The local tax revenues from the property tax total $12 million, an insignificant fraction of the severance tax.

The property tax combined with severance equals about 13 per cent; much higher than Alaska.

CALIFORNIA, the third largest producing state has only one tax on oil and gas, the ad valorem property tax. They use a unique system of determining the value. The total volume of recoverable hydrocarbons in a reservoir is estimated on the basis of the physical characteristics of the reservoir.

Most other states with ad valorem taxes on oil use a formula to estimate the value of reserves in a reservoir usually based on the value of production of the well from the previous year. As mentioned earlier, appraisal techniques in Texas (and Kansas) consider the characteristics of the reservoir.

California has no severance tax, no special tax on producing equipment, and no tax on oil and gas reserves as such. Instead, taxes are based on assessments that derive from annual total property income-type appraisals made by county assessors. The tax rate ranges from zero to nine per cent of income produced from oil and averages about seven per cent. The average seven per cent is close to what the Alaska severance tax will produce on Prudhoe oil. According to Robert Paschall, Senior Petroleum and Mining Appraisal Engineer of the California State

Board of Equalization (the closest California counterpart to the Alaska Department of Revenue):

> The upper end of the range is affected by two elements -- profitability and the local tax rate. High profitability means high value, and tax rates vary here in California from one jurisdication to another.[3]

Property taxes in California will amount to about $115 million in FY '75, nearly all of which will go to the counties and school districts. Unlike Texas, the State of California has a strong coordinating role in the industrial property taxing function.

As mentioned earlier, the basis of the tax has varying philosophical underpining. Kansas is similar to California in that the value of the right to produce oil and gas is what is taxed, although the method of determining the value of that right is generally computed similar to the method used in Texas. Paschall explains the philosophy behind the California ad valorem tax as not a property tax per se, but rather a tax on the value of the right to produce oil and gas. It is a tax on the net income from exercising the right. The higher the production, the higher the rate of taxes which are paid. As the production rate declines, and the future income promises to be lower, the present worth is reduced and so are the taxes. A properly administered ad valorem tax, although distinctly different, has the same effect as a sliding scale severance tax.

Paschall strongly advocates either the property tax or the severance tax, but not both at the same time. He explains the critical difference between the California property tax and the sliding scale sever-

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[3]Robert H. Paschall, letter of February 27, 1975.

ance tax:

> An equitable severance tax should not exact as high a levy on a barrel of marginal oil production as it does from a barrel of flush production. But how can one establish an equitable sliding scale severance tax unless it can be related to net income per barrel? The ad valorem tax, as it is administered in California, does this automatically.[4]

Of all the states surveyed, the California property tax system appeared to have solid recent administrative history and other beneficial aspects that could be applied to a similar tax if enacted in Alaska.

A recent report by the Advisory Commission on Intergovernmental Relations supports this relative excellence of the California overall property tax system:

> The type of reassessment program once common in the United States -- massive revaluation efforts often followed by years of roll copying -- is a thing of the past in California. Every county now has a continuing reassessment program. This has resulted from a number of major developments which are still underway involving pioneering technical efforts by some local assessors and the staff of the State Board of Equalization; and involving a great deal of State-local collaboration and intercounty sharing of experience.[5]

State involvement in property tax administration is strong and effective in California:

> Tremendous changes in property tax administration have occurred in California since 1962. Many of them stem from a scandal that broke early in July 1965 and was described at length in the September 10, 1966, Saturday Evening Post. After one county assessor had committed suicide and two assessors, as well as several deputy assessors and tax agents, had been convicted of felonies, the California legislature enacted Chapter 147 at an extraordinary session in June of 1966. This statute shifted the emphasis from local autonomy to State supervision of assessors, provided for vastly increased auditing of property statements, and gave taxpayers better appellate opportunities.[6]

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[4]Robert H. Paschall, Valuation of Oil and Mineral Rights, Arizona State University, 1971.

[5]Advisory Commission on Intergovernmental Relations, The Property Tax in a Changing Environment, (Washington, D.C. Printing Office, March 1974) p. 61.

[6]Ibid. p. 56.

Those in the oil industry and consultants to the Alaska State Legislature who contend that the property tax is expensive to administer should consider the California experience. Paschall, testifying before the State Senate Resource Committee in April 1975 reported roughly $6 billion is collected at a "central service" State expenditure of less than $5 million. He stated that the assessments on oil and gas property alone amounted to $115 million in revenue, with an overall cost of administration approaching $548,000. The cost of administration came to about one-half of one per cent of revenues, a very efficient ratio. Comparatively, the much smaller scale property tax on oil equipment cost about two per cent of revenues.

Consideration of the property tax as a short term tax to cover the shortfall in Alaska State revenues, or to eventually be credited towards the future severance tax, brought forth a key point of contention on property taxes of oil properties: should oil property without a pipeline allowing production be taxed? Are there any precedents? Paschall offered some illuminating points:

> You asked in your recent letter whether I could provide you with any examples of oilfields on which ad valorem taxes were levied at a time when a field had not yet been connected to a pipeline. I know of numerous instances of this nature involving gas wells, so it comes to the same thing. Quite commonly in the past gas wells have been drilled and completed but not hooked up to a pipeline as long as two years after the date of completion.
>
> It may be useful to remark that it is not germane under California law whether a well is hooked up or not, so far as its ad valorem tax liability is concerned. The key element is that the well have demonstrable value, since "ad valorem" means "according to value." Of course, a well that is not yet hooked up typically has a lower value than a producing well with similar reserves, simply because the income of the first well will not be received until some perhaps uncertain time in the future.[7]

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[7]Robert H. Paschall, letter of February 27, 1975.

Although similar examples of precedents were not requested from Texas, Pritchard was unequivocally opposed to enacting a property tax on oil property until the property was potentially able to produce revenue. The Pritchard and Abbott firm probably has considerable opportunity for financial gain from a potential Alaska property tax on oil properties as they would be prime candidates for contractual work on appraising the fields based on their significant record of accomplishments, as contractor and advisor, on the recently enacted 20 mill tax on oil and gas "chattel" property used in exploration, production and pipeline transportation. Although all executive personnel of the firm interviewed were strong advocates of the property tax on oil reserves as well as other industrial properties, they were not in favor of this tax on a resource which could not produce income.

In OKLAHOMA, the fourth ranked oil producing state, the primary form of taxation on oil and gas is the gross production tax, which is five per cent of the gross value. The payment of this production tax is in lieu of all taxes by the State or any sub-jurisdiction upon the producing leases, the oil or gas itself, or machinery and equipment used in the production of oil and gas.

Of the sixteen major producing states, twelve have a severance type of tax. Of these, only Oklahoma, Louisiana, Mississippi, Florida and Michigan provide that their severance tax is an outright in lieu tax. Property tax exemption, however, does not always mean the same thing. In Oklahoma, as in Mississippi, the severance tax is not only in lieu of property tax on the reserves in place, but also on all machinery and equipment used in production of oil and gas.

The gross production tax is administered by the Oklahoma Tax Commission. The production tax is dedicated primarily to the State where 78 per cent is appropriated to the General Fund and two per cent is allocated to collection and enforcement. Municipal sources receive the other one-fifth with ten per cent to the school districts.

W.L. Elvany, Director of the Gross Production Division of the Oklahoma Tax Division, describes the Oklahoma ad valorem taxes and their method of administration:

> Ad valorem taxes in Oklahoma are assessed by the county assessor, except on railroad and public service corporations, whose assessments are administered by the State Board of Equalization on the basis of recommendation of the Tax Commission. Pipeline companies are held to be public service corporations. Their assessments are determined from year to year by appraisal rather than by fixed schedules of value per mile by pipe size. The Tax Commission also recommends to county assessors schedules of value to be applied to such properties as oil in storage, tankage, gasoline plants, pipe, etc.[8]

Undeveloped leaseholds are not taxed in Oklahoma.

The combined gross production tax and ad valorem tax of Oklahoma is lower than current Alaska taxes on oil.

WYOMING, the fifth ranked oil producing state has an ad valorem property tax in addition to a three per cent severance tax (one per cent on wells producing less than ten barrels a day). The ad valorem tax on oil lease property is based on the preceding year's gross production in lieu of taxes on the land, but in addition to taxes on surface improvements the oil lands with an appraised valuation of $485 million in 1974 yielded $27.4 million in ad valorem taxes. This is one of the few states which considers the oil and gas property to be personal property for taxing purposes.

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[8]W.L. McElvany, letter of February 7, 1974.

According to Harold De Bolt, Director of the Ad Valorem Tax Division for the State of Wyoming, Department of Revenue and Taxation:

> The Wyoming Constitution provides that a four mill levy may be levied for ad valorem property tax, however, the state financial condition has been such that it has not been necessary to apply the four mill levy during the past four years. Therefore, all the ad valorem taxes...have remained in the local taxing districts in which the production was held. Our legislature is now in session and there is a good possibility that the three per cent severance tax on oil will be advanced to four per cent. In addition to the ad valorem (property) and severance taxes on production, which our State assessed, the county assessors assess all the above ground oil or natural gas producing equipment, i.e., pumps, tanks, gathering lines, moters, etc.[9]

Wyoming has no taxes on corporate income. Oil taxes in Wyoming are less than in Alaska.

NEW MEXICO, sixth ranked and the only other state producing more than Alaska, previously imposed nearly every type of oil tax: a severance tax, a special excise tax on the income from the sale of oil and gas, and a net proceeds type of ad valorem tax. However, as of January 1, 1975, the ad valorem tax statutes were changed -- now there are no taxes imposed on oil and gas in place in New Mexico. One feature of New Mexico's tax system that Alaska should consider is that all oil related taxes are based on the same evaluation and are administered through a central agency (all in one building). Even the royalties are administered from this central agency. Antonio L. Martinez, Executive Director of the Oil and Gas Accounting Commission for New Mexico feels they have the most efficient oil revenue system in the nation:

> New Mexico is considered to have the most efficient oil and gas collection and revenue distribution system in the nation since all production taxes and royalties due are based on the same evaluation and are administered by one central agency.[10]

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[9]Harold De Bolt, letter of February 27, 1975.

[10]Antonio L. Martinez, letter of December 26, 1974.

KANSAS, ranking eighth, produces slightly less oil than Alaska. They have a property tax on the production of oil and gas, and on oil and gas reserves. There is no severance tax in Kansas. Kansas enacted a severance tax on oil and gas production in 1957, however, six months later the State's Supreme Court declared it to be unconstitutional. Since that time the severance tax issue has surfaced in various legislative sessions, however, there has never been a major effort towards it's re-enactment. Although the State coordinates and administers the property tax for the municipalities, some oil-rich municipalities contract with the Texas firm, Pritchard & Abbott, for oil evaluation appraisals. Kansas statutes specifically state that oil and gas leases are assessable at their actual market value.

Although Kansas has a "good reputation" among oil taxing states, there are gross inequities in the spread of oil tax revenues. The oil-rich counties simply get all the revenues. This also occurs in California and Texas. The ad valorem tax contemplated in Alaska is a statewide tax. However, pressure can be expected from the municipalities to gain a large proportion of the taxes collected, as property taxes accruing to the local taxing jurisdictions have strong precedence throughout the states. Although the Alaska Constitution prohibits dedicated taxes; a property tax on oil reserves if dedicated to revenue sharing and education would eliminate the local taxing jurisdiction and at the same time provide alternate revenues to cover the shortfall in state revenues.

In Kansas, oil and gas property is assessed as personal property. The property is appraised at fair market value and assessed at 30 per

cent of that value. The State of Kansas, Division of Property Valuation, is required to furnish property assessment manuals to all local assessors. Kansas statutes require the local assessor to conform to the State manual.

The conservation tax rate is 1 1/2 mills in Kansas and one additional mill accrues to the State Board of Health. Kansas oil taxes are well under Alaska oil taxes.

MISSISSIPPI, the ninth ranked oil producing state, has a severance tax at six per cent of wellhead value. As in four other of the top sixteen producing states, the severance is in lieu of property taxes. All producing oil equipment, including wells, pumps, derricks owned by the producer and all leases in production including mineral rights are exempt from ad valorem taxes of the local taxing districts. The exemption does not apply to oil exploratory equipment. All drilling equipment, including derricks utilized in drilling, machinery used in drilling, oil gathering systems, and the surface of lands leased for oil production are assessed as other properties in Mississippi and are subject to ad valorem taxes. The State provides part of the severance tax collected to the county in which the oil is produced. One-third of the first $600,000, ten per cent of the next $600,000, and five per cent of that collected over $1.2 million is paid to the county.

Mississippi imposes a franchise tax of $2.50 for each $1,000 of capital assets. Also, they have an insignificant maintenance tax of three mills per barrel, similar to the Alaska Oil and Gas Conservation Tax of 1.25 mills per barrel. Of the sixteen major producing states only in Montana is this conservation tax rate exceeded. Virtually all oil producing states have this tax to cover the expense of administration of

the oil regulatory agency, however, mention of this tax has often been omitted in earlier state tax analyses because of its relative insignificance in comparison to property, production and severance taxes.

Mississippi has a State income tax amounting to three per cent of the first $5,000 of net income and four per cent of all income over $5,000. Overall, the taxes on oil in Mississippi are slightly lower than the comparable oil taxes of Alaska.

UTAH, the tenth ranked oil producing state, has experienced the largest percentage increase in production over the past two years. Utah has form of severance tax called an occupation tax as well as an ad valorem tax. Both are assessed at the state level, with the revenue from the occupation tax going to the state and the revenue from the ad valorem tax going to the county where the oil producing property is located.

The ad valorem tax is based on the gross proceeds and does not apply to oil reserves. According to Robert Cooper of the Utah State Tax Commission:

> The ad valorem assessment on oil and gas is based on 80 per cent of the gross proceeds, times the interest the owner or operator has in the property. In other words, if the oil is recovered from privately owned land, the assessment would be 80 per cent of the total revenue. In addition to this, there is a flat well assessment made on flowing and pumping wells. This assessment is static and allows for no depreciation. [11]

The occupation tax rate on oil and gas is only two per cent of the gross proceeds realized from the sale of the product, converted to the wellhead price, and allowing a $50,000 exemption per tract (depending on whether exempt royalties are paid by the operator).

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[11] Robert H. Cooper, letter of March 12, 1975.

The conservation tax in Utah is 1-1/2 mills, slightly higher than in Alaska, but at the median of the sixteen major producing states.

Cooper makes an interesting point concerning the reluctance of Utah to tax oil in place.

> The State of Utah has tried to steer clear of a tax on oil reserves, partly because of experiences we have had in assessing coal reserves, which have proven very unsatisfactory. The element of the unknown, which is constantly involved in establishing reserves, seems to continually haunt states where an attempt is made to tax on a reserve basis.[12]

Current Utah taxes on oil are less than Alaska taxes on oil.

COLORADO, the eleventh ranked oil producing state produces at about one-half the Alaska level. A corporate income tax serves as the basic source of revenue from oil to the state.

In addition to the state income tax, they have an additional tax on gross income from the production of oil and gas. The tax rates are: under $25,000 gross income - two per cent; from $25,000 to $100,000 - three per cent; from $100,00 to $300,000 four per cent tax; and all gross income over $300,000 at five per cent. It is an in lieu type of gross income tax, however, the ad valorem taxes paid to the municipal taxing districts are credited to the gross income tax.

The responsibility for property valuation in Colorado is delegated mainly to local jurisdictions, most of which are too small to afford a professional organization. The state property tax agency operates with a relatively slim budget and limited supervisory powers, but according to the Advisory Commission on Intergovernmental Relations, Colorado, has developed a useful program for the measurement of assess-

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[12] Ibid.

ment levels and variations.

At the county level, the ad valorem property tax in effect covers all oil property and equipment. An average rate of 89 mills on 30 per cent of actual value is collected by the municipal taxing authorities. According to Jack O'Donnell, Senior Property Appraiser of the State of Colorado, Division of Property Taxation:

> In Colorado, producing oil or gas leaseholds and lands have an assessed value equal to 87 1/2 per cent of the gross value of the oil or gas produced during the preceding year. This value is in addition to the regular actual value of the land.
>
> Severed mineral interests (nonproducing) are assessed at 30 per cent of actual value in the same manner as other real property. If there is no market in this type of property, a minimum assessed value of one dollar per acre is used.
>
> All surface oil and gas well equipment is separately valued for assessment as personal property at 30 per cent of its actual value.
>
> The ad valorem taxes are determined by multiplying the assessed valuation by the total levy in the tax jurisdiction wherein the property is located. The statewide average mill levy in Colorado is now 82.02 mills. However, many of the oil and gas fields are located in rural areas where the total levy is less than the state average.
>
> All taxable property, except that of public utilities, is valued by the local county assessors under the guidance of the Division of Property Taxation.
>
> All ad valorem taxes are collected by the local county treasurers and remain in the counties wherein collected. The State of Colorado receives no income from ad valorem taxation.[13]

The oil and gas conservation levy is one mill, slightly under Alaska's 1.25 millage rate. Overall, the Colorado oil taxes are slightly lower than Alaska's taxes on oil.

FLORIDA, the twelfth ranked state in oil production has an excise

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[13]Jack A. O'Donnell, letter of March 27, 1975.

tax of five per cent of the gross value of production. This production tax is in lieu of ad valorem taxes. The state general fund receives 80 per cent of the proceeds and the county in which the oil is produced receives the remaining 20 per cent. In essence then, one per cent of the production tax on gross value reverts to the county to pay the ad valorem tax on the "personal property" used in production.

The county tax assessors are prohibited from increasing the value of property on the basis of proven oil or gas reserves.

Florida, like Alaska, has experienced moderate increases in oil production over the last two years. Of the sixteen major producing states, only two others have realized advancing production levels.

MONTANA, the 13th ranked oil producing state, has three direct taxes on oil production: the Oil Producers License Tax, Resource Indemnity Trust Tax and Net Proceeds of Mines. All three are administered by the State with the proceeds of the License Tax and the Trust Tax becoming part of the state general fund and the receipts of the Net Proceeds Tax going to the local taxing jurisdictions.

The License Tax and the Trust Tax are both based upon a percentage of gross value. These two are more commonly referred to as severance taxes. They are actually one in the same and are separated only for the purpose of assigning the proceeds to different funds.

Montana makes heavy use of the property tax. Only two of the top sixteen oil producing states do not have a statewide sales tax, Alaska and Montana. Conversely, when looking at the relative burden from property tax as a proportion of personal income, Table 4, Montana has the highest rate and Alaska the lowest (in 1970-71).

K.K. Morrison, Chief of the Intercounty Property Bureau of the Property Evaluation Division of the Montana Department of Revenue describes the ad valorem tax:

> The Net Proceeds Tax is an ad valorem tax upon oil, as it is produced. The State of Montana is charged with the determination of the net proceeds from information provided by the oil producers. Upon determing the Net Proceeds, the State furnishes the county assessors with the information. The Net Proceeds then become part of the county's tax base the same as all other taxable property. The tax rate applied to the Net Proceeds would depend upon the mill levy in effect for the location of the oil production. The State does not receive a portion of the receipts, except to the extent of a State permissive levy may be included in the total mill levy.[14]

Montana was the only state surveyed which has centralized all property tax assessment at the state level (constitutional amendment effective July 1973).

Unlike the Alaska tax on oil exploration and producing equipment at 100 per cent of value, the states with ad valorem taxes on oil property assess at a rate less than 100 per cent. Montana, like Texas, assesses at 40 per cent of full value. The equipment in Louisiana is assessed at 20 per cent of value and in California, everything is assessed at 25 per cent of its full value. Concerning the assessed value in Montana, Morrison explains the process:

> There are two steps which are taken to arrive at the tax base. First assessed value is approximately 40 per cent of full value. Secondly, the base or taxable value is between seven per cent and 100 per cent of the assessed value, as determined by a classification system.
>
> The State permissive levy including University millage is limited to 18 mills. In 1974 only six mills were applied. It should be noted that the funds generated by the State millage are earmarked to finance local schools as a supplement to county millage for schools.[15]

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[14] K.K. Morrison, letter of February 21, 1975.

[15] K.K. Morrison, letter of February 13, 1975.

TABLE 4
STATE AND LOCAL GOVERNMENT PROPERTY TAX REVENUE IN THE 16 HIGHEST OIL PRODUCING STATES, 1970-71

Oil Producing State	Property Tax per $1,000 of Personal Income	Per Capita Amounts		As of % of Total Tax Revenue			As of % of Government Revenue		
		Total	Local	Combined	State	Local	Combined	State	Local
Montana	$70.84	$235.04	$222.90	55.6	6.3	96.6	31.6	2.7	60.2
California	67.45	296.27	284.20	49.1	4.3	88.1	32.3	2.4	42.5
Wyoming	65.74	228.35	202.25	47.3	9.5	97.0	23.8	4.1	41.7
North Dakota	63.63	188.15	185.89	44.9	1.0	96.8	24.3	.4	51.3
Kansas	55.06	209.67	205.04	50.4	2.3	97.1	32.4	1.3	49.5
Colorado	50.52	187.40	186.52	41.9	.4	83.9	25.6	0.2	42.6
Michigan	50.39	202.33	192.32	41.2	3.5	92.2	27.5	2.3	41.5
Utah	44.95	139.74	127.83	36.1	4.9	89.5	20.4	2.4	39.9
Illinois	44.56	199.54	199.50	38.9	---	85.7	27.7	---	46.6
U.S. AVERAGE	47.37	185.51	178.03	39.9	2.2	84.6	26.1	1.3	39.9
Texas	39.62	137.15	131.58	40.0	2.9	87.2	24.4	1.7	40.9
Florida	35.80	126.83	121.76	33.9	2.2	81.6	21.9	1.5	32.1
Oklahoma	29.99	97.53	97.53	30.2	NA	84.3	16.2	NA	34.3
Mississippi	29.93	76.72	74.87	24.3	.8	90.6	12.9	.4	24.3
New Mexico	28.38	87.78	72.35	22.4	5.0	87.6	11.4	2.6	20.2
Louisiana	23.79	71.95	64.27	19.0	2.9	58.0	11.0	1.6	20.4
ALASKA	23.64	105.74	105.74	22.7	NA	75.4	6.8	NA	19.4

--- Less than .05 per cent
NA Not applicable
Source: Taxable Property Value and Assessment - Sales Price Ratios, Volume 2, Part 2, 1972 Census of Governments, U.S. Department of Commerce, Social and Economics Statistics Administration, October, 1973.

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In comparing the approaches to oil field taxation by Alaska and Montana it appears that the Alaska severance tax rate exceeds the Montana severance tax by as much as 4.8 per cent. The ad valorem rates in Montana would make up the difference, resulting in an overall tax impact of state and local to be about the same in Alaska and Montana.

ILLINOIS, the fourteenth ranked oil producing state, has no severance or production taxes only an ad valorem tax. The formula for determining value includes four elements: the volume of production, the depth of the well, age of the well and nature of the reservoir (sand or limestone which is more or less determined by the depth factor). The assessments are made locally and the entire tax collected accrues to the local units of governments.

Although Illinois receives no taxes from oil or gas, a detailed formula is published by the Illinois Department of Revenue for use of local taxing entities. The Property Assessment and Equialization Supervisor for the State of Illinois, Department of Local Government Affairs, Gregory Lafakis, states, "the recommended formula is felt to be outdated and not reflective of the current value of oil reserves. Accordingly, the entire formula is in the process of being updated.[16]

Of all the states checked in this paper, the State of Illinois receives the least from the production of oil. The local taxing authorities in Illinois receive far less proportionately than the combined state/local taxes in Alaska.

In the states with ad valorem taxes that have relatively minor

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[16]Gregory J. Lakakis, letter of March 27, 1975.

production, the assessment formula is simple - usually total production in barrels times average field price equals full market value to which the level of assessment, usually 20 to 40 per cent is applied. The obvious shortcoming of this type of formula is that it doesn't take into account the costs of production. A full flowing well gets the same value and assessment as a stripper well with high operating costs. The Illinois formula, similar to the procedure in the major producing states of California and Texas, eliminates these inequities.

E. Lee Bryant, Manager of the Property Tax Department of Marathon Oil Company discusses the Illinois ad valorem formula:

> The Illinois formula provides for additional value on the royalty interest, which is done in many states, based upon the premise that the royalty interest does not bear any of the costs of production and hence should command a higher market value.
>
> The value per barrel is lower for flush (and in some instances for intermediate) production than for settled production. This is done primarily to reflect the characteristic of Illinois production of a relatively high rate of initial production followed quickly by a rapid rate of decline, particularly in the limestone formations. It was concluded that to use the temporarily high initial production levels as a measure of the remaining recoverable oil would be to exaggerate the latter. The credit for secondary recovery operations embodies this same theory, plus the factor of added production cost.[17]

NORTH DAKOTA, the fifteenth ranked oil state, produces at about one-fourth the Alaska level. A five per cent production tax is in effect which applies to the gross value at the wellhead. This production tax is in lieu of all ad valorem taxes.

In MICHIGAN, the sixteenth ranked state in oil production, a two per cent severance tax applies to the gross market value of oil produced. This low severance tax is in lieu of all other state or local taxes

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[17] E. Lee Bryant, letter of December 26, 1974.

including ad valorem taxes on oil property.

Concerning the Michigan property tax in general, it serves as a major source of revenue to the municipalities, providing about 92 per cent of local government revenues. (See Table 4.) Property tax per capita in Michigan takes a higher proportion of personal income than the U.S. average. The State Tax Commission has supervisory powers over municipal assessors and actively assists them (similar to the situation in California). Additionally, each county is required to establish a Department of Equalization to assist the local assessors in equalizing the assessment rolls.

The remaining states produce less than one-fourth the Alaska level and subsequently have relatively minor tax receipts from oil. At least three other states have an ad valorem tax on oil and gas reserves: Ohio, Nebraska and Kentucky. All three use a simple formula of production times value per barrel without regard to reservoir engineering which would bring a lower tax on marginal wells.

One Canadian Province, Alberta, was compared to the sixteen oil producing states. Alaska has more similarities with Alberta than the other states; in climate, in population and in oil reserves. Alberta relies on the royalty for revenue and have only one other tax, a Free-hold Mineral Tax. The royalty is a sliding scale royalty. The Director of Finance of the Province of Alberta, L.H. Montgomery describes the tax:

> In addition to the sliding scale type of crude oil royalty which dedicates approximately 15 % to 25 % of the value of production to the Province, there is an incremental royalty of approximately 65% of any price increase in excess of $4.71 per barrel (select price as of January 1, 1975).[18]

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[18] L.H. Montgomery, letter of April 9, 1975.

The Province now realizes a crude oil royalty of approximately 36.4 per cent of the production from Crown (national) lands. The combination of Alaska taxes and the royalty do not approach the provincial revenues from their rich oil resource.

In Alberta, the title to about 81 per cent of the oil and gas reserves are held by the provincial government. About nine per cent is within national parks or Indian reservations. The remaining ten per cent is under freehold title (privately owned). A mineral tax of 16 mills on the assessed value over $50,000 applies to the privately owned oil lands. According to Montgomery:

> With respect to mineral tax, owners of freehold minerals are assessed on petroleum and natural gas at the fair value of remaining recoverable reserves of crude oil and raw gas. The rate of tax levied upon the assessed value in excess of $50,000 was 16 mills on the dollar for 1974.[19]

So, Alberta has a simple system which extracts more revenue from the petroleum resources of it's territory than any state of the Union. They have no severance, no production, one specific corporate income tax and an ad valorem tax applying only to the one-tenth of the resource which is in private lands.

The oil companies which contend the Alaska rate is already to high may wish to change their frame of reference to include other Northern regions of North America.

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[19] Ibid.

CHAPTER II

OIL COMPANY TAXES

How do the oil companies active in Alaska regard a property tax on oil reserves? Seven of the eleven major oil companies active on the North Slope responded to a letter of inquiry which asked their evaluation of alternative oil taxes in terms of fairness and equity. All inquiries were directed to the Property Tax Divisions within the oil companies. The question basically was phrased: "Any information you can provide on the general topic of property taxes on oil reserves; and specifically on your position on this type of tax in contrast to royalties or severance taxes would be of considerable value." It would have been preferable to exclude the concept of royalties in the inquiry.

Royalties are negotiated between the producer and owner of the oil and, therefore, on leases already firm need to be considered independently from production or property taxes. On future leases though, they should be considered within the framework of a broad based, well balanced state revenue system. The recent change in royalty rate in Alaska from one-eighth to one-sixth is comparable to recent movements in other large oil producing states. Unlike Alaska, other oil producing states receive insignificant payments from royalties because most oil producing properties in those states are in private ownership.

Standard of California felt the subject too complex for a response. Evidently, Exxon, Mobil, Phillips and Amoco also considered the subject

overly complex, as they did not respond. Marathon provided an in-depth analysis. Of the six companies which did send information; Atlantic Richfield and Sohio were most strongly opposed to a property tax. Sohio speaks for British Petroleum on tax matters, and with Atlantic Richfield have the largest known reserves on the Slope. Atlantic Richfield has a section established in Anchorage exclusively to monitor Alaska oil taxes. Thus, Atlantic Richfield serves as the industry "bellwether" through its Alaska tax manager, Robert Underwood.

The principal objections to the property tax on oil reserves follow a similar pattern. According to Underwood:

> -- A tax on oil reserves is probably the most difficult to administer and the most controversial form of oil and gas taxation.[1]

D.M. Parker of Shell Oil mentions the same point:

> Generally an ad valorem tax on reserves is a difficult and costly tax to administer. Determining an equitable value on the reserves (which involves estimating both the amount of the reserves and their unit value in their unproduced state) requires the skill and knowledgeable background of highly qualified petroleum engineers... Severance taxes are generally considered to be easily administered from the collection standpoint...[2]

In contrasting the advantages and disadvantages of the severance and property taxes; R.S. Broberg, Manager of the Property Tax Division on Union Oil explains:

> A property tax system requires expertise in evaluation far beyond that which is necessary to police a severance tax. The appraisal problems are continual because of the requirement that the valuation be established every year. A severance tax, while easier to administer, is also easier to revise should a taxing jurisdiction choose to do so. A property tax system requires an annual review of the basis for taxation.[3]

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[1] R.M. Underwood, letter of November 14, 1974.

[2] D.M. Parker, letter of November 4, 1975.

[3] R.S. Broberg, letter of November 9, 1974.

The complications of appraising the oil field are also noted by E. Lee Bryant, Manager of the Property Tax Department for Marathon Oil Company:

> Reservoir engineering is not an exact science and differences of opinions between competent engineers occur frequently as to the amount of recoverable reserves that can be produced from newly discovered fields or even in existing fields with a long history of production. Add to this the problems encountered with predicting production costs in times of inflation and income to be produced under government controls and you arrive at an answer with adversary results.[4]

Although the oil companies unanimously contend that a property tax is difficult and costly to administer; those who administer this type of tax do not agree. Basically, they feel that the advantages far outweigh the relatively slight higher costs involved. The two largest oil producing states which have a property tax; California and Texas discount the arguments of complexity and excess cost of administration.

The ad valorem tax on oil properties in Texas and California have developed through the decades concurrent with the growth in the industry. Strong historical precedents underly the system utilized in both states.

As noted earlier, those that administer the property tax contend that it is relatively easy to administer. In California Paschall comments on the cost of administration, "19 appraisers and 13 clerks handle the annual reappraisal of about $3.5 billion worth of properties, that yield over $80 million in taxes.[5] In Texas, the cost is higher, how much higher is not known because of competitive reasons of private valuation firms. However, the point of cost and complexity of administration cannot be

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[4]E.Lee Bryant, letter of December 26, 1974.

[5]Robert H. Paschall, The Valuation of Oil and Mineral Rights, Arizona University, 1971.

seriously considered a deterrent in the Texas experience since the cost would be a minor part of the ad valorem taxes collected.

The second major issue in opposition to a property tax on oil reserves, suggested by all oil companies responding to the mail inquiry is that the Alaska tax rate now in effect is equal to or higher than the other major producing states. This issue is more important and also more difficult to assess. According to G.W. Ashmore, Manager for Alaska Taxes for Sohio (Sohio also handles tax matters for British Petroleum):

> Alaska's severance tax on oil of about 8 per cent plus its ad valorem tax on production equipment, equals or exceeds the tax imposed by California and Texas and may be just slightly under the Louisiana tax. Overall, Alaska's tax is equal to or greater than the effective rate of the other important oil states and higher than many of the lesser important oil states.[6]

Broberg of Union Oil stresses the same point:

> The State of Alaska, under its present statutes, has imposed a rather high severance tax and, in addition, has recently imposed a further burden in the form of a state property tax on all producing and transportation facilities, ...As you can see, if a property tax on oil and gas reserves is imposed, such added tax would push an already high burden to a point beyond all reason. ...The three levels -- severance tax, property tax on producing and transportation facilities, and property tax on oil and gas reserves -- could bring the level of tax burden above that imposed by other states where Alaskan crude oil must compete.[7]

From Atlantic Richfield, Underwood approaches this point from a somewhat different angle:

> -- In those few areas of the United States where underground reserves are taxed (most are at the local level) there is a notable absence of some of the other taxes imposed on the petroleum industry in Alaska, i.e., the oil and gas production or severance tax, the 20 mill facilities tax, and the corporate income tax.[8]

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[6]G.W. Ashmore, letter of November 26, 1974.

[7]R.S. Broberg, letter of November 9, 1974.

[8]R.H. Underwood, letter of November 14, 1974.

Underwood is the only oil company tax official noting the corporate income tax, probably because the oil companies have been able to avoid any significant tax payments under this particular tax. Although Marathon Oil Company did not compare the Alaska tax rate with that of other major oil producing states, Bryant wrote:

> ...We feel that the present severance tax as imposed by the State of Alaska plus the 20 mill tax levied against our producing and transportation properties constitutes more than our fair share and we would be opposed to additional property taxes on reserves.[9]

According to H.A. Roberts, Tax Representative of the Property Tax Department of Texaco Oil Company:

> According to the latest statistics we have, Alaska is already taxing oil at a rate as high as any in the nation.[10]

If Alaska oil is to be considered solely in competition with the other states, the rate of taxation is a critical issue. However, Alaskan oil will be competing with international oil. The rate of taxation or income to foreign countries is substantially above any domestic taxing rate.

A third argument made by the oil companies is that a state should have a property tax or a severance tax but not both. Roberts of Texaco makes the point:

> Texaco is not opposed to a severance tax on oil and gas production, or a property tax on the value of reserves per se, providing they are part of a well balanced system. If property tax rates are uniformly applied to all classes of property, including the value of oil reserves, then no severance tax should be imposed. To do so, would only discriminate against a single industry, and result in its bearing a dispproportionate (sic) or unfair share of the tax burden.[11]

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[9] E.Lee Bryant, letter of December 26, 1974.

[10] H.A. Roberts, letter of October 28, 1974.

[11] Ibid.

There are some pretty stong arguments for higher proportionate taxes on more profitable industrial enterprises. This paper will not diverge into the issue of "windfall profits." Although the "fair share" argument is not an overly convincing one, the necessity of having more than one major tax on oil is questioned by industry and taxing agencies alike. Parker, Senior Tax Representative of Shell Oil Company argues:

> A severance tax is a compulsory payment imposed by the state upon individuals or firms for the privilege of severing or extracting certain natural resources from the earth or water ...Such severance taxes are generally in lieu of a tax on the resource itself, such as an ad valorem tax on oil reserves. Severance taxes are generally considered to be easily administered from the collection standpoint and believed to be geared to the ability of a taxpayer to pay since the severance taxes are uniformly exacted from current production revenues.
>
> In addition to the severance tax, Alaska imposes a State Income Tax, an Oil and Gas Conservation Tax for the support of the Division of Oil and Gas, as well as a significant State and Local Borough Property Tax on oil and gas production and pipeline transportation equipment. ...The State already exacts a considerable tax burden from the oil and gas industry by imposing most of the taxes generally levied by other oil-producing states. Usually a state does not impose both a severance tax on production and an ad valorem tax on reserves....
>
> Your letter does not indicate whether this ad valorem tax on reserves would be pyramided on top of the present tax burden, or whether it would replace the Severance Tax.[12]

Other oil company responses included recommendations for either a severance or property tax but not both. Paschall agrees: "one or the other should be utilized, not both." The severance tax officials in Texas feel the severance tax alone would be more efficient, but the property tax officials and evaluation firms strongly feel that both types are important.

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[12] D.M. Parker, letter of November 4, 1974.

The valid and meaningful argument for both severance and property taxes relates to the stages of a field's development. A new field has more potential value, and is at that time more valuable, therefore, it should be taxed at a higher rate at the onset. The ad valorem property tax effectively derives revenue from this profit potential whereas the severance tax would impact on oil property evenly whether it was highly profitable or barely economical.

The argument is a valid one, but Alaska's sliding scale severance tax also takes into account the difference in the producing capacity of each well. By spreading the low and high rates of the scale from two or three per cent for the barely economical wells to twelve per cent (similar to what Louisiana presently uses) on the wells producing at an extremely high level (over 1,000 barrels a day) the severance tax would then give nearly all the advantages of the separate and additional property tax and at a lower administrative cost.

What is the financial condition of the companies active on Alaska's North Slope? Scrutiny of 1973 annual reports reveals that the eleven companies posted earnings of 7.9 per cent of revenues in 1973, see Table 5. Tax information and earnings information were solicited from the same eleven companies, which explains the ommission of the British Petroleum from the tabular data.

Standard Oil of California registered the highest earnings rate at 9.5 per cent and Standard of Ohio (SOHIO) the lowest at 5.1 per cent. Income averaged 8.3 per cent of total assets for the eleven companies. At Exxon as well as all other companies surveyed, the spurt in income in 1973 came mainly from "the translation of affiliates earnings from foreign

TABLE 5
EARNINGS OF MAJOR OIL COMPANIES ACTIVE
ON ALASKA'S NORTH SLOPE
(Millions of $)

OIL COMPANIES	GROSS REVENUES		OPERATING EXPENSES		NET EARNINGS		EARNINGS AS % OF REVENUES
	1972	1973	1972	1973	1972	1973	1973
ARCO	$ 3,899	$ 4,561	$ 3,706	$ 4,291	$ 193	$ 270	5.9%
EXXON	22,438	28,508	20,907	26,065	1,532	2,443	8.6%
MARATHON	1,509	1,859	1,429	1,729	80	129	6.9%
MOBIL	10,295	12,756	9,721	11,906	574	849	6.7%
PHILLIPS	2,568	3,074	2,419	2,843	148	230	7.5%
SHELL	4,850	5,750	4,589	5,417	260	333	5.8%
STANDARD - CAL.	6,746	8,927	6,199	8,083	547	844	9.5%
STANDARD - AMOCO	5,477	6,468	5,102	5,956	374	511	7.9%
STANDARD - OHIO	1,629	1,734	1,572	1,645	57	89	5.1%
TEXACO	10,749	13,868	9,860	12,576	889	1,292	9.3%
UNION	2,458	2,962	2,336	2,782	122	180	6.1%
						Average	7.9%

Source: Annual Reports filed in 1973

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currencies into more dollars as a result of devaluation of the dollar."[13]

The domestic vs. foreign situation at Texaco was even more striking:

> Texaco's earnings attributable to the United States failed to keep pace with other areas, increasing only 3.6 per cent to $454 million in 1973 compared with $438 million in 1972. Regulation of petroleum prices, sharply rising costs of doing business and lower production of crude oil and natural gas adversely affected United States earnings despite vigorous efforts toward controlling costs.
>
> Earnings attributable to operations outside the United States were $848 million, an increase of 86 per cent. Approximately 30 per cent of the $387 million increase in foreign earnings represents the effect of the higher net value, in terms of U.S. dollars, of the operating earnings realized in currencies of those countries where our operations outside the United States are conducted...[14]

SOHIO registered the lowest rate of return, primarily due to their relatively high expenditures in developing their Alaska property. At Prudhoe Bay in 1973 they drilled eight wells, all successful. This brought their drilling activity at Prudhoe Bay to 57 wells; all except three suspended and preserved for future use, have indicated to be oil bearing in the main productive zone of the field.

Taxes paid by the eleven oil companies totaled $25 billion in 1973 or about 29 per cent of revenues for the year. The tax rates listed in Table 6 reveal that Phillips had the lowest rate at 14.6 per cent and Exxon the largest company with also the highest proportionate tax burden at 37.2 per cent of revenues. Generally, the companies with the proportionately higher taxes had more extensive foreign operations where the effective tax rates were considerably higher.

Of the eleven oil companies, only six chose to publish in their annual reports a detailed listing of the various taxes paid in 1973. By

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[13]Exxon 1973 Annual Report.

[14]Texaco 1973 Annual Report.

TABLE 6
TAXES OF MAJOR OIL COMPANIES ACTIVE
ON ALASKA'S NORTH SLOPE
(Millions of $)

OIL COMPANIES	EXCISE PROPERTY & OTHER OPERATING TAXES		FEDERAL & OTHER TAXES ON INCOME		TOTAL TAXES	TOTAL ASSETS	TAXES AS % OF ASSETS	TAXES AS % OF REVENUES
	1972	1973	1972	1973	1973	1973	1973	1973
ARCO	$ 629	$ 624	$ 122	$ 197	$ 821	$ 5,109	16.1%	18.0%
EXXON	5,750	6,856	2,346	3,752	10,608	25,079	42.3%	37.2%
MARATHON	246	290	179	220	510	1,572	32.4%	27.4%
MOBIL	2,895	3,375	803	1,194	4,569	10,690	47.7%	35.8%
PHILLIPS	361	356	128	94	450	3,607	12.5%	14.6%
SHELL	878	953	83	122	1,074	5,381	20.0%	18.7%
STANDARD - CAL.	1,274	1,459	394	485	1,944	9,082	21.4%	21.8%
STANDARD - AMOCO	1,039	1,135	123	268	1,403	7,018	20.0%	21.7%
STANDARD - OHIO	299	291	23	39	330	1,963	16.8%	19.0%
TEXACO	2,031	2,388	556	733	3,071	13,595	22.6%	26.0%
UNION	397	436	62	81	517	2,909	17.8%	17.5%
						Average	29.4%	28.6%

Source: Annual Reports filed in 1973

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far the most substantial of the various forms of taxation was the excise tax. This motor fuel tax, collected directly from the consumers and paid to governmental agencies in the United States and abroad, exceeds all other taxes combined for each company. It was interesting to note that only Texaco did not include their consumer taxes collected in their listed deductions, choosing to publish gross income, not gross revenue including these consumer taxes.

All six companies reported property taxes higher than severance and production taxes. In relation to earnings; property taxes were 16.8 per cent and the production taxes including severance were 10.1 per cent. Care should be taken on drawing statistical inferences on this data. What Table 7 shows is that property taxes on oil are more substantial than other oil related taxes utilized in the states. The broad range of severance, property and other tax rates stems from the variety of production localities of each of the six companies.

Five companies published a breakout of foreign, federal and state income taxes. Four-fifths of the tax on income goes to foreign governments. The Federal Government share of these taxes is only 17.6 per cent of income taxes paid and state revenues derived from these taxes are insignificant as shown in Table 8. This data lends little credence to Atlantic Richfield's argument that Alaska corporate income tax should even be considered a factor in comparing the state to state tax burden.

While a full comparison of the overall tax burden on the oil industry as opposed to other industries would far exceed the scope of this analysis, it appears most likely from available data that the oil industry pays higher taxes in relation to their volume and profits than does bus-

TABLE 7
SPECIFIC 1973 OIL TAXES PAID BY SIX OIL COMPANIES ACTIVE
ON ALASKA'S NORTH SLOPE 1/
(Millions of $)

OIL COMPANY	EXCISE TAX	EXCISE % of REVENUES	PROPERTY TAX	PROPERTY % RELATIVE TO EARNINGS 2/	PRODUCTION & SEVERANCE TAX	PRODUCTION & SEVERANCE % RELATIVE TO EARNINGS 2/	ALL OTHER OIL TAXES EXC. INCOME TAX	ALL OTHER OIL TAXES EXC. INCOME % RELATIVE TO EARNINGS 2/	PROPERTY, SEVERANCE & PRODUCTION TAXES IN RELATION TO EARNINGS 2/	INCOME TAX 3/ TAX	INCOME TAX 3/ % OF INCOME
ARCO	$506.6	11.1%	$53.4	19.8%	$30.2	11.2%	34.1	12.6%	43.6%	$196.5	42.1% 4/
PHILLIPS	287.0	9.3%	30.2	13.1%	14.6	6.3%	24.1	10.5%	29.9%	94.3	29.1%
SHELL	817.3	14.2%	57.0	17.1%	34.0	10.2%	44.5	13.3%	40.6%	121.8	26.8%
AMOCO	963.5	14.9%	68.4	13.4%	55.4	10.8%	47.2	9.2%	33.4%	267.7	34.4%
SOHIO	251.8	14.5%	14.6	16.4%	6.3	7.1%	18.0	20.2%	43.7%	38.7	30.3%
UNION	361.3	12.2%	48.0	26.7%	22.9	12.7%	3.5	1.9%	41.3%	80.6	30.9%
Cumulative Average		13.0%		16.8%		10.1%		10.6%	37.6%		33.1%
Percentage of Total Taxes Paid	69.4%		5.9%		3.6%		3.7%			17.4%	

1/ Of the eleven oil companies, only these six itemized taxes in thier 1973 annual reports
2/ Taxes compared to earnings; not to be confused with "percentage of earnings."
3/ Federal, state and foreign income taxes as percentage of earnings plus these income taxes only.
4/ Income taxes proportionately high due to heavy foreign income taxes primarily in Venezuela, Libya, Indonesia and Iran.

Source: 1973 annual reports filed by the six companies.

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TABLE 8
INCOME TAXES PAID ON 1973 EARNINGS BY FIVE OIL COMPANIES
ACTIVE ON ALASKA'S NORTH SLOPE 1/

	UNION	PHILLIPS	ARCO	TEXACO	MARATHON	AVERAGE
FEDERAL						
Current	$19,700	$42,830	$ 36,276	$ 30,000	$ 36,675	
Deferred	14,400	(1,307)	14,400	46,145	(6,375)	
Total	$34,100	$41,523	$ 50,676	$ 76,145	$ 30,300	17.6%
STATE						
Current	8,300	---	4,908	6,500	2,647	
Deferred	1,500	---	1,250	---	---	
Total	9,800	8,984	6,158	6,500	2,647	2.6%
FOREIGN						
Current	35,900	39,819	139,242	562,300	164,737	
Deferred	800	4,022	432	88,307	22,000	
Total	36,700	43,841	139,674	650,607	186,737	79.8%
TOTAL TAXES ON INCOME	$80,600	$94,348	$196,508	$733,252	$219,684	
% FOREIGN TAX	45%	46%	71%	89%	85%	

1/ Of the eleven oil companies, only these five reported the different type of income taxes paid in 1973

Source: 1973 Annual Reports filed by the five companies

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iness in general.

The importance of state taxes on oil and gas should not be underestimated.

> Tax is of such pervasive importance in the financial reckoning of this industry that even the least financially-minded oilman, asked for his opinion of any unexpected move by any major company, immediately tries to figure out the "tax angles" that may have affected its decision. The tax treatment of oil profits in the country where any international company has its headquarters is likely to condition its industrial strategy all over the world.[15]

Companies with foreign operations get the benefit of the same deductions for drilling and development and depletion allowances as domestic companies, even though the risk of unsuccessful drillings is much less. In addition, the payments made by them to foreign governments, which are in reality royalties, are not merely treated as deductions against income, but are permitted to be taken as credits to offest their U.S. income tax liabilities dollar for dollar. The foreign royalties usually equal or exceed the amount of U.S. tax and usually wipe out all U.S. income tax liability on their foreign operations. U.S. oil companies with foreign operations also have the prerogative of using the cost of drilling and development abroad that results in operating losses to reduce the taxes they owe on income earned from their U.S. operations. J.E. Hartshorn, makes a convincing argument concerning taxes on oil companies:

> No sensible business firm anywhere arranges its affairs for the benefit of the tax collector. The international oil companies differ from those in most other industries only by having to operate within so many tax systems that their perfectly legal arrangements to avoid leaving most of their shareholders' profits in the hands of tax collectors, by comparison, have to become somewhat three-dimensional. Other liabilities to tax - and other collectors' pressures to maintain the amount paid in taxes - again occur in between producing government and home government.[16]

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[15] J.E. Hartshorn, Politics and World Oil Economics, New York, Praeger Publishing 1962, p. 176.

[16] Ibid, p. 183.

The analysis of state government taxation is directed to a number of key policy questions. The most important normative question: Who should pay? Two principles can be considered: Who is able to pay and who is entitled to the benefits. The ability-to-pay principal hinges on the economic capability to bear the burden. Without a doubt the oil industry in 1974 through 1980 can bear the burden and can bear a proportionately higher tax. The second principle, the benefit principle of taxation rests on the presumption that those who receive benefit from the services provided by government should bear the costs - under this criteria the tax should be shifted to sources other than the oil industry. There are some strong political forces at work in Alaska against further taxes on the oil industry. Nationally the oil industry has received preferential treatment on oil related taxes which can be attributed to the policy of the 1950 and 60s of utilizing foreign oil and conserving U.S. oil. The oil industry expects these privileges to shift to the state and local sectors.

Concerning administration of income taxes and the relatively small federal tax; Amoco intends to go to court over $49 million in taxes for the 1967 to 1969 period. The company contends the tax, which amount to about one per cent of their revenue, is "in large part without merit."[17] This has interesting ramification if applied to Alaska's intentions of "tightening" up the State corporate income tax. Possibly a higher severance or initiation of the property tax and dropping the corporate income tax for oil companies would achieve the same end with much less hassle.

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[17]Standard Oil of Indiana, 1973 annual report.

Of the eleven companies, Marathon has the highest proportion of it's production in Alaska. One-fourth of Marathon's North American oil production is in Alaska's Cook Inlet, more than any other state:

TABLE 9
MARATHON OIL COMPANY OIL PRODUCTION[18]

	1973	1972
Alaska	47,776	49,473
Texas		
Yates Field	23,957	22,530
Other	21,782	21,488
Wyoming	35,138	38,084
Louisiana		
Offshore	11,978	10,926
Onshore	5,782	7,036
Other U.S. (18 states)	28,120	31,396
United States	174,533	180,933
Canada	9,129	9,554
North America	183,662	190,487

Comparison of Marathon's tax burden shows the company right in the middle of the eleven companies, except in state income tax where Marathon has the lowest level of state tax.

This chapter has shown that oil companies pay significant taxes, but the largest share accumulates to foreign governments. These circumstances stem from U.S. policy over the last three decades to subsidize the exploration of foreign oil and preserve part of this countries reserves. The oil companies are adamant in their objection to additional taxes by the state and rely on the argument of total taxes paid in encouraging the states not to raise their tax levels on oil and gas. The treatment of company taxes in relation to revenues has been cursory; however, the basic fact is evident that the industry is not overtaxed by Alaska or any other state.

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[18]Marathon 1973 annual report.

CHAPTER III

PROPERTY TAX IN GENERAL

The ad valorem tax is basically a tax on wealth. It is levied against the value of tangible (and in the case of potential oil reserves, intangible) real or personal property. The term value is defined by the property tax assessor as the price paid by an informed willing buyer of a piece of property to an equally informed willing seller of the same property. The property appraiser considers three basic elements: 1) the cost incurred in creating the property, 2) the market value, the sales value on an open free market, and 3) the future income to be gained from the property, then converts that into an estimate of current value.

Few hydrocarbon properties are bought and sold, so the potential to produce income becomes the basic consideration of the value of the property. The estimating techniques on underground reserves are an educated guess of the volume of oil in the geologic structure, the relative oil, gas and water saturation, the viscosity, the porosity and permeability of the structure and the pressure of the reservoir. Upon this is placed the estimate of the percentage of the reserve which can be recovered. The determination of recoverable reserves from a new field is more difficult than determining the remaining recoverable reserves from an old field.

Once the value has been pegged, the future price of the oil, the demand in the market, and the discount rate (future value to today's

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money - combined with the risk factor) are the remaining critical factors in determining the appraisal. Oil company officials argue that the reservoir estimates are based on inexact scientific judgements. Engineers and appraisers contend that the engineering judgements on the reservoir are less of a problem than such factors as the future market price and more importantly - realistic discount factors.

Each property is assessed on a different combination of factors. The ad valorem tax on oil reserves can seldom be judged an equal tax among the various producers; but then the production taxes as they relate to income or profit are often not more equitable. Looking at the ad valorem tax from the standpoint of an equitable spread of revenue among the localities within a state -- historically it has been highly inequitable.

As outlined in Chapter I, seven of the 16 highest producing states have oil property taxes on the books which provide revenue for the local governments. In these seven states, nearly all revenues accrue to local governments, almost none to the state government. In an additional six of the 16 states, severance taxes are levied in lieu of ad valorem taxes on oil property. One state has a gross income tax (separate and in addition to a corporate income tax) an in lieu type of income tax. New Mexico recently abandoned its ad valorem tax on oil reserves. Alaska is the only other state which has neither ad valorem tax provisions or an in lieu type of severance tax.

Severance taxes based on wellhead value ranged from one to 12.5 per cent. Severance taxes on gross market value ranged from two to seven per cent. Property tax rates vary from state to state and from county to

county within each state and are usually based on an assessed valuation less than full value. The rate was most commonly applied to 20 - 50 per cent of value. An attempt was made to convert the property tax average rates per state to something comparable to the severance or production tax rate; but because of complexity and time limitations this effort was abandoned. Let us examine the taxation further in general terms.

The property tax is the most important tax in the revenue structure of local governments in all 50 states. Last year the property tax accounted for about 82 per cent of local revenues. The national average of state revenues from property taxes comes to about two per cent. The average of the 16 highest oil producing states was slightly higher, see Table 10. Of the states, New Mexico had the highest proportionate reliance on the property tax at 9.5 per cent of total state revenues in 1970-71. That figure will drop considerably with the abandonment of the ad valorem tax on oil and gas. Montana receives 6.3 per cent of it's revenue from the property tax.

California had by far the largest monetary revenue from the property tax; still only 4.3 per cent of state revenues were derived from this source.

In fiscal year 1970-71, property taxes in Alaska amounted to only about 19 per cent (see Table 4, Chapter I) of all local government revenue. The combined state-local revenue is less than seven per cent. No other state has as low a reliance on the property tax for state-local revenues.

TABLE 10
GROSS ASSESSED VALUE AND PROPERTY TAX REVENUES OF 16 OIL PRODUCING STATES, 1970-71
(In Millions $)

RANK - PROPERTY Tax as % of PERSONAL INCOME	OIL PRODUCING STATE	GROSS ASSESSED VALUE			PROPERTY TAX REVENUE		
		TOTAL	STATE ASSESSED	LOCAL ASSESSED	STATE	LOCAL	% of STATE REVENUE
1	Montana	$ 966	$ 191	$ 775	$ 8.6	$ 157.8	6.3%
2	California	59,176	4,493	54,683	244.0	5,747.5	4.3%
3	Wyoming	1,384	748	636	8.9	68.8	9.5%
4	North Dakota	627	70	557	1.4	116.2	1.0%
5	Kansas	6,476	1,086	5,390	10.5	463.0	2.3%
6	Colorado	5,454	561	4,893	2.0	425.8	.4%
7	Michigan	36,593	---	36,593	90.0	1,730.4	3.5%
8	Utah	1,966	667	1,299	13.1	140.5	4.9%
9	Illinois	49,683	1,167	48,516	.5	2,233.6	---
10	Texas	23,778	134	23,644	63.8	1,508.0	2.9%
11	Florida	51,761	299	51,462	35.7	857.3	2.2%
12	Oklahoma	4,266	867	3,399	---	254.6	---
13	Mississippi	2,579	566	2,013	4.1	166.7	.8%
14	New Mexico	2,358	655	1,703	15.9	74.5	5.0%
15	Louisiana	5,816	1,223	4,593	28.3	236.6	2.9%
16	ALASKA	2,430	---	2,430	---	33.1	---

Sources: Property Values Subject to Local General Property Taxation in the United States, (Dec. 74) Table I and Taxable Property Value and Assessment - Sales Price Ratios, Volume 2, Part 2 (Oct. 73) Table I, U.S. Department of Commerce, Social & Economics Statistics Administration, Bureau of the Census.

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Because of this apparent disparity, it has been recommended that Alaska rely more heavily on this type of tax for the State as well as local revenues. Alaska actually is in an enviable position. The literature on tax equity almost unanimously places property tax as the least equitable of all types of taxation. The Texas Research League reports a public opinion poll on the property tax.[1]

> The property tax does not stand high in the estimation of the American people according to a recent opinion poll undertaken on behalf of the National Advisory Commission on Intergovernmental Relations (ACIR).
>
> Asked to select the tax considered to be the least fair, a cross section of the public designated the property tax far more often than any other major source of public revenue...The survey results:

What is the LEAST fair tax?		What is the FAIREST tax?	
Federal income tax	- 19%	Federal income tax	- 36%
State income tax	- 13	State income tax	- 11
State sales tax	- 13	State sales tax	- 33
LOCAL PROPERTY TAX	- 45	LOCAL PROPERTY TAX	- 7
Don't know	- 10	Don't know	- 13

The property tax is not only the least popular but is considered least equitable by tax administrators. The same questions of the previous poll were asked of 145 attendees of the annual conference of the National Tax Association.[2]

> The national ACIR public opinion questionnaire was distributed at the 1972 Conference of the National Tax Association and was returned by 145 of the 450 registrants.

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[1]U.S. Advisory Commission on Intergovernmental Relations, Public Opinion and Taxes, May 1972) as cited by the Texas Research League, The Texas Property Tax: Background for Revision, Austin, August 1973, p. 5.

[2]John O. Behrens, "The Public and the Publicans Talk Taxes," National Tax Journal, XXVI, No. 2 (June 1973) p. 22 as cited by the Texas Research League, Ibid.

The results:

What is the LEAST fair tax?		What is the FAIREST tax?	
Federal income tax	- 13%	Federal income tax	- 54%
State income tax	- 5	State income tax	- 11
State sales tax	- 14	State sales tax	- 28
LOCAL PROPERTY TAX	- 60	LOCAL PROPERTY TAX	- 4
Don't know	- 7	Don't know	- 3

While the demographic and socioeconomic traits of the first group polled (e.g. age, region of the nation, occupation, income level, ethnic background, etc.) was not documented, the respondents of the second poll were a select knowledgeable group. They considered the property tax to be unequitable and in definite need of tightening the administration of the tax.

The unpopularity and inequities of property tax in general should not be extrapolated to the Alaskan experience, particularly to the potential ad valorem tax on oil property. The State has very competent administration in the Property Tax Division of the Department of Revenue. Additionaly this division has good council.

Moving from the opinions of the general property tax to the most often quoted reason for the unfairness we find: 1) it is regressive, 2) those least able to pay usually must carry the relatively highest burden, 3) it differs appreciably by region of the country, is extremely high in some states and moderate in others, 4) it tends to reduce home ownership, and 5) it perpetuates ghettos. None of the five reasons against a property tax in general apply to Alaska oil property. There are other reasons that make it an undersirable tax and these will be examined in the next and last chapter.

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CHAPTER IV

APPLICATION TO ALASKA

The Alaska House and Senate Resources Committees have heard considerable testimony on this subject, particularly in April 1975. From the oil companies came the plea - no further imposition of taxes; and the implied threat - the State would receive less in the long run through lower bonus bids on upcoming leases. Possibly the classic nadir of this testimony was the tenuous argument that a tax on oil reserves will cause such rapid development of the far north oil resource as to spur uncontrolled economic growth which will destroy the Arctic environment. British Petroleum proposed this argument.

From the other side of the issue came testimony of the pro-tax people, those who administer it or will profit from its enactment. Texas and California experts in particular were relied upon for factual information. About the only shortcoming in the testimony was an occasional non-response. For example members of the House Resources Committee tried to guage the number of months that the State might be in litigation on ad valorem tax legislation. They asked Pritchard and Abbott representatives, including the senior administrative officer, Pritchard, the length of time in court on the original Texas decision on property tax on oil. The firm had been built for 50 years, to a current level of 150 employees based on the historic precedent setting court decision on this very question. Yet

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None from the firm offered the simple fact of the court time involved in that decision.

This report required considerable interview time with oil property taxing experts from Texas and California. One finding was that the California people, from my experience were more candid and straightforward. If they knew the answer, they provided the information. If they promised to gather some information needed in the research, it was compiled and sent.

If legislation is enacted on taxing oil reserves, however, it appears the Alaska Department of Revenue will contract with Texas consultants rather than California consultants. Both offer competent appraisal techniques. The Texas alternative, however, offers both the appraisal and legal expertise that will be required. It is "easier" to obtain $150-200 million in oil taxation revenues with the help of a veteran firm which has a good record in corporate-tax matters.

Emphasis on this report should not be placed on testimony of obvious vested interests. Two witnesses, consistently "middle of the road," provided exceptional in-depth analysis of the factors involving an Alaska tax on reserves from the viewpoint of covering the shortfall in State revenues. Walter Mead, Professor of Economics, University of California at Santa Barbara and Milton Lipton of Walter J. Levy Company, provided strikingly similar testimony. Salient points made by these two witnesses show that a tax on oil reserves is not a preferable method of gleaning the required revenue.

Lipton, emphasized the unpredictability of world oil prices and

demand.[1] A few highlights of his presentation concerned world oil prices and the importance of the Alaska oil resources. He suggested that the price of foreign oil could not be supported indefinitely at the $13-14 per barrel level. If Prudhoe oil were delivered into California in early 1975 it would command a price of $11.50 a barrel.

Mead spoke of the current attractive price of oil at $12 per barrel.[2] He placed the Prudhoe bonus sale in perspective by emphasizing that the $900 million was achieved on $3.50 oil, not an $12 oil. (Underestimated discount factors and rising operational costs partially offset this, however). Like Lipton, Mead suggested that prices will go downhill from now until 1980; that the $12 price is temporary.

Paschall estimated the value of the Prudhoe Bay field at $4.7 billion in 1973. He estimated that oil production for the first 25 years of the field's operation would total 9.4 billion barrels. He said the most difficult part of the assignment on the Prudhoe field was in estimating the price of the oil at the time of production. He assumed a price of $2.95 per barrel; since then the price has tripled which, if extrapolated, would place the value of the field closer to $15 billion.[3]

The matter of current price, the fact that the pipeline now under construction is projected to have 25 per cent idle capacity, and the attractive nature of the Beaufort Sea oil potential immediately north of Prudhoe combine to make the proposed Beaufort lease sale extremely important.

Mead testified to the importance of the early lease sale in the

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[1]Milton Lipton, testimony to Senate Resources Committee, February 12, 1975.

[2]Walter Mead, testimony to House Resources Committee, April 15, 1975.

[3]Robert Paschall, personal interview, December 10, 1974.

Beaufort region irrespective of the immediate State revenue requirements. The Prudhoe field according to Mead likely extends north into the Beaufort Sea. When Prudhoe production starts, oil migrates from the "fingers" of the field. A unitization problem exists, and as Mead vividly explains it: "Someone has a straw into your oil. The immediate interest of Alaska is to hold a lease sale as soon as possible. The more delay, the more loss to the State of Alaska."[4]

Lipton and Mead are in agreement that the lease sale ranks as the highest alternative, particularly if the area includes the Beaufort which will bring in substantial revenues. Conversely, the advance sale of the State's royalty oil or options ranks as the least desirable of the alternatives available. Concerning the pre-sale of the State's royalty oil, Lipton emphasized the uncertainties involved in the future price of the oil which will influence the oil companies bids and work to the detriment of the State. Important points mentioned by Lipton included:

> The oil companies are not in the position to say what the 1978-1980 market price means to them in terms of competitive positions. Market price is a very uncertain, ephemeral dubious sort of thing; and the recovery of the price you pay for oil from the North Slope depends on the price you can sell gasoline in Los Angeles. This is a tenuous uncertain relationship...
>
> All the uncertainties get thurst back on to the State; none of the uncertainties work to the advantage of the State. In any case, no oil company is really in the position to commit themselves to the purchase of your oil, or an option on your oil, without assessing a relatively high interest rate against the funds they advance to the State compared to the time the oil is forthcoming. The interest rate the oil company is looking at is considerably higher than the cost of capital to the State of Alaska.
>
> Finally, there is the presumed importance of the State's continuing access to royalty oil...for possible comsumption within the State, e.g., to support the Fairbanks refinery. Most importantly, the movement of State royalty oil through the pipeline in interstate

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[4]Walter Mead, testimony to House Resources Committee, April 15, 1975.

commerce is tremendously important to underpin the regulatory authority of the Alaska Pipeline Commission.[5]

These reasons for caution in considering pre-sale of Alaska royalty oil by Lipton were also emphasized by Pritchard. For the reasons of future uncertainty on price and other points noted by Lipton, Pritchard felt that any other alternative would be preferable. Mead was less adamant on the problems of sale of future oil and included it as one of the combination of solutions that the State should enact. Lipton and Mead see less of a problem in sale of future gas because the regulatory nature of gas pricing and transport removes some of the uncertainties. Advanced gas sales would not be as detrimental to the State.

Mead and Lipton both recommended that the State tighten its corporate income tax laws, as a much needed and integral part of the overall solution to the revenue shortfall problem.

Lipton testified that the property tax on oil reserves is intrinsically a bad tax.

> It is our judgement that this tax as a tax measure is a bad tax...for two reasons: First, because there is no criteria available to the legislature or to the person being taxed as to what really the incidence of the taxation is. If you talk about income tax - you have the tax base which is identifiable - the profit is being taxed. Both the State, and the industry being taxed, has a basis of judgement of what the impact is, what the implications are. On the severance tax, you can make comparisons of what the tax base is in other producing areas. The bonuses are entered into by industry of their own free volition. But the ad valorem tax on oil in place is an estimate, its unknown...if you know what is in place, how much is recoverable? what is recoverable is not a technical estimate but an economic estimate...if you know how much can be recovered and if you know what it will be worth on the day it is produced or what it'll be worth on the last day the reservoir will be exploited.

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[5]Milton Lipton, testimony to Senate Resources Committee, February 15, 1975.

> So the fact of assessment itself, to assess the value of oil and gas in place is a different kind of animal than trying to assess other real property.
>
> Secondly, insofar as it may involve the respective assessment of one company's oil and gas in place, and another company's you are confronted with the problem of equitable assessment -- it becomes a matter of equity and legal responsibility that the value of one person's oil and gas in place shall be assessed by the same criteria as the other persons oil and gas in place, and I submit to you that this is an impossible problem; because the assessment of the value of oil and gas in place is so different from every other aspect of ad valorem taxation that you have taken in this State, or that has been taken anywhere else.[6]

Although there is considerable disagreement on whether it is indeed an impossible problem, Lipton's testimony points out the difficulty involved. Conversely, Mead points out the advantage of the property tax:

> The trouble with a royalty and a severance tax is that it leads to premature abandonment of a lease. A property tax does not have that disadvantage. A property tax is not a function of output. Royalty and severance is. A property tax does not raise costs. A property tax is paid whether you produce or not. That is a sizable advantage of the property tax compared to the royalty and severance which you now have.
>
> In the long run you may wish to change this and change the disadvantage of the royalty if you like. By instituting what you have done for the severance (sliding scale), you can do that for the royalty too.[7]

The advantages of the ad valorem property tax can be gained through a different method, ie., a sliding scale royalty, similar to the system in Alberta, but with a lower bottom range. Also the sliding scale severance could be extended in the lower and higher range as mentioned earlier in this paper. The combination of the sliding scale royalty and a wider ranging sliding scale severance would then provide virtually all the benefits of the property tax.

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[6] Ibid.

[7] Walter Mead, testimony to House Resources Committee, April 15, 1975.

Although Mead pointed out the advantage of the tax to insure maximum production of a field, he also testified that all future bids on lease sales would reflect the action taken on the property tax:

> If you impose this property tax burden, hereafter, companies that bid bonuses to the State of Alaska will consider that piece of history and will reduce their bonus bids accordingly. You will pay for it in the future.[8]

Mead and Lipton emphasized the importance of minimizing the uncertainties when the leases are drawn. If uncertainties exist because of wording or arbitrary future events left unclear, the discount rate figured by the oil company will go up and the State of Alaska will pay the price.

Some capricious and morally questionable unilateral changes in lease agreements have been recently made by Arab leaders on Middle East oil, by the Norwegians on North Sea oil, and by the Canadians on Alberta oil. It is the opinion of this writer that the State, if nothing else, should stick by any lease agreements into which it has entered.

There are alternative means to raise revenue that are preferable to the property tax on reserves. The lease sale in the Beaufort Sea is the most logical alternative and can incorporate into each lease a sliding scale royalty as well as severance. This will have considerable benefit to the State of Alaska and treat the oil companies equally and fairly from the onset. Even with a portion of the bonus lease revenues placed in a permanent fund, these revenues provide an important part of a temporary solution to a temporary problem. Conventional revenue anticipation bonds can cover the remainder of the shortfall.

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[8] Ibid.

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Correspondence: "Alaska taxes on oil are equal or higher than other major oil producing states."

Awalk, Charles. Property Tax Consultant, Pritchard & Abbott, Valuation Engineers, Fort Worth, Texas
Personal Contact: "Property taxes on oil have a distinct advantage over other forms of oil taxation, particularly in newly developed fields."

Berry, Randolph. Revisor of Statutes, Legislative Affairs Agency, State of Alaska, Juneau, Alaska.
Personal Contact: Research on oil property taxes and severance taxes of other states, 1973.

Broberg, Roy S. Manager, Property Tax Division, Tax Department, UNION Oil of California, Los Angeles, California
Correspondence: "An additional oil tax could bring the level of tax burden above that of other states where Alaska crude oil must compete - could affect future competitive oil lease sales."

Bryant, E. Lee. Manager, Property Tax Department, MARATHON Oil Company, Findlay, Ohio
Correspondence: An in-depth assessment of the various oil taxes of major producing states - "Present Alaska taxes on Marathon constitutes more than their 'fair share' - suggest no additional property taxes on reserves."

Calvert, Robert S. Comptroller of Public Accounts, State of Texas, Austin, Texas
Correspondnece: State of Texas is not on top of oil property taxes on oil reserves, even though indirectly revenue does accrue to the State of Texas - "contact the firm of Pritchard & Abbott for answers."

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Cooper, Robert H. Assistant Director, Property Tax Division, State Tax Commission of Utah, Salt Lake City, Utah
Correspondence: Description of oil taxes in Utah.

Cunningham, Milton. State Assessor, Ad Valorem Tax Division, State Comptroller, State of Texas, Austin, Texas
Personal Interview: "The Railroad Commission and the firm of Pritchard & Abbott know more than anyone about this subject, contact them."

De Bolt, Harold. Director, Ad Valorem Tax Division, Department of Revenue and Taxation, State of Wyoming, Cheyenne, Wyoming
Correspondence: Description of oil taxes in Wyoming.

Dunlop, W.W. Executive Secretary, State Board of Equalization, State of California, Sacramento, California
Correspondence & Telephone Interview: An advantage of the California oil property tax is that it prolongs the economic limit of a well where a comparable severance tax would encourage abandoning a well where marginally economic reserves could be removed.

Edgar, T.C. Director, Severance Tax Division, State Comptroller Office, State of Texas, Austin, Texas
Personal Interview: The Texas Severance tax is basically a gross receipts tax, or an occupation tax levied on the market value and is more equitable than the ad valorem tax.

Freeman, Roger A. Hoover Institution on War, Revolution and Peace, Stanford, California
Correspondence: "Oil companies are not rolling in 'gravy' and the popularly believed 'tax advantages' should continue in order to increase the vitally needed domestic production of oil and gas."

Freer, Richard A. Previous Commissioner of Alaska State Department of Administration, Juneau, Alaska
Personal Interview: Since property taxes in other states have historically benefited municipal-local government units, would Alaska State sponsored property tax, if dedicated to local revenue sharing, be advisable? "NO."

Hall, David M. Senior Revenue Agent, Statistics and Research Section, Department of Revenue, State of Colorado, Denver, Colorado
Correspondence: Description of oil taxes in Colorado.

Heier, Gerald D. Director, Property Tax Division, Alaska Department of Revenue, Anchorage, Alaska
Personal Interview: Key source of information, and head of Division under which a property tax on oil would be administered if enacted, "Sees no insurmountable administrative problems with oil reserves property tax."

Hopkins, William W. Manager, Alaska Oil and Gas Association, Anchorage, Alaska
Correspondence: "Not in favor of tax on oil reserves."

Howell, Holland. Industrial Properties Appraisal Engineer, Pritchard & Abbott, Fort Worth, Texas
Personal Contact: Experience in appraising Alaska petroleum industry production facilities.

Humphries, J. Kenneth. Research Analyst, Legislative Affairs Agency, State of Alaska, Juneau, Alaska
Personal Interview: Has conducted previous research on this subject, particularly California administration of oil reserve taxes, a provocative "free thinker."

Kasline, Fred. Oil & Gas Conservation Department, State of California, Sacramento, California
Telephone Interview: The severance taxes have more advantages to oil exporting states; property taxes tend to spread the tax revenues unevenly throughout the State of California.

McElvany, W.L. Director, Gross Production Division, Oklahoma Tax Commission, State of Oklahoma, Oklahoma City, Oklahoma
Correspondence: Description of Gross Production and Excise Tax of Oklahoma.

McGrew, James W. Executive Director, Texas Research League, Austin, Texas
Personal Interview: A creditable reliable source of pro-industry research information; strongly prefers severance tax over property tax because of the inequities in local administration.

McLoed, W.D. Assistant Manager, Property Tax Division, Treasurer's Department, Standard Oil Company of California, San Francisco, California
Correspondence: Subject is so complex that it would require an in-depth study which they are unwilling to conduct.

Maguire, John R. Rax Counsel (State and Local) Taxation Division, American Petroleum Institute, Washington, D.C.
Correspondence: A good source for severance and production taxes by state.

Matthews, Guy. Railroad Commission, State of Texas, Austin, Texas
Personal Interview: The Railroad Commission serves as the Texas oil and gas conservation agency; "Suggested that certain Texas counties benefit, others do not - Pritchard & Abbott have all the answers."

Messenger, John R. Assistant Attorney General, Department of Law, State of Alaska, Juneau, Alaska
Personal Interview: Most knowledgeable in Juneau on oil taxes particularly legal aspects of oil property taxes, and is concerned that oil majors pay insignificant Alaska income taxes.

Morrison, K.K. Chief, Inter-County Property Bureau Property Valuation Division, Department of Revenue, State of Montana, Helena, Montana
Correspondence: Description of oil taxes in Montana.

Parker, D.M. Senior Tax Representative, Tax Division, SHELL Oil Company, Los Angeles, California
Correspondence: "Alaska oil taxes are already high, a property tax would be difficult and costly to administer."

Paschall, Robert H. Senior Petroleum & Mining Appraisal Engineer, Assessment Standards Division, State Board of Equalization, State of California, Sacramento, California
Correspondence and Personal Interview: An exceptional source, very knowledgeable; strongly feels that the property tax in California is far superior to a severance tax.

Pritchard, Edward S. Attorney at Law, Partner in firm, Pritchard & Abbott, Valuation Engineers, Fort Worth, Texas
Correspondence and Personal Interview: Largest of three oil property appraisal firms in Texas (and the United States) has contract with Alaska State Department of Revenue and feels the property tax on oil has made the difference in developmental progress of the oil producing states.

Roberts, H.A. Tax Representative, Property Tax Department, TEXACO Inc. Los Angeles, California
Correspondence: "Alaska is already taxing oil at a rate as high as any state in the nation; either severance or property taxes should be levied, not both."

Rosell, Earl P. Deputy Director, Ad Valorem Tax Division, Comptrollers Office, State of Texas, Austin, Texas
Personal Interview: The ad valorem tax is basically an effective fair tax although there are some inequities in assessment rates applied by the local "county commissioners." The State of Texas received $47 million last year; but less in future years because of declining rate; these funds dedicated to higher education.

Singletary, George F. Administrator, Railroad Commission, State of Texas, Austin, Texas
Telephone Interview: The administrator for the Texas oil conservation agency; "The State of Texas has no idea of the impact of ad valorem or severance taxes," referred all questions to the firm of Pritchard & Abbott.

Taylor, Robert L. Chief, Research and Management, Department of Revenue, State of Kansas, Topeka, Kansas
Correspondence: Description of oil taxes in Kansas.

Underwood, R.M. Manager, Alaska Taxes, Atlantic Richfield Company, Anchorage, Alaska
Correspondence and Personal Contact: "Against a property tax on oil reserves because the State has alternative better ways to cover the shortfall in State revenues and the property tax is the most difficult to administer and the most controversial form of oil and gas taxation."

Van Manning, Owen. Research/Legislation Specialist, Department of Revenue, State of Louisiana, Baton Rouge, Louisiana
Correspondence: Description of taxes on oil in Louisiana.

Williams, Thomas K. Assistant Attorney General, Department of Law, Anchorage, Alaska
Correspondence and Personal Interview: Probably the single best source of information on the broad subject of oil taxes of other states and the relation to current State taxes and potential Alaska oil development.

II Books and other Sources of Information -- Tax Related:

Advisory Commission on Intergovernmental Relations, The Property Tax in a Changing Environment, Selected State Studies, Washington, D.C.: U.S. Government Printing Office, 1974
A 33 state comparative analysis of property tax administration, exceptionally helpful background information.

Balk, Alfred. The Free List, Property without Taxes, New York: Russel Sage Foundation, 1971
A crusading type of treatment of the evils of real estate tax exemptions.

Bird, Richard and Oldman, Oliver, Readings on Taxation in Developing Countries, Maryland: The Johns Hopkins Press, 1964
A collection of 33 papers on fiscal policy and systems of a few nations and taxes by nation (analyzed according to effectiveness in administration).

Cameron, Helen A. and Henderson, William. Public Finance, Selected Readings, New York: Random House, 1966
Five papers dealing with budgeting, fiscal policy, evaluating state and local government finance (property tax evaluating standards).

Deran, Elizabeth. Earmarked State Taxes, New York: Tax Foundation, 1965
An 80 page booklet which lists and evaluates dedicated taxes by state.

Ecker-Racz, L.L. The Politics and Economics of State-Local Finance, New Jersey: Prentice-Hall, Inc. 1970
A historical analysis of state and local revenue sources, and an evaluation of problems and advantages of each type of tax.

Freeman, Roger A. Tax Loopholes, the Legend and the Reality. Washington, D.C.: American Enterprise Institute - Hoover Policy Study #5, May 1973
A straightforward review of tax exemptions, exclusions, deductions and credits in federal taxes. A critical point on tax advantages to oil companies prompted a letter to Freeman, duplicating bibliographic entry in first section.

Harriss, C. Lowell. Handbook of State and Local Government Finance, New York: Tax Foundation, Inc. 1966
Basically a statistical handbook of state and local taxes on 15 selected states (Alaska not included).

Hirsch, Werner Z. The Economics of State and Local Government, Los Angeles: McGraw-Hill Book Company, 1970
Contemporary microeconomic approaches applied to an analysis of state and local government.

Keith, John A. Property Tax Assessment Practices, Highland Publishing Company, Monterey Park, California, 1966
The closest to a textbook approach of any publication available on property taxation (public finance, history, economics, and assessing).

Lindholm, Richard W. Property Taxation U.S.A., Madison: The University of Wisconsin Press, 1967
Fourteen individual papers on property taxation; of particular interest - Mesabi Iron-Ore taxation history outlined by Clarence Nelson, Head of Research Department of Minneapolis Federal Reserve Bank.

Lipton, Milton. Tax hearings before the Senate Resources Committee of February 12, 1975 and the House Resources Committee of April 14, 1975.
The proceedings revealed exceptional and diverse knowledge of this Walter Levy Company consultant.

Maxwell, James A. Financing State and Local Governments, Washington, D.C.: The Brookings Institution, Studies of Government Finance, 1969

A textbook type approach to state and local taxation trends and interaction with the federal tax system.

Mead, Walter. Taxed hearings before the House Resources Committee, April 15, 1975

Unencumbered by special interests, this consultant to the legislature provided some of the most outstanding far reaching testimony, with obviously strong impact on the conclusion of this paper.

Musgrave, Richard A. ed. Broad Based Taxes: New Options and Sources, Maryland: The Johns Hopkins University Press, 1973

Sources of government revenue analyzed in light of economic development, a collection of ten papers.

Musgrave, Richard A. Fiscal Systems, New Haven: Yale University Press, 1969

A comparison of tax structures in developed countries, an in-depth analysis.

Netzer, Dick. Economics of the Property Tax, Washington, D.C.: The Brookings Institution, Studies of Government Finance, 1966

A comprehensive analysis of property taxation, the nature of the tax, the incidence, distribution, and economic effects.

Pechman, Joseph A. Federal Tax Policy, Washington, D.C.: The Brookings Institution, 1971

A highly readable introduction of the field of taxation as a major instrument of public policy; it includes a section on the analysis of state and local taxes.

Reuss, Frederick G. Fiscal Policy for Growth Without Inflation, the German Experiment, Maryland: The Johns Hopkins Press, 1963.

A somewhat dated study of the effects of German fiscal policy, a system which allows a more equitable distribution of income than the U.S. system.

Ruskay, Joseph A. and Osserman, Richard A. Halfway to Tax Reform, Bloomington: Indiana University Press, 1970

A lucid examination of major areas of tax advoidance; the sale of oil property of particular interest.

Shannon, John. Business Taxes in State and Local Governments, Massachusetts: Lexington Books, 1970

A symposium report on state and local tax administration issues.

Statham, Robert R. and Lehmann, Cynthia P. A Review of the Property Tax and Its Impact on Business, Washington, D.C. Chamber of Commerce of the United States, 1973

This booklet highlights the negative aspects of property taxation in general, with strong reliance on U.S. Department of Commerce Census data.

State of Louisiana. 34th Annual Report, Louisiana Department of Revenue, Louisiana State Printing Office, 1974

State taxes listed by source for 1973; Severance tax collections itemized by product for each parrish.

Tait, Alan A. The Taxation of Personal Wealth, Chicago: University of Illinois Press, 1967

Distribution of wealth in the U.S. and Britain is examined in the light of tax proposals for a "more equitable" distribution.

Texas Research League. The Texas Property Tax: Background for Revision, printed by the League for the Texas Advisory Commission on Intergovernmental Relations, 1973

A good analysis of the deficiencies of property taxes on oil properties which are administered at the local level.

U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, 1972 Census of Governments, Taxable Property Values and Assessment - Sales Price Ratios, Volume 2, Part 1 and Part 2, Washington, D.C., April 1974

Though somewhat dated when published, the best source of statistical data on property taxation of the 50 states.

_____, 1972 Census of Governments, Government Finances, Volume 4, Number 1, Finances of School Districts, Washington, D.C., April 1974

Statistical tables on school districts finances of 33 selected states in 1971-72, Alaska not included, most major oil producing states are included.

_____, Property Values Subject to Local General Property Taxation in the United States: 1973, Washington, D.C., December 1974.

White, Anthony G. Urban Property Taxation, Monticello, Illinois, Council of Planning Librarians, 1973

Two bibliographic lists of publications on urban property tax administration; of limited value.

III Books and other Printed Material -- Oil Related:

Adelman, M.A. ed. Alaskan Oil, Costs and Supply, New York Praeger Publishers, 1971

Economic analysis of the Prudhoe Bay field before oil price increases; excellent source but already somewhat dated.

_____, The World Petroleum Market, Maryland: Johns Hopkins Press, 1972
An excellent source on oil prices, reserves and international considerations.

Atlantic Richfield Company, Annual Report 1973.

_____, Supplement to the 1973 Annual Report.

Brown, R.D. The Crisis in Mining Taxation, CIM Bulletin, November 1974.

Campbell, Robert W. The Economics of Soviet Oil and Gas, Maryland: The Johns Hopkins Press, 1968
An historical sketch of Soviet energy development strategy and contemporary description of Soviet exploration, drilling, refining, transporting and marketing practices.

Exxon Corporation, 1973 Annual Report.

Forbes, January 1, 1975.

Hartshorn, J.E. Politics and World Oil Economics, New York: Frederick A. Praeger Publishing Company, 1962
This British author considers the international aspects of the oil industry and includes an arms-length evaluation of the "Oil Companies as Taxpayers."

Herbst, Robert L. Minnesota's Mineral Policy, Skillings Mining Review, October 12, 1974.

Marathon Oil Company, 86th Annual Report, 1973.

McCaslin, John C. ed. International Petroleum Encyclopedia, Tulsa, Oklahoma: Petroleum Publishing Company, 1973
An expansive volume presenting current statistical data on all aspects of petroleum production and reserves.

Mines and Minerals Act, Government of the Province of Alberta, 1973.

Mining Engineering, September 1974.

Mobil Oil Corporation, Annual Report 1973.

O' Dell, Peter R. Oil and World Power, New York, Taplinger Publishing Company, 1971
A lucid descriptive interesting work; an excellent introduction to the politics of international oil.

Oil and Gas Accounting Laws of New Mexico, State of New Mexico, 1972.

Oil Producing Industry in your State, The, Washington, D.C. Published by the Independent Petroleum Association of America, 1973
Oil production statistics by state, a comprehensive list.

O'Neil, Thomas J. The Minerals Depletion Allowance (two articles) Mining Engineering, October & November, 1974.

Personal Property Assessment Manual, Oil and Gas 1974, by the Division of Property Valuation, Department of Revenue, State of Kansas.

Phillips Petroleum Company, Annual Report 1973.

Standard Oil Company of California, 1973 Annual Report.

Standard Oil Company of Indiana, Annual Report 1973.

Standard Oil Company of Ohio, Annual Report 1973.

State of Oklahoma, Gross Production Tax Code and Petroleum Excise Tax Code, published by Oklahoma Tax Commission, Oklahoma City, Oklahoma, 1965.

Shell Oil Company, Annual Report 1973.

State and Local Oil and Gas Severance and Production Taxes, a mimeographed compilation of the American Petroleum Institute, Washington, D.C. 1974.

State of Alaska Hearings on Proposed Pipeline Legislation, Volumes I & II, March 6 - 10, 1972, Alaska Department of Revenue
A transcript of testimony by State and oil industry officials concerning ownership of pipeline, leasing of right of way, and oil related taxes.

Texaco Inc. Annual Report 1973.

Union Oil Company of California, 1973 Annual Report.

Valuation of Oil & Gas Producing Properties, AH 566, published by the Assessment Standards Division, Property Tax Department, California State Board of Equalization, 1972.

Valuation of Oil and Mineral Rights, reprint from Institute of Public Administration Symposium, Arizona State University, 1971.