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Saskatchewan's Oil and Gas Royalties: A Critical Appraisal
by Erin Weir

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- Tables I, II, IV and V;
- Section XI: Appendices; and,
- Section XII: References.

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FOREWORD

This paper provides a critical appraisal of Saskatchewan's oil and gas royalties and argues that they should be increased. It was written between June and September of 2002 to convince the provincial government to raise its royalties, rather than to criticize its decision, announced on October 7th, 2002, to greatly reduce them. However, the October 7th announcement makes the paper's analysis and conclusions all the more timely.

The fact that neither the Saskatchewan Party nor the Liberal Party criticized the New Democratic Party government's royalty reductions confirms the paper's initial observation that a consensus in favour of low royalties has developed among the province's mainstream political parties. This underscores the need for a critical assessment of Saskatchewan's royalty policy.

The October 7th announcement designated a "fourth tier" of oil and gas wells that is subject to lower royalties and to a new system of volume incentives. This change parallels the previous creation of a "third tier" discussed in Section II of the paper. In addition to these royalty cuts, the liability of new freehold oil and gas wells was further reduced. Also, the Corporation Capital Tax Surcharge applicable to new wells was reduced, existing provincial incentives for horizontal drilling and "deep" wells were made available to more wells, and the royalties levied on "associated" natural gas produced by oil wells were reformed. In effect, the Government of Saskatchewan has resolved to collect lower royalties from the petroleum industry while paying it higher subsidies.

In announcing the royalty reductions, the provincial government suggested that lower royalties would stimulate so much additional economic activity as to increase provincial revenues. The historical statistics presented in Section VII paint a much different picture. They show that, while dramatic reductions in provincial royalty rates have facilitated a massive expansion of Saskatchewan's oil and gas sector, this growth has not increased provincial oil and gas revenues. On the contrary, lower royalty rates have meant significantly lower royalty revenues.

The provincial government also argues that increased activity in the oil and gas sector will create many jobs in Saskatchewan. However, Section IV shows that the number of jobs created in the petroleum industry by foregoing royalty revenues will be limited by the fact that its operations are highly capital-intensive and largely headquartered outside the province. Collecting these revenues and transferring them to other areas of Saskatchewan's economy by lowering taxes or increasing public expenditures would have created many more jobs.

Section VIII compares Saskatchewan's oil and gas royalties with those maintained by other jurisdictions. It suggests that this province's royalties may have been effectively lower than Alberta's even before the October 7th reductions. In announcing these cuts, Premier Lorne Calvert seemed to confirm this suggestion by declaring, "We are committed to fiscal changes which will grow the Saskatchewan economy and make us the most competitive jurisdiction in Canada" (Saskatchewan Industry and Resources News Release #778). This statement implies that the provincial government's policy is to reduce Saskatchewan's royalties below the levels set by other provinces, rather than to collect as much royalty revenue as possible while remaining reasonably competitive with other provinces. If true, this refutes the already questionable notion that Saskatchewan's royalty reductions have been driven by the need to compete with Alberta, and thereby supports the ideological and electoral explanations of low royalties suggested by Section IX.

The general concept of this paper is based on a term paper I wrote for Dr. Howard Leeson, which was subsequently selected as national winner of the Progressive Economics Forum Student Essay Contest. I am grateful to Dr. Leeson, former University of Regina Fellow at the Saskatchewan Institute of Public Policy (SIPP), for recommending my paper to the Institute for publication. I also thank Dr. Raymond Blake, Director of SIPP, for allowing me to research and write much of this paper as part of my work for the Institute, Dr. John Allan, Senior Policy Fellow at SIPP, for providing a critical review of my work, and Andrea Geisbauer, Communications and Project Officer at SIPP, for organizing the paper's publication. While I have benefited from the assistance of others, I take full responsibility for the paper's content.

Erin M. K. Weir
November, 2002

Section I: Introduction and Overview

Natural resources have always been a definitive feature of Saskatchewan's economic and political life. The industrial development of North America did not give rise to a substantial manufacturing sector in this province. Instead, it oriented Saskatchewan's economy toward the production of raw materials that are sold as inputs to industry located elsewhere. While Saskatchewan is best known for grain production, the economic importance of mineral resources has increased dramatically since World War II. The Government of Saskatchewan can play a decisive role in this sector because it owns most of the province's resources and holds regulatory power over all of them. Historically, this has made resource policy a major issue in Saskatchewan politics.

Royalties are the price that the provincial government charges private firms to exploit Saskatchewan's mineral resources. Because fossil fuels are the most valuable of the province's mineral resources, they are by far its most important source of royalties. During the 1970s and 1980s, the issue of oil and gas royalties was a major political fault line between the left-wing New Democratic Party (NDP) and the right-wing Conservative Party.

The NDP government of Premier Allan Blakeney aggressively increased royalties to capture windfall revenues created in Saskatchewan's petroleum sector by the oil-price shocks of the 1970s. Between 1975 and 1982, the Government of Saskatchewan captured an average of 50% of the province's oil and gas sales in royalties. In constant 2000 dollars, the Blakeney government collected an annual average of \$848 million in oil and gas royalties.¹

Political debate on this policy was rancorous. The Conservatives accused the NDP of expropriating wealth that rightfully belonged to individual entrepreneurs and of stifling private-sector development in Saskatchewan.² After winning power under Premier Grant Devine in 1982, they quickly slashed petroleum

¹ Table III. In this case and subsequently, 1982 is treated as part of the Blakeney period because the Devine government did not alter Saskatchewan's royalty regime until more than halfway through the year.

² Gary Lane, a leading Conservative politician, described the Blakeney government's resource policy as being "selfish" and "wrong" in the Saskatchewan Legislature. Quoted from the Saskatchewan Legislative Assembly's

royalties. Between 1983 and 1991, Saskatchewan's royalties amounted to an average of only 27% of its oil and gas sales. In constant 2000 dollars, the Devine government received an annual average of \$640 million in oil and gas royalties.³

Not surprisingly, the NDP opposition charged that the Conservative government was giving away Saskatchewan's publicly owned resources at fire-sale prices.⁴ But the election of an NDP government under Premier Roy Romanow in 1991 dramatically altered political debate on this issue. Rather than raising resource royalties, the Romanow government reduced them further. Between 1992 and 2000, provincial royalties amounted to an average of only 17% of oil and gas sales. In constant 2000 dollars, the Romanow government collected an annual average of only \$567 million in oil and gas royalties.⁵

The Romanow government's historic reversal of NDP policy created a political consensus among Saskatchewan's mainstream parties in favour of low royalties. While mineral resources remain a pillar of the provincial economy, resource royalties have almost completely dropped off Saskatchewan's political agenda. Since the government and its opposition are now in agreement on this issue, there has been almost no public scrutiny of the province's resource royalties for more than a decade.

This paper provides a critical appraisal of Saskatchewan's current low-royalty regime to recommend resource policies for this province to pursue in the future. It begins by constructing a simple economic model of Saskatchewan's petroleum sector to assess the tradeoffs and constraints faced by the provincial government in setting royalties at different levels. This model shows that the people of Saskatchewan would derive the most benefit from a resource policy that seeks to optimize provincial royalty revenues. The paper then makes historical and inter-jurisdictional comparisons that establish

Hansard in Saskatchewan New Democratic Party, *We Care!: We've been tested . . . We can be trusted* (Regina: Centax of Canada, 1982), p. 25. Colin Thatcher, the Conservative government's Minister of Mineral Resources, refers to "the repressive [resource] policies of the NDP" in his memoirs, *Backrooms: A Story of Politics* (Saskatoon: Western Producer Prairie Books, 1985), p. 192.

³ Table III. In this case and subsequently, 1991 is treated as part of the Devine period because the Romanow government was not elected until more than halfway through the year.

⁴ The 1982 NDP election pamphlet cited above suggested that the Conservatives would "waste [Saskatchewan's non-renewable resources] on their friends in the multinational resource companies." NDP, *We Care!*, p. 25.

⁵ Table III. In this case and subsequently, 2000 is treated as being the last year of the Romanow period because it is

benchmarks to evaluate Saskatchewan's success in achieving this goal. The relevant statistical evidence shows that Saskatchewan's royalty regime has fallen far short of this objective during the post-1982 period. This poor performance may be attributable to ideological and electoral factors that could have motivated both the Devine and Romanow governments to keep royalties low. Finally, the paper suggests policies that would help Saskatchewan realize a greater return on the depletion of its oil and gas reserves.

Section II: The Current Royalty Regime

The Government of Saskatchewan charges private firms two types of royalties to exploit the province's crude oil and natural gas. First, firms must pay "access royalties" for the right to exploit oil and gas on Crown land. These payments consist of competitive bids for Crown mineral rights and nominal rental fees on these rights. Secondly, and more significantly, firms must pay "production royalties" on the output of each oil or gas well they operate.⁶ Crown-owned oil and gas is subject to the Crown royalty, while privately owned oil and gas is subject to the lower freehold production tax. Crown royalties are assessed on oil and gas wells by setting a reference well rate, a base price, a base rate, and a marginal rate. A well's liability is determined by the relationship between its output and the reference rate of output, and by the relationship between the actual price of oil or gas and the base prices. If the actual price is equal to or below the base price, then the base rate is applied to the actual price. If the actual price is above the base price, then the base rate is applied to the base price and the marginal rate is applied to the amount by which the actual price exceeds the base price. The combination of base and marginal rates sets Saskatchewan's production royalties as percentages of the actual prices of oil and gas, and increases these percentages as the actual prices rise above the base prices.

Wells producing at the reference rate, which is 100 cubic meters per month for oil wells and 250,000 cubic meters per month for gas wells, are subject to this formula. The liability is sharply reduced

the most recent year for which the *Mineral Statistics Yearbook* (full citation below) is available.

⁶ The term "royalties" is generally used to refer only to what I have designated as "production royalties." For the sake of comprehensiveness, this paper includes those charges designated as "access royalties" in its analysis of Saskatchewan's royalty structure. All figures, technical information, and dates relating to production royalties are

as a well's output falls below the reference rate and slowly increased as its output rises above the rate. The freehold production tax is calculated by subtracting a specified amount from the rate established by the Crown-royalty formula.

The government applies different base prices, base rates, and marginal rates to different types of oil and gas. "Old" non-heavy oil from wells that began producing before 1974 is subject to a base rate of 20% and a marginal rate of 45%. "New" non-heavy oil from wells that began between 1974 and 1994 has a base rate of 15% (12.5% for designated southwest oil) and a marginal rate of 35%. "New" heavy oil has a base rate of 10% and a marginal rate of 25%. The base price for "old" and "new" oil is \$50 per cubic meter. "Third-tier" oil from wells that began after 1994 faces the same rates as "new" oil, but at a base price of \$100 per cubic meter.

"Old" natural gas from wells that began producing before 1976 is subject to the same rates as "old" non-heavy oil. "New" natural gas from wells that began between 1976 and 1998 is subject to the same rates as "new" non-heavy oil. The base price for "old" and "new" gas is \$35 per thousand cubic meters. "Third-tier" gas from wells that began after 1998 faces the same rates as "new" natural gas, but has a base price of \$50 per thousand cubic meters.

The Romanow government's decision to create "third tiers" of oil and gas constituted a massive royalty reduction. The substantially higher base prices mean that oil from post-1994 wells and gas from post-1998 wells is mostly subject to the base rates, rather than to the marginal rates. Since the base rates are less than half the marginal rates, this implies a substantial loss of royalty revenue. The impact of this change on provincial revenues will become more pronounced as the number of "third-tier" wells increases relative to the number of "new" and "old" wells.

from Saskatchewan Energy and Mines, *Information Circular EFA-IC01* and *Information Circular EFA-IC02* (Regina: Government of Saskatchewan, 1999).

Section III: A Conceptual Model

In order to illustrate the economic considerations involved in setting royalty rates at various levels, this paper will construct a simple model of oil and gas royalties in Saskatchewan. For the sake of brevity, the model will be described with reference only to crude oil, but it is completely applicable to natural gas. The model consists of two actors, the oil industry and the provincial government, and two time horizons, the short term and the long term. There are four variables: the price of oil net of transportation costs, the marginal cost of producing oil, the royalty per unit produced, and the quantity of oil produced.

The first two variables are exogenous to the model in that they are outside of either actor's control. The net price of oil is determined by world markets and by the cost of transporting it to the point of sale. The net price is therefore unaffected by the quantity of oil produced in Saskatchewan. To the extent that the price received by Saskatchewan producers differed from the world price during the 1970s and early 1980s, this was because of federal price regulations, which were also beyond Saskatchewan's control.

Likewise, the marginal cost of producing oil is determined by physical realities and market prices that are outside the control of either the industry or the government. Petroleum is a classic "increasing cost industry" because firms exploit the best and cheapest oil pools first, but must expand their operations to less lucrative reservoirs to increase the quantity produced. This sharply increases the marginal cost of producing oil as the volume of output rises.⁷

In the short term, these two exogenous variables can be treated as fixed because they are determined outside the parameters of the model and must be taken as given by the actors in the model. In the long term, however, net price and marginal cost must be considered as genuinely variable since they can be altered by global markets, international politics, federal energy policy, technological developments, and other factors.

It must be acknowledged that this model is a simplification of reality. The net price of a unit of oil

⁷ Curtis Eaton, Diane Eaton, and Douglas Allen, eds., *Microeconomics*, Fourth Edition (Scarborough, Ontario: Prentice Hall, 1992), p. 291.

is a function of the price for which it can be sold, which depends on its grade (heavy, medium, or light),⁸ and the cost of transporting it to the point of sale, which depends on where it is produced. The concept of a single net price for all of Saskatchewan's oil production is somewhat of an abstraction. However, the prices of different grades of oil are closely related to each other and transport charges constitute an almost insignificant fraction of the gross value of oil sold by Saskatchewan (about 1% or less throughout the period examined by this paper.)⁹ It therefore seems reasonable to abstract from these details and treat the net price of oil as being uniform for the purposes of the model.

The marginal cost of producing oil is treated as an increasing function of the quantity of oil produced, but the relationship between these variables is not explored in detail. Determining the precise shape of the marginal cost curve would require a detailed study of Saskatchewan's geology and the markets for inputs to the process of petroleum extraction. Given that Saskatchewan's geology is not completely known and the behaviour of factor markets cannot be precisely predicted, such a study would probably be impossible to complete.

This model treats royalties as a fee per unit of oil produced. Saskatchewan's current regime of production royalties sets this fee as a percentage of the price (as described in Section II). Access royalties may also be considered a fee per unit in the sense that they are a cost that must be amortized over the output derived from the acquired Crown rights. Expressing royalties as a fee per unit is a means of taking both production and access royalties into account on a common basis.

In this model, the quantity of oil produced reflects two principal abstractions. The first involves ignoring the distinction between different grades of oil. This assumption has already been explained as it relates to price. Secondly, the net price and net value of sales relate to the quantity of oil sold, while marginal cost and royalties relate to the quantity produced. Bringing these variables together requires an assumption that the volume of production equals the volume of sales. This will be true in the long term, but

⁸ Saskatchewan Industry and Resources, *Mineral Statistics Yearbook 2000* (Regina: Government of Saskatchewan), Table 2-1-1, p. 17.

it will not necessarily be the case in the short term. However, this assumption is commonly made in market analysis and is particularly valid in this model because Saskatchewan's capacity to store oil is limited. During the period under review, Saskatchewan's oil production and sales were in the millions of cubic meters, while the differences between the two were in the thousands of cubic meters. Graphing production against sales reveals no noticeable difference between them.¹⁰

The important point is that these simplifying assumptions be made explicit. The purpose of the model is not to paint a detailed picture of Saskatchewan's petroleum sector, but to illustrate the tradeoffs made by governments in setting oil royalties at different levels. Any generalized model requires that some details be discarded in favour of the crucial elements. While a more complex model would be required to generate precise quantitative results, this model appropriately illustrates the basic policy options available to the Government of Saskatchewan.

In the absence of royalties, the industry will produce oil up to the quantity where the marginal cost of extracting it equals its price. In other words, the cost of the last unit of oil produced will equal the price for which it can be sold. Pushing production beyond this point would mean producing some oil that costs more to extract than it can be sold for. Allowing production to fall short of this point would mean not extracting some oil that could be sold for more than it costs. Assuming that the oil industry seeks to maximize profit, it will produce the quantity of oil for which marginal cost equals price.

Because the sale price is the same for all units of oil extracted, and the cost of production equals the sale price only for the last unit of oil, almost every unit of oil is produced at a cost somewhere below its price. In fact, oil pumped from rich and accessible reservoirs is produced at a cost far below its price. Most producers therefore derive economic rent from geological factors that do not reflect the contribution of either labour or capital to the process of petroleum extraction. In effect, this rent reflects the contribution of the oil itself to economic welfare.

⁹ Ibid., Table 2-1-4, pp. 66-67.

¹⁰ Ibid., Graph 2-1-4, p. 68.

A clear distinction must be drawn between the economic concept of rent just described and the accounting concept of profit as a firm's revenues minus its expenditures. The standard type of profit is already included in marginal cost as payments to investors for their capital and for the risks they take, and as payments to managers for their entrepreneurial expertise. Economic rent constitutes windfall earnings over and above this standard type of profit.

It is widely accepted that governments should tax economic rents because they constitute surplus revenues in excess of the normal compensation paid to labour and capital.¹¹ In the case of oil, rent reflects the value of a resource that is largely owned by the provincial government, so it is only fair that most of these revenues accrue to the Province. Any rent retained by private firms is effectively a gift from the people of Saskatchewan to the petroleum industry.

Royalties are the mechanism used by the provincial government to capture the economic rent inherent in oil production. Unfortunately, it is not possible to simply extract all of the available rent without affecting the oil industry's operations. Royalties change the industry's basic profit-maximizing calculation by lowering the return it receives on each unit of oil produced. Royalties could be characterized either as a deduction from price or as an addition to marginal cost. Both representations produce exactly the same results.

This model conceives of the net price for which producers can sell a unit of oil as being effectively reduced by the amount of the royalty. This new price faced by firms may be referred to as the "producer price." Under a regime of royalties, the industry will produce oil to the point where marginal cost equals this producer price. If the royalty equals the net price, then no oil will be produced, since the producer price would be zero.

Given the price for which oil can be sold and the marginal cost of producing it, each actor in the model makes a decision. The government sets the oil royalty at a value between zero and the net price of

¹¹ Richard Bird, "Why Tax Corporations?," Working Paper 96-2 prepared for the Technical Committee on Business Taxation (Ottawa: Government of Canada, 1996), p. 5.

oil. Based on the resulting producer price, the industry determines how much oil to produce. The amount of new drilling the industry will undertake is closely related to this.

The combination of these basic variables produces a set of composite variables. The value of oil produced in Saskatchewan net of transport costs equals the net price multiplied by the quantity produced. Total royalty revenues collected by the Government of Saskatchewan equal the royalty per unit multiplied by the quantity produced. The oil industry's total costs (which consist of both expenditures and standard profits on these expenditures) equal the sum of the marginal costs of each unit of oil produced. The economic rent accruing to the oil industry is the sum of the differences between the producer price and the marginal cost of each unit of oil. The "royalty rate," referred to previously and subsequently in this paper, is equal to the per unit royalty divided by the net price, which is the same as total royalty revenue divided by the net value of production (or of sales).

How does the oil royalty imposed by the government affect these composite variables? If the government sets royalties at a low rate, then the producer price will be nearly the same as the net sale price and the industry will produce a large quantity of oil close to what it would have produced without royalties. Since each unit of oil produced adds to the industry's total costs and to its receipt of economic rent, both of these variables will be high. By contrast, royalty revenues will be low because the government will collect very little per unit of oil produced. The most extreme scenario would be a royalty of zero, in which case oil would be produced all the way to the point where marginal cost equals net price, industry expenditures and rents would be maximized, and the government would receive no royalty revenue.

A second option is to set royalties at a moderate rate. Since the producer price would be significantly below the net sale price, the industry would produce a more moderate quantity of oil, placing its expenditures and rents at a moderate level. But the government's revenues would be high because it would collect significant per-unit royalties on a significant volume of production. In any given period, there is one royalty rate that corresponds to a particular level of output that will maximize provincial revenues. The per-unit revenue gains of increasing royalties beyond this point would be more than offset

by the reduction in the number of units produced. Likewise, the gains of reducing royalties below this point would be more than offset by the fall in the per-unit royalty. There is a single moderate rate that will maximize current government revenues. Without knowing the industry's marginal cost curve, it may be impossible to precisely determine this rate. Nevertheless, it is a reference point worthy of consideration in setting royalties.

The third option is high royalty rates, which would drive the producer price far below the net sale price. Only a small quantity of oil would be produced, with industry expenditures and rents at correspondingly low levels. Government revenues would also be low because, despite the high royalty per unit of oil, very few units would be produced. The extreme case would be a royalty equal to the net price of oil, which would prevent any oil from being produced, leaving the industry's expenditures and rents, and the government's revenues, at zero.

Section IV: The Short-Term Tradeoff

In the short term, the rational tradeoff appears to be between low and moderate royalty rates. Low rates maximize the oil industry's economic activity at the expense of government revenues. Moderate rates maximize the government's revenues at the expense of industry activity. High rates depress both government revenues and industry activity.

Might it be possible to combine the benefits of low and moderate rates, without making a tradeoff between the two? To some extent, governments attempt to do this by applying lower royalty rates to newer wells. An extreme example of this practice was the Devine government's provision of a three-year royalty exemption for production from wells that began after 1982.¹² The idea was to allow Saskatchewan to benefit from the economic activity associated with new development, while continuing to collect royalties on previously established production.

Oil companies were able to circumvent this system by restricting production from their existing wells and drilling new wells into the same fields, thereby reducing their royalty payments, while pumping

the same oil and gas as before.¹³ This practice contributed to an unprecedented amount of new drilling during the royalty holiday,¹⁴ but robbed the government of revenues.

The larger the differential created between royalties on new and old wells, the greater the incentive for companies to drill superfluous new wells to evade royalty payments. This problem would have been even larger during the Devine period had the royalty holiday not been combined with a substantial cut in the royalty rate applied to existing production.¹⁵

A further problem relates to how long a new well is considered to be “new” for the purpose of calculating royalties. If a short exemption is provided, the government will not sacrifice much revenue, but the incentive for increased economic activity will be small. A longer exemption will allow companies to easily recoup their investments and thereby create a strong incentive for expansion in the petroleum sector, but at great cost to the government. The basic tradeoff between industry activity and government revenues therefore prevails and cannot be avoided by a creative royalty structure. This tradeoff is clearly borne out by the historical data discussed in Section VII of this paper.

Economics Professor Eric Kierans addressed the question of government revenues versus industry activity in his *Report on Natural Resources Policy in Manitoba* (1973):¹⁶

To be satisfied with the new jobs created and to forego the surplus and profits inherent in the development of its own endowment is hardly the mark of a strong government. It accepts the role of “hewers of wood and drawers of water” for its people when they are capable of much more. That role provides wages and salaries and little else. The profits, which direct and finance the future, belong to those who have been invited in and this capital formation does nothing for priorities in [other] fields.

As the former President of the Montreal Stock Exchange, Kierans is no left-wing radical. Despite his business background, he recognizes that provinces, as the owners of their natural resources, should demand

¹² Thatcher, *Backrooms*, pp. 221-222.

¹³ Lesley Biggs and Mark Stobbe, eds., *Devine Rule in Saskatchewan: A Decade of Hope and Hardship* (Saskatoon: Fifth House, 1991), p. 21.

¹⁴ Table I.

¹⁵ Thatcher, *Backrooms*, p. 221, and Biggs and Stobbe, *Devine Rule*, p. 20.

¹⁶ Cited in Lorne Brown, Joseph Roberts, and John Warnock, *Saskatchewan Politics: From Left to Right, '44 to '99* (Regina: Hinterland Publications, 1999), p. 106. Kierans also outlined his views on this subject in his forward to Thomas Gunton and John Richards, eds., *Resource Rents and Public Policy in Western Canada* (Halifax: The

more than the jobs created through private exploitation of their public endowments. He also recognizes the need to invest money extracted from the resource sector into other industries to build a modern and diverse economy.

Kierans's argument is particularly relevant to Saskatchewan's petroleum sector. The interest paid to capital and the rent retained by companies mostly goes to firms headquartered outside of Saskatchewan. These payments are subject to corporate taxation, but revenues extracted in this manner constitute only a fraction of the industry's income. It must be stressed that the corporate tax system employs a relatively low rate structure because it is designed to tax normal returns to capital. Corporate taxes will therefore capture only a small fraction of any rent not captured by the royalty system. The tax revenues generated by the oil industry's activity pale in comparison to the funds that could be generated by maximizing royalty revenues.

The issue of oil-industry employment is somewhat more difficult. Raising royalties would reduce the industry's output, which would imply a lower level of employment in the petroleum sector. In setting royalty rates, the cost of lost employment must be weighed against the benefit of increased public revenues.

During the late 1990s, the most recent portion of the period examined by this paper, Statistics Canada data shows that the number of people employed in oil and gas extraction in Saskatchewan fluctuated between about 1,000 and 2,000.¹⁷ During the same years, support activities for both mining and oil and gas extraction employed between 3,000 and 4,000 people.¹⁸ Only a portion of these support jobs is related to oil and gas extraction as opposed to mining. The number of people employed in oil and gas extraction or in support jobs contingent upon it is probably somewhere between 2,000 and 4,000.

It must be stressed that these figures reflect the number of people on the oil and gas industry's payrolls, not the existence of stable, long-term employment in this sector. The volatility of these job numbers over time clearly illustrates the temporary and transient nature of this employment. There is no

Institute for Research on Public Policy, 1987).

¹⁷ Statistics Canada, *Cansim II Series V1557971* (Ottawa: Government of Canada, 2002).

¹⁸ Statistics Canada, *Cansim II Series V1557974* (Ottawa: Government of Canada, 2002). Unfortunately, Statistics Canada does not separate those support workers employed by oil and gas extraction from those employed by mining

guarantee that those employed by the petroleum industry's Saskatchewan operations are even permanent residents of the province.

Even if one makes the extreme assumption that raising royalties from low to moderate levels would cut the level of oil and gas industry employment in half, this would still only imply a loss of between 1,000 and 2,000 jobs. This is not an insignificant cost, but it would be far outweighed by the benefit of hundreds of millions of dollars in additional public revenues. Fully replacing the incomes of all those oil and gas workers who would become unemployed as a result of increasing royalties would cost less than \$150 million, a fraction of the additional revenues that a moderate rate would generate. (The amount of revenue that could be generated by a moderate royalty rate is estimated in Section VII).

However, advocates of low royalties contend that the existence of many more jobs depends on the level of petroleum industry activity. First, they argue that the operations of SaskFerco, which uses natural gas to produce fertilizer, IPSCO, which manufactures pipes for the industry, and the province's two oil refineries are contingent upon the volume of oil and gas extraction in Saskatchewan.¹⁹ This is plainly not true. Saskatchewan's refineries and SaskFerco process only a fraction of the volume of oil and gas that this province produces. Even a massive contraction of Saskatchewan's oil and gas output would have very little effect on their operations. IPSCO acts as a supplier to the entire western Canadian petroleum industry and also to the American market. Only a small fraction of its operations are contingent on the volume of oil and gas production within Saskatchewan. The level of employment in these secondary industries is virtually unaffected by the oil and gas royalties levied by the Government of Saskatchewan.

Secondly, it is argued that petroleum industry activity creates many indirect, "spin-off" jobs.²⁰ Although this claim cannot be measured precisely, there is undoubtedly some validity to it. It is difficult to

operations.

¹⁹ Don Baron and Paul Jackson, *Battleground: The Socialist Assault on Grant Devine's Canadian Dream* (Toronto: Bedford House, 1991), pp. 42 and 44.

²⁰ *Ibid.*, p. 42.

determine how many jobs are indirectly created by industry activity and it would be even harder to determine how many of these indirect jobs would be eliminated by a given increase in royalty rates.

The critical point is that the employment lost to increased royalties must be weighed against the employment generated by them. While extracting funds from the oil and gas industry eliminates some positions directly or indirectly related to it, dispersing these funds in the form of tax reductions, transfer payments, or exhaustive public expenditures creates jobs in other sectors.

It is well established that the oil and gas sector is very capital intensive. During the 1990s, it utilized more capital per employee than any other major sector of the Canadian economy.²¹ By definition, this means that a dollar of activity in the petroleum industry creates fewer direct jobs than does a dollar of activity in other industries. In fact, 1994 figures indicate that it takes twenty-one times as much fixed capital to sustain a job in Canada's oil and gas sector as it does in this country's manufacturing sector.²² Statistical evidence suggests that the oil and gas sector also creates relatively few indirect jobs per dollar of activity.²³ The petroleum industry's generation of both direct and indirect employment in Saskatchewan is undoubtedly further reduced by the fact that it is overwhelmingly headquartered outside the province.

Oil and gas royalties effectively transfer funds from an extremely capital-intensive industry that is largely headquartered outside the province into other sectors of Saskatchewan's economy. Such a transfer almost inevitably creates more jobs than it eliminates. It is therefore reasonable to expect that increasing royalty revenues would raise the overall level of employment in Saskatchewan.²⁴ A few years ago, Blakeney explained his government's policy in these terms: "We felt that the spinoff from resource activity

²¹ Jim Stanford, *Paper Boom: Why Real Prosperity Requires a New Approach to Canada's Economy* (Ottawa: The Canadian Centre for Policy Alternatives, 1999), Table 6-4, p. 135.

²² In 1994, the oil and gas sector had \$790,000 of fixed capital per employee, while the manufacturing sector had \$38,000. Ibid.

²³ D. J. McCulla, "Minerals in Canadian Economic Development: Recent Quantitative Analysis," cited in David Brooks, *Zero Energy Growth for Canada* (Toronto: McClelland and Stewart, 1981), p. 147. McCulla's study was written for the (federal) Department of Energy, Mines and Resources.

²⁴ This would not be the case only if most or all of the additional revenues were badly mismanaged, invested in very capital-intensive infrastructure (such as electrical generation), or used to finance Crown investments outside of Saskatchewan. If these revenues were used to reduce the provincial debt, the employment gains would be delayed until such time as lower debt-servicing costs allowed an increase in provincial expenditures, a decrease in provincial

in Saskatchewan was enjoyed to a large extent outside Saskatchewan, and that we could generate more activity in Saskatchewan by collecting larger royalties and spending them within the province.”²⁵

This section has argued that Saskatchewan people derive relatively little benefit from the petroleum industry’s activity because it is largely headquartered outside the province and because its operations are unstable and capital-intensive. The additional revenues raised by increased royalties would be far more than enough to compensate for any conceivable loss of direct jobs in the oil and gas sector. The additional employment created by the dispersal of these revenues could outweigh both the direct and the indirect employment eliminated by higher royalties. The case for increasing royalty revenues at the expense of industry activity is therefore very strong.

Section V: The Long-Term Tradeoff

Moving this model into the long-term time horizon alters its dimensions in two important ways. First, the net price of oil and the marginal cost of producing it are now subject to change. As oil is produced globally, the depletion of low-cost reservoirs and the shift to more expensive ones will drive up the global marginal cost of production and the world price of oil. It must be stressed that this process is subject to major fluctuations. In the 1970s, for example, OPEC’s decision to constrain the global supply of oil drove prices up very rapidly. In the second half of the 1980s, the discovery of significant quantities of offshore oil outside OPEC’s control, on the Alaskan coast and in the North Sea, greatly depressed prices. How effective OPEC will be in holding up oil prices in the future is a major source of uncertainty.²⁶ In addition, restrictions on greenhouse gas emissions and technological breakthroughs in the field of alternative energy could slow the rate at which oil prices rise. On the other hand, the industrial development of populous third-world nations could drive up oil prices even faster. While the underlying economic logic of the industry virtually guarantees that the price of oil will increase in the very long term,

revenues, or some combination of both.

²⁵ Allan Blakeney and Sanford Borins, *Political Management in Canada: Conversations on Statecraft* (Toronto: University of Toronto Press, 1998), p. 45.

²⁶ For more on the economics of world oil prices and different economic models of OPEC, see James Griffin and

there is only a probable tendency, rather than a reliable trend, for oil prices to rise in the medium term. This point is much stronger as it applies to natural gas because there is an observable upward trend in gas prices.

While the global marginal cost of producing oil and gas will be increased by the move to lower quality reservoirs, the marginal cost for reservoirs of the same quality will be reduced by improvements in drilling and recovery equipment and techniques. For this reason, the marginal cost of production from reservoirs that are left unexploited will fall over time. How much cheaper exploitation will become depends on the pace of technological development, but there is an undeniable trend in that direction.

Secondly, the fact that oil and gas are non-renewable resources must be taken into account. Saskatchewan's fossil-fuel reserves are finite. Each unit of oil or gas produced necessarily reduces future production by one unit. In fact, because recovery methods improve over time, depleting a reservoir today may actually yield less than depleting the same reservoir in the future would. Reducing the current quantity of production is not necessarily undesirable because it increases the stock available for future extraction. In the case of the petroleum sector, foregoing economic activity in the present increases economic activity in the future (unless oil and gas extraction somehow becomes uneconomical).

These facts alter the tradeoff faced by the Government of Saskatchewan in setting royalty rates. It should consider not only the balance between royalty revenues and economic activity during the current year, but the return it receives for the depletion of its stock of oil and gas over many years. As the proprietor of Saskatchewan's oil and gas, the provincial government may sell each unit of them only once.

Because of the tendency for oil and gas prices to increase relative to the prices of other goods and for technological developments to reduce the marginal cost of producing fossil fuels from each grade of reservoir, the economic rent associated with the production of any given unit of Saskatchewan's oil and gas will tend to grow at a rate above inflation. The widening gap between price and marginal cost, and the rent it implies, will increase the real value of royalties that can be collected from oil and gas production.

High royalties were dismissed in examining only the short-term factors, but they are more attractive in the long term. Their advantage lies in maximizing the royalty charged on each unit of oil and gas produced. Oil that cannot be profitably extracted at this high royalty rate is left in the ground until the net price it can be sold for increases enough and the marginal cost of extracting it falls enough to make its production economical. This type of regime maximizes the return that the province receives for the depletion of its non-renewable resources over the long term.

In maximizing this long-term return, there is a limit on the extent to which present benefits should be sacrificed for future benefits. A constant dollar in the present is worth more than a constant dollar in the future, which is why interest rates prevail above the rate of inflation. Individuals, organizations, corporations, and governments are all willing to pay more for a given sum in the present than for the same sum in the future. The market interest rate is not necessarily the appropriate rate at which to discount the future benefits of petroleum royalties. However, a social discount rate of some sort must be applied to the public sector. In determining whether to defer present income to increase future income, the anticipated increase in the rent available in Saskatchewan's oil and gas sector must be weighed against the discount rate chosen.

Since no one knows precisely what the future price of oil or gas will be, how much oil and gas Saskatchewan has, or what the marginal cost of producing them will be, it is impossible to calculate the royalty rates that will maximize the net present value of Saskatchewan's stock of oil and gas at a given discount rate. The case for reducing current income for the sake of future income through high royalties is difficult to establish. This paper therefore does not prescribe an optimum royalty rate for Saskatchewan.

As the previous section shows, the argument for moderate rather than low royalties is very strong. The case for high rather than moderate royalties is much weaker because it is contingent upon predictions about the future that cannot be verified or falsified. However, it is abundantly clear that the tradeoff Saskatchewan should be making is between moderate and high royalties, either of which would be preferable to the present policy of low royalties.

Section VI: Constraints on Royalty Policy

A line of argumentation frequently invoked in defence of low royalties is that, even if higher royalties are desirable, they are impractical.²⁷ It is asserted that the need to compete with Alberta's royalty regime, in addition to other factors, restricts the Government of Saskatchewan's ability to raise royalties. This section examines the alleged constraints on Saskatchewan's royalty policy to determine whether raising royalties to moderate or high levels is a realistic option.

It is commonly argued that Saskatchewan must keep its royalty regime competitive with Alberta's. There is no question that royalties make oil and gas extraction less profitable, but visions of this province's entire oil and gas industry shutting down and moving west are unfounded. Most of the petroleum industry's investment in Saskatchewan is quite literally "sunk" and cannot be reversed. Only new investment can be affected by the differential between Saskatchewan and Alberta royalties.

It has already been noted that royalties curtail the volume of industry activity by making some oil and gas unprofitable for companies to produce. The fact that Saskatchewan must compete with other jurisdictions aggravates this problem. Given a finite amount of capital available for investment, the industry will try to exploit the most profitable reservoirs and forgo less profitable opportunities. Lowering royalties not only makes more reservoirs profitable, but it makes those that are already profitable even more lucrative. If Alberta's royalties are lower than Saskatchewan's, then Alberta's reservoirs will be relatively more profitable than Saskatchewan's, other things being equal. Raising Saskatchewan's royalties appreciably above Alberta's will increase the amount of investment in Alberta's petroleum sector and decrease the amount in Saskatchewan's, even though many of this province's reservoirs would remain profitable. This competition between Saskatchewan and other jurisdictions makes the negative impact of

²⁷ Because there is almost no academic writing that explicitly addresses the arguments for and against increasing or decreasing Saskatchewan's royalties, proper citations are not available for many of these arguments. It must be acknowledged that the author has encountered many of the points addressed in this section in verbal conversations, rather than in written sources.

Saskatchewan's royalties upon the level of industry activity in this province more significant than the model presented in Section III may suggest.

However, the constraint imposed on Saskatchewan's royalties by the need to compete with Alberta is not as decisive as is often suggested. The argument presumes that Saskatchewan and Alberta are competing over a finite pool of capital in the western Canadian petroleum sector. In reality, capital can enter and exit the industry, although it is not completely elastic.

If Alberta lowers its royalties relative to Saskatchewan's there will be more investment in Alberta's petroleum sector, but not necessarily at Saskatchewan's expense. Profitable opportunities in Saskatchewan will not always be forgone simply because more profitable opportunities exist in Alberta. Instead, more capital will enter western Canada's petroleum industry so that all profitable opportunities are exploited. Alberta's royalties affect industry activity in Saskatchewan only to the extent that capital is more mobile between provinces than between industries.

This constraint makes the tradeoff between industry activity and royalty revenues more severe, but it does not impose absolute limits on Saskatchewan's royalties. For example, the Blakeney government succeeded in vastly increasing royalty revenues by maintaining Saskatchewan's rates well above Alberta's, albeit at a significant cost in terms of lost industry activity. As Section VIII shows, the extent to which Alberta's royalties have been reduced does not fully account for the amount by which Saskatchewan's have been reduced.

A second argument is that changes in the fiscal structure of the Canadian federation make it more difficult for Saskatchewan to maintain its royalties at moderate or high levels. Historically, provincial royalties were deductible from federal corporate income taxes. This meant that a portion of provincial royalties was, in effect, paid by the federal government, rather than by the resource industry. It is argued that this provision allowed the Blakeney government to raise Saskatchewan's royalties to artificially high levels. Now that the federal government has replaced deductibility with a flat "resource allowance," the

entire cost of provincial royalties, beyond this allowance, is borne by the industry. Saskatchewan must therefore maintain its royalties at low levels.

This is highly dubious as an argument against raising royalties. The Blakeney government significantly increased oil royalties in 1975. The Government of Canada replaced deductibility with the resource allowance in 1976.²⁸ There was therefore only a one-year period during which deductibility facilitated increased royalties. Between 1976 and 1982, the Blakeney government was able to maintain royalties at moderate-to-high levels without deductibility. After 1982, the Devine government maintained royalties at moderate levels for a few more years. While deductibility would obviously facilitate increased royalties, it cannot be seen as a necessary condition for them. The historical record shows that higher royalties are compatible with the resource allowance system that is currently in place.

In some ways, changes to Canada's fiscal framework have actually made it much easier for Saskatchewan to extract royalty revenues from its oil and gas sector. During the 1970s and early 1980s, the Government of Canada was fairly aggressive in seeking to increase national resource revenues at the expense of provincial resource revenues.²⁹ The present federal government is passive on this question. Furthermore, the *British North America Act* prevented provinces from levying indirect taxes on natural resources. In fact, the Supreme Court struck down the Blakeney government's windfall profits tax (Bill 42) on that basis.³⁰ However, the 1982 *Constitution Act* allows the provinces to tax both Crown and freehold natural resources by any means they wish.³¹ Unfortunately, Saskatchewan's post-1982 provincial governments have not had the political will to exercise this power.

A third argument against higher royalties is that Saskatchewan's proven reserves of oil are much

²⁸ Marianne Vigneault and Robin Boadway, "The Interaction of Federal and Provincial Taxes on Businesses," Working Paper 96-11 prepared for the Technical Committee on Business Taxation (Ottawa: Government of Canada, 1996), p. 15.

²⁹ There is, of course, a case to be made that the federal government was justified in this. For more on this issue, see Erin Weir, "NEP to FTA: The Political Economy of Canadian Petroleum Policy in 1980s," *Progressive Economics Forum* (www.web.net/~pef [September 2002]).

³⁰ *Canadian Industrial Gas & Oil Ltd. v. Government of Saskatchewan et al.* [1978] 2 S.C.R. 545 in John Saywell and George Vegh, *Making the Law: The Courts and the Constitution* (Toronto: Copp Clark Pitman, 1991), pp. 225-227.

³¹ Vigneault and Boadway, "Taxes on Business," p. 16.

greater now than they were during the 1970s. It is asserted that the Blakeney government was intent on maximizing the royalties collected from Saskatchewan's oil because it thought that very little remained, but that discoveries since then have mollified this concern.

It is true that Saskatchewan's known crude oil reserves have increased from fewer than 100 million cubic meters at the end of the Blakeney era to just over 180 million cubic meters in 2000.³² Since more than 20 million cubic meters are now being produced annually,³³ this implies significant new discoveries every year. On the other hand, Saskatchewan's known reserves of gas have been declining steadily.³⁴ The argument that reserves are rising can therefore only be applied to oil.

While the discovery of more oil may delude people into forgetting that it is a non-renewable resource, it does not alter the fundamental tradeoffs. Obviously, Saskatchewan is better off with a large stock of oil than with a small stock, but the stock is finite in either case and the rationale for maximizing the return received on its depletion remains valid.

There is an argument to be made that the economically relevant stock is the quantity of oil that actually has been discovered, rather than the quantity that physically exists. It is suggested that, rather than conserving Saskatchewan's stock of oil, higher royalties constrain it by deterring exploration.³⁵ While many would be inclined to dismiss the argument that Saskatchewan should allow its oil reserves to be depleted rapidly to increase the rate at which more oil is discovered as being shortsighted, it can be questioned on other grounds as well. While development drilling, and hence the overall level of drilling, has proven to be quite sensitive to royalty rates, exploratory drilling has not. In fact, more exploratory oil wells were completed during the Blakeney period (2,068 between 1975 and 1982) than during either the Devine period (1,627 between 1983 and 1991) or the Romanow period (2,020 between 1992 and 2000).³⁶

³² Saskatchewan Mineral Resources, *Annual Report 1981-82* (Regina: Government of Saskatchewan, 1982) and Saskatchewan Energy and Mines, *Annual Report 2000-01* (Regina: Government of Saskatchewan, 2001).

³³ Table I.

³⁴ Energy and Mines, *Annual Report 2000-01*, p. 12.

³⁵ Baron and Jackson, *Battleground*, p. 42.

³⁶ Industry and Resources, *Mineral Statistics*, Table 5-2-1, pp. 201-202. In Section VII of this paper, statistics on exploratory and development drilling are aggregated together.

The decline in Saskatchewan's oil reserves during Blakeney's premiership cannot be attributed to a lack of exploration caused by high royalties.

A fourth type of constraint that should be considered is environmental. It is likely that the national government will soon place some sort of restrictions on the emission of greenhouse gases. Within such a framework, Saskatchewan will be better served by a resource policy based on extracting maximum revenue from a reduced volume of oil and gas production than by a strategy based on expanding the volume of fossil-fuel output and the associated emissions. Even without binding national policies, there is a case to be made that Saskatchewan should endeavour to reduce its emissions. Raising oil and gas royalties would achieve this goal.

The royalty rates maintained by Alberta and other jurisdictions affect the tradeoffs faced by Saskatchewan in constructing its royalty regime. For this reason, Saskatchewan's royalties are compared with those of other jurisdictions in Section VIII. However, there are also external factors, such as the 1982 constitutional amendments and the likelihood of federal restrictions on greenhouse-gas emissions, which make it easier for Saskatchewan to raise its royalties.

Section VII: Historical Performance Evaluation

Previous sections have established that the appropriate objective of Saskatchewan's royalty policy is to maximize the return that Saskatchewan residents receive from the depletion of their fossil-fuel reserves, and that the impediments to pursuing this goal are less significant than is often claimed. This section examines statistical evidence from the 1975-2000 period to assess how well the royalty regimes maintained by the Blakeney, Devine, and Romanow governments have performed.

Table I (available online at www.uregina.ca/sipp) provides data on oil industry activity and oil production royalties in Saskatchewan. This data can be summarized by the following annual averages (monetary amounts in constant 2000 dollars):

	Blakeney (1975-1982 averages)	Devine (1983-1991 averages)	Romanow (1992-2000 averages)
Price of Oil (net \$/m ³)	\$187.50	\$187.10	\$134.59
<u>Industry Activity</u>			
Drilling (wells completed)	568	1,117	1,364
Volume of Sales (m ³)	9.0 million	11.6 million	19.8 million
Value of Sales (net \$)	\$1,666 million	\$2,119 million	\$2,708 million
<u>Production Royalties</u>			
Royalty Revenue (\$)	\$769 million	\$505 million	\$395 million
Royalty Rate (%)	46%	24%	15%

Clearly, there is a tradeoff between royalty revenues and industry activity. Relatively high royalties constrained the increase in new drilling during the Blakeney period. Partly as a consequence, Saskatchewan's oil production fell from 9.4 million cubic meters in 1975 to 8.1 million in 1982. However, this tradeoff paid handsomely since the Blakeney government was able to collect an average of \$769 million per year in oil production royalties.

The Devine and Romanow governments promoted significantly more new drilling by dramatically reducing royalties. While the price of oil has fluctuated during the 1980s and 1990s, consistently low royalties have helped steadily increase Saskatchewan's oil output from 8.1 million cubic meters in 1982 to 24.2 million in 2000. However, this expansion has come at a huge cost in terms of reduced royalty revenues. The Devine and Romanow governments collected annual averages of \$505 million and \$395 million respectively in oil production royalties. The notion that lower royalties would increase revenues by promoting more production is clearly incorrect. Over the past quarter-century, the volume and value of Saskatchewan's oil output have increased substantially, while the return that Saskatchewan residents receive from this output has fallen equally substantially, both in proportional and in absolute terms.

Table II (available online at www.uregina.ca/sipp) provides data on gas industry activity and gas production royalties in Saskatchewan. This data can be summarized by the following annual averages (monetary amounts in constant 2000 dollars):

	Blakeney (1975-1982 averages)	Devine (1983-1991 averages)	Romanow (1992-2000 averages)
Price of Gas (gross \$/10 ³ m ³)	\$30.17	\$77.29	\$81.13
<u>Industry Activity</u>			
Drilling (wells completed)	42	489	592
Volume of Sales (10 ³ m ³)	1.5 million	3.6 million	6.9 million
Value of Sales (gross \$)	\$39 million	\$268 million	\$555 million
<u>Production Royalties</u>			
Royalty Revenue (\$)	\$2 million	\$32 million	\$66 million
Royalty Rate (%)	5%	12%	12%

Natural gas is much less economically significant than crude oil. During the Blakeney period, Saskatchewan gas fetched a very low price and there was very little rent inherent in its production. The value of both sales and royalties was almost insignificant. A fantastic rise in gas prices produced a significant increase in drilling and sales during the post-1982 period. While this increase has pushed up gas royalty revenues, it is not clear whether or not the Devine and Romanow governments captured a large portion of the rents created by higher prices. Because natural gas was not economically significant during the pre-1982 period, there is no useful historical benchmark against which to assess post-1982 gas royalties. Since there is less economic rent inherent in gas production than in oil production, the optimal royalty rate for gas is below the optimal rate for oil. However, if one accepts that oil rates are far below their optimum, then it seems likely that gas rates are as well.

An argument made in defence of lowering production royalties is that doing so will increase access-royalty revenues.³⁷ To the extent that lower production royalties make oil and gas extraction more lucrative, they increase the amount that firms are prepared to bid for Crown mineral rights. Theoretically, competitive bidding should capture all of the rent associated with resource extraction without distorting private investment. The auction process should force firms to pay the government an amount equal to the

³⁷ Baron and Jackson, *Battleground*, pp. 42-43.

net present value of the resources they wish to access, leaving companies with only a normal rate of profit on the capital and labour they employ, and on the risks they take.

There are three major problems with attempting to substitute access royalties for production royalties. First, access royalties extract rent only from uncommitted Crown rights. Only production royalties can be applied to freehold oil and gas or to Crown oil and gas that has already been leased to a private company. Secondly, access royalties require firms to bid on rights whose value is largely unknown. This uncertainty causes firms to apply an extremely high discount rate in calculating the value of a site. The speculative nature of competitive bidding for oil and gas rights thereby prevents it from capturing a large share of the rents realized in production. Thirdly, the oligopolistic nature of the oil and gas industry prevents the bidding process from being fully competitive. Even if the true value of the Crown rights up for auction is known, there will not be enough firms bidding for those rights to push the successful bid up to this value. Because the purchase of Crown rights imposes additional front-end costs on oil and gas operations, a heavy reliance on bidding as a means of collecting royalties may exclude smaller firms with severe debt constraints from entering the oil and gas business. By functioning as a barrier to entry, such a reliance on access royalties may make the industry even more oligopolistic, further reducing the effectiveness of the auction process as a means of capturing rents.³⁸

These theoretical arguments against relying on access royalties can be assessed using statistical evidence. Table III (printed at the end of the paper) combines the data from Tables I and II with data on access royalties. Lower production royalties after 1982 would appear to have increased access-royalty revenues somewhat. While the Blakeney government collected an annual average of \$77 million in rentals and bonus bids, the Devine government collected \$105 million per year and the Romanow government collected \$106 million per year (in constant 2000 dollars). However, access royalties are still only a fraction of production royalties. The increase in the former offset only a small portion of the decrease in the latter.

Another point worth noting is that access-royalty revenues have been much more volatile than production-royalty revenues, which is because access royalties are a function of new investment, while production royalties are a function of current output. This makes access royalties less desirable than production royalties as a source of public revenue.

The data on aggregate royalties clearly shows that increases in gas production royalties and access royalties have offset only a fraction of the decline in oil production royalties. Table III can be summarized by the following annual averages (monetary amounts in constant 2000 dollars):

	Blakeney (1975-1982 averages)	Devine (1983-1991 averages)	Romanow (1992-2000 averages)
<u>Industry Activity</u>			
Drilling (wells completed)	610	1,606	1,957
Value of Sales (\$)	\$1,705 million	\$2,387 million	\$3,264 million
<u>Aggregate Royalties</u>			
Royalty Revenue (\$)	\$848 million	\$640 million	\$567 million
Royalty Rate (%)	50%	27%	17%

The regime of low royalties maintained by the Devine and Romanow governments facilitated a massive expansion of Saskatchewan's oil and gas sector. However, this growth has not been sufficient to increase oil and gas revenues. On the contrary, Saskatchewan people have had to finance industry expansion by forgoing millions of dollars of royalty revenues every year. Over the past quarter-century, the value of Saskatchewan's oil and gas output has increased dramatically, while the return that Saskatchewan residents receive from this output has fallen equally dramatically, both in proportional and in absolute terms.

How much has the low-royalty policy pursued by the Devine and Romanow governments cost Saskatchewan? Mark Stobbe attempted to estimate the cost of Devine's royalty reductions in *Devine Rule*. He determined potential royalty revenues by multiplying the royalty rate that prevailed during 1981 by the value of Saskatchewan's oil production during each of Devine's years in office. The revenue actually collected by the Devine government was then subtracted from these potential amounts to determine the

³⁸ Gunton and Richards, *Resource Rents and Public Policy*, pp. 38-39.

amount of revenue forgone in each year.

This methodology is unreasonable since maintaining royalty rates at the heights they achieved at the end of Blakeney's last term obviously would not have allowed the volume and value of Saskatchewan's oil production to expand as they did under Devine. Stobbe admits that he is making "an extreme assumption," but does not endeavour to make his estimates more realistic.³⁹ A further problem is that Stobbe compares revenue figures compiled on a fiscal-year basis to production figures compiled on a calendar-year basis.⁴⁰

In an attempt to construct more defensible estimates, this paper concedes that the uniquely high royalty rates in effect at the end of Blakeney's premiership are not appropriate benchmarks for subsequent years, and takes the Devine government's initial royalty reductions as given. However, it does assume that Saskatchewan could maintain its royalties above those of Alberta. The paper considers potential royalties for the post-1982 period to be one-third of Saskatchewan's actual oil and gas sales. Table IV (available online at www.uregina.ca/sipp) estimates the royalties forgone by the Devine and Romanow governments based on these assumptions.

Since higher royalties would have reduced production, setting the benchmark at one-third of actual production implies that the Devine and Romanow governments could have maintained an aggregate royalty rate somewhere in excess of 33%. Given that the Blakeney government kept rates at an average of 50% between 1975 and 1982 and that the Devine government held rates well above 33% in 1983 and 1984, while its royalty holiday was in effect, this is a fairly cautious benchmark. Even the relatively conservative estimate of potential royalties in Table IV implies that the Devine government lost \$1.7 billion in forgone oil and gas royalties between 1985 and 1991, while the Romanow government gave up \$4.7 billion in potential royalties between 1992 and 2000 (monetary figures in constant 2000 dollars).

³⁹ Biggs and Stobbe, *Devine Rule*, pp. 21-22.

⁴⁰ *Ibid.*, p. 298.

Between 1996 and 2000, the Government of Saskatchewan’s low-royalty policy cost an average of \$654 million per year in forgone royalties. This figure can be placed in perspective by comparing it with some major components of provincial revenues and expenditures for the 2000/2001 fiscal year:⁴¹

<u>Revenues</u>		<u>Expenditures</u>	
Individual Income Tax	\$1,255 million	Social Services	\$577 million
Federal Transfers	\$ 920 million	Post-Secondary Education	\$530 million
Sales Tax	\$ 758 million	Education	\$499 million
Corporate Taxes	\$ 646 million	Highways and Transportation	\$275 million
Fuel and Tobacco Taxes	\$ 490 million	Justice	\$232 million
Liquor and Gaming Income	\$ 318 million	Agriculture and Food	\$224 million

Section VIII: Inter-Jurisdictional Performance Evaluation

Historical data shows the results actually produced by the application of different royalty regimes to the material conditions of Saskatchewan’s oil and gas sector. This makes it a very powerful tool in assessing the policy options available to the Government of Saskatchewan. Comparing Saskatchewan’s oil and gas royalties with those of other jurisdictions can produce another type of benchmark. This sort of comparison must be taken with a grain of salt because other jurisdictions face different material conditions than Saskatchewan. Nevertheless, these comparisons must be made because what happens elsewhere affects Saskatchewan’s royalty policy.

The most obvious and important comparison is between Saskatchewan and Alberta. Data from the two provinces can be placed on a common footing by using Statistics Canada figures on conventional oil and gas extraction. By expressing provincial royalties as a proportion of marketable production, one can calculate comparable, effective royalty rates for Saskatchewan and Alberta. Statistics Canada defines “royalties” as production royalties net of applicable incentive credits. These figures are not comparable to those cited previously in this paper.

Table V (available online at www.uregina.ca/sipp) compares the effective royalty rates that have prevailed in Saskatchewan and Alberta between 1975 and 2000. Between 1975 and 1982, Saskatchewan’s mean annual rate was 38%, while Alberta’s was 31%. The Blakeney government’s rate was, on average,

seven percentage points higher than Alberta's rate. Between 1983 and 1991, Saskatchewan and Alberta had average annual rates of 23% and 22% respectively. Between 1992 and 2000, they were 18% and 17% respectively.⁴² The Devine and Romanow governments maintained Saskatchewan's rate at an average of only one percentage point above Alberta's. In 1999 and 2000, Saskatchewan's royalty rate was actually lower than Alberta's.

Saskatchewan's royalty rate has fallen from being well above Alberta's rate to being slightly below it. The low-royalty policy implemented by the Devine and Romanow governments was not simply a case of Saskatchewan reducing its royalties by the same magnitude as Alberta reduced its royalties. Instead, Saskatchewan's royalties have declined relative to Alberta's.

In comparing Saskatchewan and Alberta royalties, the relative mix of oil and gas produced by each province must be considered. Since Alberta produces far more oil and gas than Saskatchewan, its royalty revenues are obviously much higher in absolute terms. However, Alberta produces a far lower ratio of oil to gas than does Saskatchewan.⁴³ In terms of market value, Saskatchewan produced about \$39 worth of oil for every dollar's worth of gas in 1975, while Alberta's ratio was about \$1.60 of oil per dollar of gas. In 2000, Saskatchewan produced about \$5 of oil per dollar of gas, while Alberta produced \$0.50 of oil per dollar of gas.⁴⁴ Throughout the period under consideration, Saskatchewan's oil output has far outweighed its gas output. This has not been true of Alberta's output.

As was explained previously, there is much more economic rent in a dollar of oil production than in a dollar of gas production. The optimal royalty rate for oil is necessarily higher than the optimal royalty rate for gas. It is therefore reasonable to expect the effective royalty rate applied to oil to be higher than the

⁴¹ 2001/02 forecasts for 2000/01 fiscal year. Finance, *Budget Estimates 2001/02*.

⁴² These figures are unweighted averages of the annual rates.

⁴³ In 1975, Saskatchewan produced about 9.4 million cubic meters of crude oil and 1.6 billion cubic meters of natural gas, while Alberta produced about 67.7 million cubic meters of crude oil and 83.6 billion of natural gas. In 2000, Saskatchewan produced about 24.2 million cubic meters of oil and 6.3 billion of gas, while Alberta produced about 43.5 million cubic meters of oil and 134.8 billion of gas. Statistics Canada, *The Crude Petroleum and Natural Gas Industry*, Catalogue no. 26-213-XPB (Ottawa: Government of Canada, 1975-1996) and Statistics Canada, *Oil and Gas Extraction*, Catalogue no. 26-213-XPB (Ottawa: Government of Canada, 1997-2000).

⁴⁴ Ibid.

effective rate applied to gas. Since Saskatchewan produces a much higher ratio of oil to gas than Alberta, one would expect royalty revenues to be a higher proportion of Saskatchewan's combined oil and gas output than of Alberta's combined oil and gas output. In other words, if Saskatchewan's royalties collected the same share of economic rent as Alberta's royalties, Saskatchewan's royalties would account for a significantly higher proportion of the marketable value of its production.

Table V shows that, as a percentage of marketable value, Saskatchewan's royalties were about the same as Alberta's royalties during the Devine and Romanow periods, implying that Saskatchewan has been collecting a much lower proportion of the available rent than Alberta. Although Statistics Canada's definition of royalties is not totally comprehensive, this evidence strongly suggests that Saskatchewan's royalty rates are significantly lower than Alberta's in real terms. A more detailed comparison of Saskatchewan and Alberta royalties would be needed to fully establish this argument but, if it is true, then the case for raising Saskatchewan's royalties is even stronger.

Comparisons can also be made between Saskatchewan and jurisdictions outside Canada. In 1999, the University of Alberta's Parkland Institute published a study, *Giving Away the Alberta Advantage*,⁴⁵ that compares Alberta's oil and gas royalties to those levied by Alaska and Norway. This paper integrates Saskatchewan into the Parkland framework.

The Parkland Institute's study makes comparisons on the basis of constant dollars of revenue collected per "barrel oil equivalent" produced. By using barrel oil equivalents (boe), it aggregates oil and gas production together on the basis of approximate energy equivalence. The problem with this method is that energy equivalence does not imply economic equivalence. A barrel of oil is worth more and contains much more economic rent than a boe of natural gas. It is therefore unreasonable to expect that the royalties collected from a boe of gas should equal the royalties collected from a barrel of oil. On the basis of revenue per boe, Alberta's royalties appear to be low partly because most of Alberta's boes are in the form of gas,

⁴⁵ Parkland Institute, *Giving Away the Alberta Advantage: Are Albertans Receiving Maximum Revenues from their Oil and Gas?* (Edmonton: University of Alberta, 1999).

rather than oil. Alaska and Norway both produce more oil than Alberta, but substantially less gas. The Parkland study's comparison of Alberta, Alaska, and Norway is open to question on these grounds, although it presents other compelling evidence to suggest that Alberta's royalties are lower than they should be. Fortunately, Saskatchewan produces oil and gas in a ratio similar to Alaska and Norway. Credible comparisons can therefore be made between Saskatchewan, Alaska, and Norway using the Parkland methodology.

The Parkland study concludes that, between 1992 and 1997, Alaska collected an annual average of \$4.01 per boe and Norway collected an annual average of \$6.78 per boe.⁴⁶ During the same period, Saskatchewan collected an annual average of \$3.30 per boe.⁴⁷ Alaska collected about 22% more than Saskatchewan per boe, while Norway collected 105% more. Certainly, these figures could be questioned on the grounds that there are significant differences between the oil and gas industries of Saskatchewan, Alaska, and Norway. Nevertheless, this international comparison provides one more piece of evidence converging on the hypothesis that Saskatchewan could extract substantially more royalty revenue from its oil and gas sector.

Section IX: Ideological and Electoral Factors

This paper argues that the relevant economic considerations provide a powerful case for Saskatchewan to maintain its royalties at moderate or high levels. If one accepts this case, then one cannot help but ask why both the Devine and Romanow governments set Saskatchewan's royalty rates so low, by both historical and inter-jurisdictional standards. Because public policy is formulated by many different people motivated by many different factors, it is impossible to answer this question definitively. However, this paper suggests that ideological and electoral factors may have motivated the Government of Saskatchewan to reduce its oil and gas royalties. In doing so, it does not assert that the Devine and

⁴⁶ The author converted these figures from constant 1996 dollars in *ibid.*, pp. 4 and 23, to constant 2000 dollars using the Canadian Consumer Price Index.

⁴⁷ The author calculated annual figures by dividing Saskatchewan's "aggregate royalties" (Table III) by the quantity of its oil and gas sales in boes.

Romanow governments crassly chose to implement bad public policy because it suited their ideological convictions and electoral interests. Instead, it merely assumes that political ideology affected the way in which the relevant economic tradeoffs were perceived and that electoral considerations exerted some influence on the decision-making process.⁴⁸

During the 1980s and 1990s, the face of Saskatchewan politics was radically altered. To a large extent, traditional political divisions have been replaced by a convergence toward what is often termed “neo-liberalism.”⁴⁹ As Saskatchewan’s right-wing party, the Conservatives openly embraced neo-liberalism (or “the New Right,” as it was called during the 1980s).⁵⁰ Since the NDP is considered to be a left-wing party, there is more of a debate as to whether the Romanow government can be characterized as neo-liberal. But, whether or not it can be classified as being neo-liberal generally, there is little doubt that the rise of neo-liberalism strongly influenced its economic policies.⁵¹

Three aspects of neo-liberalism are pertinent to a discussion of oil and gas royalties. First, neo-liberalism has changed the way in which state intervention is perceived. During the post-war period, the state was generally accepted as a legitimate actor in the economy with a positive role to play. In this context, the provincial government was seen as the seller of Saskatchewan’s resources on behalf of the people who own them. The concept of “the province as entrepreneur” enjoyed widespread support.⁵² This view implied that the provincial government had a duty to maximize the return that Saskatchewan people received from the depletion of their non-renewable resources.

⁴⁸ For more on the ideological and electoral aspects of oil royalties, see Erin Weir, “Economics, Ideology, and Elections: The Political Economy of Saskatchewan Oil Royalties in the 1980s and 1990s,” Progressive Economics Forum (www.web.net/~pef [September 2002]).

⁴⁹ For a discussion of neo-liberalism in the Canadian context, see Stephen McBride and John Shields, *Dismantling a Nation: The Transition to Corporate Rule in Canada*, Second Edition (Halifax: Fernwood, 1997).

⁵⁰ This is readily acknowledged by Devine’s supporters (e.g. Baron and Jackson, *Battleground*) and by his critics (e.g. James Pitsula and Ken Rasmussen, *Privatizing a Province: The New Right in Saskatchewan* (Vancouver: New Star Books, 1990)).

⁵¹ The principal debate is whether the NDP moved right during the 1990s because Romanow led it in that direction or because circumstances pushed it in that direction. Both sides of this debate acknowledge that the NDP government’s policies were largely consistent with the tenets of neo-liberalism. Howard Leeson, ed., *Saskatchewan Politics: Into the Twenty-First Century* (Regina: Canadian Plains Research Center), pp. 5-9 and 160-161.

⁵² John Richards and Larry Pratt, *Prairie Capitalism: Power and Influence in the New West* (Toronto: McClelland and

During the 1980s and 1990s, the nineteenth-century ideal of the minimal state has been revived. The appropriate function of government is seen as protecting private property, providing a few essential services, and cheering on private business from the sidelines.⁵³ In this context, Crown ownership of natural resources is seen as an incidental byproduct of Canada's British heritage. The role of government is to facilitate private development of these public assets by only charging royalties that are "fair" to private industry. In particular, governments should avoid "distorting resource development" by seeking "to ensure a minimum return to the provinces from the extraction of their resources"⁵⁴. In other words, the provincial government's duty is to stay out of the way of private capital.

Secondly, neo-liberalism has replaced collectivist principles with individualistic ones. Eric Kierans's argument for higher royalties in Manitoba was based on the collectivist notion that economic policy should be aimed at shaping the whole structure of the provincial economy and achieving broader provincial priorities, rather than simply furthering the immediate material interests of certain individuals.⁵⁵ The notion that petroleum, along with other natural resources, is owned in common by the people of Saskatchewan is crucial to the economic analysis that led the Blakeney government to raise royalties.

These ideas do not fit well with neo-liberal individualism. Saskatchewan's population is now seen less as an entity with common interests and more as an assortment of individuals operating in the global economy.⁵⁶ The notion that Saskatchewan is "open for business" is obviously more conducive to lower royalties that facilitate private activity than to higher royalties that maximize public revenues.⁵⁷

Thirdly, neo-liberalism has given rise to the notion that the industrial economy is giving way to a

Stewart, 1979), p. 3.

⁵³ McBride and Shields, *Dismantling a Nation*, pp. 22-31.

⁵⁴ Yul Kwon, "Neutral Taxation and Provincial Mineral Royalties: The Manitoba Metallic Minerals and the Saskatchewan Uranium Royalties," *Canadian Public Policy*, Vol. IX, No. 2 (1983), p. 189. Kwon uses the term "minimum return" to refer to a base level below which the provinces refuse to reduce their royalties, rather than to an attempt by the provinces to minimize their royalties.

⁵⁵ See the Kierans quote above.

⁵⁶ McBride and Shields, *Dismantling a Nation*, p. 29.

⁵⁷ The Devine Conservatives declared Saskatchewan "open for business" upon taking power in 1982 (Pitsula and Rasmussen, *Privatizing a Province*, p. 4.) It has been suggested that this theme continued to define economic policy under the Romanow government (Brown, Roberts, and Warnock, *Left to Right*.)

“new economy” based on information. The belief that governments cannot plan and manage this new economy as they did the “old” economy reinforces the neo-liberal vision of the minimal state. Because resource industries are part of the old economy, royalties are not seen to be worthy of much political attention.⁵⁸ Instead, resource policy focuses on promoting the use of advanced technology in the resource sector to bring it into the new economy.⁵⁹ This sharply contrasts with the 1970s, when natural resources were seen as putting the “new” into New West. New economy rhetoric diverts attention from the money at stake in the petroleum sector and suggests that advocates of higher royalties are living in the past.

Although there is no question that political ideology influences the formulation of public policy, decision-makers almost never refer explicitly to ideology in explaining policy. It is therefore not possible to conclusively prove that neo-liberalism affected Saskatchewan’s royalty policy in the manner suggested above. However, the Government of Saskatchewan’s ideological perception of oil and gas royalties during the 1980s and 1990s is reflected by the changes it made to the department responsible for administering them.

The annual reports of Blakeney’s Department of Mineral Resources reflected its goals of generating government revenues and ensuring Saskatchewan people a fair return on the depletion of their non-renewable resources. For example, the opening note by Jack Messer, the Minister of Mineral Resources, in the Department’s *Annual Report 1977/78* ends with the following sentence: “I submit that through the diverse undertakings recorded in this report, the department has once more proven itself an efficient steward of the province’s non-renewable resources - our peoples’ birthright.”⁶⁰

The Conservatives reconstituted the Department as Saskatchewan Energy and Mines. While this was partly a semantic reorganization, it was an important one. “Mineral Resources” stressed the finite and non-renewable nature of the resources under the Department’s jurisdiction, implying a long-term

⁵⁸ Brett Fairbairn, “Economic Development and the New Role of Government,” in Leeson, *Saskatchewan Politics*, pp. 295-318.

⁵⁹ Saskatchewan Economic and Co-operative Development, *Partnership for Prosperity: Success in the New Economy* (Regina: Government of Saskatchewan, 2001), p. 12.

perspective. By contrast, “Energy and Mines” emphasized the economic activity generated by the exploitation of those resources. The new name implied a short-term focus on the level of industry activity. This may seem to be a subtle point, but the government deliberately chose to change the Department’s name when doing so required the passage of a bill in the Saskatchewan Legislative Assembly.

Even under the Conservatives, however, the layout of the Annual Report, if not the Deputy Minister’s introduction, reflected the Department’s role as a collector of royalties.⁶¹ This was changed during the Romanow years. The “Finance and Administration Division,” which controlled the “Mineral Revenue Branch” that had previously occupied the first and most prominent part of the report, was shuffled to the back of the document, behind those divisions engaged in supporting industry activity.⁶² In addition, the following list of principles was added to the beginning of the report.⁶³

- Service to our industry clients.
- Work in partnership to ensure full and responsible development of energy and mineral resources.
- Pursue excellence in all we do. We have a proven record of accomplishment and reliability, reflecting our high standards of quality and innovation.
- Prudently manage the public, financial and other resources entrusted to us so that Saskatchewan taxpayers receive maximum value for their tax dollars.
- We strive to conduct ourselves with the utmost integrity and professionalism.
- Work as a team and continually seek opportunities to nurture trust, communication, and co-operation.

The Department’s first principle was now to support private exploitation of Saskatchewan’s resources. The fourth principle refers to stewardship of the Department’s own operating budget, rather than to stewardship of the non-renewable resources under its jurisdiction. The second, third, fifth, and sixth points are meaningless, unless they are interpreted as descriptions of the positive attitude with which the first and fourth principles are to be fulfilled. Interestingly, royalties are not mentioned at all. The Department’s role was therefore defined as promoting private economic activity, rather than raising revenues for the people of Saskatchewan.

⁶⁰ Mineral Resources, *Annual Report 1977-78*, p. 3.

⁶¹ Energy and Mines, *Annual Report 1982-83 through Annual Report 1989-90*.

⁶² *Ibid.*, *Annual Report 1993-94 through Annual Report 2000-2001*.

Recently, the NDP government of Premier Lorne Calvert, Romanow's successor, merged the Department of Energy and Mines with the Department of Economic Development to create a new Department of Industry and Resources. By tying the management of non-renewable resources to the promotion of economic development, this organizational change further emphasizes the industry activity associated with oil and gas extraction and downplays the collection of royalties.

Changes made to the Department's name, structure, and annual report matter for two reasons. First, these factors set the framework in which civil servants develop and implement policy. In particular, the guiding principles set out in the Department's annual report are presumably taken into account in the decision-making process. Secondly, even if these factors are merely window dressing that has no tangible effect on the Department's operation, they are important because the way in which the public sector chooses to present itself reflects the government's ideological perspective.⁶⁴ It is significant that the Department has deliberately sought to emphasize its role as a promoter of private business activity in the resource sector and to downplay its role as a collector of royalties on behalf of the people of Saskatchewan.

While ideological changes have altered the way in which the relevant economic tradeoffs are perceived, electoral considerations may also serve as a motive to lower royalties. Although it would be excessively cynical to claim that public policy is driven only by the desire to win votes, there is no doubt that democratic politicians must constantly take the electoral implications of political decisions into account. Three major electoral factors militate in favour of low oil and gas royalties. The last two of these factors emerged during the 1980s and are, therefore, especially pertinent in explaining why the Devine and Romanow governments departed from the Blakeney government's royalty policy.

The first factor is that the benefits of royalty revenues are spread over a broad base, while the benefits of oil and gas industry activity are more narrowly concentrated. The benefit accruing to any

⁶³ Ibid., *Annual Report 2000-2001*, p. 3.

⁶⁴ The changes made to the Department appear to be consistent with the "New Public Management" philosophy, which is, by definition, an aspect of neo-liberal ideology. For more on this, see Ken Rasmussen, "Saskatchewan's Public Service: Converging to the Norm?", in Leeson, *Saskatchewan Politics*, pp. 95-109.

individual Saskatchewan resident from an increase in royalties is small and difficult to detect. Because of the increase in government revenue, each resident will pay slightly less in personal taxes or receive slightly more in public services than they otherwise would have. While the combined benefits for everyone in the province are very large, it is not a vote-determining issue for many individuals.

On the other hand, the substantially smaller benefits of reducing royalties are densely concentrated. Those who hold highly paid positions in the oil industry, their families, and other residents of towns in the “oil patch” are greatly affected by the level of industry activity and will cast their votes almost exclusively on the basis of the government’s royalty policy.⁶⁵ In electoral terms, low oil royalties win many more votes than they lose, even though they are bad public policy from the perspective of the province as a whole.⁶⁶

These extra votes matter in Saskatchewan’s polarized two-party system. In the 1986 election, for example, the NDP won more votes than the Conservatives but took fewer seats. Two thousand more votes, properly distributed, would have put the NDP over the top.⁶⁷ In the 1999 election, in which the Saskatchewan Party, the Conservative Party’s successor, won more votes but fewer seats than the NDP, a similar number of votes could have made the difference.

The second major electoral factor is that the rural-urban split in Saskatchewan politics has increased the electoral importance of “oil patch” constituencies. During much of the post-war period, Saskatchewan politics was defined by a sharp ideological cleavage between the socialist CCF-NDP and the free enterprise Liberals and Conservatives. To some extent, these left-right lines corresponded to the geography of the province, but there was no pronounced rural-urban split.⁶⁸

A stark division between rural and urban areas first appeared in the 1986 election, with rural

⁶⁵ Grant Devine recognized this when, during the 1982 election, he made speeches in Lloydminster and Estevan promising to lower royalties, but kept this promise out of his province-wide campaign. Biggs and Stobbe, *Devine Rule*, p. 18.

⁶⁶ The public choice school of Economics and Political Science argues that the electoral system distorts government decision-making because the costs and benefits of public policies are subject to different degrees of concentration and dispersion. This paper’s argument is an application of this logic to Saskatchewan’s oil and gas royalties. For a more general application of this perspective to an analysis of resource rents, see Gunton and Richards, *Resource Rents and Public Policy*.

⁶⁷ Biggs and Stobbe, *Devine Rule*, pp. 11-12.

constituencies voting Conservative and urban ones voting NDP. This split continued into the 1990s and was particularly strong during the 1999 election, in which the NDP won twenty-five urban seats, the two northern seats, and only two rural seats. By contrast, the Saskatchewan Party won twenty-six rural seats and no urban seats, leaving the Liberal Party holding one urban seat, two rural seats, and the balance of power.

The rural-urban split may have been engineered by the Devine government as part of a strategy to win rural votes (which typically control a disproportionately high number of seats because rural constituencies are usually smaller than urban ones) and write off urban votes. However, its continuation has been facilitated by the rise of the neo-liberal consensus. The new political division between city and country has partly replaced the traditional split between left and right.⁶⁹

The prominence of this rural-urban electoral divide has inflated the importance of those constituencies that are themselves rural-urban splits, containing both sizeable rural areas and small cities.⁷⁰ Given that the larger cities, Regina, Saskatoon, Prince Albert, and Moose Jaw, are strongly NDP and that the purely rural areas are solidly Saskatchewan Party, elections are decided in these mixed constituencies. As it happens, many of the constituencies in the oil patch are rural-urban splits.

Some of the predominantly rural oil-patch constituencies, like Thunder Creek, Wood River, Cypress Hills, Cannington, and Moosomin, as well as Kindersley, which recently became a city, have consistently supported the Conservatives and their Saskatchewan Party successors, and are probably electoral write-offs for the NDP. On the other hand, oil-patch constituencies that are rural-urban splits, like Lloydminster, Battleford-Cut Knife, Rosetown-Biggan, Swift Current, Weyburn-Big Muddy, and Estevan were won by the NDP in the 1995 election, but lost in 1999.⁷¹ With the exception of Rosetown-Biggan,

⁶⁸ Leeson, *Saskatchewan Politics*, p. 7.

⁶⁹ *Ibid.*

⁷⁰ These constituencies were classified as “rural” in the preceding description of the 1999 provincial election results.

⁷¹ The identification of constituencies as being in the “oil patch” is based on the classification provided by Murray Mandryk, “Calvert’s Kyoto Decision is Right for the Province,” *the Leader-Post*, February 20, 2002, p. B7, and the author’s referencing of an electoral map of Saskatchewan against a map of the province’s oil and gas fields. It should be noted that the completion of this paper coincided with the release of proposed changes to Saskatchewan’s

which is now held by the Saskatchewan Party's leader, these are seats that the NDP could win.

The striking congruity between the battleground of rural-urban constituencies where Saskatchewan elections are decided and the oil patch, where royalty rates are a vote-determining issue, provides a strong electoral motivation for both parties to cast themselves as advocates of low royalties. This motivation was not nearly as strong during the Blakeney period, when no pronounced rural-urban split existed in Saskatchewan.⁷²

The third major electoral factor is the cozy relationship between the oil industry and Saskatchewan's political elites during the 1980s and 1990s. As Devine's first Minister of Mineral Resources, Colin Thatcher oversaw the initial royalty reductions and the Department's reorganization as Saskatchewan Energy and Mines. In his memoirs, he records how Gary Lane, a fellow cabinet minister, vehemently opposed his proposed royalty holiday on the grounds that it would cost the government far too much money. But cabinet passed Thatcher's proposal because "those who had any connection with the oil industry were all supportive."⁷³

This close relationship between the provincial government and the oil industry did not end with the election of a large NDP majority in 1991.⁷⁴ A number of NDP cabinet ministers retired from politics to highly paid positions in the oil industry, including Romanow's Deputy Premier, Dwain Lingenfelter.⁷⁵

Equally importantly, oil companies have made themselves among the principal financiers of Saskatchewan's political parties.⁷⁶ Prior to the 1980s and 1990s, parties were less dependent on this type of funding because they could raise significant revenues from within their membership bases and could run campaigns using volunteer labour in place of paid advertising. A dramatic drop in political participation rates has made it much more difficult to do either of those things. Oil money has become an important

electoral boundaries based on the 2001 census results.

⁷² In fact, one of the Blakeney government's electoral strongholds was "red square," a predominantly rural part of the parkland region. Leeson, *Saskatchewan Politics*, p. 7.

⁷³ Thatcher, *Backrooms*, p. 221.

⁷⁴ Jocelyne Praud and Sarah McQuarrie, "The Saskatchewan CCF-NDP From the *Regina Manifesto* to the Romanow Years," in Leeson, *Saskatchewan Politics*, p. 163, and Brown, Roberts, and Warnock, *Saskatchewan Politics*.

⁷⁵ Other examples would be Doug Anguish and Ned Shillington.

ingredient in successful political campaigns in Saskatchewan.⁷⁷ Politicians are naturally reluctant to alienate those who finance their campaigns. This makes the governments they compose unlikely to aggressively raise petroleum royalties.

The above evidence obviously does not come close to showing that either the Devine or the Romanow government were successfully bribed by the oil industry to reduce royalties, and this paper does not make any accusations of that sort. However, in analyzing Saskatchewan's oil and gas royalties, it would be dishonest to overlook the fact that the Government of Saskatchewan's low-royalty policy coincided with a period of very friendly relations between the oil industry and the province's political elites, both on a personal level and in terms of party financing.

A desire to win votes in the oil patch could have helped propel the Devine and Romanow governments toward a policy of low royalties. The importance of these votes is elevated by the fact that oil-patch constituencies are among the most significant battlegrounds in provincial elections defined by a rural-urban split. These factors may have been compounded by connections between oil companies and Saskatchewan's political elite. Taken together, ideological and electoral factors provide at least a partial explanation of why the Devine and Romanow governments vastly reduced Saskatchewan's oil and gas royalties.

Section X: Policy Recommendations

This paper's central argument is that the Government of Saskatchewan should raise oil and gas royalties. Based on a cautious estimate of potential royalties, Saskatchewan's low-royalty regime cost the people of this province an average of \$654 million per year in forgone revenues (constant 2000 dollars) between 1996 and 2000.⁷⁸ In terms of actual provincial revenues, this figure is equal to half of the individual income tax, most of the sales tax, all corporate taxes, or twice liquor and gaming income. On the expenditure side, it exceeds spending on social services, post-secondary education, education, or highways

⁷⁶ Mandryk, "Kyoto Decision."

⁷⁷ Ibid.

and justice combined.⁷⁹ Raising royalties to moderate levels would therefore allow the Government of Saskatchewan to significantly enhance public services, substantially decrease taxes, or greatly reduce the provincial debt.

Increased royalties would considerably reduce the volume of oil and gas production in Saskatchewan. But this is not necessarily undesirable given the non-renewable nature of these resources. Some jobs in the petroleum sector would be eliminated, but the cost of replacing the lost incomes would amount to only a fraction of the additional revenues generated. Furthermore, increased royalty revenues could be used to create much more employment in other sectors. The benefits of raising Saskatchewan's royalties would far exceed the costs.

In implementing a higher royalty regime, three major issues must be considered: how will royalties be collected, who will collect them, and how will they be dispersed? With respect to the first question, this paper has shown that, despite their imperfections, production royalties are much more effective than access royalties in extracting economic rent from the petroleum sector. However, access royalties should be retained as a means of collecting some of the rents inevitably not captured by production royalties. Beyond this, there are two other ways that governments can collect royalties: marketing boards and public ownership.⁸⁰

The provincial government could require that producers sell oil and gas to a marketing board at set prices that cover marginal extraction costs (including a normal rate of profit). The board would then sell them at higher market prices, leaving the government with the differential. Since Saskatchewan could not hope to exercise any market power as a seller of oil and gas, this option offers no real advantage over the existing method of royalty collection.⁸¹ In effect, a marketing board would simply create a producer price below the net sale price in the same way that production royalties do. Establishing a marketing board

⁷⁸ Table IV.

⁷⁹ Based on 2001/02 forecasts of the 2000/01 fiscal year. Finance, *Budget Estimates 2001/02*. See above.

⁸⁰ Gunton and Richards, *Resource Rents and Public Policy*, pp. 39-40.

⁸¹ For obvious reason, this option would be much more attractive with respect to potash.

would involve political difficulties and administrative costs, but would offer no major advantage over the present system of royalties.

While it may seem to be out of step with the current political climate, public ownership is a more attractive option in terms of public policy.⁸² As the model above shows, production royalties prevent some oil and gas extraction that would otherwise be economical and do not collect all of the rent associated with what is produced. Public ownership would allow the provincial government to produce oil and gas to the point where the marginal cost equals the net price and retain all of the economic rent inherent in this output.⁸³ An additional advantage is that, as provincial property, a Crown corporation established in this sector would be completely exempt from federal taxation.⁸⁴ Public ownership is the only means by which the Government of Saskatchewan could retain all of the rent generated by the exploitation of its oil and gas.

Although full nationalization is obviously an unlikely option, the fact that the Crown already owns extensive mineral rights would make it relatively easy to establish a Crown corporation to occupy part of this sector.⁸⁵ The extent of the nationalization could also be limited if the corporation contracted some of its operations out to private firms.⁸⁶ The important point is that such a corporation would retain all of the rent generated by these operations.

A public oil and gas company would also vastly improve the Government of Saskatchewan's capacity to collect royalties from private producers. First, it would function as a window on the industry, providing the provincial government with detailed, inside knowledge of the marginal costs actually faced

⁸² For recent writing on the future of public enterprise in Saskatchewan, see John Allan, ed., *Public Enterprise in an Era of Change* (Regina: Canadian Plains Research Center, 1998).

⁸³ If the government wished to trade current income for potentially greater future income (as discussed in Section V), it could do so by extracting a smaller volume of oil and gas. The crucial point is that it would retain all of the rent associated with whatever it chose to produce.

⁸⁴ It is a basic principle of federalism that one level of government cannot tax another. In this vein, Section 125 of the *Constitution Act, 1867* (i.e. the *British North America Act*) fully exempts provincial property from federal taxation. Historically, protection from federal taxation was a rationale for provincial Crown ownership of resource industries. Dennis Gruending, *Promises to Keep: A Political Biography of Allan Blakeney* (Saskatoon: Western Producer Prairie Books, 1990), p. 140 and Blakeney and Borins, *Political Management in Canada*, p. 179.

⁸⁵ The Blakeney government established such a corporation (SaskOil), but the Devine government privatized it.

⁸⁶ For a discussion of the potential advantages of public-private partnerships, see John Allan, *Public-Private Partnerships: A Review of Literature and Practice* (Regina: Saskatchewan Institute of Public Policy, 1999).

by producers. John Burton, a civil servant of the Blakeney era, emphasizes the importance of this sort of “in-house expertise” in optimizing Saskatchewan’s royalty revenues.⁸⁷ Secondly, it would allow the government to “use the prospect of public ownership as a bargaining lever in dealing with private owners in order to promote the public interest.”⁸⁸

The Parkland study provides further evidence of the potential benefits of public ownership in the petroleum sector. Of the jurisdictions it examined, Norway received by far the highest return on the exploitation of its oil and gas, and was the only one in which the state operated a public company in that sector.⁸⁹

Regardless of the potential benefits, some would assert that public ownership is simply unfeasible or inappropriate. However, given Saskatchewan’s strong credit rating, there is little doubt that the provincial government could establish a new Crown corporation. The relevant issue, and the one that this paper addresses, is whether or not doing so would be a good investment.

Even if one makes the pessimistic assumption that Crown corporations are not efficient enough to realize a normal rate of return on investment, a publicly owned oil and gas corporation would generate massive revenues by retaining all of the economic rent over and above this normal return. In addition, it would significantly increase the amount of royalty revenue that could be collected from private oil and gas firms. Establishing a Crown corporation in the petroleum sector would be a lucrative investment for the Government of Saskatchewan.

The second major question in raising royalties is who should collect them. This paper has shown the impact of changing ideological perceptions on the department responsible for mineral resources. Even before the advent of neo-liberalism, there was a tendency for the bureaucracy established to manage

⁸⁷ John Burton, “Resource Rent and Taxation – Application of New Principles and Approaches in Saskatchewan,” in Eleanor Glor, ed., *Policy Innovation in the Saskatchewan Public Sector, 1971-82* (North York: Captus Press [York University], 1997), p. 74.

⁸⁸ *Ibid.* Significantly, Blakeney endorses the use of Crown corporations for this purpose in *Political Management in Canada*, p. 183.

⁸⁹ The Norwegian government owns and operates Statoil. Parkland Institute, *Giving Away the Alberta Advantage*, p. 24.

provincial resources to identify with the resource industry, rather than with the rest of the public sector.⁹⁰

The most obvious way to minimize this problem is to provide the relevant department with a clear mandate to collect royalties on behalf of Saskatchewan residents, rather than creating institutional links between it and government agencies whose mandate is to promote private economic development. The merger of Saskatchewan Energy and Mines with Saskatchewan Economic and Co-operative Development would therefore seem to be a move in the wrong direction.

The final issue is how royalty revenues are to be dispersed. Currently, royalties flow through the Government of Saskatchewan's General Revenue Fund, along with most other public revenues. This is certainly a defensible practice from the perspective of public finance. However, this system contributes to the electoral factors that promote low royalties by making the benefits of royalty revenues less noticeable. Since most Saskatchewan residents are not well aware of these benefits, there is no strong constituency in favour of raising royalties. But, because the costs of royalties are quite concentrated, there is a strong constituency that supports reducing them. This constituency's influence has likely been magnified by the special position held by the oil patch in Saskatchewan's rural-urban split, and by the relationship between oil companies and the province's political elites.

To counterbalance the political influence of these special interests, the benefits of royalties must be made more visible. One way of doing this would be to disperse oil and gas revenues directly to Saskatchewan people as "dividend" payments. Such a system of straight, per capita payments is used by the State of Alaska, where royalties are concentrated in a Permanent Fund that periodically pays equal dividends to all Alaskans.⁹¹ This system has created a political consensus in favour of oil and gas royalties in Alaska despite its very right-wing political culture. As is noted above, Alaska has higher effective royalties than Saskatchewan.

This system could be revenue neutral if its implementation were combined with a compensating

⁹⁰ Gruending, *Promises to Keep*, p. 139, Gunton and Richards, *Resource Rents and Public Policy*, pp. 127-128, and Richards and Pratt, *Prairie Capitalism*.

increase in personal taxes. Such a policy would allow the Government of Saskatchewan to effectively retain all royalty revenues, while leaving the overall level of disposable personal income unchanged. However, it would still have the effect of making royalty revenues much more visible. Since the royalty dividend would be equal, while the tax increase would be progressive, this policy would also reduce income inequality.⁹²

Even if such dramatic changes are not implemented, an attempt should be made to publicize the extent of provincial royalty revenues. For example, information on how much higher personal taxes would be in the absence of royalties could be mailed out with Saskatchewan tax returns. Alternatively, the provincial government could provide residents with annual accounts of royalties on the basis that Saskatchewan people are “shareholders” in the province’s oil and gas.

Changing how royalties are collected, who collects them, and how the revenues are dispersed could make it easier for the provincial government to optimize Saskatchewan’s royalty regime. While simply raising existing production royalties would allow the Government of Saskatchewan to collect a much greater share of the rent available in the oil and gas sector, a measure of public ownership would allow it to capture an even higher proportion of the economic rent. Giving the department that administers royalties a clear mandate to generate revenue for the people of Saskatchewan would help overcome the ideological barriers to optimizing royalties. Dispersing royalty revenues in a more visible manner would counterbalance the political influence of those with vested interests in low royalties and thereby undermine the electoral motivation to depress royalties. Although these specific recommendations would be helpful, what is ultimately required is the political will to maximize the return that Saskatchewan people receive for the depletion of their non-renewable resources.

Although the analysis presented in this paper is specific to oil and gas in Saskatchewan, it has

⁹¹ Parkland Institute, *Giving Away the Alberta Advantage*, p. 28.

⁹² This proposal obviously has implications far beyond the scope of this paper. It should be noted that increasing personal taxes would run contrary to the fiscal agenda currently being pursued by the Government of Saskatchewan. However, for the sake of “competitiveness,” taxes could be raised in a non-progressive manner.

broader implications. Similar trends are visible in other areas of this province's resource sector. In 2000, Saskatchewan producers sold \$6,271 million of fossil fuels (almost all oil and gas), \$1,774 million of industrial minerals (almost all potash), and \$626 million of metallic minerals (mostly uranium).⁹³ While oil and gas are by far the most valuable component of Saskatchewan's resource sales, there are probably opportunities to increase royalty revenues from other resources as well. The framework set out by this paper may be useful in assessing the royalties that Saskatchewan applies to industrial and metallic minerals.

These conclusions are also relevant to other jurisdictions, most notably Alberta. While this paper has questioned the basis on which the Parkland Institute compares Alberta to Alaska and Norway, there is little doubt that Alberta could derive much more revenue from its vast oil and gas output than it does. Likewise, decision-makers in Atlantic Canada and British Columbia who are embarking on the development of offshore oil and gas reserves should treat the Saskatchewan experience as a cautionary tale. The object of resource policy should not be to increase the volume of resource extraction, but to maximize the public benefit derived from this process. Achieving this goal requires that some resources be left in the ground and that some short-term job creation be forgone for the sake of vastly higher current and future royalty revenues.

Section XI: Appendices is available online at www.uregina.ca/sipp. It provides the data upon which Tables I, II, and III are based.

Section XII: References is available online at www.uregina.ca/sipp. It provides a bibliography of the sources cited in the paper's footnotes.

⁹³ Industry and Resources, *Mineral Statistics*, Table 1-1-3, p. 9.

TABLE III: OIL AND GAS INDUSTRY ACTIVITY AND AGGREGATE ROYALTIES IN SASKATCHEWAN, 1975-2000
(Monetary Amounts Shown in Constant 2000 Dollars)

<u>Year</u>	<u>Oil and Gas Drilling</u> (new wells)	<u>Value of Oil and Gas Sales</u> (10 ³ dollars)	<u>Production Royalties</u> (10 ³ dollars)	<u>Access Royalties</u> (10 ³ dollars)	<u>Aggregate Royalties</u> (10 ³ dollars)	<u>Aggregate Royalty Rate</u> (per cent)
1975	186	\$1,358,514	\$ 660,375	\$ 10,930	\$ 671,305	49.41%
1976	171	\$1,383,903	\$ 564,635	\$ 38,135	\$ 602,770	43.56%
1977	407	\$1,672,469	\$ 621,455	\$ 40,182	\$ 661,637	39.56%
1978	760	\$1,829,293	\$ 698,865	\$ 68,162	\$ 767,027	41.93%
1979	960	\$1,769,116	\$ 859,779	\$131,848	\$ 991,627	56.05%
1980	1,132	\$1,905,772	\$ 837,590	\$179,691	\$1,017,281	53.38%
1981	562	\$1,614,759	\$ 644,717	\$ 79,804	\$ 724,521	44.87%
1982	698	\$2,102,940	\$1,281,596	\$ 66,421	\$1,348,017	64.10%
1983	1,519	\$2,786,344	\$ 937,086	\$184,170	\$1,121,256	40.24%
1984	2,548	\$3,071,553	\$ 960,583	\$201,235	\$1,161,818	37.83%
1985	3,228	\$3,573,192	\$ 943,671	\$232,350	\$1,176,021	32.91%
1986	1,038	\$1,930,757	\$ 375,059	\$ 32,925	\$ 407,984	21.13%
1987	1,206	\$2,321,289	\$ 439,666	\$ 90,116	\$ 529,782	22.82%
1988	1,725	\$1,652,361	\$ 264,397	\$ 49,559	\$ 313,956	19.00%
1989	1,238	\$1,949,640	\$ 276,790	\$ 55,826	\$ 332,616	17.06%
1990	1,047	\$2,394,883	\$ 345,393	\$ 48,290	\$ 393,683	16.44%
1991	904	\$1,802,093	\$ 295,311	\$ 30,532	\$ 325,843	18.08%
1992	670	\$1,987,370	\$ 275,427	\$ 24,939	\$ 300,366	15.11%
1993	1,858	\$2,073,953	\$ 293,665	\$103,877	\$ 397,542	19.17%
1994	1,921	\$2,676,450	\$ 358,409	\$234,913	\$ 593,321	22.17%
1995	1,577	\$2,903,692	\$ 416,498	\$ 86,350	\$ 502,849	17.32%
1996	2,162	\$3,740,767	\$ 531,769	\$146,958	\$ 678,727	18.14%
1997	2,953	\$3,483,147	\$ 559,896	\$155,738	\$ 715,634	20.55%
1998	1,265	\$2,509,766	\$ 303,578	\$ 74,288	\$ 377,867	15.06%
1999	2,089	\$3,807,737	\$ 500,486	\$ 63,985	\$ 564,471	14.82%
2000	3,115	\$6,188,801	\$ 905,960	\$ 64,517	\$ 970,477	15.68%

Note: The author compiled this table using data from Appendix III. Monetary figures were converted from current dollars to constant 2000 dollars using the Canadian Consumer Price Index. Percentage figures were taken directly from Appendix III rather than being recalculated from the converted monetary figures. For detailed citations, see Appendix III and Notes on Appendices.