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# Oil and Gas Fiscal Regimes of the Western Canadian Provinces and Territories

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For additional information or copies of this report contact:

Royalty & Land Tenure Policy Branch
Policy Division
Alberta Energy
Petroleum Plaza, North Tower
5th Floor, 9945 - 108 Street
Edmonton, Alberta, Canada T5K 2G6

Telephone : (403) 427-7003
Fax: (403) 422-2548

Alberta Energy

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## Preface

This report is intended to be a summary of the Western Provinces' and Territories fiscal regimes for crude oil, natural gas and natural gas by-products. The western Canadian provinces have similar systems of royalty for petroleum resources, although there are some differences. The differences in the regimes reflect the different circumstances in each province, particularly the characteristics of the resource base. Detailed information on specific features of the regimes can be obtained by contacting the government departments listed at the end of the report.

## Introduction

In Alberta, almost all of the petroleum and other mineral rights are owned by the province in the name of the Crown and are administered by the Alberta Department of Energy. On October 13, 1992, a series of permanent policy changes regarding royalty on oil and natural gas was announced. These were the most sweeping changes since 1974. The new policies reflect the increasing maturity of the western Canadian sedimentary basin with respect to oil exploration, and the dramatically different world market conditions, compared with 1974. In 1974, it was expected that oil prices would be high for the long term. Current expectations are for price cycles around a constant real price of approximately 1992 US$20 per barrel of light crude oil.

The new policies reflect the continuing philosophy of Alberta with respect to resource development: development of the Province's natural endowment of petroleum resources should take place in such a way as to ensure a fair financial return to the Province as owner of the resource, and to maximize other benefits of resource development to the Province. The Province believes this can best be accomplished through private enterprise resource development in a free market economy, with a minimum of Government intervention.

In Alberta, resource development proceeds through a business arrangement between the Province, the resource owner, and the private companies which explore for and develop the resource. This arrangement benefits both partners. The Province provides companies with the right to exploit the resource. Oil and gas companies provide the knowledge, ability, and capital needed to explore, develop and extract the resource, and deliver it to market. The Province and the companies share in the oil and gas production revenue. The return to industry must be sufficient to cover costs and to give investors a reasonable rate of return. The share retained by the province is specified by the fiscal regime. The province's share is the price companies pay for the right to exploit the natural resource.

Pricing of exploitation rights for in-situ mineral resources is problematic. The rights must be allocated by an efficient means, when a resource has yet to be discovered, and using an exploitation rights pricing formula which will be considered fair by both the resource owner and by the industry buyer. The price for the right to exploit Alberta's petroleum resources is composed of an up-front competitive bid, plus a stream of royalty payments over the production life of a well. The competitive bid is based on a company's expectations of commodity price, exploitation costs, and the royalty payments associated with extraction of the resource. The exploitation costs are based on the company's knowledge of the quality of the resource to be discovered. Since bids are made before the discovery of the resource, unexpected costs or commodity prices may result in the bids being viewed after the fact as too high, or too low. The Alberta royalty formulas are designed to share the risk of unanticipated commodity prices or costs. To do this, the formulas are directly sensitive to changes in commodity price, and indirectly sensitive to changes in exploitation costs. To take into account exploitation costs, royalty rates are made to vary with well production rates, the rationale being that the average per unit exploitation cost from a project varies inversely with the average well production rate from a project.

The Alberta system of pricing exploitation rights, using an up-front competitive bonus bid in combination with a royalty formula based on simple, readily measured variables, has the advantage of avoiding the administrative burden of a detailed rights pricing calculation, or negotiation, for each project. The royalty formulas are set to take a level of project revenue which allows for the up-front bid. Given the voluntary nature of the bid, and the fixed formula nature of the royalty, the total price for the right to exploit the petroleum resource is determined by the bidder and should therefore reflect companies expectations of a competitive rate of return. Figure 1 illustrates the components of a total allocation of project revenues.

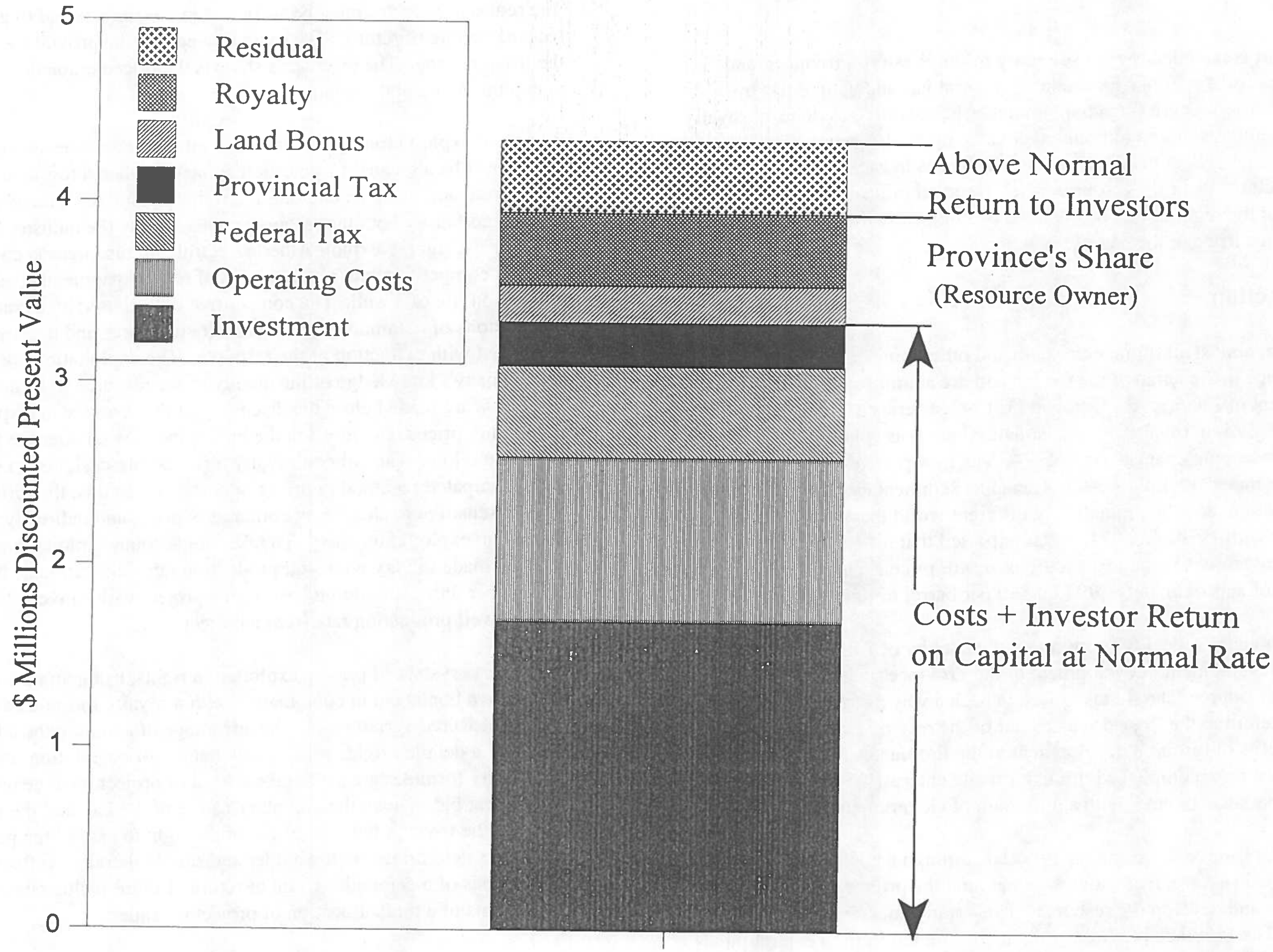


**Figure 1** General illustration of allocation of project revenues. The column represents the discounted present value of total cash flow.

## Conventional Crude Oil Crown Royalty - Graphic Comparison Between Provinces

The following three pages present the Provinces' conventional crude oil royalty formulas in graphic form. The graphs serve to illustrate royalty sensitivities to well productivity, oil vintage, quality and price. In the graphs depicting price sensitivity, heavy oil has a fixed production rate of 175 cubic metres per month, while non-heavy oil has a fixed production rate of 300 cubic metres per month. In the graphs depicting production sensitivity, heavy oil has a fixed price of $82 per cubic metre, while non-heavy oil has a fixed price of $126 per cubic metre.

### Oil Vintage

For royalty calculation purposes, Provincial oil resources have been classified into two, or three, tiers according to either the date of discovery of the pool from which the oil is produced, or the finished drilling date of the well. The royalty formulas are set so that the newer vintages pay less royalty. The tier classifications are as follows:

British Columbia - based on date of discovery of pool.

| | |
|---|---|
| Old Oil | pre-November 1975 |
| New Oil | post-October 1975 |

Alberta - based on date of discovery of pool.

| | |
|---|---|
| Old Oil | pre-April 1974 |
| New Oil | post-March 1974 |
| Third-Tier Oil | post-September 1992 |

Saskatchewan - based on finished drilling date of well.

| | |
|---|---|
| Old Oil | pre-1974 |
| New Oil | post-1973 |
| Third-Tier Oil | post-1993 |

Note that all heavy oil is classified as either New or Third-tier in Saskatchewan.

Manitoba- based on finished drilling date of well.

| | |
|---|---|
| Old Oil | pre-April 1974 |
| New Oil | post-March 1974 |

### Production

All western Canadian provinces' oil royalties vary with well productivity.

### Oil Density

For royalty calculation purposes, some Province's oil resources are classified by density:

Alberta

| Type | Definition |
|---|---|
| Heavy Oil | oil with density $\geq$ 900 kg/m$^3$ |
| Non-heavy Oil | oil with density < 900 kg/m$^3$ |

Saskatchewan

Heavy oil is defined as oil produced from the Lloydminister and Kindersley-Kerrobert heavy oil areas. Note that all heavy oil is classified as New or Third-tier oil in Saskatchewan.

### Price

Alberta's and Saskatchewan's oil royalties vary with price, whereas British Columbia's and Manitoba's do not.

### Inflation Adjustment

Royalty formulas are designed to make royalty rates rise with prices. Over the years, however, royalty rates have risen as prices have simply kept up with general price inflation.

Alberta has recognized this problem and now indexes its select prices with inflation. This prevents royalty rates from rising as prices rise with general inflation.

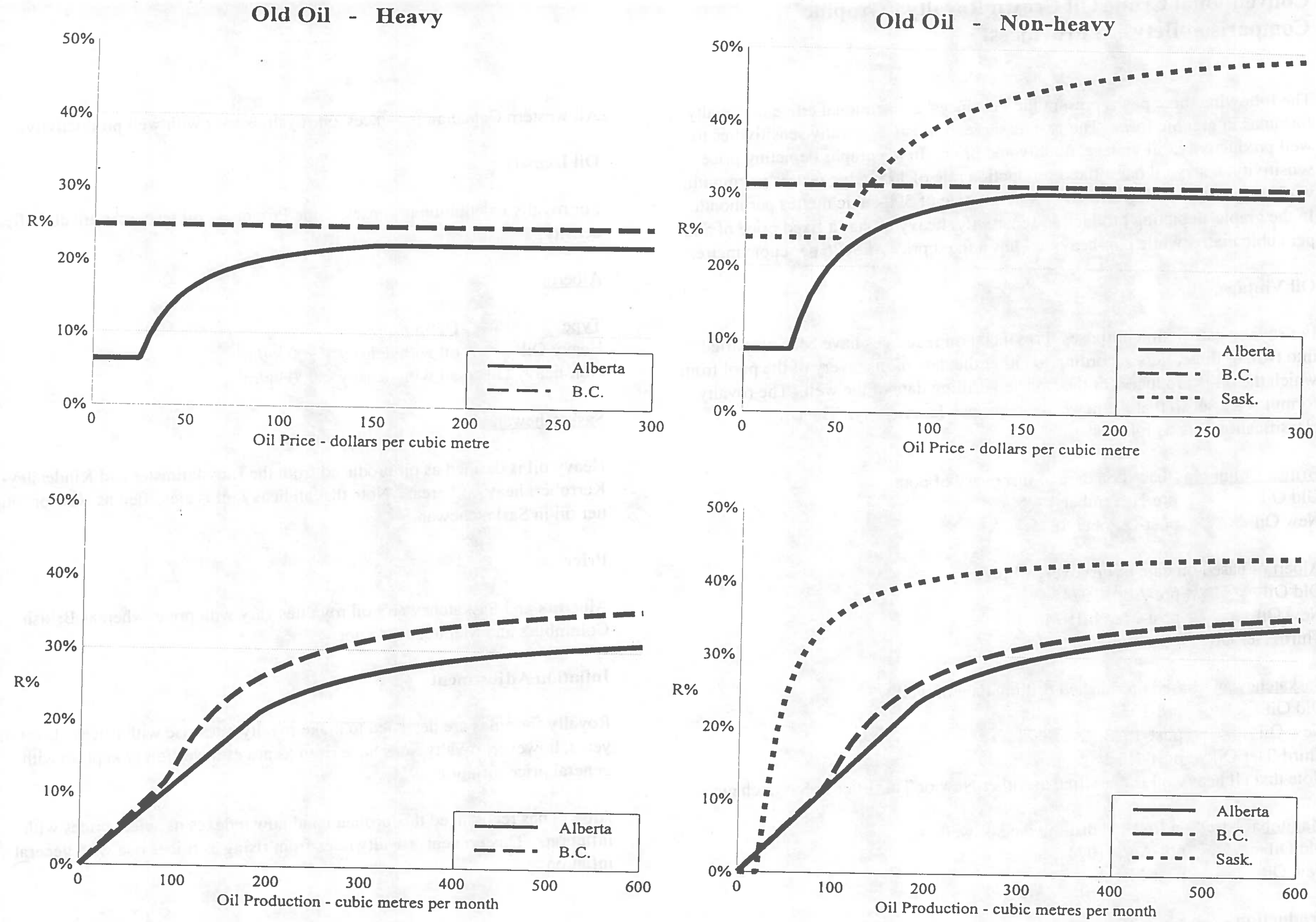


**Figure 2** Old oil royalty rates as a function of oil vintage, wellhead price and well productivity. Saskatchewan heavy oil has a vintage of new or third-tier oil.

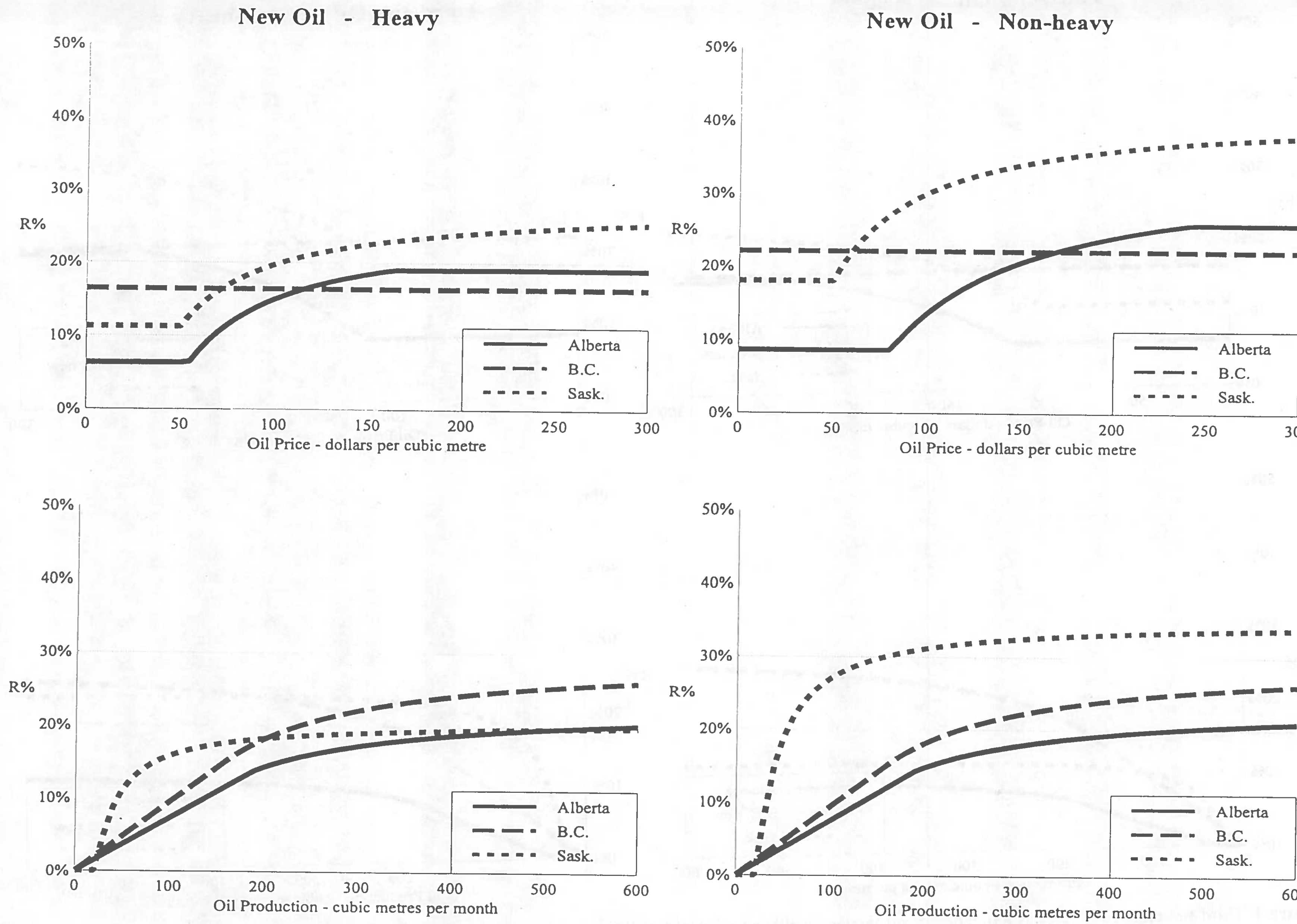


**Figure 3** New oil royalty rates as a function of oil vintage, wellhead price and well productivity.

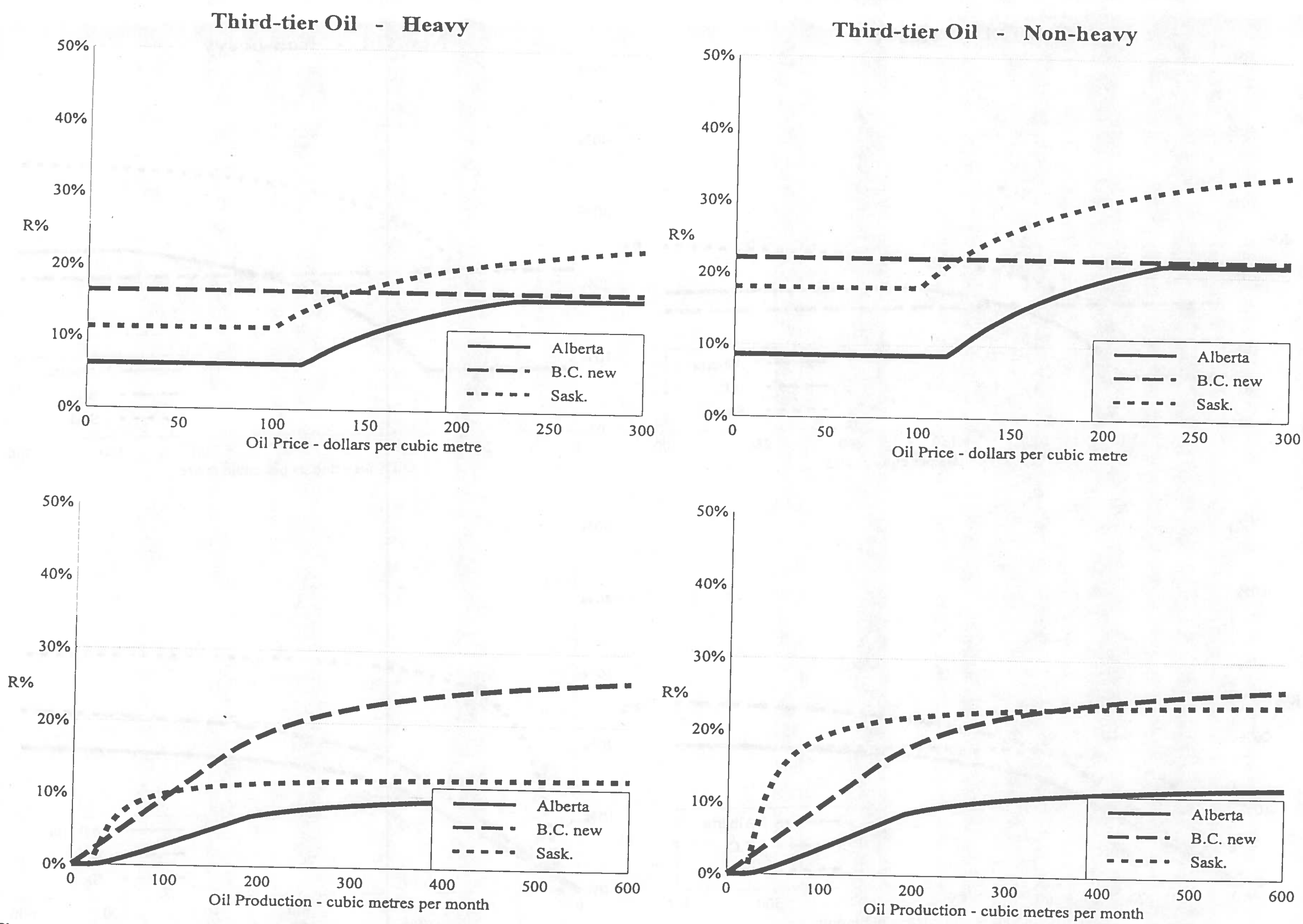


**Figure 4** Third-tier oil royalty rates as a function of oil vintage, wellhead price and well productivity (B.C. new oil vintage).

## Conventional Crude Oil Crown Royalty Formulas

Alberta

R% = Royalty rate

$$R\% = \frac{BR \times B + MR \times (A-B)}{A} \times 100$$

where BR = Base Rate (see opposite column)
MR = 4 x BR
B = Select Price and A = Par Price (see opposite column)

The royalty formula can be simplified to:

$$R\% = BR \times [4 - (3 \times \frac{B}{A})]$$

where $[4 - (3 \times \frac{B}{A})] = R_{multiplier}$

The R-multiplier is reported monthly in *Alberta Energy Information Letters* (see appendices for more information).

Production Sensitivity

Production sensitivity is given to the royalty formula through the base rate.

Minimum Royalty

The province charges a minimum royalty for the case when $A \le B$

In this case, R% = BR x 100

Price Sensitive Royalty

R% is price sensitive in the following ranges:

**Old Oil Vintage**: for A > B and A < (6 x B)

**New Oil Vintage**: for A > B and A < (3 x B)

**Third-tier Oil Vintage**: for A > B and A < (2 x B)

Maximum Royalty

A maximum royalty is charged when the par price reaches a certain limit. This maximum royalty differs for each vintage.

**Old Oil Vintage**: for $A \ge (6 \times B)$

R% = BR x 3.5 x 100

**New Oil Vintage**: for $A \ge (3 \times B)$

R% = BR x 3 x 100

**Third-tier Oil Vintage**: for $A \ge (2 \times B)$

R% = BR x 2.5 x 100

Base Rate

$$BR = \frac{S}{Q}$$

where

S = the basic royalty in cubic metres

Q = monthly well production in cubic metres

for **Old and New Oil:**

$$S = \frac{Q^2}{2{,}755\frac{1}{26}} \quad \text{when } Q \le 190.7 \text{ m}^3\text{/month}$$

$$S = 13.2 + [(Q-190.7) \times \frac{3}{26}] \quad \text{when } Q > 190.7 \text{ m}^3\text{/month}$$

for **Third Tier Oil**

$$S = 0 \quad \text{when } Q \le 20 \text{ m}^3\text{/month}$$

$$S = \frac{(Q-20)^2}{2207\frac{12}{26}} \quad \text{when } 20 < Q \le 190.7 \text{ m}^3\text{/month}$$

$$S = 13.2 + [(Q-190.7) \times \frac{3}{26}] \quad \text{when } Q > 190.7 \text{ m}^3\text{/month}$$

Par and Select Prices

There are separate par and select prices for non-heavy and heavy oils for purposes of determining royalty rates. Select prices are set annually.

A = Par Price in $\$/m^3$ = average wellhead price.

B = Select price in $\$/m^3$

**Old Oil** (pre-April, 1974)

B = $\$25.33/m^3$ for both non-heavy and heavy oil **for 1994**

**New Oil** (post-March, 1974)

B = $\$80.75/m^3$ for non-heavy oil **for 1994**

B = $\$54.47/m^3$ for heavy oil **for 1994**

**Third Tier Oil** (post-September, 1992)

B = $\$115.91/m^3$ for both non-heavy and heavy oil **for 1994**

Alberta (continued from previous page)

**Objective:** To determine a royalty share to be retained by the resource owner that is sensitive to crude oil price & quality, well productivity and to oil pool vintage. The parameters of the royalty formula are set at a reference well rate of 572.1 $m^3$/month. At this well production rate the base rate is 10% and the marginal rate is 4 times this, or 40%.

**Low Productivity Wells:** Wells producing at rates of less than 190.7 $m^3$/month (1 200 bopm) are subject to lower royalties (see calculation of the basic royalty, S).

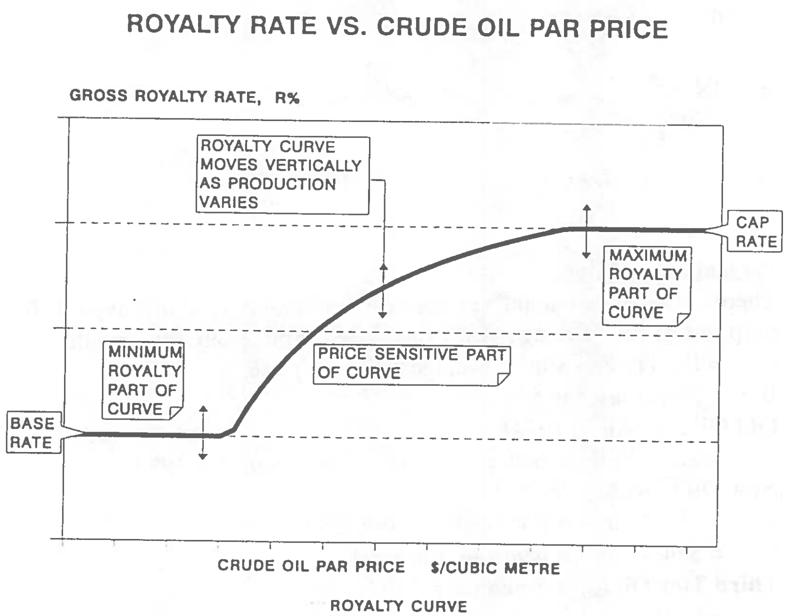


**Figure 5** General form of the Alberta conventional crude oil royalty curve.

Conventional Crude Oil Crown Royalty
British Columbia

R% = Royalty rate
Q = Production ($m^3$/month)

$$R\% = \frac{Q}{K} \times 100 \quad \text{when } Q \leq C$$

$$R\% = \frac{A + [B \times (Q - C)]}{Q} \times 100 \quad \text{when } Q > C$$

**Old Oil** (pre-November, 1975)

K = 792
A = 11.4

B = Percent of incremental production
= 40%

C = Production threshold for royalty calculation
= 95 $m^3$/month

**New Oil** (post-October, 1975)

K = 1 058
A = 23.9

B = Percent of incremental production
= 30%

C = Production threshold for royalty calculation
= 159 $m^3$/month

**Objective:**

To determine a royalty share to be retained by the resource owner that is sensitive to well productivity and vintage.

**Old Oil**

The old oil royalty formula takes between 0 and 12% of production for well production rates between 0 and 95 $m^3$/month. At well rates greater than 95 $m^3$/month, the marginal rate applied to production is 40%.

**New Oil**

The new oil royalty formula takes between 0 and 15% of production for well production rates between 0 and 159 $m^3$/month. At well rates greater than 95 $m^3$/month, the marginal rate applied to production is 30%.

**Low Productivity Wells**

Old oil wells producing at less than 95 $m^3$/month (600 bopm), and new oil wells producing at less than 159 $m^3$/month (1 000 bopm) benefit from lower royalty rates.

Conventional Crude Oil Crown Royalty

Manitoba

R% = Royalty rate
P = Production ($m^3$/month)

$$R\% = \frac{S \times C}{P} \times 100$$

where:

S = Base Crown royalty

$$S = \frac{P^2}{265} \quad \text{when } P \leq 50 \text{ m}^3\text{/month}$$

$$S = 9.43 + [0.45 \times (P - 50)] \quad \text{when } P > 50 \text{ m}^3\text{/month}$$

C = 1.0 for old oil (pre-April 1, 1974)

C = 0.55 for new oil (post-March 31, 1974)

**Objective:**
To determine a royalty share to be retained by the resource owner that is sensitive to well productivity and vintage.

**Old Oil**

The old oil royalty formula takes between 0 and 18.9% of production for well production rates between 0 and 50 $m^3$/month. For well production rates greater than 50 $m^3$/month, the marginal rate applied to production is 45%.

**New Oil**

The new oil royalty formula takes between 0 and 10.4% of production for well production rates between 0 and 50 $m^3$/month. For well production rates greater than 50 $m^3$/month, the marginal rate applied to production is 24.75%.

**Low Productivity Wells**

Wells producing at rates less than 50 $m^3$/month receive lower royalty rates.

Conventional Crude Oil Crown Royalty

Saskatchewan

R% = Royalty rate

$$R\% = K - \frac{X}{MOP} - SRC \quad \text{to a minimum of } 0\%$$

where:
MOP = Monthly Oil Production ($m^3$/month)
X = K x 23.08
A = Average wellhead price of non-heavy oil ($/$m^3$),
to a minimum of $50/$m^3$
B = Average wellhead price of heavy oil ($/$m^3$)
to a minimum of $50/$m^3$
SRC = Saskatchewan Resource Credit of one percentage point

**Old Oil** (pre-1974)

$$K = 26 + (32.5 \times \frac{A - 50}{A})$$

**New Oil** (post-1973)

$$K = 19.5 + (26 \times \frac{A - 50}{A}) \quad \text{for non-heavy oil}$$

$$K = 13 + (19.5 \times \frac{B - 50}{B}) \quad \text{for heavy oil}$$

**Third-tier Oil** (post-1993)

$$K = 19.5 + (26 \times \frac{A - 100}{A}) \quad \text{for non-heavy oil}$$

$$K = 13 + (19.5 \times \frac{B - 100}{B}) \quad \text{for heavy oil}$$

Heavy oil is defined as oil produced from the Lloydminister and Kindersley-Kerrobert heavy oil areas. All heavy oil is given new or third-tier oil status.

**Objective:**

To determine a royalty share to be retained by the resource owner that is sensitive to well productivity, crude oil price and vintage. Effective July, 1988 the calculated royalty rate is reduced by 1% to implement the Saskatchewan Resource Credit (SRC). The SRC was introduced to take into account the non-deductibility of the Saskatchewan Corporate Capital Surcharge Tax.

**Old Oil**
To take a royalty of 20% of the first $50/$m^3$ ($7.95/b) of the price, and 45% of the remainder at a well reference rate of 100 $m^3$/month (630 bopm).

**New Oil**
To take a royalty of 15% (non-heavy oil) or 10% (heavy oil) of the first $50/$m^3$ of the price, and to take 35% (non-heavy oil) or 25% (heavy oil) of the price above $50/$m^3$ at a well reference rate of 100 $m^3$/month (630 bopm).

**Third-tier Oil**
To take a royalty of 15% (non-heavy oil) or 10% (heavy oil) of the first $100/$m^3$ of the price, and to take 35% (non-heavy oil) or 25% (heavy oil) of the price above $100/$m^3$ at a well reference rate of 100 $m^3$/month (630 bopm). The third-tier structure does not apply to horizontal wells.

**Low Productivity Wells**
Wells producing at rates less than approximately 23 $m^3$/month (145 bopm) are not subject to a royalty.

## Natural Gas Royalty - Graphic Comparison Between Provinces

The following page presents the Provinces' natural gas royalty formulas in graphic form. The graphs serve to illustrate royalty sensitivities to natural gas vintage, well productivity and prices. In the graphs depicting price sensitivity, the well production rate is fixed at 25,000 cubic metres per day. In the graphs depicting production sensitivity, price is fixed at $62 per thousand cubic metres.

### Natural Gas Vintage

For royalty calculation purposes, Alberta's and Saskatchewan's natural gas resources have been classified into two tiers according to either the date of discovery of the pool from which the gas is produced, or the finished drilling date of the well. The royalty formulas are set so that royalty rates for younger vintages are lower than that for old vintages.

The tier classifications are as follows:

<u>Alberta</u> - based on date of discovery of pool.

| | |
|---|---|
| Old Gas | pre-1974 |
| New Gas | post-1973 |

<u>Saskatchewan</u> - based on finished drilling date of well.

| | |
|---|---|
| Old Gas | pre-October 1976 |
| New Gas | post-September 1976 |

British Columbia and Manitoba do not classify their natural gas resources by vintage.

### Production

Alberta and Saskatchewan natural gas royalties vary with well productivity. British Columbia and Manitoba natural gas royalties do not.

### Prices

With the exception of Manitoba, the western Canadian provinces' natural gas royalties vary with price.

### Inflation Adjustment

Some provinces' royalty formulas are designed so that royalty rates rise with prices. Over the years, however, royalty rates have risen as prices have simply kept up with general price inflation.

Alberta has recognized this problem and now indexes its select prices with inflation. This prevents royalty rates from rising as prices rise with general inflation.

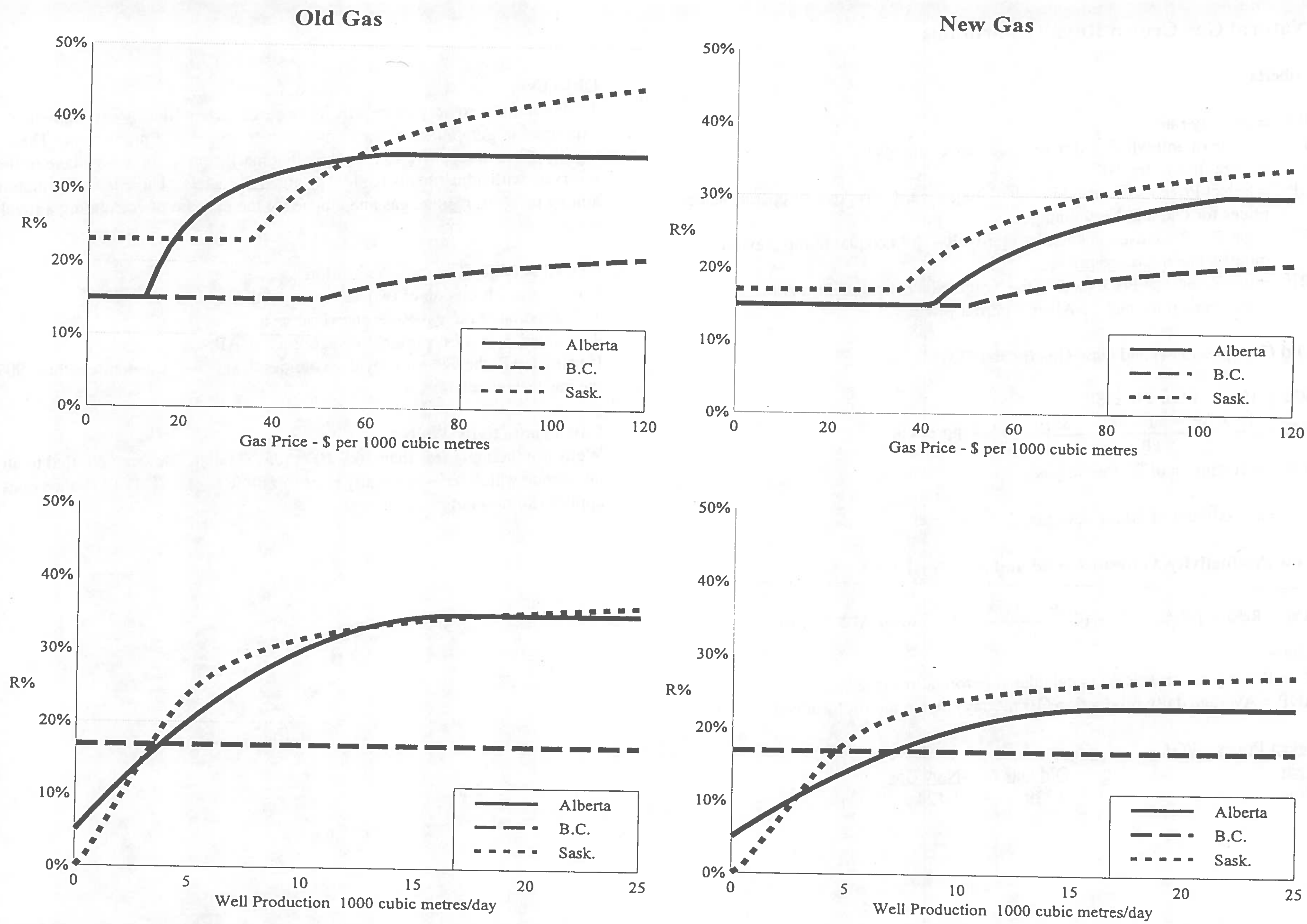


**Figure 6** Natural gas royalty rates as a function of price, well productivity and vintage.

## Natural Gas Crown Royalty Formulas

Alberta

R% = Royalty rate
J = Joule (a unit which expresses quantity of energy)
G = Giga (prefix for $10^9$)
SP = Select Price ($/GJ) used in calculating royalty. There are separate select prices for Old and New vintages.
PP = gas Par Price used in calculating royalty. PP is equal to the previous month's gas reference price.
RP = gas Reference Price ($/GJ), the weighted average of intra-Alberta consumer's price and ex-Alberta border price.

**Old Gas** (pre-1974) and **New Gas** (post-1973)

$$R\% = 15 \quad \text{when } PP \leq SP$$

$$R\% = \frac{15 \times SP + 40 \times (PP - SP)}{PP} \quad \text{when } PP > SP$$

R% = a maximum of 35 for old gas

R% = a maximum of 30 for new gas

**Low Productivity Allowance (Old and New Gas)**

$$R\% = Rc\% - [(Rc\% - 5) \times (\frac{16.9 - ADP}{16.9})^2] \quad \text{when } ADP < 16.9$$

where:
Rc = Royalty percent (R%) as calculated before allowance.
ADP = Average daily production ($10^3 m^3$/day) over a month for a well

<u>Select Prices $/GJ</u>

| <u>Year</u> | <u>Old Gas</u> | <u>New Gas</u> |
|---|---|---|
| 1994 | 0.338 | 1.124 |

**Objective:**
To determine a royalty share which is a percentage of the energy content, expressed in gigajoules, of the Crown ownershp share of production. The royalty share is sensitive to the prevailing market price and the vintage of the reserves, with adjustments for low productivity wells. There is no distinction among raw gas, residue gas and ethane for the purpose of calculating a royalty share.

**Crown Royalty Volumes Valuation**
Clients may chose one of two valuation methods:
1. Valuation at the gas Reference Price; or
2. Valuation at a Corporate Average Price (CAP).

If using CAP, the Crown's royalty volumes cannot be valued at less than 90% of the gas reference price.

**Low Productivity Wells**
Wells producing at less than 16.9 $10^3 m^3$/day (600 mcf/day) are entitled to an allowance which reduces royalty rates to as low as 5%. This allowance does not apply to solution or associated gas.

## British Columbia

R% = Royalty rate
P = Reference Price ($\$/10^3m^3$), the greater of Selling Price at the plant inlet or PMP (Posted Minimum Price).

### Non-Associated Gas

$$R\% = \frac{750 + 25 \times (P - 50)}{P} \quad \text{to a minimum of } 15\%$$

R% = 15% when $P \leq \$50/10^3m^3$

### Conservation Gas

$$R\% = \frac{400 + 15 \times (P - 50)}{P} \quad \text{to a minimum of } 8\%$$

R% = 8% when $P \leq \$50/10^3m^3$

**Objective:**
To determine a royalty share to be retained by the resource owner that is sensitive to gas prices above $\$50/10^3m^3$. Effective November 1, 1990 there is a minimum price (PMP) for natural gas to be used in the calculation of the royalty rate and royalty payable.

**Non-Associated Gas**
To take $7.5 of the price, when the price $\leq \$50/10^3m^3$, and to take 25% of the price in excess of $\$50/10^3m^3$.

**Conservation Gas**
To take $4 of the price, when the price $\leq \$50/10^3m^3$, and to take 15% of the price in excess of $\$50/10^3m^3$.

**Low Productivity Wells**
There are no special allowances for low productivity wells.

## Manitoba

R% = Royalty rate
R% = 12.5% of monthly sales

**Objective:**

To take a flat royalty of 12.5% on natural gas consumed or sold from a location.

**Low Productivity Wells**

There is no special allowance for low productivity wells.

Natural Gas Crown Royalty

Saskatchewan

R% = Royalty rate

$R\% = (C \times MGP) - SRC$ when $MGP \leq 115.4\ 10^3m^3$/month

$R\% = K - \frac{X}{MGP} - SRC$ when $MGP \leq 115.4\ 10^3m^3$/month

R% = a minimum of 0%

where:

MGP= Monthly Gas Production ($10^3m^3$/month)

$C = \frac{K}{230.76}$

$C = K \times 57.69$

P = Average provincial fieldgate price ($\$/10^3m^3$) as determined by the Saskatchewan Department of Energy and Mines, to a minimum of $\$35/10^3m^3$. The average provincial fieldgate price is determined prior to the deduction of gas cost allowance.

SRC = Saskatchewan Resource Credit of one percentage point

**Old Gas** (pre-October 1976)

$K = 26 + (32.5 \times \frac{P - 35}{P})$

**New Gas** (post-September 1976)

$K = 19.5 + (26 \times \frac{P - 35}{P})$

**Gas Associated with Oil**

R% = 0%

**Objective:**

To determine a royalty share to be retained by the resource owner that is sensitive to well productivity, and natural gas price and vintage. Effective July, 1988, the calculated royalty rate is reduced by one per cent to implement the Saskatchewan Resource Credit (SRC). The SRC was introduced to take into account the non-deductibility of the Saskatchewan Corporate Capital Surcharge Tax.

**Old Gas**

To take 20% of the first $\$35/10^3m^3$ (\$1/mcf) of the price and 45% of the remaining price at a well reference rate of 250 $10^3m^3$/month (292 mcf/day).

**New Gas**

To take 15% of the first $\$35/10^3m^3$ of the price, and 35% of the remaining price at a well reference rate of 250 $10^3m^3$/month.

**Low Productivity Wells**

There is no special allowance for low productivity wells.

## Gas Cost Allowance and Producer Cost of Service Allowance

Alberta

### Gas Cost Allowance

The gas cost allowance (GCA) is a deduction from gross royalties payable on natural gas and by-products to compensate for the costs of gathering, compressing and processing the Crown royalty share. The allowance is determined on the basis of:

**Annual Capital Cost Allowances** to royalty clients that own gathering, compressing and processing facilities. The capital cost allowance calculation includes a 15% return on investment;
**Monthly Operating Cost Allowances** to all royalty clients; and
**Annual Custom Processing Cost Allowances** to royalty clients that pay for gas gathering, compressing or processing on a fee for service basis.

For any royalty client, total cost allowances for a year cannot exceed the total value of royalty payable for that year. Excess cost allowances are not recoverable in other years.

For detailed information on Gas Cost Allowance refer to the contact person indicated in Appendices.

British Columbia

### Producer Cost of Service Allowance

Gas producers are eligible to receive the producer cost of service allowance (PCOS) for field gathering, dehydration, compression and conservation. It is a plant specific, fixed rate deduction from gross natural gas royalty. The schedule of plant rates is given below in $\$/10^3m^3$ of raw gas delivered.

| Plant | Gathering & Dehydration | Compression |
|---|---|---|
| **Westcoast Plants** | | |
| Fort Nelson | 2.80 | 5.65 |
| McMahon | 7.10 | 6.08 |
| Pine River | 6.34 | 3.16 |
| Sikanni | 2.41 | N/A |

British Columbia continued

| Plant | Gathering & Dehydration | Compression |
|---|---|---|
| **Producer Owned Plants** | | |
| Amerada Sour | 1.84 | N/A |
| Amerada Sweet | 5.06 | 6.60 |
| Amoco Cypress | 6.18 | 3.10 |
| CanHunter Elmworth | 9.26 | 5.83 |
| CanHunter Noel | 5.84 | 3.97 |
| CanHunter Ring Border | 7.09 | 3.68 |
| Imperial Boundary Lake | 6.30 | 9.20 |
| Neptune (Alberta) | 11.30 | N/A |
| Pouce Coupe (Alberta) | 10.73 | N/A |
| Total Buckinghorse | 2.69 | 1.46 |
| **Other** | | |
| BC Dry Gas | 2.60 | N/A |
| Conservation Gas | 16.00 | N/A |

Manitoba

Manitoba does not have a gas cost allowance.

Saskatchewan

Saskatchewan producers receive a deemed gas cost allowance of $\$5/10^3m^3$ on old raw gas and $\$10/10^3m^3$ on new raw gas. This allowance is in recognition of costs incurred in gathering and compressing the Crown's share of natural gas. The costs of processing gas are excluded from the allowance because the vast majority of natural gas is marketed in a raw (unprocessed) state.

## Natural Gas By-products Crown Royalty Formulas

Alberta

**Pentane Plus:**

R% = Royalty rate

$$R\% = \frac{22 \times B + [C \times (F - B)]}{F}$$

where:
F = Average selling price ($/m$^3$)
B = Select Price = $40.90/m$^3$ ($6.50/b)

**Old Pentane Plus** (pre-1974)

C = 50

**New Pentane Plus** (post-1973)

C = 35

**Objective**

To take 22% of the first $40.90/m$^3$ of the price and 50% and 35% of the price in excess of $40.90/m$^3$ for old and new pentane plus, respectively.

**Butane & Propane:**

Royalty is levied at a rate of 30% of production.

**Sulphur**

Royalty is levied at a rate of 16⅔% of production.

**Ethane**

See "Natural Gas Crown Royalty Formula".

British Columbia

Royalties on natural gas liquids are levied at a flat rate of 20% of the sales volume.

Royalty is not paid on sulphur obtained from gas processed by Westcoast Energy for Can West Gas Supply Inc. Instead, Westcoast Energy sells the sulphur and the net proceeds become part of the average price Can West pays for contracted natural gas. The increase in average price for contracted natural gas, due to sulphur, is therefor subject to the marginal royalty rate on non-associated gas (25%).

Where gas is not processed by Westcoast Energy, or where Westcoast Energy processes gas for other marketers, a flat rate royalty of 16⅔% applies on sulphur.

**Manitoba**

Royalties and taxes are not levied separately on natural gas by-products. The levy on raw natural gas encompasses by-products.

**Saskatchewan**

The majority of natural gas by-products are derived from associated gas, which is not subject to a direct royalty or tax. By-products contained in natural gas that is marketed in a raw (unprocessed) state are subject to the natural gas royalty/tax.

## Other Features of the Provincial Royalty Regimes

## Crude Oil Royalty Features

Alberta

■ Third-Tier Exploration Oil Royalty Holiday (permanent policy)

Refer to Alberta Energy Information Letter 93-8.

Qualifying Wells

A third-tier exploratory well is an oil or oil sands well spudded after September 30, 1992. It is classified by the ERCB as a New Field Wildcat (NFW), New Pool Wildcat (NPW), or Deeper Pool Test (DPT). The exploratory interval in an NFW and NPW well is the interval that extends from the surface to total depth. In a DPT well, the interval identified by the ERCB as exploratory extends from the base of the deepest established pool to total depth. The third-tier exploratory oil produced from the exploratory interval in a well qualifies for the holiday.

Non-Qualifying Types of Wells

A Development well is a well that is not an exploratory well. If a Development well, Outpost well or Shallow Pool Test finds a new pool, the pool is classified as third tier oil, but does not qualify for a one year holiday.

Benefit

A royalty holiday on the first 12 production months or $1,000,000, valued at par price, is applied to the combined production from the entire exploratory interval of the well, regardless of the number of drilling, deepening or completion events.

Coincident Royalty Holiday Eligibility

The Exploration Oil Royalty Holiday provides for an exploratory holiday for wells spudded before April 1, 1993 in the Northern and Foothills areas. This is different from the third-tier exploratory holiday. The exemption limit is $1 million or 24 production months. Some wells drilled during the period October 1, 1992 to March 31, 1993 may be eligible for both programs.

Alberta

■ Reactivated Oil Well Holiday

Refer to Alberta Energy Information Letter 93-3.

The temporary program that was set to expire April 1, 1993 has, effective October 1, 1992, become a permanent feature of the royalty regime. The royalty holiday production limit is increased to 8,000 $m^3$ (50,000 b) from 4,000 $m^3$ (25,000 b). An application is not required.

Qualifying Type of Wells

A reactivated well is an oil well or an oil sands well that was reactivated on or after October 1, 1992, after the well did not produce any substance during its qualifying period. This period comprises the 12 consecutive months preceding the month in which reactivation took place, if that month was October, November or December 1992 or January 1993. If the well was reactivated in February 1993 or later, the period consists of the preceding 24 months. Eligible oil from a reactivated well is oil or oil sands obtained from a pool or oil sands deposit that was penetrated by the well at the time the well commenced reactivated production. Production from deeper pools or deposits penetrated after the well commenced or resumed production is not eligible.

Non-Qualifying Wells

Wells eligible for benefits under another royalty reduction program will not qualify for both benefits. Wells in enhanced oil recovery projects or eligible for an oil sands agreement or experimental royalties will be specifically excluded.

Benefits

The royalty holiday is available from the reactivation date until 8,000 $m^3$ have been produced in aggregate from the reactivated well. Production of crude oil or oil sands from all events in the reactivated well is exempt from Crown royalty that would otherwise be payable under the Petroleum Royalty Regulation or the Oil Sands Royalty Regulation, 1984. Production from each producing event of an eligible reactivated well that has retained Old Oil status will be certified as New Oil after the well reaches the 8,000 $m^3$ production limit.

Crude Oil Royalty Features

Saskatchewan

■ Oil Well Reactivation Program

Oil production from qualifying reactivated oil wells will be subject to a maximum new oil royalty rate of 5% (before the application of the 1% Saskatchewan Resource Credit) for a period of 5 years from the date of reactivation , and the applicable "new oil" royalty/tax rates will apply thereafter.

Only those wells reactivated after 1993 which were shut-in or suspended prior to January 1, 1993 will qualify under this program.

**British Columbia**

■ **Discovery Oil Royalty Holiday**

Oil produced from a new pool discovery well completed after June 30, 1974 is royalty exempt for the first 36 producing months.

All benefits from holidays that were given to wells drilled under the various Crude Oil Royalty Holiday Programs expired on December 31,1991.

Manitoba

■ New Well - Holiday Oil Volume (1992-1996)

New wells drilled between January 1, 1992 and December 31, 1996 qualify for a royalty/tax free production volume. The holiday volume is sensitive to oil price and is dependent on the well's location. The maximum holiday volume is 10 000 cubic metres or ten years of production, whichever occurs first, except for the well that is the first to produce from a non-productive formation deeper than the Mississipian Bakken formation which will earn 50 000 cubic metres.

The program also features a holiday volume account which provides flexibility in the allocation of earned holiday volumes.

The holiday volume is calculated in accordance with the following equations:

| | | |
|---|---|---|
| HV | = | The holiday volume in cubic metres |
| D | = | Distance in kilometres of the new oil well from the nearest well which is cased or has been cased for production from the deepest prospective formation completely penetrated by the new oil well. |

If $D \leq 2$ kilometres: $HV = D(A) + B$

If $D > 2$ kilometres: $HV = A' (D^2) + B'$

| | | |
|---|---|---|
| A | = | $1.7\ P + 230$ |
| B | = | $3130 - 13.6\ P$ |
| A ' | = | $0.17\ P + 106.9$ |
| B ' | = | $3163 - 10.9\ P$ |
| P | = | Average Price (\$/m$^3$) |

## Crude Oil Royalty Holidays

### Manitoba

■ Special New Formation - Holiday Oil Volume (1992-1996)

Each well that is the first to produce from a non-productive formation in Manitoba deeper than the Mississippian Bakken Formation and that is drilled on or after January 1, 1992 and prior to January 1, 1997, is provided with a holiday volume of 50 000 $m^3$. This volume must be produced from the well within 10 years of the on production date of the well and is not eligible for transfer to the licensee's holiday volume account.

■ Holiday Volume Account

Each licensee of a well or wells may establish a holiday volume account. The purpose of such an account is to provide flexibility in the allocation of earned holiday volumes. This account may be used to bank and allocate holiday volumes earned by the licensee. Several rules apply (contact Manitoba Energy and Mines, Petroleum Branch).

### Saskatchewan

■ Exploratory Oil Royalty/Tax Reduction

Non-deep exploratory wells (located at least 3 km from the nearest oil well or producing from a geological system below all other wells within 3 km) qualify for a royalty reduction on the first 8,000 $m^3$ of production. A maximum royalty of 5% will apply during this period. Deep exploratory wells (located at least 3 km from the nearest oil well or producing from a geological formation below all other wells within 3 km and producing oil from a geological system older than Mississippian other than the Bakken formation and from a depth greater than 1 700 m) qualify for a royalty reduction on the first 2,500 $m^3$ of production. A maximum royalty of 5% will apply during this period.

■ Development Oil Royalty/Tax Reduction

Non-deep development wells qualify for a royalty/tax reduction on the first 2,000 m3 of production. A maximum 5% royalty applies during this period.. Generally speaking, eligibility is restricted to wells drilled into drainage units which have not been reduced in size since 1983 and where previous drilling has not resulted in oil production. Deep development wells (produce oil from a geological system older than Mississippian, other than the Bakken formation, and from a depth greater than 1 700 m) qualify for a royalty/tax reduction on the first 12,000 m3 of production. A 5% maximum royalty applies during this period.

■ New or Expanded Waterflood Projects

The incremental oil production from these projects is subject to the third-tier royalty/tax structure. A volume incentive is not available.

## New Oil Certification

Alberta

Refer to Alberta Energy Information Letter 91-28.

The administrative process has been simplified through the removal of the application requirement for "new" status.

Qualifying Type of Wells

- Oil wells drilled after 31 October 1991.
- Oil wells eligible under the Reactivated Well Holiday program.
- Oil wells shut-in as of 31 October 1991, reactivated prior to 1 April 1993, and inactive for a continuous period of one year.

Existing provisions for converting "old" oil wells to "new" status after a three year shut-in period will be discontinued. An oil well is a well that initially produces crude oil with a gas to oil ratio of less than 1800:1 at the time of first production or reactivation. Gas wells will not be eligible.

Benefits

All eligible wells are certified as "new" oil wells without making application for new status.

## Low Productivity Oil Wells

Alberta

Refer to Alberta Energy Information Letter 93-2.

Alberta introduced a permanent low productivity oil well policy effective October 1, 1992.

Qualifying Types of Wells

- Oil well or oil sands well.
- The well did not produce more than 121 $m^3$/month of oil or oil sands in any month during the qualifying period.
- The qualifying period consists of the 12 consecutive months that end in September, October, November or December 1992, or the 24 consecutive months ending in January 1993 or later.
- Average monthly production for the well is 73 $m^3$ or less during the most recent six months that the well produced, providing those months occurred within the qualifying period.
- Eligible oil from a low-productivity well is oil or oil sands obtained from a pool or oil sands deposit that was penetrated by the well at the end of the well's qualifying period. Production from deeper pools or deposits penetrated after the well's qualifying period is not eligible.

Benefit

For the first 16,000 $m^3$ (100,000 b) of gross oil or oil sands production from each eligible well, the royalty rate will be the lower of 5% or the rate determined by the oil royalty formula. An application is not required to qualify for the program.

Horizontal Re-entry Oil Wells

Alberta

Refer to Alberta Energy Information Letter 93-4.

Alberta introduced a permanent horizontal re-entry oil well royalty reduction policy effective October 1, 1992. An application is required.

Qualifying Types of Wells

The following criteria must be met:

- A horizontal wellbore was drilled from an existing wellbore to extend at least 100 m beyond the point where the wellbore deviates 80 degrees from vertical.
- The horizontal drilling activity started on or after October 1, 1992, and at least five years after the finished drilling date of the existing wellbore.
- The average of the 12 latest months with production establishes the "maintenance volume" for a well from a pool. These production months occurred both within the year of re-entry and the previous four years.
- For an injector well that is converted to a producing well by re-entry, the maintenance volume is established by the latest 12 months in which the well produced. If the well does not have 12 months of production during the year of re-entry plus the four previous years, the maintenance volume will be based on the 12-month average for the well(s) where production was enhanced by the injected substance (e.g., the four producing wells in a five-spot pattern).
- Production obtained through the horizontal extension is from the same pool as the maintenance volume.
- Application to the Department is filed by the well operator.
- Notification of qualification is issued by the Department.

Exclusions

A well is excluded from qualifying during the period in which on of the following circumstances is in effect:

- royalty for the well event is calculated under another regulation except the Horizontal Well Petroleum Royalty Regulation;
- a well is within a Petroleum Royalty Regulation, Section 11, EOR scheme boundary or 0.8 km beyond; or
- royalty is reduced under Petroleum Royalty Regulation, Section 10.

The horizontal re-entry well royalty reduction terminates when the well qualifies as either a low-productivity well or becomes a reactivated well, unless the benefits under these regulations are revoked by the Department.

Benefit

The royalty rate will be capped for oil produced from an eligible horizontal extension. The cap will be the royalty rate associated with the average production volume for the latest 12 months when production occurred before re-entry. For a well with a 12-month production average of up to 184 $m^3$/month, royalty will be capped at one half that rate for the incremental production that exceeds the qualifying average. For program purposes, the average 12-month qualifying production is referred to as the "maintenance volume".

Saskatchewan

Effective January 1, 1994, the first 12,000 cubic metres of oil production from a re-entry horizontal well (drilled from existing vertical well bores) is subject to a maximum royalty of 10%.

## Horizontal Drilling

### Alberta

#### Horizontal Well Petroleum Royalty Program

Refer to Alberta Energy Information Letters 91-9, 92-6 and 93-13.

Horizontal oil wells drilled are eligible to receive a royalty adjustment for 24 production months. The adjustment to the royalty is made by a factor which represents the number of vertical wells replaced. This program has been extended to March 31, 1994.

Crown royalty is the product of royalty calculated for adjusted production and the adjustment factor. The maximum adjustment factor is 3.

$$\text{Adjusted Production} = \frac{\text{Production}}{\text{Adjustment Factor}}$$

$$\text{Adjustment Factor} = 1 + \frac{\text{Horizontal Displacement(m)}}{\text{Spacing Unit Dimension}}$$

Spacing Unit Dimension =
800 meters for wells in pools with oil lighter than 950 $kg/m^3$
200 meters for wells in pools with oil heavier than 950 $kg/m^3$

### British Columbia

British Columbia does not have a horizontal drilling regime.

### Manitoba

#### Horizontal Well - Holiday Oil Volume (1993-1996)

A horizontal well (defined as a well that achieves an angle of 80 degrees from vertical for a minimum distance of 100 metres or a recompletion of an existing well that meets these criteria) drilled on or after January 1, 1993 and prior to January 1, 1997 will receive a holiday volume of 10 000 $m^3$. This volume must be produced within 10 years of the on production date of the well.

All horizontal wells or wells in which horizontal drains have been drilled are classified as new oil wells for royalty and tax purposes.

Holiday volumes earned by a horizontal well can be transferred to the licensee's holiday volume account.

### Saskatchewan

For non-deep horizontal wells (heavy and non-heavy) finished drilling after March 31, 1991 the first 12,000 cubic meters of oil production is subject to a royalty of 5% (less the 1% Saskatchewan Resource Credit). Freehold production tax does not apply for the first 12,000 cubic meters of oil production.

For those horizontal oil wells with a total horizontal section length of less than 300 metres, a maximum royalty of 10% is applicable to the first 12,000 cubic metres of oil production.

Deep horizontal oil wells are subject to a maximum 5% royalty on the first 25,000 cubic metres of oil production.

All horizontal oil wells are subject to the "new oil" royalty/tax rates following production of the incentive volume.

## Enhanced Oil Recovery Relief

### Alberta

Section 11 of the Alberta Petroleum Royalty Regulations allows the operator of an approved tertiary recovery scheme to deduct approved costs from tertiary revenues before calculating royalties.

Approved costs are costs incremental to a suitable secondary recovery scheme, and are approved by the Department of Energy.

Tertiary revenues are determined by a tertiary factor calculated by the Department, which deems a portion of the oil recovered from the project as incremental tertiary.

Tertiary (t) factor for a EOR project is:

$$\text{'t' Factor} = \frac{\text{Incremental Tertiary Reserves over Project Life}}{\text{Remaining Recoverable Reserves at Start of Tertiary Flood}}$$

or 0.90 whichever is less.

Tertiary (t) factor for an existing EOR project is:

$$\text{'t' Factor} = \frac{\text{Incremental Tertiary Reserves over Project Life}}{\text{Remaining Recoverable Reserves on June 1, 1990}}$$

or 0.90 whichever is less.

Alberta will provide Section 11 royalty relief to a project if two criteria are met. First, the project must receive technical approval from the ERCB under Section 26 of the Oil and Gas Conservation Act. Second, the Minister must be satisfied that the royalty revenue accruing to the province from the project, net of relief, must at least equal the royalty revenues that would have been collected under a suitable secondary recovery scheme.

### British Columbia

Incremental oil production from either an approved experimental tertiary recovery project or a commercial tertiary recovery project is subject to a royalty agreement established under Section 93 of the British Columbia Petroleum and Natural Gas Act.

### Manitoba

No specific program is in place. The provincial regulations have provision for a special royalty or production tax reduction or exemption.

### Saskatchewan

EOR projects on Crown lands are subject to a pre-payout royalty of the lesser of 5% of gross revenue or 10% of operating revenue. The royalty levied after project payout is the greater of 30% of operating revenue or 5% of gross revenue.

EOR projects on freehold lands are not subject to a freehold tax before payout but are levied a post-payout freehold tax of 23% on operating revenue.

Incremental oil production from a new or expanded waterflood project is entitled to a development well holiday.

EOR production is eligible for the 1% Saskatchewan Resource Credit.

## Natural Gas Royalty Features

Alberta

■ Deep Gas Royalty Holiday Program (DGRHP)

Refer to Alberta Energy Information Letter 85-29.

Effective June 1, 1985, a holiday applies to all new wells or deepened wells drilled into previously undefined gas pools or extensions of existing pools located below 2 500 m. The drilling spacing unit must be wholly outside the deep gas pools as defined by the ERCB.

The holiday is defined in terms of a dollar amount applied against royalties, which increases with well depth and hence the cost of incremental drilling below 2 500 m. The royalty holiday applies until the value of the natural gas and by-products exempted equals the amount determined by a depth-base schedule (see table below). The maximum value is $3.6 million. Entitlements must be used within 10 years of completing drilling.

| Depth(m) | Cumulative Value ($000) | Incremental Value ($/metre) |
|---|---|---|
| 2500 | 0 | 1000 |
| 3000 | 500 | 1000 |
| 3500 | 1000 | 1000 |
| 4000 | 1500 | 1300 |
| 4500 | 2150 | 1300 |
| 5000 | 2800 | 1600 |
| 5500 | 3600 | ---- |

Note: British Columbia and Manitoba do not offer natural gas royalty holidays.

Saskatchewan

■ Natural Gas Exploration Incentive

The first 25 million cubic metres of natural gas produced from a qualifying exploratory natural gas well will be subject to a maximum new gas royalty of 5% (0% freehold production tax).

To qualify, a gas well is drilled a minimum of 4.8 kilometres from the nearest well capable of producing gas form the same geological system.

## Non-Conventional Crude Oil

### Oil Sands Royalty

British Columbia, Saskatchewan and Manitoba have no specific royalty regimes for oil sands. Alberta has regimes for the two mining projects, Suncor and Syncrude, and the Cold Lake regime for commercial in-situ projects. Experimental projects as designated by the ERCB have separate royalty regimes.

Suncor

Alberta receives the greater of 5% of gross production or 30% of net revenues. Net revenue is calculated as:

Gross Revenue
- Allowed Operating[1] Costs
- Allowed Capital[1] Costs
= Net Revenue

1. Operating costs and capital costs are allowed 10% and 1% increases respectively, to recognize indirect costs.

Syncrude

Alberta receives a royalty of 50% of net revenue. Net revenue is calculated as:

Deemed Gross Revenue
- Allowed Operating Costs
- Deemed Interest Expense
- Amortization of Capital Expenditures
- Loss Carry Forwards (if any)
= Net Revenue

The deemed interest expense consists of 8% simple interest per annum based on 75% of average capital employed. The amortization of capital expenditures commenced in 1984 and encompasses all pre-production and ongoing capital over an assumed life commencing on the first day of the month such expenses were incurred (1984 if the expenses were incurred earlier) and ending in 2004 on a remaining useful life basis.

Between January 1, 1983 and December 31, 1987 capital expenditures (termed "special capital costs") qualify for a 100% write-off in the year incurred, thereby deferring royalties. This royalty adjustment was implemented to encourage Syncrude to expand plant capacity. Royalty benefits occur only if expenditures exceed previously agreed-upon levels. A minimum royalty clause ensures that the minimum joint venture payment would be the lesser of: 5% of gross revenue, or 50% of the net revenue that would have been payable without the implementation of the special capital costs write-off.

Alberta has an option to take a 7.5% gross revenue royalty in place of the 50% net revenue royalty. This option can only be exercised once. Therefore, once the Province opts for a 7.5% gross revenue royalty it cannot revert to a 50% net revenue royalty. Between January 1, 1991 and December 31, 1993, Alberta receives a royalty of 30% of incremental revenue from custom processing off-lease substances.

### Commercial In-Situ Production

Typically, the fiscal terms applicable to commercial in situ thermal projects are known as the Cold Lake regime because they were first applied to the Esso Cold Lake Project. The royalty consists of a 1% royalty on gross revenue at startup, increasing by 1% every 18 months to 5%. The royalty remains at 5% until payout at which point it converts to 30% of net profit or 5% of gross revenue, whichever is greater.

Net profit is calculated as:

Gross Revenue
- Allowed Operating Costs
- Allowed Capital Costs
= Net Profit

Operating costs and capital costs are allowed 10% and 1% increases respectively, to recognize indirect expenses.

Unrecovered costs are escalated by a 10% return allowance. Royalty payout is attained when cumulative gross revenue exceeds cumulative operating costs, capital costs, gross royalty and return allowance.

### Experimental Projects

Refer to Alberta Energy Information Letter 92-25.

Effective October 1, 1992, experimental projects approved by the ERCB pay a flat royalty rate of 1% of production. Prior to October 1, 1992 the rate was 5%.

## Oil & Gas Royalty Regulations in Yukon and Northwest Territories

Under the Canada Petroleum Resource Act (CPRA) royalty regulations, which use the Alberta Cold Lake royalty regime as a starting point, the royalty consists of a 1% royalty on gross revenue at startup, increasing by 1% every 18 production months to a maximum of 5%. The royalty remains at 5% until payout when it converts to 30% of net profit or 5% of gross revenues, whichever is greater.

Net profit is calculated as:

Gross Revenue
- Allowed Operating Costs
- <u>Allowed Capital Costs</u>
= Net Profit

Operating and capital costs receive 10% and 1% uplifts respectively to recognize indirect expenses. Allowed capital costs incurred before the approval of the development plan receive a 5% uplift.

Prior to payout, unrecovered costs are given a return allowance equal to the long term government bond rate plus 10%.

Royalty payout is attained when cumulative gross revenues exceed cumulative operating costs, capital costs, gross royalties and return allowance.

Payout is calculated on a working interest basis, not on a project basis.

## Petroleum and Natural Gas Rights

The total revenue received by a Province from the allocation of resource development rights generally has two major components, revenue from the allocation of the right to produce the oil or gas, and revenue from royalties on production from that lease. This section compares revenues received for the sale of rights for conventional oil and gas from Alberta, British Columbia and Saskatchewan.

The revenue from mineral rights comes from the allocation of rights by public tender. The amount paid reflects industry's estimate of the difference between the present value of production revenues and the present value of costs, taxes and royalties over the time there is production from the leased lands. This tends to make total Crown revenues from comparable leases similar despite differences in royalty rates and incentive programs.

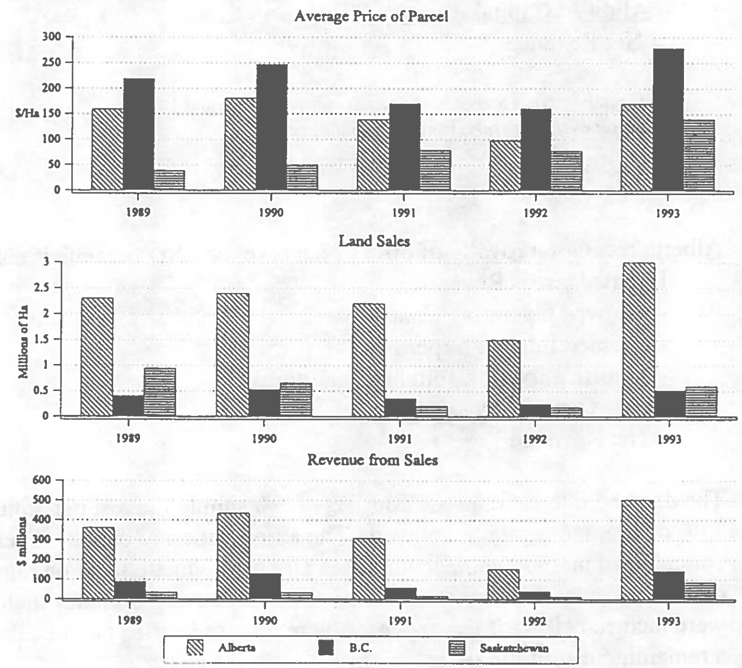


**Figure 7** Comparison of provincial land sales.

## Taxation
## Royalty Tax Credits and Workover Incentives

Alberta

Alberta Royalty Tax Credit

The Alberta Royalty Tax Credit (ARTC) program provides oil and gas producers with a refundable tax credit equal to a percentage of the first \$2.5 million in Crown royalty paid by each corporation. From January 1, 1990 to December 31, 1994 ARTC provides a variable percentage credit of a producer's first \$2.5 million of royalties. The percentage credit is linked to the price of oil,* ranging from 25% for prices at or above $\$210/m^3$ to 85% for prices at or below $\$100/m^3$.

ARTC % = 85 when APP $\leq \$100/m^3$(\$16/b)

ARTC % = 85 -(12/40)x(APP-100)

when $\$100 < APP \leq \$140/m^3$ (\$22/b)

ARTC % = 73 - (48/70)x(APP-140)

when $\$140 < APP \leq \$210$

ARTC % = 25 when $APP > \$210/m^3$ (\$33/b)

where:

APP = Average Par Price of oil for the previous quarter

ARTC rates for 1990 and 1991 are as follows:

*Starting January 1, 1995 the credit cap falls to \$2 million from \$2.5 million, and the upper ARTC rate is lowered to 75% from 85%. Also the ARTC rate will be linked to a blend of oil and gas prices, rather than just oil price.*

*The credit rate for both oil and gas production is linked to the oil price for administrative simplicity. The price used in calculating the ARTC rate is the oil par price as announced by the Minister of Energy for ARTC calculation purposes.

British Columbia

British Columbia does not have a royalty tax credit or a workover incentives program.

Saskatchewan

Royalty Tax Credit

Crown royalty and freehold production tax rates are eligible for the Saskatchewan Resource Credit reduction of one percentage point, effective June, 1988.

Workover Incentives

Old oil wells (pre-1974) may be reclassified as new oil wells for royalty/tax purposes if the operator undertakes a major workover to improve recoverability.

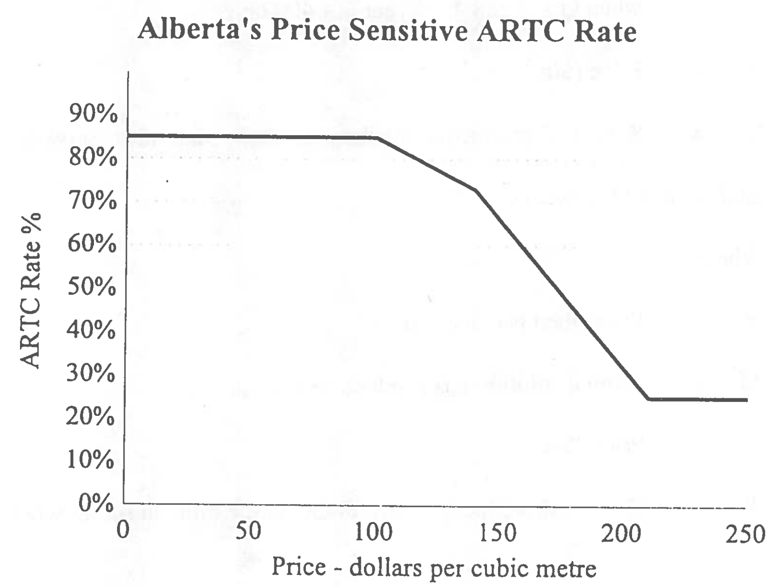


**Figure 8** Alberta royalty tax credit rate vs. oil par price.

## Freehold Taxes

Crude Oil Freehold Tax

Alberta

The freehold mineral tax levied on the holder of a petroleum right is the aggregate of crude oil factors (COF) and solution gas factors (SGF) calculated for each well on the basis of production.

COF = R x M x V x T

where:

Q = Production ($m^3$/year)

R = Prescribed tax rate = 0.269

$$M = \frac{(0.0833 \times Q)^2}{105.94}$$

when Q < 2 288.4 $m^3$/year (14 400 b/year)

$$M = \frac{Q}{4} - 228.84$$

when Q ≥ 2 288.4 $m^3$/year (14 400 b/year)

V = Price ($/$m^3$)

T = % of total production attributable to the mineral right owner

SGF = R x M x V x T

where:

R = Prescribed tax rate = 0.069

M = Annual solution gas production ($10^3m^3$/year)

V = Price ($/$10^3m^3$)

T = % of total production attributable to the mineral right owner

British Columbia

As of January 1993 Freehold Production Tax is calculated and payable on a monthly basis in a manner very similar to the royalty calculation. Previously the tax was assessed on an annual basis.

The tax rate expressed as a per cent is as follows:

- where monthly well/tract production ≤ 159 $m^3$

  Rate = 0.06 x Production

- where monthly well/tract production > 159 $m^3$

$$\text{Rate} = \frac{1575 + [20 \times (\text{Production} - 159)]}{\text{Production}}$$

- Liquids rate = 12.25%
- Sulphur rate = 10.25%

Crude Oil Freehold Tax

## Manitoba

Freehold lessees are subject only to that portion of the freehold tax levied on the operator's share of production.

The freehold lessor is responsible for that portion of the tax levied on the royalty share of production. The freehold tax on crude oil is calculated based on the monthly production rate and oil classification (old, new, incentive and holiday oil).

T = Tax rate as % of P

P = Production ($m^3$/month)

**Old Oil**

$T = 0$, when $P \leq 20$
$= [(0.43 \times P) - 8.24]$, when $20 < P < 65$
$= [42.76 - (1{,}500 / P)]$, when $P \geq 65$

**New Oil**

$T = 0$, when $P \leq 36$
$= [(0.23 \times P) - 8.11]$, when $36 < P < 65$
$= [19.59 - (820 / P)]$, when $P \geq 65$

**Incentive Oil**

$T = 0$, when $P \leq 56$
$= [9.27 - (510 / P)]$, when $P > 56$

**Holiday Oil**

$T = 0$, for all volumes

## Saskatchewan

The freehold tax on oil is derived by calculating the royalty rate according to the Crown royalty formula for crude oil and subtracting a production tax factor (PTF).

PTF = 6.9 for old oil
= 10.0 for new oil
= 10.0 for third-tier oil

The intent is to equalize after-tax netbacks from Crown and freehold production.

New freehold wells are entitled to a volume based tax reduction which is determined in the same manner as for crude oil royalty reductions.

## Natural Gas Freehold Tax

Alberta

The freehold mineral tax levied on the holder of a natural gas right is the aggregate of field gas factors (FGF) and gas well condensate factors (GWCF) calculated for each well on the basis of production.

FGF = Field gas factor
ADP = Average daily production
FGF = R x M x V x T
when ADP $\geq$ 16.9 $10^3m^3$/day (600 mcf/day)
FGF = M x V x A x T
= when ADP < 16.9 $10^3m^3$/day (600 mcf/day)

where:

R = Prescribed tax rate = 0.069
V = Value ($\$/10^3m^3$)
M = Annual raw gas production ($10^3m^3$/year)
T = % of field gas recovered attributable to the mineral right owner
A = $R - \{[(R - 0.01) \times (16.9 - ADP)^2] / (16.9)^2\}$

GWCF = R x M x V x T
where:

Q = Production ($m^3$/year)
R = Prescribed tax rate = 0.269
M = $(0.0833 \times Q)^2 / 105.94$
when Q < 2,288.4$m^3$/year (14,400 b/year)
M = (Q / 4) - 228.84
when Q$\geq$ 2,288.4 $m^3$/year (14,400 b/year)
V = Price ($\$/m^3$)
T = % of total production attributable to the mineral right owner

British Columbia

As of January 1993 Freehold Production Tax is calculated and payable on a monthly basis in a manner very similar to the royalty calculation. Previously the tax was assessed on an annual basis.

The tax rate expressed as a per cent is as follows:

Conservation Gas:

- where P $\leq$ $\$50/10^3m^3$
  rate = 5%

- where P > $\$50/10^3m^3$
  rate = [245 + 9 x (P - 50)] / P

Non-Conservation Gas:

- where P $\leq$ $\$50/10^3m^3$
  rate = 9%

- where P > $\$50/10^3m^3$
  rate = [460 + 15 x (P - 50)] / P

Where P is the Reference Price defined as the greater of the selling price at plant inlet or the Posted Minimum Price (PMP).

Liquids Rate = 12.25%

Sulphur Rate = 10.25%

Natural Gas Freehold Tax

Manitoba

Freehold lessees are subject only to that portion of the freehold tax levied on the operator's share of production. The freehold lessor is responsible for that portion of the tax levied on the royalty share of production.

The freehold tax is calculated as 1.2% of the volume produced.

Saskatchewan

The freehold tax on natural gas is derived as for crude oil, by calculating the royalty rate according to the Crown royalty formula for natural gas and subtracting a production tax factor (PTF).

PTF = 6.9 for old gas
= 10.0 for new gas

The intent is to equalize after-tax netbacks from Crown and freehold production.

## Corporate Taxes

### Federal Taxes

Effective July 1, 1988, the net federal corporate income tax rate (after the 10% abatement for income taxes levied by the provinces) is 28%. A federal surtax levied at 3% of tax owed is applicable to corporations for an indefinite period. Corporations are generally allowed deductions for amounts paid out to earn income, including operating & lifting costs, capital cost allowance, interest expense, exploration & development expense, general & administrative expense and in some cases earned depletion. Deductions cannot be claimed for provincial royalties and freehold taxes paid.

Large corporations are assessed an additional tax of 0.175% on taxable capital employed in Canada less a capital deduction of $10,000,000. The large corporations tax may be credited against the federal surtax. Capital cost allowance provides a deduction against income for depreciating property. Many classes of depreciable property exist, the most relevant being Class 41 for oil and gas equipment. Class 41 allows a 25% write-down of equipment on a declining balance basis.

Corporations are also allowed a Resource Allowance deduction for income tax purposes. The Resource Allowance is a notional allowance in lieu of deduction of provincial royalties and freehold mineral taxes. The deduction is equal to 25% of taxable net resource profits computed as gross revenue (including production royalties receivable and deemed income in B.C.) less the sum of: operating and lifting costs, production royalties paid or payable, general and administrative expenses related to production, deductible Crown lease rentals, and capital cost allowances in respect of production assets. The Resource Allowance does not reduce the tax saving advantages related to the exploration and development expenditures discussed above. Resource Allowance not claimed in the current year cannot be carried forward.

Exploratory and development expenses are grouped into one of three pools: Canadian Exploration Expense(CEE)[1]; Canadian Development Expense(CDE)[2]; and Canadian Oil and Gas Property Expense(COGPE)[3]. The CEE balance of exploration expenditures must be fully deducted against income with any unclaimed portion carried forward indefinitely. Up to 30% of the CDE balance and up to 10% of the COGPE balance can be applied against income.

### Manufacturing and Processing (M&P) Income (Gas Plants)

Prior to 1993, M&P income was eligible for a 5 per cent reduction from the general tax rate, reducing the tax rate on manufacturing profits from 28 per cent to 23 per cent. This tax rate reduction increased to six per cent on January 1, 1993, and will increase to seven per cent on January 1, 1994. M&P revenue must be at least 10% of the company's gross revenue to qualify for the credit. Oil and gas well operation and extraction are excluded from the M&P category, while operation of a gas plant is included. Gas plant income would include income from custom processing, processing on purchased gas, and the difference between sales value and royalty value (sales value less a gas cost allowance calculated in a similar manner to the gas cost allowance for processing royalty volumes) for the producers' own gas. There is no Resource Allowance deduction from M&P income.

### Small Business Deduction

Canadian Controlled Private Corporations(CCPC's) may deduct 16% of a maximum of $200,000 net income. This effectively reduces the rate on the first $200,000 from 38% to 22% (before provincial abatement).

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1 CEE: includes geological, geophysical, geochemical, drilling & completion expenses, cost of building a temporary access road or preparing a site for the well.

2 CDE: includes expenses incurred in drilling or converting a well for the disposal of waste liquids, injection of water , gas or other substances, monitoring fluid levels or pressure changes, drilling for water or gas for injection, drilling & completing a well after the commencement of production or drilling & completing a well, building a temporary access road or preparing a site for the well to the extent that the expense is not a Canadian exploration expense.

3 COGPE: includes the cost of any right, licence or privilege to explore or drill for petroleum, natural gas or related hydrocarbons, the cost of any oil or gas well, any rental or royalty.

**Example of Simplified Tax Calculation Format**

Gross Revenue
- Operating & Lifting Costs
- Non-Provincial Royalty
- General & Administrative Expense
- Capital Cost Allowance
- Interest Expense
- Exploration & Development Expense
- Resource Allowance

= Net Income

* Tax Rate

= Tax Payable

Resource Allowance = 25% * Net Resource Profits

Gross Revenue
- Operating & Lifting Costs
- Non-Provincial Production Royalties Paid or Payable
- General & Administrative Expense
- Crown Lease Rentals on Non-producing Properties
- CCA

= Net Resource Profits

Non-producing lease rentals are deductible at the rate of $2.50/ha for federal tax purposes.
Tax Rate = (38% - 10% provincial tax abatement + 3% federal surtax)

**Common CCA Classifications**

| | | |
|---|---|---|
| Class 1 | 4% | Pipeline manufacturing & distributing gas plant equipment. |
| Class 2 | 6% | As in Class 1, but acquired before 1988 or before 1990<br>- pursuant to an obligation in writing entered into before June 18, 1987<br>- that is a building, structure, plant facility or other property where the property was under construction by or on behalf of the taxpayer on June 18, 1987; or<br>- that is machinery or equipment that is a fixed and integral part of property under construction by or on behalf of the taxpayer on June 18, 1987. |
| Class 10 | 30% | As in Class 41 but, before 1987 and after 1979. |
| Class 29 | 50% | As in Class 39 but, before 1987 |
| Class 39 | 30% | Manufacturing & processing plant and equipment or oil or water storage tank after 1987. |
| Class 41 | 25% | Gas or oil well equipment<br>Property acquired after 1987 that is designed principally for the purpose of<br>- determining the existence, location, extent or qualify of accumulations of petroleum or natural gas, property acquired after 1980 to be used in the processing of heavy crude oil. |

**Provincial Taxes**
Alberta

Basic Corporate Tax

Effective April 1, 1991 the rate is 15.5% of the amount taxable in Alberta. The amount taxable in Alberta is the product of taxable income as assessed for federal taxes less the royalty tax deduction and the quotient obtained when taxable income earned in Alberta is divided by taxable income.

The royalty tax deduction is the disallowed Crown royalty and freehold mineral tax less the 25% Resource Allowance. The deduction can only reduce the tax to zero. Unused deductions can be carried forward.

Alberta Taxable Income = (Canadian Taxable Income - RTD) *(Alberta Allocation Factor)

Alberta Allocation Factor = $\frac{\text{Taxable income in Alberta}}{\text{Taxable income in Canada}}$

Royalty Tax Deduction = Crown Royalties and Freehold Mineral Tax paid but not allowed as a deduction for federal income taxes - (Resource Allowance)

**Manufacturing and Processing (M&P) Corporate Tax**

The corporate income tax rate for large manufacturers and processors was reduced to 15% from 15.5% on July 1, 1992, and was cut an additional half per cent, to 14.5% on January 1, 1993.

**Small Business Corporate Tax**

The corporate tax rate is 6% for firms that qualify as small businesses.

British Columbia

Basic Corporate Tax

Effective July 1, 1992 the rate applicable to the first $200,000 of active business income less the royalty tax rebate is 10%. The rate applicable to taxable income over $200,000 is 16%. The royalty tax rebate is the disallowed Crown royalty less the 25% Resource Allowance. The rebate can either increase or decrease the tax on a corporate basis.

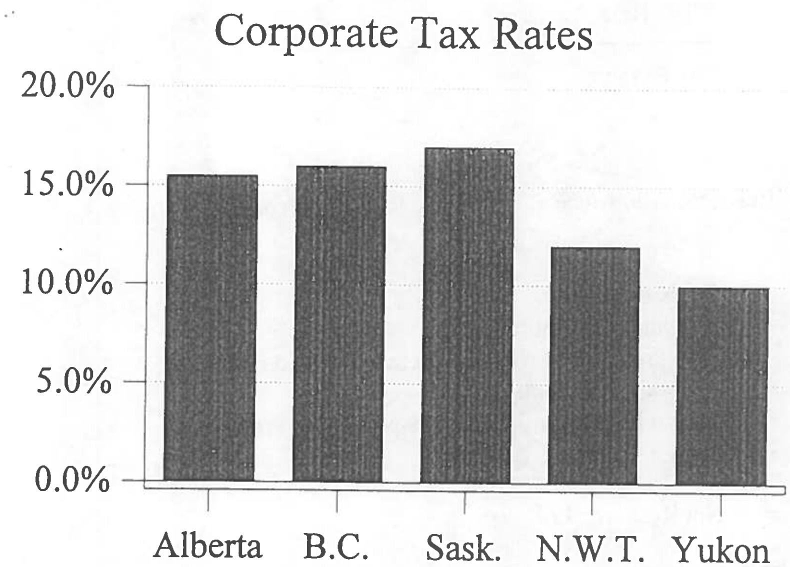


**Figure 9** Comparison of basic corporate tax rates.

Provincial Taxes
Manitoba

## Basic Corporate Tax

The basic corporate tax rate is 17% of taxable income earned in Manitoba.

### Small Business Corporate Tax

The corporate tax rate is 10% for firms that qualify as small businesses.

## Saskatchewan

### Basic Corporate Tax

Effective January 1, 1992 the rate is 17% of taxable income earned in Saskatchewan less the royalty tax rebate.

The royalty tax rebate is the royalties/freehold taxes less the 25% Resource Allowance. The rebate cannot increase the tax. Unused deductions can be carried forward.

### Corporate Capital Tax Surcharge

Effective April 1, 1993 large resource corporations will be assessed a corporation capital tax surcharge, which is equal to the difference between the existing corporation capital tax liability and 3.6% of a corporation's value of Saskatchewan resource sales. Effective April 1, 1993 Saskatchewan's fiscal regime incorporates a deduction of up to $99,000 per year from the Corporate Capital Tax Surcharge for resource corporations whose assets total less than $100 million.

### Corporate Tax Holiday

Businesses incorporated before April 1, 1992 are eligible for a two-year corporate income tax holiday.

### Small Business Deduction

Effective July 1, 1992 the small business's corporate income tax rate was reduced to 9% from 10%.

## For Further Information

For Further Information: Alberta

***Alberta Gazette***

The Alberta Gazette is published in two parts: Part 1 includes all Government Notices, Proclamations, Appointments, Orders in Council, Advertisements (Notices Published due to Statutes on Regulations) & Corporate Registry Listings. Part 2 includes New Regulations & Amendments to existing Regulations.

This publication can be obtained by contacting:

Queen's Printer Bookstore
11510 - Kingsway Avenue
Edmonton, Alberta
T5G 2Y5
Phone: (403) 427-4952
Fax: (403) 452-0668

Queen's Printer Bookstore
Main Floor, McDougall Centre
455 - 6th Street S.W.
Calgary, Alberta
T2P 4E8
Phone: (403) 297-6251
Fax: (403) 297-8450

***Alberta Energy Information Letters***

Alberta Energy Information Letters interpret the Mines and Minerals Act and regulations, and such other departmental Acts and regulations that relate directly to the minerals industry (including oil and gas), and set directions and guidelines for that industry.

Contact: Mineral Support Branch
Mineral Resources Division
Alberta Department of Energy
12th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7707
Fax: (403) 422-3044

***Alberta Energy Statutes and Regulations***

You may obtain the Alberta Energy Statutes and Regulations by contacting either of the following:

Queen's Printer Bookstore
11510 - Kingsway Avenue
Edmonton, Alberta
T5G 2Y5
Phone: (403) 427-4952
Fax: (403) 452-0668

Queen's Printer Bookstore
Main Floor, McDougall Centre
455 - 6th Street S.W.
Calgary, Alberta
T2P 4E8
Phone: (403) 297-6251
Fax: (403) 297-8450

***Crude Oil Royalty Holiday***

Publications:

Guidelines: Crude Oil Royalty Program, Exploratory Gas Well Incentives Program, Deep Gas Royalty Holiday Program.
Alberta Information Letter 86-36.

Contact: Senior Manager
Oil and Gas Incentives
Mineral Revenues Division
9th Floor, 9945 - 108 Street
Edmonton, Alberta
T5K 2G6
Phone: (403) 427-6583
Fax: (403) 427-0865

***Energy Resources Conservation Board***

The Energy Resources Conservation Board sends to the branch field orders, spacing unit orders, pool orders, etc., to be processed in conjunction with agreements administered by the division.

Contact: Manager
Mineral Mapping
Mineral Resources Division
12th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7707
Fax: (403) 422-3044

***Freehold Mineral Rights Tax***

Freehold Mineral Rights Tax, often referred to as "mineral tax", is levied on mineral rights privately owned by individuals and companies.

Contact: Director, Mineral Tax
Oil Sands and other Royalty Operations Group
Mineral Revenues Division
12th Floor, 9945 - 108 Street
Edmonton, Alberta
T5K 2G6
Phone: (403) 427-2955
Fax: (403) 422-9689

*Gas Cost Allowance*
The Gas Royalty Branch administers the Gas Cost Allowance program, and compensates gas royalty payers for the costs incurred in gathering, compressing and processing the Crown's royalty share of natural gas.

Contact: Senior Director
Gas Royalty Branch
Mineral Revenues Division
8th Floor, 9945 - 108 Street
Edmonton, Alberta
T5K 2G6
Phone: (403) 427-2962
Fax: (403) 427-3334

*Oil Sands Agreement*
The Oil Sands Prospecting Permit entitles the holder to explore a specific area of land for oil sands. It is a Crown agreement whereby the prospector pays a filing and rental fee, and assumes an obligation to conduct a program of exploration to the standards set by the department. The results are provided to the government by the prospector.

Contact: Manager Mineral Agreements
Agreements Administration
Resource Agreements Branch
Mineral Resources Division
7th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7749
Fax: (403) 422-1123

*Oil Sands Lease*
An Oil Sands Lease is obtained after a Prospecting Permit when a site shows potential for further development of oil sands. The lease entitles the developer to recover oil from the sands. The department ensures that the developer conforms to policy and standard requirements. The Energy Resources Conservation Board monitors technical aspects of a project on the lease as well as economic assessment, and coordinates an Environmental Impact Assessment.

Contact: Manager Mineral Agreements
Agreements Administration
Resource Agreements Branch
Mineral Resources Division
7th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7749
Fax: (403) 422-1123

*Petroleum and Natural Gas Agreements Regulation*
The administration of Petroleum and Natural Gas Agreements Regulation addresses the rights and obligations of an agreement holder and contains details about rental payments, drilling requirements and the conversion of licences to leases.

Publications: Current and Historical Oil and Gas Tenure Legislation in Alberta

Contact: Manager, Mineral Agreements
Agreements Administration
Resource Agreements Branch
Mineral Resources Division
7th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7749
Fax: (403) 422-1123

*Public Offering of Crown Petroleum and Natural Gas Rights*
The Public Offering of Crown Petroleum and Natural Gas Rights makes available the acquisition of oil and gas agreements through sealed competitive bidding at the request of individual exploration and development companies. the overall objective is to encourage the private sector to explore for and develop Alberta's oil and gas reserves while ensuring that the province receives an acceptable share of the revenue generated.

Public Offerings are held in Calgary twice monthly or as needed and leases and licences are awarded to the company which tenders the highest cash bonus.

Publications:

Mines and Minerals Act [Section 16(b)]
Information Letters 86-35, 88-28, 91-2, 91-15, & 92-19

Contact: Manager
Petroleum and Natural Gas Agreement Sales
Resource Agreements Branch
Mineral Resources Division
11th Floor, 9915 - 108 Street

Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7749
Fax: (403) 422-1123

***Notices of Public Offering of Crown Petroleum and Natural Gas Rights***
Notices of Public Offering of Crown Petroleum and Natural Gas Rights are published eight weeks in advance of a sale date and contain terms, conditions, and procedures as well as the lease parcels and licence parcels offered.

The Mineral Support Branch maintains the mailing list for Notices and should be notified or any change of address and/or contact.

Contact: Manager
Petroleum and Natural Gas Agreement Sales
Resource Agreements Branch
Mineral Resources Division
11th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9

***Well Licence***
Well licences are issued by the Energy Resources Conservation Board (ERCB). At application stage a copy is forwarded to the Branch for verification of Crown requirements. The Branch liaises with the ERCB regarding amendments in order to have a well licence conform to Crown leased rights.

Contact: Manager
Registrations, Mineral Records and Searches
Mineral Resources Division
12th Floor, 9915 - 108 Street
Edmonton, Alberta
T5K 2C9
Phone: (403) 427-7707
Fax: (403) 422-3044

For Further Information: British Columbia

***Resource Revenue Branch***

Royalty Reporting and Administration
Royalty Agreements and Incentive Programs

Publications: Information Letters ("F" Series)

Contact: Director, Resource Revenue Branch
239 Menzies Street
Victoria B.C.
V8V 1X4
Phone: (604) 387-1339
Fax: (604) 387-7946

***Oil and Gas Policy Branch***

Energy Removal Certificates
Domestic Supply Policy
Export Policy

Publications: Information Letters ("E" Series)

Contact: Director, Oil and Gas Policy Branch
4th Floor, 617 Government Street
Victoria, B.C.
V8V 1X4
Phone: (604) 387-6265
Fax: (604) 356-0606

***Petroleum Engineering and Operating Branch***

Well Authorizations
Well Classifications
Production and Drilling Reports
Drilling and Production Regulation Administration
Provincial Resource Inventory

Contact: Director
Petroleum Engineering and Operations Branch
4th Floor, 617 Government Street
Victoria, B.C.
V8V 1X4
Phone: (604) 387-5995
Fax: (604) 387-1339

***Petroleum Geology Branch***

Well Log Analysis
Mapping Reserves
Geological Analysis for Land Title Retention
Seismic Analysis

Contact: Director, Petroleum Geology Branch
4th Floor, 617 Government Street
Victoria, B.C.
V8V 1X4
Phone: (604) 356-7417
Fax: (604) 387-1339

***Petroleum Titles Branch***

Administration of Petroleum, Natural Gas, Geothermal and Storage Tenure Rights
Resource Planning and Regulation (Protected Areas Strategy)

Contact: Commissioner, Petroleum Titles Branch
4th Floor, 617 Government Street
Victoria, B.C.
V8V 1X4
Phone: (604) 387-1908
Fax: (604) 356-0160

***British Columbia Petroleum Corporation***

Acquisition Order Pricing
Natural Gas Levy
Natural Gas Sales Information

Contact: General Manager
British Columbia Petroleum Corporation
Suite 1650, Commerce Place
400 Burrard Street
Vancouver, B.C.
V6C 3A6
Phone: (604) 681-5395
Fax: (604) 662-3784

For Further Information: Saskatchewan

***Crude Oil and Natural Gas Crown Royalty and Freehold Production Tax Regimes***
Summary of Enhanced Oil Recovery Royalty and Tax System.
Summary of Price Sensitive Royalty/Tax Structure for Natural Gas.
Conventional Crude Oil Price Sensitive Royalty/Tax Structure.

Publications: Information Circular:
PNG86IC02, PNG87IC01 and PNG92IC01
(respectively)

Contact:
Assistant Director
Economic and Fiscal Analysis Branch
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2478

***Crude Oil Crown Royalty and Freehold Production Tax Drilling Incentives***
Royalty/tax incentive periods for oil wells drilled on or after January 1, 1993 and new or expanded waterflood projects commencing operation on or after January 1, 1993.

Publication: Policy Directive PNG93PD01

Horizontal oil well royalty/tax regime.

Publication: Information Circular PNG91IC01

Contact:
Assistant Director
Economic and Fiscal Analysis Branch
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2604

***Geophysical Licences/Permits***
Geophysical exploration licences, crew certificates and explosive permits are issued by the Petroleum Development Branch.

Contact:
Petroleum Development Branch
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-1158

***Saskatchewan Energy and Mines Manual***
The Energy and Mines Manual is a consolidation of the Acts and Regulations and is available as an annual subscription with an updating service.

Contact:
Saskatchewan Energy and Mines
Marketing and Publications
3rd Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2527

***The Saskatchewan Gazette***
The Saskatchewan Gazette is published weekly and includes Public Notices, Orders-in-Council, advertisements, new Regulations and Amendments to existing Regulations.

Contact:
Office of the Queen's Printer
Saskatchewan Justice
3rd Floor, 1874 Scarth Street
Regina, Saskatchewan
S4P 3V7
Phone: (306) 787-6948

***Well Licences***
Well licences are issued by the Petroleum Development Branch. Three copies of the well licence application and two copies of a certified survey plan must accompany the fee.

Contact:
Petroleum Development Branch
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2594

### *Well Licence Transfers/Name Changes*

Well transfers and name changes are handled by the Petroleum Development Branch. No licence can be assigned or transferred without the prior approval of the department.

Contact: Petroleum Development Branch
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-1157

### *Petroleum and Natural Gas Dispositions*

The Geology and Petroleum Lands Branch is responsible for the geological mapping and evaluation of all hydrocarbon resources in the province. It is also responsible for the administration and disposition of Crown rights to petroleum, natural gas, oil shale and helium and associated gases.

Contact: Director
Geology and Petroleum Lands Branch
Petroleum and Natural Gas Division
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2606

### *Sale of Crown Petroleum and Natural Gas Rights*

Sales of Crown Petroleum and Natural Gas Rights are held four times yearly with notices being published approximately eight weeks in advance. Parcels are posted at the request of individual companies and are accepted approximately ten weeks in advance. Offers to purchase are accepted through sealed bids with the parcel being awarded to the highest bidder. The Department reserves the rights to reject any or all bids or offers received and to refund to the person making an offer the monies received from him.

Contact: Principal Petroleum Geologist
Geology and Petroleum Lands Branch
Petroleum and Natural Gas Division
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2608

### *Oil and Gas Resource Development*

The Engineering Services Branch is responsible for reserves, pool boundaries, well spacing target areas, enhanced oil recovery projects, horizontal wells, waste water disposal wells, waterfloods, off-target wells, storage caverns, crude oil nominations and pipeline permits.

Contact: Director
Engineering Services Branch
Petroleum and Natural Gas Division
Saskatchewan Energy and Mines
11th Floor, 1914 Hamilton Street
Regina, Saskatchewan
S4P 4V4
Phone: (306) 787-2318

<u>For Further Information: Manitoba</u>

Contact: Director
Manitoba Energy & Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3
Phone: (204) 945-6573

Manager, Petroleum Administration
Manitoba Energy & Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3
Phone: (204) 945-6571