

## **Chapter IV**

# **Determining and Valuing the Crown Share**

# **Section 1**

## **Determining and Valuing Crown Share of Raw Gas and Residue Gas**

## 1. Determining and Valuing Crown Share of Raw Gas and Residue Gas

### 1.1 Calculation Criteria for Determining the Crown Share

The Crown royalty rate is stream specific for raw gas and facility specific for residue gas. The Crown royalty share is a percentage (the Crown royalty rate) of the Crown interest share of production.

The department calculates Crown royalty rates for raw gas, using the raw gas average royalty rate (RARR) for raw gas that is subsequently processed or used as lease fuel; and calculates residue gas and raw gas that does not get calculated at RARR, at the facility average royalty rate (FARR) at specific facilities each month according to where gas royalty is triggered. The facility Crown royalty rate is reflective of the average aggregate (weighted) ISC breakdown within the gas and the ISC respective royalty rates. The prescribed formulas for the ISC provide price sensitivity (par price) and distinguish between old gas and new gas (vintage and select prices). The Crown royalty rate is applied to raw gas and residue gas on 10<sup>3</sup>m<sup>3</sup> and gigajoule (GJ) volumes. For raw gas that is subsequently processed the products are converted back to an energy (GJ) equivalent using the factors identified in Table 1.

Table 1

| <b>Product</b> | <b>Gas Conversion</b> | <b>Heat Conversion</b> |
|----------------|-----------------------|------------------------|
| C2-SP          | 0.28132               | 66.065                 |
| C2-MX          | 0.28132               | 66.065                 |
| C3-SP          | 0.27201               | 93.936                 |
| C3-MX          | 0.27201               | 93.936                 |
| C4-SP          | 0.23331               | 121.406                |
| C4-MX          | 0.23331               | 121.406                |
| C5-SP          | 0.2057                | 149.363                |
| C5-MX          | 0.2057                | 149.363                |
| SUL            | 0.7375                | 23.784                 |

There are separate Crown royalty rates for "old" or "new" vintage. (For information on how to calculate the Crown royalty rate, please refer to each product).

#### 1.1.1 Vintage

A.R. 220/2002 Sch. 7

The vintage of gas is determined by the date of discovery, or first production from the pool. Generally speaking:

- New gas is gas obtained from a pool;
- Discovered on or after January 1, 1974; or
- Discovered before January 1, 1974, if no gas or other gas products from that pool had been sold or consumed for some useful purpose before January 1, 1974;
- Old gas is gas that does not qualify as new gas.

The Minister may determine that gas obtained from a well event or unit is only partly new gas and may assign a vintage between 0% new and 100% new if:

- Production from a single well event is obtained from more than one pool; and
- One or more of the pools were known to exist before January 1, 1974

## **1.2 Crown Royalty Rate for Methane ISC (C1-IC)**

The Crown royalty rates for methane ISC are calculated each month according to the prescribed formula that provides price sensitivity (methane ISC par price) and distinguishes between old methane ISC and new methane ISC (vintage and select prices).

### **1.2.1 Methane ISC Par Price and Select Prices**

The methane ISC par price for a production month is the methane ISC reference price for the current production month (prior to January 2004, the methane ISC par price was equal to the previous month's methane ISC reference price). An old methane ISC select price and a new methane ISC select price is determined by the Minister for each year. The select prices apply to all production months in that year. (For further information on select prices, please refer to the department's website at [www.energy.gov.ab.ca](http://www.energy.gov.ab.ca)).

The department will publish the methane ISC par price, the old methane ISC select price and the new methane ISC select price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which they will apply. If this day falls on a weekend or a holiday, the next business day will apply.

The methane ISC par price, old methane ISC select price and new methane ISC select price that are established for a production month will not be changed retroactively.

Calculation of the methane ISC par price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

### **1.2.2 Methane ISC Vintage**

Unless the Minister determines otherwise, the vintage of methane is the same as the gas with which it is produced and from which it is recovered.

### 1.2.3 Old Methane ISC Royalty Rate (C1-IC)

A.R. 220/2002 Sch.1 - S. (1)(2)

The Crown royalty rate for old methane ISC in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(MSP) + 40(MPP - MSP)}{MPP}$$

#### WHERE:

- RR% = the Crown royalty rate for old methane ISC.  
MSP = the old methane ISC select price prescribed by the Minister for the production month.  
MPP = the methane ISC par price prescribed by the Minister for the production month

The minimum Crown royalty rate for old methane ISC is 15%.

The maximum Crown royalty rate for old methane ISC is 35%.

### 1.2.4 New Methane ISC Royalty Rate (C1-IC)

A.R. 220/2002 Sch.1-S. (1)(2)

The Crown royalty rate for new methane ISC in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(MSP) + 40(MPP - MSP)}{MPP}$$

#### WHERE:

- RR% = the Crown royalty rate for new methane ISC.  
MSP = the new methane ISC select price prescribed by the Minister for the production month.  
MPP = the methane ISC par price prescribed by the Minister for the production month.

The minimum Crown royalty rate for new methane ISC is 15%.

The maximum Crown royalty rate for new methane ISC is 30%

## 1.3 Valuing Raw Gas and Residue Gas

### 1.3.1 Valuing Crown Share of Raw Gas, Residue Gas, and Ethane

The valuation of Crown share of raw gas, residue gas and, ethane is on a per GJ basis. For ethane valuation refer to *Ch. IV, Sec.2*.

### **1.3.2 Raw Gas**

The Crown's share of raw gas is valued at the facility average price (FAP) of the sales location identified on the RGA submission, except when the raw gas sale is subsequently processed in which case it is assessed at the raw gas average royalty rate and 80% of the gas reference price. If the raw gas sale is subsequently used for lease fuel it is assessed at the raw gas average royalty rate (RARR%) and 100% of the gas reference price. Raw gas that is injected is valued at the FARR% of the injection facility and the FAP of the reproducing facility.

### **1.3.3 Residue Gas**

The Crown's share of residue gas is valued at the FAP of the facility for a company using the reference price valuation method. A company on the reference price valuation method with Grandfathered long-term contracts should refer to *Ch. IV, Sec. 1.8*.

A company using the corporate average price (CAP) valuation method uses its own sales for the year subject to a minimum annual price calculation.

## **1.4 Royalty Client's Election of Valuation Method**

A.R. 220/2002 Sch.1 – S. 8(1)

Subject to certain eligibility criteria, royalty clients may choose one of two methods to value their Crown royalty share of raw gas, residue gas and ethane:

- Reference price;
- or
- Gas corporate average price (CAP).

The gas reference price and the respective ISC reference prices are determined by the Minister for each production month, and are used to value raw gas, and residue gas for royalty clients who choose the reference price method.

The ethane reference price is determined by the Minister for each production month, and is used to value the ethane for royalty clients who choose the reference price method.

A royalty client calculates CAP annually using his own sales for the period. The department uses the calculated CAP annually to value the raw gas, residue gas, and ethane for those royalty clients who choose the CAP method.

A.R. 220/2002 Sch.1 - S. 8(2)

If a royalty client wishes to use the CAP method, he must file a VA1 form. If a royalty client makes no selection, or is not eligible to use the CAP method, he is deemed by the Minister to have selected the reference price method.

A royalty client who has chosen to value his Crown royalty share using the CAP method may subsequently elect to use the reference price method. However, once the reference price method is chosen, the CAP method cannot be selected afterwards.

## **1.4.1 Valuing Raw Gas, Residue Gas, and Ethane (Valuation Methodology)**

### **1.4.2 Electing a Valuation Method**

#### **VA1 FORM - ELECTION FOR GAS VALUATION**

##### **Purpose**

Royalty clients must use the VA1 form to elect the CAP valuation method. If the royalty client does not file a VA1, they are deemed to have elected the reference price valuation method. The VA1 is used for both an initial election and for a subsequent election to change from CAP to reference price.

A description of the eligibility requirements for CAP elections is provided in *1.9.1* of this section.

##### **Timing**

A VA1 form to make an initial election must be received by the department on or before the 15<sup>th</sup> day of the second month following the production month in which the person becomes a royalty client.

To change from the CAP to reference price valuation method, the department must receive a VA1 form on or before March 1 of the year immediately following the production year. For example, if a royalty client wants to change from CAP to reference price valuation effective from the 2005 production year the department must receive a VA1 on or before March 1, 2006.

##### **Consequences of Non-Compliance**

If a VA1 election does not meet the eligibility requirements of the valuation method that has been chosen, the VA1 form will be returned to the applicant with a notice identifying the deficiencies in the application. The applicant has 30 days from the date on the notice to correct the identified deficiencies and submit a corrected VA1 election form to the department.

A royalty client, as well as his associates, who do not comply with the requirements for an initial election, will be deemed by the Minister to have chosen the reference price method and their Crown royalty share will be invoiced at that price.

### **1.4.3 VA1 – Completion Instructions**

#### **PART 1: CLIENT DETAIL**

- 1.1 CLIENT ID - The four-character client ID that identifies the royalty client for whom the election is being made.
- 1.2 CLIENT NAME - The full name of the royalty client for whom the election is being made.

- 1.3 PRODUCTION YEAR - The production year in which the election is to become effective.
- 1.4 DATE PREPARED - The numeric year, month and day on which the VA1 form is prepared.
- 1.5 CONTACT PERSON - The name of the person whom the department can contact concerning information on the form.
- 1.6 TELEPHONE - The telephone number, including area code of the contact person.
- 1.7 INITIAL or SUBSEQUENT - Check one box, either INITIAL or SUBSEQUENT.
  - INITIAL indicates that the election is for the first year in which the person became a registered royalty client.
  - SUBSEQUENT indicates that the royalty client has a valid CAP election and wishes to change to the reference price method.

## **PART 2: VALUATION METHOD**

- 2.1 CHECK ONE - Check one box, either REFERENCE PRICE or CORPORATE AVERAGE PRICE.
  - REFERENCE PRICE indicates that the royalty client making the election wishes to have the Crown royalty share of raw gas, residue gas, and ethane valued using the reference price method beginning in the production year indicated in field 1.3.
  - CORPORATE AVERAGE PRICE indicates that the royalty client making the election wishes to have the Crown royalty share of raw gas, residue gas, and ethane valued at the gas corporate average price beginning in the production year indicated in field 1.3.

## **PART 3: ASSOCIATES**

- 3.1 CLIENT ID - The four-character client ID for the person who is an associate of the royalty client for whom the election is being made.
- 3.2 CLIENT NAME - The full name of the person who is an associate of the royalty client for whom the election is being made.

For the purpose of raw gas, residue gas, and ethane valuation, persons are associated if one person owns or has a beneficial interest equal to or greater than 75% of the other person, whether directly or in combination with other associates.

## **PART 4: OFFICIAL DECLARATION**

- 4.1 AUTHORIZED SIGNATURE - The signature of the authorized person of the royalty client for whom the election is being made.
- 4.2 NAME OF AUTHORIZED PERSON - The full name of the authorized person whose signature appears in field 4.1.
- 4.3 TITLE OF AUTHORIZED PERSON - The position title of the authorized person whose signature appears in field 4.1.
- 4.4 DATE - The date on which the authorized person signed the VA1 election form.

Form provided for illustration purposes only. All required forms are provided in *Appendix P*.



## **1.5 Reference Price Method Methodology**

### **1.5.1 Valuing Residue Gas**

The Crown's royalty share of residue gas is valued at the facility average price (FAP). Royalty triggered gas at a facility, with some exceptions, will be assessed at FAP. For exceptions to FAP refer to *Appendix D*. FAP is the aggregate (weighted) average reference price based on the ISC content within the royalty-triggered gas, less the facility gas transportation allowance.

Details of the gas reference price, facility average price, and the ISC reference prices and transportation allowances calculations, can be found in this chapter and in *Appendix D*.

### **1.5.2 Valuing Raw Gas**

Raw gas disposed of at arm's-length prior to processing and which is subsequently processed before delivery to a sales pipeline is valued at 80% of the gas reference price. Raw gas that is processed before it can be used as off-site fuel is also valued at 80% of the gas reference price.

For all raw gas sales reported on the RGA submission, the heat content must be reported. In those instances where the heat content is not reported, the department will use a GJ factor as established by the Minister (currently set at 41 GJ per 10<sup>3</sup>m<sup>3</sup>). Raw gas that has been subsequently processed with natural gas products produced will have the products converted back to raw gas for valuation.

#### **A.R. 220/2002 Sch.1 - S.7**

The price at which the department values the Crown royalty share of raw gas is reduced to provide a nominal cost allowance in recognition of value not yet added by processing, but which is reflected in the gas reference price. The allowance is a percentage of the gas reference price as determined by the Minister.

The Minister determined that the department values raw gas, on which a Crown royalty share is established, at 80% of the gas reference price for the month in which that liability is established. This valuation of 80% of the gas reference price for the month, applies only if the immediate destination of raw gas sale is a gas plant (including mainline straddle plants). In all other cases, a valuation of 100% of gas reference price applies unless it is proven later that the raw gas sales volume is sent to a gas plant for processing, or is being used as off-site fuel which otherwise would require processing to meet the pipeline specifications. Such cases should be referred to the department for review. Raw gas sale volumes that are not subsequently processed (excluding raw gas used for off-site fuel) are not eligible for 80% of the gas reference price. Also, the Crown royalty share of raw gas volumes disposed to an injection facility are determined at the FARR% of the injection facility and valued at the FAP of the reproducing facility.

Should other situations pertaining to raw gas sale warrant the 80% of the gas reference price valuation, clients may identify these for the department for review, and if approved, an adjustment to the valuation will be made.

**NOTE: The UOCR will not be allowed as a deduction on Crown royalty for raw gas sales that are eligible for 80% gas reference price valuation. In addition, the Crown will not share in custom processing fees charged in respect to the gathering, compressing and processing of raw gas sales volumes subject to 80% GRP valuation.**

### 1.5.3 Facility Average Price (FAP)

FAP is the facility reference price less the facility gas transportation adjustment. The FAP is equivalent to the net gas reference price at a facility. The facility reference price is the aggregate (weighted) gas reference price that is calculated using ISC published reference prices and the ISC content within the royalty-triggered gas. The facility gas transportation adjustment is the transportation allowance for gas at a facility. It is a weighted average calculation using published meter station factors, published adjusted intra-Alberta transportation deductions (AIATD) for all ISCs, and the ISC content within the royalty-triggered gas. The FAP for a month is calculated as:

|  |
|--|
| Facility Reference Price for the month<br>... <i>minus</i> ...<br>Facility Gas Transportation Cost Allowance for the month |
|--|

A.R. 220/2002 Sch.1, S.4

#### STEP 1:

The facility reference price is an aggregate gas reference price. The facility reference price is calculated as:

|   |
|---|
| Sum of (ISC Product Energy times ISC Product Reference Price) for the month<br>... <i>Divided by</i> ...<br>Sum of ISC Product Energy for the month |
|---|

#### STEP 2:

The facility gas transportation adjustment is calculated as:

|   |
|---|
| [Royalty Trigger Factor <i>minus</i> 1] for the month<br>... <i>Multiplied by</i> ...<br>Facility Adjusted IATD for the month |
|---|

#### STEP 3:

The royalty trigger factor is calculated as:

|  |
|--|
| Sum of (ISC Product Energy times Meter Station Factor) for the month<br>... <i>Divided by</i> ...<br>Sum of ISC Product Energy |
|--|

**STEP 4:**

The facility Adjusted IATD is calculated as:

|  |
|--|
| Sum of (ISC Product Energy times Adjusted IATD of ISC) for the month<br>... <b>Divided by</b> ...<br>Sum of ISC Product Energy |
|--|

For a sample of the FAP calculation or exceptions to FAP refer to *Ch. VII, Sec. 1.6.4.4* and/or *Appendix D*.

**1.5.4 Calculation of the Gas Reference Price**

The gas reference price for a month is calculated as:

|   |
|---|
| Weighted Average Price of Alberta Gas for the month<br>... <b>minus</b> ...<br>Transportation Cost Allowance for the month<br>... <b>minus</b> ...<br><b>Weighted Average Marketing Allowance</b> for the month<br>... <b>minus</b> ...<br><b>Pipeline Fuel/Loss Allowance*</b> for the month<br>... <b>plus or minus</b> ...<br>Adjustment for Prior Period Amendments for the month |
|---|

Procedures for reporting and calculating the gas reference price (refer to *Appendix D*) are described in the *Ministry Natural Gas Reporting Guide*.

A.R. 220/2002 S.6 (1)

The department will publish the production month's gas reference price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month, unless the 15<sup>th</sup> day is a weekend or a holiday; in which case, the next business day will apply.

The gas reference price that is established for a month will not be changed retroactively.

A.R. 220/2002 S.33

The calculation of the gas reference price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

**1.5.5 Weighted Average Price of Alberta Gas**

The weighted average price of Alberta gas for a month is calculated as:

|  |
|--|
| (Value of gas consumed in Alberta in the month<br>... <b>plus</b> ...<br>Value of gas exported from Alberta in the month)<br>... <b>divided by</b> ...<br>(Gas consumed in Alberta [GJ] ... <b>plus</b> ... gas exported from Alberta [GJ] in the month) |
|--|

The value of gas consumed in Alberta is calculated in three steps using information reported by large volume end-users (LVE) and designated distributors (DD), including buy/sell end-users of the designated distributors. For purposes of this calculation, transactions are separated into non-associated (dispositions to persons not associated with the seller) and associated (dispositions to persons associated with the seller).

**STEP 1:**

|   |
|---|
| Value of LVE non-associated transactions in the month (as reported to the Ministry)<br>$\dots\textit{plus}\dots$ Value of LVE associated transactions in the month (GJ ... <i>multiplied by</i> ... weighted average non-associated LVE inlet price)<br>$\dots\textit{equals}\dots$ Value of LVE transactions for the month |
|---|

**STEP 2:**

|   |
|---|
| Value of DD non-associated transactions in the month (as reported to the Ministry)<br>$\dots\textit{plus}\dots$ Value of DD associated transactions in the month (GJ ... <i>multiplied by</i> ... weighted average non-associated DD inlet price)<br>$\dots\textit{equals}\dots$ Value of DD transactions for the month |
|---|

**STEP 3:**

|   |
|---|
| Value of LVE transactions in the month<br>$\dots\textit{plus}\dots$ Value of DD transactions in the month<br>$\dots\textit{equals}\dots$ Value of gas consumed in Alberta for the month |
|---|

The value of gas exported from Alberta is also calculated in three steps, using information reported by the owner of the gas at the point of removal. Reporting is based on five designated removal points: Coleman, Empress, James/McNeill, Provost and "Other". ("Other" includes transactions from all export points other than the four specified locations.) Transactions are separated into "non-associated" and "associated" in the same manner as for gas consumed in Alberta. Refer to *Appendix D* for more details on the calculation of gas reference price.

**STEP 1:**

|  |
|--|
| Value of non-associated exports at the removal point in the month (GJ ... <i>multiplied by</i> ... price at the Alberta border, for each owner) for all owners at the removal point<br>$\dots\textit{divided by}\dots$ Total non-associated exports at the removal point in the month (GJ) for all owners<br>$\dots\textit{equals}\dots$ weighted average price at the removal point for the month |
|--|

**STEP 2:**

(Non-associated exports at the removal point in the month (GJ) for all owners  
*...plus...*  
 Associated exports at the removal point in the month (GJ) for all owners)  
*...multiplied by...*  
 Weighted average price at the removal point for the month  
*...equals...*  
 Value of gas exported at the removal point for the month

**STEP 3:**

Value of gas exported at each removal point, summed for all removal points  
*...equals...*  
 Value of gas exported from Alberta in the month (excess demand charges included)

**That weighted average price is calculated as:**

([Value of associated and non-associated gas exported at all other  
 removal points] *...plus...* [value of non-associated gas exported  
 at the removal point in question])  
*...divided by...*  
 ([Quantity (GJ) of associated and non-associated gas exported at all other  
 removal points] *...plus...* [quantity (GJ) of non-associated gas exported  
 at the removal point in question])

Effective January 1996, transactions of ex-Alberta gas local distribution companies (ex-Alberta LDCs) are excluded from the main removal point pools and placed into a separate removal point pool. Associated dispositions of ex-Alberta LDCs are valued at the weighted average price of non-associated ex-Alberta LDCs exports. Refer to *Appendix D* for more information about the calculation of the border price for ex-Alberta LDCs.

Effective August 2004, the valuation of associated dispositions of non-ex-Alberta LDCs exports is based on type of disposition. Associated dispositions to affiliates continue to be valued at the non-associated weighted average border point price. Associated dispositions other than to affiliates are now valued at the weighted average price of non-associated ex-Alberta LDCs exports.

For the period January 1996 to July 2004, associated dispositions of a removal point are valued up to the non-associated dispositions of the removal point. For August 2004 and future periods, associated dispositions at a removal point are valued up to twice the non-associated dispositions of the removal point. The excess of associated dispositions to non-associated dispositions is excluded from the value of gas exported from Alberta and subsequently valued at the gas reference price. For the same periods, similar processes apply for the large volume end-users and designated distributors.

**1.5.6 Transportation Cost Allowance**

The intra-Alberta transportation cost allowance for a month is calculated as:

|  |
|--|
| Alberta cost of service for the month<br><i>...divided by...</i><br>Alberta net billable receipts (GJ) for the month |
|--|

Refer to *Appendix D* for more information.

### 1.5.7 Weighted Average Marketing Allowance

The weighted average marketing allowance is a deduction in the calculation of the monthly gas reference price. It is comprised of the Valuation Point Adjustment(VPA), Aggregator Overhead Marketing and Administration Charges (OMAC) Adjustment, and the Producer Direct Marketing Allowance. The following principles apply:

- The department calculates the VPA as the average difference between purchases and sales prices obtained for companies identified as marketers. This is multiplied by the percentage that marketers were of the total gas dispositions (for 1994 only) and the total gas removals from Alberta (for 1995 and onwards), in the previous year. (For 1994 only, volumes purchased by marketers are net of the purchased portion of net injection calculated using the latest year for which that data is available.) For 1994, the average difference is deemed to be 10¢/GJ. The department will calculate future average differences based on surveys of marketers.
- The Aggregator OMAC Adjustment rate is determined by the department each month as a proxy for the overhead, marketing and administration charges of recognized aggregators. The rate will be the weighted average OMAC type deduction of the designated large aggregators multiplied by the total percentage that the recognized aggregators volumes were of the total gas dispositions (for 1994 only), and the total gas removals from Alberta (for 1995 and onwards) in the previous year.
- The Producer Direct Marketing Allowance is determined by the department to reflect the cost of marketing direct sales of natural gas by producers. This allowance has been implemented on a go-forward basis effective with the May 2004 production month. Refer to *Appendix D* for details of the calculation methodology.

### 1.5.8 Pipeline Fuel/Loss Allowance

The pipeline fuel/loss allowance for a month is calculated as:

|  |
|--|
| (Weighted Average Price of Alberta Gas ... <i>minus</i> ... Transportation Cost Allowance ... <i>minus</i> ... VPA and Aggregator OMAC Charges Adjustment) for the month<br><i>...multiplied by...</i><br>(1.0 ... <i>minus</i> ... [Alberta net billable receipts ... <i>divided by</i> ... Alberta gross billable receipts]) for the month |
|--|

### 1.5.9 Adjustment for Prior Period Amendments

If the Ministry receives amendments to previous period reporting from companies upon whom it depends for the information used in calculating the gas reference price, the Ministry will calculate an adjustment to the current month's gas reference price. The adjustment is calculated in the manner described in *Appendix D*. The maximum adjustment for any current month's reference price is an amount equal to 2% of the gas reference price before amendments are considered. Any amount that is over the 2% limit is carried forward to the next succeeding reference price month. Amendments that are reported and included as adjustments in this manner are those which result from reporting errors or omissions by the reporting company.

If the adjustments result from re-determinations or re-allocations by a facility operator, pipeline company, producer or customer, the reporting company includes these adjustments in its reports for the delivery month in which they are transacted, and not for the production month to which the adjustments apply.

### 1.6 ISC Reference Prices

The ISC reference price calculation utilizes the principles and information collection mechanism of the gas reference price (Refer to *Ch. IV, Sec. 1.5.4* and *Appendix D*). Some additional principles are listed as follows:

- 1) ISC quantities in the ISC reference price calculations are determined from reported gas reference price quantities based on the percentage of each ISC in the gas stream.
- 2) ISCs that are consumed as gas are valued at reported gas prices.
- 3) Gas transportation costs are adjusted based on the ISC gigajoule content in a volume of gas.
- 4) The Alberta large volume end-user pool is split into a mainline straddle plant pool and other Alberta large volume end-user pool. The shrinkage value of the gas extracted at mainline straddle plants is used in the calculation of all ISCs except methane (C1).

The ISC reference prices for a month is calculated as:

|   |
|---|
| Weighted Average Price of ISC for the month<br><i>...minus...</i>                 |
| Alta. Transportation Cost Allowance of ISC for the month<br><i>...minus...</i>    |
| Weighted Average Marketing Allowance (Gas RP) for the month<br><i>...minus...</i> |
| Pipeline Fuel/Loss Allowance for the month<br><i>...plus or minus...</i>          |
| Adjustment for Prior Period Amendments for the month                              |

Refer to *Appendix D* for more details on the ISC reference price calculations.

A.R. 220/2002 S. 6 (2)(3)(4)(5)(6)(7)

The department will publish the production month's ISC reference prices in an Information Letter on the 15<sup>th</sup> day of the second month following the production month, unless the 15<sup>th</sup> day is a weekend or a holiday; in which case, the next business day will apply.

The ISC reference prices that are established for a month will not be changed retroactively.

A.R. 220/2002 S. 33

The calculation of ISC reference prices is subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

## 1.7 Facility Average Transportation Allowances

A.R. 220/2002 Sch.1 - S.5

The department deducts a facility average transportation allowance from the facility average reference prices (aggregate gas reference price), as part of its calculation of the facility average price (FAP), used to value the Crown's royalty share of raw gas and residue gas.

The facility average transportation allowance represents the difference between the average Alberta transportation cost allowances that are deducted in the gas reference price calculations, and Alberta transportation costs calculated for a specific facility. A unique transportation allowance is calculated for each royalty trigger point that is connected to a meter station of an included pipeline. Generally, the department includes a pipeline if it has access to the ex-Alberta market and has published tolls and tariffs. Where a royalty trigger point is not connected to a meter station of an included pipeline, the facility average transportation allowance is zero.

The facility average transportation allowance can be positive or negative depending on whether the calculated transportation costs for a facility are greater than or less than the Alberta average transportation costs.

The transportation allowance is calculated monthly as follows:

|  |
|--|
| Intra-Alberta Transportation Deduction (for each ISC Product)                |
| <i>multiplied by...</i>  |
| Pipeline Fuel/loss factor (for each ISC Product)                             |
| <i>...equals...</i>  |
| Adjusted Intra-Alberta Transportation Deduction (AIATD for each ISC Product) |
| <i>...plus or minus...</i>   |
| AIATD prior period amendments (for each ISC Product)                         |
| <i>...multiplied by...</i>   |
| ISC specific heat  |
| <i>...equals...</i>  |
| ISC specific weighted AIATD  |
| <i>...sum all...</i>   |
| total weighted ISC AIATD   |
| <i>...divided by...</i>  |
| total facility heat  |
| <i>...equals...</i>  |
| Facility AIATD   |
| <i>...multiplied by...</i>   |
| Royalty Trigger Factor ... minus ... one                                     |

The department calculates the royalty trigger factor by weight averaging the meter station factors based on actual volumetric dispositions (*refer to Appendix E*). Meter Station factors are generally calculated once a year from information submitted by included pipelines for the delivery month of April. Meter Station Factors calculated using April information are used for the subsequent October through September production period. Once a factor is established for a meter station, it cannot be amended retroactively. Consequently, the six months lag period enables the department to validate the information prior to its use.

For information regarding the calculation of the meter station factor refer to *Appendix E*.

A transportation allowance that is calculated for a royalty trigger point for a production month can be changed retroactively but only where the change is due to a recalculated royalty trigger factor resulting from revised volumetric information.

The ISC product adjusted intra-Alberta transportation deduction (AIATD) that is established for a month will not be changed retroactively. If the department receives amendments to the information used to calculate the ISC product AIATD, the department will calculate an adjustment to the current month's ISC product AIATD. The full amount of any adjustment will be included in the current month's ISC AIATD calculation.

The department will publish the production month's AIATD in an Information Letter on the 15<sup>th</sup> day of the second month following the production month, unless the 15<sup>th</sup> day is non-business day; in which case, the next business day will apply.

The department will publish meter station factors in an Information Letter on December 15<sup>th</sup> of each year, unless the 15<sup>th</sup> day is a non-business day; in which case, the next business day will apply. The department will also publish new meter station factors in an Information Letter during the year as required.

The department will publish royalty trigger factors by December 27<sup>th</sup> of each year, unless the 27<sup>th</sup> day is a non-business day; in which case, the next business day will apply. The department will also publish new or revised royalty trigger factors during the year as required.

## **1.8 Gas Reference Price Method – Grandfathered Co-Generation and Long-Term Contracts**

Royalty clients electing reference price valuation subsequent to June 15, 1994, are not eligible to grandfather long-term contracts.

A.R. 220/2002 Sch.1 - S.10 (1)

A royalty client who has an authorized election to grandfather a contract must determine and report on the GR2 form the monthly deliveries and netback selling prices under that contract on or before March 31, of the year following the year for which the information applies.

A.R. 220/2002 Sch.1 - S.10

A royalty client using the reference price method may elect to value the Crown royalty share of gas delivered under an existing co-generation or similar long-term contract, at the net price (and/or net value of other considerations) received under the contract where:

- The contract is in effect on January 1, 1994;
- A written agreement in principle is established on January 1, 1994, and a contract resulting from this is in effect on or before January 1, 1995;
- The price paid is fixed initially and the annual increments are tied to other than a gas index;
- The contract is between parties that are not associates; and
- The term of the contract is not less than 10 years and the portion of the term remaining on January 1, 1994, is not less than 3 years.

A novation in respect of such a contract will be honoured by the department; however, renewals of a contract or changes that affect the terms of a contract will not.

Prepaid contracts are not eligible to apply for the grandfathering provision. They will be valued using the reference price method.

### 1.8.1 Calculation of the Grandfathered Price

The department will invoice the monthly Crown royalty share of grandfathered contracts using the gas reference price. A final accounting and corporate royalty account adjustment, to reflect the grandfathered price, is made annually.

The department will adjust the Crown royalty share of grandfathered contracts as follows:

|  |
|--|
| Monthly Crown Royalty Quantity in GJ<br><i>...multiplied by...</i><br>(Monthly Gas Reference Price <i>...minus...</i> monthly Netback Selling Price) |
|--|

The department will honour dedicated reserves specified in a qualifying contract and identified in the application. The Crown interest and vintage of dedicated reserves is obtained from the stream ID. Where there is no reserve dedication, or the royalty client fails to identify the reserve dedication in its application, deliveries under a contract are deemed to be supplied at the royalty client's weighted average Crown interest and vintage calculated monthly as a composite factor which is the product of:

|  |
|--|
| Royalty client's total Crown Royalty Share (in GJ) of raw gas, residue gas<br>and ethane for the production month<br><i>...divided by...</i><br>Royalty client's total Alberta production (in GJ) of raw gas, residue gas and ethane for the<br>production month |
|--|

### **1.8.1.1 Annual Statement of Grandfathered Contract Sales**

#### **GR2 FORM - ANNUAL STATEMENT OF GRANDFATHERED CONTRACT SALES**

##### **Purpose**

Royalty clients must use the GR2 form to submit delivery and price information relating to contracts that have been authorized for grandfathered valuation of the Crown royalty share. If a royalty client needs to amend his GR2 form submission for a previous year, the GR2 form is used to submit that information as well.

##### **Timing**

For each contract that is the subject of an authorized grandfathering election, a completed GR2 form must be received by the department by March 31<sup>st</sup> of the year following the production year to which the information applies.

##### **Consequences of Non-Compliance**

Where a royalty client's annual statement of grandfathered contract sales is in default for four consecutive months after the due date of March 31<sup>st</sup>, the royalty client loses the election to grandfather co-generation or long term contracts. The volumes subject to these contracts will be valued at the applicable monthly reference price.

The penalty for failing to file a GR2 form by its due date is a penalty charge of \$1000 per calendar month for four months and the royalty client will be defaulted to reference price.

##### **Amending a Statement of Grandfathered Contract Sales**

If a royalty client receives an adjustment to transactions that were included in the GR2 submission from a previous year, an amended GR2 form must be submitted to the department. An amended GR2 form must be completed in full just as an initial GR2 form is completed in full.

### **1.8.1.2 GR2 – Completion Instructions**

#### **PART 1: ROYALTY CLIENT DETAIL**

- 1.1 CLIENT ID - The four-character client ID that identifies the royalty client.
- 1.2 CLIENT NAME - The full name of the royalty client for whom the information is being submitted.
- 1.3 PRODUCTION YEAR - The production year to which the information applies.
- 1.4 DATE PREPARED - The numeric year, month and day on which the GR2 form is prepared.
- 1.5 CONTRACT NO./ID - The unique name or number assigned for identification purposes to the contract for which the information is submitted.

1.6 CONTACT PERSON - The name of the person the department can contact concerning information on the form.

1.7 TELEPHONE - The telephone number, including area code of the contact person.

**PART 2: DETAILS OF CONTRACT SALES BY MONTH**

2.1 GJs DELIVERED - The quantity of gas (*in gigajoules*) delivered under the subject contract, by month, during the production year.

2.2 CONTRACT SELLING PRICE - The consideration payable for gas (in \$ per GJ) delivered under the contract, by month, as specified in the subject contract.

2.3 NETBACK SELLING PRICE - The value per unit (in \$ per GJ), net of incurred allowable transportation costs from the Alberta plant gate to the point of delivery for the monthly deliveries identified in column 2.1.

**PART 3: CERTIFICATION**

3.1 AUTHORIZED SIGNATURE - The signature of the authorized person for the royalty client who is responsible for the information submitted.

3.2 NAME OF AUTHORIZED PERSON - The full name of the authorized person whose signature appears in field 3.1.

3.3 TITLE OF AUTHORIZED PERSON - The position title of the authorized person whose signature appears in field 3.1.

3.4 DATE - The date on which the authorized person signed the GR2 submission.

Form provided for illustration purposes only. All required forms are provided in *Appendix P*.



**ANNUAL STATEMENT OF  
GRANDFATHERED CONTRACT SALES  
GR2**

**PART 1: ROYALTY CLIENT DETAIL**

1.1 \_\_\_\_\_ 1.2 \_\_\_\_\_  
CLIENT ID CLIENT NAME

1.3 PRODUCTION YEAR \_\_\_\_\_ 1.4 DATE PREPARED \_\_\_\_\_  
YR. MO. DY.

1.5 CONTRACT NO./ID \_\_\_\_\_

1.6 \_\_\_\_\_ 1.7 \_\_\_\_\_  
CONTACT PERSON TELEPHONE

---

**PART 2: DETAILS OF CONTRACT SALES BY MONTH**

| DELIVERY MONTH | 2.1 GJ's DELIVERED | 2.2 CONTRACT SELLING PRICE (\$/GJ) | 2.3 NETBACK SELLING PRICE (\$/GJ) |
|----------------|--------------------|------------------------------------|-----------------------------------|
| JANUARY        |                    |                                    |                                   |
| FEBRUARY       |                    |                                    |                                   |
| MARCH          |                    |                                    |                                   |
| APRIL          |                    |                                    |                                   |
| MAY            |                    |                                    |                                   |
| JUNE           |                    |                                    |                                   |
| JULY           |                    |                                    |                                   |
| AUGUST         |                    |                                    |                                   |
| SEPTEMBER      |                    |                                    |                                   |
| OCTOBER        |                    |                                    |                                   |
| NOVEMBER       |                    |                                    |                                   |
| DECEMBER       |                    |                                    |                                   |
| TOTAL          |                    |                                    |                                   |

---

**PART 3: CERTIFICATION**

3.1 \_\_\_\_\_ 3.3 \_\_\_\_\_  
AUTHORIZED SIGNATURE TITLE OF AUTHORIZED PERSON

3.2 \_\_\_\_\_ 3.4 \_\_\_\_\_  
NAME OF AUTHORIZED PERSON DATE

Revised 2006-05-31

## **1.9 Gas Corporate Average Price (CAP) Method**

A.R. 220/2002 Sch.1 - S. 8

A royalty client that has a valid CAP election must determine and report its CAP annually by April 15<sup>th</sup>, of the year following the year of production.

The department will value and invoice the monthly raw gas, residue gas, and ethane Crown royalty share of such a royalty client using an estimated CAP based on the reference price in effect during the production month adjusted by the royalty client's corporate gas factor.

Annually, the department will use the CAP calculated by the royalty client to value the Crown royalty share of raw gas, residue gas, and ethane for each month of the subject year, and will reflect the adjustment on the royalty client's Crown Royalty Detail Calculation statement.

Interest will not be charged or paid to the royalty client on the royalty difference between the estimated monthly CAP and actual CAP determined annually. With the exception of a late filing of the first version of the VA2 form, which interest would have been charged or paid on the difference. Interest will be charged or paid on amendments to the annual adjustments.

For the purpose of raw gas, residue gas, and ethane valuation, persons are associated if one person owns or has a beneficial interest equal to or greater than 75% of the other person, whether directly or in combination with other associates.

### **1.9.1 Eligibility Criteria Required for Using the Gas Corporate Average Price**

To be eligible to use the CAP method, a royalty client must:

- Have no associates who value their Crown royalty share using the reference price method; and
- Not have selected the reference price method previously, or have been required to value his Crown royalty share using this method.

A.R. 220/2002 Sch.1 - S.8 (4)

To select the CAP method, a royalty client must file an election for gas valuation on a VA1 submission (refer to *Ch. IV, Sec. 1.4*) to be received by the department:

- On or before the 15<sup>th</sup> day of the second month following the production month (reported on the OAF or RMF2) in which the person becomes a royalty client.

### **1.9.2 Maintaining Eligibility to Use the Gas Corporate Average Price**

A.R. 220/2002 Sch.1 - S. 8(7) to (11)

When a royalty client's CAP selection ceases to be valid, the royalty client must use the reference price method, which becomes effective from the production year in which the client's CAP ceases to be valid. The reasons for invalidating the selection are as follows:

- The royalty client has given written notice on the VA1 form, changing his previous selection (notice to be received by Team Lead, Client Services on or before March 1); or
- An associate of the royalty client begins to use the reference price method; or
- The royalty client becomes an associate of another royalty client who uses the reference price method; or
- The royalty client merges or, in the opinion of the Minister, effectively merges his business with that of another royalty client who uses the reference price method.

If the royalty client or an associate of the royalty client fails to comply with the disclosure and reporting requirements for determining the CAP, royalty clients must use the reference price method, effective the first day of the year to which the default relates.

A.R. 220/2002 Sch.1 - S. 8(12)

A royalty client contemplating a merger with, or an acquisition of, or a change in its relationship with another royalty client may request an advance ruling on the effect that the contemplated action will have on its eligibility to use CAP.

The department's ruling will be provided within 30 days of the date on which it receives all the information it requires to make the determination. (Refer to *Ch. II, Sec. 3.2.4*)

### **1.9.3 Sales to Associates to Qualify for Valuation at the Reference Price Method.**

In order for sales made to an associate to qualify for valuation at the reference price method, the following conditions must be met:

- The associate must not have any sales of its own. If the associate does have sales, it must calculate a CAP; and
- The associate must be purchasing the gas for consumption in its normal operations.

**NOTE: Consumption for this purpose means gas purchased for industrial use.**

A royalty client whose uncertain about valuing sales to associates should seek an advance ruling from the department. (Refer to *Ch. II, Sec. 3.1*)

### **1.9.4 Audit Access to Associates of Clients Using the Gas CAP**

A.R. 220/2002 Sch.1 - S.9 (5)(a)(b)

Where a royalty client's calculated CAP includes sales to an associate valued at the associate's CAP, the associate must consent to an audit of its CAP at the request of the Minister.

A.R. 220/2002 Sch. 1 – S. 9(6)

The royalty client whose associate is the subject of the audit may elect that the audit be done:

- By the department, at the department's expense (manpower salary expense);  
or
- By an independent auditor, subject to prior approval by the Minister, at the expense of the royalty client.

**NOTE: Audit records must be made available in Alberta.**

If an associate does not consent to the audit of his CAP, or fails to provide a satisfactory audit trail which leads to transactional data capable of being validated, the royalty client and each of his associates who are royalty clients will no longer be permitted to value their royalty quantities using CAP, effective the first day of the year for which the required data relates.

### 1.9.5 Including Non-Alberta Sourced Gas in the Gas Corporate Average Price Method

Where a royalty client's sales include non-Alberta sourced gas, that gas is included in determining the royalty client's CAP except where:

- The non-Alberta gas is not mixed with Alberta gas belonging to the same royalty client at any time prior to being sold; or
- The Minister is satisfied that the arrangements for sale and transportation do not reduce the value of Alberta gas.

Where non-Alberta gas is included in the calculation of a royalty client's CAP, it is subject to the same rules for valuation as if it were produced in Alberta. Specifically, all mixed Alberta and non-Alberta gas must be included in the CAP calculation along with all non-Alberta and Alberta eligible fixed demand and variable demand transportation charges.

### 1.9.6 Calculation of the Gas Corporate Average Price

A.R. 220/2002 Sch.1 - S.9 (2)

A royalty client's CAP for a year is calculated as follows:

|  |
|--|
| (Value of sales to non-associates at the plant gate netback value<br><i>...plus...</i>   |
| Value of sales to associates valued at the associate's CAP, netted back to the plant gate<br><i>...plus...</i>   |
| Value of sales to associates where a CAP cannot be determined, valued at<br>the Gas Reference Price for the month in which the transaction occurs<br><i>...plus...</i>                               |
| Proprietary consumption and other "fair-value <sup>(1)</sup> transactions" valued at the Gas<br>Reference Price in effect for the month in which the transaction is made)<br><i>...divided by...</i> |
| Total GJs of raw gas, residue gas and ethane included in the above transactions  |

Raw gas sales are included at actual netback value. Raw gas used as off-site fuel (which otherwise would require processing) or transferred to out of province gas plants for processing only (deemed as raw gas sales) is included in the royalty client's CAP calculation at 80% of the reference price. Ethane sales are included at actual netback value. (This does not include light ends.)

There should be no transportation cost deductions on gas used for proprietary consumption and valued at the gas reference price. The gas reference price is an average Alberta netback price after deductions for both intra and ex-Alberta transportation charges.

Bad Debts are not allowable deductions in the calculations of the gas corporate average price.

"Fair-value" transactions include swaps and exchanges.

The department considers that a contract meets the definition of an exchange or swap whenever a person passes title of gas or gas products to another person in return for non-cash consideration, all or in part. Royalty clients should be aware this definition is all-inclusive and applies to transportation service contracts wherever and whenever the terms of the agreement provide for the exchange of products at one location for products at another location.

**NOTE: If raw gas is used as off-site fuel or is delivered to an out-of-province facility for processing, this will be deemed as a raw gas sales and UOCR will not be allowed as a deduction in calculating Crown royalty.**

### 1.9.6.1 Plant Gate Netback Value

The plant gate netback value for sales to non-associates is the sum of:

|  |
|--|
| Value of sales transactions to non-associates  |
| <i>...minus...</i>   |
| Intra-Alberta transportation costs incurred on the subject transactions (including demand and reservation charges on pipelines in existence on December 31, 1993)  |
| <i>...minus...</i>   |
| Ext-Alberta transportation costs incurred on the subject transactions (including demand and reservation charges on pipelines in existence on December 31, 1993) net of any revenue from brokered transportation capacity |

References to 'demand and reservation charges' relate to the standard firm service demand charges. In situations where a demand charge is a penalty for non-performance (there are no subject royalty transactions from which costs can be deducted) the cost will not be recognized as an allowable transportation cost deduction. Demand charges however for non-performance resulting from shipments of gas temporarily interrupted by normal field maintenance are allowable transportation costs.

Transportation costs do not include costs for a sales line connecting the plant to a pipeline.

“Take or pay costs” are not allowable deductions in the calculation of the gas corporate average price.

Sales to recognized aggregators are included in the netback price plus the unit cost of intra-Alberta storage (aggregators must disclose the storage charge on invoices to suppliers). For the designated large aggregators, the actual amount of the OMAC-type charges may be deducted. For other recognized aggregators, the weighted average of OMAC-type charges for the large aggregators may be deducted. The department will publish the weighted average of OMAC-type charges annually for the large aggregators.

Marketing fees (the cost of marketing gas sold directly by producers) other than OMAC-type charges identified above are not allowable deductions in the calculation of the gas corporate average price.

Proceeds from hedging transactions are not included in the CAP calculation. The department’s policy is to exclude hedging gains and losses from the determination of Crown royalty share of residue gas. Hedging transactions are intended to reduce the risk of price changes or currency fluctuations with respect to the sale of gas or products. These are financial transactions that are separate and distinct from sales contracts requiring physical delivery of gas or products.

If a sale contract is a fixed price contract but labelled a forward sale, the sales transactions could be included in the CAP calculation. However, if some aspect of the sale is hedged to minimize the effects of price swings to either the commodity or foreign exchange market it should be excluded. Brokered volumes are included at the actual sales value minus any actual transportation costs that have been incurred after the brokered volumes were acquired. The actual costs for the brokered volumes however cannot be deducted.

### 1.9.6.2 Sales to Associates Valued at the Associate’s CAP

Where sales to an associate are valued at the associate’s CAP, and that associate is a United States-based corporation or ext-Alberta (within Canada) based corporation, the associate’s CAP is calculated as:

|   |
|---|
| (Value of sales from Associate’s total North American arm’s-length sales<br>... <i>minus</i> ...<br>Transportation costs incurred on those sales)<br>... <i>divided by</i> ...<br>Total GJs included in the same sales transactions |
|---|

The total plant gate netback value for sales to this type of associate is calculated as:

|  |
|--|
| <p>(Total GJs sold to the Associate ...multiplied by... Associate's CAP)<br/>                 ...<b>minus</b>...<br/>                 Intra-Alberta transportation costs incurred on the sales, where the costs are not included<br/>                 in the Associate's CAP calculation<br/>                 ...<b>minus</b>...<br/>                 Ext-Alberta transportation costs incurred on the sales, where the costs are not included<br/>                 in the Associate's CAP calculation</p> |
|--|

Where sales to an associate are valued at the associate's CAP, and that associate is an Alberta-based corporation, the associate's CAP is calculated in the same manner as the CAP of the royalty client.

### 1.9.6.3 Minimum Price for the Gas Corporate Average Price

A.R. 220/2002 Sch. 1 - S. 9(3)

A gas CAP may not be less than 90% of the weighted average of the monthly gas reference prices for the year to which the CAP applies.

The department calculates the annual weighted average of gas reference prices as:

|  |
|--|
| <p><i>The sum of values (monthly Gas Reference Price ...multiplied by... [intra-Alberta<br/>consumption<br/>                 ...Plus... ext-Alberta deliveries, in GJ]) for each production month in the year<br/>                 ...divided by...<br/>                 The sum of volumes (intra-Alberta consumption ...plus... ext-Alberta deliveries, in GJ)<br/>                 for all<br/>                 production months in the year</i></p> |
|--|

Price and quantity (GJ) data are taken from the information collected by the Ministry for the monthly gas reference price calculation.

The department publishes the annual weighted average of gas reference prices in Gas Royalty Calculation Information Bulletin on or before March 1<sup>st</sup> of the year, following the production year to which the prices relate.

### 1.9.6.4 Correcting the CAP for Adjustments to Sales or Costs

Where a royalty client receives adjustments to either the sales or costs relating to transactions that are included in the CAP calculation of a previous year, treatment of the adjustments will vary according to the circumstances of the case.

**If:**

- The recalculated CAP, including all adjustments for which the CAP has not previously been changed, is greater or less than the unadjusted CAP by an amount equal to or greater than 5% of the unadjusted CAP; *or*
- The royalty client has subsequently elected to use the gas reference price method in a year following the year to which the adjustment relates;

**Then:**

- The royalty client must file a recalculated CAP for the adjusted year with the department; and
- The department will re-calculate and invoice a Crown royalty adjustment to the royalty client; unless
- The unadjusted CAP is less than 90% of the weighted average of gas reference prices for the year and the recalculated CAP is also less than 90%, in which case the department will not invoice a Crown royalty adjustment.

**If:**

- The recalculated CAP is within 5% of the unadjusted CAP,

**Then:**

- The royalty client must include the adjustments in the CAP calculation for the year in which the adjustments are received; unless
- The royalty client requests that the Minister adjust his CAP and recalculate Crown royalty for the year to which the adjustment relates and the Minister approves the request, in which case the recalculation will be made.

## 1.9.7 Monthly Gas Corporate Average Price Estimate

### 1.9.7.1 Calculation of the Monthly CAP Estimate

Each royalty client with a valid CAP election must calculate a CAP annually.

The department values and invoices each CAP royalty client's monthly raw gas, residue gas, and ethane Crown royalty share using an estimated CAP that is:

|   |
|---|
| Gas Reference Price for the month<br><i>...multiplied by...</i><br>the royalty client's Corporate Gas Factor for the year |
|---|

A royalty client's corporate gas factor for a year is calculated as:

|   |
|---|
| the royalty client's CAP for the previous year<br><i>...divided by...</i><br>the weighted average of Gas Reference Prices for the same year<br><i>...subject to...</i><br>a minimum Corporate Gas Factor of 0.9 |
|---|

The department calculates the corporate gas factor and reports it to each royalty client who has a valid CAP election each year.

If a person becomes a new royalty client, and has a valid CAP election, the department will set that royalty client's corporate gas factor for the first year at 1.0. Effectively, the department will value and invoice that royalty client's monthly raw gas, residue gas and ethane Crown royalty share in its first year as a royalty client using the gas reference price. After the first year, the CAP client's valuation price will be calculated as described above.

## **1.9.8 Gas Corporate Average Price Calculation**

### **VA2 FORM – GAS CORPORATE AVERAGE PRICE CALCULATION**

#### **Purpose**

Royalty clients must use the VA2 form to submit their calculation of the gas corporate average price, which the department will use to value the Crown royalty share of raw gas, residue gas, and ethane. If a royalty client needs to amend his CAP calculation for a previous year, they must use the VA2 form to calculate and report the amendment.

Royalty clients must submit a VA2 form to report no sales and to retain their valuation method. Please refer to *Sec. 1.4.2* for filing a VA1 form if the royalty client wishes not to retain CAP valuation.

#### **Timing**

The department must receive a completed VA2 form, for each royalty client who uses CAP, on or before April 15th of the year following the production year to which the CAP applies.

#### **Consequences of Non-Compliance**

Where a royalty client fails to satisfy the reporting and disclosure requirements for determining its CAP by May 30<sup>th</sup> following the production year to which the failure relates, the CAP election made by the royalty client and associates ceases to be valid effective the first day of the year to which the failure relates. As a result, the Crown royalty share of raw gas, residue gas, and ethane will be valued at the reference price method effective the first day of the year to which the failure applies.

The penalty for failing to file a VA2 form by its due date is a one-time penalty charge of \$1000.

#### **Amending a Gas Corporate Average Price**

Where a royalty client receives adjustments to either the sale or costs relating to transactions that are included in the CAP calculation of a previous year, and a recalculation of the CAP for that previous year is required, an amended CAP calculation must be submitted using the VA2 form.

An amended VA2 form must be completed in full in the same manner as an initial VA2 form.

### **1.9.8.1 VA2 – Completion Instructions**

#### **PART 1: CLIENT DETAIL**

- 1.1 CLIENT ID - The four-character client ID that identifies the royalty client.
- 1.2 CLIENT NAME - The full name of the royalty client for which the information is submitted.

- 1.3 PRODUCTION YEAR - The production year to which the CAP calculation applies.
- 1.4 DATE PREPARED - The numeric year, month and day on which the VA2 form is prepared.
- 1.5 CONTACT PERSON - The name of the person whom the department can contact concerning information on the form.
- 1.6 TELEPHONE - The telephone number, including area code of the contact person.
- 1.7 NO SALES/DISPOSITIONS - If there are no sales or dispositions during the year, check this box and leave parts 2, 3, 4, and 5 blank.

## **PART 2: ARM'S-LENGTH SALES**

- 2.1 TOTAL ANNUAL GJs - Total value of arm's-length sales (*in gigajoules*) of the royalty client during the production year stated in field 1.3, broken down by type of purchaser:
  - AGGREGATOR - Marketing companies that contracts with and purchases large quantities of gas from many producers and resells it to a number of markets. Typically, the producers contract to sell their gas through a supply pool managed by the aggregator, and they are entitled to a vote in matters relating to the acceptability of contracts for sales from the supply pool.
  - MARKETER - a marketing company that contracts with and purchases gas from one or more producers and resells the gas to one or more buyers or that acquires the gas from one or more producers, sells the gas and pays the producer a value based on a percentage of the selling price (as broker). Typically, producers who sell to marketers do not have a vote in the contracts through which the gas is resold.
  - PRODUCER - a company that is involved in the production of petroleum and natural gas and which purchases gas for use in its own production-related operations.
  - END-USER - a company that purchases gas for the purpose of consumption, either as fuel or as a raw material in its business operations, and which is not an aggregator, a marketer or a producer.
- 2.2 GROSS ANNUAL SALES VALUE - Total value (in Canadian dollars) from the sales reported in column 2.1, by type of purchaser. Storage costs deducted in the netback price paid by an aggregator must be added back to the value of the sale.
- 2.3 TRANSPORTATION · INTRA-ALBERTA - Total cost incurred by the royalty client to transport the gas reported in column 2.1 within Alberta, including demand charges and CO2 extraction management service fees.

- 2.4 TRANSPORTATION · EX-ALBERTA - Total cost incurred by the royalty client to transport the gas reported in column 2.1 outside Alberta, including demand charges, net of any revenue received from brokered pipeline capacity.
- 2.5 NET ANNUAL SALES VALUE - The sum (Gross Annual Value of Sales ...minus...intra-Alberta Transportation ...minus... ex-Alberta Transportation) by type of purchaser for all sales reported in column

### **PART 3: SALES TO ASSOCIATES (WITH A CAP)**

- 3.1 CLIENT ID - The four-character client ID for the person who is an associate of the royalty client.
- 3.2 CLIENT NAME - The full name of the person who is an associate of the royalty client.
- 3.3 TOTAL GJs - Total sales (in gigajoules) to each associate who is identified in columns 3.1 and 3.2 during the production year, which is to be valued at that associate's CAP.
- 3.4 CAP - The Gas corporate average price of each associate identified in columns 3.1 and 3.2. If an associate is not a royalty client, attach a schedule (using the non-royalty client's VA2 form) substantiating the CAP calculation. If the associate is a royalty client, the department will verify that associate's CAP based on his VA2 submission. The business rules for calculating the CAP of an associate are described in *Ch. IV Sec. 1.9.6.2*.
- 3.5 TOTAL VALUE - The product of (Total GJs ...multiplied by... CAP) for each associate.

### **PART 4: OTHER DISPOSITIONS**

- 4.1 TYPE 1 - Total gas sales (in gigajoules) during the production year, by month, to all associates who do not have a CAP. A royalty client who is uncertain about valuing sales to associates should seek an advance ruling from the department.
- 4.2 TYPE 2 - Total gas (in gigajoules) used for proprietary consumption (including raw gas) during the production year, by month, by the royalty client in their operations. Consumed means gas used as fuel in an industrial process.
- 4.3 TYPE 3 - Total gas otherwise disposed of (in gigajoules) during the production year, by month, without an arm's-length sales transaction.
- 4.4 TOTAL GJs - The sum of Type 1 ...plus... Type 2 ...plus... Type 3 "Other Dispositions" [in gigajoules] for each month during the production year.

4.5 REFERENCE PRICE - The published gas reference price for each month during the production year. See monthly *Gas Royalty Information Bulletin*.

4.6 TOTAL VALUE- The sum of the product (total GJs ...multiplied by... reference price) for each month of the production year.

**PART 5: CAP CALCULATION**

5.1 \$ PER GJ - The total value of (sum of all values shown in columns 2.5, 3.5 and 4.6) ...divided by... the total quantity (sum of all gigajoules shown in columns 2.1, 3.3 and 4.4), calculated to the nearest one-tenth of a cent.

**PART 6: CERTIFICATION**

6.1 AUTHORIZED SIGNATURE - The signature of the authorized person for the royalty client who is responsible for the information submitted.

6.2 NAME OF AUTHORIZED PERSON - The full name of the authorized person whose signature appears in field 6.1.

6.3 TITLE OF AUTHORIZED PERSON - The position title of the authorized person whose signature appears in field 6.1.

6.4 DATE - The date on which the authorized person signed the VA2 form.

Form provided for illustration purposes only. All required forms are provided in *Appendix P*.



**CORPORATE AVERAGE PRICE CALCULATION  
GAS  
VA2**

**PART 1: CLIENT DETAIL**

1.1 \_\_\_\_\_ 1.2 \_\_\_\_\_  
CLIENT ID CLIENT NAME

1.3 PRODUCTION YEAR \_\_\_\_\_ 1.4 DATE PREPARED \_\_\_\_\_  
YR. MO. DY.

1.5 \_\_\_\_\_ 1.6 ( ) \_\_\_\_\_  
CONTACT PERSON TELEPHONE

1.7 ] (CHECK IF YES)  
NO SALES/DISPOSITIONS

**PART 2: ARM'S-LENGTH SALES**

| TYPE            | 2.1 TOTAL ANNUAL GJ's | 2.2 GROSS ANNUAL SALES VALUE | TRANSPORTATION    |                 | 2.5 NET ANNUAL SALES VALUE |
|-----------------|-----------------------|------------------------------|-------------------|-----------------|----------------------------|
|                 |                       |                              | 2.3 INTRA-ALBERTA | 2.4 EXT-ALBERTA |                            |
| AGGREGATOR      |                       |                              |                   |                 |                            |
| MARKETER        |                       |                              |                   |                 |                            |
| PRODUCER        |                       |                              |                   |                 |                            |
| END-USER        |                       |                              |                   |                 |                            |
| <b>SUBTOTAL</b> |                       |                              |                   |                 |                            |

**PART 3: SALES TO ASSOCIATES (WITH A CAP)**

| 3.1 CLIENT ID   | 3.2 CLIENT NAME | 3.3 TOTAL GJ's | 3.4 CAP | 3.5 TOTAL VALUE |
|-----------------|-----------------|----------------|---------|-----------------|
|                 |                 |                |         |                 |
|                 |                 |                |         |                 |
|                 |                 |                |         |                 |
| <b>SUBTOTAL</b> |                 |                |         |                 |

**PART 4: OTHER DISPOSITIONS**

| MONTH           | 4.1 TYPE 1 | 4.2 TYPE 2 | 4.3 TYPE 3 | 4.4 TOTAL GJ's | 4.5 REFERENCE PRICE | 4.6 TOTAL VALUE |
|-----------------|------------|------------|------------|----------------|---------------------|-----------------|
| JAN             |            |            |            |                |                     |                 |
| FEB             |            |            |            |                |                     |                 |
| MAR             |            |            |            |                |                     |                 |
| APR             |            |            |            |                |                     |                 |
| MAY             |            |            |            |                |                     |                 |
| JUNE            |            |            |            |                |                     |                 |
| JULY            |            |            |            |                |                     |                 |
| AUG             |            |            |            |                |                     |                 |
| SEPT            |            |            |            |                |                     |                 |
| OCT             |            |            |            |                |                     |                 |
| NOV             |            |            |            |                |                     |                 |
| DEC             |            |            |            |                |                     |                 |
| <b>SUBTOTAL</b> |            |            |            |                |                     |                 |

**PART 5: CAP CALCULATION**      5.1  $\frac{2.5+3.5+4.6}{2.1+3.3+4.4} = \$ \text{_____} /GJ$

**PART 6: CERTIFICATION**

6.1 \_\_\_\_\_ 6.3 \_\_\_\_\_  
AUTHORIZED SIGNATURE TITLE OF AUTHORIZED PERSON

6.2 \_\_\_\_\_ 6.4 \_\_\_\_\_  
NAME OF AUTHORIZED PERSON DATE

Revised 2006-05-31

## **Section 2**

# **Determining and Valuing Crown Share of Ethane**

## **2. Determining and Valuing Crown Share of Ethane**

### **2.1 Crown Royalty Rate for Ethane**

The Crown royalty share for ethane is a percentage (the Crown royalty rate) of the Crown interest share of production.

The Crown royalty rates for ethane are calculated each month according to the prescribed formula that provides price sensitivity (ethane par price) and distinguishes between old ethane and new ethane (vintage and select prices). Ethane, which is measured in m<sup>3</sup>, is converted to a gas equivalent heat content and the Crown royalty rate for ethane is applied to m<sup>3</sup> and GJ volumes. (For information on how to calculate the Crown royalty rate, please refer to *Ch. VII, Sec.1.6.3*).

### **2.2 Ethane Par Price and Select Prices**

The Minister determines an ethane par price for each production month, which is the ethane reference price for the current production month (prior to January 2004, the ethane par price was equal to the previous month's ethane reference price). An old ethane select price and a new ethane select price is determined by the Minister for each year. The select prices apply to all production months in that year. (For further information on select prices, please refer to the department's website at [www.energy.gov.ab.ca](http://www.energy.gov.ab.ca)).

The department will publish the ethane par price, the old ethane select price and the new ethane select price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which they will apply. If this day falls on a weekend or a holiday, the next business day will apply.

The ethane par price, old ethane select price and new ethane select price that are established for a production month will not be changed retroactively.

Calculation of the ethane par price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

### **2.3 Ethane Vintage**

A.R. 220/2002 Sch. 7 (2)

Unless the Minister determines otherwise, the vintage of ethane is the same as the gas with which it is produced and from which it is recovered.

### **2.4 Old Ethane Royalty Rate**

A.R. 220/2002 Sch. 2 - S. (2)

The Crown royalty rate for old ethane in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(ESP) + 40(EPP - ESP)}{EPP}$$

**WHERE:**

- RR% = the Crown royalty rate for old ethane.
- ESP = the old ethane select price prescribed by the Minister for the production month.
- EPP = the ethane par price prescribed by the Minister for the production month.

The minimum Crown royalty rate for old ethane is 15%.  
The maximum Crown royalty rate for old ethane is 35%.

**2.5 New Ethane Royalty Rate**

A.R. 220/2002 Sch. 2-S. (2)

The Crown royalty rate for new ethane in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(ESP) + 40(EPP - ESP)}{EPP}$$

**WHERE:**

- RR% = the Crown royalty rate for new ethane.
- ESP = the new ethane select price prescribed by the Minister for the production month.
- EPP = the ethane as par price prescribed by the Minister for the production month.

The minimum Crown royalty rate for new ethane is 15%.  
The maximum Crown royalty rate for new ethane is 30%

**2.6 Low Productivity Well Allowance**

A.R. 220/2002 Sch. 2 - S. (3)

The Crown royalty rates for both old and new ethane will be reduced for well events that:

- Are classified by the EUB as a gas well event, or an oil well event; and
- Have a monthly average daily gas production rate of less than 16.9 10<sup>3</sup>m<sup>3</sup> per day for gas well events; or
- Have a monthly average daily production rate under 0.15 m<sup>3</sup> per day of oil and 16.9 10<sup>3</sup>m<sup>3</sup> of gas for an oil well event.

Average daily production (ADP) for gas is calculated as:

|   |
|---|
| volume of natural gas obtained in the month from the gas event (in 10 <sup>3</sup> m <sup>3</sup> )<br>...divided by...<br>number of hours of operation of the well in the month<br>...multiplied by...<br>24 |
|---|

Average daily production (ADP) for oil is calculated as:

|   |
|---|
| volume of oil obtained in the month from the oil event (in m <sup>3</sup> )<br>... <b>divided by</b> ...<br>number of hours of operation of the well in the month<br>... <b>multiplied by</b> ...<br>24 |
|---|

The Crown royalty rate for a well event that qualifies for low productivity (for either old or new ethane) is calculated as:

$$R\% = RC - \left[ \frac{(RM - 5\%) \times (16.9 - ADP)^2}{16.9^2} \right]$$

**WHERE:**

- R% = the Crown royalty low productivity rate for ethane.
- RC = the Crown royalty rate that would apply if the royalty is calculated at either the old or new ethane royalty rate (whichever is applicable) for the production month.
- RM = the old or new ethane royalty rate (whichever is applicable) for the production month.
- ADP = the average daily production of gas for the well event for the production month (in 10<sup>3</sup>m<sup>3</sup>).

Refer to *Ch. VII, Sec. 1.6.6.1* for an example of low productivity calculation.

**2.7 Valuing Crown Share of Ethane**

The net unit price at which the department values and invoices the monthly Crown royalty share of ethane is the ethane reference price less the transportation allowance for ethane. Currently, the ethane reference price is prescribed to be the same as the ethane ISC reference price (see *Appendix D* for calculation details). The transportation allowance for the ethane is determined by **multiplying** the facility royalty trigger factor **minus** 1 by the ethane ISC AIATD (see *Appendix E* for calculation details). Ethane, which is in m<sup>3</sup>, is converted to GJs by using a factor of 0.28148, and then multiplying the result by a factor of 66.065. (*Source: GPA Publication 2145-00.*) Ethane, as part of NGL mix for which no value is received, will be reported as light ends.

For royalty clients that have elected to use the CAP method for raw gas, residue gas, and ethane, the department will value and invoice the monthly ethane Crown royalty share for this royalty client using an estimated CAP, based on the reference price in effect during the production month adjusted by the royalty client's corporate gas factor. (Refer to *Ch. IV Sec. 1.9.7.1*).

## **Section 3**

# **Determining and Valuing Crown Share of Propane, Butane and Pentanes**

### **3. Determining and Valuing Crown Share of Propane, Butane and Pentanes**

#### **3.1 Crown Royalty Rate for Propane**

A.R. 220/2002 Sch. 3 - S. (1)

The Crown royalty rate for propane is calculated each month according to a prescribed formula that provides price sensitivity (propane par price and propane select price).

##### **3.1.1 Propane Par Price and Select Prices**

The Minister determines a propane par price for each production month, which is the propane ISC reference price for the current production month (prior to January 2004, the propane par price was equal to the previous month's propane ISC reference price). The Minister determines a propane select price for each year. The select price applies to all production months in that year. (For further information on select prices refer to the department's website at [www.energy.gov.ab.ca](http://www.energy.gov.ab.ca)).

The department will publish the propane par price and the propane select price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which they will apply. If this day falls on a weekend or a holiday, the next business day will apply.

The propane par price and propane select price that are established for a production month will not be changed retroactively.

Calculation of the propane par price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

##### **3.1.2 Propane Vintage**

Unless the Minister determines otherwise, there is no new or old vintage designation for propane.

##### **3.1.3 Propane Royalty Rate**

The Crown royalty rate for propane in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(PSP) + 40(PPP - PSP)}{PPP}$$

#### **WHERE:**

RR% = the Crown royalty rate for propane.

PSP = the propane select price prescribed by the Minister for the production month.

PPP = the propane par price prescribed by the Minister for the production month.

The minimum Crown royalty rate for propane is 15%.

The maximum Crown royalty rate for propane is 30%

## **3.2 Crown Royalty Rate for Butanes**

A.R. 220/2002 Sch. 4 – S. (1)

The Crown royalty rate for butanes is calculated each month according to a prescribed formula that provides price sensitivity (butanes par price and butanes select price).

### **3.2.1 Butanes Par Price and Select Prices**

The Minister determines a butanes par price for each production month, which is the butanes ISC reference price for the current production month (prior to January 2004, the butanes par price was equal to the previous month's butanes ISC reference price). The Minister determines a butanes select price for each year. The select price applies to all production months in that year. (For further information on select prices refer to the department's website at [www.energy.gov.ab.ca](http://www.energy.gov.ab.ca)).

The department will publish the butanes par price and the butanes select price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which they will apply. If this day falls on a weekend or a holiday, the next business day will apply.

The butanes par price and butanes select price that are established for a production month will not be changed retroactively.

Calculation of the butanes par price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

### **3.2.2 Butanes Vintage**

Unless the Minister determines otherwise, there is no new or old vintage designation for butanes.

### **3.2.3 Butanes Royalty Rate**

The Crown royalty rate for butanes in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$RR\% = \frac{15(BSP) + 40(BPP - BSP)}{BPP}$$

#### **WHERE:**

RR% = the Crown royalty rate for butanes.

BSP = the butanes select price prescribed by the Minister for the production month.

BPP = the butanes par price prescribed by the Minister for the production month.

The minimum Crown royalty rate for butanes is 15%.  
The maximum Crown royalty rate for butanes is 30%

### 3.3 Valuing Crown Share of Propane and Butanes

A.R. 220/2002 Sch. 3 – S2, Sch.4 - S.2

The department values and invoices the monthly Crown royalty share of propane and butanes based on monthly reference prices that represent the value of specification product delivered at Edmonton. To recognize the different values of propane and butanes at the point where the Crown royalty liability is triggered (the plant gate), adjustments are provided for:

- Regional transportation cost from the plant gate to Edmonton (refer to *Ch. IV, Sec. 3.6.1*); and
- Fractionation cost for products produced as a component of an NGL mix (refer to *Ch. IV, Sec. 3.6.2*).

#### 3.3.1 Valuation Criteria

The net unit price at which the department values and invoices the monthly Crown royalty share of propane and butanes is:

|   |
|---|
| Propane/Butanes Reference Price ( <i>subject to a Floor Price</i> )<br>... <b>minus</b> ...<br>Transportation ( <i>by region</i> )<br>... <b>minus</b> ...<br>Fractionation Allowance ( <i>for Propane/Butanes, contained in an NGL mix</i> ) |
|---|

#### 3.3.2 Propane and Butanes Reference Prices

The department calculates propane and butanes reference prices as the weighted average of prices paid for non-field purchases of specification product in the Edmonton area. (Refer to the description of the Edmonton Area in *Appendix Q*).

The monthly propane reference price and butanes reference price are calculated as follows:

|   |
|---|
| total value of Propane/Butanes non-field purchase transactions reported in the month<br>in the Edmonton area.<br>... <b>divided by</b> ...<br>total volumes reported for the same purchase transactions |
|---|

Major purchasers of propane and butanes, designated by the Minister, provide price and volume information on the NGL-100 submission by the 10<sup>th</sup> day of the second month following the production month to which they apply. If the 10<sup>th</sup> day falls on a non-business day, the next business day will apply. For NGL-100 reporting instructions, refer to *Appendix Q*.

If the department receives amendments to information filed by designated purchasers, for a previous period, the department will:

- Include the adjustments in calculating the propane reference price and/or the butanes reference price for the month in which the amendments are received, up to a maximum of 2% (10% for January 1998 forward) of the respective reference price calculated before the adjustments are applied; and,
- Carry forward any amounts above the maximum to the following month(s).

Amendments that are reported and included as adjustments in this manner are those that result from reporting errors or omissions by the reporting company.

If the adjustments result from re-determinations or re-allocations by a facility operator, pipeline company, producer or customer, the reporting company includes these adjustments in its reports for the delivery month in which they are transacted, and not for the production month to which the adjustments apply.

If the information required to calculate either the propane reference price or the butanes reference price, or both, is not received by the prescribed date, the Minister will determine the reference price(s).

The department publishes the propane reference price and the butanes reference price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which the reference price applies. If the 15<sup>th</sup> day falls on a non-business day, then the next business day will apply.

The propane reference price and butanes reference price established for a month will not change retroactively. The calculation of the propane reference price and the butanes reference price are subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

### **3.3.3 Propane and Butanes Floor Prices**

The department calculates floor prices for propane and butanes to protect the Crown against inappropriately depressed prices in the Edmonton market. In any month where the floor price of either propane or butanes exceeds the reference price for the same product, and the Minister determines that there is no valid market reason for the disparity, the reference price(s) will be the same as the floor price(s). (Refer to *Appendix E*).

The propane floor price is calculated from prices posted for specification propane at Conway, Kansas, netted back to Edmonton by deducting transportation and storage costs (using tariffs based on regular rates for four months and incentive rates for eight months each year). The propane floor price is 90% of the price netted back from Conway.

The butanes floor price is calculated from prices posted for normal butanes and iso-butanes at Conway, Kansas (using a ratio of 65% normal butanes and 35% iso-butanes). This is netted back in the same manner as for propane. The butanes floor price is 90% of the price netted back from Conway.

The department publishes the propane floor price and the butanes floor price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which the floor prices apply. If the 15<sup>th</sup> day falls on a non-business day, then the next business day will apply.

If either a propane floor price or a butanes floor price becomes a reference price, that floor price is subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

### **3.4 Crown Royalty Rate for Pentanes-Plus**

A.R. 220/2002 Sch. 5 - S. (1)

The Crown royalty rates for pentanes-plus are calculated each month according to a prescribed formula that provides price sensitivity (pentanes par price and select price) and distinguishes between old and new pentanes-plus (vintage and royalty factor). There is a separate Crown royalty rate for old and new pentanes-plus.

#### **3.4.1 Pentanes Par Price, Select Price and Royalty Factors**

The Minister determines a pentanes par price for each production month, which is the pentanes reference price for the current production month (prior to January 2004, the pentanes par price was equal to the previous month's pentanes ISC reference price), minus an allowance for transportation. The deduction for transportation is calculated as the volume-weighted average of the four regional transportation allowances for specification pentanes-plus in the applicable production month.

The Minister determines:

- A pentanes select price for each year, and this select price for a year applies to all production months of that year.
- An old pentanes-plus royalty factor and a new pentanes-plus royalty factor for each year, which will apply to all production months of that year.

The department will publish the pentanes par price and pentanes select price in an Information Letter on or before the 15<sup>th</sup> day of the second month following the production month to which they will apply. If this date falls on a weekend or holiday, the next business day will apply.

The pentanes par price, pentanes select price, old pentanes-plus royalty factor and new pentanes-plus royalty factor that are established for a production month will not be changed retroactively.

Calculation of the pentanes par price is subject to an independent audit conducted on behalf of the petroleum and natural gas industry.

#### **3.4.2 Pentanes-Plus Vintage**

A.R. 220/2002 Sch. 7 - S. (3)

Unless the Minister determines otherwise, effective January 1, 1994, the vintage of pentanes-plus is the same as the gas with which it is produced and from which it is recovered.

### 3.4.3 Old Pentanes-Plus Royalty Rate

A.R. 220/2002 Sch. 5 - S. (1)

The Crown royalty rate for old pentanes-plus in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$R\% = \frac{22(SP) + RF(PP - SP)}{PP}$$

**WHERE:**

- R% = the Crown royalty rate for old pentanes-plus.
- SP = the pentanes select price prescribed by the Minister for the production month.
- RF = the old pentanes-plus royalty factor (currently set at 50) prescribed by the Minister for the production month.
- PP = the pentanes par price prescribed by the Minister for the production month to which the Crown royalty rate applies.

The minimum Crown royalty rate for old pentanes-plus is 22%.

The maximum Crown royalty rate for old pentanes-plus is 50%.

### 3.4.4 New Pentanes-Plus Royalty Rate

A.R. 220/2002 Sch. 5 - S. (1)

The Crown royalty rate for new pentanes-plus in a month, expressed as a percentage of the Crown interest share, is calculated as:

$$R\% = \frac{22(SP) + RF(PP - SP)}{PP}$$

**WHERE:**

- R% = the Crown royalty rate for new pentanes-plus.
- SP = the pentanes select price prescribed by the Minister for the production month.
- RF = the new pentanes-plus royalty factor (currently set at 35) prescribed by the Minister for the production month.
- PP = the pentanes par price prescribed by the Minister for the production month to which the Crown royalty rate applies.

The minimum Crown royalty rate for new pentanes-plus is 22%.

The maximum Crown royalty rate for new pentanes-plus is 35%.

### 3.5 Valuing Crown Share of Pentanes-Plus

A.R. 220/2002 Sch.5 - S.2 (2)

The department values and invoices the monthly Crown royalty for pentanes-plus based on the monthly reference price that represents the value of specification pentanes-plus delivered at Edmonton. To recognize the differing values of pentanes-plus at the point where the Crown royalty liability is triggered, adjustments are provided for:

- Regional transportation cost from the plant gate to Edmonton (refer to *Ch. IV, Sec. 3.6.1*);
- Fractionation cost for pentanes-plus contained as a component of NGL mix (refer to *Ch. IV, Sec. 3.6.2*); and
- Special pentanes processing allowance provided on a case-by-case basis, if approved by the Minister (refer to *Ch. IV, Sec. 3.6.3*).

#### 3.5.1 Valuation Criteria

The net unit price at which the department values and invoices the monthly Crown royalty liability for pentanes plus is:

|   |
|---|
| Pentanes Reference Price<br>... <b>minus</b> ...<br>Transportation ( <i>by region</i> )<br>... <b>minus</b> ...<br>Fractionation Allowance ( <i>for Pentanes Plus contained in an NGL mix</i> ) |
|---|

#### 3.5.2 Pentanes Reference Price

The department calculates the pentanes reference price as the weighted average of prices paid for pentanes specification product purchased at non-field locations in the Edmonton area (refer to Edmonton Area description in *Appendix Q*). Major purchasers of pentanes plus, as designated by the Minister, provide price and volume information on the NGL-100 form each month by the 10th day of the second month following the production month to which they apply. If the 10th day falls on a non-business day, the next business day will apply. Refer to *Appendix Q* for reporting instructions for the NGL-100.

The monthly pentanes reference price is calculated as follows:

|   |
|---|
| total value of non-field purchases of Pentanes in the Edmonton Area as reported in the<br>month<br>... <b>divided by</b> ...<br>total volumes reported for the same purchase transactions |
|---|

If the department receives amendments to NGL-100 information filed by designated purchasers, for a previous period, the department will:

- Include the adjustments in calculating the pentanes reference price for the month in which the amendments are received, up to a maximum of 10% of the respective reference price calculated before the adjustments are applied; and
- Carry forward any amounts above 10% to the following month(s).

Amendments that are reported and included as adjustments in this manner are those, which result from reporting errors or omissions by the reporting company.

If a business adjustment results from re-determinations or re-allocations by a facility operator, pipeline company, producer, customer, or audit; the reporting company includes these adjustments in its reports for the delivery month in which they are transacted and not for the production month to which the adjustments apply.

If the information to calculate the pentanes reference price is not received by the prescribed date, the Minister will determine the reference price(s).

The department publishes the pentanes reference price in an Information Letter on the 15<sup>th</sup> day of the second month following the production month to which the reference price applies. If the 15<sup>th</sup> day falls on a non-business day, then the next business day will apply.

The pentanes reference price established for a month will not change retroactively. The calculation of the pentanes reference price is subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

### **3.6 Allowances Deducted From Propane, Butanes and Pentanes Reference Prices**

#### **3.6.1 Regional Transportation Allowances**

A.R. 220/2002 S.6 (9)(a)

The department deducts a transportation allowance from the propane reference price, the butanes reference price, and the pentanes reference price as part of its calculation of the price at which it values the Crown royalty share of each of those products.

The transportation allowance represents the difference between the price at Edmonton and the plant gate price, excluding the fractionation allowance.

Transportation allowances are calculated for each of the four regions during the month (refer to *Appendix F*). This is done for:

- Specification propane/butanes (Spec Product);
- Specification pentanes plus (Spec pentanes); and
- Product transported as a component of an NGL mix (NGL mix).

Transportation allowances are calculated using information reported by designated major purchasers of propane, butanes, or pentanes plus. Information is reported monthly by the 10<sup>th</sup> day of the second month following the production month to

which they apply. If the 10<sup>th</sup> day falls on a weekend or a holiday, then the next business day will apply.

Transportation allowances are calculated from the purchase information reported by designated major purchasers on the NGL-100 form. Transportation allowances are determined by calculating the differences for each product between average reported field purchase prices and average reported Edmonton non-field purchase prices. A fractionation allowance is also deducted in the calculation of transportation allowances for NGLs in a mix.

**Transportation allowances for a month are calculated as follows:**

Specification Propane/Butanes = weighted average of specification Propane and Butanes transportation differentials in each region.

Specification Pentanes Plus = specification Pentanes transportation differential in each region.

Pentanes Plus, Propane and Butanes in an NGL mix = weighted average of NGL mix differentials for Pentanes, Propane and Butanes in each region, then subtracting fractionation allowance.

If the department receives amendments to information filed by designated purchasers, for a previous period, the department will:

- Include the adjustments in calculating the transportation allowances for the month in which the amendments are received, up to a maximum of a 100% of gross product prices; and
- Carry forward any amounts above the maximum to the following month(s).

Amendments that are reported and included as adjustments in this manner are those , which result from reporting errors or omissions by the reporting company.

If a business adjustment results from re-determinations or re-allocations by a facility operator, pipeline company, producer, customer, or audit; the reporting company includes these adjustments in its reports for the delivery month in which they are transacted and not for the production month to which the adjustments apply.

The department publishes the regional transportation allowances in an Information Letter by the 15<sup>th</sup> day of the second month following the production month to which the allowances apply. If the 15<sup>th</sup> day falls on a non-business day, then the next business day will apply.

Transportation allowances established for a month will not change retroactively. The calculation of the transportation allowances is subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

### **Transportation Allowance Estimates**

- All transportation allowances except specification pentanes - If there is no information available to calculate a transportation allowance, the department determines the transportation allowance as the weighted average of the other regional transportation allowances within that category (before amendment effects). The weighting uses provincial production in each region, for each category, from the previous calendar year.
- Specification pentanes – If there is no information available to calculate a transportation allowance for specification pentanes, or if the information has been submitted by a single reporting company, the department will determine the transportation allowance as the simple average of the preceding twelve months for that region (before amendment effects). The preceding period cannot include periods prior to January 2000. A continuing situation of two months or more would require a revisit of the business rule.

### **3.6.2 Fractionation Allowance**

A.R. 220/2002 S. 6 (9)(b)

The department deducts a fractionation allowance from the propane reference price, the butanes reference price, and the pentanes reference price as part of its calculation of the price at which it values the Crown royalty share of propane, butanes, and pentanes plus which are produced as a component of an NGL mix.

The fractionation allowance is equal to the standard fee specified in the Ethane Plus System Trading Agreement (EPSTA), for as long as that fee represents industry average fractionation costs, and the scope of costs covered by the fee remains unchanged. If the EPSTA fee includes allowances for de-ethanization costs, then the de-ethanization costs will be allowed. The fractionation allowance will be changed only when there is a change to the EPSTA fee.

The department publishes the fractionation allowance in an Information Letter by the 15<sup>th</sup> day of the second month following the production month to which a changed fractionation allowance applies. If the 15<sup>th</sup> day falls on a non-business day, then the next business day will apply.

The fractionation allowance established for a month will not change retroactively. The calculation of the fractionation allowance is subject to an independent audit conducted on behalf of the Petroleum and Natural Gas Industry.

### **3.6.3 Special Pentanes Processing Allowance**

A.R. 220/2002 S. 6 (9)(c)

The department deducts a special pentanes processing allowance from the pentanes reference price as part of its calculation of the price at which it will value the Crown royalty share of pentanes plus. This allowance is provided on a case-by-case basis, if approved by the Minister, for specified streams of pentanes, which are:

- Produced in significant quantities;
- Forced to be strictly segregated in transportation and processing;
- Extremely sour in nature; and,
- Consistently valued at a price significantly less than the pentanes reference price.

Royalty clients may request in writing to the department for approval of special pentanes processing allowance. The department publishes the special pentanes processing allowances in an Information Letter by the 15<sup>th</sup> day of the second month following the production month to which the allowances apply. If the 15<sup>th</sup> day falls on a non-business day, the next business day will apply.

The special pentanes processing allowance established for a month will not change retroactively.

**NOTE: The Crown will review this allowance, and the qualification of the streams for this allowance, periodically (Refer to *Appendix N – Glossary* for definition of special pentanes)**

## **Section 4**

# **Determining and Valuing Crown Share of Sulphur**

## 4. Determining and Valuing Crown Share of Sulphur

### 4.1 Crown Royalty Rate for Sulphur

A.R. 220/2002 Sch. 6 - S. (2)

The Crown royalty rate for sulphur, expressed as a percentage of the Crown interest share, is  $16\frac{2}{3}\%$  (16.66667).

### 4.2 Monthly Reporting

A.R. 220/2002 Sch.6 – S. 5

All royalty clients having annual sulphur production of 30,000 tonnes or more (based on previous year's production) must file VA4 submissions monthly to determine their sulphur corporate average price (S-CAP). The submission is filed on a "best efforts" basis, i.e., using the best information available at the time of filing. The department notifies the royalty clients who are in this category.

Those royalty clients whose annual sulphur production is less than 30,000 tonnes (based on previous year's production) may choose to file VA4 submission monthly effective January's production month, and then, must continue to file VA4 forms for the entire year. New royalty clients who wish to file VA4 forms must file them effective the first production month in which they have sulphur allocation and then, must continue to file for the remainder of the year.

The department values and invoices the Crown royalty share of sulphur production monthly using the royalty client's S-CAP. For royalty clients who are not required and, therefore, choose not to file VA4 submissions, the department will use a sulphur default price to value the Crown royalty share of monthly sulphur production. A month's sulphur default price is the weighted average unit value of all arms' length sales reported on the VA4 submissions by royalty clients. The sulphur default price is also used in valuing monthly sulphur for provisional assessment. (Refer to *Ch. II, Sec. 1.3.2*).

#### 4.2.1 Monthly Sulphur Corporate Average Price Calculation

A royalty client's S-CAP for a month is calculated using the following:

|   |
|---|
| Net revenue at the plant gate from arms' length sales of Alberta gas-plant-produced sulphur<br>... <i>divided by</i> ...<br>total tonnes of sulphur included in the above transactions<br>... <i>subject to</i> ...<br>a minimum S-CAP of \$0.00 (zero) |
|---|

Royalty clients must report their own volumes of plant-produced sulphur. This does not include other producer's share of sulphur, if royalty clients are also marketing other producer's share of sulphur.

If a royalty client's VA4 results in a negative unit value, the price used will be \$0.00; and the royalty client will be allowed to carry forward and add the volumes and

values to the following month's sales data to calculate that month's S-CAP. The net revenue from sales of Alberta gas-plant-produced sulphur in a month is the:

|   |
|---|
| value of sales of Alberta gas-plant-produced sulphur in the month<br>... <i>minus</i> ...<br>transportation cost incurred in the month for sulphur<br>... <i>minus</i> ...<br>costs incurred in the month for transportation-related storing, loading and<br>handling of the sulphur (costs incurred in the month that are not eligible for "GCA" Allowable<br>Costs) |
|---|

If a royalty client has no sales for a production month, the department still requires the VA4 submission identifying no sales and will apply the monthly sulphur default price to that royalty client.

#### 4.2.2 Monthly Sulphur Default Price Calculation

The department calculates the monthly sulphur default price from the VA4 submissions provided by royalty clients. The monthly sulphur default price will be published in the monthly Gas Royalty Information Bulletin after it is determined.

The department calculates the monthly sulphur default price as follows:

|  |
|--|
| The weighted average unit value of all arms'-length sales,<br>as reported by royalty clients in their S-CAP filings<br>to the department for the month |
|--|

**NOTE:**

- 1) **Royalty clients whose S-CAP filings are below the minimum S-CAP will have their net monthly revenue converted to zero for the determination of the monthly sulphur default price. All reported tonnage will be included in the calculation.**
- 2) **The sulphur default price that is established for a production month will not be changed retroactively.**

#### 4.2.3 Preparing a Monthly Sulphur Corporate Average Price (S-CAP) Calculation

##### VA4 – FORM – MONTHLY CORPORATE AVERAGE PRICE CALCULATION - SULPHUR

**Purpose**

The VA4 is used to report and determine a royalty client's S-CAP for the purpose of valuing the monthly Crown royalty share of sulphur. Monthly VA4 submissions are used to determine the monthly sulphur default price using the weighted average unit value of all arms' length sales reported on VA4 submissions.

### **Timing**

A completed VA4 submission must be received by the department on or before the 15<sup>th</sup> day of the second month following the production month to which the S-CAP applies. If the 15<sup>th</sup> day falls on a non-business day, the next business day will apply.

### **Consequences of Non-Compliance**

The penalty for failing to file a VA4 form by its due date is \$100 per month or part of a month until the form is received.

The Crown royalty share of sulphur for the delinquent month will be valued and invoiced using that month's sulphur default price. Upon receipt of the VA4 form, the Crown royalty share of sulphur will be valued using the royalty client's S-CAP. Interest will be charged or paid on the difference between the values calculated by using the monthly sulphur default price versus the S-CAP.

### **Amending Monthly Sulphur Corporate Average Price**

Amendments to VA4 submissions may be submitted to amend any production month(s) within the current production year. The amended VA4 form must be completed in full just as the initial VA4 form.

Once a VA3 form is filed, VA4 forms for that production year will not be accepted.

## **4.2.4 VA4 – Completion Instructions**

### **PART 1: CLIENT DETAIL**

- 1.1 CLIENT ID - The four-character client ID that identifies the royalty client.
- 1.2 CLIENT NAME - The full name of the royalty client for whom the information is submitted.
- 1.3 PRODUCTION YEAR/MONTH - The production year and month to which the S-CAP information applies.
- 1.4 DATE PREPARED - The numeric year, month and day on which the VA4 form is prepared.
- 1.5 CONTACT PERSON - The name of the person the department can contact concerning information on the form.
- 1.6 TELEPHONE - The telephone number, including area code of the contact person.
- 1.7 NO SALES - If there are no sales during the year, check this box and leave Part 2 blank.

## **PART 2: ARM'S-LENGTH SALES**

**NOTE: Completion of fields 2.1, 2.3, 2.4 and 2.5 is optional**

- 2.1 POINT OF SALE - The point of delivery for volumes sold (NORTH AMERICA and OFF-SHORE).
- 2.2 TONNES - Total tonnes of Alberta gas plant-produced sulphur sold by the royalty client during the year, for each point of sale. Must be  $\geq 0$ .
- The total tonnes of sulphur do not include other producers' share of sulphur if the royalty client also markets other producers' share of sulphur.
- 2.3 GROSS MONTHLY SALES VALUE - Total gross monthly sales value received for sulphur sales (tonnes) identified in field 2.2. Must be = 0 if Total Tonnes = 0 or must be  $>0$  if Total Tonnes  $>0$ .
- 2.4 TRANSPORTATION COSTS - Total transportation costs incurred to transport sulphur (tonnes) identified in field 2.2, from the producing plant gate to the point of sale. Must be  $\geq 0$ .
- 2.5 STORAGE COSTS - Total storage, loading and handling costs incurred as a direct consequence of the transportation of sulphur identified in field 2.4. Must be  $\geq 0$ .
- 2.6 NET MONTHLY SALES VALUE - The gross monthly sales value ...minus... transportation costs ...minus... storage costs.

## **PART 3: CERTIFICATION**

- 3.1 AUTHORIZED SIGNATURE - The signature of the authorized person of the royalty client who is responsible for the information submitted.
- 3.2 NAME OF AUTHORIZED PERSON - The full name of the authorized person whose signature appears in field 3.1.
- 3.3 TITLE OF AUTHORIZED PERSON - The position title of the authorized person whose signature appears in field 3.1.
- 3.4 DATE - The date on which the authorized person signed the VA4 form.

Form provided for illustration purposes only. All required forms are provided in *Appendix P*.



**MONTHLY CORPORATE AVERAGE PRICE CALCULATION  
SULPHUR  
VA4**

**PART 1: CLIENT DETAIL**

1.1 \_\_\_\_\_ 1.2 \_\_\_\_\_  
CLIENT ID CLIENT NAME

1.3 PRODUCTION YEAR/MONTH \_\_\_\_\_ 1.4 DATE PREPARED \_\_\_\_\_  
YR. MO. YR. MO. DY.

1.5 \_\_\_\_\_ 1.6 \_\_\_\_\_  
CONTACT PERSON TELEPHONE

1.7  (CHECK IF NO SALES)

**PART 2: ARM'S-LENGTH SALES**

| 2.1           | 2.2    | 2.3                       | 2.4                  | 2.5           | 2.6                     |
|---------------|--------|---------------------------|----------------------|---------------|-------------------------|
| POINT OF SALE | TONNES | GROSS MONTHLY SALES VALUE | TRANSPORTATION COSTS | STORAGE COSTS | NET MONTHLY SALES VALUE |
| NORTH AMERICA |        |                           |                      |               |                         |
| OFF-SHORE     |        |                           |                      |               |                         |
| TOTAL         |        |                           |                      |               |                         |

**PART 3: CERTIFICATION**

3.1 \_\_\_\_\_ 3.3 \_\_\_\_\_  
AUTHORIZED SIGNATURE TITLE OF AUTHORIZED PERSON

3.2 \_\_\_\_\_ 3.4 \_\_\_\_\_  
NAME OF AUTHORIZED PERSON DATE

Revised 2006-05-31

### 4.3 Annual Reporting

All royalty clients who have filed monthly VA4 submissions must file annual VA3 submissions for the annual S-CAP at which their Crown royalty share of sulphur will be valued. The VA3 submission is the primary valuation reporting to determine S-CAP. Thus a recalculation occurs and replaces the entire year's monthly prices determined by the VA4 submission. This creates amendment transactions for all the months of the production year for which the royalty client filed VA4 submissions.

A.R. 220/2002 Sch.6 - S.4 (5)

Royalty clients, who do not file VA4 submissions because their sulphur production is less than 30,000 tonnes annually, may choose to file an annual VA3 submission. If they so choose, the S-CAP determined from the VA3 filing will replace the sulphur default price for all the months of the year.

A. R. 220/2002 Sch.6 - S.5

The department calculates an annual sulphur default price to value sulphur for those royalty clients who chose to have their monthly sulphur valued at the monthly sulphur default price, and who chose not to file an annual VA3 submission. For those royalty clients, the department will replace the monthly sulphur default price with an annual sulphur default price, thereby creating amendment transactions for all the months of the production year, which were subject to the monthly sulphur default price.

If a royalty client's arms' length sales for a year is less than 10% of their total Alberta gas plant production for that year, the department values and invoices that royalty client's Crown royalty share of sulphur using the annual sulphur default price.

If a royalty client indicates no sales on their VA3 submission, the department values and invoices that royalty client's Crown royalty share of sulphur using the annual sulphur default price.

The Crown will either charge or pay interest on the royalty difference due to the adjustment of the sulphur price from the monthly (VA4) to the annual (VA3) valuation.

Un-reconciled sulphur volumes will be reported and assessed to the facility operator monthly using the monthly sulphur default price. There will be no adjustment to convert the valuation of un-reconciled sulphur volumes from monthly to annual sulphur default price.

#### 4.3.1 Annual Sulphur Corporate Average Price Calculation

A royalty client's S-CAP for a year is calculated using the following for that year:

Net revenue at the plant gate from arms' length sales of Alberta gas-plant-produced sulphur  
...divided by...  
total tonnes of sulphur included in the above transactions  
...subject to...  
a minimum S-CAP of \$0.00 (zero)

Royalty clients must report their own volumes of plant-produced sulphur. This does not include other producer's share of sulphur, if royalty clients are also marketing other producer's share of sulphur.

If a royalty client's VA3 results in a negative unit value, the price used will be \$0.00. Costs that are not recovered in a year because of the minimum S-CAP, may not be applied to the S-CAP calculation of any other year.

The net revenue from sales of Alberta gas-plant-produced sulphur in a year is:

|   |
|---|
| value of sales of Alberta gas-plant-produced sulphur in the year  |
| ...minus...   |
| transportation cost incurred in the year for sulphur  |
| ...minus...   |
| costs incurred in the year for transportation-related storing, loading and<br>handling of the sulphur (costs incurred in the year that are not eligible for "GCA"<br>Allowable Costs) |

If a royalty client has no sales for a production year, the department requires the VA3 submission identifying no sales and will apply the annual sulphur default price to that royalty client.

### 4.3.2 Annual Sulphur Default Price Calculation

The department recalculates the annual sulphur default price twice a year in May and December due to VA3 amendments. This process continues for each production year until the production years' legislated close off. The annual sulphur default price is published in the Gas Royalty Information Bulletin.

The department calculates the annual sulphur default price as:

|   |
|---|
| the weighted average unit value of all arms'-length sales,<br>as reported by royalty clients in their S-CAP filings<br>to the department for the year |
|---|

**NOTE: Clients whose S-CAP filings are below the minimum S-CAP will have their net annual revenue converted to zero, or the determination of the annual sulphur default price. All reported tonnage will be included in the calculation.**

### 4.3.3 Annual Sulphur Corporate Average Price (S-CAP) Calculation

#### VA3- FORM – ANNUAL CORPORATE AVERAGE PRICE CALCULATION - SULPHUR

##### Purpose

The VA3 is used to report and determine a royalty client's S-CAP for the purpose of valuing the annual Crown royalty share of sulphur. Annual VA3 submissions are

used to determine the annual sulphur default price using the weighted average unit value of all arms' length sales reported on VA3 submissions.

### **Timing**

A completed VA3 form must be received by client services on or before April 15<sup>th</sup> of the year following the production year to which the VA3 submission applies.

### **Consequences of Non-Compliance**

Where a royalty client's S-CAP (VA3) form is in default for three consecutive months after the due date of April 15<sup>th</sup>, the department will value the Crown royalty share of the royalty client using the annual sulphur default price for the production year for which the VA3 form applies. Upon receipt of the VA3, the Crown royalty share will be valued in the manner described in this chapter. Interest will be charged or paid on the Crown royalty difference between the values calculated by using the annual sulphur default price versus the S-CAP.

Those clients who are not required but choose to file VA3 forms must file them before the due date. Penalties will apply for late submission of the VA3 forms.

The penalty, for failing to file a VA3 form by its due date, is a one-time penalty charge of \$1000.

### **Amending Annual Sulphur Corporate Average Price**

An amended VA3 form must be completed in full.

## **4.3.3.1 VA3 – Completion Instructions**

### **PART 1: CLIENT DETAIL**

- 1.1 CLIENT ID - The four-character client ID assigned by the department that identifies the royalty client.
- 1.2 CLIENT NAME - The full name of the royalty client for whom the information is submitted.
- 1.3 PRODUCTION YEAR - The production year to which the S-CAP information applies.
- 1.4 DATE PREPARED - The numeric year, month and day on which the VA3 form is prepared.
- 1.5 CONTACT PERSON - The name of the person the department can contact concerning information on the form.
- 1.6 TELEPHONE - The telephone number, including area code of the contact person.

- 1.7 NO SALES - If there are no sales during the year, check this box and leave Part 2 blank.

**PART 2: ARM'S-LENGTH SALES**

- 2.1 POINT OF SALE - The point of delivery for volumes sold (NORTH AMERICA and OFF-SHORE).
- 2.2 TONNES - Total tonnes of Alberta gas plant-produced sulphur sold by the royalty client during the year, for each point of sale.

The total tonnes of sulphur do not include other producers' share of sulphur if the royalty client also markets other producers' share of sulphur.

- 2.1 GROSS ANNUAL SALES VALUE - Total gross annual sales value received for sulphur sales (tonnes) identified in field 2.2.
- 2.2 TRANSPORTATION COSTS - Total transportation costs incurred to transport sulphur (tonnes) identified in field 2.2, from the producing plant gate to the point of sale.
- 2.3 STORAGE COSTS - Total storage, loading and handling costs incurred as a direct consequence of the transportation of sulphur identified in field 2.4.
- 2.4 NET ANNUAL SALES VALUE - The gross annual sales value ...minus... transportation costs ...minus... storage costs.

**PART 3: CERTIFICATION**

- 3.1 AUTHORIZED SIGNATURE - The signature of the authorized person of the royalty client who is responsible for the information submitted.
- 3.2 NAME OF AUTHORIZED PERSON - The full name of the authorized person whose signature appears in field 3.1.
- 3.3 TITLE OF AUTHORIZED PERSON - The position title of the authorized person whose signature appears in field 3.1.
- 3.4 DATE - The date on which the authorized person signed the VA3 form.

Form provided for illustration purposes only. All required forms are provided in *Appendix P*.



## **Section 5**

# **Determining and Valuing Crown Share of Other Products**

## **5. Determining and Valuing Crown Share of Other Products**

### **5.1 Field Condensate Royalty**

For Crown royalty purposes, field condensate is defined as "products obtained from natural gas or solution gas before they are delivered to a gathering system". Typically, field condensate is separated from gas in the field and sold or otherwise disposed of without further processing before entering a gas gathering system.

A.R. 220/2002 S. 10 (6)

Field Condensate is subject to Crown royalty under Schedules 2 and 3 of the Petroleum Royalty Regulation. A. R. 248/90. Effective February 2006 billing period invoice, condensate will appear on the Gas Royalty Invoice as a separate line item (charge type). Along with the changes made to the invoice, the following reports have also had changes made in order to incorporate condensate royalty:

- The Production Year Detail report includes a column that lists the condensate royalty. This report is available to clients in two formats: TXT and PDF
- A Condensate Royalty Statement is produced and included with the monthly invoice. This statement provides a breakdown of condensate well production at each battery listing, the current period royalty condensate volumes, as well as any reduction to royalty condensate volumes. This report is available to clients on the Petroleum Registry of Alberta (PRA) in two formats: TXT and PDF
- For each business associate who receives a condensate royalty charge, a Condensate Royalty Calculation Detail report is produced and included with the monthly invoice.
- The Royalty Exemption Statement provides details of the Deep Gas Royalty Holiday Program and identifies in both summary and detail by well the total condensate royalty exempted. This report is available to clients on the PRA in three formats: CSV, TXT and PDF

Samples of the affected reports can be found in Ch. VII, Sec 1.

#### **5.1.1 Determining the Crown Share of Field Condensate**

A.R. 248/90 S. 8 (4)

The Crown royalty share of field condensate is determined under the Petroleum Royalty Regulations. The valuation of that share is identified under the Natural Gas Royalty Regulations.

#### **5.1.2 Valuing and Reporting Field Condensate**

The monthly Crown royalty share of field condensate is valued using the pentanes reference price in effect for the production month, reduced by the applicable transportation allowances for pentanes plus, propane, and butane contained in a natural gas liquids mix. *Ch. IV, Sec. 3.5.2* provides a description of the business rules

for pentanes reference price. *Ch. IV, Sec. 3.6.1* provides a description of the business rules for regional transportation allowances. Condensate royalty calculation includes the exemption of Deep Gas Royalty Holiday Program (DGRHP) amounts if the battery is tied to a holiday well.

The condensate Crown royalty formula equals:

$$\begin{array}{r} \text{Condensate Crown Volume} \\ \text{Multiplied by} \\ \text{(Pentanes Plus Reference Price – Pentanes Plus MX Transportation Allowance)} \\ \text{Less} \\ \text{DGRHP Exemption Amount Taken} \end{array}$$

- The department values field condensate using the pentanes reference price in effect for the production month, reduced by the applicable regional transportation allowance for pentanes plus, propane, and butane contained in a natural gas liquid mix.
- Each operator receives one invoice for all the batteries they operate, together with documentation supporting the condensate royalty calculation, including a production report for the wells in each battery, and a royalty share calculation report for each battery.
- Amendments are generated whenever condensate volumes are changed. Condensate royalty may also be affected by the following infrastructure changes:
  - Battery Operator change: Condensate royalty will be reversed from the old operator and recharged to the new operator for affected production periods.
  - Well-Battery Tie change: Condensate royalty will be reversed and recharged to the new battery and/or new operator for the affected periods.
  - Battery Transportation Region change: Condensate royalty will be reversed and recharged using the transportation allowance of the new transportation region.
  - Well Event change: Condensate royalty will be reversed and recharged for the effective period of the well event change.
- If the condensate charge is for a prior period, Prior Period Interest (PPI) will be calculated on the net condensate volume. A reversing entry will be created for any condensate royalty charge details where the condensate volume has been amended for the same well and production period if exists.

#### **Statement of Account & Royalty Deposit**

- Charges for condensate royalty are included on the G94 Statement of Account.

- The monthly royalty deposit calculation process includes the condensate royalty charges in the net royalty that is used to determine the royalty deposit adjustment for new clients. The annual royalty deposit adjustment calculation also includes the condensate royalty charges.

### **5.1.3 Allowable Costs for Field Condensate**

There are no allowable costs applicable to field condensate, as no compressing, gathering or processing has occurred.

## **5.2 Crown Royalty Rate for Other Products**

A.R. 220/2002 S. 10 (5)(g)

The Crown royalty rate for other products, expressed as a percentage of the Crown interest share, is 30%. These products are:

- Carbon dioxide;
- Nitrogen;
- Helium; and
- Light ends

## **5.3 Valuing Other Products**

A.R. 220/2002 S. 17(4)

Royalty compensation is not payable in respect to gas products other than residue gas, ethane, propane, butanes, pentanes plus and sulphur, and light-ends. Light-ends means a gas product that is obtained at a gas processing plant or reprocessing plant and is given by the owner of the product to another person for no consideration and that is, in the Minister's opinion, not of a kind or quantity sufficient for the owner of the product to dispose of by way of sale.