HANDBOOK

for the recipients of the

Crown Royalty Detail Statement
User Defined File (UDF)

Effective: June 2011

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PREFACE

This document is intended to assist recipients of the UDF in reading and interpreting the information transmitted to them. The format of the file, including the record types, fields, field lengths etc. has been originally established by PRIDE and is described in their publications. This document explains how the Department will use that file structure to communicate details of various types of charges. It is intended to answer questions like:

What factors or pieces of information will be provided for a specific type of charge?
What fields will be used to provide these details?
How many decimals of precision will be used for a given piece of information?
What formulas would I use to verify a particular calculation?

DEFINITIONS

"Charge" is used generically in this document to mean a financial transaction. It is **not** meant to be the opposite of "credit", or to differentiate normal charges from "reversals".

"Reversal" charge is used in this document to indicate a charge that reverses a previous charge fully.

"Component" is a part of a charge. Every charge is made up of one or more components. For example, a particular "Crown Royalty" charge may be made up of the components: "Basic Royalty", "Vintage Adjustment", and "CAP Adjustment".

1 GENERAL INFORMATION

1.1 File Structure

The Crown Royalty Detail Statement UDF has 13 record types arranged in a hierarchical structure. Every record is preceded by a "record ID" consisting of four identifying fields.

The hierarchical arrangement of the records is a critical to a successful interpretation of the contents. Any sorting or re-arranging of the order of the records could easily sever the implied associations between records, and will likely destroy the usefulness of the file.

As depicted in the diagram at the front of Appendix G, record types 11, 26, 27 and 90 will each appear once in each file. The other record types will repeat as often as required.

1.2 Use of Signed Values

As with the printed version of the Crown Royalty Detail Statement, the amount of each charge will appear as a positive number, except when the charge is reversing a previous charge, in which case the amount will appear as a negative number. (Prior Period Interest charges are an important exception to this rule. Please refer to Section 3.1 for details.) The Charge Type (e.g. Crown Royalty or Injection Credit) will indicate whether the charge should be added or subtracted when determining a net value.

Product quantities and volumes are handled in the same manner as the dollar amount of the charge. These will appear as negative values when the charge is a reversal, otherwise they will be a positive value. Again, the Charge Type will indicate whether the value should be added or subtracted when calculating a net value.

Similarly, each component of a charge will have a positive dollar amount and the component type will indicate whether that amount should be added or subtracted when combining the components to determine the amount of the charge. (In the case of a reversal charge, the amount on each of the components involved would appear as a negative value.)

See Appendix A for a list of the component types and their effect on the charge amount.

1.3 Numeric Formats

Most of the numeric fields in the PRIDE file structure are type "R" (real), which require an explicit decimal point when the value is not an integer. This includes the charge component dollar amount field on record 61. In each of these cases, any decimal point will be explicitly indicated by a period. Refer to Appendix B for decimal precision details.

Percentage values are typically represented as a percentage rather than a fraction. For example, an Interest Rate of 7.5% will appear as 7.50 rather than 0.075.

Record 90 contains a dollar amount field which has a type of "N2", which indicates a numeric field having two implied decimal places. Therefore this value will appear as an integer, but it must be assumed to have a decimal point before the last two digits.

When the field is marked as "mandatory" (Use[1] = 'M'), a value will always be provided, but that value may be zero where appropriate. When a numeric field is "optional" (Use = 'O'), it will either have a value or be filled with spaces.

Numeric values will be right justified within the field. When a numeric value does not require the full space available in a field, it will be padded with leading spaces (not zeros). Trailing zeros will be used to indicate the standard business precision for a given value.

1.4 Totals

Totals and sub-totals are generally not provided. Any required totals by charge, product, stream ID, facility, etc. must be computed from the details provided. Record 90, at the end of the file, contains a total dollar amount for the full file / document, which can be used to confirm the completeness of the details.

[1] "Use =" refers to the PRIDE document column that specifies whether a field is mandatory or optional. Refer to Appendix G.

2 UDF RECORD TYPES

2.1 Record ID

The record ID resides in the first 21 characters of every record type in the Invoice Detail File.

2.1.1 Trading Partner ID

The trading partner ID (field 1) will appear if a Dunn and Bradstreet (DUNNS) ID has been set-up. Otherwise, the field will be blank.

2.2 Record 11 - Replacement

2.2.1 Transaction Type Code

This code will indicate whether the document is an original (00) or replacement (05). A replacement indicates the Crown Royalty Detail Statement was previously created either on paper or electronically.

2.3 Record 28 - Client

This record contains the information associated with the Royalty Client whose charges are being merged into the Payer's Crown Royalty Detail Statement. The client codes reported to the department on the header of an OAS will be used to populate this record. This can create more than one 28 record for the same client.

For example, if an OAS header reported the owner as >0001' and another OAS reported >001', the OAS and charge information will be reported on the Crown Royalty Detail Statement UDF under two 28 records.

OAS	Production Period	Owner ID	Facility
1	1994-01	0001	GS3000
2	1994-01	0001	GP1000

On the January UDF, the record type order would be:

28 0001
29 GS3000
41

51's
61
28 001
29 GP1000
41
51's
61

Note: For volumetrics received from the Petroleum Registry of Alberta, this record applies to the owner on the OAF.

2.4 Record 30 – Meter Station

Record 30 will be required for the meter station information. The following data will be stored in these new records:

Meter Station Identifiers (Transporter and Unique Identifier)
Meter Station Factors
Contract Demand Percentages

One record would be required for each Meter Station grouped with the facility under consideration.

Meter Station data is used in the calculation of the Royalty Trigger factor for the facility. See appendix F – Gas Transportation Adjustment Calculations.

Meter Station data will not be provided for submissions received from the Petroleum Registry of Alberta because the Royalty Trigger Factor for the facility is no longer based this data. The Royalty Trigger Factor calculation details are now shown on the Facility Average Price (FAP) Supporting Details Reports and are not available on the UDF.

2.5 Record 34 – Amounts by Charge Type

Record 34 will provide a summary of the amounts by charge type for a royalty client. There will be one or more 34 records for each 28 (royalty client) record. In the hierarchy of record types, 34 records will be at the same level as the 29 records.

The 34 record will split the charges (for a charge type and royalty client) into the amount pertaining to prior production periods and the amount pertaining to the current production period, to reflect the new invoice structure. Within that split, it will also contain separate fields for the amount generated by an automated calculation, and the amount entered manually on MRIS.

The record will contain separate fields for the interest associated with the prior period

automated and manual amounts as well. The total of the amounts on a 34 record, excluding the interest fields, will correspond to a line item on the invoice, for all charge types other than prior period interest. The total of all the interest amounts from all of the 34 records will correspond to the prior period interest line item on the invoice.

A 34 record will be provided for all possible charge types. As a result, the total of the record type 34 amounts for all charge types will correspond to the invoice total.

The following is the layout for the proposed Record 34: Summary Charge Information:

Field	Description	Characteristics
1	charge type	same as field 1 of record type 33 of invoice file
2	prior period - automated amount	same as field 1 of record type 90 of CRD file
3	interest on prior period - automated amount	same as field 1 of record type 90 of CRD file
4	prior period - manual amount	same as field 1 of record type 90 of CRD file
5	interest on prior period - manual amount	same as field 1 of record type 90 of CRD file
6	current period - automated amount	same as field 1 of record type 90 of CRD file
7	current period - manual amount	same as field 1 of record type 90 of CRD file

2.6 Record – Stream Id

This record contains data associated with the stream ID within the facility indicated in the previous record 29. The stream ID will be reported to industry in the same format reported on the OAS/SAF.

2.7 Record 51 – Charge Information

Record 51 is used to provide information that pertains to a charge, but is not specific to one component of the charge. This includes the Production Period and Product involved, and some of the prices and factors. Note that a total amount for the charge is not provided; this must be calculated by combining the component amounts found on the associated "61" records.

Record 51's will also appear for 100% Freehold streams.

2.7.1 Revision Flag

This record has a "Revision Flag" which will indicate whether the charge is an "original" (value of 0), or a "reversal" (value of 1). When this field = 1, the Reported Product Quantity and Heat from the "62" record(s) should be reversed (e.g. multiplied by -1) to obtain the correct Calculated Royalty Liable Qty/Heat (record 51, fields 5 and 7). (As described in Section 1.2 above, the volumes and dollar amounts on a reversal will appear as negative values.)

Note that the PRIDE document uses the term "revision", while we are using the term "reversal". Whenever a charge must be corrected, it will be fully reversed and a new replacement charge will be created. The Department is using the "Revision Flag" to indicate the reversing entry, i.e. the charge that is reversing a previous charge. If there is an associated replacement charge, it will have the earlier Production Period, but will have the Revision Flag = 0.

For example, an original charge of $1,000.00 occurs in the billing period of March 1995:

Charge	Billing Period	Production Period	Amount	Revision Flag
1	1995-03	1995-03	1000.00	0

In May 1995, this charge is reversed and a replacement charge is created for $900:

Charge	Billing Period	Production Period	Amount	Revision Flag
2	1995-05	1995-03	-1000.00	1
3	1995-05	1995-03	900.00	0

Note that of the three charges, only the reversal has the Revision Flag = 1.

2.7.2 Royalty Trigger Description

Field 4 of record 51 is the Royalty Trigger Description. For charge type Crown Royalty, this field will contain one of the following descriptions:

By-Product Processing

Disposition of Unsold Gas (for OAS volumetrics only)

Field Straddle Plant Gas Proc. (for OAS volumetrics only)

Facility Eligible Consumption (for OAS volumetrics only)

Disposition Out-of-Network (for PRA volumetrics)

Royalty Liable Lease Fuel (for PRA volumetrics)

Disposition with Return Fuel (for PRA volumetrics)

Raw Gas Lease Fuel (for PRA volumetrics)

Raw Gas Disposition (no Processing) (for PRA volumetrics)
Raw Gas Disposition with Processing only (for PRA volumetrics)
Raw Gas Processing (for PRA volumetrics)
Raw Gas Disposition with Return Fuel (no Processing) (for PRA volumetrics)
Raw Gas Disposition with Processing & Return Fuel (for PRA volumetrics)
Royalty Liable Lease Fuel with Processing only (for PRA volumetrics)
Raw Gas Delivered to Injection (for PRA volumetrics)

For charge type Injection Credit, this field will contain the description:

Injection Credit
Injection Disposition (for PRA volumetrics)

For any other charge types, this field will be blank.

The following table cross-references DOE Volumetric Royalty Trigger Types to Royalty Trigger Description on Crown Royalty Detail UDF

Royalty Trigger Description (Value Code)	**Royalty Trigger Type** **(refer to DOE Volumetric Royalty Triggers)**
Disposition Out-of-Network (DISP)	Dispositions to Out of Network
Raw Gas Disposition (no processing) (RGAD)	
Raw Gas Disposition with Processing only (RGADP)	
Raw Gas Delivered to Injection (RGAIF)	
By-Product Processing (PROC)	By-Products Processing
Raw Gas Processing (RGAP)	
Royalty Liable Lease Fuel (PURDSP)	Royalty Liable Lease Fuel
Raw Gas Lease Fuel (RGAPUR)	
Royalty Liable Lease Fuel with Processing only (RGAPP)	
Injection Credit (INJECT)	Injection Credit
Injection Disposition (INJDSP)	
Disposition with Return Fuel (DISPRF)	Disposition to Out of Network with Return Fuel
Raw Gas Disposition with Return Fuel (no Processing) (RGADR)	
Raw Gas Disposition with Processing & Return Fuel (RGDPR)	

2.7.3 Product Gas Conversion Factor

Field 11 for products other than gas will be reported to 5 decimal places (eg. Pentane=.78783). Only gas will be reported to 4 decimal places (eg. Gas=1.0000).

2.8 Record 61 – Charge Component

Note that record type 61, which is used to provide the detailed information for each component of each charge, is an optional record. (Page A-15 of the PRIDE document states that “there must be at least one” record). If a charge is calculated as zero dollars, the charge will not be displayed. For 100% Freehold streams, all charges will calculate to zero so there will not be a record 61 for the associated record 51.

This record has eight generic fields (fields 3 through 10 in the PRIDE layout) that are used to provide different items of detail depending on the combination of Charge Type and Component Type.

Refer to Appendix C "Use of Record 61 for each Charge Type and Component Type". This table depicts:

- the text used to identify each Charge Type and Component Type,
- the valid combinations of Charge Type and Component Type, and
- the specific details which will appear in the UDF for each of these combinations.

As an example, in the case of Charge Type "Crown Royalty" and Component Type "Vintage Adjustment", the table indicates that items 2,3,1 and 4 will be provided in fields "Code", "Rate 1", "Rate 2" and "Factor 1" respectively. The table also indicates that for this component, the Crown Royalty Quantity, Crown Royalty Heat and Amount fields will be provided.

Details about each numbered item are provided, including: name and description in Appendix D, and formulas in Appendix E. For example, we see that item 3 in the table is the "New Royalty Rate" for new vintage product.

2.8.1 Changes for the New Royalty Framework

Effective January 2009, Vintage Tiers for Natural Gas were eliminated. As a result, there will be a single Royalty Rate applied to Gas, Ethane and Pentane products, and Vintage Adjustments will no longer be given. The Natural Gas Royalty Rate formula is now based on the Price and Well Production of the well producing that gas. Details of the Royalty Rate calculation are given in the accompanying “Well Event Average Royalty Rate” details report.

To allow for compatibility with the existing UDF structure, all Natural Gas can be treated as being 100% “OLD” vintage. This will result in no Vintage Adjustments being given and the “Old Royalty Rate” now being the Royalty Rate applied under the new Royalty Regime.

Also effective January 2009, Corporate Average Prices and the Low Productivity allowance have been eliminated. As a result, CAP and Low Productivity adjustments will no longer be calculated.

2.8.2 Changes from the Competitiveness Review

Effective for the 2010-05 Production Period, the New Well Royalty Reduction program will no longer be applied as an adjustment to the Base Royalty amount, but instead a New Well Royalty Rate will be used in the determination of the Base Royalty amount. As a result, the Holiday Adjustment will no longer be given for volumes eligible for the New Well Royalty Reduction program. In addition to the New Well Royalty Rate, four New Well Royalty Rates will be introduced; Shale Gas New Well Royalty Rate, Coalbed Methane New Well Royalty Rate, Horizontal Gas New Well Royalty Rate and Horizontal Oil New Well Royalty Rate.

Volumes where one of the New Well Royalty Rates was used in the determination of Base Royalty (Charge Component Type = ‘Basic Royalty’) will have the Charge Code field of Record 61populated with one of the following Royalty Rate Reason Codes.

Code	Royalty Rate Reason Code Description
NWRR	New Well Royalty Rate
CMNWRR	Coalbed Methane New Well Royalty Rate
SGNWRR	Shale Gas New Well Royalty Rate
HGNWRR	Horizontal Gas New Well Royalty Rate
HONWRR	Horizontal Oil New Well Royalty Rate

2.9 Record 62 – Volumetric Source Records

2.9.1 Reported Stream Category

The Stream Category (field 8) may not contain the exact text reported on the OAS. The Department of Energy has standardized the text as follows,

BANK
BYPROD
CASCD
GAS

INJ
MULTI
PROD
PURCH
STOR

This does not apply to volumetrics received from Petroleum Registry of Alberta (PRA).

2.9.2 Reported Product Quantity and Heat

For volumetric submissions received from the PRA, the Reported Product Quantity (field 14) and Heat (field 16) will be Production Volume (field 25) and Energy (field 26) reported on the Volumetric for the given Volumetric Activity multiplied by the Owner Allocation Factor (field 21) and Stream Allocation Factor (field 23) and Raw Gas Allocation Factor (field 40).

2.9.3 Maximum Length

The maximum length of Record 62 may be up to 674 characters.

2.10 Record 90 – Net Amount

The following is the layout for the Record 90: Document Trailer (Net Amount) Information:

Field	Description
1	net amount (CRD automated charges)
*2	prior periods amount
*3	current period amount

Field 1: Net amount of all the charge amounts on the 61 records in the file. It will correspond to the sum of fields 2, 3, and 6 on the 34 records in the file for the CRD charge types.

Field 2: The invoice amount pertaining to prior production periods (the production periods previously invoiced) for all charge types. This amount will correspond to the sum of fields 2, 3, 4, and 5 on all the 34 records in the file.

Field 3: The invoice amount pertaining to the current production period (the production period being invoiced for the first time) for all charge types. This amount will correspond to the sum of fields 6 and 7 on all the 34 records in the file.

The sum of fields 2 and 3 will correspond to the invoice total.

Appendix A indicates the calculations to occur based on charge component types. However, this will only work if the components are added separately for each charge type and then the proper calculation is done to determine the net amount. For example, add/subtract all of the component types for each charge (crown royalty, injection credit, RPB, RDI, etc.) using the formula in Appendix A. Then, subtract the credits from the debits at a charge type level to determine the end result.

To use one running total as the 61 records are processed requires a different calculation. Examine each charge/charge component combination for each 61 record to determine whether the amount should be added or subtracted from the running total. This is the breakdown to use:

CHARGE TYPE	**CHARGE COMPONENT**	
	Basic	**Adjustments**
Crown Royalty	+	-
Injection Credit	-	+
EOR Adjustment	-	
Provisional Assessment	+	-
Royalty Paid Banks	-	+
Royalty Due Inventory	+	-

3 SPECIAL CASES

3.1 Prior Period Interest

Interest charges are calculated and applied separately for each charge where necessary. In the case of a reversal and a new charge, for example, the interest is calculated and applied on the reversal, then separately on the new charge.

The start date of the interest period is the due date associated with the Production Period of the charge, plus one day. The end date of the interest period is the issue date associated with the Billing Period for the Invoice. The principle amount for the interest calculation is the net amount of the charge. This net amount is determined by combining all of the components for the charge (i.e. all of the "61" records associated with a "51" record), except, of course, the prior period interest components.

The interest calculation for a charge is broken down by calendar month, and the interest rate used for each month is provided in field 5 of record 61. The interest charges are compounded; the formula used is the same as in the Department's receivables system:

Principle Amount * (Monthly Interest Rate * Days In Month/Days In Year)

If interest must be applied to more than one month then this calculation is performed for each month. The interest rate reported is the effective interest amount for the period - the ratio of the total interest charged to the total principle amount.

In the Crown Royalty Detail Statement, any prior period interest related to a charge is depicted as a component of that charge. However, on the Invoice, these prior period interest charges are combined and appear as a separate charge type. (For example, the prior period interest charges that relate to Crown Royalty charges do not appear in the Crown Royalty amount on the Invoice, but rather are added into the Prior Period Interest amount.)

The amount of a Prior Period Interest charge will be signed according to its effect on the net Invoice amount. For example, an interest charge related to an original Crown Royalty charge will have a positive dollar amount, while one related to an Injection Credit will have a negative dollar amount. An interest charge related to a reversal Crown Royalty charge will have a negative dollar amount, while one related to a reversal of an Injection Credit will have a positive dollar amount.

3.2 Enhanced Oil Recovery Operating Cost Adjustment

The EOR calculation involves a comparison of "processed" volumes to “injected” volumes for an EOR scheme. The lesser of these two volumes is used in calculating the EOR adjustment. In the UDF, all of the volumetric details (processed and injected) that relate to this calculation are included, with each volumetric detail line appearing as a record 62. The two subtotals (volume processed and volume injected) are not provided, and there is no explicit indication as to which volume was used in the charge calculation.

Note that the EOR adjustment appears under the injection facility (which is on record 29), even though it is the processing facility that determines the Unit Operating Cost Rate that is used in the calculation.

The rates and factors used in the EOR calculation are the same as those used in the Crown Royalty calculation for the processing facility. These rates and factors are not repeated for the EOR charge. For example, if the EOR scheme had new vintage gas the Crown Royalty charge will have a Vintage Adjustment which will include the new royalty rate and vintage factor. The same rate and factor will be used in the EOR calculation, but these factors will not be repeated in the UDF under the “EOR” charge type.

3.3 Royalty Paid Bank Facilities

The Royalty Paid Bank charges appear under the processing facility (which is on record 29). The Stream ID record (41) is used to indicate the injection facility related to the charge.

3.4 Low Productivity Adjustment

One of the factors involved in the Low Productivity Adjustment calculation is the "Total S1 Production". This factor, which appears in record 61, field 10, is the "allocated" total after applying any Production Entity percentage. The current format of the UDF does not provide a field to report the Production Entity percentage factor, so this factor cannot be provided in the UDF.

In the case of a Low Productivity Adjustment for solution gas, the factor "Average Daily Production" for oil is used. (This equates to the 0.15 m3 factor that is used for oil.) The current format of the UDF does not accommodate reporting this factor.

Record 62 of the UDF is used to report the low productivity wells involved in the calculation. In this case, record 62 will have a Source Document Type (field 1) of "S1". (Note that the PRIDE document does not list oil as a valid product for field 13.)

3.5 Injection Credits

The Injection Credit charges appear under the injection facility (which is on record 29).

APPENDIX A - PRIDE Crown Royalty Detail UDF – Charge Types

Charge Types	Add/Subtract to Determine the Net Crown Royalty Detail Amount
Crown Royalty	Add
Injection Credit	Subtract
EOR Adjustment	Add
Provisional Assessment	Add
Royalty Paid Banks	Subtract
Royalty Due Interest	Add
Prior Period Interest	Add*

*Prior Period Interest is added to it's own Charge Type on the Invoice.

Component Types	Add/Subtract to determine The net Charge Amount
Base Royalty	Add
GORR Adjustment	Add
Vintage Adjustment	Subtract
Low Productivity Adjustment	Subtract
Raw Gas Adjustment	Subtract
CAP Adjustment	Subtract
Special Agreement Adjustment	Subtract
Transportation Adjustment	Subtract
Storage Adjustment	Subtract
Fractionation Adjustment	Subtract
Holiday Adjustment	Subtract
Unit Operating Cost Adjustment	Subtract
Prior Period Interest	Add*

*Prior Period Interest is added to it's own Charge Type on the Invoice.

APPENDIX B – PRIDE Crown Royalty Detail UDF – Decimal Precision of Numeric Fields

Precision of Fields

Record	Field	Name	DP	Notes
30	3	Meter Station Factor	2	
30	4	Contract Demand Percentage	0	
51	5	Calculated Royalty Liable Qty	7	
51	7	Calculated Royalty Liable Heat	2	1 dec. place if value too large
51	8	Payee Interest		If=100%, 6 dec. places ELSE 7 dec. places
51	9	Product Valuation Price	2	
51	10	Product GJ Conversion Factor	5	
51	11	Product Gas Conversion Factor	5	No leading zero! e.g. .12345
52	6	Allocation percentage	7	
61	5	Rate 1		DP varies; see details in Appendix E
61	6	Rate 2		DP varies; see details in Appendix E
61	7	Factor 1		DP varies; see details in Appendix E
61	8	Factor 2		DP varies; see details in Appendix E
61	9	Factor 3		DP varies; see details in Appendix E
61	10	Factor 4		DP varies; see details in Appendix E
61	11	Royalty Quantity	7	
61	13	Royalty Heat	2	1 dec. place if value too large
61	14	Amount	2	
62	14	Reported Product Quantity	1	
62	16	Reported Product Heat	0	
62	17	Reported Activity Duration	0	
62	19	Arithmetic Operator	0	
62	20	Amendment Number	0	
62	21	Owner Allocation Factor	10	
62	22	Owner Allocation Amendment Number	0	
62	23	Stream Allocation Factor	10	
62	24	Stream Allocation Amendment Number	0	
62	25	Reported Unallocated Production Volume	1	
62	26	Reported Unallocated Production Energy	2	
62	40	Raw Gas Allocation Factor	10	

**DP – indicates decimal places (precision) of value*

APPENDIX C – PRIDE Crown Royalty Detail UDF – Record 61 – Charge Types and Component Types

			Field 3	Field 4	Field 5	Field 6	Field 7	Field 8	Field 9	Field 10			
			see key on following pages								Cr Roy Qty	Cr Roy Heat	Amount
Charge Type	**Charge Component Type**		Code	Date	Rate 1	Rate 2	Factor 1	Factor 2	Factor 3	Factor 4			
Crown Royalty	Base Royalty		28		1						X	X	X
	GORR Adjustment				26		27				X	X	X
	Vintage Adjustment		2		3	1	4				X	X	X
	Low Productivity Adjustment				5	6	7	8	9	10	X	X	X
	Raw Gas Adjustment						11						X
	CAP Adjustment						12						X
	Special Agreement Adjustment						13						X
	Transportation Adjustment	Liquids	14		15		16						X
		Gas			15	24	25						X
	Storage Adjustment				17								X
	Fractionation Adjustment				18								X
	Holiday Adjustment		19								X		X
	Unit Operating Cost Adjustment		20		21								X
	Prior Period Interest			22	23								X
Injection Credit	Base Royalty				1						X	X	X
	Vintage Adjustment		2		3	1	4				X	X	X
	CAP Adjustment						12						X
	Transportation Adjustment	Liquids	14		15		16						X
		Gas			15	24	25						X
	Storage Adjustment				17								X
	Fractionation Adjustment				18								X
	Prior Period Interest			22	23								X
EOR Operating Cost	Unit Operating Cost Adjustment		20		21	1					X		X

Adjustment	Prior Period Interest			22	23								X
Provisional Assessment	Base Royalty				1						X	X	X
	Transportation Adjustment (Gas)				15	24	25						X
	Prior Period Interest			22	23								X
Royalty Paid Bank	Base Royalty				1						X	X	X
	Vintage Adjustment		2		3	1	4				X	X	X
	CAP Adjustment						12						X
	Transportation Adjustment	Liquids	14		15		16						X
		Gas			15	24	25						
	Storage Adjustment				17								X
	Fractionation Adjustment				18								X
	Unit Operating Cost Adjustment		20		21								X
	Prior Period Interest			22	23								X
Royalty Due Inventory	Base Royalty										X	X	X
	CAP Adjustment						12						X
	Transportation Adjustment		14		15		16						X
	Storage Adjustment				17								X
	Prior Period Interest			22	23								X

APPENDIX D - PRIDE Crown Royalty Detail UDF - Record 61 - Component Type Field Descriptions

Key to generic Code, Date, Rate and Factor fields:

Data Element	DP*	Description
1. Old Royalty Rate	5	The royalty rate for old vintage product. This rate is used to calculate the base royalty before any adjustments. Effective 2009-01, the Old Royalty Rate is equal to the single Royalty Rate applied under the new regime.
2. Vintage		The vintage being adjusted. Old vintage does not require an adjustment, so currently the only possible value is 'NEW'.
3. New Royalty Rate	5	The royalty rate for new vintage product.
4. Vintage Factor (i.e. Co-Ex Factor)	5	The percentage of the product that is new vintage.
5. New Royalty Rate Adj Factor	5	The factor that adjusts the New Royalty Rate to accommodate a Low Productivity allowance. The formula to determine this factor for a single well-event is as follows: (New Royalty Rate – Low Prod Min Royalty Rate) * ((Low Prod Well Allowance Threshold – (S1 Reported Product Quantity * Max Low Prod Daily Hours / S1 Reported Activity Duration)) ^2) (Low Prod Well Allowance Threshold)^2
		(For a well group or unit, the New Royalty Rate Adj Factor will be a blended (weighted average) factor for all wells in the group.) The formula is: For each S1: (S1 Reported Product Quantity * Payee Interest * Vintage Factor * New Royalty Rate Adj Factor). Total of these values for the group / (Total Reported S1 Production * Payee Interest) Note if there is no Vintage Adjustment, assume Vintage Factor = 1
6. Old Royalty Rate Adj Factor	5	The factor which adjusts the Old Royalty Rate to accommodate a Low Productivity allowance. The formula to determine this factor for a single well-event is as follows: (Old Royalty Rate – Low Prod Min Royalty Rate) * ((Low Prod Well Allowance Threshold – (S1 Reported Product Quantity * Max Low Prod Daily Hours / S1 Reported Activity Duration))^2 / (Low Prod Well Allowance Threshold) ^2
		(For a well group or unit, the Old Royalty Rate Adj Factor will be a blended (weighted average) factor for all wells in the group.) The formula is: For each S1: (S1 Reported Product Quantity * Payee Interest * (1 – Vintage Factor) * Old Royalty Rate Adjustment Factor). Total of these values for the group / (Total Reported S1 Production * Payee Interest) Note if there is no Vintage Adjustment, assume Vintage Factor = 1

7. Low Prod Min Royalty Rate	5	The amount by which the applicable royalty rate is reduced when calculating the Low Productivity Crown Royalty Rate. As indicated in the "Principles and Procedures", this value is currently '5'.
8. Low Prod Well Allowance Threshold	1	The threshold that is compared to the average daily production when calculating the Low Productivity Crown Royalty Rate. As indicated in the "Principles and Procedures", this value is currently '16.9'.
9. Max Low Prod Daily Hours	0	The maximum number of hours of operation per day, as used when calculating the average daily production to identify Low Productivity wells. As indicated in the "Principles and Procedures", this value is currently '24'.
10. Total Reported S1 Production	1	The total S1 production reported for all wells in the Well Group or Unit. If only a portion of the well's production is allocated to the group, only that portion is included in this total. This value is used when calculating the Low Productivity adjustment.
11. Raw Gas Factor	0	The factor used to calculate an adjustment for raw gas.
12. CAP Factor	5	The factor used to calculate an adjustment for those clients who have elected valuation based on Corporate Average Price. This factor is an estimate used to calculate the monthly CAP adjustment.
13. Special Price Factor	0	The factor used to calculate an adjustment for clients who have a special negotiated price.
14. Transportation Region		The Region to which the Transportation allowance applies. (i.e. the region in which the product movement took place.)
15. Transportation Rate	2	The rate used to calculate the Transportation allowance.
16. Transportation Factor	2	The factor applied to adjust the Transportation Allowance for clients owning transportation facilities.
17. Storage Rate	2	The rate used to calculate the Storage allowance.
18. Fractionation Rate	2	The rate used to calculate the Fractionation allowance.
19. Royalty Holiday Program		The program under which an adjustment to reduce or eliminate the royalty charges is made.
20. Plant Type / Plant Class		The Plant Type (1,2,3,4,5) / Plant Class (DRY, SWEET, SOUR) which determined the Unit Operating Cost rate.
21. Unit Op Cost Rate	2	The rate used to calculate the Unit Operating Cost allowance.
22. Prior Period		The monthly period for which interest is being charged or reimbursed to the Payer.
23. Interest Rate	2	The interest rate used for the Prior Period Interest charge.
24. Adjusted IATD	3	Refers to the adjusted IATD (Intra-Alberta Transportation Deduction) that has been further adjusted by prior period amendments to the IATD.
25. Royalty Trigger Factor	2	The facility and period specific factor used to adjust the IATD used to adjust reference price. A facility's Royalty Trigger Factor is based on the Meter Station Factor from the Meter Stations that are connected to the facility.
26. Gas Overriding Royalty Rate	5	The Gas Over riding Royalty Rate that determines the adjustment for Gas Over Bitumen wells.

27. Application Factor	5	The application factor is used to change the rate at which the Gas Over riding Royalty Rate is applied.
28. Royalty Rate Reason		Code to indicate the Royalty Rate used. Only populated for volumes eligible to receive a New Well Royalty Rate.

APPENDIX E - PRIDE Crown Royalty Detail UDF - Record 61 - Component Type Formulas

*DP – indicates decimal places (precision) of value

Formulas for:	Crown Royalty Quantity	Crown Royalty Heat	Amount
Base Royalty	Calculated Royalty Liable Quantity * Crown Interest * Old Royalty Rate	(Gas, Ethane only): Calculated Royalty Liable Heat *Crown Interest * Old Royalty Rate	(Gas, Ethane only): Base Royalty Crown Royalty Heat * Reference Price (Other products): Base Royalty Crown Royalty Quantity * Reference Price
GORR Adjustment	Calculated Royalty Liable Quantity * Application Factor * GOR Rate * Crown Interest	(Gas, Ethane only): Calculated Royalty Liable Heat * Application Factor * GOR Rate * Crown Interest	(Gas, Ethane only): GORR Adj. Crown Royalty Heat * Reference Price (Other products): GORR Adj. Crown Royalty Quantity * Reference Price
Vintage Adjustment (Gas, Ethane, Pentanes only)	Calculated Royalty Liable Quantity * Crown Interest * Vintage Factor * (Old Royalty Rate - New Royalty Rate)	(Gas, Ethane only): Calculated Royalty Liable Heat * Crown Interest * Vintage Factor * (Old Royalty Rate - New Royalty Rate)	(Gas, Ethane only): Vintage Adj. Crown Royalty Heat * Reference Price (Pentanes): Vintage Adj. Crown Royalty Quantity * Reference Price
Low Prod Adjustment (Gas, Ethane only) - if no Vintage Adjustment:	Calculated Royalty Liable Quantity * Crown Interest * Old Royalty Rate Adj Factor	Calculated Royalty Liable Heat * Crown Interest * Old Royalty Rate Adj Factor	Low Prod Adj. Crown Royalty Heat * Reference Price

Low Prod Adjustment (Gas, Ethane only) - if Vintage Adjustment exists:	(Calculated Royalty Liable Quantity * Crown Interest * (1- Vintage Factor) * Old Royalty Rate Adj Factor) + (Calculated Royalty Liable Quantity * Crown Interest * Vintage Factor * New Royalty Rate Adj Factor)	(Calculated Royalty Liable Heat * Crown Interest * (1- Vintage Factor) * Old Royalty Rate Adj Factor) + (Calculated Royalty Liable Heat * Crown Interest * Vintage Factor * New Royalty Rate Adj Factor)	Low Prod Adj. Crown Royalty Heat * Reference Price
Raw Gas Adjustment			(Base Royalty Crown Royalty Heat + GORR Adj. Crown Royalty Heat – Vintage Adj. Crown Royalty Heat - Low Prod Adj. Crown Royalty Heat) * (1- Raw Gas Factor) * Reference Price
CAP Adjustment			(Base Royalty Crown Royalty Heat + GORR Adj. Crown Royalty Heat – Vintage Adj. Crown Royalty Heat - Low Prod Adj. Crown Royalty Heat) * (1 – CAP Factor) * Reference Price
Special Agreement Adjustment			(Base Royalty Crown Royalty Heat + GORR Adj. Crown Royalty Heat – Vintage Adj. Crown Royalty Heat - Low Prod Adj. Crown Royalty Heat) * (1- Special Price Factor) * Reference Price
Transportation Adjustment (liquids only) - for clients receiving an adjustment for owned transportation facilities:			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity – Vintage Adj. Crown Royalty Quantity – Low Prod Adj. Crown Royalty Quantity) * Transportation Factor * Transportation Rate
Transportation Adjustment (liquids only) - for clients NOT receiving an adjustment for owned transportation facilities:			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity – Vintage Adj. Crown Royalty Quantity – Low Prod Adj. Crown Royalty Quantity) * Transportation Rate

Gas Transportation Adjustment (Gas and Ethane only)			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity – Vintage Adj. Crown Royalty Quantity – Low Prod Adj. Crown Royalty Quantity) * Adjusted IATD * (Royalty Trigger Factor - 1)
Storage Adjustment			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity - Vintage Adj. Crown Royalty Quantity - Low Prod Adj. Crown Royalty Quantity) * Storage Rate
Fractionation Adjustment			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity - Vintage Adj. Crown Royalty Quantity - Low Prod Adj. Crown Royalty Quantity) * Fractionation Rate
Unit Operating Cost Adjustment - for charge types Crown Royalty, Royalty Paid Banks:			(Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity - Vintage Adj. Crown Royalty Quantity - Low Prod Adj. Crown Royalty Quantity - Holiday Crown Royalty Quantity) * Product Gas Conversion Factor * Unit Op Cost Rate
Unit Operating Cost Adjustment - for charge type EOR Operating Cost Adjustment:	Lesser of: (Base Royalty Crown Royalty Quantity + GORR Adj. Crown Royalty Quantity – Vintage Adj. Crown Royalty Quantity - Low Prod Adj. Crown Royalty Quantity) from charge type 'Crown Royalty' or (Base Royalty Crown Royalty Quantity - Vintage Adj. Crown Royalty Quantity) from charge type 'Injection Credit'		EOR Adj. Crown Royalty Quantity * Product Gas Conversion Factor * Unit Op Cost Rate

APPENDIX F - Gas Transportation Adjustment Calculations

Royalty Trigger Factor Calculation

The Royalty Trigger Factor is calculated based on the Meter Station Factor from the Meter Stations that are connected to the facility. If there is only one meter station connected to the facility, the Royalty Trigger Factor is the same as the Meter Station Factor. If there is more than one meter station attached to the facility, then the Royalty Trigger Factor is the Contract Demand (CD) weighted average volumes of the meter stations factors. The following calculation will result:

$$\frac{(MSF^1 * CD^1) + (MSF^2 * CD^2) + (\ldots.)}{(CD^1 + CD^2 + \ldots)}$$

where MSF^1 is the first meter station factor for the meter station attached to the facility
CD^1 is the first meter station's contract demand.
MSF^2 is the second meter station factor for the meter station attached to the facility
CD^2 is the second meter station's contract demand.
… represents all other meter station attached to the facility.

Gas Transportation Adjustment Calculation

The Gas Transportation Adjustment is calculated for each Facility, every month, since the Provincial Intra-Alberta Transportation Adjustment Deduction (IATD) changes every month. The adjustment for the facility is:

IATD * (1 - Royalty Trigger Factor)

The reference price used at that facility is therefore calculated as:

Reference Price - IATD * (Royalty Trigger Factor - 1)

Note: The Royalty Trigger Factor and Gas Transportation Adjustment calculations only apply to volumes not received from the Petroleum Registry of Alberta (PRA). Details of the Royalty Trigger Factor calculation are now shown on the Facility Average Price (FAP) Supporting Details Reports and are not available on the UDF.

APPENDIX G - PRIDE Crown Royalty Detail UDF - File Structure

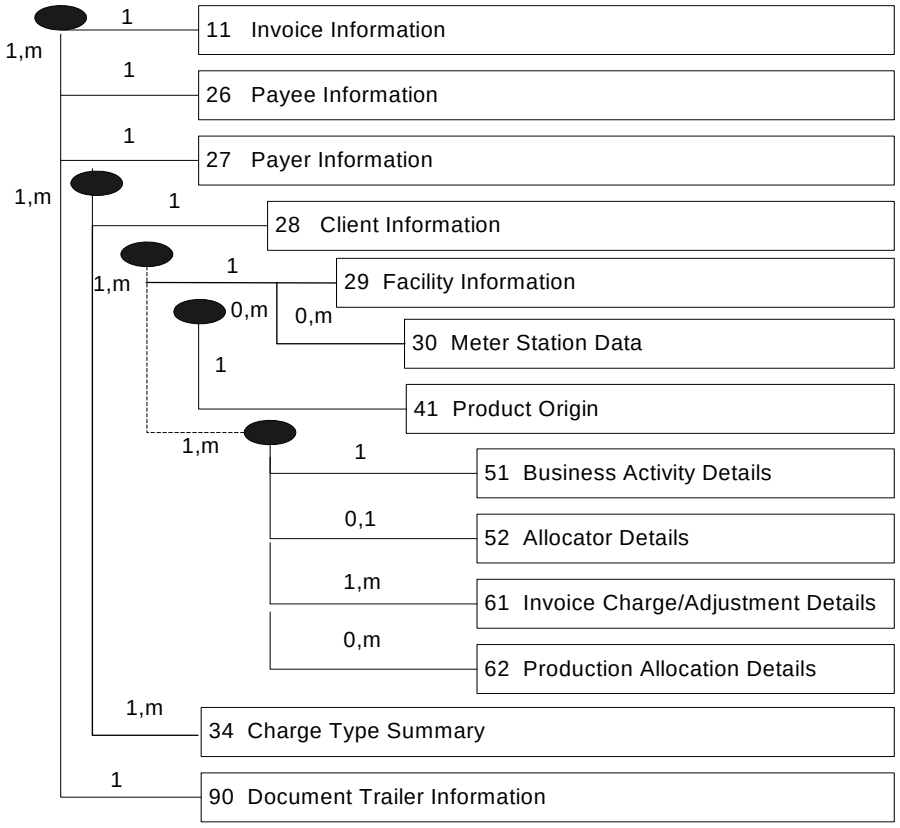
The intent of this file structure is to assist companies in going from the application to the EDI translator. It is intended that this file could be used as what is often termed the "User Defined File", which is the file used as input to, or output from, the EDI translator. This document has two sections, the first gives the layout of the file and the second provides the mapping to the PRIDE EDI standards.

The file structure for an Invoice document will have the following general form:

Record ID	Generic Data Record

The Record ID will identify the Record Type along with necessary document control information.

The CRD UDF will be structured as shown below.



Record ID

The Record ID will precede every Generic Data Record in the Invoice Detail File document and will have the following format:

		Name	Typ	Lgth	Js	Use	Description	EDITING
	1	Trading Partner ID	AN	1/16 Char Pos 1-16	L	O	Many EDI Translators require a trading partner field to select the appropriate map. This is the recipient's DUNS number with a suffix of the Document ID that appears below.	No editing done on this field.
	2	Record ID	AN	2/2 Char Pos 17-18	L	M	A code identifying the record format. '11' = Document Information '26' = Payee Information '27' = Payer Information '28' = Client Information '29' = Facility Information '30' = Meter Station Data '34' = Charge Type Summary '41' = Stream / Project Origin Information '51' = Business Activity Information '52' = Allocator Details Information '61' = Charge Detail Information '62' = Allocation Detail Information '90' = Document Trailer Information	Field must contain a valid code.
	3	EDI/Paper Production/Test Flag	AN	1/1 Char Pos 19-19	L	M	A flag that specifies how the document is to be treated. 'A' = Printed only 'B' = Production, EDI direct to Joint Owner or Crown 'F' = Production, EDI copies to both Joint Owner and Crown 'G' = Production, EDI to Fax for Joint Owner and EDI Copy to Crown 'H' = Production, paper for Joint Owner and EDI for Government 'J' = Test, EDI direct to Joint Owner or Crown 'N' = Test, EDI copies to both Joint Owner and Crown 'O' = Test, EDI to Fax for Joint Owner and EDI Copy to Crown 'Q' = Test, paper for Joint Owner and EDI for	Field must contain a valid code.

							Government 'X' = EDI to Fax direct to Joint Owner	
	4	Document ID	AN	2/2 Char Pos 20-21	L	M	A code identifying the document. For this Crown Royalty, PRIDE established the code: 'CW' = Crown Royalty Well-Group Details	Field must contain a valid code.

Record 11 - Document Information

All Generic Data Records start at position 22 since the first 21 positions are used for the Record ID.

This record contains all the data from the header section of the document which is not related specifically to a company or facility. There is only one Document Information Record per document and it is mandatory.

		Name	Typ	Lgth	Js	Use	Description	EDITING
11	1	Reference Number	AN	1/30 Char Pos 22-51	L	M	A unique number identifying the document. For this Invoice Detail document, this will be the Invoice Number with a suffix of '02'.	Field must contain data.
11	2	Transaction Type Code	ID	2/2 Char Pos 52-53	L	M	A code which specifies whether the document is an original or replacement. '00' = Original '05' = Replacement	Field must contain a valid code.
11	3	Invoice Number	AN	1/22 Char Pos 54-75	L	M	The unique identifier for the invoice as determined by the party producing the invoice.	Field must contain data.
11	4	Invoice Date	DT	8/8 Char Pos 76-83	L	M	The date the invoice was issued. (in YYYYMMDD format).	Field must contain data. The date must be valid.
11	5	Due Date	DT	8/8 Char Pos 84-91	L	M	The date the invoice charges are due to be paid (in YYYYMMDD format).	Field must contain data. The date must be valid.
11	6	Billing Period Date	DT	8/8 Char Pos 92-99	L	M	The production period to which current charges apply (in YYYYMMDD format). I.e. The production period which is being invoiced for the first time.	Field must contain data. The date must be valid.
11	7	Filing Data	DT	8/8 Char Pos 100-107	L	M	The date the document was created (YYYMMDD format). This date is used to determine the most current document when sending amendments.	Field must contain data. The date must be valid.
11	8	Filing Time	TM	6/6 Char Pos 108-113	L	M	The time the document was created in HHMMSS 24-hour clock format (i.e. 000000-235959). This time is used to determine the most current document when sending amendments.	Field must contain data. The time must be valid.
11	9	Filing Time Zone	ID	2/2	L	M	Code identifying the time zone for the Filing Time.	Field must contain a valid code.

				Char Pos 114-115			Options are: 'CT' = Central Time 'ET' = Eastern Time 'MT' = Mountain Time 'PT' = Pacific Time	
11	10	Trading Partner ID Qualifier	AN	2/2 Char Pos 116-117	L	M	Code specifying what type of code is used in the Trading Partner ID. This typically a DUNS number plus suffix in which case '14' should be used.	No edit test performed.

Record 26: Payee Information

This Record contains all the information associated with the Payee. There is only one Operator Record per document and it is mandatory.

		Name	Typ	Lgth	Js	Use	Description	EDITING
26	1	Payee Agency	ID	2/2 Char Pos 22-23	L	M	Indicates the agency that established the Payee Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy, Government of Alberta 'SD' = Saskatchewan Energy Mines and Resources	Field must contain a valid code.
26	2	Payee Code	AN	2/17 Char Pos 24-40	L	M	Code that identifies the Payee.	Field must contain data.
26	3	Payee Name	AN	1/35 Char Pos 41-75	L	O	Textual name of the Payee which generated the invoice.	No editing done on this field.
26	4	Payee Additional Name	AN	1/140 Char Pos 76-215	L	O	Additional space for the Payee name.	This field cannot contain data unless the Payee Name does.
26	5	Payee Address	AN	1/140 Char Pos 216-355	L	O	Street Address for the Payee.	No editing done on this field.
26	6	Payee City	AN	2/19 Char Pos 356-374	L	O	City of the Payee.	If field contains data, then a minimum of 2 characters is required.
26	7	Payee Province/State	ID	2/2 Char Pos 375-376	L	O	Province or state of the Payee.	Field must contain data if Payee City contains data. If field contains data, then a minimum of two characters is required.
26	8	Payee Postal/Zip Code	ID	5/9 Char	L	O	Postal or Zip Code of the Payee.	If field contains data, then a minimum of 5 characters is

				Pos 377-385				required.
26	9	Payee Country Code	ID	2/2 Char Pos 386-387	L	O	Control Code of the Payee. Options are: 'CA' = Canada 'GB' = Great Britain 'US' = United States	If field contains data, it must contain a valid code.

Record 27: Payer Information

This Record contains all the information associated with the Payer. There is only one Owner Record per document and it is mandatory.

		Name	Typ	Lgth	Js	Use	Description	EDITING
27	1	Payer Agency	ID	2/2 Char Pos 22-23	L	M	Indicates the agency that established the Payer Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy, Government of Alberta 'SD' = Saskatchewan Energy Mines and Resources	Field must contain a valid code.
27	2	Payer Code	AN	2/17 Char Pos 24-40	L	M	Code which identifies the Royalty Payer for which the invoice was generated.	Field must contain data.
27	3	Payer Name	AN	1/35 Char Pos 41-75	L	O	The textual name of the Payer.	No editing done on this field.
27	4	Payer Additional Name	AN	1/140 Char Pos 76-215	L	O	Additional space for the Payer name.	This field cannot contain data unless the Payer Name does.
27	5	Payer Address	AN	1/140 Char Pos 216-355	L	O	Street address for the Payer.	No editing done on this field.
27	6	Payer City	AN	2/19 Char Pos 356-374	L	O	City of the Payer.	If field contains data, then a minimum of 2 characters is required.
27	7	Payer Province/State	ID	2/2 Char Pos 375-376	L	O	Province or State of the Payer.	Field must contain data if Payer City contains data. If field contains data, then a minimum of two characters is required.
27	8	Payer Postal/Zip	ID	5/9	L	O	Postal or Zip Code of the Payer.	If field contains data, then a

		Code		Char Pos 377-385				minimum of 5 characters is required.
27	9	Payer Country Code	ID	2/2 Char Pos 386-387	L	O	Country Code of the Payer. Options are: 'CA' = Canada 'GB' = Great Britain 'US' = United States	If field contains data, it must contain a valid code.
27	10	Payer Account Number	AN	1/1 Char Pos 388-398	L	M	Number identifying the Department of Energy Account for the Payer.	Field must contain data.

Record 28: Royalty Client Information

This Record contains all the information associated with the Royalty Client. There can be multiple Client records. Must be at least one record within Payer group.

		Name	Typ	Lgth	Js	Use	Description	EDITING
28	1	Client Agency	ID	2/2 Char Pos 22-23	L	M	Indicates the agency that established the Client Payer Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy, Government of Alberta 'SD' = Saskatchewan Energy Mines and Resources	Field must contain a valid code.
28	2	Client Code	AN	2/17 Char Pos 24-40	L	M	Code that identifies the Client Payer whose charges are being merged into the Payer's invoice and Account Number. The Payer identified here is the party responsible for the royalty charges according to the volumetric reporting (e.g. OAS, RMF2), however, because of an established relationship with the Payer, his charges are incorporated on the Payer's invoice.	Field must contain data.
28	3	Client Name	AN	1/35 Char Pos 41-75	L	O	Textual name of the Client Payer.	No editing done on this field.
28	4	Client Additional Name	AN	1/140 Char Pos 76-215	L	O	Additional space for the Client Payer name.	This field cannot contain data unless the Client Name does.

Record 29: Facility Information

		Name	Typ	Lgth	Js	Use	Description	EDITING
29	1	Facility Agency	ID	2/2 Char Pos 22-23	L	M	Indicates the agency that established the Facility Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy, Government of Alberta 'SD' = Saskatchewan Energy Mines and Resources	Field must contain a valid code.
29	2	Facility Type	ID	2/2 Char Pos 24-25	L	M	Code which identifies the type of Facility.	Field must contain data.
29	3	Facility Code	AN	2/17 Char Pos 26-42	L	M	Code which identifies the Facility.	Field must contain data.
29	4	Facility Name	AN	1/35 Char Pos 43-77	L	O	Textual name of the Facility.	No editing done on this field.
29	5	Facility Additional Name	AN	1/140 Char Pos 78-217	L	O	Additional space for the Facility Name.	This field cannot contain data unless the Facility Name does.
29	6	Facility Province/State	ID	2/2 Char Pos 218-219	L	O	Province or state of the Facility. Options are: 'AB' = Alberta 'BC' = British Columbia 'SK' = Saskatchewan	If field contains data, then a minimum of two characters in required.

Record 30: Meter Station Data

The Meter Station data contains information required for the meter station.

		Name	Typ	Lgth	Js	Use	Description	EDITING
30	1	Meter Station Transporter	ID	4/6 Char Pos 22-27	L	M	Meter Station Transporter Codes: CWNG = Canadian Western NUL = Northwestern Utilities WEST = West Coast NOVA = Nova AEC = AEC	This field must contain a valid code.
30	2	Meter Station Identifier	AN	1/8 Char Pos 28-35	L	M	Unique meter station identifier	This field must contain data.
30	3	Meter Station Factor	R	1/6 Char Pos 36-41	R	M	Meter station factor	This field must contain data.
30	4	Contract Demand Percentage	R	1/6 Char Pos 42-47	R	M	Contract Demand Percentage	This field must contain data.

Record 34: Charge Type Summary Information

The Charge Type Summary contains provides a summary of the amounts by charge type for a royalty client. There can be multiple Charge Type Summary Records within a Client. There must be at least one record.

		Name	Typ	Lgth	Js	Use	Description	EDITING
34	1	Charge Description	ID	3/3 Char Pos 22-24	L	M	The invoice code for the charge category. PRIDE: "010" - Crown Royalty "020" - Monthly Proprietary Waiver "030" - Monthly Capital Cost Deduction "040" - Monthly Custom Processing Fee Deduction "044" - Monthly Operating Cost Deduction "060" - Annual Co-Generation Contract Adjustment "080" - Annual Capital Cost Adjustment "090" - Annual Custom Processing Fee Adjustment "095" - Annual Operating Cost Adjustment "100" - Allowable Cost Restriction "101" - Annual Allowable Cost Restriction Adjustment "110" - Injection Credits "120" - Enhanced Oil Recovery Operating Cost Adjustment "130" - Crown Royalty Paid Bank Settlement "140" - Crown Royalty Inventory Settlement "150" - Audit Adjustments "180" - Sulphur Emission Control Assistance Program (SECAP) "190" - Royalty Deposit Adjustment "200" - Other Financial Transactions "210" - Provisional Royalty Assessment	This must be a valid code.

							"230" - Penalties "240" - Interest: Prior Period “250” - Otherwise Flared Solution Gas (OFSG) “260” - Condensate Royalty	
34	2	Automated Prior Period Amount	N2	1/17 Char Pos 25-41	R	M	The automated amount pertaining to prior production periods (the production periods previously invoiced) for the charge type.	Field must contain data.
34	3	Interest on Automated Prior Period Amount	N2	1/17 Char Pos 42-58	R	M	The interest associated with the automated amount pertaining to prior production periods (the production periods previously invoiced) for the charge type.	Field must contain data.
34	4	Manual Prior Period Amount	N2	1/17 Char Pos 59-75	R	M	The manual amount pertaining to prior production periods (the production periods previously invoiced) for the charge type.	Field must contain data.
34	5	Interest on Manual Prior Period Amount	N2	1/17 Char Pos 76-92	R	M	The interest associated with the manual amount pertaining to prior production periods (the production periods previously invoiced) for the charge type.	Field must contain data.
34	6	Automated Current Period Amount	N2	1/17 Char Pos 93-109	R	M	The automated amount pertaining to the current production period (the production period being invoiced for the first time) for the charge type.	Field must contain data.
34	7	Manual Current Period Amount	N2	1/17 Char Pos 110-126	R	M	The manual amount pertaining to the current production period (the production period being invoiced for the first time) for the charge type.	Field must contain data.

Record 41: Stream / Product Origin Information

The Stream/Product Origin contains the data associated with the Origin of a Product Stream. There can be multiple Stream Records within a Facility. There must be at least one record.

		Name	Typ	Lgth	Js	Use	Description	EDITING
41	1	Stream ID Agency	ID	2/2 Char Pos 22-23	L	M	Indicates the agency that established the Stream ID Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy (Alberta) 'SD' = Saskatchewan Energy Mines and Resources	This field must contain a valid code.
41	2	Stream ID Type	ID	2/2 Char Pos 24-25	L	M	Code which indicates the type of Stream ID.	If field contains data it must contain a valid code. Codes are mapped as follows: PRIDE = ANSI BT = BA GP = GA GS = ZG IF = ZI IS = ZS PL = LH UN = ZU WG = ZR WI = ZW
41	3	Stream ID Code	AN	2/2 Char Pos 26-42	L	M	Code which identifies the Stream ID.	If Stream ID Type contains data then this field must contain data.
41	4	Stream ID Province/State	ID	2/2 Char Pos 43-44	L	M	Province or state of the Stream ID. 'AB' = Alberta 'BC' = British Columbia 'SK' = Saskatchewan	If Stream ID Type contains data then this field must contain a valid code.

Record 51: Business Activity (BA) Information

This Record contains all the information associated with the Product, Period and Royalty event. There can be multiple BA Records within a Stream, but there must be at least one.

		Name	Typ	Lgth	Js	Use	Description	EDITING
51	1	Production Period	DT	8/8 Char Pos 22-29	L	M	The month to which the reported volumes, and therefore the charges, apply	Field must contain a valid code.
51	2	Product Code	AN	1/12 Char Pos 30-41	L	M	The product code for which the Inventories and transactions apply. C2-MX = Ethane Component in Mix C2-SP = Ethane Spec C3-MX = Propane Component in Mix C3-SP = Propane Spec C4-MX = Butane Component in Mix C4-SP = Butane Spec C5-MX = Pentane Component in Mix C5-SP = Pentane Spec GAS = Gas SUL = Sulphur	Field must contain data.
51	3	Revision Flag	AN	1/1 Char Pos 42-42	L	O	Indicates a revision to a previous assessment, therefore corresponding 61 records (charges) are reversals, and corresponding 62 records (volumes) are from the original charge. The new charge (replacing the original) will appear as a normal charge, i.e. it will not be marked as a revision. 0 (Original) 1 (Revision)	Optional. If present, must be a valid code.
51	4	Royalty Trigger Description	ID	1/50 Char Pos 43-92	L	O	Description of the royalty trigger, i.e. the business event or condition that caused royalty charges / credits to be incurred. By-Product Processing	Optional.

							Disposition of Unsold Gas Field Straddle Plant Gas Proc. Injection Credit Facility Eligible Consumption Disposition Out-of-Network Royalty Liable Lease Fuel	
51	5	Calculated Royalty Liable Qty	R	1/17 Char Pos 93-109	R	M	The product quantity used to calculate charges for which the Payer is liable. This value is derived by totaling (according to the Arithmetic Operator) the reported quantity on the associated source documents (Record ID 62). If there is an Allocator (Record ID 52), the total must be multiplied by the Allocation Percentage to arrive at this value.	Field must contain data. May be 0.
51	6	Calculated Royalty Liable Qty UM	ID	2/2 Char Pos 110-111	L	M	The unit of measure for the Calculated Royalty Liable Quantity. Options are: 'R9' = Thousand cubic metres 'CR' = Cubic metres 'MP' = Tonnes	Field must contain data.
51	7	Calculated Royalty Liable Heat	R	1/12 Char Pos 112-123	R	O	The product heat content used to calculate charges for which the Payer is liable. This value is derived by totaling (according to the Arithmetic Operator) the reported heat on the associated source documents (Record ID 62). If there is an Allocator (Record ID 52), the total must be multiplied by the Allocation Percentage to arrive at this value.	Optional. Product dependent.
51	8	Payee Interest	R	1/10 Char Pos 124-133	R	M	The Payee's interest in (share of) the product. When the Crown is the Payee, this is the "Crown Interest Share".	Field must contain data.
51	9	Product Valuation Price	R	1/16 Char Pos 134-139	R	M	The price used to value the product. In Alberta, this is the published Gas Reference Price, which is used to calculate the Basic Royalty charge component.	Field must contain data.
51	10	Product GJ Conversion Factor	R	1/8 Char Pos	R	O	Factor used to convert product quantity (in volumetric unit of measure) to heat content (in Gigajoules).	Optional. Product / other business rule dependent.

				140-147				
51	11	Product Gas Conversion Factor	R	1/6 Char Pos 148-153	R	O	Factor used to convert volumes of a product to equivalent volumes of gas. May or may not be an energy adjusted factor.	Optional. Product / other business rule dependent.

Record 52: Allocator Details Information

This Record contains all the information associated with the Reassignment of Quantities by the Original Owner. There may be zero or one Allocator Detail Records within a Business Activity.

		Name	Typ	Lgth	Js	Use	Description	EDITING
52	1	Allocation Source Doc. Type	AN	1/6 Char Pos 22-27	L	M	Indicates the type of source document that reported the allocation. Options are: RMF2	Must be a valid code.
52	2	Allocator Agency	ID	2/2 Char Pos 28-29	L	M	Indicates the agency that established the Allocator Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources	Field must contain a valid code.
52	3	Allocator Code	ID	2/17 Char Pos 30-36	L	M	Code that identifies the Allocator. In the case of an RMF2 allocation, this is the "form" agency, which allocated volumes to the Payer (or Client).	Field must contain data.
52	4	Allocator Name	AN	1/35 Char Pos 47-81	L	O	Textual name of Allocator	No editing done on this field.
52	5	Allocator Additional Name	AN	1/140 Char Pos 82-221	L	O	Additional space for the Allocator Name.	This field cannot contain data unless the Allocator Name does.
52	6	Allocation Percentage	R	1/12 Char Pos 222-233	L	M	Percentage of volumes, which were allocated on the RMF2 to the Payer (or Client).	Field must contain data.

Record 61: Charge / Adjustment Detail Information

This Record contains all the information necessary Detail to re-construct the Charge Total by Product and Charge Type. There can be many Charge / Adjustment Details within a Business Activity, but there must be at least one.

		Name	Typ	Lgth	Js	Use	Description	EDITING
61	1	Charge Type	AN	1/30 Char Pos 22-51	L	M	Indicates the type of charge. Options are: Crown Royalty, Injection Credit, EOR Adjustment, Provisional Assessment, Royalty Paid Banks, Royalty Due Inventory. Crown Royalty Injection Credit EOR Adjustment Provisional Assessment Royalty Paid Banks Royalty Due Inventory	Field must contain a valid code.
61	2	Charge Component Type	AN	1/30 Char Pos 52-81	L	M	Indicates the type of charge component. Options are: Basic Royalty, GORR Adj., Vintage Adj., Low Prod Adj., Raw Gas Adj., CAP Adj., Special Agreement, Transportation, Storage, Fractionation, Holiday, Unit Operating Cost, Prior Period Interest. Basic Royalty GORR Adjustment Vintage Adjustment Low Prod Adjustment Raw Gas Adjustment Cap Adjustment Special Agreement Transportation Storage Fractionation Holiday Unit Operating Cost Prior Period Interest	Field must contain a valid code.

61	3	Charge Code	AN	1/30 Char Pos 82-111	L	O	Optional code to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type.	Optional. Dependent on charge type.
61	4	Date	DT	8/8 Char Pos 112-119	L	O	Optional date to support the charge (YYYYMMDD format). Generic field. Specific content determined by Charge Component Type and/or Charge Type.	Must be a valid date.
61	5	Rate 1	R	1/10 Char Pos 120-129	R	O	Optional rate to support the charge. Generic Field. Specific content determined by Charge Component Type and/or Charge Type.	No editing done on this field.
61	6	Rate 2	R	1/10 Char Pos 130-139	R	O	Second rate to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type	No editing done on this field.
61	7	Factor 1	R	1/10 Char Pos 140-149	R	O	Optional factor to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type.	No editing done on this field.
61	8	Factor 2	R	1/10 Char Pos 150-159	R	O	Second factor to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type.	No editing done on this field.
61	9	Factor 3	R	1/10 Char Pos 160-169	R	O	Third factor to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type.	No editing done on this field.
61	10	Factor 4	R	1/10 Char Pos 170-179	R	O	Fourth factor to support the charge. Generic field. Specific content determined by Charge Component Type and/or Charge Type.	No editing done on this field.
61	11	Royalty Quantity	R	1/6	R	O	The product quantity (due in kind) to the Crown. The formula used to determine this value depends	No editing done on this field.

				Char Pos 180-196			on the Charge Component Type and /or the Charge Type.	
61	12	Royalty Quantity UM	ID	1/10 Char Pos 197-198	ID	O	The unit of measure for the Royalty Quantity. Options are: 'R9' = Thousand cubic metres 'CR' = Cubic Metres 'MP' = Tonnes	No editing done on this field.
61	13	Royalty Heat	R	1/10 Char Pos 199-210	R	O	The product heat content (due in kind) to the Crown. The formula used to determine this value depends on the Charge Component Type and /or the Charge Type.	No editing done on this field.
61	14	Amount	R	1/17 Char Pos 211-227	R	M	Amount of Charge or adjustment.	No editing done on this field.

Record 62: Allocation Detail Information

This Record contains all the information necessary to determine the Client Volumetric Totals within a Business Activity. There can be many Allocation Details within a Business Activity, but there must be at least one.

		Name	Typ	Lgth	Js	Use	Description	EDITING
62	1	Source Document Type	AN	1/6 Char Pos 22-27	L	M	Code indicating the type of source document. (e.g. OAS). Options are: OAS, FAS, WAS, S1, S8, S18, S20, S21, VOL	Must be a valid code.
62	2	Reporting Facility Operator Agency	ID	2/2 Char Pos 28-29	L	M	Identifies the agency that established the Reporting Facility Operator ID Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources 'AE' = Alberta Department of Energy	Field must contain a valid code.
62	3	Reporting Facility Operator Code	ID	2/17 Char Pos 30-46	L	M	Code that identifies the Reporting Facility Operator.	Field must contain data.
62	4	Reporting Facility Agency	ID	2/2 Char Pos 47-48	L	M	Identifies the agency that established the Reporting Facility Identification Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources 'AE' = Alberta Department of Energy	Field must contain a valid code.

62	5	Reporting Facility Type	ID	2/2 Char Pos 49-50	L	M	Code that identifies the type of Reporting Facility. Options are: 'BT' = Battery 'GP' = Gas Plant 'GS' = Gas Gathering System 'IF' = Injection Facility 'WI' = Well Event 'MS' = Meter Station	Field must contain a valid code.
62	6	Reporting Facility Code	ID	2/17 Char Pos 51-67	L	M	Code that identifies the Reporting Facility.	Field must contain data.
62	7	Reporting Facility Province/State	ID	2/2 Char Pos 68-69	L	M	Province or state of the Reporting Facility. Options are: 'AB' = Alberta 'BC' = British Columbia 'SK' = Saskatchewan	Field must contain data.
62	8	Reported Stream Category	AN	1/12 Char Pos 70-81	L	O	The stream category code. BANK BYPRODUCT CASCADE GAS MULTI INJECTION PRODUCTION PURCHASE STORAGE	Must be a valid code. Not reported for Source Document Type 'VOL'
62	9	Reported Filing Date	DT	8/8 Char Pos 82-89	L	O	The date the document was created (YYYYMMDD format). This date is used to determine the most current document when sending amendments.	The date must be valid.
62	10	Reported Filing Time	TM	6/6 Char	L	O	The time the document was created in HHMMSS 24-hour clock format (i.e. 000000-235959). This	The time must be valid.

				Pos 90-95			time is used to determine the most current document when sending amendments.	
62	11	Reported Filing Time Zone	ID	2/2 Char Pos 96-97	L	O	Code identifying the time zone for the Filing Time. Options are: 'CT' = Central Time 'ET' = Eastern Time 'MT' = Mountain Time 'PT' = Pacific Time	Must be a valid code.
62	12	Reported Activity Code	AN	1/12 Char Pos 98-109	L	O	The Activity to which the volumes apply.	No editing done on this field.
62	13	Reported Product Code	AN	1/12 Char Pos 110-121	L	M	The product code for which the Inventories and transactions apply. C2-MX = Ethane Component in Mix C2-SP = Ethane Spec C3-MX = Propane Component in Mix C3-SP = Propane Spec C4-MX = Butane Component in Mix C4-SP = Butane Spec C5-MX = Pentane Component in Mix C5-SP = Pentane Spec C6-MX = Hexane Component in Mix C6-SP = Hexane Spec CO2 = Carbon Dioxide COND = Condensate GAS = Gas IC4-MX = ISO-Butane Component in Mix IC4-SP = ISO-Butane Spec IC5-MX = ISO-Pentane Component in Mix IC5-SP = ISO-Pentane Spec LITEMX = Light Ends (Components lighter than C2 in a mix LPG = LPG NC4-MX = Normal-Butane Component in Mix	Must be a valid product code.

							NC4-SP = Normal Butane Spec NC5-MX = Normal-Pentane Component in Mix NC5-SP = Normal Pentane Spec NGL = Natural Gas Liquids O2 = Oxygen S = Sulphur SUL = Sulphur SBASE = Sulphur-Basepad SBLOC = Sulphur-Block SFORM = Sulphur-Formed SLATE = Sulphur-Slate SMOLT = Sulphur-Molten SPRILL = Sulphur-Prilled	
62	14	Reported Product Quantity	R	1/17 Char Pos 122-138	L	M	The reported quantity associated with the activity and product.	Field must contain data.
62	15	Reported Product Quantity UM	ID	2/2 Char Pos 139-140	L	M	The unit of measure for the Reported Product Quantity. Options are: 'R9' = Thousand Cubic Metres 'CR' = Cubic Metres 'MP' = Tonnes	Must be a valid code.
62	16	Reported Product Heat	R	1/12 Char Pos 141-152	L	O	The reported heat content associated with the activity and product.	No editing done on this field.
62	17	Reported Activity Duration	R	1/17 Char Pos 153-169	L	O	The reported duration associated with the activity and product. (eg. Production Hours from S1 document).	No editing done on this field.
62	18	Reported Activity Duration UM	AN	1/1 Char Pos 170-170	L	O	Indicates the unit of measure for the Reported Activity Duration. Options are: 'H' = Hours 'D' = Days	Field must contain a valid code. Used in S1. Codes are mapped as follows: PRIDE - ANSI "H" - HR

								"D" - DA
62	19	Arithmetic Operator	R	1/2 Char Pos 171-172	L	M	Indicates whether the reported Quantity/Heat should be added or subtracted when calculating the Royalty Liable Quantity/Heat. Values are +1, -1.	Must be a valid code.
62	20	Amendment Number	R	1/3 Char Pos 173-175	L	O	The version number (0, 1, 2…) of the Source Document.	Only reported for Source Document Type 'VOL'
62	21	Owner Allocation Factor	R	1/12 Char Pos 176-187	L	O	The factor applied to calculate the owner's allocation of the Reported Product Quantity/Heat	Only reported for Source Document Type 'VOL'
62	22	Owner Allocation Amendment Number	R	1/3 Char Pos 188-190	L	O	The version number of the Owner Allocation Factor form used in the calculation of the Reported Product Quantity/Heat.	Only reported for Source Document Type 'VOL'
62	23	Stream Allocation Factor	R	1/12 Char Pos 191-202	L	O	The factor applied to calculate the stream's allocation of the Reported Product Quantity/Heat. This value will include any cascaded SAF factors.	Only reported for Source Document Type 'VOL'
62	24	Stream Allocation Amendment Number	R	1/3 Char Pos 203-205	L	O	The version number (0, 1, 2…) of the Stream Allocation Factor form used in the calculation of the Reported Product Quantity/Heat.	Only reported for Source Document Type 'VOL'
62	25	Reported Unallocated Production Volume	R	1/12 Char Pos 206-217	L	O	The facility Reported Volume for a given activity (prior to application of Stream/Owner allocation factors). Same Unit of Measure (UM) as Reported Product Quantity.	Only reported for Source Document Type 'VOL'
62	26	Reported Unallocated Production Energy	R	1/12 Char Pos 218-229		O	The facility Reported Energy for a given activity (prior to application of Stream/Owner allocation factors). Same Unit of Measure (UM) as Reported Product Heat.	Only reported for Source Document Type 'VOL'

62	27	SAF/OAF Submitter Agency	ID	2/2 Char Pos 230-231	L	O	Indicates the agency that established the SAF/OAF Submitter Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources	Only reported for Source Document Type 'VOL' Field must contain a valid code.
62	28	SAF/OAF Submitter Code	ID	2/17 Char Pos 232-248	L	O	Code that identifies the SAF/OAF Submitter In the case of an RMF2 allocation, this is the "form" agency, which allocated volumes to the Payer (or Client).	Only reported for Source Document Type 'VOL' Field must contain data.
62	29	SAF/OAF Submitter Name	AN	1/35 Char Pos 249-283	L	O	Textual name of SAF/OAF Submitter	Only reported for Source Document Type 'VOL' No editing done on this field.
62	30	SAF/OAF Submitter Additional Name	AN	1/140 Char Pos 284-423	L	O	Additional space for the SAF/OAF Submitter Name.	Only reported for Source Document Type 'VOL' This field cannot contain data unless the SAF/OAF Submitter Name does.
62	31	From/To Facility Agency	ID	2/2 Char Pos 424-425	L	O	Identifies the agency that established the From/To Facility Identification Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources	Only reported for Source Document Type 'VOL' No editing done on this field.
62	32	From/To Facility Type	ID	2/2 Char Pos 426-427	L	M	Code that identifies the type of From/To Facility.	Only reported for Source Document Type 'VOL' No editing done on this field.
62	33	From/To Facility	ID	2/17	L	M	Code that identifies the From/To Facility.	Only reported for Source

		Code		Char Pos 428-444				Document Type 'VOL'. No editing done on this field.
62	34	From/To Facility Province/ State	ID	2/2 Char Pos 445-446	L	M	Province or state of the From/To Facility.	Only reported for Source Document Type 'VOL'. No editing done on this field.
62	35	Cascaded SAF Flag	ID	1/1 Char Pos 447	L	O	This flag will indicate whether or not the SAF Factor includes a cascade. Possible values: Y – SAF Factor includes a cascade N – SAF Factor does not include a cascade	May only be reported for Source Document Type 'VOL'. No editing done on this field.
62	36	Response to Cascade Facility Agency	ID	2/2 Char Pos 448-449	L	O	Identifies the agency that established the Response to Cascade Facility Identification Code. Options are: 'BC' = BC Ministry of Energy Mines and Resources 'DE' = Department of Energy 'SD' = Saskatchewan Energy Mines and Resources	Only reported for Source Document Type 'VOL' No editing done on this field.
62	37	Response to Cascade Facility Type	ID	2/2 Char Pos 450-451	L	O	Code that identifies the type of Response to Cascade Facility.	Only reported for Source Document Type 'VOL' No editing done on this field.
62	38	Response to Cascade Facility Code	ID	2/17 Char Pos 452-468	L	O	Code that identifies the Response to Cascade Facility.	Only reported for Source Document Type 'VOL'. No editing done on this field.
62	39	Response to Cascade Facility Province/ State	ID	2/2 Char Pos 469-470	L	O	Province or state of the Response to Cascade Facility.	Only reported for Source Document Type 'VOL'. No editing done on this field.

62	40	Raw Gas Allocation Factor	R	1/12 Char Pos 471-482	L	O	The Raw Gas Allocation factor applied to calculate the owner's allocation of the Reported Product Quantity/Heat. This factor will be less than 1.0 if the Raw Gas Allocation included a non-arm's length sale.	Only reported for Source Document Type 'VOL'.

Record 90: Document Trailer Information

This Record is used for Invoice Detail Summary information. There will be one of these records per document.

		Name	Typ	Lgth	Js	Use	Description	EDITING
90	1	Net Document Amount	N2	1/17 Char Pos 22-38	R	M	The net amount of all Charges / Credits / Adjustments for a Payer within this document.	Field must contain data.
90	2	Total Prior Periods Amount	N2	1/17 Char Pos 39-55	R	M	The invoice amount pertaining to prior production periods (the production periods previously invoiced) for all charge types. This amount will correspond to the sum of fields 2, 3, 4, and 5 on all the 34 records in the file.	Field must contain data.
90	3	Total Current Period Amount	N2	1/17 Char Pos 56-72	R	M	The invoice amount pertaining to the current production period (the production period being invoiced for the first time) for all charge types. this amount will correspond to the sum of fields 6 and 7 on all the 34 records in the file.	Field must contain data.