Production Allocation Discrepancy Reporting

Government of Alberta

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Background

Background

- Effective with 2009 reporting, the Alberta Royalty Framework (ARF) introduced a new well event based royalty rate formula with a quantity (r_q) component that is influenced by reported well production.
- Royalty submissions show variances between reported production and allocations on the Stream Allocation Factor (SAF) / Owner Allocation Factor (OAF).
- To ensure accurate reporting, a Production Allocation Discrepancy Reporting subcommittee (CAPP Accounting and DOE) met to discuss the issue and develop a solution.
- A new monthly reconciliation process was introduced to compare SAF quantities with the reported well event production volumes.
- The results of the monthly reconciliation process are communicated to industry with discrepancy reports to operators and royalty impact (shadow billing) reports to owners identified on OAF submissions.

Consultation

Reconciliation Process

- A new monthly reconciliation process has been implemented on PRA
  - Compares SAF quantities with reported production volumes for a stream
- Production Allocation Discrepancy Report
  - Commences with the January 2009 production period.
  - Shows variances (both over and under) where the volume percentage difference between SAF quantities and production volumes is more than +/- 20.00%.
    - The absolute volume difference is greater than 10.0 10^3m^3 for a given production month and stream.
  - Format is comma separated values (CSV).
  - Report availability:
    - Ability to run this report on demand.
    - Preview - two days before the DOE allocation reporting deadline.
    - Final report - on the reporting deadline.

Discrepancy Calculation Algorithms

- Volume Difference for a given production month for a stream is equal to its SAF quantities less its production volumes (shown on the report as an absolute value).
  - e.g. SAF = 90.0 10^3m^3, Production = 100.0 10^3m^3, Volume difference = 90.0 10^3m^3 less 100.0 10^3m^3 = -10.0 10^3m^3
- For a given production month, the volume percentage difference for a stream is its volume difference divided by its production volumes.
  - e.g. SAF = 120.0 10^3m^3, Production = 100.0 10^3m^3, Volume difference = 120.0 10^3m^3 less 100.0 10^3m^3 = +20.0 10^3m^3, Volume percentage difference = +20.0 10^3m^3 divided by 100.0 10^3m^3 = +20.00%

Deliverables

Deliverables

- Department worked with PRA to develop business requirements and system design on the discrepancy report for operators.
- Department developed shadow billing report to quantify royalty impact for owners identified on OAF submissions.
  - MRIS uses final discrepancy report (on the reporting deadline) to generate a further report depicting potential royalty impacts if the discrepancies remain unresolved.
  - Commenced in May 2012 (March 2012 billing period) and expected to be run for at least six months (i.e. October 2012 (August 2012 billing period)) for volume variances identified on each month's final discrepancy report.
  - The potential royalty impact is the difference between the existing Crown royalty charge and a recalculated Crown royalty based on a default r_q.

PRA Report Definitions

- **A: Production Month**: The production month the data was reported for.
- **B: Volumetric Reporting BA ID**
- **C: Volumetric Reporting BA Name**
- **D: Volumetric Facility ID:** The Facility ID that reported the volumetric data.
- **E: Volumetric Facility Name**
- **F: Volumetric Amendment Number**
- **G: Volumetric Well ID:** The Well id that reported gas production.
- **H: Volumetric Gross Well Production**
- **I: Volumetric PE %**

PRA Report Definitions (cont'd)

- **J: Volumetric Well Production:** The calculated result of the Gross Well Production multiplied by the Volumetric PE %.
- **K: Volumetric PE Product:** The production Entity product used for this row of data on the report. There are 3 available GAS, OIL or ALLOC. The production entity screen will identify GAS or OIL. ALLOC is used when a well belongs to a multi well group i.e. a Unit but is on a royalty holiday or program and has been (should be) excluded from the group (unit) until the program ends.
- **L: Volumetric Contact Name**
- **M: Volumetric Contact Email**
- **N: Volumetric Contact Phone**
- **O: Production Entity:** The production entity (PE) the Volumetric Well Production belongs to.

PRA Report Definitions (cont'd)

- **P: Total Production Volume:** This is the sum of all the Volumetric Well Production quantities that belong to the PE. For a single well PE it will be the same value as column J, for a multi well PE it will be the sum of all the wells (column J) involved in the PE.
- **Q: Allocation Reporting BA Id**
- **R: Allocation Reporting BA Name**
- **S: Allocation Facility id:** The Facility id that reported the allocation data.
- **T: Allocation Facility Name**
- **U: Allocation Amendment Number**
- **V: Allocation Product:** The product being allocated on the SAF
- **W: Allocation Activity:** The activity being allocated on the SAF

PRA Report Definitions (cont'd)

- **X: Allocation From/to:** The from/to facility id on the SAF allocation
- **Y: Allocation Cascaded from:** The Cascaded from facility id on the SAF allocation
- **Z: Allocation Production Entity:** The Production Entity (PE) listed on the allocation (stream id)
- **AA: Allocation Gross Calc Volume**
- **AB: Allocation Calculated GE Volume:** The Gas equivalent of the volume allocated for gas this will be the same as the gross Calculated Volume (column AA) for liquids (NGLs) this will be the gross multiplied by the applicable gas equivalent factor.
- **AC: Allocation Contact Name**
- **AD: Allocation Contact Email**

PRA Report Definitions (cont’d)

- **AE: Allocation Contact Phone**
- **AF: Total Allocated Volume:** This is the sum of all the Allocation Calculated GE volume quantities that belong to the PE. For a single well PE it will be the same value as column AB, for a multi well PE it will be the sum of all the allocations (column AB) involved in the PE.
- **AG: Volume Difference:** The absolute value of the difference between production volume and allocated volume.
- **AH: Volume Difference%:** The percentage of the volume difference the percentage is capped at plus or minus 100%. It is the plus percentages that will be subject potential royalty recalculations.
- **AI: Volume Discrepancy Message Id**
- **AJ: Volume Discrepancy Message Text**

PRA Known Issues

- Allocations for the activity of PURDISP at a Battery (BT) to a Gas Plant (GP) are not being captured.
- The Registry does not currently know if a well completes its royalty program early. The Registry has been capturing the start and end date of the programs but now needs to record when a well completes the program early. Until this is fixed, wells that have completed their program and are in a multi-well PE (i.e. Unit) will incorrectly expect the allocation to a single well PE.
- Gas production less fuel, flare & vent that equals zero or near zero or a battery that has zero or near zero dispositions are appearing on the report.
- The sweep versions of the report will be generated and e-mail notifications will be sent to users who will be unable to open the report if they do not have experimental access. This is related to how notifications are generated and may take time to adjust.

MRIS Shadow Billing

Alberta
ENERGY

Production Allocation Discrepancy Report

Invoice #: 12345678901

Issue Date: 2012/06/30
Royalty Client: 1234
Name: PARENT COMPANY

Royalty Payer: 1234
Name: PARENT COMPANY
Address: XXXXXXXXXXXXXXXXXXXXXXXX
CALGARY AB X9X 9X9
CA

Stream Id	Production Period	Facility	Product	Volumetric Heat	Crown Interest	Previous rq	Previous Royalty Rate	Projected Royalty Rate	Previous Base Royalty	Projected Base Royalty	Previous Charge Amount	Projected Charge Amount	Charge Amount Difference
AB WI 100010000000W000	2009-03	AB GP 0000001	GAS	839	100.0000000	-17.231	7.418	28.229	255.80	973.42	253.93	966.31	712.38
AB WI 100020000000W000	2009-03	AB GP 0000002	GAS	723	100.0000000	-17.247	7.418	28.229	220.43	838.84	218.82	832.70	613.88
AB WI 100030000000W000	2009-03	AB GP 0000003	GAS	3,239	100.0000000	-7.887	7.418	28.229	987.52	3,757.94	980.31	3,730.50	2,750.19
AB WI 100040000000W000	2009-03	AB GP 0000004	C2-MX	4	100.0000000	-7.887	5.000	30.135	0.83	4.98	0.83	5.00	4.17
AB WI 100040000000W000	2009-01	AB GP 0000004	GAS	9,332	100.0000000	12.129	19.199	35.368	10,462.97	19,275.21	10,409.22	19,176.19	8,766.97
AB WI 100050000000W000	2009-03	AB GP 0000005	GAS	17,575	100.0000000	13.687	13.438	28.229	9,706.51	20,390.79	9,635.66	20,241.95	10,606.29
AB WI 100060000000W000	2009-03	AB GP 0000006	GAS	2,604	100.0000000	-12.211	7.418	28.229	793.92	3,021.20	788.12	2,999.13	2,211.01

******* End Of Report *******

Royalty Recalculation

- Recalculate royalty for January 2009 to present on all streams that have been identified on the Production Allocation Discrepancy Report, depending on whether a recalculation is prescribed.
  - If a stream's discrepancy is within +/-20.00%, it is not subject to a royalty recalculation.
  - If a stream's discrepancy is more than -20.00%, it is not subject to a royalty recalculation.
  - If a stream's discrepancy is greater than +20.00%, it is subject to a royalty recalculation.

- In all situations, volume discrepancies of less than 10.0 10^3m^3 are not subject to royalty recalculation.

Royalty Recalculation Examples

- Assuming a production volume of 100.0 10^3m^3:
  - If the SAF quantity is between 80.0 10^3m^3 and 120.0 10^3m^3, the discrepancy is within +/- 20.00% and the stream is not subject to a royalty recalculation.
  - If the SAF quantity is less than 80.0 10^3m^3, the discrepancy is more than -20.00% and the stream is not subject to a royalty recalculation.
  - If the SAF quantity is greater than 120.0 10^3m^3, the discrepancy is greater than +20.00% and the stream is subject to a royalty recalculation using a default r_q to recalculate Crown royalty on gas and ethane.

Report Exceptions

- DOE will recognize certain situations as report exceptions if it can be proven that the discrepancy is incorrectly classified on the report or if there are valid reasons why the discrepancy exceeds the tolerance.
- A report exception is only required if the allocated volumes exceed production as those volumes may be subject to royalty recalculation.
- Report exceptions must be initiated through written request to the Volumetric & Cost Reporting team, identifying the single well or multi-well PE, the reporting facility and the production period date range.
- Once approved, a report exception may be subject to periodic review.
- Examples of reporting situations that would be considered for a report exception include, but are not limited to, the following:
  - Wells in a multi-well PE that have completed their program and are incorrectly expected to have an allocation to a single well PE.
  - Wells that are tied to more than one multi-well PE where the production and allocation are not correctly aligned to each PE.

Next Steps

Next Steps

- Continue consultation with industry based on actual discrepancies
  - Evaluate effort level required to resolve discrepancies for prior years of 2009 through 2011 in order to determine an acceptable timeframe to commence royalty recalculation.
- DOE and industry reviews initial reports and outputs produced in May 2012
- Committee meeting in June 2012 to share and discuss observations
- Develop a plan of action in terms of how much time is required to resolve discrepancies
- DOE Contact Information

– #, A, B, H-P	780-644-1201	VCR1@gov.ab.ca
– C – G	780-644-1202	VCR2@gov.ab.ca
– Q – Z	780-644-1203	VCR3@gov.ab.ca
– Will Wong	780-415-0755	Will.Wong@gov.ab.ca

Discussion