National Energy Board

Office national de l'énergie

Short-term Canadian Natural Gas Deliverability

2014-2016

AN ENERGY MARKET ASSESSMENT • MAY 2014

Canada

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gas

Appendices

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ISSN: 1910-7773
NE2-1/2014E-PDF

This report is published separately in both official languages. This publication is available upon request in multiple formats.

ISSN: 1910-779X
NE2-1/2014F-PDF

Ce rapport est publié séparément dans les deux langues officielles. On peut obtenir cette publication sur supports multiples, sur demande.

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APPENDIX A

A1 Methodology (Detailed Description)

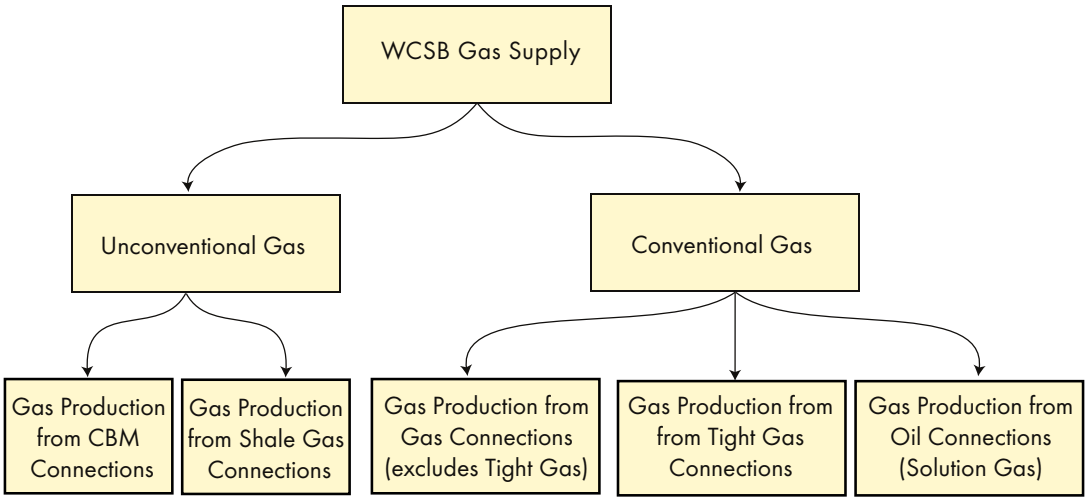
Canadian natural gas deliverability from 2014 to 2016 will consist of conventional gas supply from the WCSB with contributions from Atlantic Canada, Ontario, Northwest Territories, CBM production from Alberta, and shale gas production from Alberta and B.C. In this report, an analysis of trends in well production characteristics and resource development expectations was undertaken to develop parameters that define future natural gas deliverability from the WCSB. A different approach was undertaken for other regions of Canada where production is sourced from a smaller number of wells.

A1.1 WCSB Gas Supply

To assess gas deliverability for the WCSB, gas production was split into two major categories as shown in Figure A1.1.

FIGURE A1.1

WCSB Major Gas Supply Categories for Deliverability Assessment



The methodology to determine gas deliverability associated with conventional gas connections (including tight gas), CBM connections, and shale gas is described below. Canadian shale gas included in this analysis is also tight gas but is split out to provide more detailed information. The methodology to determine gas deliverability related to oil connections (solution gas) is described in section 1.2 of this appendix.

A1.1.1 Gas Connections from Gas Wells

The methodology used to assess deliverability is mostly the same for conventional gas connections (including tight gas) and CBM connections. Production decline analysis on historical production data was used to determine parameters that define future performance. In the case of CBM, shale gas, and Montney tight gas, historical data is more limited, so the views gathered in consultations with industry played a larger role in establishing the performance parameters.

A1.1.1.1 Groupings for Production Decline Analysis

Different groupings of conventional gas connections (including tight gas), shale gas, and CBM connections were made to assess well performance characteristics. Conventional gas connections were grouped geographically on the basis of the Petrocube areas in Alberta, B.C., and Saskatchewan, as shown in Figure A1.2. Conventional gas connections in each area were also grouped by zone. In this analysis, gas deliverability from the Montney formation is separate from the other tight gas sources.

FIGURE A1.2

WCSB Area Map

Within each Petrocube area and zone, gas connections were grouped by connection year, with all connections made prior to 1999 forming a single grouping, and separate groupings for each year from 1999 through 2012.

CBM connections were grouped primarily by zone into three categories:

- Horseshoe Canyon Main Play
- Mannville CBM, and
- Other CBM

For the projection period, CBM development is expected to occur only in Alberta.

Within each of the three categories of CBM resources, connections were also grouped by connection year. Due to the short period of commercial production, there are fewer connection year groupings. For the Horseshoe Canyon Main Play and Other CBM categories, there is a single grouping for all connections made prior to 2004, and separate groupings for each year from 2004 through 2012. For Mannville CBM, a single grouping was made for all connections made prior to 2006, and separate groupings for each following year.

Existing Connections vs. Future Connections

In this report, "existing connections" are connections brought on production prior to January 1, 2013, and "future connections" are connections brought on production from January 1, 2013 onwards. The methodology applied to make the gas deliverability projections for existing connections is substantially different from what is done to assess deliverability for future connections.

A1.1.1.2 Methodology for Existing Connections

For **existing connections**, production decline analysis on historical production data is done on each grouping (gas type/study area/zone/connection year) to develop two sets of parameters.

1. Group deliverability parameters-- describing deliverability expectations for the entire gas resource grouping.
2. Average connection deliverability parameters-- describing deliverability expectations for the average gas connection in the grouping (note—these only apply when the grouping represents a specific connection year).

The methodology for the production decline analysis on existing connections is described below. The group deliverability parameters and average connection deliverability parameters resulting from this analysis are contained in Appendices A.3 and A.4, respectively. In the deliverability model, the group deliverability parameters are used to make the deliverability projection for existing connections.

Production Decline Analysis Methodology

The production decline analysis procedure described below applies to conventional gas connections (including tight gas), and CBM in the WCSB.

Conventional gas connections are grouped by study area, zone, and connection year. CBM connections in Alberta are grouped by producing zone and connection year. For each of these groupings, a data set of group marketable production history is created and, where the grouping represents a specific connection year, a data set of average connection marketable production history is also generated.

The data sets for group marketable production are generated as follows:

- Raw well production for gas connections in each grouping is summed by calendar month getting total group raw production by calendar month.
- The total group raw production by calendar month is multiplied by an average shrinkage factor that applies to the grouping and divided by the number of days in each month to get total monthly marketable gas production and marketable gas production rate (MMcf/d) for each calendar month.
- Using this data set, plots of total daily marketable production rate versus total cumulative marketable production are generated for each grouping.

The data sets for average connection production history are created as follows.

- The raw well production by month for each connection in the grouping is put in a data base.
- For each entry of production month for each connection, a value of normalized production month is calculated as the number of months between the month the connection began producing and the actual production month (this is the normalized production month).
- The raw production for connections in the grouping is summed by normalized production month and then multiplied by the average shrinkage factor that applies to the grouping, providing total marketable production by normalized production month.
- The total marketable production by normalized production month is then divided by the total number of connections in the grouping to get marketable production for the average connection by normalized production month.
- The marketable production for normalized production month is then divided by the average number of days in a month, or 30.4375, giving the production rate for the average connection in the grouping by normalized production month. (Note: due to the different number of production months for connections in the grouping coming on stream at different times of the year, some production data could not be used in the calculation of the average connection production rate).
- Using this data set, plots of daily marketable production rate versus cumulative marketable production for the average connection were generated for each grouping.

For conventional gas connections, the following procedures are applied in performing production decline analysis using the group and average connection historical production data sets:

- **Production Decline Analysis for the Pre-1999 Connections**

  In each study area, the group rate versus cumulative production plot for the grouping of gas connections on production prior to 1999 is the first to be evaluated. In all study areas, a stable exponential decline for the past several years was exhibited. The group plot for all the connections prior to 1998 yields a current marketable production rate, a stable decline rate applicable to future production, and a terminal decline that may be applicable to later connection year groupings for the study area.

- **Evaluate Connection Year 1999 through 2012**

  After the initial aggregate connection year is evaluated for a study area, each connection year is evaluated in sequence, from 1999 through 2012.

a. **Production Decline Analysis for the Average Connection:**

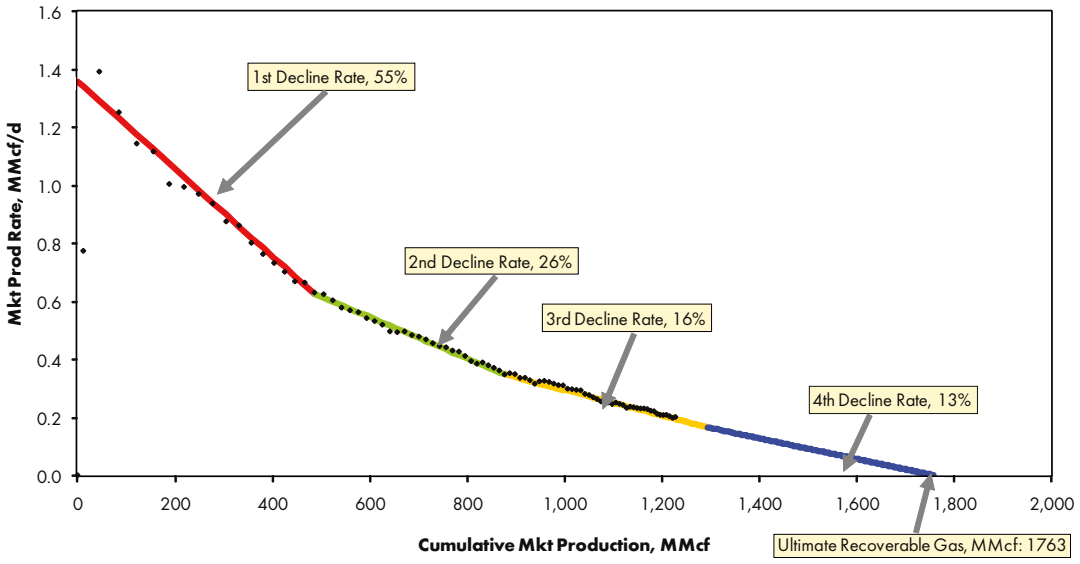
For each connection year, the rate versus cumulative production plot for the average connection is evaluated first to establish the following parameters that describe the production profile of the average connection over the entire productive life:

- Initial Production Rate
- First Decline Rate
- Second Decline Rate
- Months to Second Decline Rate- usually around 18 months
- Third Decline Rate
- Months to Third Decline Rate- usually around 45 months
- Fourth Decline Rate
- Months to Fourth Decline Rate- usually around 100 months.

Figure A1.3 shows an example of the plots used in evaluation of average connection performance, and the different decline rates that are applied to describe the production.

FIGURE A1.3

Example of Average Connection Production Decline Analysis Plot



Source: NEB analysis of Divestco Geovista well production data

For the earlier connection years, the available data is usually sufficient to establish all of the above parameters. For more recent connection years, the duration of historical production data becomes shorter and the parameters describing the later life decline performance must be taken from that determined for earlier connection years. In the example shown in Figure A1.3, the available data is sufficient to determine parameters defining the first, second, and third decline periods for the connection, but the parameters defining the fourth decline period must be assumed based on the analysis of earlier connection years.

It is assumed that, unless the historical data for the connection year indicates otherwise, the fourth decline rate will equal the terminal decline rate for the grouping established through evaluation of all pre-1999 connections, and that period of the terminal decline rate will commence after 120 months of production.

The decline parameters determined in this manner for average connections are available in Appendix A4.

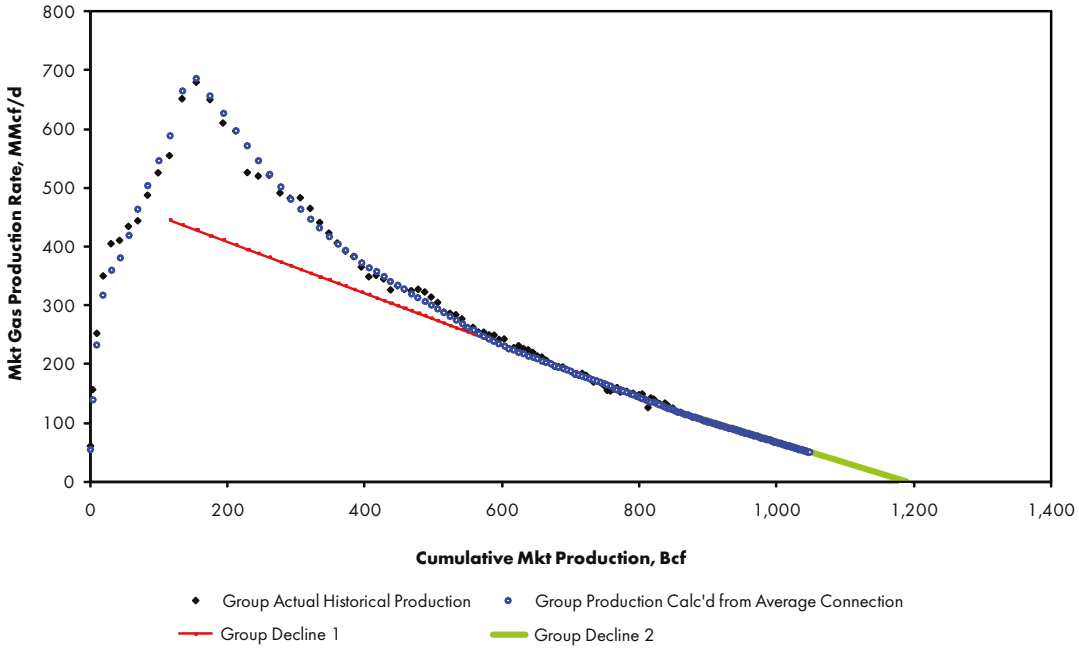
b. **Production Decline Analysis for the Group Data:**

Once the performance parameters for the average connection are established, the procedure focuses on evaluation of group performance parameters.

As a first step, the average connection performance parameters are combined with the known connection schedule to calculate the expected group performance. This is plotted with the actual group performance data. If the data calculated from average connection performance data does not provide a good match with the actual historical production data for the group, then the average connection parameters may be revised until a good match is obtained between calculated group production data (from average connection data) and actual group production data. An example of the group plots described here is shown in Figure A1.4.

FIGURE A1.4

Example of Group Production Decline Analysis Plot



Source: NEB analysis of Divestco Geovista well production data

The following group performance parameters are determined from the group plot:

- Production Rate as of December 2012
- First Decline Rate
- Second Decline Rate (if applicable)

- Months to Second Decline Rate (if applicable)
- Third Decline Rate (if applicable)
- Months to Third Decline Rate (if applicable)
- Fourth Decline Rate (if applicable)
- Months to Fourth Decline Rate (if applicable)

In the earlier connection year groupings (2001, 2002, etc.), the actual group data is usually stabilized by the current date at or near the terminal decline rate established via the pre-1999 aggregate grouping. In these cases a single decline rate sufficiently describes the entire remaining productive life of the grouping. In these cases the expected performance calculated from average connection data has little influence over determination of the group parameters.

In later connection years (2010, 2011, etc.) actual group production history data cannot provide a good basis upon which to project future deliverability. In these cases the expected performance calculated from average connection data is vital to establishing the current and future decline rates applicable for the connection year.

Group performance parameters determined in this manner are available in Appendix A3.

Production Decline Analysis of CBM

The production decline analysis procedure described above is also applied to the CBM groupings, subject to the following:

1. The short production history of CBM in Alberta makes it difficult to establish long term decline rates based on historical data, especially with regard to Mannville CBM. Nevertheless, decline rates that describe the full productive life of CBM connections are still estimated in this EMA, based on industry consultations, and on the NEB's view of ultimate gas recovery for the average connections for the different CBM groupings.
2. Mannville CBM connections have a different performance profile than the other gas resources in the WCSB. While gas connections for all other groupings can be described by an initial production rate that declines in a relatively predictable manner, Mannville CBM connections go through a dewatering phase with gas production increasing over a period of months to a peak rate. After the peak rate is reached decline will occur. Thus a slightly different set of parameters is used to describe performance of the average connection for Mannville CBM, with initial production rate being replaced by "Months to Peak Production" and "Peak Production Rate".

A1.1.1.3 Methodology for Future Connections

For future connections, deliverability is projected based on the number of future connections and the expected average performance characteristics of those connections. The drilling projection is used to estimate the number of future gas connections. Historical trends in average connection performance parameters, obtained from production decline analysis of existing gas connections, are used to estimate average connection performance parameters for future connection years.

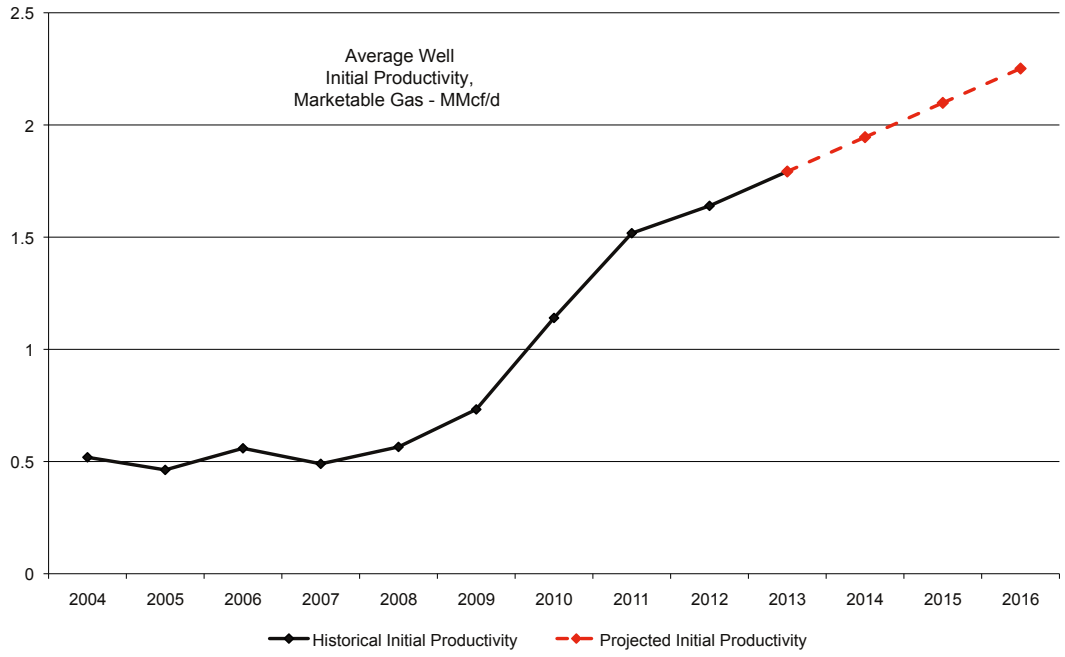
A1.1.1.3.1 Performance of Future Connections

The performance of future connections is obtained in each resource grouping by extrapolating the production performance trends for average connections in past connection years. The performance parameters estimated are initial productivity of the average connection and the associated decline rates.

In many groupings, each new connection year follows a trend of decreasing initial productivity for the average conventional gas connection. This trend is evident in Figure A1.5, which shows the initial production rate over time for conventional gas connections in the West Central Alberta Tertiary conventional grouping. Recently, however, there has been a trend in some tight and shale groupings where initial productivity for the average gas connection has been increasing. The Initial Production Rate for future gas connections is estimated by extrapolating the trend in each resource grouping. Historical and projected initial productivity values for the average connection for all gas resource groupings are contained in Appendices A3 and A4.

FIGURE A1.5

Example of Initial Productivity of Average Connections by Connection Year
West Central Alberta Tertiary Conventional Grouping



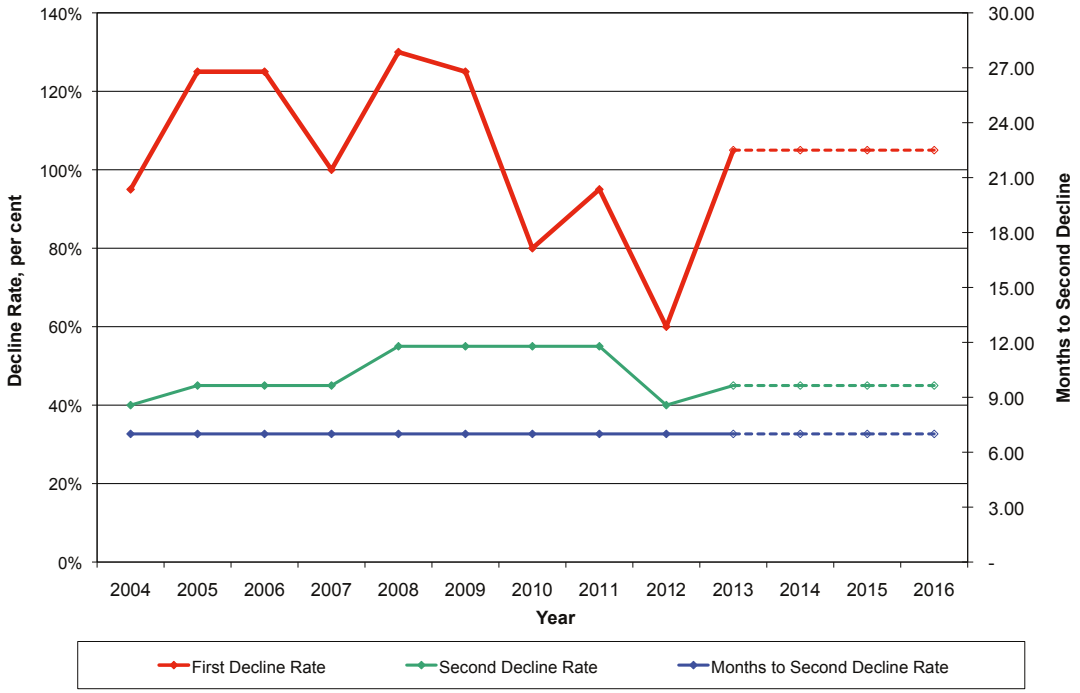
Source: NEB analysis of Divestco well production data

The key decline parameters impacting short-term deliverability are the first decline rate, second decline rate, and months to second decline rate. Figure A1.6 shows the historical and projected values of these key decline parameters for the average connections during the years 2004 through 2016 for conventional gas connections in the Southwest Alberta, Tertiary, Upper Cretaceous, Upper Colorado grouping. As shown in Figure A1.6, trends seen in the decline parameters in past connection years are used to establish these key parameters for future years.

FIGURE A1.6

Example of Key Decline Parameters for Average Connections over time

Southwest Alberta, Tertiary, Upper Cretaceous, Upper Colorado Conventional Grouping



A1.1.1.3.2 Number of Future Connections

Projecting the number of future connections requires an estimate of the annual number of gas-intent (including tight gas), shale-intent, and CBM-intent wells for each resource grouping and then multiplying by the ratio of annual connections to annual wells.

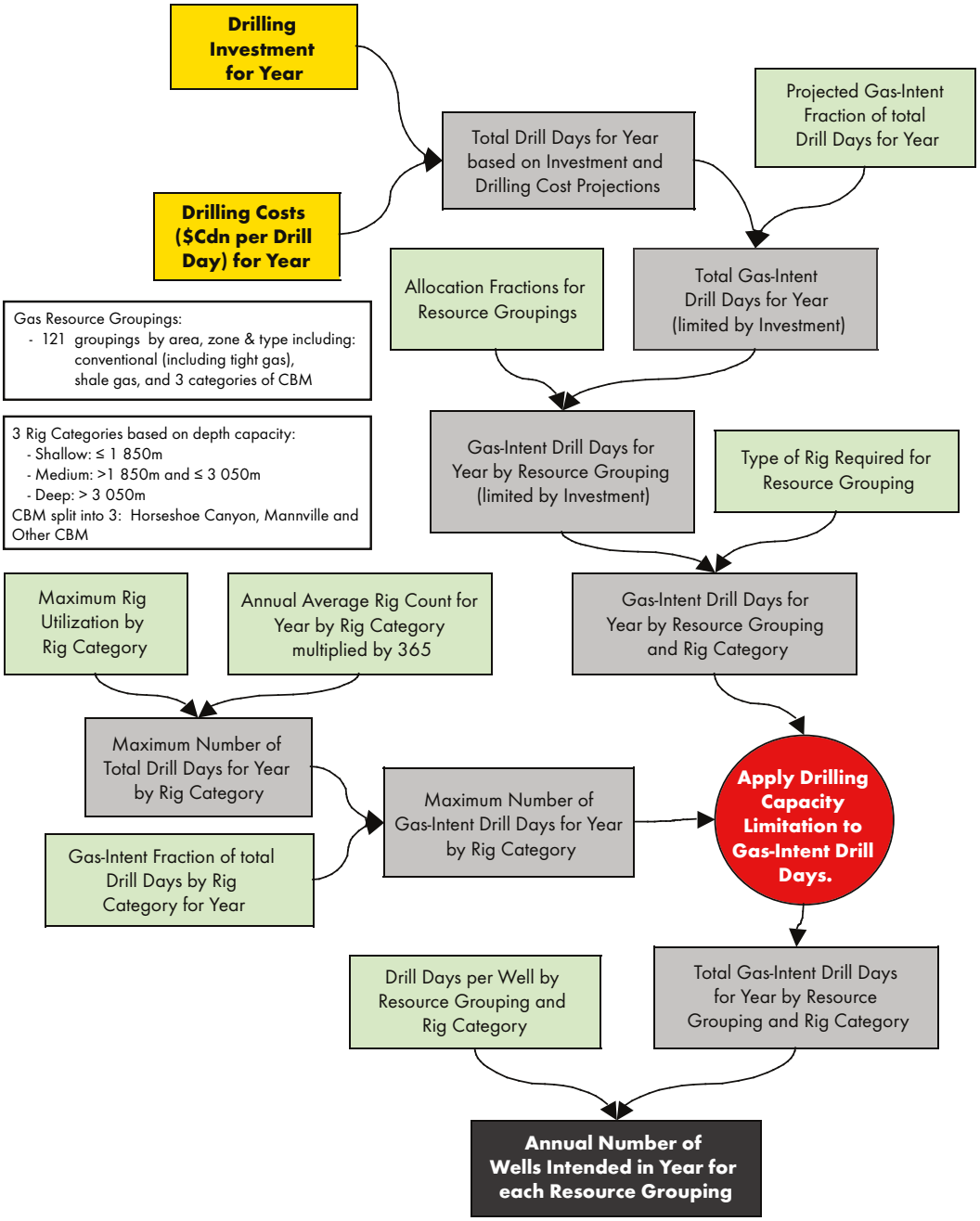
Shown in Figure A1.7 is the methodology for projecting the number of gas-intent and CBM-intent wells for each year over the projection period. The key inputs are **Annual Drilling Investment** and **Costs per Drill Day**. Adjustments to these two key inputs (shown as yellow boxes in Figure A1.7) produce different drilling activity situations in the WCSB. Other inputs required by the procedure are shown in the green boxes in Figure A1.7. The values projected for these other inputs are estimated from an analysis of historical data.

The Board projects an allocation of gas-intent drill days for each of the resource groupings. The allocation fractions are determined from historical trends, recent estimates of supply costs, and the Board's view of development potential for the resource groupings. The allocation fractions reflect the historical trends of an increasing focus on the deeper formations located in the western side of the basin, increasing interest in tight gas and gas shales in B.C, and further development of liquids rich/ wet natural gas. Tables of the historical data (drill days and allocation fractions) and the projected allocation fractions are available in Table B1.

After allocating the gas-intent drill days to the resource groupings, a check is completed against drilling capacity to ensure that physical drilling limitations are not exceeded. The number of gas-intent wells drilled in each year is calculated by dividing the drill days targeting each resource grouping by the applicable average number of drill days per well.

FIGURE A1.7

Flowchart of NEB Drilling Projection Methodology



For each resource grouping, a connection ratio (the ratio of annual connections to annual wells drilled targeting a grouping) is estimated based on historical data. The annual number of wells drilled is multiplied by the connection ratio to obtain the number of annual connections for each resource grouping. The connection ratios for each resource grouping are provided in Table B.2. The annual number of connections for each resource grouping is allocated to each month of the year in accordance with the established historical connection schedule.

A1.1.2 Solution Gas

Solution gas is gas produced from oil wells in conjunction with the crude oil and accounts for about nine per cent of total marketable gas production in the WCSB. To estimate deliverability of solution gas, oil connections are grouped by study area and production decline analysis is performed on the entire grouping to obtain the current production rate and the decline rate. The deliverability resulting from these parameters is deemed to represent all solution gas deliverability (i.e. deliverability from both existing and future connections).

A1.1.3 Yukon and Northwest Territories

In the Yukon and Northwest Territories, conventional gas was produced from two pools close to the territorial border of 60 degrees north latitude. These two pools (or fields) are Kotaneelee and Cameron Hills. Kotaneelee production ceased in September 2012. Much further to the north, the Ikhil and Norman Wells fields also produce small amounts of gas that serve local purposes and are not tied into the North American pipeline grid. With the limited number of producing wells and development activity in the Cameron Hills area, production decline analysis for the existing gas connections provides a good estimate of future deliverability. No deliverability from the Mackenzie Delta and elsewhere along the Mackenzie Corridor is included during the three year projection period.

In this report, gas deliverability of the southerly fields tied into the pipeline grid is represented as total deliverability from the Yukon and Northwest.

A1.2 Atlantic Canada

For producing wells from offshore Nova Scotia, production profiles are based on an average of the decline rates in the five producing fields. No additional infill wells are assumed for the producing fields over the projection period. The parameters used in the compression analysis are based on discussions with industry representatives. Deliverability from the Deep Panuke development started in fall 2013.

Onshore production from the McCully Field in New Brunswick was connected into the regional pipeline system at the end of June 2007. Future development and performance of the field is based on corporate development plans and industry consultations, and takes into consideration the performance of existing wells.

Due to the early stage of assessment and lack of data, reasonable estimates of onshore CBM and shale gas deliverability in Nova Scotia and New Brunswick cannot be developed at this time.

A1.3 Other Canadian Production

The WCSB, Yukon and Northwest Territories, and Atlantic Canada discussed in the preceding sections of this chapter account for almost all of Canada's deliverability. This minor remaining amount of Canadian deliverability is from Ontario. Deliverability from Ontario is projected by extrapolation of historical production volumes. Due to the early stage of assessment and lack of data, reasonable estimates of Quebec natural gas deliverability cannot be developed at this time.

A1.4 Canadian Deliverability and Canadian Demand

Canadian natural gas demand is met within the integrated North American natural gas market by a combination of Canadian natural gas deliverability and imports of U.S. gas.

Natural gas deliverability is defined as the estimated amount of gas supply that could be produced from a given area, after field processing, based on historical production and individual well declines, as well as projected activity. All estimated gas use prior to the outlet from field processing plants has already been deducted from the deliverability estimate, and likewise is not included in the demand estimate. Gas consumed at the Goldboro processing facility in Nova Scotia is in this category of field processing and has therefore already been deducted from Atlantic Canada deliverability.

Current and projected Canadian gas demand is divided geographically at the Saskatchewan-Manitoba border into Western and Eastern Canada demand. Western Canada demand includes gas volumes withdrawn during the recovery of natural gas liquids at straddle plants. Approximately 85 to 90 per cent of the gas volumes leaving Alberta are processed through the straddle plants, where much of the ethane in the gas stream is extracted along with traces of other NGLs and heavier components remaining after field processing. A table of the Average Annual Canadian Deliverability and Demand is available in Appendix E.

Canadian gas demand includes gas required for pipeline fuel in the respective areas. The Board's projection of Canadian gas demand is based on historical trends and expected major increments of gas-fired power generation and industrial projects (including oil sands developments). The demand projection is based on the assumption of average weather conditions. Considerable variability in actual gas demand is possible due to the impact of weather variation on Canada's space heating needs.

A2 Deliverability Parameters - Results

A2.1 WCSB

Using the Board's methodology, connections in the WCSB are categorized as either gas or oil. Gas connections are further categorized as conventional (including the tight gas sub-category), and unconventional (including shale gas and CBM). Connections are grouped based on geographical area, producing zone, and connection year, with different grouping criteria applied to different types of connections.

In the case of existing gas connections (those on production prior to 1 January 2013), and all oil connections (solution gas), production decline analysis is used to establish parameters that define future deliverability of each grouping. Section A2.1.1 below provides further discussion of the parameters resulting from the production decline analysis.

For future gas connections (those on production after 1 January 2013), the number of expected future connections and the expected production performance of those future connections is estimated to provide a basis for the deliverability projection. Section A2.1.2 below provides discussion of the parameters used to project deliverability for future gas connections.

A2.1.1 Production from Existing Gas Connections

The future deliverability of existing connections of the resource groupings comprising conventional (including tight gas), and unconventional (including shale gas and CBM), and all solution gas was determined via the production decline analysis procedure described in Appendix A3. The decline parameters describing the expected future deliverability of each grouping are listed in Appendix A3.

The deliverability parameters for these groupings **are not** impacted by the different price cases considered in this report. The different price cases are included to reflect uncertainty in future gas drilling activity only.

The parameters describing future deliverability for all of these groupings are the production rate as of December 2012 and as many as four future decline rates that apply to specified time periods in the future. For the older groupings of wells where production appears to have stabilized at a final decline rate, only one future decline rate is needed to describe future group deliverability. For newer well groupings, the decline rate that applies over future months changes as the group performance progresses towards the final stable decline period. For these newer well groupings, three or possibly four different decline rates have been determined to describe future performance.

The future deliverability projected for these groupings represents the deliverability that would occur from the WCSB if there were no further gas connections made after the end of 2011. Deliverability projections made in previous reports for these categories of groupings have proved to be very close to actual performance.

The Board's projections show that aggregate production for these groupings will decline by 13 per cent per year over 2013 to 2016. Deliverability from future gas connections supplements the declining deliverability from existing connections.

A2.1.2 Future Gas Connections

Deliverability associated with future gas connections is calculated for each resource grouping using estimates for production performance of the average connection and the number of connections in future years. The parameters associated with both of these inputs are discussed in the sections below.

While past deliverability projections for existing gas connections have enjoyed a high degree of accuracy, the certainty associated with the projections for future gas connections is less. The key uncertainty is the level of gas drilling that will occur. Three price cases have been created to address the uncertainty inherent in the gas drilling projections.

A2.1.2.1 Performance Parameters for Future Average Gas Connections

The production decline analysis procedures described in Appendix A.1 provide the basis for establishing performance parameters for future gas connections. The trends seen in average connection performance for the various groupings of existing connections are used to make an estimate of performance parameters for future gas connections.

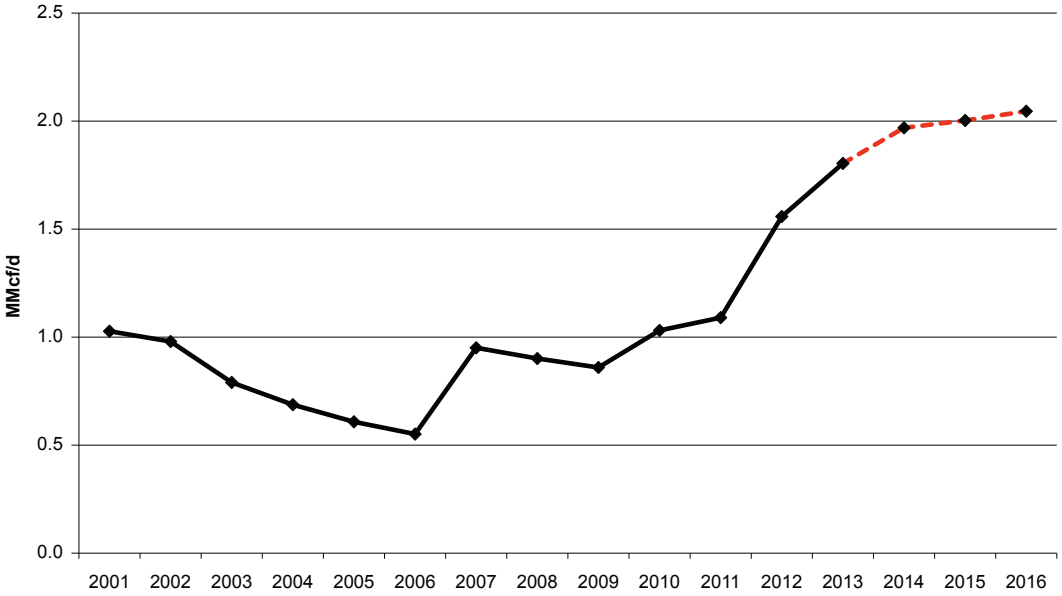
For conventional gas connections (including tight gas), the connections are grouped based on area, formation, and connection year from 1999 through 2012. These 13 connection year groupings are assessed for each grouping, providing an excellent historical data set to estimate performance of future wells.

Two trends are apparent in the performance parameters for the existing conventional gas connections.

- Decline rates applicable to the average connection are quite stable over the past several connection years.
- Initial productivity of the average connection increases from connection year to connection year.

FIGURE A2.1

WCSB Initial Productivity of Average Conventional Gas Connections by Connection Year



Source: NEB Analysis of Divestco Well Production Data

TABLE A2.1

WCSB Initial Productivity of Average Gas Connections by Connection Year by Area - MMcf/d

Area	2006	2007	2008	2009	2010	2011	2012
00 - Alberta CBM	0.103	0.103	0.099	0.067	0.047	0.046	0.037
01 - Southern Alberta	0.108	0.097	0.119	0.105	0.145	0.130	0.083
02 - Southwest Alberta	0.237	0.227	0.308	0.303	0.259	0.241	0.142
03 - Southern Foothills	1.181	0.342	0.151	0.683	0.008		
04 - Eastern Alberta	0.077	0.075	0.080	0.093	0.092	0.102	0.097
05 - Central Alberta	0.197	0.210	0.196	0.204	0.227	0.168	0.169
06 - West Central Alberta	0.354	0.416	0.509	0.453	0.505	0.580	1.131
07 - Central Foothills	1.236	2.560	2.152	1.599	1.628	2.966	2.466
08 - Kaybob	0.641	0.660	0.561	0.742	0.697	0.803	0.530
09 - Alberta Deep Basin	0.472	0.750	0.779	1.057	1.022	0.811	0.953
10 - Northeast Alberta	0.144	0.162	0.163	0.149	0.135	0.171	0.051
11 - Peace River	0.461	0.542	0.484	0.596	0.530	0.509	1.298
12 - Northwest Alberta	0.318	0.273	0.391	0.731	0.334	0.122	0.035
13 - BC Deep Basin	0.652	1.294	1.431	1.388	2.482	2.105	1.330
14 - Fort St. John	0.793	1.085	1.218	1.450	1.426	1.297	1.022
15 - Northeast BC	0.577	0.741	1.040	1.016	2.168	1.867	2.217
16 - BC Foothills	1.887	1.021	1.552	1.254	1.644	2.193	2.232
17 - Southwest Saskatchewan	0.027	0.027	0.026	0.018	0.016	0.028	0.027
18 - West Saskatchewan	0.079	0.069	0.068	0.062	0.056	0.078	0.033
Total WCSB	*0.551*	*0.951*	*0.901*	*0.859*	*1.031*	*1.090*	*1.558*

Source: NEB Analysis of Divestco Well Production Data

With respect to initial productivity of the average gas connection, the overall trend for the WCSB is shown in Figure A2.1. After decreases in initial productivity over 2001 to 2006, the trend reversed upward for 2007, remained fairly stable through 2009, and continued upward through to 2013 as higher initial productivity rates from tight gas and shale gas wells began to represent a growing share of the wells drilled in a year. Initial productivity over the projection is almost flat primarily due to holding the rates constant for most gas wells.

Table A2.1 shows the historical average initial production rates for the average gas connections for each area. Appendices A3 and A4 provide a complete listing of all performance parameters for average connections by grouping for both historical and future connection year groupings.

The average connection performance parameters projected for connection years 2013 through 2016 are the same in all three price cases assessed in this report. Variance between the cases is affected by applying different levels of gas drilling activity as discussed further in section 1.2.2 of this appendix.

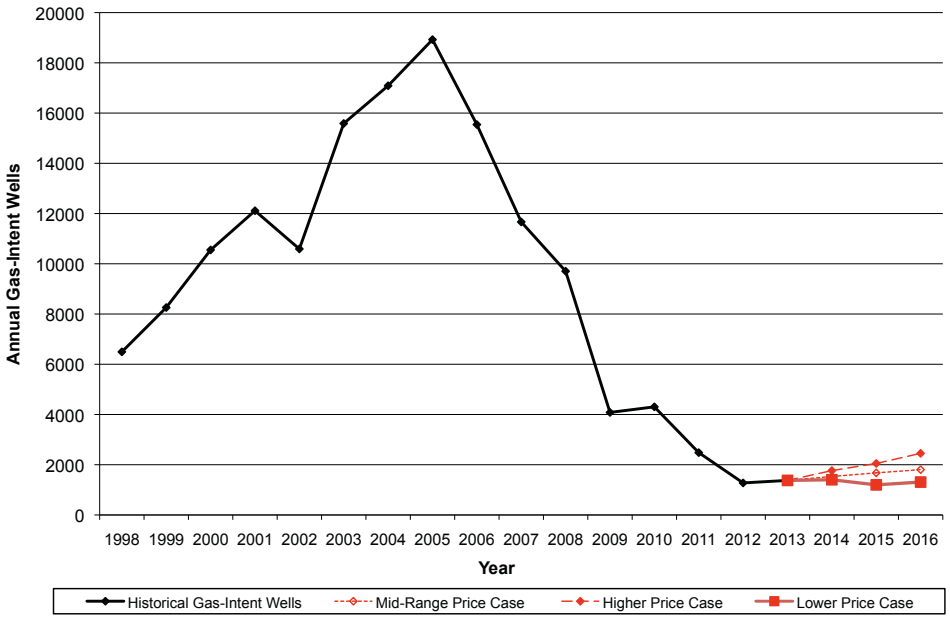
A2.1.2.2 Number of Future Gas Connections

The projected number of connections by year and the projected production performance of the average connections in those years are applied to provide deliverability associated with future gas connections. To determine the number of future gas connections, projections of gas-intent drilling are made for each of the resource groupings. The annual number of wells targeted to each grouping is applied to the ratio of annual connections to annual wells for that grouping to provide the annual number of connections.

Volatile and unpredictable market conditions are expected to be the primary influence on gas-intent drilling activity. As a result, there is a high degree of uncertainty in the gas drilling activity that might occur in the coming years. Three drilling activity cases (Mid-Range, Higher, and Lower) that are based on projections of gas price reflect a range of market conditions that may occur over the projection period. Figure A2.2 indicates the projected number of gas-intent wells for all resource grouping in each case.

FIGURE A2.2

WCSB Gas-Intent Drilling Cases



Detailed tabulations of projected annual gas-intent-wells, connection ratios, and annual connections for each resource grouping for each case are provided in Table B2.

A2.2 Atlantic Canada, Ontario, and Quebec

As indicated in Appendix A1, deliverability from Atlantic Canada and Ontario is based on extrapolation of prior trends. No additional wells over the 2014 to 2016 period are assumed to be drilled that would contribute to deliverability at this time.

Marketable production from the Deep Panuke development started in fall 2013.

Future development and performance of the McCully field in New Brunswick is based on corporate development plans and consultations with industry. No additional drilling is expected over the projection period. Consequently, this report does not show any natural gas deliverability throughout the projection period.

Testing of onshore CBM and shale gas prospects is ongoing in Atlantic Canada. Due to the early stage of development, reasonable estimates of onshore CBM productivity cannot be developed due to a lack of data.

Deliverability from Ontario continues to decline with no additional drilling expected over the projection period.

Shale gas potential exists in Quebec; however, insufficient data is available. Consequently, this report does not show any natural gas deliverability throughout the projection period.

A3 Decline Parameters for Groupings of Existing Gas Connections

Table A3.1 - Formation Index

Formation	Abbreviation	Group Number
Tertiary	Tert	02
Upper Cretaceous	UprCret	03
Upper Colorado	UprCol	04
Colorado	Colr	05
Upper Mannville	UprMnvl	06
Middle Mannville	MdlMnvl	07
Lower Mannville	LwrMnvl	08
Mannville	Mnvl	06;07;08
Jurassic	Jur	09
Upper Triassic	UprTri	10
Lower Triassic	LwrTri	11
Triassic	Tri	10;11
Permian	Perm	12
Mississippian	Miss	13
Upper Devonian	UprDvn	14
Middle Devonian	MdlDvn	15
Lower Devonian	LwrDvn	16
Horseshoe Canyon	HSC	–
Mannville CBM	Mannville	–

Table A3.2 - Grouping Index

Area name	Area Number	Resource Type	Resource Group
CBM Area	00	CBM	Main HSC
CBM Area	00	CBM	Mannville
Southern Alberta	01	Conventional	Tert;UprCret;UprColr
Southern Alberta	01	Conventional	Colr
Southern Alberta	01	Conventional	Mnvl
Southern Alberta	01	Tight	UprColr
Southwest Alberta	02	Conventional	Tert;UprCret;UprColr
Southwest Alberta	02	Conventional	Colr
Southwest Alberta	02	Conventional	MdlMnvl;LwrMnvl
Southwest Alberta	02	Conventional	Jur;Miss
Southwest Alberta	02	Conventional	UprDvn
Southwest Alberta	02	Tight	UprColr
Southwest Alberta	02	Tight	Colr
Southwest Alberta	02	Tight	LwrMnvl
Southern Foothills	03	Conventional	Miss;UprDvn
Eastern Alberta	04	Conventional	UprCret;UprColr
Eastern Alberta	04	Conventional	Colr;Mnvl
Eastern Alberta	04	Tight	UprColr
Eastern Alberta	04	Shale	Duvernay
Central Alberta	05	Conventional	Tert;UprCret
Central Alberta	05	Conventional	Colr
Central Alberta	05	Conventional	Mnvl
Central Alberta	05	Conventional	Miss;UprDvn
Central Alberta	05	Tight	Colr
Central Alberta	05	Tight	Mvl
Central Alberta	05	Tight	Montney
Central Alberta	05	Shale	Duvernay
West Central Alberta	06	Conventional	Tert
West Central Alberta	06	Conventional	UprCret;UprColr
West Central Alberta	06	Conventional	Mnvl
West Central Alberta	06	Conventional	LwrMnvl; Jur
West Central Alberta	06	Conventional	Miss
West Central Alberta	06	Conventional	UprDvn
West Central Alberta	06	Tight	Colr
West Central Alberta	06	Tight	Mnvl
West Central Alberta	06	Tight	Montney
West Central Alberta	06	Shale	Duvernay
Central Foothills	07	Conventional	UprColr
Central Foothills	07	Conventional	Colr;Mnvl
Central Foothills	07	Conventional	Jur;Tri;Perm
Central Foothills	07	Conventional	Miss
Central Foothills	07	Conventional	UprDvn;MdlDvn
Central Foothills	07	Tight	UprColr;Colr
Central Foothills	07	Tight	Mnvl
Central Foothills	07	Tight	Jur
Central Foothills	07	Tight	Montney
Central Foothills	07	Shale	Duvernay
Kaybob	08	Conventional	UprColr;Colr
Kaybob	08	Conventional	Mnvl;Jur
Kaybob	08	Conventional	Tri
Kaybob	08	Conventional	UprDvn
Kaybob	08	Tight	Colr;Mnvl
Kaybob	08	Tight	Tri
Kaybob	08	Tight	Montney
Kaybob	08	Shale	Duvernay
Alberta Deep Basin	09	Conventional	UprCret
Alberta Deep Basin	09	Conventional	UprColr
Alberta Deep Basin	09	Conventional	Mnvl;Jur
Alberta Deep Basin	09	Conventional	Tri

Area name	Area Number	Resource Type	Resource Group
Alberta Deep Basin	09	Conventional	UprDvn
Alberta Deep Basin	09	Tight	UprColr
Alberta Deep Basin	09	Tight	Colr
Alberta Deep Basin	09	Tight	Mnvl;Jur
Alberta Deep Basin	09	Tight	Tri
Alberta Deep Basin	09	Tight	Montney
Alberta Deep Basin	09	Shale	Duvernay
Northeast Alberta	10	Conventional	Mnvl;UprDvn
Peace River	11	Conventional	UprColr
Peace River	11	Conventional	Colr;UprMnvl
Peace River	11	Conventional	MdlMnvl;LwrMnvl
Peace River	11	Conventional	UprTri
Peace River	11	Conventional	LwrTri
Peace River	11	Conventional	Miss
Peace River	11	Conventional	UprDvn;MdlDvn
Peace River	11	Tight	UprColr
Peace River	11	Tight	MdlMnvl;LwrMnvl
Peace River	11	Tight	UprTri
Peace River	11	Tight	LwrTri
Peace River	11	Tight	Tri
Peace River	11	Tight	Miss
Peace River	11	Tight	Montney
Peace River	11	Shale	Duvernay
Northwest Alberta	12	Conventional	Mnvl
Northwest Alberta	12	Conventional	Miss
Northwest Alberta	12	Conventional	UprDvn
Northwest Alberta	12	Conventional	MdlDvn
Northwest Alberta	12	Shale	Duvernay
BC Deep Basin	13	Conventional	Colr
BC Deep Basin	13	Conventional	LwrTri
BC Deep Basin	13	Tight	Colr
BC Deep Basin	13	Tight	Mnvl
BC Deep Basin	13	Tight	LwrTri
BC Deep Basin	13	Tight	Montney
Fort St. John	14	Conventional	Mnvl
Fort St. John	14	Conventional	Tri
Fort St. John	14	Conventional	Perm;Miss
Fort St. John	14	Conventional	UprDvn;MdlDvn
Fort St. John	14	Tight	Mnvl
Fort St. John	14	Tight	Tri
Fort St. John	14	Tight	Perm;Miss
Fort St. John	14	Tight	Dvn
Fort St. John	14	Tight	Montney
Northeast BC	15	Conventional	LwrMnvl
Northeast BC	15	Conventional	Perm;Miss
Northeast BC	15	Conventional	UprDvn;MdlDvn
Northeast BC	15	Tight	UprDvn
Northeast BC	15	Shale	Cordova
Northeast BC	15	Shale	Horn River
Northeast BC	15	Shale	Liard
BC Foothills	16	Conventional	Colr;Mnvl
BC Foothills	16	Conventional	Tri;Perm;Miss
BC Foothills	16	Tight	LwrTri
BC Foothills	16	Tight	Tri
BC Foothills	16	Tight	Montney
Southwest Saskatchewan	17	Tight	UprColr
West Saskatchewan	18	Conventional	Colr
West Saskatchewan	18	Conventional	MdlMnvl;LwrMnvl;Miss
East Saskatchewan	19	Conventional	Solution Gas

Table A3.3 - Decline Parameters for Groupings of Existing Gas Connections

Resource Grouping - Gas - Alberta Coalbed Methane - Horseshoe Canyon						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2006	195.83	0.14	0.12	25	0.10	60
2007	128.52	0.14	0.12	25	0.10	60
2008	98.79	0.14	0.12	25	0.10	60
2009	101.79	0.14	0.12	25	0.10	60
2010	62.71	0.14	0.12	25	0.10	60
2011	57.08	0.16	0.14	25	0.12	60
2012	45.66	0.16	0.14	25	0.12	60

Resource Grouping - Gas - Alberta Coalbed Methane - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2007	32.15	0.16	0.14	25	0.12	60
2008	39.38	0.14	0.12	25	0.10	60
2009	8.51	0.14	0.12	25	0.10	60
2010	4.85	0.14	0.12	25	0.10	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Alberta Coalbed Methane - Other						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2006	29.57	0.10	0.08	25	0.05	60
2007	41.87	0.10	0.08	25	0.05	60
2008	45.39	0.10	0.08	25	0.05	60
2009	16.32	0.10	0.08	25	0.05	60
2010	7.58	0.10	0.08	25	0.05	60
2011	4.49	0.16	0.14	25	0.12	60
2012	1.80	0.16	0.14	25	0.12	60

Resource Grouping - Gas - Southern Alberta - Conventional - Tertiary, Upper Cretaceous, Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	47.73	0.16	0.12	25	0.05	60
2005	32.40	0.16	0.14	25	0.12	60
2006	30.73	0.16	0.12	25	0.05	60
2007	32.60	0.16	0.12	25	0.05	60
2008	25.40	0.16	0.12	25	0.05	60
2009	10.00	0.16	0.12	25	0.05	60
2010	12.06	0.16	0.14	25	0.12	60
2011	5.03	0.16	0.14	25	0.12	60
2012	2.21	0.16	0.12	25	0.05	60
2011	8.23	0.16	0.14	25	0.12	60

Resource Grouping - Gas - Southern Alberta - Conventional - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	18.57	0.16	0.12	25	0.05	60
2005	15.28	0.16	0.12	25	0.05	60
2006	9.53	0.16	0.12	25	0.05	60
2007	17.57	0.16	0.12	25	0.05	60
2008	14.85	0.16	0.12	25	0.05	60
2009	2.85	0.16	0.12	25	0.05	60
2010	3.01	0.16	0.12	25	0.05	60
2011	1.07	0.16	0.12	25	0.05	60
2012	0.15	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southern Alberta - Conventional - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	45.03	0.16	0.12	25	0.05	60
2005	28.62	0.16	0.12	25	0.05	60
2006	30.23	0.16	0.12	25	0.05	60
2007	30.42	0.16	0.12	25	0.05	60
2008	31.68	0.16	0.12	25	0.05	60
2009	14.81	0.16	0.12	25	0.05	60
2010	12.00	0.16	0.12	25	0.05	60
2011	9.29	0.16	0.12	25	0.05	60
2012	2.60	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southern Alberta - Tight - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	335.93	0.16	0.12	25	0.05	60
2005	196.39	0.16	0.12	25	0.05	60
2006	181.50	0.16	0.12	25	0.05	60
2007	164.41	0.16	0.12	25	0.05	60
2008	134.27	0.16	0.12	25	0.05	60
2009	78.92	0.16	0.12	25	0.05	60
2010	47.00	0.16	0.12	25	0.05	60
2011	34.74	0.16	0.12	25	0.05	60
2012	3.88	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Conventional - Tertiary, Upper Cretaceous, Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	18.88	0.16	0.12	25	0.05	60
2005	24.00	0.16	0.12	25	0.05	60
2006	16.52	0.16	0.12	25	0.05	60
2007	14.07	0.16	0.12	25	0.05	60
2008	11.95	0.16	0.12	25	0.05	60
2009	2.64	0.16	0.12	25	0.05	60
2010	3.23	0.16	0.12	25	0.05	60
2011	2.24	0.16	0.12	25	0.05	60
2012	1.64	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Conventional - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.41	0.16	0.12	25	0.05	60
2005	2.62	0.16	0.12	25	0.05	60
2006	1.93	0.16	0.12	25	0.05	60
2007	0.92	0.16	0.12	25	0.05	60
2008	0.78	0.16	0.12	25	0.05	60
2009	0.10	0.16	0.12	25	0.05	60
2010	0.81	0.16	0.12	25	0.05	60
2011	0.30	0.16	0.12	25	0.05	60
2012	0.18	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Conventional - Middle Mannville, Lower Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	9.02	0.16	0.12	25	0.05	60
2005	11.38	0.16	0.12	25	0.05	60
2006	6.03	0.16	0.12	25	0.05	60
2007	6.31	0.16	0.12	25	0.05	60
2008	8.01	0.16	0.12	25	0.05	60
2009	4.10	0.16	0.12	25	0.05	60
2010	1.75	0.16	0.12	25	0.05	60
2011	2.65	0.16	0.12	25	0.05	60
2012	0.40	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Conventional - Jurassic, Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	5.62	0.16	0.12	25	0.05	60
2005	2.21	0.16	0.12	25	0.05	60
2006	0.45	0.16	0.12	25	0.05	60
2007	1.42	0.16	0.12	25	0.05	60
2008	1.31	0.16	0.12	25	0.05	60
2009	2.05	0.16	0.12	25	0.05	60
2010	0.63	0.16	0.12	25	0.05	60
2011	0.17	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Southwest Alberta - Conventional - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	6.07	0.20	0.12	25	0.05	60
2005	0.43	0.20	0.12	25	0.05	60
2006	1.96	0.16	0.12	25	0.05	60
2007	1.53	0.20	0.12	25	0.05	60
2008	0.34	0.25	0.12	25	0.05	60
2009	1.14	0.16	0.12	25	0.05	60
2010	0.47	0.20	0.12	25	0.05	60
2011	0.11	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Southwest Alberta - Tight - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	3.14	0.16	0.12	25	0.05	60
2005	3.40	0.20	0.12	25	0.05	60
2006	0.74	0.20	0.12	25	0.05	60
2007	1.34	0.20	0.12	25	0.05	60
2008	0.18	0.16	0.12	25	0.05	60
2009	0.08	0.20	0.12	25	0.05	60
2010	0.16	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.02	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Tight - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	1.42	0.20	0.12	25	0.05	60
2005	0.33	0.16	0.12	25	0.05	60
2006	0.11	0.16	0.12	25	0.05	60
2007	0.69	0.16	0.12	25	0.05	60
2008	0.81	0.16	0.12	25	0.05	60
2009	0.56	0.16	0.12	20	0.05	60
2010	0.13	0.16	0.12	25	0.05	60
2011	0.12	0.16	0.12	25	0.05	60
2012	1.20	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Alberta - Tight - Lower Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	24.16	0.16	0.12	25	0.05	60
2005	13.55	0.16	0.12	25	0.05	60
2006	22.90	0.16	0.12	25	0.05	60
2007	18.29	0.16	0.12	25	0.05	60
2008	10.32	0.16	0.12	25	0.05	60
2009	6.44	0.16	0.12	25	0.05	60
2010	2.83	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.60	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southern Foothills - Conventional - Mississippian, Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	54.06	0.16	0.12	25	0.05	60
2005	29.69	0.16	0.12	25	0.05	60
2006	87.80	0.16	0.12	25	0.05	60
2007	63.92	0.16	0.12	25	0.05	60
2008	13.29	0.16	0.12	25	0.05	60
2009	20.50	0.16	0.12	25	0.05	60
2010	0.03	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Eastern Alberta - Conventional - Upper Cretaceous, Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	28.25	0.16	0.12	25	0.05	60
2005	29.68	0.16	0.12	25	0.05	60
2006	27.49	0.16	0.12	25	0.05	60
2007	13.03	0.16	0.12	25	0.05	60
2008	17.63	0.30	0.22	18	0.11	40
2009	2.43	0.16	0.12	25	0.05	60
2010	2.72	0.16	0.12	25	0.05	60
2011	2.32	0.16	0.12	25	0.05	60
2012	2.93	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Eastern Alberta - Conventional - Colorado, Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	110.86	0.16	0.12	25	0.05	60
2005	118.28	0.16	0.12	25	0.05	60
2006	92.57	0.16	0.12	25	0.05	60
2007	62.64	0.16	0.12	25	0.05	60
2008	45.24	0.16	0.12	25	0.05	60
2009	27.37	0.16	0.12	25	0.05	60
2010	11.41	0.16	0.12	25	0.05	60
2011	4.88	0.16	0.12	25	0.05	60
2012	2.00	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Eastern Alberta - Tight - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	17.83	0.16	0.12	25	0.05	60
2005	54.06	0.16	0.12	25	0.05	60
2006	29.69	0.16	0.12	25	0.05	60
2007	87.80	0.16	0.12	25	0.05	60
2008	63.92	0.16	0.12	25	0.05	60
2009	13.29	0.16	0.12	25	0.05	60
2010	20.50	0.16	0.12	25	0.05	60
2011	0.03	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Central Alberta - Conventional - Tertiary, Upper Cretaceous						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	51.33	0.16	0.12	25	0.05	60
2005	46.40	0.16	0.12	25	0.05	60
2006	37.83	0.16	0.12	25	0.05	60
2007	40.30	0.16	0.12	25	0.05	60
2008	28.07	0.16	0.12	25	0.05	60
2009	10.96	0.16	0.12	25	0.05	60
2010	9.23	0.16	0.12	25	0.05	60
2011	6.15	0.16	0.12	25	0.05	60
2012	2.90	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Alberta - Conventional - Colorado						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	10.77	0.16	0.12	25	0.05	60
2005	12.94	0.16	0.12	25	0.05	60
2006	12.10	0.16	0.12	25	0.05	60
2007	10.18	0.16	0.12	25	0.05	60
2008	3.71	0.16	0.12	25	0.05	60
2009	1.80	0.16	0.12	25	0.05	60
2010	1.45	0.16	0.12	25	0.05	60
2011	0.64	0.16	0.12	25	0.05	60
2012	0.08	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Alberta - Conventional - Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	70.20	0.16	0.12	25	0.05	60
2005	64.77	0.16	0.12	25	0.05	60
2006	62.77	0.16	0.12	25	0.05	60
2007	50.88	0.16	0.12	25	0.05	60
2008	31.77	0.16	0.12	25	0.05	60
2009	14.94	0.16	0.12	25	0.05	60
2010	7.14	0.16	0.12	25	0.05	60
2011	7.05	0.16	0.12	25	0.05	60
2012	2.73	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Alberta - Conventional - Mississippian, Upper Devonian						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	19.31	0.16	0.12	25	0.05	60
2005	12.13	0.16	0.12	25	0.05	60
2006	8.54	0.16	0.12	25	0.05	60
2007	11.44	0.16	0.12	25	0.05	60
2008	7.81	0.16	0.12	25	0.05	60
2009	1.67	0.16	0.12	25	0.05	60
2010	0.25	0.16	0.12	25	0.05	60
2011	2.25	0.16	0.12	25	0.05	60
2012	0.27	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Alberta - Tight - Colorado						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	10.30	0.16	0.12	25	0.05	60
2005	7.47	0.16	0.12	25	0.05	60
2006	6.44	0.16	0.12	25	0.05	60
2007	3.80	0.16	0.12	25	0.05	60
2008	2.72	0.16	0.12	25	0.05	60
2009	3.06	0.16	0.12	25	0.05	60
2010	6.16	0.16	0.12	25	0.05	60
2011	0.48	0.16	0.12	25	0.05	60
2012	0.21	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Alberta - Tight - Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	10.23	0.16	0.12	25	0.05	60
2005	6.92	0.16	0.12	25	0.05	60
2006	8.47	0.16	0.12	25	0.05	60
2007	5.24	0.16	0.12	25	0.05	60
2008	3.25	0.16	0.12	25	0.05	60
2009	3.59	0.16	0.12	25	0.05	60
2010	1.38	0.16	0.12	25	0.05	60
2011	1.32	0.16	0.12	25	0.05	60
2012	0.37	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Tertiary						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	25.56	0.16	0.12	25	0.05	60
2005	24.09	0.16	0.12	25	0.05	60
2006	22.25	0.16	0.12	25	0.05	60
2007	18.01	0.16	0.12	25	0.05	60
2008	17.15	0.16	0.12	25	0.05	60
2009	7.84	0.16	0.12	25	0.05	60
2010	8.29	0.16	0.12	25	0.05	60
2011	2.00	0.16	0.12	25	0.05	60
2012	0.63	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Upper Cretaceous, Upper Colorado						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	22.10	0.16	0.12	25	0.05	60
2005	24.64	0.16	0.12	25	0.05	60
2006	25.56	0.16	0.12	25	0.05	60
2007	25.92	0.16	0.12	25	0.05	60
2008	21.60	0.16	0.12	25	0.05	60
2009	10.08	0.16	0.12	25	0.05	60
2010	13.84	0.16	0.12	25	0.05	60
2011	30.60	0.16	0.12	25	0.05	60
2012	21.35	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	2.36	0.10	0.08	25	0.05	60
2005	4.45	0.10	0.08	25	0.05	60
2006	0.97	0.10	0.08	25	0.05	60
2007	0.77	0.10	0.08	25	0.05	60
2008	3.35	0.10	0.08	25	0.05	60
2009	0.12	0.10	0.08	25	0.05	60
2010	3.02	0.10	0.08	25	0.05	60
2011	0.46	0.16	0.12	25	0.05	60
2012	2.33	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Lower Mannville, Jurassic						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	39.56	0.12	0.10	25	0.08	60
2005	41.87	0.12	0.10	25	0.08	60
2006	37.82	0.12	0.10	25	0.08	60
2007	31.44	0.12	0.10	25	0.08	60
2008	25.45	0.12	0.10	25	0.08	60
2009	17.97	0.12	0.10	25	0.08	60
2010	13.03	0.12	0.10	25	0.08	60
2011	37.49	0.16	0.12	25	0.05	60
2012	31.74	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Missisippian						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	33.85	0.16	0.12	25	0.05	60
2005	37.00	0.16	0.12	25	0.05	60
2006	29.53	0.16	0.12	25	0.05	60
2007	28.56	0.16	0.12	25	0.05	60
2008	9.53	0.16	0.12	25	0.05	60
2009	13.85	0.16	0.12	25	0.05	60
2010	1.19	0.16	0.12	25	0.05	60
2011	3.49	0.16	0.12	25	0.05	60
2012	1.43	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Conventional - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	56.46	0.16	0.12	25	0.05	60
2005	50.43	0.16	0.12	25	0.05	60
2006	5.96	0.16	0.12	25	0.05	60
2007	41.37	0.16	0.12	25	0.05	60
2008	7.61	0.16	0.12	25	0.05	60
2009	2.09	0.16	0.12	25	0.05	60
2010	3.21	0.16	0.12	25	0.05	60
2011	0.80	0.16	0.12	25	0.05	60
2012	2.60	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Tight - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	11.35	0.16	0.12	25	0.05	60
2005	11.40	0.16	0.12	25	0.05	60
2006	23.49	0.16	0.12	25	0.05	60
2007	8.26	0.16	0.12	25	0.05	60
2008	9.70	0.16	0.12	25	0.05	60
2009	3.95	0.16	0.12	25	0.05	60
2010	8.42	0.16	0.12	25	0.05	60
2011	2.06	0.16	0.12	25	0.05	60
2012	4.95	0.16	0.12	25	0.05	60

Resource Grouping - Gas - West Central Alberta - Tight - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	67.99	0.16	0.12	25	0.05	60
2005	70.78	0.16	0.12	25	0.05	60
2006	92.32	0.16	0.12	25	0.05	60
2007	84.36	0.16	0.12	25	0.05	60
2008	91.36	0.16	0.12	25	0.05	60
2009	68.11	0.16	0.12	25	0.05	60
2010	145.73	0.16	0.12	25	0.05	60
2011	299.33	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Central Foothills - Conventional - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	28.08	0.16	0.12	25	0.05	60
2005	12.54	0.16	0.12	25	0.05	60
2006	12.12	0.16	0.12	25	0.05	60
2007	9.40	0.16	0.12	25	0.05	60
2008	17.24	0.16	0.12	25	0.05	60
2009	9.85	0.16	0.12	25	0.05	60
2010	6.01	0.16	0.12	25	0.05	60
2011	1.13	0.16	0.12	25	0.05	60
2012	4.81	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Foothills - Conventional - Colorado, Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	37.23	0.16	0.12	25	0.05	60
2005	12.78	0.16	0.12	25	0.05	60
2006	17.49	0.16	0.12	25	0.05	60
2007	18.72	0.16	0.12	25	0.05	60
2008	30.25	0.16	0.12	25	0.05	60
2009	20.16	0.16	0.12	25	0.05	60
2010	14.15	0.16	0.12	25	0.05	60
2011	14.30	0.16	0.12	25	0.05	60
2012	14.81	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Foothills - Conventional - Jurassic, Triassic, Permian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	20.53	0.16	0.12	25	0.05	60
2005	2.29	0.16	0.12	25	0.05	60
2006	27.31	0.16	0.12	25	0.05	60
2007	11.86	0.16	0.12	25	0.05	60
2008	10.10	0.16	0.12	24	0.05	60
2009	18.83	0.16	0.12	25	0.05	60
2010	10.69	0.16	0.12	25	0.05	60
2011	13.48	0.16	0.12	25	0.05	60
2012	0.90	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Foothills - Conventional - Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	93.34	0.14	0.12	25	0.10	60
2005	33.03	0.14	0.12	25	0.10	60
2006	47.88	0.14	0.12	25	0.05	60
2007	40.74	0.14	0.12	25	0.10	60
2008	75.62	0.16	0.14	25	0.05	60
2009	50.53	0.14	0.12	25	0.10	60
2010	24.42	0.16	0.14	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Central Foothills - Conventional - Upper Devonian, Middle Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	57.65	0.16	0.12	25	0.05	60
2005	39.35	0.16	0.12	25	0.05	60
2006	15.61	0.16	0.12	25	0.05	60
2007	22.95	0.16	0.12	25	0.05	60
2008	4.67	0.16	0.12	25	0.05	60
2009	3.69	0.16	0.12	25	0.05	60
2010	2.38	0.16	0.12	25	0.05	60
2011	3.95	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Central Foothills - Tight - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	3.19	0.16	0.12	25	0.05	60
2005	4.19	0.16	0.12	25	0.05	60
2006	1.25	0.16	0.12	25	0.05	60
2007	2.46	0.16	0.12	25	0.05	60
2008	0.48	0.16	0.12	25	0.05	60
2009	1.45	0.16	0.12	25	0.05	60
2010	0.00	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Central Foothills - Tight - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	0.28	0.16	0.12	25	0.05	60
2005	0.79	0.16	0.12	25	0.05	60
2006	4.20	0.16	0.12	25	0.05	60
2007	2.52	0.16	0.12	25	0.05	60
2008	0.20	0.16	0.12	25	0.05	60
2009	2.46	0.16	0.12	25	0.05	60
2010	0.00	0.16	0.12	25	0.05	60
2011	4.68	0.16	0.12	25	0.05	60
2012	4.94	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Central Foothills - Tight - Jurassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2007	11.34	0.16	0.12	25	0.05	60
2008	22.64	0.16	0.12	25	0.05	60
2009	5.26	0.16	0.12	25	0.05	60
2010	0.00	0.16	0.12	25	0.05	60
2011	1.76	0.16	0.12	25	0.05	60
2012	1.99	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Conventional - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	6.58	0.16	0.12	25	0.05	60
2005	11.56	0.16	0.12	25	0.05	60
2006	10.49	0.16	0.12	25	0.05	60
2007	5.32	0.16	0.12	25	0.05	60
2008	9.49	0.16	0.12	25	0.05	60
2009	2.63	0.16	0.12	25	0.05	60
2010	1.95	0.16	0.12	25	0.05	60
2011	0.11	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Kaybob - Conventional - Mannville, Jurassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	27.08	0.16	0.12	25	0.05	60
2005	31.97	0.16	0.12	25	0.05	60
2006	29.87	0.16	0.12	25	0.05	60
2007	39.09	0.16	0.12	25	0.05	60
2008	25.11	0.16	0.12	25	0.05	60
2009	6.41	0.16	0.12	25	0.05	60
2010	1.88	0.16	0.12	25	0.05	60
2011	1.66	0.16	0.12	25	0.05	60
2012	0.50	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Conventional - Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	11.00	0.16	0.12	25	0.05	60
2005	22.53	0.16	0.12	25	0.05	60
2006	9.58	0.16	0.12	25	0.05	60
2007	10.65	0.16	0.12	25	0.05	60
2008	10.09	0.16	0.12	25	0.05	60
2009	7.54	0.16	0.12	25	0.05	60
2010	1.26	0.16	0.12	25	0.05	60
2011	1.45	0.16	0.12	25	0.05	60
2012	0.69	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Conventional - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	0.02	0.16	0.12	25	0.05	60
2005	15.61	0.16	0.12	25	0.05	60
2006	22.95	0.16	0.12	25	0.05	60
2007	4.67	0.16	0.12	25	0.05	60
2008	3.69	0.16	0.12	25	0.05	60
2009	2.38	0.16	0.12	25	0.05	60
2010	3.95	0.16	0.12	25	0.05	60
2011	0.00	0.16	0.12	25	0.05	60
2012	0.00	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Tight - Colorado, Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	52.80	0.16	0.12	25	0.05	60
2005	43.70	0.16	0.12	25	0.05	60
2006	63.99	0.16	0.12	25	0.05	60
2007	41.47	0.16	0.12	25	0.05	60
2008	36.76	0.16	0.12	25	0.05	60
2009	25.86	0.16	0.12	25	0.05	60
2010	29.07	0.16	0.12	25	0.05	60
2011	26.65	0.16	0.12	25	0.05	60
2012	12.22	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Tight - Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	13.40	0.16	0.12	25	0.05	60
2005	14.89	0.16	0.12	25	0.05	60
2006	17.68	0.16	0.12	25	0.05	60
2007	17.51	0.16	0.12	25	0.05	60
2008	3.27	0.16	0.12	25	0.05	60
2009	3.98	0.16	0.12	25	0.05	60
2010	3.28	0.16	0.12	25	0.05	60
2011	1.41	0.16	0.12	25	0.05	60
2012	1.69	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Tight - Montney						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2007	2.69	0.16	0.12	25	0.05	60
2008	15.24	0.16	0.12	25	0.05	60
2009	21.12	0.16	0.12	25	0.05	60
2010	20.44	0.16	0.12	25	0.05	60
2011	15.31	0.16	0.12	25	0.05	60
2012	7.98	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Kaybob - Shale - Duvernay						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2011	2.19	0.16	0.12	25	0.05	60
2012	7.93	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Cretaceous						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	10.38	0.16	0.12	25	0.05	60
2005	10.25	0.16	0.12	25	0.05	60
2006	3.60	0.10	0.08	25	0.05	60
2007	3.78	0.16	0.14	25	0.05	60
2008	3.50	0.16	0.14	25	0.05	45
2009	7.20	0.16	0.14	25	0.05	45
2010	4.56	0.16	0.14	25	0.05	45
2011	5.63	0.16	0.12	25	0.05	60
2012	4.55	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	20.41	0.16	0.14	25	0.05	60
2005	18.70	0.16	0.14	25	0.05	60
2006	26.72	0.16	0.14	25	0.05	60
2007	18.29	0.16	0.14	25	0.05	60
2008	8.79	0.16	0.14	25	0.05	45
2009	5.47	0.16	0.14	25	0.05	45
2010	11.68	0.16	0.14	25	0.05	45
2011	9.84	0.16	0.12	25	0.05	60
2012	6.00	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Mannville, Jurassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	4.90	0.16	0.12	25	0.05	60
2005	3.87	0.16	0.14	25	0.05	60
2006	6.19	0.16	0.12	25	0.05	60
2007	4.46	0.16	0.12	25	0.05	60
2008	6.34	0.16	0.12	25	0.05	45
2009	1.34	0.16	0.12	25	0.05	45
2010	3.28	0.10	0.08	25	0.05	45
2011	5.94	0.16	0.12	25	0.05	60
2012	1.54	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	15.13	0.16	0.12	25	0.05	60
2005	11.56	0.16	0.12	25	0.05	60
2006	9.46	0.16	0.12	25	0.05	60
2007	4.66	0.16	0.12	25	0.05	60
2008	1.80	0.16	0.12	25	0.05	45
2009	1.67	0.16	0.12	20	0.05	40
2010	1.70	0.16	0.12	25	0.05	60
2011	1.30	0.16	0.12	25	0.05	60
2012	0.16	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	16.88	0.16	0.12	25	0.05	60
2005	7.73	0.16	0.12	25	0.05	60
2006	0.40	0.16	0.12	25	0.05	60
2007	17.12	0.16	0.12	25	0.05	60
2008	10.08	0.16	0.12	25	0.05	60
2009	1.84	0.16	0.12	25	0.05	60
2010	2.11	0.16	0.12	25	0.05	60
2011	0.02	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Alberta Deep Basin - Tight - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	84.75	0.16	0.12	25	0.05	60
2005	88.68	0.16	0.12	25	0.05	60
2006	73.01	0.16	0.12	25	0.05	60
2007	52.09	0.16	0.12	25	0.05	60
2008	33.87	0.16	0.12	25	0.05	60
2009	22.17	0.16	0.12	25	0.05	60
2010	28.32	0.16	0.12	25	0.05	60
2011	36.14	0.16	0.12	25	0.05	60
2012	40.02	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Tight - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	18.37	0.16	0.12	25	0.05	60
2005	12.80	0.16	0.12	25	0.05	60
2006	13.11	0.16	0.12	25	0.05	60
2007	18.64	0.16	0.12	25	0.05	60
2008	10.83	0.16	0.12	25	0.05	60
2009	4.85	0.16	0.12	25	0.05	60
2010	6.40	0.16	0.12	25	0.05	60
2011	1.49	0.16	0.12	25	0.05	60
2012	0.53	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Tight - Mannville, Jurassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	280.31	0.16	0.12	25	0.05	60
2005	294.44	0.16	0.12	25	0.05	60
2006	386.11	0.16	0.12	25	0.05	60
2007	310.77	0.16	0.12	25	0.05	60
2008	305.05	0.16	0.12	25	0.05	60
2009	192.39	0.16	0.12	25	0.05	60
2010	299.94	0.16	0.12	25	0.05	60
2011	307.84	0.16	0.12	25	0.05	60
2012	279.41	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Tight - Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	10.25	0.16	0.12	25	0.05	60
2005	15.86	0.16	0.12	25	0.05	60
2006	10.38	0.16	0.12	25	0.05	60
2007	4.84	0.16	0.12	25	0.05	60
2008	12.25	0.16	0.12	25	0.05	60
2009	6.29	0.16	0.12	25	0.05	60
2010	12.44	0.16	0.12	25	0.05	60
2011	13.53	0.16	0.12	25	0.05	60
2012	20.71	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Tight - Montney						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2008	3.62	0.16	0.12	25	0.05	60
2009	17.07	0.16	0.12	25	0.05	60
2010	33.55	0.16	0.12	25	0.05	60
2011	49.57	0.16	0.12	25	0.05	60
2012	75.67	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Alberta Deep Basin - Shale - Duvernay						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2012	1.74	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northeast Alberta - Conventional - Mannville, Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	77.61	0.16	0.14	25	0.05	60
2005	45.77	0.16	0.14	25	0.05	60
2006	50.45	0.16	0.14	25	0.05	60
2007	37.74	0.16	0.12	25	0.05	60
2008	19.54	0.16	0.12	25	0.05	60
2009	11.92	0.16	0.14	25	0.05	60
2010	7.94	0.16	0.14	25	0.05	60
2011	1.76	0.16	0.12	25	0.05	60
2012	0.62	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Upper Colorado						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	4.35	0.16	0.12	25	0.05	60
2005	4.40	0.16	0.12	25	0.05	60
2006	1.31	0.16	0.12	25	0.05	60
2007	1.26	0.16	0.12	25	0.05	60
2008	0.16	0.16	0.12	25	0.05	60
2009	0.43	0.16	0.12	25	0.05	60
2010	0.28	0.16	0.12	25	0.05	60
2011	2.22	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Peace River - Conventional - Colorado, Upper Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	5.40	0.16	0.12	25	0.05	60
2005	8.64	0.16	0.12	25	0.05	60
2006	5.73	0.16	0.12	25	0.05	60
2007	5.27	0.16	0.12	25	0.05	60
2008	3.40	0.16	0.12	25	0.05	60
2009	1.20	0.16	0.12	25	0.05	60
2010	3.34	0.16	0.12	25	0.05	60
2011	1.22	0.16	0.12	25	0.05	60
2012	0.09	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Middle Mannville, Lower Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	9.69	0.16	0.12	25	0.05	60
2005	8.10	0.16	0.12	25	0.05	60
2006	11.58	0.16	0.12	25	0.05	60
2007	6.78	0.16	0.12	25	0.05	60
2008	6.66	0.16	0.12	25	0.05	60
2009	2.37	0.16	0.12	25	0.05	60
2010	2.23	0.16	0.12	25	0.05	60
2011	0.23	0.16	0.12	25	0.05	60
2012	0.47	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Upper Triassic						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	6.13	0.16	0.12	25	0.05	60
2005	2.63	0.16	0.12	25	0.05	60
2006	7.08	0.16	0.12	25	0.05	60
2007	2.80	0.16	0.12	25	0.05	60
2008	2.35	0.16	0.12	25	0.05	60
2009	1.63	0.16	0.12	25	0.05	60
2010	1.21	0.16	0.12	25	0.05	60
2011	1.17	0.16	0.12	25	0.05	60
2012	0.22	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Lower Triassic						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	13.93	0.16	0.12	25	0.05	60
2005	10.63	0.16	0.12	25	0.05	60
2006	21.94	0.16	0.12	25	0.05	60
2007	7.56	0.16	0.12	25	0.05	60
2008	13.29	0.16	0.12	25	0.05	60
2009	6.62	0.16	0.12	25	0.05	60
2010	3.81	0.16	0.12	25	0.05	60
2011	5.98	0.16	0.12	25	0.05	60
2012	1.08	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Mississippian						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	42.00	0.16	0.12	25	0.05	60
2005	40.94	0.16	0.12	25	0.05	60
2006	18.32	0.16	0.12	25	0.05	60
2007	9.07	0.16	0.12	25	0.05	60
2008	19.39	0.16	0.12	25	0.05	60
2009	7.76	0.16	0.12	25	0.05	60
2010	6.09	0.16	0.12	25	0.05	60
2011	2.60	0.16	0.12	25	0.05	60
2012	2.93	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Conventional - Upper Devonian, Middle Devonian						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	2.43	0.16	0.12	25	0.05	60
2005	5.88	0.16	0.12	25	0.05	60
2006	2.07	0.16	0.12	25	0.05	60
2007	6.90	0.16	0.12	25	0.05	60
2008	0.82	0.16	0.12	25	0.05	60
2009	0.29	0.16	0.12	25	0.05	60
2010	0.57	0.16	0.12	25	0.05	60
2011	2.94	0.16	0.12	25	0.05	60
2012	4.54	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Peace River - Tight - Triassic						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	9.95	0.16	0.12	25	0.05	60
2005	13.52	0.16	0.12	25	0.05	60
2006	17.95	0.16	0.12	25	0.05	60
2007	16.74	0.16	0.12	25	0.05	60
2008	15.36	0.16	0.12	25	0.05	60
2009	3.45	0.16	0.12	25	0.05	60
2010	2.25	0.16	0.12	25	0.05	60
2011	0.56	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Peace River - Tight - Lower Triassic						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	6.11	0.16	0.12	25	0.05	60
2005	8.95	0.16	0.12	25	0.05	60
2006	15.55	0.16	0.12	25	0.05	60
2007	12.77	0.16	0.12	25	0.05	60
2008	11.36	0.16	0.12	25	0.05	60
2009	1.75	0.16	0.12	25	0.05	60
2010	3.17	0.16	0.12	25	0.05	60
2011	0.50	0.16	0.12	25	0.05	60
2012	4.67	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northwest Alberta - Conventional - Mannville						
Connection Year	Group Production Rate as of Dec.31, Mkt MMcf/d	First Decline Rate	Second Decline Rate	Months to Second Decline Rate	Third Decline Rate	Months to Third Decline Rate
2004	29.05	0.16	0.12	25	0.05	60
2005	25.19	0.16	0.12	25	0.05	60
2006	23.84	0.16	0.12	25	0.05	60
2007	9.90	0.16	0.12	25	0.05	60
2008	20.32	0.16	0.12	25	0.05	60
2009	4.00	0.16	0.12	25	0.05	60
2010	2.92	0.16	0.12	25	0.05	60
2011	0.42	0.16	0.12	25	0.05	60
2012	0.34	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northwest Alberta - Conventional - Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	6.89	0.16	0.12	25	0.05	60
2005	10.60	0.16	0.12	25	0.05	60
2006	8.60	0.16	0.12	25	0.05	60
2007	2.93	0.16	0.12	25	0.05	60
2008	4.34	0.16	0.12	25	0.05	60
2009	0.47	0.16	0.12	25	0.05	60
2010	0.29	0.16	0.12	25	0.05	60
2011	0.05	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Northwest Alberta - Conventional - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	19.28	0.16	0.12	25	0.05	60
2005	10.37	0.16	0.12	25	0.05	60
2006	11.13	0.16	0.12	25	0.05	60
2007	3.65	0.16	0.12	25	0.05	60
2008	3.31	0.16	0.12	25	0.05	60
2009	1.90	0.16	0.12	25	0.05	60
2010	0.95	0.16	0.12	25	0.05	60
2011	0.05	0.16	0.12	25	0.05	60
2012	0.15	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northwest Alberta - Conventional - Middle Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.71	0.16	0.12	25	0.05	60
2005	2.54	0.16	0.12	25	0.05	60
2006	0.79	0.16	0.12	25	0.05	60
2007	0.63	0.16	0.12	25	0.05	60
2008	0.90	0.16	0.12	25	0.05	60
2009	0.79	0.16	0.12	25	0.05	60
2010	0.24	0.16	0.12	25	0.05	60
2011	0.22	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - BC Deep Basin - Conventional - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	14.83	0.16	0.12	25	0.05	60
2005	5.35	0.16	0.12	25	0.05	60
2006	0.22	0.16	0.12	25	0.05	60
2007	0.06	0.16	0.12	25	0.05	60
2008	0.32	0.16	0.12	25	0.05	60
2009	0.02	0.16	0.12	25	0.05	60
2010	1.25	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - BC Deep Basin - Conventional - Lower Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	4.06	0.16	0.12	25	0.05	60
2005	67.95	0.16	0.12	25	0.05	60
2006	13.70	0.16	0.12	25	0.05	60
2007	29.98	0.16	0.12	25	0.05	60
2008	20.51	0.16	0.12	25	0.05	60
2009	10.92	0.16	0.12	25	0.05	60
2010	14.70	0.16	0.12	25	0.05	60
2011	13.50	0.16	0.12	25	0.05	60
2012	16.19	0.16	0.12	25	0.05	60

Resource Grouping - Gas - BC Deep Basin - Tight - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	1.70	0.16	0.12	25	0.05	60
2005	0.64	0.16	0.12	25	0.05	60
2006	2.29	0.16	0.12	25	0.05	60
2007	4.20	0.16	0.12	12	0.05	60
2008	1.82	0.16	0.12	25	0.05	60
2009	3.89	0.16	0.12	25	0.05	60
2010	0.00	0.10	0.08	25	0.05	60
2011	0.98	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - BC Deep Basin - Tight - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	50.94	0.16	0.12	25	0.05	60
2005	68.29	0.16	0.12	25	0.05	60
2006	56.69	0.16	0.12	25	0.05	60
2007	24.88	0.16	0.12	25	0.05	60
2008	31.94	0.16	0.12	25	0.05	60
2009	16.90	0.16	0.12	25	0.05	60
2010	32.97	0.16	0.12	25	0.05	60
2011	32.04	0.16	0.12	25	0.05	60
2012	6.80	0.16	0.12	25	0.05	60

Resource Grouping - Gas - BC Deep Basin - Tight - Montney						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2006	40.14	0.16	0.12	25	0.05	60
2007	1.28	0.16	0.12	25	0.05	60
2008	18.47	0.16	0.12	25	0.05	60
2009	41.37	0.16	0.12	25	0.05	60
2010	59.10	0.16	0.12	25	0.05	60
2011	168.05	0.16	0.12	25	0.05	60
2012	34.34	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Fort St John - Conventional - Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	117.47	0.16	0.12	25	0.05	60
2005	117.00	0.16	0.12	25	0.05	60
2006	126.95	0.16	0.12	25	0.05	60
2007	65.28	0.16	0.12	25	0.05	60
2008	54.40	0.16	0.12	25	0.05	60
2009	15.25	0.16	0.12	25	0.05	60
2010	22.06	0.16	0.12	25	0.05	60
2011	3.03	0.16	0.12	25	0.05	60
2012	0.42	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Fort St John - Conventional - Triassic						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	97.95	0.16	0.12	25	0.05	60
2005	94.17	0.16	0.12	25	0.05	60
2006	81.09	0.16	0.12	25	0.05	60
2007	62.33	0.16	0.12	25	0.05	60
2008	56.46	0.16	0.12	25	0.05	60
2009	27.15	0.16	0.12	25	0.05	60
2010	24.30	0.16	0.12	25	0.05	60
2011	15.43	0.16	0.12	25	0.05	60
2012	143.26	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Fort St John - Conventional - Permian, Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	6.77	0.16	0.12	25	0.05	60
2005	4.84	0.16	0.12	25	0.05	60
2006	11.10	0.16	0.12	25	0.05	60
2007	28.29	0.16	0.12	25	0.05	60
2008	17.76	0.16	0.12	25	0.05	60
2009	20.37	0.16	0.12	25	0.05	60
2010	6.12	0.16	0.12	25	0.05	60
2011	6.84	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Fort St John - Conventional - Upper Devonian, Middle Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	4.37	0.16	0.12	25	0.05	60
2005	7.18	0.16	0.12	25	0.05	60
2006	2.38	0.16	0.12	25	0.05	60
2007	1.02	0.16	0.12	25	0.05	60
2008	0.00	0.00	0.00	0	0.00	0
2009	1.29	0.16	0.12	25	0.05	60
2010	2.86	0.16	0.12	25	0.05	60
2011	0.41	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Fort St. John - Tight - Montney						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2006	21.93	0.16	0.12	25	0.05	60
2007	99.72	0.16	0.12	25	0.05	60
2008	170.33	0.16	0.12	25	0.05	60
2009	305.37	0.16	0.12	25	0.05	60
2010	371.02	0.16	0.12	25	0.05	60
2011	277.93	0.16	0.12	25	0.05	60
2012	206.93	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northeast BC - Conventional - Lower Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.54	0.16	0.12	25	0.05	60
2005	0.86	0.16	0.12	25	0.05	60
2006	2.74	0.16	0.12	25	0.05	60
2007	0.00	0.00	0.00	0	0.00	0
2008	0.70	0.16	0.12	25	0.05	60
2009	0.00	0.00	0.00	0	0.00	0
2010	0.00	0.16	0.12	25	0.05	60
2011	0.00	0.00	0.00	0	0.00	0
2012	1.13	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northeast BC - Conventional - Permian, Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	6.38	0.16	0.12	25	0.05	60
2005	8.28	0.16	0.12	25	0.05	60
2006	3.36	0.16	0.12	25	0.05	60
2007	3.54	0.16	0.12	25	0.05	60
2008	0.66	0.16	0.12	25	0.05	60
2009	0.36	0.16	0.12	25	0.05	60
2010	0.25	0.16	0.12	25	0.05	60
2011	0.55	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Northeast BC - Conventional - Upper Devonian, Middle Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	82.24	0.16	0.12	25	0.05	60
2005	42.77	0.16	0.12	25	0.05	60
2006	13.54	0.10	0.08	25	0.05	60
2007	6.44	0.16	0.12	25	0.05	60
2008	2.87	0.16	0.12	25	0.05	60
2009	0.21	0.16	0.12	25	0.05	60
2010	3.31	0.16	0.12	25	0.05	60
2011	0.79	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Northeast BC - Tight - Upper Devonian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	123.61	0.16	0.12	25	0.05	60
2005	110.67	0.16	0.12	25	0.05	60
2006	67.89	0.16	0.12	25	0.05	60
2007	54.77	0.16	0.12	25	0.05	60
2008	55.50	0.16	0.12	25	0.05	60
2009	21.90	0.16	0.12	25	0.05	60
2010	22.15	0.16	0.12	25	0.05	60
2011	20.39	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - Northeast BC - Shale - Horn River						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2006	0.24	0.16	0.12	25	0.05	60
2007	0.44	0.16	0.12	25	0.05	60
2008	26.41	0.16	0.12	25	0.05	60
2009	72.17	0.16	0.12	25	0.05	60
2010	103.40	0.16	0.12	25	0.05	60
2011	141.81	0.16	0.12	25	0.05	60
2012	139.64	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Northeast BC - Shale - Cordova						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2010	3.89	0.16	0.12	20	0.05	60
2011	15.57	0.16	0.12	25	0.05	60
2012	15.92	0.16	0.12	25	0.05	60

Resource Grouping - Gas - BC Foothills - Conventional - Colorado, Mannville						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.40	0.16	0.12	25	0.05	60
2005	5.23	0.16	0.12	25	0.05	60
2006	10.40	0.16	0.12	25	0.05	60
2007	7.96	0.16	0.12	25	0.05	60
2008	11.74	0.16	0.12	25	0.05	60
2009	2.89	0.16	0.12	25	0.05	60
2010	2.73	0.16	0.12	25	0.05	60
2011	11.20	0.16	0.12	25	0.05	60
2012	0.00	0.00	0.00	0	0.00	0

Resource Grouping - Gas - BC Foothills - Conventional - Triassic, Permian, Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	94.08	0.16	0.12	25	0.05	60
2005	76.54	0.10	0.08	25	0.05	60
2006	173.92	0.16	0.12	25	0.05	60
2007	73.31	0.16	0.12	25	0.05	60
2008	130.85	0.16	0.12	25	0.05	60
2009	62.21	0.16	0.12	25	0.05	60
2010	7.97	0.16	0.12	25	0.05	60
2011	25.54	0.16	0.12	25	0.05	60
2012	32.75	0.16	0.12	25	0.05	60

Resource Grouping - Gas - BC Foothills - Tight - Montney						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.20	0.10	0.08	25	0.05	60
2005	5.49	0.16	0.12	25	0.05	60
2006	0.00	0.00	0.00	0	0.00	0
2007	6.20	0.16	0.12	25	0.05	60
2008	0.00	0.00	0.00	0	0.00	0
2009	10.97	0.16	0.12	25	0.05	60
2010	58.75	0.16	0.12	25	0.05	60
2011	93.23	0.16	0.12	25	0.05	60
2012	49.55	0.16	0.12	25	0.05	60

Resource Grouping - Gas - Southwest Saskatchewan - Tight - Upper Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	2.35	0.14	0.08	25	0.05	60
2005	28.91	0.14	0.08	25	0.05	60
2006	3.03	0.14	0.08	25	0.05	60
2007	9.12	0.14	0.08	25	0.05	60
2008	2.89	0.14	0.08	25	0.05	60
2009	19.45	0.14	0.08	25	0.05	60
2010	207.12	0.14	0.08	25	0.05	60
2011	1.90	0.14	0.08	25	0.05	60
2012	2.28	0.14	0.08	25	0.05	60

Resource Grouping - Gas - West Saskatchewan - Conventional - Colorado						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	3.26	0.14	0.08	25	0.05	60
2005	4.16	0.14	0.08	25	0.05	60
2006	2.37	0.14	0.08	25	0.05	60
2007	1.54	0.14	0.08	25	0.05	60
2008	0.77	0.14	0.08	25	0.05	60
2009	4.21	0.14	0.08	25	0.05	60
2010	12.87	0.14	0.08	25	0.05	60
2011	0.19	0.14	0.08	25	0.05	60
2012	0.08	0.14	0.08	25	0.05	60

Resource Grouping - Gas - West Saskatchewan - Conventional - Middle Mannville, Lower Mannville, Mississippian						
Connection Year	**Group Production Rate as of Dec.31, Mkt MMcf/d**	**First Decline Rate**	**Second Decline Rate**	**Months to Second Decline Rate**	**Third Decline Rate**	**Months to Third Decline Rate**
2004	3.03	0.14	0.08	25	0.05	60
2005	14.63	0.14	0.08	25	0.05	60
2006	3.60	0.14	0.08	25	0.05	60
2007	4.08	0.14	0.08	25	0.05	60
2008	2.99	0.14	0.08	25	0.05	60
2009	4.32	0.14	0.08	25	0.05	60
2010	20.25	0.14	0.08	25	0.05	60
2011	0.84	0.14	0.08	25	0.05	60
2012	0.08	0.14	0.08	25	0.05	60

A4 Decline Parameters for Groupings of Future Gas Connections

Resource Grouping - Gas - Alberta Coalbed Methane - Mannville										
Connection Year	**Peak Production MMcf/d**	**1st Decline Rate**	**2nd Decline Rate**	**Months to 2nd Decline Rate**	**3rd Decline Rate**	**Months to 3rd Decline Rate**	**4th Decline Rate**	**Months to 4th Decline Rate**	**5th Decline Rate**	**Months to 5th Decline Rate**
2005	0.24	0.40	0.20	16	0.15	36	0.10	90	0.10	500
2006	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2007	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2008	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2009	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2010	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2011	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2012	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2013	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2014	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2015	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100
2016	0.38	0.01	0.40	15	0.20	30	0.15	50	0.10	100

Resource Grouping - Gas - Alberta Coalbed Methane - Horseshoe Canyon										
Connection Year	**Initial Production per Connection MMcf/d**	**1st Decline Rate**	**2nd Decline Rate**	**Months to 2nd Decline Rate**	**3rd Decline Rate**	**Months to 3rd Decline Rate**	**4th Decline Rate**	**Months to 4th Decline Rate**	**5th Decline Rate**	**Months to 5th Decline Rate**
2004	0.09	0.18	0.16	7	0.14	20	0.12	45	0.10	90
2005	0.08	0.25	0.16	7	0.17	20	0.12	45	0.10	90
2006	0.09	0.25	0.18	7	0.16	20	0.12	45	0.10	90
2007	0.09	0.50	0.20	7	0.16	20	0.12	45	0.10	90
2008	0.08	0.40	0.20	7	0.16	20	0.14	45	0.10	90
2009	0.08	0.45	0.20	7	0.15	20	0.10	45	0.10	90
2010	0.06	0.30	0.20	7	0.15	20	0.10	45	0.10	90
2011	0.06	0.50	0.30	7	0.20	20	0.10	45	0.10	90
2012	0.05	0.50	0.30	7	0.20	20	0.10	45	0.10	90
2013	0.05	0.50	0.30	7	0.20	20	0.10	45	0.10	90
2014	0.05	0.50	0.30	7	0.20	20	0.10	45	0.10	90
2015	0.05	0.50	0.30	7	0.20	20	0.10	45	0.10	90
2016	0.04	0.50	0.30	7	0.20	20	0.10	45	0.10	90

Resource Grouping - Gas - Alberta Coalbed Methane - Other										
Connection Year	**Initial Production per Connection MMcf/d**	**1st Decline Rate**	**2nd Decline Rate**	**Months to 2nd Decline Rate**	**3rd Decline Rate**	**Months to 3rd Decline Rate**	**4th Decline Rate**	**Months to 4th Decline Rate**	**5th Decline Rate**	**Months to 5th Decline Rate**
2004	0.08	0.60	0.30	7	0.20	20	0.10	45	0.05	90
2005	0.06	0.50	0.30	7	0.16	20	0.10	45	0.05	90
2006	0.07	0.80	0.30	7	0.14	20	0.05	45	0.05	90
2007	0.08	0.75	0.35	7	0.16	20	0.05	45	0.05	90
2008	0.07	0.50	0.22	7	0.11	20	0.05	45	0.05	90
2009	0.04	0.46	0.21	7	0.18	20	0.10	45	0.05	90
2010	0.03	0.35	0.20	7	0.16	20	0.10	45	0.05	90
2011	0.04	0.55	0.35	7	0.20	20	0.16	45	0.12	90
2012	0.03	0.55	0.35	7	0.20	20	0.12	45	0.10	90
2013	0.03	0.55	0.35	7	0.20	20	0.10	45	0.05	90
2014	0.03	0.55	0.35	7	0.20	20	0.10	45	0.05	90
2015	0.03	0.55	0.35	7	0.20	20	0.10	45	0.05	90
2016	0.03	0.55	0.35	7	0.20	20	0.10	45	0.05	90

Resource Grouping - Gas - Southern Alberta - Conventional - Tertiary, Upper Cretaceous, Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.13	0.90	0.45	7	0.30	20	0.14	45	0.09	90
2005	0.07	0.73	0.45	7	0.22	20	0.14	45	0.08	90
2006	0.08	1.05	0.37	7	0.22	20	0.14	45	0.10	90
2007	0.08	0.60	0.40	7	0.18	20	0.14	45	0.08	90
2008	0.10	0.62	0.45	10	0.22	20	0.14	45	0.08	90
2009	0.08	0.80	0.45	8	0.22	20	0.14	45	0.08	90
2010	0.11	0.80	0.44	7	0.25	20	0.14	45	0.08	90
2011	0.08	0.65	0.40	7	0.25	20	0.14	45	0.08	90
2012	0.07	0.65	0.40	7	0.25	20	0.12	45	0.08	90
2013	0.05	0.65	0.40	7	0.25	20	0.12	45	0.08	90
2014	0.05	0.65	0.40	7	0.25	20	0.12	45	0.08	90
2015	0.05	0.65	0.40	7	0.25	20	0.12	45	0.08	90
2016	0.05	0.65	0.40	7	0.25	20	0.12	45	0.08	90

Resource Grouping - Gas - Southern Alberta - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.25	1.25	0.55	7	0.30	20	0.20	45	0.08	90
2005	0.21	0.85	0.60	10	0.35	20	0.16	45	0.08	90
2006	0.15	1.35	0.57	7	0.30	30	0.14	50	0.08	90
2007	0.12	0.80	0.62	10	0.22	20	0.12	45	0.08	90
2008	0.12	0.95	0.50	7	0.15	20	0.12	45	0.08	90
2009	0.12	1.25	0.60	7	0.30	20	0.16	45	0.08	90
2010	0.23	0.95	0.40	7	0.30	20	0.16	45	0.08	90
2011	0.22	1.25	0.55	7	0.25	20	0.16	45	0.08	90
2012	0.03	0.85	0.45	7	0.25	20	0.16	45	0.08	90
2013	0.07	0.85	0.50	7	0.25	20	0.16	45	0.08	90
2014	0.07	0.85	0.50	7	0.25	20	0.16	45	0.08	90
2015	0.07	0.85	0.50	7	0.25	20	0.16	45	0.08	90
2016	0.07	0.85	0.50	7	0.25	20	0.16	45	0.08	90

Resource Grouping - Gas - Southern Alberta - Conventional - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.33	0.70	0.55	7	0.36	20	0.20	45	0.10	90
2005	0.28	0.55	0.65	7	0.45	20	0.20	45	0.10	90
2006	0.25	0.70	0.60	7	0.33	20	0.16	45	0.10	90
2007	0.23	0.70	0.45	7	0.35	20	0.20	45	0.10	90
2008	0.33	0.70	0.50	10	0.25	20	0.18	45	0.10	90
2009	0.26	0.85	0.35	7	0.22	20	0.16	45	0.10	90
2010	0.30	1.00	0.50	7	0.35	20	0.20	45	0.10	90
2011	0.32	1.30	0.60	7	0.30	20	0.20	45	0.10	90
2012	0.28	0.95	0.55	7	0.30	20	0.20	45	0.10	90
2013	0.14	0.95	0.55	7	0.30	20	0.20	45	0.10	90
2014	0.14	0.95	0.55	7	0.30	20	0.20	45	0.10	90
2015	0.14	0.95	0.55	7	0.30	20	0.20	45	0.10	90
2016	0.14	0.95	0.55	7	0.30	20	0.20	45	0.10	90

Resource Grouping - Gas - Southern Alberta - Tight - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.09	0.70	0.40	7	0.22	20	0.12	45	0.12	90
2005	0.08	0.80	0.35	7	0.22	20	0.12	45	0.12	90
2006	0.08	0.90	0.40	7	0.20	20	0.12	45	0.12	90
2007	0.08	0.85	0.40	7	0.18	20	0.14	45	0.12	90
2008	0.08	0.90	0.37	7	0.20	20	0.16	45	0.12	90
2009	0.08	0.75	0.43	7	0.20	20	0.16	45	0.12	90
2010	0.08	0.65	0.45	7	0.22	20	0.16	45	0.12	90
2011	0.07	0.60	0.33	7	0.22	20	0.12	45	0.12	90
2012	0.08	0.85	0.40	7	0.22	20	0.12	45	0.12	90
2013	0.01	0.85	0.40	7	0.22	20	0.12	45	0.12	90
2014	0.01	0.85	0.40	7	0.22	20	0.12	45	0.12	90
2015	0.01	0.85	0.40	7	0.22	20	0.12	45	0.12	90
2016	0.01	0.85	0.40	7	0.22	20	0.12	45	0.12	90

Resource Grouping - Gas - Southwest Alberta - Conventional - Tertiary, Upper Cretaceous, Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.19	1.25	0.49	7	0.32	20	0.20	45	0.12	90
2005	0.16	1.20	0.40	7	0.30	20	0.16	45	0.10	90
2006	0.13	1.05	0.45	7	0.30	20	0.20	45	0.10	90
2007	0.14	1.40	0.50	7	0.25	20	0.16	45	0.10	90
2008	0.12	1.30	0.50	7	0.27	20	0.16	45	0.10	90
2009	0.10	0.80	0.55	7	0.32	20	0.18	45	0.10	90
2010	0.08	0.95	0.55	7	0.30	20	0.18	45	0.10	90
2011	0.07	0.65	0.40	7	0.25	20	0.16	45	0.10	90
2012	0.12	0.90	0.50	7	0.25	20	0.16	45	0.10	90
2013	0.07	0.90	0.45	7	0.25	20	0.16	45	0.10	90
2014	0.07	0.90	0.45	7	0.25	20	0.16	45	0.10	90
2015	0.07	0.90	0.45	7	0.25	20	0.16	45	0.10	90
2016	0.07	0.90	0.45	7	0.25	20	0.16	45	0.10	90

Resource Grouping - Gas - Southwest Alberta - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.19	0.65	0.72	7	0.52	20	0.30	45	0.12	90
2005	0.11	0.98	0.40	7	0.30	20	0.24	45	0.12	90
2006	0.22	1.45	0.65	7	0.33	20	0.20	45	0.12	90
2007	0.25	1.05	0.65	7	0.35	20	0.24	45	0.12	90
2008	0.26	1.05	0.65	7	0.35	20	0.24	45	0.12	90
2009	0.12	1.95	0.70	7	0.37	20	0.16	45	0.12	90
2010	0.32	1.65	0.60	7	0.30	20	0.16	45	0.12	90
2011	0.07	0.80	0.40	7	0.30	20	0.16	45	0.12	90
2012	0.24	0.65	0.45	7	0.30	20	0.24	45	0.12	90
2013	0.24	0.80	0.40	7	0.30	20	0.16	45	0.12	90
2014	0.24	0.80	0.40	7	0.30	20	0.16	45	0.12	90
2015	0.24	0.80	0.40	7	0.30	20	0.16	45	0.12	90
2016	0.24	0.80	0.40	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Southwest Alberta - Conventional - Middle Mannville, Lower Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.39	0.85	0.65	7	0.25	20	0.17	45	0.12	90
2005	0.56	1.15	0.65	7	0.37	20	0.22	45	0.12	90
2006	0.42	0.85	0.80	7	0.40	20	0.20	45	0.12	90
2007	0.44	0.75	0.58	7	0.45	20	0.30	45	0.12	90
2008	0.45	0.75	0.45	7	0.32	20	0.16	45	0.12	90
2009	0.53	1.00	0.45	7	0.32	20	0.16	45	0.12	90
2010	0.46	1.25	0.75	7	0.35	20	0.20	45	0.12	90
2011	0.87	0.65	0.40	7	0.30	20	0.20	45	0.12	90
2012	0.12	1.25	0.65	7	0.30	20	0.16	45	0.12	90
2013	0.50	1.00	0.60	7	0.30	20	0.16	45	0.12	90
2014	0.50	1.00	0.60	7	0.30	20	0.16	45	0.12	90
2015	0.50	1.00	0.60	7	0.30	20	0.16	45	0.12	90
2016	0.50	1.00	0.60	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Southwest Alberta - Conventional - Jurassic, Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.35	0.65	0.65	7	0.20	20	0.12	45	0.05	90
2005	0.46	1.55	0.75	7	0.27	20	0.14	45	0.08	90
2006	0.21	1.40	1.15	7	0.85	20	0.25	45	0.12	90
2007	0.27	1.35	0.60	7	0.20	20	0.14	45	0.08	90
2008	0.74	1.15	0.80	7	0.55	20	0.25	45	0.12	90
2009	0.91	0.85	0.40	7	0.27	20	0.16	45	0.10	90
2010	0.25	0.60	0.40	7	0.25	20	0.14	45	0.08	90
2011	0.22	1.45	0.65	7	0.30	20	0.14	45	0.08	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	0.22	0.85	0.50	7	0.30	20	0.14	45	0.08	90
2014	0.22	0.85	0.50	7	0.30	20	0.14	45	0.08	90
2015	0.22	0.85	0.50	7	0.30	20	0.14	45	0.08	90
2016	0.22	0.85	0.50	7	0.30	20	0.14	45	0.08	90

Resource Grouping - Gas - Southwest Alberta - Conventional - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.12	0.65	0.20	7	0.16	20	0.12	45	0.05	90
2005	0.12	0.30	0.20	7	0.18	20	0.16	45	0.12	90
2006	0.38	0.70	0.45	7	0.40	20	0.20	45	0.12	90
2007	0.50	0.85	0.55	7	0.27	20	0.12	45	0.05	90
2008	0.23	1.20	0.85	7	0.25	20	0.16	45	0.12	90
2009	0.29	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2010	0.18	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2011	0.03	0.95	0.55	7	0.25	20	0.16	45	0.12	90
2012	0.04	0.85	0.45	7	0.20	20	0.16	45	0.12	90
2013	0.04	0.85	0.45	7	0.25	20	0.16	45	0.12	90
2014	0.04	0.85	0.45	7	0.25	20	0.16	45	0.12	90
2015	0.04	0.85	0.45	7	0.25	20	0.16	45	0.12	90
2016	0.04	0.85	0.45	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Southwest Alberta - Tight - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.16	0.75	0.55	7	0.48	20	0.16	45	0.12	90
2005	0.10	1.65	0.40	7	0.27	20	0.14	45	0.12	90
2006	0.05	1.25	0.35	7	0.24	20	0.12	45	0.12	90
2007	0.13	1.35	0.62	7	0.25	20	0.18	45	0.12	90
2008	0.07	1.05	0.75	7	0.30	20	0.16	45	0.12	90
2009	0.25	1.65	0.65	7	0.20	20	0.16	45	0.12	90
2010	0.17	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.06	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2013	0.06	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2014	0.06	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2015	0.06	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2016	0.06	1.25	0.60	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Southwest Alberta - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.32	0.32	0.32	0	0.32	0	0.32	0	0.32	0
2005	0.08	0.08	0.08	0	0.08	0	0.08	0	0.08	0
2006	0.12	0.12	0.12	0	0.12	0	0.12	0	0.12	0
2007	0.43	0.43	0.43	0	0.43	0	0.43	0	0.43	0
2008	0.87	0.87	0.87	1	0.87	1	0.87	1	0.87	1
2009	0.62	0.62	0.62	1	0.62	1	0.62	1	0.62	1
2010	0.25	0.25	0.25	0	0.25	0	0.25	0	0.25	0
2011	0.15	0.15	0.15	0	0.15	0	0.15	0	0.15	0
2012	0.99	0.99	0.99	1	0.99	1	0.99	1	0.99	1
2013	0.99	0.99	0.99	1	0.99	1	0.99	1	0.99	1
2014	0.99	0.99	0.99	1	0.99	1	0.99	1	0.99	1
2015	0.99	0.99	0.99	1	0.99	1	0.99	1	0.99	1
2016	0.99	0.99	0.99	1	0.99	1	0.99	1	0.99	1

Resource Grouping - Gas - Southwest Alberta - Tight - Lower Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.55	0.35	0.20	7	0.18	20	0.16	45	0.12	90
2005	0.67	0.95	0.35	7	0.20	20	0.12	45	0.12	90
2006	0.93	0.75	0.45	7	0.35	20	0.16	45	0.12	90
2007	0.59	0.70	0.45	7	0.30	20	0.10	45	0.10	90
2008	0.38	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2009	0.36	0.80	0.30	7	0.20	20	0.16	45	0.12	90
2010	0.56	0.95	0.45	7	0.28	20	0.16	45	0.12	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.67	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2013	0.67	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.67	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.67	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.67	0.65	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Southern Foothills - Conventional - Mississippian, Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	3.77	0.25	0.20	7	0.18	20	0.16	45	0.12	90
2005	1.85	0.55	0.35	7	0.20	20	0.10	45	0.05	90
2006	2.54	0.65	0.30	7	0.16	20	0.10	45	0.05	90
2007	2.03	0.40	0.20	7	0.12	20	0.08	45	0.05	90
2008	2.09	0.25	0.20	7	0.18	20	0.12	45	0.08	90
2009	6.63	0.40	0.25	7	0.16	20	0.12	45	0.08	90
2010	0.01	0.40	0.30	7	0.20	20	0.12	45	0.08	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.55	0.40	0.25	7	0.20	20	0.12	45	0.08	90
2014	2.55	0.40	0.25	7	0.20	20	0.12	45	0.08	90
2015	2.55	0.40	0.25	7	0.20	20	0.12	45	0.08	90
2016	2.55	0.40	0.25	7	0.20	20	0.12	45	0.08	90

Resource Grouping - Gas - Eastern Alberta - Conventional - Upper Cretaceous, Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.12	0.75	0.30	7	0.22	20	0.16	45	0.08	90
2005	0.10	0.75	0.40	7	0.22	20	0.12	45	0.08	90
2006	0.05	0.95	0.43	7	0.20	20	0.16	45	0.08	90
2007	0.05	0.75	0.40	7	0.25	20	0.22	45	0.12	90
2008	0.06	0.55	0.40	7	0.25	20	0.16	45	0.12	90
2009	0.09	0.65	0.30	10	0.25	20	0.16	45	0.12	90
2010	0.14	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2011	0.16	1.25	0.50	7	0.25	20	0.16	45	0.12	90
2012	0.20	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2013	0.22	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2014	0.23	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2015	0.24	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2016	0.25	0.95	0.45	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Eastern Alberta - Conventional - Colorado, Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.19	0.90	0.50	7	0.35	20	0.18	45	0.12	90
2005	0.18	0.80	0.50	7	0.32	20	0.18	45	0.12	90
2006	0.17	0.70	0.45	7	0.36	20	0.25	45	0.12	90
2007	0.18	0.90	0.55	7	0.35	20	0.26	45	0.12	90
2008	0.18	0.85	0.50	7	0.33	20	0.24	45	0.12	90
2009	0.21	1.05	0.41	7	0.30	20	0.20	45	0.12	90
2010	0.16	1.10	0.69	7	0.35	20	0.20	45	0.12	90
2011	0.15	1.25	0.65	7	0.35	20	0.20	45	0.12	90
2012	0.12	1.05	0.50	7	0.40	20	0.20	45	0.12	90
2013	0.13	1.05	0.50	7	0.35	20	0.20	45	0.12	90
2014	0.13	1.05	0.50	7	0.35	20	0.20	45	0.12	90
2015	0.13	1.05	0.50	7	0.35	20	0.20	45	0.12	90
2016	0.13	1.05	0.50	7	0.35	20	0.20	45	0.12	90

Resource Grouping - Gas - Eastern Alberta - Tight - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.05	0.50	0.35	7	0.20	20	0.12	45	0.05	90
2005	0.06	0.80	0.50	7	0.20	20	0.12	45	0.12	90
2006	0.06	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2007	0.04	1.20	0.35	7	0.20	20	0.05	45	0.05	90
2008	0.06	1.25	0.40	7	0.25	20	0.12	45	0.12	90
2009	0.06	1.75	0.45	7	0.25	20	0.16	45	0.12	90
2010	0.04	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2011	0.06	0.70	0.40	7	0.22	20	0.16	45	0.12	90
2012	0.03	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2013	0.05	0.70	0.40	7	0.22	20	0.16	45	0.12	90
2014	0.05	0.70	0.40	7	0.22	20	0.16	45	0.12	90
2015	0.05	0.70	0.40	7	0.22	20	0.16	45	0.12	90
2016	0.05	0.70	0.40	7	0.22	20	0.16	45	0.12	90

Resource Grouping - Gas - Eastern Alberta - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Conventional - Tertiary, Upper Cretaceous										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.17	0.70	0.40	7	0.25	20	0.18	45	0.12	90
2005	0.14	1.05	0.50	7	0.25	20	0.16	45	0.12	90
2006	0.10	0.85	0.46	7	0.25	20	0.16	45	0.12	90
2007	0.14	0.70	0.42	7	0.25	20	0.18	45	0.12	90
2008	0.12	0.75	0.47	7	0.27	20	0.16	45	0.12	90
2009	0.12	1.10	0.47	7	0.23	20	0.16	45	0.12	90
2010	0.12	1.25	0.45	7	0.25	20	0.16	45	0.12	90
2011	0.12	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2012	0.07	0.95	0.50	7	0.25	20	0.16	45	0.12	90
2013	0.02	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2014	0.02	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2015	0.02	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2016	0.02	0.85	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.26	1.15	0.65	7	0.28	20	0.16	45	0.10	90
2005	0.20	1.15	0.40	7	0.30	20	0.20	45	0.12	90
2006	0.11	0.75	0.43	7	0.25	20	0.14	45	0.10	90
2007	0.16	0.50	0.35	7	0.25	20	0.16	45	0.12	90
2008	0.14	0.70	0.55	7	0.25	20	0.16	45	0.12	90
2009	0.18	1.30	0.45	7	0.25	20	0.16	45	0.12	90
2010	0.18	1.25	0.70	7	0.30	20	0.16	45	0.12	90
2011	0.12	1.15	0.50	7	0.30	20	0.16	45	0.12	90
2012	0.14	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2013	0.15	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2014	0.16	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2015	0.17	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2016	0.17	0.85	0.50	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Conventional - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.37	0.85	0.55	7	0.33	20	0.30	45	0.12	90
2005	0.31	0.80	0.53	7	0.35	20	0.26	45	0.12	90
2006	0.31	0.60	0.50	7	0.45	20	0.25	45	0.12	90
2007	0.30	0.80	0.55	7	0.38	20	0.20	45	0.12	90
2008	0.26	0.95	0.60	7	0.35	20	0.18	45	0.12	90
2009	0.26	0.75	0.52	7	0.40	20	0.18	45	0.12	90
2010	0.27	1.35	0.85	7	0.45	20	0.20	45	0.12	90
2011	0.27	1.15	0.50	7	0.30	20	0.18	45	0.12	90
2012	0.28	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2013	0.20	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2014	0.20	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2015	0.20	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2016	0.19	0.85	0.50	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Conventional - Mississippian, Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.52	0.40	0.30	7	0.50	20	0.32	45	0.12	90
2005	0.37	1.15	0.65	7	0.22	20	0.20	45	0.12	90
2006	0.25	1.20	0.60	7	0.31	20	0.20	45	0.12	90
2007	0.36	0.95	0.55	7	0.20	20	0.14	45	0.12	90
2008	0.27	0.80	0.63	7	0.20	25	0.16	50	0.12	90
2009	0.16	1.25	0.45	7	0.30	20	0.20	45	0.12	90
2010	0.05	0.95	0.50	7	0.30	20	0.16	45	0.12	90
2011	0.28	0.90	0.50	7	0.30	20	0.20	45	0.12	90
2012	0.06	0.90	0.50	7	0.30	20	0.20	45	0.12	90
2013	0.04	0.90	0.50	7	0.30	20	0.20	45	0.12	90
2014	0.04	0.90	0.50	7	0.30	20	0.20	45	0.12	90
2015	0.04	0.90	0.50	7	0.30	20	0.20	45	0.12	90
2016	0.04	0.90	0.50	7	0.30	20	0.20	45	0.12	90

Resource Grouping - Gas - Central Alberta - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.30	1.15	0.60	7	0.22	20	0.14	45	0.10	90
2005	0.23	1.05	0.35	7	0.22	20	0.16	45	0.12	90
2006	0.17	0.65	0.30	7	0.14	20	0.12	45	0.10	90
2007	0.27	0.95	0.50	7	0.22	20	0.12	45	0.10	90
2008	0.19	0.95	0.35	7	0.24	20	0.16	45	0.12	90
2009	0.15	0.90	0.40	7	0.24	20	0.16	45	0.12	90
2010	1.08	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2011	0.10	0.85	0.45	7	0.24	20	0.16	45	0.12	90
2012	0.11	1.05	0.60	7	0.25	20	0.16	45	0.12	90
2013	0.21	1.05	0.45	7	0.25	20	0.16	45	0.12	90
2014	0.21	1.05	0.45	7	0.25	20	0.16	45	0.12	90
2015	0.21	1.05	0.45	7	0.25	20	0.16	45	0.12	90
2016	0.21	1.05	0.45	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Tight - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.60	1.20	0.55	7	0.22	20	0.14	45	0.12	90
2005	0.25	0.65	0.40	7	0.30	20	0.14	45	0.12	90
2006	0.51	1.15	0.43	7	0.30	20	0.16	45	0.12	90
2007	0.33	0.65	0.30	7	0.28	20	0.20	45	0.12	90
2008	0.54	0.85	0.65	7	0.50	20	0.20	45	0.12	90
2009	0.71	1.20	0.50	7	0.32	20	0.16	45	0.12	90
2010	0.40	1.15	0.65	7	0.30	20	0.16	45	0.12	90
2011	0.30	1.15	0.60	7	0.30	20	0.16	45	0.12	90
2012	0.70	1.05	0.50	7	0.30	20	0.16	45	0.12	90
2013	0.46	1.05	0.50	7	0.30	20	0.16	45	0.12	90
2014	0.46	1.05	0.50	7	0.30	20	0.16	45	0.12	90
2015	0.46	1.05	0.50	7	0.30	20	0.16	45	0.12	90
2016	0.46	1.05	0.50	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Alberta - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2014	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2015	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2016	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100

Resource Grouping - Gas - Central Alberta - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Tertiary										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.18	0.65	0.42	7	0.30	20	0.20	45	0.12	90
2005	0.14	0.65	0.47	7	0.25	20	0.18	45	0.12	90
2006	0.15	0.70	0.40	7	0.32	20	0.20	45	0.12	90
2007	0.15	0.60	0.40	7	0.30	20	0.20	45	0.12	90
2008	0.17	0.55	0.42	7	0.32	20	0.16	45	0.12	90
2009	0.23	0.72	0.45	7	0.25	20	0.16	45	0.12	90
2010	0.25	1.10	0.60	7	0.32	20	0.16	45	0.12	90
2011	0.30	0.75	0.50	7	0.25	20	0.16	45	0.12	90
2012	0.20	0.75	0.50	7	0.30	20	0.16	45	0.12	90
2013	0.20	0.75	0.50	7	0.25	20	0.16	45	0.12	90
2014	0.18	0.75	0.50	7	0.25	20	0.16	45	0.12	90
2015	0.17	0.75	0.50	7	0.25	20	0.16	45	0.12	90
2016	0.15	0.75	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Upper Cretaceous, Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.34	0.65	0.40	7	0.30	20	0.16	45	0.12	90
2005	0.28	0.80	0.42	7	0.25	20	0.18	45	0.12	90
2006	0.26	0.85	0.45	7	0.25	20	0.16	45	0.12	90
2007	0.34	0.45	0.30	7	0.22	20	0.14	45	0.10	90
2008	0.37	0.50	0.30	7	0.25	20	0.16	45	0.12	90
2009	0.35	0.60	0.30	7	0.25	20	0.16	45	0.12	90
2010	0.81	1.15	0.40	7	0.24	20	0.16	45	0.12	90
2011	1.22	1.25	0.50	7	0.25	20	0.16	45	0.12	90
2012	1.24	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2013	1.33	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2014	1.43	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2015	1.53	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2016	1.64	0.90	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.48	0.60	0.35	7	0.28	20	0.18	45	0.10	90
2005	0.51	0.99	0.55	7	0.40	20	0.16	45	0.10	90
2006	0.24	1.15	0.50	7	0.24	20	0.16	45	0.12	90
2007	0.44	1.45	0.60	7	0.30	20	0.16	45	0.12	90
2008	0.46	0.80	0.30	7	0.20	20	0.16	45	0.12	90
2009	0.08	1.20	0.40	7	0.24	20	0.16	45	0.12	90
2010	1.45	0.65	0.40	7	0.22	20	0.12	45	0.05	90
2011	0.14	0.95	0.45	7	0.25	20	0.16	45	0.12	90
2012	0.87	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2013	0.87	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2014	0.87	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2015	0.87	0.75	0.40	7	0.25	20	0.16	45	0.12	90
2016	0.87	0.75	0.40	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Lower Mannville, Jurassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.42	0.50	0.35	7	0.20	20	0.16	45	0.08	90
2005	0.64	0.65	0.42	7	0.32	20	0.18	45	0.12	90
2006	0.55	1.10	0.50	7	0.22	20	0.16	45	0.12	90
2007	0.50	0.90	0.43	7	0.25	20	0.16	45	0.12	90
2008	0.51	0.65	0.40	7	0.34	20	0.20	45	0.12	90
2009	0.72	0.60	0.45	7	0.30	20	0.16	45	0.12	90
2010	1.04	0.85	0.55	7	0.30	20	0.20	45	0.12	90
2011	1.86	0.85	0.55	7	0.30	20	0.20	45	0.12	90
2012	2.69	0.85	0.50	7	0.30	20	0.16	45	0.12	90
2013	3.57	0.85	0.55	7	0.30	20	0.16	45	0.12	90
2014	4.08	0.85	0.55	7	0.30	20	0.16	45	0.12	90
2015	4.59	0.85	0.55	7	0.30	20	0.16	45	0.12	90
2016	5.10	0.85	0.55	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Missisippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.56	0.88	0.42	7	0.22	20	0.14	45	0.12	90
2005	0.73	0.20	0.27	7	0.40	20	0.22	45	0.12	90
2006	0.81	0.85	0.45	7	0.33	20	0.20	45	0.12	90
2007	0.54	0.50	0.35	7	0.25	20	0.18	45	0.12	90
2008	0.29	1.15	0.35	7	0.18	20	0.16	45	0.12	90
2009	0.56	0.70	0.30	7	0.25	20	0.16	45	0.12	90
2010	0.29	1.25	0.44	7	0.24	20	0.16	45	0.12	90
2011	0.68	1.45	0.55	7	0.24	20	0.16	45	0.12	90
2012	1.63	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2013	0.86	1.25	0.45	7	0.24	20	0.16	45	0.12	90
2014	0.86	1.25	0.45	7	0.24	20	0.16	45	0.12	90
2015	0.86	1.25	0.45	7	0.24	20	0.16	45	0.12	90
2016	0.86	1.25	0.45	7	0.24	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Conventional - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.38	0.10	0.12	7	0.16	20	0.14	45	0.12	90
2005	0.98	0.35	0.20	7	0.12	20	0.10	45	0.05	90
2006	0.46	1.05	0.50	7	0.35	20	0.16	45	0.12	90
2007	1.71	0.40	0.27	7	0.20	20	0.16	45	0.12	90
2008	1.71	1.25	0.50	7	0.25	20	0.16	45	0.12	90
2009	0.73	1.25	0.80	9	0.45	20	0.16	45	0.12	90
2010	0.84	1.25	0.65	7	0.30	20	0.16	45	0.12	90
2011	0.24	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2012	0.37	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2013	0.22	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2014	0.22	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2015	0.22	1.25	0.50	7	0.24	20	0.16	45	0.12	90
2016	0.22	1.25	0.50	7	0.24	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.35	0.20	0.16	7	0.10	20	0.10	45	0.12	90
2005	0.38	0.99	0.52	7	0.12	20	0.10	45	0.08	90
2006	0.71	0.75	0.35	7	0.22	20	0.18	45	0.08	90
2007	0.44	0.70	0.40	7	0.25	20	0.16	45	0.08	90
2008	0.91	0.75	0.60	7	0.25	25	0.12	45	0.08	90
2009	1.19	1.00	0.25	7	0.16	20	0.14	45	0.08	90
2010	0.46	0.55	0.40	7	0.25	20	0.14	45	0.08	90
2011	0.51	0.90	0.50	7	0.35	20	0.16	45	0.12	90
2012	2.17	0.65	0.40	7	0.20	20	0.12	45	0.05	90
2013	1.05	0.75	0.40	7	0.25	20	0.12	45	0.08	90
2014	1.05	0.75	0.40	7	0.25	20	0.12	45	0.08	90
2015	1.05	0.75	0.40	7	0.25	20	0.12	45	0.08	90
2016	1.05	0.75	0.40	7	0.25	20	0.12	45	0.08	90

Resource Grouping - Gas - West Central Alberta - Tight - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.52	0.85	0.35	7	0.22	20	0.14	45	0.12	90
2005	0.46	0.65	0.35	7	0.23	20	0.16	45	0.12	90
2006	0.56	1.00	0.45	7	0.21	20	0.16	45	0.12	90
2007	0.49	1.00	0.32	7	0.22	20	0.16	45	0.12	90
2008	0.57	0.85	0.55	7	0.22	20	0.16	45	0.12	90
2009	0.73	0.75	0.52	7	0.35	20	0.20	45	0.12	90
2010	1.14	1.15	0.60	7	0.30	20	0.16	45	0.12	90
2011	1.52	1.05	0.60	7	0.30	20	0.16	45	0.12	90
2012	1.64	1.25	0.60	7	0.30	20	0.16	45	0.12	90
2013	1.79	1.05	0.60	7	0.30	20	0.16	45	0.12	90
2014	1.95	1.05	0.60	7	0.30	20	0.16	45	0.12	90
2015	2.10	1.05	0.60	7	0.30	20	0.16	45	0.12	90
2016	2.25	1.05	0.60	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - West Central Alberta - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2014	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2015	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100
2016	3.50	2.25	0.80	6	0.40	20	0.20	45	0.12	100

Resource Grouping - Gas - West Central Alberta - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Foothills - Conventional - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.28	0.45	0.20	7	0.14	20	0.12	45	0.05	90
2005	0.74	0.20	0.16	7	0.12	20	0.10	45	0.08	90
2006	0.76	0.50	0.25	7	0.16	20	0.12	45	0.05	90
2007	0.62	0.85	0.35	7	0.12	20	0.10	45	0.05	90
2008	1.41	0.80	0.30	6	0.18	20	0.12	45	0.05	90
2009	1.65	0.50	0.35	7	0.25	20	0.10	45	0.05	90
2010	0.93	0.60	0.40	7	0.20	20	0.12	45	0.05	90
2011	1.12	0.58	0.40	7	0.20	20	0.12	45	0.05	90
2012	1.60	0.60	0.50	7	0.20	20	0.12	45	0.05	90
2013	1.60	0.60	0.40	7	0.20	20	0.12	45	0.05	90
2014	1.60	0.60	0.40	7	0.20	20	0.12	45	0.05	90
2015	1.60	0.60	0.40	7	0.20	20	0.12	45	0.05	90
2016	1.60	0.60	0.40	7	0.20	20	0.12	45	0.05	90

Resource Grouping - Gas - Central Foothills - Conventional - Colorado, Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.63	0.40	0.20	7	0.16	20	0.12	45	0.07	90
2005	0.79	0.50	0.35	7	0.21	20	0.12	45	0.05	90
2006	1.03	0.40	0.20	7	0.16	20	0.14	45	0.08	90
2007	1.42	0.75	0.40	7	0.28	20	0.10	45	0.05	90
2008	2.24	0.65	0.35	7	0.20	20	0.12	45	0.05	90
2009	1.21	0.50	0.30	7	0.14	20	0.08	45	0.05	90
2010	1.64	0.45	0.25	7	0.16	20	0.10	45	0.05	90
2011	1.64	0.45	0.30	7	0.20	20	0.12	45	0.05	90
2012	2.19	0.55	0.30	7	0.20	20	0.12	45	0.05	90
2013	1.47	0.50	0.30	7	0.20	20	0.12	45	0.05	90
2014	1.47	0.50	0.30	7	0.20	20	0.12	45	0.05	90
2015	1.47	0.50	0.30	7	0.20	20	0.12	45	0.05	90
2016	1.47	0.50	0.30	7	0.20	20	0.12	45	0.05	90

Resource Grouping - Gas - Central Foothills - Conventional - Jurassic, Triassic, Permian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	3.57	0.08	0.12	7	0.16	20	0.12	45	0.08	90
2005	0.77	0.40	0.20	7	0.16	20	0.12	45	0.05	90
2006	4.67	0.30	0.20	7	0.16	20	0.14	45	0.08	90
2007	3.85	0.65	0.35	7	0.30	20	0.16	45	0.08	90
2008	3.87	0.60	0.35	7	0.25	20	0.16	45	0.08	90
2009	2.72	0.30	0.20	7	0.12	20	0.10	45	0.05	90
2010	2.20	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2011	3.06	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2012	0.81	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2013	2.02	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2014	2.02	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2015	2.02	0.65	0.30	7	0.24	20	0.12	45	0.05	90
2016	2.02	0.65	0.30	7	0.24	20	0.12	45	0.05	90

Resource Grouping - Gas - Central Foothills - Conventional - Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	2.97	0.40	0.25	7	0.14	20	0.10	45	0.05	90
2005	2.81	0.75	0.25	7	0.14	20	0.08	45	0.05	90
2006	2.20	0.20	0.16	7	0.12	20	0.10	45	0.05	90
2007	3.31	0.25	0.20	7	0.14	20	0.10	45	0.08	90
2008	4.58	0.60	0.25	7	0.12	25	0.08	45	0.05	90
2009	5.71	0.60	0.25	10	0.16	25	0.08	45	0.05	90
2010	4.58	0.45	0.25	7	0.08	20	0.05	45	0.05	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.26	0.50	0.25	7	0.14	20	0.08	45	0.05	90
2014	2.26	0.50	0.25	7	0.14	20	0.08	45	0.05	90
2015	2.26	0.50	0.25	7	0.14	20	0.08	45	0.05	90
2016	2.26	0.50	0.25	7	0.14	20	0.08	45	0.05	90

Resource Grouping - Gas - Central Foothills - Conventional - Upper Devonian, Middle Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	2.36	0.16	0.12	7	0.10	20	0.08	45	0.05	90
2005	12.86	0.15	0.18	7	0.20	20	0.16	45	0.12	90
2006	4.30	0.40	0.25	7	0.16	20	0.12	45	0.05	90
2007	2.03	0.45	0.30	7	0.20	20	0.12	45	0.05	90
2008	1.68	0.45	0.30	7	0.20	20	0.12	45	0.05	90
2009	1.34	0.45	0.30	7	0.20	20	0.12	45	0.05	90
2010	1.20	0.85	0.40	7	0.12	20	0.12	45	0.12	90
2011	2.98	0.85	0.50	7	0.30	20	0.12	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.98	0.85	0.50	7	0.20	20	0.12	45	0.12	90
2014	2.98	0.85	0.50	7	0.20	20	0.12	45	0.12	90
2015	2.98	0.85	0.50	7	0.20	20	0.12	45	0.12	90
2016	2.98	0.85	0.50	7	0.20	20	0.12	45	0.12	90

Resource Grouping - Gas - Central Foothills - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.09	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2005	1.58	0.75	0.40	7	0.28	20	0.20	45	0.12	90
2006	0.24	0.55	0.10	7	0.05	20	0.02	45	0.02	90
2007	1.31	1.55	0.60	7	0.28	20	0.16	45	0.12	90
2008	0.77	0.48	0.38	7	0.30	20	0.18	45	0.12	90
2009	1.38	1.25	0.45	7	0.24	20	0.16	45	0.12	90
2010	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	1.38	0.85	0.40	7	0.25	20	0.16	45	0.12	90
2014	1.38	0.85	0.40	7	0.25	20	0.16	45	0.12	90
2015	1.38	0.85	0.40	7	0.25	20	0.16	45	0.12	90
2016	1.38	0.85	0.40	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Foothills - Tight - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.39	2.95	0.65	7	0.22	20	0.16	45	0.12	90
2005	0.30	0.60	0.35	7	0.20	20	0.12	45	0.05	90
2006	5.74	1.65	0.75	7	0.45	20	0.05	45	0.05	90
2007	0.60	1.25	0.30	7	0.16	20	0.10	45	0.05	90
2008	0.32	1.45	0.60	7	0.23	20	0.16	45	0.12	90
2009	2.27	1.25	0.45	7	0.25	20	0.16	45	0.12	90
2010	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2011	9.79	1.45	0.62	7	0.30	20	0.16	45	0.12	90
2012	6.00	0.65	0.40	7	0.20	20	0.12	45	0.05	90
2013	6.00	1.45	0.60	7	0.25	20	0.12	45	0.05	90
2014	6.00	1.45	0.60	7	0.25	20	0.12	45	0.05	90
2015	6.00	1.45	0.60	7	0.25	20	0.12	45	0.05	90
2016	6.00	1.45	0.60	7	0.25	20	0.12	45	0.05	90

Resource Grouping - Gas - Central Foothills - Tight - Jurassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2005	4.60	0.60	0.40	7	0.30	20	0.22	45	0.12	90
2006	1.14	0.85	0.55	7	0.20	20	0.14	45	0.12	90
2007	1.35	0.85	0.50	7	0.18	20	0.16	45	0.12	90
2008	3.84	0.85	0.35	7	0.18	25	0.16	45	0.12	90
2009	2.37	1.15	0.40	7	0.20	20	0.16	45	0.12	90
2010	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2011	1.79	0.65	0.40	7	0.30	20	0.16	45	0.12	90
2012	3.79	0.75	0.40	7	0.24	20	0.16	45	0.12	90
2013	3.79	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.79	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.79	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.79	0.65	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Central Foothills - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2014	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2015	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2016	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90

Resource Grouping - Gas - Central Foothills - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Kaybob - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.56	0.80	0.50	7	0.25	20	0.10	45	0.08	90
2005	0.61	0.50	0.40	7	0.30	20	0.16	45	0.08	90
2006	0.49	0.75	0.35	7	0.12	20	0.10	45	0.08	90
2007	0.50	0.75	0.40	7	0.14	20	0.10	45	0.08	90
2008	0.58	0.75	0.30	7	0.10	20	0.08	45	0.05	90
2009	0.77	0.85	0.40	7	0.30	20	0.12	45	0.08	90
2010	0.64	0.50	0.40	7	0.30	20	0.14	45	0.08	90
2011	0.20	0.85	0.50	7	0.14	20	0.10	45	0.08	90
2012	0.28	0.95	0.60	7	0.25	20	0.16	45	0.12	90
2013	0.28	0.85	0.50	7	0.14	20	0.10	45	0.08	90
2014	0.28	0.85	0.50	7	0.14	20	0.10	45	0.08	90
2015	0.28	0.85	0.50	7	0.14	20	0.10	45	0.08	90
2016	0.28	0.85	0.50	7	0.14	20	0.10	45	0.08	90

Resource Grouping - Gas - Kaybob - Conventional - Mannville, Jurassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.60	0.45	0.28	7	0.22	20	0.14	45	0.08	90
2005	0.77	0.65	0.45	7	0.25	20	0.12	45	0.08	90
2006	0.72	0.65	0.40	7	0.25	20	0.14	45	0.08	90
2007	0.66	0.30	0.20	7	0.16	20	0.12	45	0.08	90
2008	0.83	0.65	0.42	7	0.16	20	0.14	45	0.08	90
2009	0.82	0.55	0.30	7	0.20	20	0.16	45	0.08	90
2010	0.48	0.60	0.45	7	0.30	20	0.16	45	0.08	90
2011	0.39	0.75	0.40	7	0.25	20	0.16	45	0.08	90
2012	0.45	0.65	0.45	7	0.25	20	0.16	45	0.08	90
2013	2.56	0.65	0.40	7	0.25	20	0.16	45	0.08	90
2014	2.56	0.65	0.40	7	0.25	20	0.16	45	0.08	90
2015	2.56	0.65	0.40	7	0.25	20	0.16	45	0.08	90
2016	2.56	0.65	0.40	7	0.25	20	0.16	45	0.08	90

Resource Grouping - Gas - Kaybob - Conventional - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.39	0.65	0.40	7	0.25	20	0.16	45	0.08	90
2005	1.22	0.35	0.30	7	0.25	20	0.16	45	0.08	90
2006	1.09	0.95	0.60	7	0.25	20	0.16	45	0.12	90
2007	1.04	0.35	0.35	7	0.25	20	0.18	45	0.12	90
2008	0.69	0.16	0.14	7	0.12	20	0.10	45	0.08	90
2009	0.93	0.18	0.16	7	0.12	20	0.10	45	0.08	90
2010	0.40	0.85	0.45	7	0.25	20	0.16	45	0.08	90
2011	1.62	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2012	0.40	0.20	0.18	7	0.16	20	0.12	45	0.08	90
2013	0.60	0.65	0.30	7	0.22	20	0.16	45	0.08	90
2014	0.60	0.65	0.30	7	0.22	20	0.16	45	0.08	90
2015	0.60	0.65	0.30	7	0.22	20	0.16	45	0.08	90
2016	0.60	0.65	0.30	7	0.22	20	0.16	45	0.08	90

Resource Grouping - Gas - Kaybob - Conventional - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.03	0.55	0.40	7	0.20	20	0.12	45	0.05	90
2005	0.07	0.35	0.25	7	0.20	25	0.12	45	0.05	90
2006	1.22	0.65	0.35	7	0.25	20	0.16	45	0.08	90
2007	0.84	0.50	0.25	7	0.16	20	0.14	45	0.08	90
2008	0.61	0.50	0.25	7	0.20	20	0.18	45	0.08	90
2009	1.23	0.75	0.50	7	0.25	20	0.16	45	0.08	90
2010	0.87	0.50	0.35	7	0.25	20	0.16	45	0.08	90
2011	0.31	0.55	0.30	7	0.20	20	0.16	45	0.08	90
2012	0.52	0.50	0.30	7	0.20	20	0.12	45	0.08	90
2013	0.73	0.55	0.30	7	0.20	20	0.16	45	0.08	90
2014	0.84	0.55	0.30	7	0.20	20	0.16	45	0.08	90
2015	0.94	0.55	0.30	7	0.20	20	0.16	45	0.08	90
2016	1.04	0.55	0.30	7	0.20	20	0.16	45	0.08	90

Resource Grouping - Gas - Kaybob - Tight - Colorado, Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.63	0.85	0.40	7	0.18	20	0.14	45	0.12	90
2005	0.64	0.88	0.50	7	0.26	20	0.14	45	0.12	90
2006	0.72	0.95	0.45	7	0.28	20	0.18	45	0.12	90
2007	0.69	0.75	0.50	7	0.33	20	0.18	45	0.12	90
2008	0.63	1.10	0.50	7	0.25	20	0.16	45	0.12	90
2009	1.31	0.90	0.67	7	0.40	20	0.20	45	0.12	90
2010	1.49	1.35	0.62	7	0.40	20	0.16	45	0.12	90
2011	1.50	1.10	0.55	7	0.40	20	0.16	45	0.12	90
2012	1.52	1.10	0.55	7	0.35	20	0.16	45	0.12	90
2013	1.30	1.10	0.55	7	0.30	20	0.16	45	0.12	90
2014	1.30	1.10	0.55	7	0.30	20	0.16	45	0.12	90
2015	1.30	1.10	0.55	7	0.30	20	0.16	45	0.12	90
2016	1.30	1.10	0.55	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Kaybob - Tight - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.95	1.15	0.55	7	0.24	20	0.20	45	0.12	90
2005	0.94	1.05	0.47	7	0.25	20	0.16	45	0.12	90
2006	0.76	0.85	0.50	7	0.20	20	0.24	45	0.12	90
2007	0.66	0.75	0.50	7	0.30	20	0.24	45	0.12	90
2008	0.36	1.15	0.55	7	0.30	25	0.20	45	0.12	90
2009	0.40	0.60	0.40	7	0.30	20	0.20	45	0.12	90
2010	0.84	1.30	0.60	7	0.30	20	0.20	45	0.12	90
2011	1.18	1.25	0.75	7	0.40	20	0.30	45	0.12	90
2012	0.32	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2013	1.30	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2014	1.30	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2015	1.30	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2016	1.30	1.25	0.60	7	0.30	20	0.20	45	0.12	90

Resource Grouping - Gas - Kaybob- Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2012	3.50	0.50	0.45	7	0.30	20	0.20	45	0.12	90
2013	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2014	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2015	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2016	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90

Resource Grouping - Gas - Kaybob - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2012	2.00	0.65	0.40	7	0.20	20	0.12	45	0.05	90
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Cretaceous										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.46	0.40	0.25	7	0.16	20	0.12	45	0.08	90
2005	0.45	0.40	0.25	7	0.16	20	0.10	45	0.08	90
2006	0.35	0.45	0.20	7	0.12	20	0.08	45	0.05	90
2007	0.43	0.85	0.35	7	0.14	20	0.08	45	0.08	90
2008	0.53	0.65	0.25	7	0.16	20	0.12	45	0.08	90
2009	0.53	0.45	0.22	7	0.12	20	0.10	45	0.05	90
2010	0.49	0.35	0.40	7	0.20	20	0.12	45	0.05	90
2011	0.61	0.55	0.25	7	0.16	20	0.12	45	0.08	90
2012	1.18	0.65	0.35	7	0.20	20	0.16	45	0.08	90
2013	1.81	0.65	0.35	7	0.20	20	0.12	45	0.08	90
2014	2.06	0.65	0.35	7	0.20	20	0.12	45	0.08	90
2015	2.26	0.65	0.35	7	0.20	20	0.12	45	0.08	90
2016	2.42	0.65	0.35	7	0.20	20	0.12	45	0.08	90

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.46	0.65	0.40	7	0.14	20	0.08	45	0.05	90
2005	0.47	0.75	0.25	7	0.16	20	0.12	45	0.08	90
2006	0.60	0.85	0.23	7	0.16	20	0.10	45	0.06	90
2007	1.19	0.50	0.25	7	0.40	20	0.18	45	0.08	90
2008	0.44	0.70	0.35	7	0.16	20	0.10	45	0.08	90
2009	0.48	0.70	0.30	7	0.18	20	0.14	45	0.08	90
2010	0.80	0.70	0.30	7	0.20	20	0.16	45	0.08	90
2011	0.66	0.65	0.30	7	0.16	20	0.12	45	0.08	90
2012	0.77	0.65	0.30	7	0.20	20	0.12	45	0.08	90
2013	0.52	0.65	0.30	7	0.16	20	0.12	45	0.08	90
2014	0.52	0.65	0.30	7	0.16	20	0.12	45	0.08	90
2015	0.52	0.65	0.30	7	0.16	20	0.12	45	0.08	90
2016	0.52	0.65	0.30	7	0.16	20	0.12	45	0.08	90

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Mannville, Jurassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.03	1.05	0.45	7	0.25	20	0.12	45	0.05	90
2005	0.53	0.40	0.30	7	0.20	20	0.16	45	0.08	90
2006	0.50	0.60	0.25	7	0.20	20	0.16	45	0.08	90
2007	0.36	0.75	0.20	7	0.12	20	0.08	45	0.05	90
2008	0.92	0.90	0.20	7	0.12	20	0.10	45	0.08	90
2009	0.37	0.75	0.40	7	0.20	20	0.12	45	0.05	90
2010	1.34	0.95	0.65	7	0.30	20	0.14	45	0.05	90
2011	1.19	0.50	0.30	7	0.20	20	0.14	45	0.05	90
2012	1.46	1.25	0.50	7	0.25	20	0.12	45	0.05	90
2013	1.46	0.75	0.40	7	0.25	20	0.14	45	0.05	90
2014	1.46	0.75	0.40	7	0.25	20	0.14	45	0.05	90
2015	1.46	0.75	0.40	7	0.25	20	0.14	45	0.05	90
2016	1.46	0.75	0.40	7	0.25	20	0.14	45	0.05	90

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.48	0.55	0.30	7	0.20	20	0.10	45	0.08	90
2005	1.12	0.30	0.28	7	0.22	20	0.16	45	0.08	90
2006	1.28	0.30	0.25	7	0.20	20	0.16	45	0.08	90
2007	0.73	0.50	0.30	7	0.20	20	0.16	45	0.08	90
2008	0.97	0.65	0.50	7	0.28	20	0.20	45	0.08	90
2009	1.41	0.80	0.40	7	0.25	20	0.16	45	0.08	90
2010	2.02	0.85	0.50	7	0.16	20	0.12	45	0.08	90
2011	1.35	1.30	0.45	7	0.25	20	0.16	45	0.08	90
2012	0.33	1.40	0.45	7	0.25	20	0.16	45	0.08	90
2013	0.25	1.00	0.45	7	0.25	20	0.16	45	0.08	90
2014	0.25	1.00	0.45	7	0.25	20	0.16	45	0.08	90
2015	0.25	1.00	0.45	7	0.25	20	0.16	45	0.08	90
2016	0.25	1.00	0.45	7	0.25	20	0.16	45	0.08	90

Resource Grouping - Gas - Alberta Deep Basin - Conventional - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	4.04	0.35	0.16	7	0.14	20	0.18	45	0.08	90
2005	4.24	1.10	0.45	7	0.25	20	0.16	45	0.08	90
2006	0.37	0.95	0.55	7	0.25	20	0.12	45	0.05	90
2007	6.22	0.16	0.14	7	0.12	20	0.08	45	0.05	90
2008	4.28	0.50	0.30	7	0.20	20	0.12	45	0.08	90
2009	4.11	0.60	0.35	7	0.20	20	0.12	45	0.08	90
2010	0.92	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2011	0.03	0.65	0.40	7	0.25	20	0.16	45	0.08	90
2012	1.63	1.25	0.60	7	0.30	20	0.16	45	0.12	90
2013	1.63	0.85	0.45	7	0.25	20	0.16	45	0.08	90
2014	1.63	0.85	0.45	7	0.25	20	0.16	45	0.08	90
2015	1.63	0.85	0.45	7	0.25	20	0.16	45	0.08	90
2016	1.63	0.85	0.45	7	0.25	20	0.16	45	0.08	90

Resource Grouping - Gas - Alberta Deep Basin - Tight - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.81	0.85	0.40	7	0.20	20	0.13	45	0.12	90
2005	0.59	0.90	0.40	7	0.23	20	0.13	45	0.12	90
2006	0.55	1.00	0.35	7	0.23	20	0.16	45	0.12	90
2007	0.56	1.05	0.45	7	0.19	20	0.12	45	0.12	90
2008	0.61	0.90	0.37	7	0.24	20	0.16	45	0.12	90
2009	0.80	0.85	0.58	7	0.28	20	0.16	45	0.12	90
2010	0.97	0.90	0.50	7	0.26	20	0.16	45	0.12	90
2011	1.16	1.00	0.55	7	0.30	20	0.16	45	0.12	90
2012	1.44	1.00	0.60	7	0.24	20	0.16	45	0.12	90
2013	1.11	1.00	0.55	7	0.25	20	0.16	45	0.12	90
2014	1.11	1.00	0.55	7	0.25	20	0.16	45	0.12	90
2015	1.11	1.00	0.55	7	0.25	20	0.16	45	0.12	90
2016	1.11	1.00	0.55	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Alberta Deep Basin - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.22	0.75	0.50	7	0.39	20	0.16	45	0.10	90
2005	0.55	0.60	0.40	7	0.22	20	0.16	45	0.10	90
2006	0.49	0.50	0.44	7	0.28	20	0.16	45	0.10	90
2007	0.93	1.05	0.45	7	0.25	20	0.14	45	0.10	90
2008	0.63	0.30	0.25	7	0.20	20	0.14	35	0.12	90
2009	1.30	1.45	0.50	7	0.25	20	0.12	45	0.10	90
2010	1.01	0.85	0.48	7	0.25	20	0.12	45	0.10	90
2011	1.03	0.90	0.40	7	0.25	20	0.16	45	0.10	90
2012	0.84	0.90	0.60	7	0.25	20	0.16	45	0.10	90
2013	0.84	0.90	0.50	7	0.25	20	0.16	45	0.10	90
2014	0.84	0.90	0.50	7	0.25	20	0.16	45	0.10	90
2015	0.84	0.90	0.50	7	0.25	20	0.16	45	0.10	90
2016	0.84	0.90	0.50	7	0.25	20	0.16	45	0.10	90

Resource Grouping - Gas - Alberta Deep Basin - Tight - Mannville, Jurassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.68	0.60	0.45	7	0.27	20	0.13	45	0.10	90
2005	0.55	0.60	0.45	7	0.28	20	0.14	45	0.10	90
2006	0.59	0.65	0.45	7	0.26	20	0.14	45	0.10	90
2007	0.72	0.75	0.41	7	0.28	20	0.16	45	0.10	90
2008	1.00	0.85	0.45	7	0.27	20	0.16	45	0.10	90
2009	0.99	0.70	0.50	7	0.24	20	0.16	45	0.10	90
2010	1.25	0.80	0.45	7	0.30	20	0.18	45	0.10	90
2011	1.89	0.90	0.50	7	0.26	20	0.16	45	0.10	90
2012	2.16	0.90	0.50	7	0.26	20	0.16	45	0.10	90
2013	2.39	0.90	0.50	7	0.26	20	0.16	45	0.10	90
2014	2.59	0.90	0.50	7	0.26	20	0.16	45	0.10	90
2015	2.74	0.90	0.50	7	0.26	20	0.16	45	0.10	90
2016	2.85	0.90	0.50	7	0.26	20	0.16	45	0.10	90

Resource Grouping - Gas - Alberta Deep Basin - Tight - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	2.39	0.90	0.45	7	0.20	20	0.22	45	0.12	90
2005	0.81	0.95	0.45	7	0.20	20	0.16	45	0.12	90
2006	0.72	1.00	0.45	7	0.25	20	0.18	45	0.10	90
2007	0.55	1.25	0.50	7	0.30	20	0.20	45	0.10	90
2008	1.22	1.45	0.55	7	0.27	20	0.16	45	0.11	90
2009	0.62	0.95	0.50	7	0.35	20	0.20	45	0.10	90
2010	1.41	1.25	0.55	7	0.30	20	0.16	45	0.10	90
2011	0.80	0.70	0.35	7	0.24	20	0.16	45	0.10	90
2012	1.19	0.70	0.45	7	0.25	20	0.16	45	0.10	90
2013	1.55	0.70	0.45	7	0.24	20	0.16	45	0.10	90
2014	1.55	0.70	0.45	7	0.24	20	0.16	45	0.10	90
2015	1.55	0.70	0.45	7	0.24	20	0.16	45	0.10	90
2016	1.55	0.70	0.45	7	0.24	20	0.16	45	0.10	90

Resource Grouping - Gas - Alberta Deep Basin - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2012	3.50	0.45	0.30	7	0.20	20	0.16	45	0.10	90
2013	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2014	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2015	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2016	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90

Resource Grouping - Gas - Alberta Deep Basin - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2012	3.00	0.85	0.45	7	0.24	20	0.16	45	0.12	90
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast Alberta - Conventional - Mannville, Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.22	0.10	0.16	7	0.14	20	0.12	45	0.10	90
2005	0.23	0.45	0.25	7	0.20	20	0.11	45	0.10	90
2006	0.18	0.45	0.20	7	0.18	20	0.13	45	0.10	90
2007	0.21	0.40	0.25	7	0.18	20	0.14	45	0.10	90
2008	0.20	0.40	0.25	7	0.22	20	0.20	45	0.12	90
2009	0.18	0.45	0.35	7	0.18	20	0.12	45	0.12	90
2010	0.18	0.30	0.16	7	0.12	20	0.12	45	0.12	90
2011	0.21	0.45	0.30	7	0.16	20	0.12	45	0.12	90
2012	0.08	0.45	0.30	7	0.20	20	0.12	45	0.12	90
2013	0.04	0.45	0.30	7	0.18	20	0.12	45	0.12	90
2014	0.04	0.45	0.30	7	0.18	20	0.12	45	0.12	90
2015	0.04	0.45	0.30	7	0.18	20	0.12	45	0.12	90
2016	0.04	0.45	0.30	7	0.18	20	0.12	45	0.12	90

Resource Grouping - Gas - Peace River - Conventional - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.40	0.50	0.16	7	0.20	20	0.12	45	0.12	90
2005	0.38	0.45	0.30	7	0.20	20	0.14	45	0.12	90
2006	0.26	0.50	0.30	7	0.20	20	0.26	45	0.12	90
2007	0.31	0.45	0.30	7	0.08	20	0.08	45	0.08	90
2008	0.25	0.50	0.35	7	0.25	20	0.16	45	0.12	90
2009	0.23	0.30	0.16	7	0.12	20	0.10	45	0.05	90
2010	0.83	0.85	0.45	7	0.25	20	0.16	45	0.12	90
2011	1.20	0.60	0.40	7	0.20	20	0.16	45	0.10	90
2012	0.60	0.60	0.40	7	0.20	20	0.16	45	0.10	90
2013	0.60	0.60	0.40	7	0.20	20	0.16	45	0.10	90
2014	0.60	0.60	0.40	7	0.20	20	0.16	45	0.10	90
2015	0.60	0.60	0.40	7	0.20	20	0.16	45	0.10	90
2016	0.60	0.60	0.40	7	0.20	20	0.16	45	0.10	90

Resource Grouping - Gas - Peace River - Conventional - Colorado, Upper Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.71	0.20	0.40	7	0.32	20	0.27	45	0.12	90
2005	0.61	0.45	0.30	7	0.22	20	0.18	45	0.12	90
2006	0.42	0.25	0.35	7	0.30	20	0.20	45	0.12	90
2007	0.61	0.30	0.20	7	0.40	20	0.30	45	0.12	90
2008	0.40	0.55	0.35	7	0.28	20	0.14	45	0.10	90
2009	0.40	0.45	0.30	7	0.20	20	0.14	45	0.12	90
2010	0.55	0.45	0.30	7	0.20	20	0.16	45	0.12	90
2011	0.59	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2012	0.27	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2013	4.37	0.55	0.35	7	0.20	20	0.16	45	0.12	90
2014	4.37	0.55	0.35	7	0.20	20	0.16	45	0.12	90
2015	4.37	0.55	0.35	7	0.20	20	0.16	45	0.12	90
2016	4.37	0.55	0.35	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Peace River - Conventional - Middle Mannville, Lower Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.59	0.30	0.25	7	0.22	20	0.18	45	0.12	90
2005	0.68	0.75	0.40	7	0.32	20	0.20	45	0.12	90
2006	0.61	0.60	0.40	7	0.25	20	0.18	45	0.12	90
2007	0.63	0.65	0.40	7	0.26	20	0.28	45	0.12	90
2008	0.49	0.75	0.20	7	0.16	20	0.14	45	0.12	90
2009	0.62	0.75	0.45	7	0.30	20	0.16	45	0.12	90
2010	0.42	0.80	0.45	7	0.22	20	0.16	45	0.12	90
2011	0.35	0.65	0.30	7	0.20	20	0.16	45	0.12	90
2012	0.81	0.60	0.45	7	0.30	20	0.16	45	0.12	90
2013	0.40	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.37	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.34	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.31	0.65	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Peace River - Conventional - Upper Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.59	0.25	0.20	7	0.16	20	0.14	45	0.12	90
2005	0.44	0.65	0.40	7	0.22	20	0.18	45	0.12	90
2006	0.77	0.50	0.30	7	0.20	20	0.14	45	0.12	90
2007	0.78	0.95	0.55	7	0.30	20	0.16	45	0.10	90
2008	0.64	0.20	0.45	7	0.30	20	0.16	45	0.12	90
2009	0.87	0.90	0.45	7	0.20	20	0.14	45	0.12	90
2010	0.65	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2011	2.03	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2012	0.52	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2013	0.39	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2014	0.39	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2015	0.39	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2016	0.39	0.65	0.40	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Peace River - Conventional - Lower Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.00	0.65	0.40	7	0.25	20	0.12	45	0.08	90
2005	0.64	0.50	0.25	7	0.16	20	0.12	45	0.08	90
2006	0.67	0.45	0.25	7	0.20	20	0.12	45	0.08	90
2007	0.71	1.15	0.55	7	0.25	20	0.16	45	0.08	90
2008	1.00	0.65	0.25	7	0.16	20	0.10	45	0.05	90
2009	2.09	0.25	0.35	7	0.40	20	0.16	45	0.10	90
2010	1.10	0.60	0.50	7	0.30	20	0.18	45	0.10	90
2011	2.67	0.10	0.30	7	0.25	20	0.16	45	0.10	90
2012	1.00	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2013	4.15	0.60	0.30	7	0.20	20	0.16	45	0.10	90
2014	4.15	0.60	0.30	7	0.20	20	0.16	45	0.10	90
2015	4.15	0.60	0.30	7	0.20	20	0.16	45	0.10	90
2016	4.15	0.60	0.30	7	0.20	20	0.16	45	0.10	90

Resource Grouping - Gas - Peace River - Conventional - Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.74	0.05	0.18	7	0.18	20	0.12	45	0.10	90
2005	0.71	0.05	0.35	7	0.20	20	0.14	45	0.08	90
2006	0.62	0.60	0.40	7	0.20	20	0.12	45	0.08	90
2007	0.59	0.75	0.55	7	0.22	20	0.12	45	0.08	90
2008	0.92	0.05	0.38	7	0.40	20	0.18	45	0.08	90
2009	1.19	0.55	0.35	7	0.25	20	0.16	45	0.12	90
2010	0.59	0.40	0.30	7	0.16	20	0.12	45	0.08	90
2011	0.47	0.40	0.25	7	0.16	20	0.12	45	0.08	90
2012	1.52	0.50	0.30	7	0.20	20	0.12	45	0.08	90
2013	0.21	0.50	0.30	7	0.16	20	0.12	45	0.08	90
2014	0.21	0.50	0.30	7	0.16	20	0.12	45	0.08	90
2015	0.21	0.50	0.30	7	0.16	20	0.12	45	0.08	90
2016	0.21	0.50	0.30	7	0.16	20	0.12	45	0.08	90

Resource Grouping - Gas - Peace River - Conventional - Upper Devonian, Middle Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.50	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2005	3.25	0.10	0.40	7	0.28	20	0.20	45	0.12	90
2006	0.61	0.75	0.45	7	0.30	20	0.16	45	0.12	90
2007	2.00	0.85	0.60	7	0.25	20	0.16	45	0.12	90
2008	0.73	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2009	0.37	0.95	0.40	7	0.25	20	0.18	45	0.12	90
2010	1.13	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2011	3.55	1.25	0.50	7	0.25	20	0.16	45	0.12	90
2012	5.53	0.20	0.16	7	0.14	20	0.12	45	0.10	90
2013	5.53	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2014	5.53	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2015	5.53	0.90	0.50	7	0.25	20	0.16	45	0.12	90
2016	5.53	0.90	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Peace River - Tight - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.66	1.15	0.55	7	0.20	20	0.16	45	0.12	90
2005	0.89	1.50	0.62	7	0.32	20	0.16	45	0.12	90
2006	0.61	1.30	0.50	7	0.38	20	0.26	45	0.12	90
2007	0.59	0.60	0.70	7	0.38	20	0.24	45	0.12	90
2008	0.77	0.85	0.58	7	0.30	20	0.24	45	0.12	90
2009	0.51	0.80	0.40	7	0.20	20	0.16	45	0.12	90
2010	0.60	1.15	0.45	7	0.28	20	0.16	45	0.12	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	1.69	1.25	0.50	7	0.30	20	0.16	45	0.12	90
2014	1.69	1.25	0.50	7	0.30	20	0.16	45	0.12	90
2015	1.69	1.25	0.50	7	0.30	20	0.16	45	0.12	90
2016	1.69	1.25	0.50	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Peace River - Tight - Lower Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.72	0.95	0.55	7	0.32	20	0.20	45	0.12	90
2005	0.60	1.45	0.60	7	0.30	20	0.14	45	0.12	90
2006	0.69	1.25	0.45	7	0.35	20	0.24	45	0.12	90
2007	0.46	0.65	0.45	7	0.25	20	0.20	45	0.12	90
2008	0.57	0.85	0.52	7	0.28	20	0.20	45	0.12	90
2009	0.57	1.25	0.65	7	0.30	20	0.20	45	0.12	90
2010	0.79	1.25	0.58	7	0.30	20	0.20	45	0.12	90
2011	0.24	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2012	1.89	1.25	0.60	7	0.30	20	0.20	45	0.12	90
2013	3.26	1.15	0.60	7	0.30	20	0.20	45	0.12	90
2014	3.26	1.15	0.60	7	0.30	20	0.20	45	0.12	90
2015	3.26	1.15	0.60	7	0.30	20	0.20	45	0.12	90
2016	3.26	1.15	0.60	7	0.30	20	0.20	45	0.12	90

Resource Grouping - Gas - Peace River - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2014	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2015	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90
2016	3.50	0.85	0.60	7	0.30	20	0.16	45	0.05	90

Resource Grouping - Gas - Peace River - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Northwest Alberta - Conventional - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.10	0.10	0.16	7	0.14	20	0.10	45	0.08	90
2005	0.08	0.05	0.16	7	0.12	20	0.12	45	0.08	90
2006	0.12	0.22	0.12	7	0.10	20	0.10	45	0.08	90
2007	0.17	0.45	0.25	7	0.14	20	0.12	45	0.08	90
2008	0.23	0.20	0.10	7	0.08	20	0.05	45	0.05	90
2009	0.29	0.25	0.16	7	0.10	20	0.08	45	0.05	90
2010	0.29	0.45	0.25	7	0.16	20	0.10	45	0.05	90
2011	0.36	0.45	0.20	7	0.16	20	0.10	45	0.05	90
2012	0.09	0.45	0.20	7	0.16	20	0.10	45	0.05	90
2013	0.19	0.45	0.20	7	0.16	20	0.10	45	0.05	90
2014	0.19	0.45	0.20	7	0.16	20	0.10	45	0.05	90
2015	0.19	0.45	0.20	7	0.16	20	0.10	45	0.05	90
2016	0.19	0.45	0.20	7	0.16	20	0.10	45	0.05	90

Resource Grouping - Gas - Northwest Alberta - Conventional - Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.40	0.45	0.30	7	0.20	20	0.12	45	0.08	90
2005	0.20	0.35	0.20	7	0.16	20	0.12	45	0.08	90
2006	0.10	0.25	0.12	7	0.08	20	0.08	45	0.05	90
2007	0.25	0.55	0.30	7	0.18	20	0.14	45	0.12	90
2008	0.25	0.30	0.20	7	0.12	20	0.10	45	0.08	90
2009	0.15	0.40	0.18	7	0.12	20	0.10	45	0.08	90
2010	0.21	0.10	0.20	7	0.12	20	0.10	45	0.08	90
2011	0.04	0.45	0.20	7	0.12	20	0.10	45	0.08	90
2012	0.03	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2013	0.03	0.65	0.30	7	0.16	20	0.10	45	0.08	90
2014	0.03	0.65	0.30	7	0.16	20	0.10	45	0.08	90
2015	0.03	0.65	0.30	7	0.16	20	0.10	45	0.08	90
2016	0.03	0.65	0.30	7	0.16	20	0.10	45	0.08	90

Resource Grouping - Gas - Northwest Alberta - Conventional - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.86	0.85	0.20	7	0.18	20	0.18	45	0.12	90
2005	0.64	0.50	0.60	7	0.40	20	0.20	45	0.12	90
2006	0.78	1.25	0.50	7	0.18	20	0.16	45	0.12	90
2007	0.28	0.55	0.25	7	0.20	20	0.14	45	0.08	90
2008	0.68	1.25	0.45	7	0.20	20	0.14	45	0.10	90
2009	2.54	1.45	0.65	7	0.40	20	0.16	45	0.12	90
2010	0.71	0.65	0.40	7	0.27	20	0.16	45	0.12	90
2011	0.03	0.25	0.12	7	0.10	20	0.08	45	0.05	90
2012	0.12	0.65	0.30	7	0.20	20	0.16	45	0.12	90
2013	0.22	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.22	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.22	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.22	0.65	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Northwest Alberta - Conventional - Middle Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.80	0.60	0.40	7	0.38	20	0.28	45	0.12	90
2005	0.89	0.60	0.50	7	0.38	20	0.30	45	0.12	90
2006	0.70	1.25	0.85	7	0.42	20	0.20	45	0.12	90
2007	0.66	0.85	0.70	7	0.34	20	0.24	45	0.12	90
2008	0.94	0.80	0.60	7	0.55	20	0.30	45	0.12	90
2009	1.07	0.85	0.50	7	0.34	20	0.26	45	0.12	90
2010	0.83	0.85	0.50	7	0.35	20	0.24	45	0.12	90
2011	0.64	0.70	0.40	7	0.28	20	0.20	45	0.12	90
2012	0.00	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2013	0.37	0.80	0.40	7	0.30	20	0.20	45	0.12	90
2014	0.37	0.80	0.40	7	0.30	20	0.20	45	0.12	90
2015	0.37	0.80	0.40	7	0.30	20	0.20	45	0.12	90
2016	0.37	0.80	0.40	7	0.30	20	0.20	45	0.12	90

Resource Grouping - Gas - Peace River - Shale - Duvernay										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2013	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	3.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Deep Basin - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	4.96	0.35	0.50	7	0.40	20	0.30	45	0.12	90
2005	4.30	0.85	0.60	7	0.34	20	0.20	45	0.12	90
2006	0.29	1.45	0.60	7	0.18	20	0.12	45	0.10	90
2007	0.15	0.50	0.25	7	0.20	20	0.16	45	0.12	90
2008	1.04	0.65	0.40	7	0.30	20	0.18	45	0.12	90
2009	0.06	1.25	0.45	7	0.20	20	0.16	45	0.12	90
2010	2.69	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	0.67	0.85	0.50	7	0.20	20	0.16	45	0.12	90
2014	0.67	0.85	0.50	7	0.20	20	0.16	45	0.12	90
2015	0.67	0.85	0.50	7	0.20	20	0.16	45	0.12	90
2016	0.67	0.85	0.50	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Deep Basin - Conventional - Lower Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.33	1.45	0.65	7	0.25	20	0.16	45	0.12	90
2005	1.40	0.10	0.30	7	0.20	20	0.12	45	0.05	90
2006	0.85	0.70	0.45	7	0.27	20	0.16	45	0.12	90
2007	1.23	0.45	0.20	7	0.16	20	0.12	45	0.10	90
2008	1.36	0.65	0.35	7	0.16	20	0.12	45	0.12	90
2009	1.63	0.40	0.25	7	0.22	20	0.16	45	0.12	90
2010	4.18	0.85	0.55	7	0.30	20	0.16	45	0.12	90
2011	3.07	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2012	2.98	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2013	1.65	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2014	1.65	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2015	1.65	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2016	1.65	0.85	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Deep Basin - Tight - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.52	1.40	0.40	7	0.20	20	0.08	45	0.05	90
2005	0.64	1.55	0.85	7	0.38	20	0.10	45	0.05	90
2006	0.98	1.05	0.40	7	0.10	20	0.05	45	0.05	90
2007	1.28	0.40	0.20	7	0.25	20	0.12	45	0.05	90
2008	1.46	1.95	0.55	7	0.30	20	0.12	45	0.05	90
2009	2.60	1.55	0.65	7	0.30	20	0.12	45	0.05	90
2010	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2011	2.63	1.45	0.60	7	0.30	20	0.12	45	0.05	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.63	1.45	0.60	7	0.30	20	0.12	45	0.05	90
2014	2.63	1.45	0.60	7	0.30	20	0.12	45	0.05	90
2015	2.63	1.45	0.60	7	0.30	20	0.12	45	0.05	90
2016	2.63	1.45	0.60	7	0.30	20	0.12	45	0.05	90

Resource Grouping - Gas - BC Deep Basin - Tight - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.25	1.65	0.55	7	0.16	20	0.08	45	0.05	90
2005	1.40	1.75	0.65	7	0.22	20	0.16	45	0.05	90
2006	1.77	2.20	0.65	7	0.30	20	0.16	45	0.12	90
2007	1.83	2.15	0.65	7	0.32	20	0.16	45	0.12	90
2008	3.05	1.55	0.70	7	0.40	20	0.16	45	0.12	90
2009	2.88	1.15	0.60	7	0.30	20	0.16	45	0.12	90
2010	3.94	0.80	0.65	7	0.40	20	0.20	45	0.12	90
2011	3.43	0.85	0.40	7	0.25	20	0.16	45	0.12	90
2012	2.72	1.05	0.60	7	0.30	20	0.16	45	0.12	90
2013	5.42	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2014	5.42	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2015	5.42	1.25	0.60	7	0.25	20	0.16	45	0.12	90
2016	5.42	1.25	0.60	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Deep Basin - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2006	1.40	1.85	0.63	7	0.25	20	0.14	45	0.12	90
2007	3.50	1.65	0.55	7	0.30	20	0.16	45	0.12	90
2008	3.50	0.80	0.45	7	0.25	20	0.16	45	0.12	90
2009	3.50	0.65	0.40	7	0.30	20	0.16	45	0.12	90
2010	3.50	0.65	0.45	7	0.30	20	0.16	45	0.12	90
2011	4.00	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2012	4.00	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2013	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Fort St John - Conventional - Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.44	0.65	0.42	7	0.26	20	0.22	45	0.14	90
2005	0.34	0.55	0.40	7	0.28	20	0.18	45	0.14	90
2006	0.39	1.00	0.40	7	0.25	20	0.18	45	0.16	90
2007	0.47	0.80	0.50	7	0.32	20	0.20	45	0.18	90
2008	0.39	0.88	0.45	7	0.22	20	0.20	45	0.18	90
2009	0.33	0.85	0.43	7	0.30	20	0.25	45	0.18	90
2010	1.23	1.20	0.55	7	0.28	20	0.20	45	0.12	90
2011	0.13	0.45	0.30	7	0.20	20	0.16	45	0.12	90
2012	0.20	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2013	0.20	0.50	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.20	0.50	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.20	0.50	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.20	0.50	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Fort St John - Conventional - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.74	0.85	0.30	7	0.26	20	0.18	45	0.12	90
2005	0.68	0.95	0.40	7	0.25	20	0.16	45	0.12	90
2006	0.63	0.85	0.50	7	0.25	20	0.18	45	0.12	90
2007	0.62	1.05	0.40	7	0.28	20	0.20	45	0.12	90
2008	0.71	1.10	0.40	7	0.23	20	0.18	45	0.12	90
2009	0.76	1.15	0.50	7	0.25	20	0.18	45	0.12	90
2010	0.93	1.15	0.40	7	0.25	20	0.18	45	0.12	90
2011	1.08	0.95	0.60	7	0.30	20	0.16	45	0.12	90
2012	1.88	0.65	0.40	7	0.25	20	0.16	45	0.12	90
2013	1.42	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2014	1.42	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2015	1.42	0.85	0.50	7	0.25	20	0.16	45	0.12	90
2016	1.42	0.85	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Fort St John - Conventional - Permian, Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.88	0.20	0.25	7	0.35	20	0.24	45	0.12	90
2005	1.50	0.95	0.40	7	0.14	20	0.12	45	0.10	90
2006	0.94	0.75	0.50	7	0.12	20	0.10	45	0.05	90
2007	2.39	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2008	2.76	0.95	0.50	7	0.30	20	0.16	45	0.12	90
2009	2.05	0.40	0.30	7	0.20	20	0.18	45	0.12	90
2010	2.43	1.45	0.60	7	0.30	20	0.18	45	0.12	90
2011	3.35	0.30	0.25	7	0.20	20	0.16	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	3.35	0.95	0.50	7	0.25	20	0.16	45	0.12	90
2014	3.35	0.95	0.50	7	0.25	20	0.16	45	0.12	90
2015	3.35	0.95	0.50	7	0.25	20	0.16	45	0.12	90
2016	3.35	0.95	0.50	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Fort St John - Conventional - Upper Devonian, Middle Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.16	0.75	0.35	7	0.20	20	0.12	45	0.10	90
2005	3.04	0.50	0.45	7	0.32	20	0.24	45	0.12	90
2006	0.84	0.95	0.40	7	0.25	20	0.14	45	0.12	90
2007	1.95	0.30	0.90	7	0.45	20	0.24	45	0.12	90
2008	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2009	4.55	0.85	0.52	7	0.20	20	0.16	45	0.12	90
2010	3.06	1.25	0.60	7	0.30	20	0.16	45	0.12	90
2011	2.05	1.35	0.55	7	0.30	20	0.16	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.00	0.95	0.55	7	0.25	20	0.16	45	0.12	90
2014	1.95	0.95	0.55	7	0.25	20	0.16	45	0.12	90
2015	1.89	0.95	0.55	7	0.25	20	0.16	45	0.12	90
2016	1.84	0.95	0.55	7	0.25	20	0.16	45	0.12	90

Resource Grouping - Gas - Fort St John - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2006	2.98	0.75	0.45	7	0.32	20	0.18	45	0.12	90
2007	3.50	0.85	0.60	7	0.28	20	0.12	45	0.05	90
2008	3.50	0.75	0.45	7	0.25	20	0.12	45	0.05	90
2009	3.50	0.35	0.28	7	0.20	20	0.16	45	0.05	90
2010	3.50	0.45	0.30	7	0.20	20	0.16	45	0.12	90
2011	4.00	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2012	4.00	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2013	4.50	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2014	4.50	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2015	4.50	0.65	0.40	7	0.20	20	0.16	45	0.12	90
2016	4.50	0.65	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast BC - Conventional - Lower Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.17	0.12	0.10	7	0.08	20	0.05	45	0.05	90
2005	0.71	0.35	0.25	7	0.20	20	0.16	45	0.12	90
2006	0.21	0.55	0.25	7	0.08	20	0.05	45	0.05	90
2007	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2008	0.42	0.65	0.40	7	0.18	20	0.16	45	0.12	90
2009	0.17	0.95	0.35	4	0.22	20	0.16	45	0.12	500
2010	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	1.02	0.80	0.40	7	0.25	20	0.16	45	0.12	90
2013	1.02	0.85	0.40	4	0.22	20	0.16	45	0.12	500
2014	1.02	0.85	0.40	4	0.22	20	0.16	45	0.12	500
2015	1.02	0.85	0.40	4	0.22	20	0.16	45	0.12	500
2016	1.02	0.85	0.40	4	0.22	20	0.16	45	0.12	500

Resource Grouping - Gas - Northeast BC - Conventional - Permian, Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	2.13	0.65	0.55	7	0.45	20	0.25	45	0.12	90
2005	1.01	0.50	0.30	7	0.25	20	0.18	45	0.12	90
2006	0.53	1.25	0.60	7	0.35	20	0.22	45	0.12	90
2007	0.23	0.35	0.12	7	0.10	20	0.08	45	0.05	90
2008	0.36	1.00	0.30	7	0.18	20	0.16	45	0.12	90
2009	0.84	0.30	0.20	7	0.16	20	0.14	45	0.12	90
2010	0.15	0.30	0.20	7	0.18	20	0.16	45	0.12	90
2011	0.43	0.30	0.22	7	0.18	20	0.16	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	0.43	0.30	0.22	7	0.18	20	0.16	45	0.12	90
2014	0.43	0.30	0.22	7	0.18	20	0.16	45	0.12	90
2015	0.43	0.30	0.22	7	0.18	20	0.16	45	0.12	90
2016	0.43	0.30	0.22	7	0.18	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast BC - Conventional - Upper Devonian, Middle Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.96	0.35	0.22	7	0.16	20	0.14	45	0.12	90
2005	1.75	0.45	0.25	7	0.20	20	0.16	45	0.12	90
2006	1.43	0.95	0.40	7	0.25	20	0.18	45	0.12	90
2007	0.94	0.85	0.40	7	0.30	20	0.16	45	0.12	90
2008	1.25	2.65	0.60	7	0.25	20	0.16	45	0.12	90
2009	0.10	1.25	0.60	7	0.30	20	0.16	45	0.12	90
2010	3.06	2.05	0.55	7	0.30	20	0.16	45	0.12	90
2011	0.65	0.65	0.35	7	0.20	20	0.16	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	0.65	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.65	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.65	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.65	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast BC - Tight - Upper Devonian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	1.24	1.15	0.45	7	0.26	20	0.16	45	0.12	90
2005	1.31	1.25	0.45	7	0.28	20	0.16	45	0.12	90
2006	1.11	1.65	0.53	7	0.23	20	0.16	45	0.12	90
2007	1.56	1.80	0.60	7	0.28	20	0.16	45	0.12	90
2008	1.40	1.55	0.60	7	0.30	20	0.16	45	0.12	90
2009	1.01	0.75	0.40	7	0.30	20	0.16	45	0.12	90
2010	1.44	1.35	0.65	7	0.30	20	0.16	45	0.12	90
2011	2.52	1.55	0.65	7	0.30	20	0.16	45	0.12	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.52	1.55	0.65	7	0.30	20	0.16	45	0.12	90
2014	2.52	1.55	0.65	7	0.30	20	0.16	45	0.12	90
2015	2.52	1.55	0.65	7	0.30	20	0.16	45	0.12	90
2016	2.52	1.55	0.65	7	0.30	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast BC - Shale - Horn River										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2006	0.44	0.95	0.45	7	0.24	20	0.16	45	0.12	90
2007	1.52	1.50	0.85	7	0.45	20	0.16	45	0.12	90
2008	2.96	0.95	0.45	7	0.24	20	0.16	45	0.12	90
2009	3.96	0.75	0.45	7	0.24	20	0.16	45	0.12	90
2010	5.26	0.55	0.38	7	0.24	20	0.16	45	0.12	90
2011	8.00	0.50	0.38	7	0.24	20	0.16	45	0.12	90
2012	8.00	0.65	0.38	7	0.24	20	0.16	45	0.12	90
2013	10.00	0.50	0.38	7	0.24	20	0.16	45	0.12	90
2014	10.00	0.50	0.38	7	0.24	20	0.16	45	0.12	90
2015	10.00	0.50	0.38	7	0.24	20	0.16	45	0.12	90
2016	10.00	0.50	0.38	7	0.24	20	0.16	45	0.12	90

Resource Grouping - Gas - Northeast BC - Shale - Cordova										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2012	1.79	0.75	0.40	7	0.20	20	0.16	45	0.12	90
2013	2.50	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2014	2.50	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2015	2.50	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2016	2.50	0.65	0.40	7	0.22	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Foothills - Conventional - Colorado, Mannville										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.73	0.40	0.26	7	0.20	20	0.16	45	0.12	90
2005	1.14	1.05	0.55	7	0.36	20	0.22	45	0.12	90
2006	0.69	0.55	0.30	7	0.25	20	0.16	45	0.12	90
2007	0.69	0.40	0.30	7	0.20	20	0.12	45	0.12	90
2008	0.91	0.75	0.45	7	0.25	20	0.16	45	0.12	90
2009	0.30	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2010	1.54	0.25	0.20	7	0.14	20	0.12	45	0.12	90
2011	1.71	0.12	0.10	7	0.08	20	0.05	45	0.05	90
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	1.71	0.45	0.20	7	0.12	20	0.05	45	0.05	90
2014	1.71	0.45	0.20	7	0.12	20	0.05	45	0.05	90
2015	1.71	0.45	0.20	7	0.12	20	0.05	45	0.05	90
2016	1.71	0.45	0.20	7	0.12	20	0.05	45	0.05	90

Resource Grouping - Gas - BC Foothills - Conventional - Triassic, Permian, Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	4.73	0.40	0.30	7	0.25	20	0.16	45	0.12	90
2005	3.69	0.30	0.20	7	0.12	20	0.08	45	0.05	90
2006	4.41	0.35	0.18	7	0.14	20	0.12	45	0.10	90
2007	1.90	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2008	3.12	0.45	0.30	7	0.20	20	0.16	45	0.12	90
2009	4.52	0.40	0.25	7	0.20	20	0.16	45	0.12	90
2010	1.24	1.45	0.60	7	0.30	20	0.16	45	0.12	90
2011	4.09	0.85	0.45	7	0.24	20	0.16	45	0.12	90
2012	2.41	0.65	0.40	7	0.24	20	0.16	45	0.12	90
2013	1.87	0.85	0.40	7	0.24	20	0.16	45	0.12	90
2014	1.87	0.85	0.40	7	0.24	20	0.16	45	0.12	90
2015	1.87	0.85	0.40	7	0.24	20	0.16	45	0.12	90
2016	1.87	0.85	0.40	7	0.24	20	0.16	45	0.12	90

Resource Grouping - Gas - BC Foothills - Tight - Triassic										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	2.35	0.20	0.42	7	0.65	20	0.25	45	0.12	90
2005	0.97	1.45	0.60	7	0.30	20	0.20	45	0.12	90
2006	0.59	0.37	0.30	7	0.35	20	0.20	45	0.12	90
2007	0.53	0.75	0.40	7	0.30	20	0.20	45	0.12	90
2008	1.52	0.75	0.40	7	0.25	20	0.20	45	0.12	90
2009	1.16	0.85	0.45	7	0.30	20	0.20	45	0.12	90
2010	2.68	0.85	0.45	7	0.30	20	0.20	45	0.12	90
2011	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2012	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2013	2.68	0.85	0.45	7	0.30	20	0.20	45	0.12	90
2014	2.68	0.85	0.45	7	0.30	20	0.20	45	0.12	90
2015	2.68	0.85	0.45	7	0.30	20	0.20	45	0.12	90
2016	2.68	0.85	0.45	7	0.30	20	0.20	45	0.12	90

Resource Grouping - Gas - BC Foothills - Tight - Montney										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2007	3.50	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2008	3.50	0.00	0.00	0	0.00	0	0.00	0	0.00	0
2009	3.50	1.10	0.50	7	0.24	20	0.16	45	0.12	90
2010	3.50	0.80	0.45	7	0.24	20	0.16	45	0.12	90
2011	4.00	0.85	0.30	7	0.20	20	0.16	45	0.12	90
2012	4.00	0.80	0.45	7	0.24	20	0.16	45	0.12	90
2013	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2014	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2015	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90
2016	4.50	0.85	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - Southwest Saskatchewan - Tight - Upper Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.03	0.95	0.35	7	0.14	20	0.12	45	0.12	90
2005	0.04	0.45	0.32	7	0.20	20	0.16	45	0.12	90
2006	0.04	0.99	0.38	7	0.16	20	0.14	45	0.12	90
2007	0.04	0.65	0.40	7	0.22	20	0.16	45	0.12	90
2008	0.04	0.85	0.34	7	0.20	20	0.16	45	0.12	90
2009	0.03	0.65	0.24	7	0.18	20	0.16	45	0.12	90
2010	0.02	0.22	0.20	7	0.16	20	0.14	45	0.12	90
2011	0.04	0.40	0.30	7	0.22	20	0.16	45	0.12	90
2012	0.04	0.40	0.30	7	0.22	20	0.16	45	0.12	90
2013	0.04	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2014	0.04	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2015	0.04	0.40	0.30	7	0.20	20	0.16	45	0.12	90
2016	0.04	0.40	0.30	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - West Saskatchewan - Conventional - Colorado										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.10	1.45	0.55	7	0.25	20	0.10	45	0.08	90
2005	0.15	1.05	0.70	7	0.40	20	0.14	45	0.12	90
2006	0.09	0.90	0.60	7	0.30	20	0.16	45	0.12	90
2007	0.07	1.10	0.55	7	0.40	20	0.16	45	0.12	90
2008	0.06	0.80	0.30	7	0.20	20	0.16	45	0.12	90
2009	0.05	0.75	0.35	7	0.26	20	0.20	45	0.12	90
2010	0.05	0.30	0.25	7	0.20	20	0.16	45	0.12	90
2011	0.14	0.80	0.40	7	0.20	20	0.16	45	0.12	90
2012	0.03	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2013	0.05	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2014	0.05	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2015	0.05	0.60	0.40	7	0.20	20	0.16	45	0.12	90
2016	0.05	0.60	0.40	7	0.20	20	0.16	45	0.12	90

Resource Grouping - Gas - West SK - Conventional - Middle Mannville, Lower Mannville, Mississippian										
Connection Year	Initial Production per Connection MMcf/d	1st Decline Rate	2nd Decline Rate	Months to 2nd Decline Rate	3rd Decline Rate	Months to 3rd Decline Rate	4th Decline Rate	Months to 4th Decline Rate	5th Decline Rate	Months to 5th Decline Rate
2004	0.19	1.55	0.95	7	0.40	20	0.20	45	0.12	90
2005	0.16	1.30	0.65	7	0.40	20	0.20	45	0.12	90
2006	0.13	1.45	0.75	7	0.35	20	0.24	45	0.12	90
2007	0.12	1.45	0.75	7	0.40	20	0.24	45	0.12	90
2008	0.13	0.75	0.90	7	0.25	20	0.20	45	0.12	90
2009	0.11	1.20	0.60	7	0.40	20	0.20	45	0.12	90
2010	0.10	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2011	0.25	0.50	0.30	7	0.20	20	0.16	45	0.12	90
2012	0.04	0.65	0.40	7	0.24	20	0.16	45	0.12	90
2013	0.27	0.85	0.50	7	0.24	20	0.16	45	0.12	90
2014	0.27	0.85	0.50	7	0.24	20	0.16	45	0.12	90
2015	0.27	0.85	0.50	7	0.24	20	0.16	45	0.12	90
2016	0.27	0.85	0.50	7	0.24	20	0.16	45	0.12	90

APPENDIX B

B1 Factors for Allocation of Gas-Intent Drill Days by Area

Historical Gas-Intent Drill Days by Area

Year	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Keybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (excl Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskatchewan	18 - West Saskatchewan	19 - East Saskatchewan
2003	4,141	17,144	3,012	385	5,194	5,498	8,283	6,162	2,798	17,216	1,728	2,362	2,667	3,012	3,609	6,713	0	1,025	10,442	1,804	0
2004	11,407	13,552	2,602	356	5,149	6,327	9,558	5,773	2,689	24,196	1,470	2,904	2,980	3,757	5,284	6,554	0	1,745	10,066	1,663	11
2005	20,801	12,550	3,370	399	6,955	8,951	11,835	4,403	3,218	29,318	1,539	3,978	2,409	6,336	5,860	5,572	0	1,866	6,417	1,404	11
2006	11,147	10,275	2,026	364	6,778	5,311	10,631	5,345	3,416	29,485	1,742	4,171	1,773	6,245	5,677	4,641	70	1,631	8,402	1,016	0
2007	10,926	8,676	1,713	441	3,682	3,234	6,243	3,619	2,828	16,443	1,192	2,201	588	3,130	3,998	2,187	154	1,886	5,726	503	18
2008	7239	6,443	1,374	78	1,581	3,103	6,622	3,850	2,862	14,977	679	2,766	520	4,194	5,768	1,908	1,189	2,219	5,086	1,750	8
2009	3,454	2,268	347	21	477	828	3,501	2,198	2,410	10,301	242	1,638	179	2,984	4,220	614	4,075	1,285	848	125	0
2010	5,662	5,201	812	109	542	1,282	4,546	1,253	2,514	13,284	65	2,270	86	4,352	5,443	1,055	1,144	2,792	179	15	10
2011	2,103	1,040	267	0	191	400	5,749	928	1,949	12,928	55	1,596	45	2,666	5,689	712	4,148	2,864	119	35	9
2012	228	192	34	0	118	224	3,084	474	1,583	10,352	6	1,216	21	987	4,602	281	845	1,441	20	15	8

Historical Fraction of Total Gas-Intent Drill Days by Area

DrlYr	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Keybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (excl Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskatchewan	18 - West Saskatchewan	19 - East Saskatchewan
2003	0.0401	0.1661	0.0292	0.0037	0.0503	0.0533	0.0803	0.0597	0.0271	0.1668	0.0167	0.0229	0.0258	0.0292	0.0350	0.0651	0.0000	0.0099	0.1012	0.0175	0.0000
2004	0.0966	0.1148	0.0220	0.0030	0.0436	0.0536	0.0810	0.0489	0.0228	0.2050	0.0125	0.0246	0.0252	0.0318	0.0448	0.0555	0.0000	0.0148	0.0853	0.0141	0.0001
2005	0.1516	0.0915	0.0246	0.0029	0.0507	0.0652	0.0863	0.0321	0.0235	0.2137	0.0112	0.0290	0.0176	0.0462	0.0427	0.0406	0.0000	0.0136	0.0468	0.0102	0.0001
2006	0.0928	0.0855	0.0169	0.0030	0.0564	0.0442	0.0885	0.0445	0.0284	0.2454	0.0145	0.0347	0.0148	0.0520	0.0473	0.0386	0.0006	0.0136	0.0699	0.0085	0.0000
2007	0.1376	0.1093	0.0216	0.0056	0.0464	0.0407	0.0786	0.0456	0.0356	0.2071	0.0150	0.0277	0.0074	0.0394	0.0504	0.0275	0.0019	0.0238	0.0721	0.0063	0.0002
2008	0.0975	0.0868	0.0185	0.0011	0.0213	0.0418	0.0892	0.0519	0.0386	0.2018	0.0091	0.0373	0.0070	0.0565	0.0777	0.0257	0.0160	0.0299	0.0685	0.0236	0.0001
2009	0.0822	0.0540	0.0083	0.0005	0.0114	0.0197	0.0833	0.0523	0.0574	0.2452	0.0058	0.0390	0.0043	0.0710	0.1004	0.0146	0.0970	0.0306	0.0202	0.0030	0.0000
2010	0.1076	0.0988	0.0154	0.0021	0.0103	0.0244	0.0864	0.0238	0.0478	0.2525	0.0012	0.0431	0.0016	0.0827	0.1034	0.0201	0.0217	0.0531	0.0034	0.0003	0.0002
2011	0.0484	0.0239	0.0061	0.0000	0.0044	0.0092	0.1322	0.0213	0.0448	0.2972	0.0013	0.0367	0.0010	0.0613	0.1308	0.0164	0.0954	0.0658	0.0027	0.0008	0.0002
2012	0.0089	0.0075	0.0013	0.0000	0.0046	0.0087	0.1198	0.0184	0.0615	0.4023	0.0002	0.0473	0.0008	0.0384	0.1789	0.0109	0.0328	0.0560	0.0008	0.0006	0.0003

Projected Gas-Intent Drill Days by Area - Mid-Range Price Case

DrlYr	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Keybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (excl Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskatchewan	18 - West Saskatchewan	19 - East Saskatchewan
2013	241	203	36	0	125	237	3,256	500	1,671	10,930	6	1,284	22	1,042	4,859	297	892	1,522	21	24	0
2014	268	226	40	0	139	263	3,626	557	1,861	12,171	7	1,430	25	1,160	5,411	330	993	1,694	24	27	0
2015	293	247	44	0	152	288	3,965	609	2,035	13,309	8	1,563	27	1,269	5,917	361	1,086	1,853	26	29	1
2016	315	266	47	0	163	310	4,266	656	2,190	14,322	8	1,682	29	1,365	6,367	389	1,169	1,994	28	31	1

Projected Fraction of Total Gas-Intent Drill Days by Area - Mid-Range Price Case

DrlYr	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Kaybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (exd Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskatchewan	18 - West Saskat-chewan	19 - East Saskat-chewan
2013	0.0089	0.0075	0.0013	0.0000	0.0046	0.0087	0.1198	0.0184	0.0615	0.4023	0.0002	0.0473	0.0008	0.0384	0.1789	0.0109	0.0328	0.0560	0.0008	0.0009	0.0000
2014	0.0089	0.0075	0.0013	0.0000	0.0046	0.0087	0.1198	0.0184	0.0615	0.4023	0.0002	0.0473	0.0008	0.0384	0.1789	0.0109	0.0328	0.0560	0.0008	0.0009	0.0000
2015	0.0089	0.0075	0.0013	0.0000	0.0046	0.0087	0.1198	0.0184	0.0615	0.4023	0.0002	0.0473	0.0008	0.0384	0.1789	0.0109	0.0328	0.0560	0.0008	0.0009	0.0000
2016	0.0089	0.0075	0.0013	0.0000	0.0046	0.0087	0.1198	0.0184	0.0615	0.4023	0.0002	0.0473	0.0008	0.0384	0.1789	0.0109	0.0328	0.0560	0.0008	0.0009	0.0000

Projected Gas-Intent Drill Days by Area - Higher Price Case

DrlYr	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Kaybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (exd Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskat-chewan	18 - West Saskat-chewan	19 - East Saskatchewan
2013	241	203	36	0	125	237	3,256	500	1,671	10,930	6	1,284	22	1,042	4,859	297	892	1,522	21	24	0
2014	309	260	46	0	160	304	4,179	642	2,145	14,030	8	1,648	28	1,338	6,237	381	1,145	1,953	27	31	1
2015	359	302	53	0	186	352	4,852	746	2,490	16,286	9	1,913	33	1,553	7,240	442	1,329	2,267	31	36	1
2016	429	361	64	0	222	421	5,801	892	2,978	19,472	11	2,287	40	1,857	8,656	529	1,589	2,710	38	42	1

Projected Gas-Intent Drill Days by Area - Lower Price Case

DrlYr	00 - Alberta CBM	01 - Southern Alberta	02 - Southwest Alberta	03 - Southern Foothills	04 - Eastern Alberta	05 - Central Alberta	06 - West Central Alberta	07 - Central Foothills	08 - Kaybob	09 - Alberta Deep Basin	10 - Northeast Alberta	11 - Peace River	12 - Northwest Alberta	13 - BC Deep Basin	14 - Fort St. John	15 - Northeast BC (exd Shale)	15 - Northeast BC (Shale)	16 - BC Foothills	17 - Southwest Saskat-chewan	18 - West Saskat-chewan	19 - East Saskatchewan
2013	241	203	36	0	125	237	3,256	500	1,671	10,930	6	1,284	22	1,042	4,859	297	892	1,522	21	24	0
2014	245	207	37	0	127	241	3,318	510	1,703	11,137	6	1,308	23	1,062	4,951	302	909	1,550	22	24	0
2015	210	177	31	0	108	206	2,835	436	1,455	9,516	6	1,118	19	907	4,231	258	777	1,325	18	21	0
2016	229	193	34	0	119	225	3,098	476	1,590	10,400	6	1,222	21	992	4,623	282	849	1,448	20	23	0

B2 Detailed Gas-Intent Drilling and Gas Connection Projections by Case

Mid-Range Price Case

Resource Grouping	Projected Annual Numberof Wells Targeted to Resource Grouping			Connection Ratio	Projected Annual Number of Connections for Resource Grouping		
	2014	2015	2016		2014	2015	2016
Gas Connections							
00 - Alberta CBM	112	122	132	1.277	143	156	168
01 - Southern Alberta	90	99	106	1.207	109	119	128
Tight Portion	25	27	29	1.061	26	29	31
02 - Southwest Alberta	11	12	13	1.125	13	14	15
Tight Portion	1	1	1	0.980	1	1	1
03 - Southern Foothills	0	0	0		0	0	0
04 - Eastern Alberta	36	39	42	1.058	38	42	45
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
05 - Central Alberta	105	115	124	1.215	128	140	151
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
06 - West Central Alberta	198	217	234	1.119	222	243	261
Tight Portion	156	170	183	1.127	175	192	207
Duvernay Shale Portion	1	1	1	1.000	1	1	1
07 - Central Foothills	14	15	16	1.334	18	20	22
Montney Tight Portion	0	0	0		0	0	0
Other Tight Portion	2	2	2	1.325	3	3	3
Duvernay Shale Portion	0	0	0		0	0	0
08 - Kaybob	79	86	93	1.000	79	86	93
Montney Tight Portion	12	13	14	1.000	12	13	14
Other Tight Portion	34	37	40	0.998	34	37	40
Duvernay Shale Portion	13	14	15	1.000	13	14	15
09 - Alberta Deep Basin	442	484	521	1.287	570	623	671
Montney Tight Portion	34	37	40	1.000	34	37	40
Other Tight Portion	343	375	404	1.348	462	506	544
Duvernay Shale Portion	4	4	4	1.000	4	4	4
10 - Northeast Alberta	1	1	1	0.930	1	1	1
11 - Peace River	65	71	77	1.088	71	77	83
Montney Tight Portion	35	39	42	1.000	35	39	42
Other Tight Portion	15	17	18	1.214	19	20	22
Duvernay Shale Portion	0	0	0		0	0	0
12 - Northwest Alberta	2	3	3	0.964	2	2	3
Duvernay Shale Portion	0	0	0		0	0	0
13 - BC Deep Basin	57	63	68	1.047	60	66	71
Montney Tight Portion	29	32	35	1.000	29	32	35
Other Tight Portion	9	10	11	1.099	10	11	12
14 - Fort St. John	206	226	243	0.997	206	225	242
Montney Tight Portion	175	192	206	1.000	175	192	206
15 - Northeast BC	37	41	44	1.009	38	41	44
Tight Portion	12	13	14	0.970	12	13	14
Cordova Shale Portion	4	4	4	1.000	4	4	4
Horn River Shale Portion	12	13	14	1.000	12	13	14
16 - BC Foothills	56	61	66	0.988	55	61	65
Montney Tight Portion	48	53	57	1.000	48	53	57
17 - Southwest Saskatchewan	8	9	10	0.987	8	9	10
Tight Portion	7	8	8	0.985	7	8	8
18 - West Saskatchewan	10	11	12	1.047	11	12	13
19 - East Saskatchewan	0	0	0	1.000	0	0	0
Subtotal: Gas - Conventional (non-tight)	449	492	529	1.140	512	560	603
Subtotal: Gas - Tight	938	1,026	1,104	1.154	1,083	1,185	1,275
Montney portion of Tight	334	365	393	1.000	334	365	393
Subtotal: Gas - CBM	112	122	132	1.277	143	156	168
Subtotal: Gas - Shale	33	36	39	1.000	33	36	39
Gas Connections - CBM Breakdown							
AB - Main HSC	111	121	130	1.279	142	155	167
AB - Mannville CBM	0	0	0		0	0	0
AB - Other CBM	1	1	1	1.070	1	1	1
Subtotal: Gas - CBM	112	122	132	1.277	143	156	168
Total: All Gas	**1,532**	**1,676**	**1,804**	**1.156**	**1,771**	**1,937**	**2,085**

Higher Price Case							
Resource Grouping	**Projected Annual Number of Wells Targeted to Resource Grouping**			**Connection Ratio**	**Projected Annual Number of Connections for Resource Grouping**		
	2014	**2015**	**2016**		**2014**	**2015**	**2016**
Gas Connections							
00 - Alberta CBM	129	150	179	1.277	165	191	229
01 - Southern Alberta	104	121	144	1.207	125	146	174
Tight Portion	28	33	40	1.061	30	35	42
02 - Southwest Alberta	13	15	18	1.125	15	17	20
Tight Portion	1	1	1	0.980	1	1	1
03 - Southern Foothills	0	0	0		0	0	0
04 - Eastern Alberta	41	48	57	1.058	44	51	61
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
05 - Central Alberta	121	141	169	1.215	148	171	205
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
06 - West Central Alberta	229	265	317	1.119	256	297	355
Tight Portion	179	208	249	1.127	202	235	281
Duvernay Shale Portion	1	2	2	1.000	1	2	2
07 - Central Foothills	16	19	22	1.334	21	25	30
Montney Tight Portion	0	0	0		0	0	0
Other Tight Portion	2	3	3	1.325	3	4	4
Duvernay Shale Portion	0	0	0		0	0	0
08 - Kaybob	91	106	126	1.000	91	106	126
Montney Tight Portion	14	16	19	1.000	14	16	19
Other Tight Portion	39	46	55	0.998	39	46	55
Duvernay Shale Portion	15	17	21	1.000	15	17	21
09 - Alberta Deep Basin	510	592	708	1.287	656	762	912
Montney Tight Portion	39	46	55	1.000	39	46	55
Other Tight Portion	395	459	549	1.348	533	619	740
Duvernay Shale Portion	4	5	6	1.000	4	5	6
10 - Northeast Alberta	1	2	2	0.930	1	1	2
11 - Peace River	75	87	104	1.088	81	95	113
Montney Tight Portion	41	47	57	1.000	41	47	57
Other Tight Portion	18	20	24	1.214	21	25	30
Duvernay Shale Portion	0	0	0		0	0	0
12 - Northwest Alberta	3	3	4	0.964	3	3	4
Duvernay Shale Portion	0	0	0		0	0	0
13 - BC Deep Basin	66	77	92	1.047	69	80	96
Montney Tight Portion	34	39	47	1.000	34	39	47
Other Tight Portion	11	12	15	1.099	12	14	16
14 - Fort St. John	238	276	330	0.997	237	275	329
Montney Tight Portion	202	234	280	1.000	202	234	280
15 - Northeast BC	43	50	60	1.009	43	50	60
Tight Portion	14	16	19	0.970	14	16	19
Cordova Shale Portion	4	5	6	1.000	4	5	6
Horn River Shale Portion	14	16	19	1.000	14	16	19
16 - BC Foothills	65	75	90	0.988	64	74	89
Montney Tight Portion	56	65	77	1.000	56	65	77
17 - Southwest Saskatchewan	9	11	13	0.987	9	11	13
Tight Portion	8	9	11	0.985	8	9	11
18 - West Saskatchewan	12	14	17	1.047	12	14	17
19 - East Saskatchewan	0	0	0	1.000	0	0	0
Subtotal: Gas - Conventional (non-tight)	518	602	720	1.140	590	686	820
Subtotal: Gas - Tight	1,081	1,256	1,501	1.154	1,248	1,449	1,733
Montney portion of Tight	385	447	534	1.000	385	447	534
Subtotal: Gas - CBM	129	150	179	1.277	165	191	229
Subtotal: Gas - Shale	38	44	53	1.000	38	44	53
Gas Connections - CBM Breakdown							
AB - Main HSC	128	148	177	1.279	163	190	227
AB - Mannville CBM	0	0	0		0	0	0
AB - Other CBM	1	2	2	1.070	1	2	2
Subtotal: Gas - CBM	129	150	179	1.277	165	191	229
Total: All Gas	**1,766**	**2,051**	**2,453**	**1.156**	**2,042**	**2,371**	**2,835**

Lower Price Case

Resource Grouping	Projected Annual Number of Wells Targeted to Resource Grouping			Connection Ratio	Projected Annual Number of Connections for Resource Grouping		
	2014	2015	2016		2014	2015	2016
Gas Connections							
00 - Alberta CBM	102	88	96	1.277	131	112	122
01 - Southern Alberta	82	70	77	1.207	100	85	93
Tight Portion	23	19	21	1.061	24	20	22
02 - Southwest Alberta	10	9	10	1.125	12	10	11
Tight Portion	1	1	1	0.980	1	1	1
03 - Southern Foothills	0	0	0		0	0	0
04 - Eastern Alberta	33	28	31	1.058	35	30	32
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
05 - Central Alberta	96	82	90	1.215	117	100	109
Tight Portion	0	0	0		0	0	0
Duvernay Shale Portion	0	0	0		0	0	0
06 - West Central Alberta	181	155	170	1.119	203	174	190
Tight Portion	142	122	133	1.127	160	137	150
Duvernay Shale Portion	1	1	1	1.000	1	1	1
07 - Central Foothills	13	11	12	1.334	17	14	16
Montney Tight Portion	0	0	0		0	0	0
Other Tight Portion	2	2	2	1.325	3	2	2
Duvernay Shale Portion	0	0	0		0	0	0
08 - Kaybob	72	62	67	1.000	72	62	67
Montney Tight Portion	11	9	10	1.000	11	9	10
Other Tight Portion	31	27	29	0.998	31	27	29
Duvernay Shale Portion	12	10	11	1.000	12	10	11
09 - Alberta Deep Basin	405	346	378	1.287	521	445	487
Montney Tight Portion	31	27	29	1.000	31	27	29
Other Tight Portion	314	268	293	1.348	423	362	395
Duvernay Shale Portion	3	3	3	1.000	3	3	3
10 - Northeast Alberta	1	1	1	0.930	1	1	1
11 - Peace River	59	51	56	1.088	65	55	61
Montney Tight Portion	32	28	30	1.000	32	28	30
Other Tight Portion	14	12	13	1.214	17	15	16
Duvernay Shale Portion	0	0	0		0	0	0
12 - Northwest Alberta	2	2	2	0.964	2	2	2
Duvernay Shale Portion	0	0	0		0	0	0
13 - BC Deep Basin	53	45	49	1.047	55	47	51
Montney Tight Portion	27	23	25	1.000	27	23	25
Other Tight Portion	8	7	8	1.099	9	8	9
14 - Fort St. John	189	161	176	0.997	188	161	176
Montney Tight Portion	160	137	150	1.000	160	137	150
15 - Northeast BC	34	29	32	1.009	34	29	32
Tight Portion	11	9	10	0.970	11	9	10
Cordova Shale Portion	3	3	3	1.000	3	3	3
Horn River Shale Portion	11	9	10	1.000	11	9	10
16 - BC Foothills	51	44	48	0.988	51	43	47
Montney Tight Portion	44	38	41	1.000	44	38	41
17 - Southwest Saskatchewan	8	6	7	0.987	7	6	7
Tight Portion	6	6	6	0.985	6	5	6
18 - West Saskatchewan	9	8	9	1.047	10	8	9
19 - East Saskatchewan	0	0	0	1.000	0	0	0
Subtotal: Gas - Conventional (non-tight)	411	352	384	1.140	469	401	438
Subtotal: Gas - Tight	858	734	802	1.154	991	847	926
Montney portion of Tight	306	261	285	1.000	306	261	285
Subtotal: Gas - CBM	102	88	96	1.277	131	112	122
Subtotal: Gas - Shale	30	26	28	1.000	30	26	28
Gas Connections - CBM Breakdown							
AB - Main HSC	101	87	95	1.279	130	111	121
AB - Mannville CBM	0	0	0		0	0	0
AB - Other CBM	1	1	1	1.070	1	1	1
Subtotal: Gas - CBM	102	88	96	1.277	131	112	122
Total: All Gas	**1,402**	**1,199**	**1,310**	**1.156**	**1,621**	**1,385**	**1,514**

APPENDIX C
Deliverability Details by Case

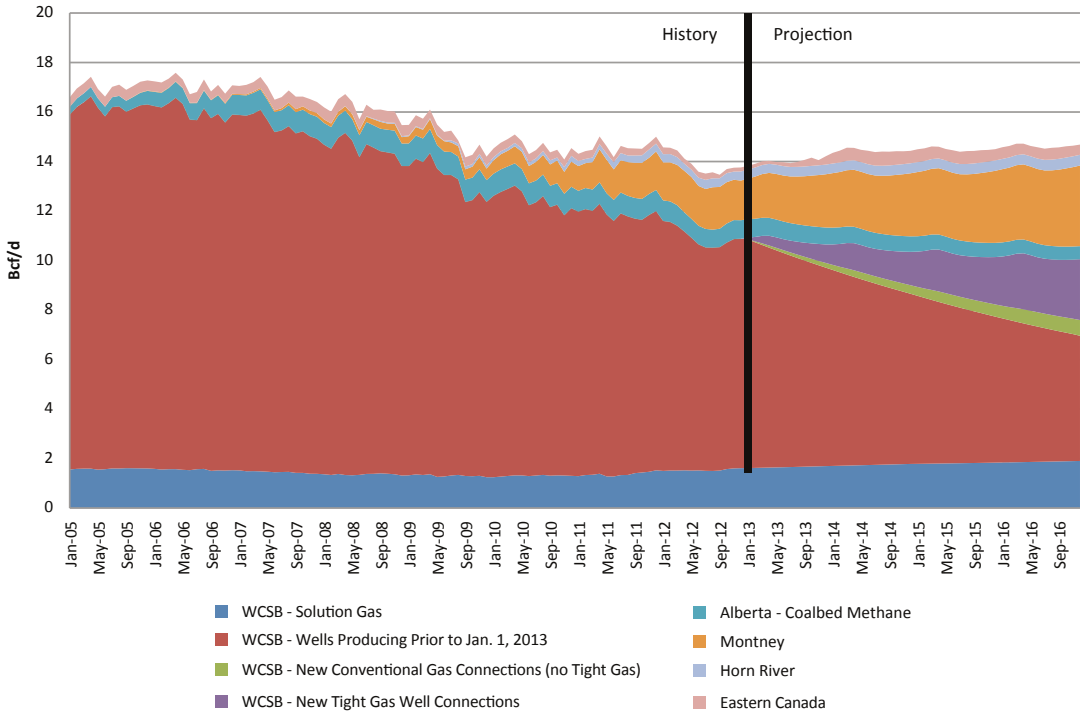
C.1 - Canadian Gas Deliverability by Area/Resource – Mid-Range Price Case										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
00 - Alberta CBM	21.86	772	20.16	712	18.44	651	16.91	597	15.54	549
HSC Portion	16.19	572	14.92	527	13.62	481	12.44	439	11.37	401
Mannville Portion	2.22	78	1.93	68	1.72	61	1.55	55	1.40	49
Other CBM Portion	3.44	122	3.31	117	3.10	109	2.92	103	2.77	98
01 - Southern Alberta	30.31	1,070	27.01	954	23.53	830	20.53	725	17.99	635
Solution Gas	2.14	76	2.22	79	2.30	81	2.34	83	2.40	85
Tight Portion	19.46	687	17.18	607	14.65	517	12.49	441	10.65	376
02 - Southwest Alberta	5.93	209	5.48	193	4.78	169	4.19	148	3.69	130
Solution Gas	0.68	24	0.68	24	0.66	23	0.66	23	0.65	23
Tight Portion	1.78	63	1.56	55	1.34	47	1.15	40	0.98	35
03 - Southern Foothills	3.43	121	3.57	126	3.06	108	2.64	93	2.28	80
Solution Gas	0.10	4	0.12	4	0.13	5	0.14	5	0.14	5
04 - Eastern Alberta	14.48	511	13.04	460	12.09	427	11.28	398	10.59	374
Solution Gas	4.54	160	4.72	166	4.85	171	4.96	175	5.04	178
Tight Portion	0.36	13	0.31	11	0.26	9	0.22	8	0.19	7
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
05 - Central Alberta	17.31	611	15.44	545	14.12	499	13.01	459	12.11	427
Solution Gas	3.93	139	4.20	148	4.47	158	4.71	166	4.96	175
Tight Portion	1.47	52	1.20	42	1.02	36	0.87	31	0.74	26
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
06 - West Central Alberta	47.51	1,677	48.43	1,710	49.36	1,743	50.50	1,783	52.11	1,839
Solution Gas	11.41	403	12.60	445	13.41	473	14.19	501	14.83	524
Tight Portion	17.54	619	17.94	633	19.03	672	20.13	711	21.53	760
Duvernay Shale Portion	0.05	2	0.02	1	0.05	2	0.06	2	0.07	3
07 - Central Foothills	20.29	716	18.86	666	16.79	593	14.98	529	13.48	476
Solution Gas	0.25	9	0.34	12	0.39	14	0.41	14	0.42	15
Montney Tight Portion	0.20	7	0.00	0	0.00	0	0.00	0	0.00	0
Other Tight Portion	1.34	47	1.30	46	1.33	47	1.34	47	1.36	48
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
08 - Kaybob	19.92	703	20.12	710	20.31	717	20.19	713	20.19	713
Solution Gas	4.77	168	5.70	201	6.42	227	6.90	244	7.39	261
Montney Tight Portion	1.50	53	1.73	61	1.96	69	2.11	75	2.25	79
Other Tight Portion	7.35	260	6.63	234	6.16	217	5.72	202	5.34	189
Duvernay Shale Portion	0.14	5	0.82	29	1.23	43	1.54	54	1.81	64
09 - Alberta Deep Basin	66.30	2,340	71.43	2,521	78.38	2,767	84.56	2,985	90.97	3,211
Solution Gas	1.97	70	2.39	84	2.70	95	2.92	103	3.11	110
Montney Tight Portion	3.97	140	4.75	168	5.59	197	6.16	217	6.66	235
Other Tight Portion	54.00	1,906	58.17	2,053	63.91	2,256	69.22	2,444	74.81	2,641
Duvernay Shale Portion	0.04	2	0.16	6	0.27	10	0.36	13	0.43	15
10 - Northeast Alberta	9.29	328	8.08	285	7.15	252	6.35	224	5.67	200
Solution Gas	2.10	74	2.14	76	2.09	74	2.04	72	2.00	71
11 - Peace River	13.24	467	15.25	538	16.96	599	18.20	643	19.33	682
Solution Gas	3.95	139	4.69	166	5.31	187	5.78	204	6.21	219
Montney Tight Portion	0.00	0	0.98	35	2.17	77	3.08	109	3.87	137
Other Tight Portion	1.73	61	2.58	91	2.76	98	2.88	102	2.98	105
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
12 - Northwest Alberta	7.87	278	6.49	229	5.72	202	5.06	179	4.50	159
Solution Gas	2.83	100	2.64	93	2.42	86	2.25	79	2.09	74
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
13 - BC Deep Basin	16.27	574	15.80	558	16.98	599	17.90	632	18.88	666
Montney Portion	8.19	289	7.86	277	8.90	314	9.78	345	10.64	376
Other Tight Portion	4.79	169	4.91	173	5.00	177	5.04	178	5.12	181
14 - Fort St. John	45.07	1,591	53.71	1,896	59.94	2,116	65.11	2,298	70.28	2,481
Solution Gas	0.90	32	0.84	30	0.78	28	0.72	26	0.67	24
Montney Portion	27.62	975	32.88	1,161	41.44	1,463	48.59	1,715	55.43	1,957

C.1 - Canadian Gas Deliverability by Area/Resource – Mid-Range Price Case (continued)										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
15 - Northeast BC	20.25	715	21.26	750	20.87	737	20.52	725	20.35	718
Solution Gas	0.15	5	0.13	5	0.12	4	0.12	4	0.11	4
Tight Portion	6.46	228	6.58	232	6.03	213	5.56	196	5.18	183
Cordova Shale Portion	0.55	19	0.86	30	0.88	31	0.90	32	0.92	33
Horn River Shale Portion	9.54	337	10.76	380	11.22	396	11.59	409	12.00	424
16 - BC Foothills	16.02	565	15.40	544	15.18	536	14.95	528	14.88	525
Montney Tight Portion	4.87	172	5.43	192	6.46	228	7.29	257	8.09	286
17 - Southwest Saskatchewan	6.72	237	6.41	226	5.60	198	4.91	173	4.29	152
Solution Gas	0.27	10	0.28	10	0.27	10	0.27	9	0.25	9
Tight Portion	6.32	223	6.13	216	5.33	188	4.64	164	4.04	143
18 - West Saskatchewan	4.04	143	4.00	141	3.75	132	3.53	124	3.32	117
Solution Gas	2.09	74	2.07	73	2.04	72	2.01	71	1.97	70
19 - East Saskatchewan	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
Solution Gas	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
22 - Yukon and Northwest Territories	0.48	17	0.35	12	0.33	12	0.27	9	0.21	7
Total Conventional (no tight, no solution gas)	**143.37**	**5,061**	**133.62**	**4,717**	**119.50**	**4,218**	**107.54**	**3,796**	**97.77**	**3,451**
Total Tight	**168.96**	**5,964**	**178.11**	**6,287**	**193.36**	**6,826**	**206.27**	**7,282**	**219.86**	**7,761**
Montney Portion	**46.35**	**1636.22**	**53.62**	**1893.01**	**66.53**	**2348.69**	**77.01**	**2718.70**	**86.93**	**3068.88**
Total Solution Gas	**43.43**	**1533.28**	**46.87**	**1654.41**	**49.34**	**1741.87**	**51.27**	**1810.01**	**53.01**	**1871.35**
Total CBM	**21.86**	**772**	**20.16**	**712**	**18.44**	**651**	**16.91**	**597**	**15.54**	**549**
Total Shale	**10.32**	**364**	**12.62**	**446**	**13.65**	**482**	**14.45**	**510**	**15.23**	**538**
Total WCSB	**387.94**	**13,695**	**391.38**	**13,816**	**394.29**	**13,919**	**396.45**	**13,995**	**401.42**	**14,170**
Atlantic Canada	5.76	203	5.16	182	14.39	508	13.72	484	12.48	441
Other Canada	0.40	14	0.35	12	0.32	11	0.29	10	0.25	9
Total Canada	**394.10**	**13,912**	**396.89**	**14,010**	**409.00**	**14,438**	**410.46**	**14,490**	**414.15**	**14,620**

rates are annual averages
*matched to 2013 actual production for Jan-Oct

FIGURE C1

Outlook for Total Canadian Gas Deliverability - Mid-Range Price Case



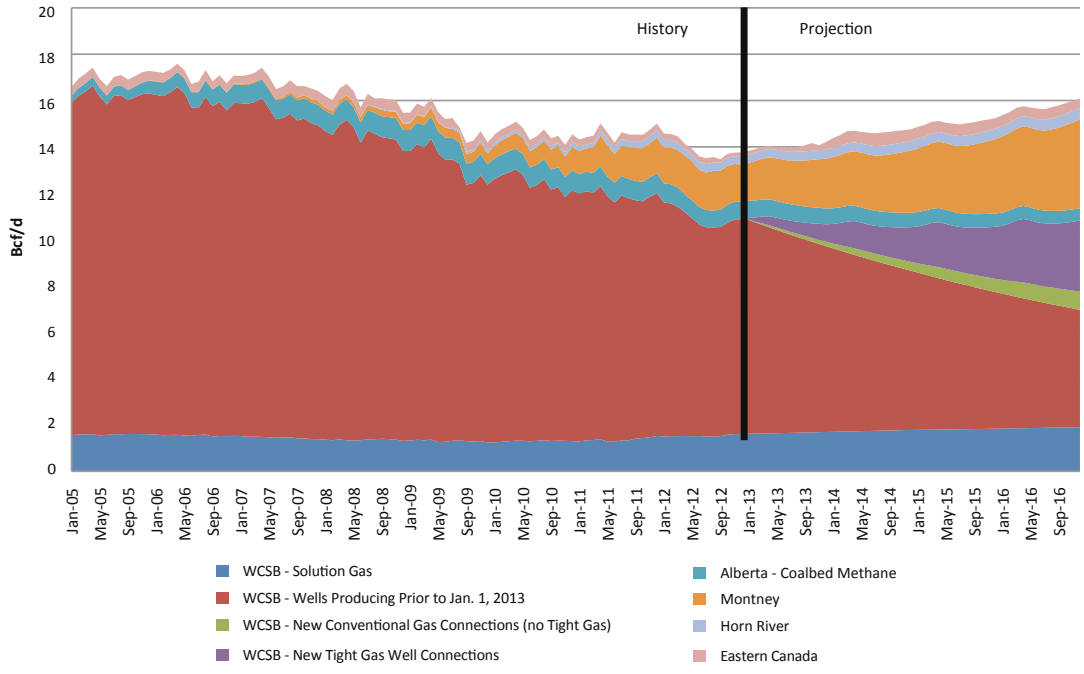
C.2 - Canadian Gas Deliverability by Area/Resource - Higher Price Case										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
00 - Alberta CBM	21.86	772	20.16	712	18.45	651	16.95	598	15.61	551
HSC Portion	16.19	572	14.92	527	13.63	481	12.48	441	11.45	404
Mannville Portion	2.22	78	1.93	68	1.72	61	1.55	55	1.40	49
Other CBM Portion	3.44	122	3.31	117	3.10	109	2.92	103	2.77	98
01 - Southern Alberta	30.31	1,070	27.01	954	23.54	831	20.56	726	18.05	637
Solution Gas	2.14	76	2.22	79	2.30	81	2.34	83	2.40	85
Tight Portion	19.46	687	17.18	607	14.65	517	12.49	441	10.65	376
02 - Southwest Alberta	5.93	209	5.48	193	4.78	169	4.20	148	3.71	131
Solution Gas	0.68	24	0.68	24	0.66	23	0.66	23	0.65	23
Tight Portion	1.78	63	1.56	55	1.34	47	1.15	41	0.99	35
03 - Southern Foothills	3.43	121	3.57	126	3.06	108	2.64	93	2.28	80
Solution Gas	0.10	4	0.12	4	0.13	5	0.14	5	0.14	5
04 - Eastern Alberta	14.48	511	13.04	460	12.10	427	11.32	400	10.68	377
Solution Gas	4.54	160	4.72	166	4.85	171	4.96	175	5.04	178
Tight Portion	0.36	13	0.31	11	0.26	9	0.22	8	0.19	7
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
05 - Central Alberta	17.31	611	15.44	545	14.13	499	13.04	460	12.16	429
Solution Gas	3.93	139	4.20	148	4.47	158	4.71	166	4.96	175
Tight Portion	1.47	52	1.20	42	1.02	36	0.87	31	0.74	26
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
06 - West Central Alberta	47.51	1,677	48.43	1,710	49.96	1,763	52.28	1,845	55.84	1,971
Solution Gas	11.41	403	12.60	445	13.41	473	14.19	501	14.83	524
Tight Portion	17.54	619	17.94	633	19.46	687	21.41	756	24.20	854
Duvernay Shale Portion	0.05	2	0.02	1	0.05	2	0.07	2	0.09	3
07 - Central Foothills	20.29	716	18.86	666	16.85	595	15.18	536	13.86	489
Solution Gas	0.25	9	0.34	12	0.39	14	0.41	14	0.42	15
Montney Tight Portion	0.20	7	0.00	0	0.00	0	0.00	0	0.00	0
Other Tight Portion	1.34	47	1.30	46	1.35	48	1.41	50	1.50	53
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
08 - Kaybob	19.92	703	20.12	710	20.47	723	20.67	730	21.13	746
Solution Gas	4.77	168	5.70	201	6.42	227	6.90	244	7.39	261
Montney Tight Portion	1.50	53	1.73	61	2.01	71	2.27	80	2.55	90
Other Tight Portion	7.35	260	6.63	234	6.22	220	5.88	208	5.66	200
Duvernay Shale Portion	0.14	5	0.82	29	1.28	45	1.69	60	2.10	74
09 - Alberta Deep Basin	66.30	2,340	71.43	2,521	80.28	2,834	90.15	3,182	102.30	3,611
Solution Gas	1.97	70	2.39	84	2.70	95	2.92	103	3.11	110
Montney Tight Portion	3.97	140	4.75	168	5.76	203	6.65	235	7.61	269
Other Tight Portion	54.00	1,906	58.17	2,053	65.53	2,313	74.02	2,613	84.59	2,986
Duvernay Shale Portion	0.04	2	0.16	6	0.29	10	0.40	14	0.51	18
10 - Northeast Alberta	9.29	328	8.08	285	7.15	252	6.35	224	5.67	200
Solution Gas	2.10	74	2.14	76	2.09	74	2.04	72	2.00	71
11 - Peace River	13.24	467	15.25	538	17.27	610	19.07	673	21.02	742
Solution Gas	3.95	139	4.69	166	5.31	187	5.78	204	6.21	219
Montney Tight Portion	0.00	0	0.98	35	2.34	83	3.53	125	4.74	167
Other Tight Portion	1.73	61	2.58	91	2.83	100	3.07	108	3.35	118
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
12 - Northwest Alberta	7.87	278	6.49	229	5.72	202	5.06	179	4.50	159
Solution Gas	2.83	100	2.64	93	2.42	86	2.25	79	2.09	74
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
13 - BC Deep Basin	16.27	574	15.80	558	17.33	612	18.97	670	21.01	742
Montney Portion	8.19	289	7.86	277	9.12	322	10.44	369	11.98	423
Other Tight Portion	4.79	169	4.91	173	5.09	180	5.29	187	5.61	198
14 - Fort St. John	45.07	1,591	53.71	1,896	61.29	2,163	69.31	2,447	78.78	2,781
Solution Gas	0.90	32	0.84	30	0.78	28	0.72	26	0.67	24
Montney Portion	27.62	975	32.88	1,161	42.71	1,508	52.58	1,856	63.48	2,241

C.2 - Canadian Gas Deliverability by Area/Resource - Higher Price Case (continued)										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
15 - Northeast BC	20.25	715	21.26	750	21.16	747	21.38	755	22.06	779
Solution Gas	0.15	5	0.13	5	0.12	4	0.12	4	0.11	4
Tight Portion	6.46	228	6.58	232	6.08	215	5.71	201	5.47	193
Cordova Shale Portion	0.55	19	0.86	30	0.90	32	0.95	33	1.01	36
Horn River Shale Portion	9.54	337	10.76	380	11.42	403	12.21	431	13.25	468
16 - BC Foothills	16.02	565	15.40	544	15.35	542	15.53	548	16.06	567
Montney Tight Portion	4.87	172	5.43	192	6.61	234	7.81	276	9.14	323
17 - Southwest Saskatchewan	6.72	237	6.41	226	5.60	198	4.91	173	4.30	152
Solution Gas	0.27	10	0.28	10	0.27	10	0.27	9	0.25	9
Tight Portion	6.32	223	6.13	216	5.33	188	4.64	164	4.04	143
18 - West Saskatchewan	4.04	143	4.00	141	3.75	132	3.54	125	3.34	118
Solution Gas	2.09	74	2.07	73	2.04	72	2.01	71	1.97	70
19 - East Saskatchewan	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
Solution Gas	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
22 - Yukon and Northwest Territories	0.48	17	0.35	12	0.33	12	0.27	9	0.21	7
Total Conventional (no tight, no solution gas)	**143.37**	**5,061**	**133.62**	**4,717**	**120.06**	**4,238**	**109.24**	**3,856**	**101.26**	**3,575**
Total Tight	**168.96**	**5,964**	**178.11**	**6,287**	**197.73**	**6,980**	**219.44**	**7,746**	**246.50**	**8,702**
Montney Portion	**46.35**	**1636.22**	**53.62**	**1893.01**	**68.56**	**2420.39**	**83.28**	**2939.90**	**99.51**	**3512.81**
Total Solution Gas	**43.43**	**1533.28**	**46.87**	**1654.41**	**49.34**	**1741.87**	**51.27**	**1810.01**	**53.01**	**1871.35**
Total CBM	**21.86**	**772**	**20.16**	**712**	**18.45**	**651**	**16.95**	**598**	**15.61**	**551**
Total Shale	**10.32**	**364**	**12.62**	**446**	**13.94**	**492**	**15.31**	**541**	**16.96**	**599**
Total WCSB	**387.94**	**13,695**	**391.38**	**13,816**	**399.53**	**14,104**	**412.22**	**14,552**	**433.34**	**15,297**
Atlantic Canada	5.76	203	5.16	182	14.39	508	13.72	484	12.48	441
Other Canada	0.40	14	0.35	12	0.32	11	0.29	10	0.25	9
Total Canada	**394.10**	**13,912**	**396.89**	**14,010**	**414.24**	**14,623**	**426.23**	**15,046**	**446.08**	**15,747**

rates are annual averages
*matched to 2013 actual production for Jan-Oct

FIGURE C2

Outlook for Canadian Gas Deliverability – Higher Price Case



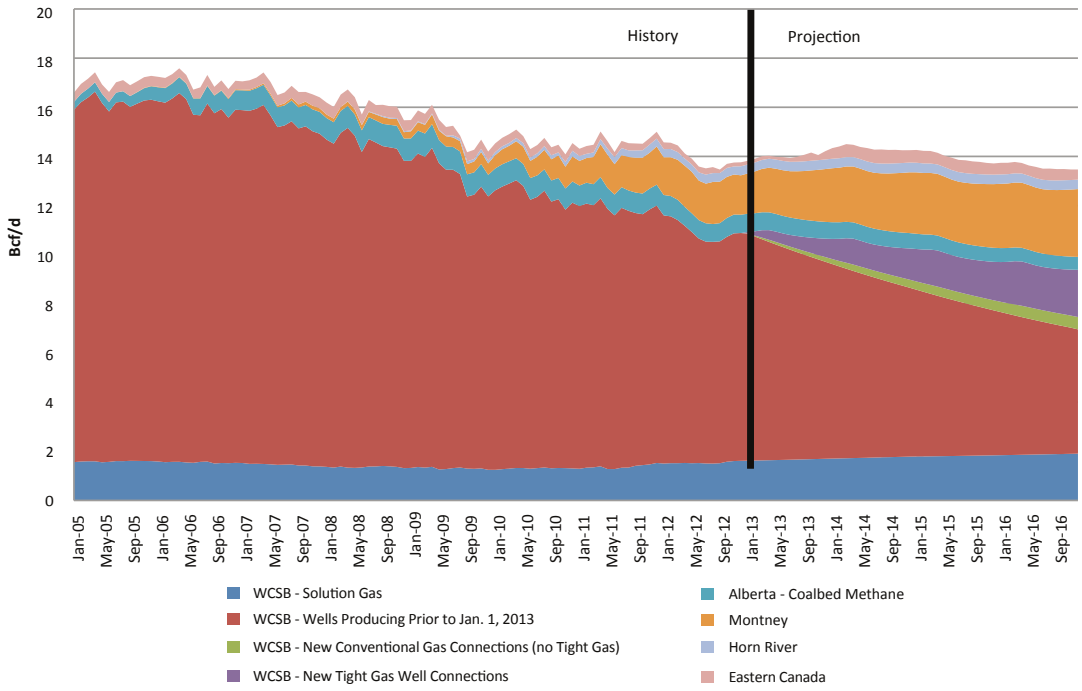
C.3 - Canadian Gas Deliverability by Area/Resource - Lower Price Case										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
00 - Alberta CBM	21.86	772	20.16	712	18.43	651	16.88	596	15.47	546
HSC Portion	16.19	572	14.92	527	13.61	481	12.41	438	11.30	399
Mannville Portion	2.22	78	1.93	68	1.72	61	1.55	55	1.40	49
Other CBM Portion	3.44	122	3.31	117	3.10	109	2.92	103	2.77	98
01 - Southern Alberta	30.31	1,070	27.01	954	23.52	830	20.50	724	17.94	633
Solution Gas	2.14	76	2.22	79	2.30	81	2.34	83	2.40	85
Tight Portion	19.46	687	17.18	607	14.65	517	12.49	441	10.64	376
02 - Southwest Alberta	5.93	209	5.48	193	4.78	169	4.18	148	3.67	130
Solution Gas	0.68	24	0.68	24	0.66	23	0.66	23	0.65	23
Tight Portion	1.78	63	1.56	55	1.34	47	1.14	40	0.98	35
03 - Southern Foothills	3.43	121	3.57	126	3.06	108	2.64	93	2.28	80
Solution Gas	0.10	4	0.12	4	0.13	5	0.14	5	0.14	5
04 - Eastern Alberta	14.48	511	13.04	460	12.08	426	11.25	397	10.51	371
Solution Gas	4.54	160	4.72	166	4.85	171	4.96	175	5.04	178
Tight Portion	0.36	13	0.31	11	0.26	9	0.22	8	0.19	7
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
05 - Central Alberta	17.31	611	15.44	545	14.12	498	12.99	458	12.06	426
Solution Gas	3.93	139	4.20	148	4.47	158	4.71	166	4.96	175
Tight Portion	1.47	52	1.20	42	1.02	36	0.87	31	0.74	26
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
06 - West Central Alberta	47.51	1,677	48.43	1,710	49.03	1,731	48.76	1,721	48.70	1,719
Solution Gas	11.41	403	12.60	445	13.41	473	14.19	501	14.83	524
Tight Portion	17.54	619	17.94	633	18.79	663	18.88	666	19.09	674
Duvernay Shale Portion	0.05	2	0.02	1	0.04	2	0.05	2	0.05	2
07 - Central Foothills	20.29	716	18.86	666	16.75	591	14.80	522	13.12	463
Solution Gas	0.25	9	0.34	12	0.39	14	0.41	14	0.42	15
Montney Tight Portion	0.20	7	0.00	0	0.00	0	0.00	0	0.00	0
Other Tight Portion	1.34	47	1.30	46	1.32	46	1.27	45	1.24	44
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
08 - Kaybob	19.92	703	20.12	710	20.21	713	19.73	696	19.32	682
Solution Gas	4.77	168	5.70	201	6.42	227	6.90	244	7.39	261
Montney Tight Portion	1.50	53	1.73	61	1.93	68	1.97	69	1.97	70
Other Tight Portion	7.35	260	6.63	234	6.13	216	5.56	196	5.05	178
Duvernay Shale Portion	0.14	5	0.82	29	1.20	42	1.40	49	1.55	55
09 - Alberta Deep Basin	66.30	2,340	71.43	2,521	77.33	2,730	79.17	2,795	80.59	2,845
Solution Gas	1.97	70	2.39	84	2.70	95	2.92	103	3.11	110
Montney Tight Portion	3.97	140	4.75	168	5.50	194	5.69	201	5.78	204
Other Tight Portion	54.00	1,906	58.17	2,053	63.01	2,224	64.59	2,280	65.87	2,325
Duvernay Shale Portion	0.04	2	0.16	6	0.27	9	0.32	11	0.35	12
10 - Northeast Alberta	9.29	328	8.08	285	7.15	252	6.35	224	5.67	200
Solution Gas	2.10	74	2.14	76	2.09	74	2.04	72	2.00	71
11 - Peace River	13.24	467	15.25	538	16.79	593	17.37	613	17.78	628
Solution Gas	3.95	139	4.69	166	5.31	187	5.78	204	6.21	219
Montney Tight Portion	0.00	0	0.98	35	2.08	73	2.64	93	3.07	109
Other Tight Portion	1.73	61	2.58	91	2.72	96	2.70	95	2.65	94
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
12 - Northwest Alberta	7.87	278	6.49	229	5.71	202	5.06	179	4.49	158
Solution Gas	2.83	100	2.64	93	2.42	86	2.25	79	2.09	74
Duvernay Shale Portion	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
13 - BC Deep Basin	16.27	574	15.80	558	16.78	592	16.90	597	16.91	597
Montney Portion	8.19	289	7.86	277	8.78	310	9.16	323	9.41	332
Other Tight Portion	4.79	169	4.91	173	4.96	175	4.81	170	4.66	165
14 - Fort St. John	45.07	1,591	53.71	1,896	59.19	2,089	61.22	2,161	62.44	2,204
Solution Gas	0.90	32	0.84	30	0.78	28	0.72	26	0.67	24
Montney Portion	27.62	975	32.88	1,161	40.73	1,438	44.91	1,585	47.98	1,694

C.3 - Canadian Gas Deliverability by Area/Resource - Lower Price Case (continued)										
Area/Resource	Historical				Projected					
	2012		2013*		2014		2015		2016	
	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d	$10^6m^3/d$	MMcf/d
15 - Northeast BC	20.25	715	21.26	750	20.71	731	19.72	696	18.79	663
Solution Gas	0.15	5	0.13	5	0.12	4	0.12	4	0.11	4
Tight Portion	6.46	228	6.58	232	6.00	212	5.42	191	4.93	174
Cordova Shale Portion	0.55	19	0.86	30	0.88	31	0.86	30	0.84	30
Horn River Shale Portion	9.54	337	10.76	380	11.11	392	11.01	389	10.85	383
16 - BC Foothills	16.02	565	15.40	544	15.08	532	14.43	509	13.78	486
Montney Tight Portion	4.87	172	5.43	192	6.38	225	6.83	241	7.11	251
17 - Southwest Saskatchewan	6.72	237	6.41	226	5.60	198	4.91	173	4.29	151
Solution Gas	0.27	10	0.28	10	0.27	10	0.27	9	0.25	9
Tight Portion	6.32	223	6.13	216	5.33	188	4.64	164	4.04	143
18 - West Saskatchewan	4.04	143	4.00	141	3.75	132	3.52	124	3.31	117
Solution Gas	2.09	74	2.07	73	2.04	72	2.01	71	1.97	70
19 - East Saskatchewan	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
Solution Gas	1.35	48	1.09	39	0.97	34	0.86	30	0.76	27
22 - Yukon and North West Territories	0.48	17	0.35	12	0.33	12	0.27	9	0.21	7
Total Conventional (no tight, no solution gas)	**143.37**	**5,061**	**133.62**	**4,717**	**119.19**	**4,207**	**105.92**	**3,739**	**94.58**	**3,339**
Total Tight	**168.96**	**5,964**	**178.11**	**6,287**	**190.92**	**6,740**	**193.77**	**6,840**	**195.40**	**6,898**
Montney Portion	**46.35**	**1636.22**	**53.62**	**1893.01**	**65.40**	**2308.80**	**71.19**	**2513.21**	**75.32**	**2658.87**
Total Solution Gas	**43.43**	**1533.28**	**46.87**	**1654.41**	**49.34**	**1741.87**	**51.27**	**1810.01**	**53.01**	**1871.35**
Total CBM	**21.86**	**772**	**20.16**	**712**	**18.43**	**651**	**16.88**	**596**	**15.47**	**546**
Total Shale	**10.32**	**364**	**12.62**	**446**	**13.49**	**476**	**13.64**	**481**	**13.64**	**482**
Total WCSB	**387.94**	**13,695**	**391.38**	**13,816**	**391.38**	**13,816**	**381.49**	**13,467**	**372.10**	**13,136**
Atlantic Canada	5.76	203	5.16	182	14.39	508	13.72	484	12.48	441
Other Canada	0.40	14	0.35	12	0.32	11	0.29	10	0.25	9
Total Canada	**394.10**	**13,912**	**396.89**	**14,010**	**406.09**	**14,335**	**395.50**	**13,962**	**384.84**	**13,585**

rates are annual averages
*matched to 2013 actual production for Jan-Oct

FIGURE C3

Outlook for Canadian Gas Deliverability – Lower Price Case

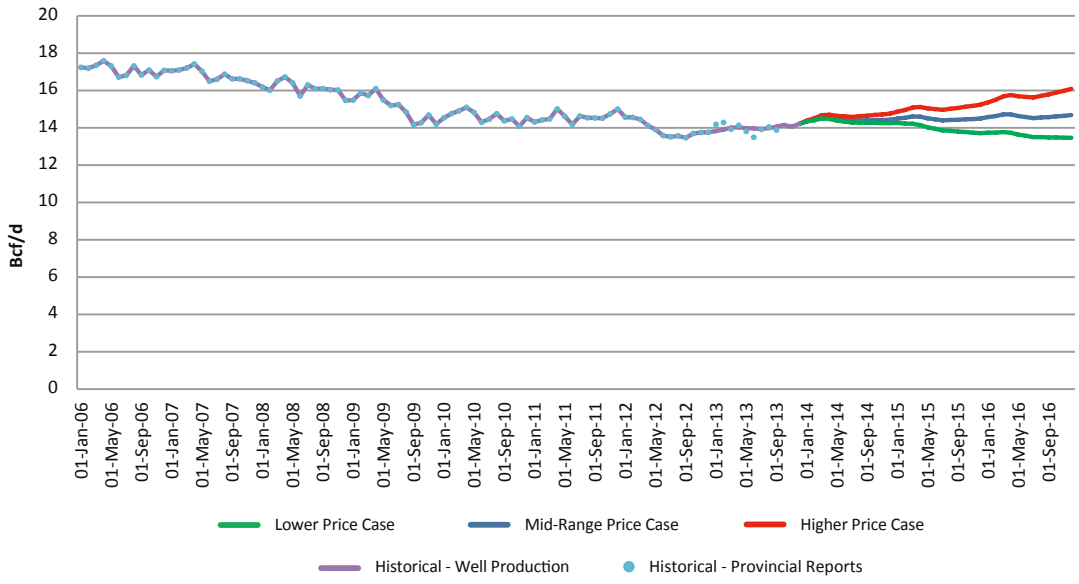


APPENDIX D

Total Canadian Deliverability Comparison by Case

FIGURE D1

Total Canadian Deliverability Comparison by Case



APPENDIX E

Average Annual Canadian Deliverability and Demand

E.1 – Average Annual Canadian Deliverability and Demand

	2013		2014		2015		2016	
	$10^6m^3/d$	Bcf/d	$10^6m^3/d$	Bcf/d	$10^6m^3/d$	Bcf/d	$10^6m^3/d$	Bcf/d
Canadian Deliverability, Mid-Range Case	397	14.0	409	14.4	410	14.5	414	14.6
Total Canadian Demand [a]	241	8.5	248	8.7	253	8.9	268	9.4
Western Canada Demand	161	5.7	165	5.8	169	6.0	179	6.3
Eastern Canada Demand	80	2.8	82	2.9	84	3.0	89	3.1

[a] Demand is equal to total primary natural gas demand less natural gas used in gas mining and processing. The demand projection is the Reference Case projection from the NEB report Canada's Energy Future 2013 available at http://www.neb-one.gc.ca/clf-nsi/rnrgynfmtn/nrgyrprt/nrgyftr/nrgyftr-eng.html#s9.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