2017/18

Liability Management Rating Summary

20TH ANNIVERSARY

BC Oil & Gas COMMISSION

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About the BC Oil and Gas Commission

The BC Oil and Gas Commission protects public safety and safeguards the environment through the sound regulation of oil, gas and geothermal activities in B.C.

From exploration through to final reclamation, the Commission works closely with communities and land owners, and confirms industry compliance with provincial legislation. It also ensures there are close working relationships; consults with, and considers the interests of Indigenous peoples.

With more than 20 years' dedicated service, the Commission is committed to safe and responsible energy resource management for British Columbia.

For general information about the Commission, please visit www.bcogc.ca or call 250-794-5200.

Vision

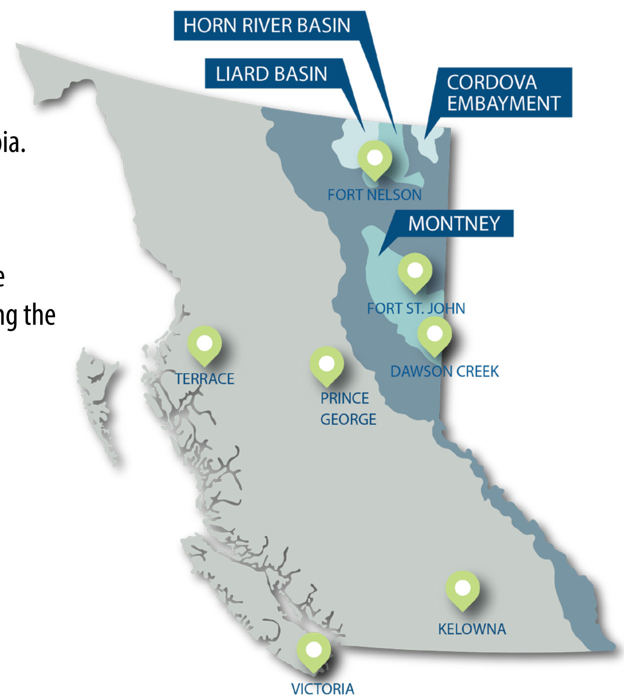
Safe and responsible energy resource development for British Columbia.

Mission

We provide British Columbia with regulatory excellence in responsible energy resource development by protecting public safety, safeguarding the environment and respecting those who are affected.

Values

Respect
Integrity
Transparency
Innovation
Responsiveness



2017/18 Liability Management Rating Summary

About This Summary

Decommissioning and restoration of oil and gas sites in British Columbia is regulated by the BC Oil and Gas Commission. Permit holders are required to properly deactivate and abandon wells, facilities and pipelines, and restore disturbances to meet regulatory closure. The purpose of the Liability Management Rating (LMR) program is to ensure permit holders carry the financial risk of their operation through to regulatory closure by identifying those whose deemed liabilities exceed deemed assets (a LMR below 1.0) and to require security for the risk inherent in the calculation.

This report outlines the measurement of key indicators that are used to determine the amount of permit holder liability the Commission is exposed to, and how the risk exposure changes over time. The metrics are used to evaluate whether the goal of reducing liability exposure to the Orphan Site Reclamation Fund (OSRF) is being accomplished.

Background

The authority to collect security falls under Section 30 of the *Oil and Gas Activities Act* (OGAA). A permit holder's LMR is used to determine the amount of required security. Following the release of the LMR program, a deemed asset calculation was developed to determine the estimated value of a permit holder's production, processing and disposal infrastructure, and a liability model was developed to estimate abandonment and reclamation costs.

If at the time of review a permit holder's deemed asset is not sufficient to cover their deemed liability (a LMR below 1.0), or if their deemed asset is projected to be insufficient, security may be required. LMR reviews are conducted monthly and during asset transfer processes for all permit holders. This allows the Commission to increase security deposits should a permit holder's LMR decrease as a result of a divestment, or a drop in production, disposal or throughput. Deposits can be returned to permit holders who no longer have assets in B.C., or if, in the opinion of the Commission, the security deposit is no longer required to secure the permit holder's obligations.

Objectives for the LMR Program

1. To protect the OSRF, and ultimately the Crown, from bearing the costs associated with abandonment and reclamation activities.
2. To ensure adequate security is provided by permit holders to address the risk that oil and gas sites will not be adequately abandoned and reclaimed.
3. Provide incentive for industry to actively manage liability obligations.

LMR Calculation

The LMR is the calculated ratio of estimated operational assets and security deposit to estimated decommissioning liabilities for permit holders. The LMR equation is as follows:

$$\text{LMR} = \frac{\text{Deemed Assets} + \text{Security Deposit}}{\text{Deemed Liabilities}}$$

Additional information can be found at: http://www.bcogc.ca/industry-zone/liability-management-rating-program

LMR Permit Holder Categories

Producers
Permit holders whose operations and deemed assets are primarily in the form of gas and/or oil production.

Disposers
Permit holders whose operations and deemed assets are primarily in the form of downhole oil and gas waste disposal.

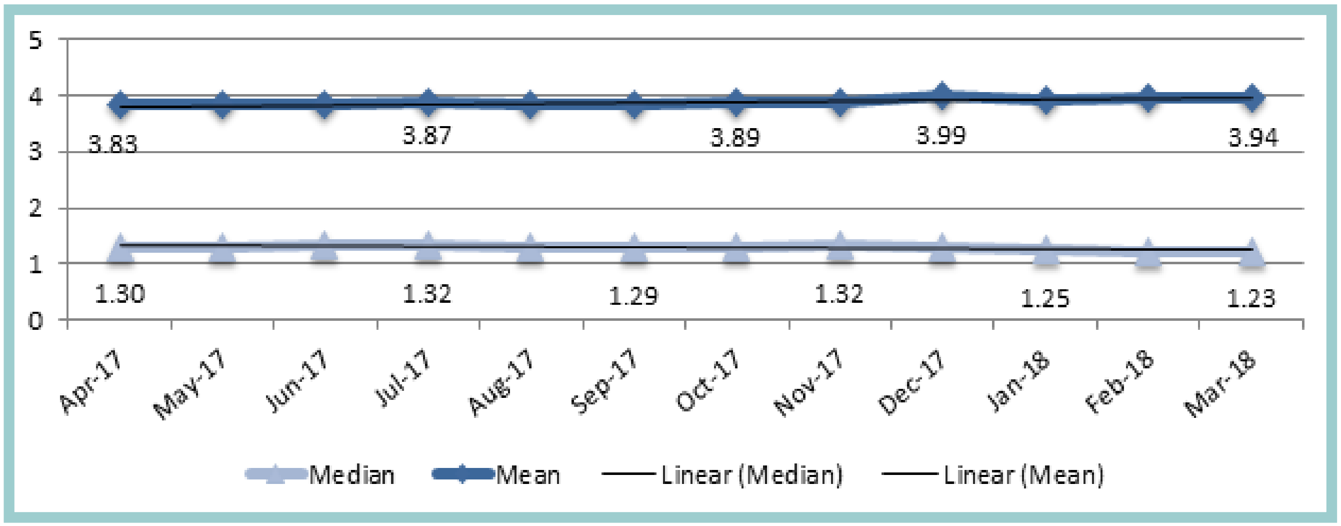
Processors
Permit holders whose operations and deemed assets are primarily in the form of processing raw gas into marketable gas.

Permit Holder LMRs

The Commission measures the mean (average) and median (central point) LMR of all B.C. producers, disposers and processors to spot trends in the overall ability of the industry to meet its closure obligations. Identifying trends that may be indicative of lower industry financial health can inform the Commission of when program changes may be necessary.

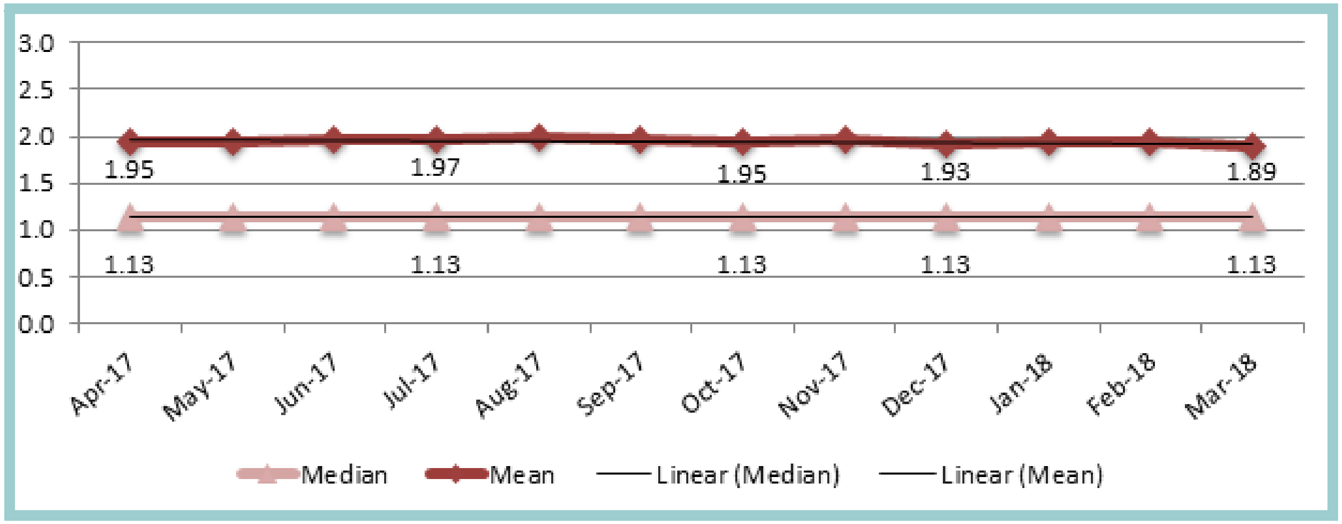
The following figures illustrate the mean and median LMR for permit holders over time in each business category.

FIGURE 1 - Mean and Median LMR of Producers



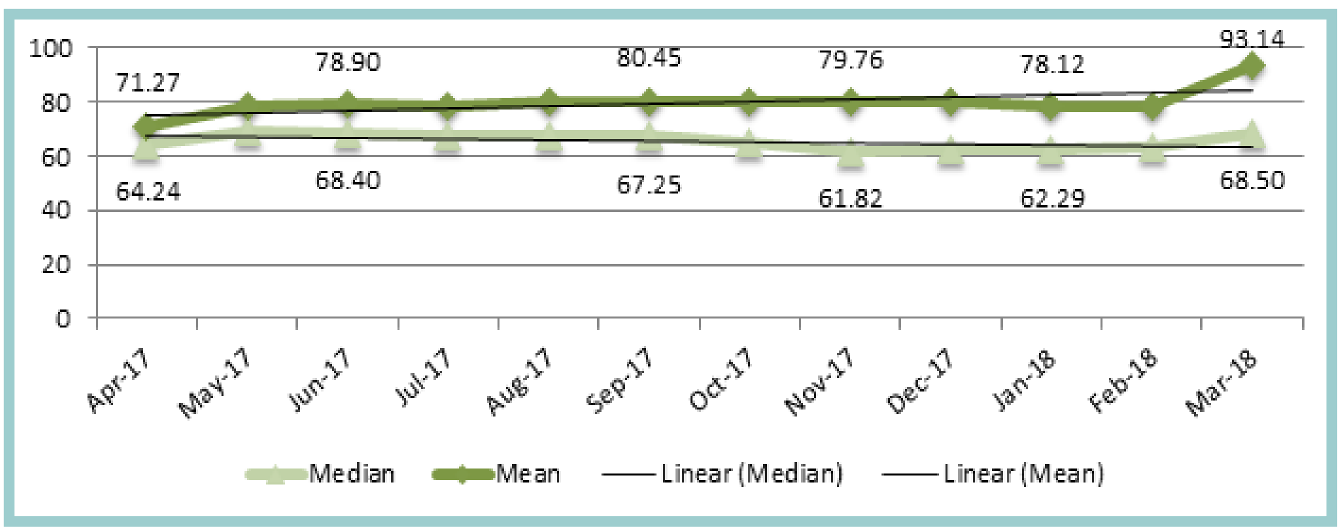
As evidenced in Figure 1, the mean and median LMRs for producers were largely flat throughout the year. While the mean and median LMR values were up slightly from the 2016/17 fiscal year, they remain below prior years. Median LMRs remain significantly less than the corresponding average, as more than half of B.C. permit holders have ratings below the industry average. Continued low pricing for natural gas has extended the depression of the deemed asset in the LMR numbers as producers opt to shut-in marginal fields where operating costs may exceed revenue.

FIGURE 2 - Mean and Median LMR of Disposers



There was little change in the mean LMR of disposers over the 2017/18 fiscal year, while the median LMR was unchanged. The mean and median for disposers are consistent with the previous year.

FIGURE 3 - Mean and Median LMR of Processors

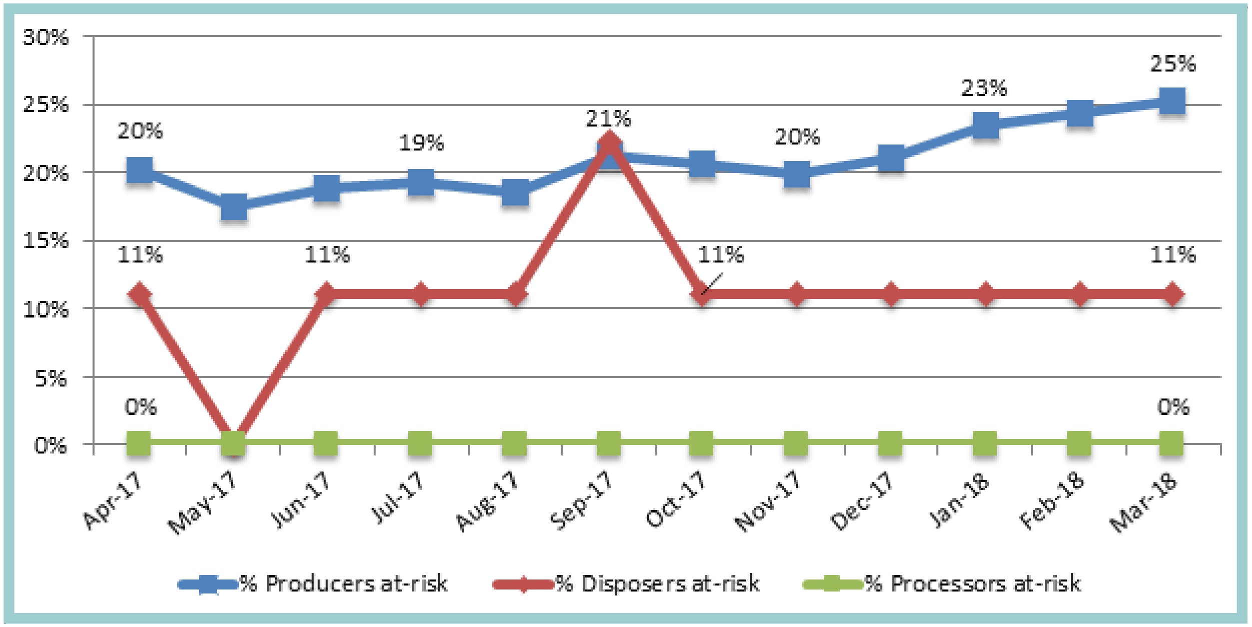


The mean and median for processors was generally flat throughout the year with an uptick in March due to the sale of a large facility with a high LMR, increasing the average value of processors. Seven of nine processors were significantly above a LMR of 1.0, and the overall trend reflected this as the LMR of processors remained strong throughout the year. The LMR of active processors is typically higher than other operator categories due to the consistently high volumes processed with no evident throughput decline. While the mean and median are unlikely to fall close to a LMR of 1.0, the LMR program may continue to observe fluctuating measures due to the small number of processors

At-Risk Permit Holders

Permit holders are identified as a potential financial risk (at-risk) if the total of their deemed assets and security deposit are less than deemed liabilities. The following figure illustrates the proportion of B.C. permit holders found to be at-risk over time[1].

FIGURE 4 - Percentage of Permit Holders Below Threshold



The number of at-risk producers in the LMR program has been consistently high for the past two years, indicating the number of permit holders with potential financial risk in their operations has grown as depressed gas pricing persists. The number of at-risk producers peaked at 25 per cent in March 2018. In the disposer category, one company consistently saw their LMR drop under 1.0. Not a single processor fell under a LMR of 1.0 in the fiscal year.

As permit holders enter B.C., build new infrastructure, or experience production declines, the LMR program often sees temporary peaks in the percentage of those at-risk as they work to secure their liability; this is evident for disposers – which saw a new entrant in September 2017 (Figure 4 above).

Unsecured Liability

The LMR framework focuses requests for security to at-risk permit holders. Unsecured liability refers to the amount of deemed liability that exceeds the deemed asset in the calculation and is not covered by a security deposit. Unsecured liability includes both overdue security requirements issued and new security requests. Non-compliant operators with overdue security requirements have historically represented around half of the total unsecured liability.

Security deposit requirements fluctuate over time as the number of at-risk permit holders changes (e.g. corporate reorganization or production changes). The 2017/18 fiscal year saw a number of companies enter receivership through the year including Quattro Exploration, BLZ Energy and Lexin Resources. The receivership of Quattro Exploration had the largest impact as their unsecured liability rose to a high of $13 million in March 2018 following the shut-in of their production.

[1] This target measures the proportion of at-risk permit holders rather than the total number of at-risk permit holders since the total count changes over time (e.g. a reduction in the count will raise the target percentage).

Figure 5 illustrates the total amount of estimated liability requiring future security payment by at-risk producers. In the 2017/18 fiscal year, producers saw their total unsecured liability remain at a high level throughout the year. Around $5.8 million of the March 2018 total unsecured liability was from non-compliant operators, which is slightly lower than in March 2017.

The 2017/18 fiscal year was the fourth full year non-producers were included in the LMR program (see Figure 6). The year saw the unsecured liability of processors remain at zero for the entire year. For disposers, unsecured liability remained under $50,000 aside from one occurrence in September 2017 when security was required for a new entrant's facility.

High Risk Permit Holders

The LMR program works with all willing permit holders to reduce their unsecured liability through the submission of security deposits, divestment guidance or liability reduction through asset retirement. Permit holders that have not complied with security deposit requirements are deemed non-compliant under Section 30 of OGAA and enter a compliance and enforcement framework.

As of the end of the 2017/18 fiscal year, the Commission deemed eight permit holders as non-compliant. The Commission designated the assets of five permit holders as orphans during the fiscal year. The Asset Integrity & Retirement branch monitors non-compliant permit holders and actively seeks solutions to retire the asset. Please direct requests for specific details related to non-compliance to the Commission.

FIGURE 5 - Total Unsecured Liability by Month (Producers)

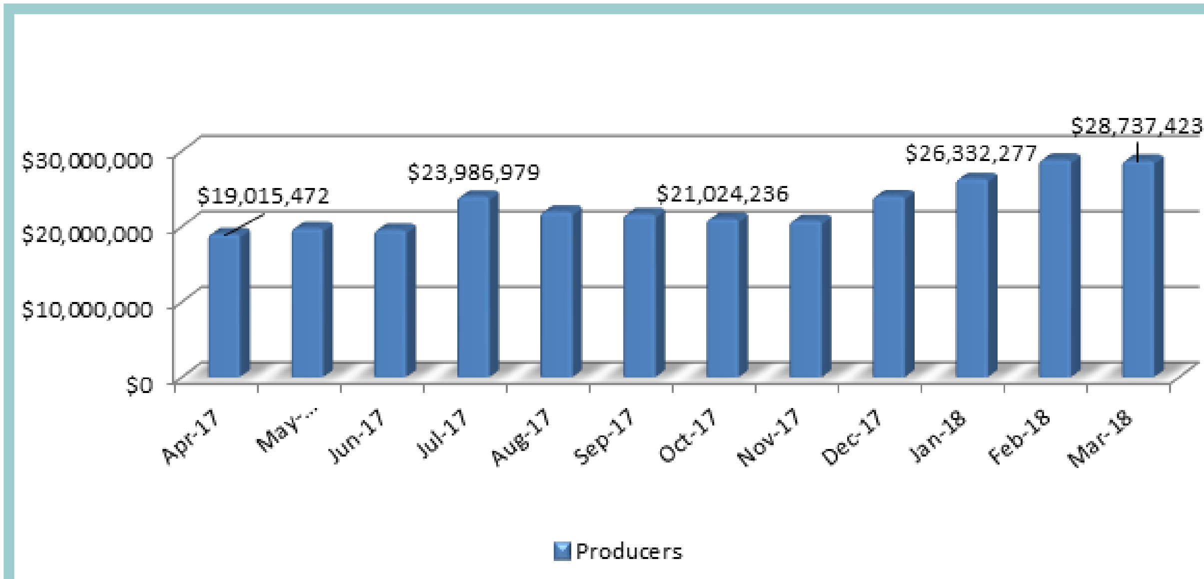
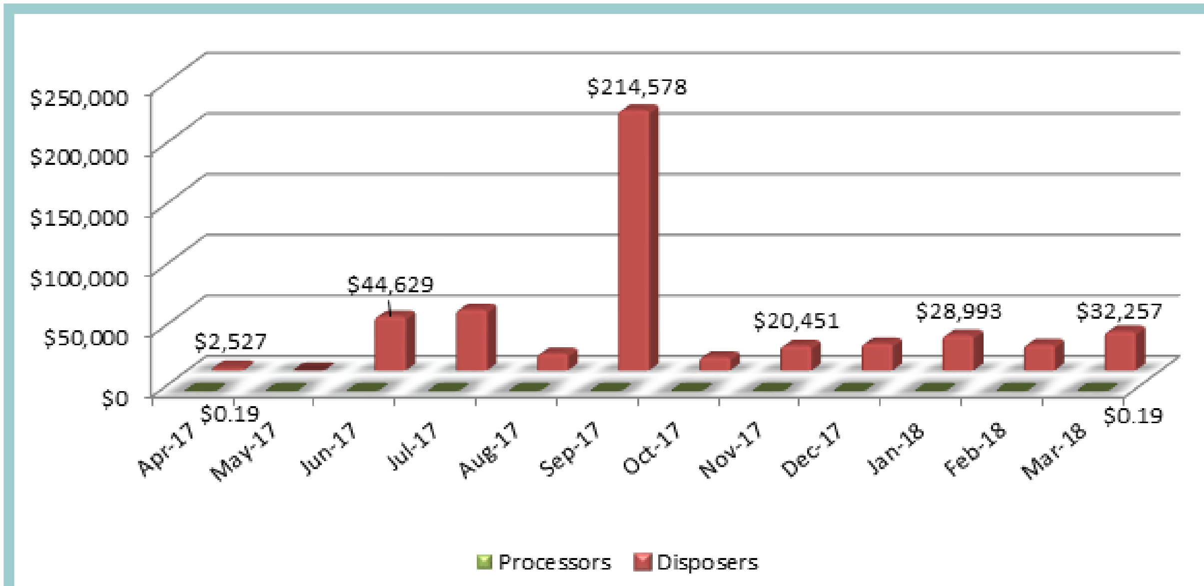


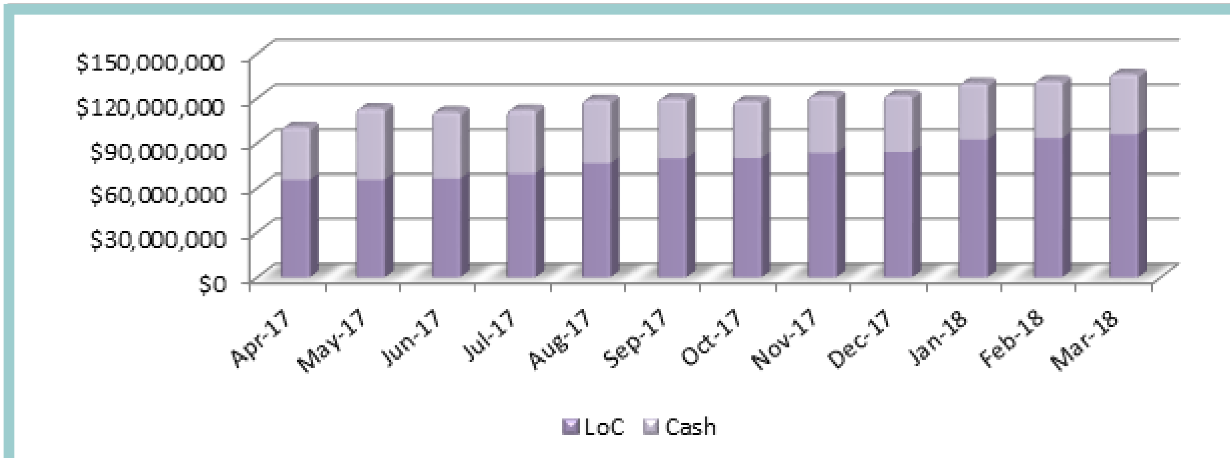
FIGURE 6 - Total Unsecured Liability by Month (Disposers and Processors)



Permit Transfer Reviews

The Commission completes in-depth evaluations of all permit transfer applications to determine whether any transfers increase pressure on the OSRF. In addition to the requirement to maintain a post-transfer LMR of 1.0, the Commission bases decisions on security deposit requirements on production declines affecting deemed assets, as well as operator history and associated compliance issues. Permit holders are encouraged to contact the Commission's liability management staff at liability.management@bcogc.ca to inquire about potential transfer applications. In the 2017/18 fiscal year, the Commission reviewed 60 permit transfer applications; 58 were approved after meeting liability management requirements, and two were rejected for failing to pay the required security.

FIGURE 7 - Total Security Deposits Held



Security Deposits

During the 2017/18 fiscal year, the Commission received an additional $35 million in security deposits. Significant amounts of security were required as operators reduced their production due to continued low prices.

Operator preference for security submission has continued to move away from cash to a strong preference for letters of credit. In the past three years, the value of cash deposits held by the Commission has increased by 60 per cent, whereas the value of letters of credit held has increased by 600 per cent. Those companies with significant security deposits continue to prefer letters of credit, while companies with smaller security requirements prefer cash. A small majority of permit holders with security greater than $1 million submit as non-cash (59 per cent), but with the 74 per cent of permit holders holding less than $1 million in security, the preference remains firmly with cash for smaller submissions.

Summary

The 2017/18 fiscal year continued to be challenging for the oil and gas industry in British Columbia. The impact of depressed gas prices continues to affect the productive capacity of many permit holders, as exhibited in the LMR program. As a result, the Commission saw an increasing number of permit holders at risk of insolvency over the course of the year. Despite the significant increase in security held, there is still financial risk evident in the LMR program.

The outlook for the 2018/19 fiscal year continues to look challenging, and the Commission is preparing for further financial impacts to the LMR program and the OSRF from insolvent companies. The Commission remains committed to working directly with permit holders to establish individual plans to manage financial risk and reduce exposure to the OSRF.

For more information on the Commission's LMR program, OSRF or enquiries regarding this document, please contact **liability.management@bcogc.ca**.

What's Next in Liability Management?

The Commission is implementing an industry gas production levy increase from \$0.71 per 1,000 m^3 of marketable gas produced to \$0.85 to raise funds for orphan site restoration. The oil levy will also increase from \$1.30 to \$1.58 per m^3 petroleum produced. The new rates take effect beginning with October 2018 production.

Beginning April 1, 2019, a new liability levy will replace the existing orphan tax (\$.03 per 1,000 m^3 marketable gas and \$.06 per m^3 petroleum). The production levy increase will also continue to support the OSRF over a three year period while the liability levy is phased in. By 2021/22, the liability levy will provide the entire estimated \$15 million per year required to sustain the orphan fund.

Cover photo and photos on pages 3-4 and 7-8 courtesy Province of British Columbia.