2015/16
Liability Management Rating Summary

BC Oil & Gas COMMISSION

Table of Contents

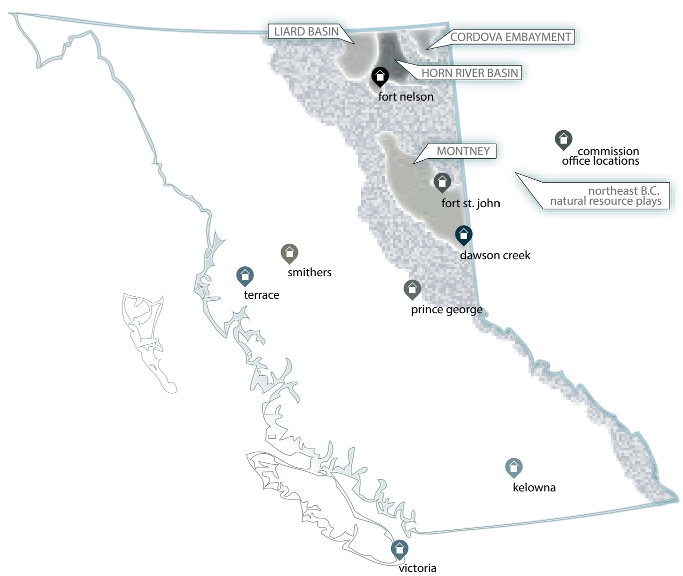
About the

BC Oil and Gas Commission

The BC Oil and Gas Commission (Commission) is the provincial regulatory agency with responsibilities for regulating oil and gas activities in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Commission's core services include reviewing and assessing applications for industry activity, consulting with First Nations, cooperating with partner agencies, and ensuring industry complies with provincial legislation and all regulatory requirements. The public interest is protected by ensuring public safety, respecting those affected by oil and gas activities, conserving the environment, and ensuring equitable participation in production.

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



Mission

We regulate oil and gas activities for the benefit of British Columbians.

We achieve this by:

- Protecting public safety,
- Respecting those affected by oil and gas activities,
- Conserving the environment, and
- Supporting resource development.

Through the active engagement of our stakeholders and partners, we provide fair and timely decisions within our regulatory framework.

We support opportunities for employee growth, recognize individual and group contributions, demonstrate accountability at all levels, and instill pride and confidence in our organization.

We serve with a passion for excellence.

Vision

To provide oil and gas regulatory excellence for British Columbia's changing energy future.

Values

Respectful

Accountable

Effective

Efficient

Responsive

Transparent

2015/16 Liability Management Rating Summary

About this Summary

The decommissioning and restoration of oil and gas sites in British Columbia is regulated by the Commission. Permit holders are required to properly deactivate and abandon wells, facilities and pipelines, and restore disturbances to meet regulatory closure.

The Liability Management Rating (LMR) program ensures permit holders carry the financial risk of their operations through to regulatory closure.

This report outlines the measurement of key indicators 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.

Objectives for the LMR Program

1. To protect the OSRF, and ultimately the Crown, from bearing the costs associated with abandonment and reclamation of oil and gas activities.
2. To ensure adequate security is provided by permit holders to address the risk of oil and gas sites inadequately abandoned and/or reclaimed.
3. To 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:

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

Additional information can be found at: bcogc.ca/industry-zone/liability-management-rating-program including documentation and summary reports.

The **Orphan Site Reclamation Fund** is an industry-funded program that addresses the costs of environmental reclamation for wells, pipelines and facilities for which an owner cannot be identified or is insolvent. The OSRF ensures taxpayers, and in some cases land owners, are not liable for environmental reclamation costs.

More information on Orphan Site Management is available on Commission website.

LMR PERMIT HOLDER CATEGORIES

Producer - Permit holder whose operations and deemed assets are primarily in the form of gas and/or oil production.

Disposer - Permit holder whose operations and deemed assets are primarily in the form of downhole oil and gas waste disposal.

Processor - Permit holder whose operations and deemed assets are primarily in the form of processing raw gas into marketable gas.

Glossary available on Commission website.

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. A deemed asset calculation determines the estimated value of a permit holder's production, processing and disposal infrastructure, and a liability model estimates abandonment and reclamation costs.

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.

If a permit holder's deemed assets are not sufficient to cover their deemed liabilities (a LMR below 1.0), security is required. Deposits can be returned to permit holders who no longer have assets in B.C. (by regulation), or if they have been approved for a return due to an adequate LMR.

Updates/changes to the LMR Program During 2015/16

The Commission may update or make changes to the LMR program throughout the year. Changes to the LMR program may cause significant increases or decreases in program measures reported herein and are not always directly indicative of changing trends and/or the activity of permit holder's operations.

In November 2015 updates were made to the calculation parameters used to determine production assets using updated economic data. Further information on the parameter update can be found in the Commission's Industry Bulletin 2015-24.

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 may be indicative of lower industry financial health and can inform the Commission of when program changes may be needed.

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

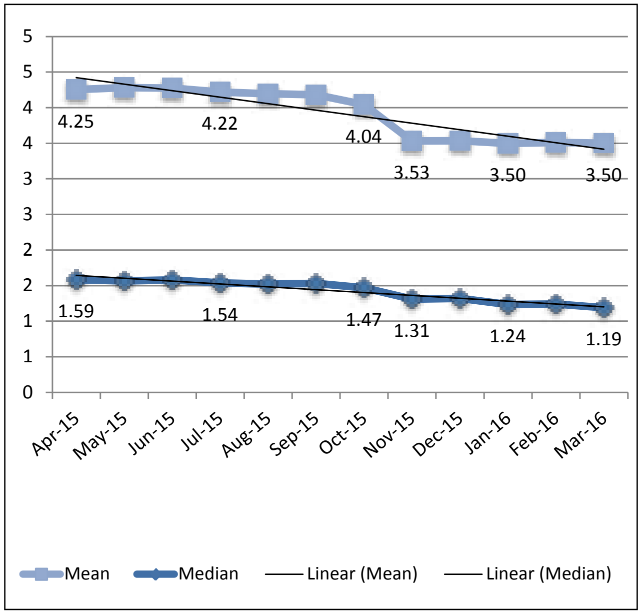


Figure 1 - Mean and Median of Producers

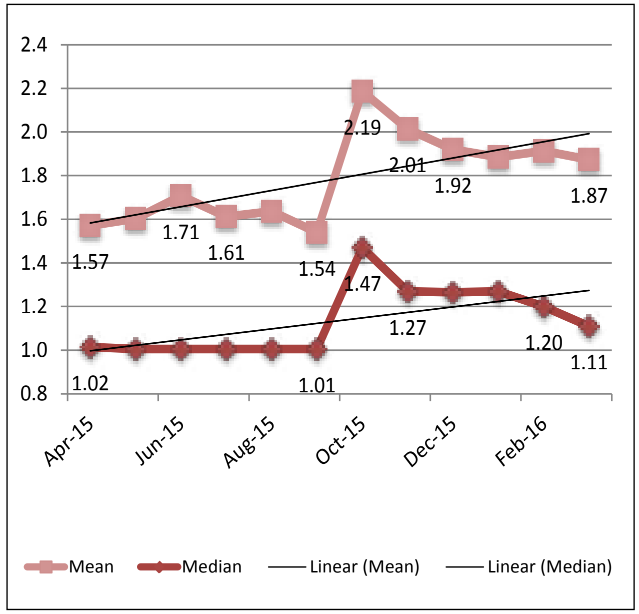


Figure 2 - Mean and Median of Disposers

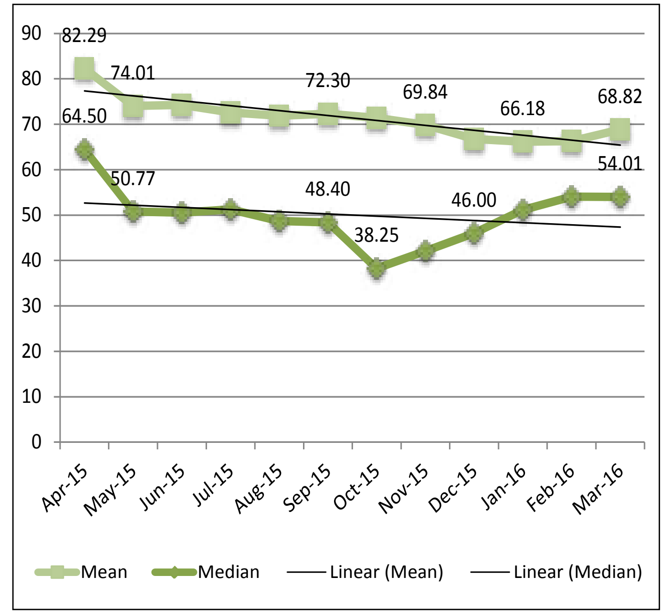


Figure 3 - Mean and Median of Processors

As evidenced in Figure 1, producers had a significant drop in the mean, and to a lesser extent the median, in November. This was due to a combination of the update to the production asset calculation parameters and the continued pressure on industry from reduced commodity prices. Outside of the November dip, the trend appeared to be on a consistent decline as more producers shut in their production as a result of depressed prices. While a number of operators with large LMRs pushed the mean up, the median data indicated the greatest proportion of operators were below the industry average.

With a small data set like disposers (Figure 2), the variation of a single data point can result in a notable dip or peak in the mean and median. Such was the case in October when the Commission revised the asset calculation for a disposal company following acceptance of a dispute process. This skewed the data set because their revised asset calculation was considerably higher than previously modeled. However, if the disposer with a revised asset calculation was excluded, the trend was a general decline in both the median and the mean over the year.

Processors (Figure 3) are a small data set where minimal changes in the data affected the mean and median. While six of the nine processors were well above a LMR of 1.0, the overall trend of the mean showed a steady decline starting in May and reaching its lowest point in February. The main cause of the overall decline was an operator fully shutting in their gas plant. A major drop in October was likely a result of the Spectra turnaround that occurred in August. 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 as a result of seasonal operational variations.

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 with time.

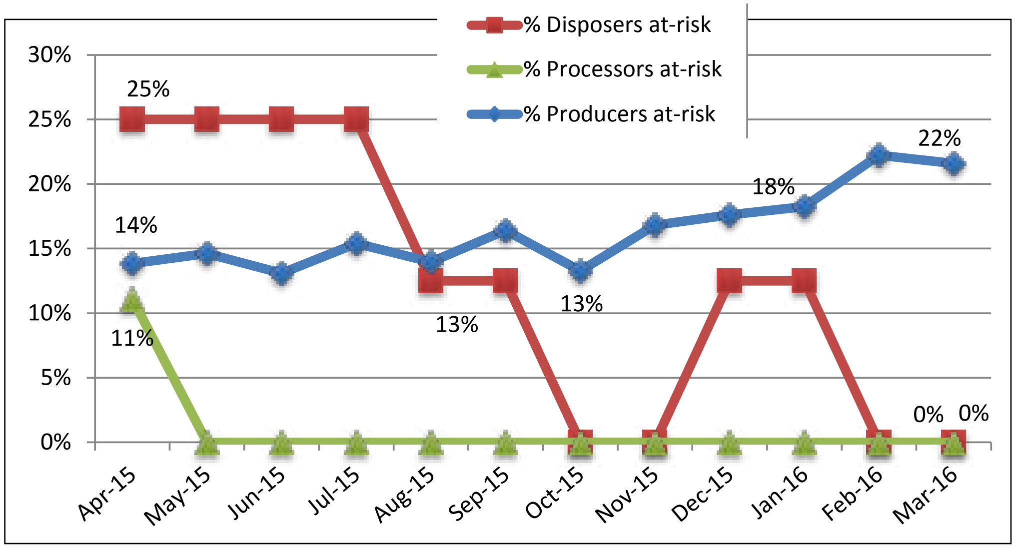


Figure 4 - Percentage of Permit Holders Below Threshold

The proportion of at-risk permit holders in the LMR program grew in 2015/16, indicating the number of permit holders with potential financial risk in their operations was growing as the downturn persisted forcing some operations to be shut-in. It is expected that the number of disposers and processors at-risk should remain low in the near term. As permit holders enter B.C., build new infrastructure, or experience production or throughput 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 in the figure above.

At-risk producers grew throughout the year with a sharp uptick as a result of the update to asset calculation parameters in November. The percentage rose by four per cent as the update impacted a number of permit holders, of which four fell below a LMR of 1.0.

Reclamation process.

Unsecured Liability

The LMR framework focuses on 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.

Security deposit requirements fluctuate over time as the number of at-risk permit holders changes (e.g. corporate reorganization or production changes). The growth in unsecured liability over the last half of the year was likely due to the impact from a challenging commodity price environment.

Figure 5 illustrates the total amount of estimated liability requiring future security payment by at-risk producers. During the 2015/16 fiscal year, producers saw their total unsecured liability fluctuate by over $10 million, from a low of just under $5 million to a high of $15 million towards the end of the fiscal year. The increase in unsecured liability was due to an increase in non-compliant operators combined with monthly security requests that were consistently over $6 million as more companies dropped below a LMR of 1.0. Around $6.5 million of the March 2016 total unsecured liability was from non-compliant operators.

2015/16 was the second full year non-producers were included in the LMR program. With the final phased payment due in May 2015, the overall unsecured liability for processors reached zero. Disposers saw a spike in unsecured liabilities as a result of one operator no longer conducting their operations in a way calculable under the LMR program parameters. Following the acceptance of their dispute request, the unsecured liability of disposers also fell to zero and subsequent deposit requirements were met.

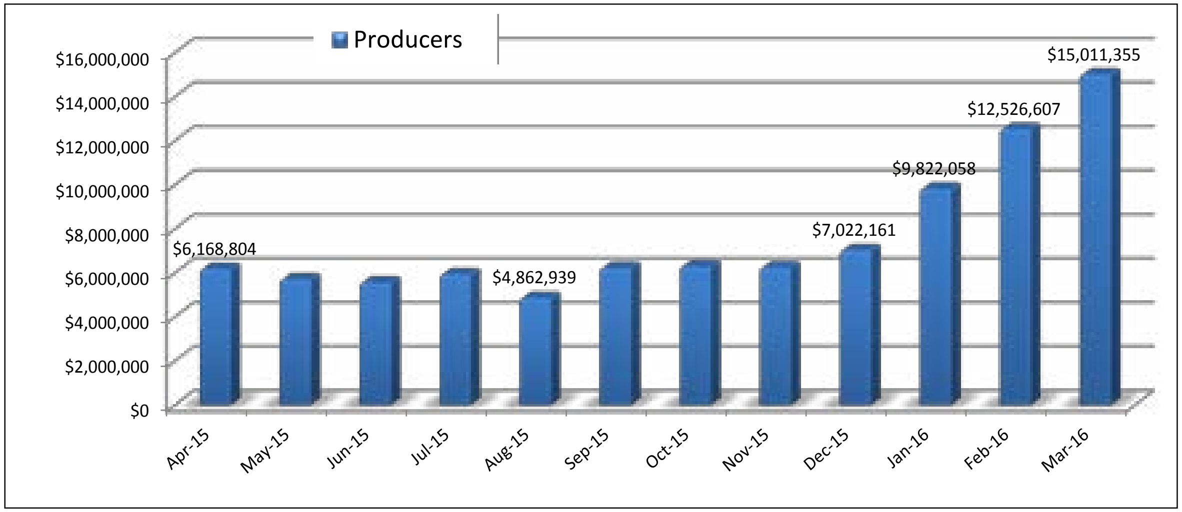


Figure 5 - Total Unsecured Liability by Month (Producers)

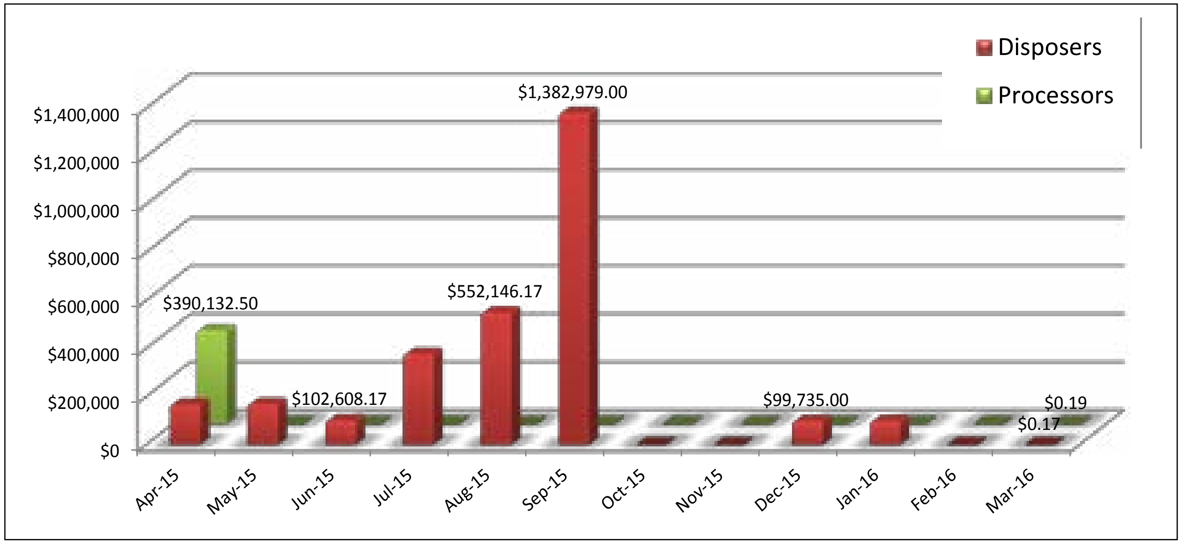


Figure 6 - Total Unsecured Liability by Month (Disposers and Processors)

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.

At the end of the 2015/16 fiscal year, seven high-risk permit holders were deemed non-compliant. No permit holders were orphaned during the fiscal year. The Commission's Asset Integrity & Retirement branch monitors high-risk and non-compliant permit holders and actively seeks solutions to reduce the financial risk.

Security Deposits

During the 2015/16 fiscal year the Commission received an additional $11 million in security deposits. The increase in security deposits have been required due to an increasing number of operators shutting-in or reducing their production.

Over the past year, the trend in security submissions has shifted to companies preferring to provide letters of credit over cash, a closer margin than in previous years. Currently, over 53 per cent of security is held in cash over letters of credit. The majority of permit holders holding security >$1 million submit letters of credit (60 per cent) and 73 per cent of permit holders holding <$1 million submit as cash.

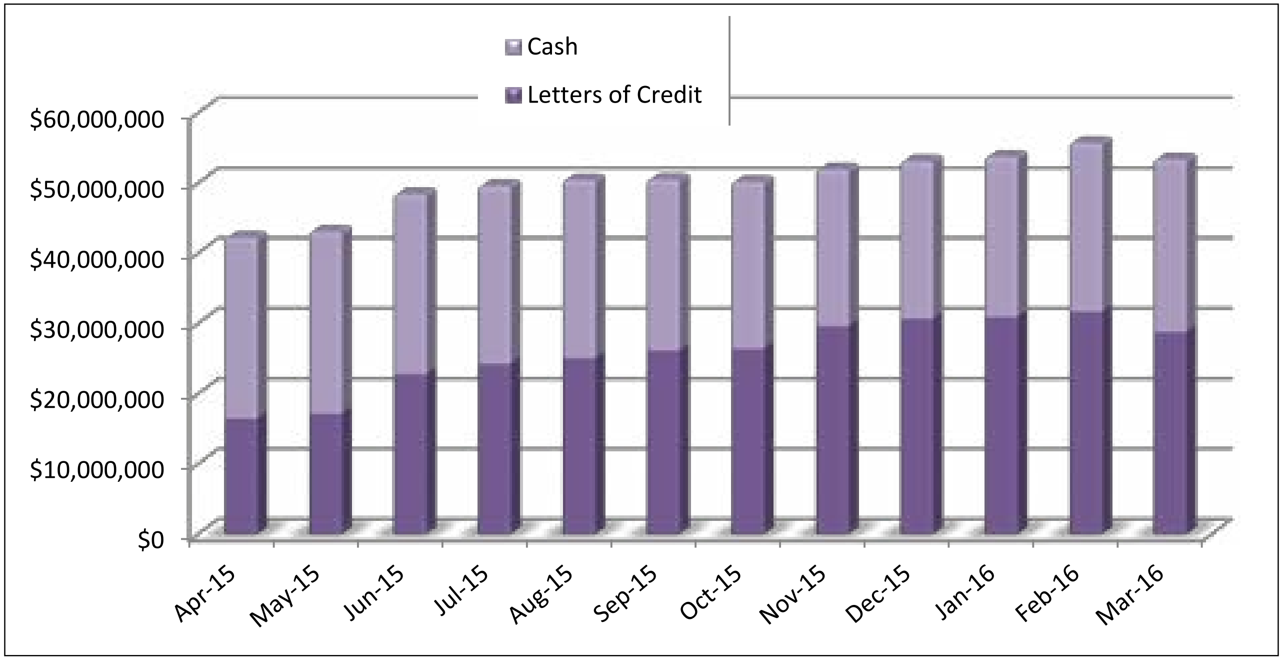
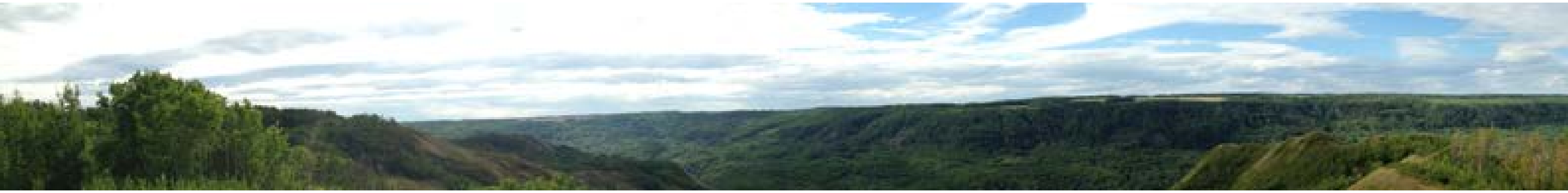


Figure 7 - Total Security Deposits Held



Closure

Fiscal 2015/16 saw some success within the LMR program as processors and disposers saw their unsecured liability drop to zero. However, the challenges in oil and gas prices has resulted in increases to the unsecured liability of producers. This trend has the potential to continue for the first six months of the 2016/17 fiscal year.

Over the next year, as market conditions continue to challenge operators, the Commission expects to see an increase in the number of at-risk producers and unsecured liability. If this occurs, the Commission is committed to working directly with permit holders to establish individual plans to manage financial risk and reduce exposure to the OSRF.

Visit the LMR page of the Commission web site for more information on the Commission's LMR program and/or for further information on LMR, OSRF or enquiries regarding this document, contact Mike Janzen at Mike.Janzen@bcogc.ca.