



## Vent Flow/Gas Migration Data Trends in the Western Provinces

*Gerry Boyer, P.Eng*

*Senior Advisor, Industry Operations, Alberta Energy Regulator (AER)*

### Summary

Surface casing vent flow (SCVF) and gas migration (GM) are indicators of well integrity failures. The frequency of SCVF and GM has been examined for different types of wells including well geometry, age and other factors.

There are issues related to emerging trends of new wells. More drilling is occurring in Oil Sands areas and there are some concerns with non-vertical wells.

In Alberta the inventory of inactive wells is also growing and some of these wells have SCVF/GM.

### Introduction

Energy wells have been drilled in Alberta for over a hundred years. Alberta regulations, and the capture of data on wells, has evolved over time. The AER has developed internal processes to validate and analyse some of the well data reported by industry. Although industry reporting has evolved significantly over time, the validated data may be used to assess some well integrity issues that are of concern to the AER.

Some slides in this presentation have been presented at previous technical conferences.

### Theory and/or Method

The AER continues to assess industry reported data, to work with industry and with research organizations to quantify well risks and well failures. Also to advance industry best practices, to identify areas of regulatory improvement and to recommend areas of research.

### Examples

AER presentations on well integrity have been made to the SPE, the CSGM, the CHOA and other groups. The data has been used in support of new Industry recommended practices and standards. Workshops have also been recently held with industry related to InSitu well integrity and on fracturing issues.

### Conclusions

Some conclusions and potential solutions to well integrity failures may be postulated with the available data.

There are well integrity issues that still need to be addressed and there are areas where research is required.

### Acknowledgements

The AER collaborates with other regulators in Western Canada via the Western Regulators Forum. Some data from Saskatchewan and British Columbia was used in this presentation.

Todd Han (Saskatchewan Ministry of the Economy)

Kevin Parsonage (British Columbia Oil and Gas Commission)