

UNCONVENTIONAL THINKING

SANJEL ENERGY'S COLLABORATION
WITH THE UNIVERSITY OF ALBERTA

Sanjel ENERGY
SERVICES



UNCONVENTIONAL THINKING

Innovation through collaboration with the University of Alberta

Wellbore stress is increasing. Current Montney and Duvernay well designs conduct hydraulic fracturing operations on 200+ stages that cycle up to 80+ MPa. Meanwhile, in heavy oil wells thermal stimulation is conducted at temperatures in excess of 300+°C . Where once these conditions were unique, they are now the norm.

Modern well construction and stimulation techniques are resulting in increasingly complex wells. We knew that in order to deliver entire life-cycle wellbore integrity for these increasingly complex wells, it was time for an evolution in cement design.

To meet these challenges Sanjel Energy Services and the University of Alberta initiated a three year NSERC assisted collaboration. Combining scanning electron microscopy (SEM), micro-computed tomography (μ -CT) techniques and 3D fluid dynamics simulation, we are able to quantify the impact of the stress-induced 3D fractures on cement integrity.

The study allows Sanjel Energy to:

- Optimize cementing technologies which address the root cause of integrity loss
- Deliver the best value solutions for improving long term wellbore integrity
- Reduce occurrences of gas migration and surface casing vent flows
- Develop more effective remedial technologies

Well complexity is increasing, and Sanjel Energy is delivering optimal solutions.

For the full story, join Sanjel Energy at the SPE Thermal Well Integrity and Design Symposium from November 19-21, 2019 or read SPE-198683 Imaging Leakage Pathways in Wellbore Cement after Uniaxial Compressive Loading.



»» To learn more visit sanjel.com

Partners through Performance



Sanjel Energy Services is an industry leader committed to ensuring the performance and integrity of your wells for their entire life-cycle.

Our talented team is the driving force behind our company.



Sanjel Energy's proprietary complexity matrix is applied to every phase of a project and aspect of our business, from design to execution to evaluation. This approach gives us the unique ability to analyze and mitigate risks for complex projects, guaranteeing optimal well performance, highly reliable operations and enhanced safety results.
