



Proppant Failing into Large Fragments

Technology Summary

The present invention is a hydrofracturing process for stimulating oil/gas well production using proppants to selectively open, clean and prop open geological fractures in hydrofractured oil and natural gas wells. Proppants used in the present invention are glass spheres, which offer highly reliable failure behavior to promote maximum well permeability. Thereby, this technology results in enhanced extraction efficiency in packed proppant beds.

Application & Market Utility

In the hydrofracturing process for stimulating oil/gas well production, a slurry of surfactants, acids, and proppants are pumped into a well, intended to selectively open geological fractures. Proppants must remain in the appropriate location after the release of the fracturing pressure. Therefore, they must provide a strong, reliable, and permeable bed. The present invention maintains these features and provides cheaper proppants compared to other methods. The proppants in the invention exhibit a high degree of sphericity to promote flow and dispersion in the facing pad.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

8-10

Seeking

Investment | Licensing | Research

Keywords

- oil and gas well production
- proppants
- hydrofracture
- hydrofracturing process

Researchers

John R. Hellmann

Senior Associate Dean for Graduate Education and Research

[Online Bio](#)

Ryan P. Koseski

Barry E. Scheetz

Originating College

College of Earth and Mineral Sciences

Office of Technology Management Contact

Swope, Bradley

bas101@psu.edu

814-863-5987