

FRACTAL SYSTEMS COMPLETES DEMONSTRATION OF JET SHEAR™

Demonstration of Enhanced JetShear™ Technology Next Major Milestone

Calgary, Alberta – Fractal Systems together with its partner, a large oil sand producer, successfully completed the demonstration phase of its patented JetShear™ technology during April 2015. The 1,000 barrel per day facility commenced processing on April 8, 2014 and operated for approximately one year. During this period, the facility processed over 100,000 barrels of partially diluted bitumen that was trucked to the site in Provost, Alberta from SAGD projects in the Athabasca region that are operated by Fractal's partner.

The goal of the project was to (1) meet processing objectives with commercial size nozzles, (2) achieve desired nozzle life performance, (3) meet facility operability and throughput expectations with no safety or environmental incidents, and to (4) achieve certain product quality targets (product stability, H₂S content, acidity, and liquid yield). All key targets were met or exceeded and the demonstration was deemed a success by the partnership.

The positive field demonstration of JetShear™ has led Fractal Systems and its partner to an expansion of the current technology platform to further increase diluent displacement and to further reduce acidity (Total Acid Number or TAN) via a proprietary technology. The new platform is called Enhanced Jetshear™ and targets diluent displacement up to 60% and TAN levels less than 1 mgKOH/g while maintaining all other pipeline transportation specifications.

Fractal Systems announced in March that Sustainable Development Technology Canada has awarded \$3.7 million to field trial this improved version of JetShear™. Planning for the project has commenced and certain engineering contracts will be let in the coming weeks to support design of the modifications to the existing facility in Provost, Alberta. The Enhanced JetShear™ demonstration project is expected to be completed in 2016.

Fractal Systems Inc. is a private Canadian company with offices in Calgary, Alberta and Sherbrooke, Quebec. Fractal is engaged in the business of processing/upgrading heavy-oil and bitumen, by applying proprietary technology that has **significant cost advantage** over alternatives. The company will be active in manufacturing & licensing systems to oil producers and mid-stream companies.

Jetshear™, Fractal System's first technology, has been **successfully field demonstrated** in Canada. The technology dramatically reduces the viscosity of heavy oil allowing the oil to move more freely in pipelines for transportation. This result provides the owner or transporter of the oil to significantly reduce their costs associated with moving it. In addition, the heavy oil processed by Jetshear™ has a reduced density.