

FRACTAL SYSTEMS APPOINTS INDUSTRY VETERAN DAVE MCDOUGALL AS VICE PRESIDENT OF ENGINEERING

McDougall further enhances Fractal's project execution and engineering capabilities as it advances the commercialization of its JetShear technology platform

Calgary, Alberta – Ed Veith, President & COO of Fractal Systems, Inc., is pleased to announce that Dave McDougall has joined Fractal as Vice President of Engineering. Dave joins Fractal from MEG Energy where he was Project Director. Dave will be based in Fractal's Calgary office and is responsible for leading the company's engineering team and the commercialization of the Fractal technology platform.

Mr. McDougall brings 35 years of project and process experience from both the owner and EPC perspectives. Over the past 17 years, he has worked with large independent resource companies (MEG Energy, Cenovus and CNRL) on major oilsands and heavy oil projects. Before joining Fractal, Mr. McDougall was Project Director at MEG Energy where he oversaw the Phase 2B expansion (>\$1 billion) and the Hub Facility at Stonefell Alberta, among other initiatives. While with Cenovus he managed large scale projects at both Foster Creek and Christina Lake.

Prior to his work in the resource sector, Mr. McDougall was a partner with Titan Projects Ltd. and also worked with Delta Catalytic Engineering and Construction Ltd., in various roles focused on Canadian and international heavy oil, gas processing, pipeline and offshore projects. Mr. McDougall holds a Bachelor of Science Degree in Chemical Engineering from the University of Calgary, is a Professional Engineer in Alberta and has experience developing intellectual property and patents.

Working closely with Fractal's Sherbrooke engineering and technology development team, Mr. McDougall will provide leadership around the design, fabrication, installation and operation of Fractal System's JetShear facilities as the company moves forward in commercializing its technologies.

About Fractal:

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

The JetShear technology platform (which includes Jetshear™, Enhanced Jetshear™ and Acid Reduction Process™ ("ARP")) is being recognized by producers and other stakeholders for supporting the sustainable development of Canadian bitumen and extra-heavy oil. The Jetshear technology platform is designed to:

- significantly reduce the cost of transporting bitumen and extra-heavy oil and improve the price received for the product by partially upgrading the bitumen and reducing the TAN,



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- improve export pipeline utilization leading to 20 to 25% increase in export capacity, and
- reduce the GHG footprint compared to the status quo of shipping conventional dilbit.

New technologies and approaches will be required to manage sustainable growth in the oilsands for the benefit of Canada, North America and the world. Fractal's Jetshear technology platform can play a vital role in improving producer operating margins while also improving the GHG footprint and long-term sustainability of the oilsands.

Jetshear 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 allows the owner or transporter of the oil to significantly reduce costs and the environmental footprint associated with moving bitumen or extra-heavy oil to market.

Enhanced JetShear and the ARP technologies are currently being demonstrated in the field. These two technologies represent a new approach that allows for further reductions in the diluent required, lowers the acid number (TAN) of the bitumen to below 1.0 and increases transportation infrastructure utilization.

For further information, please contact:

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