Well Resources Granted Canadian Patent Related To Bitumen Upgrading

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An Alberta company has been granted a Canadian patent related to its bitumen upgrading process that would cost less money and use less energy than conventional coking and hydrocracking processes.

Well Resources Inc. of Edmonton developed a partial upgrading process called selective extraction of asphaltenes, or SELEX-Asp, a solvent-based physical separation process capable of selectively extracting asphaltenes as dry granulates. Well Resources says its process has been proven at small refineries in China (DOB, Feb. 5, 2018 (http://www.dailyoilbulletin.com/article/2018/2/5/former-syncrude-researcher-sees-oilsands-opportuni/)).

The Canadian patent granted earlier this month "speaks to the ability to use deasphalted oil product for conventional refining processes," said **Warren Chung**, president of Well Resources, in an email to the *Bulletin*.

"While there are many technical nuances within the patent, the key takeaway

is that we have proven that Alberta bitumen — and other heavy petroleum streams — need not be processed in costly and energy-intensive coking or ebullated bed hydrocracking processes that are commonly deployed in upgrader configurations."

While this patent (Canadian Patent No. 2,920,054) doesn't cover non-energy uses for the extracted asphaltenes, it represents one piece of the puzzle that "allows Well to protect the end uses of the products coming out of our process," Chung said.

Earlier this year **Jacobs Consultancy** completed an Alberta government-funded assessment of proposed partial upgrading technologies, markets for the proposed products and gaps that still need to be filled by further research and development (DOB, July 9, 2018 (http://www.dailyoilbulletin.com/article/2018/7/9/review-identifies-partial-upgrading-technologies-a/)).

In its report, Jacobs said while there is a strong non-fuel market in places such as China for asphaltenes as an asphalt blending stock, Alberta currently has a limited market for rejected asphaltenes.

To avoid sending the asphaltenes to disposal, Jacobs recommended further research to develop new uses for the material.

Well Resources says it is developing non-energy uses for asphaltenes (DOB, Feb. 5, 2018 (http://www.dailyoilbulletin.com/article/2018/2/5/company-looking-non-energy-uses-asphaltenes/)). The company hopes to eventually file a patent application for commercial uses for its asphaltene product.

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