Well Resources Granted Patent For Asphaltene Non-Combustion Uses

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Well Resources Inc. says it has been granted a patent by the Canadian Intellectual Property Office for environmentally friendly, non-combustion uses for asphaltenes, the most carbon-intensive constituents in petroleum.

Asphaltenes are found in large quantities in heavy oils, and are not suitable for processing into transportation fuels from both economic and environmental perspectives, the company says, adding that the asphaltene content in petroleum derived from the Canadian oilsands can be as high as 18 per cent by weight.

Well's commercial SELEX-Asp process cleanly and selectively removes the asphaltenes from petroleum, leaving behind a cleaner and lower carbon intensity oil.

"Well demonstrated that asphaltenes have characteristics similar to activated carbon, and can be used as a low-cost material for addressing important environmental issues such as waste water treatment and soil remediation," the company said in a statement.

"Asphaltenes were shown to be good adsorbents for trapping pollutants, as well as key materials for bioreactors. Well's patent also covers the transformation of asphaltenes into carbon fibers, mats, and fillers for environmental applications."

The company filed its patent application in February 2019; it says that it was eligible for accelerated examination because invention meets the criteria for classification under the federal clean technology category.

President **Warren Chung** said the technology "creates a win-win scenario for everyone involved, and is an important step towards decarbonization."

"The petroleum industry, particularly the heavy oil producers in Canada, are often criticized for the high carbon intensities of their oil. We now have a way to remove the most carbon intensive portion from the barrel and use it to help the environment without the need for combustion — and by extension, greenhouse gas emissions," he said.

Well says it has already partnered with the Chinese Academy of Sciences to deploy asphaltenes in major water decontamination projects in China.

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