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**ASPHALTENES STABILITY IN DILUTED BITUMEN AND HEAVY OILS**

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It is projected that the production of bitumen from Oil Sands in Alberta will increase from the current 1.2 MMB/d to 3.0 MMB/d by the year 2014. At the present part of produced bitumen is upgraded to SCO (Synthetic Crude Oil) by the upgradres and refiners such as Syncrude, Suncor Energy (Fort McMurry), Husky Energy (Lloydminster), Shell (Fort Saskatchewan) and Petro-Canada (Edmonton) using coking and hydrocracking technologies. Although it is expected that the upgrading capacity to increase when the new upgrading facilities are built in Alberta, but at the same time major portion of bitumen will be transported via pipelines to the refineries in the US. To reduce the viscosity (350 cSt) and density (940 Kg/m<sup>3</sup>) of bitumen to meet pipeline specification, 30vol% diluent is added to produce Dilbit. Bitumen and heavy oil can also be diluted with synthetic crude oil (gas oil range) and pipelined to different refineries. In this case 50vol% of the synthetic crude oil is needed to meet pipeline specification for viscosity and density (Synbit). Depending on the availability of diluents, bitumen producers may be forced to use other sources of diluent including hydrocarbons from different refinery streams (C<sub>5</sub>, C<sub>6</sub>, etc.)

No matter which diluent is added to bitumen to reduce density and viscosity, one has to make sure that there is no chance of asphaltenes precipitation during transportation and storage. In this paper methods and techniques for measuring asphaltenes stability will be presented. The solvent strength of different diluents and refinery streams for blending with bitumen and heavy oils will be compared.