



### Reducing Waste Materials in Alberta's Oil Patch

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Alberta's oil patch is growing exponentially in activities involved with oil exploration, production and delivery. Integral to this energy development is the transportation of excess or perceived waste materials created in this process. The general practice has been, whenever possible, to dispose down hole or blend and bind wastes to create a friendlier product for disposal at a specialized landfill. If our energy development activity continues to expand, these practices will be challenged as well as become increasingly costly. In today's business environment, we have a responsibility/opportunity to maximize the use of waste materials through economically sound reclamation.

Industry should take a proactive

approach to lessening environmental challenges and profitably reclaim materials previously considered as wastes for disposal. To do this the oil industry has begun to embrace three concepts. First, reduce the amount of waste destined for landfills and disposal wells. Second, it must reduce the amount of water taken locally to be used for production. Third, the industry should embrace the concept of recycle and reuse.

Some upcoming projects are applying reuse and recycle wastes concepts with the benefit of increasing profits as well.

Suncor's Voyager will recycle all the production water within the facility, reducing the draw on the local water supply by over 50% in the next three years.

Furthermore Voyager is examining technologies to recover lost oil from hydrocarbon wastes and dry out the solid materials from these wastes for use as a solid fuel of non-toxic disposal.

In the expansion plans of Royal Dutch Shell's Peace River Project, water reclamation is involved from inception of new drilling with the intent to recover all water. Drilling muds are perceived as valuable resources as their composition is typically 78% water. Centrifuge technology recovered some 11% of the water and used bulking materials on the remaining product to make a waste which was safe for disposal. Shell, using the new DryVac Technology will process spent drilling mud, recovering all the water in these muds for production processes and lowering the water draw on the environment. With this process, the muds are now above 90% dry and are potentially useable as road base additive. With recovery of the water, the muds are also reduced in volume by 85%. This minimizes trucks, fuel and manpower disposal costs.

Cost and environmental constraints are fueling a strong look at new technologies. With application of new technologies the industry is able to reuse the solids and reuse the water while increasing production, reducing waste and generating an increased bottom line. The idea of creating use while reducing waste is green in both environmental and financial terms.