

**Committee on Science, Space, and Technology  
Subcommittee on Energy and Environment  
United States House of Representatives**

**“Challenges and Opportunities of Unconventional Resources Technology”**

**Testimony of Cameron M. Todd  
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Mr. Chairman and members of the Committee, I thank you for the opportunity to address the committee today on vital matters of energy, environment and the economy. My name is Cameron Todd and I am the Chief Executive Officer of US Oil Sands. I am an engineer by training with more than 30 years' experience in the oil and gas industry, and have worked extensively in Canada, the United States and internationally. US Oil Sands is a public company with a unique proven technology for the development of Utah's extensive oil sand resources. I am here today to explain that development of these valuable resources is not only economically viable and technologically proven, but also can be done in an environmentally responsible manner with significant economic benefit for Utah and the nation.

US Oil Sands has a proprietary technology using a renewable bio-solvent to can extract heavy oil from oil sand without the need for tailings ponds. This breakthrough is expected to revolutionize the development of bitumen resources, particularly in the US, where in spite of extensive resources, there have been no continuous commercial oil sand extraction projects to date.

The solvent we use is non-toxic and biodegradable, made from citrus peels. It has been widely used for decades in environmentally-friendly household and industrial cleaning products; however nobody had ever thought to use it in oil sand extraction. Over the last 10 years our company has perfected a proprietary method which has been exhaustively tested and piloted in the field. This process greatly simplifies the current approaches to development, and allows them to be built on a smaller scale with modular phases. This also allows for continued improvement of both technology and operating practice while minimizing environmental impact.

Our company has been active in Utah for more than 7 years and has invested more than 20 million dollars developing and proving our technology, acquiring and exploring lands, on environmental reviews, in design, and initiating construction. Beginning later next year we expect to complete construction and initiate production on what we believe will be the first

continuous commercial oil sands extraction project in the United States. By that time we will have invested more than \$50 million dollars and employed hundreds of people.

These years of development and sizeable private capital investment have allowed our company to perfect a process which demonstrates the best environmental performance of any commercial oil sand development to date. Our process recovers 96% of the bitumen processed, the highest of any existing project. Since we produce clean sand without tailings ponds, we reclaim the mined area as we go instead of waiting until the end of the project as other processes do. This allows for a greatly reduced surface impact. Our first project is expected to operate an open mine site of only 30 acres, less than 1/20 of a square mile. By the time we need to access additional mine area, the original mine site is being filled back in. US Oil Sands process recycles 95% of the water used, the highest of any project to date. We use less than half the water of other mining processes and less than 1/3 the amount of energy of other bitumen producers (approximately 1/3 mcf of natural gas for each barrel of bitumen produced). Fuel used to produce a barrel equates to approximately 1/18 of the amount of energy contained in that same barrel. This also means that we have a lower greenhouse gas footprint than all other current oil sand projects, in fact less than many conventional oil projects. The oil we produce in Utah is sweet, meaning that it contains 90% less sulfur than is found in the Canadian oil sands. This makes it much easier to refine and therefore it generates much lower amounts of greenhouse gases at the refinery. In almost every regard, the environmental aspects of this process are best-in-class.

Our first project will be relatively modest, producing 2000 barrels per day of bitumen, as heavy oil processed in local refineries. Over the next 10 years, assuming fair access to resource lands, our company has expansion plans for the development of 50,000 barrels per day. Over the life of our development, we expect to generate over 60,000 person years of direct employment. These are high quality, full time, permanent jobs. And they come at a time when the American economy has been hit with the worst recession it has seen in the last 75 years. Over this same 10 year development period we expect to pay more than 9 billion dollars in taxes and royalties and contribute more than \$20 billion dollars into the economy. And we will be saving the import of over \$50 billion worth of foreign oil, a notable impact on both the balance of trade and the security of energy supply.

This only accounts for the economic impact expected directly from our own company and its employees and contractors. The indirect "spin-off" economic benefits and employment are several multiples more than these levels.

While we may be first, US Oil Sands is not alone in this endeavor. Other companies are pursuing new and exciting technologies which will bring additional environmentally-responsible and economically-attractive projects.

So what is standing in the way of such an important development in American energy supply? The largest impediment to the responsible development of these valuable resources is federal government policy. Even though 80-90% of the lands in this region are federal lands, it is no accident that 100% of US Oil Sands oil sand leases are on State lands. The BLM essentially has a de facto moratorium on leasing oil sands or oil shale and as on the approval of commercial projects. This, in spite of the instructions of Congress in the Energy Policy act of 2005, whereby the administration was directed to open these very lands to oil sand and oil shale development. The current administration is proposing to reduce the lands available for oil sand development by nearly 80% (from 431,000 acres originally proposed down to 91,000 acres). Purportedly this reduction is because of the belief that commercial technologies for development do not exist, that only massive large scale development would occur, and that the lands should be conserved.

It is not that these lands are conservation areas where development is prohibited. Quite the contrary, other development such as conventional oil and gas exploration, forestry activities, cattle grazing, and mining developments are allowed (subject to normal permitting and approval requirements). It is only oil sand and oil shale leasing that is restricted.

We are not asking for unfettered access. Every project would still be subject to extensive scrutiny and approval just as are conventional projects. We have already shown that small scale modular development is possible, and that world-class environmentally-responsible technologies are proven and already in development. Why would the federal government restrict enterprise from developing such a valuable resource, especially one that can be developed with such strong economic benefit and such sound environmental performance.

In conclusion, the oil sand resources of the western states are large and accessible. US Oil Sands has developed a process which unlocks these valuable resources in an environmentally-superior manner. We have a project on Utah state lands which we expect to be in production later next year. The process uses far less water, energy, surface area, and generates less greenhouse gas than any project to date. It generates clean tailings and requires no tailings ponds. Our company expects to generate tens of thousands of man-years of employment, billions of dollars of tax revenue, and contribute tens of billions of dollars to the US economy. In exchange we ask for no special treatment, no fuel subsidies and no grants. We simply suggest that Congress permit these developments on federal lands as mandated in the Energy Policy Act of 2005.

We at US Oil Sands intend to implement our game-changing approach with or without access to federal lands. We have identified a large amount of resources on State lands and will develop them in concert with the State. We also expect to be able to apply our approach to oil sand resources in Canada and in other parts of the world where large deposits exist. Of course it would be a shame if the people of the US were not able to enjoy the benefits of development

of their own extensive resources, but such a great technology and such a win-win-win result with respect to energy, the economy and the environment, is too good not to be applied to solve the energy challenges of the world.