



Sustainable Wealth Management Ltd.

Developing Unconventional Oil is Necessary

According to my research conventional oil production peaked in 2005 at 72 million barrels/day and has either hit a plateau or is declining at this time. The great hope was that unconventional sources such as deep offshore and oil sands would make up the slack. To a large extent that has been the case up until now. In my opinion the recent environmental events will affect the growth of both sectors in North America. The IEA estimates that conventional oil production is declining at a rate of 6.7% per annum or 5 million barrels/day. That means that the deficit that will have to be covered by unconventional oil will increase from the current 12 million b/d to 17 million b/d in the near term, a 40% increase. Clearly, this is not feasible in the short time period involved from a supply point of view and given the increased environmental scrutiny that will be required on future projects. The mostly likely scenario is that price will be used to mitigate demand. Alternatively, a combination of economic depression and mandated efficiency could reduce demand. My view is that it is a “no win scenario” either way. A rapid rise in crude prices will cause an economic depression just like the high prices in 2008 led to the economic collapse we are experiencing now. The economic impact of \$100+ oil now would be even worse given the weakened state of the global economy. If a depression occurs first, oil prices will collapse back into the \$30 to \$40 range and most new oil projects will be cancelled or delayed.

A Way Out

Economic depressions have a way of spawning new technologies and new business models. I believe that will be the case with the oil sands. Adoption of new approaches in the energy sector are sometimes slow, however extreme economic need should result in a more rapid innovation cycle. That trend is already evident in companies such as OPTI Canada, Petrobank, Ivanhoe Energy and others who are investing in new approaches to extracting/upgrading bitumen that resolve many of the environmental concerns such as pollution, natural gas and water use issues. We should encourage and invest in these companies and push for the testing and adoption of new technologies at an accelerated pace. In future articles I will bring attention to the key concerns regarding oil sands development and discuss approaches for dealing with them.



Sustainable Wealth Management Ltd.

Oil Sands Reloaded

I'm a big supporter of alternative energy. I think that one day we will develop cheap generating capacity in solar, wind, and geothermal supported by inexpensive storage to handle the variability of these energy sources. Unfortunately, in the past, economic depressions in the 1930's and early 1980's severely hurt the development of solar energy. When oil and gas prices collapsed and there was a glut, the economics of solar energy doomed the industry to niche applications. I'm afraid that this could happen again and the same could happen to the oil sands. To counter the threat we need to focus on developing technology that will reduce our cost per barrel as well as our environmental footprint. To get a glimpse of the future of Canada's oil sands I recommend that you read a recently published book by Alastair Sweeny entitled *Black Bonanza: Canada's Oil Sands and the Race to Secure North America's Energy Future* (www.alastairsweeny.com/blackbonanza/index.php). The book does an excellent job highlighting the trials and tribulations that have gotten us to this point, how technology is changing the oil sands and what we can expect going forward. Mr. Sweeny discusses a logical transition to renewable energy economy that he calls the "Blue Shift". He courageously discusses environmental issues and focuses on solutions to many of the most pressing problems with developing the oil sands. Investors who wish to obtain a broader perspective on the sector should consider reading this book. My view is that the development of the oil sands will shift more dramatically towards in situ projects that will adopt new extraction technology such a THAI and VAPEX. Mining projects will undergo closer scrutiny and will be required to reclaim land and reduce tailing ponds on an accelerated schedule. The increased cost will put them at an economic disadvantage to the smaller in situ developers who will benefit from lower input costs (less water and natural gas use) and higher quality of bitumen extracted (partial in situ upgrading).

Next article I plan on discussing the recent merger and acquisition activity in the sector and the growing interest from China.

Derek Gates, CFA
Founder of the Oil Sands Sector Index™
Sustainable Wealth Management Ltd.
www.SWMindex.com