End of Conventional Oil

[Name of the Writer]

[Name of the Institution]

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Introduction

Conventional oil production grew by approximately 1.5% per year between 1995 and 2005, but from that year entered a plateau, although since 2004 the price of oil began to increase from the $ s 30 to the nearly 110 today. While the rise in prices led to an increase in the tasks of exploration and development of new deposits, only managed to offset the decline of mature fields. Therefore, increases in production globally in recent years come from the condensed natural gas (ethane, propane, butane, pentane), deepwater fields, oil sands and tight (shale) oil. Today, oil production is highly concentrated in a small number of countries and a small number of large deposits. Approximately 100 sites produce half of global supply, 25 produce one quarter and one field (Ghawar in Saudi Arabia) produces 7%. Almost all these large deposits are relatively mature, many have reached their peak production and most other declining enter the next decade. Globally, there is little hope of finding new so-called giant fields. In addition, 96% of global reserves are held by the states, so that the oil must meet various regulations and to share the rent. In a way, the major oil companies in the world are suffering some version of the same problem: they are spending more money to produce less oil.

To maintain production rates, companies are running on the search for new reserves and at the same time, are increasing their gas projects, costing them access to the reserves of conventional global oil and gas is increasing its participation in the global energy mix. It is ending the era of cheap oil and the world is facing a future of economic and geopolitical turbulence. Luckily, we have a Vaca Muerta.

Discussion

Oil is unarguably most important commodity and resource in the world today. It is so important in today's world that volatility in oil prices can take nations into economic turmoil and recession. Even with this importance the dawn of oil was fairly recent. Although used for different purposes since ancient times, the proper commercial extraction for modern use of oil begin in second half of nineteenth century and the demand for oil has risen ever since (Anonymous, 2013).

The first revolution to decrease the dominance of oil on world was lead by a Texan businessman George Mitchell. George Mitchell championed the process of 'fracking' which is a way to release huge supplies of unconventional gas from shale beds. This along with new discoveries of conventional gas has significantly increased world reserves from 50 to 200 years. Due to revolution of shale gas extraction is US, liquefied or compressed gas is making its way as transportation fuel. This shale gas can also replace oil in other uses such as ships, power generation, petrochemical plants and domestic and industrial heating system and could decrease consumption of oil in recent future. The second revolution taking place is that of advances in vehicle engines and design. The new engines and structures of cars are making them more fuel efficient and the growing increase in use of electric and hybrid cars as well as vehicles powered by natural gas is decreasing the demand and dominance of oil as fuel (Anonymous, 2013).

But the change in demand structure of oil will change the corporate and geopolitical situation of the world. Major oil companies even as big as Exxon which is largest company is the world along with apple are vulnerable to shift in oil dynamics. The cost of oil extraction from Arctic and other demanding regions have increased to $100 per barrel and are not cost efficient anymore. Major oil companies who also deal in natural gas will survive the changing dynamics

but will become less profitable due to smaller profit margins than oil. Geopolitically it will change dynamics of oil producing countries whose economies are dependent on production and export of oil. Russia which has major dependency on oil for its economy can have problems and many oil producing Arab countries can fall into turmoil into long run once oil revenues stops or decreases in future as they do not have any alternative other than oil to run their economies. America may also abandon their Arab oil producing allies as they will not be much useful to them after self sufficiency in energy due to shale powered fuel. And as the rise of oil in past has caused many conflicts, it fall will cause further more. For all that, most people will welcome the change (Wirth et. al, 2003).

Uncoventional Technology

In a "conventional" formation fluids are accommodated in cavities or pores of the reservoir rock (as a rigid sponge oil or gas filled) and the ease with which fluid is drawn depends primarily on the permeability of the rock. Therefore hereinafter discuss gas or oil interchangeably, both are fluids that must move through a solid porous medium to be extracted. It is quite intuitive that the greater the average pore size and the more these cavities are interconnected with each other, the gas will flow more easily through the rock. Broadly, drilling a conventional well consists of the following stages: is drilled vertically, then it is piped (a tube called casing is inserted) and cemented around to ensure no leakage outside the casing (known and recent spill in the Gulf of Mexico corresponds precisely to a faulty cementing, among other contingencies). After drilling proceeds to completion, where the casing is punctured in the area of training, among other tasks.

The drastic change in the oil prices was marked with the shocks and economic crises that were prevalent in the late 2007 and in 2008. The price of the oil is correlated with that of economic output which led to the lower income due to lower consumption of oil and related products in the international market. This extended till the end of 2008 and somewhat continued in 2009 while the recovery period began in 2010 while speculation also took place. Due to the world economic recession, initially the impact was uneven but then it prevailed throughout the world economies (Miller & Sorrell, 2014).

Conclusion & Recommendations

The increasing advances in shale gas technology and increase in use of natural gas along with other technological enhancements such as hybrid technology are the factors behind the eventual decline of oil as major energy source (Van Vliet et. al, 2010). The recommendations for oil importers and producers and exporters, oil corporations and individuals to prepare for future scenario and change in oil dynamics can be

- Countries which rely solely on production and export of oil should start diversifying their economies by using wealth they have amassed by oil production (Miller & Sorrell, 2014).
- Big oil corporations which are set to lose everything in case of fall of oil should start investing in new energy sources such as shale gas (King, 2010).
- Investing in and implementing other sources of energy and fuel along with oil will not only break monopoly of oil as dominant fuel source of world but will also provide geopolitical independence in terms that oil producing countries and organizations such as OPEC will not be able hold world in blackmail as they have done previously by oil embargos in 1970s and 1980s (Van Vliet et. al, 2010).

- Oil producing countries and OPEC can increase the production of oil to decrease the prices of oil and continue consumption of oil as dominant source of fuel by world and discourage investment in alternatives. Even such as scenario is not feasible for country like Russia whose economy is dependent on higher prices of oil.

In short, to bring this gas to the surface, go to look to the ends of the bedrock, which a decade ago was not possible and today it is, if we are willing to pay for it dearly. The technological aspect of art is so key to the exploitation of unconventional reservoirs and its massive scale, which involves large scale industrialization of the region under exploitation, such as has never been seen in a conventional deposit equivalent volumes, both below as above the surface.

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