Separate Account Investment Management

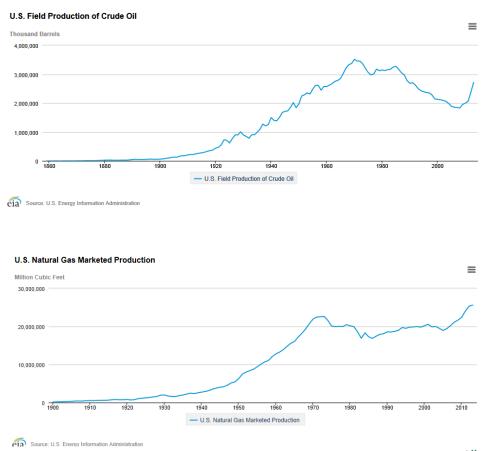
# Alley Company Quarterly Letter Shale Revolution

October 13, 2014

"U.S. oil production will likely peak between 1965 and 1970 and decline steadily thereafter."

- M. King Hubbert, geologist for Shell Oil, 1956

M. King Hubbert's "Peak Oil Theory" postulated that oil field production would follow a bell curve and his theory played out perfectly in the U.S. with oil production peaking in the early 1970s and steadily declining thereafter. The theory, however, failed to contemplate how new technologies could alter fossil fuel production and in 2009 a curious thing began to happen – oil production in the U.S. began to grow.



Hydraulic fracturing and horizontal drilling in shale rock formations has led to both crude oil and natural gas production growth that continues to rise, with natural gas production in the U.S. now greater than the prior peak production years of the early 1970s.

We have long opined that investors would do well to focus more on "what can go right" in America. The shale revolution has profound positive implications for the United States economy, yet its benefits are seemingly underappreciated by the media and market pundits. The economic and investment implications of this phenomenon are many and below we highlight some of the important developments that have emerged.

## **Reindustrialization of America**

Due to substantial and growing supply, natural gas prices in the U.S. have recently hovered around \$4 per MMBtu (million British thermal units), while the price in Europe for the same equivalent is above \$10 and in Japan it is even higher at over \$17. Our cheap energy prices and extensive reserves have made the U.S. an attractive destination for many industries to build new plants, most notably chemical and steel companies. The trend towards bringing back manufacturing to the U.S. appears to be gaining steam as a survey in 2012 of 200 manufacturing executives showed that 37% were actively considering bringing back manufacturing to the U.S. from China and in 2013 the results of that survey showed that 54% were now actively considering it.<sup>1</sup>

# **Current Account Deficit Improvement**

The U.S. resurgence on the global energy scene is being felt within the country's current account deficit, a measurement of a country's trade imports versus exports. A move towards energy independence has resulted in lower net imports of energy, thereby dramatically altering the direction of the U.S.'s long standing current account deficit. Byproducts of this are a more balanced economy and a stronger U.S. dollar.



US Current Account Balance - Percent of GDP

Source: FRED

#### **Energy Price Buffer**

Historically, recessions in the U.S. have been preceded by higher oil prices. As economic expansion occurs, the demand for energy rises culminating in higher energy prices. Increased domestic supply of both natural gas and crude oil could act as a buffer to future price shocks. Further, the increased usage of U.S. energy reserves will keep more of the economics contained within the U.S as opposed to abroad.

# **Attractive Transportation Economics**

Transportation companies within the U.S., ranging from railroads to trucking fleets, have much to gain from the ongoing shale revolution. There are currently over 15 million natural gas vehicles worldwide, however, there are only 140,000 natural gas vehicles here in the U.S.<sup>2</sup> With the current price of compressed natural gas at approximately \$2.00 per gallon compared to diesel fuel at \$3.65 per gallon, a substantial cost reduction opportunity exists for transportation companies that could result in higher profit margins.

### **Consumer Tax Cut**

Energy prices are an important input to economic growth and also have a considerable impact on consumer behavior. IHS, an energy industry consultancy, estimates that the shale revolution increased disposable income by an average of \$1,200 per U.S. household in 2012 and they see this rising to \$2,000 in 2015 and then increasing to \$3,500 by 2025. Stable to lower energy prices are effectively a "tax cut" and typically lead to more consumer spending elsewhere in the economy.

In conclusion, the shale revolution in the United States has the potential to keep a lid on energy prices for years to come. The economic benefits and by extension positive investment implications include, improved manufacturing competitiveness, a more balanced economy that is less reliant on foreign oil, a greater ability to withstand energy price shocks, opportunities to reduce transportation costs, and importantly a de facto "tax cut" which has innumerable benefits for consumers. In just five years' time, the energy picture in the U.S. has improved dramatically, providing a potentially "game changing" benefit to the U.S. economy.

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<sup>&</sup>lt;sup>1</sup> Boston Consulting Group Reshoring Survey, "Majority of Large Manufacturers Are Now Planning or Considering 'Reshoring' from China to the US", September 24, 2013.

<sup>&</sup>lt;sup>2</sup> Questar press release, "Questar Fueling Announces Opening of CNG-Fueling Station in Kansas City, Kansas", September 25, 2014.

<sup>&</sup>lt;sup>3</sup> IHS White Paper, "America's New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy", 2012.