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It's Official: 'Age of Shale' Has Arrived

by Russell Gold and Ryan Dezember

Shale is rocking the U.S. energy industry to its core.

WSJ's Ryan Dezember discusses the changing shape of oil and natural gas exploration in the U.S. brought on shale and the process known as fracking. AP Photo/The Shreveport Times, Jim Hudelson

The technique of cracking open shale rock to release oil and natural gas has spurred hundreds of billions of dollars worth of deals, including Monday's $4.4 billion proposed purchase of Brigham Exploration Co. by Norway's Statoil ASA. And it has delivered enormous profits and revenues to those in its midst, including Halliburton Co., which reported a record $6.5 billion in third quarter revenue.

Shale discoveries have reinvigorated U.S. oil and gas production that just half a dozen years ago was widely seen as in terminal decline. Today, there is a glut of cheap natural gas, and domestic oil production is rising for the first time in decades. Shale development is even spreading to other countries, such as Poland and Argentina.

The shale boom has already minted a half-dozen new billionaires comparable to the riches brought by the Internet.

"You certainly have to record the discovery and the exploitation of resources from both oil and gas shales as one of the great wealth creators in American history," said Ralph Eads, vice-chairman of investment bank Jefferies & Co., which has advised on more than $75 billion worth of shale deals over the last three years. "It looks to be the economic equivalent to any of the big technology innovations."

The discoveries have been such a disruptive force in the energy industry that companies that navigated this change successfully are now ascendant.

Many of those that didn't are disappearing quickly. The shale frenzy has helped push the total value of U.S. oil and gas deals beyond $292 billion over the last two years, according to financial-data provider Dealogic.

On Sunday, Kinder Morgan Inc. said it was buying rival El Paso Corp. in a $21.1 billion deal. It was a major bet by pipeline giant Kinder Morgan that the glut of new shale gas will not be short-lived and billions of dollars will need to be invested in distribution systems.

But it is also a reflection on El Paso, which spent years cleaning up its financial results after a disastrous strategic pursuit of Enron-like energy trading and was too slow to embrace changes in the industry.

Statoil's purchase is the latest move by a foreign oil company to snap up shale properties in the U.S.—Brigham's oil-producing assets in North Dakota's Bakken Shale field. Foreign companies, as well as oil behemoths such as Exxon Mobil Corp., have opened their wallets for U.S.-based companies that invested in shale production early.

They are motivated to buy production assets and the employees who know how to tap into shales.

Meanwhile, companies that pioneered shale, such as Chesapeake Energy Corp., have been able to capitalize on their experience and get others to pay for their drilling. Since 2008 Chesapeake has sold stakes in five shale fields for nearly $12.8 billion as buyers are willing to pay top dollar for a chance to learn from it.

Cracking open shale is a much more intensive, and expensive, process than traditional onshore drilling. Oilfield service companies, such as Halliburton, Baker Hughes Inc. and Schlumberger Ltd., have struggled to keep up with the demand while profiting handsomely.

On Monday, Halliburton reported record revenue and operating income, driven by surging demand for its hydraulic fracturing services. It attributed the gains in large part to frenzied activity in Texas and North Dakota shale formations.

The emergence of shale energy—and widespread use of hydraulic fracturing—has raised red flags. U.S. regulators are looking into what companies say about the gas they've found to determine if they are misleading investors. Environmentalists and local governments are concerned that the process is ruining aquifers and air quality. They are calling for more oversight.

But the industry is wagering billions that shale energy is sustainable and can be exploited without political intervention.

"Shale is clearly the engine driving the train for the foreseeable future—but it is not a 100% certain bet," said energy analyst John Olson. While the gains in oil and gas production are real, he notes that little is known about how these wells will perform over decades.

How shale has created winners and losers is on display in places such as Oklahoma City. Kerr-McGee Corp. was once the most important corporate presence in the city. But the oil company never took a plunge into shale and was acquired by Anadarko Petroleum Corp. in 2006.

Devon Energy Corp., meanwhile, made a major shale acquisition in 2001—and today is completing a new 50-story headquarters. On the other side of town, Chesapeake rode shale from obscurity to become a company with a market value of $18 billion that holds drilling leases on an area the size of Indiana.

Other industries and government officials are rethinking the implications of this sudden abundance of gas and increasing supply of oil. In the early 2000s, the chemical industry was mothballing U.S. plants and shifting overseas where gas was cheaper. Today, Dow Chemical Co. and others are building new world-scale facilities along the Gulf Coast because of the inexpensive energy available. In the Rust Belt, steel makers are building new mills to meet the demand for pipes needed to tap shale discoveries.

The impact of shale has reached into many aspects of U.S. life, creating millionaires of some landowners in drilling zones and creating thousands of jobs even as the rest of the economy was shedding them. On Wednesday, the Texas Rangers play in its second consecutive World Series. The club's success can be tied, in part, to an increased player payroll covered by its two new owners: Bob Simpson, whose shale-focused XTO Energy was acquired by Exxon Mobil in 2009 for $25 billion, and Ray Davis, a former pipeline executive.
