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HD **No Shale-Gas Revolution Yet for Australia; Pumping Viable Quantities of Fuel Will Take Time, Due to Varying Geological Conditions**
BY By Ross Kelly
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Don't expect Australia to join the ranks of shale-gas producers world-wide anytime soon.

According to the country's third-biggest oil-and-gas company, Santos Ltd ., it could take up to a decade for reserves of the fuel locked up in the Australian Outback to be pumped out in viable quantities.

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Shale gas has become a booming business in the U.S., thanks to new technology enabling the commodity to be economically extracted from dense underground rock formations. An abundance of the fuel has led to its selling more cheaply than imports of more traditional types of energy.

Shale gas now accounts for more than a third of the natural gas used in the U.S., and has given the economy a boost by enabling households and industrial users to cut their fuel bills.

The success of the U.S. producers has inspired companies elsewhere to look at extracting the fuel. But replicating the boom in other countries such as Australia will take time because of the need to procure expensive equipment for drilling and extraction, and due to varying geological conditions.

Australia has large shale-gas formations similar in size to the Marcellus and Bakken formations in the U.S., but producers are still in the early stages of testing if their geological properties are similar enough to support commercial production.

"It all seemed to happen very quickly in the U.S., but the science behind it wasn't developed overnight," said James Baulderstone , head of unconventional gas at Santos, in an interview. China, too, has struggled to develop its own vast shale-gas reserves, as producers confront rough terrain and poor infrastructure.

Australia has been experiencing a gas boom, but one underpinned by the discovery of conventional resources in deep waters off its northwestern coastline. Another new source is gas trapped onshore in coal seams on the country's eastern coast.

Shale gas is a different variety of unconventional fuel trapped in rock formations typically found thousands of meters underground.

The cost of producing shale gas in Australia is likely to be higher than for other resources, because of the need to acquire technology to undertake the complicated process of smashing the rocks open with sand, chemicals and water in a process known as hydraulic fracturing, or fracking.

"We need to make sure we have the right technology, and understand the nature of the shale-gas resource," Mr. Baulderstone said. "We're in the learning phase now for the next 5-10 years."

He said demand for new sources of domestic energy supply would intensify as conventional resources diminish in more mature production hubs such as the Cooper Basin in central Australia,

which supplies much of the eastern and southern parts of the country. The development of unconventional types of gas would become increasingly necessary by around 2020 to offset the decline in the Cooper Basin, he said.

The country still has untapped conventional natural-gas resources, like the Browse basin offshore northwestern Australia, but much of the recently discovered fields have been earmarked for exports to Asia if and when they are developed.

Mr. Boulderstone said **coal**-seam-gas production, particularly in New South Wales state, may help take up the slack from about 2018 for the following five or six years. Shale gas production in the Cooper Basin itself could form a third wave of production.

The pace of that evolution may be influenced by factors such as fluctuating demand for natural-gas exports from producers of liquefied natural gas, or LNG, and environmental regulations governing **coal**-seam gas extraction in New South Wales.

Two years ago, Santos said it had sold a small quantity of shale gas from its Moomba-191 well, without disclosing the cost of producing it. Chevron Corp . is also active in the sector, last year agreeing to pay up to US\$349 **million** for a **stake** in Beach **Energy** Ltd .'s central-Australian shale-gas prospects.

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