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BP IS PURSUING ALASKA DRILLING SOME CALL RISKY

'ONSHORE' YET AT SEA - SCIENTISTS SAY OVERSIGHT OF PROJECT SO FAR HAS BEEN FAULTY

A causeway leads to BP's oil and gas facility at Endicott, east of Prudhoe Bay. The facility is on a gravel island in the Beaufort Sea. *Photo by Damon Winter of the New York Times.*

By IAN URBINA

The future of BP's offshore oil operations in the Gulf of Mexico has been thrown into doubt by the recent drilling disaster and court wrangling over a moratorium.

But about three miles off the coast of Alaska, BP is moving ahead with a controversial and potentially record-setting project to drill two miles under the sea and then six to eight miles horizontally to reach what is believed to be a 100-million-barrel reservoir of oil under federal waters.

All other new projects in the Arctic have been halted by the Obama administration's moratorium on offshore drilling, including more traditional projects like Shell Oil's plans to drill three wells in the Chukchi Sea and two in the Beaufort.

But BP's project, called Liberty, has been exempted as regulators have granted it status as an "onshore" project even though it is about three miles off the coast in the Beaufort Sea. The reason: it sits on an artificial island — a 31-acre pile of gravel in about 22 feet of water — built by BP.

The project has already received its state and federal environmental permits, but BP has yet to file its final application to federal regulators to begin drilling, which it expects to start in the fall.

Some scientists and environmentalists say that other factors have helped keep the project moving forward.

Rather than conducting their own independent analysis, federal regulators, in a break from usual practice, allowed BP in 2007 to write its own environmental review for the project as well as its own consultation documents relating to the Endangered Species Act, according to two scientists from the Alaska office of the federal Mineral Management Service that oversees drilling.

The environmental assessment was taken away from the agency's unit that typically handles such reviews, and put in the hands of a different division that was more pro-drilling, said the scientists, who discussed the process because they remained opposed to how it was handled.

"The whole process for approving Liberty was bizarre," one of the federal scientists said.

The scientists and other critics say they are worried about a replay of the disaster in the Gulf of Mexico because the Liberty project involves a method of drilling called extended reach that experts say is more prone to the types of gas kicks that triggered the explosion on the Deepwater Horizon.

"It makes no sense," said Rebecca Noblin, the Alaska director for the Center for Biological Diversity, an environmental watchdog group. "BP pushes the envelope in the gulf and ends up causing the moratorium. And now in the Arctic they are forging ahead again with untested technology, and as a result they're the only ones left being allowed to drill there."

BP has defended the project in its proposal, saying it is safe and environmentally friendly. It declined to respond to requests for further comment.

Extended-reach drilling has advantages. Drilling at an angle might be less threatening to sensitive habitats. But engineers say that this type of drilling is riskier and more complicated than traditional drilling because it is relatively new and gas kicks are more frequent and tougher to detect.

And because of the distance and angles involved, drilling requires far more powerful machinery, putting extra pressure on pipes and well casings.

Several companies have built artificial islands to drill offshore in the Arctic and elsewhere, in part because surging ice floes can destroy conventional floating or metal-legged offshore drilling platforms.

Critics say that such islands are so tiny that a large oil spill will quickly flow into the surrounding waters.

BP officials say that by accessing the Liberty oil field from far away, the project reduces its environmental impact in the delicate North Shore area.

The Liberty field lies about five miles from land under the shallow waters of the Beaufort Sea in an area populated during the winter by seals and polar bears and covered by thick floating ice.

During the summer, bowhead whales migrate through the region.

"The overall Liberty Project has been planned and designed to minimize adverse effects to biological resources," BP wrote in 2007 in the development proposal to federal regulators. "Impacts to wetlands have been significantly reduced including shoreline and tundra habitat for birds and caribou."

The project will also involve nearly 400 workers in a region where jobs are scarce, according to BP.

But concerns exist about the project's oversight and critics say the project offers another example of dangerous coziness between industry and regulators.

For example, the federal scientists say that BP should never have been allowed to do environmental reviews that are the responsibility of the regulators. And yet, the language of the "environmental consequences" sections of the final 2007 federal assessment and BP's own assessment submitted earlier the same year are virtually identical.

No such overlap existed in the documents for other major projects approved by the same office around the same time, a review of the documents shows.

Both assessments concluded that the effects from a large spill potentially could have a major impact on wildlife, but discounted the threat because they judged the likelihood of spill to be very remote.

They also asserted that BP's spill response plan would be able to handle a worst case — which BP estimated as a spill of 20,000 barrels per day.

Officials from the minerals agency declined to answer questions about the handling of the BP's environmental assessment, but they added, "In light of the BP oil spill in the gulf and new safety requirements, we will be reviewing the adequacy of the current version of the Liberty project's spill plan."

In promotional materials, BP acknowledges that the Liberty project will push boundaries of drilling technology.

To reduce weight on the rig, BP has developed a new steel alloy for the drill pipe.

So much force is needed to power a drill over such long distances that BP had to invest more than $200

million to have a company build what it describes as the largest land rig in the world.

The drill's top drive is rated at 105,000 foot-pounds of torque, while North Slope rigs are typically rated at 40,000 foot-pounds.

"It will take all of this technology that we've developed and exploited in Prudhoe Bay and extend it to a new realm," Gary Christman, BP's director of Alaska drilling and wells, told Petroleum News in 2007.

But engineers say that realm includes greater risk.

John Choe, an expert in extended-reach drilling and director of the department of energy resources at Seoul National University, said that it was less safe than conventional types of drilling because gas kicks that can turn into blowouts are tougher to detect as they climb more slowly toward the rig.

"So, you may not detect it until it becomes serious," he said. "In that case, the kick or drilling related problems become too big to be managed easily."

A 2004 study commissioned by the Minerals Management Service came to a similar conclusion.

"A gas kick represents probably the most dangerous situation that can occur when drilling a well since it can easily develop to a blowout if it is not controlled promptly," it said. Extended-reach drilling wells "are more prone to kicks and lost-circulation problems than more conventional and vertical wells, but have some advantages when the well takes a kick because gas migration rates are lower."

Despite these concerns, the Liberty's 614-page environmental assessment says nothing about how the project would handle the unique risks posed by this type of drilling.

Mike Mims, a former owner of a company that specialized in extended-reach drilling, said he believed that the worries about this type of drilling were overblown. "The kicks can occur but they move slower and the bubbles don't expand as fast," he said.

"It all comes down to personnel," he added, "If your people understand the risks and handle the work carefully, this drilling is entirely safe."

BP discovered the Liberty oil field in 1997, began construction of a rig there in 2008, and was nearing final preparations this April when the Deepwater Horizon rig exploded in the Gulf of Mexico.

Two weeks after the Obama administration declared a moratorium on offshore drilling on May 27, BP announced that the Liberty project would continue, with drilling scheduled to start in the fall, generating its first oil production by 2011. By 2013, BP estimates, Liberty will yield 40,000 barrels of oil per day.

If approved, the Liberty will be the longest horizontal well of its kind in the world. BP's production plan for the Liberty notes that drilling studies only support horizontal wells up to 8.33 miles. Any horizontal wells longer than that, the plan says, "have not been studied."

State regulators have faulted BP for not being prepared to handle a spill at a similar, though less ambitious project, known as the Northstar field. That project involves vertical drilling and sits on an artificial island six miles northwest of Prudhoe Bay in the Beaufort Sea.

The Liberty project will tie into the Endicott pipeline when complete. On April 20, the federal Pipeline and Hazardous Materials Safety Administration warned BP that it was in "probable violation" of federal standards because of corrosion found on its Endicott oil pipeline and a lack of records indicating corrosion protection and monitoring efforts.

BP has faced a number of challenges at its Alaska facilities. The company sustained two corrosion-caused leaks in its rigs in Prudhoe Bay in 2006, including a leak of over 200,000 gallons that cost the company around $20 million in fines and restitution. This was the largest spill to have occurred on Alaska's North Slope.

Robbie Brown contributed reporting