

The Coming Shootout at the LT Corral

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Lovie has held various leadership roles in industry organizations, including as a SPE Facilities Group Chair, as a Contributors' Cochair for DeepStar, and as Industry Cochair for the Rice Global Engineering and Construction Forum. He maintains registration as a professional engineer and naval architect in Texas, Newfoundland, and the European Union. He earned a BSc degree in civil engineering from the University of Glasgow and an MS degree in applied mechanics from the University of Virginia where he was a Fulbright Scholar. He holds several patents and is the author of numerous papers.

The traditional pipeline infrastructure in the US Gulf of Mexico (GOM), perhaps the most efficient in the world, faces new challenges as fields lie further and further from shore, in deeper and deeper water, and increasingly in mountainous seabed terrain. The apparently obvious tanker solution is not so easy in US waters with the Jones Act requirement to use higher-cost US-built and -manned tankers, often at economics and availabilities different from international trade. Only last year were the contracts signed for the first shuttle tankers in the GOM, for operations starting in 2010 at the early production system (EPS) being used for the Cascade/Chinook development (Petrobras operated with Devon and Total as partners).

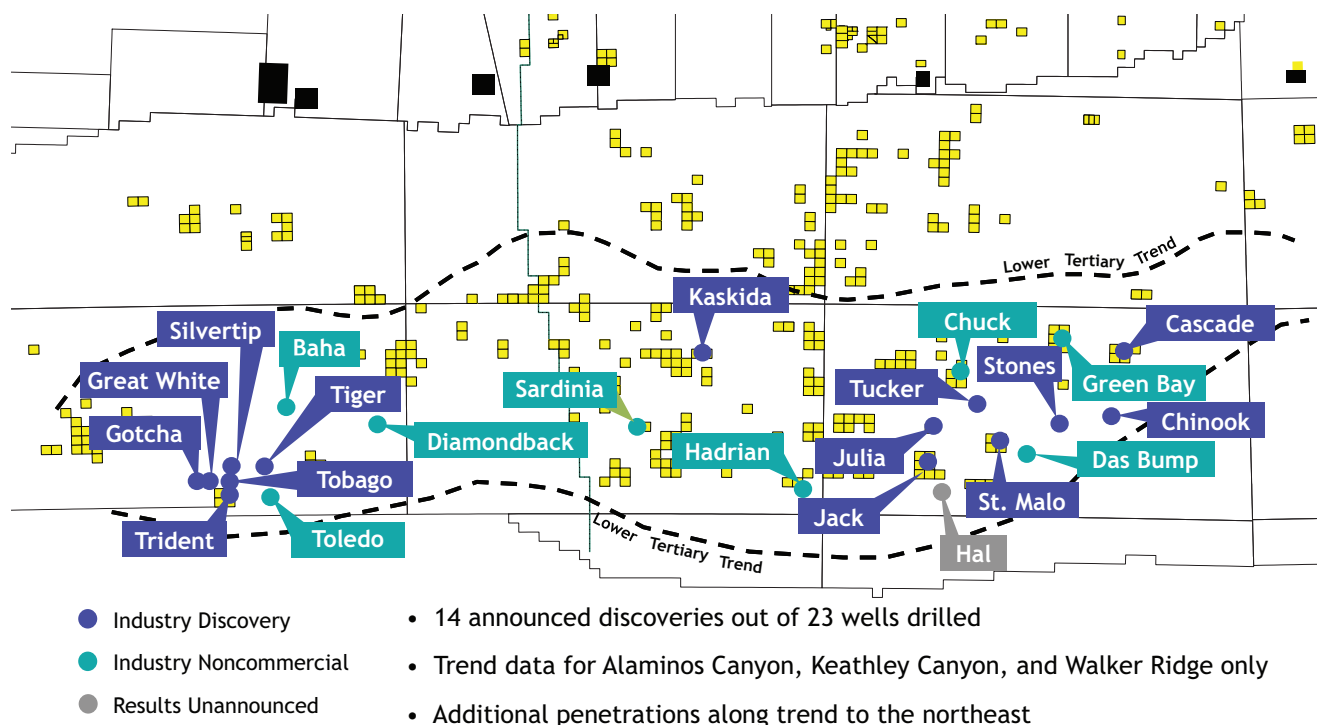
The stakes are high, with transportation contracts in the billions of dollars, whether for pipeline or shuttle tankers. A "shootout" threatens to become immediate, with the export mode to be decided in the next year for longer-term, full-field developments: Jack/St. Malo (Chevron operated) and Kaskida (BP operated). I work for Devon, which has large minority interests in both of these developments plus many other Lower Tertiary (LT) prospects—some Devon operated (such as Bass, now drilling) and some not. Each time our company runs the numbers, we see how the economic prize on the export negotiating table is huge and how the traditional pipeline solution is challenged like never before.

These two different transport modes have battled it out in the GOM intermittently since 2001. So far, the pipeliners have prevailed over the tankermen.

The laws of physics and economics will soon be tested in the marketplace as pipeliners and tanker companies square off on transporting crude oil production from the remote locations of LT prospects in the GOM. What is different this time is the combination of distances, water depths, and the scale of investments. When it stretches the technical and economic limits of the pipeliners, the tanker people just steam a little further out. And if the field plays out early, the tankermen just go somewhere else with their vessels.

During 2000 and into mid-2001, deepwater export was the theme of a low profile but intense competition for exporting production from BP's coming developments. It went down to the wire: bids and counter bids, pipe vs. storage vessel, and tanker export. The regulatory picture was not clear back then—US government approval of the Minerals Management Service (MMS) Environmental Impact Study approving floating production, storage, and offloading (FPSO) vessels and shuttle tankers in the GOM was not given until December 2001. And use of tankers would have prevented a steady income from partial or complete oil company ownership of a pipeline. The prize went to the pipeliners in what is now the Mardi Gras system. Pipeliners 1, Tankermen 0.

Then in 2003, with FPSOs and shuttle tankers now having regulatory approval (MMS and US Coast Guard), the competition for the Conoco-operated Magnolia development led to another shootout. Despite an accessible nearby pipeline and a peaky production profile not well suited for shuttle tankers, low tariffs proposed by the tanker arm of Conoco forced down the competing pipeline tariffs. Talk on the street was that it caused about a USD 100 million reduction in pipeline tariff over the life of the field, but no one will confirm that today. Nevertheless, the record now stood at Pipeliners 2, Tankermen 0.



Source: Devon, 3 September 2008

Fig. 1—A map of locations of the fields mentioned in the article as well as other LT discoveries and prospect locations.

In 2005, another competition for export emerged from what is now called the Perdido development, which includes the Great White, Tobago, and Silvertip discoveries. In 2002, this development was touted as the one that would bring FPSOs and shuttle tankers to the GOM. But as more was learned about the reservoirs, it became obvious that direct vertical access was preferred and so, with the use of a spar and no storage, the tanker solution was out and export was by pipeline. So the final duel was effectively called off.

Then everything changed. The EPS at the Cascade/Chinook development did require shuttle tankers: two were contracted in October of 2007. It was not really a balanced competition—pipelines in 8,200 ft of water and a 5-year commitment meant the pipeliners did not have a realistic chance. It sort of balanced out the absence of a win for the tankermen at Perdido.

Today, looking forward to 2009, multiple fair and balanced shootouts are in sight but the territory they will take place in has changed. In addition to the

deeper water and more remote production locations than before, another factor is at play: the potential for “2005 all over again,” i.e., the hazard of export and shore facilities being knocked out by hurricanes and unable to flow production for months on end, as the GOM saw in 2004 and even more so in 2005. Now “optionality” is the catch word—the need for an export system that offers multiple routes ashore in the event one route suffers an outage, whether from hurricane or a refinery incident. Now the pipeliners have to offer optionality to answer this need and compete with the optionality of tankers that can be readily redirected to another destination in the event the original destination is out of commission.

The sheer magnitudes of risk and investment give many reasons to pause. The producers do not have long-term experience with the LT formations, which makes it difficult enough to commit to these field developments, far less harder to commit on new major pipeline installations when there is no guarantee they will be

filled. At least tankers can be used for something else if the field is a bust and the volumes turn out not to be there. But taking up a pipeline and laying it somewhere else is not workable—the garden hose metaphor does not work.

Whether tankers or pipelines, either way the export expenditures will be into the billions of dollars over the field life for many of these long-lived LT fields. Hence the mounting industry interest in “The Coming Shootout at the LT Corral” that many expect to play out during 2009–2010 at Jack/St. Malo, Bass, and other developments in the remote ultradeepwaters of the LT.

Acknowledgment

Official confirmation of dealings on export decisions are notoriously difficult to obtain. I am indebted to good friends in the industry who confirm the veracity of past shootouts and contributed in the thoughts presented in this article. I am also indebted to my employer for allowing me to write on this controversial theme in our industry today.

JPT