



Spec build FPSOs: dangerously risky

Floating systems consultant **Peter Lovie** pinpoints some of the perils of speculative FPS building and wonders if the practice may now have become just too risky for operators or contractors to consider.

In the service vessel business and in the offshore drilling business spec builds seem to work fairly well quite a lot of the time. So why not FPSOs? In my time at Devon Energy I had the opportunity to look at offerings from most of the spec build ventures. Some were attractive if we just had the right project for them. The Nexus 1 was one such, a good basic design and builder, but at the end of the day we just did not have a project to employ it. It turned out that no-one else in the world did either at day rates that the project needed for a satisfactory return, and so this almost complete newbuild had to be sold. Published sources indicated a sales price of around \$400 million against a project total of about \$640 million. Sooner or later the deal probably would have worked but there was no telling how long the owners would have had to wait: that the owners chose to take that \$240 million hit was understandable in the circumstances.

The advocates of these FPSO spec builds were generally pretty experienced people. However, this was unlike doing a spec build drilling rig. An oil company can contract for a period to employ a MODU and wells may be in several parts of the world over say a three to five year term of the initial drilling contract. But with an FPSO it is for the life of the field and the characteristics of each oilfield are different, generally involving a wider range of equipment requirements than for drilling wells. The decision process to choose the field development solution and contract it takes more time.



Reconciling the interfaces between FPSO and drillship is no simple matter, as operator Murphy discovered with its Azurite FDPSO, now working successfully in the Congo.

So while the Nexus 1 situation was made worse by the downturn and crash at the end of 2008, the venture was well known from early 2006 onwards and in retrospect it struggled against the effects of a much thinner market than MODU speculations in the same era.

The MPF was another one we looked at and attempted to see if it could be made to work. It was attractive from the viewpoint of being able to immediately follow on with appraisal wells once a discovery well was completed and was being tested, even for a year or two. It had plenty of capacity for remote operations on very deep wells and overall was a high spec vessel. However, the deal killers were non-technical matters. One was that planning appraisal wells takes time and often serious time to get funding as these are often \$100-300 million-plus commitments for what we were looking at in the Gulf of Mexico. Additionally, partner approvals have to be secured for whatever development strategy is chosen: for a novel concept like MPF that can be difficult and time consuming. Lining up a work program to take advantage of all that the MPF could do was too difficult. Talking it through, the consensus was that it was too expensive as an FPSO alone and the FPSO capability was too much of an overhead for it to be employed as a drillship.

The interfaces, regulatory approvals and construction of a vessel that is both an FPSO and a drillship are serious matters that add to the time and project cost, something that Murphy experienced on a much simpler vessel than the MPF: the FDPSO that now works successfully at Azurite in the Congo (*OE* November 2009). But MPF never got that far along. MPF Corp went bankrupt and published sources now indicate that the hull will now be used for a mega-drillship under construction by Cosco in China to be operated by Vantage Drilling of Houston.

Compared to the Suezmax size of hull on the MPF vessel, the spec build offerings from FPSOcean were much smaller, Aframax size or less, and employing an untried active station-keeping system. For Gulf of Mexico service we required at least a storage capacity of 600,000 bbl, a double hull and could not take a flyer on a new company with the risks of a new station-keeping system. That one did not really make it in our books and it came as no surprise that it eventually went bankrupt. The proponents gave it their best shot but the tool did not match our market.

Petroprod also had a spec build venture. It did match the requirements to hand and so I cannot comment on that one, other than relay the bad news that it too went bankrupt.

The apparent attraction of spec build FPSOs has been how the vessel could be economically taken off station at the end

of an assignment and reused relatively easily, unlike more site-specific spar or semi floating production system designs. After all, the FPSO is the most commonly used type of floating production system in the world and it should be easy to find another home for it!

Despite that perception, Exmar speculated on building a deepwater semisubmersible with topsides aimed for Gulf of Mexico fields. Exmar's Opti-Ex spec build semisubmersible confounded the skeptics and will this year go to work for LLOG in the Gulf of Mexico. This project was first announced in May 2006 and for years people wondered if it would ever succeed as it was touted for one field development after another (*OE* April 2009). Instead of the original idea of chartering it, a sale was announced in June last year. Press reports indicate a construction cost in the region of \$320 million and revenues from the sale coming in over 2011-16 totaling about \$400 million.

So at the end of the day Exmar came out better than all the spec build FPSOs, although the true NPV10 of the transaction may not line up too well against a conventional non-speculative venture!

What went wrong with these spec builds? I think there was a lack of understanding in the minds of the various proponents in the true ability of oil companies to hire spec builds.

Oil companies are happy to talk positively about employing available options but translating that into serious hiring or buying talk is often another thing when the decision is usually one that needs time for partners' blessings and a lot of planning and integration into a field development – a quite different game from hiring a MODU for the appraisal or production wells in the same development. It is relatively rare to find a field development where the FPS spec build is right on availability, the timing for the operator's decision making and the specification.

In a downturn, spec builds have to compete with bids on conversions or newbuilds at rates prevailing at the time. That risk gets overlooked in the heat of enthusiasm in a booming up-market. History shows that shipyard and services rates do plunge seriously in a downturn, like during 2008/09. And deflating values in 2009/10 were a trap for the likes of the Nexus 1 spec build.

The two biggest and best established contractors in the FPSO building and owning business – SBM and Modec – don't do it. They take another approach: they either own tankers and trade them until an FPSO opportunity comes along, or they have some close link to be able to secure a suitable vessel and have done their project homework in advance so they can move very quickly. They don't want the risks of spec builds.

A lot has changed in the FPS market over the last two years. What has become clear to me in that time is that this market is too much of a niche business for spec builds and the risks during a downturn can be horrendous.

Conclusion: a spec build is a very risky business in the FPS world – don't do it! **OE**

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Peter Lovie, a fellow of the Royal Institution of Naval Architects and a registered professional engineer in Texas, was educated at Glasgow University and earned his Master of Applied Mechanics as a Fulbright Scholar at the University of Virginia. Basing himself in Houston, he began a 43-year offshore career in drilling and then switched to subsea production before settling in the floating production business 16 years ago. He held senior management posts with Bluewater and American Shuttle Tankers (now Teekay) before joining Devon Energy in 2006 and, among other things, helping to shape the contract for the US Gulf of Mexico's first FPSO, on the Petrobras-operated Cascade-Chinook development. Since Devon sold off its offshore division in 2009 Lovie has been working as a consultant as well as serving as executive vice president of SOCOSS Global, a Houston start-up company developing a portfolio of projects for West Africa.