

# 7<sup>th</sup> Generation and Beyond: Newbuild Rig Features, Challenges, and Learnings



Oct 17 2013  
AADE Emerging Technologies Meeting

# Characteristics of Newbuilds



1. Dual Activity
2. Dual Gradient Capable – Chevron is going with the MLP system
3. Dual BOPs
  - Additional equipment required (test stumps, surface accumulators, etc)
  - LMRP's interchangeable?
  - What do you do with 2<sup>nd</sup> BOP- Swap BOPs (Reg)- 1 completion/1 drilling
4. Dual million plus capacity (2.5 million) – Derrick, Top Drive, Landing String



# Recent Newbuild Experience



- The Pacific Santa Ana is the newest rig for Chevron Deepwater Exploration and Production (GOM)
  - At startup, the rig had minor BOP problems and an indention on the BOP body (in the area of the door seals) that had to be repaired.
  - It has since been performing well
- The ability to drill a well prior to finalizing the Pacific Sharav design was a great opportunity for Pacific and Chevron to improve the base design.

# Additional Modifications from Base Design – Make Requests Early



HES	Performance	Design/Efficiency
Cement line to cuttings box deck	2 BOPS	Increased helicopter fuel storage
Bigger line in process room drain	2 <sup>nd</sup> test pump (BOP, C&K)	Reduced footprint on current meter
ROV winch operator position	Rack back new GOM casing sizes 14"	Hull storage – elevator
ROV drain line and hard piping	Dual auger system	Virtual warehouse
Fire alarm enhancements	Bigger better performing centrifuges	Wingdecks added for 3 <sup>rd</sup> parties w/ transfer deck
Valve to isolate rain water to waste tank –reduce disposal	Quick connect ring for choke and kill	Flanged high pressure valve manifolds
Crew engagement sessions	Dedicated test line from cement unit	DGD – Frederic to cover
Riser connection – X over for capping stack	Fingerboard modifications	3 <sup>rd</sup> Party server for training / diagnostics
Elevator to the helideck	Active heave drawworks	Inconel package on the doors and ram bodies
Taller handrails on pipedeck	Batch mixer – spacers, etc.	Software and Network set up
	Derrick arm on track	ISO locks on cabins
	BHA make up tool	Larger heli waiting room

- **Advancement of Dual Gradient**
- **Completion Specific Rigs**
- **20K psi**

