



*Comanche and Wild Oats XI, two very different super-maxis, caused a media storm at the end of the Sydney Hobart, finishing minutes apart, but it was a 29-year-old Farr 43 that won the race overall. Matthew Sheahan and Crosbie Lorimer report*

# The fast and

# the steadfast

**W**eeks before the start of the 2014 Rolex Sydney Hobart Yacht Race the focus was on the battle of the super-maxis. Five 100-footers would go head to head in the 70th edition of one of the world's classic offshore races. But there were two grand-prix giants in particular that were stealing the show: Jim Clark's new VPLP-designed extreme machine *Comanche* alongside the boat that had taken line honours seven times, scored overall victories twice and holds the outright course record, Bob Oatley's *Wild Oats XI*.

The little and large of the super-maxi scene, these two monohulls looked so different and yet provided incredibly close racing. With aft sections as wide and flat as a tennis court, *Comanche* has the looks of a potent offwind flyer; by comparison, *Wild Oats XI*'s skinny, almost tubular form suggested a hull more at home with lighter, trickier conditions where waterline length and minimal wetted surface area would keep her ghosting along.

Yet just 49 minutes separated the pair at the end of the two-day drag race to Hobart and *Wild Oats XI* took yet another line honours victory, her eighth, making her the most successful boat in the history of the event, a remarkable achievement.

Apart from her crew of highly experienced and professional crew, who have raced aboard her for many years, *Wild Oats XI* is also notable for the number of tweaks and reconfigurations she has had. A year earlier she had made the news after being nicknamed the Swiss Army Knife, following the addition of multiple foils. This year the mods were fewer, but no less significant. But the fact remains that for a nine-year-old boat to beat a brand new, no-holds-barred, master blaster was no mean feat.

It was no surprise that these boats attracted so much interest, but there was another twist. Just over a day after the big guns had finished, *Wild Rose*, a 29-year-old Farr 43, crossed the line to win the IRC division overall.

Roger Hickman's amateur crew, including his brother and sister, had been among the favourites from the start and with good reason. This was Hickman's 38th Sydney Hobart and the second time he had won the race. The last time had been aboard the same boat, 21 years earlier, when she was owned by Bob Oatley and named *Wild Oats*.

Crosbie Lorimer takes a closer look at these three outstanding boats.

Matthew Sheahan

“What further mods can be effected? We've still got a few tricks up our sleeves”



C. Borlenghi/Rolex

## WILD OATS XI

**TWO THEMES** recurred consistently in interviews with the skippers of the five super-maxis in this year's Rolex Sydney Hobart: good management and the right people. In both regards the core of the *Wild Oats XI* team has remained remarkably consistent over the decade since she was launched and the contribution that made to their record-breaking win in 2014 should not be underestimated.

But no amount of experience and expertise can make good a shortfall in boat speed. So what have been the major modifications necessary to keep *Wild Oats XI* on the pace?

Regular crewmember naval architect Steve Quigley cites five changes that have contributed most to *Wild Oats XI*'s winning ways over her nine-year lifespan.

The first was the removal of the forward rudder and the installation of the daggerboards, which made the boat more efficient downwind, but just as importantly improved lateral lift and VMG upwind. The daggerboards came with their own issues, however, the most problematic of which was the substantial shift in the centre of lateral resistance (CLR) which didn't necessarily match the centre of effort (COE) under different sail configurations.

Small variations could be expected, but when changing from a jib to a Code 0 the COE on *Wild Oats XI* was moving forward by metres, producing lee helm in light airs.

To resolve this issue a forward centreboard was added – the second major modification – supplementing the twin daggerboards and stabilising the balance of the boat in the low wind ranges up to the point where boat speed matches wind speed, where the daggerboards take over again.

The third refinement was the addition of a lateral foil (not a DSS, they say). Off the breeze in a seaway and strong winds *Wild Oats XI* had a tendency to bury the bow. The lateral foil provides lift and reduces that tendency, resulting in a more even downwind speed profile. A longer lateral foil was recently tested and shows further promise.

The fourth refinement was a new mast, 250kg lighter than its predecessor and substantially stiffer, with significant improvements in upwind speeds, especially in lighter airs. The stiffer mast gave the sail trimmers more options.

The final modification was the reshaping of the bow and rebuild of the bowsprit. The whole bow section was refaired to a narrower profile up to two metres abaft the stem and the bowsprit constructed to a more aerodynamic shape – the bobstay stem fitting was also lifted 500mm.

The result had additional benefits beyond streamlining. “The bow team . . . couldn't believe how dry the boat now was,” says skipper Mark Richards.

As *Wild Oats XI* berthed in Hobart having achieved a record eight line honours wins in ten years, her owner Bob Oatley vowed to bring his boat back again next year. It is hard to know what further modifications can be effected. When quizzed on the subject after the race, helmsman Stuart Bannatyne smiled wryly, but was giving little away: “We've still got a few tricks up our sleeves!”



**BOW** The refairing of the bow section, remodelling of the bowsprit and lifting of the bobstay attachment to the stem have streamlined the forward end of the boat and made it drier for the bow team. Photographers are the only losers



**LATERAL FOIL** The lateral foil adds lift downwind, reducing any tendency to bury the bow into waves and thus improving the downwind speed profile. The foil is deployed to the windward side in upwind mode to minimise drag



**FOILS** From left to right: starboard daggerboard, rudder, keel, forward centreboard, port daggerboard. The aperture for the lateral foil can just be seen on the starboard side of the hull. Note original position of the bobstay



**WITH COMANCHE** Given that *Wild Oats XI*'s stern can fit twice into *Comanche*'s it's hard to believe that the two boats were so evenly matched. But when *Comanche* heels at 25° she has the same wetted surface as *Wild Oats*. The latter's narrower cross section allows her to gain mileage from VMG running

Photos: C Lorimer



“ You can't take a chance, you have to put on board people who have seen the movie before ”

C. Borlenghi/Rolex

## COMANCHE

“THE DESIGN office were told specifically by me that if this boat wasn't the worst rated boat in history they have failed,” Dr Jim Clark said about his new raceboat. Not exactly the sort of remark you might expect, perhaps, but Clark, founder of software company Netscape, is well known for his singular approach to his many sailing ventures.

For Clark, owner of the 295ft three-masted schooner *Athena* and the replica J Class *Hanuman*, the goal for his brand new 100ft super-maxi *Comanche* is first and foremost to break records.

Not surprising then that he should look to his regular skipper Ken Read and the French design team collaboration

of Verdier Design/VPLP. Despite a punishing one-year timeline for the build team, project managers Tim Hackett and Brandon Linton worked with boat captain Casey Smith – all three were involved in Read's previous Volvo campaign – to see the new boat launched on time from the Hodgdon Yard in Maine, given an impressive first run in heavy airs and then put on a ship to Sydney.

First impressions of *Comanche* under sail inevitably draw comparisons with the current crop of IMOCA 60s and globe-circling multihulls in which the design team excels. With massive beam at the stern, long reverse sheer, the mast well aft of 50 per cent of the boat length, towering narrow mainsail and a long boom overhanging the stern, everything is built for speed when the wind is abaft the beam.

In anything above eight knots of true wind *Comanche* starts to move out of displacement mode and at 25° of heel she has the same wetted surface as *Wild Oats XI* – the more remarkable when you consider that you could fit two of *Wild Oats*'s sterns into *Comanche*'s.

Helming *Comanche* requires a different mindset, according to Read: “You sail the boat a bit like a multihull in a way, it's so wide you rock it up on its 'leeward hull.’”

With the boat arriving in Sydney in early December, giving precious little time for testing, Ken Read understood the importance of having a mine of experience aboard: “You can't take a chance, you have to put people on board that have seen the movie before and know how to create a happy ending,” he says.

Sure enough, the *Comanche* team for Hobart read like a Who's Who of America's Cup and Volvo Ocean racing, including Casey Smith, Stan Honey, Kelvin Harrap, Tony Mutter, Kimo Worthington and even a late signing of Jimmy Spithill. Even before *Comanche* had left Sydney Harbour on Boxing Day there were two very clear signs that the Americans were not simply in town to make up the numbers.

The first came a week before when *Comanche* gave *Wild Oats XI* an impressive run in the SOLAS Big Boat Challenge, an aptly named fast-paced showcase race around Sydney Harbour that has a habit of publicly showing up any weaknesses in boats and crews.

The second came on race day itself when *Comanche* left the four other 100-footers flat-footed from the start line as she powered the short 1.7nm to the first turning mark near the harbour entrance, averaging more than 20 knots.

The range of conditions that are characteristic of the Sydney Hobart Race, however, was unlikely to favour *Comanche*'s no-compromise design and, despite a powerful surge late on the second day, she crossed the finish line in Hobart 49 minutes behind *Wild Oats XI*.

It is a hallmark of the impression that *Comanche* made on the Australian sailing scene that as *Wild Oats XI* vainly chased the American yacht down Sydney Harbour from the start line it was the race-winning skipper Mark Richards himself who was heard on live TV voicing what everyone else was thinking:

“They are smoking! Look at that thing go... wooh!”



Photos: C. Lohmer

**STERN** *Comanche*'s beamy stern swiftly earned her the tag The Aircraft Carrier. Her optimum heel angle is anything over 20°, while at 25° she has the same wetted surface as *Wild Oats XI*. The fitting of an escape hatch and the liferaft stowage in her stern are a direct result of lessons learned from the capsizing of *Rambler* in the 2011 Rolex Fastnet



**MAST** As with the IMOCA 60s, the mast is positioned well back in the boat; sited directly above the canting keel, the mast is deck-stepped on a triangulated mast base are in the order of 75 tonnes, increasing to 150 tonnes under sail



**DEFLECTORS** The 150ft (46m) four-spreader rig features two running backstays and three deflectors, precluding the need for checkstays for mast bend control, and also reducing windage and weight aloft. Mast height was limited to be able to pass under Sydney Harbour Bridge



**COCKPIT AND WINCHES** Sail handling is by grinder-powered Harken winches with customised drive shafts, grinder pedestals and gearboxes to cater for the substantial torque. The winch pedestals are placed inboard to permit stacking of up to four sails in the cockpit



**WHEEL POSITION** The steering pedestals can be moved to a position at the forward end of the cockpit (ringed), just behind a detachable hard dodger over the companionways, affording the helmsmen and crew maximum protection if required for long passages



**DEFLECTOR RAMS** The three deflectors controlling mast bend are trimmed by three hydraulic rams that work interactively. Although cheat sheets have been developed for basic settings, the crew is still exploring setting refinements for these



**CANTING KEEL** The canting keel is controlled by a 350kg titanium ram built by Cariboni. The keel can be swung 35° either side of centre and moved through the full arc in about 25 seconds. A secondary slave cylinder can be used to swing the keel if the primary ram fails

Watch the video



Scan here or go to [yachtingworld.com/comanche](http://yachtingworld.com/comanche)

LOA	30.50m	100ft 0in	<b>Designed by</b> Verdier Design/VPLP
Beam	7.80m	25ft 6in	<b>Built by</b> Hodgdon Yachts, Maine, USA and Owner's build team
Draught	6.50m	21ft 4in	
Mast height	46.00m	150ft 0in	<b>Mast/boom</b> Southern Spars
Displacement	31,000kg	68,343lb	<b>Sails</b> North Sails
Mainsail	410m <sup>2</sup>	4,413ft <sup>2</sup>	<b>Hydraulics</b> Cariboni
Downwind sail area	1,022m <sup>2</sup>	11,000ft <sup>2</sup>	<b>Foils</b> Re Fraschini
Upwind sail area	350m <sup>2</sup>	3,767ft <sup>2</sup>	<b>Winch System</b> Harken with Jon Williams
Largest spinnaker	1,100m <sup>2</sup>	11,840ft <sup>2</sup>	<b>Rigging</b> ECsix
IRC Rating	1.958		

# ROLEX SYDNEY HOBART

Photos: C Lorrimer



**WATER BALLAST** Manifolds, pipes and valves controlling water ballast are located behind the navstation bulkhead. Water ballast comprises 6.5 tonnes per side in three tanks on each flank. All pipework is built in carbon fibre



**COMPASS** The cheapest fitting on the boat is a card compass that would look more at home on a Laser. Though the helmsmen and trimmers use the digital read-outs, the rules require a card compass to be fitted, so the team went looking for the simplest and lightest



**NAVIGATION STATION** is located immediately behind the companionway bulkhead, also being the point from which all the boat's electrics are controlled. The carbon fibre chart table can be tacked and the bench seat is long enough to allow the navigator to sleep or rest here if required



**TACKING HEADS** There are two concessions to 'luxury' aboard *Comanche*, one being a carbon fibre tray for six coffee cups and the other a carbon heads that can be tacked! No privacy for the latter, of course



C Borlenghi/Rolex. Below: C Lorrimer

## WILD ROSE

"SAILING IS 80 PER CENT good housekeeping," says Roger Hickman (right), skipper of *Wild Rose*, the overall winner under IRC of the Rolex Sydney Hobart race. It is certainly testament to Hickman's approach to good housekeeping and the crew's experience that the *Wild Rose* team finished the race at all, much less collected the silverware.



"You're only as good as your weakest link and in our case that was our steering," adds Hickman, recalling the broach that broke their steering gear off Tasman Island. Within minutes the team had the spinnaker down, emergency steering in place, breakage mended and the boat on its way again.

Shortly afterwards the boat recovered from a Chinese gybe – Hickman's first in 38 Hobart races, he recalls – before enduring a torrid battle across Storm Bay and up the Derwent River in conditions that ranged from dead calm to full gale.

Hickman's long and successful record of races to Hobart also involves an association with the owner of this year's line honours-winning *Wild Oats XI*. The 29-year-old *Wild Rose*, a Farr 43, built by John McConaghy, was originally owned and raced as *Wild Oats* by Bob Oatley, with whom Hickman raced to Hobart three times before Oatley decided to have a new boat. Recognising her qualities Hickman was keen to buy the yacht and speaks with gratitude about the very generous terms on which Oatley eventually sold in 1991.

The full potential of the yacht was realised two years later when Hickman and co-owners Bruce Foy and Lance Peckman won the Sydney Hobart overall under IOR, before renaming her.

Twenty-one years on and Roger Hickman's love of his boat and his respect for its first owner is still evident. "I feel lucky and privileged to have Bob Oatley's boat," he said as he held up the Tattersall's Cup in Hobart.



**BOWSPRIT** Hickman is the first to point out that the bowsprit added to the boat prior to the race is not attractive. But it played an important role in the race. Hickman was advised that he would never beat a Beneteau First on handicap – the First 40s have enjoyed considerable success in this race over recent years – unless he could improve the boat's light airs performance. The bowsprit allows the boat to set a Code 0, which was well used in the light airs of the second day. "It's coming straight off and the bow roller's going back on," says the owner



**1980s PROFILE** *Wild Rose* demonstrates the characteristic long stern overhang and rounded mid-section profile of the classic 1980s IOR hull shapes. This is the stern view of the boat that many of her competitors bemoan seeing too often. At the end of last year's race she was crowned the winner of the season's Blue Water Pointscore Series

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