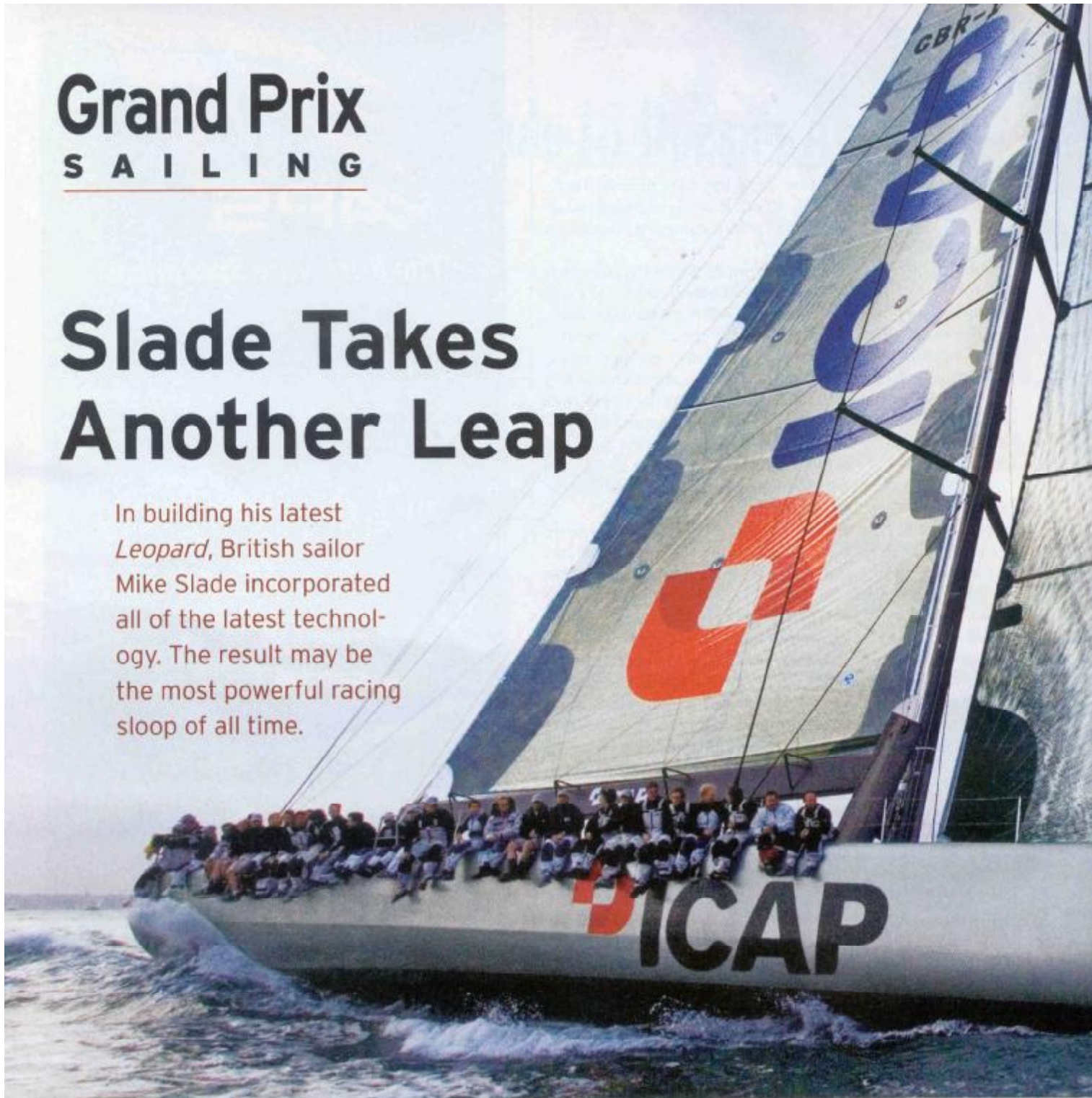


Grand Prix

SAILING

Slade Takes Another Leap

In building his latest *Leopard*, British sailor Mike Slade incorporated all of the latest technology. The result may be the most powerful racing sloop of all time.



AS A BREED, THE 100-foot supermaxis have evolved in a unique way among grand-prix classes: they have simply conformed to whatever is the maximum size allowed by the Cruising Yacht Club of Australia for the annual Rolex Sydney Hobart Race. Previously this was 98-feet long, with a stipulation that the boat's IRC stay under 1.61. But for the 2005 race, the rating limit was dispensed; the result was an

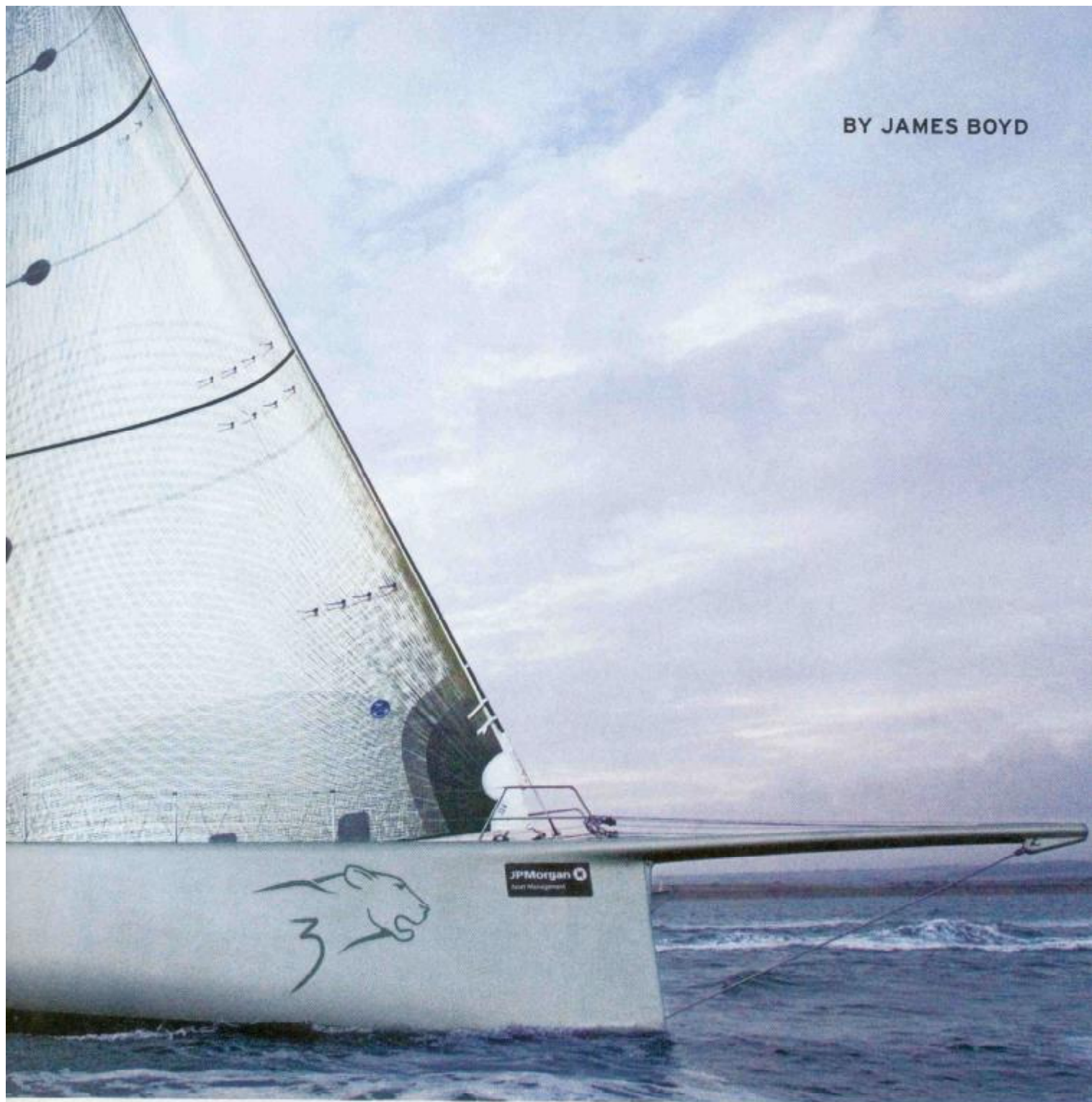
amazing 600-mile match race between two Reichel/Pugh sisterships, *Alfa Romeo 2* and *Wild Oats XI*.

To date Reichel/Pugh have had the supermaxi market largely sewn up, but this summer McConaghy's Boatyard, just north of Sydney, launched the first Farr Yacht Design offering in this rarefied category.

Built for British property developer Mike Slade, the new *Leopard* is a replacement for his previous Reichel/Pugh-designed boat bearing the same name. The

new *Leopard*, he says, came out mainly to keep up with the latest technology. As Slade is principally interested in offshore racing, his boats have generally kept pace with the technology of the Volvo Ocean Race. The previous *Leopard* was designed during the era of Volvo 60s and had water ballast. The new *Leopard*, born at the time of the Volvo Open 70s, has a canting keel, a low, wide transom, and a chine running along the after third of the boat.

"You can't just keep bashing around in the same thing; the crew and everyone



who is with you, they want you to take the next step," says Slade. "And out came *Wild Oats*, *Alfa*, *Skandia*, *Maximus*, and the swing keel guys following on from *Pyewacket* and *Morning Glory* and suddenly there was a new game in town. It became quite clear that if we wanted to be in the top five and create a name for ourselves, we had to have a new boat."

For the Farr office, the new *Leopard* maxi represents their first pure raceboat of this size since Larry Ellison's *Sayonara*. Compared to the Reichel/Pugh offerings,

the boat has marked differences—it is a "big" 100-footer with a 24-foot beam compared to 17-feet for *Alfa Romeo 2* and *Wild Oats IX*, and is much heavier partly because of this. *Leopard* weighs in at roughly 41 tons, as opposed to 32 for the other two boats.

According to Slade, the larger beam was the principle reason he chose Farr over Reichel/Pugh. In addition to racing, he charts his boats to help cover the cost—he forecasts around 60 days of this activity next year. The racing is Slade's

NOT QUITE A CAST OF THOUSANDS, but close. It takes more than two-dozen professional sailors to get the powerful 100-foot *Leopard* around the racecourse. Despite its canting keel, the windward rail is crowded while going upwind.

passion, but he uses the profile the boat gains through this to market it to potential clients.

This foresight goes further still, at the end of the boat's racing career, the plan is to fit a full interior to *Leopard*, allowing her to be sold as a fast, to say the least,



WHAT DOES MIKE SLADE THINK of his latest Leopard? The smile (above) pretty much says it all. In its first serious off-shore race, the boat earned line honors in the Rolex Fastnet Race and set a new course record. The hydraulic and electrical package on Leopard may well be the most complex ever installed on such a raceboat.

cruising yacht and at a higher price than if it were merely an outdated raceboat. "We sold *Leopard 2000* very well last year, and we could sell it because it is a yacht," he says "And this *Leopard* will be a yacht rather than a racing machine."

So, interior volume was important. A removable interior has already been built for the boat. "Some aspects will stay in when racing, others will come out," explains Jon Morris, of McConaghy's. "Normally it will look pretty reasonable even in racing mode. The furniture weighs nothing. It is more about room for handling sails. Then down the track they'll do a full fit out, with cabins, etc."

The boat also has the *Leopard* "look" and this is no coincidence. Unlike other



supermaxis, *Leopard's* lines passed across the drawing board of interior designer Ken Freivoch. The curved cabin top links this new design to the old boat.

But for the moment, what matters to



Slade is the performance on the water. Launched in June, *Leopard* has already proved itself on the racecourse by taking line honors in the Rolex Fastnet Race, from which *Alfa Romeo* withdrew



AMONG THE CONTROLS sitting at the finger tips of the helmsman are those for the port and starboard daggerboards, the canting keel, the traveler, the bow thruster, and the windlass. The keel can swing from maximum cant on port (40 degrees) to max cant on starboard in 12 seconds.

after trouble with its mainsail. Later this year it will attempt to break the Reichel/Pugh domination in the Hobart Race. Then follows a program of Caribbean regattas before a return to Europe.

While the new *Leopard* is bigger in all respects than the Reichel/Pugh boats, it also breaks several new technological barriers. While *Alfa Romeo* and *Wild Oats* are CBTF boats with a forward steerable canard, *Leopard* uses a more conventional Volvo 70/Open 60 appendage arrangement with a canting keel and twin asymmetric daggerboards, though unlike most designs for those two classes, Farr decided *Leopard* was narrow enough at the stern to need only one rudder.

Whether it is right or wrong—purists will say it detracts from the sport—powered hydraulics are playing an increasingly vital role on boats of this size. IRC allows for this technology, though this provision was originally intended for cruising-oriented superyachts, and the designers of the supermaxis have all embraced it, *Leopard* being no exception. Large crews are still required to manhandle the mammoth sails, but no longer are thousands of calories expended grinding. Instead, trimming and hoisting sails is a one-finger, push-button affair.

Onboard *Leopard*, twin stainless-steel rams, each rated at 88 tons with a six-foot throw and 10-inch bore, are used to cant the keel. "This will hold the keel on center on one ram," explains Greg Waters, of Central Coast Hydraulics in Australia, which was responsible for designing, building, and installing *Leopard's* complex hydraulic package. "But, it can only achieve full cant on two rams otherwise it would have been too big. We paid a lot of attention to detail to make them as small and as light as we can." The keel cants 40 degrees each side, like the VO70s, and can move from fully canted on one tack to full canted on the other in 12 seconds."

Hydraulics are also used throughout the rig, on the downhaul purchase on sails using halyard locks, the vang, the backstays, and the outhaul, among other sail controls. But one of the most novel uses of hydraulic power on *Leopard* is the raising and

JAMES BOYD

lowering of the twin daggerboards—the first time this has been achieved. The system was designed in England by Nick McGarry, of C-Designs, and works on a principle similar to that of an old-fashioned mangle for drying clothes. On each side of the boat, six hydraulic rams force rollers on to the board, allowing it to be raised or lowered by around 6-feet in around 8 to 10 seconds.

Although they are designed to take up to 105-tons of load, there are limitations governing how the boards can be used. "There is a threshold of about 14 knots [boatspeed] above which you wouldn't try to move them," says Waters. The hydraulic operation of the boards may have also had an effect on the boards' design as the cord of around 3-feet seems quite large even for a boat of this size.

All the hydraulic technology on board operates via a complex control mechanism, known as the PLC, containing four processors and housed in a giant box located immediately forward of the nav station. From this box everything is programmable; the speed at which the boards can be raised or lowered, the maximum cant angle of the keel—which is less when chartering, to the drop-down prop shaft, and even the sail controls. The line speeds and gearings of the nine hydraulic winches can be altered as well, as each has been fitted with an automatic gear box similar to that used in an automobile.

Central Coast, alongside Oelectrics, which build the custom electronic controls, including the smart control panel just in front of each steering station, have worked on all of the Aussie-built maxis, as well as the *movistar* Volvo 70, but the installation on board *Leopard* is the most extensive they have carried out. The PLC alone is around 10 times the size of the one they fit into the VO70.

SINCE THE BOAT WAS DESIGNED TO RACE OFFSHORE, the navigation station received a significant amount of space. The interior was designed with charter guests in mind as Slade intends to put the boat to work when he's not racing it. When the boat's racing life winds down, *Leopard* will be fitted with a cruising-friendly interior.





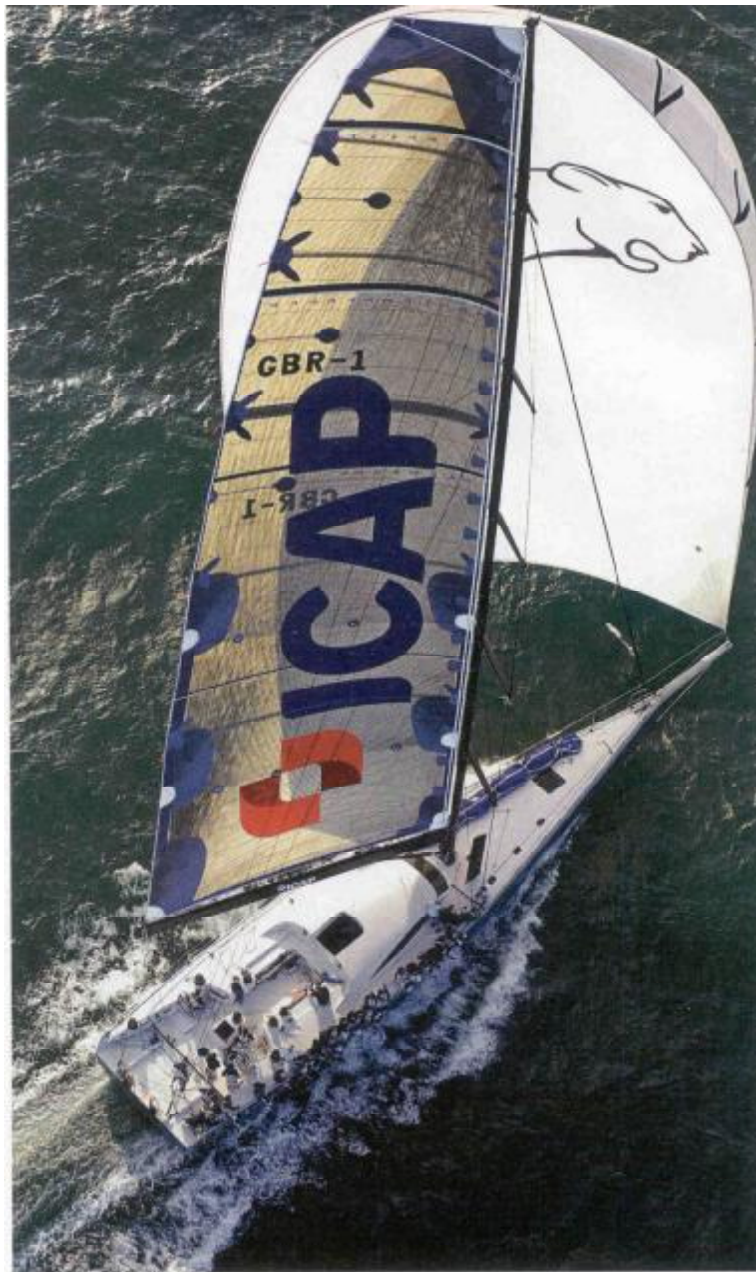
ICAP LEOPARD TRAILED GEORGE DAVID'S RAMBLER around the Fastnet Rock in the 2007 Rolex Fastnet Race, but once the two boats turned the corner, *Leopard's* longer waterline and canting keel powered it into the lead. With a time of 1d:18:20m, *Leopard* was the first monohull to complete the course in less than two days.

"It is more complex; there are the daggerboards, the extra winches and the touch screen functionality is a lot more interactive," says Oelectrics' Guy Oliver of *Leopard's* complex central nervous system.

With on board satellite communication, Oelectrics can carry out checks and modifications to the system by remote to the extent that they can operate the hydraulics remotely while the boat is at sea. So could Mike Slade tack *Leopard* from the comfort of his office? "Theoretically," says Waters, "he could."

A downside of having a dual-purpose boat—racing and high-end chartering—is that *Leopard* must comply with Marine Coastal Agency standards, and as a result, requires backups of certain systems, alternative power supplies, and slightly heavier grade cabling than otherwise might be fitted.

For example, the hydraulics can be powered by three different systems: the main engine, the auxiliary engine/generator, or the DC supply. "The keel is intended to be canted with the main engine," says Waters. "It can be done off the auxiliary engine at a slower speed. It can also be done with the DC electric at a very slow speed."



WITH HYDRAULIC POWER AVAILABLE to hoist, trim, and tune sails, sailing ICAP Leopard in a straight line is a relatively sweat-free affair. However, when it comes to turning a corner, or making a sail change, the massive sails and huge loads require all hands.

With a successful debut in the Fastnet, the next goal for *Leopard* is the Rolex Sydney Hobart. Due to it being a bigger, heavier boat, Slade is hoping for some breeze in the annual Christmas holiday classic. "If it is light airs we'll suffer because we are a bigger, heavier boat," he says. "There is meant to be a crossover point above which we'll be faster. We'll have to wait and see."

But aside from being first across the line into Hobart, the most exciting prospect for the world's latest supermaxi is Slade's dream of the boat becoming the first monohull to sail non-stop around the world fully crewed—this is one of the few remaining ocean passages where a record has yet to be set. "It would be the perfect boat to do it in," he says. "This is a downwind reaching boat, a supersize Volvo 70 design. It has the canards, swing keel, huge rig. This should be very quick around the world. It would be fun to do a fully crewed monohull round-the-world in 80 days. But I'm looking for some sponsorship for that. Why doesn't someone come and take me on and we'll have a race?" ♦

RICK TOMLINSON