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2016 I ISSUE 100

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100 ISSUES ANNIVERSARY

GLOBAL COVERAGE OF THE HELICOPTER

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# HeliOps AND COUNTING


Welcome to HeliOps Issue 100. Yes, 100 issues and in that time, as with anything in this time of technological revolution, the magazine has undergone transformation, metamorphization (such a word? If not, it should be), and digitalization. The magazine has represented some of the best helicopter photography and the stories from all around the world; from the frozen Arctic and Antarctic to the tropical jungles of Central America, Asia and Papua New Guinea. With the continued support of our advertisers and a bevy of writers, HeliOps has presented the best of the industry and meanwhile, has not been afraid to call out problems where they occur.


As John Persinos comments in his column in this issue, the offshore helicopter industry is having a hard time of it all. I support all his comments and add this observation; those OEMs that invested when times were not so good but could see the change coming were the ones who benefitted the most when the last upturn came. Sikorsky, AgustaWestland and Eurocopter (Airbus) had products ready for the last boom time. The time it takes to design and build helicopters means that it is likely that if the exercise is conducted after the boom commences, it is quite likely that the product won't make it in time – the cycles can be that short. What is also evident are those products that have a multitude of uses such as the AW139 and the S92 will also succeed because when one sector is having a dip, another is having a boom. The secret is being prepared to invest when others are bailing out.

Another problem for the industry now is how does it employ young pilots? Insurance requirements and industry expectations are that experienced pilots are the ones that everyone needs, but then, how does a pilot get experience? A friend recently wrote to me about a young guy who has his commercial and instrument tickets but no turbine time and was looking for somewhere to build

time. I really don't think there is any quick route to building time these days except maybe in tourism flying but there are only so many seats available in that industry. Oil and Gas demand has dropped so experienced pilots are being released from that industry (I recall after the last boom, a lot of IFR helicopter pilots went to the airlines). It would seem these days that about the only quick avenue to well-paid helicopter flying is the military and even that demand is reducing for now. We are going to see some significant belt tightening in the industry for some time.

The one industry that is likely to see an explosion in demand is the drone sector. Some time ago I advocated that helicopter operators were probably in a good position to develop businesses that incorporated drone operations. Movie production is moving strongly towards using drones as are Oil and Gas for inspections. Certainly similar operations can be envisaged for power utility companies. There is also potential to support emergency services and simple things like real estate sales. These are many roles that were once the sole purview of helicopters. Those who moved into developing drone capability are the ones now benefitting from the shift. Now the regulators need to catch up!

All in all, HAI's Heli Expo 2016 will be an interesting meet. Technology and an industry in transition will always generate deep discussion and it is a discussion that needs to be had. While I don't believe we will see radical change overnight, it does seem that we are on the cusp **of change and a new paradigm shift.**

*Mark Ogden*

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PHOTO: AIRBUS

## INCREASED MTOW FOR H145

In December, the European Aviation Safety Agency (EASA) awarded the certification of the 50kg increase in the maximum take-off weight (MTOW) for the H145, to a total of 3.7 metric tons. The improvement does not require any structural modifications or additional equipment and will be available for customers in early 2016. As, it will not cause extra costs for the operators.

## BELL HOLDS HANDOVER CEREMONY FOR FIRST BELL 407GXP TO AIR METHODS

Bell Helicopter announced today the delivery of the first Bell 407GXP configured for Helicopter Emergency Medical Services to launch customer Air Methods - the first of two hundred Air Methods 407GXPs expected over the next ten years. The delivery was commemorated at a special ceremony at Air Methods headquarters in Englewood, Colorado. All of the new 407GXPs will be equipped with a United Rotorcraft emergency medical services interior, which can accommodate a single patient or specialty transport, and includes the articulating loading system for easy patient loading. It also provides integrated medical systems including medical oxygen, suction, air, storage, electrical power, and approved provisions for securing medical support equipment during all aspects of flight.


PHOTO: KAI

## SURION MEDEVAC MAKES SUCCESSFUL MAIDEN FLIGHT

A medical transport variant of the South Korean KAI KUH-1 Surion, the first-ever indigenous twin-engine light utility helicopter in South Korea, has successfully completed its first official test flight. Capable of evacuating up to 6 people simultaneously, the Surion medical chopper is equipped with weather radar and an anti-collision warning system, automatically height-adjusting stretcher pedestal, oxygen supply, medical suction units, patient monitoring system, cardioverter defibrillators and respirators.


## GUARDIA COSTIERA RECEIVES LAST OF SIX NEW AW139S

Italy's Guardia Costiera (Coast Guard) received the last pair its new batch of six AgustaWestland AW139s in late January. This brings the fleet AW139 total to ten examples and signals the retirement of older Agusta-built Bell 412s.


PHOTO: AIRBUS

## AIRBUS DELIVERS FOUR ADDITIONAL H135S TO POLAND'S LPR

Poland's public air medical rescue operator LPR has received four new H135s to extend its HEMS operations in Poland. This latest delivery brings the total LPR H135 fleet to 27 units. After the intensive technical acceptance process in December 2015, the four new helicopters were transferred to the main LPR base in Warsaw, with delivery being on-time and on-quality. All LPR H135s boast full NVG certification and a fully equipped state of the art EMS cabin.

PHOTO: SKY AVIATION

## FIRST CIVILIAN CH-46E SEA KNIGHT FOR SKY AVIATION

Sky Aviation is officially the first civilian owner and operator of a CH-46E Sea Knight. The company bought four airframes from the GSA auction in March of 2014 and finally received the completed type certificate in July of 2015. Modifications include load cell, bubble windows for both pilots, cockpit controlled hook and Bambi bucket controls. Sky Aviation has approved training and maintenance programs and the aircraft is fully outfitted and carded with the Forest Service, ready to help on fires.

## AIRBUS RELEASES NUMBERS FOR 2015

During 2015, Airbus Helicopters delivered 395 rotorcraft and booked 383 orders – adjusted to 333 due to contract amendments for governmental NH90 and Tiger helicopters. Bookings levels for the new-generation 7-ton H175 and the light-twin H135 and H145 series all exceeded the company's targets for 2015; with 36, 49 and 107 units respectively.


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## MUSEUM ACQUIRES FLYING BANANA AND PUTS IN LOTTERIES FUNDING BID

A rare Piasecki H-21 Workhorse, nicknamed the 'Flying Banana' has arrived at the Helicopter Museum at Weston-super-Mare in Somerset for restoration and future display, as part of its collection. The aircraft, serial number FR41, is the first of its type in the UK and was originally built in Pennsylvania for the French Army Air Force. The museum has also entered a £3 million bid with the UK Heritage Lottery Fund (HLF), to build new facilities for the collection and its visitors. The museum has set itself a £1 million fund raising target to match-fund a £2 million request to the HLF.

PHOTO: AIRBUS

## KORFEZ AVIATION TAKES DELIVERY OF H145 MERCEDES BENZ STYLE

Airbus Helicopters has handed over the first of two H145 Mercedes Benz Style to Körfez Aviation in Turkey, to expand its fleet dedicated to business, charter and private aviation. The second is expected to be delivered in March 2016.


PHOTO: AIRBUS

## AIRBUS HELICOPTERS H155 FOR SHAANXI PROVINCIAL PUBLIC SECURITY DEPARTMENT

Shaanxi Provincial Public Security Department and Airbus Helicopters have signed an agreement for the order of one H155, for police, law enforcement and other public services, to be delivered in the beginning of 2017. Mission equipment for Shaanxi's H155 includes a searchlight, an electrical hoist and rappelling system, firefighting equipment, and a loud speaker.

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PHOTO: ERICKSON

## ERICKSON RENEWS BRITISH COLUMBIA S64 TIMBER CONTRACT

Erickson Incorporated has renewed a contract with Helifor Canada, a subsidiary of Columbia Helicopters, to continue providing aerial timber harvesting services in British Columbia and western Canada. This is the fifth renewal and provides for year-round services with one Erickson S64 Aircrane until December 31, 2016.


PHOTO: URBANAERO

## SUCCESSFUL FIRST FLIGHT FOR AIRMULE

UrbanAero's AirMule successfully completed its first autonomous, untethered flight at the Megiddo airfield in northern Israel on December 30th. The testing schedule includes plans for a demonstration of AirMule's cargo delivery capability as well as a beyond-line-of-sight flight. The AirMule is an autonomous VTOL that can carry up to 1,100 pounds and operate within a 30-mile radius. It is powered by internal rotors and built by UrbanAero subsidiary, Tactical Robotics Ltd.

## 5,000 HOUR CABRI G2 MILESTONE

Helicentre Aviation Academy has achieved 5,000 fleet hours with the Guimbal Cabri G2, a record number of hours flown by a single UK training organisation, and more than 6% of the global Cabri G2 fleet hours, according to statistics from Hélicoptères Guimbal. The French manufactured helicopter was selected to be the company's flagship training platform in 2013 when the decision was made to invest almost €2m EUR into six factory new aircraft over 3 years. The milestone hour was flown by 2015 FI(H) Scholarship winner Jop Dingemans whilst undergoing his Flight Instructor course which was funded in its entirety by Helicentre Aviation Academy as part of the award. Dingemans passed his FI(H) Assessment of Competence to a high standard earlier this week after being tested by CAA examiner Captain Richard Craske. Dingemans has already been offered a full-time position as a Flight Instructor at the Academy. Helicentre Aviation Academy is the UK's leading provider of "ab-initio to Flight Instructor" training on the Cabri G2. The reliability of the airframe and ongoing support received from Hélicoptères Guimbal has given the company a great deal of confidence in their choice of training helicopter. Utilisation is set to increase further as the popular BSc (Hons) degree programme, a joint initiative between Helicentre Aviation Academy and Middlesex University, enters its second year of new student intakes. Delivery of the first of four additional Cabri G2 airframes is expected later this month.

## FIRST BELL 407GXP INTO NEPAL

Bell Helicopter announced an agreement for the purchase of the first Bell 407GXP in Nepal. This will be the customer's first Bell helicopter and will be outfitted for multi-mission capabilities including travel and tourism. Chairman of Simrik Air Pvt Ltd., Capt. Rameshwar Thapa, joined Bell Helicopter's leadership team at the Singapore Airshow to sign the agreement for the first Bell 407GXP in Nepal.

Simrik Air, established in 2001, is a leading helicopter company in Nepal with a superior track record in high altitude rescue services. Simrik Air's trained pilots and rescue specialists from the United States and Switzerland carry out long line missions for rescues, heli skiing missions, filming operations, aerial surveying, and more. "At Simrik Air, we pride ourselves on meeting any helicopter mission requirement – whenever and wherever – and safety remains the top priority in our company, which is why the Bell 407GXP is a great fit for our team," said Capt. Rameshwar Thapa, Chairman, Simrik Air Pvt Ltd. "After testing the aircraft and experiencing first-hand the maneuverability and smooth performance during the recent Bell 407GXP demo tour we could not be more thrilled to add the Bell 407GXP to our fleet."

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## FINNHEMS EFFECTIVENESS ENHANCED IN 2015

2015 Air Ambulance statistics from the Finnish helicopter EMS provider - non-profit limited liability company FinnHEMS - show a 6% increase over 2014 in patients treated, although the number of calls responded to was down 5% to 13,748. Deeper analysis shows 1,494 patients received critical assistance, of which 172 would probably have died before reaching the hospital without an air ambulance response. The introduction of the more spacious EC145T2 to replace the previous EC135s has helped raise the patient transfer taskings by 52% year-on-year, particularly from the Kuopio and Oulu bases.

## LOCKHEED DIMS OUTLOOK FOR SIKORSKY COMMERCIAL SALES

Lockheed Martin Corp. has said that commercial helicopter sales for its Sikorsky Aircraft unit this year are expected to be about $375 million, half the level projected last summer, due to the sustained drop in world oil prices. Sikorsky sees good prospects for international helicopter sales in areas such as search and rescue and border patrol, but Lockheed Chief Financial Officer Bruce Tanner said those prospects would not translate into firm orders until after 2016 or 2017.


PHOTO: SIKORSKY

## FLIGHTSAFETY PROMOTES STEVE GROSS TO SENIOR VP, COMMERCIAL

FlightSafety International has announced that Steve Gross has been promoted to Senior Vice President, Commercial, responsible for FlightSafety's business aviation and regional airline training sales activities worldwide. Mr. Gross joined FlightSafety in 1996 and has held a number of positions since then; most recently Vice President, Sales.

## URALS CIVIL AVIATION PLANT TO PRODUCE H135

On January 25th, the OJSC Urals Civil Aviation Plant and Airbus signed a license contract for the production of Airbus Helicopters H135s in Moscow. A further two agreements with French company Turbomeca will permit UZGA to assemble Arrius B2BPlus engines for the H135s and conduct technical maintenance of the engines.

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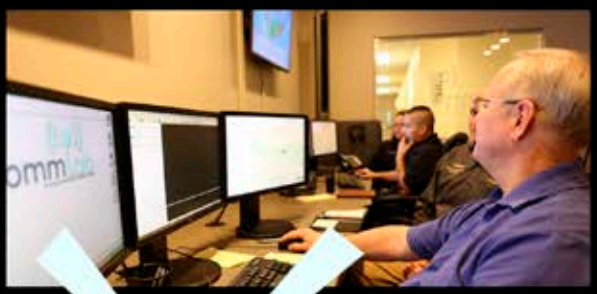

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## AIR METHODS COMPLETES TRI-STATE CAREFLIGHT PURCHASE

Air Methods Corporation has acquired Tri-State Care Flight. In November, Air Methods announced it entered into a definitive agreement to acquire Tri-State Care Flight and its air medical transport program. Tri-State Care Flight will continue to operate as a critical care transport provider servicing Arizona, New Mexico, Nevada, and Colorado.

## UW HEALTH TO ADD SECOND BASE IN SOUTHWESTERN WISCONSIN

UW Health Med Flight plans to establish a satellite base in southwestern Wisconsin in a move that will improve response times. A second base will be set up at the Iowa County Airport near Mineral Point this spring, cutting response times for medical emergencies in the southwestern Wisconsin area by approximately 20 minutes. Med Flight's primary base remains at University Hospital. Med Flight utilizes EC135s and provides a physician on every flight, an arrangement which is not typical for medical-helicopter services.


PHOTO: AIRBUS

## AIRBUS PARTNERS WITH UBER FOR HELICOPTER SERVICE

Airbus has partnered with Uber to make it possible for travelers to book a helicopter using the Uber app, CEO Thomas Enders has said at the DLD (Digital-Life-Design) conference, in Munich. The new link with Uber will allow Airbus to provide on-demand transportation service using its H125 and H130 helicopters.

## ROBINSON PRODUCTION 5% UP IN 2015 OVER 2014

Robinson Helicopter delivered 347 aircraft in 2015, made up of 117 R66s, 196 R44s, and 34 R22s – a steady gain over 2014, which was in itself a huge drop over 2013. This compares with an all-time peak year in 2008, with 893 deliveries. Looking at each model, the R22 production was the lowest in six years, R44s were marginally ahead and the main percentage gain was in the biggest of the range, the R66 Turbine. 2015 also saw R66 production numbers exceed the H120 total, a comparative five seat turbine.

## LEVEL D QUALIFICATION FOR THALES REALITY H H225 SIMULATOR

The Norway Training Centre begins H225 helicopter training in January 2016 with launch customers, Blueway Offshore Norway AS and Dancopter in Denmark, after receiving both the EASA FSTD Operator (Flight Simulation Training Devices Operator), and Level D qualification for its Reality H full flight simulator.


PHOTO: GWAAC

## GREAT WESTERN AIR AMBULANCE REPORTS RECORD YEAR

The charity puts the rise down to their new Eurocopter EC135, which arrived at the Filton base in October 2014. HM65 and her crew attended 1,655 life-saving incidents In 2015, across Bristol, Bath, Gloucestershire, South Gloucestershire, North Somerset and parts of Wiltshire. This is an increase of 270 incidents compared to 2014, when they were using an older Bolkow. The new machine is able land on any hospital helipad, whereas the previous Bolkow was unable to land on the elevated helipads at the Bristol Royal Infirmary and Gloucester Royal Hospital. The EC135's extra speed reduces response times anywhere within the operating region to 20 minutes.

## AIRBUS DELIVERS FIRST OF THREE H145S TO PACIFIC HELICOPTERS

In the largest H145 campaign to date in the region, Pacific Helicopters in Papua New Guinea has taken delivery of the first of three H145s from Airbus Helicopters. The first machine, leased from international lessor Waypoint Leasing, has arrived in the eastern highlands provincial capital of Goroka, following final reassembly at Airbus Group Australia Pacific's Sydney facility. The remaining two H145s, purchased and owned by Pacific Helicopters, will be delivered later this year. These are the first new Airbus Helicopters aircraft to be operated in Papua New Guinea and will be multi-tasked across Pacific Helicopters' operations, on missions including Defence Force support, emergency medical services, law enforcement, government department duties, oil & gas, aerial work, and business and private passenger transport.

PHOTO: PACIFIC HELICOPTERS

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## LAX CLOSES HELIPORT WITHOUT INDUSTRY CONSULTATION

Several board members of the Professional Helicopter Pilots Association (PHPA) and helicopter industry representatives met with the executive director of Los Angeles World Airports on January 5 to request that the plan by LAWA to permanently close the Los Angeles International Heliport be canceled and the heliport reopened to commercial helicopter operations. The heliport has been closed since 2010 due to ongoing construction activities at LAX, which are expected to continue for the next two years. In response, the director's staff advised that their plans to turn the existing heliport into approximately 178 parking spaces - while setting aside only one emergency landing slot above the Terminal 4 parking structure – were under way and irrevocable. The loss of this facility is a loss to the national airspace system and a potential problem for public safety first responders at LAX. LAWA has agreed to work with PHPA on future plans for a heliport at LAX.

## RIG'N FLY RECEIVES CERTIFICATION


PHOTO: LORETTE FABRE

Airbus Helicopters has received EASA certification for the Rig'N Fly (Rig Integrated GPS approaches with eNhanced Fly-ability and safetY), an avionics enhancement designed to provide automatic rig approaches for offshore operations. First developed on H225, it will also be implemented on H175 (end 2016) and on H160.

Rig'N Fly uses a combination of sensors (GPS, barometric altimeter, radar altimeter, weather radar, etc.) to provide enhanced flight precision and situational awareness for automatic VMC and IMC rig approaches. The system reduces workload for pilots, allowing them to focus on monitoring flight parameters and the outside environment.

This new mode also includes offset approaches, which can be tailored according to weather conditions and oil rig environment for the safest, standardized approach, placing the helideck in the most easily visible position for the crew.

"Rig'N Fly procedures are of the utmost importance to ensure reliable operations and the safest flight conditions possible, and this is an area where Airbus Helicopters continues to focus its developments," said Marie-Agnes Veve, head of the Super Puma and H225 programme. "With the Rig'N Fly, almost the entire approach procedure is automated, a key element in ensuring that our customers have the right technologies for safe, smooth and efficient flights."

Using the Digital MAP (DMAP) and the Enhanced Cursor Control Device (ECCD), the pilots will have the possibility to easily modify the approach. The DMAP brings an essential safety element as the flight plan map can be merged with additional environmental factors, including weather radar and wind data, platform locations. It also includes the Automatic Information System (AIS) that alerts the pilot if a ship is about to interfere with its planned trajectory and allowing the pilot to plan a hold to the approach or a rerouting if necessary. The ECCD, which will also be available on the H175 and the H160, is a new, ergonomic, easy-to-use control device which allows for a quick and efficient way to fine-tune the flight plan. The H225's upgraded avionics also includes the introduction of Required Navigation Performance approaches (Localizer Performance with Vertical Guidance (LPV) and Lateral & Vertical Navigation (LNAV/VNAV).

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PHOTO: AIRBUS

## FIRST FLIGHT FOR SECOND H160

Airbus' second H160 prototype took off on January 29th in Marignane, the first H160 to fly with the new Turbomeca Arrano engines. Bernard Fujarski, head of the H160 program said that the development program will utilize 5 development aircraft; two helicopter zeros and three flying prototypes, paving the way for planned entry into service in 2018.

## FIRST AW139 ARRIVES FOR CROATIAN POLICE

The Croatian Police took delivery in late January of the first of two AW139 helicopters, with the second reportedly due in July 2016. The aircraft quietly entered national airspace the previous evening and overnighted at Pula ready for its higher profile landing at Zagreb Airport on Wednesday. The new AW139s are intended primarily for border protection.


PHOTO: FINMECCANICA


PHOTO: HIOWAA

## HAMPSHIRE AND IOW AIR AMBULANCE START H135 NIGHT TRAINING

After announcing its commitment to full night flying capability last year, Hampshire and Isle of Wight Air Ambulance (HIOWAA) has announced the arrival of their enhanced model H135T3, specially equipped for night flying, at the charity's air base in Thruxton, near Andover. The commencement of night flying is expected in early 2016.

## ROBINSON TO DELIVER 700TH R66

Robinson's 700th R66 Turbine rolled off the production line on December 18, 2015, five years after the type was FAA certificated. Serial Number 700 is an R66 Turbine Marine (an R66 equipped with pop-out floats) and will be delivered to Robinson Dealer Air Technology Belgium. This will be the first Turbine Marine delivered to Europe since EASA approved the float option in October 2015.


PHOTO: AIRBUS


## AIRBUS DELIVERS SIX H125S TO CALIFORNIAN LAW ENFORCEMENT AGENCIES

Airbus Helicopters recently delivered six new H125 Astars (formerly AS350-B3E) to four Californian law enforcement agencies, including two to the California Highway Patrol (its fourth and fifth as part of a five-year contract to upgrade its entire fleet), two to the Riverside County Sheriff's Office, one to the LAPD (its second, as part of a multi-year contract to upgrade the department's fleet of AS350-B2s) and one to the Ontario Police Department, adding to its fleet of two AS350-B2s.

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# BIRD STRIKES

BY
TERRY
PALMER

As I was checking my twitter feed, I noticed a lot of talk about National Bird Day. It is a day celebrated mostly on social media to create avian awareness, specifically wild birds. I think every day is a good day to celebrate avian awareness in our industry. There were 204 reported bird strikes in 2013 in the US. That figure is 68% higher than 2009 that reported 121 strikes. Bird strikes are becoming more frequent as both sides in this battle increase in numbers. More of the encounters are being reported ever since the high profile accident of US Airways Flight #1549 that was ditched in the Hudson River in NY following engine failures due to ingestion of geese. It is vital to include bird strikes in emergency procedure training. You are more likely to encounter a bird than to have the system failures that are included in most training scenarios.

Stressing the real danger of bird strikes is critical in training. Many pilots do not realize that if they collide with a bird, the effect of speed turns it into a missile capable of inflicting considerable damage. This can be fatal to pilot and passengers. Bird strikes have smashed windshields, blocked engine air intakes, broken pitot heads, damaged brake hoses, and caused significant rotor head or helicopter tail rotor damage. Gary Roach, an FAA helicopter safety engineer informed an advisory committee meeting on the hazard. “We’re getting more severe damage, more frequent cases of birds penetrating the windshield and the risk of pilot incapacitation that could cause fatalities for everybody there.” The risk is high for all aircraft. The FAA and the USDA maintain a database of all reported wildlife strikes to U.S. civil aircraft and foreign carriers experiencing strikes in the United States. The agencies have compiled more than 160,000 strike reports from about 1,900 U.S. airports and 290 foreign airports for January 1990 through November 2015, with about 13,700 of those strikes in 2014.

So how do we train to avoid and manage bird strikes? During training, once the risk is fully understood, there should be discussion on both avoidance and what to do in the event of an incident. Training to avoid the birds is a good place to start. Vigilance is a key to preventing incidents with birds. It is essential to know where they are. Many birds are colored to blend in with the terrain so they may be difficult to spot. It is important to know the seasons and paths of migratory birds in your flight area, which can often be fairly predictable. Most bird strikes occur between 500 and 2000 feet. This is definitely inconvenient since most helicopter pilots also prefer this altitude range. Therefore, if birds are prevalent in your area, flying at a higher altitude

can add a level of safety. As a bonus, flying higher also adds a bit more time for autorotation options in the event of an engine failure. It is always best to fly over a bird, since most birds will dive if they feel threatened.

Knowing when the birds are most active is also helpful. Dawn and d usk are the highest risk. It is also more difficult to see flying objects in the low light, so avoiding these times of the day can help. Again this is inconvenient for student pilot training since these hours are preferred due to the lack of significant wind gusts. Therefore primary students should be made aware of the possibility of birds in the area. Pre-flights should also include a search for bird nests. It can take less than hour for birds to take up residence in a parked aircraft.

The Helicopter Safety Advisory Conference (HSAC) which focuses on safety for the large population of helicopters in the Gulf of Mexico has some excellent best practices. They highly recommend pilot awareness training for bird avoidance techniques to be completed on initial training and repeated in recurrent training annually. They stressed that pilot incapacitation should be considered on all single pilot flight activities and the majority of helicopter bird strikes occur on the windshield. Consideration should be given to requiring the use of eye protection, or helmets with visors down. For every 1000' of altitude a pilot climbs, there is a significant reduction in bird activity. Therefore, pilots should fly at the highest altitudes possible when environmental conditions allow. Altitude is your friend and an expeditious climb to cruising altitude should be completed at best rate of climb. Departure from cruising altitude for landing should be completed as late as possible to avoid flying low level for any extended period of time in high bird risk areas. While flying at lower altitudes an airspeed reduction should be considered to allow greater reaction time for the pilots and birds. The use of pulse lights and or landing lights is recommended when operating in the vicinity of bird activity.

Pilots and operators are encouraged to develop an active bird strike reporting system to assist in the development of improved statistical data. Most regulatory agencies are collecting this data. The bird population appears to be increasing requiring greater diligence by pilots for avoidance.

Training to recognize and mitigate the risk is important to all of us that share the sky. Most of these items can be discussed in a classroom. There is plenty of material available online along with graphic accident photos that can reinforce the need for vigilance. In a simulator, I have seen the scenario practiced as the instructor suddenly tosses a large wet red towel at the pilot flying the simulator. This is obviously not recommended in aircraft training, but in the simulator it really emphasized the danger.

Birds and their mechanical counterparts, drones, may be unpredictable. Training to expect the unexpected and maintain situational awareness is crucial to safety. HO

# HELICOPTER CRASH-RESISTANT FUEL SYSTEMS.

## How much Government Involvement is TOO Much?

BY
BUZZ COVINGTON

Our intrepid news teams across the USA have been at it again, and have suddenly become experts on helicopters, crash-worthy fuel tanks, and accident investigations. To hear some of the breathless reporting going on, jumping into a helicopter these days is akin to signing your own death warrant. A few post-crash fiery clips on the internet seems to galvanize our intrepid reporters, and they start asking "Why isn't more being done?!?"

Recent reports have cited "loopholes" in Federal Aviation Administration (FAA) standards that fuel tanks in helicopters should be able to survive a drop-test from 50 feet without spilling any fuel. That sounds like a reasonable metric to strive for, but some people feel that since this rule only applies to helicopters certified since 1994, manufacturer are intentionally producing new aircraft under old certifications so that they can skirt this mandatory requirement. An example that has recently been used to illustrate this point was the recent crash of an AS-350 in Frisco, Colorado. The aircraft was manufactured in 2014, but since it was based on a certification that was awarded in 1977, it wasn't required to have the more crash-worthy fuel tank. It does seem odd though, that the FAA would have implemented a change to aircraft in such a non-committal way. Here we are 22 years later, and only approximately 16% of the civilian helicopters flying in the United States today have crash-resistant fuel tanks on board. The FAA would have certainly been aware that manufacturers would continue to build airframes using older designations to avoid the additional costs associated with R&D and production. Why make such a half-hearted effort then? Is this just another case of a federal organization implementing rules that have little effect just so they can be seen as "doing something" to earn their pay? In effect, this ruling has probably had a stifling effect on ushering in new makes and models of helicopters. Why would a helicopter company spend all of the extra money on developing new airframes that would not be protected by the FAA's ruling of 1994?

Some have made the argument that "The US Military figured this out years ago, so we should require all helicopters to have these kinds of fuel tanks."

This would make sense if it weren't for two things: Cost and practicality.

The cost to equip many of these aircraft with crashworthy fuel tanks during the manufacturing process starts at around $80,000 per aircraft, and a retrofit from an older system begins at $110,000! In a business with such tight profit margins, it makes no sense to mandate such drastic measures, and doing so would certainly put many small operators out of business. However, it seems that some of the hysteria from the few post-mishap fires that have been caught on camera have spurred even more government regulation into action. A recent safety recommendation from the National Transportation Safety Board (NTSB) to the FAA (Safety Recommendation A-15-012) is calling for ALL new helicopters, regardless of certificate status, be required to have the more costly, crash-resistant tanks installed. I think it is fine if an owner/operator chooses to spend the extra money to have a retrofit performed or order the more expensive option from the beginning, and applaud them for doing so of their own accord. One large operator of commercial helicopter services, Air Methods, has already declared that the company is "committed to retrofitting 100% of our Airbus AS350/EC130 (H125/H130) fleet" and is working with a third party to seek "certification for a crash-resistant fuel system for the entire Airbus line." This is the free market system at work, and they didn't need a government organization cramming new rules and regulations down their throat to do it. Indeed, it shows everybody in our industry that this is a company that cares about it's people, and is even willing to spend extra money to insure that an event as rare as a post-crash fire doesn't happen in the future.

Like most actions taken by our bloated bureaucratic government, the FAA will take ages to make yet more changes and regulations to rectify the mess they helped to create in 1994. The FAA's administrator Michael Huerta recently said that the FAA would start the process of considering the NTSB's recommendations, but that the process historically takes years. Even after the FAA comes up with a detailed proposal to require crash-resistant fuel tanks be installed on all new aircraft, there will be another long period of time to allow members of the public to weigh in and add comments before a final determination is made.

Organizations spending millions of taxpayer dollars, years going by, hundreds of meetings, dithering back and forth in committees... It's enough to make you pull your hair out. Look, I am all for operating helicopters in the safest way that we can, but having the government invoke even more regulations and directives in an industry already suffocated with bureaucratic red tape is certainly not the answer. HO

# MIDAIR CONFLICT

BY
MIKE
BIASATTI

According to the FAA, about 7,500 small, commercially operated drones (not including drones flown by public bodies) will be active in the U.S. within about five years. That is a lot of small unmanned aircraft sharing the low altitude sky with helicopters.

On February 15, 2015 The FAA issued its Notice of Proposed Rulemaking (NPRM) for small unmanned aircraft, opening the door for public comment marking the beginning of the rulemaking process. All existing regulations, policy or rules remain in force during the NPRM period. With their increased availability, popularity, lowering price point, and increased range, Unmanned Aircraft Systems (UAS), or drones, will continue to share the airspace with many Helicopter Air Ambulance Aircraft increasing the possibility of midair conflict. Operating an air medical helicopter presents a number of risks, most of which are under the control of the operator and minimized using various risk management tools, but now as the skies get more crowded at lower altitudes, this is a risk that could be difficult to manage.

As far back as 1981, the FAA published Advisory Circular (AC) 91-57 to provide guidance for hobbyists amidst safety concerns raised about the model flying. The AC included guidance for site selection, operating the model aircraft only while within line of site of the operator, remaining within 400ft of the surface and avoid other aircraft in flight and to avoid flight in the vicinity of spectators until the model aircraft has proven itself to be airworthy.

Under Title 49 United States Code 40103 the United States Government has exclusive sovereignty of all airspace of The United States and the FAA has the authority to set forth regulations on all air traffic including UAS.

There are two distinct categories of unmanned aircraft, the first and most popular includes those remote control aircraft that are flown as a hobby for fun. Aside from local area municipalities that impose further restrictions in areas such as parks and school grounds. The FAA Modernization and Reform Act of 2012 stipulates: (1) the aircraft is flown for strictly hobby or recreational use, (2) the aircraft is operated in accordance within the programming of a nationwide community based

organization and in accordance with a community based set of safety guidelines, (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test and operational safety program administered by a community based organization, (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft, (5) when flown within 5 miles of an airport the operator of the aircraft provides the airport operator and the air traffic control tower with advanced notice of the operation, and (6) the aircraft is flown within visual site of the operator.

The second involves using a drone in the furtherance of business to conduct surveys, perform photography services for real estate, events such as weddings or to inspect powerlines to name a few, not to mention Amazon and others grandiose plans of delivering pages via UAS are all considered Commercial Operations and fall under a completely different set of regulations. The current situation is that no person may operate a UAS in the National Airspace System without specific authority. For those flying model aircraft the specific authority is AC 91-57, for UAS operating as civil aircraft that authority is a special airworthiness certificate, for UAS operating as public aircraft (the most common of which is the U.S. Department of Defense) the authority is the Certificate of Waiver Authorization (COA). The growing and anticipated future demand for both public use and commercial use aircraft has seen the FAA develop a memorandum titled "Unmanned Aircraft Systems Operations in the U.S. Airspace System (UAS Policy 05-01). An acceptable level of safety is the benchmark currently used by the FAA as required by operator applicants, in addition the ability to operate clear of clouds/terrain and being able to demonstrate that a collision with another aircraft is 'extremely improbable'.

For those future commercial UAS operators the FAA Policy is to require an FAA Airworthiness certificate, just as any other aircraft would be required to apply for. Section 333 of the FAA Modernization and Reform Act of 2012 allows for the Secretary of Transportation to determine if an airworthiness certificate is required for UAS to operate in the National Airspace System (NAS). Prior to finalization of the small UAS Ruling those interested can petition for an exemption to operate a commercial UAS in the NAS. Visit faa.gov/uas/news for more information.

What does all of this mean to the air medical helicopter crews? The airspace we operate in is going to get more crowded and during this period of the NPRM is the time to speak up with your concerns, suggestions and experiences. Not long ago we had an encounter with a drone flying around our hospital helipad and more recently I read an article regarding a police helicopter having to divert during a pursuit because of an unmanned aircraft and possible collision hazard.

The time to begin formulating a plan to safely coexist with these UAS is now. HO

# FROM FIRE STARTER TO FIREFIGHTER

BY TOM HUMANN

During the massive California wildfires of 2003, I surveyed the devastation along with President George W. Bush from the smoke-free confines of Marine One. Local fire chiefs who battled the conflagrations firsthand provided a blow-by-blow aerial escort. It was my first exposure to wildland firefighting and I was instantly intrigued. I made it my mission to learn more about aerial firefighting and how I could get into the firefight after leaving the Marines. Lucky for me, I established friendships with the right people and finagled my way into this close-knit community. During the past decade, I have learned a bit about becoming a successful fire pilot – and how to transform military helicopter experience into the ideal fire pilot résumé. As someone who got help along the way, I am happy to pay it forward with a few pointers to my military brethren.

For a military pilot eyeing the civilian utility world, the possibilities are exciting, but the path intimidating. The average flight hours amongst industry pilots can be overwhelming, the categories unfamiliar. While the minimum required PIC hours generally hover around 1,500, the norm is at least 5-10,000 hours. Mountain time, most-often defined as that above 4,000 feet MSL, can be many hundred and is not something normally tracked amongst military squadrons (so start logging it now!). Another keystone to firefighting or utility flying is external load time. Most firefighting operators require a minimum of 100 hours, but like PIC time the average industry pilot has hundreds if not more. Employers also expect significant experience in the particular model if the job is for a command pilot position. Another common expectation is a few hundred hours flying “typical missions,” which is where the door begins to crack open.

A military helicopter pilot figures he has much to offer civilian operators, but does not know precisely how to translate his qualifications into useful civilian verbiage, or what amongst his experience is most pertinent. When it comes to aerial firefighting, many skill sets are the same as combat, the only difference being the desire to put fires out instead of starting them.

The most common cause of accidents amongst helicopter pilots operating low-level is controlled flight into terrain (CFIT). Therefore, flight experience amongst the most insidious hazards like wires, towers and dead trees is priceless. Understanding how to safely assess landing zones in austere environments and cope with brownout conditions is critical. Depending on the type of helicopter and tactical mission, a military pilot may possess vast experience working with other crewmembers, playing into the growing

importance of CRM in the civilian world. Another might have rescue hoist experience, also a growing aspect of firefighting operations. On large fires the airspace above may be inundated with helicopters and fixed wing aircraft. Comfort handling hectic radio traffic in a busy airspace is an asset for the fire pilot. Even better is experience as a forward air controller (FAC), which translates seamlessly to managing multiple helicopters in the fire traffic area as a helicopter coordinator (HELCO).

With each passing year, more fire agencies seek the ability to continue the aerial assault during hours of darkness. With nighttime operations comes the desire to have pilots qualified on night vision goggles and instruments. This trend has led some contractors and agencies to replace legacy aircraft with newer, sophisticated machines. There is no pilot more accustomed to flying complex helicopters in a tactical environment than a military one.

So far we've discussed how a military pilot can explain to a potential employer what talents he possesses in terms that make sense in the civilian world. But there are also steps he can take to enhance his bona fides while still serving. Whereas military instructor qualifications may not be recognized in the civilian world, commercial privileges such as ATP or CFI may set a prospective hire above others. These add-ons are often not difficult or expensive for a military pilot who already holds a basic commercial license. Some military branches offer high-altitude or mountain training schools – take advantage of this opportunity. Aviation safety school is another useful résumé-builder that certifies a pilot as an aviation safety officer or accident investigator. Another way to build mission critical flight time is to sign on with a unit that flies fires. The optimal outfit is one that regularly supports civilian firefighting operations, like many National Guard units. This teaches familiarity with firefighting tactics and experience in the same complex airspace as civilian fire pilots. A second-best option is to join a squadron that prosecutes wildland fires on their base or within a bombing range. The airspace rules are not the same, but the techniques of water-delivery are no different.

A military pilot seeking a transition to aerial firefighting may discover there is no cookie-cutter path and he may need to be flexible to reach his goals. For instance, the industry standard for water delivery remains rooted in the ability to fly a sling load on a 150-foot longline via vertical reference (VTR). A military pilot lacks this important ability because military units employ the crew concept when flying external loads – a pilot flies while a crew chief in the rear cabin oversees the line and load below. In order to get a foot in the door, he might entertain taking a job as a copilot for a civilian contractor. This option may feel like starting over for an experienced military pilot. In a way it is. But paying dues to eventually fly as a command fire pilot is worth it.

Ten years ago, I took a leap of faith, left the Marines and pursued a career as a helicopter fire pilot. While it did not happen overnight, the journey has been worth it. Another military pilot seeking this rewarding mission can do the same if he makes the most of his service time, honing and advertising his skills in a manner likely to garner the attention of the aerial firefighting world. HO

# CREATIVE DESTRUCTION IN THE OFFSHORE SECTOR

BY JOHN PERSINOS

EDITOR
THE AMERICAS

As energy prices continue to plunge, offshore operators are struggling. But they're implementing smart moves that will make them stronger down the road.

To understand the pain now unfolding in the offshore sector, we turn to famed economist Joseph Schumpeter, who coined the term "creative destruction."

He wrote that creative destruction is the "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one."

Hence the paradox in the offshore sector: The pain now will yield healthy growth later.

No denying it, conditions in the helicopter offshore sector are grim. Flagging economic growth overseas, political turmoil in Russia and the Levant, uncertainty in the euro zone, record-high U.S. crude inventories and a deepening oil glut have all conspired to push oil prices below $30 a barrel, compared to their highs of more than $110 in the summer of 2014. That's a dizzying decline of more than 70%.

Some analysts now warn that oil prices are in danger of falling as low as the $20s, which would be he death knell for a host of overleveraged operators in the sector.

Fact is, Saudi Arabia started a fight it can't win. Initially, the kingdom's opening of the oil production spigots was a "price war" designed to hamstring rivals Iran and Russia, as well as to shake out smaller, highly leveraged shale producers in North America, many of which now face the specter of bankruptcy.

Now, with energy prices in free fall, Saudi Arabia would like to curtail production to bolster prices, but its fractured leadership has been unable

to exert its usual control over OPEC. Recent reports of a deal to freeze production would only serve as a temporary stop gap measure and do little to shore up prices.

Strategists at Goldman Sachs recently declared it was “highly unlikely” Saudi Arabia could succeed in convincing Russia and other major producers to reduce output, saying higher prices would simply bring curtailed production back on line, which in turn would depress prices again.

The lifting of sanctions against Iran and Venezuela’s chronic need for oil revenue are feeding the oil glut — and energy prices that still haven’t touched bottom.

Sure, energy prices will inevitably bounce back. But when?

If you’re an offshore helicopter operator waiting for a rebound, consider this sobering fact: After 1980, reduced demand and increased production produced an oil glut on the world market. The result was a steady decline in the price of oil that lasted long six years.

## HOPE AMID THE CARNAGE

For a cyclical industry such as helicopter offshore transportation, the energy slump has been calamitous. Operators of all types and sizes are reporting sharp declines in demand, prompting them to lay off workers, cancel aircraft acquisition plans, and revise revenue projections downward.

But here’s the good news: these offshore operators are using the carnage in the energy sector to get into leaner and fitter shape.

The giants of offshore transport — Texas-based Bristow Helicopters, and Louisiana-based Era Group and PHI — are now downsizing. However, these cost-cutting efforts will hold these companies in good stead and enhance their operating margins when energy prices inevitably resume their upward trajectory.

There’s a direct correlation between oil prices and demand for offshore helicopters. If oil prices significantly drop, rig utilization falls — and helicopter demand with it. And that’s the dynamic offshore operators have been struggling with for over a year.

But over the past year, offshore leader Bristow and its peers have taken proactive measures to maintain their competitiveness and financial strength during this downturn, with an eye toward eventual market recovery.

They’ve dramatically reduced operating expenses, which include workforce reductions and the elimination of company bonuses. They’ve also created flexibility by deferring aircraft deliveries in the near term to match the realities of the current market.

However, when energy prices went into decline in late 2014, operators such as Bristow, Era and PHI started to emphasize other aspects of their business, notably search and rescue (SAR), which is enjoying rising demand that helps offset falling demand in offshore.

With diversification efforts combined with cost reductions, these struggling offshore operators should bounce back, if not in 2016 then probably in 2017.

Problem is, during the go-go days of oil at $100 a barrel, some offshore operators over-expanded and they're now leveraged to unsustainable levels. As new offshore contracts in 2016 continue to dwindle, so will revenue for offshore operators, especially the smallest ones. Those with the weakest balance sheets will feel the most stress.

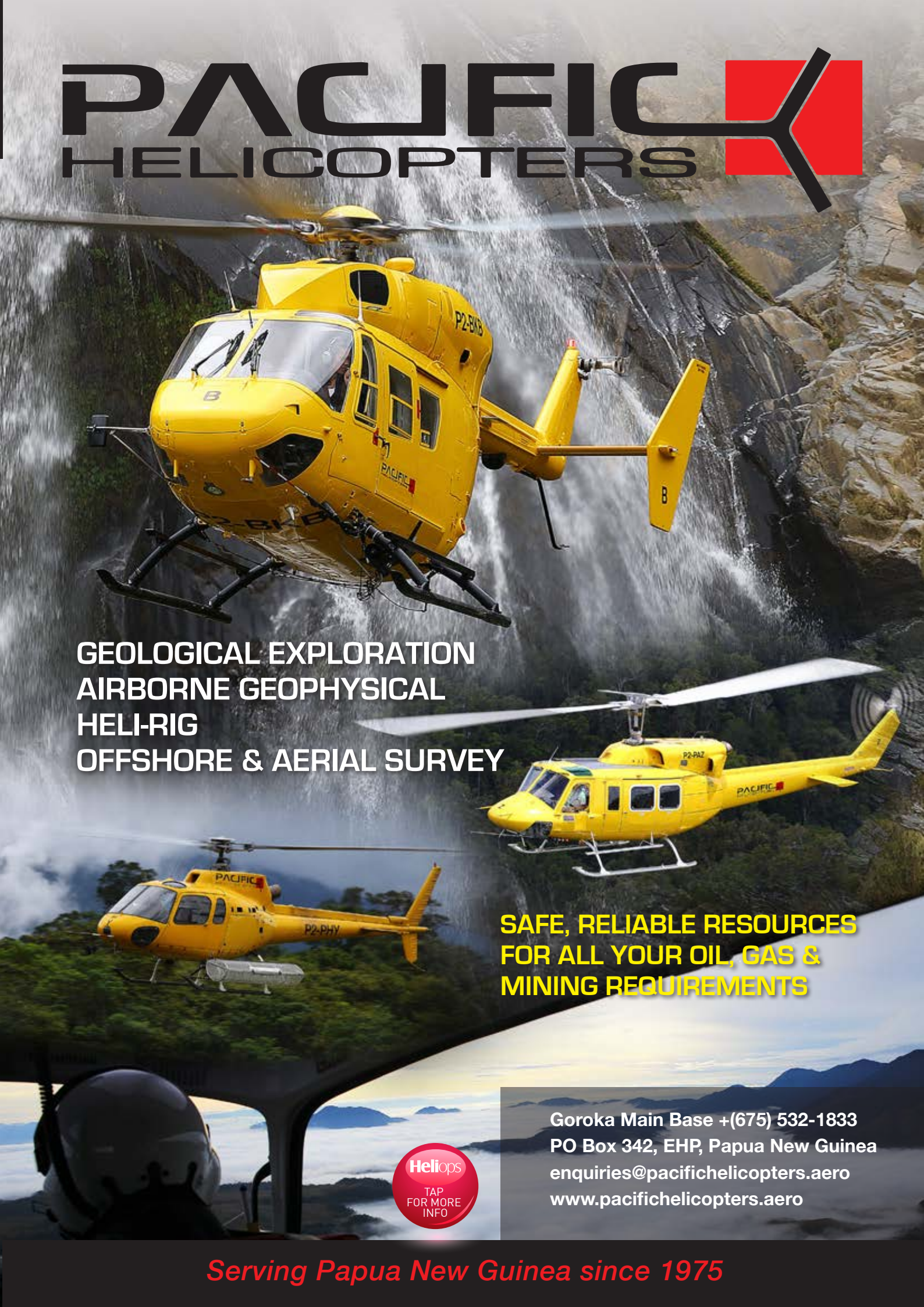
That spells likely consolidation in the offshore sector, as the big players with deeper pockets and greater financial wherewithal gobble up the struggling smaller players. This consolidation reflects "creating destruction" as well, creating greater value in the offshore sector over the long haul.

Richard Aboulafia, vice president of analysis at the Teal Group, puts it this way: "Offshore helicopter operators bought a lot of expensive aircraft during the boom times, when oil was between $80 and $100 a barrel," he said. "Because of the oil slump, new purchases have now been deferred. But modern industrial society still needs oil and the price of crude will eventually bounce back. And when it does, these operators will be leaner and more efficient, and they'll be flying the most advanced helicopters available today."

The Bell 525, the Airbus EC-175, the AgustaWestland AW189, the Sikorsky S-92 — they all stand at the ready, to transport oil rig workers and boost operator margins, when the energy sector gets off its feet.

Right now, the offshore sector is passing through a "dark valley" of declining demand, falling revenue and earnings, layoffs and retrenchment. But awaiting the sector is a renaissance. Operators simply need to keep making the right moves, to set the stage for resurgence.

The cyclical forces governing the global economy in general and the energy sector in particular have not been repealed. What goes down eventually goes back up. Better days for the offshore sector will come. HO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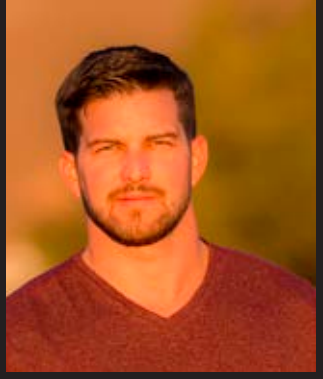
# DRONES ARE IN THE AIR



BY KEVIN LAROSA II

PHOTOS BY ROBERT GLUCKMAN

We have all seen a great deal of attention, both negative and positive, being given to the sUAS (small unmanned aerial system) industry lately. Whether we like it or not, drones are here to stay. It can be little overwhelming when we take a look at the numbers of new drone pilots/operators who are taking to the skies each month. Recent figures show that in the USA, around 3,300 commercially approved sUAS operators are now able to work in the skies that we once knew were only shared by aircraft being operated and flown by other aircraft pilots. Further intensifying the issue, is the staggering figure of 300,000 private non-commercial drones that have now been registered with the FAA and the number is growing rapidly. If you think that number is big, try to imagine all of the drone owners/pilots who haven't or refuse to register their craft and are actively flying in our skies. Change can be difficult, especially when it involves the safety of millions of people in the air and on the ground. But one

thing is for sure; this multi-billion dollar industry cannot be stopped and the FAA is trying desperately to incorporate this new technology into our existing aviation infrastructure and our already complex national airspace system. As a pilot, my concern isn't necessarily from the 3,300 commercially approved operators doing it right, but more so for the hundreds of thousands of drones flown by people in the USA who just don't care, understand, or blatantly disregard the dangers they could be causing to others.

This type of technology has never been so readily available to the consumer. A young boy or girl can simply walk into a hobby shop and walk out with a piece of equipment that is able to triangulate its position via GPS, navigate to predetermined waypoints, and fly higher and further than the human eye can see all while beaming a camera image back down to the operator. How can that much responsibility be given to someone with little to no understanding on what is really happening in the sky, let alone the people it endangers below. As pilots, we spend the better portion of our lives obtaining experience in the form of hours, ratings, and certificates so that we can eventually be compensated as a professional aviator in one of the most governed and carefully controlled environments in the world. Something is going to have to be done to restrict this ever-evolving technology in a way that forces the end user of private and recreational drones to enjoy it in a more responsible and safe manner. Unfortunately, it will take something very serious to occur before a major mandatory change is put in to place. Until then, we must be vigilant as pilots, take a little extra time to scan outside the windshield, and be ready to make an evasive maneuver. Its not a question of if, its only a matter of time before someone gets hurt.

Having said all of that, it is important to know that I am one of the commercially approved drone operators. Three years ago I wrote and

designed a program for commercial sUAS operations and submitted it to the public docket. My company, Team5 LLC, was the 9th company approved for the purpose of flying for the Motion Picture and Television Industry. I did so with the help of my father, Kevin LaRosa Sr, who is a world-renowned motion picture stunt pilot and my friend Robert Gluckman, one of the most talented and knowledgeable drone technicians and builders I have ever known. By trade, I am a second-generation Motion Picture Aerial Coordinator and movie stunt pilot holding an ATP rating and flying everything from jets to helicopters. Becoming a 333 exempt commercial drone operator gave me another tool in the shed to use for my customers and protected me from losing too much stake and market share in the aerial photography business. Before you rush out and start buying expensive drone equipment, understand that just because we fly helicopters and airplanes doesn't necessarily mean we will be top-notch drone pilots. Yes, our understanding of aerodynamics, weather, and fundamentals of flight absolutely help in my opinion, but the sensation of controlling something remotely via hand-eye coordination is a perishable skill that takes time to develop and perfect.

Before I ever become a full size aircraft pilot, I was a model airplane pilot. I started when I was 8 years old and by the time I turned 15 I was involved in almost every realm of the hobby. Everything from full 3D airplane and helicopter aerobatics to giant scale warbirds, to professional R/C pylon racing. Today I have 22 years of experience and countless hours flying remote controlled aircraft. I can't imagine doing what I do today in the professional sUAS world without this experience.

Currently in the USA, the FAA requires operators/pilots who have received their 333 exemption to hold a sport or recreational license at a minimum. Despite countries such as Australia already having legislation and rules in place, it won't be until later this year, the FAA plans to unveil its new rulings for the sUAS world. The entire sUAS community has been patiently looking forward to these rulings for quite some time while some full size aircraft operators and pilots fear that it could open the gates to another wave of even lesser experienced drone pilots.

One of the more notable changes for sUAS world will be the requirement to obtain an unmanned operator certificate with a small UAS rating instead or a sport or recreational certificate. Are we further separating the skills of a true aviator away from future drone operators, or bridging the gap in a more direct manner with more useful and purposeful information regarding UAS operations in the national airspace system? Time will tell. HO

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# ITALY'S FIRST 407GX ENTERS CORPORATE/VIP SERVICE

The first example of the Bell 407GX to be based in Italy has recently joined the fleet of EliCompany, an Italian helicopter operator that flies a large range of missions but has purchased this – its first Bell product – as a corporate and VIP charter asset.

STORY BY **LEIGH NEIL** | PHOTOS BY **NED DAWSON**

# AN AMERICAN WITH *Italian Flair*

The new machine is configured for VIP transport and boasts an air-conditioned, full leather corporate interior but will also be used occasionally for utility work in the survey role with laser-scan and infrared camera equipment.

The corporate and VIP charter market can be a tough sell for manufacturers, so the sale of a Bell 407GX to a European company with predominantly European types on strength warrants a close look at the hows and whys of the deal. The new machine is configured for VIP transport and boasts an air-conditioned, full leather corporate interior but will also be used occasionally for utility work in the survey role with laser-scan and infrared camera equipment. It will not, however, be utilized for lifting work.

Cristian Forghieri is EliCompany's flight operations manager and a co-owner of the company. He outlined the reasoning behind the decision to purchase the new Bell. "Sure, it was a bit of a gamble perhaps. We were looking for the right helicopter type that was better suited to the task of VIP charter service than the AS350-BA we're using at the moment," he told HeliOps. "We started looking at the 407GX for its smooth ride, better speed, and additional seat compared to the Ecuriel. It's also a better-looking, sleeker, more modern machine that presents the image we want to portray for our customers." Interestingly and unusually, Forghieri advises that no

# Heliops


other types were considered for the new purchase as it was felt that there were no suitable directly comparable products on the market. The Italian company was not without experience of Bell's product and support as, alongside their AS350s, they had operated Bell 206s for some time.

Although the 407GX only entered service in June this year, Forghieri reports that after their initial surprise at the purchase of anything other than a Eurocopter product in Europe – almost a default decision in the European single-engine market - many other operators have expressed a keen interest in how well the new machine performs in its role with EliCompany. In service to date, the aircraft has already exceeded the company's performance expectations, with Forghieri making particular reference to speed, fuel-burn and passenger comfort. The only area in which the AS350-BA surpasses the 407GX is in its luggage capacity so there are occasions that the BA will be used on flights where luggage volumes are large, or for very short flights where the 407's advantages are not so obvious but already there have been instances of some customers expressing disappointment at flying in the AS350 instead of the new Bell.

Forghieri commented that, at first, the company had investigated a LongRanger to replace the AS350 but after research and test-flights had decided it lacked the desired power for


The 407GX is a better-looking, sleeker, more modern machine that presents the image we want to portray for our customers.

Brothers – Cristian and Matteo Forghieri – owners of EliCompany.

the task. They then considered buying a pre-owned 407 from Bell, but during negotiations the move to a brand-new GX gained traction because, although the investment was huge for a relatively small organization such as EliCompany, they wanted the new helicopter to be able to remain in service for ten to fifteen years, in order to obtain a suitable return on that outlay. The GX's air-conditioning, autopilot and advanced Garmin G1000H avionics suite make it a better bet for such an extended expected service life.

The Sardinian summer market was one of the main targets in EliCompany's sights when deciding to introduce the 407GX, as it is perceived as a profitable growth area and the company's satisfaction with the aircraft so far bodes well for it's success in that market. As Forghieri explained, "We wanted to introduce the best single-engine helicopter in the market and set the highest standard for demanding clients. This is our fourth year operating VIP charter in Sardinia and already we are seeing 25-30% growth over the same period last year, so the market is telling us we're heading in

In service to date, the aircraft has already exceeded the company's performance expectations, with Forghieri making particular reference to speed, fuel-burn and passenger comfort.

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a joint partnership with Sardinian Air Service, a well-known local company that provides customer interface and bookings, along with a ground staff member, and EliCompany's input is the provision of one helicopter and either one or two pilots, with Forghieri opining that a prime reason for the ongoing success of the operation is the clear separation of roles, with no conflicting overlap between the two companies. Forghieri is highly complimentary of the service SAS ground staff provides to EliCompany. "Without the SAS ground staff we would have no idea what the next day's schedule included or be able to manage the customers. They are always on the phone organizing, arranging and communicating with us." Each evening They provide the schedule for the following day, but during the day SAS ground staff are constantly managing and amending the schedule as required by changing circumstances. When not on the phone they are accompanying the 407GX to assist in loading and unloading the VIPs – something they very much appreciate and again underlines the extra mile the EliCompany team go to create and establish the VIP clientele.

With a base about half way between the Costa Smerelda and the south of Corsica, the location is ideal for a service of which the primary business is flights between those two areas.

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With a base about half way between the Costa Smerelda and the south of Corsica, the location is ideal for a service of which the primary business is flights between those two areas.

the right direction. Customers have been extremely positive about the 407 and we seem to always get one of three common remarks from our clients. Wow, this is nice! Or Wow, this is bigger! Or Wow, this is finally air-conditioned." Forghieri explained that the choice of the aircraft's color scheme - a deep, rich, dark charcoal with metallic striping and accents - was based on the usual preferences of the VIP clientele for an elegant and dark finish. According to Forghieri, the VIP clientele is becoming more demanding, with expectations of more modern, comfortable aircraft, and an appreciation of the details like the club seating and Bose headsets provided in the GX. He estimated that around half of EliCompany's customers are Italian, with half the remainder being Russian. The rest is a mix of all nationalities and although the relatively low cost of a helicopter transfer to Cavallo (an island between Sardinia and Corsica) means that virtually anyone can take advantage of the service, the large number of well-travelled and wealthy people makes for a demanding and informed client base.

The Sardinian operation is almost a sideline for the Modena-based EliCompany, the core business of which is power-line and pipeline servicing and inspection. The VIP/charter work is carried out from a satellite base as

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Forghieri reported that between 60 and 70 percent of all flights carried out from the Sardinian base involve transfers to or from the small island of Cavallo off the southeast tip of Corsica. The season stretches from the beginning of June to the end of October and EliCompany has averaged between six and seven hundred flights each season, with durations of up to two hours each way for the occasional longer trips to destinations such as Naples and Capri. Because such a majority of flights cross national boundaries, a flight-plan is required more often than not. To facilitate this process the company uses a software program called 'RocketRoute", an online app' allowing filing of flight-plans, complete with the provision of briefing packs and operational flight-plans and all in compliance with civil aviation requirements. This allows flightplans to be filed "on the run" when last minute flights are requested.

The increased speed and comfort of the new type has already brought about an increase in the number of flights to the mainland so Forghieri expects this to result in higher demand and utilization as each season progresses. An increase in repeat business has also been observed since the Bell's introduction and one new regular client secured – a wealthy businessman who commutes in a Falcon jet and

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All EliCompany's passenger transfer operations are conducted with the comfort of their clients in mind and a standard departure involves an immediate climb to around 1,500ft for a flight to Cavallo or 2,000ft for longer sectors

transfers by helicopter. His Falcon pilot suggested he try out the GX instead of the competitor's AS350 he had been using and after a trial flight he was sufficiently impressed to transfer his allegiance to EliCompany and their new machine.

All EliCompany's passenger transfer operations are conducted with the comfort of their clients in mind and a standard departure involves an immediate climb to around 1,500ft for a flight to Cavallo or 2,000ft for longer sectors - higher than many other operators might choose - and Forghieri explained that the departure profile was chosen to increase safety, reduce the noise-pollution footprint and minimize exposure to turbulence in the interests of passenger comfort. An extra benefit of the higher altitude when using the non-a/c equipped AS350 is the cooler

ambient temperature. In addition to the statutory requirement to carry lifejackets and liferaft when more than three minutes flying time from land, the new 407GX is also equipped with pop-out floats, which add an extra safety margin for the large proportion of airtime spent over water. For the less frequent - but still regular - scenic flights, an altitude of 1,000ft is maintained to enhance the view and experience for clients. The usual work day is around thirteen hours or so, with flying operation spread over twelve hours but because so many flights are short transfers that there are always plenty of opportunities for crew to take breaks for rest or refreshments. Each machine in use does, however, usually require two pilots on duty to keep up with demand. So far only Forghieri and one other pilot are rated on the 407GX so they have been kept busy throughout the season.

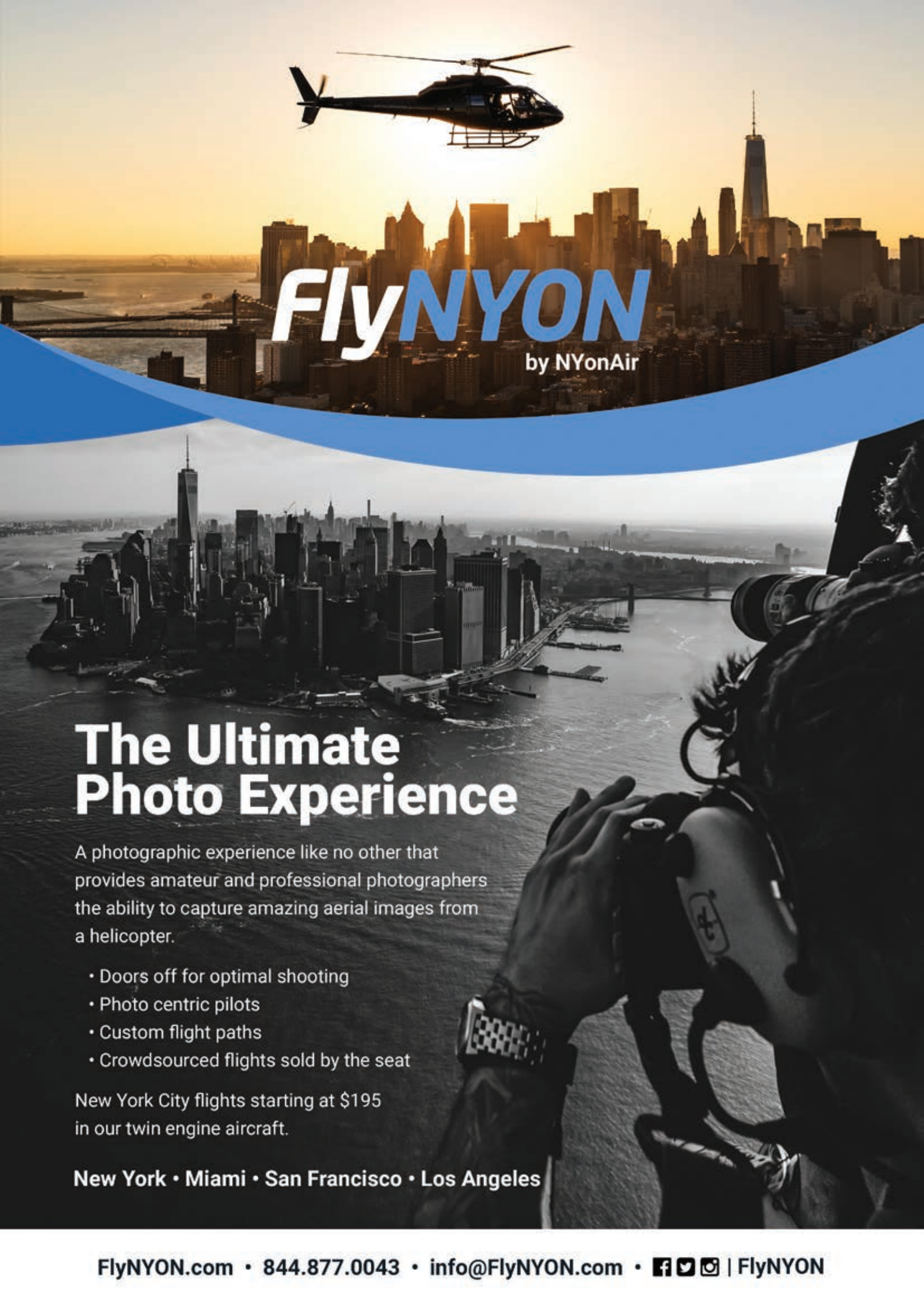
Giving HeliOps his pilot's perspective, Forghieri reported his very favorable initial impression of the 407GX. "It's sleek, fast and beautiful to fly. Much better even than I had thought it would be!" After spending more time on type, Forghieri has had the chance to appreciate some more of the type's profound benefits "The Garmin G100H avionics suite itself is a really good tool but the addition of the autopilot makes it an amazing combination and the pilot workload is reduced noticeably. The ability of the 407GX to carry full fuel and a full passenger load in the middle of summer is a major advantage the machine offers," he enthused. No matter what he's piloting though, he always enjoys the flying, as the beauty of the region, with its famous beaches and resorts is constant and spectacular. He also enjoys the challenge of working to expand and consolidate in a growing market, explaining, "Compared to France, the market in Sardinia is well behind. But that means that there is obviously the opportunity to grow the market and start to catch up." One

# Heliops

area that he sees as a potential major improvement would be the extension of the season beyond the current five months. While the cooler winter weather precludes an all-year operation, Forghieri sees no reason that an extra two months wouldn't work well if the local tourist industry promoted and marketed such a stretch.

Although the VIP and charter roles are currently a minor part of EliCompany's total operation, Forghieri admits the possibility that, if growth and expansion proceeds as hoped, it could make up perhaps fifty percent of the company business within a few years. "To be honest," he admitted, "we have been busier than we expected. In just two months we've put around 250hrs on the GX, with about another fifty on the BA. I think the arrival of the GX possibly coincided with an expansion in the tourism market and we gained the benefit from that." The new aircraft has given almost no trouble to date and the only issue – a generator failure – was rectified by replacement with a new part within 48 hours, "Not too bad at all, considering we're on an island," remarked Forghieri. He reported that the new machine is currently backed and supported extremely well by Bell Prague, while a sister company of EliCompany is currently working towards Part 145 certification for the 407GX. He went on to add that Bell in Europe has a stated goal to improve support to the levels provided in the continental USA, with replacement parts available within 24 hours.

In time, it is possible that demand will increase sufficiently for a VVIP market, with its associated requirement for a twin-engine machine, but Forghieri believes that the single-engine market is the key growth sector. Any such expansion will be welcome news indeed to Bell Helicopter if the 407GX continues to live up to expectations, as any marked increase would undoubtedly necessitate the acquisition of more machines. With other operators displaying interest in the success of EliCompany's new aircraft, it may not be long at all before Italian skies become home to a few more 407GXs. HO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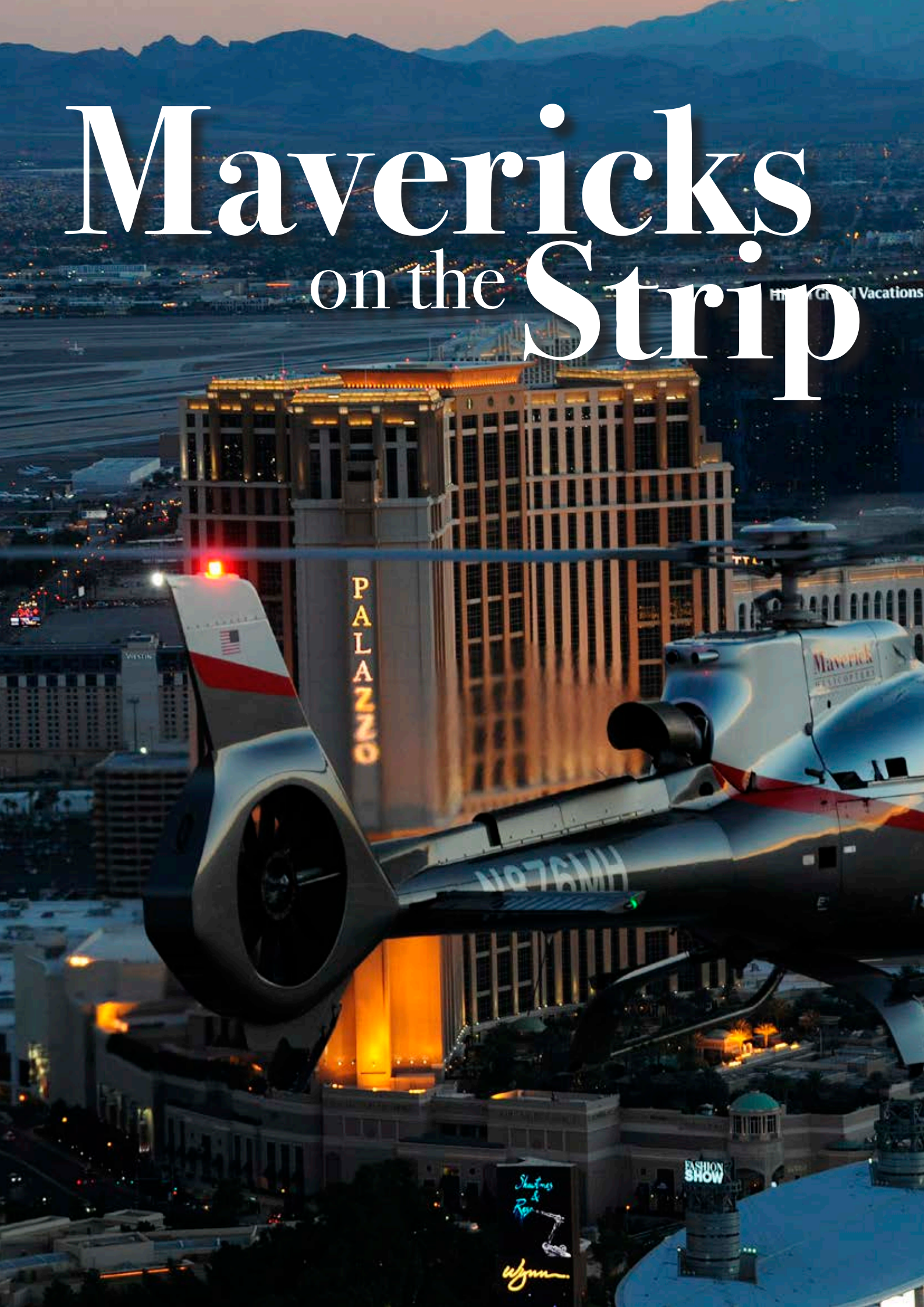
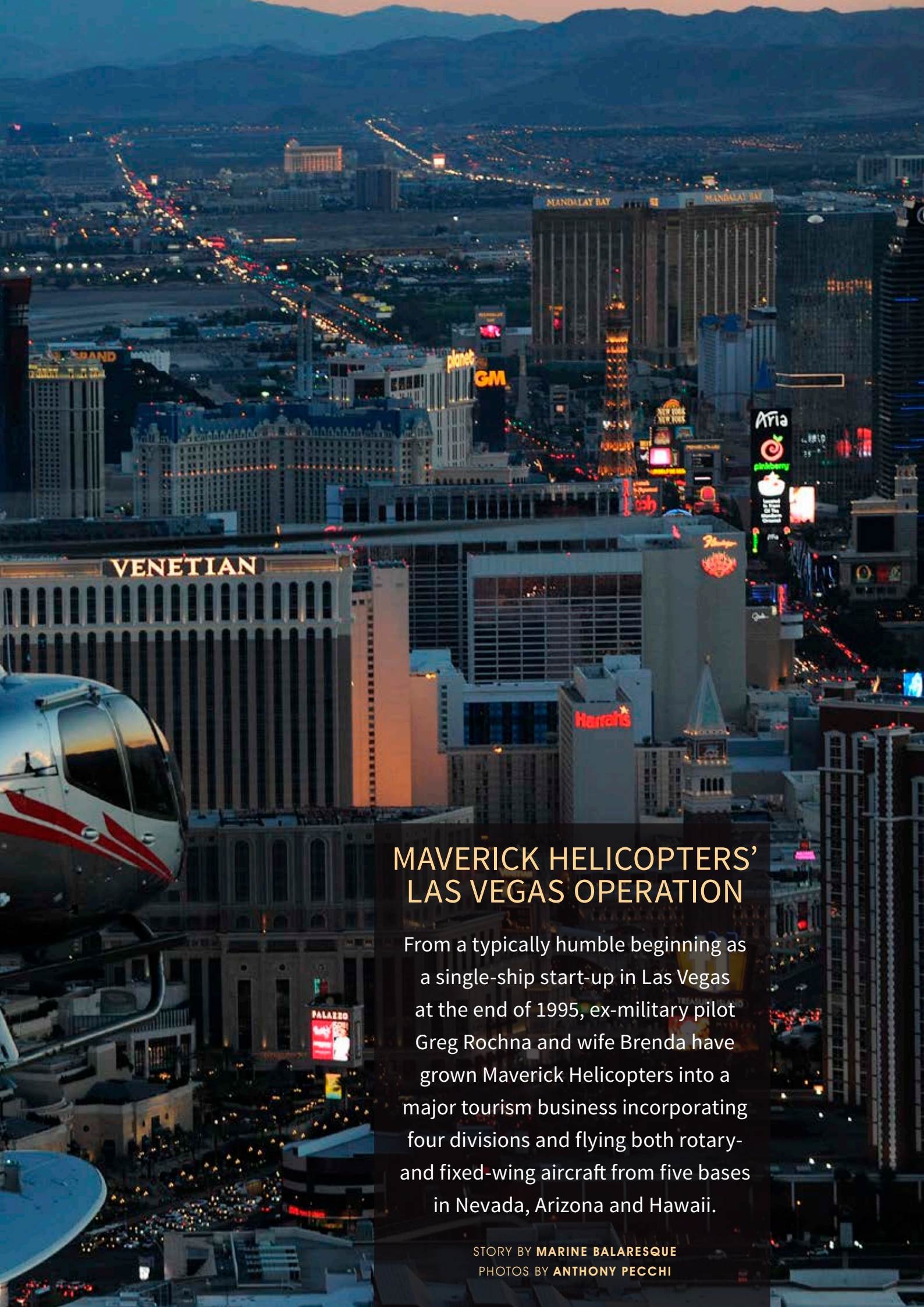
# Mavericks on the Strip






# MAVERICK HELICOPTERS' LAS VEGAS OPERATION

From a typically humble beginning as a single-ship start-up in Las Vegas at the end of 1995, ex-military pilot Greg Rochna and wife Brenda have grown Maverick Helicopters into a major tourism business incorporating four divisions and flying both rotary- and fixed-wing aircraft from five bases in Nevada, Arizona and Hawaii.

STORY BY **MARINE BALARESQUE**
PHOTOS BY **ANTHONY PECCHI**

# Maverick

## GROWING CONCERN

In just a little over 20 years, Greg Rochna's vision of bringing VIP-level service to helicopter tourism in Las Vegas has more than come to fruition. The current combined fleet of what is now Maverick Aviation Group, numbers 47 EC130-series helicopters and six fixed-wing aircraft, with around 20 of the helicopters flying tourists from McCarran International Airport, located on the Las Vegas strip. Fixed wing operations are carried out by Maverick Airlines from Nevada's Henderson Executive Airport, utilizing either 9-seat Cessna 208 Grand Caravans or 19-seat Beechcraft 1900D ExecLiners, while helicopter operations from Henderson to the Grand Canyon are flown under the banner of subsidiary Mustang Helicopters. The company recently developed its first operation outside the southwestern United States with the establishment of the company's Maverick-Maui terminal in Hawaii during 2015.

## FLEET CHANGES

The Eurocopter AS350 A-Star range was the company's fleet mainstay until about ten years ago and following a dramatic expansion

# Heliops

and replacement program over the subsequent period the entire fleet has been replaced with Airbus Helicopters, commencing with 34 examples of the EC130-B4 and then adding a further 13 H130s (previously designated EC130-T2) after the new variant's introduction in 2012. Maverick Helicopters was the first launch customer for H130 having received their first machine in December 2012. Maverick's chief pilot Jim Ogletree explained that the fleet-wide type commonality provided benefits in terms of reduced training and maintenance costs, increased pilot confidence and superior performance and safety for passengers.

Both helicopter types utilize the same airframe configuration, variable speed rotor system and fenestron empennage, but the newer H130 boasts substantial upgrades over the EC130-B4. Upgrades to over 60% of the airframe, the addition of an effective active-vibration-control system and the switch to the substantially more powerful and fuel-efficient Ariel 2D turboshaft engine result in a smoother, faster and more capable and comfortable aircraft. Not that the B4 particularly lacking in any regard with the type being one of the most popular tourist-flight platforms for several years. The large, wide cabin shared by the two models offers a roomy environment for the light single-engine class and the view from all seats is expansive. Ogletree praised the high levels of comfort offered by the H130 "The AVCS (Active Vibration Control System) built in our H130 surpasses the one on the EC130B4 and allows for a definite improvement of the flight quality", he said. "The anti-vibration system equipped in the H30 offers levels of quietness and comfort in flight that give our customers the feeling of being in a luxury sedan on a smooth road," although he notes that turbulence can still be felt in the machine when flying in strong wind conditions.

He also advises that the fenestron

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In addition to the legislative requirements, all pilots are required to undergo 8hrs classroom training and 2hrs flight-training every year, followed by a practical flight-test.

Maverick

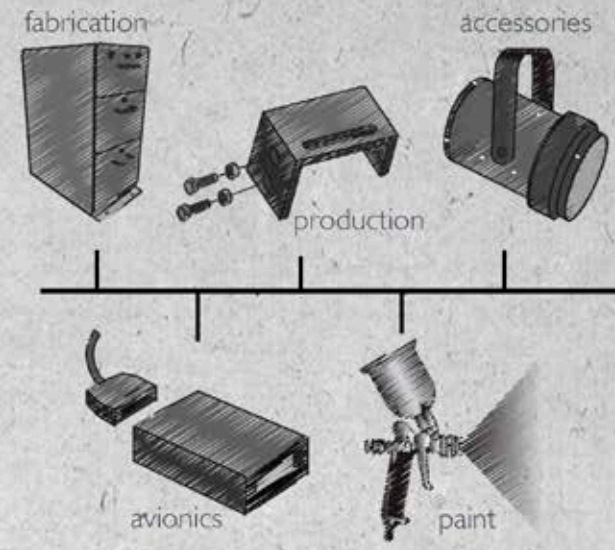
tail does provide lesser yaw authority than a conventional tail-rotor in some hover flight conditions but this is seldom an issue, as conditions that would stretch the limits of the fenestron are not usually conducive to tourist flights in any case.

Tim Hoffman is Maverick's chief of maintenance and QA manager and therefore well placed to compare the two types. "The summers here regularly feature extreme temperatures, so the variation in the two types' environmental control systems are one of the most notable differences in terms of the passenger experience," he reported. "However, the new design of the doors and especially the 2 sliding doors at the rear of the H130, which the B4 lacks, are a distinct advantage." The new door system permits access to the rear seats from both sides of the aircraft, making loading and unloading more practical and efficient. The seats of the machine appear to have been redesigned using carbon fibre, thereby creating more room in the cabin without compromising safety or comfort.

All Maverick's helicopters are fitted with tinted windows and the maximum eight seats, with all seven passenger seats being forward facing, leather-upholstered and equipped with earphones for listening to a multilingual recording explaining the history behind the various landscape features. The rear row is raised theatre-style to enhance the ambience and view for rear passengers. The machines are also fitted with onboard digital image-capture, enabling customers to purchase a recording of in-flight imagery at the conclusion of their flight; no doubt a welcome adjunct to the memory of the flight and one that can be shared with friends and family.

## MAINTENANCE

With a fleet the size of Maverick's, maintenance is a major commitment and the company operates its own maintenance facility at Henderson with around 50 full-time aircraft mechanics and engineers. The technical center includes technicians, craft designers, engine specialists, paint specialists, a quality control department and a spare parts stock worth well over a million dollars. Tim Hoffman advised that five engine maintenance personnel were fully certified by Turbomeca, enabling in-house maintenance on the fleet's powerplants so the majority of maintenance needs are met without the need to outsource. "That allows us to better control the cost, quality, efficiency and safety of our operations," he stated. "While all programmed maintenance is based on the number of hours or cycles, we conduct regular inspections on the machines and components are being changed daily." As with any large company with a serious focus on safety, training is another major commitment and the Maverick technicians are all subject to a stringent 2000-hour training program.

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## PILOTING

The minimum experience requirements for helicopter pilots to be considered for employment are 1,200hrs total time, with 300hrs turbine pilot in command. Bryan Kroten, marketing manager for Maverick, outlined the additional training that Maverick requires the pilots to take. “In addition to the legislative requirements, all pilots are required to undergo 8hrs classroom training and 2hrs flight-training every year, followed by a practical flight-test,” he explained. “They are also encouraged to seek additional qualifications and experience that will add to their aeronautical knowledge and expertise,” he added. Maverick’s fleet of B4s and H130s amasses well in excess of 40,000 flight-hours each year so both maintenance staff and flightcrew have ample opportunity to rapidly gain experience on type, with remaining current being a given.

## VEGAS

Las Vegas is regularly the host location to major entertainment and promotional events that can severely restrict traffic and choke the already busy streets, with more than 40 million people visiting the city every year. Taking advantage of their proven and well known service to VIP-level clients, alongside the tourism flights Maverick also offers comprehensive helicopter transfer and charter services. These are in high demand by those wishing to avoid the frequent congestion of the road network.

Jim Ogletree also pointed out that

By far the most popular destination is the Grand Canyon, but many customers book shorter flights to Hoover dam or around the resorts of the strip.

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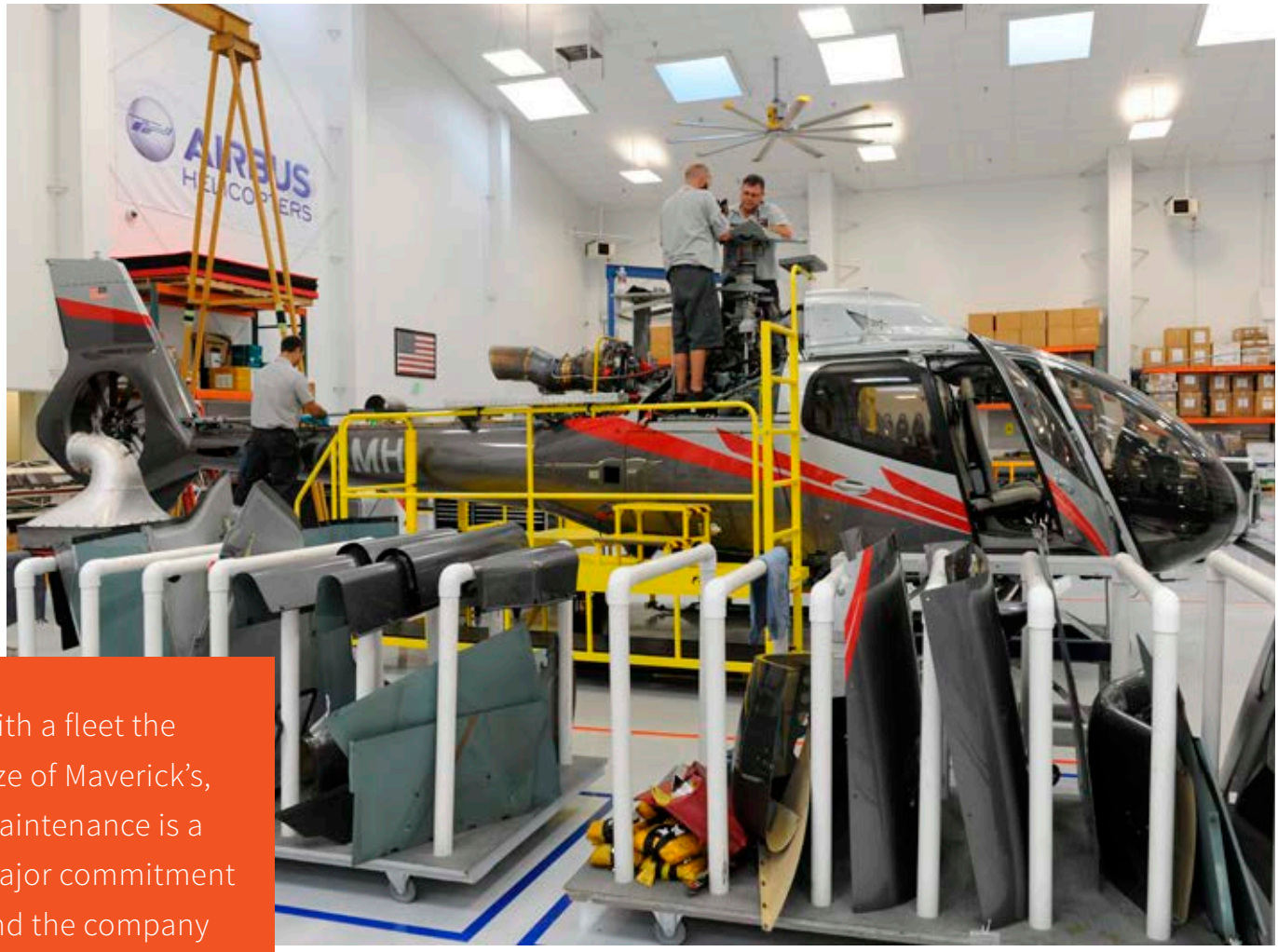


With a fleet the size of Maverick's, maintenance is a major commitment and the company operates its own maintenance facility at Henderson with around 50 full-time aircraft mechanics and engineers.

most of the most famous national parks in the southwest USA are within a few hours flying time so charter flights are in regular demand and in fact, the core of the Las Vegas operation is still flying the tourist and flight-seeing. Kroten reports that massive growth has been observed in the last four years, accompanied by a change in customer type. "We've noticed a reduction in the number of private individual clients, but an even greater increase in the number of group bookings, from business seminars, corporate meetings and the like."

Ogletree expanded on Kroten's comments, explaining that the global economy has had a noticable impact on the number and type of tourists in Las Vegas. When Maverick first started flying tourists to the Grand Canyon, the passengers were mostly Americans. During the recession at the end of the 1990s when the US Dollar fell in relation to most other currencies, there was a huge influx of Northern Europeans – mostly British - who came to Las Vegas. Over the years, the popularity of Las Vegas with European visitors has kept growing, regardless of economic fluctuations. "During the recent recession we started to see more visitors from Canada, Australia and South American countries such as Brazil and Argentina." Although Las Vegas has also witnessed a growing number of visitors from Asia, particularly China, this has not been reflected in client numbers, according to Ogletree. "We rarely fly Chinese passengers. I don't know if it's due to financial or cultural reasons or to the traditional fear of helicopters."

## TOURS

The proximity of McCarran International Airport to the heart of


the Las Vegas strip means that the full range of visitor demographics have ready access to the services offered by Maverick, resulting in a widely varying demand for flights, depending on expense and duration. As a result, Maverick offers a quite a range of tourist and scenic flights.

Jim Ogletree reports that the company has an average daily passenger count of around 400, although the resources on hand allow for an absolute maximum of around 800 passengers on 175 separate flights. By far the most popular destination is the Grand Canyon, but many customers book shorter flights to Hoover dam or around the resorts of the strip.

Bryan Kroten also observed that the demand from the general public, particularly with the widespread use of the internet as an international planning and booking tool, is steadily growing and the significant increase in activity has led the company to include flights as short as 15 minutes into their repertoire. “Our aim is to offer a flight or service for every foreseeable type of client.”

It would seem that their recent fleet upgrade will go a long way towards ensuring that Maverick Helicopters achieves that goal. **HO**


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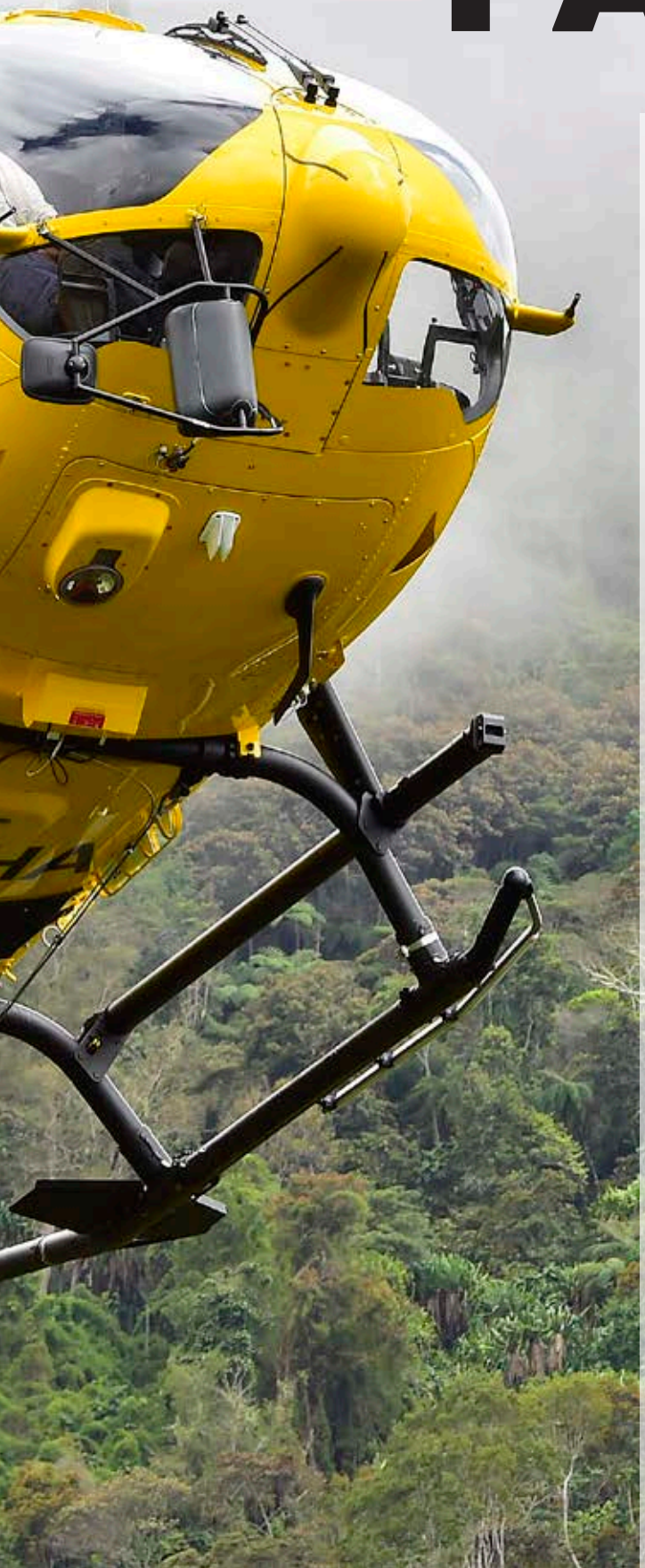
# BOLD STEP IN THE PACIFIC



## PACIFIC HELICOPTERS INTRODUCES THE H145 TO PAPUA NEW GUINEA

The Airbus H145 is becoming a popular choice for demanding twin-engine utility applications around the world. It is the latest generation of aircraft built under the BK117 Type Certificate and the BK117 lineage is plainly visible. As Pacific Helicopters introduces the model to its fleet, Papua New Guinea can now be added to the extensive and growing list of countries in which the new-generation machine serves.

STORY BY **LEIGH NEIL** | PHOTOS BY **NED DAWSON**

The H145 is Airbus Helicopters' latest offering in the 4-tonne twin-engine class and its introduction into Pacific Helicopters' fleet marks the first occasion in many decades that the very newest offering in contemporary helicopter technology has been put into service in PNG.

Papua New Guinea (PNG) provides a particularly inhospitable environment for helicopter operations, as Mal Smith, CEO of Pacific Helicopters knows well, having flown in the rugged country for the last forty-five years. Dense, virtually impenetrable jungle carpets steep, mountainous terrain and little road infrastructure exists so helicopters are the only viable tools to support the large-scale mining and oil exploration/recovery operations that are prevalent throughout the country. It is a difficult and demanding location in which to fly, with countless wrecks dating back to WW2 rusting quietly and invisibly away, deep in the jungle.

Smith has been flying in PNG since first arriving in 1969 as a 2,000hr army pilot on Bell 47s, following active duty flying in Vietnam. His total is now an impressive 17,000hrs and amazingly, despite PNG's reputation for destroying aircraft and pilots, after his 45 years flying helicopters in PNG, he himself has never had a crash or major incident there. Smith joined with several other Australians to put the core of Pacific Helicopters together and from its inception with a single helicopter on April Fool's day in 1975, the Goroka-based company's fleet quickly expanded, peaking at 55 helicopters about twelve years later. Smith is now the sole remaining original partner and is assisted by his indefatigable 'number-two', Nicole Demosky, who aids Smith in the day-to-day operations of the company and worked closely with him when the decision was made to add Airbus Helicopters' new H145 into the fleet.

The H145 is Airbus Helicopters' latest offering in the 4-tonne twin-engine class and its introduction into Pacific Helicopters' fleet marks the first occasion in many decades that the very newest offering in contemporary helicopter technology has been put into service in PNG. It is a technologically advanced and complex machine that's carries a hefty price tag for utility work, so why did Pacific Helicopters make that choice? As Smith explained, evolving client requirements meant the company was not really in a position that left them a lot of options for new platforms. "We've looked at a lot of information on different types over the years but nothing until now has had the required performance with genuine hot-and-high capability," he said. "We were always looking for a Category A certified machine capable of operating at Performance Class 1 in this environment because we knew that was the rising trend but everything that we looked at was either too big for us or it had wheels. Then this (the H145) came along. It's on skids so is capable in bush operations and it has the true performance. It was a no-brainer after that."

It is a difficult and demanding location in which to fly, with countless wrecks dating back to WW2 rusting quietly and invisibly away, deep in the jungle.

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ALPHA


We've looked at a lot of information on different types over the years but nothing until the H145 has had the required performance with genuine hot-and-high capability

Previously, Smith had added the BK117 850D2 to the Pacific Helicopters fleet to fill a gap in capability that some clients were demanding. That earlier type was not, however, able to provide the complete package that Smith was seeking. Not only is the BK117 unable to meet full Cat-A performance under all required operating conditions, it is also an older type that fails to meet a now-common oil and gas customer requirement for airframes less than 25 years old. According to Demosky, the ever-more stringent mission-specifications of clients in the oil and gas industry were rendering Pacific's entire fleet either under-performing or obsolete for their purposes. The age requirement in particular frustrates Smith. "We send our aircraft to Alpine Aerotech and if you see one of our 212s back from a major overhaul, it's like a factory built machine," he opined. "The oldest component on it is the data plate and everything else has a life limit. If you do a proper major they come out like brand new again." Regardless of Smith's feelings on the matter, he and Demosky knew that the only way to compete long-term in the oil and gas support role was to add an aircraft type to the fleet that complied with the clients' specifications. They looked at other types including the Bell 429, but in the end the H145 turned out to be, in Demosky's words, "...the best of the best for what we wanted the aircraft to do."


Mal Smith and some of his great team at Pacific Helicopters pose with the H145 on the ramp at Goroka.

Pacific's criteria for selecting a new type were stringently demanding, to say the least. "We wanted something, that was versatile enough for the utility role but also good as an IFR platform." The H145's ability to operate effectively in a nine-seat configuration has already impressed Smith. "We came out of Moresby with seven passengers, full fuel and at Gross Weight. We couldn't squeeze another bit of freight into the cargo areas," he recalled. "As full as we were, it just climbed out and the thing that amazed me about this machine is that we climbed to almost 14,000ft and it was still just cruising so well. I couldn't believe it was doing about 120kts and still just so smooth." This example is particularly relevant, as for the majority of PNG operations the terrain tops are around 10,000ft and it is therefore commonplace for flights to climb to 12,000ft or more.

There is no doubt that the choice of the H145s has been a 'gutsy' call from Mal Smith. Bearing in mind that the selection and acquisition of the new helicopters has been carried out in the absence of any existing contracts or agreements from the intended client-base, one has to admire his determination to secure a substantial portion of the oil and gas work in the region. Demosky listed the requirements that the oil and gas companies have dictated, "They want Cat-A performance, twin engines, two pilots, IFR capability, aircraft under 25 years old, the ability to longline and skid landing-gear. They want it all from one machine and they all told us 'Fulfill this and we'll talk.' Well, now we have it, we're the first ones to do so and it's exciting!" Such a serious commitment to the new type means that it will play an ever-increasing role in Pacific's fleet as time progresses. The Pacific Helicopters fleet currently boasts around 24 helicopters in PNG, but the total fleet numbers almost 50 machines as operations are now spread widely, with machines based with other companies and overseas, as far afield as Israel and China. When asked to summarize his view of the H145, Smith described it as a new-generation helicopter for young,

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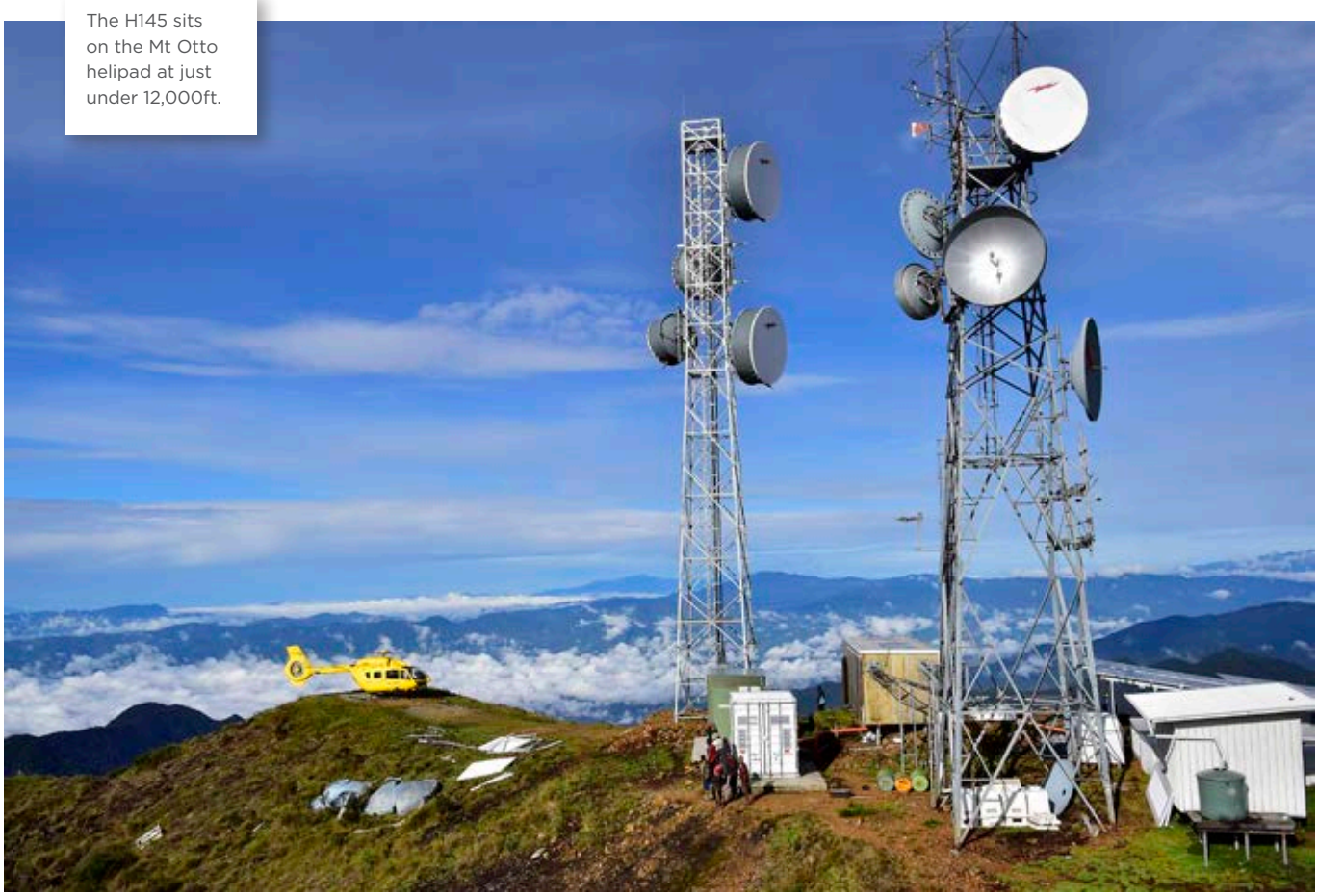

The H145 sits on the Mt Otto helipad at just under 12,000ft.

Lance Donnelly was the first to long-line in Pacific's H145.

new-generation pilots. "It's not for old pilots like me who like to have their hands on it all the time. I see that helicopter hanging around for at least ten years before they can find anything to beat it." In terms of longevity Smith has few concerns. "From what I've seen, it's a well-built and solid product and I have no concerns about that. The rain and humidity in this operating environment will be the biggest challenges I think, so if there is anything I'm concerned about it would be the computers and electronics, but only time will tell," he explained. "I'm happy with the purchase, I'm happy with the crews, I'm happy with everything.

As a place to live, PNG is not really the wild and dangerous land that seems to be the perception held by many. As far as Smith is aware, there are no longer any tribes remaining which practice cannibalism, although jokes about the subject are not uncommon. "They don't need to be cannibals any more," quipped Smith.

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Pilots will use between 100ft and 200ft longlines in the jungle because of the tree height.

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# Heliops

PACIFIC
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“They can get tinned meat now.” He went on to add in an aside that he did learn many years ago from one cannibal tribe that the best and most tender meat on a man was apparently that from the cheeks. “That’s kind of scary though,” remarked Demosky in response, “to think that they’ve eaten enough people to know that the most tender parts are the cheeks!” One of Smith’s very good friends is Jimmy, a Singaporean national who has always refused to visit Smith in PNG. Smith jokes that when he pressed him to come and visit, Jimmy adamantly refused and said in explanation, “You just want me to be a Chinese take-away.” It is Smith’s opinion that much of the misunderstanding about life in PNG stems from the desire of many to safeguard the myth, simply in order to perpetuate the common practice of paying danger money to overseas employees stationed in the country.

One of the first pilots to fly the H145 in PNG is New Zealander Lance Donnelly,

# HeliOps

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I don't think any helicopter is one-size-fits-all, but this is a great compromise and once a customer has seen what this machine can do, I've no doubt they'll go for the 145 every time.

an 11,000hr pilot with experience flying Offshore and EMS work on the BK117 and Bell 212 and police work in the NZ Police 'Eagle' helicopter,. After about four years as a job-sharing pilot for Pacific he is now full-time and is both impressed with and enthusiastic about the new machine, although all his comments were prefaced with the proviso that the machine has only been in service for barely over a week. "So far it's performing really well, even beyond our expectations," he reported. "Because it's a new model to New Guinea we've got a steep learning curve as we establish exactly how it performs in all the various flight phases we require of it. I must say that, so far, it's proving to be very, very good in this environment. I had initial concerns about the fenestron at altitude –that's probably only because I've never operated a fenestron before this – but this morning we were up at 11,600ft at around ISA+20, so with a density altitude around 14,500ft and it was awesome. We were about 300kgs under the maximum weight we could carry up there and I was pleasantly surprised at how well it performed doing pedal-turns both left and right." Donnelly has substantial experience in BK117B2 variants and considers the 145 to be far superior.

"The long-lining is another learning curve, just because every new aircraft requires a slightly different set-up to work out of. It's a very stable machine in the hover, in fact in all phases of flight and it's a lot more stable than the 117. Because the fuselage is wider than the 117 you do have to lean out a little further, but when you've got it set up the way you want it, it's as comfortable as any other machine to long-line out of. A nice feature that helps is the electric mirror that allows you to see the hook and about the first hundred feet of the long-line. The aircraft certainly has


PACIFIC
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PACIFIC

The long-lining is another learning curve, just because every new aircraft requires a slightly different set-up to work out of. It's a very stable machine in the hover, in fact in all phases of flight and it's a lot more stable than the 117.

oodles of power." Donnelly is also highly impressed with the way Airbus Helicopters has set up the engine operation procedure and instrumentation. "There's a blue OEI line on the FLI and as long as you have that above your lubber line you've safeguarded the integrity of the second engine, so if you lose an engine in any phase of flight you don't have to physically do anything." He described just how well the aircraft performs with one engine inoperative. "When I was with the German instructor, I asked about run-on OEI landings and he said it wasn't necessary," recalled Donnelly. "I questioned that and he proved it to me. At maximum gross weight and around 200 – 300ft he lost one engine and we just flew around a bit and then came back to a hover. I tell you, it's got power to burn!" Even the fuel-burn has proved to be better than initially expected with reported averages around 230-240kg per hour during twenty hours of fairly hard work. This compares closely with the burn of a BK117-850, despite the 145's substantial performance gains.

"Most people think we don't fly IFR in PNG but we actually do quite a lot and the H145 is a fantastic IFR machine. The four-axis autopilot and Helionix system is just state-of-the-art. It's just one of the reasons that the 145 is such a versatile aircraft. In the morning I can be long-lining at 11,000ft, then in the afternoon I can be flying IFR offshore, all while fully offshore equipped." Like Smith, Donnelly sees the H145 rapidly supplanting the BK117 and becoming the fleet mainstay type. "I don't think any helicopter is one-size-fits-all, but this is a great compromise and once a customer has seen what this machine can do, I've no doubt they'll go for the 145 every time." Although the H145 is a development of the BK117 line, there is now very little similarity between the two aircraft. Donnelly noted that, apart from the transmission and main rotor-head, they were two very different aircraft from a pilot's point of view. "It's not 1970s technology like the BK, this is today's technology. Pacific is leading the way in new technology and in the way they operate. The training we have had with Airbus is fantastic. I'm very keen on the new technology and the whole culture that Pacific Helicopters has got going on here is very satisfying, right from the top on down."

Donnelly has yet to find anything major about the H145 that he doesn't like or that gives him cause for concern. "Anything I've found so far has been an issue of me learning the machine and honing my techniques," he admitted. "Things like slow maneuvering, pedal-turns in the hover out of ground-effect; that's the whole point of all the training and testing we do when we put a new model into service." In summary, Donnelly described the H145 as beautifully responsive and admitted that, despite his initial concern, he was very impressed with the fenestron.

When the first customer contract is commenced, Mal Smith has no doubt that the client will be getting the best possible service that they could hope for. "The aircraft is right, what my guys have done to put it into service is right, the training in Germany is right and everything has been done as professionally as possible." HO

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# GLASS SKIES

## Ivana Gorlin

MY STORY


EVERETT
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## BY THE EDITOR

Being one of the now 'older generation' in the helicopter industry, I have to admit I never understood nor really considered the challenges that women have had breaking into the helicopter industry until recently in a conversation with Ivana Gorlin who told me some of her experiences. As a father of a young woman, I would like to think that my daughter would be able to achieve whatever she wants based on her ability and not be advanced or held back by the simple genetic fact that she is a woman. Yet after talking to Ivana, who by the way has had to be almost coerced into revealing her experiences, I realised that I had been guilty of gender bias during my career. While I happily taught many aircrew, male and female, I had quietly hated the idea of women at sea in the navy because of the change in operational culture it encouraged. Camaraderie was diminished and guys couldn't do what they had done for centuries. I realise now that the change in the culture I didn't like was more a reaction to societal change that was happening and it was easy to focus on the women as the cause of those 'unwanted' changes. The real issue was the male attitude to females in society in general. The military had been a magnifying glass of society and now, rather than reflecting societal values, the military was being used to drive changes. Unfortunately, many in the military were not ready for that responsibility. The media attention was unwanted, often unfair but in the end, essential to force change. It was a blunt instrument that actually on one hand drove the change but on the other made many resentful of the change and held it back.

Has the military got it right yet? Unlikely as society has not fully moulded to the new paradigm but in many ways, it is probably well ahead of the civilian side of the industry. It seems that the civilian helicopter industry has just as many preconceptions, biases and bigotries to address. It is an important issue that should be laid bare.

With a Masters in Aviation, Ivana is articulate and very capable pilot. So we have asked her to write a series of articles and columns examining the experiences of women in the industry from around the world.

Ivana Gorlin was raised in Melbourne and caught the helicopter aviation bug relatively late, in her early 20's. Like many women these days, she has served in the military and operated in many countries around the world, flown a variety of helicopters, in a multitude of roles. This is a slice of her story and her introduction to the HeliOps readers.

We look forward to hearing the views of different people in the industry as it is hoped this series will encourage serious discussion.

# Ivana Gorlin

## THE FIRST 'FIRST'

Women helicopter pilots are nothing new. In 1937 Hanna Reitsch set the first 'first' for women in the helicopter industry by piloting what is generally considered to be one of the first practically functional helicopters – the Focke-Wulf Fw 61. While Reitsch's demonstration of the Fw 61 during the 1938 International Automobile Exhibition in Berlin is perhaps most notable for it being the first helicopter flight conducted within a fully enclosed arena, it also served to affirm Reitsch as one of the world's first helicopter pilots and certainly the world's first female helicopter pilot.

It is somewhat surprising then that despite the passage of some 78 years the pursuits of women helicopter pilots are still notable for achieving various 'firsts' around the world. 'First' in the country, 'first' in the organisation, 'first' on that type of helicopter, 'first' to attain captaincy, 'first' in the military, 'first' to be an instructor or test pilot or combat pilot or rescue pilot or the numerous other possibilities available to helicopter pilots.

Being the 'first' typically means battling prejudice, managing stereotypes and resisting subconscious bias. In Reitsch's case she focused her passion and determination to hone her flying prowess in order to quash any gender-based resistance she encountered. She quickly established herself as highly skilled helicopter pilot – being a woman was not a consideration.

Reitsch was fortunate in that her becoming a helicopter pilot was coincident with the introduction of helicopters. The practice, whether formal or informal, of preventing women from piloting helicopters had yet to be implemented – that was to come later. She enjoyed positive publicity making her popular with her both comrades and compatriots alike.


Yet for the women that followed, the publicity was not always favourable, often focusing on the novelty of the achievement rather than the promotion of women pursuing careers in helicoptering. Media attention is a double-edged sword; on the one hand calling attention to the achievement demonstrates it's accomplishment as not being gender reliant; but then inequitably distinguishes the achievement of the female over the male counterparts who preceded her. While the former may somewhat normalize the inclusion of women in the helicopter industry and encourage a move towards gender balance; the latter has the potential to give prominence to the imbalance in a manner that further differentiates and highlights the individual from her colleagues, antagonises, and discourages inclusion.

## MY OWN EXPERIENCE

I had hoped to avoid the predicament imposed by media attention after earning my wings on an Australian Army Blackhawk, particularly given that a good number of other women across the world had blazed that trail well before me, but unfortunately that was not to be the case. In its wisdom, the Australian Army decided that the best way to


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assuage the adverse press they'd been encountering after 18 service personnel lost their lives as a result of two Blackhawks colliding mid air was to thrust me, it's first female Blackhawk pilot, into a media circus. The Army's message (intended or otherwise) was that flying Blackhawks couldn't possibly be as dangerous as the media made out, if a girl was doing it. It was not at all surprising that the media attention exacerbated the already obvious resentment from those in the Australian military reluctant to accept the Government's 1992 change of policy allowing women to serve as Army pilots. The surprising element was the derisory reason for the resentment, explained to me quite some time later by a colleague, that my having graduated to Blackhawks somehow diminished their kudos for the same. I have since discovered that downplaying qualifications, knowledge and experience may have gone someway to mitigating this unintentional slight. The difficulty there is that it is a pilot's qualifications, knowledge and experience that should instil confidence in operators and passengers alike. Unfortunately it seems 'likeability' is too often the primary measure of competence.

Despite having been in this industry for over 20 years, I am still trying to find a balance between mastery and

I had hoped to avoid the predicament imposed by media attention after earning my wings on an Australian Army Blackhawk, particularly given that a good number of other women across the world had blazed that trail well before me, but unfortunately that was not to be the case.


# Ivana Gorlin

likeability. In her book Lean In, Sheryl Sandberg describes the decades of social science studies that have confirmed that men and women are characterised in opposition to each other. A woman successful in a male dominated industry violates stereotypical expectations of women resulting in her being disliked. Disliked not only by those she works with, but also by both men and women in broader society.

But why the bother with likeability? The long and the short of it is employability. It has been reported that that men are often promoted based on their potential, while women are generally promoted based on past accomplishments and likeability. It's not an easy ride getting a gig as a helicopter pilot nor, in my experience, is it easy keeping one (or even wanting to keep one for that matter).

Sandberg writes "for men, professional success comes with positive reinforcement at every step of the way [but] for women, even when they're recognized for their achievements, they're often regarded unfavourably". We see this often in politics, entertainment and technology. To this day, I continue to experience it in aviation.

Just the other night, we were tasked to a primary retrieval of a 15 year-old male who had been bitten by a brown snake. It was a relatively high risk and challenging retrieval from an aviation perspective for a relatively minor medical affliction (given the appropriate treatment he received on scene prior to our arrival). While being loaded and secured into the aircraft, when the patient came to understand that I was the pilot, he turned to the doctor paramedic and asked whether one of them could fly instead. Normally I would spend some time with the patient trying to ease their concerns by explaining my experience but on that night there was no need, because the crew quickly jumped to my defence. I have no doubt that the crew's primary concern was to mollify the patient, but in so immediately and frankly lauding my piloting experience they unwittingly

Despite having been in this industry for over 20 years, I am still trying to find a balance between mastery and likeability.

pilot as the contrast in environment between Australia, The Solomon Islands, Kenya and Tanzania, Iraq and Scotland. Despite my career having been directed by circumstance far more than by design, I feel fortunate to have experienced such diversity. The exposure to various operations, operators, crew rooms, ancillary courses, climatic and environmental conditions, aviation legislation, aircraft manufactures, helicopter types, clients and of course pilots has considerably broadened my skills, knowledge and experience.

It is in the comparison of both the differences and similarities that I have learnt some of the lessons I hold most valuable.

Not all of the challenges have been specifically aviation related. I believe that any minority in the workplace would experience similar challenges.

Being part of the team was incredibly important to me, being one of the 'boys' was not a compromise I was either willing or capable of making. Enduring the typically unrefined crew room banter of laddish aviators in order to pick up the pearls of wisdom that emerge from time to time was acceptable to me, engaging in typically often unruly behaviour was not.

## GENDER BIAS

The subconscious gender bias within the industry is simply a reflection of greater society and it has been the case that commonly resistance also comes from women outside the industry. In part this is due to those near to the industry (wives, partners etc.) being uncomfortable with the mixed accommodation necessitated


5Y-EXI

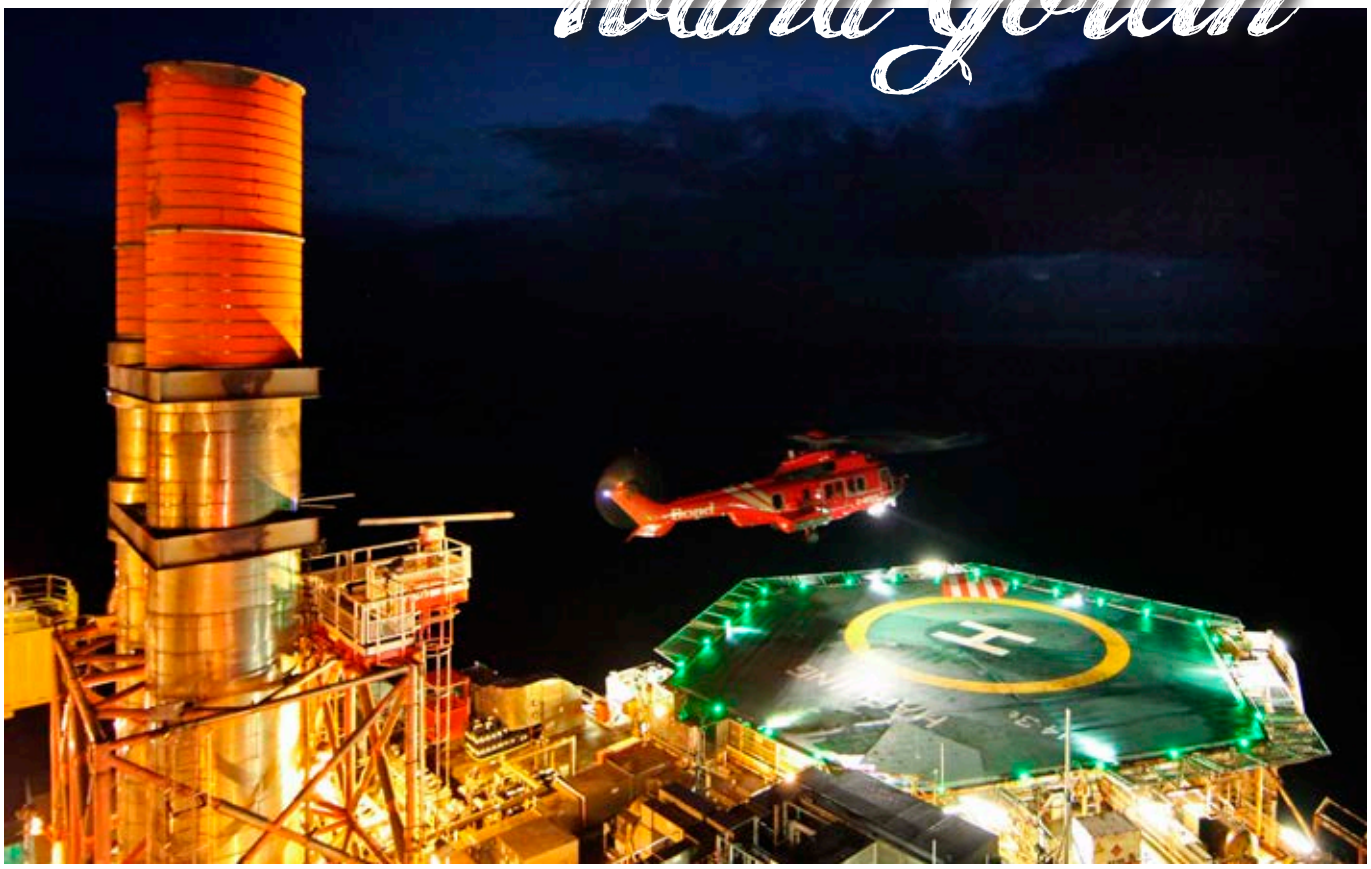
The result of the internalization of unfavourable messages meted throughout a woman's lifetime can be a lack of professional self-confidence. While intellectually I rationalise that I am a capable and competent pilot, it can be a struggle to actually feel that way – which is why even the most seemingly insignificant acceptance means so very much.

provided me with very welcomed reassurance. The fact though that the patient had those biases and the crew had to jump to my defence highlights the intrinsic societal issues and the challenges many women face.

## A WOMAN'S PLACE

The result of the internalization of unfavourable messages meted throughout a woman's lifetime can be a lack of professional self-confidence. While intellectually I rationalise that I am a capable and competent pilot, it can be a struggle to actually feel that way - which is why even the most seemingly insignificant acceptance means so very much. I have been blessed in my career that I have had the support of a number of commanders, chief pilots, colleagues and clients

# Ivana Gorlin




While the constant exposure to the subconscious gender bias of the profession, eminently evident in the language, has at times had an impact on my both professional and personal well-being, it has never been enough to remove myself from it entirely. Flying is just too exhilarating to give up.

along the way. While often that support was notable simply for the absence of gender bias, those occasions where I received empathy, reassurance and encouragement remain memorable.

Through reconnecting with an Army Pilot Course-mate recently I learned that he'd had a conversation some many years ago with the most senior Aviation Commander at the time, who also happened to be the chair of the selection panel for Army pilots when I

went through the process. My course-mate revealed the Brigadier had said words to the effect that his job would be much easier if other pilots were more like me. The revelation floored me for a couple of reasons; firstly that the Brigade Commander had made such a comment and secondly that my course-mate would recall such a conversation after all this time. I remember thinking that I wished that I'd been told way back then, because it could have had made a real difference to my professional self-esteem, but on further reflection I concluded that there must have been others along the way quietly championing my cause and even if unknown to me they did make a real difference; for that I am grateful.

## A CAREER MOST VALUED

Both in spite and because, of being a woman in this industry my career has been markedly diverse. Unlike many other pilots my enthusiasm for flying did not start when I was a child, but rather by chance as a university student. An unexpected flight in a helicopter had such an impact that I just 'knew' that I had to pursue it as a career. I am obligated to a rather unique combination of naivety and obstinance in my pursuit of a commercial helicopter pilot licence, for there was otherwise no sound reason for it. It was the early 90s, Australia was in recession, I had very little money, and gaining a job in the civil industry appeared highly unlikely. Fortunately for me, not long after completing commercial licence training, the Defence Force opened their helicopter doors to women. Despite successfully completing the selection process, I was advised I was not competitive enough on my first application, but managed to secure a position on pilots course the following year.

Since then I have had some extraordinary adventures. With the Army I flew not only a diverse range of sorties over a good part of Australia, but was operationally deployed to Papua New Guinea, West Papua (Indonesia) and East Timor. As a civilian pilot I have worked in general aviation, media, paramilitary operations, offshore oil & gas, marine pilot transfer and emergency medical services. Each as unique in their requirements of a

by operational deployments, in part to the stereotyping of the job itself, but mostly I believe due to the unusualness of circumstances. It is disappointing that even now in 2015, both within and outside the industry, most comments I receive relating to my profession are gender based. I understand they are not malicious in their transmission, never the less they have become tiring after 20 years. The up side is that it's a great conversation starter and I am always flattered when people want to know more about what I do. The danger is always that, given an opportunity, I could bore any listeners with my take on the fabulousness of flying helicopters. And I am particularly fond of encouraging young girls, especially those not aware it is an option for them, to consider helicoptering as a career.

While the constant exposure to the subconscious gender bias of the profession, eminently evident in the language, has at times had an impact on my both professional and personal well-being, it has never been enough to remove myself from it entirely. Flying is


Ivana Gorlin

just too exhilarating to give up. There is a sense of freedom in being airborne in a machine that is not constrained by airports and flight routes and routine schedules. Even after 20-odd years of flying helicopters the simple pleasure that comes from being able to coax such an engineering phenomena into flight remains enlivening. I love the perspective that comes from being a few hundred feet above the earth. I have had the great privilege of flight over some of the most striking landscapes and seen some glorious sights. Yet the best (and sometimes worst) part of my journey has been the people I've met along the way.

## WOMEN SUPPORTING WOMEN

Without a doubt the growing, albeit slowly, number of women helicopter pilots will continue and as it does the ensuing normalisation will encourage even more women to the point that eventually the numbers will be balance. It will be interesting to see where that might take the industry.


The promotion of women in the helicopter industry has been championed by those first few who understood the importance camaraderie in an industry where they were a significant minority. Just 13 charter members from three different countries came together to form the Whirly Girls in 1955 with an aim to share information. Since then the not for profit organisation has grown to well over 1500 members from 44 different countries. Promotion is now done through "scholarship awards, mentoring, public appearances, press releases, magazine articles and informational displays in aviation museums" but as always the facilitation of exchange of information among women in helicopter aviation remains a core organisational goal. **www.whirlygirls.org**

While not specific to helicopter pilots, the Women in Aviation International non-profit organisation established in 1990 is also dedicated to the promotion of women pursuing careers in aviation through opportunities in networking, education, mentoring and scholarships. They provide resources not only to assist women in aviation but also to encourage young women to consider aviation as a career. **www.wai.org**

Likewise through the publication of articles featuring female aviators, the Woman Pilot Magazine, established in 1993, profiles the accomplishment of women in all aspects of aviation including the experiences and lives of women helicopter pilots. **www.womanpilot.com**

Here at HeliOps they believe that exploring the perspective of women who have pursued careers flying helicopters will make an interesting and informative series. The intent is to examine the careers of the remarkable women in the industry around the world and explore their perspectives on the various challenges they have faced and the differing approaches they've taken to overcome them. HO

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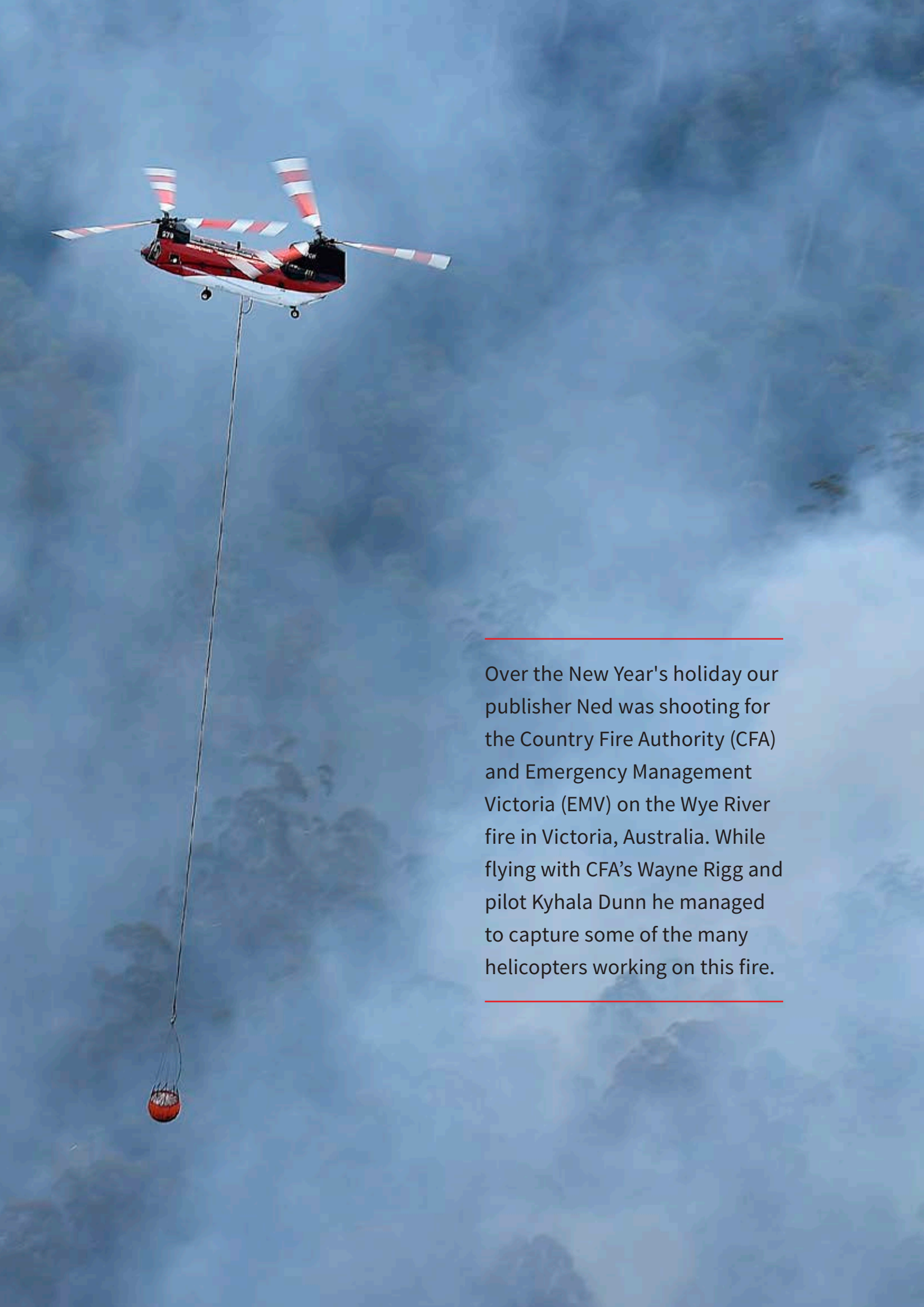
# THE WYE RIVER FIRE



Over the New Year's holiday our publisher Ned was shooting for the Country Fire Authority (CFA) and Emergency Management Victoria (EMV) on the Wye River fire in Victoria, Australia. While flying with CFA's Wayne Rigg and pilot Kyhala Dunn he managed to capture some of the many helicopters working on this fire.

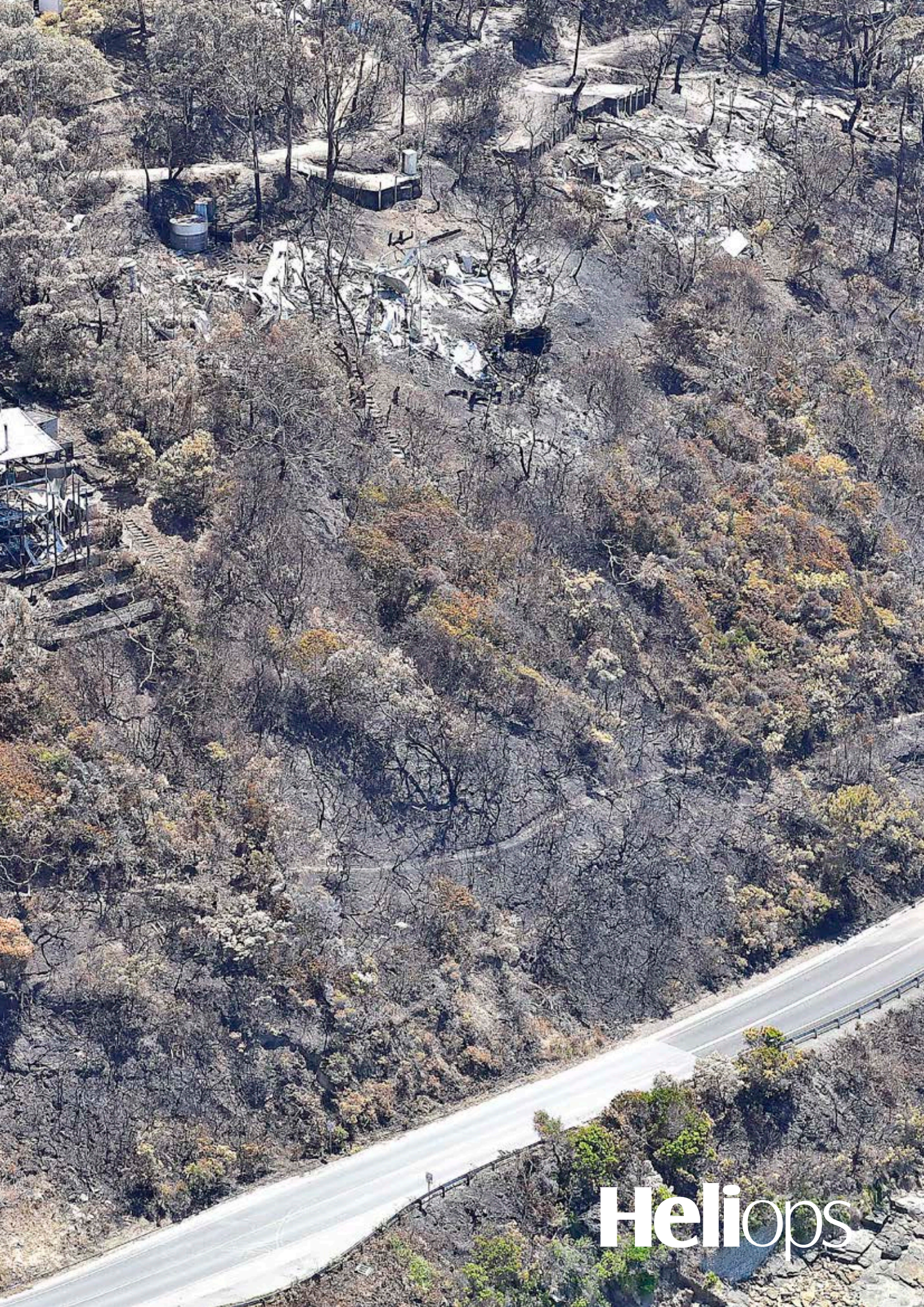
FIRE
Wye River
Jamieson Track

START DATE
19 December 2015

DURATION
34 days

SIZE
2,515 ha

# THE WYE RIVER FIRE


Heliops


# PURGATORY


S64E
ERICKSON AIR-CRANE


Heliops


## AIRCRAFT TYPES USED

| | |
|---|---|
| S61 | 2 |
| Bell 204 | 3 |
| Bell 412 | 1 |
| S64 | 1 |
| UH1H | 1 |
| Bell 212 | 3 |
| CH47D | 1 |
| AS350 | 8 |
| AS355 | 1 |
| C130Q | 1 |
| L100 | 1 |
| RJ85 | 1 |


Heliops

COULSON

LOSSES

116 Houses

CAUSE

Lightning

# THE WYE RIVER FIRE


FAH
JOHN MURRAY
PILOT


343


310


FIREBIRD 312
HELI


Rachel Maree
RFC


Lorne Hotel
gdconstruction
Coast Times
312



ROTARY WING FLIGHT HOURS

**782**

# THE WYE RIVER FIRE


Heliops

We are continuing to pour resources into the job so we can bring the fire under control as quickly as possible. We have over 150 fire fighters, six aerial water bombing aircraft, seven dozers, two excavators, two water trucks, along with an Incident Management Team of 40. We will also have the two Large Air Tankers (LATs) RJ and Hercules on stand by to lend a hand tomorrow.


Aircraft and around 300 personnel continue to work on the fire each day, with the fire's perimeter now 45 kilometres and 2500 hectares burnt. Crews from New Zealand and incident management personnel from New South Wales are also supporting.

# THE WYE RIVER FIRE


Heliops

PURGATORY



## Visit www.AAMS.org for all the details and to register.

CHARLOTTE **September 26–28, 2016**

## At AMTC 2016, you'll find:

- **2500 attendees** representing over 250 international emergency medical transport programs.
- More than **150 education sessions** on topics pertinent to the following disciplines:

  Aviation, Safety, Clinical, Communications, Management/Administration & Marketing, Global Perspectives
- A trade show featuring more than **150 vendors** presenting a wide variety of the latest products and services available for emergency medical transport providers!
- Unmatched networking events and opportunities!
- **The AAMS SIM Cup!**

  This annual critical care skills event utilizes the latest in human patient simulation. Up to 10 teams go head-to-head to show off their real time, real situation skills on state-of-the-art patient simulators.

AMTC 16

Air Medical Transport Conference
September 26–28, 2016
Charlotte, North Carolina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