

# HELISAF

## SPANISH SAR IN AFGHANISTAN

Spain withdrew the last of its helicopters from Afghanistan in November. **Erwan de Cherisey** was embedded with the Spanish Air Force's MEDEVAC Super Puma team last summer and describes what its day-to-day activities were



**I T IS Monday June 3 at a little past 0930hrs at Forward Support Base (FSB) Herat in western Afghanistan.** Aérospatiale AS332 Super Puma HT.21-01/803-13's Makila turbines burst into life with a roar. Captain 'MB' and his co-pilot go through the last pre-flight checks in the cockpit while we sit in the cabin, waiting for the mission to begin. To my left is the unit's doctor, behind me the flight mechanic, and in front of me behind his FN MAG 7.62mm machine-gun is the door gunner, an air force NCO who, like most of the crew, is a veteran of a number of previous Afghan deployments. Behind him, seated by the right-hand door, are two sappers (zapadores paracaidistas, the Spanish Air Force Special Forces), each armed with an assault rifle. Leaning against the two stretchers in the rear of the cabin are the nurse and the technician tasked with operating the various life support equipment on-board. Like the rest of us, they wear a bulky Level IIIA bulletproof vest that affords a high level of protection and a Kevlar helmet. Everyone but me carries a sidearm and "just in case", the doctor points me to the Heckler & Koch (H&K) G-36 rifles ("one for each of us") stored behind my back. The energizing 40°C heat eases slightly as we begin to taxi towards

the runway, followed closely by our escort aircraft another Super Puma HT.21-02/803-14 armed with a lethal .50 FN M3M heavy machine-gun. Minutes later, both helicopters take to the air, vertically ascending for a few moments before accelerating forward, nose down, dashing away from the FSB at high speed and low level. Both aircraft keep a close formation on their way to Provincial Support Base (PSB) Qala i Naw, in the neighbouring province of Baghdis, the home of the Spanish Provincial Reconstruction Team (PRT). Both helicopters are assigned to HELISAF, the Spanish Air Force's (Ejército del Aire - EdA) sole rotary wing detachment in Afghanistan. Its mission is to provide a medical evacuation (MEDEVAC) capability to the International Security Assistance Force's (ISAF) Regional Command West (RC-West) (under Italian command with its headquarters at FSB Herat) and Spanish forces in Afghanistan (ASPFOR).

At the time of *AFM's* visit HELISAF had three Super Pumas on strength, although these seldom all flew together. The standard mission pattern was two helicopters, one for the medical team and its equipment while the other acted as an armed escort. The flight *AFM* joined during its visit to HELISAF was a training sortie, not an operational ►



**'Everyone but me carries a sidearm and "just in case", the doctor points me to the Heckler & Koch G-36 rifles - "one for each of us" - stored behind my back'**

### Ala 48 (48 Wing)

The Spanish Air Force Ala 48 was created formally in 1992 by combining two flying squadrons, 803 and 402. The 803 Squadron was established in 1965 at Getafe AB, as a SAR unit, initially flying a mix of Agusta-Bell AB205As and AB206 JetRangers, the latter replaced later by Sud Aviation SA316 Alouette IIIs. It started flying SA330 Pumas in 1973, receiving its first AS332-B nine years later. The squadron still flies five of these, along with two AS332-B1s delivered in 1992.

Fixed-wing aircraft on strength within 803 Squadron comprised Casa C212s for SAR and maritime surveillance duties, but these were withdrawn in 2008. They were replaced

by a number of Casa (now Airbus Military) CN235-100MPA VIGMAs. The 402 Escuadrón de Fuerzas Aéreas (air force squadron) was formed in 1978, taking over the aircraft and duties performed by the helicopter unit in charge of royal, government and VIP flights, which then operated SA330s and AB205s. In 1982 it received two AS332-Bs, later followed by four more modern AS332M1s and, more recently, two AS532UL Cougars. Nowadays, all rotary-wing aircraft belonging to 803 and 402 squadrons are concentrated at Cuatro Vientos, while the fixed-wing platforms operate from Getafe. Over the years, Ala 48's members and aircraft (mainly 803 Squadron's) have been involved in a number of international operations not only in Afghanistan but also in Djibouti, Africa, as part of the anti-piracy Operation Atalanta and in Italy during Unified Protector, when it provided support to the ongoing combat operations in Libya against Gaddafi's forces.

1: Gunner's-eye-view along the barrel of the 7.62mm general purpose machine gun.  
2: Shoulder patch for Camp Arena Forward Support Base, Herat, Afghanistan.  
3: Shoulder patch for EZAPAC, the Escuadrón de Zapadores Paracaidistas, Spain's airborne sappers.  
4: The HELISAF shoulder patch.  
5: AS332-B1 Super Puma HT.21-02/803-14 in flight near Herat. All images by Erwan de Cherisey unless specified.

mission. Nevertheless, there was no difference in terms of crew, flight pattern or equipment embarked aboard the Super Pumas.

**Days past: a brief history of HELISAF**

The HELISAF detachment started its operations on June 1, 2005, from FSB Herat with the aim of providing MEDEVAC cover in western Afghanistan at a time where such a capability was non-existent in that part of the country. Over the next six years this Spanish unit was the only one in the whole RC-West, its aircraft providing vital MEDEVAC support not only to ISAF and Afghan National Security Forces (ANSF) troops but also local civilians. During this time HELISAF's medical personnel, comprising flight surgeons from the Spanish Air Force, nurses from the Ala 48 (48 Wing) and 49 or 802 Escuadrón (Squadron) and support technicians from the air force's Medical Air Evacuation Unit (Unidad Médica de Aeroevacuación - UMAER), had to deal with countless evacuations from the forward edge of battle, in the middle of some seriously 'hot' combat zones. They provided both initial care to the wounded as well as stabilising them during the return flight to hospital. In 2011, the deployment of three American MEDEVAC UH-60s at Qala i Naw meant that HELISAF was no longer alone and, consequently, forward evacuations became a less frequent part of the detachment's duties with the transporting of already stabilised patients from one hospital to another taking greater prominence.

**The people who made it happen**

HELISAF's flight crews, mechanics and support personnel came mostly from Ala 48's 803 and 402 Escuadróns, based at Cuatro Vientos air base in the suburbs of Madrid. Some unit personnel were also from Ala 49's 801 Escuadrón, flying Pumas, Casa C212s and Airbus Military CN235MPAs VIGMA tasked with search and rescue (SAR) and naval surveillance duties located at Palma de Mallorca in the Balearic Islands, and 802 Escuadrón, a combined AS332/532/CN235 VIGMA SAR/Naval Patrol unit based at Las Palmas in the Canary Islands. In 2013 HELISAF comprised 42 members, including eight pilots, four flight mechanics, four gunners, two doctors, two nurses, two technicians for life support equipment, eight airborne sappers, one armoured, eight maintenance technicians and one secretary for the paperwork! Personnel would be assigned



Above: Gunners scrutinize the ground beneath as their aircraft flies near Herat. Coalition aircraft are under constant threat from insurgents on the ground.

to ISAF for three months with Ala 48's usually deploying every year for a new tour of duty. Prior to its deployment to Afghanistan, the relieving group would train for three months, to prepare for the environment and conditions it would encounter once in-country and the missions it would be conducting. Part of the preparation was spent training intensively in the use of night vision goggles (NVGs), helicopter landings in dusty areas as well as the technique for firing door-mounted weapons.

HELISAF lost no personnel in Afghanistan, but serious damage was sustained by AS332-B1 HD.21-12 on September 28, 2008, while it was attempting to land to pick up a wounded Afghan policeman.



Above: Two stretchers mounted on the inside of the Super Puma's cabin. Below: One of HELISAF's AS332-Bs taxiing in at FSB Herat. A .50 FN M3M machine gun is deployed at the cabin door.

**HELISAF's AS332 Super Pumas**

The Super Pumas deployed in Afghanistan as part of HELISAF all belonged to the Spanish Air Force's 803 Escuadrón. This unit fields two versions of the Super Puma: five AS332-Bs and one of the more modern AS332-B1s (a second is awaiting repair following the 2008 incident). The primary missions of 803 Escuadrón comprise personnel recovery (PR), SAR, combat search and rescue (CSAR), medical evacuation (MEDEVAC) and support to the air force's special forces (Escuadrón de Zapadores Paracaidistas - EZAPAC).

Although capable of carrying out CSAR duties as well as transport or VIP flights, HELISAF was officially a MEDEVAC unit and its three Super Pumas were fitted out for this specific type of mission. At the time of AFM's visit to Herat, last June, three AS332-Bs were assigned to the unit. Originally received by the Spanish Air Force between 1983 and 1985, each aircraft has an unrefuelled endurance of four-and-a-half hours. Missions in Afghanistan rarely last that long, owing to the proximity of the combat zones. Because of the high threat level in the area and the peculiarities of the physical environment the Super Pumas assigned to HELISAF were all modified with a variety of specific equipment, with the aim of maximizing their protection and optimizing their capabilities during deployment. Each was fitted with an armoured floor and armour plating on the fuselage to pro-

tect the cabin and cockpit. Two external ballistic plates were also fixed either side of the fuselage to provide the pilot's upper body with protection against small arms up to 7.62mm. To preserve the helicopters' turbines from the ever-present dust, sand filters were mounted on the engines' intakes while heat dispersers were installed on each side of the exhaust pipes to reduce the heat signature of the aircraft. All Spanish AS332s are fitted with a complete set of electronic counter-measures (ECM) namely the SAAB Integrated Defensive Aids Suite (IDAS), integrated by the Swiss company RUAG. This comprises a radar warning receiver (RWR), a missile approach warning system (MAWS) connected directly to the helicopter's chaff and flare dispensers which allows their automatic release (although this can also be done manually) and a laser warning system (LWS) to detect any laser illumination and, therefore, potential targeting of the aircraft. HELISAF's AS332s were also fitted with side mounted weapons, a .50 FN M3M for the escorting aircraft and a 7.62 mm FN MAG for the MEDEVAC chopper.

When operating in Afghanistan, HELISAF's pilots resorted to tactical low-level flying at an altitude of 100 to 200 feet above ground level (AGL), climbing to around 2,000 feet when approaching a town or populated area. The climb was necessary to remain outside the effective firing envelope of small arms fire and RPGs. Because of the vital need to operate around the clock 365 days a year, all HELISAF pilots were fully trained and proficient in night flying. Standard equipment comprised third generation binocular ANVIS 9 NVGs. Towards the end of the deployment the Israeli-made Elbit ANVIS HUD, a helmet-mounted head-up display (HUD) offering similar capabilities to that of the Eurocopter EC665 Tigre's Thales TopOwl, and which can also be used for day flying was added. A forward-looking infra-

**Escuadrón de Zapadores Paracaidistas**

EZAPAC is the Special Forces unit of the Spanish Air Force. Its origins date back to 1946 and the advent of the first aviation troops of the Spanish Air Force, which would later evolve into the 1st Parachute Squadron (1er Escuadrón de Paracaidistas) in 1953 (later, in 1965, Escuadrilla de Zapadores Paracaidistas). The unit saw action for the first time in early 1958, still as the 1er Escuadrón de Paracaidistas, when it participated in the last phase of the Ifni war, in Spanish Sahara (today's Western Sahara). Troops jumped from French transport aircraft during the combined French-Spanish counter offensive that drove off Moroccan insurgents who had been attempting, since October 1957, to cause major disruption within Spanish-held territory in a bid to fast-track independence. Years later, in 1975, the Escuadrilla de Zapadores Paracaidistas, as it was known by then, would again see action in the Spanish Sahara, this time deploying to Gando in the Canary Islands to provide support to the evacuation of the colony, prior to its handover to Morocco. The next decade would see the unit undertake extensive training, with the assistance of the USAF, in a bid to master new capabilities such as high altitude low opening (HALO) and high altitude high opening (HAHO) parachute jumps with oxygen. It also honed its skills in CSAR, escape and evasion, extraction from hostile territory and related activities, making it the leading outfit in this domain in Spain. This expertise resulted in the unit, as early as 1983, being tasked with training air crews in the techniques, something it still does today. In 1989 the Escuadrilla carried out its first international mission, in Namibia, followed by the Balkans during the 1990s and Rwanda in 1994. Also in 1989, the unit was officially reorganised as the special operations component of the Spanish Air Force. Eight years later it was renamed Escuadrón de Zapadores Paracaidistas (EZAPAC).

Today the unit is still headquartered at Alcantarilla AFB, Murcia, and divided between a Special Forces Flight (Escuadrilla de Fuerzas Especiales), an Operational Support Squadron (Escuadrilla de Apoyo Operativo), a Training Flight (Escuadrilla de Instrucción) and a General Secretariat (Secretaria General) which acts as a headquarters structure, with a number of subsections tasked with matters such as intelligence, operations planning, etc. As with all special forces units, training is long and extreme with only 30 to 40% of applicants earning the coveted green beret worn by all EZAPAC personnel. In Afghanistan, the squadron provided three tactical air control parties (TACP: callsign 'Bullfighter') which, along with four teams from the Spanish Marines, provided the ASPFOR (Spanish Forces) with the capability to request and co-ordinate air strikes, etc. Initially deployed at Qala i Naw in support of the Spanish units at the PSB, the EZAPAC's teams relocated to Herat, following Qala i Naw's handover to the ANSF. EZAPAC was also tasked with providing security to all HELISAF's flights, eight sappers being attached to the MEDEVAC unit for such purpose. Whenever the AS332s took off for a sortie, a pair of sappers could be found aboard each aircraft. As soon as the MEDEVAC Super Puma had landed to pick up the wounded the men of EZAPAC would position themselves on the LZ to secure it and cover the extraction of the casualty. This process took from five to 15 minutes generally, depending on the state of the wounded, the conditions at the LZ, etc. In Afghanistan EZAPAC men were armed with the Heckler & Koch G-36C 5.56mm short assault rifle, fitted with EoTech holographic sights and laser designators. Some rifles were also fitted with under-muzzle AG-36 40mm grenade launchers. Sappers also carried a 9mm H&K USP pistol as a sidearm. All EZAPAC personnel departed Afghanistan for the last time and headed back to Spain on November 1.



One of HELISAF's Super Pumas in its hangar at Herat.

red ball could also be fitted on the left side of the aircraft when needed.

Speaking about night flying in Afghanistan, Captain MB explained that the greatest difficulty encountered was the monochromatic rendering of the desert environment provided by the ANVIS NVG, which was aggravated by the wind and the ever-present dust making it extremely difficult to determine accurately the topography of the area overflown. As a result it became necessary to resort much more frequently to the radar altimeter to maintain a constant altitude in flight. As an added precaution Spanish Super Pumas always maintained a higher altitude than during daytime, between 300 and 500 feet AGL when outside populated areas. Night landings in dusty environments (pretty much everywhere in rural Afghanistan) and the consequent brown out, the dust agitated by the helicopter's moving rotor blades, were another highly challenging element of operations.

To supplement the Super Puma's own navigation suite, HELISAF's pilots employed the Samsung Galaxy III tablet for in-flight cartography and the Garmin 296 portable GPS. All aircraft in the unit were also fitted with an Iridium satellite communication system.

The AS332's maintenance cycle had to be adapted to take into account the peculiarities of the Afghan environment, particularly the ever present dust and the accelerated wear it causes. Every ten flight hours the rotor blades were carefully and thoroughly washed while the turbines' compressor ▶





**Above:** On board an AS332-B over Baghdis province, a captain from Ala 48's 803 Escuadrón serves as a nurse. All Spanish MEDEVAC Super Pumas carried a doctor, a nurse and a technician who operate life support equipment on the aircraft. Erwan de Cherisey

blades were inspected with an endoscope to find signs of unusual damage or wear. Engine or rotor blade changes were conducted on site, along with the 200 hours inspections, but the helicopters were sent back to Spain for their 500 hour checks.

### Saving lives: a look at some of the unit's missions

All MEDEVAC sorties began with HELISAF receiving

an alert either by telephone or the chat system employed by ISAF forces in Afghanistan. The message would contain information on the location and condition of the wounded as well as a briefing about the situation in the area (potential insurgent activity, etc) the helicopters were expected to arrive. HELISAF's command would then assess the upcoming mission's complexity, analysing the different routes and flight paths to the objective in line with the available intelligence. A rapid briefing of the flight crew (pilot, co-pilot, flight mechanic and gunner) and on-board medical personnel (doctor, nurse and technician) would then take place. This would be followed quickly by last-minute preparations before heading for the aircraft, which would usually take off within 15 minutes of receiving the initial alert. Aircraft almost always flew in pairs but, on the rare occasions when only one Super Puma was available for the sortie, a support helicopter to act as escort was requested from either the Italian Task Force 'Fenice', the helicopter unit deployed at Herat equipped with Agusta A129 Mangustas, Sikorsky HH-3F Pelicans (which were eventually replaced by the new NHI UH-90A (NH90 TTH) and Boeing CH-47 Chinooks) or the Spanish army aviation helicopter unit in Afghanistan ASPUHEL. It was essential that the landing zone (LZ) be secured by the time the MEDEVAC chopper arrived to pick up the casualties. The escort aircraft would overfly it first, to pinpoint potential threats, and then circle



**Above:** An H&K G-36C fitted with an under-barrel 40mm grenade-launcher is carried by an EZAPAC trooper. Erwan de Cherisey

around the LZ providing air cover while the Super Puma landed and recovered the wounded. Two casualties could be accommodated on stretchers and a number of additional seated wounded might be carried depending on the heat and altitude which impact considerably on the helicopter's performance. Occasionally the escort aircraft would take on wounded, with the MEDEVAC AS332's nurse transferring aboard to care for them. As soon as the casualties were loaded into the helicopter(s) the medical personnel started treating them, using the advanced life support equipment installed aboard: artificial breathers, various types of perfusions, multipurpose monitors to follow the patient's vital signs (blood pressure, cardiac rhythm, etc) and aspirators. When it returned to the FSB, the Super Puma would be met by staff from the Spanish Military Role No 2 hospital who would take over the casualties and proceed with their transfer to hospital. It should be remembered that the most important rule in any MEDEVAC situation is that of the 'Golden Hour', which says that to ensure a casualty's best chance of survival, he/she must be in hospital within 60 minutes of being wounded. In HELISAF (as well as all the other MEDEVAC units in Afghanistan) this was, and still is, an immutable law.

### HELISAF and the withdrawal from Afghanistan

On October 7 HELISAF conducted its last mission, before being deactivated after more than eight years of continuous operation in western Afghanistan. During this period it flew no less than 5,912 hours in 1,877 missions and evacuated 1,030 people. For the men and women of Ala 48, deploying with HELISAF was more often than not a duty repeated every year, which allowed them to build up highly valuable operational experience. The Spanish Air Force's Super Pumas were not restricted to evacuation of ISAF and ANSF personnel and, on many occasions, the aircraft were sent to pick up wounded civilians who probably would have died if not for the timely arrival of the team. Despite these achievements, the work of HELISAF made few headlines outside military circles and little has been said about the continuous work done by the unit's personnel, its professionalism or exceptional preparation. HELISAF was a pioneer unit in RC-West, the first of its kind in this part of Afghanistan and the sole MEDEVAC component to operate there for several years.

### War stories

Captain MB, then chief of the air component of HELISAF, told AFM about some of the unit's missions that stood out most vividly in his memory. In July 2008, a suicide attack took place in Delaram District, Farah Province, to the South of Herat in broad daylight. The bomber used an explosive vest and killed a large number of people, wounding even more. In those days HELISAF was the sole MEDEVAC unit in the whole RC-West and thus, as soon as the alert reached the detachment, two Super Pumas were scrambled. The pair of helicopters flew south for 120 miles (192km), landing on a stretch of Highway 1 which had been cleared of all traffic to receive the aircraft. As they stepped out of their AS332s, members of the medical team were met with an Afghan truck loaded with 43 wounded, some of them very badly, others less so. They had to sort through the casualties giving priority to the most severely injured. Four were loaded on stretchers and these, plus another six casualties, were squeezed aboard the two choppers. The return flight to Herat had to be made at a higher altitude than usual to compensate for the increase in load – there wasn't enough fuel remaining to make the journey at the usual low level. All wounded made it safely to the FSB where they were met and attended to by personnel from the Role 2 Spanish Military Hospital. The ten people rescued in that three hours and 40 minutes mission were the greatest number of casualties ever evacuated by HELISAF in a single trip, a record that remains.

A few weeks later in August HELISAF conducted its most dangerous mission, according to Captain MB. In the middle of the night, an Italian motorised patrol was attacked by insurgent forces in Siavashan, some four miles (6.5km) to the north-east of FSB Herat. One of the Italian light armoured vehicles was hit badly and a request for a MEDEVAC was forwarded to HELISAF. Two Super Pumas were on their way in a matter of minutes, despite the enemy still being present all around the area where the initial contact had

taken place. The helicopters arrived quickly at the LZ which had been marked by members of the patrol, assisted by the quick reaction force (QRF) which had been dispatched to support them. Just as they were about to land, both Super Pumas came under sustained intense enemy fire and had to withdraw back to the FSB while Italian A129s were scrambled to suppress the threat, neutralising the remaining Taliban attackers. Meanwhile, back on the ground, the HELISAF crews checked their aircraft and, having determined that the battle damage was not enough to stop them flying, took off again for the LZ. The rescue chopper was finally able to land and take the wounded back to the FSB.

Not every mission involved military action and, by his own admission, the one that made the deepest impression on Captain MB took place in Bala Morghab, Baghdis Province, North of PSB Qala i Naw, in May 2010. HELISAF's AS332s were scrambled after a three-year-old Afghan girl fell down a well, injuring herself badly. The Spanish helicopters departed Herat as quickly as possible since there was no precise information on the wounds sustained by the child and it was feared her life could be in immediate danger. Having reached the town and landed, the medical personnel diagnosed a fractured arm and severe neck contusions, which prompted the decision to go ahead with the toddler's evacuation. Waiting for the Spaniards were the girl's father and grandfather as well as a translator, who recounted the events and how the town's people had managed to extract the child from the well using a bucket on a rope. They told the doctor and nurse that the grandfather would travel with the child to Herat. The MEDEVAC AS332 took off and, along with its escort, flew back to the FSB where the young girl was transferred to the Role 2 and treated for her injuries. Captain MB remembers vividly the child's stoicism after her accident as well as her father's apparent lack of concern for her eventual fate.