

SOUTH AUSTRALIAN AVIATION MUSEUM

SIGNIFICANT AVIATOR, AIRCRAFT & AVIATION EVENTS PROFILES

Bell 206B OH-58A Kiowa & JetRanger

Toward the latter half of 1960 it was broadcast to numbers of aircraft manufacturers that the United States Army was in the market for a light observation helicopter (LOH).

Through a proposal made initially by the US Navy on October 14th 1960, a competition was created that requested submission of designs conforming to the US Army's specifications. These called for a helicopter that could fulfil the following duties: casualty evacuation, close support, observation, photo-reconnaissance and transport.

No single previous helicopter design had been able to meet all these operational requirements. The Army also made it clear that they were looking for a helicopter that had seating for four, a payload of 181kg and a cruising speed in the vicinity of 193km/h.



*US Army Hughes OH-6A (Cayuse) prototype
(Public Domain)*

Out of the 12 aircraft manufacturing companies interested in this project, two were contracted to build five prototypes and subject them to the US Army test and evaluation procedures. The two companies that submitted the most favourable designs were Bell, and Fairchild Hiller with Hughes Tool Co. From the test results the Hughes OH-6A (Cayuse) prototype was selected for production in May 1965.

Bell did not take this loss of contract easily, and almost immediately began to redesign its aircraft. Bell's initial design was listed as D-250 but later the prototype was designated as YOH-4. Bell was also made aware that to promote its modified product two areas would need to be addressed. One was to redesign the prototype closer to the specifications required, and the



*Bell YOH-4
(Public Domain)*

other was to formulate a marketing strategy to promote its product. (5)

It would appear that much of the criticism leveled at the YO4 was concerned with the cabin and storage facilities. It did not carry enough passengers nor have enough cargo space. There was also some criticism regarding its appearance. To counter the criticisms Bell redesigned the fuselage by increasing the cargo space by 0.45m³ and providing seating for five people. It also improved its appearance by streamlining its overall contours.

The end product of these design changes became known as the Bell 206A. Bell's President at that time was Edwin J Ducayet and it was he who named it the JetRanger.

The US Army had initially thought that some 4000 Hughes OH-6As would be produced, but as the production costs increased they became alarmed at the spiraling price. So much so, it was decided to reopen the competition process in 1967. In March 1968 the Bell 206A JetRanger was declared the winner. From 1968 to 1973, 2,200 of this aircraft were built. (4)

Numerous modifications were made to the original 206A design, with many relative to both civilian and military needs. In 1971 the 206B (JetRanger 2) went into production. This model had a more powerful propulsion unit, being the 298kW Allison 250-C20 turboshaft engine. Most of the airframe alterations were minor enough for Bell to be able to supply modification kits to upgrade the 206A to the improved 206B version. (4)

Under the contract agreement with the US Army, Bell supplied the military version with a more powerful engine (313 kW Allison T63-A-720 turboshaft) and allowed for better pilot vision by redesigning the canopy from the civilian model. It also had a larger diameter main rotor and military avionics. This military version of the 206A was given the designation OH-58A. By 1978 further improvements were made which led to the OH-58C. As each worldwide military contract was received, so changes were made to the model according to the wishes of the customer. Other models were: OH-58B, (supplied to the Austrian Air Force) and the TH-57A (SeaRangers) supplied to the US Navy. These later versions had the capacity to act as dual control trainers, thus enabling the aircraft to fulfil the role as primary helicopter pilot training units. It was the US military that named the OH-58A the Kiowa, after an American Indian Tribe. (3)

Throughout the 1960s Bell aircraft had dominated the rotary wing operations of both the Australian Army and Air Force. Between the years 1965-1969 the Australian Army had on charge 65 Bell 47G helicopters, and the Royal Australian Air Force between the years 1962-1973 had on charge 64 Bell UH-1 Iroquois helicopters. (6)

Toward the end of the 1960s it became obvious that the Bell 47G would need replacing and it was not surprising that the OH-58A Kiowa was chosen. With the Vietnam War still far from ending, the need for a battle proven light observation

helicopter became important. In the second half of 1971 it was considered wise to lease eight Bell OH-58A Kiowas for service in Vietnam. The leasing arrangements lasted for eight months. These leased OH-58As were transferred from the United States Army and operated by the Australian Army 161 (Indep) Recce Flight based at Nui Dat, Vietnam. All US Army insignia were replaced (except the tail numbers 70-15236-70-156243) and the Australian roundel applied. (6)

At about the same time a purchase order for 75 OH-58A Kiowas was placed with Bell with the intention of having them built under licence at the Commonwealth Aircraft Corporation (CAC) at Fisherman's Bend, Victoria. The only parts not manufactured in Australia were the power unit and the avionics. These were supplied directly from the United States. It was also a requirement of the Australian variant to have the 313kW Allison propulsion unit, a higher skid configuration and longer rotor blades. These modifications were designed to improve aircraft operation in difficult terrain.

The first 12 aircraft from this order were 206B models built by Bell at Fort Worth in Texas. Their Australian serial numbers were from A17-001 to A17-012. The first aircraft (A17-001) was officially transferred to the Australian Army at Brisbane Airport on the 22nd November 1971. (2). The Australian Government reduced the order for the Army Kiowas to 56, a reduction of seven from the original order of 75. The Army serial numbers for these aircraft were A17-013 to A17-056. The last OH- 58A Kiowa helicopter was delivered to the Army in 1977.



*Bell OH-58A A17-010 Kiowa, Holdsworthy
21.5.1972
(Photo - Nigel Daw)*



*Bell OH-58A A17-010 Kiowa, Oakey 6.8.1980.
(Photo - Nigel Daw)*

A17-010, acquired by the South Australian Aviation Museum by tender from Defence Disposals in August 2017, was accepted by the Australian Army Aviation Corps on the 25 January 1972 and served with the 161 Recce Squadron till 1 December 2005. (1). During its service life this aircraft could well have been operated by the School of Army Aviation at Oakey, Queensland, and with 162 Recce Squadron base in Townsville.

Further research is needed to uncover its complete operational history.

It is interesting to note that the OH-58A was renamed by the Army as the Kalkadoon. This was in honour of a tribe of Queensland indigenous Australians known for their bravery in warfare. This name however, did not remain long as the Kiowa epithet remained paramount. (6).

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