

# Calvin H. Markwood

## F-105 History

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24-Apr-67

1276

The first four Ryan's Raiders crews arrived at the 388 TFW, Korat RTAFB, Thailand. They had been training on radar bombing at Yokota since March. These first crews, all F-105 pilots, were:

Capt Donald Heiliger with Maj Ben Pollard,  
Capt Nicholas J. Donelson with Capt David W. Forgan,  
Capt Peter P. Pitman with Capt Robert A. Stewart,  
Capt Dave Burney with Capt Aquilla Friend Britt.

The four modified F-105Fs that they flew from Yokota were: 63-8269, 63-8312, 63-8345, and 63-8269.

The front seat pilots had been instructor pilots from the 35 TFS and 80 TFS at Yokota. Two of the IPs from the 35th, Capt Paul W. Hansen and Capt Lawrence E. Huggins, remained at Yokota. Larry Huggins explained why. "Paul Hansen did not deploy since he had already flown 100 missions over the north. I was not allowed to deploy because I had just finished revising the 5th AF SIOP target set and had a 'special' TS clearance." (Larry Huggins, e-mail 15 Dec 04.)

The rear seat pilots were recent graduates from McConnell's F-105 RTU. Captains Stewart and Forgan had graduated from F-105 RTU class 67ER on 6 January 1967. Maj Pollard and Capt Britt had graduated from F-105 RTU class 67FR on 13 February 1967.

Eleven other Ryan's Raider aircrew members arrived in May 1967. Four of these crews were:

Capt John F. Rehm with Capt Calvin Markwood  
Capt Donald D. Henry with Capt James Wright  
Capt George Bogert with Maj Donald S. Aunapu  
1Lt William W. Koelm with Capt Al Esser

The group was initially assigned to the 34 TFS under the command of Lt Col Alan G. Nelson, but later operated as a provisional unit within the 13 TFS commanded by Lt Col Gerald F. "Jerry" Fitzgerald. On 1 June 1967, it was integrated as a separate operation of the 13 TFS when Lt Col Jim McInerney took over the squadron. The Ryan's Raiders were guided by Maj Ralph Kuster from the 469 TFS. Jim McInerney explained Maj Kuster's role: "... He was [388 TFW Commander] Colonel Chairsell's 'helper' having served under him at Spang."

Maj Frank L. Yow, Jr., the 388 TFW Weapons Officer, also helped the Raiders. "Maj Ralph Kuster and I worked with them and helped plan the missions although I disagreed with the way there were doing it."

"Because of changes in mission and compromise, the name of the project was changed from the original Project Northscope to Operation Commando Probe to Operation Commando Nail."

Before they had left Yokota, Capt Donelson recalled, "The crews called it Ryan's Raiders and created a special patch showing an F-105F with a golden screw through the rear cockpit. This represented the dissatisfaction of the pilots that had to occupy the rear cockpit." (Nicholas J. Donelson in River Rats Vol III, pgs 52 - 53.)

The 388 TFW history for the period October - December 1967 described the technical and operational problems encountered by the Raiders. "Several difficulties, some of which are not yet resolved, have complicated the operation of the Raiders. Chief among these was the challenge of electronics. Modifications were made to the R-14 radar. An expanded scope now provides an

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improved presentation. A fast sweep in the center of the scope allows the operation to have a fast constant paint of the target. New test equipment obtained from Yokota AFB have greatly improved the terrain avoidance and contour mapping capabilities. Still to come are replacement of the rear seat scope by a Cathode Ray Tube and the addition of a radar absolute altimeter. Daily improvements reflect the success of the efforts of our Armament and Electronics Squadron and our maintenance in general. Other difficulties encountered include incomplete maps and charts of North Vietnam, (a problem partly resolved by radar photography of these areas), and lack of experience in Raider operations and techniques, which necessitated exchange of information with the A-6 Intruder pilots of the Bonhomme Richard. Daily crew meetings under the inspiring leadership of Major Ralph L. Kuster, his knowledge and experience in the airplane, and devotion to duty, have been most successful in advancing the Raider program." (13 TFS history, 1 Apr - 31 July 1967, USAF microfilm NO584, frames 0038 - 0040.)

*388 TFW history, Jan - Dec 67, USAF microfilm NO583, frames 1449 and 1582 & Corona Harvest Chronology of Significant Airpower Events in Southeast Asia, 1954 - 1967, pg 133 & Frank Yow letter dated Sept 1, 1986 to Bauke Jan Douma.*

**26-Apr-67**

5118

In a secret message to CINCPACAF (General Ryan), Hq 5th Air Force defined the daily reports that they would submit on the progress of crew training for the F-105F "Radar Level Bombing Training" under project "North Scope". The message reflected General Ryan's interest in the details of this program.

The crews were training at Yokota and Kadena and the message identified the "integrated crews" (all pilots) that had formed to date at each location.

At the 41 Air Division, Yokota:

Crew Alpha - Heiliger/Pollard  
Crew Bravo - Donelson/Forgan  
Crew Charlie - Burney/Britt  
Crew Delta - Pitman/Stewart

Crew Golf - Rehm/Markwood  
Crew Hotel - Bogert/Annapu  
Crew India - Koelm/Esser  
Crew Juliett - Henry/Wright

The message reported that "Crews Alpha, Bravo, Charlie, and Delta have deployed to Korat" (where they were assigned to the 34 TFS).

At the 18 TFW, Kadena:

Crew Echo - Beresik/Reece (Reece was identified as a Radar Navigator)  
Crew Foxtrot - Fullam/Scheer

The message listed the flying experience of the crews training at Kadena.

	Total Time	F-105 Time	Out Country Missions
Maj Eugene P. Beresik	3189:10	555:40	0
Capt H. M. Reece	3534:30	18:50	0
Maj Wayne E. Fullam	3398	1133	19
Capt Roger P. Scheer	2263	1250	14

The message provided detailed results of each training sortie in radar-modified North Scope F-

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105Fs by the crews at Kadena. For example, on 18 April 1967, the crew of Beresik/Reece flew two daylight sorties each at 2000 feet and 500 knots on land range R-178 using the plane's timer and Toss Bomb Computer (TBC) on each sortie. They had made two timer drops and four TBC drops of BDU-33 practice bombs. Their CEA for the timer drops on sortie 1 was 195' and on sortie 2 was 275'. The CEAs for their TBC drops were 982' and 862' for their first and second sortie, respectively.

On 20 April 1967, the crew of Fullam/Scheer made one sortie under the same conditions flying six TBC drops of BDU-33/Bs. Their CEA was 930'.

*5AF/CC TWX 261015Z Apr 67 to CINCPACAF in PACAF DO Read File for 25 - 26 April 67, AFHRA Call # K717.312, IRIS # 00518453.*

#### 04-May-67

3813

On 4 May 1967, four more Ryan's Raiders crews arrived at Korat from training at Yokota. They flew in with the second set of four modified F-105Fs and were the second group of dual-pilot crews since the initial contingent of four crews arrived at Korat on 24 April 1967. The crews who were initially assigned to the 34 TFS were:

Capt John F. Rehm with Capt Calvin Markwood  
Capt Donald D. Henry with Capt James Wright  
Capt George Bogert with Maj Donald S. Aunapu  
1Lt William W. Koelm with Capt Al Esser

The four front seat pilots were TDY from Kadena. Capt Rehm, Capt Bogert, and Lt Koelm were TDY from the 12 TFS. Capt Henry was from the 67 TFS. This was Lt Koelm's fifth TDY combat tour to SEA, and the third to the 388 TFW at Korat.

George Bogert told about his Ryan's Raider assignment. "I was 'volunteered' due to my 710 hours in the back seat of a 101B prior to Pilot Training. There is a reason the Raider Patch has a screw through the center of the airplane! Don Aunapu was a B-52 AC with a lot of experience in the R-14A radar and a terrific back seater. The missions were designed to keep the NVA awake at night and not a lot more. The Iron Hand support was designed as our radio relay, not to attack SAMs. I will reference another night strike, unknown date. Target was the Yen Bay Airfield. I don't know any crew that used the TA mode for an attack, everybody flew MEAs. We dropped off the tanker about 11:00 pm and descended to about 10,000 feet through Laos. The bad guys would light fires on the mountain tops after we passed to announce our arrival. We swung north to almost DNP, then straight southeast along the river. We got intermediate fire can cuts so they knew we were coming. The 105-F was like a Cadillac on a freeway at 100 miles an hour, just kept rolling. Never used burner, no lights. At about 15 miles, Don had the airfield centered and we used the TBC for a low toss of six 750s across the airfield. I'll never forget watching them hit as we rolled away and ducked for the river. It was also the first time they used search lights, which became a regular event. If we had gone straight across the target, you wouldn't be getting this e-mail. Our Iron Hand support was quite impressed. Another time we were chased out by a MIG well above us, he must have been their squadron commander. It was an interesting few months and enough night time to last me for a long time." (George Bogert, e-mail Saturday, April 21, 2012.)

Don Henry described his Ryan's Raider experience. "... We got much of our information thru Ben Pollard who was the tacit leader at Yokota due to seniority. ...The original Raiders flew exclusively at night and both commanders had primary day jobs. We didn't see them much and they didn't fly our night mission. We saw much more of the Wing Commander, Colonel Chairsell, who seemed to always drop by the planning room in the middle of the night to talk to us and attend many of our briefings. He also spent hours -- literally hours -- talking to our crews."

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*388 TFW history, Apr Dec 67, Vol II, 13 TFS history, 1 Apr - 31 July, microfilm NO584, frames 0044 - 0045 & Don Henry, e-mail, 16 Oct 2004.*

### 21-May-67

5126

The 34 TFS Ryan's Raider crew of Capt John F. Rehm and Capt Calvin H. Markwood flew a night North Scope mission in F-105F 63-8281 using call sign "Delight". They dropped six 750-pound bombs on target 1473, the Quang Khe Ferry in RP1 North Vietnam. They acquired the target IP 10 NM away but had to drop their bombs manually due to a malfunction in the TBC. "After refueling, we proceeded to Channel 89, then onto our route, descending beyond the restricted zone to 1000' AGL. For the last 20 NM into the IP, we were in clouds but broke out in the clear after rolling out on final heading. Last 6 miles flown in bright moonlight at 800' across rice paddies. Extremely bright moon reflecting from rice paddies would mark aircraft with its white paint. Felt very vulnerable. ... Doppler errors exceeded safe tolerances."

*388 TFW TWX 210935Z May 67 to 7 AF in PACAF DO Read File for 20 - 22 May 67, AFHRA Call # K717.312, IRIS # 00518470.*

### 24-May-67

5132

The 34 TFS Ryan's Raider crew of Capt John F. Rehm and Capt Calvin H. Markwood flew a night North Scope mission in F-105F 63-8293 using call sign "Mantis". Their primary was target 195, the Dong Chung Railroad Yard, but they diverted and dropped their six 750-pound bombs on target 1463, the Nui Caay Seeding Segment. "While making a calibration check, the radar was found to be completely unreliable for low-level navigation and flight was diverted to target 1463. On the drop, TBC malfunctioned and we had to drop manually. ... UHF garbled both transmitter and receiver, auto pilot intermittently rolls out suddenly."

*388 TFW TWX 240640Z May 67 to 7 AF in PACAF DO Read File for 24 - 25 May 67, AFHRA Call # K717.312, IRIS # 00518471.*

### 26-May-67

5134

The 34 TFS Ryan's Raider crew of Capt John F. Rehm and Capt Calvin H. Markwood flew a night North Scope mission in F-105F 63-8353 using call sign "Resale". Their primary was target JCS 47, the Yen Son Ordnance & Ammunition Depot, but they diverted and dropped their six 750-pound bombs on target 1463, the Nui Caay Seeding Segment. "Terrain avoidance calibration indicated an unreliable T/A left. ALQ-71 was inoperative. Decision was made to divert to target 1463."

*(388 TFW TWX 261101Z May 67 to 7 AF in PACAF DO Read File for 26 - 27 May 67, AFHRA Call # K717.312, IRIS # 00518473.)*

### 16-Jun-67

6987

The Ryan's Raider crew of Capt John F. Rehm and Capt Calvin H. Markwood from the 13 TFS flew a mission for which they were awarded the Silver Star.

"'With utter disregard for the danger to his own life ...' Thus read, in part, the citation accompanying the award of the Silver Star Medal, which John D. Ryan, commander of the Pacific Air Forces, ... presented to Capt Calvin H. Markwood, an F-105 Thunderchief pilot of the 388 TFW, during his ... visit to Korat [the week of 10 Dec 1967].

"Markwood received the Silver Star, the Air Force's third highest decoration, for his part in a night fighter-bomber attack on the Phoung Lam military installation, 30 miles west of Hanoi, June 16, 1967.

"He is a member of the 388 TFW's 44 TFS (Vampires), which true to its name specializes in surprise night raids on enemy installations using radar bombing techniques.

"On this mission Capt Markwood, serving as navigator in a two-place F-105F and his pilot, Capt

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John F. Rehm (who also received the Silver Star for the mission), were required to penetrate deep into enemy territory. The target and its approaches were guarded by several surface-to-air missile sites and an 85-mm anti-aircraft artillery site.

"Captain Markwood guided the plane to the target by threading his way over 100 miles through passes and valleys in hazardous mountain terrain, and was able to deal the enemy a surprise blow.

"The surprise was so complete that it was a full 45 seconds after the ordnance impacted on the target before any reaction was noted. However, when the reaction came it was intense. Markwood and Rehm came under heavy enemy attack, but returned to Korat unscathed."

Capt Norman E. Powell, a Wild Weasel pilot from the 13 TFS, also received a Silver Star for a mission he flew today. "Captain Norman E. Powell distinguished himself by gallantry in connection with military operations against an opposing armed force over North Vietnam on 16 June 1967. On that date, as an F-105F pilot, he deliberately presented himself as a target and endured determined and repeated surface-to-air missile attacks at night and in poor weather conditions. His action successfully drew fire away from a friendly bombing aircraft. By his gallantry and devotion to duty, Captain Powell has reflected great credit upon himself and the United States Air Force."

*Sawadee Flyer, Vol I, No. 11, Friday, Dec 15, 1967, pg 1 & Norman Powell citation and 7th AF SO G-219 dated 9 Dec 67.*

#### 03-Aug-67

3817

"Early in the month Major Ralph L. Kuster (from the 469 TFS), who had so much to do with setting up the (Ryan's Raider) program from basic organization to tactics and procedures, returned to the United States upon completion of his 100 missions over North Vietnam. ... His next assignment in the Plans and Tactics Branch at the Pentagon should prove to be of great benefit to all concerned. Major Kenneth D. Oliver became the new Raider Operations Officer upon Major Kuster's departure."

A Ryan's Raider pilot completing his 100 missions on 3 August was Capt John H. Rehm. "He returned to his organization, the 12 TFS at Kadena AB, Okinawa. His flying partner, Capt Calvin H. Markwood, was released immediately to the day strike force."

*388 TFW history, Apr Dec 67, Vol II, 13 TFS history, 1 Apr - 31 July, microfilm NO584, frame 0053.*

#### 31-Aug-67

3816

As of 31 August 1967, the 13 TFS possessed one F-105D and 20 F-105Fs to perform their three separate operations. "The day Strike pilots visually attack all assigned targets. The Wild Weasel crews destroy enemy defenses i.e., surface-to-air missiles and antiaircraft artillery. The 13th [Ryan's Raiders] operate singly against point-targets at night or in weather."

"Late in August several of the initial crew members assigned to the Raiders were released to the day strike force. This was brought about by the imminent arrival of specially trained Wild Weasel crews from Nellis AFB. These crew members will remain in the 13 TFS and will still be available for Raider operations should the need arise." The six Ryan's Raider pilots transferred to strike missions were:

Maj James B. Register  
Maj Francis P. Walsh  
Maj Harold D. Wilson  
Capt Thomas T. Walker  
Capt Neil F. Blake  
Capt Calvin H. Markwood.

By the time he transferred to the strike force, Maj Walsh had flown 41 night, low-level Ryan's

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Raider missions. (Sawadee Flyer, Friday 23 Feb 1968)

Thirteen pilots departed the 13 TFS after completing 100 missions in August 1967. They were:

Maj William E. Underwood departed 3 August.  
Capt Christopher D. Dascalos departed 3 August.  
Maj Russell A. Starkman departed 3 August.  
Capt William M. Milstead departed 3 August.  
Capt Donald M. Majors departed 4 August.  
Maj Charles E. Van Driel departed 4 August.  
Maj David H. Coats departed 5 August.  
Maj William T. "Ted" Twinting departed 5 August.  
Maj John R. Des Jardins departed 7 August.  
Maj Robert J. Lines departed 8 August.  
Maj George V. Wish departed 22 August.  
Maj Anthony Gardecki departed 26 August.  
Maj Edwin F. "Tiny" Malone departed 26 August.

*388 TFW history, Apr - Dec 67, Vol II, 13 TFS history, 1 Apr - 31 July, microfilm NO584, frames 0052 -0056.*

**01-Oct-67**      **18-Oct-67**

847

Under PACAF Movement Order 35, dated 20 September 1967, the 13 TFS designation was transferred from the 388 TFW, Korat RTAFB, Thailand, to an F-4 squadron at Udorn RTAFB, Thailand. The departure of the 13 TFS left the 388 TFW with the 34 TFS, 469 TFS, and 44 TFS. The reduction to three squadrons was a result of combat losses of the F-105.

Under 388 CSG special order AB-3874, sixty officers were transferred from the 13 TFS to the 44 TFS. On 1 October 1967, personnel and F-105F aircraft of the 13 TFS began being absorbed into the 44 TFS, which had arrived at Korat from Kadena on 25 April 1967. The 44 TFS distributed their twenty-one F-105Ds to the 34 TFS and 469 TFS and picked up the Wild Weasel and Ryan's Raider missions from the 13 TFS. The changeover was completed on 18 October 1967.

The 388 TFW commander, Col Edward B. Burdett, led the change of command ceremony. Lt Col James E. McInerney, Jr., who had been commander of the 13 TFS, replaced Lt Col Fred A. Treyz as commander of the 44 TFS.

Korat's base newspaper, "The Sawadee Flyer", reported the event but got its facts wrong. "It was noted that the retiring 13 TFS, which came to Korat in June 1965 [wrong year. It was June 1966] from Kadena AFB, Okinawa, had been an offspring of the 44th. A cycle is now completed: from the 44 TFS in March 1965, [1966] then the 13 TFS for over two [one] years and back again to the 44 TFS in September 1967".

One of the 13 TFS Wild Weasel crews transferring to the 44 TFS was Capt Robert E. Dorrrough and his EWO Maj Clarence S. Summers. Another crew, this one assigned to night raider missions, was Maj Kenneth D. Oliver and Maj James B. Register. Capt Norman E. Powell was a Wild Weasel pilot who transferred to the 44 TFS.

Capt Calvin H. Markwood, a former Ryan's Raider pilot who was now a strike pilot, transferred to the 44 TFS.

About this time, Maj Robert W. Barnett transferred from the 44 TFS to the 469 TFS. Maj Eugene L. Main transferred from the 13 TFS to the 469 TFS.

While at Korat, Lt Col Treyz flew 107 combat missions in F-105s. He was next assigned to the USAF IG at Norton AFB, CA. (USAF bio Brigadier General Fred A. Treyz)

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Maj Donald S. Aunapu transferred from the 469 TFS to the 44 TFS.

*Sawadee Flyer, Friday, October 13, 1967 388 TFW history, 1 Oct - 31 Dec 67, USAF microfilms NO584, frame 0031 and NO583 frame 1721.*

### 30-Oct-67

3456

Ten F-105D pilots from the 388 TFW at Korat attacked the Dap Cau railroad bridge (JCS 16) at coordinates 21-23-21N and 106-15-58E in RP-6A, North Vietnam.

The pilots from the 34 TFS were: Capt Irving E. LeVine flying 58-1157, Maj Clyde L. Falls, Jr. flying 61-0152, and Maj Almer L. "Buddy" Barner, Jr. flying 59-1759.

Pilots from the 44 TFS were: Capt Douglas G. Glime flying 61-0162, Capt Wayne Wright flying 59-1760, and Capt Calvin H. Markwood flying 62-4270.

Pilots from the 469 TFS were: Lt Col William N. Reed flying 60-0464, Maj Robert F. Grubb flying 62-4221, Maj William Calvin Diehl, Jr. 62-4359, and a pilot named Wilson flying 61-0208.

"Waco" was a Wild Weasel flight supporting strikes in this area. Their target was SAM site VN780 at location 21-17N and 106-17E. The flight took off at 05:50 and the mission lasted 3.9 hours. The flight's lineup was:

#1 - Capt Rowland F. "Frank" Smith, Jr. and EWO 1Lt David H. Williams from the 44 TFS in F-105F 63-8302

#2 - Capt Fred R. Nelson and EWO Capt James T. Wallace from the 44 TFS in F-105F 63-8312

#3 - Maj Oscar Moise Dardeau, Jr. and EWO Capt Edward William "Tiny" Lehnhoff, Jr. from the 44 TFS in 63-8306

#4 - Capt Jacob C. Shuler from the 34 TFS flying F-105D 60-0445 on his 12th combat mission.

*National Archives camera film archive control number NWDNM(m)-342-USAF-42649C & Jake Shuler combat mission spreadsheet.*

### 01-Dec-67

4792

For the second day in a row, bad weather over their targets in North Vietnam cancelled the mission of the Wild Weasel crew of Capt Robert E. Dorrough, Jr. and EWO Maj Clarence S. "Bud" Summers from the 44 TFS.

"Fri - Cancelled - target weather. Received Combat Readiness Medal for four years as combat ready fighter pilot. Capt Cal Markwood finished 100 today. [Capt Calvin H. Markwood, 44 TFS.] Lost 14 F-105s in Nov."

"Captain Markwood ... recently completed his 100th combat mission over North Vietnam. He will be leaving the 388th for an assignment at Andrews AFB, Md."

By the time of his 100th mission, Capt Markwood had accumulated 375.7 flying hours in the F-105.

*Bob Dorrough's combat diary & Sawadee Flyer, Vol I, No. 11, Friday, Dec 15, 1967, pg 1.*