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From: Commander Destroyer Division ONE HUNDRED NINETY-TWO
To: Commander Carrier Division FIVE (CTF 77)

Subj: Chronology of Events; Gulf of Tonkin 4 August 1964

1. Attached chronology and overlays are forwarded herewith for forwarding to Joint Chiefs of Staff.

J. J. MERRICK

Copy to:
CO, USS MADDOX (DD-731)
CO, USS TURNER JOY (DD-951)

Approved for Release by USN on 07-07-2005 pusuant to E.O. 12958, as amended

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Chronological Sequence of Events USS MADDOX (DD 731) and USS TURNER JOY (DD 951) action of 4 August 1964 in the Gulf of Tonkin.

I

BACKGROUND

On 2 August 1964, USS MADDOX (DD 731), commanded by CDR Herbert L. OGIER, Jr., USN, with Commander Destroyer Division 192 (CTG 72.1), CAPT J. J. HERRICK, USN, embarked, was conducting a surveillance and intelligence patrol (DESOTO) in the Gulf of Tonkin. During the afternoon of that date, MADDOX, while in international waters about 28 miles from North Vietnam, was attacked by three DRV PT boats. MADDOX successfully evaded three observed torpedoes and took the attacking PT's under fire. All three PT's were hit by MADDOX fire. MADDOX suffered no damage.

Following the engagement, COMSEVENTHFLT, by msg 022225Z August 1964, directed CTG 72.1 to take operational control of the USS TURNER JOY (DD 951), commanded by CDR Robert C. BARNHART, Jr., USN, which had joined MADDOX after the engagement. Both ships were directed to resume the DESOTO Patrol along a newly prescribed route which was specified in CINCPACFLT msg 021104Z August 1964.

On the morning of 4 August the patrol proceeded from the East in the direction of Point Delta, an arbitrary DESOTO Patrol point off the coast of North Vietnam (DRV). At 1145G the patrol turned southwest to a course roughly paralleling the DRV coast, and proceeded to the vicinity of Point Charlie, arriving there at 1608G. At no time did the patrol approach closer than sixteen miles from the DRV coast. The patrol turned East (090) at 1608G in order to retire for the night to a prescribed 24 mile square area centered about 100 miles from the DRV coast. It was intended that MADDOX and TURNER JOY would, during the night, maneuver in company within the prescribed area once it was reached.

Because of the 2 August attack, a CAP was being provided by TICONDEROGA (CVA 14) for the 4 August DESOTO patrol. This CAP was present during the evening except for the period 1649 to 2057.

II

CHRONOLOGY

NOTE: The times included herein are the best results obtained by the integration of information and plots from both MADDOX and TURNER JOY with careful reconstruction of the engagement common plot. Prior reported times, if in variance, should be disregarded as less accurate.

1800 - Steaming in the Tonkin Gulf off the coast of North Vietnam as units of Task Group 72.1 on DESOTO Patrol. Ships in company include MADDOX and TURNER JOY. SOPA and OTC is COMDESDIV 192/CTG 72.1 embarked

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MADDOX. Ships in column formation, MADDOX is guide in Station one, TURNER JOY is in Station two, 1000 yards astern on base course 090, speed 20 knots proceeding to night steaming area. Very dark night with no moon and thunderstorm activity in area.

1941 - MADDOX picked up an intermittent radar contact (skunk - unidentified surface contact) to the northeast at 42 miles. Not held by TURNER JOY's radar.

NOTE: From prior experience of MADDOX and TURNER JOY in the Gulf of Tonkin, junks are seldom encountered more than 30-40 miles from the coast. During the engagement of the night of the 4th, no contacts identified or suspected as junks were detected in the area of engagement. Thus, except for the contacts described in this chronology, the radar-scopes of both MADDOX and TURNER JOY were free from distracting contacts. (A few weather and wake contacts were soon identified as such).

1945 - MADDOX detected a contact at 070, 36.4 miles and designated it as skunk "N", with course 170, speed 33 knots. This contact was not held by TURNER JOY. Contact was evaluated as a probable patrol craft due to its high speed. Considered to be a threat in that it was closing rapidly. Maximum boiler power ordered at this time by OTC. Soon after, two other contacts were picked up to the northeast (in the same general area as first contact), at approximately 40 miles, also closing.

NOTE on speed and other characteristics of Tonkin Gulf vessels:

Gulf of Tonkin junks are of two basic sail powered types which generally operate in fleets of twenty to one hundred. Within the fleets the junks operate in pairs when towing a large trawl net between the boats. When engaged in trawling, the net acts much like a large sea anchor and prevents the junks from making more than a few knots through the water. Junks not fishing and under full sail can make about 6 knots. Tonkin Gulf junks are very similar in appearance to the South Vietnam types, VTAC-2 and PTBC-1a as shown in the OSOD Junk Blue Book.

Two types of PT boats are known to belong to the DRV Naval Forces which operate in the Gulf. The P-4 class is a 50 knot (plus) boat which carries two 18" torpedoes and two 12.7 MM twin guns. The P-6 class has a maximum designed speed of 43 knots. It carries two 21" torpedoes, two 25 MM twin guns and is equipped with radar (Skinhead).

There is a third type of vessel, the PGM "Swatow" class patrol boat which has a speed of 25 knots, a Skinhead radar, and guns. It is believed that these slower craft are used to [illegible] the PT's in to their target during night engagements, leav[illegible]

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the last moments of the run-in up to the individual PT to make their own adjustments for the attack solution. It is further believed that the PT's reposition themselves for subsequent attack by first seeking the fresh wakes of the target vessels, getting their "bearings", and then opening out for another attack.

1946 - Changed course to 130 to open threat. CTG 72.1 evaluated the situation as a trap, since these relatively high speed craft appeared to be waiting in the area used on prior occasions, and most recently, the night before, by the MADDOX and TURNER JOY as a night-steaming area.

1950 - MADDOX designated a contact at 044, 38 miles as skunk "O", course 243, speed 28 knots. Designated a contact at 060, 36.6 miles, as skunk "P" course 340, speed 40 knots.

NOTE: All three skunks, "N", "O" and "P", were tracked consistently with no chance of confusion between contacts. Courses and speeds were determined. Initial contact was made by a third class Radarman with 3 years experience. Skunk "N" was detected on the bridge radar repeater and plotted independently by the Executive Officer on the bridge at 1945. Long detection ranges were attributed to "ducting" or "trapping" which is a propagation phenomonon consistently experienced since 2 August in the Gulf. Ducting is caused by a temperature inversion in the lower atmosphere, and, when it exists, ranges of surface contacts up to 100 miles are possible. Validity of contacts: positive. None of these contacts were held by TURNER JOY, because its radar was tuned for detection of close contacts in order to obtain ranges on MADDOX while operating at high speeds, darken ship and in close formation.

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1955 - Changed course to 140. A MADDOX contact was designated skunk "R" bearing 104, 29 miles, with course 270, speed 10 knots. Evaluated as possible threat. Bearing drifted left and closed slowly. No electronic intercept. Closest point of approach on "R" was 055, 20 miles at 2027. "R" made no change in course to intercept MADDOX and TURNER JOY.

2005 - Changed speed to [redacted] (maximum boiler power was almost achie at this time).

2007 - MADDOX observed that contacts "N", "O" and "P" merged on the radar at about 32 miles. (This was taken as an indication that they had joined up in close formation. For a short time after "N", "O" and "P" closed up, the MADDOX Operations Officer was able to observe, on the bridge repeater, that the three contacts were close together in a straight line formation).

2012 - Changed speed to [redacted]

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2020 - Changed course to 160 to further open skunks "N", "O" and "P".

2030 - Skunk "N", "O" and "P" (merged), continued on course 240, 30 knots. MADDOX commenced tracking an undesignated skunk at 330, 40 miles, on about the same course and speed as the MADDOX and TURNER JOY. All contacts drifted aft and faded about 2045, due to long range.

2111 - Both ships detected and tracked a skunk designated "U", at 090, 13 miles, course 160, speed approximately 30 knots. (Prior reported course of 200 was in error). Both ships fire control radars locked on skunk "U" which was evaluated a probable PT boat.

2116 - MADDOX evaluated "U" as 4 contacts proceeding together in close formation. TURNER JOY evaluated "U" as 3 contacts proceeding together in close formation.

2117 - Vectored CAP to investigate skunk "U", with negative results.

2134 - "U" closed to 23,200 yards when a new threat was detected by MADDOX closing at high speed (35-40 knots), bearing 093, 9800 yards. MADDOX locked on this new contact, designated "V" and batteries were released. TURNER JOY locked on a 50 knot contact nearer in and slightly to the right of "V", designated as "V-1." At this time MADDOX designated another contact as skunk "T", but soon evaluated it as weather.

2139 - TURNER JOY opened fire on "V-1", bearing 090, range 7000 yards.

2142 - MADDOX lost contact on "V", bearing 090, 9000 yards and opening, after an apparent quick turn of "V" to the left. At the same time that this maneuver was noticed, MADDOX sonar reported hydrophone effects bearing 051, which was classified torpedo. The turn away by contact "V" was similar to that noticed in the action on 2 August as a maneuver pecuiliar to boats launching torpedoes. (A comparision of the proximity of MADDOX and TURNER JOY DRT marks, in plotting "V-1" and "V", respectively at time 2139 indicate a possibility that this might have been only one contact which launched at time 2137, turned back, and launched another torpedo at 2142). Initial fall of shot from TURNER JOY was over the contact and a 10 mil down spot was applied by Director 52 radar operator (Mk 35 Radar - Mark 56 Gunfire Control System). The spot did not have time to take effect because firing was checked at 2141. The contact "V-1" was tracked by TURNER JOY at high speeds (50 knots) closing on an intercept course. Firing immediately resumed with both Mts 52 and 53 (5"/54) rapid fire mnt and hits were observed by the Mk 35 radar operator. "Lock-on" was lost and firing ceased at 2142. While contact was held, target echoes on both surface search and FC radars were strong, though small, and a good steady lock-on was obtained. This contact was evaluated as a definite high speed small craft.

2143 - MADDOX changed course to the right with full rudder to avoid the torpedo, transmitting a warning to TURNER JOY. At no time during the

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action did TURNER JOY's SQS-23 detect torpedo noises. (This is a general characteristic of this type sonar and, in fact, JOY's sonar has in the past failed to detect torpedo noises when, during exercises, torpedoes were known to have passed close aboard). At about 2144 TURNER JOY received the MADDOX report of a torpedo in the water bearing 040. This bearing was plotted on TURNER JOY DRT and a right course change was immediately recommended by CIC to the bridge to avoid the torpedo in accordance with standard torpedo evasion doctrine which is: If torpedo is fired from abaft beam then ship turns away and stops 30° beyond the reciprocal of the torpedo bearing. TURNER JOY came right and just after steadying on course 210°, a torpedo wake passed up the port side aft to forward, at a distance of about 300 feet. This torpedo wake was seen by four people: the ASW Officer in Director 51, the Director 51 rangefinder operator, the port lookout, and the Director 52 operator. All evaluated it as a definite torpedo. The ASW Officer has seen many torpedo wakes before as had Director 51 rangefinder operator. The port lookout reported this sighting to the bridge and course was changed again to the right.

2143 - MADDOX illuminated the target area to the east with star shells after having lost target "V". TURNER JOY also had no radar contacts at this time.

NOTE: Throughout the ensuing action MADDOX expended 24 star shells. Illumination was attempted by various methods, by firing on point targets, by covering a large area with shots on each quarter, and by firing overhead. Except for one instance of such doubtful validity that it is not mentioned in the chronology, results were negative. On several occasions aircraft requested star shell illumination, which was provided. It is conceivable that the illumination assisted the patrol boats more than it did the destroyers and aircraft since there were strong indications that the boats did not have radar. The same comment applies to aircraft dropped flares and photo-flash. TURNER JOY did not fire star shells because she had none aboard. 5"/54 star shells have been withdrawn from the fleet pending re-design and re-working of stocks. Star shells and flares would be more effective with larger, more slowly moving targets. The arc of visibility for one star shell is only about 3°; the great number of shells needed to illuminate a PT action would probably be better spent directed at the PT's.

2144 - Torpedo noises were reported again from MADDOX sonar, almost immediately after the first evasive action. The first contact sonar reported was evaluated positively as a torpedo. Many subsequent reports by MADDOX sonar reported over the next hour, however, are believed to have been mostly self noise with some being aircraft noise and possibly also patrol boat sounds. (Note: MADDOX sonar personnel were accustomed to ASW exercises conducted at 15-20 knots. They were, therefore, relatively unfamiliar with sounds associated with [redacted] steaming on rapidly changing courses). For the remainder of the action, however,

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MADDOX evaded such reported contacts, not feeling it appropriate to question the source of the sounds reported as torpedoes while in action. TURNER JOY continued a wide circle right, changing course at intervals whenever MADDOX reported a torpedo wake. No surface radar contacts were obtained from 2142 to 2201.

2201 - TURNER JOY picked up a 20 knot radar contact at 2000 yards to the West (V-2). Contact appeared to be opening and TURNER JOY's course was changed at 2204 to 010 to bring guns to bear. Contact turned around initially to close, then began opening to the West. At 2210 course was changed to 060 to unmask guns and turn continued until ship steadied on 180. Firing was commenced and terminated shortly thereafter due to lost radar contact.

2212 - Contact was regained at about 6000 yards to the West and firing resumed by TURNER JOY on "V-2".

2212½ - TURNER JOY ceased firing. It was estimated by radar that three hits had been obtained. TURNER JOY again proceeded on a Southerly course (160°T), firing briefly on the contact to the West.

2218 (approx) - TURNER JOY detected another contact to the Northwest at a range of 3200 yards. Fire control lock-on was obtained and a southerly course observed. Firing began at 2218 and ceased at 2219 when contact plotted DIW (Dead in Water). Evaluation of this contact is low possible since its presence cannot be correlated with other contacts or tracks. Furthermore, the contact persisted for only about 2 minutes. TURNER JOY continued to the South (160°T) to rejoin MADDOX.

2221 - TURNER JOY obtained a contact, designated "V-3", bearing 008 at a range of 3600 yards and closing with a speed of 48 knots. At 2224 contact had closed to 2500 yards and had been "locked-on" by F/C system.

222[illegible] - Firing commenced at this time. Explosions were observed by many TURNER JOY personnel. After numerous hits right on target "V-3", the contact disappeared from all radars and was believed sunk at 2228. Commanding Officer and others observed a thick column of black smoke from this contact, with no flame, leading to belief that the contact sank and did not burn on the surface.

During the next few minutes TURNER JOY was having difficulties with her after 5" mounts and was unable to engage any targets. No targets were detected on any radars with the exception of an intermittent contact closing rapidly from the North.

2237 - Aircraft, at request of TURNER JOY, began strafing the general area of the above contact as TURNER JOY continued southerly. By 2242 this contact had closed to 2100 yards. TURNER JOY changed course to starboard and contact overshot wake at 2243. By 2247 ship took this contact under rapid fire for about 1 minute. This PT boat was sighted by six people at various times during its closing track. Contact

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appeared to be following in wake. One depth charge was launched to shake up the PT. As soon as depth charge launched, TURNER JOY turned to starboard and contact again overshot wake.

2247 - Many personnel on the TURNER JOY saw a searchlight bearing approximately due north at a distance of approximately 10 miles. At this time TURNER JOY was on course, 310°T. MADDOX bore about 305°T, definitely eliminating that ship as the source of the light. All TURNER JOY's original contacts, V-1, V-2 and V-3, had been plotted in the vicinity of from 10 to 15 miles north of the TURNER JOY's 2247 position. Thus the major contact area coincided with the apparent position of the light. Three theories have been proposed for this light, (a) It was a recall light for all PT's in the action, (b) It was a call for assistance from a damaged vessel or, (c) It was a light used by the PT boats to pick up survivors.

2252 - The contact which had been closing from the north just prior to 2237 was held by TURNER JOY bearing 105°T, 2200 yards. At 2254 rudder was put over hard left and a ram was attempted at 2252. Contact was lost in sea return at 700 yards.

2259 - Contact was regained bearing 320, 1500 yards. Contact appeared on opposite side of TURNER JOY after having evaded ram. Immediate "lock-on" was obtained and firing began at 2300. Four bursts were observed on this contact and contact was lost at 2303. The entire episode with this contact, lasting from 2232 until 2303, provided what is considered by TURNER JOY as definite proof that contacts were using wake to obtain sighting and intercept. *This contact overshot the wake twice indicating that he could not observe a course change from any position but dead astern. USS TURNER JOY verified on ECM equipment (ELR) that contacts had no radar in operation by complete absence of normal CH... MM or DRV seaborne radars.

- MADDOX acquired an intermittent radar contact close-up astern. This time TURNER JOY also detected a contact astern of MADDOX, but too close to MADDOX to take under fire. MADDOX fired 3 inch mount astern in attempt to flush shadower. Validity of contact: possible.

2306 - MADDOX released a depth charge against time 2304 contact. No apparent results. Boats seem to seek the wake possibly to take advantage of a relatively blind area and also as a means of locating the target.

TURNER JOY turned West to rejoin MADDOX then 9½ miles bearing 272.

2309 - A surface radar contact was obtained at 2800 yards and movement towards TURNER JOY's wake was noted. At 2310 depth charge was launched and firing commenced. No hits were observed. Contact was lost at 2311.

2319 - MADDOX sonar reported torpedo bearing 200. (Post engagement analy... indicates doubtful). Fired on weak intermittent radar surface conta...

*See continued comment on p. 8

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to the West. Range and bearings were not recorded. Validity of contact: poor. Various manouvers were made as TURNER JOY began falling in 4000 yards astern of MADDOX.

2321 - A contact bearing 005, was obtained by TURNER JOY at 1300 yards and taken under fire. This was evaluated by TURNER JOY as the same contact which was lost at 2311. Firing ceased at 2322 with contact opening, no hits were observed.

2342 - TURNER JOY observed another contact on radar to the North at a range of 4000 yards, and taken under fire for a brief period. This contact closing fast and was tracked at 39 knots. Again no hits were reported and contact was lost at 2351.

2347 - TURNER JOY observed a contact between MADDOX and TURNER JOY. This was finally evaluated as high speed wake. Fire control could not lock on this target. On detecting the contact, however, TURNER JOY informed MADDOX, who dropped a depth charge astern.

No other surface contacts were observed until contact with USS S. N. MOORE was obtained at 0016. At this time, MADDOX and TURNER JOY had reached the southern end of the Gulf of Tonkin. No other significant incidents occurred thereafter. As a final descriptive note, the entire engagement took place on a generally North to South axis with the distance between the first turn to the South of MADDOX and TURNER JOY to open skunk "N" at 1946, and the final contacts about 2340 was about 85 miles. Ammunition expended in both ships: MADDOX, 5/38 Frag (2), 5/38 AAC (3), 5/38 star shells (24), 3/50 Frag (95) and 4 depth charges; TURNER JOY, 5/54 Frag (134), 5/54 AAC (86), 3/50 Frag (28), and 1 depth charge.

* Continued comment from 2259 entry:

Furthermore, it is believed that the DRV PTs used stern chase and quarter approach tactics because most U.S. destroyers, including MADDOX which they had engaged on 2 August, have two 5" mounts forward and only one aft. While TURNER JOY has two 5" mounts aft, the PTs were possibly unaware of this because of TURNER JOY's recent arrival in the Gulf, with no involvement in the 2 August engagement.

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