Robert Oliva: This interview is being conducted with Captain Michael P. Sullivan by Master Sergeant Robert H. Oliva at Marine Corps Schools, Quantico, Virginia, on 12 January 1966. The subject of this interview is F-4B ground and air problems. The subject is unclassified. Captain Sullivan, would you state your name, grade, and service number please?


RO: What were your duty assignments while you were in Vietnam?

MS: I was a member of Marine Fighter Attack Squadron 531. My job in Vietnam was the line division officer, which encompassed all flight-line ops and ground handling equipment supervision.

RO: What periods did you serve in these billets, and where were you physically located within Vietnam during the period covered?

MS: I was in Vietnam from 10 April to approximately, I think, 14 June 1965, located at Da Nang Airbase.

RO: What type of aircraft did you fly, sir?

MS: I flew the F-4B Phantom II in 531.

RO: What do you think of the combat capabilities of this aircraft?

MS: The capabilities of the F-4, I believe, it’s the finest dual-purpose aircraft we have in our inventory today. It can adapt to any tactical mission that we have. However,
the limitation is that for the war in Vietnam, ninety percent of our missions, we should’ve
had the gun pod on the aircraft. It’s definitely in need for the 20-milimeter cannon and
also our TPQ missions, utilizing the ASRT were completely voided many times due to
the fact that we did not have the beacon aboard the aircraft, such as the A-4s do. This
could be alleviated by either installing the box in production or adapting a rig by cutting a
bomb in half and putting the beacon itself in the bomb, putting it under the rack of the
airplane so the ASRT can pick you up and you’ll be able to drop in bad weather
conditions which as the best effect on the TPQ.

RO: How many missions did you fly, sir?
MS: I flew 103 combat missions in Vietnam.
RO: Can you give a brief description of a normal mission?
MS: Well, about sixty percent of our missions were strictly interdiction mission
strikes. We had no ground component involved. We’d be up to—well, the maximum
mission we flew was 360 miles away from Da Nang. Of course, the minimum would be
about three miles away, but we had a Bird Dog Aircraft, JL-19 Airborne US Air Force
Controller. We’d be briefed on the target or the rendezvous point, anyhow, before
takeoff. We’d proceed out there, the Air Force airplane would mark the target or give us
some instructions to the target and then we would hit it. We had about thirty percent of
our missions were either standing MAF-alert, which we launched airplanes in support
Marine ground forces or other services in trouble, or we had close air support missions
scheduled. We had column escort. We had a night close air support with the Marine
Corps. We’d be launched on a MAF alert at dusk or at night and again, the Marine Corps
did not have any flares whatsoever and the only light we got was from the fires that we
started with our own bombs and rockets. Utilizing with working with the ARVN, the US
Air Forces out there with their C-123s, they did have flares and it worked out real well.
They illuminated at about 7000 feet, the flares run out about 3000. We had good
visibility, the darkest portion would be about like the darkest portion of an outfield in a
night baseball game and also we did helo-escort and a few column escorts for
mechanized columns that would go down, say, from Chu Lai to Quang Ngai and back
again.

RO: Was your training adequate prior to going to Vietnam?
MS: Yes it was, probably more so than probably any other F-4 squadron that would go out there due to the fact that our squadron was together for three years. At least half the personnel in that squadron were in it for a three-year period, which included the Cuban flap and many prolonged periods of under pressure and tension of care quals and deployment trans-Pacs, demonstrations down in Okinawa, etc. and plus the fact that the other people in the squadron had been in it for two years. Again the aircrew, the experience gained was better than average that you’ll find in a normal squadron because of the time being together, but what really paid off was with our ground troops, the maintenance people and again, having the Cuban flap pushed upon us with only six months in the airplane working twenty-four hours and we had good part supply, and then going overseas again and down to Vietnam. Again, our airplanes held up real well and the experience gained in the airplane with our mechanics in a three-year period is what made it very beneficial and also gave us the availability rate, which was approximately thirteen-and-a-half airplanes for a sixty-day period up every morning and again. We might shut down the day with only four birds up, but we made every mission. We lost a few sorties, but we had many days where we had add-on missions. Again, I think in April we had fourteen out of fifteen up every morning and in May, we had thirteen out of fifteen, and then again in June, we had fourteen out of fifteen as far as maintenance went. Getting back to the experience level again, the fact that our squadron was primarily a fighter squadron and that’s what it had trained for actually for two-and-a-half years, we were really primed and ready to go and we had seen one, the Cuban flap. However, then all of a sudden the attack capability was presented to us. We had approximately two months of attack work during Philippine deployments prior to going to Vietnam and when we got down there, of course, we really went into it. But it proves one thing that anybody can drop a bomb and to be an attack pilot, if you can fly a mere approach or just fly an airplane well, anybody can drop a bomb, especially 500-pounders. Of course, you get about five or six hops under your belt and everybody gets to be pretty good at it. We never had any night flare work prior to going down there, but again, it’s nice to have everybody make it sound like it’s a big hairy deal, but it really isn’t. Our least-experienced man, again, he had two years in the airplane, but nobody had any problems.
with it whatsoever and we find out, actually, a lot of the interesting points I’m sure, which we’re known in the past about it.

RO: Give a brief description of the air control used in close air support.

MS: Okay, well, first of all, the close air support type missions, we either we had a forward air controller on the ground, Marine, which did a fairly good job, or we had an airborne forward air controller, which was the US Air Force or the Marine Corps. The US Air Force was outstanding. We couldn’t have been better. We never used the close air support charts that they give you for the mission that the FAC gives to you. The Air Force controller would just give us a brief description of where it was, best run in heading, and he’d mark it or a few other pertinent factors, we were rolling into the target or approaching it and that’s all that was needed. However, I found that the Marine airborne FACs were unsatisfactory and in an incident that I recite here will bear this point. That’s that, I think it was 14 May or something, I was the flight leader in a four plane flight that was launched out of Da Nang on the MAF-alert at dusk. We got down to the target, it was 900 foot overcast, we broke through and luckily about a mile in front of us was a rendezvous point, which we were briefed to go to. Again, I had these three wingman tucked in on me so we could keep our flight integrity. We broke out about 900 feet, I called the deadlock aircraft, I think, it again, was 161. I called him and asked him what his position was because I didn’t see him at the rendezvous point and he came back with “Over here.” I was so mad then that if I had have seen him, I would’ve shot him down and I said, “Well, we’re at the rendezvous point now, where are you in relation to that?” He came back and he says, “Well, I’m near the mountains.” Well, if you looked, the whole coast there is mountains north to south. Finally, we got together and we made our runs. Well, after the mission was over, I told him that we were ammo-minus or negative and that we were returning to base and would like a damage report. He came back and he asked me to make a strafing attack and I told him negative on that. Then he said, “Well, you mean nobody can make a strafing attack?” I said, “That’s affirmative, no strafing attack.” Well, finally, and he kept persisting and I finally came on the air and I told him, “Well, the F-4 B doesn’t have any guns.” Well, he didn’t even know about this, which was very poor. One other misuse of the aircraft was down at Quang Ngai in this mechanized column escort I was on one day. I got down there just as the column
was pulling in from Chu Lai into the compound at Quang Ngai, and again, we orbited for
an hour and fifteen minutes overhead while they ate their lunch in a fortified position and
then they pulled out and we gave them fifteen minutes air support. Now, what should’ve
been done is somebody should’ve gotten on the horn, either the air liaison officer, an
FAC, or battalion commander. Whosever running the show down there called back to Da
Nang and told us to keep the birds on the deck until they were leaving this area because
we can use these planes for other missions other than orbiting while somebody eats their
lunch.

RO: What problems did you encounter in locating targets, sir?

MS: Well, we actually didn’t have too many due to the fact that ninety-nine
percent of our missions, the targets were marked for us. Again, if you can find the target,
which wasn’t too bad—some of the jungles and the rivers looked fairly much the same,
but again, good DR flight planning, that’s all you needed to go out on your TACAN as
far as you could, let down and hold you head in. Again, the winds were negligible down
there, so it had hardly any effect. You could get right to the target and it didn’t really
matter about the weather. If a helicopter could get there, we figured we could and this is
what we did. We never aborted because of weather. As far as seeing the targets in the
jungle, of course, you never see them, you just his smoke with the high tree canopy. But
again, in the villages and bunkers and stuff, the tunnels underground they had marked it
was hard to tell, you might see some fresh earth, but you just dropped your bomb
according to where he said to and then he’d tell the next man to move it over ten meters
or twenty or whatever he wanted and you could do it. Actually, there wasn’t any problem
at all firing at targets. Some of them like footbridges were hard to see when they called
it, but again, if he marked it well or told you where he was in air when he did it mark it,
normally, you’d be on target pretty soon.

RO: What type ordnance did you use mostly and on what type of targets?

MS: Well, we used three types of ordinance. We used bombs, rockets, and nape.
We used the Mark-79, the 77 nape. The Mark-79 was unsatisfactory. The first twelve
napalm bombs we dropped in Vietnam, eleven of them were duds. After that, the Mark-
77s turned out to be real fine, but I don’t know if we didn’t mix our nape right or what,
didn’t let it gel long enough, but the charge on the 79s kept flying out and I watched it
because I was on this first flight. The bombs we used, Mark 81s, 2s, and 3s; which is a 250-, 500-pounders and 1000-pounders. Mainly, I’d say we used 250-pounders and probably at least fifty percent of them, no, probably more than that, sixty percent 250s and I think we only dropped twelve 1000-pounders the whole time we were down there. No problems on the bombs except, of course, the restriction of 550 knots or you can arm them. Again, we found that you could drop bombs and I did it personally at 500 feet in level flight with this overcast weather and it took five seconds for the bomb to hit the ground. You could cob it back into burner and go in through the clouds and it would go off and you didn’t pick up any ricochets. And again, we found that the work that VX-5 had done in their advanced notes and in their publications—the only thing they had was a ten-degree dive and a thirty-degree dive, which is ridiculous for combat because you have to give them air support if you get out there. That’s what you’re there for. We found that we used a foot per pound. Well, actually, we never went any lower than about 500 feet in a 250-pounder, but I dropped 500-pounders, and my flight did at 500 feet and nobody picked up any damage. And again, we figured out the mil setting to start out with 190-200 mils and then the wingman could see where you hit, you tell them what you set, and you work it out and pretty soon you’re hitting pretty well right on target. This type of information has to be available and it wasn’t. We had to find it out ourselves. The NWIP, I think it is 1-20, says that for, I think, a 500-pound bomb, you’re supposed to have 1100 feet or something in combat, is completely erroneous. You can drop it in level flight if you got the power and again, these runs were at 500 knots, 480-500. If you got the power, as soon as you drop it, you don’t fly over the target, you brink your aircraft sharply in one direction or the other and pull it up and we did it. We got away with it and it worked real well and I think everybody except maybe a few were convinced when we left. We had problems with our rockets. Again, we started firing point blank instead of the 3000-foot slant range and all. The weather determined a lot of this, but we found that the Zuni rocket was so tremendous that if you fired in a 30-degree dive, it’d just bury itself in the ground. So we fired level as point blank as you could get it, it wouldn’t burn out when it hit, everything it hit it’d knock down and it would run right through a town without—completely from one end to the other and doing tremendous damage. Talking to Air Force pilots, they figured that they were getting shot down with their 20-Mike
Mikes a lot because they’d stay there and fight back, but they were convinced that after watching us on targets with our Zunis that normally you’d make one or two passes the whole flight and you wouldn’t get anymore ground fire that either you were getting them or they were running because the Zuni really, really worried them. The 2.75 rockets really weren’t too good. In the jungles, I guess they were better because they would detonate on contact with the upper canopy than you’d get ricochets, I guess, and shrapnel all around underneath. But using them in villages and all, unless you got a direct hit with it, you just had nineteen holes in the ground and this was borne out by the helicopter pilots who saw us prep zones. Again, we ended up firing them row flat trying to get them to ricochet, but they’re so unpredictable, they don’t go as true as the Zuni. But I’d rather have the Zuni rocket.

RO: Did you work with an air support radar team?

MS: Right. We worked many missions with the air support radar, and again, I only guided three or four missions with them. The first one worked out real well. I think it was the first one we dropped while we were down there. A skipper and myself went out on that. However, the next three or four, whatever I had missions after that, every single one of them was an abort due to the fact that we get airborne and it was such bad weather, that the ASRT could not pick us up and we dropped between sixteen and twenty-one thousand. They’d pick us up over the water where there weren’t any thunderstorms, but we get back overhead and the F-4 does not have a beacon. Now, it should have this beacon as I’ve mentioned before. We can fly the exact altitude and the true air speed right to the knot, which makes it a real fine for the ASRT people and their corrections. They notice, they said were very small compared to the other airplanes due to the fact that with the heading-hold capability in the airplane and all, that it makes it for very accurate bombing. Again, the limitation is the beacon. You need this because the surprise comes in the bad weather and at night. They did a real good job, I thought, the ASRT people, it wasn’t their fault they couldn’t pick us up, but it seemed that when they did pick us up, and we did drop—I remember one mission, twelve bombs, the worst one from a bunker was sixty meters off the target.

RO: Can you give a brief description of an actual mission with an air support radar team, sir?
Right. Well, we’d take off and normally they’d brief us where they wanted us to go. It’d be like on the two-four, not two-four, but the one-five-zero degree radial at nineteen miles say at 15,000 feet and they’d pick us up. Again, we did not have a beacon, then they’d vector us around, normally it’d be up to the north, then fly to the west and then back in on a southerly heading or two-one-zero or something into the target area. They’d shoot for a 20,000 meter, I think it was, straight in and they’d give your last couple of heading corrections and you just come right in and they’d give you a stand by to drop and then, I think, they counted down “5-4-3-2-1” or something, “Drop” or they’d say, “Mark, mark” and they gave you an Armstrong of 2000 meters and that’s how it worked and we just turn downwind again and go. Again, this is when we could drop.

What, excuse me.

Go ahead.

What type of anti-aircraft fire did you encounter and how effective was it?

Okay. Well, I never encountered any. I never saw any. I heard rumors that there were a couple of guns down there as far as flak, but the only type of anti-aircraft that we encountered at all was small arms, automatic weapon, 50-caliber. We saw this quite frequently. But again, they were way behind us and I think one thing to note is that we were making runs at 500 to 550, anywhere from 480 to 550; the limitation of the ordinance. You could actually laugh at the fact that they’d been shooting at you. You could see the tracers going way below you or way behind you. But toward the end, I remember the last couple of missions, it was really getting close it looked like so I think they were catching on a little bit under the speeds. And again, the big reason is most other airplanes delivered about 400 knots, the F-100s and all, and I think this is one thing that helped us. However, Tin Bin and his squadron, the NCOIC of the metal shop said he patched up 192 holes in our airplanes when we came back. Again, I never noticed any of mine, they might have been rocket fins, they could’ve been small arms, maybe a few even our own blasts, but again, it’s an indication that the airplane can fly. I can only recall two times where the airplane was down due to hits and one of them was the own bomb that went off into the airplane at 400 feet. He had armed the bomb, evidently, by exceeding the speed limitations, when he dropped the bomb, the round or something hit it because both the flight leader and the FAC saw it go off estimated at 400 feet below the
airplane and he lost his engine, one of his engines with the shrapnel from it. Then, another time, we had a rocket pod come off in-flight and the drop, and it tore about a third of the leading edge of the wing off the BLC-flap and again, he got it back, the pilot made a good landing and the airplane was down, of course, until he could get a replacement on the flap.

RO: Captain Sullivan, if you participated in helicopter escort missions, what tactics were used and how effective were they?

MS: We did. We started out—again, we never did any of this in the past, in our training because I guess it’s an attack mission, the helicopter escort. We started out, we tried a four-plane to start with, we tried two-plane, we ended up with the best, being a three-plane flight. Again, this was a forty-four planes on down, forty-four choppers on down and what we did is we ran a racetrack pattern around them, started out a beam, the chopper to about a 100 yards and above them, the last plate in the flight by about 1000 feet. Again, you’d have about 250 knots. You’d come back to idle, you let down on the glide staying about 100 yards a beam, come along, level with the lead aircraft at which time in the lead chopper you would honk it back up to full military power and you’d have about 350 knots. Then, you’d climb back up on the side of the circle again, to about 1000 feet above them, fly along till the last chopper again, then turn on your downwind. We kept that plane, we figured within fifteen to twenty seconds all the time of the rolling heading, which would be above and behind them at about 250 knots. Again, the system was, if they had gotten hit from the ground, they were going to break the chopper fight in the opposite direction and the man on the perch would roll in and fire rockets at them. Of course, that’s all we had without the gun. Now, again, it worked out fairly well due to the fact that we had an RO in the backseat because it was really hard to keep track of the green choppers over the green jungle and also your other airplanes. So, this helps over a single-seat aircraft, but the F-4s a little too big, I think, and clumsy. We even tried it half-flaps once, which was unsat. It didn’t work at all. Flaps would blow up and you can’t turn, it’d be an impossible situation, I thought. Again, I think the A-4 is probably better suited for this except for the two-man capability and if they put guns on the F-4, it might be all right, but I think guns on the A-4 is a much better system for helicopter escort than using F-4s for it.
RO: To what extent was aerial photo recon utilized in support of both ground operations and air operations, sir?

MS: I don’t—I only saw a couple of pictures the whole time I was down there for missions up in the Bao Long Valley. And again, looking at the pictures that they’ve taken and when we flew over the targets due to the cover of weather and whipping around leading a flight, it was hard to really recognize it and maybe we could have if they hadn’t been an airborne FAC there, but heck, he’d get there, he’d mark the target and so really, the pictures, as far as I was concerned, weren’t too much value. Again, because most of our targets, they weren’t the kind that really stuck out too well. If it had been a city, say, and pick out a certain quadrant, it would’ve probably helped a lot if they were up-to-the-minute pictures.

RO: Could you give a brief description of the overall air control system employed in Vietnam?

MS: No. Again, the air controller we’d had before checking in with the TAC center and all this, they were trying to set it up, but it would never work while we were there. In fact, it was a real lousy system. We had about three frequency change to make prior to getting on our FAC’s frequency. And again, when you had to strike three miles off the end of the airstrip on a MAF alert, this was impossible. So, heck, we used to just forget it actually and check in on the way back. If we had one, say, within thirty miles, you might get over to Panama, which was the GCI sight, in radio with them, but the Marine people, you’re supposed to check in. Half the time, they weren’t on the air and I remember one time coming back from a mission, one of them was on the air on guard channel screaming about somebody, they wanted to know if both airplanes were on the deck. Again, this was real disconcerting when you are running in on a strike trying to listen to the forward air controller. Again, I imagine this is probably taken care of now, but at the time, it was completely too many channel changes.

RO: Explain to us what type aircraft is best suited for tactical observations, sir?

MS: Well, in my own mind, I think that the armed Huey, from what I saw of it out there, I thought it was outstanding. It’s a little vulnerable, but again, you got six M-60s on it and that’s a lot of firepower through all tracers. I think he can see well and he can control well. The L-19 did an outstanding job, but he has no armament on it and
again, that would probably be second best. Of course, again, for being an airborne FAC or just observation, the AD-Sky Rader would probably be about the next best. I feel that a jet is really unsuited for any types of observation. Even in an open area, it’s really hard to see to slow it down; if you slow it down, you’re going to get shot at. If you get down low enough where they can hit you a lot easier, whereas the Huey and the L-19 and all, the AD are much more maneuverable. Again, from what I saw, they did an outstanding job.

RO: Thank you.

MS: Okay, I’d like to cover now is some flight line operations ground handling which is a very important part of our operation down there. To start with, let’s talk about security. As far as I’m concerned on the flight line, we had none. We had eight aircraft facing seven and we had 300 feet between the tail of the last airplane of one facing the opposite line and the tail of the other aircraft in the opposite line. They were packed so closely together, that we had our wings folded and we had to put jacks in the wings because when you lose hydraulic pressure, the wings would’ve come down and they would’ve hit each other. All right, the security; we could not put sandbags out, we couldn’t revet them anyway because we didn’t have the room. Vietnamese civilians and military drove up and down our flight line at will with fuel trucks and everything you can think of. They stopped their vehicles, looked under the hood, everything that could happen happened. They had Vietnamese troops marching right by out of the C-123s that were parked next to us. These guys had grenades and everything dangling from their equipment. Again, it just takes one to throw one down in intake or to have a satchel under one of these fuel trucks and our flight lines going up in smoke. If they get one airplane, they’ve got every one. Another thing is they had Vietnamese personnel working in the hangar. He was a caretaker, I think he was in the Vietnamese Air Force, but he sold hats and all that stuff. They had—as the crow fly, it’s about a mile-and-a-half from the center of our flight line to downtown Da Nang, I think, which has 65,000 people. A mortar, any mortar attack would wipe us out. Somebody could have a mortar tube in one of his huts someplace in any area there and if they get to us on our line, we’ve had it. They get one, again, they’ll get all of them. Another problem we had was with our refueling. Now, we had the TAFDS, which worked out real well, except we didn’t
get fuel. Lots of times, we had a 60,000 gallon, of course, capability, but the fuel was
trupped in on the base and then it had to sampled and the sample were taken down to
Saigon. We couldn’t get the fuel until it’d been checked. Many times I’ve seen our bags
get down to 3000 gallons in one bag; the other’s flat and we couldn’t put any add-on
missions—and we had the airplanes—due to the fact that we didn’t have the fuel. Also,
we had four refueling hoses coming out of our TAFDS. We didn’t use these hot
refueling though because when you refuel four aircraft, the pressure is so low, that it took
forever to refuel it. It was so hot that we just put our probes out prior to shutdown which
conditioned the airplane for cool power refueling and then let the plane captains refuel
the airplanes and then tow them back into position. We did them, most of the
maintenance right there on the flight line. If it was serious maintenance or a check, we’d
pull the planes into the hangar. Normally, we had a “hangar queen” in there, something
that we would cannibalize and get our parts from if we didn’t have them. The
maintenance people did an outstanding job on keeping the airplanes up and doing regular
line maintenance. Again, I told you how cluttered the area was. The flight line, again,
with all the ground support equipment and bombs and everything sitting out there, we
really had problems. We were blowing plane captains around taxing out because you had
to put a lot of power on a moving aircraft with all the bomb loads we had and it really
sort of took heads up ball here and it really was a dangerous situation, but it was all we
had. Again, security, the lack of it could’ve really cost us the whole squadron. Again,
our ordnance, the bombs, the rockets were sitting right out in the open about maximum of
thirty yards from the airplane. We had, I’d say, about a forty or fifty-yard area where we
kept ordnance and again, that wasn’t across the field. There was nothing else we could
do about it. The weather, I think, had a big part to play in keeping our airplanes up, that
it was warm weather. We didn’t lose too many seals or anything, but dust was a major
problem. In fact, we had to put dust covers on everything, otherwise we’d lose due to the
communications equipment in the airplane with a block that the pilot plugs in, this would
go out very easily. But after we figured this out, which was a couple of days, we had dust
covers on everything. Again, the instruments would get dirty, but the plane captains
would just have to keep wiping them off. Our ground handling equipment, our starting
pods and all stood up real well. We had some regular GTC-85 backups for our 105s and
I don’t think we ever had to use one. We got down to one starting pod a couple of times out of six or five. I’m not sure the number we had, but as the rule, they stood up real well and we were augmented from MABS when we first went down there. Our HAMS people did it to maintain these. One of the problems again with the rockets I failed to mention were our racks ourselves, the MERS and TERS. After sustained operations, it took about two weeks for these Zunis and then we find out that the racks were shorting out. The Zuni, the heat was so great, that it would melt the wires and therefore you couldn’t get anything off normally. Where you would fire it and it would short out and the next flight, they wouldn’t know this and he wouldn’t be able to fire and if it popped the circuit breaker in the RO’s cockpit, no matter what you did, if you held it in or what, you wouldn’t drop anything off the airplane at all other than by jettisoning everything off the airplane, so of course, we brought it back. There was no abort gear at Da Nang. The Air Force wouldn’t let us put it out there due to the fact that, they said it was bad for their tires. When we left, they put in, I think, an abort gear at the end of the runway, but we couldn’t put our most in the middle, and again, if you had utility failure or something, it could cause you to lose an airplane for a relatively minor emergency because you did not have the abort gear. The abort gear that they did put up there toward the end was, I think, seventy-five feet from the end and nobody had ever flown into it before and they said, “Well, it’s supposedly okay.” I’m not sure if it is or not and again, I don’t know if it’s been utilized. The tire problem that we had when we first got there, we didn’t have all General tires, we had to change the tires after every three takeoffs and landings over 49,500. But when we got the General tires, the twenty-six-ply tires, I think we had one blown tire the whole time we were down there and that was on takeoff and it worked out, actually, those tires were outstanding.

RO: Thank you, Captain Sullivan, for this interview.