

Orion EFT-1 Recovery

Milt Heflin was asked to provide an article to the Science Editor at the *Houston Chronicle* newspaper about the Orion recovery experience as an Apollo consultant. He was 25 in 1968, when along with other LRDer's enjoyed their first primary recovery ship ride on the USS Yorktown during Apollo 8...now, at 71 years he thinks he may have been the oldest on the USS Anchorage for his 9th splashdown! Following is the *Houston Chronicle* article published on December 24, 2014:

An engineer who recovered eight Apollo capsules from the Pacific tells of fishing Orion from the sea

Posted on December 24, 2014 | By Eric Berger

*Eric Berger's note: Because NASA's Orion spacecraft was recovered by a U.S. Navy vessel neither the media nor public got much insight into the process. However **Milt Heflin**, a NASA engineer and flight director, was on board. He had a unique vantage point because not only did he participate in Orion's recovery, he did so for eight Apollo splashdowns. Here is his account.*

Standing there on the deck of the USS Anchorage, my mind couldn't help but drift back nearly forty years.

The date was July 24, 1975, and I was a NASA recovery engineer aboard the USS New Orleans west of the Hawaiian Islands. We were all set for the return of the crew from the Apollo-Soyuz Test Project, a joint mission with what was then known as the Soviet Union. From 1968 to 1975, I had been on the scene for eight Apollo splashdowns – Apollo 8, 10, 16, 17 and all three Skylab flights, as well as ASTP.

Thirty-nine years after that last Apollo landing, I saw the ninth splashdown of my career. I am the only person who was present at the final landings of both the Apollo and Space Shuttle programs, but this was something else, something better. This was very hopefully the beginning of a brand-new era in the history of human spaceflight. And I was there. As Yogi Berra once said, it was like *deja vu* all over again.

In the early morning of December 5, the Orion capsule announced its arrival with twin sonic booms. Not long afterward came the eerily familiar sight – to me, at least – of a capsule returning from space, suspended underneath the beautiful plume of three billowing parachutes. Finally, Orion scored a bull's eye landing about 600 miles west of the Baja peninsula. Its four-and-a-half-hour mission, an early test of its heat shield, structure and guidance systems for eventual return from deep space was over ... or was it?

Then the most hazardous, tricky maneuvers with humans in close proximity since launch. Wrestling a 20,000-pound spacecraft into the well deck of an amphibious transport dock like the USS Anchorage is no small feat in general, and particularly so when it's bobbing on top of the water like a cork and surrounded by a herd of boats and swimmers. Gone are the days when we hoisted a capsule onto the deck of a big aircraft carrier using a simple crane. Gone are the days when swimmers dropped from helicopters to begin corralling the spacecraft for the retrieval. Swimmers now dive in from several small and rugged boats – very much like the ones you'd imagine a team of Navy SEALs using – that are deployed from the Anchorage. These differences are by design. The Orion spacecraft does not have the beefed-up structure of the Apollo Command Module, with all the extra weight of a lifting loop and so forth.



Orion awaits the U.S. Navy's USS Anchorage for a ride home. (NASA)

One thing hasn't changed, however, and it never will. Mother Nature is still in charge in the open ocean. There was a tremendous amount of energy that needed to be contained while coaxing Orion into its initial parking spot just inside the opened stern gate, a flooded well-deck a few feet above submerged "speed bumps." Even then, the drama did not stop. Boatswains and boatswain's mates were communicating at full volume as they pulled and tugged on the lines affixed to the capsule to get it into its temporary cradle.

Heave.

Heave!

This way, that way.

It truly was something to watch. Orion was an untamed stallion bucking all over the place in its corral, with several cowboys surrounding it and trying to calm it down. With two lines on one side of the spacecraft and another two on the other, not to mention the rolling waves, the shipmates couldn't work against each other. They had to achieve their goal as one unit, working together.

It was that kind of magnificent teamwork that made all of this happen in the first place. If there was one striking similarity that spanned the four decades between programs, it was in how representatives of NASA, the Department of Defense, Lockheed Martin and various contractors all threw all their badges on the table in an effort to make things work. There were no turf wars. There were plenty of meetings in which folks with some pretty strong personalities seemed close to coming to blows over this issue or that, but the fact was, it was a diverse team and they were solving problems.

The bottom line is this. There are incredibly talented and capable people who can accomplish the task of getting us out of low-Earth orbit. They can do this, and do it very well, if only others will get the hell out of the way and allow them to do their work unhindered. If we really want to continue out into the stars, capable people have to be allowed to come together and do the job. We've got the people to do it. Just get out of their way, and the world will watch in awe and wonder just as it did during Apollo.

After it was secured and brought on board for good, I had the opportunity to spend some time with Orion. I noticed an American flag painted on the side of the spacecraft, up near the top. I marveled at the fact that it was still in such good shape, despite the ordeal of re-entry that it had just been through. Then, it struck me. As

Americans, we don't have our own vehicle right now to get our own astronauts into lower Earth orbit. Orion could be an important piece of the puzzle to getting into deep space.



Heflin, standing, reads well wishes from his Apollo mates to the crew aboard the USS Anchorage. (Milt Heflin)

As I parted ways with my new recovery teammates, I told them I'm still eight splashdowns ahead of them. I hope they can catch up.

Is this a new beginning? Time will tell.

Milt's favorite EFT-1 recovery photo:



USS Anchorage-Orion approaching stern - Milt Heflin is in the middle in the tan-colored shirt. (Navy)

Note from C. Mac Jones: I was assigned to the Landing Safing Team for Apollo 8 and met the USS Yorktown at Ford Island when it docked on December 29, 1968. The Apollo 8 Command Module with the Apollo CM Transport Dolly was offloaded from the ship, and Milt accompanied the CM to the hangar where the contractor team safed the pyros and cleaned the hypergolic propellants from the RCS so the CM could be flown back in a USAF C-133B to the West coast.



Apollo 8 CM under tow on December 29, 1968, to Ford Island hangar for landing safing – Milt Heflin sitting on tug. (Personal photo of C. Mac Jones)