

## William Pogue

Bill's distinguished Air Force career caught the eye of NASA and led to him piloting a flight into space.

### Chapter 1 - 1:15

#### Introduction

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**Announcer:** Astronaut William R. Pogue was born in Okemah, Oklahoma. He attended primary and secondary schools in Sand Springs and Tulsa, and holds degrees from Oklahoma Baptist University and Oklahoma State University. Bill's 25-year military career included a combat tour in Korea, two years as aerobatic pilot with the Thunderbirds, a tour as an assistant professor of mathematics at the Air Force Academy, and an exchange assignment as test pilot with the Royal Air Force. During his career he flew more than 50 types and models of American, British and Czech aircraft. He was selected in the 5th group of astronauts in 1966 and was on the support crews for Apollo's 7, 11 and 14. Bill's 84-day space flight aboard the Skylab space station (1973-1974), with astronauts Jerry Carr and Ed Gibson set eight endurance and distance records. He made two space walks (one for a new record of more than seven hours) and conducted numerous experiments related to studies of the Earth, the sun and the long-term effects of zero gravity on crewmembers. Bill left NASA in 1977 and has since worked as an independent technical contractor for several aerospace and energy firms. In October 1977, Bill was inducted into the U.S. Astronaut Hall of Fame at Titusville, Florida. He is the author of several books including an autobiography titled *But for the Grace of God*.

### Chapter 2 - 5:55

#### Wagon Ride

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**John Erling:** My name is John Erling. Today's date is August 8, 2012. Bill, if you'll state your full name, your date of birth, your present age and where you were born.

**Bill Pogue:** William Reed Pogue. Born on January 23, 1930. Present age is 82. I was born in Okemah, Oklahoma. The family didn't live in Okemah. My parents taught in a country

school where there was no medical assistance, so I used to get calls from my parents on my birthday and they would review this great adventure they had, because there was three feet of snow on the ground, so Dad tried to use a Chevy–Chevrolet—to travel to Okemah, and he had to give it up. He had to borrow a wagon and a team of mules to take my mother to Okemah to the doctor because she was in labor. Anyway, it took like eight hours. You’ve ridden in a wagon?

**JE:** Yes. I can’t imagine.

**BP:** Oh, boy! You know, that’s tough.

**JE:** Yeah.

**BP:** Anyway, they made it. I was born about eight hours after they got to my cousin’s house. He lived there.

**JE:** That’s where you were born.

**BP:** That’s right.

**JE:** In Okemah.

**BP:** Correct.

**JE:** Then your home actually...

**BP:** It was a rural community is what it was. It wasn’t a town. Of course, I don’t remember anything about that, but they had got another school. He was hired as a principal for a place that is close to Depew, Oklahoma. That’s where we went to get the groceries and so forth.

**JE:** Yeah.

**BP:** But we lived out—it was really in the boonies. It was back during the time when they were doing a lot of oil exploration. I don’t remember, but my parents had told me about it. One of the wells caught fire and it was roaring all night long. Finally when it stopped, everybody woke up. (Laughs)

**JE:** (Chuckles)

**BP:** Because they got used to the noise.

**JE:** Also a question I’d like to ask you, where are we recording this interview?

**BP:** We’re in Bella Vista, Arkansas. My wife Jean and I had a place out in Madison County, which is about 40 miles to the east of here, and finally we moved into Bella Vista. This is a very nice community. Very quiet.

**JE:** Your mother’s name, maiden name, where she was born, where she grew up.

**BP:** Her name was Margaret Frances McDow. M-c-D-o-w. She was born in Stigler, Oklahoma. She grew up in Stigler. She went to Oklahoma A&M and my dad did too. They were both school teachers.

**JE:** What was her personality like?

**BP:** She was very peaceful. A very quiet person. Very loving. I had a very healthy home life.

**JE:** And your father’s name and where he grew up?

**BP:** Alex Wallace Pogue. The first few years they lived in Arkansas, south of Fort Smith. This was back during the Depression and the life was not so bad, really. When we lived out in the country, everybody had plenty of food stuff because they raised their own food. Dad would take me out when they were making sorghum molasses. He just wanted me to get a sort of an education as to what life was like then. It was a good life. The only thing that I could think of that was subpar was medical assistance. Most people just didn't go to the doctors very much, you know, but they worked hard and so they were usually in good physical condition.

**JE:** Both your parents were teachers.

**BP:** Yes. Now, my mother stopped teaching after about four or five years.

**JE:** Did you have brothers and sisters?

**BP:** Yes, I had two brothers and two sisters. One of them passed away several months ago and that was my older sister. I have a younger sister and two brothers that live in the Tulsa area.

**JE:** Your education—first school you went attended.

**BP:** It was at Shady Glen.

**JE:** And where is that?

**BP:** Nowhere. (Chuckles) My mom just hated it. She called it living in the sticks. All the natural sounds—the birds and the coyotes barking and all that, yipping. We lived there for two years and I went to first grade there. But I thought it was a nice place.

**JE:** Shady Glen, though. Where is it in Oklahoma?

**BP:** Oh, excuse me. I would say about four or five miles south of Depew.

**JE:** Okay. You started first grade at a pretty early age.

**BP:** Five.

**JE:** Five years old.

**BP:** Yeah.

**JE:** Was that ahead of schedule?

**BP:** It was a necessity. Mother was teaching. It wasn't until the following year that an uncle came and stayed with us and could take care of the kids. But primarily I started school because she was my sitter, so to speak.

**JE:** Yeah. Was she ever your teacher?

**BP:** Yes.

**JE:** So what is your remembrance about first grade, second grade? Anything stand out in your mind?

**BP:** Oh, yes. Mother was kind and loving but she was also the disciplinarian. She had four grades in one room and Dad had the other grades. I think he went through the eighth grade, and that's when they had four years of high school. The drill was that she would start on one side of the room and work with the first, second, third, fourth grades. So one

day I was just a little bit boisterous and so she said, “I want you to go out there and get me some twigs.” Well, I thought that would be really neat because it got me out of the classroom. She said, “Bring me two.” And I brought her four or five. Well, what it was, it was a switch. She grabbed me and set my legs on fire. In retrospect, looking back on it, it got deathly silent in the room. (Chuckles)

**JE:** I’ll bet.

**BP:** But I never did that again. She didn’t have to do that again.

### Chapter 3 - 4:55

#### Dust and Cotton Bowl

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**JE:** In the ‘30s, you remember the dust storms, the Dust Bowls?

**BP:** Oh, yeah. I remember we had moved to a new location that’s close to Drumright—actually sort of between Cushing and Drumright—but it’s still out in the country. I can remember Mother had some gauze. She would wet the gauze and put it over our face so we could breathe through that gauze. I can remember waking up in the morning and having dirt I had been breathing in that this thing had acted like a filter and it had absorbed a lot of that dust, that real fine dust. It looked kind of nasty but it saved us a lot of pain, I think, as far as health was concerned. Those dust storms were terrible.

**JE:** So you’d see dust clouds?

**BP:** Yes. In fact, later on when I was flying for the Air Force I recall I was at 30,000 feet over someplace in Oklahoma and I was in dust—at 30,000 feet.

**JE:** (Chuckles)

**BP:** It was nasty.

**JE:** You moved around a lot, I believe, right?

**BP:** Yes.

**JE:** Was school fun for you?

**BP:** I enjoyed school.

**JE:** Was reading interesting?

**BP:** I read a lot.

**JE:** Science or math? Did that pick up early?

**BP:** Yeah. Of course, they were rudimentary, but I enjoyed school.

**JE:** We’re also talking about the time of the Depression back then. With your parents working as a school teacher, then you never really felt any wants during the Depression.

**BP:** No.

**JE:** Were there neighbors around who you knew that perhaps...

**BP:** Yes.

**JE:** Needed or maybe even moved on as many did to California?

**BP:** Oh, that's right. They did. They moved to California. Well, I remember Tom Stafford and I were in California. We were in the space program.

**JE:** Astronaut Tom Stafford who was also from Oklahoma.

**BP:** Correct. He was introducing me and Pete Conrad made some slur about Okies, and Tom said, "You better be careful. We took California without firing a shot!" (Chuckles)

**JE:** (Chuckles) Well, let me just go back to the WPA projects, Works Progress Administration.

**BP:** Yeah, they gave people jobs. That was really fortunate for the people because it was a little bit of cash flow.

**JE:** You saw some of those projects underway?

**BP:** Oh, yeah.

**JE:** What kind of projects?

**BP:** What I saw is they were working on roads. Now, I had a cousin that worked for the CCC camps—my cousin Kenneth was at one of those camps. It was very much like a military situation. Everybody was happy. They had that work. Kenneth—his mother had passed away—and he sent money to his father and that helped them out considerably.

**JE:** Mm hmm.

**BP:** And then in his senior year, Kenneth came and stayed with us because it was convenient. He was really a good basketball player and Dad was a coach. Anyway, it was kind of an interesting time to be alive because of the uncertainty involved. And then, of course, as Europe got engulfed in war, everything changed.

**JE:** Didn't you pick cotton as a young boy?

**BP:** Yes.

**JE:** How old were you then about?

**BP:** I was about 11.

**JE:** Tell us about that experience.

**BP:** Well, cotton pickers are the greatest invention in the world as far as I'm concerned.

**JE:** The machinery.

**BP:** Now what I did was, we had the professional cotton pickers. These people had a bag about 10 feet long and they'd drag that thing. As soon as the bag filled up, they'd go weigh it, and they would write it down in a book and so forth because that's how they got paid. Now the people who lived on the farm, they didn't get paid. They just worked. What I was doing was following the other people and I was cleaning the bowls out if they didn't get all of the cotton, so my fingers started getting really sore because bowls are hard and sharp after the cotton has been pulled out of them.

**JE:** The bowl actually houses the cotton.

**BP:** The cotton.

**JE:** Right.

**BP:** I'd -how in the world do these people put up with that pain? I looked at their hands. And you've heard the expression "Keep your cotton-pickin' hands off of me?"

**JE:** Yes. (Chuckles)

**BP:** Well, that's not a joke. I mean their hands are all rough and ruddy. They toughed up their fingers and so forth, but they looked horrible and that's no way to live. When I was working on the International Space Station in Huntsville, Alabama, they'd grow a lot of cotton down there and I had a good friend there, and so I said, "Do you know anybody around here who has a cotton patch?" And he said, "Oh, yeah." He said, "about half a dozen people in the church." Of course, now they have these big machines, so I got to go see one and see how it worked. I was just fascinated by the mechanized cotton pickers.

**JE:** The—as you call them—professional pickers back then, they were mostly black were they? American...

**BP:** No.

**JE:** No?

**BP:** No, we didn't have too many blacks in the area where we lived.

## Chapter 4 - 3:50

### First Plane Ride

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**JE:** When do you think you were first fascinated by airplanes?

**BP:** I would have been about 10. In fact, I was in a cotton field. There was a flight from Tulsa to Oklahoma City and back. They were DC-2's. That was the predecessor to the DC-3 and they didn't make very many of the DC-2's because they improved the design. And I looked up and I saw this thing, this DC-2. I thought, boy, that is really a pretty piece of equipment, you know. I watched it until it flew out of sight. And I think that was the first time I really got the urge to want to be a pilot, watching that piece of equipment. Of course, now they're real antiques, but at that time I was really impressed.

**JE:** That's when the light bulb went on.

**BP:** Yeah.

**JE:** Did you witness barnstormers back then?

**BP:** Oh, yes. They traveled all over the country and it gave rise to people. They charged five dollars for 15 minutes or five minutes or something like that. That's a lot of money back

then. That was over a day's wages. Anyway, they traveled—they would come in and they would find a big flat field, and land. And, of course, they would fly around the area first and the curiosity seekers would come to look at the equipment. I was at Highway 99 and I saw the planes headed for a certain area and I knew it was a big flat spot, so I knew they were going to land, and I went over there and they had a beautiful Beechcraft biplane. They also had a Ford Tri-motor. They said that about 11:00 they would take off, they'd go up and they would do a loop with this Ford Tri-motor. And I thought, boy, that doesn't look like it has that much performance. But they took off and they got up to about 3,000 feet. The guy put this thing into a dive and he pulled it up and went to the vertical and then just did a solid falling leaf to finish the loop. Well, it wasn't much of a loop but I had to give him credit for having a lot of spunk to even try it with a tri-motor. The sides of this fuselage were corrugated aluminum. It looked like a piece of agricultural equipment more than an aircraft.

**JE:** (Chuckles)

**BP:** But the Beechcraft was a beautiful airplane.

**JE:** What day was your first plane ride?

**BP:** Oh, yeah. It was at Cushing, Oklahoma. I can't remember what the date was, but it was in the summer.

**JE:** Yeah.

**BP:** Of '46. I had turned 16 and I could get flight instruction. I had saved up my money and my cousin lived in Drumright. I was visiting him. He says, "You know, we can hitchhike over to Cushing and you can get an instructional flight in a Piper Cub." And I said, "Okay!" So we got over there and I paid him, I think it was \$15. He took me up and he gave me some instruction, and I was doing stalls and so forth.

**JE:** Your first plane ride.

**BP:** First plane ride. And then my dad found out that I had been flying. He said, "That's ridiculous." He said, "You're not going to waste your money taking flight instruction." So I didn't get to fly any until I joined the Air Force.

**JE:** So that was quite a few years.

**BP:** Oh, yeah.

**JE:** Yeah. And \$15 was a lot of money.

**BP:** Yeah.

**JE:** Where did you get that at 16?

**BP:** I was a janitor at the church, a Baptist church in Sand Springs. It was called Broadway Baptist Church and it moved—the church—but it still kept the same name. It was on Broadway.

**JE:** Alright. So you moved to Cushing and your dad was looking for work...

**BP:** Yes.

**JE:** Teaching, of course. That's what made you move then to Perkins.

**BP:** That's correct.

**JE:** You had a paper route there, isn't that true?

**BP:** Yeah.

## **Chapter 5 - 10:53**

### **December 7, 1941**

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**JE:** Do you remember the day, December 7th, 1941?

**BP:** Oh, yeah.

**JE:** You would have been 11 years old?

**BP:** Yes, that's right.

**JE:** Tell us about that day.

**BP:** Well, we had a cousin that was based at Pearl Harbor, so we were worried about him.

We didn't know for two to three days whether or not he'd been injured or anything in the attack on Pearl Harbor. He was fine. He lasted through the war. In fact, when I went to Korea, he was over there at Korea, so we had lunch a couple of times together and talked about old times.

**JE:** December 7th, '41, do you remember—how did you first hear the...

**BP:** It was word of mouth, I think, but I do know that the following day in school—it was really interesting because Roosevelt made a speech. We had radios in the classroom, so we heard Roosevelt's speech:

#### ***Recording of President Roosevelt speaking on December 8th, 1941:***

*Mr. Vice President, Mr. Speaker, Members of the Senate, and of the House of Representatives:*

*"Yesterday, December 7th, 1941—a date which will live in infamy—the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan.*

*The United States was at peace with that nation and, at the solicitation of Japan, was still in conversation with its government and its emperor looking toward the maintenance of peace in the Pacific.*

*Indeed, one hour after Japanese air squadrons had commenced bombing in the American island of Oahu, the Japanese ambassador to the United States and his colleague delivered to our Secretary of State a formal reply to a recent*

*American message. And while this reply stated that it seemed useless to continue the existing diplomatic negotiations, it contained no threat or hint of war or of armed attack.*

*It will be recorded that the distance of Hawaii from Japan makes it obvious that the attack was deliberately planned many days or even weeks ago. During the intervening time, the Japanese government has deliberately sought to deceive the United States by false statements and expressions of hope for continued peace.*

*The attack yesterday on the Hawaiian Islands has caused severe damage to American naval and military forces. I regret to tell you that very many American lives have been lost. In addition, American ships have been reported torpedoed on the high seas between San Francisco and Honolulu.*

*Yesterday, the Japanese government also launched an attack against Malaya. Last night, Japanese forces attacked Hong Kong.*

*Last night, Japanese forces attacked Guam.*

*Last night, Japanese forces attacked the Philippine Islands.*

*Last night, the Japanese attacked Wake Island.*

*And this morning, the Japanese attacked Midway Island.*

*Japan has, therefore, undertaken a surprise offensive extending throughout the Pacific area. The facts of yesterday and today speak for themselves. The people of the United States have already formed their opinions and well understand the implications to the very life and safety of our nation.*

*As commander in chief of the Army and Navy, I have directed that all measures be taken for our defense. But always will our whole nation remember the character of the onslaught against us.*

*(Applause)*

*No matter how long it may take us to overcome this premeditated invasion, the American people in their righteous might will win through to absolute victory.*

*(Cheers and applause)*

*I believe that I interpret the will of the Congress and of the people when I assert that we will not only defend ourselves to the uttermost, but will make it very certain that this form of treachery shall never again endanger us.*

*(Cheers and applause)*

*Hostilities exist. There is no blinking at the fact that our people, our territory, and our interests are in grave danger.*

*With confidence in our armed forces, with the unbounding determination of our people, we will gain the inevitable triumph, so help us God.*

*I ask that the Congress declare that since the unprovoked and dastardly attack by Japan on Sunday, December 7th, 1941, a state of war has existed between the United States and the Japanese empire.”*

And then they were talking about how much money it was going to cost to fight a war. They started talking about millions of dollars and then billions of dollars and I couldn't relate to that figure at all.

**JE:** And, of course, December 7th was on a Sunday and so then it would have been on a Monday that you heard that radio broadcast...

**BP:** Right.

**JE:** In school.

**BP:** But anyway, everybody was pitching in. I was still picking up scrap iron when we moved to Tulsa, because at Grover Cleveland Junior High School we had a pile—what they did is they gave us three days to go out and scrounge and get metal. Scrap metal is what they were wanting. They had a picture on the Tulsa World on the front page of this big pile of scrap metal.

**JE:** That students at Cleveland...

**BP:** Yes, Cleveland Junior High School.

**JE:** Had collected. And where would you collect scrap metal? Where would you find it?

**BP:** Well, what we did is, we would look in ditches. Sometimes we would find somebody that actually had made a stash and wanted to get rid of it. We had wagons, little toy wagons that we used to pull this stuff around in because it's heavy and makes you tired real quick.

**JE:** So the metal would be parts to...

**BP:** Agricultural equipment. Now those are collector's items. Agricultural equipment that was worn out—that was perfectly good scrap iron.

**JE:** When did you move to Tulsa?

**BP:** It was in 1942.

**JE:** So in '42, you lived in Tulsa and your first school was Cleveland Junior High.

**BP:** Yeah.

**JE:** What were the other schools you attended in Tulsa?

**BP:** It's the only school I attended in Tulsa, because Dad took a job out at Keystone. He was a basketball coach and softball coach and so forth and taught.

**JE:** Did you make model airplanes?

**BP:** Oh, yeah. I made model airplanes. We'd keep patching them up. That was a great sport.

**JE:** Many of those kids, of course, just did it as a hobby then. I mean, for you it was a bigger deal than that, I suppose. It obviously went on to bigger things. Then your family moves in '43 to Keystone—and that was the town of Keystone, because your father became...

**BP:** He was a teacher and a coach. He coached softball and basketball. We didn't have football.

**JE:** Were you an athlete too?

**BP:** Not really. I liked to play basketball.

**JE:** How long did you live in Keystone?

**BP:** One year and then we moved to Sand Springs.

**JE:** And we should mention that Keystone was covered up with water, right?

**BP:** Forty feet of water.

**JE:** Tell us about that, what that was about.

**BP:** Well, they got ready to build the Keystone Dam. They figured out where they would put the dam and then behind it, it would be about 40 feet deep. They condemned all of the property and bought the houses from the people and if they wanted to, they could tear them down and move them because they were not going to do anything with those houses. Some people did that. It was the talk of the town, you know, when they condemned the places and condemned the entire area, actually. But the people made out fairly well after that.

**JE:** Was there controversy or people arguing and fighting about it?

**BP:** No.

**JE:** They just knew that this was a good thing to do.

**BP:** Yeah.

**JE:** Remember seeing it built?

**BP:** Yes, from a distance.

## **Chapter 6 - 13:35**

### **North Korea**

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**JE:** But then you're living in Sand Springs.

**BP:** Right.

**JE:** And you went to Sand Springs High School.

**BP:** Now they call it Charles Page High School, but it was called Sand Springs High School at that time.

**JE:** It's in here, then, that you have your first flying lesson.

**BP:** Yes.

**JE:** That's when your father said...

**BP:** No more.

**JE:** No more. However, did you obey him?

**BP:** Yes, I did.

**JE:** (Chuckles)

**BP:** But once I got the—he finally he changed his mind. He never did fly. He never did fly in an airplane, but he would come to my air shows when I was in the Thunderbirds. If I was within 100 miles, he'd drive out and watch the show.

**JE:** In Sand Springs High School, what was your major interest?

**BP:** Math. Mathematics. And we had excellent teachers in Sand Springs.

**JE:** Remember the names of some of those people?

**BP:** Oh, yes. Ruth Hatch was my English teacher and Literature teacher. Chemistry teacher was named Rowe, R-o-w-e. She was really a bright person. All of them.

**JE:** Math came real easy for you.

**BP:** Well, yes. I enjoyed it. As a matter of fact, Ruth Hatch, my English teacher, was so good that when I went to college, the level of instruction was such that I had already done it all.

**JE:** What year did you graduate?

**BP:** '47

**JE:** 1947. We should also point out that something happened of great honor for you in Sand Springs in 1974...

**BP:** Right.

**JE:** When they named their airport after you.

**BP:** Yeah, and I didn't have to die to do it. You know, most...(Chuckles)

**JE:** (Chuckles)

**BP:** Most are named for people that have died. So that was a—that was a bonus.

**JE:** Yeah. So then you're on to college.

**BP:** Right.

**JE:** And where did you go to school?

**BP:** I went to Oklahoma Baptist University. OBU at Shawnee.

**JE:** What was your intention? What did you think you wanted to be?

**BP:** I wanted to be a school teacher.

**JE:** Your parents obviously had influenced that.

**BP:** Yes. Yes.

**JE:** Probably a math teacher, right?

**BP:** Yeah. Math and Physics.

**JE:** What happens then?

**BP:** What happened was, in 1950 the North Koreans came across the 38th Parallel headed south with the intent of subjugating South Korea. MacArthur messed up their plans. It's a long story, but I was at OBU and I was getting ready for my last year. I had gone to summer schools and gotten a lot of extra credits so that I could finish at the end of the

first term and so—I can remember in June I heard that the Air Force had reopened the aviation cadet program to train pilots, so I went down to the recruiting office at Shawnee and asked them what I could do to get into this program and they said, “Well, we’ll take you over to Oklahoma City. They’ll give you a physical and they’ll give you a test.” If you pass it all—then they had sort of an interview. I went over there and I took the physical and passed the physical. They started asking me technical questions and I started answering those. By the time we got back to Shawnee—they said, “Now we don’t know when you’ll be called up, but you’ll be called up. You’ve passed everything.” And they started drafting. Shawnee started drafting people out of the college, so I almost panicked. I went back to the recruiting office even though I heard awful stories about recruiting officers not being exactly honest, but they were honest. I said, “What can I do?” He said, “You can enlist.” And I said, “Well, what about my flying school?” He said, “That will take precedence.” He said, “They’ll probably put you in a tech school after you finish your basic training, but when your time comes up to enter a flying school class, that all goes away. They’ll reassign you to an air base where you’ll be taught to fly.” They were absolutely correct. I went halfway through this tech school. It’s divided into two halves. And they made me class leader because I had the most education. It worked out just fine.

**JE:** Then your assignment was what?

**BP:** They assigned me to Bartow, Florida. It was a contract school. Most all of those primary bases were contracted and most of them were pilots of World War II. He had combat experience and everything. I had a really good instructor. When I finished that first six months, they gave us check rides and, of course, I wanted to go with the fighters—fighter aircraft—so I had done a lot of hard work. A lot of people would just go up and bore a hole in the sky and I’d go up and do aerobatics, you know, just trying to develop skills. So when I took my check ride, this guy took the plane away from me and said, “You don’t need any more. I don’t need to see anything else.” He says, “I’m going to send you to fighters.” I said, “Great!” That’s how I was assigned from Bartow, Florida, to Bryan, Texas, right there by Texas A & M.

**JE:** You would have been on a course to be a teacher had it not been for the Korean War.

**BP:** That’s correct.

**JE:** And that’s what got you into flying.

**BP:** That’s right.

**JE:** You earn your wings and your office commission in 1952.

**BP:** Right.

**JE:** And then you finally come to Korea in 1953. Tell us who you’re attached to and what’s happening there in Korea for you.

**BP:** They’ve put me in fighter bombers, so we did a lot of dive bombing. As I say, I think I’ve blown up more rice paddies than anybody else in Korea. But it was actually pretty exciting.

They had good anti-aircraft, the North Koreans. In fact, they were U.S. designed—Quad 90's they call them. They're positioned with four 90-millimeter guns. They were very accurate. Radar-controlled heavies they called them. I was up on a mission one day. We had pulled off of the target. I was just climbing up through about 12,000 feet. That's just about when the heavies become useful—the 90 millimeters—flat. All of a sudden, looking straight in I saw this big flack burst right in my line, and then I saw another flack burst and it would fire four rounds in short succession. Only thing I remember is I counted two flack bursts and then it looked like the next one was going to nail me, except it didn't go off. I looked in the rear-view mirror and there was one big burst right behind me. That's when I really got scared and I started doing evasive maneuvers to destroy the radar solution. But they didn't fire anymore. One guy was on my wing—and they called me Wily—and they said, "Wiley, a heavy is all over you," and I said, "Tell me something I don't know."

**JE:** Why did they call you Wily?

**BP:** Well, that's interesting. I wanted a desk because I had enrolled in a plastics course at USAFI—U.S. Air Force University or something. It was a correspondence course. I would mail them lessons in and then they'd mail me another one. But I wanted a desk, so I found a piece of four by eight mahogany, quarter inch. So I started work designing this desk. I had some grid paper and I had designed this thing on the grid paper. Four of my buddies liked to play bridge, so they were playing bridge while I was cutting on this wood and starting to put the thing together. When I got through, I had one little scrap of wood left. And so the guys that had been watching me said, "Boy, that really worked out nice." They said, "It's really lucky that that worked out so good." And so these guys that were playing bridge, they said, "It's not luck when you design it." He said, "That was really wily." So they gave me the name Wily Coyote.

**JE:** (Chuckles)

**BP:** I used that desk the whole time I was there.

**JE:** You were there in Korea.

**BP:** Yeah.

**JE:** How many missions did you fly?

**BP:** Forty-three.

**JE:** And the kinds of targets you were given to shoot?

**BP:** Any moving stock. Any vehicles. Trains, trucks. We'd go after them with a vengeance.

Mostly we'd go in and we'd dive bomb first. If you had some good targets, then you could strafe-shoot the machine guns. We had four machine guns—fifty caliber. That one time was the closest I got to getting hit. That flack just barely missed me. You could only bomb a bridge if you were briefed to do it. Otherwise they'd threaten you with a court martial.

**JE:** Some bridges they would want to use themselves?

**BP:** Yes.

**JE:** And others they didn't need.

**BP:** Yes. But a train—trains were fair game.

**JE:** So when you say "dive bomb," what did that mean?

**BP:** You go into a dive. And the way this thing was designed, you'd push forward on a stick and put the pepper, that site, on the target, and then you'd keep moving forward on the stick. That progressively put you into a dive. Now, when you got to about 1/2 G, then the bombs would automatically release or you could also pull that release. We did pretty well with the dive bombing, but we tried to bomb earthen dams and that did not work out very well at all. It's almost like it's a plastic. We'd bomb dams, we'd do trains. We caught one train—what they would do is, they would drive the trains at night and then before it got light, they would take the engine and put it into a cave. We caught this one—an F80 photo reconnaissance pilot called in a train out in the open during the day. Well, I'd never seen that, especially with the engine on it. They would take the engine and put the engine in the cave or a tunnel, really. Then they'd leave the rest of the boxcars exposed. We would go after them too. I can remember, I was lined up on this boxcar, you know, I was going to strafe it, and I started firing and it looked like the bullets were going out and turning around and coming back. Well, see, they were raiding our positions during the early part of the war and they had an awful lot of our machine guns. Well, also the ammo. Then suddenly I realized that somebody down there on the train didn't like it. He was firing away at me—water-hosing me, because there was no deflection at all. I mean, they were just firing straight at me. But I broke off that run and I don't know how in the world I kept from getting hit. It was just like bullets all around me. As soon as I disengaged, I climbed up to about 10,000 feet, I put it into a dive and strafed that train for about five second bursts with armor-piercing incendiary and, of course, I could see I hit him because the slag's like little sparklers going off. I pulled off of that and then went and did something else and what was really strange was, I flew three missions that day. So the second mission, we came back. That train was still burning and that had been about an hour and a half or two hours. They had wooden floors. That's what was burning. Anyway, that was about the most exciting day I had.

**JE:** They were out to kill you. Was that an issue in your mind? You knew that you were killing people in these trucks and trains and so forth? Did you have to work through that?

**BP:** No.

**JE:** Because that was the war. They were out to get you.

**BP:** That's right.

**JE:** That was not an issue. Did you experience the Post Traumatic Stress Disorder that we talk about today?

**BP:** Yeah, that day I flew three missions. By the end of the day it was dusk and we were flying along there out over the Sea of Japan just to get out of the way of any artillery or whatever else. They couldn't reach us out over that water. I was flying along—we were about 25,000 feet—and all of a sudden I got this blast of cold air and the canopy rolled back. I didn't know what in the world was going on, so I reached up and I closed the canopy and strangely enough it closed. But this gave me such a start that when I got back to the barracks, I got my correspondence course out to do some studying and I couldn't concentrate. I kept reliving this shock that I experienced. I had never had a drink of hard liquor, but I thought—when a guy got shot down, the first thing they'd do, they'd get all of his stuff together to send back to their survivors and then they would take all of their whiskey, booze, to the bar in the barracks and it was free game. So I kept seeing these red balls coming at me. I didn't like that at all, so I poured a water glass about half full of—I think it was bourbon. I started sipping on that and the more I sipped, the better I felt. (Chuckles) We had canvas cots with air mattresses in them. Of course, we had to have mosquito net all around it. I started feeling pretty relaxed. I got into the cot and I was on top of this air mattress and then I experienced a drunk. I was drunk is what it was.

**JE:** Yeah.

**BP:** So I just went to sleep. And then when I woke up I was fine. But boy, that was a bad evening.

## Chapter 7 - 9:44

### Thunder Birds

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**JE:** So after Korea, what is next?

**BP:** I was reassigned to Luke Air Force Base near Phoenix and I was a gunnery instructor. I'd usually fly three missions a day—instruction—but I'd finished my three missions and I was talking with Jim Merritt, a buddy of mine, and this guy walked in. I didn't know him. And he introduced himself as Ed Pomgren, called us over to the side—both of us—he says, “We are getting ready to select a new member of the Thunderbirds. Your name has been forwarded that you probably have what it takes.” Well, needless to say, that was very flattering. He said, “Now you go home and talk it over with your wife and then come back at seven o'clock in the morning down at the Thunderbird office and tell us what your decision is.” We both said okay. Well, Jim Merritt, he went home and his wife just had a hissy fit because it was a lot of travel. I went home and I told my wife that I'd been asked to try out. She said, “Well, what are you going to do?” and I said, “Well, I'm going to give it a shot.” So I went in the next morning I said I'd like to try out. They'd invited eight people, eight pilots. Two of them flew

the F-84F, which was a different airplane than the straight-winged 84. It was a slip-winged. It had a full power control system. I mean, it's really tough to handle until you get used to it. There were two of them that were proficient in the airplane and I thought, well, I don't have a chance, but at least I'll get to fly the F-48F if nothing else. Well, this is two and a half or three weeks, I forget which it was, but it was a real workout. I mean, two or three missions a day is really a lot of work. I had been putting hot water bottles on my right arm, you know, because it's really a real tough workout. Anyway, two and half week later he said, "Okay, tryouts are over. You come back in the morning and we'll give you the answer."

**JE:** So then obviously you come in that next day...

**BP:** Yeah, and it was kind of, almost like a hazing. I walked in and the leader said, "Go ahead and have a seat." I looked around and the other guys wouldn't make eye contact with me and I thought, oh, this is not good. (Chuckles) But anyway, Jack Broughton, who was the leader, said, "Well, Bill, we think you're a great pilot and you've worked real hard, and if you want the job, it's yours."

**JE:** (Chuckles)

**BP:** (Chuckles) And then everybody busted out laughing. And they'd pulled their little joke on me.

**JE:** Yep.

**BP:** And I'd met ever everybody on the team. In fact, one of them was from Tulsa. Bob Anderson. He was already on the team.

**JE:** You must have been elated.

**BP:** Oh, yeah. The people down at the squadron, they knew what I was up against. Later, I learned that all that tryout, all that flying and workout, they said, "You weren't necessarily the best pilot, but you worked harder than anybody else."

**JE:** Hmm.

**BP:** They were looking for somebody with a burning desire. Otherwise, you don't know whether you can trust the person or not.

**JE:** Mm hmm.

**BP:** That was the start of two years of a real joy.

**JE:** What makes that F-84F so difficult?

**BP:** Well, it's a full power control system, which probably doesn't mean anything to you, but it's an artificial feel. What you do is, you trim it out so that you're having to hold pressure, because if you go through the neutral point you'll go out of control. It's called a PIO—Pilot Induced Oscillation—and that can scare you. So you deliberately hold force and you're doing this while you're flying in formation. So that made it doubly difficult.

**JE:** This was a good experience? Did you have any bad luck?

**BP:** Yes. I had a series, six-month period, where I couldn't get in an airplane without having problems. I had two flameouts. One of them I had to eject. The other one I got it on the

ground. I had oil pressure failures, about three. I lost a drag shoot—deployed while I was in the air. No one wanted to fly with me because every time I raised the gear, something would happen to this airplane. There were more than that. I've documented it in the book. It was really strange, but finally I stopped having so much trouble.

**JE:** You flew the newest fighter?

**BP:** It was a new plane but it was not capable of super-sonic flight in level flight. The F-100 is the one that was being tested while I was in Korea, as a matter of fact. And Bob Hoover, who was the chief test pilot, a North American, became a good friend. He was really good. I look back on that period of time as probably one of the most exciting periods of my career.

**JE:** Because the F-100 couldn't fly at super-sonic speed?

**BP:** Yeah, in level flight. Although when I first got on the team, I was flying the F-84F. The commanding general of the air training command said he wanted to indoctrinate the American people to the sonic boom. I was flying solo at that time and when we transitioned into the F-100, I had to work out a routine for the F-100. Now, in the slower airplanes they did not need a solo pilot. But when the planes got faster, in order to go from one maneuver to the next, you had to go up and do a turnaround maneuver and get spacing and so forth. It was a good airplane, the F-100 was, but I could do better aerobatics in the F-84F, really.

**JE:** Did you open the show—the Thunderbirds?

**BP:** Yes. With a sonic boom. That caused all kinds of grief. They were getting all kinds of bad press.

**JE:** They didn't stop you from doing it.

**BP:** No, no. As a matter of fact, the leader says the thing that's causing the problem is when you're going super-sonic, you're swiping the shock wave all over everywhere. What the leader said to do is you come up from behind the crowd, you pull straight up and you do vertical rows going straight up and then you split S, that is to say you turn the plane up. That's what it took until you're going straight down and then as soon as you get the indication that you're going faster than the speed of sound, you just take it out of burner and then you can go ahead and recover. I did this and that was working out pretty well. This is in the summer of 1956. It was August, their flight show at Tyndall Air Force Base, which is at Panama City, Florida. In August. Now that means it's hot. And that means that the engine is not going to produce as much thrust as it would ordinarily. I was supposed to top out at 20,000 feet. I knew I wasn't going to get to 20,000 feet, but anyway, I got the thing pointed straight down with full burnt after-burn, then I watched for the indication and then I took it out of burn and started my recovery. I pulled over 10-G's in my recovery and I wasn't sure I was going to make the pullout. It looked so hairy that the narrator stopped talking. I cleared the ground by a good 50 feet and I started climbing,

then all of a sudden I heard this horrendous noise. It was a pop. Explosion. My G suit had actually blown up. I was pulling so many G's that the bladders in that G suit—those things, the tighter you pull, the more the bladders expand to press against your muscles, your abdomen and your legs. I went ahead and flew the rest of the show and came back in. The engineering officer, as soon as I taxied in, he climbed up and wanted to look at the G meter. It was over 10. I never did that again.

**JE:** But you didn't do it on purpose.

**BP:** Oh, no. I was just gung ho.

**JE:** Did you say you came down within how many feet of earth?

**BP:** Fifty.

**JE:** Fifty feet!

**BP:** Again, that's what I thought I hit, see, because when that G suit blew up, it blew at the hose. Not only did it blow up, but the G suit valve was stuck open full, and so when the G suit blew up, the air had to go someplace, so it just came into the cockpit. It was hot. Real hot air.

**JE:** Was there any danger that you could have lost consciousness and all of that?

**BP:** Sure. I've had high blood pressure my whole life. And this one doctor said, "I think the only reason you're alive is because you have high blood pressure."

**JE:** Well, let me just say. So it is something you purposely did?

**BP:** Yes.

**JE:** But (chuckles) it hadn't been part of your plans before.

**BP:** See, I had gone up that morning at 10:00. I did the maneuver. I was out over the swamp. Well, air show time was at 2:00, I think. It was the hottest part of the day, and that's what robbed my engine of thrust. The air was hot.

**JE:** So some of that you didn't have any control over, is what I'm trying to get to.

**BP:** No. That's correct. That's correct.

**JE:** So we should point out the Thunderbirds are really barnstorming, weren't they?  
(Chuckles)

**BP:** Well, you could call it that, yeah.

**JE:** Right. But it was a promotional air show for the Air Force.

**BP:** It is, and it's the recruiting officers. The general in charge of recruiting really had a hissy fit when they said they were going to disband the Thunderbirds. The Blue Angels had the same problem. We flew about three shows that year together, so we knew them all. And when we were down at Eglin Air Force Base, we would drive over to visit the Blue Angels at their home base. It was certainly an exciting time.

**Chapter 8 – 5:20****NASA**

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**JE:** So you come back to Oklahoma and you go to graduate school at OSU?

**BP:** Right.

**JE:** Then on to the Air Force Academy. You taught Math there?

**BP:** Right.

**JE:** For a couple of years. Onto the Royal Air Force.

**BP:** Right.

**JE:** What were you doing there?

**BP:** I was going through the Empire Test Pilot School. I attended the Empire Test Pilot School and when I finished, then I stayed at Farnborough and finished an exchange tour with the RAF.

**JE:** And then on to Edwards Air Force Base.

**BP:** That's correct.

**JE:** And then—this is a big part of your life—you're into the Aerospace Research Pilots' School.

**BP:** Yes.

**JE:** That's where you were tested, then, to see if you were accepted into the NASA program.

**BP:** Correct. I reported down to Edwards and immediately asked if it was okay if I applied for this astronaut selection and my boss said, "Yeah, sure, everybody does it." And so I did. Well, they were going to call us up for physicals, but this one flight surgeon said, "I can't send in your papers." I said, "What's wrong?" He said, "You've got high blood pressure, that's on the Surgeon General's list of serious diseases." Brooks Air Force Station is where we were going to have our physicals. It's in San Antonio. I said, "I know for a fact that Brooks has grounded people. They give them much more strenuous physical, more complete, so if you want to try to ground me, then I'm going to fight it." But I said, "Look at it this way." I said, "If you let me go down to the Brooks and they find this blood pressure problem, you won't have to ground me, they will. Save you an awful lot of paperwork." The guy looked at me kind of weird and he said, "All right, I'll do that, but I can guarantee you that you're not going to make it." Then I said, "Well, that's okay. I'll give it a shot." He gave me my papers, I went to Brooks for that evaluation. I was there it seemed like a week and a half. It was really a work over, but they said, "Well, we got one blood pressure reading that's just a little bit high." He says, "But we're going to put you on a table here and give you a four-hour check." This thing was automatic. It would come on every 15 minutes. It would test my blood pressure. Of course, by this time I thought, well, I've had it, you know. So the guy that was in charge of this test, he

came and checked me. He says, "Well, you've got low blood pressure." I said, "What do you mean?" He said, "You're almost dead." And I said, "Well, that's an improvement. (Chuckles) Anyway, I made it.

**JE:** You know, when the doctor said after that harrowing experience in the Thunderbirds, he says it's a good thing you had high blood pressure, what did he mean by that?

**BP:** That I could tolerate more G's.

**JE:** And then explain for the audience "G's." What does that mean, Bill?

**BP:** Oh, I'm sorry. G stands for "force of gravity." One-G. If you're sitting in a chair, you're at 1-G. If they put you in a centrifuge and start swinging you around, the acceleration builds up. You can get to 2-G's, 3-G's, 4-G's and so forth. And, of course, when you're doing a high-speed pullout, that's when you encounter some really heavy G's.

**JE:** How did you get word that you were actually in the NASA program?

**BP:** Deke Slayton called everybody that made it.

**JE:** Deke Slayton was a famous name.

**BP:** Well, he was actually in charge of the office—the astronaut office. He had a medical problem early on. He finally flew in Apollo Soyuz mission in 1975. But Deke worked his fanny off trying to get back on flying status and he made it. In fact, Tom Stafford was the commander of that mission.

**JE:** And that mission was...

**BP:** Apollo Soyuz Test Project.

**JE:** So he calls and gives you the good news.

**BP:** Yeah.

**JE:** Elation, huh?

**BP:** Yeah, really.

**JE:** You're one of how many astronauts accepted then by NASA?

**BP:** There were 19 selected.

**JE:** Nineteen.

**BP:** One year we lost five people. Well, we lost three people in the fire. This was in 1964.

**JE:** You're saying we lost five astronauts.

**BP:** Yes.

**JE:** And three were in that fire.

**BP:** It was a test. They were testing the Apollo spacecraft. They did a really dumb thing. They over-pressurized the inside of the Apollo spacecraft. This was to give them the right difference in pressure for the test. Well, that meant there were 15 pounds per square inch, roughly. And they added five. So they had 100% oxygen at a high pressure. Anything will burn in that situation. Now, the Russians had lost a cosmonaut in a similar situation, except he wasn't in a spacecraft, he was just in shirt sleeve. They did not tell us what happened.

And they were doing the same thing we were doing to get the right pressure difference. But those people were doomed—the astronauts.

**JE:** This is just a layman's question. All of this flying through Korea, Thunderbird—is there any time you ever fear you're going to die—you're going to lose your life? You keep going on and on.

**BP:** Yes. Well, what it is, I'm a Christian. I made my peace with God a long time ago and I felt like that's what God wanted me to do, so I put it out of my mind.

## Chapter 9 - 6:34

### Schirra-Armstrong

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**JE:** You were serving as an astronaut support crew, right?

**BP:** Right.

**JE:** I believe for Apollo 7, 11 and 14.

**BP:** Correct.

**JE:** And when you're in the role of support crew, you're just as engaged as those who are going on the flight.

**BP:** No, not quite. You don't have any hope of going on the flight. You have the prime crew, the backup crew and then you have the support crew. Primarily you're just supporting them. You meet with them, you'd participate in spacecraft tests, but you have absolutely no hope of flying on that mission. But that was fine. I enjoyed the work on the support crew, and I was actually put on a backup crew for 16 with the thought that we would fly Apollo 19—Jerry Carr, Ed Gibson and I. Eighteen, 19 and 20 were canceled.

**JE:** So that had to be really disappointing.

**BP:** Yeah, it really was.

**JE:** Your training started in Houston for all this. There was helicopter training?

**BP:** Yeah. We went through the Navy school there in Pensacola.

**JE:** And why helicopter training when you're going out in space?

**BP:** Well, it's a good way to get the exposure to the type of flying you're going to do in the lunar module. That's why we got the helicopter training is because it's very similar. All the physical queues and all that are much the same. We all enjoyed flying the choppers.

**JE:** There was other training? Water survival?

**BP:** Yeah.

**JE:** Tropical survival.

**BP:** Tropical survival. Those were all good. Good schools.

**JE:** Now, you were around for the Apollo 7 launch?

**BP:** Yes.

**JE:** And Wally Schirra and Walt Cunningham. You got to know them.

**BP:** Yes.

**JE:** Wally Schirra. What was he like?

**BP:** He was a free spirit. He was really very comical. He was always pulling a joke on you. It's what he'd call a "gotcha". The time that I thought I had gotten him, it turned out that he had really pulled a sneaky one on me. This was right before the launch of Apollo 7. We had finished all of the training and everybody was kicked back and relaxed, and Wally said, "Bill, I've got a tennis court reserved in Melbourne. Let's go and have a game of tennis." And I said, "Well, Wally, I haven't played tennis since college." He says, "Oh, I tell you, it's a good day." It was a fall day. And he said, "You'll enjoy it." I said, "Okay." So Wally drove and I just sat there and we got to Melbourne and got rackets. So Wally started serving, and he started serving bullets. And I said, "Gosh." He just kept serving. After about ten minutes it suddenly dawned on me that he had gotten me again. He did not want to play tennis, he wanted to practice his serve and he needed somebody to return the balls and I was it. (Laughs)

**JE:** (Chuckles) Maybe we got ahead of ourselves. You were assigned to Apollo 11. One of those working with you on Apollo 11 was Buzz Aldrin.

**BP:** Yes.

**JE:** And what about him? What kind of a person was he?

**BP:** Well, he was brilliant, really. The only problem I had was he would be thinking about the problem, but he would still be talking to you. It was very confusing. Brilliant guy.

**JE:** What did Buzz Aldrin mean in the space program? What had he done?

**BP:** He had flown the Gemini. It was very similar to Mercury. They were just getting experience with space flight, that's what it was.

**JE:** Right.

**BP:** And getting experience in keeping the things working.

**JE:** Which led to the first man on the moon and Neil Armstrong.

**BP:** Right.

**JE:** And you were him as well.

**BP:** Yes.

**JE:** Knew him.

**BP:** Yes.

**JE:** Talk to us about him a little bit and his personality.

**BP:** He's quiet. He's smart. Really competent. We shared a back fence near the space center. Our houses backed up to each other. He is very interesting to work with. We would go home every weekend. I would usually drive my Beetle.

**JE:** Your Volkswagen.

**BP:** Yes. Leave it at Ellington when we flew down to the Cape. And then I'd take him home. And he was under a lot of pressure.

**JE:** What kind of pressure?

**BP:** The pressure of the importance of the mission.

**JE:** You're talking about before he had actually landed on the moon.

**BP:** That's right.

**JE:** The lead-up to it.

**BP:** Correct. We would be flying along and he said, "Do you know what the zodiacal light is?" and I said, "Haven't the foggiest idea." He says, "I'll show you." So he did. He talked me through it and showed me the zodiacal light. That took about a half an hour just to go through that. It was about an hour and a half flight from Florida back to Texas.

**JE:** What is a zodiacal light?

**BP:** It is a light—you can see it right after sunset. The sun is still right below the horizon, but the light from the sun is going past the earth and there's dust here and there. The dust captures the light. When you can see that, that's called zodiacal light.

**JE:** You were around him right up to the day he performed the landing on the moon. He felt tremendous pressure, as you talked about.

**BP:** Yeah, he did.

**JE:** Where were you when he landed on the moon?

**BP:** I was at mission control.

**JE:** And you experienced the elation, then, in mission control.

**BP:** Yes.

**JE:** When that was all happening.

**BP:** Yes. Then I went home to watch the EVA's—the space walk.

**JE:** Did you talk to him personally after this about his experience being on the moon?

**BP:** No, I did not. They sent him to NASA headquarters as soon as they got through with the debriefing, maybe a couple of months or something like that. And he—he was made to feel like a captured trained ape. The only time I really had much to do with him, I had put a package together using Apollo photographs and he wanted to use it. They were resources-type stuff. I sent him the whole package, he used it, and then he called me up and thanked me. I won't say he was distant, but he knew that he occupied a historical position in the space program.

**JE:** As a public, we never saw him come out and be a personality, so that matches what you're saying about him. When you were with him prior to the moon launch, was it real obvious—wow, I understand why they selected him for this?

**BP:** Yes. He had it.

**JE:** (Chuckles)

**BP:** The right stuff. (Laughs)

**JE:** Right.

## Chapter 10 - 3:38

### Skylab

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**JE:** So you were on to Apollo 14 and then you transferred to Apollo 16?

**BP:** Yes, backup crew.

**JE:** You thought you were eventually going to move along and eventually fly Apollo and then there was a headline which stated....

**BP:** 18, 19 and 20 were canceled.

**JE:** How disappointing that had to be for you.

**BP:** Yeah. We had just finished a week of geological survey in Mexico and Arizona. Fred Hayes was going to be the one that orbited the moon.

**JE:** And so you were disappointed and you probably wondered, "What now?"

**BP:** Well, that's it. About a week after this happened, Deke called Jerry and me and Ed Gibson—says, "Bill, you're not going to fly on Apollo. How would you like to fly on Skylab?" And we all said, "Yes! We'll take it. It's the only action left."

**JE:** So then you began three years of training.

**BP:** Yes. We were taught solar physics so we could operate the solar observatory. We knew just enough to stay out of trouble. Some of the equipment was hard to use in the observatory. I'll give you an example. We had a white light coronagraph. The corona is what you can see during time of solar eclipse. Okay? It's the only time you can see it because otherwise it's washed out by the branch of the sun. But when the moon comes right in front of the disk, you can take pictures of that corona. They started taking pictures of the corona in like 1830-something and the sum total accumulated pictures of the corona were something like 80 hours. But when you put your hand out and blot out the sun, then you can see the corona. It becomes visible. We learned an awful lot from those coronagraphs—the corona pictures.

**JE:** Hmm.

**BP:** In fact, we're still learning. The corona is important because it also gives us indications of changes in earth's weather. Here's the deal. It took over 20 years to fathom this out. As a matter of fact, there are ways to know when a mass ejection is going to occur. This is where tons, hundreds of tons, of hydrogen are blown off the surface of the sun.

**JE:** Hmm.

**BP:** As far as predicting the effect on earth, it was problematic. We just didn't know how to do it. But just about five years ago, I think, they finally noticed that when these coronal mass ejections occur that there would be a sort of a halo around the sun. If you can see that, then you know where it's coming. It's coming toward us. Otherwise, it's being spewed out into the solar system and you don't know where it's going to end up and then you can track it after a while...

**JE:** Mm hmm.

**BP:** And so forth. But the thing that was really important was that when they noticed that this sort of halo was generated, that meant you're looking down the gun barrel, and so that way they know when we have to pacify the satellites and protect them and make sure that you don't expose expensive equipment to this particular phenomenon, that was really a big breakthrough when they knew that it was coming. If you had people in space—not the best thing in the world—the fact is you can take automated satellites and you could pacify them—turn them off or whatever—so that it doesn't ruin the innards of the equipment, because that stuff is really nasty.

## Chapter 11 - 2:37

### The Pukes

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**JE:** You did all this flying and you never got nauseated in space at all? Did you have any problems with that?

**BP:** Yes, I did. They called me “lead ears.” We were all sent to Pensacola and we spent time in that lab to see if you'd get sick. And so what they'd do is they'd put you in a rotating chair and they'd start turning the chair around increasing the rpm. I had done all this aerobatic flying and so forth, so they would keep spinning the chair up to the limit and I would have to moving my head touching little things here to try induce nausea. I got to the limit and never did get sick, yet on our flight, I was the only one that got sick. It's really hard to understand except that there's more to the accelerations than you really are aware of, apparently. They could have sent centrifuges and subjected us to 15 G's because that was real close to the limit of depressed trajectory or elevated trajectory. If you're being launched and you see this trend developing that's going to cause you to be too low or too high, you want to take some protective measures.

**JE:** Like what?

**BP:** Well, one thing would be a G suit. Anyway, the “early flight malaise” is what they finally ended up calling it or the “pukes” is what the astronauts call it. About half of the people

who go up into space have bouts of nausea, but what is really strange is, after three days up there, you're immune.

**JE:** Hmm.

**BP:** You're immune to that nausea. They still don't understand it.

**JE:** That's got to be a horrible feeling, though, to be up there. You were in Skylab and you were nauseated.

**BP:** I didn't think I was nauseated. I just all of a sudden threw up. That was it. If you want to see people move fast, tell them you think you're going to throw up and it'll get you a barf bag real fast.

**JE:** Can you buy life insurance as an astronaut?

**BP:** When I was still training, I saw this ad in the paper about life insurance, so I called this toll-free number. I said "I'm interested in getting one of those million-dollar policies." He said, "What kind of business are you in?" (Chuckles) So I told him and he just, "Aww. Ha ha ha." He thought that was funny. He was still laughing when I hung up. (Chuckles) But we were covered with a million-dollar policy by the makers of the spacecraft.

## Chapter 12 - 6:48

### Skylab 4

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**JE:** So then you went up—Skylab 4. Before the launch, are you nervous?

**BP:** I didn't think I was too nervous, but...in the first place, I didn't think we were going to go. We had so much trouble with the booster. It seemed to me to be a low probability that we were going to make the launch because we'd had so much trouble with this booster. It wasn't until they said, "Thirty seconds and counting," that I thought, "Hey, we've got a good chance of going." When those engines light off, that's really loud. Then you have the vibration and then you have the accelerations caused by the maneuvering of the engines. My job was to read out of the computer our velocity and our altitude, and then I had a graph chart and I was supposed to make sure that we weren't getting too high or too low. Very quickly I learned I could read the computer screen, but I couldn't go in to use the graph because of...

**JE:** Shaking so much...

**BP:** Shaking so much. And so I said, Well, I'll just put the checklist on my chest. If the engines stop, then we'll do whatever's called for."

**JE:** Finally, you're getting into zero gravity?

**BP:** Well, yes.

**JE:** Then everything is quiet?

**BP:** Right.

**JE:** Is it just a floating sensation? Tell us about that.

**BP:** Well, it's really weird. I got a kind of strange feeling in my head. Now, I don't know what that was. Now, the stop stage is a nice smooth ride, but when you're down—until you get to above about 50,000 feet, it's still pretty rough.

**JE:** Wasn't that ever simulated before your flights so that you knew that?

**BP:** No, they had a sort of simulation of it with the audio system in the simulator, but it's not anywhere close to the real thing.

**JE:** How long does it take, then, for you to get to that peaceful part of the flight?

**BP:** Probably about three minutes.

**JE:** You remember your first view of the earth's horizon?

**BP:** Yeah, I can see the horizon. I was really surprised how thin that atmospheric band is. It's really very thin.

**JE:** It had to be a thrill to see that.

**BP:** Oh, yeah. After about two or three days, you get used to it. I mean, it's no longer novel. The next big experience you had is when you go out on a spacewalk.

**JE:** Part of the longest manned flight—four days, one hour and 15 minutes, but who's counting?

**BP:** That's right.

**JE:** Who were you accompanied by out there?

**BP:** Jerry Carr was the commander and Ed Gibson was the scientist pilot.

**JE:** You completed 56 experiments...

**BP:** I lost track.

**JE:** Twenty-six science demonstrations...

**BP:** Okay.

**JE:** Fifteen subsystem detailed objectives, 13 student investigations and you made 1,214 revolutions of the earth.

**BP:** Yeah.

**JE:** Is there any piece of knowledge that you discovered?

**BP:** Well, the solar physics—the studies of the sun, I think, probably contributed more than anything else. Again, we couldn't study the corona until we got out into space. There are other things to look at, but that was the outstanding experience. The student experiments were interesting. I forget how many we had, but there were quite a few of them. You're not talking about the zodiacal light earlier. But there's also a phenomenon that occurs if you look at a spot 60 degrees ahead of the earth and 60 degrees behind the earth, there's a—I call it a space parking lot because of the effect of three bodies—the spacecraft, the earth, and then you have the attraction at these points. If you put something there, gravitational

forces are such that it'll stay there. They've not documented it in earth orbit, but they have been able to do this at Jupiter, because Jupiter's a lot bigger. It's kind of hard to explain, but it's interesting.

**JE:** Did space affect your body measurement?

**BP:** Yes. The first three days you go through an adaptation period. Your torso length increases two inches. You lose three pounds.

**JE:** So what you do is you grow taller and you lose weight.

**BP:** That's correct.

**JE:** (Chuckles)

**BP:** They didn't know this. We did the first full set of body measurements on Skylab 4. They called us up about two to three days later and said, "You guys have grown over two inches in height." That was all well and good, but our suits were custom-fitted at Dover, Delaware, in 1G and when you get that extra height, it has an effect on you. We had grown but the suits had not. It makes the suit fit bad.

**JE:** Do you think the Skylab missions were as important as moon landing missions?

**BP:** Probably more. It was new knowledge.

**JE:** It's all this knowledge you were able to gain from Skylab that obviously landing on the moon did not. Our mission there was just to land on the moon.

**BP:** Well, they did a lot more than that, but I had occasion once to guide a visiting group of senators from Egypt. This was before the first lunar landing. And this one lady, senator, pulled me over to the side and says, "You've got to get to the moon and land first before the Russians." She said, "If you don't do that, we'll never hear the end of it." I had never even thought about that. There's a lot of value in the prestige that you generate by doing these things.

**JE:** Eighty-four days in Skylab. Does that get trying? Do you say, "I've got to get out of here?"

**BP:** No. They take care of that because they keep you so busy. They scheduled us at a higher rate than they did the other crews. They gave us the task to perform that the other crews had achieved at the end of, say, two months. So, they started us out at the same pace that those other people had achieved at the end of two months.

**JE:** And why is that?

**BP:** It was a stupid mistake is what it was. The flight activities officer is the person that does this and they schedule your activities. But we didn't have a chance to grow into the role, so to speak. It was six weeks before they discovered that they had started us out at an unachievable rate.

**JE:** Yet you achieved it, for the most part?

**BP:** Well, we had made mistakes, but if they hadn't done that—if they had let us grow into the role—you had to learn to walk before you run.

**Chapter 13 - 5:44****Spacewalk**

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**JE:** So, you go out on the space walk. You logged 13 hours, 31 minutes and 2 EVAs outside the orbital workshop. What's it like to be out there like that?

**BP:** Well, it's really a lot of fun as long as you have the right equipment—hand holds and whatever. What you don't want to do is give somebody a job to do where they're not properly restrained. But if you have trained properly—and the water tank is really a great place to train. It's called a neutral buoyancy facility. You can do a timeline development in that water tank and it will be very close to what you'll achieve in space.

**JE:** What was your mission during the spacewalk?

**BP:** I had to take pictures of the sun on one spacewalk. That was easy because it was automatic. Once I got it pointed in the right direction, I'd just throw the switch and it does its own thing. I was able to help Jerry Carr because he was having a real time of it. He just didn't have the right body restraints so, finally, I worked my way out to where he was. I put my shoes in his foot restraints and I put his legs under my armpits. I was able to hold him and balance the forces so he could get his work done.

**JE:** This is why you're in the spacewalk.

**BP:** Yeah.

**JE:** (Chuckles)

**BP:** But we were learning a lot.

**JE:** I'm sure you've been asked the question. What if something happens so that your tether to the Skylab was broken and you were floating off? What would happen?

**BP:** Well, if you believe in the physics of the orbit—if you floated off, 180 degrees later, you'd come back. No one tried that.

**JE:** (Chuckles)

**BP:** And I wouldn't try it. But if you work out the orbital physics, you would come back.

**JE:** Hoping you could grab on to Skylab, then...

**BP:** Yeah.

**JE:** When you come back.

**BP:** They'd even talked about having lassos and all kinds of stuff.

**JE:** Yeah. Hot or cold? The temperatures vary?

**BP:** Plus 250 to minus 250—Fahrenheit.

**JE:** You were in your suit, obviously.

**BP:** Yes.

**JE:** Everything would be adjusted for you. What temperature were you experiencing?

- BP:** Well, we had a control right down by our belly button which controlled the water pump. The water was cold. Of course, you want to have that because you had to remove metabolic heat generated while you're active. Now, you go on the dark side and you don't have anything to do, then you start getting cold. So, you can control the flow of water in your liquid cooled garment. That works fine.
- JE:** Back to that moment out there. You were thinking, "Here I am floating outside the Skylab and I'm this kid from Oklahoma."
- BP:** Yeah. You just consider yourself really lucky to be able to do that and experience the sensations of the weightless environment.
- JE:** We're all interested in UFOs—Unidentified Flying Objects. There were probably things you saw that were unidentified at some point but no reason to believe that it was somebody from outer space or from Mars hovering around?
- BP:** Yeah, I'm a skeptic. I don't believe in UFOs.
- JE:** You don't think there's another life out there in space?
- BP:** Well, I didn't see any. That doesn't mean there is not. Now, Gordon Cooper, who is also from Oklahoma, went to his grave believing in UFOs. I don't know exactly why. I think it was a strongly emotional feeling that he had, but anyway, I didn't see any evidence.
- JE:** So then you head home. Did you take a little spin around, look back at Skylab before you jettisoned to earth?
- BP:** As a matter of fact, I took about 100 pictures of Skylab as we went over the top. The engineers wanted the photo documentation, so we had pretty good documentation.
- JE:** What do you think the greatest contribution is as a result of Skylab?
- BP:** The greatest contribution was increased understanding of the sun. They didn't know much about the sun. They thought that ultraviolet energy was homogeneously scattered around the sun and it's not. There are hot spots and cold spots. We learned a lot from the solar physics experiments.
- JE:** The greatest contribution of the space program would be what?
- BP:** The inspiration that it gives to other people.
- JE:** How's that?
- BP:** In other words, it's the wonder of it all. Being able to exist in a weightless environment. It takes a lot of good planning, but you can work fine. People, I guess, are jaded now, but during the earlier part of the manned space flight, people were really fascinated with it.
- JE:** You had direct visual observations from space.
- BP:** Yeah.
- JE:** Were there benefits from being able to be up there and actually see? Making observations?
- BP:** Yes. In fact, it was called Visual Observations Program—Vis Ops. It was a lot of fun, really. What we did is, sometimes we were actually observing things on earth. The people that

flew on Skylab had the valuable experience of being up there for an extended period of time and they could come up with deductions that were pretty good.

**JE:** Medical care—benefitted from the space program?

**BP:** Oh, yeah.

**JE:** How's that?

**BP:** Well, automated monitoring physiology. That was an advantage. One of the things that has really profited from space exploration has been people with artificial limbs. These people that have lost limbs and more, they've benefitted greatly from that.

## Chapter 14 - 4:25

### Bathroom in Space

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**JE:** You're a great writer. You wrote your own story, a space tribute in 2003. And in 1991, the book was *How Do You Go to the Bathroom in Space?* So, I supposed with all these questions I should ask you, so how do you go to the bathroom in space? (Chuckles)

**BP:** (Laughs) Well, yes, that's what everyone wants to ask. For urination we had a cup-sort-of thing and air was drawn into that cup, then you urinated into the cup and it put it down through a centrifuge and put it into a urine bag. Now, that's for number one. For number two, we had on Skylab—the system in the shuttle operated very similarly. You had a fecal bag which you put on yourself. You put this fecal bag in this commode, air was drawn into that, so we used air like you use water in normal toiletry. This worked fine as long as you remembered to turn on the fan.

**JE:** Yes.

**BP:** The shuttle had more trouble than we did. For about five years, they had to carry fecal bags and if they wanted to extend the mission, they had to have enough fecal bags for each person. That's what dictated what length of time they could extend the mission.

**JE:** Now I'm thinking about the food. Is the food tasty? Is it bland?

**BP:** That's a good question. First it was bland. Pete Conrad, the commander of the first Skylab mission, he came down and he really read them the Riot Act. He said, "That food is terrible!" They sent up pepper and salt with the second Skylab crew, which that didn't do anything but pollute the air. By the time we got ready to go, we had salt dispensers which were light, little hypodermic syringes, so we could squirt salt water. We had liquid pepper which was oil based. It was really good. And we had hot sauce. I can't remember all we had, but we had a range of condiments. The food, I thought, was excellent. The condiments made that so. We enjoyed meal time.

**JE:** Here we are, August 8th, 2012, and just a few days ago, “Curiosity: The Rover Lands Safely on Mars.” First of all, you had to be excited to see that happen.

**BP:** Oh, yeah. I was really pulling for the GPL. Those poor guys. They’ve been laboring in the shadow of the loss of two spacecraft vendors.

**JE:** There’s been a lot of criticism of NASA that it maybe just become a bureaucracy, wasn’t capable of matching some of the great things you astronauts did, but they are looking for evidence of life, at least one time on Mars. What’s leading us to believe there’s a possibility of life there?

**BP:** Well, mainly because that’s where life started on earth—in the sea. It’s really interesting and intriguing to work with this. If you look at pictures of Mars, I mean, you’d have to be dope not to think that one time there was a lot of water there. Because it washes. Air, erosion does not hack it. But anyway, the idea is that if there was ever life there, there had to be water. But I’ll leave that to the people that study that sort of thing. One theory is that within 20 degrees of the equator, north and south, probably is a lot of water bound up in ice. Ice in real cold temperatures is pretty stable. I’ve even heard some theories that life developed on Mars before it developed on Earth. I don’t think I buy that, but that’s okay.

**JE:** Landing on Mars now, that has to be euphoric for NASA and brings it back into the main mindset of Americans.

**BP:** It’s an outstanding feat.

**JE:** Right. For the future of space exploration, I suppose there was a time there we wondered if they were going to continue. What do you see here in 2012?

**BP:** Well, right now, the whole space program has been sabotaged by the White House. Giving things away? I mean, to the Egyptian senator, this is great prestige to be able to pull off these technological feats. But what has happened is we’ve lost the cadre, the nucleus of people. And you don’t get that back very easily. That’s what bothers me.

**JE:** And now with the fight over money and so forth, what’s it going to take? Another JFK to come out and re-energize this?

**BP:** Yeah, someone like that.

## Chapter 15 - 2:07

### Advice to Students

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**JE:** Your advice for young people, young minds interested in the space program? What do you generally say? I know you speak in schools and you’re out. What do you tell these young minds?

**BP:** Keep your curiosity healthy. But, gosh, it's really depressing right now to me to see that we've just thrown away the people.

**JE:** In the space program?

**BP:** In the space program and in support roles. I saw this happen after Apollo to some extent. Fortunately, they had the shuttle to work on. But right now, we've essentially thrown away the capability to organize programs and so forth. Now, the money is problematic because it does take resources. And when there's competition you can make some bad decisions, but I would guess that the Chinese are going to keep after it. They're going to the moon. They say they are. It may take them a while. But the Apollo program gave us the lunar landing, which was fantastic. They just really outdid themselves. I think that if you don't continue to reach out, then you just fester away. One thing that's good about space exploration is that it is a real challenge to solve some of the problems that they work on.

**JE:** Your book, "But for the Grace of God", why did you select that as a title?

**BP:** Because I had a lot of harrowing experiences. I adopted an attitude that I was doing what God wanted me to do. That kept going. It was really amazing to me that I was able to do what I was able to do. I've been very grateful for that.

**JE:** As you look back on your life, what would be your overall statement or how you'd like to be remembered?

**BP:** Just a dumb old Okie that doesn't really care about taking a chance.

**JE:** That's very good. Well, Bill, I am honored to have been able to speak with you. I thank you for sharing your life and your space adventure, and we're proud that you are an Oklahoman.

**BP:** Well, thank you, John. Proud to be one.

## Chapter 16 - 0:29

### Conclusion

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This oral history presentation is made possible through the support of our generous foundation funders. We encourage you to join them by making your donation which will allow us to record future stories. Students, teachers and librarians are using this website for research, and the general public is listening every day to these great Oklahomans share their life experience. Thank you for your support as we preserve Oklahoma's legacy one voice at a time on [VoicesofOklahoma.com](http://VoicesofOklahoma.com).