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**August 30, 2018**

**Pilot Andy Bachner's account of the 1964 Alaska earthquake**

Date of interview: July 20, 2018  
 Location: Bachner Residence (2672 Alaska Range Lane, Fairbanks, Alaska)  
 Interviewer: Carl Tape  
 Interviewee: Andy Bachner

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## Overview

On Friday, March 27, 1964, at about 4:30pm, a 22-year-old pilot named Andy Bachner<sup>1</sup> took off from Fairbanks International Airport on a training flight for Wien Airlines. Alongside Bachner in the single-engine Tri-Pacer<sup>2</sup> plane was the flight instructor, Don Edgar Jonz<sup>3</sup>. Their instrument training flight took them into the clouds and north of Fairbanks 100 miles, in the vicinity of Beaver Creek. Approximately one hour into the flight, Bachner and Jonz abruptly lost all communication with the ground. Fearing a nuclear strike on Eielson and expecting to see Soviet fighter jets, Bachner continued to fly for approximately 30 minutes until fuel was a consideration, prompting them to return to Fairbanks. Upon landing back at Fairbanks, Bachner and Jonz learned about the catastrophic earthquake in southern Alaska. Jonz was asked by the U.S. Army Corps of Engineers to pilot a flight to southern Alaska to survey the earthquake and tsunami damage. Jonz invited Bachner to pilot the plane, allowing Bachner to gain additional instrument training. The two men boarded a Twin Bonanza<sup>4</sup> plane owned by Frontier Flying Service and were provided with a fancy radio. They flew for approximately six hours that night<sup>5</sup>. They live-radioed what they saw in the twilight, fire light, and light of the full moon, while surveying Anchorage, Whittier, Valdez, and Cordova, and then landing back in Fairbanks early March 28<sup>th</sup>.

On Friday, March 27, 1964, at 5:36pm local time, a magnitude 9.2 earthquake struck south-central Alaska. The earthquake devastated Anchorage with its shaking, and it devastated coastal communities with its tsunami<sup>6</sup>. To date, this was the second largest earthquake ever recorded on Earth (1960 magnitude 9.5 in Chile).

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<sup>1</sup> John Andrew Bachner, born June 16, 1941, in Fairbanks, Alaska.

<sup>2</sup> Piper PA-22 Tri-Pacer.

<sup>3</sup> Jonz was the pilot who disappeared in southeast Alaska on October 16, 1972, along with U.S. Senator (Alaska) Nick Begich and U.S. Representative (Louisiana) and House Majority Leader Thomas Hale Boggs Sr.

<sup>4</sup> Beechcraft Twin Bonanza (twin engine). In a follow-up discussion, Bachner said that the Bonanza they flew was owned by Dick McIntyre of Frontier Flying Service.

<sup>5</sup> To get some sense of the daylight, consider Anchorage on March 27, 1964. Sunset at 18:19 (nautical twilight ends 20:12), sunrise on the 28<sup>th</sup> at 05:20 (nautical twilight starts 03:56). But there would have been moonlight, as the full moon was on March 27 and 28<sup>th</sup>, 1964. Bachner recalls seeing things illuminated from the light of fires, as well as light reflected from the snow cover.

<sup>6</sup> The shaking from the earthquake also caused submarine landslides in coastal fjords such as near Seward and Whittier; these landslides generated tsunami waves that arrived earlier than the tsunami waves generated at the spatial origin of the earthquake.

**Timeline of events on March 27, 1964 (all times are approximate<sup>7</sup>)**

- 16:30 Bachner/Jonz take off from Fairbanks, flying north ~100 miles
- 17:40 Bachner/Jonz lose communication with all points on ground
- 18:45 Bachner/Jonz land at Fairbanks
- 19:00 Bachner/Jonz take off from Fairbanks to survey earthquake damage in southern Alaska (Anchorage, Whittier, Valdez, Cordova)
- March 28 01:00 Bachner/Jonz land back in Fairbanks after flying for six hours

**References**

Plafker, G., Kachadoorian, R., Eckel, E.B., and Mayo, L.R., 1969, Effects of the earthquake of March 27, 1964, on various communities: U.S. Geological Survey Professional Paper 542-G, 43 p., 2 sheets, scales 1:2,500,000 and 1:250,000, <https://pubs.usgs.gov/pp/0542g/>

**Transcript**

[00:00:01] [Tape] Testing, testing. It's going to be fine. Put that over here. All right. This going? Get the time and date here.

[00:00:26] [Tape] Alright, Friday July 20<sup>th</sup>, 2018. This is Carl Tape with a short interview of Andy Bachner at his home here in Fairbanks. For the record, can you state your name, birth date, and place of birth?

[00:00:46] [Bachner] Sure. Andy Bachner, June 16, '41, Fairbanks Alaska.

[00:00:51] [Tape] Alright. Andy, I know you've told this story before to me and, as an earthquake scientist, I feel like there's no story on the planet quite like the one that we're about to hear from you and I'll hopefully, you'll do all the talking but I'll just set you up to say if you could describe kind of the setting on March 28<sup>th</sup>, 27<sup>th</sup>, or so, 1964<sup>8</sup>? And, yeah... take it away.

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FLIGHT #1 TRAINING OUT OF FAIRBANKS

**EDIT PART A**

[00:01:27] [Bachner] Sure. **I worked for a company called Wien Airlines, which was the primary airline in Alaska. They serviced all of Alaska at the time, and Wiens had a policy in early '64 that all of their pilots needed to be instrument rated. So I was on the process of getting my instrument rating and we were IFR<sup>9</sup> in the clouds. And any time that you're on instruments you're in contact with some form of ground control and ground control—we heard they were abandoning the tower.**

[00:02:05] [Tape] What was your- could you start and say where were you departing from and supposed to be landing in this?

[00:02:10] [Bachner] **Well, it was a training mission from Fairbanks. I was just about to get my**

<sup>7</sup> This summary of events is based on Bachner's account, but it also reflects his best guess of the timing. We discussed these approximate times in a follow-up conversation.

<sup>8</sup> Earthquake origin times are listed in UTC time in the scientific literature. The UTC time was March 28<sup>th</sup> 03:36 UTC. Hence my confusion about the 27<sup>th</sup> or 28<sup>th</sup>.

<sup>9</sup> IFR = instrument flight rules

instrument ratings so they put me in actual clouds. Usually you flew under a hood<sup>10</sup>, but in this case they wanted you under actual instrument conditions. So we were IFR, you couldn't see the ground. Instrument flight rules. Solid. And, but you're in communications with ground control all the time. If you can't see the ground, then somebody has got to clear the air space for you. So you have to have permission to do everything. When you start an airplane up at the terminal, ground control gives you clearance to get to the runway. The tower gives you a clearance to take off, departure control picks you up and gives you clearance to probably about 20,000 feet, and then turn you over to Anchorage Center or Fairbanks Center or Edmonton Center—different FAA centers that keep track of the airplane and you're on radar all the time.

### EDIT PART C

So we're talking to a facility that was located at Eielson at the time, which was Fairbanks Center, and all of a sudden we got a couple words that they were abandoning the building and that's it. Then you couldn't contact. There are a lot of choices. We can contact Fairbanks radio, we can contact Fairbanks tower, we can contact departure control, arrival control, there's lots of different frequencies. There wasn't anybody<sup>11</sup>. So we just assumed that they had nuked—dropped an A-bomb—on Eielson, only thing we could think up because there were no communications at all. And then we had to consider whether we want to come out of the clouds, may not be very pleasant.

[00:03:53] [Tape] You described at one point the ... now feeling like you were going to have fighter jets on your back-

[00:04:02] [Bachner] We expected that if they bombed it they probably sent fighters along with it. And we had flown- I'd flown earlier on the DEW Line<sup>12</sup>. So I was familiar with the Russian Bear bombers. They would approach the American alliance, testing our defenses, and we would see them quite often. So I expected to see Bear bombers or fighters or both.

[00:04:24] [Tape] Can you describe the plane you're in? Do you, do you remember that? I mean you're saying it's for Wien, but wouldn't that mean it was a passenger plane?

[00:04:32] [Bachner] No, it was just a small single engine. It was a Tri-Pacer.

[00:04:38] [Tape] Okay. Wow.

[00:04:38] [Bachner] Something that was reasonably inexpensive to train in. So, and then when we came out of the clouds we finally because you're going to have to come out you're going run out of fuel.

[00:04:48] [Tape] Do you remember how long your flight was? Do you have-

### EDIT PART B

[00:04:51] [Bachner] Well we'd probably been in the clouds for an hour and they're doing all kinds of nasty things: steep turns and everything on instruments to make sure we can recover from stalls and whatever. So we'd probably already been training for an hour, just about to be done, and then there was no communications. You need permission when you're gonna come out of the clouds you need permission to go from a certain point to another point. And we didn't get it.

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<sup>10</sup> The "hood" refers to a helmet-like visor that blocks the visibility of the pilot. The idea is that the pilot has to fly by only using the instruments in the plane. In addition to the training pilot using the hood, there was often an additional "check" in place to use some cardboard to block the windows from the plane. This way, if the pilot wearing the hood looked up, he still could not see outside the window.

<sup>11</sup> In a follow-up conversation, Bachner mentioned that although they had no communication with the ground, they were able to communicate with other planes in the air at that time. This allowed them to verify that the other planes had also lost contact with ground control.

<sup>12</sup> DEW Line = Distant Early Warning Line

[00:05:18] [Tape] So can you describe the "we" part? So you're being trained. So who was-

[00:05:22] [Bachner] An instructor. Ironically the instructor was a guy named Don Jonz that disappeared with Begich and Boggs, the [U.S.] House Speaker and the senator from Alaska, back in the early '70s.

[00:05:40] [Tape] Disappear ... like died or?

[00:05:41] [Bachner] Well, they never found them.

[00:05:43] [Tape] Okay.

[00:05:45] [Bachner] The [U.S.] Speaker of the House and the senator from Alaska just vanished on a flight but he was the instructor. He was.

[00:05:55] [Tape] So was he the authority on what happens? I mean what—you guys are just up there. No communication, then what?

[00:06:01] [Bachner] Then when finally- we both decided that we got to come out of the clouds and face up to whatever it is.

[00:06:08] [Tape] So can you describe as your coming out when, when it occurred to you what had happened?

[00:06:13] [Bachner] Well, it didn't right away because when we came out we didn't see any big fire. So that was a good sign but it was dark. It was you know kind of twilight. It was March. I think the earthquake was what, 5:30?

[00:06:30] [Tape] Something like that.

## **EDIT PART E**

[00:06:30] [Bachner] We probably came out at 7:30 or something. So it was kind of-

[00:06:34] [Tape] At Eielson?

[00:06:36] [Bachner] -Dusky. No, we were actually north of Fairbanks 100 miles probably when we came out, but no lights. No lights from the city of Fairbanks, no lights from the airport, no lights. Normally you could see lights, even on those days. But it had knocked all the power out<sup>13</sup>, you know, so...

[00:06:53] [Tape] So is, at that moment you know what point did you kind of put it together that it would be an earthquake you just thought power went out at that point?

[00:07:04] [Bachner] We had no idea what it was. We didn't know until we landed. We came in and landed, figuring all kinds of bad stuff could happen to us. But nothing did. And then we were immediately put in another airplane to fly Anchorage, Cordova, Valdez, because... So we took off<sup>14</sup>

<sup>13</sup> The widespread power outage in Fairbanks is not mentioned in the 1969 report by Plafker and others.

<sup>14</sup> In a follow-up discussion, Bachner elaborated on the charter flight to survey the 1964 earthquake damage. Jonz was asked to fly the charter. But, knowing that Bachner was seeking training, and that the flight was already paid for by the U.S. government, Jonz kindly invited Bachner to pilot the plane for what would be, in essence, free training for Bachner. To Bachner, who recalled making \$2.12 an hour as a mechanic for Wiens, this was a great opportunity. Flight training cost about \$100 per hour, and here was a fully instrumented, twin-engine plane, with six hours of fuel. Bachner accepted Jonz's offer and therefore the charter flight also served as a training flight, with Bachner "under the hood" (that is, flying by instruments only), except for when they were over the damaged regions, in Anchorage, Whittier, Valdez, and Cordova. Bachner was the main pilot on the charter flight, but Jonz could provide flying relief as needed.

immediately and went to those destinations and they were on fire and it was, you know, nasty then.

[00:07:27] [Tape] Wow.

[00:07:27] [Bachner] So within probably an hour of landing we loaded up and took off.

[00:07:31] [Tape] And under what — just being a pilot that could help-.

[00:07:35] [Bachner] It was a charter. The Federal Government charter, Corps of Engineers.

[00:07:38] [Tape] Can you- when you said you are 100 miles north of Fairbanks, can you, so you're doing this training exercise? The museum<sup>15</sup> is kind of map oriented and-

[00:07:51] [Bachner] We'd be up by Beaver Creek, which is close to the Steese Highway by Nome Creek.

[00:07:58] [Tape] And then at that point when you say you came out you're coming-

[00:08:01] [Bachner] Well you're trying to get out of congestion. Well there are other airplanes you know in the Fairbanks area so in case you make mistakes, you're not going to run into anybody.

[00:08:10] [Tape] Did you see- did you see anything as you came down to the runway that would indicate that there was any shaking? I mean there's no communication.

[00:08:18] [Bachner] No everybody had abandoned the tower. So there was nobody in there.

[00:08:22] [Tape] There wasn't stuff like knocked over anything?

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FLIGHT #2 SURVEYING THE EARTHQUAKE DAMAGE

[00:08:25] [Bachner] No, it wasn't until we started flying these other places that then we ran into that. Big cracks of- Valdez was on fire. Cordova was sitting high and dry, the dock.

[00:08:37] [Tape] And you were basically guiding people to show the-

[00:08:40] [Bachner] We were flying for the Corp to report on the devastation.

[00:08:42] [Tape] Was there with their Corp people with you in your plane?

[00:08:45] [Bachner] No, no. The same guy the instructor and I-.

[00:08:48] [Tape] Wow you just got right back-

[00:08:50] [Bachner] Got called right into another airplane and left, yep.

[00:08:52] [Tape] And you're- you're radioing in what you're seeing are you?

[00:08:56] [Bachner] Yes. Yeah. They gave us a fancy radio, an HF radio<sup>16</sup>. Yep.

[00:09:01] [Tape] That's interesting.

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<sup>15</sup> The mention of the museum is for a special exhibit on historical earthquakes at University of Alaska Museum of the North. Content from the interview is expected to be used in the exhibit, which opens fall 2018.

<sup>16</sup> HF = high frequency

[00:09:01] [Bachner] So we reported, I think, to the governor's office or wherever it was.

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DEW LINE (1964–1966)

[00:09:06] [Tape] Can you, you mentioned the DEW Line<sup>17</sup> experience. Can you just mention the years that you were, you were involved in and roughly since you're here what your perception of what the- what the job was that you were doing?

[00:09:19] [Bachner] Sure. They had radar installations that were supposed to detect any Russian invasions, which would be aircraft, and the Russians to this day still have their bar- their Bear bombers, which is an eight-engine airplane the pretty big bomber. Some are six, some are eight. But anyway we were the sites were managed by the military but the work was performed by civilians so they had all officers that were in charge of the facility. But then the cooks and the carpenters and all that sort of stuff for civilians and it was prior to Prudhoe Bay. There were very few facilities mostly gravel runways no paved runways at all. And our job is to support those facilities so people got sick you had to go in and you hauled food to them and parts and whatever they needed.

[00:10:19] [Tape] And what years were you-

[00:10:21] [Bachner] I was there '64, '65, and '66.

[00:10:27] [Tape] So that would have been right after this training that you were-.

[00:10:31] [Bachner] Yes.

[00:10:31] [Tape] Happened to be part of the '64 earthquake.

[00:10:32] [Bachner] Right.

[00:10:33] [Tape] You turn right in.

[00:10:34] [Bachner] Yeah. They ran the DEW line pretty much like a war. The minimums were generally ignored. The weather minimums. You flew in much worse weather than was normal because there wasn't any place to go. You're going across the top of the Arctic and when it fogged in it usually flogged in for hundreds of miles right to the ground.

[00:10:59] [Tape] Was that, do you consider that kind of the most dangerous flying you've done?

[00:11:03] [Bachner] It was probably the most difficult you know as things progressed you get better facilities better approaches and you get to the real world with real minimums.

[00:11:14] [Tape] But it's a it's a federal project where whether they've made some calculations of what they need and what can be done but there are safety standards were a little they pushed it to the limit, sounds like.

[00:11:28] [Bachner] Yes, yes yeah. Sometimes they paid the ultimate price. People crash. It was important that the facility stay up and running. And if, you know, if a few people got used up in the process that was just a cost of.

[00:11:47] [Tape] What were some of the- what would be some of your main destinations or flights that you could remember?

[00:11:52] [Bachner] Primarily we went Barter Island, Flaxman Island, Oliktok, Lonely, Barrow,

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<sup>17</sup> DEW Line = Distant Early Warning Line

Wainwright,, and Lisburne. That was a run. One day you'd go one way and the next day or go the other way. But occasionally they'd have problems somebody would crash or the airplane would break. You'd get up into Canada and you'd run their sites across Canada and once in a while we got even up into Greenland.

[00:12:20] [Tape] Wow. You rattled those names off pretty fast so, doesn't seem to be-

[00:12:24] [Bachner] Well they're just little radar sites – they weren't even villages, although there were a few that had villages. But most of them just sites where there were 100 people. There were no women allowed on the DEW line, so no females.

[00:12:37] [Tape] Including the servicing and supplies?

[00:12:39] [Bachner] We couldn't even have a female flight attendant.

[00:12:42] [Tape] Wow.

[00:12:42] [Bachner] Yep.

[00:12:42] [Tape] What kind of plane were you flying for that?

[00:12:43] [Bachner] Flying a DC-3.

[00:12:45] [Tape] Okay so that's still being flown.

[00:12:48] [Bachner] Mhm. Later we flew the same thing with the F 27, then a 227, and then a Boeing 737.

[00:12:55] [Tape] Did the planes that you fly at that time, are those still the same ones that are flying now or?

[00:13:01] [Bachner] Some of them, although I don't know if any DC 3s left but.

[00:13:05] [Tape] Mostly these big ones that are flying?

[00:13:07] [Bachner] You probably see 46s is probably what you're seeing.

[00:13:10] [Tape] Okay, [huge bow plane.]?

[00:13:10] [Bachner] We had some of those too. But yeah we ended up eventually went on the DEW line sites for the Navy when they were drilling for oil. We landed Boeings on DEW line sights, and lakes. Frozen lakes.

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FLIGHT #1 TRAINING OUT OF FAIRBANKS

[00:13:30] [Tape] Well, back to the, back to the '64 just to make sure since you're, this is the chance to get the details. Your- it sounds like the flight is a training flight that maybe would have lasted an hour and then lasted another hour or so.

[00:13:49] [Bachner] Yeah probably was probably the normal would have been a couple-hour flight and it probably lasted three or four.

## **EDIT PART D**

[00:13:55] [Tape] Was- did you do- any conversation you had in that one hour with this trainer?

[00:14:01] [Bachner] Oh yeah. Yeah there was lots of conversation.

[00:14:03] [Tape] Were you guys-?

[00:14:05] [Bachner] We were trying...

[00:14:05] [Tape] Scared?

[00:14:05] [Bachner] ...to figure out what we were going to do, well do you go north or south? You know there's a problem here if they bombed Eielson we better go north.

[00:14:13] [Tape] Were you guys, I mean it sounds like you really- were you scared?

[00:14:17] [Bachner] Oh yeah. We figured that, you know, this whole place was probably cookin'. If didn't cook, it was radiated. It was a big, you know, supposedly the Russians and the atomic bomb was a big deal. Kind of the end of that but we couldn't imagine what else would knock all the communications out.

[00:14:35] [Tape] And you said Eielson was your main point of communication, but in reality did that mean the backups had also gone down or was that just the only opportunity for-

[00:14:44] [Bachner] All the backups everything. We couldn't talk to anybody.

[00:14:46] [Tape] So you knew that not only Eielson was down but-

[00:14:49] [Bachner] Some of it was at Wainwright and some of it was Eielson. But, well, everybody left all the buildings so they figured they were going to come down.

[00:14:56] [Tape] Was anyone else in the air at that time?

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FLIGHT #2 SURVEYING THE EARTHQUAKE DAMAGE

[00:14:58] [Bachner] Oh, I'm sure there had to be other airplanes. Sure, sure. I think there were, you know when we got to Anchorage there were airplanes that got to the runway and couldn't land on the runway. We didn't land. We stayed in the air and flew a circuit. Anchorage, Whittier, Valdez, Cordova, and then back to Fairbanks.

[00:15:16] [Tape] On the day the earthquake?

[00:15:17] [Bachner] That night.

[00:15:18] [Tape] Oh that night!

[00:15:19] [Bachner] Yep.

[00:15:19] [Tape] Oh my gosh, I didn't understand. So you're flying at night-

[00:15:23] [Bachner] Yeah.

[00:15:23] [Tape] -Lots of fires-.

## EDIT PART F

[00:15:23] [Bachner] When we finally came out of the clouds<sup>18</sup> it was getting dark. It was probably

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<sup>18</sup> Here he is referring to coming out of the clouds north of Fairbanks, prior to the second flight to southern

9:00 or 9:30. So then we just got crawled in another plane, took off to report on because there were no communications in any of these places.

[00:15:37] [Tape] So you got a radio going to some sort of military...

[00:15:41] [Bachner] Yeah, the Corp of Engineers brought out some type of a radio. I think an H.F., and the other guy, one of us would fly and one would work the radio, and it didn't always work all that wonderful.

[00:15:54] [Tape] So you spent a lot of time with this guy in some pretty extraordinary-

[00:15:58] [Bachner] Spent all night.

[00:16:01] [Tape] Yeah.

[00:16:01] [Bachner] Yeah. We got to watch Valdez, which was burning, you know, big fire, black smoke.

[00:16:06] [Tape] And that night you stayed, you said, down Whittier, Anchorage, or where did you-

[00:16:10] [Bachner] We flew here Fairbanks to Anchorage. Did not land because the runway was in bad shape. And then Whittier. And then cut over to Valdez.

[00:16:20] [Bachner] Valdez was, you know, a fire. Nasty. There was debris everywhere, lit up by the fires. And then Cordova, there weren't many lights, but you could see that it had gone dry where the boats docked. There wasn't any water. It was all mud.

[00:16:38] [Tape] Tsunami.

[00:16:41] [Bachner] Well, the water had all left. Yeah. And there were places you could see where it had come back and gone way up mountains, get in a canyon and it might go a thousand, fifteen hundred feet up, knock all the timber down<sup>19</sup>.

[00:16:56] [Tape] So when, when you were flying it, when did you finish your job of that night I guess, and where did you land?

[00:17:02] [Bachner] We probably got back in Fairbanks early morning.

[00:17:06] [Tape] Did you have to refuel during all that then?

[00:17:08] [Bachner] No.

[00:17:08] [Tape] Really?

[00:17:08] [Bachner] We had, we had six hours of fuel on board and we used it all.

[00:17:13] [Tape] Did you ever have light during that flight to see other effects like you're talking about. I mean, I just, hard to imagine how much you're talking about—middle of the night to early

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Alaska.

<sup>19</sup> In coastal fjords, submarine landslides—caused by 1964 earthquake shaking—generated local tsunami waves that traveled much higher and further inland than the main tsunami waves. Plafker et al. (1969, p. G9) wrote: “At a few places all trees, including some 2 feet in diameter, were uprooted or broken to heights 110 feet above tide level, barnacle-covered boulders 6 feet across were carried more than 100 feet above the shoreline, and material from marine deposits were splashed more than 170 feet above the tide level.” Bachner likely saw this debris, though his recollection of the height of the debris line is probably an over-estimate. Or he might be recalling the 1958 Lituya Bay earthquake, whose shaking caused a landslide and a local tsunami that wiped out tress up to an elevation of 1710 ft above sea level.

morning. Did you see any tsunami effects or?

[00:17:29] [Bachner] You could. Because when we got on the coast it was clear, so you could see where the trees were down it looked like they'd gone in and clear cut the timber. Go up a canyon it went up again. You can see debris everywhere.

[00:17:41] [Tape] And what, like what high elevation were you flying in for this kind of job?

[00:17:46] [Bachner] Not real high because it was fairly good visibility, so we probably were a couple thousand feet, and then when we got to a certain place and look out we got down within a couple hundred feet.

[00:18:00] [Tape] Well I wasn't prepared for this story but I'm glad that you, you continue it because I've heard the first part about this part in Fairbanks but it's really fascinating to think about the statewide catastrophe that was there and the fact that, you know, people like you in Fairbanks actually played, played a role. We think of it as just "that happened in Anchorage", you know.

### EDIT PART G

[00:18:27] [Bachner] I think we were very fortunate. I was surprised that very few people got killed in the debris. The docks were floating out the middle of the bay. There were boats upside down in the middle of the bay. One of the boats had tipped over sideways, we heard later. In Valdez. Luckily it came right side up when the water came back. But it was a mess.

[00:18:50] [Tape] It is, it is a massive destruction with minimal-

[00:18:54] [Bachner] Little bit of water yeah. I don't even think it was that high. I don't know how high it was but it doesn't have to be real high to cause a lot of problems.

### EDIT PART H

[00:19:03] [Tape] Drive a boat right through a town.

[00:19:05] [Bachner] Yeah, yeah. There were cars, you know, you could see way up hillsides, different places. Those little villages, a lot them were completely wiped out. Some of them had bonfires that you could see. You could see it didn't look very pleasant.

END

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MISC WRAP-UP

### EDIT PART I

[00:19:25] [Tape] Well thank you for your story and for your time. And just as an aside I hope, I hope you're able to come check out this exhibit<sup>20</sup>.

[00:19:34] [Bachner] Oh, well, I always enjoy the Alaska history and the University, so.

[00:19:40] [Tape] We got to get, you know, it's tough. We got project jukebox these funds for oral histories. We've actually pursued, we had a proposal to pursue oral history of sort of seismology related, and you were on that list of sort of a professional sequence of how to do the project. But I'm glad just to get, get the story down, that step one and we'll see where it goes.

### EDIT PART J

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<sup>20</sup> Again, here referring to the forthcoming 2018 museum exhibit, which is expected to use Bachner's story.

[00:20:02] [Bachner] Well, I'm happy to help any time I can.

[00:20:06] [Tape] Alright. Signing out. Thanks.

[00:20:08] [Bachner] You bet.

[00:20:10] [other voice] Very Interesting. Jonz, you know, owned the property that is Walshes now.

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### **Excerpt from Plafker et al. (1969)**

Plafker et al. (1969, p. G45) summarizes the effects of the 1964 earthquake in Fairbanks:

Fairbanks, the second largest city in Alaska, is in the interior of the State on a broad, flat surface along the Chena River. It is 275 miles north of the earthquake epicenter and predictable experienced only minimal damage.

Most of the Fairbanks area rests upon silt, sand, and gravel with local accumulations of loess and organic debris. Except along the Chena River and local small areas, the sediments are perennially frozen. The thickness of the sediments is unknown, but it may be as much as 300 ft locally. The water table lies close to the surface, and many of the shallow gravel pits contain water. Most small residential wells are no more than 25 ft deep.

Seismic motion at Fairbanks lasted from 4 to 5 minutes; more people reported the lesser figure than the greater one. Motion was of a rolling nature and was chiefly northeast-southwest. The intensity of seismic motion increased gradually and once at its maximum intensity did not vary much. The motion subsided abruptly.

Top Copeland reported seeing ground waves, 4 to 6 inches high, traveling about 10 miles an hour in a northeast direction. He also reported that a parked automobile rolled back and forth 1 to 1½ feet in the same direction.

Relatively little damage was reported at Fairbanks. Shelf goods were shaken, but not toppled. There were some fissures in the ground. At the Alaska Motel, fissures 2 inches wide and 40 feet long developed during the earthquake. One edge of the structure sank about 4 inches, and some slumping occurred in the excavation beneath the motel. Some damage to utilities and to a few concrete structures at Fort Wainwright was reported. The water in one 23-foot-deep well in Fairbanks was muddy for about 2 days after the earthquake.

The very light damage experienced at Fairbanks is accounted for by the distance from the earthquake epicenter and by the fact that most of the city is underlain by permafrost, which responds to seismic vibrations much as does solid rock.