

The Statewide Committee for Research honors Alaska's

Northern Innovators



Ed Clinton and Lynn Johnson Inventor in the Garage

Northern Innovators Hall of Fame Member

Like so many pinpricks in North Slope tundra, more than 2,000 oil wells penetrate frozen soil to reach gooey deposits formed millions of years ago. Heat and stress from deep within the earth squeeze the viscous liquid to wellheads with such explosive force that each represents a disaster waiting to happen. That threat created a niche for Alaskans who solved a problem for which oil companies had no answer.

On a May morning in 1975, Lynn Johnson, then in his early 20s, sipped a cup of coffee and looked across the kitchen table in a home near Anchorage. He pondered the offer just delivered by his neighbor.

“I’m inventing an arctic control system in my garage,” Johnson remembers the late Ed Clinton saying. “The (oil companies) might end up buying a bunch of them. Would you like to own part of the company if it takes off? We’ll build them and you get to do everything — you get to be the fabricator, you get to be the business guy, you get to be the sales guy.”

Then a college student who spent his summers working for the family helicopter business, Johnson loved the quirky and talented Ed Clinton like an uncle. But Alaska was exploding with other opportunities.

“Geez, I might not get a paycheck,” Johnson thought. He also knew the character across the table had created a prototype oil-well failsafe system that might work in deep Alaska cold.

“Ed was a mechanical engineer and a metallurgist,” Johnson says. “I asked him, ‘How do you know what they want?’ He said, ‘I don’t. I’m going to tell them what they want.’”

Johnson took a sip of coffee, thought for a few more seconds, and then chose a lucrative, never-boring path he would follow for decades. He agreed to work with Clinton on arctic-proofed systems that shut down wellheads if instruments detected changes in

oil-flow pressure — an indicator of leaks, fires or surges in the well.

Johnson was not the only one skeptical of the mad genius who was his neighbor. Officials for British Petroleum were not convinced they wanted to award a contract for six dozen of these devices to a nonexistent business ready to be launched from a man’s carport. A five-man deciding committee was split two for and two against Clinton’s idea. The man with the swing vote was, like Clinton, a fan of classical music.

Because it felt right and couldn’t hurt, Clinton decided to name the yet-unformed company after composers John Dowland and Johann Sebastian Bach. The fledgling Dowland-Bach soon after received the \$750,000 contract for the 74 oil-wellhead control systems. Many of them are still working today.

Clinton and Johnson beat out established manufacturers by applying their cold-weather knowledge to the control systems. Until oil companies moved into Alaska, they had little experience with 40 below zero. The Alaska partners used low temperature O-rings that wouldn’t shrink (like they did in the Space Shuttle Challenger disaster in 1986), and cold-weather lubricants from the aviation business.

“We kind of arctic-proofed the design,” Johnson says.

When their system worked, saving the oil companies untold amounts by eliminating the need for people to monitor wellheads, Clinton and Johnson became busier than they had imagined. They moved from Clinton’s garage to a workshop in the heart of Anchorage. As oil companies poked more holes in the North Slope in the late 1970s, they called on Dowland-Bach. And word spread throughout the industry. From Alaska to the Middle East, more than 7,000 of the devices with the company nameplate are now performing silent service.

Now supporting 27 employees from sheet-metal fabricators to computer programmers, the company grew in spurts. One occurred when a top BP supporter of Dowland-Bach was transferred to Bogotá, Columbia. He soon called long-distance to ask Clinton and Johnson if they might be able to modify wellhead control systems for the jungles of South America. They could, and did.

Another growth opportunity was the creation of systems oil companies use to inject salt water into wells to add pressure and allow the flow of sluggish oil. That high-pressure, high-corrosion environment introduced Dowland-Bach to the world of manufacturing with stainless steel, for which they are now known in the oil industry and to guys all over Alaska who order it for vessels in which to brew their own beer.

Dowland-Bach, now owned by the Koniag Inc., recently made headlines in Alaska business magazines with another adaptation. They established a customer base in the United Arab Emirates, and now make control systems for industry giant Halliburton.

“That’s a big deal for people building something in Anchorage,” Johnson, the company president, says. “We’ve proven you can compete if the value and technical competence is there. If the device is complex enough and expensive enough, the point of manufacture is insignificant.”

“And, when you figure the distance from Houston to the UAE and Anchorage to UAE, we’re 1,500 miles closer.”

All this success stems from an inventive Alaskan who later became leader of the Alaska Science and Technology Foundation. Ed Clinton knew this state was one big opportunity.

“You always hear about someone starting a damn company in the garage,” Johnson says. “But this guy was just crazy enough to make it work.”