



## So Much to Give: The Legacy of Garman Kimmell

Those who knew Garman O. Kimmell, founder and builder of Oklahoma City-based Kimray, Inc., remember him best as a brilliant design engineer and a devout Christian man. He revolutionized the field of oil and gas production and made significant personal contributions to the field of heart treatment. But the technical nature of his inventions, coupled with a humble personality that eschewed personal glory, has consigned him to anonymity in previous American and even Oklahoman histories. That is the problem with history books — most of the men and women who possessed the noblest character and made the greatest contributions were too busy impacting other lives to get their own written about.



### An American Boy

As with so many great American leaders across the fields of industry and business who were the children and grandchildren of immigrants in the 19th century, Kimmell took his cue on how to get ahead in America from his forebears. Kimmell's father, for instance, was an imaginative capitalist. "As a young man, around the turn of the 20th century," Kimmell's son-in-law and current Kimray chairman Tom Hill recalls, "Garman, Sr., would pedal a bicycle from town to town in rural Maryland. He carried a projector and a sheet on the back of it. After setting up, he'd charge a few pennies for people to come see a movie."

Garman, Sr. headed west with his family to Oklahoma during the early-20th-century oil boom when he was around 30 years of age. Though his small stature disqualified him from oil field work, he found work digging basements for houses in the red clay of a young and brawling Oklahoma City. He invested his earnings in city property during the boom, and gradually worked his way into a position as an oil and gas "land man" pulling together mineral interests for drilling projects.

"Garman, Sr. was the kind of person that if 15 people went to a farmer to get a lease, that farmer might run them all off with a shotgun," says Hill. "But he could go and have a signed lease within 30 minutes. He was a likable, but trustworthy and genuine person."

The younger Garman grew up in Wichita, Kansas, where his father had moved to pursue his business dealings, and reflected the older man's imagination and zeal from childhood onward.

"He built these huge 'war kites,'" Hill recounts of his father-in-law's teenaged years. "They required two or three young men to hold them down, or he'd have to tie them to the bumper of a car. He would make runners to be blown up the kite string, flying several hundred feet up in the air. He hooked a big multi-cell flashlight to one of them, thinking it would be fun to have light up there. The heavy flashlight, however, came loose, hurtled toward the earth, went through the roof of a nearby house, and crashed



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down on the floor beside his neighbor who was reading the newspaper. His father fixed the roof and wasn't angry with his son."

Kimmell's grandson David Hill, current CEO of Kimray, added to the story: One day, his grandfather "caught a neighbor's cat and tied it into a nice silk parachute one of his friends had and sent him up the kite line glider, maybe 800 or 900 feet in the air. The kite line glider disconnected at the top, and the cat floated gently back down to earth, all very fine and dandy, except the cat wasn't having a good time at all. Upon landing, apparently in a tree, he got hung up and he climbed up the lines and ripped that silk parachute to shreds. I don't remember Garman being too worried about the ride the cat took, but I remember him being very disturbed about the loss of that silk parachute."

Kimmell attended Wichita State University for two years before transferring to the University of Oklahoma because of its strong engineering program. As a student at OU, he and his fraternity brothers befriended a crow that had no flight feathers on one wing and could only hop around their fraternity. When school broke for summer, everyone wondered what to do about the crow. Kimmell suggested he could enable the bird to fly. Doubted by everyone else, he collected other flight feathers and glued them onto the crow, before taking him out onto the front porch of their fraternity house for release. The frat brothers tossed him in the air, and he flapped around, then hit the ground. Kimmell didn't lose hope, and neither did the crow. The bird looked around, flapped his wings, then took off. He spiraled hundreds of feet into the air, so high that Kimmell and his friends could barely see him. Then he headed off in a beeline, never to be seen again.

Kimmell graduated in 1937 with a Master of Science degree in Petroleum Engineering, but "maturity" and responsibility did not abate his cheeky streak. Well past middle age, he collaborated with protégé and Audio Associates founder Greg Robertson on a recording project at his home, only to have a "small yappie" dog next door disturb them with constant barking. The two men placed a microphone near the dog and recorded his yapping at them. "Then we played the dog barking 'a number of times louder' back to him through one of my enormous public address horns," Robertson recalled with a laugh. "He decided not to bark at us any more after that. It was kind of funny to watch this little dog back off and quit barking because a much bigger dog, that he couldn't see, was roaring at him!"

For all Kimmell's legendary discipline, focus, and single-minded perseverance, grandson David maintains, "To Garman, everything was play. Work, family, everything was a joy to him, because he approached it that way."

### **New Name in the Oil Field**

While still pursuing his master's degree, Kimmell was hired by Black, Sivalls & Bryson, one of the world's foremost designers and builders of oil and gas process equipment systems and plants. He worked there for over a decade, rising to the rank of chief research engineer before declining the company's offer in 1948 of a further promotion and move to Kansas City, because he wanted to remain in Oklahoma City. He resigned from Black, Sivalls & Bryson and founded Kimray. Only a year later, however, his partner in the new enterprise veered from their agreement on a major project with a Texas client. "This won't work," he told the partner. "I'll either pay you for your half of what I think the company is worth, or you pay me for my half." It was back to square one for the rookie entrepreneur, as he shouldered 98 percent ownership of the budding oil and gas equipment and controls manufacturer.

Kimmell also faced a restrictive three-year non-compete agreement with Black, Sivalls & Bryson on designing new products. Kimray needed new products, however, so — with his father's financial and



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managerial assistance — he purchased the rights to manufacture a valve from another designer. Unfortunately, the valve design, although patented, did not work. Kimmell redesigned the valve and in doing so the patent had to be updated twice to reflect the new designs. Kimmell continued to pay the patent owner according to the contract, even after discovering a patent that superseded by decades the one under contract. When Kimmell confronted the designer, the latter responded, “You’re right, the patent’s no good — but my contract with you is.” Kimmell agreed, and paid the designer the full value of the contract, though the man’s patent was worthless.

Tom Hill recalls hearing the designer later tell Kimmell, “Everybody else welched out, but you completely fulfilled your contract with me.”

“Garman basically revolutionized the field production of oil and gas,” says Hill. “When he started manufacturing at Kimray in 1949, most of the back pressure valves in the field were weight-loaded valves. This resulted in uneven pressure regulation at working sites, which could lead to big problems. Things were just mechanical back then,” he explains. “To have a piloted valve was just too expensive.”

So in 1950, Garman created the 3” SGT-BP, a three-inch pressure regulator that was piloted, rather than weight-loaded. A piloted valve was an enormous improvement over the traditional weight-loaded ones, since unlike those, it automatically adjusted the volatile flow of gas out of the ground to a constant rate and desired pressure, allowing easier and more accurate measurement of that flow.

The 3” SGT-BP stands as nothing less than a landmark in the history of oil and gas field production. A marvel of American ingenuity, it marked the first time an affordable product of this sort could succeed in the field. It cost only \$105, and only \$280 today. And as befits a true story of Americana, Kimmell first peddled it out of the back of a pickup truck. Over the next 15 years, his creative genius spawned a dozen more watershed products, all of which — along with their variations and derivatives — have had lasting impact on the oil and gas industry.

The multi-generational success of the 3” SGT-BP reflects numerous attributes of its designer’s character. One is simplicity, another endurance, in an age of planned obsolescence. “If you bought that three-inch gas back pressure regulator valve from us in 1950 and called us today needing a repair kit,” Hill says, “we wouldn’t even ask you when it was made. The repair kit we sell today fits every valve we’ve made for the last 61 years.”

Indeed, despite the company’s plethora of valves and regulators — Kimmell’s genius looms again — their parts nearly always prove interchangeable. “He built things like Tinker Toy sets,” explains Hill. “He used the same parts and made a new valve out of them. So you have all these variations of valves, but there may be only one or two different parts among them. It allows us to keep a much smaller inventory, perhaps only 10,000 parts for as many as 900 different valves.” Though materials and manufacturing processes have improved, Kimmell’s original designs approached perfection and have caused the 3” SGT-BP and his other valves to last for generations. Yet they possess such simplicity that workmen in the field can repair them on the line, then put them right back to work.

### **Multi-faceted Genius**

Kimmell’s experiments weren’t limited to mechanical valves. In 1957, he invented an energy exchange glycol pump that eliminated the polluting of land around oil fields caused by the leaking of glycol. Hill estimates that Kimray now builds 99 percent of all the oil field exchange pumps in the world. The company’s glycol pumps, treater valves, oil dump valves, high pressure control valves, and pilots — totaling in the millions — now operate in almost every oil field lease on the planet, from the United



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States to Africa to Australia.

Kimmell also designed a method to estimate how much gas is held in an underground gas reservoir. He sent a device into the tubing and measured the pressures and took gas samples as the well flowed. It enabled him to calculate the reservoir capacity. But sitting on a well and opening a pipe to the atmosphere with gas blowing out at thousands of pounds of pressure per square foot to measure its capacity and output is dangerous work. The pressure can get loose and blow something off the top of the well that lands half a mile away. Kimmell nearly lost an eye doing it one time in Louisiana.

His body of work stretches far beyond his epochal contributions to oil and gas production to the medical field, electronics, audio products, the arts, and music. Nearly all his contributions possessed a common denominator: solving people's problems.

In the 1960s, he developed a heart-lung machine and served as the technical physicist on the first open-heart surgery team in Oklahoma City. The device allowed heart doctors to perform lengthy open-heart surgeries. He created de-bubblers and oxygenators (from stainless steel canisters conscripted from his wife's kitchen) for the blood as it was recirculating outside the body. Kimmell devoted thousands of hours of his own time toward these humanitarian pursuits — without remuneration. When asked why, he responded, "I guess the best answer is simply the philosophy expressed in the parable of the Good Samaritan: Here's a chance to help people with congenital heart problems. My reward has been actually seeing the sick made whole, but I wouldn't be in it at all if it weren't for the dedication of those doctors. I may have gone the mile, but they've gone the extra mile."

After all that, Kimmell helped daughter Kay make an accurate, detailed, one-quarter scale model of the open-heart surgery room for a science fair project. "It was fun to spend time with my dad making all the parts on his lathe, bandsaw, and drill press," she says.

Kimmell considered the vena cava filter as one of his most significant inventions. He borrowed the idea from sludge valve baskets used down hole, or underground, in the oil field and applied that technology to design a delicate, wire, umbrella-type device that snags blood clots in people's lower extremities and allows them to dissolve without limiting blood flow. Over 500,000 people have had this device implanted, and it has saved many of their lives.

For 30 years, Kimmell recorded, edited, and produced for radio the Oklahoma City Symphony Orchestra's weekly performances, all at his own expense. He eventually did so on a state-of-the-art tape recorder machine that he and A. P. Van Meter designed and built. Years before most companies employed an intercom system, Kimmell designed his own for Kimray. He also designed and built amplifiers, mixers, photographic developing equipment, and even, according to Audio Associates founder Robertson, "A gadget to automatically plug and unplug holes on the golf course for the golf balls to go in."

Keeping pace with, or ahead of, advancing technology, Kimray launched an Automation Division in 1988. It provided engineered solutions for the oil and gas industry's growing need for electronic monitoring, control, and data acquisition.

Another Kimmell grandson, current Kimray President Thomas Hill, noted the interesting way in which Kimmell designed products: "He put nothing on paper until he worked it all out in his mind," the younger Hill says, "and when he did put it on paper, he would do so on the reverse side of scrap paper or, if at a restaurant for lunch, a napkin. He drew the new invention by hand, in the proper proportion, notating the size, shape, and dimensions for each piece."



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“Some of the napkins we would get back from Garman had prints on them he had drawn at lunch and they were as good as the ones we got from the Drafting Department,” says retired Kimray machine shop manager Don Huffstutlar.

“I would imagine that most of our really great products started out on a napkin!” adds David Hill.

From there, Kimmell proceeded to his home shop and created wooden parts for his new design, making sure they all fit together and worked properly. “Next,” says Tom Hill, “he would take his drawings to Kimray, asking the men in the various shops which parts they wished to make. He would return home and make the remaining parts with his own hands and shop tools. Then, he and the others would assemble the product and begin testing it.”

Kimmell never lost this ability. Two days before he died at age 95 in 2008, bedridden and racked with pain, he looked up at the ceiling fan and asked Tom Hill, “Are those blades composite? I have designed a motor for ceiling fans which is continuously variable and instantly reversible.” One day before he died, again from his bed, he regaled Robertson about the little train system Kimray was planning to build to move parts around its many buildings. “He kept taking his little oxygen mask off to tell me,” Robertson remembers.

## Stool of Success

Kimmell imagined, labored, and led atop what he called his three-legged “Stool of Success.” “The legs are all equal, or nearly equal,” he said, “or else they don’t sit level on the ground.” The first leg was shareholder value. “Shareholders own the company, they’ve invested their money, and they deserve to have shareholder value, some protection, and return on their shares.”

Customers comprised the second leg. “The customer buys your product,” Kimmell said. “They deserve to have a good product at a fair price that is designed to be easily taken care of, that will serve them well and last a long time.” Employees made up the third, but equal, leg of the stool. “They do the work for you,” he said. “They are the key people in your manufacturing process; they are your customer relations people. You have to take care of your employees, be fair with them, and pay them a good wage. If you do all that, you’re going to have a good company.”

Garman Kimmell was a man of truth. He believed in the future — in this world and the next — and he believed in equipping the young to succeed in both. He would no doubt be the last man to wish the truth about him to be misrepresented in a manner that would confuse or mislead the young as they grow into maturity to face a world full of danger and conflict.

Presenting Kimmell as a perfect man would lessen the opportunity for the rest of us to relate to him as a person and benefit from the lessons of his life. Some family recollections of the not-fully-refined elements of his character bring smiles, such as his preoccupation with current projects while dinner table conversation proceeded around and without him. “He was so focused,” Tom Hill remembers, “that you would think he was ignoring you, but he was just thinking about what was going on at work. He had to be a hard man to live with.” Hill remembers 35 years of frequent dining with the Kimmells, and how his father-in-law was late almost as frequently. This spawned the oft-repeated line by Garman when his wife would ask if he wanted his dinner reheated. “No, Vera, it is just fine,” he would respond, eating cold dinners many nights.

Daughter Kay has her own mealtime story from childhood. It occurred during a Kimmell family vacation to Tucson, Arizona. “My mother cut into a piece of pie only to discover a grasshopper,” she remembers. “My dad’s logical explanation of the current grasshopper plague and of it being cooked and purified





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didn't convince my mom to go ahead and eat the pie!"

Some recollections do not bring smiles, such as memories of a father who worked late, missed family activities, or didn't hug his children or impart terms of endearment to them as often as they might have wished.

"It was wonderful, yet difficult at times, being the daughter of a genius inventor," Kay Hill recalls. "He worked long hours, especially at night when he could concentrate on his valve designs. Consequently, he had little time for interaction with his three daughters." An air of wistfulness pervades her voice, but she adds, "My father gifted me with his belief in and example of organization, thriftiness, resourcefulness, generosity, loyalty, honesty, patriotism, hard work, and faith in Christ, and those have guided me through all my life."

Kimmell would share openly with family members about his finances, his work, and his other projects, but personal feelings occupied a different realm. When the Hills set about recording the history of his life, they came to a certain difficult event. Kay asked him, "Daddy, how did you feel about that?" He never answered her question.

"Some people might think he was hard," Tom Hill says, "but that's not true. He just didn't show his emotions."

Wife Vera, the love of Kimmell's life, whom he had adored since college, passed away in 1979, nearly 30 years before him. He lost her, his mother, and his father within a few years. Hill recalls how difficult it was for Kimmell even to visit his wife in the hospital as she slowly succumbed to cancer. Not surprisingly, he immersed himself in his work. "That generation took those hardships, stuffed them, and went on and did their work. People would say that's unhealthy, and it probably is, I don't know. But it worked for him," said Hill.

### **Deepest Beliefs**

Undergirding all that Kimmell was, and all that he did, lay a sturdy and dogged Christian faith. His devoutness worked itself out in many fashions, some of them described above. Another was his commitment to giving back, in multiple ways, to his local community for the opportunity and support that community gave him, and to making it a better place to live.

The worldview emanating from Kimmell's faith led him to what grandson Thomas Hill remembers as a simple view of politics: "He believed that government's responsibility was limited to what the Founding Fathers thought it should be, which was to protect us from people outside our boundaries and to regulate interaction between the states. Just about everything else should be left up to local government. He fought hard for that, putting a lot of his own time and money into people and processes attempting to maintain that."

Hill adds that his grandfather believed in a strict interpretation of the Constitution. "He reminded us on a regular basis that it was our responsibility, that government rested on our shoulders, that if we were not involved in the process, if we did not stand up to be counted, if we did not put our money and effort into insuring that the right things got done, we would be the ones to blame if things weren't done." Apparently, Kimmell applied the general precepts for personal responsibility to his own life. None of his family or friends remembers him ever blaming anyone else for something he did or that happened to him.

He shared all these beliefs with The John Birch Society, and long supported them, to the extent of his



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ability to do so. He passed his passion for the JBS and its often-courageous stands on to his son-in-law Tom Hill, a faithful proponent of the organization, and his other kinfolk.

Anyone who knew Kimmell for any period of time cites his Christian faith as central to his identity. They remember that he taught Sunday school for over 60 years, and was a pillar for decades at the First Lutheran Church in downtown Oklahoma City. Kay Hill remembers how, when she was a girl, “On most Fridays or Saturdays he would be at his desk in the single car garage turned library and office studying for his Sunday school lesson.” He studied the Bible, not just in English but in its original languages. He strived to buoy his knowledge and understanding of the Scriptures with the most trustworthy study aids and commentaries.

“He spent a lot of time making sure that what he believed was scripturally viable,” says Thomas Hill. “That was very important to him.”

Kimmell did not just know the Bible, he devoted his life to living it, and in some ways the life he practiced was quite rare in modern America, even among professing Christians. For one, even as his and Kimray’s fortunes rose, he lived in the same modest Oklahoma City home for 65 years. Kimmell declined the opportunity to “move up” to the more fashionable parts of town. Why? “He felt like any increase God gave him was to give away, not to spend on himself,” says Robertson. “He was a great advocate in using what God gave you to help other people.” Amazingly, convincingly, here was a brilliant, successful man of means who really lived what he believed!

Were Kimmell here today, he would not approve detailing in public his charitable giving contributions. According to daughter Kay and others who knew him well, however, they amounted to a staggering amount, in the many millions of dollars. Befitting his personal philosophy, he spread his donations amongst local, state, national, and international organizations. The list of beneficiaries included Campus Crusade for Christ and dozens of its individual staff members; the Alliance Defense Fund; Cal Farley’s Boys Ranch in Amarillo; Character First; Child Evangelism Fellowship of Oklahoma; Christian Heritage Academy of Del City, Oklahoma; City Rescue Mission of Oklahoma City; Cumberland College in Tennessee; First Lutheran Church of Oklahoma City; the Heart Ministries home for girls; the Hope Pregnancy Center in Oklahoma City; the Institute for Creation Research; Joni & Friends evangelical ministry to the handicapped; Navigators; Novo Ministries gospel ministry to inner city children in Oklahoma City; Oklahoma City Jail & Prison Ministries; Oklahoma Baptist Home for Children; Patrick Henry College in Virginia; Reaching Souls International in Oklahoma City; Scope Ministries Christian Counseling; The New American magazine; and The John Birch Society. Upon his death, he bequeathed his entire estate to foundations that continue his gifting.

“It didn’t matter how much he gave away, God always gave him more,” remembers Tom Hill.

Kay Hill “had the privilege of helping him with his gifting for over 30 years. He believed that everything he had actually belonged to the Lord. The more he gave to spread the Gospel and help the poor, the more God poured into his hand. He said, ‘You can never out-give God.’”

Here again, Kimmell’s legacy lives on. Kimray’s company mission statement stands apart from the vast majority of others with its undiluted devotion to Christian principles:

Honoring the Lord in all we do by operating the company in a manner consistent with Biblical principles.

Serving our employees and their families by establishing a work environment and company policies which build character, strengthen individuals, and nurture families.



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Producing a high quality, marketable product at a fair price in order to provide a return on the stockholders' investment, share the Lord's blessing with our employees, and invest in our community.

We believe that it is by God's grace and provision that Kimray, Inc. has endured. He has been faithful in the past, and we trust Him for our future.

One of the most dramatic examples of carrying forth Kimmell's Christian legacy — and boldly into the commercial marketplace — is the Character First organization Tom Hill birthed at Kimray in 1992. "Character First is how we have tried to promote the values of Mr. Kimmell into the future, and maintain those values in our company," says Hill. Character First addresses the culture of organizations large and small by actively encouraging good character in each employee. The program has spread like wildfire, helping strengthen and, in some cases, save thousands of companies in 28 countries. (See book review, page 29)

## Looking Ahead

Kimmell respected and learned from the past, but he built for the future. He told grandson Thomas at the end of his life that his chief regret involved not having additional time to accomplish more good.

Today, those who follow in Kimmell's footsteps at Kimray continue his futuristic perspective. Three years after his death, the company he created more than 60 years ago shines stronger than ever. At the beginning of September, Kimray employed 725 people. As other companies in its own industry and most others decline and even fail amidst persistent national and global economic upheaval, Kimray grows; that employment number stands 125 more than the same date the year before, and twice what it was just seven years previous.

David Hill invokes another of the many powerful pillars of his grandfather's legacy. While Kimray operates in countries around the world, employing their peoples, helping develop their resources, and enriching their economies, the components it manufactures are made by the same folks who have always made them: Americans in America. "Nothing is made offshore and everything is made in Oklahoma to boot," says Hill with pride.

While Kimmell apparently loved few things more than drawing, designing, and building new inventions in his home shop, he seems to have reveled in sharing those experiences with young people whenever possible. He relentlessly lived out Moses' ancient Old Testament admonition to Israel regarding God's commandments: "And these words which I command you today shall be in your heart. You shall teach them diligently to your children, and shall talk of them when you sit in your house, when you walk by the way, when you lie down, and when you rise up."

"I spent countless hours out there with Garman in his shop," Thomas Hill says, "standing behind the lathe or looking over his shoulder when he was working on the bench as he made parts and models, and put things together. The whole time he was working, he would teach my brother David and me what he was doing. For a man who was by everyone's estimation a genius, he could explain things to a 5-, 6-, or 10-year-old that made it crystal clear, even some concepts he himself didn't totally understand until after he earned a master's degree in them!" From the fourth grade on, Hill adds, "Whenever anyone would ask me what I wanted to be, I would tell them, an engineer. And that was because of Garman."

Kimmell didn't limit his tutoring to the realm of engineering. "He was always explaining to us the principles *behind* what we were doing," Hill points out. "Whether that was a principle of physics or engineering, or theology or philosophy, or politics, he was transmitting *why* he was making his decisions, why he believed what he did believe, why he was doing what he was doing. From an early





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age, we had the benefit of a wise man who had seen a lot.”

Perhaps it is appropriate that those grandsons who learned at the feet, lathe, and bench of Garman O. Kimmell sum up his life and legacy.

“Garman never sought the limelight,” says David Hill. “He never wanted to be on the front page of the paper. He never wanted to be the one to get the credit; he was always happy for other people to get it. I saw Garman my whole life operate behind the scenes, working diligently, mostly at night, when nobody else was awake. One thing remains consistent throughout all this work, and that is Garman freely gave of himself to help other people.”

“There aren’t any buildings named after him,” says Thomas Hill. “He didn’t hold office, they’re not going to build a library and name it after him, but there are thousands of people all over the nation and the world that Garman’s knowledge, genius, money, and time impacted, people who are where they are today because at some point in the past, Garman stepped into their life.”



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