



"Make it Right the First Time!"

This is the improbable story of a brilliant machinist and reluctant entrepreneur and his son

(an accomplished motocross racer, artist, and hairdresser). Together, they have managed to create one of the nation's foremost job shops known for its outstanding quality and ability to take on impossible jobs.

This Spring, EDM Today left the still shivering New England for the warmth of sunny southern California to visit the Maroney Company, nationally known for its innovative application of the EDM process.



A Big John with his faithful companion Buddy pose in front of the Logan lathe, his first machine.

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A brief history of Maroney Company

John Maroney always possessed a talent for fixing things. Recently married and needing a job, he began work at a local machine shop with no formal machinist training. Due to his natural ability with all things mechanical, he thrived in the shop making things.

In 1955, a friend of his who owned a shop suggested to John that he consider going into business for himself. This friend told John that he knew of a Logan 11" lathe that was available at a reasonable price that could be the start of a new business. John had neither the inclination to start his own business nor the money to buy a lathe. However, his friend was persistent, offering to rent John space in the corner of his shop for \$20 per month and to even purchase the lathe for John if John could give him \$100 down and pay back the loan at \$100 per month. Still, John was hesitant. Finally his persistent friend convinced John to proceed, and they picked up the lathe in his friend's truck. Such was the origin of J & M Mfg (John had a partner for all of two weeks, but that's a story for another time) in 600 square feet of space in Van Nuys, California. John continued to work his ten hour day job and worked in his shop nights and weekends.

In 1957, John learned that his friend had sold his business including the building, and his friend warned him that the building's new owner was going increase his rent substantially. So, despite the fact that he had no interest in moving his shop had he not been confronted with this unexpected rent increase, John moved the shop to 1,000 square feet of rented space in North Hollywood. At that time his equipment list had grown to the trusty Logan, a Leblond, a Bridgeport, a Tree, and a Doall surface grinder. The shop now had two employees.

In 1962, as the business grew, John moved his shop to 2,000 square feet of rented space in Van Nuys.

In 1963, John was approached by a friend who was a machine tool salesman. The friend had just taken on a line of Swiss EDM's and suggested that John venture into this new field. John was again reluctant to get into a new field that he knew nothing about, but after much cajoling, his friend convinced him to buy a machine, a Charmilles D1S. The process was extremely slow compared to conventional machining, yet it enabled John to take on a job producing packaging molds that could only be done by EDM. Impressed by the capability of the process, John bought another D1S and took on work EDM'ing blind holes in carbide balls.

The business continued to grow and John again moved his business into 6,000 square feet of leased space in 1967. John was looking to increase his growing EDM capabilities and felt that his next machine needed to combine the accuracy of an ultra precision Jig Bore with EDM. He traveled to Switzerland to look at a new Charmilles/Hauser hybrid machine which gave him just the capability he was seeking.

It was during this trip that John had an epiphany. He had visited Swiss machine tool builders and during his trip was astounded by the attention all of these folks lavished on creating an environment for precision. He realized that careful attention to the environment which included such things as temperature control, cleanliness, and organization was at the heart of the remarkable ability of the Swiss to produce precision products. This lesson proved to be the cornerstone of the future path and success of the Maroney Company. John purchased that Charmilles/Hauser and used it to

successfully produce key intricate components for the LEM Descent Module that successfully landed on the moon with the Apollo 11 mission. Maroney's success with this difficult, highly precise project got the attention of the aerospace industry and helped set the course for the company's future growth.

In 1971 a friend suggested to John that he consider buying a building owned by the Ted Smith Aircraft Company in Northridge. While John had no intention of buying a building, after repeated urging from his friend and his banker, he submitted a low bid substantially below the asking price based upon what he could afford. After some negotiation, the building's owner who was facing significant financial pressure accepted his offer, and he moved his shop to the 12,500 square foot building he had just acquired. Now that he had is own building he could fully apply the concepts he learned during his Switzerland trip. He created separate rooms for his precision equipment and departments within a facility with hospital-like cleanliness.

In the mid seventies, Maroney acquired its first Wire EDM. John had been intrigued by the possibilities of Wire EDM but just hadn't found the right application for it in his shop. Finally, that job presented itself and John jumped at the opportunity to acquire a machine that could do another impossible job.

As the business grew and prospered, John became increasingly restive due to the time administering the shop was taking away from his time out in the shop. He convinced his son John Cameron Maroney (now known throughout the industry as JC or John Cameron in order to distinguish himself from his dad), who had undertaken various endeavors from motocross racing to hairdressing, to become his business manager so he could concentrate his considerable talents exclusively in the shop.

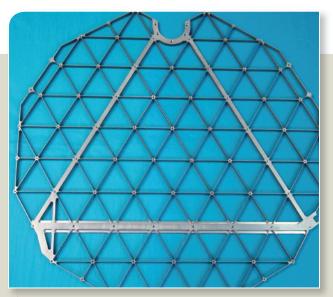
During the early eighties, Maroney began doing a lot of ultra precision components for Datatape, Inc. (a subsidiary of Eastman Kodak). Among other things, Datatape was renowned for its high density magnetic tape storage devices, one of which could store the entire works of the history of the Library of Congress on one 12" reel of 1" wide mag tape. Datatape began to take more and more of Maroney's capacity to the point where they bought the company in 1986, and the Maroney's ran it for them as an independent division. As often happens when large companies purchase entrepreneurial businesses, Kodak determined it needed to get back to its core business and sold the company back to the Maroneys in 1992.

In 1996, John Cameron became President of Maroney. Considering that in his background was in motocross, art, and hairdressing, one might ask how he can possibly manage such a high precision machining enterprise? The answer is two-fold:

- John is extremely intelligent and has absorbed a tremendous amount of knowledge from his father (also known as Big John who remains the company's CEO).
- John has assembled a team of key personnel that he depends on to "sweat the details" and make things happen.

After spending just a few minutes with JC, it's immediately apparent that he more than knows his stuff.

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Cell component used to capture Solar Dust samples (this part is approximately 36" across and had to be Wire EDM'd in multiple setups)



△ Vascomax class 10 EDM'd gears used on the Mars Pathfinder



Maroney Accomplishments

In the course of its 58 years, Maroney has achieved success in innumerable highly challenging ground-breaking projects, such as:

- Selected over 28 other EDM shops by TRW to be the Sole Supplier of Fuel Metering LEM parts for the 1st Lunar Landing of Apollo 11.
- Selected as the sole source supplier by NASA's Jet Propulsion Laboratory to make 235 parts for the Mars Pathfinder project.
- Sole supplier of extremely precise special metal sleeves for Pfizer to meter insulin powder for filling insulin inhalers.
- Manufactured the prototype of the world's smallest mass spectrometer for JPL
- Sole supplier to Pratt Whitney Rocketdyne for critical J2X Fuel and Oxidizer components for the new Manned Deep Space Exploration Program.

A-List Customers

Maroney satisfies the demanding requirements of the Best of the Best, including:

NASA Boeing Pfizer
Rocketdyne 3M Pharmaceutical Raytheon
Lockheed Martin Ultramet Nanoprecision
Medtronics



△ Maroney Company EDM Department

Maroney Today

Maroney has a substantial EDM Department

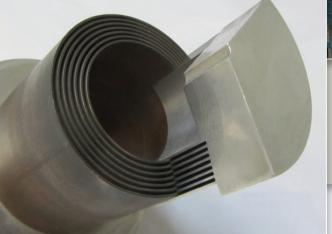
- 5 CNC Sinkers
- 6 Wire EDM's
- 2 High Speed Small Hole CNC EDM's

LEM Descent Engine Fuel Metering Parts

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L-R: John Cameron, Ed Valadez EDM Supervisor, Steve Reynolds Shop Foreman





Precision mating EDM'd parts



△ Micro EDM Dental Components

Maroney has been one of the pioneers in applying Turn & Burn techniques (See the Bud Guitrau's Turn & Burn article in this issue). Two of their wire EDM's are equipped with this capability.

Maroney is particularly proud of its outstanding precision CNC 4 & 5 Axis Milling, Jig Boring, turning, grinding and lapping capabilities, where working to millionths and low micro inch finishes is their forte.

Their well-equipped inspection department features two Brown and Sharpe CMM's and (would you believe) a Moore Measuring Machine.

Maroney, with its 17 employees, continues to specialize and excel at complex precision components that most other shops would not even attempt, including those made from difficult to machine materials such as molybdenum, tungsten, hiperco 50, rhenium, titanium, Inconel, and Hy-mu 80.

Current projects are an incredibly fragile rhenium thruster nozzles for the U.S. Missile Defense kinetic intercept program and Nasa's J2X Inconel Fuel and Oxidizer Ball Valves for the next Manned Deep Space exploration. They continue to thrive even though they have never employed a salesman.

EDM Today salutes John Maroney, John Cameron, and their team of highly skilled professionals for persevering with Big John's deep rooted philosophy of perfection.

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