DELORA - STELLITE MARCH-APRIL 1977

physically lean over his shoulder, he agreed to one trial before he was scheduled to perform the planned operation. With the Belleville surgeons assisting, he operated on Mrs. George Carver the day before. The students had placed two cameras in the operating room; one, high above, gave a full overview of the entire area, the other was focussed on the incision.

That first operation was designed to be instructional for the Belleville staff. It was an eye-opener for the Communication Arts students. It went smoothly and effectively; above all, the untried video crew consisting of Roy Leigh, Robert Stuart and Geoffrey Calvert were professional and proved their own ability in their chosen vocation. It is said that an invitation they had to actually enter the operating theatre still leaves some doubt on who actually stayed the longer.

Then came the big day. In the corridor there was a suppressed air of intense excitement. But the video crew, in their gowns worked quickly and quietly. The adjacent room filled with medical authority watched the monitors attentively. Mr. Ring's voice came calmly and steadily as he worked swiftly. Perhaps the students did become too involved in the drama on the screen and permitted the sound of the instruments used in the operation to become too loud. But reports from this point in time that two medical witnesses reached for a gulp of water might be discounted as an embellishment to the students' later story. Actually, the technical surgical performance was brilliant. It was reported that Mr. Ring was able to set a precedent in time, from the first incision until the wound was closed, of twenty-eight minutes. The patient, Mrs. J. E. Embury, had received care that a king might envy.

After the operation was over, Mr. Ring told the College that, although he was still firmly adverse to live television being combined with surgery, Loyalist students could record him in the operating room whenever they wished to do so. Dr. Harold Williamson of Belleville who had kept a cautious eye on the intruders in his surgical corridors agreed that things had gone smoothly.

The video record that was made that day is still a teaching tool. Perhaps the day should also be marked as the time that, combined with other elements, the superfluous metal in the silver ore had been a factor in bringing together unlikely groups to assist others with formerly almost insoluble medical needs. It would not, as we shall see, be the last time.

DELORO SMELTER

Returning to the early smelter in Deloro, the better the refining methods become, the faster the stock of cobalt accumulated. The laboratory tested it in varying mixtures of other metals. Also, down in the United States, an inventor was interested in similar alloys. Elwood Haynes was trying combinations of the cobalt element with other metals. We know that he visited the O'Brien laboratories at this time and saw the hard alloy composed of cobalt, molybdenum and chrome that the miner had christened Stellite. Some say the name came from O'Brien's daughter Stella, others that it shone star-like when it was polished, the records are not clear. There are exhibits of **Haynes Stellite** preserved at the museum that commemorates Haynes as the inventor of one of the world's first automobiles. However it may be, stellite was a fact and was being made here in this district. The next question was, what use was it?

In the beginning, the laboratory was attempting to develop a new stainless steel. They looked for a combination of metallic elements that would resist rust, yet be hard enough to use in tools and utensils. The new alloy appeared to be not only tough and hard to polish, it stood up to eroding solutions when other metallic mixtures gave way under longer exposures. However, O'Brien was a miner and he knew that

Foundation had the background of the special metallurgical processes needed; the medical profession had the techniques for the use of the developed product. The engineers in Belleville, the scientists in Toronto and the surgeons of two continents worked smoothly as one team and the process was perfected. It was to become known as "porous coating".

This process is now a patent of Deloro Stellite of Belleville which holds the world rights in accordance with their development contract with the Ontario Government. It is not possible to estimate how many millions this one development out of the many that have come out of the plant in Eastern Belleville is worth.

It took nearly 40 years for the mineralogist to bring the production of cobalt from an impurity in silver to the status of a medical break through in England. It took just five more years for the surgical techniques to be brought back for demonstration in Belleville. Now, a short seven years later, the Belleville plant has come up with the ultimate refinement. Ultimate, that is, until human ingenuity can refine the refinements over again.

A TEAM EFFORT

A success story of this sort should include the names of some of those who made it possible, who are members of the Belleville community. First of all, naturally, there is Len Shacklock, General Manager, who co-ordinates the entire plant's administration for Canadian Oxygen Limited of which Deloro Stellite is a division. Then there is Dave Karsikas, the Manager of Medical Products, the vital liaison with the ongoing national development of appropriate processes, Dave Adamson, the Superintendent of Medical Products, who translates processes to production, and Bob Wombwell who, as Quality Control Manager, has the greatest final responsibility of all in supervising metallurgical development and ensuring rigid quality control, not only for the medical products but also for the many other products that require fine and exact tolerances.

This is a team well qualified to work with the other Canadian teams that we have described who have made this medical opportunity possible for so many thousands of people.

One final story. The day after the student team had successfully made its first major video tape of the operation by Mr. Ring, the president of Loyalist College, passing the cafeteria at noon, heard an unusual broadcast over the video communications system that had been installed for the use of the student council.

Stepping inside, he found an exact and dramatic replay of the operation with full sound for the "benefit" of the students at lunch. Questioned, the video operator explained: "Sir, we just wanted to see if **they** could take it too!"

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