

### Forensic petrology applied to the Titanic headstones

All but one of the 150 victims of the Titanic disaster buried in Halifax, Nova Scotia, have petrologically identical gabbro (“black granite”) headstones. After being in place for nearly a century, one headstone had become damaged, so the City of Halifax sought to replace it; however, there was no historical or archival record of where these headstones had come from, and thus the solution as to their place of origin had to be determined scientifically. Just as DNA is unique to each living thing, so every rock also has a unique set of characteristics (age, minerals, texture, and chemical composition) that sets it apart from every other rock. Ideally, the headstones should match only the quarry where they were extracted. But there are tens of thousands of quarries in the world, so which was the right one? This presentation describes how, using the best sleuthing techniques of Sherlock Holmes and CSI combined with multivariate statistics, we located the source quarry in southwestern New Brunswick.



Titanic headstones in Fairview Lawn Cemetery, Halifax, NS



Defunct Charles Hanson source quarry in Bocabec, NB