

**The Xavier Pye-Hurd Case**  
**Analytical Results From Crime Lab and Autopsy**  
**Dated July 18, 2006**

**Analytical Results From Crime Lab and Autopsy**

*Analysis of Evidence Collected From Eberth's Van*

The greyish-white grains of rock dust sampled from the back of the suspect's vehicle were mounted in Canada Balsam resin and polished to 0.03 mm for petrographic examination in thin section. The larger grains were noted to exhibit well-defined rhombohedral cleavage. As a test for carbonate, Alizarin Red-S was applied to the thin section. The grains showed no staining by Alizarin Red-S. Intermixed with these grains were found a few particles of a distinctly different mineral, lacking cleavage and possessing a blue colour; owing to their small size, these grains apparently escaped notice when the dust was sampled. When reacted with acid, the mineral with cleavage showed slight effervescence but did not completely dissolve. The blue mineral was noted to dissolve, leaving behind a gel-like residue of silica. The same tests on the mineral grains collected from the floor of the van immediately under the brake pedal produced identical results, indicating the presence of minerals of the same composition as those found in the back of the van.

*Analytical Results for Materials Collected From Eberth's Backyard Shed*

Samples of the rock dust collected from the floor of Mr. Eberth's backyard shed were washed with hydrogen peroxide to remove residues of dried blood. Examination of the dust grains indicated its derivation from a single mineral characterized by a striking blue-colour and lack of cleavage. The larger, sand-sized grains of rock collected from the dust collection pan of the rock indicated a mineral composition identical to the rock dust collected from the shed floor.

*Analytical Results for Materials Collected From Victim's Vehicle*

Due to its highly incoherent nature, the grey-coloured clayey material collected under the brake pedal in the victim's car could not be prepared for petrographic study. However, x-ray diffraction analysis indicated its mineral composition to be almost entirely illite. Using the same method, it was determined that the fossil shell fragment found imbedded in the clay are composed mainly of calcite with minor amounts of pyrite, the latter presumably a replacing the former in places. The shell fragments appear have been derived from the species *Mucrospirifer arkonensis*. As indicated in Bulletin 3, small pieces of black shale were also imbedded in the grey clay. Laboratory technicians reported that, when freshly broken, the black shale released an odour similar to that of motor oil. Although most of the shale pieces proved too small to allow the identification of fossil remains, a few of the larger ones were noted to bear partial impressions of two species of trilobites: 1) *Pseudogygites latimarginatus* and 2) *Triarthrus eatoni*.

## *Autopsy Report on the Body of Mr. Pye-Hurd and Additional Comments on Associated Evidence*

An autopsy on the body of Mr. Pye-Hurd revealed a few details that may prove significant to this case. According to an official report provided by the coroner, two sets of injuries are likely to have been inflicted on Mr. Pye Hurd. Bone in the upper left cheek and nose was noted to exhibit severe fragmentation and premolars in both the upper and lower teeth of the right side of the face had clearly been loosened. It appears that these injuries resulted from a single blow. A hairline fracture was also noted on the left ulna. Most obvious, however, was the deep laceration noted in the external jugular vein of the victim. The greyish-white and blue-coloured mineral grains recovered from the victim were analysed by X-ray fluorescence. Processing of the results indicated that the greyish-white mineral contains magnesium, calcium, oxygen and carbon. The blue mineral was determined to contain sodium, aluminum, silicon, oxygen and chlorine. The chemical composition of the blue mineral found on the exterior of the tarpaulin (apparently adhering to the plastic surface by a coating of dried blood around the grains) was determined to be identical to that of the blue mineral grains found on the corpse.

### **Mr. Eberth's Account of His Whereabouts from June 30 to July 16, 2006**

When questioned, Mr. Eberth claimed that he had no knowledge of the murder of Mr. Pye-Hurd and reminded police that he was trying to “stay on the straight and narrow and trying to make an honest living.” Asked about the dust found in the front and back of his van, Mr. Eberth claimed that it was from a load of drywall that he was carrying to his mother in law’s house for some renovation work she asked him to do on Canada Day weekend. He added that she lived in Quadeville and that he and Ms. DeWitt had decided to stay for an extra day so that he could collect more of the rough stone he was cutting in his shed to sell to some lapidarists at the Gemboree. He told police that he got all of his rough stone from the Beryl Pit near there. When asked about the brown car that had been parked in his driveway, Mr. Eberth stated that it was Ms. DeWitt’s mother’s car that he had borrowed to do some errands the week after Canada Day weekend. He added that it came in handy that week for dumping “a critter I shot in the shed,” and that Ms. DeWitt’s mother wasn’t impressed when he brought the car back “stinking like roadkill.” Finally, when asked about the phone call Mr. Pye-Hurd had made to Ms. DeWitt prior to Canada Day, Mr. Eberth stated that Mr. Pye-Hurd had been “whining incessantly that Ditzi never phoned him.” He stated further that “Ditzi was just playing with his mind a bit” and he admitted she could be “really cruel sometimes.” He also admitted that he himself “got a bit freaked out by how mean she could be to her ex.” Police then asked Mr. Eberth to call on Ms. DeWitt for further comment. He told the officers that Ms. DeWitt had “just taken off” that day and that he had no clue of her whereabouts.

### **Final Comments on Investigation**

This completes the description of all the available evidence for the case. We request that you, as a member of the forensic team consider the information that has been provided to you and to advise us of any insight you may be able to contribute to resolving the many questions raised in this case. You will soon be provided with explicit guidelines for writing your report.

Ivana Ree Tih,  
Unit Chief  
CSI, London, Ontario Investigation Team,  
London, Ontario, Canada