

**Crystal Data:** Monoclinic. *Point Group:* 2, *m*, or 2/*m*. Material dug from polished surfaces tends to be somewhat fibrous by elongation || [010], resulting from the two perfect cleavages.

**Physical Properties:** *Cleavage:* Perfect on {100} and {001}. *Hardness* = n.d. *VHN* = 179  
D(meas.) = n.d. D(calc.) = 5.83

**Optical Properties:** Opaque. *Color:* Lead-gray. *Streak:* Black. *Luster:* Metallic.  
*Pleochroism:* Fairly strong, from white to gray. *Anisotropism:* Strong.

R<sub>1</sub>–R<sub>2</sub>: (470) 42.6–38.6, (546) 43.8–36.9, (589) 42.7–36.2, (650) 40.9–35.5

**Cell Data:** *Space Group:* C2, *Cm*, or C2/*m* (pseudocell). *a* = 42.6 *b* = 8.04 *c* = 32.3  
*β* = 102°5(45)' *Z* = 2

**X-ray Powder Pattern:** Madoc, Canada.

3.45 (100), 4.17 (80), 2.92 (80), 2.010 (70), 3.40 (60), 2.836 (50), 3.97 (30)

<b>Chemistry:</b>	(1)	(2)	(3)
Pb	48.5	44.95	47.09
Cu		1.35	
Sb	29.5	31.35	32.70
As	1.5	1.75	
S	21.25	20.85	20.21
Total	100.75	100.25	100.00

(1) Madoc, Canada; by electron microprobe, average of two analyses; corresponds to Pb<sub>21.55</sub>(Sb<sub>22.30</sub>As<sub>1.84</sub>)<sub>Σ=24.14</sub>S<sub>61.00</sub>. (2) Do.; by electron microprobe, average of two analyses; corresponds to Pb<sub>20.35</sub>Cu<sub>1.99</sub>(Sb<sub>24.16</sub>As<sub>2.19</sub>)<sub>Σ=26.35</sub>S<sub>61.00</sub>. (3) Pb<sub>22</sub>Sb<sub>26</sub>S<sub>61</sub>.

**Occurrence:** Of hydrothermal origin, in marbles.

**Association:** Veenite, boulangerite.

**Distribution:** From Madoc, Ontario, Canada [TL].

**Name:** For Professor Louis Alphonse Auguste de Launay (1860–1938), French student of mineral deposits, National School of Mines, Paris, France.

**Type Material:** Canadian Geological Survey, Ottawa, 12176; Canadian Museum of Nature, Ottawa, Canada.

**References:** (1) Jambor, J.L. (1967) New lead sulfantimonides from Madoc, Ontario. Part 2 – mineral descriptions. *Can. Mineral.*, 9, 191–194. (2) (1968) *Amer. Mineral.*, 53, 1423 (abs. ref. 1). (3) Jambor, J.L., J.H.G. Lafamme, and D.A. Walker (1982) A re-examination of the Madoc sulfosalts. *Mineral. Record*, 13, 93–100, esp. 95.