Delindeite $(Na,K)_3(Ba,Ca)_4(Ti,Fe,Al)_6Si_8O_{26}(OH)_{14}$

Crystal Data: Monoclinic. *Point Group:* $2/m$. As lath-shaped crystals or flakes, forming compact spherulitic aggregates, to 1 mm. *Twinning:* Submicroscopic on {100}, common.

Physical Properties: *Cleavage:* {001}, good. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = n.d. D(meas.) = 3.3(1) D(calc.) = 3.70(1)

Optical Properties: Translucent. *Color:* Pale pinkish gray. *Luster:* Resinous, pearly. *Optical Class:* Biaxial (+). $\alpha = 1.790(5)$ $\beta = 1.825(5)$ $\gamma = [1.982]$ 2V(meas.) = Moderate. 2V(calc.) = 54°

Cell Data: *Space Group:* $C2/m$ or subgroup. $a = 21.617(13)$ $b = 6.816(5)$ $c = 5.383(3)$ $\beta = 94.03(5)°$ Z = 1

X-ray Powder Pattern: Diamond Jo quarry, Arkansas, USA.
10.80 (100), 2.888 (31), 3.083 (28), 3.54 (24), 2.806 (20), 2.262 (18), 2.753 (16)

Chemistry:

	(1)
SiO_2	27.10
TiO_2	23.02
Al_2O_3	1.10
Fe_2O_3	2.54
MgO	0.00
CaO	0.61
BaO	33.05
Na_2O	3.79
K_2O	1.47
H_2O	[7.32]
Total	[100.00]

(1) Diamond Jo quarry, Arkansas, USA; by electron microprobe, total Fe as Fe_2O_3, H_2O by difference; corresponds to $(Na_{2.16}K_{0.55})_{\Sigma=2.71}(Ba_{3.80}Ca_{0.19})_{\Sigma=3.99}(Ti_{5.08}Fe_{0.56}Al_{0.34})_{\Sigma=5.98}(Si_{7.96}Al_{0.04})_{\Sigma=8.00}[O_{32.83}(H_2O)_{7.17}]_{\Sigma=40.00}$.

Occurrence: In vugs and miarolitic cavities, as a weathering product of titaniferous nepheline syenite.

Association: Pectolite, barite, labuntsovite, lourenswalsite, pyroxene, titanite, sphalerite, potassic feldspar.

Distribution: Found in the Diamond Jo quarry, Magnet Cove, Hot Spring Co., Arkansas, USA.

Name: In honor of amateur mineralogist Henry deLinde of Mabelvale, Arkansas, USA, owner of the Diamond Jo quarry.

Type Material: n.d.

References: (1) Appleman, D.E., H.T. Evans, Jr., G.L. Nord, E.J. Dwornik, and C. Milton (1987) Delindeite and lourenswalsite, two new titanosilicates from the Magnet Cove region, Arkansas. Mineral. Mag., 51, 417–425. (2) (1988) Amer. Mineral., 73, 1493–1494 (abs. ref. 1).