

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$ . As stubby prismatic to platy crystals, commonly wedge-shaped, may have jagged terminations; in aggregates, to 10 cm.

**Physical Properties:** *Cleavage:* Perfect on {001}. Hardness = 6-7 D(meas.) = 2.70-2.78 D(calc.) = 2.779

**Optical Properties:** Transparent. *Color:* Colorless to tan or yellowish pink. *Luster:* Vitreous. *Optical Class:* Biaxial (-).  $\alpha = 1.554-1.558$   $\beta = 1.565$   $\gamma = 1.572-1.573$   $2V(\text{meas.}) = 74^\circ-81^\circ$

**Cell Data:** *Space Group:*  $C\bar{1}$ .  $a = 7.8388(9)$   $b = 12.3730(10)$   $c = 6.8082(7)$   $\alpha = 93.324(8)^\circ$   $\beta = 116.381(9)^\circ$   $\gamma = 92.014(8)^\circ$   $Z = 4$

**X-ray Powder Pattern:** Duchesne Co., Utah, USA.

3.037 (100), 3.561 (90), 3.076 (90), 3.225 (85), 3.876 (65), 2.841 (55), 6.076 (50)

Chemistry:	(1)	(2)	(3)		(1)	(2)	(3)
SiO <sub>2</sub>	73.13	68.63	73.26	BaO	0.09		
TiO <sub>2</sub>	0.03			Na <sub>2</sub> O	12.15	10.11	12.59
B <sub>2</sub> O <sub>3</sub>	14.27	16.80	14.15	K <sub>2</sub> O	0.03		
Al <sub>2</sub> O <sub>3</sub>	0.15	0.90		F		0.09	
Fe <sub>2</sub> O <sub>3</sub>	0.08			H <sub>2</sub> O	0.08	0.98	
MgO	0.09	2.20		<u>P<sub>2</sub>O<sub>5</sub></u>		<u>0.08</u>	
CaO		0.70		Total	100.10	100.49	100.00

(1) Duchesne Co., Utah, USA. (2) Dara-i-Pioz massif, Tajikistan. (3) NaBSi<sub>3</sub>O<sub>8</sub>.

**Mineral Group:** Feldspar group.

**Occurrence:** As authigenic crystals along bedding laminations, in brown dolomitic rock and black oil shale from well cuttings (Duchesne Co., Utah, USA); in highly evolved pegmatite in an alkalic massif (Dara-i-Pioz massif, Tajikistan).

**Association:** Eitelite, shortite, nahcolite, searlesite, leucosphenite, aegirine, analcime, magnesio-riebeckite (Duchesne Co., Utah, USA); leucosphenite, eudialyte, stillwellite, pyrochlore, microcline, aegirine, polyolithionite, albite, quartz (Dara-i-Pioz massif, Tajikistan).

**Distribution:** Near the Joseph Smith #1 well, near Duchesne, Duchesne Co., Utah; and at Wind Mountain, Otero Co., New Mexico, USA. In the Dara-i-Pioz massif, Alai Range, Tien Shan, Tajikistan. From the Lovozero massif, Kola Peninsula, Russia.

**Name:** Honors Frank S. *Reed* (1894-?) and John L. *Mergner* (1894-?), petrographic technicians with the U.S. Geological Survey.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 106865.

**References:** (1) Milton, C., E.C.T. Chao, J.M. Axelrod, and F.S. Grimaldi (1960) Reedmergnerite, NaBSi<sub>3</sub>O<sub>8</sub>, the boron analog of albite, from the Green River Formation, Utah. *Amer. Mineral.*, 45, 188-199. (2) Dusmatov, V.D., N.A. Popova, and L.K. Kabanova (1967) First find of reedmergnerite in the USSR. *Dokl. Acad. Nauk Tadzh. SSR*, 10, 51-53 (in Russian). (3) (1968) *Chem. Abs.*, 71149 (abs. ref. 2). (4) Fleet, M.E. (1992) Tetrahedral-site occupancies in reedmergnerite and synthetic boron albite (NaBSi<sub>3</sub>O<sub>8</sub>). *Amer. Mineral.*, 77, 76-84. (5) Grew, E.S., M.G. Yates, D.I. Belakovskiy [Belakovskii], R.C. Rouse, S.-C. Su, and N. Marquez (1994) Hyalotekite from reedmergnerite-bearing peralkaline pegmatite, Dara-i-Pioz, Tajikistan, and from Mn skarn, Långban, Sweden: a new look at an old mineral. *Mineral. Mag.*, 58, 285-297. (6) Wunder, B., J. Stefanski, R. Wirth, and M. Gottschalk (2013) Al-B substitution in the system albite (NaAlSi<sub>3</sub>O<sub>8</sub>) - reedmergnerite (NaBSi<sub>3</sub>O<sub>8</sub>). *Eur. J. Mineral.*, 25, 499-508.