Crystal Data: Monoclinic. *Point Group*: 2/*m*. As striated tablets, to 0.11 mm, commonly in parallel intergrowths. Tablets probably flattened on {100} and striated || to [010] and [001].

Physical Properties: *Cleavage*: Excellent on {100}; good on {010} and {001}, probable. *Tenacity*: Very brittle. *Fracture*: Irregular, curved. Hardness = 2.5 D(meas.) = 2.91(2) D(calc.) = 2.905 Moderate bluish white fluorescence (405 nm laser). Dissolves immediately with effervescence in dilute HCl.

Optical Properties: Transparent. *Color*: Pale green-yellow. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Biaxial (-). $\alpha = 1.550(2)$ $\beta = 1.556(2)$ $\gamma = 1.558(2)$ 2V(meas.) = 60(2)° 2V(calc.) = 59.8° *Dispersion*: Strong, r > v. *Orientation*: Y = b. Non-pleochroic.

Cell Data: Space Group: $P2_1/n$. a = 17.9507(7) b = 18.1030(8) c = 18.3688(13) $\beta = 108.029(8)^{\circ}$ Z = 16

X-Ray Diffraction Pattern: Markey mine, Red Canyon, San Juan Co., Utah, USA. 8.54 (100), 4.371 (97), 6.31 (91), 5.52 (46), 5.66 (45), 4.759 (45), 3.544 (41)

Chemistry:		(1)	(2)
	Na ₂ O	1.05	
	CaO	17.06	18.08
	SrO	0.46	
	UO_3	47.44	46.11
	CO_2	[21.90]	21.29
	<u>H2</u> O	[15.05]	14.52
	Total	102.96	100.00

(1) Markey mine, Red Canyon, White Canyon District, San Juan Co., Utah, USA; average electron microprobe analysis supplemented by Raman spectroscopy, H_2O and CO_2 from structure; corresponds to $(Ca_{1.83}Na_{0.20}Sr_{0.03})_{\Sigma=2.05}(UO_2)(CO_3)_3 \cdot 5H_2O$ (+0.07 H). (2) $Ca_2(UO_2)(CO_3)_3 \cdot 5H_2O$.

Occurrence: As efflorescent crusts on the surfaces of mine walls. A secondary phase on gypsumcoated asphaltum, deposited as replacements of wood and other organic material in channels incised into reddish brown siltstones in a roll-front U deposit,

Association: Andersonite, calcite, gypsum, natromarkeyite.

Distribution: From the Markey mine, Red Canyon, White Canyon District, San Juan Co., Utah, USA.

Name: From the Greek $\pi\alpha\rho\alpha$ for 'near' and the mineral *markeyite* to which it is similar.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (67487 and 67488).

References: (1) Kampf, A.R., T.A. Olds, J. Plášil, P.C. Burns, R. Škoda, and J. Marty (2022) Paramarkeyite, a new calcium-uranyl-carbonate mineral from the Markey mine, San Juan County, Utah, USA. Mineral. Mag., 86(1), 27-36.