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A New Occurrence of Rhodonite Associated with Nephrite Jade in Washington State, USA

Gem- and ornamental-quality massive rhodonite (MnSiO_3) is commonly found in close association with nephrite jade, as seen at various localities such as north-western Canada (Simandl *et al.* 1999), Washington State (Ream 2022) and Italy (Diella *et al.* 2014). Recently, a new occurrence of rhodonite was discovered at Jade Leader Corp.’s DJ project in Washington (see the article on this nephrite deposit on pp. 494–511 of this issue).

This rhodonite occurrence was first recognised in the field by the author in 2017, leading to initial efforts at cutting and shaping the material to assess its workability and general attractiveness, and this yielded encouraging results. Further exploration in 2018 and 2019 defined two distinct but poorly exposed *in situ* occurrences of

rhodonite, with surface expressions measuring about 4.1×6.2 m and 2.2×5.3 m (e.g. Figure 5). These are located about 110 m apart and are hosted in a regional-scale serpentinite unit. Due to weathering and forested areas between these two surface showings, the level of continuity between them cannot be ascertained without further exploration work such as trenching.

In excess of 2,500 kg of rhodonite material has been extracted so far, for rough inventory as well as for cutting cabochons, beads and spheres (e.g. Figures 6 and 7). The extracted material consists of blocks of massive rhodonite ranging from 1–2 kg to more than 150 kg. In addition, a boulder with an estimated weight of 4,500 kg has been recovered, and is being assessed for use in a large sculptural work (Figure 8).



Figure 5: The surface expression of one of the two rhodonite outcrops found to date at the DJ project in Washington (shown here with the author) exhibits a typical black appearance due to staining by manganese oxide. Photo by J.-P. Jutras.



Figure 6: These rhodonite samples consist of a partially polished block (2.5 kg) with various cabochons and beads cut from the material. The round beads are 7.5–10.5 mm in diameter and the barrel-shaped beads are 13.5×12.5 mm. Photo by J.-P. Jutras.



Figure 7: This image provides a more detailed view of the cut-and-polished rhodonite (shown here resting on glass), consisting of a 2.3 × 1.8 cm cabochon and a 6.0 × 2.5 cm polished slab. Photo by J.-P. Jutras.

Several polished samples were examined for this report. The material consists of medium-grained polymineralic aggregates that are dominantly pink to reddish pink (rhodonite) with some white-to-grey areas (calcite and quartz) and attractive black patterning (manganese oxides). No RI reading could be obtained with a refractometer (probably due to the mixture of minerals present), and the hydrostatic SG value obtained from four samples ranged from 3.02 to 4.01 (average 3.43), reflecting the varying amounts of accessory minerals. The material is inert to long- and short-wave UV radiation, and the Mohs hardness was determined to be 5½–6½. These properties are consistent with those of massive rhodonite (e.g. O'Donoghue 2006).

Further development of the deposit will take place according to market demand.

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Figure 8: This large block was sliced from a rhodonite-bearing boulder weighing about 4,500 kg that was recovered at the DJ project. The material's carving potential is being evaluated for a life-size meditating female figure by international award-winning stone and jade sculptor Georg Schmerholz. Photo by J.-P. Jutras.

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A Chinese Seal Stone Consisting of Yellow Talc

Recently, a large yellow Chinese seal stone (Figure 9) was submitted to author TTS for testing among other yellow samples. This particular one weighed 1,592.5 g and measured 123.69 × 71.70 × 71.30 mm. It was soft

and had a waxy appearance and soapy feel, resembling what is known as *Tianhuang stone* in China (i.e. the kaolinite-group minerals dickite and/or nacrite; cf. Tay *et al.* 2017). It yielded a spot RI reading around 1.55,