

## NEVADA OBSIDIAN SOURCES

### CROW SPRING

**ALTERNATE NAMES:** Crow Springs.

**LOCATION - COUNTY:** Nye.

**SOURCE DESCRIPTION:** The Crow Spring obsidian source lies in the Monte Cristo Range, just west of Big Smoky Valley in northern Esmeralda County, Nevada, approximately 60 km northwest of NTTR (Nevada Test and Training Range). Stewart et al. (1994:4) report a date of 7.2 Ma on obsidian from a perlitic vitrophyre that is locally present along the margins of rhyolite flow domes (Tr) forming a north-northeast trending belt on the east side of the Monte Cristo Range. Near Crow Spring, obsidian nodules make up anywhere from 5 to 75 percent of a perlite zone found between the Tertiary rhyolite flows and domes (Tr) and a welded ashflow (Taw) (Albers and Stewart 1972:63). The perlite was mined commercially between 1964 and 1965, and obsidian nodules recovered during mining operations were apparently stockpiled for eventual use in producing terrazzo tile. Although toolstone-quality obsidian is found in several places in the Monte Cristo Range (Macdonald et al. 1992:172; Moore 2009:53; Silberman et al. 1975:14, 18; Stewart et al. 1994:7; Thomas 1983:395–396), some of this material was likely exposed during modern quarrying operations. Thus, it is difficult to estimate the geographic extent and amount of obsidian available for exploitation during prehistoric times.

Trace element concentrations and Fe/Mn ratios determined for three specimens collected in the vicinity of Crow Spring during the Monitor Valley Project first were used to establish geologic source standards for the Crow Spring geochemical type (Hughes 1983:403, Table 77; Sappington 1981; Thomas 1983). Thomas (1983:395–396) reports obsidian at Crow Spring occurs as fist-sized nodules embedded in a matrix of perlite, and that nodules eroded from the perlite are scattered over several acres. Because the area had been seriously disturbed by extensive mining operations, little evidence of aboriginal procurement activities was noted. Two of the 54 obsidian artifacts from Gatecliff Shelter subjected to XRF analysis during the Monitor Valley Project were attributed to the Crow Spring source (Hughes 1983:406).

During the 2004 field season, nodules were collected from a cut wall at a perlite quarry about 2.5 km southwest of Crow Spring. Obsidian at this locality (DW-04-MCR-1) occurs in a zone of crumbly perlite in a welded ash-flow tuff at the base of the Tertiary volcanic section. Here, nodules ranging in size from one to nearly 8 cm in diameter carpet the ground. No evidence of prehistoric exploitation of obsidian was noted at this extensively disturbed locality, and it could not be determined if obsidian was exposed here and thus available to prehistoric peoples before modern quarrying activities. Although recovered from a different locality in the Monte Cristo Range than the obsidian nodules that Hughes (1983) analyzed during the Monitor Valley Project, the 10 specimens from locality DW-04-MCR-1 have the trace element profile of the Crow Spring geochemical type (see Appendix A, Table A-1, Specimen Nos. 426–435).

*Slightly modified from Johnson and Wagner (2005:35-36).*

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