

Custer County Historical Society Monthly Program

Lois Wells – Program Director

Rachel Nepper -- Recorder

“A Historic Look: The Carving of Mt. Rushmore to the Challenge of Preservation”

Mr. Blaine Kortemeyer – March 7, 2015

Following the refreshment period, Lois introduced Blaine Kortemeyer, Assistant Chief of Interpretation at Mt. Rushmore. Mr. Kortemeyer said that last year he had presented a program on how they accessed the monument. Today he wanted to explain how they preserve the sculpture with the latest technology. Gutzon Borglum at first had to find the location for the carving – the right rock – a foundational rock. Doan Robinson had first wanted to carve western heroes in the Needles which were not rocks for carving. Borglum found Harney Peak granite which was a fine granite and a location that would hold broad features facing east. He then had to decide where the faces would go. There were only to be three but he added Roosevelt later. He had to remake the scale model each time problems developed with the rock. Besides the Presidents, he wanted an entablisher shaped like the Louisiana Purchase which President Coolidge was to write for 10 dates, 1776 being the first. Mr. Kortemeyer showed the sculpture and the cracks and the reason for the moving of Jefferson to Washington’s left instead of right. There was only one patch done on the monument and that was on Jefferson’s lip with a piece of quartz. For crack patching they used to use white lead and linseed oil. The mountain continues to move – expanding and contracting each year so today they use foam core rods for crack resealing with silicon-based caulk. They do not patch all cracks – they do not want to keep all the water inside the sculpture so some cracks are left open. Today photogrammetry is used in 3-D mapping of the sculpture. 144 inconsistencies were found in the granite. Of the 22 rock blocks areas, four are being watched. The monitoring used to be very labor intensive but now fiber optics makes it easier. Mr. Kortemeyer explained power washing to get lichen off the monument. He then explained about laser scanning and how Mt. Rushmore is one of the World Heritage Sights that has been digitally preserved. He showed the audience a virtual tour of Mt. Rushmore including the Hall of Records. He gave out the website of the organization that has

recorded all these sites. (CyArk.org founded by Ben Kacyra) The audience appreciated such informative details to our National Memorial.