

The Making of Roaming Stone



In ancient Mesopotamia, stamps carved into rounded stones called cylinder seals were rolled onto clay documents to create planar impressions of their contents. The seals were used by citizens as a means of authenticating identity in correspondence, much like signatures or fingerprints.

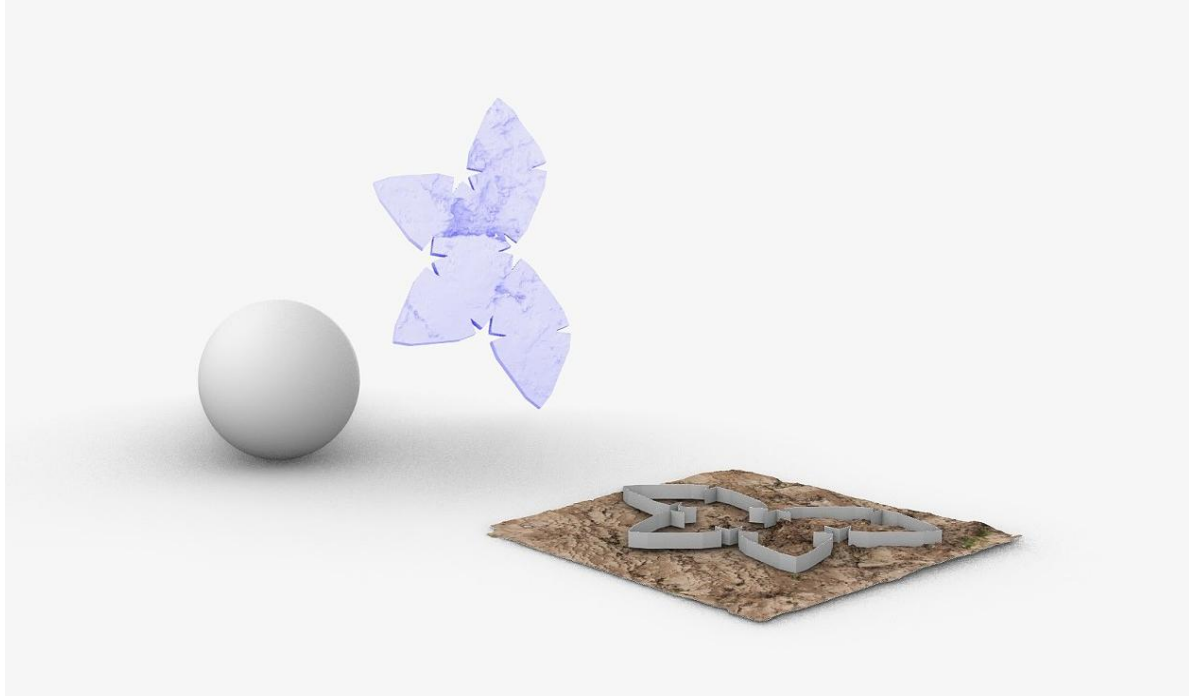




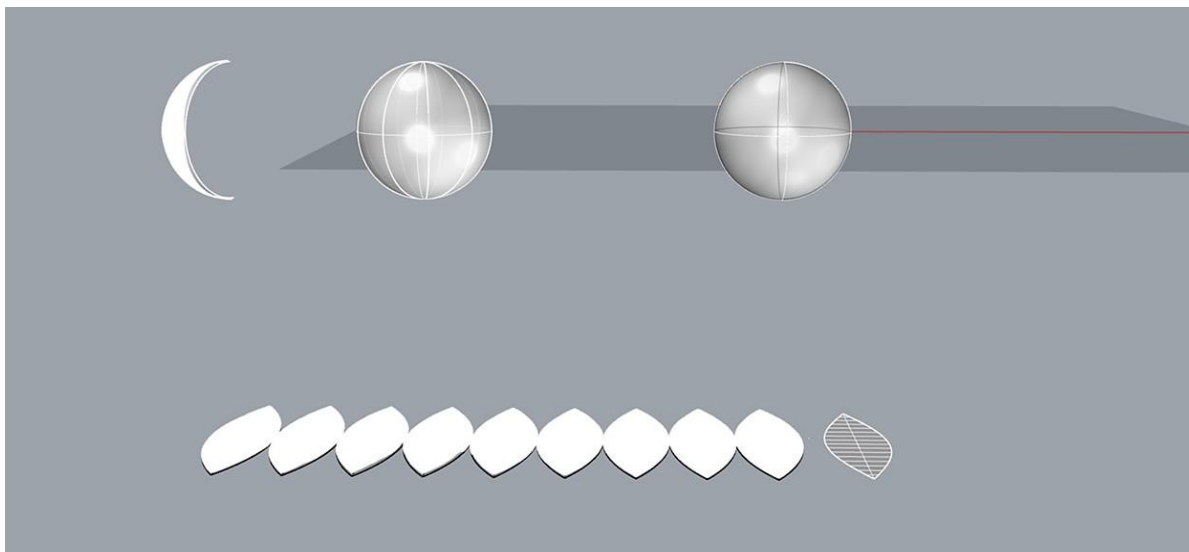
Roaming Stone is a seven-foot concrete sphere that bears the signature of the prairie's most skilled caretakers, the American bison. Through a process of casting the ground at Belwin, applying the impressions to the surface of a spherical core then translating the object into concrete, a five-ton document of the land has been constructed. It's a spherical seal, a fingerprint, a memory of the prairie in the late spring of 2022. If the massive stone were to roll the inscription of the land that it holds would be reiterated as sound is reiterated by turning a record.



The tracks that protrude from the stone's surface bring to mind all the ways the bison maintain the health of the prairie ecosystem through their erratic roaming, their grazing and wallowing. Wrapping the impression of the land around a sphere, a form that rolls freely in any direction, reflects how the bison pick up and deposit microbes and seeds as they roam.



In the first stage of the process impressions of the ground were taken where bison had recently walked and wallowed. A steel mold was made in the shape of a "gore"—a cartographic term that refers to a segment of globe defined by two lines of longitude—in this case one ninth of the surface of a seven-foot sphere (as pictured below). The steel form was hammered into the ground and filled with a two-part flexible polyurethane foam. That process was repeated nine times to make the nine sections of the sphere's surface.









The foam gores were then sealed with lacquer and glued to the surface of a large inflatable sphere shelled in plaster and burlap.













Cracks and gaps were patched with plaster and dirt from the prairie to prepare the model for mold-making. The model was positioned upside-down so that the bottom of the mold could be made first.





Playing cards were used to section off the "bottom" of the model (it's upside-down in the above picture), then ten layers of latex were applied to create the flexible inner skin of the mold. This inner skin captures all the surface detail and its flexibility allows it to be removed from deep crevices and undercuts in the model. After the latex had cured, a PVA release agent was applied to keep it from sticking to the rigid fiberglass outer mold.





Four layers of woven fiberglass and epoxy were applied to the partitioned-off "bottom" section to create the rigid mother-mold. The model was then inverted so that it was resting on the cured cap of fiberglass allowing the rest of the model and mold to be completed.



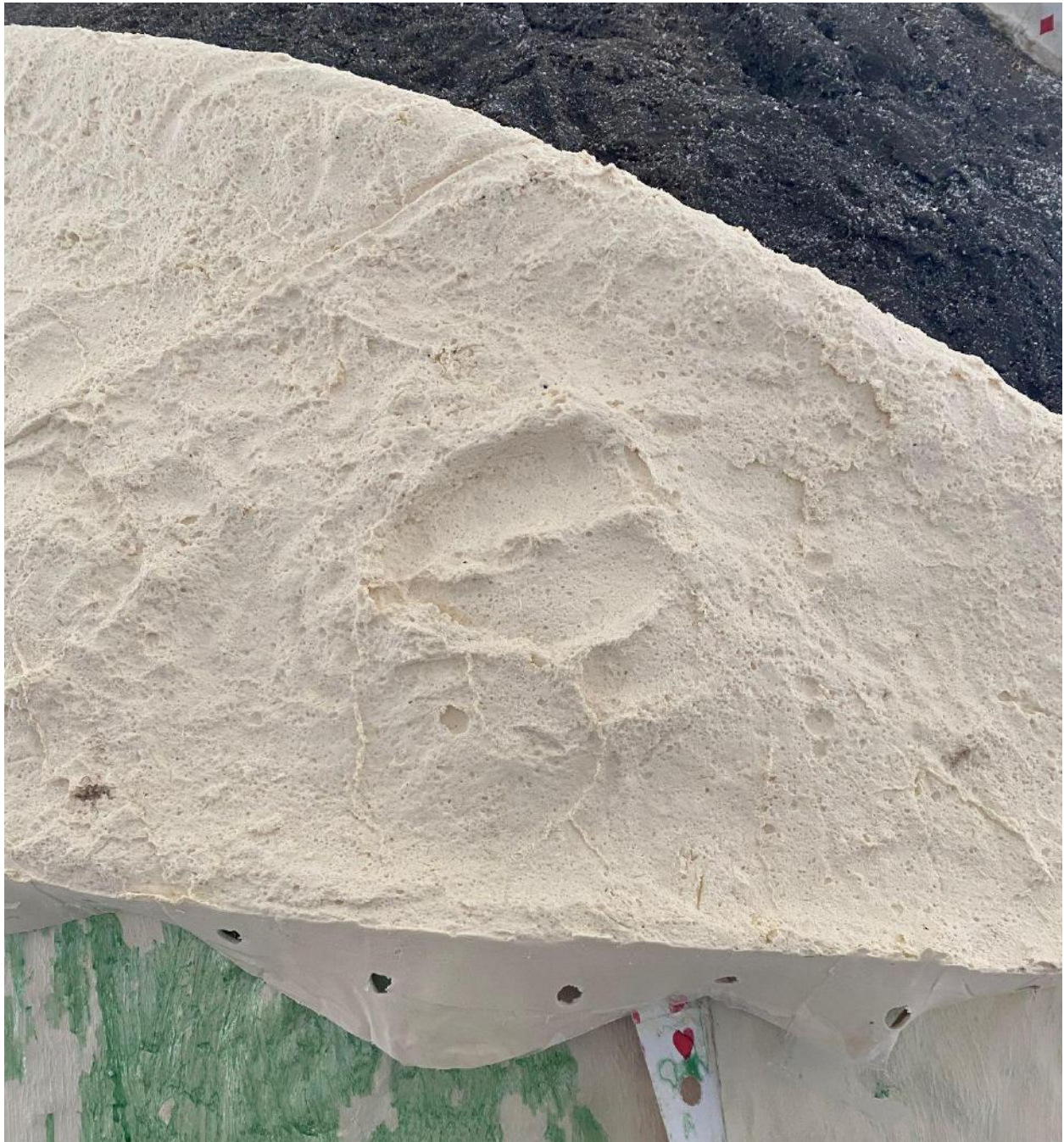








When the mold was finished, its 22 component parts were removed from the model and prepared to be transported to the prairie. During the construction of the mold an inner core for the final sculpture was made from a series of foam disks to reduce the amount of liquid concrete that the mold would have to contain during the pour. Without this inner core the sculpture would have weighed close to 30,000 pounds.









The foam core and the mold were then transported back to Belwin to be reconstructed on-site. The bottom of the mold was installed and leveled around a two inch pipe anchored in the ground. A concrete base was poured inside the mold to secure three 1-inch-thick threaded rods that run up through the foam to prevent it from floating during the pour. The rest of the mother-mold was then pieced together into three sections that correspond to the remaining large pieces of latex. A resist was applied to the interior of the latex and it was adhered to the fiberglass using contact cement to prevent it from sagging inside the mold. Those three sections were then constructed around the foam core leaving a five inch gap between the inside of the mold and the core to receive the 10,000 pounds of pigmented concrete. The 500 bolts that held it together were thoroughly tightened and nine pieces of angle iron were mounted to seams in the mold to stabilize it. The sky-blue pigmented concrete was poured through a ten-inch hole in the top of the mold, filling the gap around the core. Roaming Stone is positioned so that the pole of the sculpture where the gores come together is roughly aligned with the celestial north pole. The tilt of Roaming Stone approximates the tilt of the earth.

























