ABSTRACT
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CENTRAL UTAH RELOCATION CENTER (TOPAZ)
WAKASA MEMORIAL STONE ASSESSMENT REPORT

August 15, 2023

SUBJECT PROPERTY

Wakasa Memorial Stone
Current Location:
Topaz Museum
55 West Main Street
Delta,Utah
United States of America

3374 Homestead Rd. Park City, Utah 84098 Cell: 801-509-5099
johnlambert402@gmail.com

Brick Stone Terra-Cotta Mortar Adobe Stucco Concrete

REPORT PREPARED FOR:

Topaz Museum Board
55 West Main Street
Delta, Utah 84624

REPORT PREPARED BY:

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HISTORICAL BACKGROUND

The history of the subject stone is both important and intriguing. The events surrounding it have been well documented by others. The *National Parks Service January 2022 Central Utah Relocation Center (Topaz) National Historic Landmark Condition Assessment Report - Redacted April 2023* [1] and its associated footnotes, bibliography and appendix provides a comprehensive history. For an in depth history, I highly recommend reading this report.

For the purposes of this report, the most pertinent timeline dates and events are as follows:

June 1943 - The stone was used to construct a monument near where Mr. James Hatsuaki Wakasa was shot and killed on April 11, 1943. The stone is likely native to the area surrounding the Central Utah Relocation Center (commonly known as Topaz). Shortly after its construction, the stone monument was "...torn down and the rocks which were used in this construction have been completely removed from sight" [2]

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[1] See appendix A

[2] Letter from then Topaz Project Director Charles F. Ernst to WRA Director Meyer

Fall 2020 - Archeologists Jeffrey Burton and Mary Farrell located the subject stone (almost entirely underground) near where Mr. Wakasa is believed to have been shot and killed.

July 27, 2021 - To avert potential vandalism, the Topaz Museum Board unearthed the stone, loaded it onto a trailer, and transported it to an area behind (south of) the Topaz Museum at 55 West Main Street, Delta, Utah.

PROJECT OVERVIEW

The stone, commonly referred to as *Wakasa Memorial Stone* or *Wakasa Monument* (herein designated, "the stone"), now rests in what is intended to be a temporary location pending decisions respecting its future. Concern has arisen over the following:

A) The current condition / fitness of the stone and whether conservation or stabilization measures are prudent now or at such time as it may be moved.

B) The expected durability of the stone in its future location and setting.

SCOPE OF REPORT

Per the agreement with the Topaz Museum Board (herein designated, TMB), the scope of this report is to opine regarding:

A) "The current condition of the stone in terms of its cohesiveness and/or fragility."
B) "The feasibility of lifting, re-situating, moving and/or transporting the stone to another location."
C) "The potential durability of the stone in an exterior environment with natural climatic and other exposure conditions, or a protected interior environment."

This analytic report is based upon observations of the visible conditions of the stone and information provided to me before, during and after my on-site inspections. It does not claim to itemize all conditions and is intended only to provide the client with a general assessment of the conditions observed during the on-site inspections. Although I was careful to perform a proper and thorough inspection, I make no representation regarding the existence of latent or concealed defects. No warranty or guarantee is expressed or implied.

The observations were limited to visual examination. No destructive tests were performed to reveal unseen conditions. No laboratory or advanced non-destructive analysis was performed. This report is not intended to address all life / safety issues.

My opinions may change and this report may be amended as more information becomes available to me.

STONE ASSESSMENTS DATES

On the dates listed below, I spent considerable time carefully assessing the stone at its current location (the courtyard area directly behind (south of) the Topaz Museum building at 55 West Main Street, Delta, Utah).

- October 24, 2022
- November 1, 2022
- November 10, 2022

In addition to my assessments, to the best of my knowledge, the stone has also recently been assessed by three other professionals:

1) Dr. Eric H. Christiansen, Professor of Geology at Brigham Young University in Provo, Utah. Dr. Christiansen's report assesses the stone primarily from a geological and petrological perspective. His report is not dated, but it is thought to have been written after his September 2, 2022 site visit. [3]

2) Kimberleigh Collins-Peynaud, Objects Conservator in Sandy, Utah. Ms. Collins-Pernaud was onsite assessing the stone on June 23, 2022, and September 10, 2022. Her report is dated September 25, 2022. [4]

3) Rachel Adler, Architectural Conservator, Vanishing Treasures Program, National Parks Service, Regions 6, 7 and 8. Ms. Adler's assessment is summarized in the *National Parks Service Central Utah Relocation Center (Topaz) National Historic Landmark Condition Assessment Report, Section 4.1*, dated January 2022, Redacted April 2023. [5]

These assessments from two separate architectural conservators and a geologist provide important interdisciplinary perspectives and broader context.

EXISTING CONDITION

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[3] See appendix B

[4] See appendix C

[5] See appendix A

With few exceptions, the results of my assessment of the existing condition of the stone *very* closely align with Ms. Adler's *Section 4.1* in the *National Parks Service Central Utah Relocation Center (Topaz) National Historic Landmark Condition Assessment Report* of January 2022, Redacted April 2023 [6] and thus are not repeated here.

Because an understanding of the means, methods, and equipment used during the unearthing and relocation of the stone would provide valuable insight into its current condition, at my request, the TMB provided the video recordings taken from multiple perspectives during the unearthing of the stone from the Topaz site, its loading onto a trailer, and unloading at its existing site.

CHARACTERIZATION OF PREDOMINANT SURFACES AS THE STONE IS CURRENTLY SITUATED IN THE COURTYARD BEHIND THE TOPAZ MUSEUM IN DELTA, UTAH

My description begins with the south side as it is currently situated and moves counter-clockwise around the stone:

A) The **south side** is characterized by the presence of substantial cracks and natural fissures that intersect, forming approximately 90 degree angles in a cross shape (+). The stability and cohesiveness of these fissured areas is of concern. This surface faced predominantly skyward during its approximate 80 years at Topaz. A skyward orientation for this period likely facilitated the puddling of water from rain, stone, and ice in and around the cracks. Gravitational forces likely facilitated water infiltration into the fissures. Since water expands approximately 8-9% in volume when frozen, repeated freezing and thawing cycles would exert substantial expansive force in the fissures, which often results in a weakened and less cohesive stone. The extent of the distress from this process is undetermined.

[6] See appendix A

B) The **east side** is characterized as constituting the east "end" of the stone. There is a substantial horizontal crack across its entire end that extends from the + crack on the south side.

C) The **north side** is characterized by a continuation of the horizontal crack from the south and east sides. This crack is located near the upper level of the north elevation. It fades and terminates approximately half the distance across the north side of the stone. The lower half of the north side is covered with caliche (calcification), and the remaining top half is desert varnish.

D) The **west side** constitutes the west "end" of the stone. The defining feature on the west side is a large, awkward downward bend on the end of the stone. This unexpected dropped shape created difficulty dislodging the stone from the ground during unearthing. The downward pointing bend extends off the west end of the

pallet and below the top surface of the pallet, and is not currently supported except by a wood board the equipment operator placed at an angle under it—likely to keep the stone from rocking during loading, transporting and unloading.

E) The present **<u>skyward facing surface</u>** consists primarily of "desert varnish." Desert varnish is described by Dr. Eric H. Christiansen, Professor of Geology at Brigham Young University in Provo, Utah, as a dark iron-manganese deposit formed by the rock surfaces being exposed to the atmosphere in arid and semi-arid environments.[7] There is significant loss of surface material on this side. I "sounded" the skyward / desert varnish surface by lightly tapping it with the end of hand-held metal rods, listening to the resulting sounds. Areas sounding higher in pitch are typically cohesive, while areas sounding lower in pitch typically indicate hollowness or separation of layers. Based on the results of the sounding, large areas of the desert varnish surface appear to have developed hollowness, delamination, or other distress. This condition, typical of many skyward-facing stone surfaces, preceded the unearthing and relocation of the stone.

[7] See appendix B

F) The **underside** is not readily visible at this time due to its resting on the carpet-covered pallet. A thorough documentation and assessment of this surface is deferred to a later date—perhaps when the stone is moved to its next location.
G) No inscriptions were visually detected anywhere on the stone.
H) Fragments of cement were found on the ground surface close to the stone. No remnants of cement were visually detected anywhere on the stone.

ORIENTATION OF THE STONE AT TOPAZ *PRIOR TO UNEARTHING*

Video clips show the orientation of the stone while at Topaz, prior to its unearthing and extraction from the hole.

- The south side *as currently situated on the pallet in the courtyard behind the Topaz Museum* was predominantly facing skyward.
- The east end *as currently situated on the pallet in the courtyard behind the Topaz Museum* was pointed approximately toward the north-north-east, and the west end pointed approximately toward the south-south-west.

POTENTIAL IMPACTS TO THE STONE DURING UNEARTHING, LOADING, TRANSPORTING AND UNLOADING

While impact to the stone certainly occurred during its unearthing, loading, transporting, and unloading by TMB, it is unreasonable to suggest that no impact would have occurred if different means, methods, and equipment were used. The stone is a large, awkwardly shaped, approximately 2400 pound object that poses significant challenges when handled. The actual impact to the stone during unearthing and relocation is difficult to determine with certainty. However, based on my study of the videos and observing the physical stone itself, it is reasonable to conclude the stone was impacted to some degree during the unearthing and relocation process as a result of the following:

A) Very light impact when contacted with metal spade shovels and a small hand held gardening shovel may have resulted in very short and shallow surface scratches / scrapes. The personnel hand-shoveling the soil away from the stone were quite careful however.
B) Abrasion and surface loss when the silver metal hook on the end of the yellow strap impacted the stone while tugging it to dislodge the stone from the soil.
C) The yellow strap rigged around the stone in a variety of ways was tightly tugged by the skid steer. This could potentially have caused some degree of additional separation or weakness to the cracked areas in the stone as it was pulled. Any weakening or deleterious impact to the cohesiveness of the cracked areas is very difficult to establish with certainty.
D) Abrasion resulting from friction between the fine silty soil as the stone was dragged from the site of its unearthing to the side of the road where it was loaded

onto the cardboard and carpet covered wooden pallet prior to loading it onto the trailer. The extant native fine silty soil likely minimized impact to the stone when compared to other soils consisting of larger and coarser grains.

E) It is quite likely the current top side of the stone, where the desert varnish is predominant, sustained surface loss as a result of the unearthing and relocation of the stone. As the stone was being tugged via the yellow strap while dislodging it from the soil in the bottom of the hole, the stone rotated, which resulted in substantial areas of the desert varnish coming in direct contact with the silty soil at grade. It was in this position that the stone was dragged toward the road prior to its being loaded. The January 2022 NPS report, page 27, states that "stone fragments found at the site where the stone was removed match the color and texture of areas on the main body of the stone that exhibit evidence of loss." See photos 26-29 of the NPS Redacted April 2023 report.[8] The report does not state whether the referenced stone fragments were collected by the NPS personnel and, if so, where they are currently located.

F) Scrapes and possible loss of surface material resulting from impact of the metal forks extending from the skid steer as the equipment operator moved and situated the stone onto the wooden pallet prior to loading it onto the trailer.

G) Two separate roughly triangular shaped fragments measuring approximately 9"-10" in length are currently detached from the host stone and are kept in the Topaz Museum. Based on the video clips, one fragment appears to have been gravity-resting from the very beginning near the cross crack (+) on the then skyward facing surface. This fragment was picked up and removed by hand. The other fragment separated from the host stone as the equipment operator was attempting to load the stone onto the wooden pallet. He noticed it, stopped work as a result, picked it up off the ground, and handed it to one of the other people helping with the relocation process. The specific location of the origin of these two fragments on the north and south sides of the host stone has been established and photographed. Future conservation techniques to reattach the fragments are fairly simple and straightforward.

[8] See appendix A

As I watched the video clips, I admired the skill of the equipment operator in managing the skid steer and moving large, awkward, heavy objects. The team performing the unearthing and loading of the stone at Topaz did a reasonable job based on their limited level of experience with and knowledge of such work. However, the assistance of experienced and knowledgeable professionals, such as an archeologist or a stone professional with significant insight into potential weakness or fragile areas in natural stones, would have been beneficial. An experienced stone professional, by keeping a watchful eye on what the stone itself may have been experiencing during its unearthing and identifying vulnerable areas of potential weakness, would likely have reduced the impact to the stone.

Many factors contribute to the challenge of analyzing the means and methods of unearthing the stone and any impact that may have resulted. Among them are various strategies for rigging and securing the strapping around the stone; strap to stone contact; specific locations of the straps relative to forces exerted by pulling / tugging; stone to soil contact, and so forth.

The extent of impact to the stone and its relative cohesiveness and fragility is difficult to fully determine. While watching the video clips, it proved challenging to determine whether what seems to be a crack is, in fact, an actual crack, a shadow, a small root, etc. After comparing the cracks / fissures visible in the stone in the video clips with the physical stone I observed and photographed during my on-site assessments, I did not detect new cracks resulting from the unearthing and relocation process.

The stone consists of a lot of thick and dense mass. With respect to development of cracks, this is in its favor.

RECOMMENDATIONS FOR MOVING FORWARD

1) Remove the yellow rigging strap currently wrapped around the stone. Because the weight of the stone may be compressing the strap onto the carpet covered pallet securing it tightly in place, it may be necessary to carefully cut the strap near both bottom sides of the stone and leave the remaining strap piece in place under the stone.

2) Based on my experience moving and restoring stone, I believe the potential risk of the stone sustaining further deleterious impact outweighs the potential benefit of lifting, handling, and situating it into a low wooden frame filled with pea gravel or similar material as recommended on page 34 in the NPS Report Redacted April

2023. [9] However, other simple things can be done to help mitigate the risks associated with the weight load distribution on the wooden pallet. One option to consider is to strategically situate several small engineered blocks of medium to high compressive strength foam board and/or other materials in the space between the top and bottom wood boards of the existing pallet. This should be performed by professional stone-workers.

3) For now, delay proceeding with any preservation or restoration treatments. Performing preemptive conservation treatments prior to handling and moving stone often results in unintended consequences that may result in further distress to the stone. In other words, do *not* coat, paint, or spray the stone at this time with anything, including latex or acrylic additives, as geologist Eric H. Christiansen's report recommends.[10]

4) Thoroughly document the two triangular stone fragments. Properly label and store them in a secure location. Have a competent stone conservator re-adhere the fragments in their original location after the stone is moved to its final location.

5) Potential for the stone to sustain damage as a result of moving it always exists—human error, equipment malfunction, unforeseen conditions etc. However, I am confident that the stone can be successfully moved to its next location *if thoughtfully planned and executed by experienced professionals*. These professionals should consist of a team of a trusted equipment operator / rigger, a stone professional with significant insight into potential weakness or fragile areas on natural stones, and possibly others. A written plan should be developed and reviewed by TMB, NPS, WMC and SHPO for critique and comments.

6) Consider utilizing LIDAR technology to produce 3D images of the currently visible and accessible surfaces of the stone. These images may be useful to more accurately map and document existing conditions.

7) For the following reasons, I recommend against the stone being in an outside, unprotected setting in its final destination.

- The potential of fragmentation. The most pronounced cracks are wide, long and converging, pointing to possible large-scale weakness. The smaller and finer cracks pose risks for possible surface loss. An outside unprotected setting lends itself to exacerbating these weaknesses.

- Exposure to the deleterious effects of freeze / thaw cycling and wind erosion.

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[9] See appendix A

[10] See appendix B

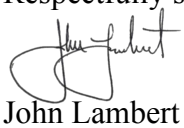
- Potential damage to the fragile desert varnish (especially those that resulted in a lower pitch when sounded) and other distressed surface layer areas.

- Risk of vandalism.

CONCLUDING STATEMENT

These observations and recommendations are based on my careful evaluation of the Wakasa Memorial Stone in light of my 30+ years' experience evaluating, recommending successful preservation strategies and hands-on restoring historic stonework. Because of the history and significance the Wakasa Memorial Stone, it is deserving of the utmost care and treatment. I'm hopeful this report will serve as a reliable guide to the owner and stakeholders as decisions for its care are made moving forward.

Respectfully submitted,



John Lambert
Historic Masonry Consultant, Trainer & Expert Witness

APPENDIX A

Central Utah Relocation Center (Topaz) National Historic Landmark Condition Assessment Report

National Park Service

U.S. Department of the Interior

REDACTED APRIL 2023

Sections of this document referring to the location or character of archeological resources are restricted under the authority of Section 304 of the National Historic Preservation Act (54 U.S.C. §307103). This version of the document was redacted through consultation with the Keeper of the National Register of Historic Places and stakeholders in March 2023. This refers to the removal of sensitive location information for the purpose of protecting resources.

Resources Associated with the Wakasa Monument Condition Assessment Report

Central Utah Relocation Center (Topaz) National Historic Landmark

Prepared by:

Justin Henderson, Program Manager, Heritage Partnerships Program
Skylar Bauer, Archaeologist, RPA, Heritage Partnerships Program
Rachel Adler, Architectural Conservator, Vanishing Treasures Program

National Park Service
NPS Regional Office Serving Interior Regions 6, 7 & 8

January 2022

Contents

1.1 Introduction

As a leader in the field of historic preservation and public history, the National Park Service strives to work in collaboration with communities and private property owners in the stewardship of our nation's heritage. The complex and often challenging history of the American experience is reflected in a diverse range of places and resources that physically connect individuals to the past. New scholarship, research, and discoveries continue to shed light on often ignored stories and resources, giving a voice to communities that have often been denied their voice. Through the National Historic Landmarks program, the National Park Service provides technical preservation assistance in the form of subject matter expertise in the fields of cultural resource management and historic preservation to site stewards and partners. This resource condition assessment has been developed through such a technical assistance request.

1.2 Central Utah Relocation Center (Topaz) National Historic Landmark

Designated a National Historic Landmark (NHL) in 2007, the Central Utah Relocation Center Site (referred to as Topaz) is located in west central Utah just north of the town of Delta and 140 miles southwest of Salt Lake City. Initially named Central Utah Relocation Center, then briefly Abraham Relocation Center, this location became better known as Topaz War Relocation Center, or simply Topaz, due to its proximity to Topaz Mountain in Central Utah. Topaz was one of ten relocation centers constructed in the United States during World War II for the purpose of detaining Japanese Americans and people of Japanese descent. More than 11,000 people passed through Topaz and, at its peak, it housed over 8,000 internees.

Topaz is significant under National Historic Landmark Criterion 1: *Properties that are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained,* for its association with U.S. military history (World War II on the Home Front), its association with politics and government (the relocation decision), U.S. constitutional law (the protection of civil liberties during wartime), ethnic heritage (Japanese American history), and social history (history of minorities in the U.S.; history of civil rights). The period of significance for the property begins in 1942, the year of its construction and opening, and ends in 1946, the year when the War Relocation Authority dismantled the buildings at the site.[1] Today, this National Historic Landmark is owned and managed by the Topaz Museum Board (referred to as TMB) and consists of two standing monuments, building foundations, roads, gravel walkways, agricultural buildings, portions of the perimeter fence, and landscaping features.

1. R. Laurie and Thomas. H Simmons, "Central Utah Relocation Center (Topaz)," National Historic Landmark Nomination Form (Washington, DC: U.S. Department of the Interior, 2007).

In 2020 dedicated scholars identified the potential location of another significant monument, the Wakasa Monument. On the evening of April 11, 1943, James Hatsuaki Wakasa was shot and killed by military police near the western extent of Topaz's barbwire-fenced boundary. In the weeks following the murder, a group of *Issei* agricultural workers constructed a monument of stone and concrete near the site of the incident. Topaz officials and the War Department determined the monument was in violation of an agreement they had with a committee of internees and the agricultural workers were ordered to remove the monument.[2] The fate of the monument remained unknown for nearly 80 years, until new research and subsequent investigations revealed the location of a large, almost competely buried stone and concrete remnants in the approximate location of Mr. Wakasa's murder and where the historic monument would likely have been placed. Please reference *Section 2.1 Previous Investigations at Topaz and the Wakasa Monument Site* to learn more about this discovery.

With the recent discovery of the Wakasa Monument's location and in response to concerns of potential vandalism, the TMB moved the stone associated with the Wakasa Monument from its original context within the National Historic Landmark on July 27, 2021.[3] The stone was relocated to the grounds of the Topaz Museum in Delta, Utah. These actions resulted in new resource management concerns related to the documentation and historic preservation of the original site and resources associated with the Wakasa Monument. Based on these resource management concerns, the Wakasa Memorial Committee was established by a group of former incarcerees, descendants of incarcerees, and other stakeholders interested in the future management and stewardship of the Wakasa Monument and Memorial Site.

1.3 National Historic Landmark Technical Preservation Assistance

Authorized by the Historic Sites Act of 1935 (Public Law 74-292, 16 U.S.C. sec. 461-467) and administered by the National Park Service, the National Historic Landmarks program recognizes buildings, sites, districts, structures, and objects determined by the Secretary of the Interior to be nationally significant in American history and culture. Designation as a National Historic Landmark helps recognize, preserve, and protect important locations in American history. A property designated as a National Historic Landmark may also make the property eligible for preservation grants and technical preservation assistance from the National Park Service. Most National Historic Landmark properties are privately owned and governed by any applicable local and state preservation laws or ordinances. Technical preservation assistance may only be provided by the National Park Service if requested by the National Historic Landmark property owner. Because federal funds are used to provide technical preservation assistance, such federal undertakings are subject to Section 106 of the National Historic Preservation Act. Please reference *1.5 National Historic Preservation Act, Section 106 Consultation* for additional information regarding this regulatory requirement in relation to the development of this resource condition assessment report.

2. Ibid.

3. Perceived concerns about potential vandalism is what the research team understood as the Topaz Museum Board's rationale for removing the memorial stone at the time of this report's creation (Footnote added March, 2023).

Within the National Park Service Department of Interior Regions 6,7, & 8, the Intermountain Heritage Partnerships Program administers the National Historic Landmarks program at the regional level. The Heritage Partnerships Program coordinates technical preservation assistance within the state of Utah for the National Historic Landmarks program. Technical preservation assistance generally takes the form of surveys, resource condition assessments, and historic preservation treatment plans for historic buildings, archaeological sites, and cultural landscapes; preservation and interpretive planning; strategic planning; and assistance with grant applications and identifying potential funding sources for National Historic Landmark properties. The Heritage Partnerships Program brings together interdisciplinary research teams of National Park Service professionals and subject matter experts to meet the unique needs of National Historic Landmark properties. The structure of these National Park Service research team ensures that the appropriate type of expertise is available for individual technical preservation assistance projects and that professional standards and best practices are followed.

In October 2021 the Central Utah Relocation Center (Topaz) National Historic Landmark property owner, the Topaz Museum Board (TMB), contacted the National Park Service's Heritage Partnerships Program requesting technical preservation assistance regarding the Wakasa Monument. Based on preliminary conversations with the TMB, as well as information provided by other organizations including the Wakasa Memorial Committee, the Heritage Partnerships Program recommended that a Resource Condition Assessment would be an appropriate step in addressing emerging resource management concerns associated with the Wakasa Monument.

1.4 Goal of the Cultural Resource Condition Assessment

A cultural resource condition assessment is a resource management tool used by the National Park Service to document and record the current state of key resources identified for preservation and protection. By recording current resource conditions, potential stressors or factors that may impact cultural resources can be identified, which then, in turn, can inform the development of historic preservation strategies and treatment recommendations to address the long-term stewardship and protection of the cultural resources being evaluated. The primary goal of a resource condition assessment is to document current resources to better inform future collaborative management decisions about those resources.

The primary goal of this resource condition assessment is the evaluation and assessment of resources associated with the Wakasa Monument found at Topaz. The two cultural resources included in this assessment are: 1.) the stone associated with the Wakasa Monument and 2.) the site associated with the Wakasa Monument (the original location of the stone). In order to successfully accomplish the goal of this resource condition assessment, the National Park Service brought together an interdisciplinary research team that included qualified archaeologists, an architectural conservator, an historical architect, and historians.

The first phase of this condition assessment began with reviewing existing information and acquiring a better understanding of previous investigations at Topaz as they relate to the Wakasa Monument. A large body of research and documentation exists for the National Historic Landmark, and numerous archaeological investigations and reports provided a strong foundation for the National Park Service research team to build from. (Please reference report bibliography)

In order to document and record current resource conditions, the National Park Service research team collected on-site resource data and completed field work from November 30-December 1, 2021. The stone associated with the Wakasa Monument was documented by the team's architectural conservator who visually examined and photographed the stone, looking for evidence of markings, masonry, damage, and any other clues that may convey its current condition or potential stressors (Please reference *Section 3 Condition Assessment Methodology* for additional information). The site associated with the monument where the stone was removed from was mapped and photographed by a qualified National Park Service archaeologist. This documentation work included a pedestrian survey of the immediate area and documentation of culturally associated materials or features visible on the surface, in addition to areas of disturbance from the stone's removal (Please reference *Section 3 Condition Assessment Methodology* for additional information). Out of respect for the site, and in accordance with NPS best practices, no ground disturbance was conducted. Given the significance this site holds, it was important that there be consensus among stakeholders regarding how this location and artifacts found there should be treated and if further archaeological investigation would be appropriate. Once data was collected and documentation was complete, the National Park Service research team moved into phase two of the resource condition assessment process.

The second phase of this assessment focused on the analysis and evaluation of the collected resource data, and the development of this report and its treatment recommendations. Previous research and site documentation played an import role and helped inform this analysis process. The results of this analysis and evaluation are presented in this *Cultural Resource Condition Assessment* report. As stated earlier, the goal of this assessment is to present current resource condition data that can be used to inform the stewardship and preservation of resources associated with the Wakasa Monument. This resource condition assessment should be used as a tool to foster dialogue between key stakeholders and encourage collaboration in making resource management decisions in the future.

1.5 National Historic Preservation Act, Section 106 Consultation

In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) and 36 C.F.R. Part 800, the National Park Service submitted a formal Section 106 request for consultation and a packet outlining the proposed undertaking to the Utah State Historic Preservation Office on November 11, 2021 (see Appendix A). This request was submitted via email as well as through the Utah State Historic Preservation Office's e106 system. The consultation packet outlined the National Park Service research team's plans to conduct

a resource condition assessment of the stone associated with the Wakasa Monument as well as the location from which the stone was removed. This Section 106 consultation materials were also submitted to both the Topaz Museum Board and Wakasa Memorial Committee.

On November 22, 2021, the Utah State Historic Preservation Office responded to the Section 106 consultation request, concurring with the National Park Service research team's determination of no adverse effect (see Appendix B). With Section 106 responsibilities met, the proposed field work was conducted from November 30 – December 1, 2021. Per stipulations outlined in the consultation packet, the National Park Service has provided copies of this Resource Condition Assessment to the Utah State Historic Preservation Office as well as to the Topaz Museum Board and Wakasa Memorial Committee.

2.1 Previous Investigations at Topaz and the Wakasa Monument Site

Although not exhaustive in scope, the following section provides an overview of key surveys and reports that have helped inform the NPS research team's understanding of Topaz's significance, with particular emphasis given to research and findings that relate to the Wakasa Monument. Notably absent from this summary are the many voices of local community, descendant, and survivor groups who possess unique insights and perspectives that enrich our historical understandings of Topaz and its legacy.

In 1974, Topaz was listed in the National Register of Historic Places (NRIS #7400193). The nomination was prepared by the Utah State Historical Society and encompassed 300 acres.[4] Located 9-miles northwest is Topaz Mountain, the site's namesake. While the National Register listing has a different name (Topaz War Relocation Center) than its National Historic Landmark designation name (Central Utah Relocation Center (Topaz)) with a different boundary, they recognize the significance of the same place. Another site name that represents Topaz is 42MD1793. This naming convention is known as a site's Smithsonian trinomial, which is a unique identifier given to an archaeological site for identification and management purposes.

Formal archaeological investigations began at Topaz (42MD1793) in 1995.[5] Jeffrey Burton (currently Cultural Resource Program Manager/Park Archeologist, Manzanar National Historic Site) and Mary Farrell (retired Heritage Program Leader and Tribal Liaison, Coronado National Forest) carried out an archaeological assessment funded through the National Park Service's Manzanar National Historic Site. They examined multiple lines of evidence to document what remains at Topaz, and other sites where Japanese Americans were incarcerated during World War II.

4. Kent Powell, "Topaz War Relocation Center," National Register of Historic Places Nomination Form (Washington, DC: U.S. Department of the Interior, National Park Service, 1972).

5. Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 14. and Jeffery F. Burton, Mary M. Farrell, Florence B. Lord, and Richard W. Lord, "Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites," Publications in Anthropology 74 (Tucson, AZ: Western Archeological and Conservation Center, National Park Service, 1999, rev. July 2000), ch. 12, 259-278.

Their findings are published in the formative volume titled *Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites*.[6] These research and publication became the basis for 2012 National Historic Landmarks Theme Study *Japanese Americans in World War II*.[7]

In 1998, the Topaz Museum Board (TMB) purchased 417 acres of the relocation center's main complex.[8] This purchase included land in the western extent of Topaz where Mr. Wakasa was fatally shot. With a mission to preserve and interpret Topaz's history, the TMB contracted Sheri Murray Ellis (Project Manager and Archaeologist formerly with SWCA) to document the site's condition, artifacts, and features. In 2001, Ellis studied residential blocks and open areas in the main camp complex to the west and south. The project was funded by a Save America's Treasures grant and the TMB. A primary goal of the report was to help to establish a baseline for TMB's management planning.[9]

The 2001 investigations included an intensive pedestrian survey in the western extent, near where the stone associated with the Wakasa Monument was removed. The survey consisted of walking parallel transects between the original perimeter fence and outer complex road that encloses the residential blocks. This area was mostly devoid of features, especially in the southwest area between Guard Towers #9 and #8. (b) (3) (B) [redacted]

The Wakasa Monument in Ellis' report refers to the Wakasa memorial tree situated upright on a low earthen mound with the name "WAKASA" carved into it. Mr. Ron Walkshorse, who lived on the former Block 35 at the time of the 2001 survey, used white paint to accentuate the carved letters and added above the carving the words "IN MEMORY." As Ellis explains, "It is unclear whether the marker and the carving in it are original to the camp, being installed by fellow internees shortly after the shooting, or whether it was created by Mr. Walkshorse, who has placed a sign on the remains of the sewer pump station noting the location and date

6. Jeffery F. Burton, Mary M. Farrell, Florence B. Lord, and Richard W. Lord, "Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites," Publications in Anthropology 74 (Tucson, AZ: Western Archeological and Conservation Center, National Park Service, 1999, rev. July 2000).
7. Barbara Wyatt, ed., Japanese Americans in World War II: A National Historic Landmarks Theme Study (Washington, D.C.: National Historic Landmarks Program, National Park Service, August 2012).
8. Jeffery F. Burton, Mary M. Farrell, Florence B. Lord, and Richard W. Lord, "Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites," Publications in Anthropology 74 (Tucson, AZ: Western Archeological and Conservation Center, National Park Service, 1999, rev. July 2000), ch. 12, 266.
9. Sheri Murray Ellis, "Site Documentation and Management Plan for the Topaz Relocation Center, Millard County, Utah," SWCA Cultural Resources Report No. 01-154A, prepared for the Topaz Museum Board, Delta, Utah, with funding from the J. Paul Getty Trust and the Topaz Museum Board, (Salt Lake City, Utah: SWCA, Inc., Environmental Consultants, January 13, 2002).
10. Sheri Murray Ellis, "Site Documentation and Management Plan for the Topaz Relocation Center, Millard County, Utah," SWCA Cultural Resources Report No. 01-154A, prepared for the Topaz Museum Board, Delta, Utah, with funding from the J. Paul Getty Trust and the Topaz Museum Board, (Salt Lake City, Utah: SWCA, Inc., Environmental Consultants, January 13, 2002), 38-40,56, Appendix A.

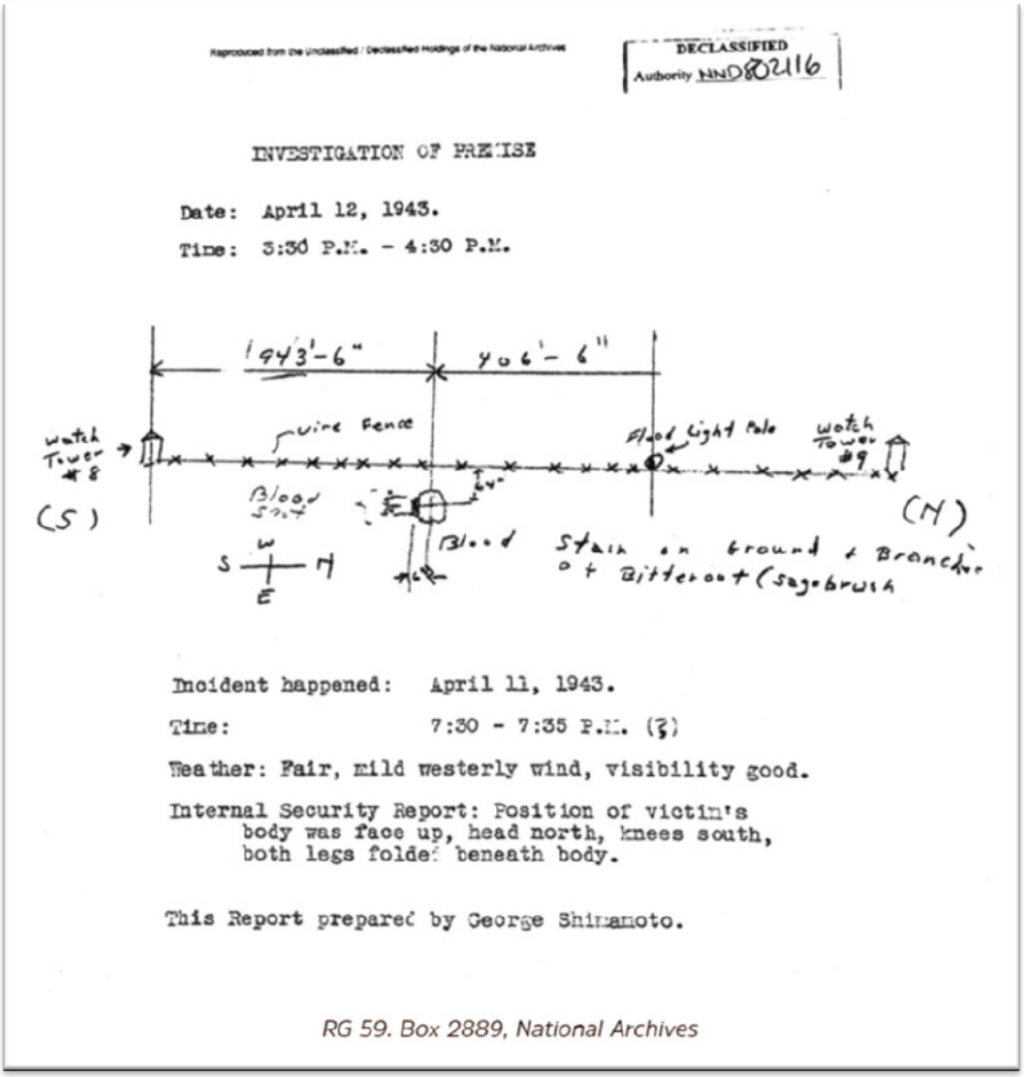
of Mr. Wakasa's death."[11] The stone and site identified by Burton and Farrell in 2020 was not included in the Ellis 2002 report.

In 2005, two archaeological investigations occurred outside TMB's landholding, but still within the larger Topaz complex. Charles Haecker (retired NPS NHL Program Archaeologist) investigated the eastern portion of the camp that was not examined during the SWCA survey. (b) (3) (B) [redacted]

Historical and archaeological studies continually demonstrated the ways in which Topaz conveys its national significance and overall physical integrity, even though its barracks and other buildings were removed. In 2007, the Central Utah Relocation Center (Topaz) was designated a National Historic Landmark (NRIS #07000432). The NHL nomination included a section about the death of Mr. Wakasa describing it as, "One of the events which incited the greatest fear and protest at Topaz."[14]

In 2015, Nancy Ukai (Director of the "50 Objects/50 Stories" Project) located at the National Archives a 1943 map titled "Investigation of Premise" drawn by the internal police the day after the shooting of Mr. Wakasa. Ms. Ukai published the map on the "50 Objects/50 Stories" website in 2020. The hand-drawn map shows the location where Mr. Wakasa was killed, 943.5' north of Guard Tower #8 and 64" east of the fence line (see Figure 1)[15] Correspondence reveals that two months later, an agricultural landscape crew of incarcerees built a monument near where Mr. Wakasa was killed. On June 21, 1943, Charles F. Ernst (Topaz Project Director) explained that the monument was constructed using "native rock obtainable close by the Center. About a sack and a half of cement was used without authorization," but it was soon torn down after the landscape crew was told to remove it.[16]

11. Sheri Murray Ellis, "Site Documentation and Management Plan for the Topaz Relocation Center, Millard County, Utah," SWCA Cultural Resources Report No. 01-154A, prepared for the Topaz Museum Board, Delta, Utah, with funding from the J. Paul Getty Trust and the Topaz Museum Board, (Salt Lake City, Utah: SWCA, Inc., Environmental Consultants, January 13, 2002), 39. And Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 15.
12. Charles Haecker, NHL Program Archaeologist, National Park Service, Santa Fe, New Mexico, e-mail message to Kara Miyagishima, National Park Service, Denver, Colorado, December 28, 2005.
13. Joelle McCarthy, U.S. Bureau of Land Management, Topaz Waste Disposal Survey, IMACS survey form, 42MD1793, October 17, 2005.
14. R. Laurie Simmons and Thomas H. Simmons, "Central Utah Relocation Center Site (Topaz)," National Historic Landmark Nomination Form, (Washington, DC: U.S. Department of the Interior, 2007), 48-50.
15. Nancy Ukai, "The Demolished Monument: James Hatsuaki Wakasa and the Erasure of a Memory," 50 Objects/Stories: The American Japanese Incarceration. https://50objects.org/object/the-demolished-monument/ and Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 17-26.
16. Charles F. Ernst, Letter from Charles F. Ernst to Dillon S. Myer, attn: Col. Wilson, June 21, 1943, 3, James Hatsuaki Wakasa Evacuee Case File, RG 210, (Washington, DC: National Archives, 1943). And John J. McCloy, Letter from John J. McCloy to Dillon S. Myer, June 8, 1943, James Hatsuaki Wakasa Evacuee Case File, RG 210, (Washington, DC: National Archives, 1943).



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INVESTIGATION OF PREMISE

Date: April 12, 1943.

Time: 3:30 P.M. - 4:30 P.M.

Incident happened: April 11, 1943.

Time: 7:30 - 7:35 P.M. (?)

Weather: Fair, mild westerly wind, visibility good.

Internal Security Report: Position of victim's body was face up, head north, knees south, both legs folded beneath body.

This Report prepared by George Shimamoto.

RG 59. Box 2889, National Archives

Figure 1."Investigation of Premise" report map prepared by George Shimamoto on April 12, 1943 (RG 59 Box 2889, National Archives, Washington, DC). Map found by Nancy Ukai.

In the fall of 2020, using these new findings, Burton and Farrell returned to Topaz to look for evidence of the deconstructed stone and concrete monument. (b) (3) (B) [redacted] There they located an unusually large, almost completely buried stone measuring 4'-long and 1.5'-wide that showed evidence of cracking. Broken concrete fragments were also documented nearby. (b) (3) (B) [redacted] It is possible that the police would have used a measuring wheel, which would have less precision. Or perhaps the monument was built in an area that was slightly removed from the place where Mr. Wakasa died.[17] The report, *The Power of Place James Hatsuaki Wakasa and the Persistence of Memory*, sharing these findings was published on-line through a *Discover Nikkei* series in June and July 2021.

17. Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 17-20.

In June 2021, archaeologists Dana Shew, Dr. April Kamp-Whittaker, and Koji Lau-Ozawa conducted a survey of Residential Block 22. The goal was to record the current preservation levels in an area frequented by local school groups and develop a monitoring plan that would help TMB track and manage site preservation and visitation. During this trip, Lau-Ozawa conducted a drone survey of Block 22. He also collected drone footage of the area where Burton and Farrell identified the stone, which was not formally included in their project but was done in anticipation of future need and archaeological work.

On July 27, 2021, based on concerns of potential vandalism prompted by the *Discover Nikkei* publication that identified the location of the stone, the Topaz Museum Board removed the stone associated with the Wakasa Monument from its location onsite and relocated it to the Topaz Museum in Delta, Utah.[18] These actions resulted in new resource management issues related to the documentation and historic preservation of the stone associated with the monument and the site from which it was removed. Growing concerns about the decision to move the stone associated with the monument lead to the formation of the Wakasa Memorial Committee by a group of former incarcerees, descendants of incarcerees, and other stakeholders interested in the future management and stewardship of the Wakasa Monument and Memorial Site.

In November 2021, the TMB requested technical assistance from the National Park Service's Heritage Partnerships Program (HPP). Based on feedback from numerous stakeholders, the NPS research team proposed conducting a condition assessment of the stone associated with the Wakasa Monument and the site. The NPS research team's methodology, findings, and recommendations are discussed in the following sections.

18. Perceived concerns about potential vandalism is what the research team understood as the Topaz Museum Board's rationale for removing the memorial stone at the time of this report's creation (Footnote added March, 2023).

3.0 Condition Assessment Methodology

3.1 Documentation of the Stone Associated with the Monument

The examination and assessment of the stone associated with the Wakasa Monument took place on November 30, 2021, in the rear courtyard of the Topaz Museum in Delta, Utah, where the stone currently sits. Following brief presentations by members of the TMB and a remembrance ceremony by the Wakasa Memorial Committee, an NPS conservator made a thorough visual inspection of all accessible surfaces of the stone. This inspection included the use of a Dino-Lite Edge portable digital microscope. Several photomicrographs were taken using the microscope, most of which focused on lichens, mineral deposits and obvious changes in color or texture on the stone's surface. These images were transferred directly to a laptop in the field for further examination and analysis in the office.

In addition to the images taken by the built-in microscope camera, several photographs of each accessible stone surface were taken using a Nikon D5100 digital SLR camera. Photographs focused on areas of the stone that exhibited notable conditions, including lichens, mineral deposits, fractures, detachment, disaggregation and areas of apparent material loss. Photographs were also taken of two stone fragments collected by the TMB that detached from the main stone body during the site removal process.

After photographic documentation, a graphic condition assessment was undertaken to illustrate the existing conditions apparent on the stone and map their locations on the stone's surface. At least one image was taken facing roughly parallel to each of four surfaces facing in approximately the cardinal directions as the stone is currently positioned. That is, photography of the north-facing surface, west-facing surface, south-facing surface, and east-facing surface. Photography was also taken of the sloping top north-facing surface of the stone. Photography angles were limited by the current location of the stone in a relatively narrow space between the restored recreation hall and fence in the museum's rear courtyard area. Images were printed in black and white and inserted into clear acetate sleeves. The NPS conservator then visually inspected each face of the stone and used different colors and patterns drawn on the acetate to indicate the presence and location of extant conditions. The conditions recorded in this manner were: surface loss, mineral deposits, discoloration, vegetation, lichen growth, fractures, loose pieces, and friable areas. Also, as part of this examination, several areas of the stone were lightly tapped with a fingernail to assess for potential detachment and hidden voids beneath the surface layers. Areas that sounded hollow when sounded in this manner were also marked on the appropriate acetate sleeves.

Graphic condition assessment images were digitized using AutoCAD and are included in Appendix C. Due to concerns of safety and potential material loss, the stone was not moved or disturbed during this examination and was returned to its previous sheltered condition once the assessment was completed.

Along with documentation of the stone associated with the Wakasa monument, the area where the stone is currently stored was also documented by the NPS research team. To better understand the slope and drainage of this area, GPS elevation datapoints of the Topaz Museum rear courtyard were collected and the location of existing drainage covers were noted. Measurements and photographs of the current storage shed structure that is placed over the stone were taken. This data was reviewed and assessed by an NPS historical architect who created measured drawings of this structure, presented in Appendix D of this report.

3.2 Documentation of the Site Associated with the Monument

Documentation of the site associated with the Wakasa Monument began on November 30, 2021 and concluded on December 1, 2021. On the afternoon of November 30, the NPS research team drove to the site along with representatives of the TMB and the Wakasa Memorial Committee. A 23' x 32' area surrounding the area where the stone was removed was flagged off with orange tape to discourage visitors from accidently walking through the site being documented. Preliminary site photographs were also taken (Appendix E).

On December 1, a remembrance ceremony was held on site outside of the protected flagged area. At the conclusion of the ceremony, the NPS research team continued site documentation which consisted of additional preliminary condition assessment photographs, re-shoots of photographs taken in 2020, surface survey, mapping, and post-assessment photographs. Pre-stone removal photographs are presented in the Burton and Farrell 2020 report. These photographs serve as control points helping to visualize the changes in site condition following the stones removal.

A pedestrian survey within the flagged area was carried out by the NPS research team. It consisted of walking over the ground surface identifying and mapping culturally associated materials or features, in addition to areas of disturbance from the stone's removal. In accordance with the project scope outlined in the Section 106 consultation process, no excavation occurred, and no artifacts were collected.

Using hand-held measuring tapes, a 10' x 20' grid was laid out with the perimeter fence as the western extent. This grid was used to produce a hand-drawn map that has been digitized in ArcGIS Pro.[19] A Leica GG04 Plus Smart Antenna utilizing RTK technology with sub-meter precisions was also used to collect spatial data including elevation points. To ensure real-time precision when cellular service was available, the Leica antenna was connected to Utah's TurnGPS GNSS network. Together, the hand-drawn map and sub-meter GPS data were added to ArcGIS Pro software providing a bird's eye view of the area where the stone was removed (Figure 2). This data is also displayed over Lau-Ozawa's drone imagery showing where the stone was in June 2021, prior to its removal (Figure 3).

19. The Imperial measuring system was used for mapping for continuity. Past surveys and the 1943 police report used feet as the primary unit of measurement.

Once documentation was completed on the afternoon of December 1, the NPS research team walked over the site one more time to make sure they left no trace. Post-assessment photographs were also taken. Prior to leaving Topaz, the NPS research team visited the Wakasa Memorial Tree and the area associated with Guard Tower #8 to observe their conditions.

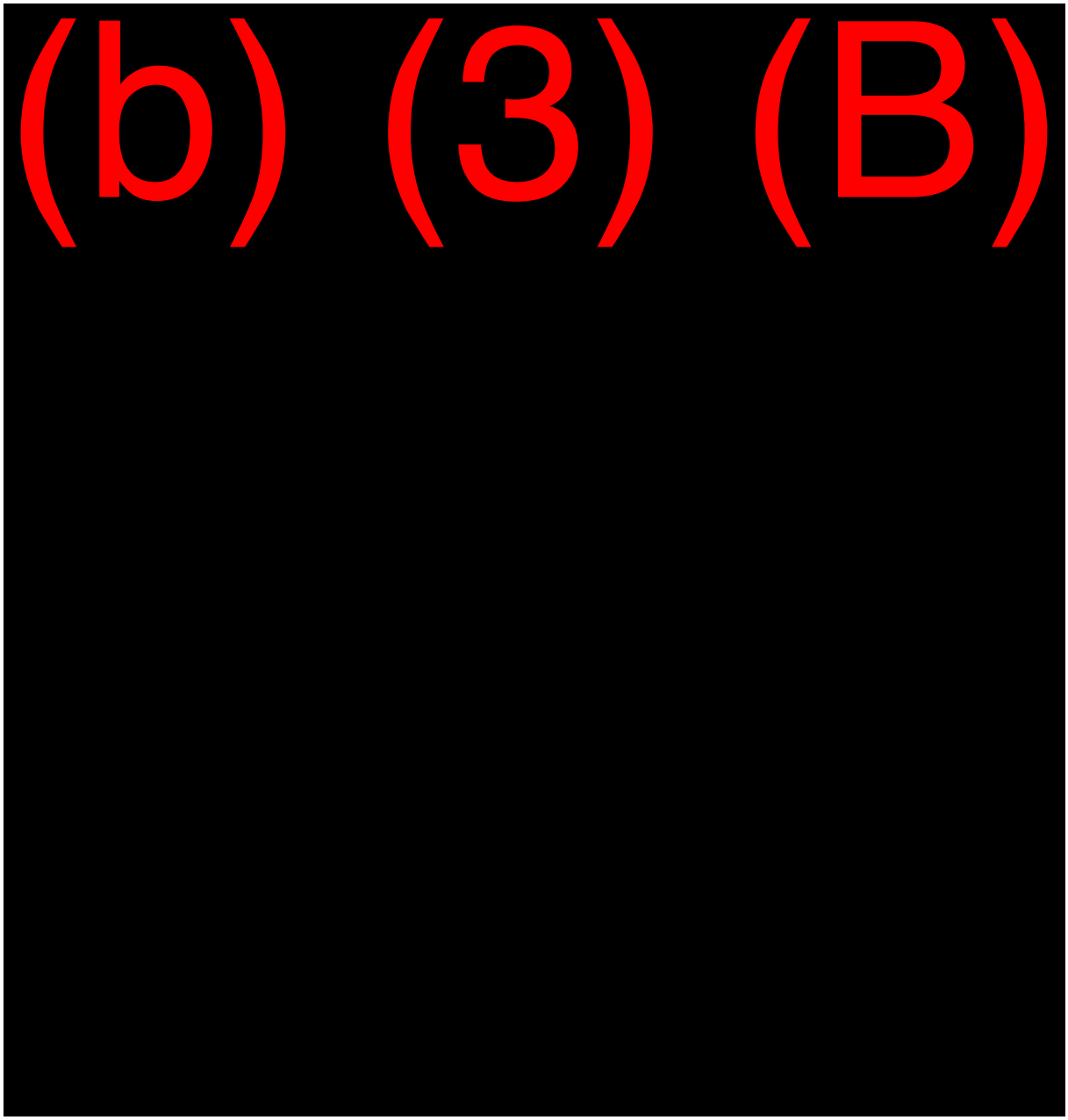


Figure 2. Full extent of survey area. Map includes labels for artifacts/ecofacts (shell, glass, wooden stake, stone, concrete), other landscape elements (fence post, western fence line, shrubs), and disturbance areas (pushed dirt, depression, debris zone, wash out).

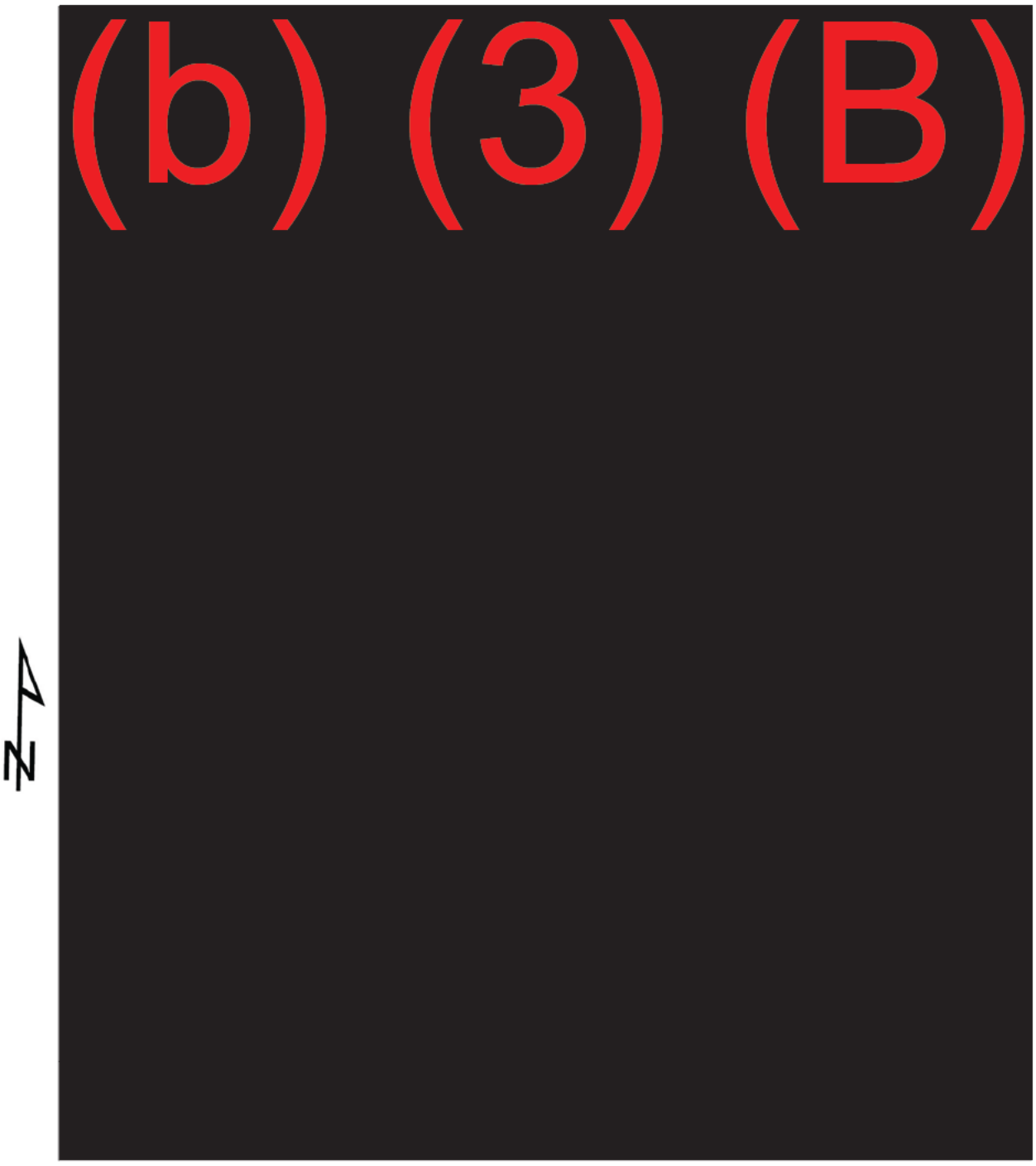


Figure 3. Close-up of core survey area with June 2021 drone imagery base map (drone imagery courtesy of Koji Lau-Ozawa).

4.0 Condition Assessment Findings

4.1 Findings from the Stone Associated with the Monument

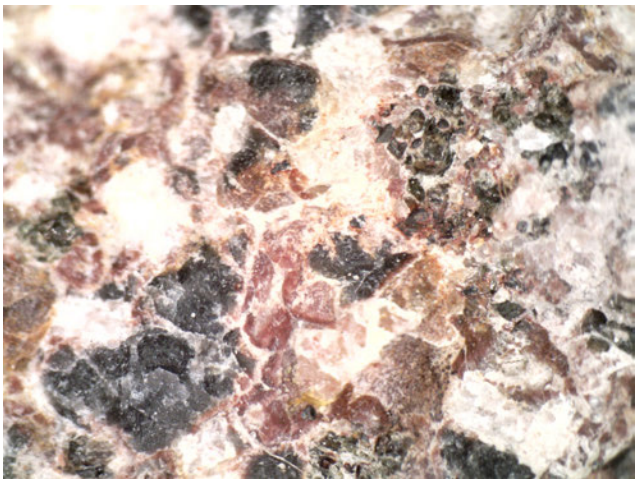
The stone, a medium-sized boulder measuring roughly 145cm in length, 80cm in width and 60cm in height, is currently located in the rear courtyard of the Topaz Museum, placed on a piece of carpeting atop a wooden pallet. The pallet lies on a bed of gravel on the west side of the courtyard in the space between the courtyard fence and the restored recreation hall. There is a nylon ratchet strap encircling the stone from top to bottom. This strap was presumably used during the stone's removal and remained in place after it was deposited at its current location.

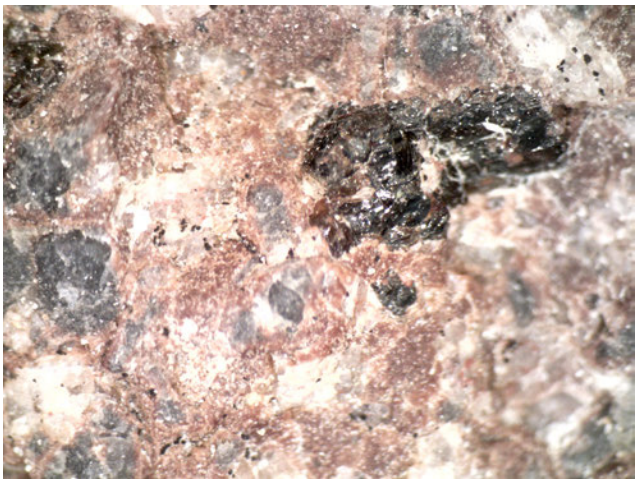
Although the stone is usually under the cover of a small metal shed structure, the shed was removed on the day of the assessment. Due to the stone's current placement between two taller structures, on the date it was examined, it was shaded in the early morning and received several hours of sun through the late morning and early afternoon. By mid-afternoon, it was again in the shade. These environmental conditions will obviously change seasonally, and the stone will receive more sun exposure during the spring and summer months. While the stone did not remain in full sun for long enough to withstand substantial thermal loads, this condition will change throughout the year.

The current position of the stone is such that the area that was exposed when the stone was in the ground is now facing south. Much of the area of the stone that was buried *in situ*[20] is exposed and visible from all sides as well as from above. The idea of repositioning the stone during the condition assessment to better allow for examination of all surfaces was extensively discussed, but the NPS research team decided against it to avoid causing accidental damage to the resource.

A positive identification of stone type could not be made during the examination. However, it is likely that the stone is primarily a porphyritic rhyolite of the kind commonly found in several nearby mountain ranges. Landscape workers at Topaz would have had access to trucks for bringing in large stones for use as building material, and it is feasible that the monument stone made its way to the site in this manner. Magnified images of the stone's composition and texture reveal obvious crystal inclusions (see Images 1 and 2). Confirmation of stone type and properties would require some level of destructive testing, which was not appropriate at this juncture.

20. For the purposes of this report, the term "in situ" is used to refer to the site at Topaz from which the stone was removed.





Images 1 and 2. Microscopic mages taken of the stone surface show crystal inclusions, or phenocrysts, that can be indicative of rhyolite common to the area.

Extant Conditions

Mineral Surface Deposits

Roughly half of the stone lengthwise exhibits what appears to be a thin white mineral coating (Images 3 and 4). The coating covers most of the area that was exposed before the stone was moved, but based on pre-movement photographs, also covers a good deal of surface area that was underground. In some places the mineral coating extends as much as 30cm beyond where the stone was exposed when it was *in situ.* The north face of the stone[21] shows a distinct linear boundary for the coated area, while this boundary is less defined on the other faces. Without further analysis, it is difficult to know the composition of the mineral coating and whether it was deposited over time while the stone sat partially buried, or if it leached out of the stone itself as a result of water saturation and subsequent evaporation over many years. It is also impossible to know at this time whether the coating developed after the stone was moved to its location at Topaz, or whether it was extant when the stone was taken to that site from its original location.

Image 3. North face of the stone showing roughly linear boundary of mineral surface coating.

Image 4. South face of stone showing irregular boundary of mineral surface coating.

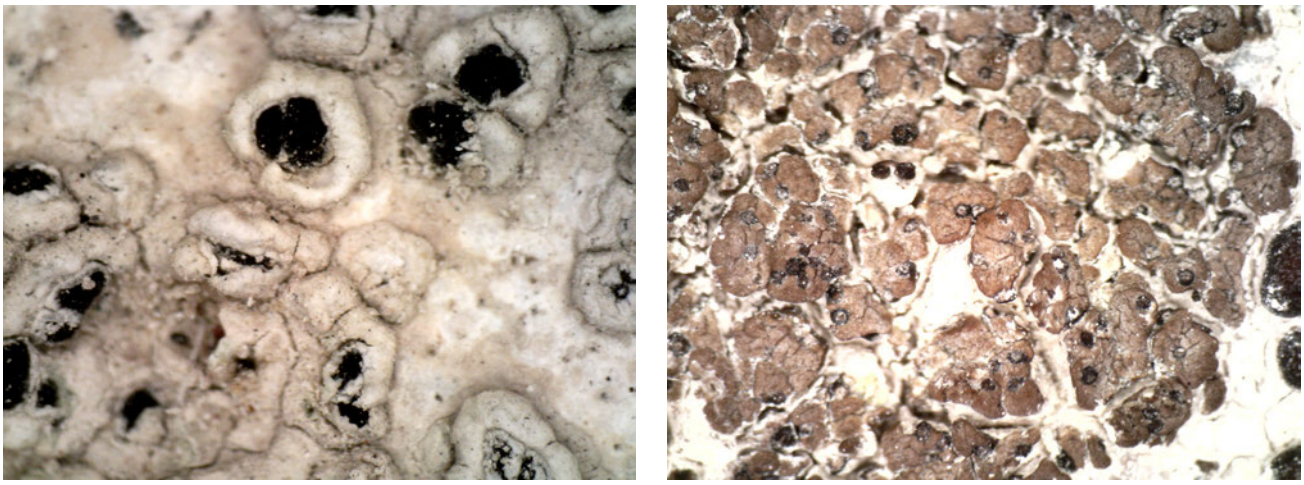
21. All directional descriptions are based on the position of the stone as it lay in the courtyard of the Topaz Museum on November 30, 2021.

There is evidence of a blue-gray mineral deposit on the current top surface of the stone, which would have been the most deeply buried portion when the stone was *in situ* (Image 5). As with the white mineral coating, it is impossible to know the composition of this coating without further analysis.

Image 5. Blue-gray mineral deposit on the current top surface of the stone.

Lichens

Several species of lichen were seen growing on the stone surface (Images 6 and 7). All were crustose in nature and covered very small areas. Lichen growth appeared to be concentrated in areas of the stone that contained divots or depressions, which would have collected water and made for a more hospitable environment when the stone was *in situ.* The lichens do not appear to be causing any noticeable damage to the stone.



Images 6 and 7. Microscope images of two different lichen species found on the surface of the stone.

Vegetation

In addition to lichen grown, there was also evidence of vegetation on limited areas on the stone surface. Vegetation refers to plant growth that is completely or partially embedded in the body of the stone. Most of the vegetation presented as root fragments lodged into cracks and crevices on the stone surface. None appeared to indicate living plant material. It is likely that the root fragments were attached to surface plants that infiltrated the stone mass in areas that collected water, while the stone was located at Topaz. When the stone was removed, the roots broke, leaving some fragments lodged in cracks in the stone surface. As long as these fragments do not appear to be live and actively growing, they do not pose a threat to the integrity of the stone.

Fractures and cracking

There are noticeable fractures on the north, south, east, and top surfaces of the stone. Some appear to be surface fractures, while others are deeper. It is not known how long the fractures have been present. Some may be products of the stone's geologic formation, while others may have developed over time while the stone was buried. Some of the surface cracking may have been exacerbated by the stone's relocation.

The south face of the stone exhibits two large fractures, one vertical and one horizontal, that converge to the east of that face's midpoint (Image 8). These fractures are visible, but narrow, and while there has been previous loss in that area (to be discussed in the next section), it now appears to be stable. The vertical crack continues to the top face of the stone, where it joins a network of surface cracks that are discussed at the end of this section.

Image 8. Intersecting fractures on south face of stone.

The horizontal crack on the south face of the stone continues around to the east face, where it grows wider and less stable. Here the fracture splits into several smaller cracks, creating layers of delaminated stone fragments within an area that may previously have suffered surface loss (Image 9). This area terminates as the fracture narrows again and continues around to the north face.

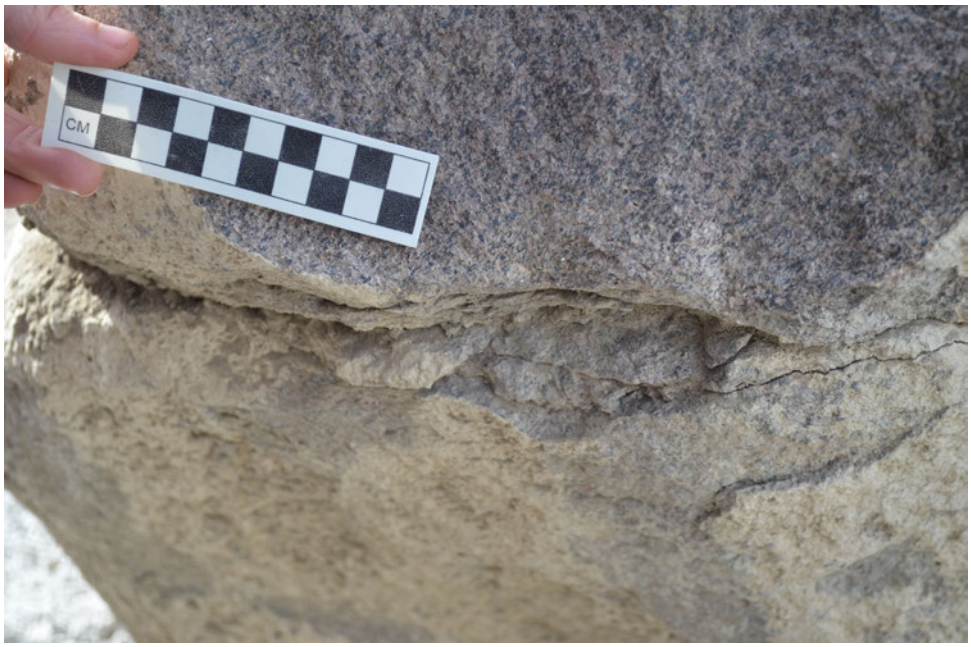


Image 9. Fracture on east face of stone running through area of previous loss and delaminating stone fragments.

The same fracture on the north face again becomes very narrow and stable and remains this way until it terminates above the face's midpoint. Two other fractures are also visible on the north face of the stone, one vertical near the midpoint and one horizontal starting just west of the midpoint and continuing approximately 30cm to the west. Both are narrow and stable and are not a cause for concern at this time.

The top surface of the stone as it is currently positioned exhibits a rounded ridge that runs the length of the face. This ridge exhibits multiple intersecting fractures that appear to affect only the surface layers of stone, but these fractures may indicate that those surface layers are becoming detached from the larger stone mass. Several areas of this ridge sounded hollow when tapped with a fingernail, while more stable areas of the stone did not. This network of cracks that runs along the top ridge of the stone (Images 10-12) is currently the area of the stone most vulnerable to damage and loss.

Image 10. Network of cracks on north face of ridge running along top of stone.

Image 11. Network of cracks along top ridge of stone viewed from the west.

Image 12. Network of cracks along top ridge of stone on south face.

Loss

There are several areas of the stone that exhibit evidence of previous material loss. While it is unknown when most of this loss occurred, two areas were described and shown to the NPS research team as having occurred during the removal of the stone from its previous site. These areas are on the south side of the stone at the juncture of the two previously discussed fractures (Image 13) and on the north side of the stone on what is currently the underside closest to the ground (Image 14). The pieces that detached from the main body of the stone during its removal were collected and are currently stored in the collections of the Topaz Museum (Image 15).

Image 13. Area of recent loss on the south face of the stone.

Image 14. Area of recent loss on the current underside of the north face of the stone.

Image 15. Fragments that detached from the stone during its removal.

Other areas of the stone show evidence of surface loss, mostly through the absence of surface mineral coatings or abrupt changes in surface topography. One of these areas is on the top surface of the stone, along the fracture-laden ridge that was previously discussed (Image 16). Changes in surface color, along with abrupt ledges left by missing fragments both indicate the loss of surface material. This is further supported by the fact that the area is surrounded by fractures and by surface layers that sound hollow when tapped, indicating the presence of voids beneath these layers and nascent detachment.

Another area that exhibits potential loss is on the east face of the stone, near the top (Image 17). Again, an abrupt change in color and sharply defined surface boundaries indicate sudden loss of a piece of stone, as opposed to gradual erosion of an area.

Finally, stone fragments found at the site where the stone was removed match the color and texture of areas of the main body of the stone that exhibit evidence of loss (Images 18 and 19). It is possible that these fragments were originally part of the main stone body and became detached at some point between when the stone was placed on site at Topaz and when it was removed for placement at the Topaz Museum.

Image 16. Ridge at the top of the stone that exhibits evidence of loss. Note the abrupt changes in color and surface topography, especially on the left side of the picture.

Image 17. Potential surface scar indicating loss on the upper part of the east face of the stone.

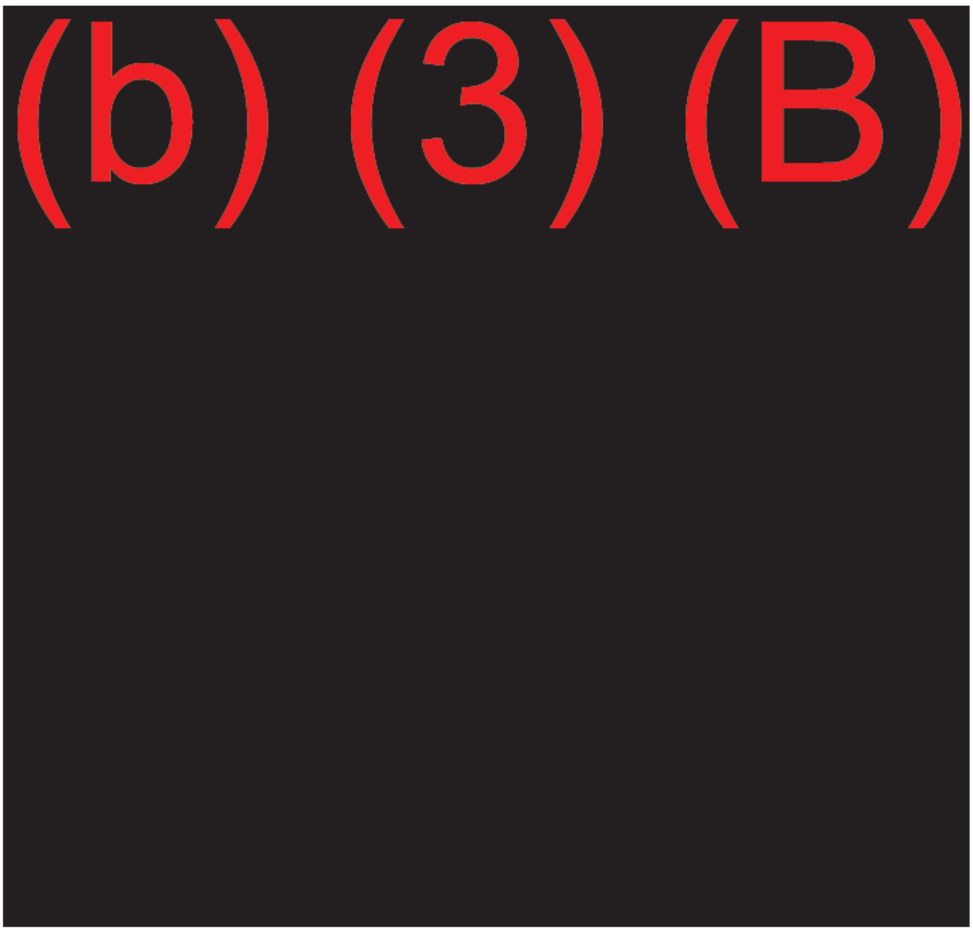
Images 18 and 19. Stone fragments found at the removal site that may have originally been part of the larger body of stone.

4.2 Findings from the Site Associated with the Monument

The NPS research team's investigations focused on the site where the stone associated with the Monument was documented in 2020. The site (b) (3) (B) The NPS research team collected baseline documentation in the form of photography and spatial data to serve as a record of the site's current condition.

The U.S. Department of Agriculture's online Web Soil Survey classifies the site's soil as poorly drained Abbott silty clay, strongly saline. The dominant shrub type is Greasewood (*Sarcobatus vermiculatus*). Soil surface at the time of survey showed evidence of desiccation cracking. This phenomenon, characterized by the formation of cracks and soil clumps, is common when saline soils with a high clay content dry out.

By comparing field observations with Burton and Farrell's 2020 photographs, it appears some of the shrubs located on the roadside were damaged by mechanical equipment (Images 20 and 21). The historic fence posts and barbed wire remained intact and showed no additional signs of damage. No equipment tread marks were visible at the time of this survey.



Images 20 and 21. Comparison of shrubs beyond fence line in Burton and Farrell 2020:Figure 42 (top) and NPS's 2021 condition assessment (bottom).

The most obvious alteration is a shallow depression measuring approximately 7’ x 7’-6” at its widest, marking the location where the stone was removed (Figure 3 and Image 22). No historic artifacts were observed in the depression. Along the depression’s south side is an area where sediment washed out and collected. Elevation points were taken around the depression, in its center, and in the wash out zone. As seen in Figure 4, the depression at its center dips on average to around 3.6”-below the surface of the surrounding area. Further erosion around the depression is a concern as the backfill settles.

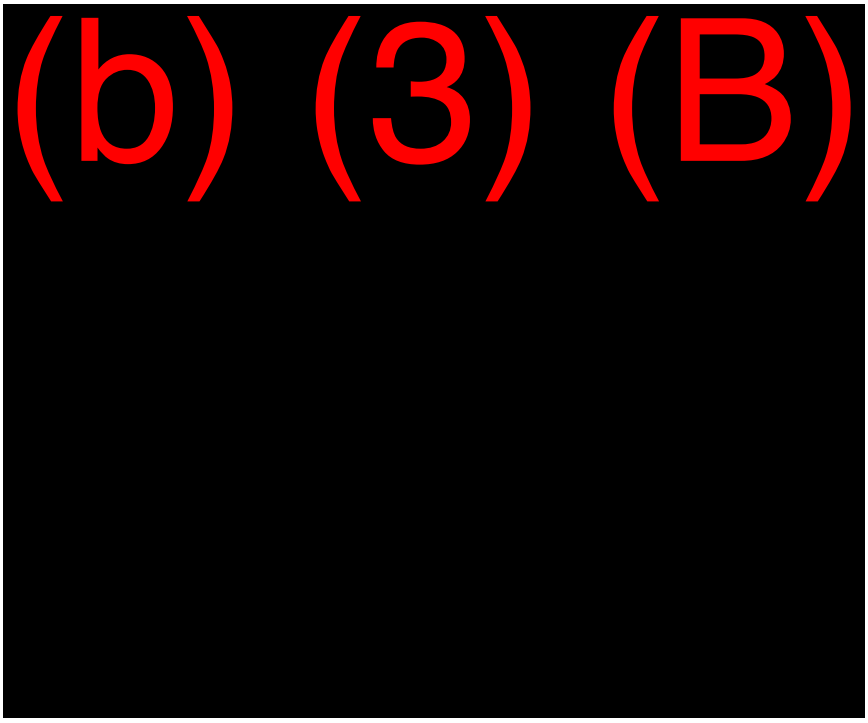


Figure 4. Close-up of core survey area with elevation points (feet).

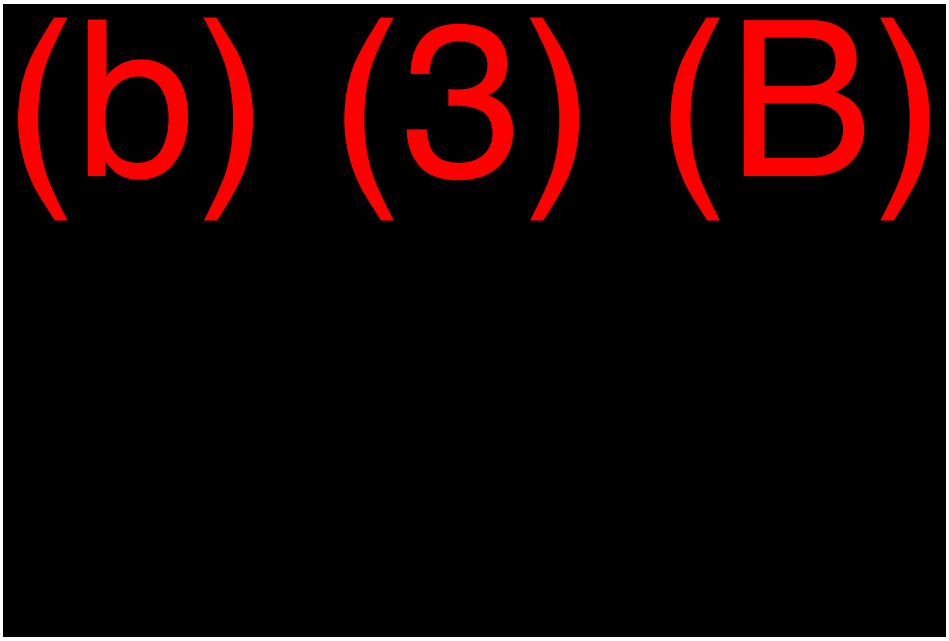
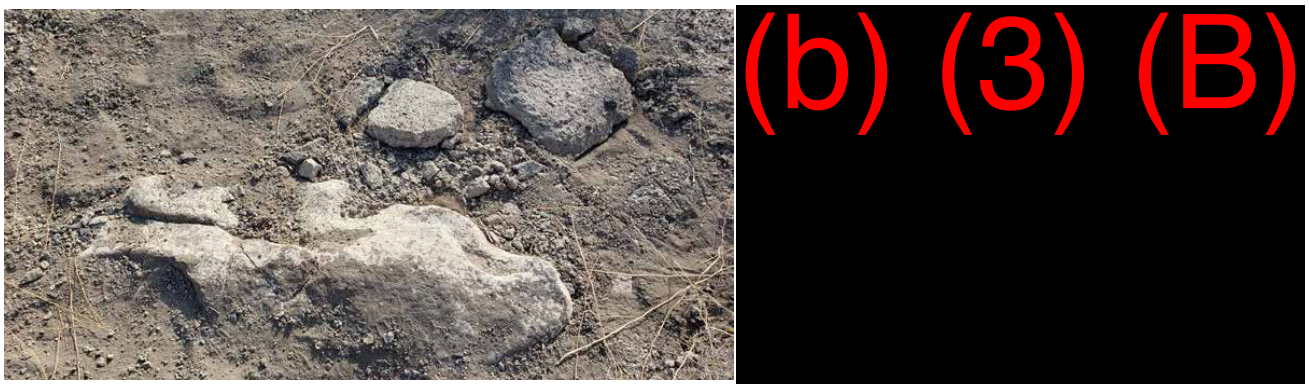


Image 22. Depression extent marked by yellow pin flags with wash out behind white board and debris zone further east.

Adjacent to the depression is a cluster of concrete and stone debris. This pile consists of approximately 40-50 fragments of concrete, 10 fragments that may have originated from the removal of the stone, and 5 small basalt cobbles (compare Images 23 and 24). Included in this count are the three large concrete pieces and concrete bits documented by Burton and Farrell in 2020. It is possible that some stone fragments and basalt cobbles may be new additions that are associated with the stone's July 2021 removal (see Images 23 and 24 for comparison). Basalt and concrete were incorporated into decorative features elsewhere at Topaz to construct ponds, monuments and markers, gardens, stoops, and paths.[22]



Images 23 and 24. Comparison of debris zone: Burton and Farrell 2020: Figure 45 (left) and NPS December 2021 (right).

In addition to the debris, several wood stake fragments and one complete wood stake were documented nearby. Burton and Farrell's report also identified wood stakes near the stone, which they suggested likely came from more recent road construction activities.[23] This is plausible given their presence elsewhere along the western fence line as it parallels the road. Also of note is Ellis' 2001 survey which documented numerous wood stakes, including some that were used near blocks to border raised flower beds or walkways. Not far from the site where the stone was removed, Ellis documented a low earthen mound with wood stakes.[24]

No back dirt piles were present from the stone's removal. The soil appears to have been returned to the hole and additional soil was used from the surrounding area. Shrubs to the east of the depression show soil build-up at their bases. TMB staff confirmed that the surface around these shrubs was scraped to help backfill the depression (see "Pushed Dirt" in Figure 2).[25]

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22. Sheri Murray Ellis, "Site Documentation and Management Plan for the Topaz Relocation Center, Millard County, Utah," SWCA Cultural Resources Report No. 01-154A, prepared for the Topaz Museum Board, Delta, Utah, with funding from the J. Paul Getty Trust and the Topaz Museum Board, (Salt Lake City, Utah: SWCA, Inc., Environmental Consultants, January 13, 2002), 13, 15, 20, 32, 38, Appendix B."
23. Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 26.
24. Sheri Murray Ellis, "Site Documentation and Management Plan for the Topaz Relocation Center, Millard County, Utah," SWCA Cultural Resources Report No. 01-154A, prepared for the Topaz Museum Board, Delta, Utah, with funding from the J. Paul Getty Trust and the Topaz Museum Board, (Salt Lake City, Utah: SWCA, Inc., Environmental Consultants, January 13, 2002), 17, 21-22, 38, Appendix B.
25. Jane Beckwith, Topaz Museum Board Director, Delta, Utah, in person communication to Skylar Bauer, National Park Service, Denver, Colorado, December 1, 2021.

The NPS research team identified two colorless bottle glass fragments and shell fragments (Image 25) in the area between the depression and the fence line. One colorless bottle glass is an unmarked, curved body fragment (Image 26) while the other is a colorless bottle glass base embossed with a Hazel-Atlas Glass Company mark (Image 27). The Hazel-Atlas Glass Company was established in 1902 and operated in Wheeling, West Virginia, until 1964.[26] Five smaller concrete fragments were also scattered away from the depression and debris zone (see Figure 2). In contrast, Burton and Farrell's 2020 findings noted an absence of other concrete fragments surrounding the stone area and no historic artifacts.[27] The removal of the stone and/or the intense flooding activity that occurred in Delta, Utah, in August 2021 are likely responsible for the presence of these artifacts and scattered concrete fragments.

Image 25. Shell fragments.

Image 26. Colorless bottle body fragment near survey area's northern fence post.

Image 27. Colorless round bottle glass base with Hazel-Atlas Glass Company mark embossed with "/A\ 6754 15".

26. Julian M. Toulouse, Bottle Makers and Their Marks (New York: Thomas Nelson, Inc., 1971), 239-240.
27. Jeffrey E. Burton and Mary M. Farrell, "The Power of Place James Hatsuaki Wakasa and the Persistence of Memory" (Los Angeles: Discover Nikkei, 2021), 26.

5.0 Resource Stewardship Recommendations

5.1 Recommendations for the Stone Associated with the Monument

The most immediate step that can be taken to ensure the stability of the stone associated with the monument in its current condition is to make sure the environment in which it is stored is not causing or exacerbating damage or deterioration.

While it remains outside in the Topaz Museum courtyard, the stone should continue to be sheltered by the small metal shed structure that was constructed for that purpose. However, ventilation holes should be drilled in the north and south sides of the shed to encourage air flows through the shed interior. This will help to regulate the internal temperature of the shed and protect the stone from extreme thermal loads and temperature fluctuations. Although the area where the stone is stored was not subjected to long periods of direct sunlight in late November, this will change during the spring and summer months and heat due to prolonged sun exposure will be amplified on the shed interior. Proper ventilation will help to alleviate this thermal stress.

The addition of a fixed base for the existing shed structure being used to protect the stone is also recommended and would provide additional stability, ventilation, and resistance to wind produced uplift for the existing structure. This base should be constructed with pressure treated lumber, if possible, due to its perennial contact with potential ground moisture. Please reference Appendix D for measured drawings and a narrative description of the proposed base's construction. Such a base would allow for stability and resistance against wind produced uplift. In addition, the gaps provided by the 2" x 2" blocks in the recommended new base design should allow air flow to reduce condensation and surface mold or decay and yet still protect against snow, moisture, and direct wind.

For longer term storage, the stone should remain resting on the surface that is currently nearest the ground. To alleviate as much pressure as possible from this surface, the stone should be removed from the pallet and carpet fragment on which it currently sits and placed in a low wooden frame filled with pea gravel or a material with similar sized particles and drainage capabilities. The frame should be deep enough that when the stone is placed inside, it does not sink low enough to touch the ground surface beneath. A medium weight, permeable, nonwoven geotextile fabric should be placed on top of the gravel layer to protect the stone from abrasion. This material must allow water to pass through it so it can drain away through the gravel layer, and it must also dry easily so the stone does not end up in prolonged contact with damp material. This system will distribute the weight of the stone across the entirety of its bottom surface and prevent pressure points from developing. The yellow strap that is currently around the stone should also be removed as part of this process.

In addition to recommendations for the physical treatment of the stone, there are also important considerations for how to manage the intangible factors that contribute to the stone's significance. There should be consultation among key stakeholders to better understand how the value and significance of the stone is defined. The significance may be with the stone itself as an artifact that belongs in a museum, or it may be more closely connected to its role as a monument on the physical site and location from which it was removed. These are two possible considerations, although there are many more. Future preservation strategies for the stone will depend upon clearly defining these values and significance so that future management decisions support and enhance them.

Other decision points affecting the stone's preservation that would benefit from robust consultation with stakeholders include decisions about how and where the stone will be stored, whether indoors or outdoors, in public or in private, displayed and interpreted or not. Future preservation treatment decisions will out of necessity be dependent upon the answers to many of these questions. It is important that these decisions are made strategically through a collaborative decision-making process that takes the philosophies and concerns of key stakeholders into account and builds support for the final outcome.

5.2 Recommendations for the Site Associated with the Monument

The NPS research team strongly recommends that the site associated with the monument is stabilized and that a site condition monitoring plan is developed to preserve and protect it. Archaeological survey and testing at the site are not immediately necessary but would provide an opportunity for learning more about the site and impacts from the stone's removal. Proactive archaeological survey could also be beneficial should there be plans to interpret the site leading to increased foot traffic and impacts to the surrounding area. The NPS research team share the following recommendations as options for consideration, recognizing that there are other possibilities beyond those presented below which the TMB may wish to pursue.

Erosion is a primary concern at the site as evidenced by a wash out that extends into the depression. Priority should be given to the immediate stabilization of the site to prevent further damage. Stabilization would involve lining the depression with geotextiles such as landscaping cloth that is permeable and then backfilling over the lining with sediment until it is level with the surrounding surface. Added sediment should be locally sourced and brought to the site, but should not originate from within Topaz.[28] An attempt should be made to make sure there are no invasive seeds within the sediments. The recommended lining would act as a barrier so off-site sediment is isolated from the underlying soil associated with the location. Keeping these two contexts separate is important should future archaeological work be undertaken at the site. Photographs should be taken before, during, and after stabilization efforts and should be part of a report documenting treatment of the area that can be added to the site's record.

28. Using soil from the site would cause unnecessary damage and destruction. On-site soil should not be used unless there are existing spoils from a previously excavated area that have been documented by a qualified archaeologist and cleared by them for re-use on site.

A site monitoring plan is highly recommended so that there is an agreed upon process and repeatable protocol for tracking and managing the site's condition over time. Systematic monitoring would seek to identify unanticipated effects and discoveries resulting from the recommended stabilization efforts and future visitation. This plan should be developed in conjunction with stabilization efforts outlined earlier. Monitoring plans can vary but as an example they could include the following: site background, monitoring objective, description of monitor's responsibilities and their training requirements, identification of area and important features to be monitored, identification of when and how frequently monitoring should occur, and instructions for how the condition will be documented (photographs, template form, reporting responsibilities/needs).

Should a decision be made to interpret the site which may result in increased visitation to this location and an increased potential to cause visitation-related damage, then it is recommended that a qualified archaeologist with experience working at Japanese American confinement sites be consulted early in the planning process. The archaeologist should have an opportunity to prepare a research design that considers potential visitation impacts and recommends data recovery methods to mitigate. An archaeological research design should address a site's historic context, previous research, research goals and questions that define the scope of the proposed project, what area will be investigated, methods for data collection (including an artifact collection policy and curation plan), and other relevant information.[29] If warranted, the archaeologist could also assist the site steward with updating the monitoring plan to address increased visitation concerns.

If, through consultation with stakeholder groups, the TMB identifies the need for more archaeological work at the site, even without added interpretation, a research design prepared by a qualified archaeologist would still be needed. Even with the stone's removal, opportunities remain to learn more about the site of the Wakasa Monument. If archaeology can help answer lingering questions, then an archaeologist should prepare a research design that identifies the research goals and the methods best suited to address them.

In considering these recommendations for the stewardship of the site associated with the monument, it is important that there are opportunities to build support among stakeholders regarding how this location and artifacts found there should be treated and if further archaeological investigation is appropriate.

29. If a proposed project is a Federal undertaking, then Section 106 of the National Historic Preservation Act (NHPA) will apply. A Federal undertaking is a project, activity, or program either funded, permitted, licensed, or approved by a Federal Agency. The lead federal agency will consider impacts to the historic property and consult with the appropriate entities. The Advisory Council on Historic Preservation requires that federal agency officials notify NPS (acting on behalf of the Secretary of the Interior) of all consultations involving NHLs.

6.0 Conclusion

The National Park Service Heritage Partnerships Program appreciates the opportunity to provide technical preservation assistance supporting the stewardship of the Central Utah Relocation Center (Topaz) National Historic Landmark and the resources associated with the Wakasa Monument. At the request of the Topaz Museum Board, this resource condition assessment was prepared by the National Park Service to document current resource conditions and provide recommendations for addressing resource management challenges associated with the Wakasa Monument. The development of this report also responds to a request from the Wakasa Memorial Committee made in a September 7, 2021 letter to the Topaz Museum Board.

As a private landowner, the Topaz Museum Board is under no legal obligation to carry out any of the recommendations proposed in this report. The intention of this condition assessment report is to provide recommendations that can be implemented immediately or used as tools to facilitate additional dialogue between the Topaz Museum Board and many of the key stakeholder and partner groups concerned about the future stewardship of resources associated with the Wakasa Monument at Topaz.

In considering treatment recommendations or future management decisions for resources associated with the Wakasa Monument, fundamental questions about the significance of these resources should be explored. As stated earlier in this report, there should be opportunities for consultation among key stakeholders to better understand how the value and significance of the stone associated with the monument are defined. The significance of the stone may be with the stone itself as an artifact that belongs in a museum, or it may be more closely connected to its role as a monument on the physical landscape and site from which it was removed. Future preservation strategies for the stone will depend upon clearly defining these values and significance so that management decisions support and enhance them.

Likewise, questions about the site associated with the monument and the potential for future archaeological research should be considered in collaboration with key stakeholders. Will the site associated with the monument be interpreted and is visitor access to this location appropriate? If so, this could raise new resource management concerns that would need to be addressed. Would additional archaeological investigation and research at this location be appropriate? If so, an appropriate research strategy and collection policy would need to be clearly defined for future archaeological investigations. Engaging key stakeholder groups in these types of discussions, to better understand both the historic significance as well as the cultural significance of the Wakasa Monument and its associated resources, are important steps in a collaborative resource management and decision-making process.

The National Park Service National Historic Landmarks program, through the Heritage Partnerships Program, looks forward to continuing to work with the Topaz Museum Board by providing technical assistance in the stewardship of resources at Topaz and honoring the legacy of this nationally significant place.

7.0 Bibliography

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Appendix A: National Park Service Section 106 Consultation Materials

United States Department of the Interior

NATIONAL PARK SERVICE
IMDE-HPP
PO Box 25287
Denver, Colorado 80225-0287

IN REPLY REFER TO:
H(34) (IMDE-HPP)

Dr. Christopher Merritt
Utah Division of State History
300 Rio Grande
Salt Lake City, UT 84101

RE: Technical Assistance, Documentation in the vicinity of Wakasa Monument Site, Central Utah Relocation Center (Topaz) National Historic Landmark, Delta, Millard County, Utah

Dear Dr. Merritt,

In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) and 36 C.F.R. Part 800, we seek your comments regarding plans to document the location and excavated stone in the vicinity of the Wakasa Monument Site, which was identified within the Central Utah Relocation Center National Historic Landmark (NHL) in Millard County, Utah.

Designated an NHL in 2007, the Central Utah Relocation Center Site (also referred to as the Topaz Relocation Center or Topaz) is located in west central Utah just north of the town of Delta and 140 miles southwest of Salt Lake City. Topaz was one of ten relocation centers constructed in the United States during World War II for the purpose of detaining Japanese Americans and people of Japanese descent. More than 11,000 people passed through the center and, at its peak, it housed over 8,000 internees. Today, Topaz is owned and managed by the Topaz Museum and the NHL consists of two standing monuments, building foundations, roads, gravel walkways, agricultural buildings, portions of the perimeter fence, and landscaping.

Recent research identified the potential location of another monument, the Wakasa Monument. On the evening of April 11, 1943, James Hatsuaki Wakasa was shot and killed by military police near the southwestern extents of Topaz's fenced enclosure. In the weeks following, a group of issei agricultural workers constructed a monument of stone and concrete nearby. Topaz officials determined the monument was in violation of an agreement they had with a committee of internees and had it torn down. It is unclear from records whether it was removed entirely, partially, or left dismantled in place.

In response to the recent discovery of a large stone in the vicinity, the Topaz Museum removed it from its original context on July 27, 2021 and disturbed the associated Memorial Site context in the process. In November 2021, the Museum requested technical assistance from the National Park Service Heritage Partnerships Program (HPP). HPP administers the National Historic Landmarks program in the region that includes Utah. HPP agreed to provide this assistance with the stipulation that the museum invite representatives from the Wakasa Committee to the site in order to observe this field work and that both parties consult on a future vision and direction for honoring Mr. Wakasa and protecting this location.

HPP proposes conducting a condition assessment of the stone associated with the Wakasa Monument and the Memorial Site. The primary goal is to document the condition of the stone and site, offering recommendations for preservation of both. The stone associated with the monument would be examined by an NPS Architectural Conservator who would visually examine and photograph the stone, looking for evidence of historical markings, masonry, damage, and any other clues that may convey its significance and condition. The Memorial Site would be mapped and photographed by an NPS Archeologist with the HPP. This work will involve a pedestrian survey of the immediate area (see attached APE) and documentation of culturally associated materials or features visible on the surface, in addition to areas of disturbance from the stone's removal. No ground disturbance will occur. Given the significance of this site, it is important that there is consensus among stakeholders in regards to how this location and artifacts found there should be treated and if further archeological investigation is appropriate. Once documentation is complete, the NPS will provide the SHPO and consulting parties with a report sharing findings and recommendations for the protection and preservation of Wakasa Monument and Memorial Site.

We respectfully request an expedited review of this project and seek your concurrence in this finding of *no adverse effect*. The NPS hopes to conduct the proposed baseline documentation of the Monument and Site the week of November 29, 2021. The National Park Service will also submit this request through the Utah State Historic Preservation Office's e106 system to log this new correspondence, but due to the time sensitive nature of this request, I wanted to send it directly to you. If you have any questions regarding the project or the Heritage Partnerships Program, please contact archeologist Skylar Bauer at Skylar_Bauer@nps.gov or (303) 969-2842, or me at Justin_Henderson@nps.gov or (303) 969-2540.

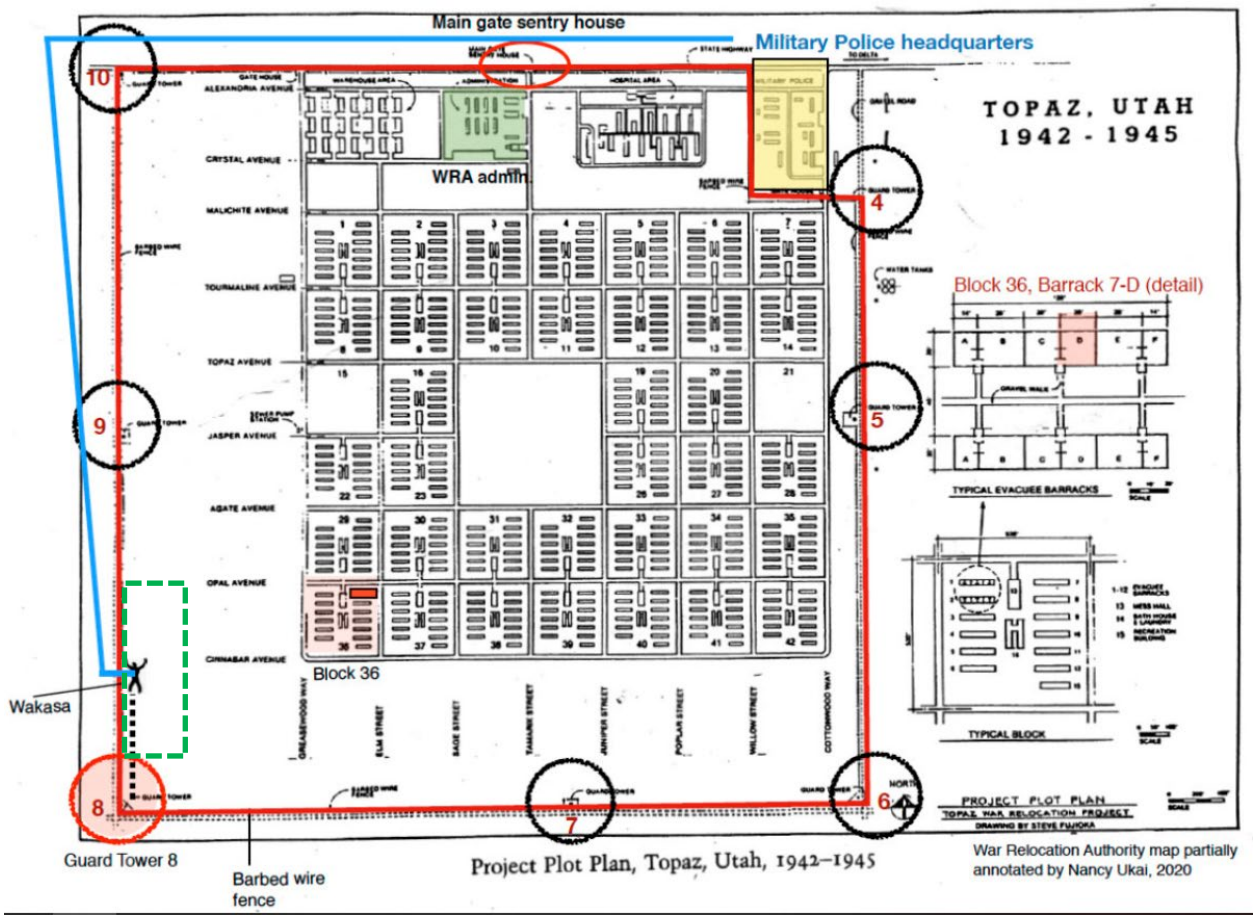
Sincerely,

Justin Henderson
Program Manager
Heritage Partnerships Program

Enclosures:
Area of Potential Effect

cc:
Topaz Museum topazmuseum@frontiernet.net
Wakasa Memorial Committee WakasaMemorial@gmail.com
National Trust for Historic Preservation RNieweg@savingplaces.org

APE: Maximum extent to be pedestrian surveyed (see dotted green box; image from https://50objects.org/object/the-demolished-monument/)



Appendix B: Utah State Historic Preservation Office Section 106 Concurrence

Spencer J. Cox
Governor

Deidre M. Henderson
Lieutenant Governor

Jill Remington Love
Executive Director
Utah Department of Cultural and Community Engagement

Utah Division of State History

Jennifer Ortiz
Director

Christopher Merritt
State Historic Preservation Officer

November 22, 2021

Justin Henderson
Program Manager
Heritage Partnerships Program
National Park Service Intermountain Region
12795 West Alameda Parkway
PO Box 25287
Denver, CO 80225-0287

RE: NPS Technical Assistance, Documentation in the vicinity of Wakasa Monument Site, Central Utah Relocation Center (Topaz) National Historic Landmark, Delta, Millard County, Utah

For future correspondence, please reference Case No. 21-2376

Dear Mr. Henderson,

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced undertaking on November 15, 2021.

We concur with your determination of "No Adverse Effect" for this undertaking.

This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or by email at cmerritt@utah.gov.

Sincerely,

Christopher W. Merritt, Ph.D.
State Historic Preservation Officer

Utah Department of Cultural & Community Engagement
3760 South Highland Drive • Salt Lake City, Utah 84106 • history.utah.gov

Appendix C: Graphic Documentation of Stone Conditions

North Face

Surface Loss
Loose or Friable Pieces
Blue-gray Deposit
White Mineral Deposit
Lichen

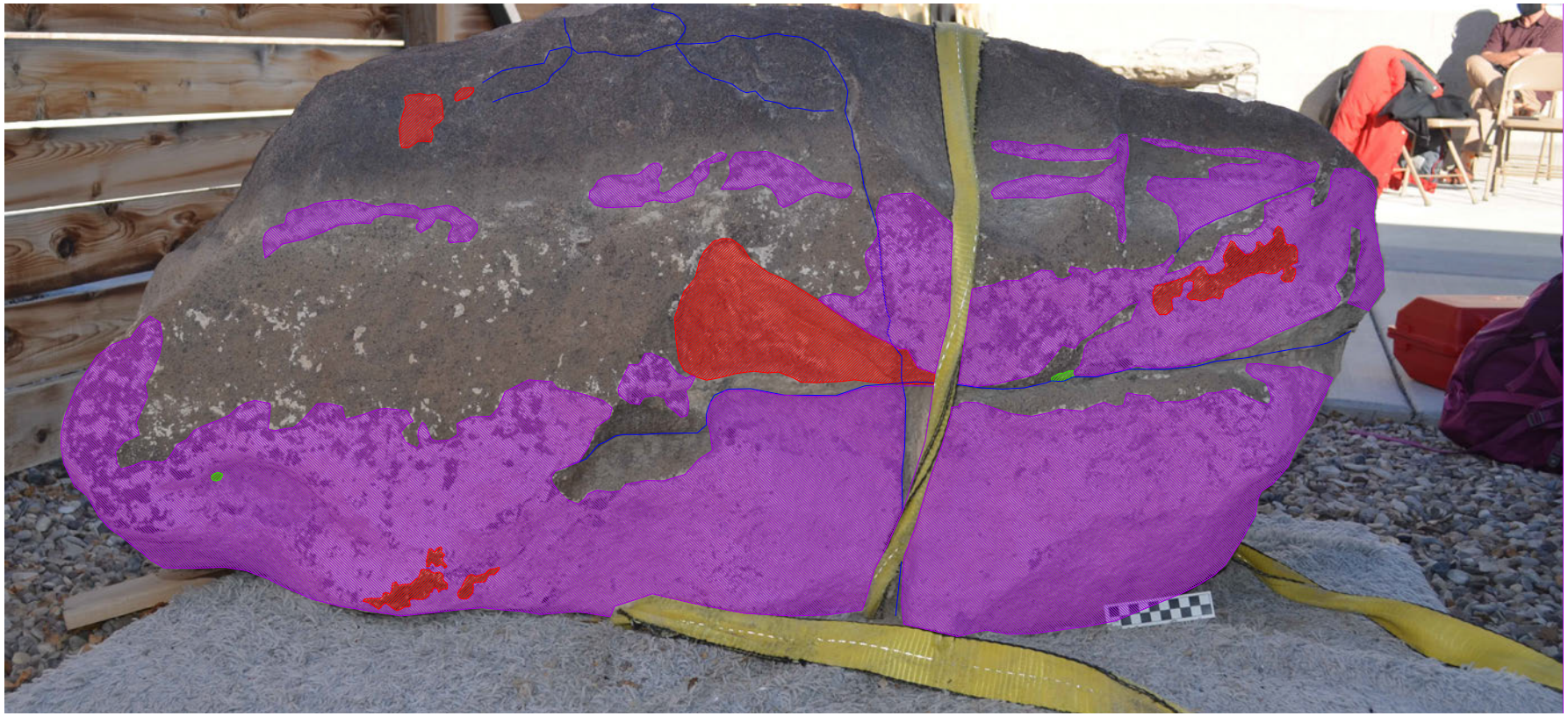
Fracture
Vegetation

Note: Conditions are represented as accurately as possible. At this scale not all instances of every condition can be illustrated. Where a condition is present over a large area but may not be continuous (ex. coating loss), the entire area may be marked with that condition.

West Face

- Surface Loss
- Loose or Friable Pieces
- Blue-gray Deposit
- White Mineral Deposit
- Lichen
- Fracture
- Vegetation

Note: Conditions are represented as accurately as possible. At this scale not all instances of every condition can be illustrated. Where a condition is present over a large area but may not be continuous (ex. coating loss), the entire area may be marked with that condition.



South Face

- Surface Loss
- Loose or Friable Pieces
- Blue-gray Deposit
- White Mineral Deposit
- Lichen
- Fracture
- Vegetation

Note: Conditions are represented as accurately as possible. At this scale not all instances of every condition can be illustrated. Where a condition is present over a large area but may not be continuous (ex. coating loss), the entire area may be marked with that condition.

East Face

Surface Loss

Loose or Friable Pieces

Blue-gray Deposit

White Mineral Deposit

Lichen

Fracture

Vegetation

Note: Conditions are represented as accurately as possible. At this scale not all instances of every condition can be illustrated. Where a condition is present over a large area but may not be continuous (ex. coating loss), the entire area may be marked with that condition.

North Top Face

Surface Loss

Loose or Friable Pieces

Blue-gray Deposit

White Mineral Deposit

Lichen

Fracture

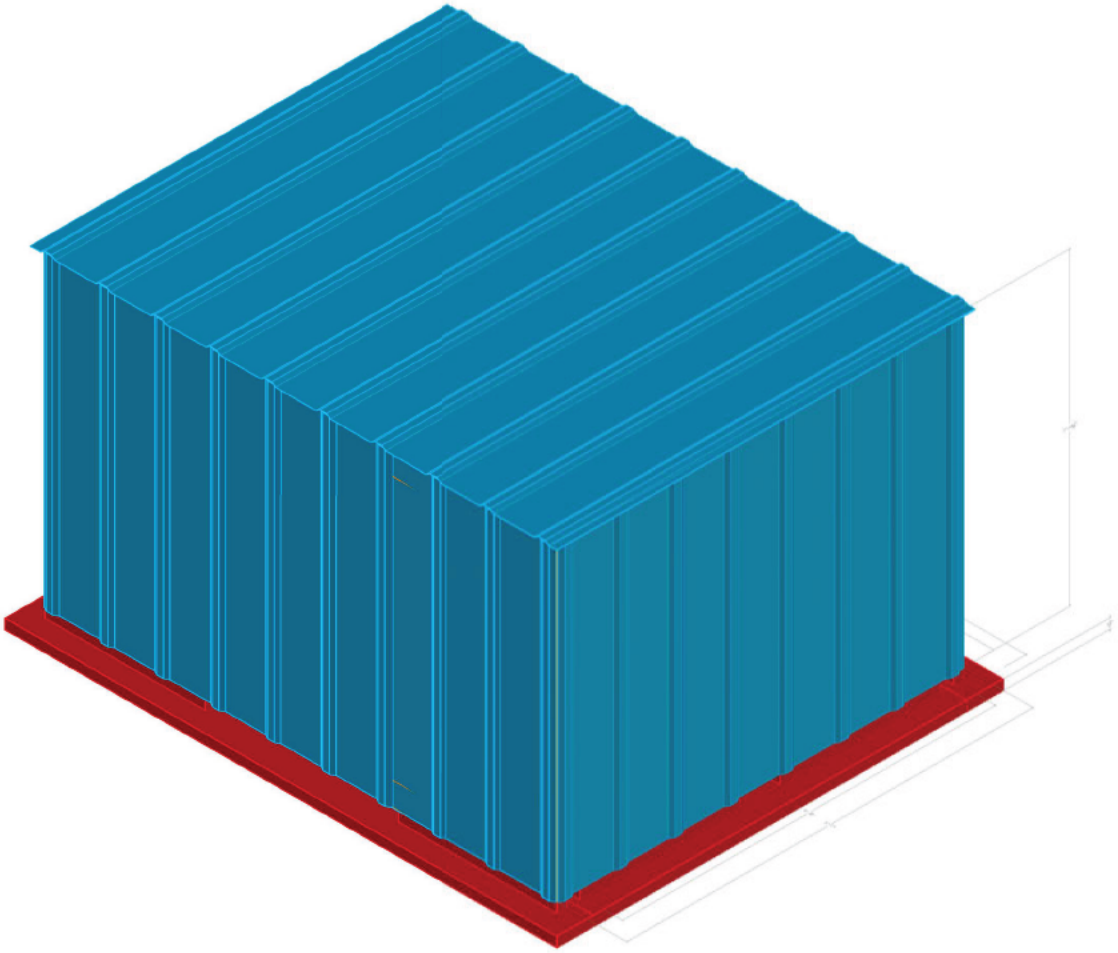
Vegetation

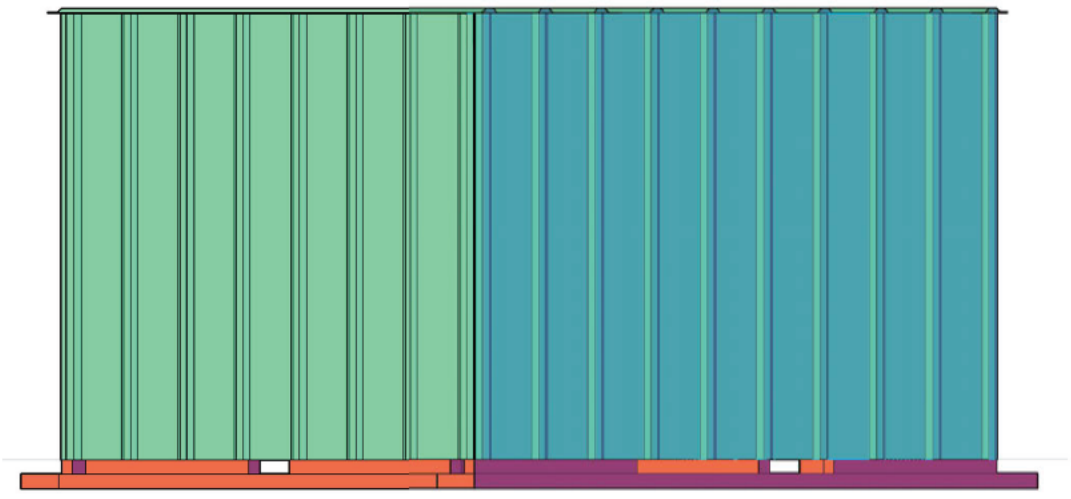
Note: Conditions are represented as accurately as possible. At this scale not all instances of every condition can be illustrated. Where a condition is present over a large area but may not be continuous (ex. coating loss), the entire area may be marked with that condition.

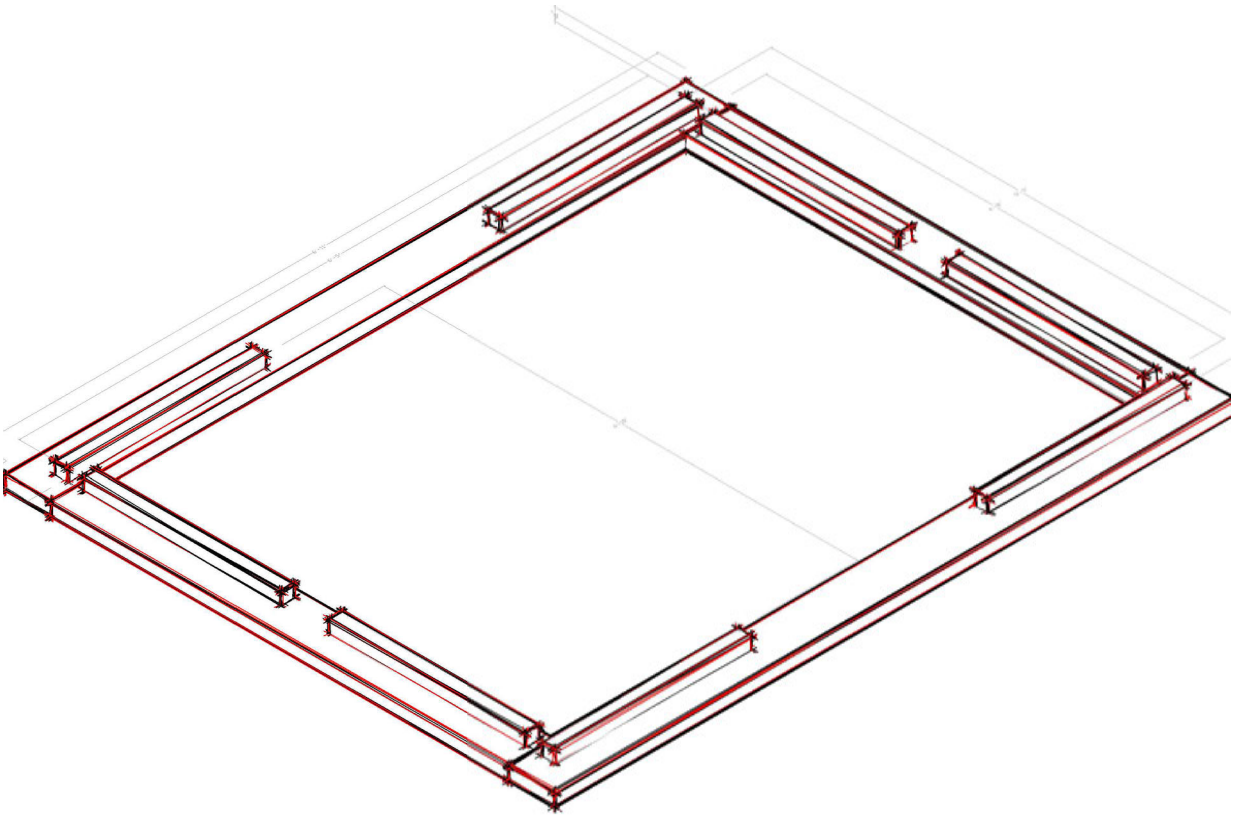
Appendix D: Photographs and Measured Drawings of the Storage Structure at the Topaz Museum, Delta, Utah

“Interior of Storage Structure, turned onto its south-side.

Roof of Storage Structure







Base Construction Plans, Narrative Description

The recommended base addition to the existing shed structure being used to protect the stone associated with the Monument should provide additional stability, ventilation, and resistance to wind produced uplift. The base should be made up of pressure treated lumber, if possible, due to its perennial contact with potential ground moisture.

The recommended base is constructed with 4 - 2" x 2" dimensional blocks (1.5” x 1.5” actual) connected to the existing 2" x 4"s of the box shed and 4 – 2" x6" dimensional lumber boards (1.5” x 5.5” actual) laid on their sides forming a rectangle beneath the existing box shed.

The 2"x 2" dimensional blocks should be cut to 2’ lengths and each connected via 3 screws inserted directly beneath and into the existing 2" x 4" boards at the bottom of the box shed. These screws should be at least 2.5” in length to hold a 1” bearing into the existing 2" x 4" boards. The location of connections should be at the midpoint of each 2" x 2" dimensional block along a centerline and at ¾” from each end. The placement of the 2"x 2" dimensional blocks should be flush with the ends along the long sides (77” long sides), thus leaving a 2’-5” space open at the center. On the short sides (61” long sides), the 2" x 2" dimensional blocks should leave a 2” gap at each end from the other 2" x 2" dimensional blocks, thus leaving a 6” space open at the center.

The 2" x 6" dimensional lumber should be placed on its side and initially placed on one long side (77” long side) of the existing box shed so that 3” is exposed from the 2" x 2" dimensional blocks along the entire length of the 2" x 6", as well as 3” exposed at each end. The length of each 2" x 6" along the long sides will be 6’-11”. The 2" x 6" can be mechanically fastened to the 2" x 2" dimensional blocks via L-brackets with ¾” screws at 2” from the ends of each 2" x 2" or fastened with 2.5” screws from underneath each 2" x 6", again at 2” from the ends of each 2" x 2". This will make 4 connections for each 2" x 6". These same dimensions and connections can be repeated for the opposite long side.

Finally, a 2" x 6" can be placed on its side along one short side (61” long side) to butt joint the 2" x 6"s on the long sides and stay flush with each outside edge, thus leaving 3” exposed of the 2" x 6" along its length from the existing 2" x 2" dimensional blocks on the short side. Each 2" x 6" along the short sides will be 4’-8”. Similar connection methods using either L-brackets with ¾” screws or 2.5” screws from underneath, both at 2” from the ends of the 2" x 2" dimensional blocks, should be used on the shorts sides as on the long. This will be repeated for the last remaining short side. 4 connections will be made for each 2" x 6".

The result should allow for stability and resistance against wind produced uplift due to the 3” lip on each side and the 5.5” ground bearing of the 2" x 6"s vs. the 1.5” ground bearing of the existing 2" x 4"s. In addition, the gaps provided by the 2" x 2" dimensional blocks should allow air flow to reduce condensation and surface mold or decay and yet still protect against snow, moisture, and direct wind.

Appendix E: Re-shoots of the Site Associated with the Monument Pre- and Post- stone Removal

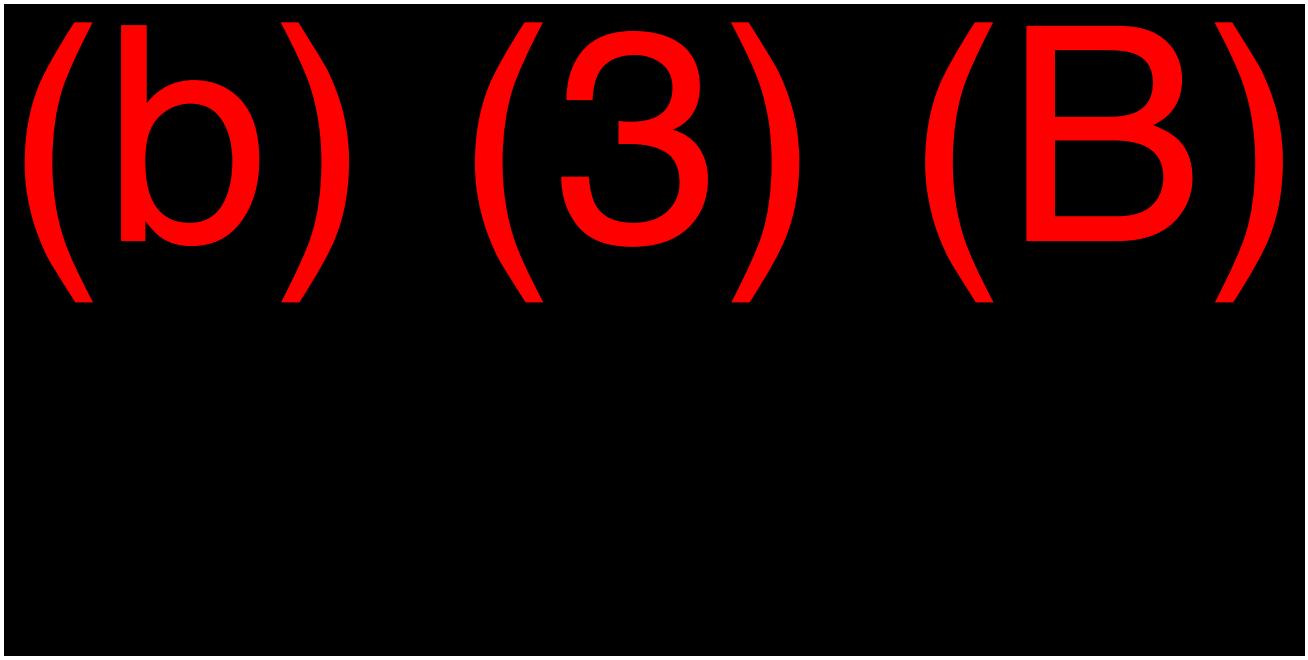


Figure 41 from Burton and Farrell 2020:20.

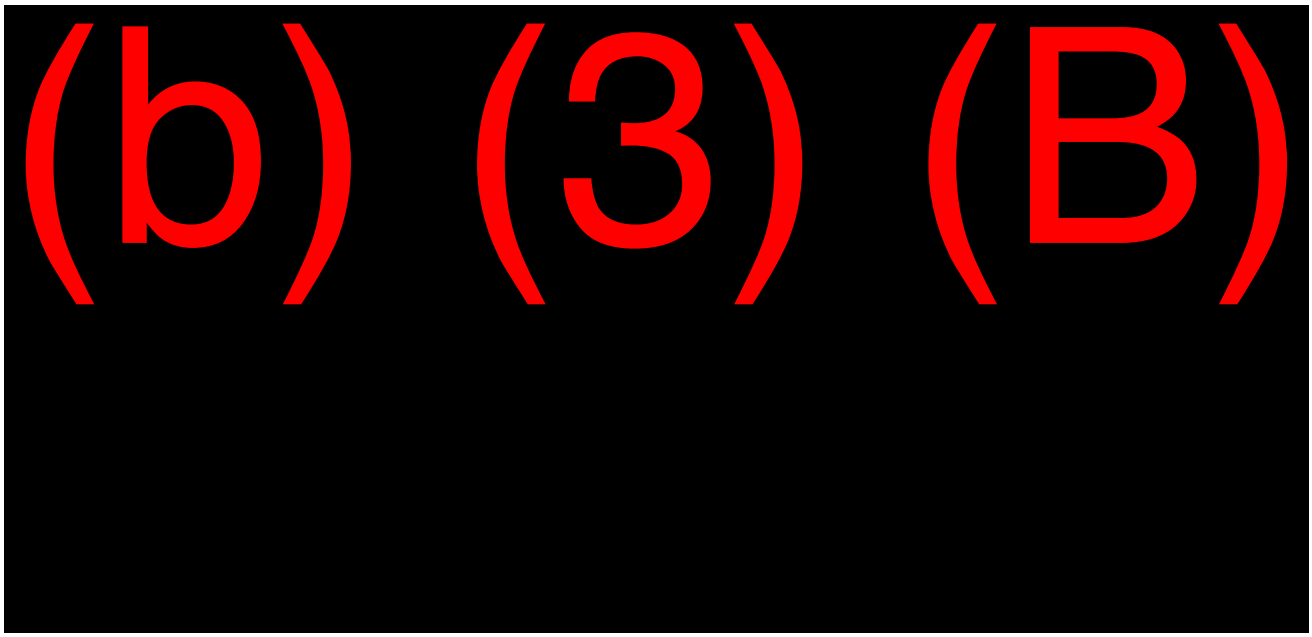


Photo facing north taken at start of NPS documentation on 12/1/2021 (Skylar Bauer NPS). By comparing photos you can see soil removed from around the base of shrubs located northeast of depression. Arrow mimics that see in Figure 41 from Burton and Farrell 2020:20.

Figure 42 from Burton and Farrell 2020:21. Photograph taken before stone removal.

Photo facing west taken at start of NPS documentation on 12/1/2021 (Skylar Bauer NPS). Photograph can be compared with 2020 report photo to see shrubs outside of fence that were impacted by stone removal.

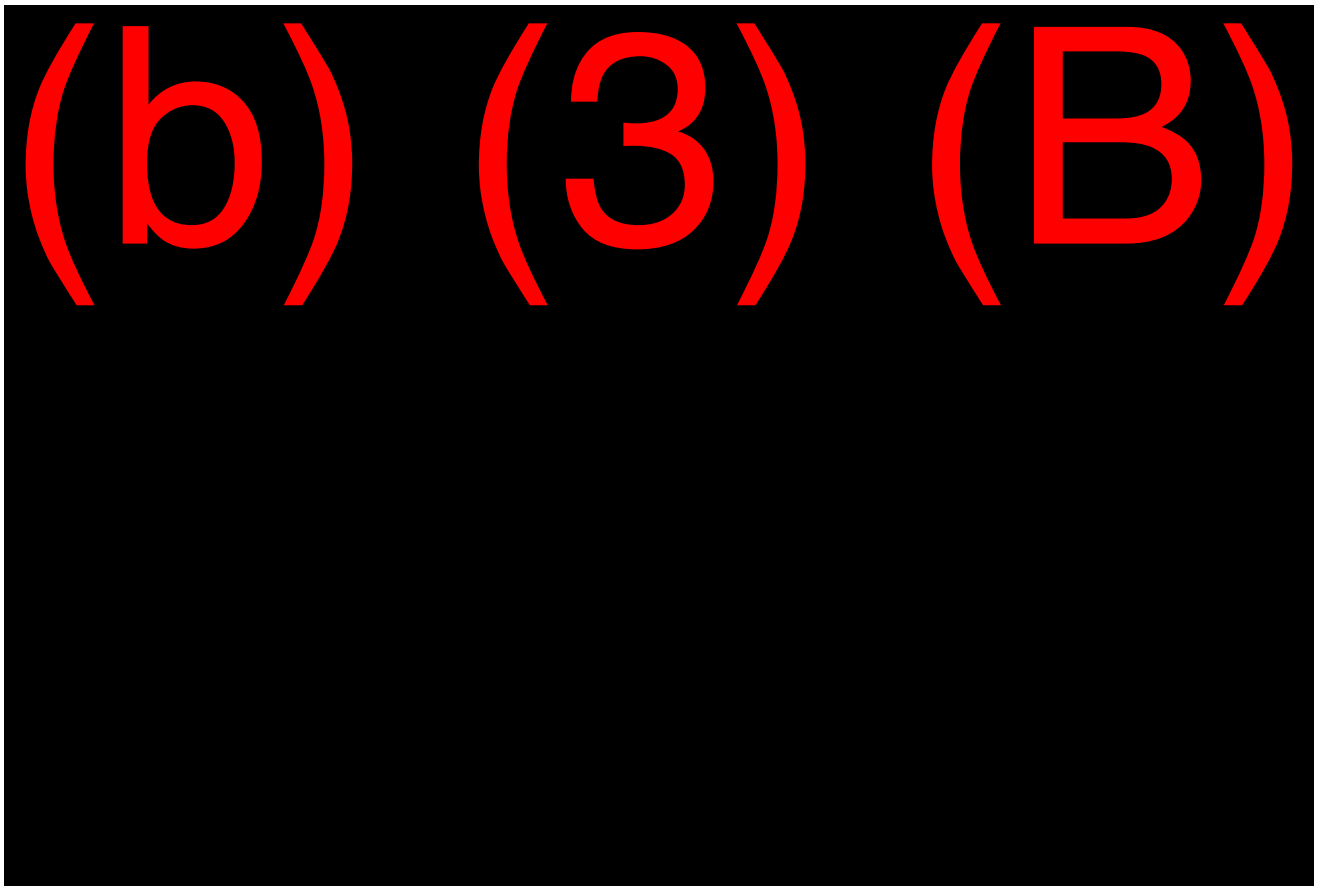


Photo facing west taken at end of NPS documentation on 12/1/2021 (Skylar Bauer NPS).

Figure 45 from Burton and Farrell 2020:24.

Photo facing east taken at start of NPS documentation on 11/30/2021 (Skylar Bauer NPS).

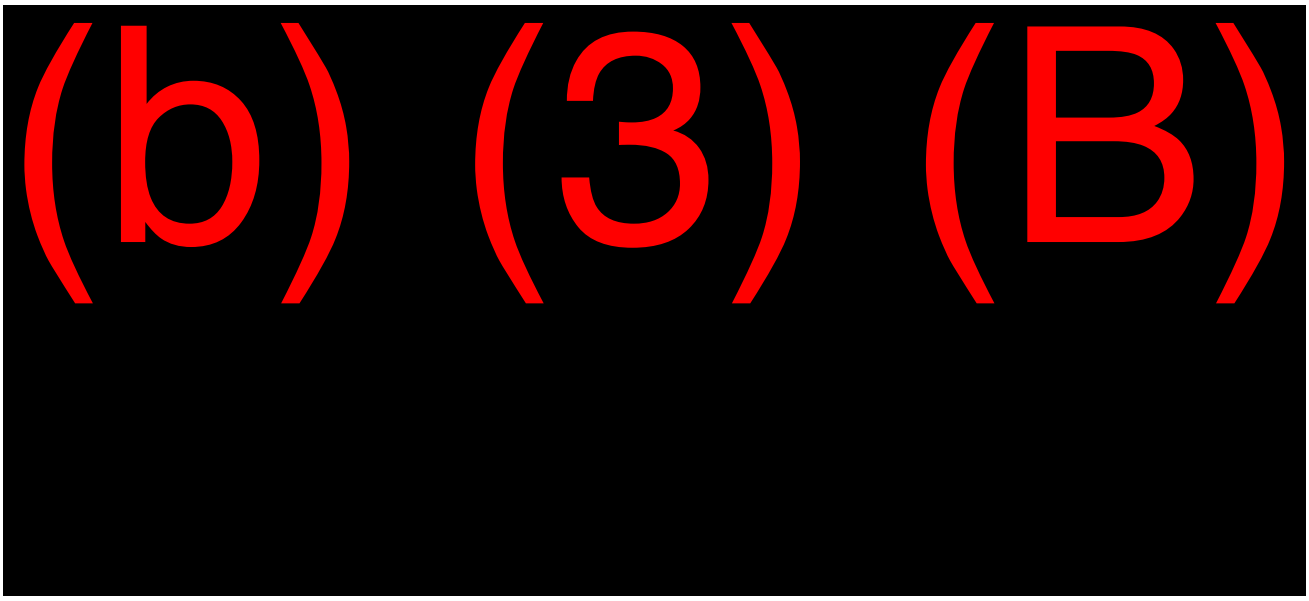


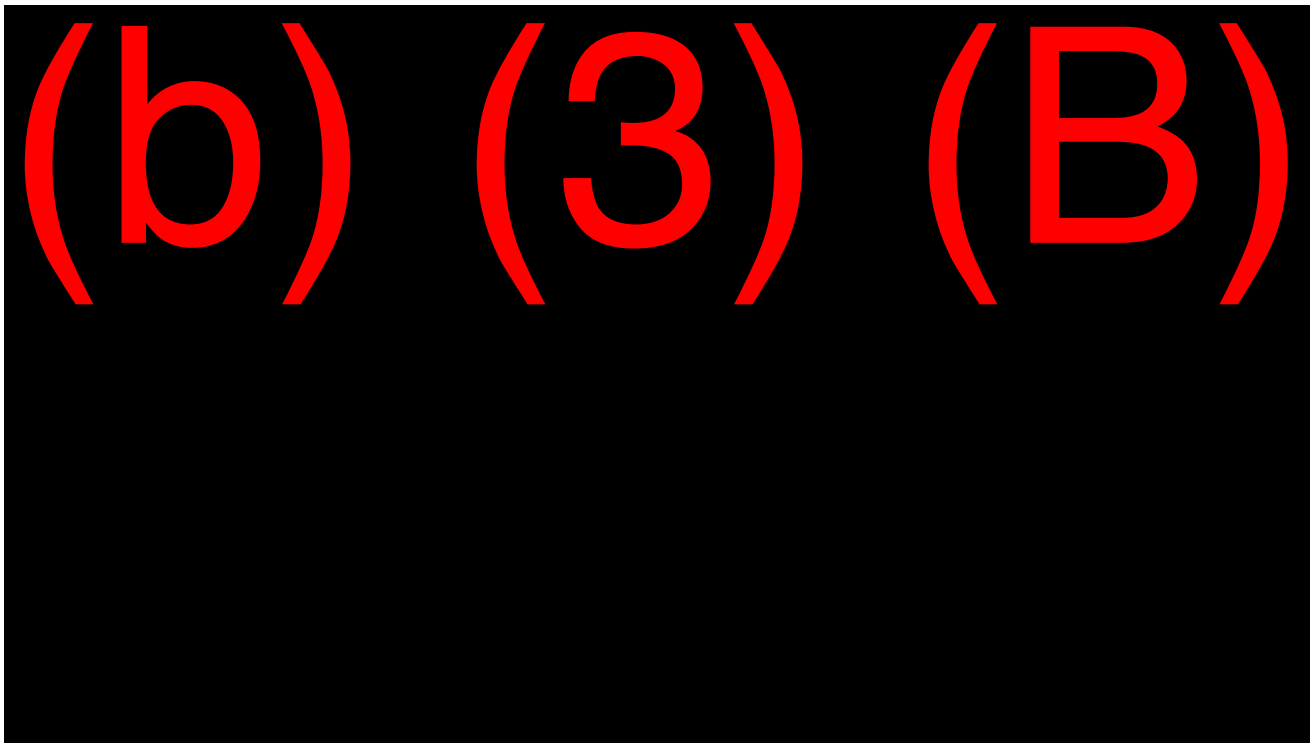
Figure 52 from Burton and Farrell 2020:27.

Photo facing east taken at start of NPS documentation on 11/30/2021 (Skylar Bauer NPS).

Unknown, in Additional Photos Folder Burton. Presumably facing southeast.

(b) (3) (B)

Debris facing west, located east of depression taken on 12/1/2021 (Skylar Bauer NPS).



Post Stone Removal Image, Submitted to the National Park Service on 11/4/2021.

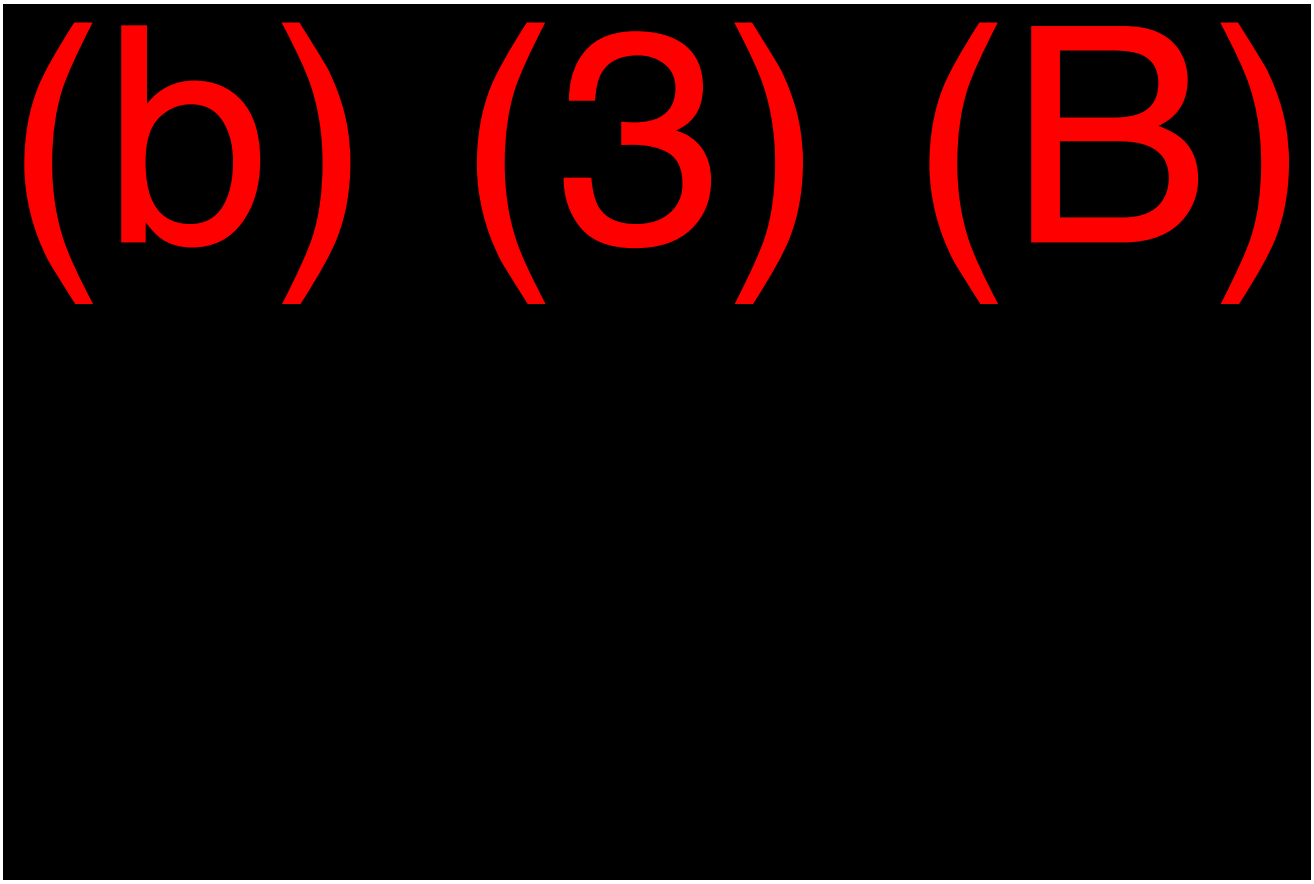


Photo facing northeast taken at start of NPS documentation on 11/30/2021 (Skylar Bauer NPS).

Post Stone Removal Image, Submitted to the National Park Service on 11/4/2021.

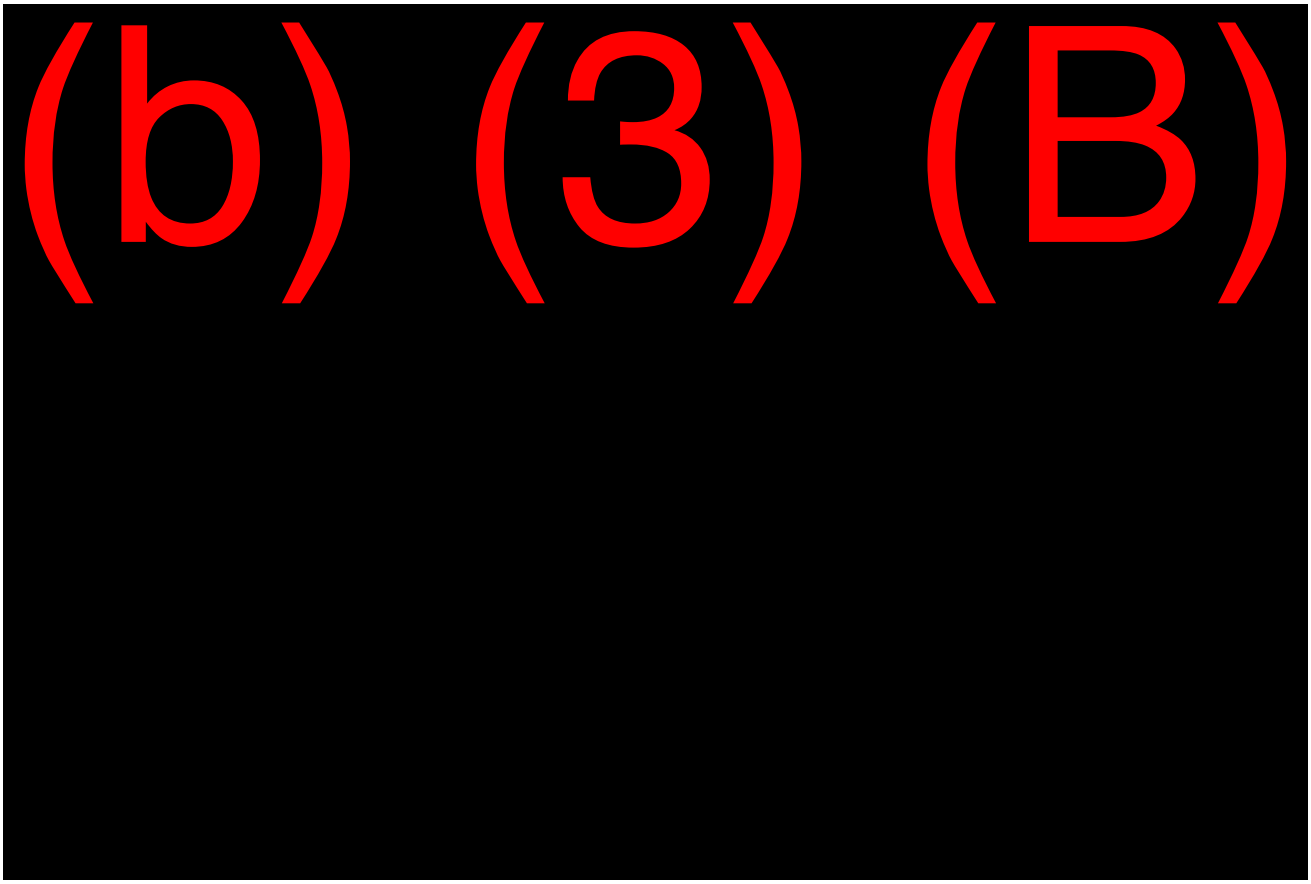


Photo facing northeast taken at start of NPS documentation on 12/1/2021 (Skylar Bauer NPS).

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Nature and Origin of the Wakasa Stone, Topaz Museum, Delta, Utah

Introduction

The Wakasa stone was discovered partially buried inside the fence at Utah's Topaz Internment Camp site in 2020 and interpreted to be part of a memorial erected to commemorate the death of James Hatsuaki Wakasa in 1943. Later, the boulder was excavated and moved to the Topaz Museum in Delta to protect it from further degradation. I was tasked with providing a petrographic description of the boulder to ascertain its composition and to reconstruct some facets of its geologic history based on its external features (Figure 1).

Methods

I studied the stone on two separate occasions in the Topaz Museum, and I have seen the extraction site for the stone and some photos taken during excavation. Its exterior dimensions were measured and multiple digital images acquired of each of its sides, except for the bottom which rests on a pallet and is largely inaccessible. I examined the boulder with a hand lens and I also examined fragments of the boulder with a stereo-microscope to determine its mineralogical composition and texture.

Results

Size. The boulder is about 1.0 by 1.36 by 0.66 m in size with a volume of about 0.47 m^3. Using a typical density for andesite (2300 kg/m^3) that accounts for some of the fractures, the boulder should weigh about 1,080 kg or 2,400 pounds. An unsuccessful attempt was made to construct a three-dimensional digital model of the boulder using multiple photos and photogrammetry software, but the lighting was inadequate (strong shadows in the image) and the base was inaccessible.

Caliche Coating. Careful attention was given to the "white" material that dominates the bottom of the stone as it is oriented now (Figure 1). The material is a thin discontinuous coating. It is less than a millimeter thick in most places and consists of very fine grains of calcium carbonate, based on its color, texture, and reaction to weak acid. Patches of the once more continuous coating have been removed and exposed the underlying rock. Coatings like this form as calcite (and other minerals) precipitate from groundwater in semi-arid environments and are called caliche. Groundwater carries dissolved ions of Ca^{2+} and CO_3^{2-}. As groundwater evaporates, carbonate minerals form on the surfaces of buried rocks.

When the boulder was excavated, this caliche-covered surface was vertical (according to the photos I have seen and statements by Jane Beckwith). The vertical orientation of the coated surface is strong evidence that the boulder was moved from elsewhere to the Topaz site and that it was later buried in this vertical orientation (Figure 1). The coating could not have formed in situ on a vertical surface. The lack of caliche on the lower part of the boulder (in the orientation

it was found) shows that the stone was not buried for a long time. It takes 100s to 1000s of years to develop a caliche coating like that found here, so the time of burial would have to be less than that.

Desert Varnish. The upper part of the boulder is not coated with caliche but has a thin discontinuous coating of desert varnish (a dark iron-manganese deposit). It forms by weathering of rock surfaces exposed to the atmosphere in arid and semi-arid environments. This is another clue that the rock resided for a long time with half of it exposed to the atmosphere where desert varnish formed and the other half buried where caliche formed. Much later, it was moved, rotated, and buried.

Igneous Rock. In places there was no desert varnish or caliche and the nature of the boulder is clearly seen. Based on inspection of the surface with a hand lens and of fragments with a stereo microscope, it is an igneous rock with a fine-grained reddish groundmass and larger phenocrysts (<5 mm across) of white plagioclase and dark pyroxene. There are also rare grains of dark hornblende. The fine grain size shows that it probably originated as a volcanic lava (erupted at the surface) that cooled quickly rather than as a deep intrusion that cooled and crystallized below the surface. The mineral assemblage shows that it is has an andesitic composition. So in short, the boulder is a plagioclase-pyroxene andesite. When already solid lava cools, it contracts, and eventually stress builds to the point that further contraction causes narrow fractures to form. These fractures or joints form vertically and subhorizontally. Such near perpendicular cooling fractures a few 10s of cm long are apparent in the boulder.

Once fractured, the andesite lava flow was weathered and partially decomposed as a fracture-bounded clast separated from the flow. As it weathered, the angular surfaces were rounded and the internal fractures enlarged; in places, the fractures are now a few centimeters deep. A subhorizontal fracture cuts one side of the boulder but dies out inside leaving an unfractured mass. This fracture is intersected by a subvertical fracture that was also enlarged by weathering before the caliche coating formed.

During weathering of the surface exposed to air, desert varnish formed. A thin weathered rind a few mm thick formed on the upper surface of the boulder. Chips of it have fallen off. The lower half of the rounded boulder was buried and caliche formed on it. Much later the boulder was removed from its place of formation, transported to the Topaz site, rotated, and partially buried for a short time scale (less than a few hundred years). Before burial, and perhaps even before transport, chips of the weathering rind and of the light-colored caliche coating were removed. However, I saw no evidence of scuffing (of the exposed surfaces) during its most recent move. There is no evidence of abrasion or scraping, no gouges or scratches, no streaks left by metal implements, to indicate any rough handling or dragging during its move from the Topaz site to the Museum.

Microscope examination and chemical analyses would allow it to be classified in more detail but that would involve removing a few hundred grams of material and a few hundred dollars of expense. It was decided that this was not necessary for the present project.

Origin and Provenance. Based on its large size and the apparent lack of other large *in situ* boulders like this in the area of the Topaz site, the boulder was probably brought in from some distance. Similar andesitic rocks are found in the natural outcrops of a volcanic deposit called the Little Drum Formation. The closest small outcrops are 2.8 miles to the NW . Much larger areas of the Little Drum Formation cover the east side of the Little Drum Mountains,

about 5 miles west of the camp. The Little Drum Formation formed when volcanoes erupted about 37 million years ago in what was once an extensive volcanically active region of western Utah and adjacent Nevada (L.F. Hintze, 1993, Geologic map). The andesite boulder could also come from the volcanic sequence of Dennison Canyon, a series of volcanic debris flows that overlie the Little Drum Formation and are exposed about 8 miles to the west. It is clear that the boulder is not from other nearby outcrops of igneous rock, such as the rhyolite of Smelter Knolls (about 3.5 miles from the camp) or the basalt of Smelter Knolls (2 miles away). Nor is it from the basalt of Crater Bench (about 10 miles away) or from the rhyolites of Topaz Mountain (25 miles away).

Concrete. There is a reference that the stone was used as a monument that included a sack and a half of cement in its construction (letter from Charles Ernst, the director of Topaz camp at the time, to Dillion S. Myer, director of the War Relocation Authority). Consequently, I looked for patches of adhering concrete. I found no sign of concrete on the exposed surface. All of the light-colored patches are best interpreted as caliche. However, photographs and statements by those present at the excavation clearly slow slabs and smaller fragments of concrete near (less than a meter away) where the boulder was at the site (Figure 1). This is consistent with the letter saying a monument was constructed of concrete and "stones."

Recommendations

The fractures will affect the long term stability of the rock, especially if it is moved, but even in its present state. The boulder will need to be carefully coated and then packaged before it is moved or some of it may fracture away. A wide variety of products can be painted or sprayed on the surface to preserve it as it is now. They are intended to protect the surface from oxidation and hydration and to mechanically strengthen the outer surfaces. The solutions include latex or acrylic additives. For example, Edison Coatings (https://www.edisoncoatings.com/Home/Stone/stone.html) lists many different types of restoration products and has a link to "A technical guide to repair of natural stone." Due to the technical nature of preserving a fragile natural rock like the Wakasa stone, it would be best to hire or get the advice of a professional stone conservator.

Qualifications of the Author

Dr. Eric H Christiansen is an expert on the volcanic geology of western Utah. He was first introduced to this area in 1975 as a geology student at Brigham Young University. Christiansen went on to complete a Ph.D. at Arizona State University in 1981. Volcanic rocks of the Thomas Range and Spor Mountain, northwest of Delta were the basis of his dissertation. At the U.S. Geological Survey, his post-doctoral studies were also focused in western Utah. As a faculty member at the University of Iowa and later at Brigham Young University, his research, and that of his students, was centered on this region. Nineteen of his M.S. students completed theses involving work here. He has authored or co-authored 40 peer-reviewed papers on the geology of western Utah and received several research grants from the National Science Foundation, the U.S. Geological Survey, and the Utah Geological Survey to complete that work. Moreover, he has co-authored college textbooks on physical geology (4 editions), igneous petrology (1 edition), and planetary geology (2 in print and 3 online editions).

(A)

(B)

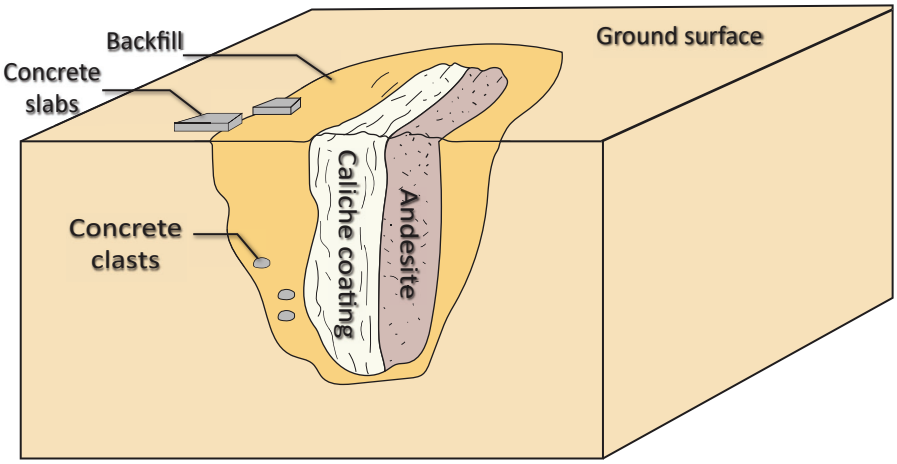

Figure 1. (A) The Wasaka stone at the Topaz Museum, Delta, Utah. The boulder is made of andesite--a common volcanic rock in western Utah. The andesite is exposed at the top of the boulder and has a coating of desert varnish. The bottom part of the boulder is light-colored because it is coated with caliche--a deposit of calcite and other minerals formed from groundwater when the stone was partially buried. The top of the band is nearly horizontal and reveals that thousands of years ago, during the formation of the caliche coating, the boulder was oriented much like it is now.
(B) When found buried on the Topaz site, the top of the boulder was oriented as shown in this block diagram. The once horizontal caliche-coated surface was vertical before it was excavated. This is clear evidence that the boulder was moved from its original orientation. Slabs of concrete were found near the buried boulder and some pieces of concrete were also taken from the hole.

Assessment of large stone, Topaz Museum, Delta, UT, 8/21/2022

The stone measures approximately 145cm x 80cm x 60cm. Photographs below of the 4 sides and top surface of the stone are labeled Face A-D, moving in a counter-clockwise direction in alphabetical order.

Fig. 1: Face A

Fig. 2: Face B

Fig. 3: Face C

Fig. 4: Face D

Identification of the material requires testing that was not practiced during this initial observation. The stone, under observation with the naked eye only, is greyish-brown in color with medium to large sized grains.

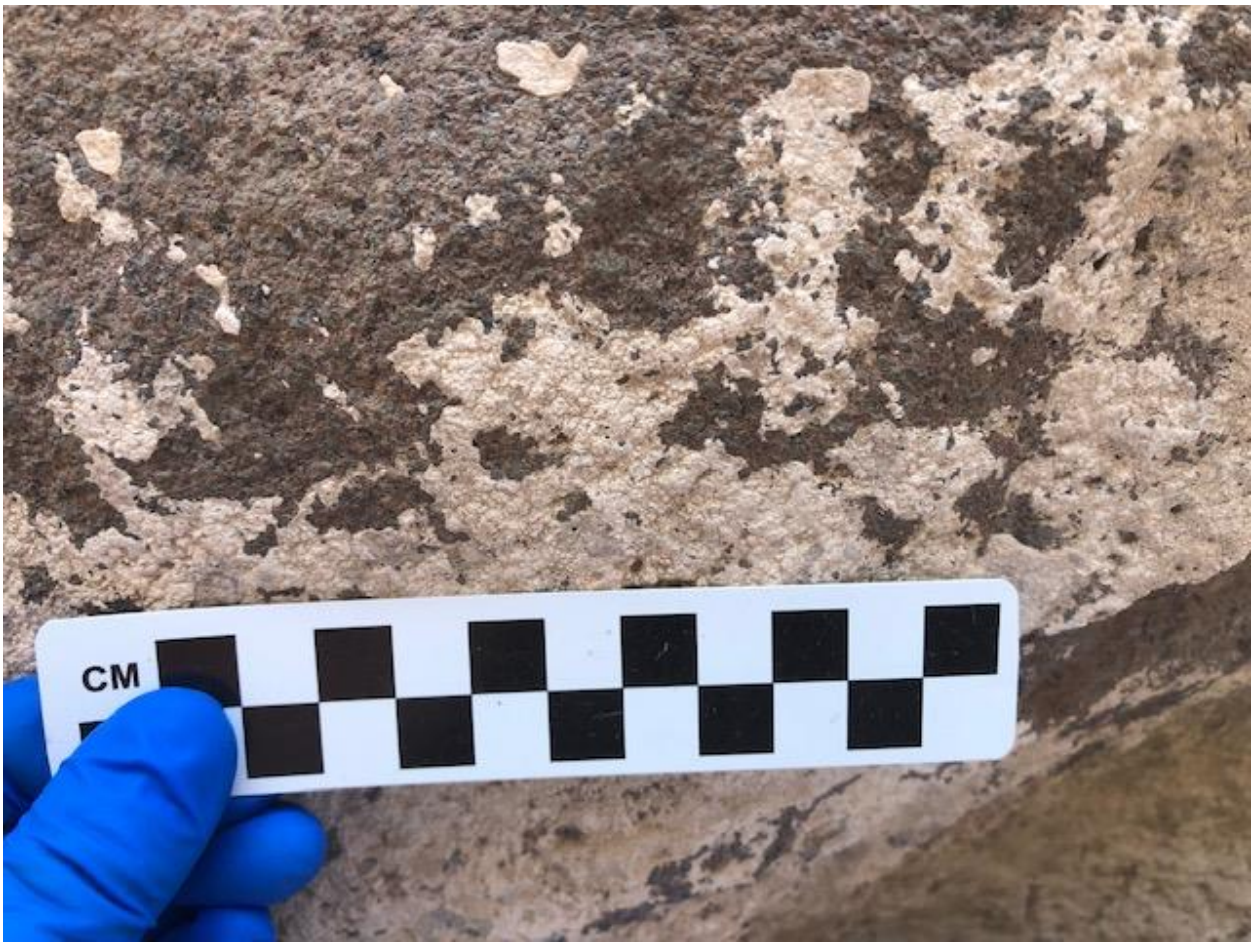

Fig. 5: Detail of white layer visible on lower half of stone as it was observed in-situ.

A **white layer**, uniform in aspect and compact in consistency, roughly 1mm in depth, is adhered to the surface, yet when tested in a discrete microtest, the layer comes off without leaving a trace on the stone beneath. This layer covers the lower half of the stone (meaning lower half, when observed in-situ in the courtyard of the museum in August 21, 2022, on palette and carpet). A deep horizontal **crack,** measuring 67cm in length, appears to travel about half way though the stone (see Figure 1: the crack is visible on the left side and center). This is based on observation and was not tested. The horizontal crack continues 45cm on the other side of the stone and **intersects with a vertical crack** that measures 60cm from the bottom surface (touching the ground) upwards (see Figure 3). There is slight **delamination** of the stone in some areas as well as two areas of loss that were indicated. There is a fragment from one of these areas of loss that is conserved separately.

Figure 6: Detail of surface of the stone showing layers of stone that have delaminated.

There is **some biological growth** on the lower side of the stone near the ground. This includes three different types: one blueish-grey, another in the form of small black dots, and another that appears yellow. These are very localized and do not appear to be spreading as they were observed again on Sep. 10th, two weeks after the first observation, with no change. Treatment is straightforward and would simply require application of a biocide treatment to make sure it is not live, and then mechanical removal using scalpel under magnification.

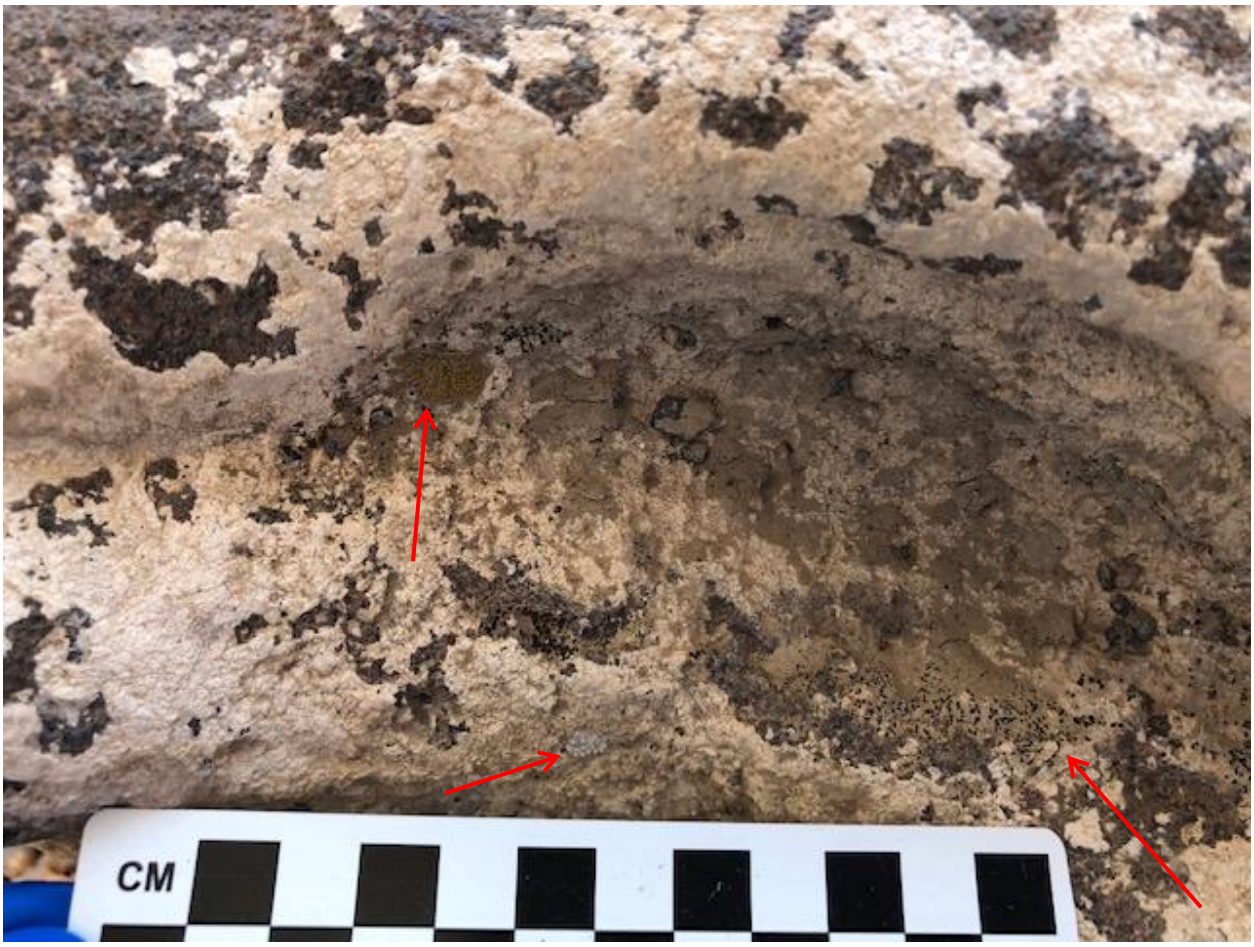

Figure 7: Detail of biological growth at lower bottom left corner of Face C (figure 3). One can see the 3 different types observed and described in the text. Although the growth was not identified when observed, identification of samples may be achieved using micro-tests and image comparison.

No traces of damage due to handling or transportation were observed, however one must keep in mind that the surface in contact with the ground was not observed during the assessment. All other surfaces of the stone were observed. The straps used to lift the stone were still attached to the stone to avoid the need to remove and replace them again in the future. I did not observe damage created to the stone by these straps when I was able to move them and observe the surface beneath, which had loose soiling and debris on the surface.

Figure 8: Unidentified white linear traces observed on upper surface of stone that do not resemble the white layer.