CAPTAIN JACK'S STRONGHOLD

The Geologic Events that Created a Natural Fortress

Siskiyou County

AARON C. WATERS

After settlers arrived in the Modocs' homeland in the mid-1800s, the Modocs were relocated to the Klamath Indian Reservation. Finding this new life unacceptable, they gradually returned to their ancestral land. In late 1872 fighting broke out when the U.S. Army ordered them to return to the reservation. Under the leadership of Kientpoos, also known as Captain Jack, the grossly outnumbered Modocs defended themselves throughout the winter.

*This article, an abridged version of a paper in U.S. Geological Survey Circular 838 (1981, p. 151-161), focuses on the geologic factors of two battles of the Modoc War. Additional maneuvers and strategies are described in the original publication....*editor.

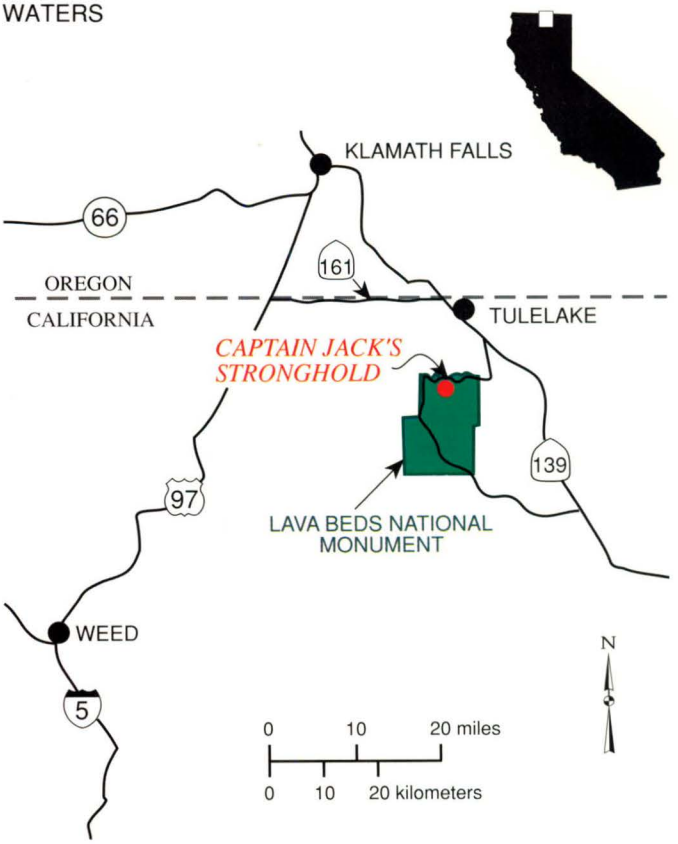


Figure 1. Location map of Captain Jack's Stronghold, Lava Beds National Monument.

INTRODUCTION

One of the last Native Californian uprisings, the Modoc War (November 29, 1872 to June 4, 1873), has been chronicled by many newspaper writers, historians, and social scientists (Murray, 1958; Thompson, 1971). The written record, however, is blurred and contradictory concerning the causes, motives, heroism, and savagery of principal participants on both sides (Riddle, 1974). This article is no attempt "to set the record straight" with regard to what has been reported about the historic and sociological roots of the Modoc War. Instead I investigate the question repeatedly asked: How did 53 Modoc men, with twice as many women and children, withstand a siege throughout the dead of winter, rout 300 U.S. Army soldiers engaged in the first major assault, and withdraw undetected after repulsing a second assault by 650 men supported by mortars and howitzers?

One part of the answer is that the Modocs chose a superb natural fortress. They were familiar with the terrain south of the shoreline of Tule Lake (Figures 1 and 2). The Army was ignorant of this landscape's military advantages. Chroniclers of the Modoc War have not understood the nature of the terrain in which the Modocs holed up any more than did the U.S. troops and their officers. One historian wrote vaguely about the Modocs "disappearing into the Schonchin flow," as if this barren patch of recent lava had some mythical power to swallow the Modocs and hide them from the pursuing Army patrols. In fact this almost treeless expanse of small and loose blocks of lava would be the worst place for the Modocs to hide, so they avoided the Schonchin flow. Some writers have assumed that the Stronghold is "within the Schonchin flow," but the end of the Schonchin flow is 2.4 miles (3.8 km) south of the Stronghold. The source of the flow is at the east base of Schonchin Butte, another 4 miles (6.4 km) farther south. The Schonchin flow played no part in the Modoc War, except that a few of Captain Jack's band ambushed about 60 soldiers there, possibly to avoid being trapped against the inhospitable west edge of the flow.

I first describe the terrain in and near the Stronghold, as seen through the eyes of a geologist. Then I return to the Modoc War and discuss, in terms of terrain, the consequences of the first and second assaults by the Army on the Stronghold, followed by an analysis of how the Modocs were able to withdraw from the Stronghold undetected.

EXPLANATION OF MAP SHOWING GEOLOGY AND FORTIFICATIONS

of

Captain Jack's Stronghold

1976

FORTIFICATIONS

MODOC FORTIFICATION — Cracks on plateau margins and tops of schollendomes.

U.S. ARMY FORTIFICATONS — Loose blocks of rock piled to form low thick walls of various shapes.

SYMBOLS

TRAILS
(with bridge ⊢, stairs ····· , and numbered stops on Park Service trail)

ROAD

STRIKE AND DIP
(within schollendome areas, shows slope of land; short line indicates the direction of tilt)

5 CONTOURS (meters)

0 Lake shore in 1873

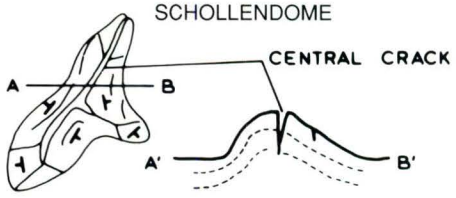
SURFACE FEATURES

PLATEAU REMNANTS — Flat-topped remains of a once continuous lava-flow surface, which in other parts of the map have been lowered, broken, and tilted into basins and schollendomes.

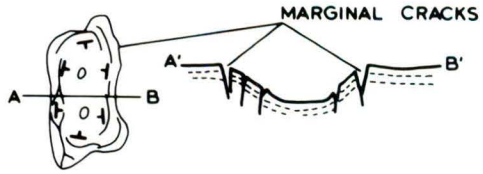
AREA OF LARGE SCHOLLENDOMES — Tilted and broken solidified crust of a former lava flow. The draining of molten lava caused the already solidified crust to collapse into a very rough landscape of schollendomes, small basins, collapse pits, deep cracks, and piles of talus.

GEOLOGIC FEATURES

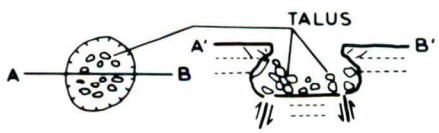
SCHOLLENDOME



COLLAPSE BASIN



COLLAPSE PIT



NATURAL DEFENSE TRENCH

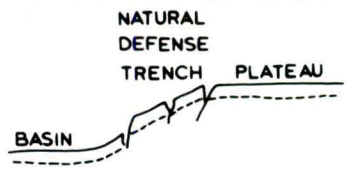


Photo 1. View toward Tule Lake from Captain Jack's Stronghold. Green farmland covers an area occupied by Tule Lake in 1872. *Photo by D.L. Wagner.*

THE TERRAIN

Today the country in and adjacent to Captain Jack's Stronghold consists of four kinds of topographic surfaces (Figure 2).

1. The Tulelake Plain—which in 1872-1873 lay beneath the waters of Tule Lake. Since 1906 most of this large, shallow lake has been reclaimed as farmland (Photo 1).

2. Lowlands—underlain by lobes and tongues of solidified lava, border the shoreline to the east and west of the Stronghold. The lowlands are rough in places, but the maximum relief is 6 feet (2 m). At the shoreline, the lava tongues grade into pillow lavas (pillow-like ellipsoids of basaltic lava, which formed where the molten lava tongues were quenched and granulated by entry into the waters of former Tule Lake) interspersed with sandy beaches of hyaloclastic (basaltic glass) debris.

3. The Plateau—is the part of the Stronghold where the Modocs had their living quarters (Photo 1). It is the northernmost remnant of a lava flow plateau that rises gradually from 33 feet (10 m) above the former shoreline at the Stronghold to 100-130 feet (30-40 m) a few miles farther south. It is dimpled with small sag basins and vertical-walled collapse pits (Waters and others, 1990) (Photo 2). The plateau edges near the flow front are "turndown margins." These formed when the crust rafted on the flow, cracked, and then slumped as the lava drained from beneath.

4. Schollendomes—form the margin on three sides of the plateau remnant in the Stronghold area and border other plateau remnants for many miles to the east and southwest. A schollendome is a part of a lava flow's crust which detached and formed an elongate dome characterized by deep fissures and minor cracks branching from a central cleft.

Tulelake Plain Contrasted with the Tule Lake of 1872

In 1872 the area north of Captain Jack's Stronghold looked very different than it does now. Where today there are grain fields laced with irrigation and drainage ditches, in the 1800s the waters of Tule Lake lapped against a steep slope of crazily tilted lava blocks that formed a schollendome field. The change from lake to farms was brought about by diversion of Lost River to irrigate lands farther west. Between 1906 and 1918, the lake shrank to less than a quarter of its former area. The hyaloclastic silts and sands on the lakebed, fortified with organic matter from the tule swamps, became rich farmland. The original shoreline in 1873, and the shape of the present land surface immediately adjacent to it, are shown in Figure 2 by 5-meter contours.

Only over a stretch of about 1/3 mile (500 m) did the shoreline of Tule Lake come against the belt of large schollendomes that rim the plateau remnant of the Stronghold. The lava lowlands rise only 10 feet (3 m) above the level of the former lake. There is a temporary Native American village site on a rocky ledge just above lake level on the eastern lowland, 0.6 mile (1 km) northeast of the center of the Stronghold. There are grinding holes in the volcanic rock as well as bird bones and freshwater clamshells. A 33-foot (10-m) bluff drops from the Native American village site to the former lake floor, now farmland. Here Tule Lake was deep, but at other parts of the lake, especially at the heads of bays, there were wide sandy beaches. The beaches and bayhead bars consisted of hyaloclastic gravel, silt, and sand. Windblown sand and silt from these beaches abraded and smoothed the rough lava surface of the adjacent lowlands. Travel along or close to the shoreline was relatively easy, but where the schollendomed margin of the plateau reached the lake, passage could be denied by a small group of determined outpost snipers.

The Broken Surface of the Lava Plateau

The plateau, schollendomed margin, and lowlands make up the lava plateau. Each represents a phase of a major episode of volcanic activity. Tracing their order of development makes it easier to understand how the Modoc's natural fortress was formed.

The surface of the plateau at Captain Jack's Stronghold is the top of an unusually thick lava flow. Numerous cracks along the margin of the plateau penetrate the surface 35 to 40 feet (10 to 12 m). The flow is one of many that spread north and east from vents in and near Mammoth Crater, 9.4 miles (15 km) to the south. Much of the lava, however, did not travel all this distance on the surface. Instead, large volumes of it flowed most of the way through lava tubes. Small distributary tubes became active during the last stages of eruption.

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A 3- to 50-foot- (1- to 15-m-) thick crust formed after the flow front stopped. A resurgence of volcanism sent large volumes of lava through the long systems of tubes. Lava entered the still-molten interior of the flow and lifted the crust, allowing lava to break through in many places. During the waning stages of volcanism, large parts of the flow front and parts of the crust of the flow broke up and were rafted slowly on the currents. At the base of the flow front, small lobes and tongues of molten lava escaped and flowed north.

After eruptive activity at the distant vents had ceased, the lava drained from the tubes and the unsupported parts of the plateau sagged, forming collapse basins. Large masses of the solidified flow front, and finger-like tongues of the crust extending hundreds of yards upstream from the flow front, also sagged and were dragged forward as the lava leaked from beneath them. (Note in Figure 2 the many small oval collapse basins, and the finger-like basins with schollendomes which indent the plateau.)

Wherever the edge of the plateau turned down to replace the escaping lava beneath, deep tensional fissures formed in the flap. Parts of these fissured margins were rafted away, forming schollendomes. Where shallow distributary lava tubes drained, there are numerous vertical-walled collapse pits and collapse trenches. Nearly all edges of the plateau remnants became intricate mazes of deep fissures which are difficult to traverse.

Each of the faint lines in Figure 2 represents a crack or fissure too wide to jump over without extreme caution. For each of these there are many more cracks too small to show. These fissures, especially the big ones at or near the top of the turndown flaps, are the natural trenches used by the Modocs. Note that they are nearly continuous along the edge of the plateau on three sides of the Modoc encampment. These plateau-edge fissures, however, were only the last line of defense. The Modocs also used clefts in the schollendomes as sentry outposts.

The Schollendomed Margin of the Lava Plateau

The frontal part of the thick flow that formed the plateau was broken up and transformed into a broad area of schollendomes. Thus the schollendome field at Captain Jack's Stronghold grades upslope into the turndown edge of the plateau remnants. Downslope the frontal end of the schollendome field is engulfed by the thin lobes and tongues of lava that escaped to the surface through the ruptured flow front. In areas east and west of the central part of the Stronghold, this escaping lava contributed to the building of the lowlands along the former shore of Tule Lake.

The basins between the largest schollendomes, and also the turndown basins that project like fingers into unbroken parts of the plateau, are cluttered with smaller schollendomes, which were too small to be mapped. We have used the word hummocky in places in Figure 2 to indicate that such surfaces are quite irregular, rough with various sized schollendomes and riven with hundreds of cracks and fissures (Photo 3).

Several high schollendomes outside the plateau remnants provide excellent views of the shoreline and lowland areas. The Modocs developed them into well-camouflaged sniper positions by piling loose fretworks of rock in or around parts of the central crack (Photo 4).

Photo 2. View southward across the lava plateau toward Mount Shasta. A collapse pit is in the center of the photo. *Photo by D.L. Wagner.*

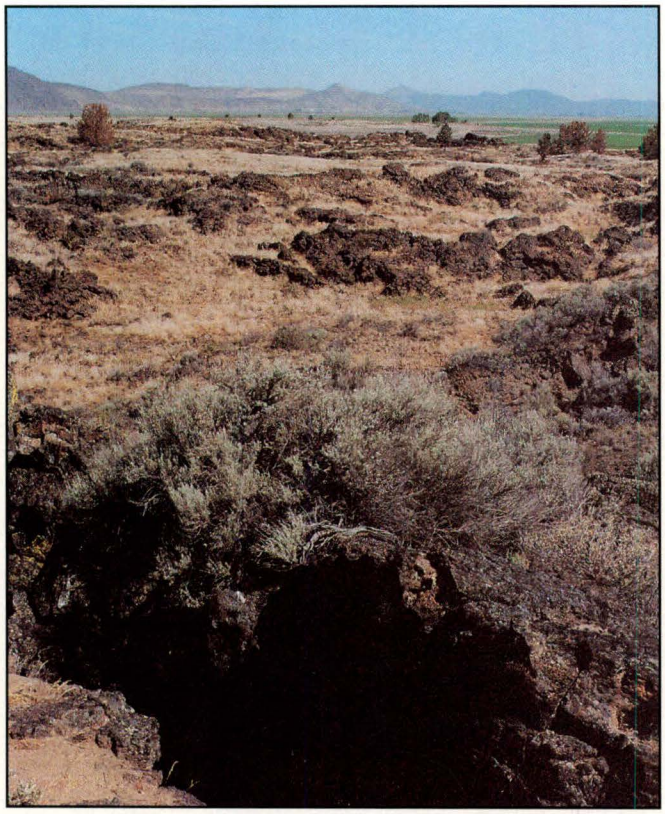

Photo 3. In the foreground there is a fissure along the turndown edge of the plateau. In the background is the rugged, hummocky schollendome field that the Army had to cross to attack the Stronghold. *Photo by D.L. Wagner.*

craters (broad, low-relief craters) to the east between the Stronghold and Hospital Rock. Several miles to the east of the Stronghold, lava erupted into the lake, building large volcanoes at The Peninsula, Juniper Butte, and Prisoners Rock.

The lowland areas are easily crossed. Although the lava surface is rough, with small schollendomes about 3 feet (1 m) high, there are none of the large schollendomes, deep fissuring, or broken areas like those that make the adjacent schollendome field so difficult to cross. Moreover, waves and wind have scattered hyaloclastic sands and silts over the surface of many lowland areas. The soldiers on the lowland areas near Gillem's Camp, or on the hyaloclastic flats near Hospital Rock, had no concept of the kind of terrain they would encounter in their assaults on the Stronghold.

The Stronghold

Note the nature of the natural fortress which was to be the home of the Modocs for 5 months. The northern tip of the plateau surface overlooks a bay on the south shore of Tule Lake. The part of the plateau closest to the lake is a rounded table approximately 500 feet (150 m) in diameter. It is bordered on three sides by a field of large schollendomes, but to the south a neck about 160 feet (50 m) wide connects it with a larger remnant of the plateau.

The plateau surface where the Modocs lived is dimpled by eight collapse pits. Each is a steep-sided hole 6 to 50 feet (2 to 15 m) in diameter and 10 to 26 feet (3 to 8 m) deep. Floors of these pits are covered with large angular boulders that have tumbled from the roof and walls. Around these boulders, especially beneath the overhanging walls of the pits, there are small chambers which would protect up to five people each. Three of

Lowlands Built of Pillow Lavas and Hyaloclastic Debris

Outcrops along the former shoreline of Tule Lake show that lava flowed into the lake from the south. On contact with water, molten lava forms pillow lavas and hyaloclastic deposits. These materials accumulated along the edges of the original Tule Lake, pushing the shoreline northward. For details of the mechanics of pillow lava formation and various kinds of hyaloclastic deposits consult Fuller (1931) and Waters and Fisher (1971).

In a quarry developed for road-building materials, near the site of the former Native American village, we can examine typical examples of pillow lavas with chilled glass rinds, pillow breccias, and granulated slag-like bits of hyaloclastic material. In nearby areas, molten lava also entered the lake through lava tubes. Good examples of this are on Hovey Point west of the Stronghold. There are several additional vent areas and maar

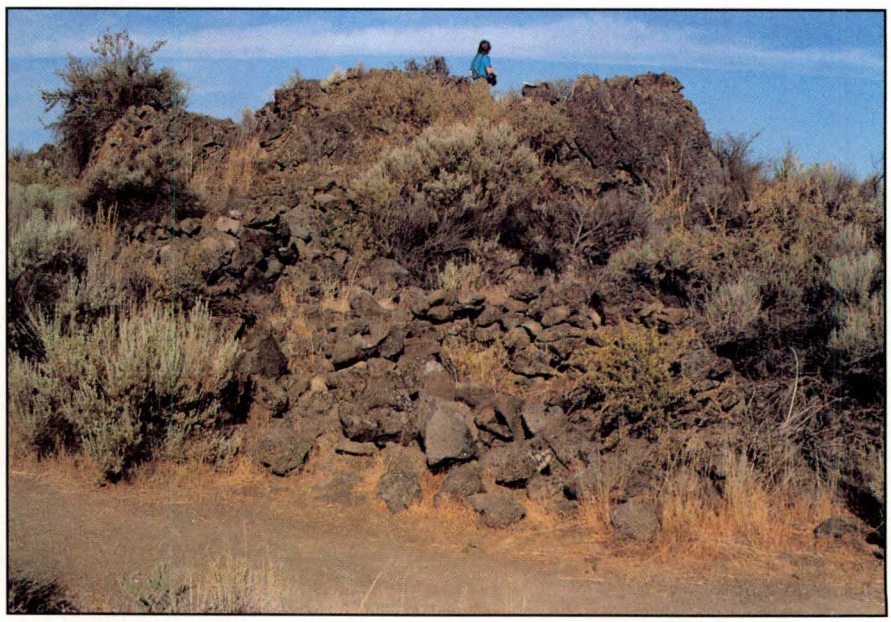

Photo 4. High schollendome used as a sniper position at the edge of the Stronghold. *Photo by D.L. Wagner.*

these collapse pits, Captain Jack's Cave, Schonchin John's Cave, and Family Cave are easily reached from the inner trail constructed by the Park Service (Photo 5). Outside Captain Jack's Cave a small mound of pahoehoe (smooth) lava served as a rostrum from which the Modoc leaders could address their people.

Loose rocks on the surface of the plateau were piled low, forming a partial breastworks around parts of the camp. Army soldiers made these walls thicker and higher after the Modocs withdrew from the Stronghold. The main defense positions used by the Modocs, however, are the deep natural cracks and crevasses along the top of the turndown edges of the plateau, and similar fissures along the tops of high schollendomes (Photo 6). The more strategic and important of these Modoc defense trenches are labeled in Figure 2. They form a sinuous line along the entire northwest margin of the plateau, then curve eastward into a natural U-shaped ambush line. The floors of these natural defense trenches were cleared so the defenders could quickly pass along them. From the central Stronghold, the Modocs used short radial routes to reach various parts of the trench system without encountering difficult crevasses.

Most of the scattered Modoc outposts, high isolated overlooks with unimpaired views of the surrounding country, are in the central cracks of the highest schollendomes. No doubt additional Modoc outposts within the area of Figure 2 have gone unrecognized during the mapping.

These natural defense features of the Stronghold are not unique. Many other plateau remnants have more-formidable and deeply-crevassed turndown edges. The Stronghold's unique value was its proximity to the shoreline of Tule Lake, thus assuring a constant supply of water, wocus root, waterfowl, fish, and freshwater clams. Also, its location denied communication for an enemy using the easily traversable route along the lakeshore. Moreover, the Modocs were well aware of an easy escape route to the south over the flat surfaces of scattered remnants of the lava plateau. The heavily fissured and schollendomed terrain surrounding these plateau remnants would be difficult and slow for a traveler unfamiliar with the terrain.

Photo 5. Captain Jack's Cave. *Photo by D.L. Wagner.*

Still another unusual topographic feature was vital in helping the Modocs withstand the winter siege—the corral. Just west of the Stronghold encampment is a small and deep collapse basin, bounded by three large schollendomes, and the steep and deeply fissured turndown flap of the plateau. A smooth and easily crossed slope leads off the plateau and northward through a gate across the end of the southern schollendome into the natural corral (Photo 7). Stray cattle on the southern plains, and others captured in Modoc raids, were driven north across the plateau remnants and into this natural corral. They were penned by piling a wall of rocks and brush across the narrow gate (Figure 2). Thus an adequate supply of beef was available throughout the winter.

THE MODOC WAR

In late November of 1872 two groups of Modocs were encamped at their winter villages about 1/2 mile (less than 1 km) apart on either side of Lost River a few miles upstream from where it entered Tule Lake. On November 29 there was a shootout when the Modocs were surprised by a patrol of soldiers sent to put them on the Klamath Indian Reservation. Two groups of Modocs, one led by Captain Jack, and the other led by Hooker Jim, headed for the Stronghold on the opposite (south) shore of Tule Lake. Jack's group, which included the women and children from both villages, paddled the 13 miles (21 km) across the lake from the mouth of Lost River. The following day they were joined by Hooker Jim's small group of warriors, who had ridden horses along the 35-mile (56-km) route around the east end of the lake. They took revenge for the Modoc fatalities of the early morning shootout by killing all the men at isolated ranches and settlements along the north and east shores of Tule Lake. In the wake of the revenging Modocs, the settlers' widows and children made the long walk across Stukel Mountain to the security of other settlements.

Assault of January 17, 1893

The Army, stung by its failure to "round up" the Modocs and shocked by the murder of the 14 settlers, was preparing a second attempt. Additional troops were called from other Army posts, and groups of volunteers from Oregon and California (whose enlistment period was

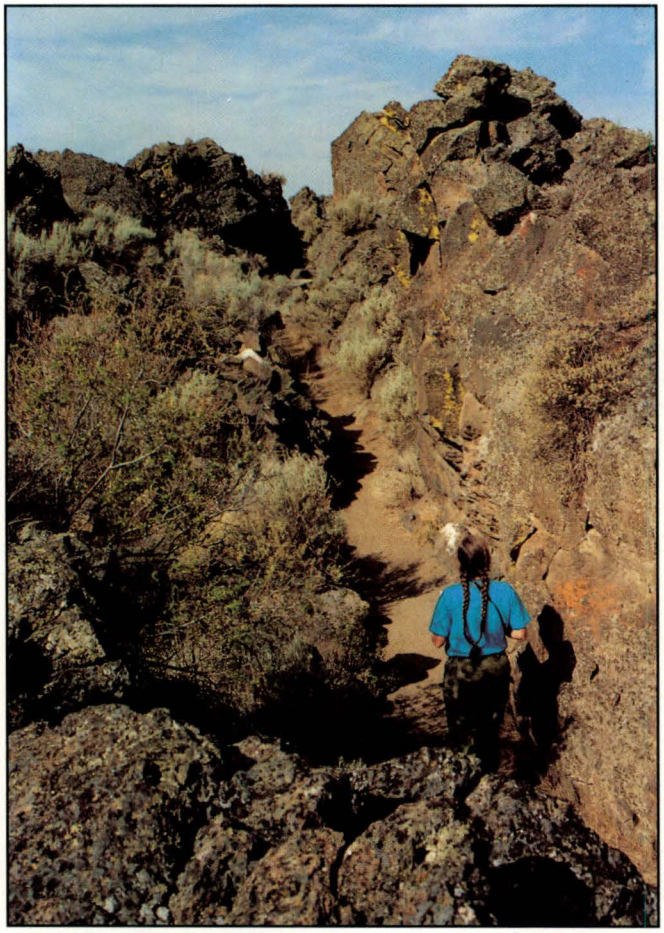

Photo 6. Deep natural fissure that is part of the main defense line along the turndown edge of the plateau. Defenders could move quickly without being seen. *Photo by D.L. Wagner.*

only 30 days) were hastily organized and haphazardly trained. Also recruited were unorganized volunteers and labor support from nearby towns and ranches. By early January, 400 "fighting men" were "raring to go." Lieutenant Colonel Frank Wheaton set January 17 for the attack on the Modocs' then-unnamed encampment. It soon became known as Captain Jack's Stronghold. Colonel Wheaton ordered a pincers from west and east. Three hundred men were to be committed to battle, 100 held in reserve. Captain Green's dismounted cavalry, along with contingents of Oregon and California volunteers, was to attack from the west and bear the brunt of the fighting. Captain Bernard's smaller command was to advance from the east, primarily as a holding force to keep the Modocs from escaping along the lakeshore lowlands. On January 16 the troops moved into position on the bluff overlooking the southwest corner of Tule Lake (near Gillem's Camp on modern maps). On the same day, Bernard's forces advanced west over the lowlands adjacent to the south shore of Tule Lake. Because of a heavy fog they went too far and drew Modoc fire which wounded three soldiers. Bernard's group then withdrew to an area near Hospital Rock (about 2 miles [3 km] east of the Stronghold) and camped for the night.

The morning of January 17 was cold and there was a heavy fog around the lake. Wheaton and Green's troops, although on the march at dawn, were slow in making their way down Gillem Bluff and organizing a line of skirmishers as they advanced toward the Stronghold. No doubt Modoc scouts had been aware of the troops' movements since early dawn, but it was after 11 a.m. before Modoc snipers opened fire. The most detailed account of the number of men, their positions, and their movements during the "battle" is in Thompson (1971). After wounding some soldiers and killing several others, the Modocs relinquished some of their outposts, thus leading the advancing troops eastward until they were enmeshed in the chaos of deep cracks and crevasses within the schollendomed area. Here the Modoc fire from their natural defense trenches was deadly; Army casualties mounted, and yet not one Modoc had been seen by the befuddled troops. The plan of charging up onto the plateau was abandoned. Some parts of the line were already in retreat leaving the dead on the field. Captain Green attempted to round the Stronghold along the lakeshore and make contact with Bernard's command on the east. His men suffered many casualties; most retreated or were killed, but a few remained concealed behind boulders until darkness, and then made their way over to Bernard's position. Captain Green was among them.

Bernard's group had also been in trouble during the day. Casualties were inflicted by Modoc snipers. The terrain, although not as difficult as that on the west side, is extensively schollendomed, and in places it contains treacherous crevasses. After Bernard's men learned that the assault on the west side failed they began a retreat on the east side.

The day after the rout the Modocs searched the battlefield and recovered much valuable booty (Riddle, 1974). They found the ground covered with ammunition, rifles, and other kinds of guns where the Oregon volunteers had stampeded. In the area where most of the Army casualties had occurred were nine carbines and six belts filled with carbine cartridges. Considerable field equipment, boots, and clothing were also recovered.

The January 17 assault was a spectacular victory for the Modocs. There were 37 casualties of the Army and Oregon and California volunteers. The Modocs had no casualties. In Thompson's words (1971), "Three hundred men had been unable to make the slightest dent on the magnificent union of lava and Indian skills."

In many written accounts the heavy fog is blamed for the Army's debacle, but it can be argued that the fog worked to the Army's advantage, not the Modocs'. The Modocs' early defense was accomplished entirely by snipers in Modoc outposts. From their secondary natural defense trenches at the top of the plateau, other Modoc defenders could not see through the fog and determine which parts of the Army's line were hung up on fissured ground, which parts were advancing, and which were routed and in retreat.

Winter of 1873

After its humiliating defeat, the Army made changes in command and gradually grew to a force of 675 soldiers and

70 Warm Springs Indian scouts. Across the country sympathy for the Modocs was expressed. A Peace Commission was formed but the meetings were fruitless.

On April 11 the Modocs killed military commander General Canby and one other member of the Peace Commission. They reasoned if the white leaders were killed the soldiers would leave. This event spurred the Army into action.

Assault of April 15

The planning, execution, and results of the April attack were the same as the assault of January 17, except the scenario was played in slow motion. On the night of April 14 the soldiers edged forward in the dark until they were roughly in the same position as were the troops of January 17 when they came under Modoc fire. But in this second assault, the troops on the west side were moving into position when a soldier lost his footing among the jagged rocks, firing his rifle accidentally. The Modocs were alerted, and their cries of warning were passed along the perimeter of the Stronghold. The soldiers hastily built rock forts as shelters.

On April 15, mortar and howitzer shells were poured into the Modoc encampment, and the troops began a cautious and slow advance. The next day an attempt to push forward strongly on the south flank of the west side failed. During the night women, children, and most of the Modoc warriors withdrew to the south, undoubtedly following the well known route across the plateau remnants along which the Modocs had driven cattle into the natural corral. A few Modoc warriors remained to harass and taunt the troops "in very plain, if not the classical English" (Thompson, 1971).

On the morning of April 17 the artillery stopped pouring shells into the Stronghold, and troops on both the east and west sides began a cautious advance. No sounds came from the Modocs' position, no shots were fired as the soldiers approached and entered the Stronghold. It was an empty "sweep." Over 650 Army regulars had spent 3 days and 3 nights in "battle" and had suffered 23 casualties (six killed, 17 wounded). Their attempt to "round up" or else "exterminate" the Modocs was a failure, even though they now occupied the Modocs' Stronghold.

The Modocs' Withdrawal Route

Much nonsense has been written in Army reports, as well as by historians and other writers, about the route by which 150-170 people, mostly women and children, were able to leave the Stronghold undetected. It was inconceivable to the Army command that the Modocs could slip away so silently in the night without the soldiers' knowledge. The Warm Springs Indians, hired as mercenaries, were suspected of being traitors, allowing the Modocs to "escape up a gully," near the line the Warm Springs Indians held. Historians, as well, have appealed to the finger-like collapse draws south of the Stronghold, plus connivance with the Warm Springs scouts. Yet these collapse draws are so cluttered with schollendomes and riven with deep cracks and crevasses that it would be impossible to get such a large group through, plus dogs and horses, in one night. Even more fanciful are the written statements in some serious reports that the Modocs "slipped past the Warm Springs scouts in a large lava trench" (no such "trench" or "gully" is there), or the less ambiguous (but no less impossible) statement that they... "disappeared into the Schonchin Flow."

To a geologist equipped with aerial photographs of the terrain, the escape route of the Modocs is obvious. They simply walked south and then southeast at a brisk pace on the plateau remnants (Figure 2), avoiding the collapse basins, turndown flaps, and schollendomes (Photo 8).

Where had the Modocs gone? Would they return? Was their disappearance only a ruse before a surprise attack? Colonel Gillem and his troops did not know. However, a few Modocs remained, for an occasional crack of a sniper's rifle was heard and Modocs were sometimes spotted walking on the southern plateau remnants. After the occupation, a few days were spent in building rock forts and rock walls for defense in case the Modocs returned. Over 200 of these fortifications have been located, some of which are shown by appropriate symbols in Figure 2. Another 30 or 40, including a long but discontinuous rock wall, were built by Mason's troops before the April assault.

During this activity the troops selected an easy east-west route across the plateau remnants south of the Modocs' former living quarters. This route was fortified with ten larger and stronger "hollow-square" forts (Photo 9). The outer trail, constructed by the Park Service, follows this line of forts in its east-west course (Figure 2).

Photo 7. The Stronghold's natural corral, used to hold cattle during the Modoc war. *Photo by D.L. Wagner.*

Photo 8. Withdrawal route south of the Stronghold, on the lava plateau. *Photo by D.L. Wagner.*

EPILOGUE

Once the Modocs were dislodged from the Stronghold the end was inevitable. However, on April 26 a group of Modocs accomplished one last spectacular victory when they ambushed an Army patrol at Hardin Butte, south of the Stronghold. By mid-May the Modocs were quarreling bitterly. They splintered into groups that were hounded by Army patrols aided by Warm Springs scouts. Some Modocs who surrendered or were captured assisted the Army in tracking Captain Jack and other fugitive Modocs. Captain Jack surrendered on June 1, 1873 and, along with three other Modoc leaders, was hanged 4 months later. The remaining 155 Modocs were sent to a reservation in Oklahoma.

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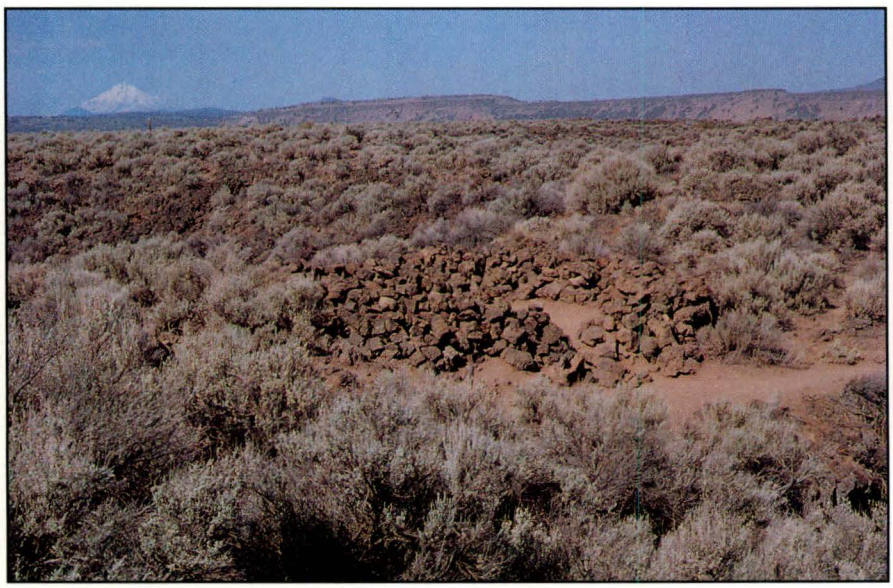

Photo 9. Fortification constructed by the Army after the Modocs abandoned the Stronghold. *Photo by Elise Mattison.*

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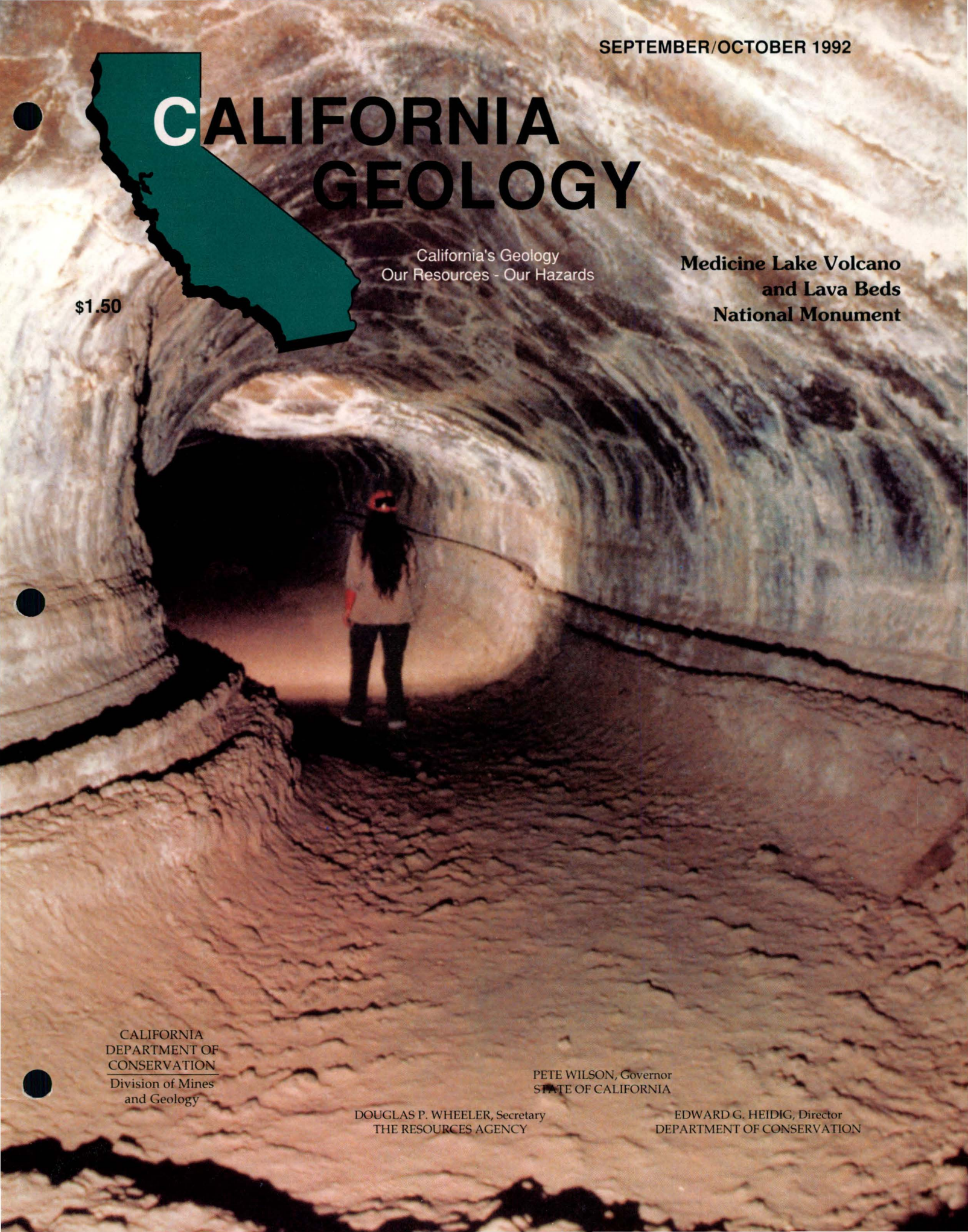

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Cover Photo: Valentine Cave, a lava tube in Lava Beds National Monument, Siskiyou County, California. Lava benches on the walls mark the level of lava that once flowed through the tube. *Photo by Bruce W. Rogers.*