

Huccacove Cave Anchor Replacement Trip Report

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Summary

Paul Ryan, Derek Bristol and Greg Winkler visited Huccacove Cave in Williams Canyon with the goal of inspecting and replacing fixed anchors and ropes rigged in various areas of the cave. The ladder at Angel Falls was inspected and the bolts were wrench tightened. The handline across the top of Bottomless Pit was re-rigged, and 3 new bolts were used to replace old corroded anchors. The rope at Leap of Faith was rigged to two new bolts and is now routed so that it makes traversing this area safer. A new bolt was added to the natural anchor at the top of the dome in the Sand Castle Room to significantly improve the security of this anchor. Other ropes at Huccys Secret and Gods Country were inspected and a handline running from a chockstone above Huccys Secret back to a pit/window above the room was de-rigged since it crosses flowstone and doesn't lead to a destination. All new anchors are entirely stainless steel (bolts, hangers and quick-links). No new ropes were placed but all existing ropes appeared to be in good condition with no obvious wear points.

Angel Falls

This 23' ladder appears to be in excellent condition and is buried in sediment at the bottom of the pit. The top of the ladder is secured with 4 bolts that appear to be Rawl 5-piece style plated steel sleeve bolts. There is a little surface corrosion on these bolts, and they are not mounted flush to the cave wall, but they showed no signs of movement. The nuts connecting the threaded portion of the bolts to the top flange of the ladder were all loose. These were tightened to approximately 20ft-lbs with a wrench. It would be a good idea to use split washers or Loctite on these bolts to prevent the nuts from coming loose again. When the day comes to replace these bolts, SS threaded rod mounted with epoxy would be a good long-term alternative.



Top of Angel Falls ladder

There are 3 other bolts installed near Angel Falls. These were reportedly installed in 2009 to act as belay anchors during a mock rescue.

These all appear to be 3/8" wedge bolts equipped with SS Metolius hangers. The bolts themselves may be plated steel, but they appear to be in good condition and are certainly capable of being used as a belay anchor. Two are directly above the ladder and the third is about 10' back from the top.

Bottomless Pit

The passage at the top of Bottomless Pit has a handline that runs across its entire length. This handline was reportedly installed by COW management to facilitate beginner and

staff trips into the cave. The ledge crossing the top of the pit isn't particularly technical or exposed, but the handline was installed for those less comfortable or familiar with heights and caving. There was an array of older anchors along the south wall of this traverse that included an 8mm Petzl self-drive, several old self-drive sleeves without hangers, a couple 6mm self-drives, and an old 1/4" Rawl buttonhead. All of these anchors were loose, badly corroded and their ability to even support body weight was questionable. Old anchors were removed, old holes were filled with epoxy, and new SS anchors were installed as replacements. The rope appeared to be an older 11mm Bluewater static rope, but seemed to be in good condition, so it was reused.

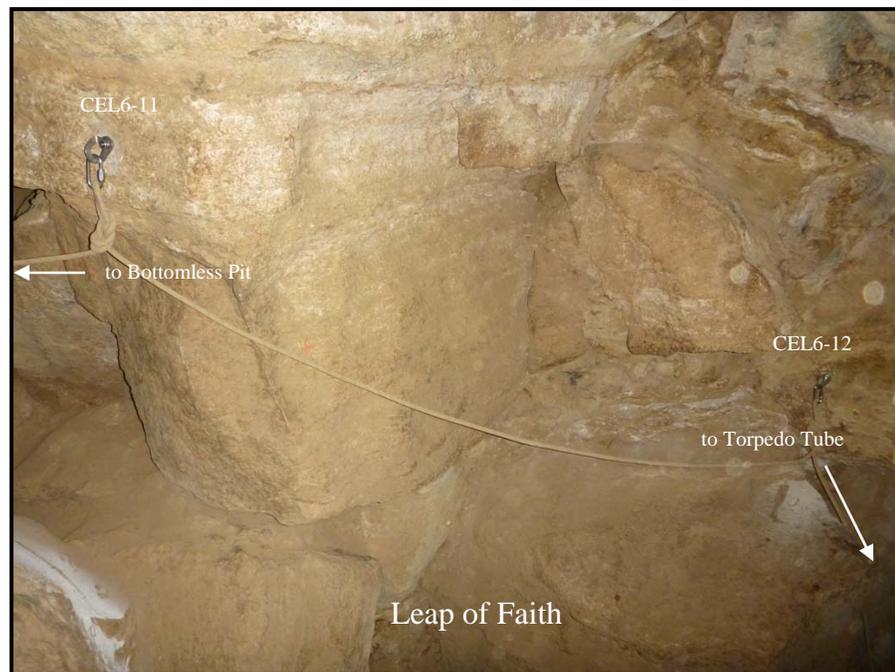


One of the new anchors at Bottomless Pit. New bolt along with old 6mm self-drive on left, same bolt with patched hole on right.

Leap of Faith

Just past the east side of the Bottomless Pit traverse is a very exposed climb to get to the bottom of Bottomless Pit and the Torpedo Tube. This climb, in the Steve Tried and Died area, is often referred to as the Leap of Faith.

There is a rope rigged here, but this rope went straight over the edge of the drop and could not be used as a handline. The top end of the rope was re-rigged around the same natural anchor used to secure the east end of the Bottomless Pit rope, and the ropes were linked

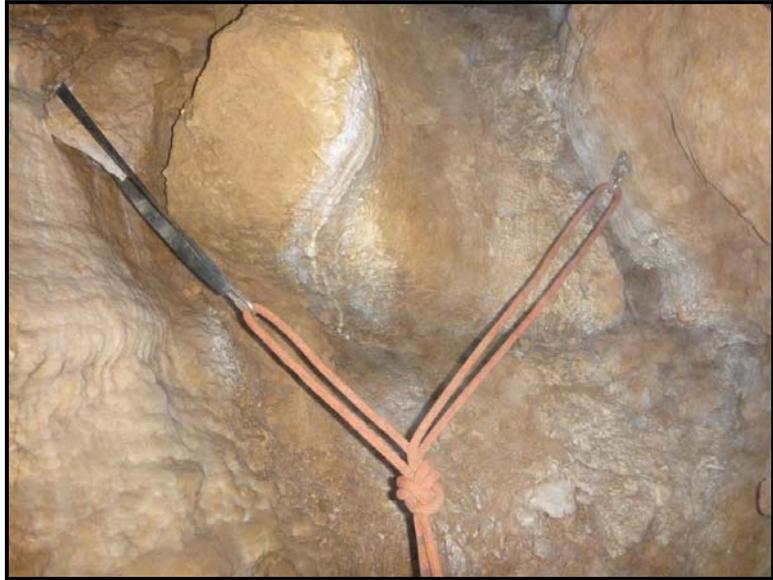


Leap of Faith rigging

by threading their loops through each other. Two new bolts were placed at the Leap of Faith, one on the south side and one on the north side of the step-across. The rope was tied into these anchors and the tail goes down to a natural anchor below. This now protects the exposed traverse move and the steep and polished climb on the north side of the drop.

Sand Castle Room

In the Sand Castle Room, east of Little Grand Canyon, there is a steep climb up the south wall that has a lot of mud and loose rock. A rope has been rigged here and the anchor was found to be a very small breakdown block cemented in place with a thin layer of flowstone. A new bolt was placed on the right wall near this natural anchor. Webbing was threaded through the natural anchor and both were used to re-rig the rope. The rope is a dynamic climbing rope, but is in good condition so it was left in place. There is a rub spot about 20'



Sand Castle Room anchor

below the top that could probably use a rope pad, but there is no sign of wear on the rope currently. It is unclear whether this rope facilitates access to an area of exploration, digging, or of other interest, but at least the anchor is now safe.

Huccys Secret

At the NE end of Huccys Secret is a very steep handline climb that facilitates access to a passage that is ~30' above the floor. The rope that is rigged here is a red dynamic climbing rope that is reportedly wrapped around a buried chockstone. The chockstone and rope have been covered with digging debris such that it's not possible to inspect the anchor or rope. At some point this should be uncovered so that the anchor can be properly evaluated. It would also be good to replace this with a static rope.

Also attached to the same anchor, and possibly part of the same rope, is a handline that runs up the near wall and back across the top of Huccys Secret in a high alcove above the room below. This alcove is covered with flowstone and has some other speleothems. It was reported that this area doesn't lead anywhere (no digs, no additional passage, etc.) so the rope was de-rigged, and the excess rope was coiled and left near the buried chockstone.

At the NW end of Huccys Secret is a ~45 degree slope leading to the hole that connects to Gods Country. An 80' piece of New England static rope (dated 2001) is installed here. It is rigged around a very large breakdown block in Gods Country. It is very safely rigged and where it's wrapped around the natural anchor it is padded with pieces of carpet and duct tape. When it comes time to replace this rope, it's recommended that a 2-bolt anchor be placed near the hole that connects Huccys Secret to Gods Country. This will reduce the amount of rope required from 80' down to about 40', eliminate the need for rope pads, simplify inspection, and be less of a trip hazard.

Future Work

The rope rigged on the north end of Gods Country, that provides access to Twins Passage was inspected from the ground and appears to be dynamic rope in reasonable condition. The anchors securing this rope need to be inspected and probably replaced, and a static line should be used in place of the dynamic rope. Although visitation to the Twins Passage is a rare event, the rope and anchors, if left fixed, should be safe for when there is a need to use them.

There are reportedly 3 ropes rigged between Enchanted Canyon and Hall of the Mountain King. Two of these are short handlines and the other is rigged for SRT. All of these ropes were placed relatively recently, but they were placed to facilitate exploration, and may not be robust enough for permanent rigging. It is suggested that a trip be taken to inspect and possibly upgrade these ropes and anchors.

A list of documented anchors and ropes in Huccacove Cave is found in Table 1 and 2.

The team would like to thank Cave of the Winds management and the Williams Canyon Project for their support of this effort.

Table 1. Database list of ropes in Huccacove Cave

Rope ID#	Rope Type	Rope Length	Rope Diameter	Date Purchased	Date Installed	Installer	Labeled in Cave	Area Installed	Notes
CEL6-L1	Aluminum Ladder	23ft	NA				FALSE	Angel Falls	Fabricated pole ladder.
CEL6-R1	Bluewater	115ft	11mm				FALSE	Bottomless Pit	Rope extends across pit and tied to natural anchors on both ends.
CEL6-R2	Bluewater		11mm				FALSE	Leap of Faith	Rope across Leap of Faith down to bottom of Bottomless Pit.
CEL6-R3	red dynamic kernmantle	80ft	11mm				FALSE	Sand Castle Room	Handline going up dome in Sand Castle Room.
CEL6-R4							FALSE	Hall of the Mountain King	Rope between Enchanted Canyon and Hall of the Mountain King.
CEL6-R5	red dynamic kernmantle		11mm				FALSE	Huccys Secret	Steep handline on north side of Huccys Secret going to passage above.
CEL6-R6	red dynamic kernmantle		11mm				FALSE	Huccys Secret	Traverse line above Huccys Secret
CEL6-R7	green dynamic kernmantle		11mm				FALSE	Gods Country	Rope at north end of Gods Country leading to Twins Passage.
CEL6-R8	New England static	80ft	11mm	01-Apr-01			FALSE	Huccys Secret	Handline going from HS to Gods Country. Rigged to natural in GC.
CEL6-R9							FALSE	Enchanted Canyon	Handline up steep slope.
CEL6-R10							FALSE	Hall of the Mountain King	Handline up steep slope.

Table 2. Database list of anchors in Huccacove Cave

Anchor ID#	Attached Rope ID#	Bolt Type	Bolt Material	Bolt Diameter	Bolt Length	Hanger Type	Hanger Material	Maillon	Date Installed	Installer Name	Installed torque	Labeled	Area Installed	Notes
CEL6-01	none	wedge	Plated Steel (Galvanized)	3/8 in		Metolius SS	Stainless Steel	none	01-Jan-09	Warren, Todd	20 ft-lb	FALSE	Angel Falls	Right of 2 bolt belay anchor
CEL6-02	none	wedge	Plated Steel (Galvanized)	3/8 in		Metolius SS	Stainless Steel	none	01-Jan-09	Warren, Todd	20 ft-lb	FALSE	Angel Falls	Left of 2 bolt belay anchor
CEL6-03	none	wedge	Plated Steel (Galvanized)	3/8 in		Metolius SS	Stainless Steel	none	01-Jan-09	Warren, Todd	20 ft-lb	FALSE	Angel Falls	In ceiling 10' behind ladder
CEL6-04	CEL6-L1	Rawl Sleeve (5pc)	Plated Steel (Galvanized)	3/8 in		none	Other	none			20 ft-lb	FALSE	Angel Falls	One of 4 bolts securing ladder
CEL6-05	CEL6-L1	Rawl Sleeve (5pc)	Plated Steel (Galvanized)	3/8 in		none	Other	none			20 ft-lb	FALSE	Angel Falls	One of 4 bolts securing ladder.
CEL6-06	CEL6-L1	Rawl Sleeve (5pc)	Plated Steel (Galvanized)	3/8 in		none	Other	none			20 ft-lb	FALSE	Angel Falls	One of 4 bolts securing ladder.
CEL6-07	CEL6-L1	Rawl Sleeve (5pc)	Plated Steel (Galvanized)	3/8 in		none	Other	none			20 ft-lb	FALSE	Angel Falls	One of 4 bolts securing ladder.
CEL6-08	CEL6-R1	Hilti Wedge	Stainless Steel	3/8 in	3 in	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	20 ft-lb	FALSE	Bottomless Pit	West side of traverse.
CEL6-09	CEL6-R1	Hilti Wedge	Stainless Steel	3/8 in	3 in	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	20 ft-lb	FALSE	Bottomless Pit	Center bolt in 3 bolt traverse.
CEL6-10	CEL6-R1	Hilti Wedge	Stainless Steel	3/8 in	3 in	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	20 ft-lb	FALSE	Bottomless Pit	East side of traverse.
CEL6-11	CEL6-R2	Fixe Triplex	Stainless Steel	12mm	75mm	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	30 ft-lb	FALSE	Leap of Faith	South side of step-across.
CEL6-12	CEL6-R2	Fixe Triplex	Stainless Steel	12mm	75mm	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	30 ft-lb	FALSE	Leap of Faith	North side of step-across.
CEL6-13	CEL6-R3	Hilti Wedge	Stainless Steel	3/8 in	3 in	Fixe SS (30kN)	Stainless Steel	8mm SS	25-Mar-12	Bristol, Derek	20 ft-lb	FALSE	Sand Castle Room	Top of dome on right.