

Jewel Cave National Monument Cave Survey Synopsis

Field Work Conducted December 30, 2012—January 2, 2013

Team members:

Adam Weaver—trip leader (South Dakota)

Hilary Fischer (Nebraska)

Garrett Jorgensen (New Mexico)

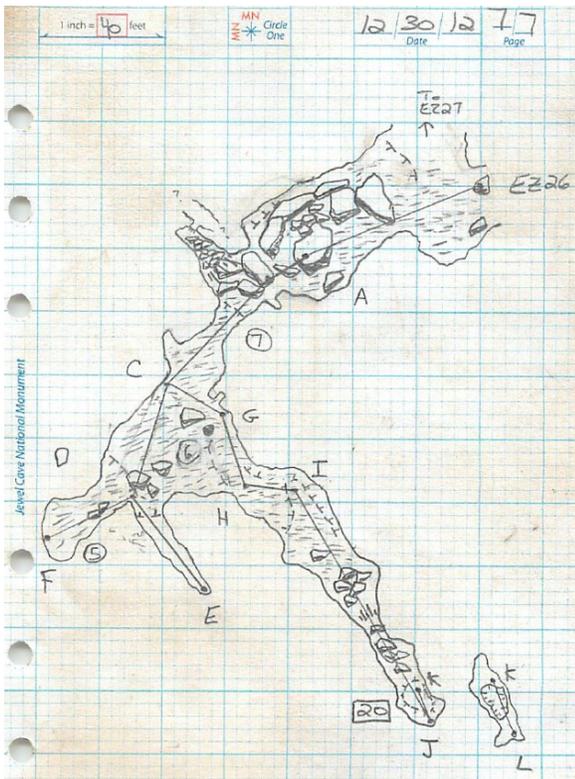
Ian McMillan (Hawaii)

Rene Ohms (South Dakota)

Chris Pelczarski (South Dakota)

December 30, 2012

The group traveled together to the “Volksmarch” area, and reached their first survey destination 6 hours after entering the cave. Here, they split into two teams to conduct mapping and inventory work in unexplored passages (or “leads”) that had been marked on the map by previous explorers.



A page of survey notes from the first day of the trip.



Calcite rafts.

Adam, Garrett, and Ian documented a series of passages near the main travel route, and added 1,445 feet to the cave. Rene, Hilary, and Chris surveyed 825 feet, including a passage going off the edge of the cave to the southwest. Both groups surveyed in large passages, tip-toeing their way through rooms where the floors were covered in delicate white “calcite rafts.” Rafts are paper-thin sheets of calcite, which once floated on the surface of a pool thousands of years ago. The rafts were left behind on the cave floor once the pool drained away.

The two teams regrouped for the remainder of the trip to Camp, and arrived at 11:30 p.m. After cleaning up, changing clothes, and eating freeze-dried dinners, they slept for 8 1/2 hours and awoke at 9:30 a.m. the next morning.

December 31, 2012

The cavers left Camp at 11:00 a.m., and traveled for about two hours to the “IE survey,” south of

Camp. At survey station IE47, they split into two survey teams, and agreed to meet back at IE47 at 11:50 p.m.

Ian, Rene, and Chris traveled to the JV survey, on the southernmost edge of the cave, with high hopes of making a breakthrough. In July 2012, a previous team had surveyed in this area and had left a tight crawl lead with strong airflow, heading away from the known map. The team's objective was to try to find a way through this tight passage into more cave beyond.

They spent 6 hours surveying some very difficult passage and trying to get through the tighter areas, but did not find the way on. At one point they followed the strong airflow down into a passage 20 feet tall and 5 feet wide, but it quickly pinched back down into a very small bellycrawl. Ian and Chris both emerged from this lead with their shirts completely torn, looking tired and disappointed.

In the ceiling of a crawl near the very end of the cave, the team found an unusual hollow formation lined with crystals, which was approximately 2 feet tall and 1 foot in diameter. This type of formation has not previously been documented elsewhere in Jewel Cave. Because it resembled a large slug, they named the formation the "Slug Vug," and named the crawlway "The Slugway."

Meanwhile, Adam, Garrett, and Hilary checked leads along the IE survey, and surveyed multiple passages, hoping that something would go somewhere. One lead, heading off the map to the south (toward the JV survey where the other team was mapping), held some promise — it had been discovered by a team a few years ago who had noted that only smaller cavers could fit, but that it had strong airflow. Adam, Garrett, and Hilary

were all able to make it through the constriction, but found that it ended after about 200 feet on the other side.

At 11:50 p.m., everyone met at IE47 for a snack/water break. As midnight approached, they checked their watches and counted down to 2013 together, ringing in the New Year 6 miles into Jewel Cave! With a total of 1,727 feet of new survey data in the books, they traveled back to Camp, and arrived at 2:30 a.m. After settling in and getting 8 hours of sleep, they got up at noon the next day.

January 1, 2013

Both teams stayed within 30-45 minutes of Camp on day three, and worked on filling in gaps in the old map around the Romper Room (Rene, Chris, and Hilary) and Volksmarch (Adam, Garrett, and Ian). Most of the day was spent thoroughly documenting alcoves and finishing the maps of some larger rooms, and 2,871 feet were surveyed.



Ian McMillan at a survey station in the Volksmarch area.

January 2, 2013

The team traveled out of the cave on day four, and it took them 7-1/2 hours to reach the surface. Total survey for the trip was 6,870.20 feet, and Jewel Cave is now 164.36 miles long!

Jewel Cave Four-Day Camp December 30, 2012 - January 2, 2013

Total survey = 6,870.20 feet

— New Survey



Hilary, Chris, and hundreds of calcite rafts.

The "Slug Vug"

