or equipment to cope safely, and many SAR missions have been conducted to rescue these climbers.

A wealth of information in the form of photographs, written descriptions, and personal experience can be found at the Jenny Lake Ranger Station. Climbers beginning their apprenticeship in the Teton Range can benefit greatly from this resource. (Source: Marty Vidak, Incident Commander)

LIGHTNING — IGNORED CLOUD BUILD UP, POOR POSITION, FALL ON ROCK, UNKNOWN RAPPEL ERROR — EXACERBATED BY COLD HANDS AND INEXPERIENCE

Wyoming, Grand Teton National Park, Grand Teton

Prior to the beginning of this storm, members of all parties described an awareness of the approaching clouds. A series of lightning strikes shocked several people and the parties decided to sit tight in hopes that the storm would pass quickly. The storm intensity increased and both the Tyler party (five members who were "determined to sit it out") and the Sparks party (eight members) began to move down the mountain with the intention of finding protection from the wind, rain and lightning. The Tyler party was in the Owen Chimney area and the Sparks party was in the Double Chimney area lower on the Owen-Spalding route. The Kline party remained near the Boulder Problem in the Sky at the top of the Exum Ridge route, well above the other parties.

A series of very strong lightning bolts hit the mountain during this time (about 1215). In the Sparks party, Greg Sparks descended to below the double chimneys and prepared an anchor. Brandon Oldenkamp (21) was belayed to Greg Sparks (55) who clipped Brandon into a figure eight on a bight with a carabiner to Brandon's harness. A large bolt of lightning occurred and Greg Sparks was knocked down. He observed Brandon falling over the edge of the mountain. Only one other member of Spark's party was injured (electrical, minor).

In the Owen Chimney area the Tyler party was in the process of rappelling down the Owen Chimney. They were hoping to sit out the storm at the top of the chimney, but after some shocks from lightning and the increased winds and rain, they decided to descend. Dan Tyler had rappelled down the chimney and was near the base when two shocks occurred. He heard that two members of his party above were affected, so he started up to help when more large shocks occurred. He was knocked down and had no feeling in his legs and one arm as well as burns to his back. He immediately called 911 and was connected to the Park Dispatch at 1223.

Above him, Troy Smith (40) was unconscious and in respiratory arrest (NB: Steve Tyler was temporarily unable to move but soon was giving Troy Smith mouth-to-mouth resuscitation. Smith began breathing after about

ten breaths from Steve Tyler, 67). Henry Appleton (31) was thrown to the ground and unable to move his right leg. Mike Tyler (41) was relatively uninjured and descended the mountain, traversing the lower Owen-Spalding area tied in with the Sparks party to summon help.

At the top of the Exum Ridge, the Kline party was gathered in an alcove. They were squatting away from their ice axes and climbing gear and felt several shocks, then one large one that sent them all sprawling. Alan Kline (27) was knocked unconscious temporarily. He had minor burns on his right leg and had major internal injuries. (He was later admitted to the ICU with air around his heart and esophagus.) Betsy Smith (26) lost all feeling from her body and had a serious burn injury to one hand and was unable to use the other, even after some recovery. (Her right index finger was amputated in the ICU.) Matthew Walker (21) was coherent but unable to walk. He sustained bad burns to a foot, arm, and his rib cage. Andrew Larson was uninjured and climbed down and rappelled the 100 foot rappel to the Upper Saddle where he joined Mike Tyler. They continued to the Lower Saddle, ahead of the Sparks Party, to summon help.

The Teton Interagency Dispatch Center received 911 calls forwarded from surrounding counties starting at 1223. SAR coordinator Chris Harder had the Jenny Lake Rescue team paged out at 1227.

While the rescue plan was being developed, the Kline party was working their way down the upper mountain by lowering and rappelling, including one roped, pendulum fall by Matt Walker.

At 1354 Helicopter 7HE dropped Rangers Helen Bowers and Jack Mc-Connell at the Lower Saddle and then conducted an aerial reconnaissance of the accident scene. Conditions were not safe for insertion of rangers at the scene so at 1416, Bowers and McConnell started up the mountain on foot with Exum guide Dan Corn. At 1430, rangers Vidak, Visnovske, and Guenther were dropped at the Lower Saddle. Guenther was assigned Operations Chief at the Lower Saddle, while Vidak and Visnovske headed up the mountain. McConnell and Bowers soon met with members of the Kline and Tyler parties below the Black Dike and gained additional information. Below the Upper Saddle McConnell saw two members of the Sparks party rappelling down the Idaho Express snow chute. McConnell instructed them to ascend and wait for other rescuers to direct them down the normal descent.

Rangers Hardesty, Armitage, and Schuster were dropped at the Lower Saddle at 1447 and began ascending the mountain. As rangers met with the Sparks party, they guided them through various parts of the descent to the Lower Saddle. At 1520 McConnell and Corn began the Belly Roll at the beginning of the technical section of the Owen-Spalding route. Traversing the long ledge system, they were subjected to jets of water gushing from

cracks in the cliff side. They arrived at the base of the Owen Chimney at 1537 and began a quick examination of Dan Tyler (40). McConnell transmitted that conditions were favorable for short-haul extraction. Guide Dan Corn secured Dan Tyler while McConnell continued up to the other patients.

Ranger Rick Guerrieri with Exum Guides Brenton Reagan and Anneka Door were dropped off at the Lower Saddle by the Yellowstone Llama helicopter. An external sling load of rescue equipment was flown to the base of Sergeants Chimney near the accident scene by Helicopter 7HE. One Teton Interagency Helitack crew member John Filardo, Ranger Case Martin, and A.J. Wheeler, MD, followed to the Lower Saddle.

At 1545 Ranger Bowers arrived at the Upper Saddle and saw Elizabeth Smith being lowered down the 100-foot rappel and aided her at the bottom. The other two members of the Kline party followed. Rangers Vidak, Hardesty, Schuster, Visnovske, and Armitage arrived at the Upper Saddle during this time. Visnovske, as Medical Unit Leader, remained at the Saddle with Bowers to aid the injured members of the Kline party while the others continued up the Owen-Spalding route.

At 1648 the first pair of patients were extracted from the top of the Owen Chimney via Screamer Suit/Short-Haul. Rangers Vidak and Hardesty arrived at the base of the Owen Chimney and began care of Dan Tyler. Rangers Armitage and Schuster continued up to aid McConnell.

At 1706 all of the Sparks party had arrived at the Lower Saddle. At this point a large thunderstorm moved over the area and all aerial operations were suspended. Heavy rain and winds and lightning lashed and shocked the rescuers and their patients for an hour and a half. The weather cleared enough to resume operations and the patient at the base of the Owen Chimney, Dan Tyler, was short-hauled off the mountain to the Lower Saddle at 1845 hours. Rangers McConnell, Armitage, Schuster, and Guide Dan Corn moved the final patient from the Tyler party to the 100-foot rappel of the Owen-Spalding and lowered him to the Upper Saddle. These actions cleared all patients from the mountain above the Upper Saddle.

At 1858 two patients were short-hauled from the Upper Saddle to the Lower Saddle. At 1915 the final two patients were short-hauled from the Upper Saddle to the Lower Saddle. All rescuers except Visnovske, Armitage, and McConnell descended toward the Lower Saddle at this time. Shuttles of patients, then rescuers, continued from the Lower Saddle to Lupine Meadows with all patients down by 1956 hours.

Helicopter 7HE was then used to sweep the Exum Ridge and popular Teton routes for possible other parties in distress. The helicopter then moved into Valhalla Canyon and the Black Ice-West Face areas to search for Brandon Oldenkamp, but met with no success. Air operations were ended as the daylight faded. All rescue personnel except Visnovske, Armitage, and

McConnell, who had descended to the Lower Saddle and remained there for the night, were off the mountain.

On the morning of July 22 the aerial search continued with Helicopter 7HE. Oldenkamp's body was found quickly and a ground team was assembled to move him to a location where he could be air lifted. Rangers Jernigan, Schuster, Vidak, Guenther, and Hardesty were flown to Valhalla Canyon and ascended to the scene. The deceased was lowered three hundred feet over moderately steep scree then air lifted from there and delivered to the Teton County Coroner at the Rudd's Picnic Area in Lupine Meadows. The rangers were flown back to Lupine Meadows. Rescue equipment was then flown down from the Lower Saddle but attempts to retrieve equipment from the upper mountain were unsuccessful due to high winds.

An attempt was made to retrieve equipment via long line from the upper mountain on July 23, but high winds precluded the operation. Early July 24, Ranger Drew Hardesty climbed to the Upper Saddle to attach the rescue equipment sling load. He then descended to the Lower Saddle and was flown back to Lupine Meadows.

Analysis

Brandon Oldenkamp had some experience with technical rock climbing and had used his harness and belay equipment in a trip to the Black Hills in 2009. On July 19th Brandon was in a group that ascended the Middle and South Tetons. They returned to their camp in the Garnet Meadows that night. On July 20th the group moved their camp two thousand feet higher to the Moraines camp zone arriving between noon 1200 and 1300. Mr. Oldenkamp was very fit and was not noticed to be fatigued or overly tired. He spent the day around camp eating well and in good spirits. Brandon slept well under the stars and awakened in apparently good shape and good spirits on the 21st. The group left camp around 0500. and Brandon was moving well, scrambling easily up the rock to the Upper Saddle. The party moved across the initial technical pitch of the Owen Spalding route as some snow began to fall. Brandon had no trouble negotiating the climbing and arrived at the base of the Owen Chimney with no difficulty.

According to Barry Sparks (52), the first lightning bolt was felt by everyone, though it is not certain what Mr. Oldenkamp experienced. The group decided to descend the mountain and Greg Sparks was belayed down to the base of the double chimney. Greg established an anchor and tied a figure eight on a bight for Brandon, who was being belayed from above down to Greg's location.

Greg Sparks clipped the figure eight loop into Brandon's harness with a carabiner. A large bolt of lightning struck at this time (about a half an hour since the first shock). Greg Sparks was thrown to the ground and he saw Brandon Oldenkamp thrown out and down the cliff out of sight.

Conclusions: Lightning storms are common in the Teton Range in the summer. Although most storms occur in the afternoon or evening and follow a distinct progression, storms at other times of the day or night are not rare and are often missed by professional weather forecasters. All three parties in this incident made a decision to ignore obvious signs of an impending storm: dark clouds, rapidly increasing in size from a relatively clear morning sky. Seasoned Teton climbers have the knowledge and/or experience to rapidly move to less exposed terrain when the first signs of building clouds appear.

The Tyler and Kline parties both decided to wait out what they felt was going to be a rapidly passing disturbance. As the storm increased in intensity, they sought shelter from the snow, rain and wind by huddling near alcoves of rock. Their actions put them into areas much more likely to be subject to electrical currents from lightning, specifically near rock walls and overhangs. The Sparks party made an earlier decision to descend but was still caught by the storm. They also sought protection from the elements. They moved down into the Double Chimney area of the Owen Spalding route, making them much more likely to experience electrical shocks from lightning.

Why Brandon Oldenkamp's tie-in failed is difficult to confirm, but evidence points to an improper attachment to his harness. Hypothermia, cold hands, lack of experience and the intensity of the situation were all contributing factors. However, based on the physical evidence, it appears that Oldencamp's gear loops were pulled on hard enough and quickly enough to break its attachment to the harness and strip off a piece of the tubing that it was laced through. A second possibility is that Brandon was tied into the figure of eight climbing rope loop on the gate side of the locking carabiner. The violence of his reaction to the electrical shock could have caused the rope to come out of the carabiner if it was not in the locked position.

It should be noted that this rescue began about one hour after the conclusion of the recovery of Jillian Drow, a rescue that began the night before. (Source, Jim Springer, Incident Commander)

Further analysis sent forward by Betsy Smith, who began her letter by pointing out that they felt the first strike "close to 10:30 a.m." She goes on to say, "I believe strongly that there is a great deal to be learned from this incident. First and foremost that if we waited for rescue near the top of the Grand, we would have risked being benighted. We would have also had to sit out the storm that came later in the afternoon. If we were benighted, [I] would have lost [my] left arm from the elbow down and [my] right hand, according to the doctor. Walker would have chanced losing his foot. Kline would have been risking his life, considering the air in his chest should have collapsed a lung. It was due to Kline's experience that he was able to build enough improvised anchors (with the gear that wasn't melted) to lower himself, Walker, and Smith to the upper saddle."

(Editor's Note: This was the Jenny Lake Rangers' largest rescue ever. Over the course of nine hours, seven people were flown from 13,200 feet and nine others were flown out from other locations. In all, 92 emergency workers became involved. The long narrative above should help the reader understand some of the decisions, intricacies, technical difficulties, and dedication required for such an operation.)

SLIP ON ROCK - BOULDER FIELD

Wyoming, Grand Teton National Park, Garnet Canyon Boulder Field

On July 22, in the early afternoon, I received a call from Exum Mountain Guide Trevor Deighton. He said that a member of his party had sustained an isolated right lower leg injury while descending through the Boulder Field in Garnet Canyon. The patient, Scott Hanson (43), had slipped on a rock, trapping his lower leg and causing the injury. Mr. Deighton caught Mr. Hanson before further injury occurred. Mr. Deighton told me that the accident happened at 1400 and that he had had to hike down canyon over a mile to get cell phone reception to make the report. I told Mr. Deighton to return to the site and that Rangers would be flown to the Meadows in Garnet Canyon to assist.

A briefing and risk assessment were conducted at the Rescue Cache. Rangers Vidak and Schuster were flown to a landing zone in Garnet Canyon and hiked down canyon to the patient by 1530. Ranger Schuster determined that Hanson had an isolated right lower leg injury with a possible fracture. Given the late hour of the day, rescuer fatigue associated with the unrelated, yet ongoing rescue and additional patient stress that would result from an extended evacuation by ground, the decision was made to extract the patient via helicopter short-haul.

Analysis

The Boulder Field in Garnet Canyon requires focus as one moves amongst and around the boulders. Use of hands is required as one lowers from or climbs over the boulders. Some of the granite blocks can be slick.. Whether due to inattention, fatigue, loose rock, and/or a slick foothold, Mr. Hanson unfortunately lost his footing at an inopportune time. (Source: Scott Guenther, Incident Commander)

VARIOUS STRANDED CLIMBERS

Wyoming, Devils Tower National Monument, Devils Tower

On October 30th, rangers received a phone call from Crook County dispatch regarding a group of climbers who were stuck on the south side of Devils Tower with a rope caught in a crack. They had no headlamps or proper cold weather clothing and had only a little food and water with them.

The five climbers, all from Iowa, were on a single-day climb to the summit via the Durrance Route when the incident occurred. Two of them