Q: Why is Resolution Copper taking the Magma Smelter complex down?

A: The removal and cleanup of the old Magma Copper Smelter is necessary for us to complete our environmental reclamation work, which includes proper disposal of contaminants in the soil and in the buildings, such as asbestos, arsenic, lead and copper. A proactive approach is required to remove these soils but safe access to the grounds is needed. Eliminating the safety threat posed by the unstable Smelter structures was necessary. We can't complete the required soil cleanup around the Smelter chimney stack until it is removed because its instability makes the area too dangerous for people to work in. The stack has been failing over the years, so it is only a matter of time before it comes down on its own. Our preemptive plan to bring it down safely ensures it will happen in a controlled fashion while reducing environmental impacts.
Q: Is removing the old Magma Smelter structures a cost savings measure?

A: No, it is a health and safety measure. We reviewed the cost of rehabilitating the facilities along with an evaluation of the associated health and safety risks. The decision to remove the structures ultimately came down to safety and health. There is too much risk of injury from unstable and unpredictable structural failure for people to be working to refurbish the structures. In addition, technical studies commissioned by the company show that land reclamation couldn’t be completed without removing the Smelter structures because they contain hazardous contaminants also present in the soil beneath the structures. Sampling and chemical analyses of the brick and mortar from the chimney stack and remaining Smelter buildings was conducted in 2014 to determine if they contained elevated concentrations of hazardous contaminants. The results of the brick and mortar sampling indicated that arsenic concentrations in brick from the chimney stack and buildings were elevated at concentrations above residential and industrial standards for soil.

Q: When is the stack demolition taking place?

A: Stack demolition is scheduled for early November, 2018. The exact target date will be confirmed as soon as final preparations are completed. On the day scheduled, the operation will be carried out between the hours of 8am and 12pm. The scheduled stack felling is subject to postponement due to weather conditions, especially wind. Felling will only proceed if winds are at least 2 miles per hour (mph) but less
than 35 mph coming from the south or southwestern direction or directly from the east to avoid dust blowing towards the town. In general, optimal weather is necessary for safe execution and any inclement weather, including lightning or unsuitable wind directions, may result in postponement of stack implosion.

**Q:** Will the public be allowed to view the demolition of the stack?

**A:** The public can view the stack demolition from a variety of viewpoints in Superior where the stack is clearly visible. The Town of Superior has plans to set up a designated viewing area for residents and visitors along a section of Main Street adjacent to the West Plant property boundary. This section of Main Street will be closed to vehicle traffic on the morning of the stack demolition. Details on the road closure will be announced in the days leading up to demolition. Safety is Resolution Copper’s highest priority. In order to ensure safe execution, the company will have extra security personnel on site when the stack is taken down to ensure that nobody trespasses on mine property or breaches any other safety boundary in place. Only Resolution Copper employees will be allowed on company property.

**Q:** Isn't this just another example of Resolution affecting historical areas in and around the new operation?

**A:** The West Plant reclamation project is a 15-year effort that is making the area safer and cleaner. Resolution Copper’s number one priority is health and safety, and finalizing this project is an important part of our commitment to protecting our employees and the local community. We are committed to being a good neighbour, and the felling of the smelter stack is an important part of that commitment for health and safety. Resolution Copper is dedicated to environmental stewardship and is committed to making Superior a cleaner and safer place to live and work.
Q: Did Resolution Copper engage with the town and other stakeholders prior to making this decision?

A: Yes. Resolution Copper hosted public town hall meetings and met with Town officials and other key stakeholders in the community to explain the company’s plans, listen to concerns and receive input. In 2016, at the request of the Superior Community Working Group, a new structural evaluation of the buildings was completed to determine what would be required to make the buildings usable. Our studies indicate that restoring the Smelter chimney stack was not a feasible option given the great health and safety risks posed by its advanced state of deterioration. Restoration work could not be done safely.

The uppermost 63 feet of the stack leans approximately one foot off the vertical center. This portion of the stack had long ago been reinforced with metal banding. Numerous horizontal and vertical cracks ranging from a few feet to several tens of feet in length were observed and the uppermost outside courses of brick were significantly deteriorated with many bricks having fallen from the chimney stack. Additionally, some of the steel banding strap has unbuckled and is dangling from the stack.
Top of stack looking north. Many bricks from outer course are missing and more layers are in danger of falling. The concrete top cap is weathered and exhibits radial and horizontal cracking. The steel banding strap is unbuckled and hanging.

Q: How are you planning to honor the legacy of this community landmark?

A: Resolution Copper understands the historic and cultural significance of the Smelter complex for the Superior community. We recognize that the Magma Smelter has great historical value to Superior and represents the hard work of local families in the mining industry. Resolution Copper has committed to funding a legacy project study to enshrine Superior’s mining history. Under an agreement with the Town of Superior, three project proposals will be submitted to Resolution Copper by the end of 2018. The Town’s proposals are based on several months of gathering feedback from the community on how they would like to see Superior’s mining history honored and preserved.

Resolution Copper is also funding major improvements to Superior’s public park on US Highway 60 & Caboose Visitor Center, a preserved train caboose converted into a welcoming information hub for visitors to the area. The Caboose Park improvement project scope includes working with the town to enhance the mining history trail and upgrade existing playground equipment to include new mining themed elements.
We’re currently completing in depth historical and archaeological documentation to preserve the cultural heritage embodied in the Smelter structures, and we continue gathering feedback from residents on how we can conserve the place of Magma Copper’s operations in the history of Superior.

A major component of West Plant reclamation is the historical preservation research we are conducting to record and conserve the area’s mining history. Our team managing the project has hired WestLand Resources to conduct architectural and industrial archaeological studies on the smelter complex and surrounding mine property. WestLand’s team is also producing a video documentary featuring interviews to capture oral histories of people who worked at the smelter and mill facilities. We will make all collected historical materials available to the public.

Resolution Copper has collaborated with the Town of Superior to display a number of iconic images and historical elements related to the Magma smelter at Boyce Thompson Arboretum to celebrate the rich mining history of the area. We understand the importance of the town’s legacy of mining, and we proactively sought this opportunity to work with Superior residents and public officials. The historical photo exhibit will be open and free for the public to visit for six months during the Arboretum’s regular business hours. The exhibit is installed in the Gibson House at the Arboretum and will be open to the public free of charge for six months starting in November during scheduled business hours (Fall-Winter hours: Monday-Sunday, 8am to 5pm, October thru April). The exhibit’s opening day will be announced soon.
Q: How much does this cost? Who is paying for it?

A: Resolution Copper is paying for all costs associated with the West Plant reclamation project. To date, over $40 million has been spent on reclamation and millions more will be spent in order to ensure safe completion.

Q: How are you planning to execute the felling?

A: The Smelter chimney stack will be taken down using an industry-proven implosion approach that centers on controlled use of explosives detonated at the base of the stack resulting in the structure falling over like a tree. The rubble will be crushed and placed with other waste soils to help with closing an historic tailings impoundment on site. Ultimately, these materials will be covered with clean soil and revegetated like the other historic tailings ponds on site. During the event, a safety exclusion zone will be strictly enforced within mine property to protect everyone working on site and for the safety of the community. Physical barriers around the structure will prevent debris from escaping the safety exclusion zone.
Q: Will any part of town need to evacuate before the Smelter stack demolition?

A: The stack implosion will not pose a safety threat to spectators outside company property. There will not be any evacuations necessary for safely carrying out removal of the Smelter stack and surrounding buildings. The nearest public street (Main Street) is approximately 1,900 feet from the stack. At that distance, closing the street for safety during controlled demolition is an optional precautionary measure for traffic control and for accommodating public viewing. The Main Street closure will be managed by the Town of Superior. Resolution Copper will support Town of Superior officials in facilitating the viewing area on the section of Main Street adjacent to the West Plant property boundary. The company will assist and collaborate with the Town of Superior as needed.

Q: How much dust will disperse during the stack demolition? How will we mitigate it?

A: The stack will only be taken down under ideal wind conditions, and these wind conditions will be closely monitored. Water cannons will be deployed in the fall zone to saturate the surrounding ground before demolition to control dust. The water cannons will moisten the soils in the fall zone before the stack falls and will continue to operate during and after the fall to suppress dust. Ambient air monitoring will be conducted before, during and after the chimney stack’s fall. Air samplers will be set up at four locations near the closest potential residential areas at the perimeter of Resolution Copper property. We will also monitor wind speed and direction from our on-site meteorological station. All work will be carried out in accordance with the Pinal County Air Quality Permit and Pinal County Dust Control Permit in effect for the site.
Q: How much noise will occur during the removal process? And how will we mitigate it?

A: The noise generated by the falling stack will be relatively minimal outside mine property and will not pose any health hazard. The decibel level at the edge of mine property will be well below the established safe level of 134 decibels. Some nearby residents may detect a momentary vibration when the stack falls. We will minimize noise using physical barriers such as earth berms and backstops placed around the chimney stack base. The audible noise levels beyond mine property will be kept within the safe noise limits mandated by the Occupational Safety & Health Administration and National Institute of Occupational Safety and Health.

Q: How much ground vibration will occur during the stack demolition? And how will we mitigate it?

A: Ground vibrations from the fall will be minor outside a limited radius around the safety exclusion zone and will not be disruptive to nearby residents. Ground vibrations caused by the explosives detonation will be very low. The vibrations caused by the falling stack impacting the ground will not be strong enough to damage any structures outside mine property. The smelter stack is a brick masonry chimney that will implode on itself and crumble while falling, rather than impacting the ground predominantly in one piece the way a reinforced concrete chimney does. Before the felling event, field seismographs will be placed on and off the Resolution Copper site to monitor the vibrations that occur from the event.

Q: What is the timeline for full completion of this reclamation work?

A: Here are some approximate dates for major milestones:
• Controlled demolition of Smelter chimney stack in early **November 2018, target date TBD.**
  o The exact date and time may be shifted depending on weather conditions. Optimal weather is required for safe execution. Stack felling will only occur if winds are ideal on the scheduled day. Postponements will be announced on our social media channels.
• Finish removal of contaminated debris in December 2018
• Finish reclamation of surrounding soils in March 2019
• Finish re-seeding and rehabilitation of Smelter site in April 2019
Q: What will happen to the old Magma Arizona Railroad locomotive?

A: It will be preserved. Not all the details of our preservation plan for the Smelter’s railroad locomotive have been determined. Resolution Copper will decide the final placement of the locomotive at a later date.

Q: What specifically makes the Smelter chimney stack a safety threat?

A: The stack’s current condition does not meet building code requirements under wind loading and is at risk of failure under loading from ground movement. Loading measures how much stress the structure can withstand from variations in forces. Bricks have been falling from the stack over the years and continue to fall, creating a hazard for people who work near it. (The following codes were used in the analysis: International Building Code (IBC-2006), American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures (ASCE 7-05), American Concrete Institute, Building Code Requirements for Masonry Structures (ACI 530-05), American Concrete Institute and Code Requirements for Reinforced on Concrete Chimneys (ACI 307-98) used for guidance on chimney design.)

The stack is leaning at an angle that makes it unstable. Incorporating the lean and deterioration due to observed major and minor cracking, the risk of failure and collapse is increased. Deterioration of the stack will only continue over time.

Q: Who will be doing the work and leading the project? What will Resolution Copper’s role be?
A: Resolution Copper hired an experienced contractor, ERM, to carry out the Smelter demolition and removal project. The contractor specializes in safe deconstruction of unstable structures and has an excellent record of accomplishment on similar projects. They hire qualified, licensed specialty subcontractors to conduct the work. Resolution Copper is also employing qualified Health and Safety personnel to perform health and safety monitoring for the duration of the project. Resolution Copper has ultimate oversight and responsibility for the project and will ensure that all work is done safely.

Q: What government agencies are involved and what is their role?

A: Several agencies are consulted as part of this activity. The Arizona Department of Environmental Quality (ADEQ) runs the Volunteer Remediation Program that has helped determine soil clean up requirements near the stack area. The ADEQ Aquifer Protection Permit section is involved because the bricks and soils will be placed in an historic tailings impoundment and covered for disposal. The Pinal County Air Quality Control District issues the permits for dust control. The State Historic Preservation Office and the Tonto National Forest were informed about the project as well.