

THE AUSTIN ADVANTAGE

BOLD SOLUTION FOR 90' BURDEN REMOVAL



GENERAL INFORMATION

Location: Fredericktown, Central States, LLC

Industry: Quarry

Products Used: Paradigm, E*STAR

Project Lead & Author: Lance Jones, Technical Manager

THE HISTORY

A potential customer approached the Central States Fredericktown location regarding a challenging blasting scenario left by the previous owners. The task involved merging two ledges into a single 90' bench. However, an obstacle emerged as approximately 90' of burden remained from the accessible bench area due to insufficient advancement of the lower bench. Given the bench height, the quarry deemed conventional ramping up to the lower ledge uneconomical.



90' of burden with loose material



THE GOALS

1. Safely remove 90' of burden
2. Efficiently merge two ledges into a single 90' bench
3. Ensure economic viability
4. Accurate blasting in challenging conditions
5. Mitigate environmental impact
6. Optimize production ramp-up
7. Utilize innovative technology



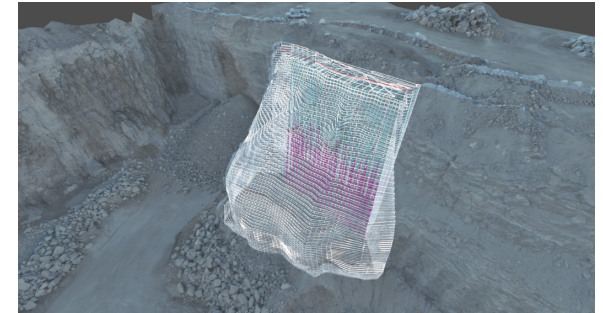
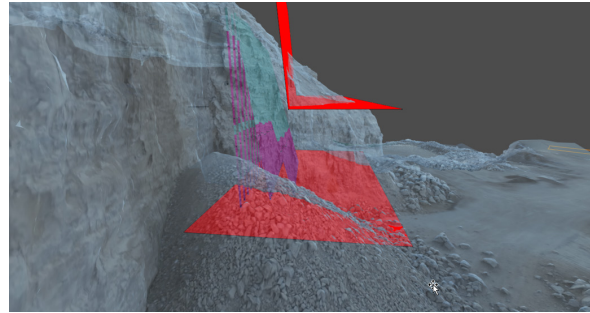
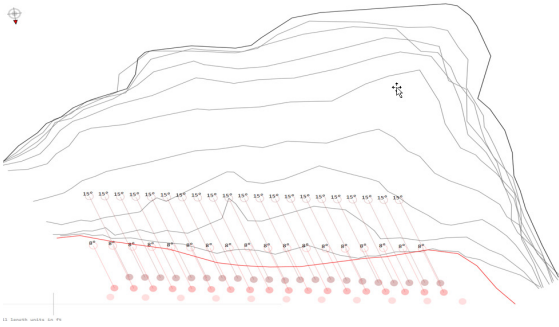
Aerial view of the quarry near 100's of new vehicles, homes, and an airport

CUSTOMER CHALLENGE

The second lower ledge contained shot rock, complicating the Technical team's ability to accurately pinpoint the upper wall's true face location and restricting visibility of the lower wall's actual bench height. Positioned approximately 314' ahead of the blast site was the crusher. South of the property lay an airport, while within the property boundaries were multiple parking lots leased to General Motors for overflow parking of their new vehicles. The client also voiced concerns over multiple neighbor complaints regarding high readings and expressed the desire to minimize them.

THE AUSTIN SOLUTION

The solution involved a combination of advanced detonator technology, precise blast planning using angled holes, environmental mitigation measures, safety considerations, and operational efficiency to successfully merge the ledges and meet the project goals.



THE OUTCOME

The readings obtained were comfortably within compliance limits and were a third of those reported from a previous blasting company. Both toe pull and fragmentation exceeded expectations. The client expressed high satisfaction with the results. The ability to resolve this issue in one operation facilitated a swift production ramp-up for the new ownership. The strategic use of Paradigm and E*STAR detonators played a crucial role in the success of this endeavor.



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