

CHEMFORCE

Case Study: Enhanced Drilling Performance with Complex42™



Project	1 x 7m deep 1500mm
Substrate	Up to 300MPa Basalt
Location	Walwa, Victoria
Date	November 10th, 2023
Company	Access Excavation
Engineers	Joel & Kyle Dazenko
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Drill Rig	Mait MC45(20 Ton)
Drill Bit	1500mm Auger, Betek TCT Teeth

Summary of results Mait MC45 drill rig using 0.8% Complex42™

3X

Faster drilling time

Parameter	Water Only First 3.8m	Complex42™ Second 3.2m
Duration/Hole	240 minutes	80 minutes

Project Details:

- 1500mm Steel lined hole for monopole
- Ground composition: Very hard sedimentary rock

Methodology:

- Equipment: Mait MC45 with auger drill bit
- Measurements: Duration of drilling,
- Complex42™ poured directly into the hole from an IBC @ 0.8%
- For the first 4 hours (3.8m) drilling was drilled with water
- When they hit rock, Complex42™ was introduced and they were able to complete the job for the final 3.2m in 80min. In even harder material.

Key Findings:

- With the introduction of Complex42™, the auger was able to retrieve significantly more spoil on each excursion of the drill bit.
- Even in hard rock the ROP was able to significantly increase

