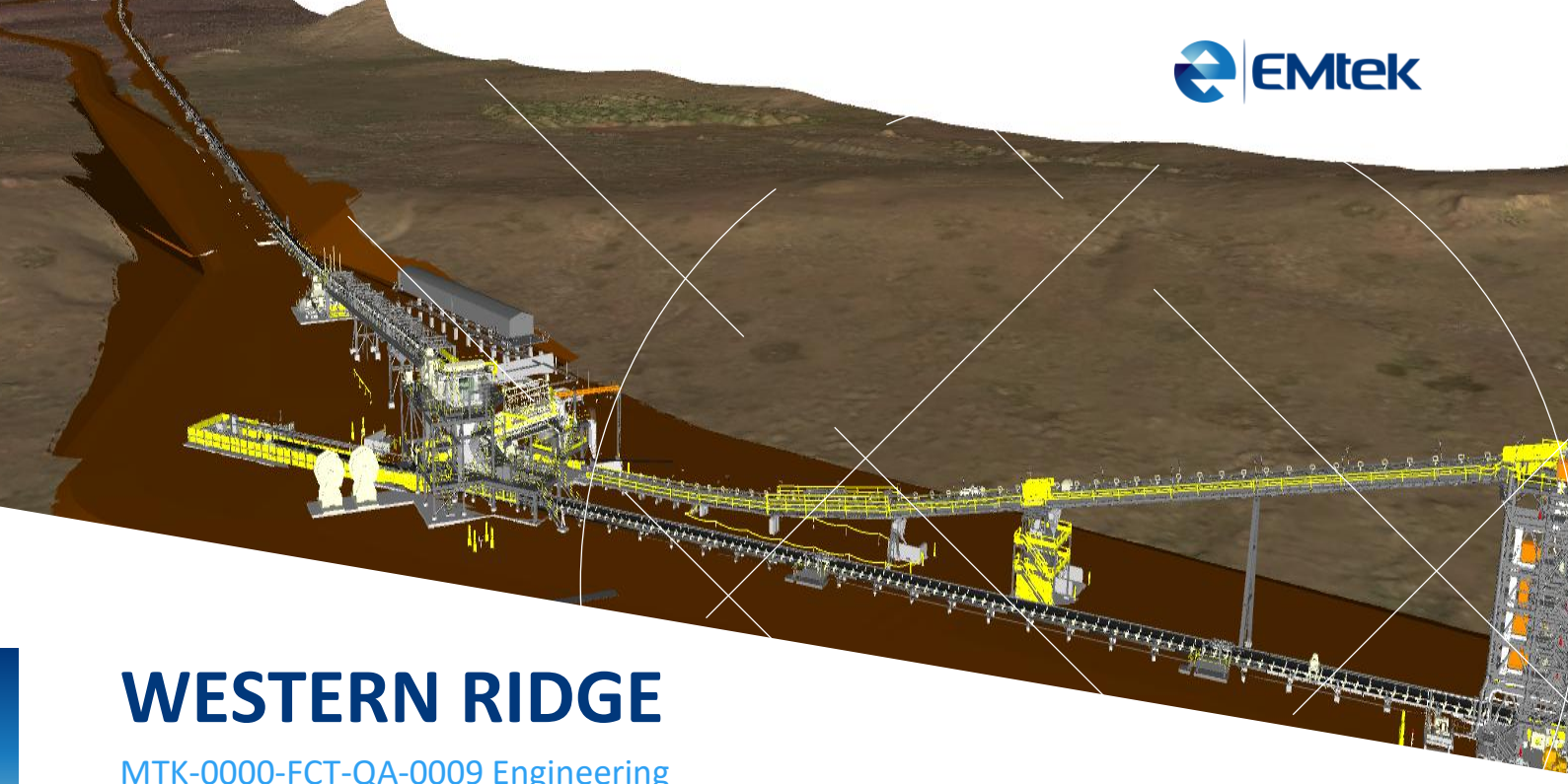

WESTERN RIDGE

MTK-0000-FCT-QA-0009 Engineering & Design Fact Sheet

CLIENT:
BHP

PROJECT OWNER:
BHP

PROJECT VALUE:
$145M

LOCATION:
PILBARA, WA

DATE COMPLETED:
2024 – 2025

Key Project Components

- Engineering Management, Project Management and Project Controls
- SMP Engineering and Design
- Functional Specifications
- DEM Modelling for all chutes in-house
- Static and dynamic analysis in-house
- Shop Detailing
- Procurement Support of Long Lead Items
- Commissioning
- Handover and Ongoing Support

Project Overview

EMtek, working in a partnership with Sedgman Civmec joint venture (SCJV) and BHP developed the Western Ridge Crusher (WRC) Project in Western Australia. The objective of the project was to sustain the Newman Joint Venture Mining and Processing Hub (NJV Hub) production. The Project connects the existing NJV Hub's operations to the Silver Knight and Mt Helen ore deposits located on the western side of Western Ridge.

EMtek's scope included the detailed engineering, design, and shop detailing through to IFC for Overland Conveyors CV104 and CV105, including take up assemblies, loading area assemblies, low level module assemblies, ore analyser platforms, belt splicing stations, pedestrian cross overs, creek crossing assemblies, head end transition modules and truss assemblies, drive station, head-end washdown chutes and head end assemblies. EMtek took the study level design completed by others and was able to optimise the arrangement which saved over 1000 tonnes of steel on one conveyor alone and significantly reduced onsite man hours.

Major Works Included

- Engineering and design of conveyors CV104 and CV105
- Head and Tail drive stations including braking where required
- Feed point - Impact station complete with skirts
- Flaking and splicing stations
- Conveyor structure required to support belt weighers, sizing & profile scanners, moisture analysers and water sprays
- Functional specification
- Engineering specifications/data sheets to enable procurement of 3rd party equipment.