

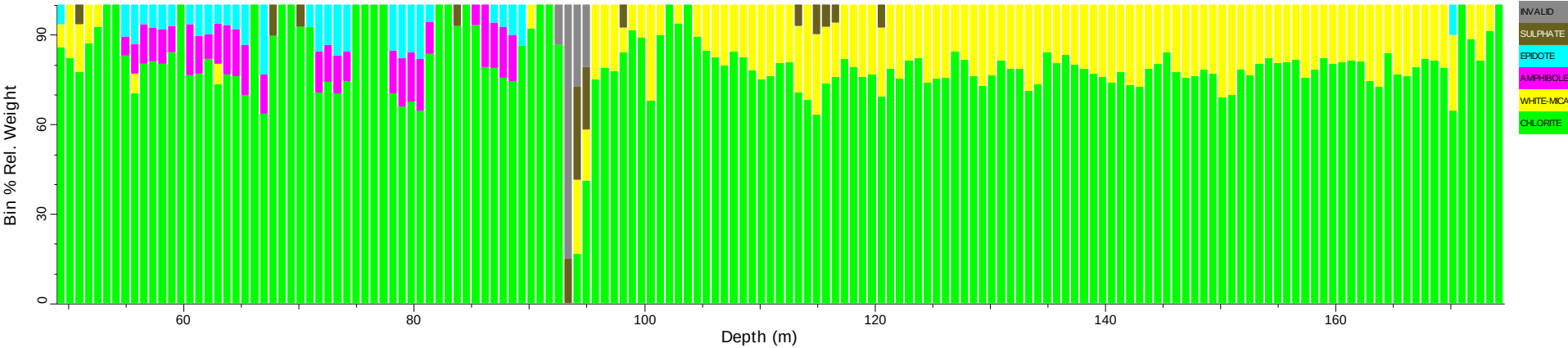


# Mineralogy Summary

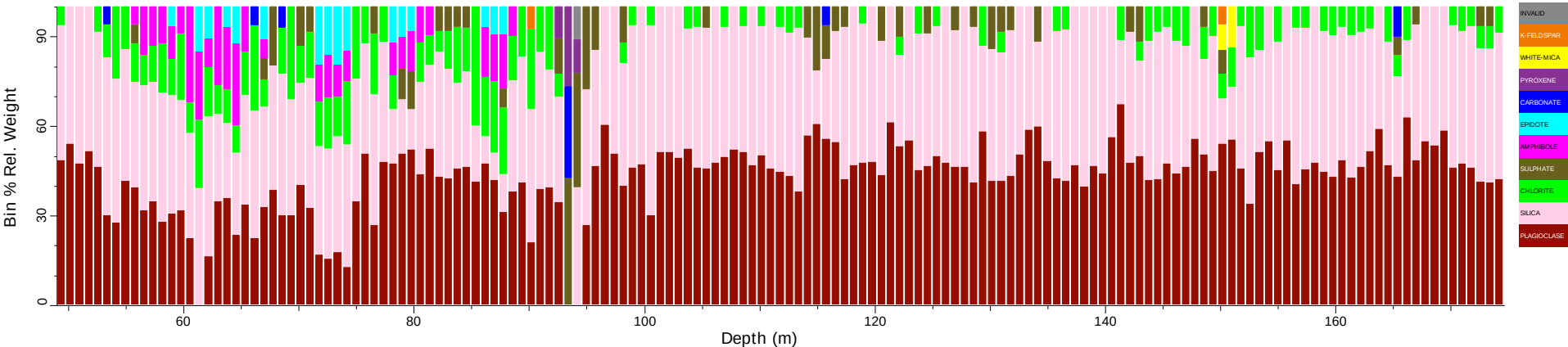
## Drillhole: LSHD7

*HyLogger-3*  
*Process Level 2*

LSHD7: Spatial Summary (Bin=0.8 MinBin=5% uTSA+ 7.05)



LSHD7\_tsg\_tir: Spatial Summary (Bin=0.8 MinBin=5% ujCLST 7.08)



| TERMINOLOGY              | DESCRIPTION                                                                                  | <p><b>TSA+ algorithm:</b><br/>           “The Spectral Assistant™ plus” - an improved TSA unmixing routine utilised in TSG. Identifies and estimates abundances of minerals from VNIR or SWIR spectra using linear modelling of in-built reference library mineral spectra. Default results are best-fit 1 to 3 mineral spectral models (Schodlok et al., 2016).</p> <p><b>jCLST algorithm:</b><br/>           “Justified Constrained Least Squares” - an improved CLS unmixing routine utilised in TSG. Identifies and estimates abundances of minerals from TIR spectra using quadratic modelling of restricted sets of in-built reference library mineral spectra, guided by TSA results. Default results are best-fit 1 to 3 mineral spectral models (Schodlok et al., 2016).</p> <p>Schodlok, MC, Whitbourn, L, Huntington, J, Mason, P, Green, A, Berman, M, Coward, D, Connor, P, Wright, W, Jolivet, M and Martinez, R 2016, HyLogger-3, a visible to shortwave and thermal infrared reflectance spectrometer system for drill core logging: functional description: Australian Journal of Earth Sciences, v. 63, no. 8, p. 929-940, doi:10.1080/08120099.2016.1231133</p> |
|--------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TSG</b>               | The Spectral Geologist™ software package (and associated file format)                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Process Level 1</b>   | Dataset processed with automated (System) mineral interpretations                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Process Level 2</b>   | Dataset processed with geologist refined (User) mineral interpretations                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>VNIR</b>              | Visible-Near Infrared region (380-1000 nm)                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SWIR</b>              | Short-wave Infrared region (1000-2500 nm)                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>TIR</b>               | Thermal Infrared region (6000-14500 nm)                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Bin</b>               | Selected summary interval for plot (metres)                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>MinBin</b>            | Selected minimum spectral weight for plot (%)                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Bin % Rel. Weight</b> | Relative spectral weight %<br>(normalized to 100 for minerals above minimum spectral weight) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>sTSA+</b>             | System (process Level 1) TSA+ SWIR unmixing algorithm                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>uTSA+</b>             | User (process Level 2) TSA+ SWIR unmixing algorithm                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>sjCLST</b>            | System (process Level 1) jCLST TIR unmixing algorithm                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>ujCLST</b>            | User (process Level 2) jCLST TIR unmixing algorithm                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |