



Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**

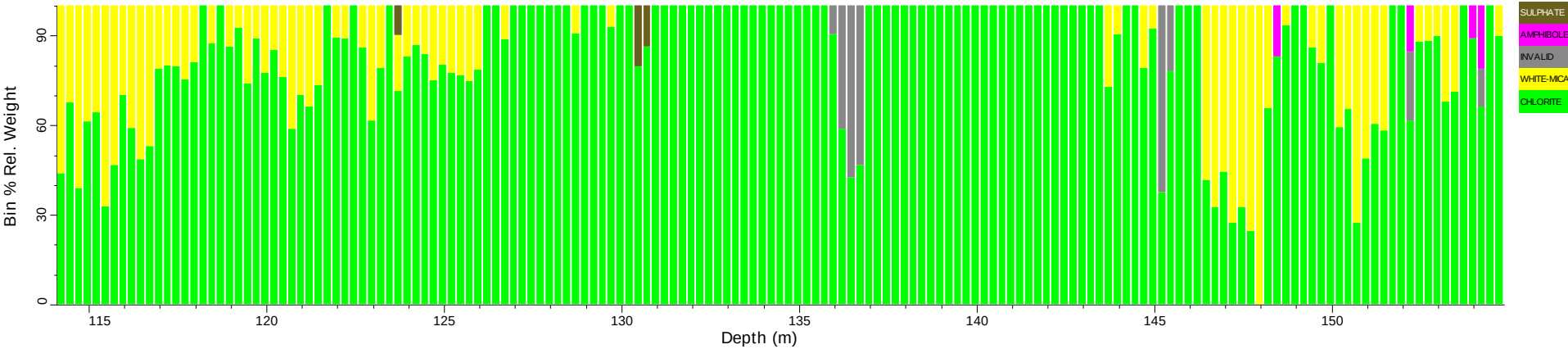


Mineralogy Summary

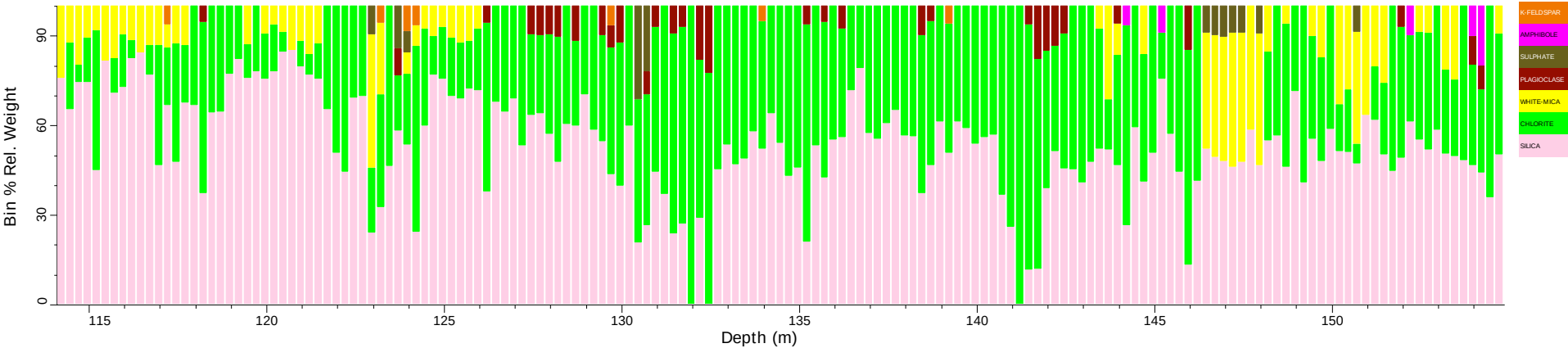
Drillhole: **HCRD0044**

HyLogger-3
Process Level 2

HCRD0044: Spatial Summary (Bin=0.25 MinBin=5% uTSA+ 7.05)



HCRD0044_tsg_tir: Spatial Summary (Bin=0.25 MinBin=5% ujCLST 7.08)



Terminology	Description	
TSG	The Spectral Geologist™ software package (and associated file format)	<p>TSA+ algorithm: “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>jCLST algorithm: “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>
Process Level 1	Dataset processed with automated (System) mineral interpretations	
Process Level 2	Dataset processed with geologist refined (User) mineral interpretations	
VNIR	Visible-Near Infrared region (380-1000 nm)	
SWIR	Short-wave Infrared region (1000-2500 nm)	
TIR	Thermal Infrared region (6000-14500 nm)	
Bin	Selected summary interval for plot (metres)	
MinBin	Selected minimum spectral weight for plot (%)	
Bin % Rel. Weight	Relative spectral weight % (normalized to 100 for minerals above minimum spectral weight)	
sTSA+	System (process Level 1) TSA+ SWIR unmixing algorithm	
uTSA+	User (process Level 2) TSA+ SWIR unmixing algorithm	
sjCLST	System (process Level 1) jCLST TIR unmixing algorithm	
ujCLST	User (process Level 2) jCLST TIR unmixing algorithm	