Radar Analysis Graphical Utility (RAGU) Interpretation Format Description

RAGU output interpretation format information. Each row in the output interpretation text or geopackage file contains the following information for each radargram trace. The below format information corresponds to a merged export file created from two horizon interpretations. Columns 8-12 will repeat for additional horizons. <horizon0> and <horizon1> will be replaced by user selected horizon identifiers. The number of columns in the output interpretation is variable depending on how many horizons are exported. There will be 6 columns at a minimum. Each field id (fid) in the output interpretation is denoted in the list below as fid.

trace

Column number: 0
Description: Radargram trace.

lon

Column number: 1
Unit: Degrees
Description: Longitude of footprint location.

lat

Column number: 2
Unit: Degrees
Description: Latitude of footprint location.

elev

Column number: 3
Unit: Meters
Description: Elevation of radar system. For Earth, referenced to WGS-84 Ellipsoid. For Mars, this is spacecraft radius from planetary center of mass.

<horizon0>_sample

Column number: 4
Description: Sample number of horizon interpretation.

<horizon0>_twtt

Column number: 5
Unit: Seconds
Description: Two-way travel time delay to horizon interpretation.

<horizon0>_elev

Column number: 6
Unit: Meters
Description: Elevation of horizon interpretation. Two-way travel time delay converted to depth by user-defined dielectric permittivity (defaults to 1 if horizon is declared as the surface). For Earth, referenced to WGS-84 Ellipsoid. For Mars, this is elevation relative to planetary center of mass.

<horizon0>_amp

Column number: 7

Description: Amplitude of horizon interpretation.

<horizon1>_sample

Column number: 8

Description: Sample number of horizon interpretation.

<horizon1>_twtt

Column number: 9

Unit: Seconds

Description: Two-way travel time delay to horizon interpretation.

<horizon1>_elev

Column number: 10

Unit: Meters

Description: Elevation of horizon interpretation. Two-way travel time delay converted to depth by user-defined dielectric permittivity. For Earth, referenced to WGS-84 Ellipsoid. For Mars, this is elevation relative to planetary center of mass.

<horizon1>_amp

Column number: 11

Description: Amplitude of horizon interpretation.

<horizon0>_<horizon1>_thick

Column number: 12

Unit: Meters

Description: Thickness between <horizon0> and <horizon1>. Two-way travel time delay converted to depth by user-defined dielectric permittivity.