

Reflection seismic study of the Siljan Ring impact structure: Orsa - Raw data

SND-ID: snd1042-1. **Version:** 2. **DOI:** <https://doi.org/10.57804/3gj5-xt38>

Associated documentation

SND 1042 - orsa_2011_stack.jpg (1.7 MB)

SND 1042 - Orsa_line.geojson (357 bytes)

SND 1042 - Orsa_line.gml (755 bytes)

Citation

Juhlin, C., Sturkell, E., Ebbestad, J. O. R., Lehnert, O., Högström, A. E. S., & Meinhold, G. (2023) Reflection seismic study of the Siljan Ring impact structure: Orsa - Raw data (Version 2) [Data set]. Uppsala University. Available at: <https://doi.org/10.57804/3gj5-xt38>

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Research principal

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Description

Two new reflection seismic profiles over the Paleozoic successions of the western part of the Siljan Ring impact structure were acquired during 2011, the Mora and the Orsa profile. This data set concerns the Orsa profile. The profile has length of c. 12 km and the processed data image the geological section to about 3 km depth (Silurian siliciclastic and Ordovician carbonate rocks to several hundred metres depth, below disturbed Paleoproterozoic crystalline basement). During the survey, 542 source points (VIBSIST 3000) were recorded by 320 receiver channels for 30 seconds. From this recording, the following data sets were generated and published: 1) decoded and quality controlled raw data; 2) pre-processed (shot geometry applied) data; 3) stacked data; 4) migrated data; 5) depth converted data and velocity field.

This dataset contains the raw data of the Orsa profile after decoding the sweep signal the VIBSIST 3000 source.

Processing steps for this data set:

1: Read decoded VIBSIST data

Key acquisition parameters are:

Number of channels: 320 (160-160)

Near offset: 0m

Geophone spacing: 10 m

Geophone type: 28 Hz single
Source spacing: 20 m
Source type: VIBSIST 3000
Hit interval between hammer blows: 100-200 ms
Sweeps per source point: 3-4
Nominal fold: 80
Recording instrument: SERCEL 428UL
Sample rate: 1 ms
Field low cut: Out
Field high cut: 400 Hz
Record length: 30 s
Profile length: 12 km
Source points: 542
Dates acquired: 10/6-15/6: 2011

File format: SEGD rev 2; Field acquisition notes scanned to PDF

Digital shot records, one file per shot, according to SEG technical standard SEG-D revision 2.1 (SEG-D_r2.1, 2006); <https://seg.org/Publications/SEG-Technical-Standards>

Data is available on request due to file size.

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

2011-06-10 - 2011-06-15

Data format / data structure

[Numeric](#)

[Text](#)

[Geospatial](#)

[Other](#)

Data collection 1

- Time period(s) for data collection: 2011-06-10 - 2011-06-15
- Instrument: SERCEL 428UL - Seismic
- Instrument: VIBSIST 3000 - Seismic

Geographic spread

Geographic location: [Orsa Municipality](#)

Geographic description: Siljan Ring impact structure, central Sweden, near Orsa

Responsible department/unit

Department of Earth Sciences

Funding

- Funding agency: Swedish Research Council
- Funding agency's reference number: 2009-04492

Research area

[Geophysics](#) (Standard för svensk indelning av forskningsämnen 2011)

[Geoscientific information](#) (INSPIRE topic categories)

Keywords

[Earth science](#), [Geological disaster](#), [Geophysics](#), [Research](#)

Publications

Juhlin, Christopher, Erik Sturkell, Jan Ove R. Ebbestad, Oliver Lehnert, Anette E. S. Högström, and Guido Meinhold. 2012. "A New Interpretation of the Sedimentary Cover in the Western Siljan Ring Area, Central Sweden, Based on Seismic Data." *Tectonophysics* 580 (December):88-99.

<https://doi.org/10.1016/j.tecto.2012.08.040>.

[Fulltext article](#)

DOI: <https://doi.org/10.1016/j.tecto.2012.08.040>

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

14.60869974, 61.20358864

14.60869974, 61.12874931

14.73675842, 61.12874931

14.73675842, 61.20358864

14.60869974, 61.20358864

Accessibility level

Access to data through SND

Access to data is restricted

Use of data

[Things to consider when using data shared through SND](#)

License

[CC BY-SA 4.0](#)

Versions

Version 2. 2023-08-16

[Version 1.0](#). 2018-02-27

Contact for questions about the data

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Related research data in SND's catalogue

[Reflection seismic study of the Siljan Ring impact structure: Orsa - Shot geometry corrected](#)

[Reflection seismic study of the Siljan Ring impact structure: Orsa - Stacked data](#)

[Reflection seismic study of the Siljan Ring impact structure: Orsa - Migrated data](#)

[Reflection seismic study of the Siljan Ring impact structure: Orsa - Time-depth migrated data](#)

[Reflection seismic study of the Siljan Ring impact structure: Mora - Raw data](#)

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