RUBY

Soviet Deep Seismic Sounding Project

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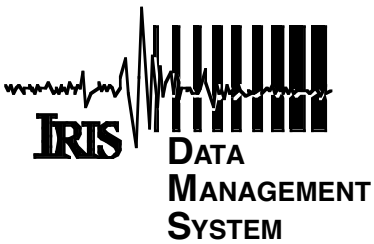
Assembled Data Set 04-002



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Project RUBY

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Data summary

Project RUBY included two lines, referred to as Ruby1 and Ruby2 beloc (Figure 1). The data were acquired by the Center GEON in 1988-1989. The two PNEs were recorded by both lines.

Line Ruby1:

Location: town Kostomuksha — town Semipalatinsk (Figure 1)
Profile length: approximately 3050 km
2 PNEs and 27 chemical explosions of 3000-5000 kg
Recording systems: Portable 3-component analogue systems TAIGA and CHEREPAKHA, 1-Hz sensors

Line Ruby2:

Location: town Nizhni Tagil — town Urengoi (Figure 1)
Profile length: approximately 1850 km
2 PNEs and 26 chemical explosions of 3000-5000 kg
Recording systems: Portable 3-component analogue systems TAIGA and CHEREPAKHA, 1-Hz sensors

Figure 1 Location map of the two lines of project RUBY. Stars indicate the PNEs, small triangles are 3-component recording sites.

On the accompanying CD, the data for both PNEs are provided in directory `ruby`, and the chemical explosions are given separately for the two lines, in directories `ruby1` and `ruby2`. PostScript plots of all sections are also provided in the corresponding subdirectories. All plots were generated by an automated procedure for quality control purposes and may not be very well optimized for viewing or interpretation.

Data format

The data format is identical to that of QUARTZ, CRATON, KIMBERLITE, and RIFT records delivered earlier. The data are provided in standard SEGY format using the IBM floating point representation of data values. Geographic coordinates of shots and receivers (in degrees), and offsets (in meters) are loaded in data headers. Recording station numbers (numbering starting from the West, Figure 1) are loaded in SEGY headers as `CHANNEL`, and the `FFIDs`

correspond to shot numbers. Each data file contains a single component of recordings from one shot. File names follow the following convention:

`ruby-<shot_number>-<line>-<component_index>.segy`	for PNEs

`ruby1-<shot_number>-<component_index>.segy`
or
`ruby2-<shot_number>-<component_index>.segy`
	for chemical explosions

where `shot_number` is the number of the shot. Shot numbers are 1,2,3 for the PNEs (RUBY-1, and 2, respectively; Figure 1). For the PNEs, the line numbers (1 or 2) are appended to differentiate between the in-line and fan recordings. For chemical shots, shot numbers correspond to the number of the nearest receiver. The `component_index` is `'v'` for the vertical (upward), `'r'` for radial (directed away from the shot), and `'t'` for the transverse (directed to the right when looking away from the shot point).