

Bazalt -1

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Project BAZALT-1

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Data summary

Project BAZALT-1 included three seismic profiles recording chemical explosions. Locations of and the approximate lengths of the lines are (Figure 1):

Profile 1A: city Krasnovodsk – town Mari, 16 source points, 757 km.

Profile 1B: town Mari – town Muruntau – city Abakan, 48 source points, 2818 km;

Profile 2: town Termez – Aral Sea – town Emba, 23 source points, 1590 km.

Data acquired by Center GEON in 1989.

87 chemical explosions of 3000-5000 kg

Recording systems: Portable 3-component analogue systems TAIGA and
CHEREPAKHA, 1-Hz sensors

Data format

Data format is identical to that of QUARTZ records delivered earlier. The data are provided in standard SEGY format using 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 (generally numbered starting from the West, Figure 1) are loaded in SEGY headers as CHANNEL, and FFIDs correspond to shot numbers. Each data file contains a single component of recordings from one shot. File names follow the following convention:

`baz-1-<line>-<shot_number>-<component_index>.seg`

where `line` is the line name (1A, 1B, or 2), and `shot_number` is the number of the shot. Shots are numbered by the position of the nearest receiver station. 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).

Data records are started at times = offset/8 (s) after the shots and truncated at 200-second record lengths. Time sampling intervals are typically 10 ms (stored in SEGY headers).

For quality control purposes, data CDs also contain subdirectories with PostScript plots of the corresponding data sections. As the plots are automatically generated, plotting parameters may not be optimal for every record, yet they give an idea of data density and general quality.

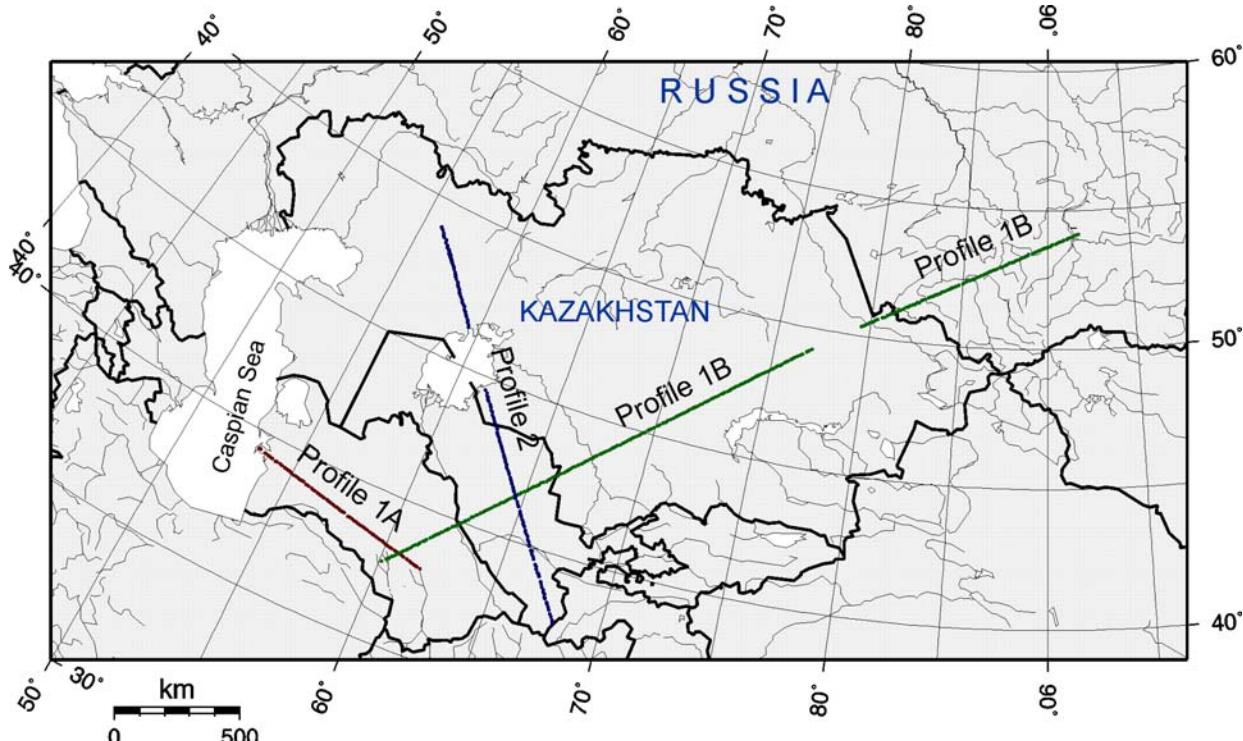


Figure 1. Location map of three chemical-explosion profiles of project BAZALT-1. Small colored triangles show 3-component receiver stations.

```
.:
total 132
-rw xr--r-- 1 morozov dss 123494 Jul 18 17:17 Bazalt-1.pdf
drwxr-xr-x 5 morozov dss 4096 Jul 18 17:40 chemical
-rw r--r-- 1 morozov dss 0 Jul 18 18:06 file_list

./chemical:
total 12
drwxr-xr-x 3 morozov dss 4096 Jul 18 17:35 line-1A
drwxr-xr-x 3 morozov dss 4096 Jul 18 17:40 line-1B
drwxr-xr-x 3 morozov dss 4096 Jul 18 17:42 line-2

./chemical/line-1A:
total 11692
-rw r--r-- 1 morozov dss 321944 Jul 18 17:34 baz-1-1A-11-r.segy
-rw r--r-- 1 morozov dss 321944 Jul 18 17:34 baz-1-1A-11-t.segy
-rw r--r-- 1 morozov dss 321944 Jul 18 17:34 baz-1-1A-11-v.segy
-rw r--r-- 1 morozov dss 285212 Jul 18 17:34 baz-1-1A-16-r.segy
-rw r--r-- 1 morozov dss 285212 Jul 18 17:34 baz-1-1A-16-t.segy
-rw r--r-- 1 morozov dss 285212 Jul 18 17:34 baz-1-1A-16-v.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-20-r.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-20-t.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-20-v.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-25-r.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-25-t.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-25-v.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:34 baz-1-1A-29-r.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:34 baz-1-1A-29-t.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:34 baz-1-1A-29-v.segy
-rw r--r-- 1 morozov dss 138284 Jul 18 17:34 baz-1-1A-2-r.segy
-rw r--r-- 1 morozov dss 138284 Jul 18 17:34 baz-1-1A-2-t.segy
-rw r--r-- 1 morozov dss 138284 Jul 18 17:34 baz-1-1A-2-v.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-33-r.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-33-t.segy
-rw r--r-- 1 morozov dss 236236 Jul 18 17:34 baz-1-1A-33-v.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:35 baz-1-1A-40-r.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:35 baz-1-1A-40-t.segy
-rw r--r-- 1 morozov dss 260724 Jul 18 17:35 baz-1-1A-40-v.segy
-rw r--r-- 1 morozov dss 297456 Jul 18 17:35 baz-1-1A-46-r.segy
-rw r--r-- 1 morozov dss 297456 Jul 18 17:35 baz-1-1A-46-t.segy
-rw r--r-- 1 morozov dss 297456 Jul 18 17:35 baz-1-1A-46-v.segy
-rw r--r-- 1 morozov dss 309700 Jul 18 17:35 baz-1-1A-48-r.segy
-rw r--r-- 1 morozov dss 309700 Jul 18 17:35 baz-1-1A-48-t.segy
-rw r--r-- 1 morozov dss 297456 Jul 18 17:35 baz-1-1A-52-r.segy
-rw r--r-- 1 morozov dss 297456 Jul 18 17:35 baz-1-1A-52-t.segy
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-rw r--r-- 1 morozov dss 248480 Jul 18 17:35 baz-1-1A-57-r.segy
-rw r--r-- 1 morozov dss 248480 Jul 18 17:35 baz-1-1A-57-t.segy
-rw r--r-- 1 morozov dss 248480 Jul 18 17:35 baz-1-1A-57-v.segy
-rw r--r-- 1 morozov dss 223392 Jul 18 17:35 baz-1-1A-63-r.segy
-rw r--r-- 1 morozov dss 223392 Jul 18 17:35 baz-1-1A-63-t.segy
-rw r--r-- 1 morozov dss 223392 Jul 18 17:35 baz-1-1A-63-v.segy
-rw r--r-- 1 morozov dss 150528 Jul 18 17:35 baz-1-1A-689-r.segy
-rw r--r-- 1 morozov dss 150528 Jul 18 17:35 baz-1-1A-689-t.segy
-rw r--r-- 1 morozov dss 150528 Jul 18 17:35 baz-1-1A-689-v.segy
-rw r--r-- 1 morozov dss 309700 Jul 18 17:35 baz-1-1A-68-r.segy
-rw r--r-- 1 morozov dss 309700 Jul 18 17:35 baz-1-1A-68-t.segy
-rw r--r-- 1 morozov dss 309700 Jul 18 17:35 baz-1-1A-68-v.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-8-r.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-8-t.segy
-rw r--r-- 1 morozov dss 162772 Jul 18 17:34 baz-1-1A-8-v.segy
drwxr-xr-x 2 morozov dss 4096 Jul 18 17:35 plots

./chemical/line-1A/plots:
total 180480
-rw r--r-- 1 morozov dss 4145704 Jul 18 17:34 baz-1-1A-11-r.ps
-rw r--r-- 1 morozov dss 4145704 Jul 18 17:34 baz-1-1A-11-t.ps
-rw r--r-- 1 morozov dss 4145704 Jul 18 17:34 baz-1-1A-11-v.ps
-rw r--r-- 1 morozov dss 4124761 Jul 18 17:34 baz-1-1A-16-r.ps
-rw r--r-- 1 morozov dss 4124761 Jul 18 17:34 baz-1-1A-16-t.ps
-rw r--r-- 1 morozov dss 4124761 Jul 18 17:34 baz-1-1A-16-v.ps
-rw r--r-- 1 morozov dss 3830587 Jul 18 17:34 baz-1-1A-20-r.ps
-rw r--r-- 1 morozov dss 3830587 Jul 18 17:34 baz-1-1A-20-t.ps
-rw r--r-- 1 morozov dss 3830587 Jul 18 17:34 baz-1-1A-20-v.ps
-rw r--r-- 1 morozov dss 3427802 Jul 18 17:34 baz-1-1A-25-r.ps
-rw r--r-- 1 morozov dss 3427802 Jul 18 17:34 baz-1-1A-25-t.ps
```



```
-rw-r--r-- 1 morozov dss 3394050 Jul 18 17:36 baz-1-1B-75-r.ps  
-rw-r--r-- 1 morozov dss 3394050 Jul 18 17:36 baz-1-1B-75-t.ps  
-rw-r--r-- 1 morozov dss 3394050 Jul 18 17:35 baz-1-1B-75-v.ps  
-rw-r--r-- 1 morozov dss 3960445 Jul 18 17:36 baz-1-1B-79-r.ps  
-rw-r--r-- 1 morozov dss 3960445 Jul 18 17:36 baz-1-1B-79-t.ps  
-rw-r--r-- 1 morozov dss 3960445 Jul 18 17:36 baz-1-1B-79-v.ps  
-rw-r--r-- 1 morozov dss 3810186 Jul 18 17:36 baz-1-1B-87-r.ps  
-rw-r--r-- 1 morozov dss 3810186 Jul 18 17:36 baz-1-1B-87-t.ps  
-rw-r--r-- 1 morozov dss 3810186 Jul 18 17:36 baz-1-1B-87-v.ps  
-rw-r--r-- 1 morozov dss 4159397 Jul 18 17:36 baz-1-1B-94-r.ps  
-rw-r--r-- 1 morozov dss 4159397 Jul 18 17:36 baz-1-1B-94-t.ps  
-rw-r--r-- 1 morozov dss 4159397 Jul 18 17:36 baz-1-1B-94-v.ps
```

./chemical/line-2:

total 14632

```

-rw-r--r-- 1 morozov dss      162772 Jul 18 17:40 baz-1-2-8-v.segy
-rw-r--r-- 1 morozov dss      126040 Jul 18 17:41 baz-1-2-95-r.segy
-rw-r--r-- 1 morozov dss      126040 Jul 18 17:41 baz-1-2-95-t.segy
-rw-r--r-- 1 morozov dss      126040 Jul 18 17:41 baz-1-2-95-v.segy
-rw-r--r-- 1 morozov dss      138284 Jul 18 17:41 baz-1-2-96-r.segy
-rw-r--r-- 1 morozov dss      138284 Jul 18 17:41 baz-1-2-96-t.segy
-rw-r--r-- 1 morozov dss      138284 Jul 18 17:41 baz-1-2-96-v.segy
drwxr-xr-x 2 morozov dss      4096 Jul 18 17:42 plots

```

./chemical/line-2/plots:

total 258924

```

-rw-r--r-- 1 morozov dss      4001366 Jul 18 17:41 baz-1-2-101-r.ps
-rw-r--r-- 1 morozov dss      4001366 Jul 18 17:41 baz-1-2-101-t.ps
-rw-r--r-- 1 morozov dss      4001366 Jul 18 17:41 baz-1-2-101-v.ps
-rw-r--r-- 1 morozov dss      3680675 Jul 18 17:42 baz-1-2-109-r.ps
-rw-r--r-- 1 morozov dss      3680675 Jul 18 17:42 baz-1-2-109-t.ps
-rw-r--r-- 1 morozov dss      3680675 Jul 18 17:42 baz-1-2-109-v.ps
-rw-r--r-- 1 morozov dss      3789861 Jul 18 17:42 baz-1-2-113-r.ps
-rw-r--r-- 1 morozov dss      3789861 Jul 18 17:42 baz-1-2-113-t.ps
-rw-r--r-- 1 morozov dss      3789861 Jul 18 17:42 baz-1-2-113-v.ps
-rw-r--r-- 1 morozov dss      3673588 Jul 18 17:42 baz-1-2-119-r.ps
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-rw-r--r-- 1 morozov dss      3673588 Jul 18 17:42 baz-1-2-119-v.ps
-rw-r--r-- 1 morozov dss      3851770 Jul 18 17:42 baz-1-2-126-r.ps
-rw-r--r-- 1 morozov dss      3851770 Jul 18 17:42 baz-1-2-126-t.ps
-rw-r--r-- 1 morozov dss      3851770 Jul 18 17:42 baz-1-2-126-v.ps
-rw-r--r-- 1 morozov dss      3939947 Jul 18 17:42 baz-1-2-136-r.ps
-rw-r--r-- 1 morozov dss      3939947 Jul 18 17:42 baz-1-2-136-t.ps
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-rw-r--r-- 1 morozov dss      3898931 Jul 18 17:42 baz-1-2-142-v.ps
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-rw-r--r-- 1 morozov dss      3939737 Jul 18 17:40 baz-1-2-14-r.ps
-rw-r--r-- 1 morozov dss      3939737 Jul 18 17:40 baz-1-2-14-t.ps
-rw-r--r-- 1 morozov dss      3939737 Jul 18 17:40 baz-1-2-14-v.ps
-rw-r--r-- 1 morozov dss      3564256 Jul 18 17:42 baz-1-2-150-r.ps
-rw-r--r-- 1 morozov dss      3564256 Jul 18 17:42 baz-1-2-150-t.ps
-rw-r--r-- 1 morozov dss      3564256 Jul 18 17:42 baz-1-2-150-v.ps
-rw-r--r-- 1 morozov dss      3720722 Jul 18 17:40 baz-1-2-1-r.ps
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-rw-r--r-- 1 morozov dss      3782666 Jul 18 17:40 baz-1-2-21-t.ps
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-rw-r--r-- 1 morozov dss      3926045 Jul 18 17:40 baz-1-2-31-v.ps
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-rw-r--r-- 1 morozov dss      3693769 Jul 18 17:41 baz-1-2-48-t.ps
-rw-r--r-- 1 morozov dss      3693769 Jul 18 17:41 baz-1-2-48-v.ps
-rw-r--r-- 1 morozov dss      4035777 Jul 18 17:41 baz-1-2-51-r.ps
-rw-r--r-- 1 morozov dss      4035777 Jul 18 17:41 baz-1-2-51-t.ps
-rw-r--r-- 1 morozov dss      4035777 Jul 18 17:41 baz-1-2-51-v.ps
-rw-r--r-- 1 morozov dss      3940159 Jul 18 17:41 baz-1-2-61-r.ps
-rw-r--r-- 1 morozov dss      3940159 Jul 18 17:41 baz-1-2-61-t.ps
-rw-r--r-- 1 morozov dss      3940159 Jul 18 17:41 baz-1-2-61-v.ps
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-rw-r--r-- 1 morozov dss      3768925 Jul 18 17:41 baz-1-2-70-t.ps
-rw-r--r-- 1 morozov dss      3768925 Jul 18 17:41 baz-1-2-70-v.ps
-rw-r--r-- 1 morozov dss      3919523 Jul 18 17:41 baz-1-2-78-r.ps
-rw-r--r-- 1 morozov dss      3919523 Jul 18 17:41 baz-1-2-78-t.ps
-rw-r--r-- 1 morozov dss      3919523 Jul 18 17:41 baz-1-2-78-v.ps
-rw-r--r-- 1 morozov dss      3980179 Jul 18 17:41 baz-1-2-89-r.ps
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-rw-r--r-- 1 morozov dss      3980179 Jul 18 17:41 baz-1-2-89-v.ps
-rw-r--r-- 1 morozov dss      3843705 Jul 18 17:40 baz-1-2-8-r.ps
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-rw-r--r-- 1 morozov dss      3843705 Jul 18 17:40 baz-1-2-8-v.ps
-rw-r--r-- 1 morozov dss      3802614 Jul 18 17:41 baz-1-2-95-r.ps
-rw-r--r-- 1 morozov dss      3802614 Jul 18 17:41 baz-1-2-95-t.ps
-rw-r--r-- 1 morozov dss      3802614 Jul 18 17:41 baz-1-2-95-v.ps

```

```
-rw-r--r-- 1 morozov dss 3877783 Jul 18 17:41 baz-1-2-96-r.ps  
-rw-r--r-- 1 morozov dss 3877783 Jul 18 17:41 baz-1-2-96-t.ps  
-rw-r--r-- 1 morozov dss 3877783 Jul 18 17:41 baz-1-2-96-v.ps
```