Elf L7d 2-D synthetic dataset

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ABSTRACT

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DATA FILES

Raw Data /data_3d/elf_north_sea/2D-synth/elfdata.HH
Velocity Model /data_3d/elf_north_sea/2D-synth/elfvel.HH
Stack ???
Zero-offset Migration ???
Usage (Prucha et al., 1998; Malcotti and Biondi, 1998, 1997)
Geometry

```
In3d:
----------------------------------------------------------------
              ********** Dat/elfdata.HH ************
        4 -esize                        data_format-xdr_float
----------------------------------------------------------------
n1=1250              o1=0.000000    d1=0.004000    label1=time (s)
n2=127          o2=190.00000   d2=0.025000    label2=offset (m)
n3=199          o3=50.000000   d3=50.000000   label3=source location (m)
Data: in=/data_3d/elf_north_sea/2D-synth/elfdata.HH@
     25273 elements,  126365000 bytes in data file
----------------------------------------------------------------
```

Problem Multipathing - Illumination problems / Shadow zones - Common-angle gathers
History of Data This synthetic dataset created by Elf-IFP[2]-CGG[3] is inspired from real data recorded in the North Sea (block L7d). To generate the data, the source spacing was 50m, receiver spacing 25m, and the offsets cover the range 190-3340m. The modeling used is unknown.
Preprocessing Synthetic data
Proprietary Considerations For SEP private use only. Publishing authorized.

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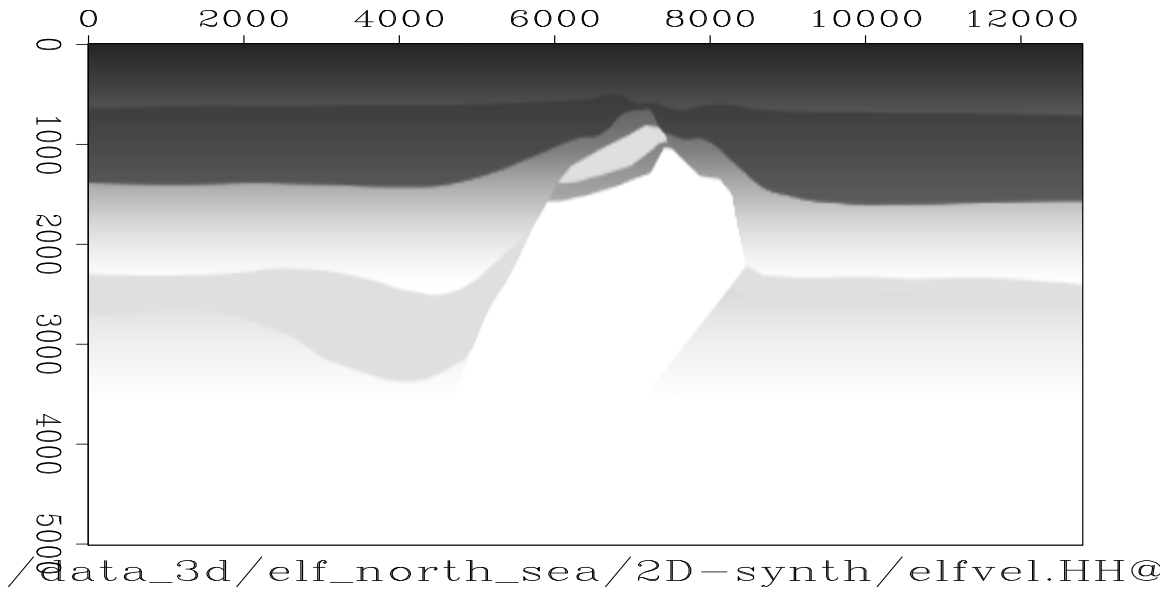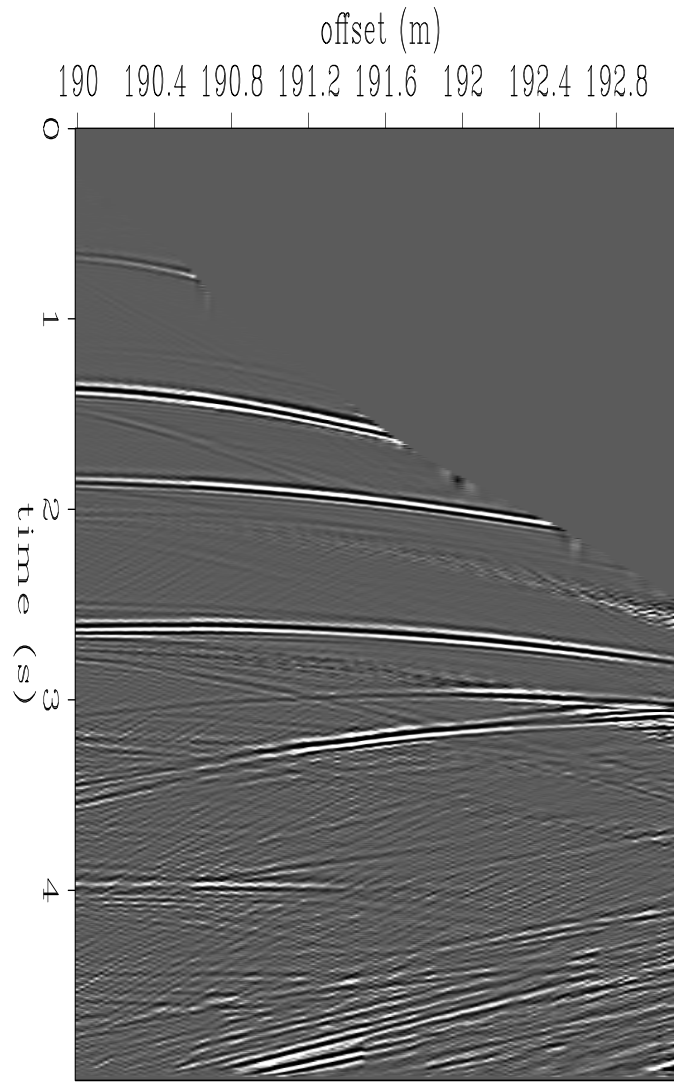[2]Institut Francais du Pétrole
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Figure 1: Elf synthetic velocity model elf-synth-velmodel [ER]

REFERENCES

Malcotti, H., and Biondi, B., 1997, Results in depth focusing analysis for 3-D migration velocity estimation: SEP–**95**, 239–249.

Malcotti, H., and Biondi, B., 1998, Accurate linear interpolation in the extended split-step migration: SEP–**97**, 61–72.

Prucha, M. L., Clapp, R. G., and Biondi, B. L., 1998, Imaging under the edges of salt bodies: Analysis of an Elf North Sea dataset: SEP–**97**, 35–44.

Figure 2: Common-shot gather generated from the synthetic velocity model shown previously elf-synth-shot [ER]