An example *Geophysics* report,
with a two-line title

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ABSTRACT

This is an example of using georeport.cls for writing *Geophysics* reports.

INTRODUCTION

This is an introduction. LaTeX is a powerful document typesetting system (Lamport, 1994). An excellent reference is (Kopka and Daly, 2004). The new geophysics.cls class complies with the LaTeX2e standard. .

THEORY

This is another section.

Equations

Section headings should be capitalized. Subsection headings should only have the first letter of the first word capitalized.

Here are examples of equations involving vectors and tensors:

$$\mathbf{R} = \begin{pmatrix} R_{\mathrm{XX}} & R_{\mathrm{YX}} \\ R_{\mathrm{XY}} & R_{\mathrm{YY}} \end{pmatrix} = \mathbf{P}_{M \to R} \ \mathbf{D} \ \mathbf{P}_{S \to M} \quad \mathbf{S} \quad , \tag{1}$$

and

$$R_{j,m}(\omega) = \sum_{n=1}^{N} \ P_j^{(n)}(\mathbf{x}_R) \ D^{(n)}(\omega) \ P_m^{(n)}(\mathbf{x}_S) \quad . \tag{2}$$

Note that the macro for the `\tensor` command has been changed to force tensors to be bold uppercase, in compliance with current SEG submission standards. This is so that documents typeset to the old standards will print out according to the new ones: e.g., tensor $\mathbf{T}$ (note converted to uppercase).

Figures

Figure 1 shows what it is about.

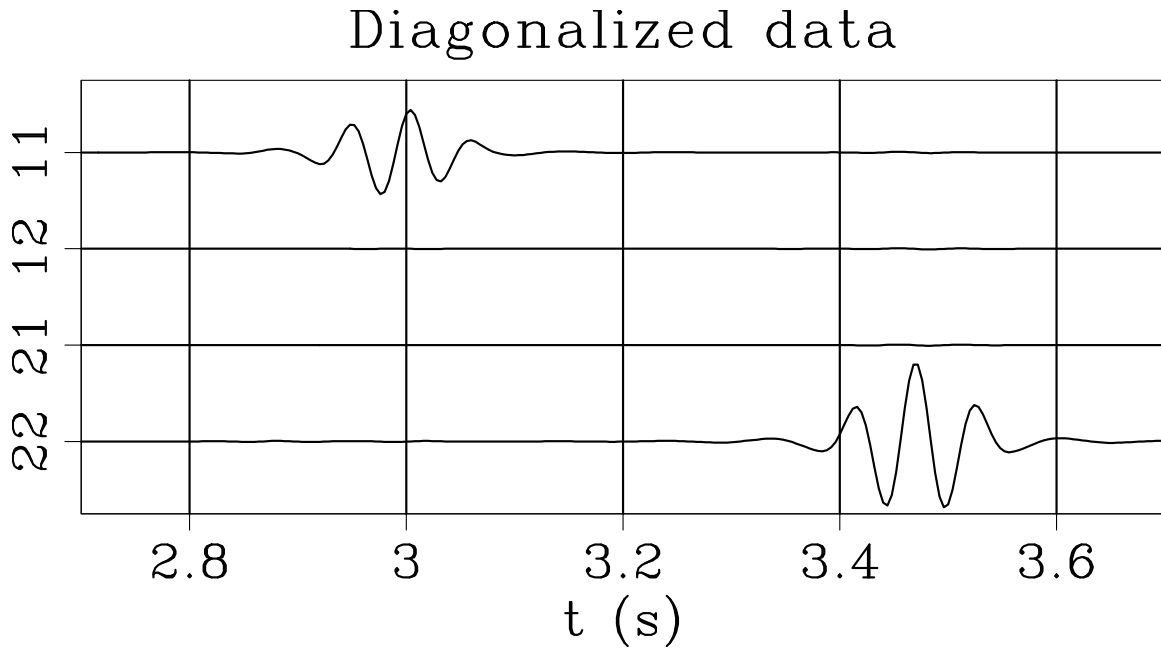# Diagonalized data

Figure 1:   This   figure   is   specified   in   the   document   by
`\plot{waves}{width=\textwidth}{This caption.}`.

Multiplot

Sometimes it is convenient to put two or more figures from different files in an array (see Figure 2). Individual plots are Figures 2a and 2b.
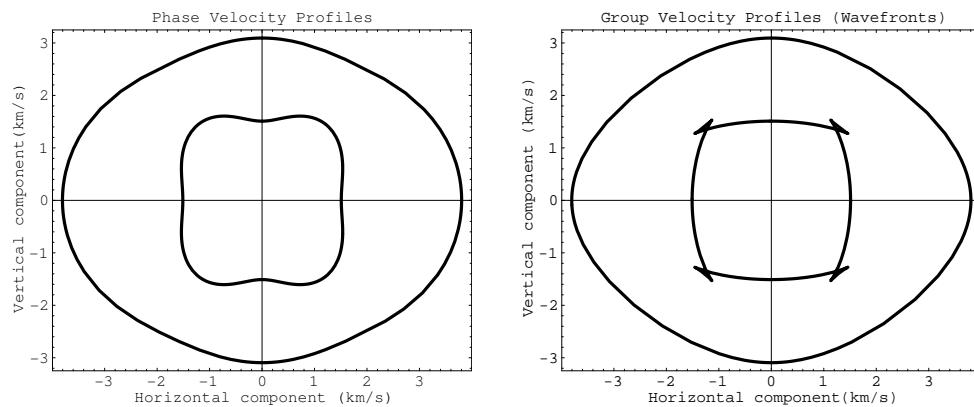

Figure 2: This figure is specified in the document by
`\multiplot{2}{exph,exgr}{width=0.4\textwidth}{This caption.}`.

The first argument of the `multiplot` command specifies the number of plots per row.

Tables

The discussion is summarized in Table 1.

Table Example		
migration	$\omega \to k_z$	$k_y^2 + k - z^2 \cos^2 \psi = 4\omega^2/v^2$
zero-offset diffraction	$k_z \to \omega_0$	$k_y^2 + k_z^2 = 4\omega_0^2/v^2$
DMO+NMO	$\omega \to \omega_0$	$\frac{1}{4}v^2 k_y^2 \sin^2 \psi + \omega_0^2 \cos^2 \psi = \omega^2$
radial DMO	$\omega \to \omega_s$	$\frac{1}{4}v^2 k_y^2 \sin^2 \psi + \omega_s^2 = \omega^2$
radial NMO	$\omega_s \to \omega_0$	$\omega_0 \cos \psi = \omega_s$

Table 1: This table is specified in the document by `\tabl{example}{This caption.}{...}`.

ACKNOWLEDGMENTS

APPENDIX A

APPENDIX EXAMPLE

According to the new SEG standard, appendices come before references.

$$\frac{\partial U}{\partial z} = \left\{ \sqrt{\frac{1}{v^2} - \left[\frac{\partial t}{\partial g}\right]^2} + \sqrt{\frac{1}{v^2} - \left[\frac{\partial t}{\partial s}\right]^2} \right\} \frac{\partial U}{\partial t} \tag{A-1}$$

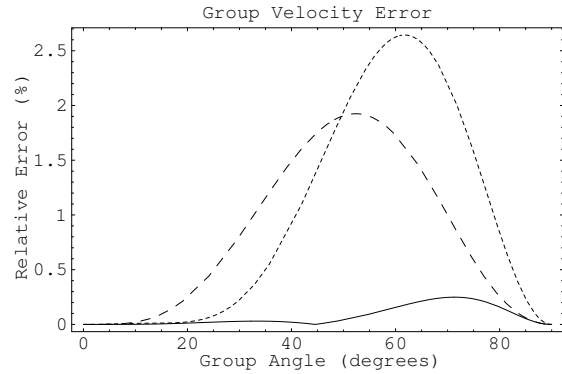It is important to get equation A-1 right. See also Appendix **??**.

APPENDIX B

[

equations]Another appendix

$$\frac{\partial U}{\partial z} = \left\{ \sqrt{\frac{1}{v^2} - \left[\frac{\partial t}{\partial g}\right]^2} + \sqrt{\frac{1}{v^2} - \left[\frac{\partial t}{\partial s}\right]^2} \right\} \frac{\partial U}{\partial t} \tag{B-1}$$

Too lazy to type a different equation but note the numeration.

The error comparison is provided in Figure B-1.

Figure B-1: This figure is specified in the document by \sideplot{errgrp}{width=0.8\text-width}{This caption.}.

REFERENCES

Červený, V., 2000, Seismic ray method: Cambridge University Press.

Forgues, E., 1996, Inversion linearisée multi-paramètres via la théorie des rais: PhD thesis, Institut Français du Pétrole - University Paris VII.

Kopka, H., and P. W. Daly, 2004, Guide to LATEX: Addison-Wesley.

Lamport, L., 1994, LATEX: A document preparation system: Addison-Wesley.