

# Index

<b>A</b>	Huygen's principle .....	22, 28
Apparent velocity .....	19, 37	
<b>C</b>	Interference	
CINCA experiment	constructive .....	23, 32
acquisition parameters.....	13–14	
investigation area.....	9–11	
<b>D</b>	destructive .....	23, 32
Diffraction stack.....	22	
diffraction curve .....	22	
diffraction surface.....	22	
<b>E</b>		
Emergence angle.....	31, 37, 40–45	
Escarpment .....	70	
<b>F</b>		
Fermat's principle.....	29	
Frequency-wavenumber (f-k) filtering.	19	
fan filter .....	20	
Fresnel criterion .....	34–37	
Fresnel volume .....	33–37	
Fresnel volume ray tracing .....	33	
paraxial approximation .....	35	
Fresnel Volume Migration....	31, 37, 38,	
39–53		
Fresnel weight .....	34–37, 51	
Fresnel zone.....	31–33	
radius of a Fresnel zone...	32, 45–51	
<b>H</b>		
Horst and Graben .....	58	
<b>I</b>		
Kirchhoff Prestack Depth Migration	22–25	
Hagedoorn's principle .....	22	
<b>K</b>		
Migration methods .....	21–25	
finite-difference method .....	21	
frequency-wavenumber migration.	21	
Kirchhoff integral method.....	21	
wavefield back propagation.....	21	
Multiple suppression methods ....	16–18	
<b>M</b>		
Normal moveout correction.....	15, 17	
<b>N</b>		
Polarization.....	37	
<b>P</b>		
Quadratic regression .....	26	
<b>Q</b>		
Radon transform.....	16–18, 37	
$\tau$ -p transform.....	16	
$\tau - p$ transform .....	37	
<b>R</b>		

- Radon filter ..... 16
- Ray tracing ..... 31, 45–51
  - paraxial ray tracing ..... 27
  - ray propagator matrix ..... 45
  - ray tracing steps ..... 48
  - virtual source point ..... 35, 51
- Restriction methods ..... 21–22
  - Gaussian beam migration ..... 22
  - slowness-weighted diffraction stack ..... 22
  - wavepath migration ..... 22
- Runge-Kutta method ..... 46

**S**

- Semblance analysis ..... 15
- Slowness ..... 37–38, 40–45
  - cross-correlation method ..... 37
  - frequency dependence ..... 40
  - slant stack ..... 17, 37
  - slowness vector ..... 43

**T**

- Travel time computation methods 27–29
  - finite difference method ..... 28

**W**

- Weight function ..... 24