

Errata to

3D Seismic Survey Design, second edition,

by Gijs J. O. Vermeer, Geophysical References Series No. 12

Note: The following lists a number of errors in the book. Some corrections deal with outright mistakes or typos; others refer to inconsistencies in the nomenclature or to unclear wording. For instance, “coarse sampling” is used for aliased sampling of a shot line or a receiver line (as intended), but it was also used where “sparse sampling” is better: for line intervals and for the sparsely sampled unit in areal geometry.

Contents, page vi

“2.6.8 Velocity analysis and DMO” \Rightarrow “2.6.8 Velocity analysis”

Acknowledgments to the Second Edition, page xviii, column 1, 2nd paragraph

“Regone, Chris” \Rightarrow “Regone, Cees Corsten, Chris”

Chapter 1, page 2

equation 1.2b should be:

$$x_s = x_m - \frac{x_o}{2},$$
$$x_r = x_m + \frac{x_o}{2}.$$

Chapter 1, page 2, column 2, last paragraph, line 3

“sampled. Likewise” \Rightarrow “sampled (equation A.1). Likewise”

Chapter 1, page 3, caption Figure 1.2

“The value C” \Rightarrow “C”

Chapter 1, page 7, column 1, line 12

“Section 4.8.4” \Rightarrow “Section 4.7.4”

Chapter 2, page 16, column 1, Section 2.2, 2nd paragraph, line 4

“a coarse grid” \Rightarrow “a sparse grid”

Chapter 2, page 16, column 2, 3rd paragraph

“coarsely sampled” \Rightarrow “sparsely sampled” (twice)

Chapter 2, page 16, column 2, 4th paragraph

“*Full 3D*, or fullfold 3D,” \Rightarrow “*Full 3D*”

Chapter 2, page 19, column 1, 3rd paragraph, line 8

“OBCs” \Rightarrow “receiver lines”

Chapter 2, page 19, column 1, 3rd paragraph, last line

“coarsely” \Rightarrow “sparsely”

Chapter 2, page 19, column 2, Section 2.3.1, last line

“of subsets (Section 2.5)” ⇒ “of pseudo-COV gathers (Section 2.5)”

Chapter 2, page 21, column 2, last line

“in the cross-spread is” ⇒ “in the cross-spread from O is”

Chapter 2, page 25, column 1, 1st paragraph of 2.3.3.3, line 2

“2.1 cover the whole midpoint area” ⇒ “2.1 may cover the whole survey area”

Chapter 2, page 27, column 2, 2nd paragraph, last 3 lines

“orthogonal geometry, with ... offset distribution.” ⇒ “orthogonal geometry with the same spread length and the same number of receiver lines, but the offset distribution is different.”

Chapter 2, page 33, column 1, 6th last line

“spiderweb” ⇒ “spider”

Chapter 2, page 34, column 1, last paragraph, line 7

“coarsely sampled” ⇒ “sparsely sampled”

Chapter 2, page 36, column 1, 4th paragraph, line 7

“(Beasley)” ⇒ “(Vermeer, 1994; Beasley)”

Chapter 2, page 44, column 1, line 3

“spiderweb” ⇒ “spider”.

Chapter 2, page 47, column 2, 5th last line before Section 2.6

“minimum-maximum offset” ⇒ “ minimum maximum offset”

Chapter 2, page 50, column 1, 2nd paragraph, line 2

“random noise” ⇒ “random-noise”

Chapter 2, page 51, column 1, 5th paragraph, line 8

“NMO” ⇒ “NMO correction”

Chapter 2, page 52, column 2, 4th paragraph

“NMO at all” ⇒ “NMO correction at all”

Chapter 2, page 52, column 2, Section header 2.6.8

“Velocity analysis and DMO” ⇒ “Velocity analysis”

Chapter 3, page 59, column 2, 2nd paragraph, line 3

“constant-velocity event lies” ⇒ “constant-velocity event (direct arrival) lies”

Chapter 3, page 68, column 1, line 4

“largest” ⇒ “minimum”

Chapter 3, page 69, column 2, first 2 lines

“of the prestack data, the effect of the array on signal is negligible” ⇒ “of all prestack signal, the effect of the array on signal is negligible (assuming no intra-array statics)”

Chapter 3, page 76, column 2, 5th last line

“they do not pass the apexes of the noise cones generated” ⇒ “they suppress the apexes of the rounded pyramids generated”

Chapter 3, page 77, column 2, paragraph starting with “For 2D...”

“the offset sampling in the” ⇒ “the offset interval in the”

Chapter 3, page 79, caption fig. 3.23, line 3

“random noise” ⇒ “random-noise”

Chapter 3, page 80, caption fig. 3.24, line 2

“linear noise” ⇒ “linear-noise”

Chapter 3, page 80, caption fig. 3.24, line 2

“random noise” ⇒ “random-noise”

Chapter 3, page 84, column 1, 2nd paragraph

“Selecting a wide” ⇒ “Selecting wide”

Chapter 4, page 87, column 1, 1st paragraph, line 15

“coarsely sampled” ⇒ “other two”

Chapter 4, page 88, column 1, last paragraph, line 6

“Only ... by necessity.” ⇒ “Only along the edges of the survey area there are usually truncated cross-spreads.”

Chapter 4, page 89, column 1, 4th last bulleted item

“(Section 4.5.2)” ⇒ (Sections 4.5.1 and 4.5.2)”

Chapter 4, page 91, column 1, line 7

“fold, parallel” ⇒ “fold, (narrow) parallel”

Chapter 4, page 92, column 2, fifth last line

“a coarse grid” ⇒ “a sparse grid”

Chapter 4, page 94, column 1, first paragraph, line 5

“with areal geometry” ⇒ “with type 1 areal geometry”

Chapter 4, page 94, column 1, Section 4.3.6, first paragraph, line 3

“geometry can” ⇒ geometry type 1 can”

Chapter 4, page 100, column 2, 2nd paragraph, line 10

“can also be try to” ⇒ “can also try to”

Chapter 4, page 108, column 1, fourth last line

“7.4]” ⇒ “7.4.4]”

Chapter 4, page 108, column 2, paragraph above equation 4.18a, 2nd last line

“zone of influence rather” ⇒ “zone of influence (ZOI) rather”

Chapter 4, page 110, column 1, line 5

“tests.” ⇒ “tests (see also Section 4.6).”

Chapter 4, page 110, Section 4.4.8, 2nd line

“sampled coarsely” ⇒ “sampled sparsely”

Chapter 4, page 111, column 1, line 7 after (4.20)

“should be equal” ⇒ “should preferably be equal”

Chapter 4, page 112, Section 4.4.11, line 1

“parameters’ fold” ⇒ “parameters fold”

Chapter 4, page 112, Table 4.3, second last line

“96,000/km²” ⇒ “1,440,000/km²”.

Chapter 4, page 121, column 1, 3rd paragraph

Replace whole paragraph with

“The difference with the full-swath roll technique is that in the full-swath roll (if properly implemented) the smallest maximum crossline offset of each cross-spread is at least equal to the nominal maximum crossline offset, whereas in the multiline roll the smallest maximum crossline offset of some cross-spreads is smaller than the nominal maximum crossline offset. This asymmetry of the multiline roll can be remedied only by discarding all traces with absolute crossline offsets larger than the smallest maximum crossline offset.”

Chapter 4, page 121, column 2, line 6

“acquired data to the area” ⇒ “acquired data around the area”

Chapter 4, page 123, column 1, line 1

“maximum zone” ⇒ “maximum radius of the zone”

Chapter 4, page 125, column 2, 2nd paragraph, 2nd last line

“Poole and Lecerf (2006;” ⇒ “Poole et al. (2009;”

Chapter 4, page 133, column 2, last paragraph, 2nd line

“influence of parameters ...such as depth” ⇒ “influence of other field parameters, such as depth”

Chapter 4, page 135-138, captions

“(b) full fold” ⇒ “(b) fold”

Chapter 5, page 144, column 2, last paragraph

“(I use” ⇒ “(Here, I use”

Chapter 5, page 149, column 1, second last paragraph

“(Hobson” ⇒ “(Figure 3.25; Hobson”

Chapter 5, page 160, column 2, 2nd last line before 5.3.8

“OBS survey” ⇒ “OBN survey”

Chapter 5, page 167, column 1, Note 1

“IsometrixTM” ⇒ “IsoMetrixTM”

Chapter 5, page 170, column 2, 2nd paragraph, line 3

“changing its direction” ⇒ “changing direction”

Chapter 5, page 172, column 1, 4th last line before 5.3.15

“OBS or nodes” ⇒ “OBN”

Chapter 5, page 183, column 2, line 4

“in WATS geometry” ⇒ “in areal WATS geometry”

Chapter 5, page 183, column 2, lines 8 and 10

“spiderweb” ⇒ “spider”

Chapter 5, page 183, Caption Fig. 5.45

“Spiderweb” ⇒ “Spider”

Chapter 5, page 188, column 1, line 1

“with WATS geometries” ⇒ “with wide-azimuth geometries”

Chapter 5, page 188, column 1, 3rd paragraph, line 6

“although ... alternative.” ⇒ “whereas WATS acquisition suffers from many compromises and from feathering.”

Chapter 5, page 193, column 2, line 5

“This method ... cables.” ⇒ “Outside the fullfold area of the geometry, this method provides at least an azimuth range of 90° in the four corners of the receiver area and an azimuth range of at least 180° elsewhere inside the receiver area.”

Chapter 5, page 193, column 2, line 15

“5.55b ... because” ⇒ “5.55b inside the receiver area – except in the four corners of that area, see above – , because”

Chapter 5, page 199, column 2, 2nd last line

“(Kragh” ⇒ “(Ronen et al., 1999; Kragh”

Chapter 6, page 220, column 1, line 13

“Moreover, the spatial continuities” ⇒ “Moreover, the spatial discontinuities”

Chapter 6, page 222, column 2, line 7

“image, fold” ⇒ “image, image fold”

Chapter 6, page 227, column 2, line 9

“hybrid gather” ⇒ “hybrid geometry”

Chapter 7, page 230, column 1, line 3

“ground roll.” ⇒ “ground-roll cone.”

Chapter 8, page 248, column 1, last sentence before 8.2

“Finally, ... fold.” ⇒ Section 8.3 also deals with the link between sampling and resolution, including bin fractionation, and the influence of fold. This chapter ends with discussion and conclusions.”

Chapter 8, page 250, column 2, 2nd line below (8.7c)

“1980” ⇒ “1981”

Chapter 8, page 258, caption fig. 8.16, line 7

“random noise” ⇒ “random-noise”

Chapter 9, page 266, Section 9.2.4, 2nd paragraph, line 2

“all 3D properly” ⇒ “all properly”

Chapter 10, page 279, equation 10.2

I in right-hand side should be l

Chapter 10, page 281, column 2, 2nd paragraph, line 10

“Figure 2.26” ⇒ “Figure 2.27”.

Chapter 10, page 281, column 2, last line

“2.5.2” ⇒ “2.5.3”

Chapter 10, page 290, Fig. 10.22 caption

“Illumination and imaging” ⇒ “Imaging”

Appendix E, page 307, ISS

“Instantaneous” ⇒ “Independent”

Appendix E, page 310, column 2, line 2

“downgoing wavelet” ⇒ “primary wavelet”

References, page 316, column 2, Dürschner, 2001

“Grabner” ⇒ “Graebner”.

References, page 318, column 1, line 3

“61-67” ⇒ “no. 2, 61-67”

References, page 318, column 2, add

“Hatchell, P. J., and P. B. Wills, 2007, Time-lapse multiple removal technique to improve 4D interpretation in the gas cloud region at Valhall: 69th Conference & Exhibition, EAGE, Extended Abstracts, H018.”

References, page 323, column 1, line 9

“, 87” ⇒ “, no. 2, 87”

References, page 326, column 2, insert after line 3

“Ronen, S., R. van Waard, and J. Keggin, 1999, Repeatability of sea bed multi-component data: 69th Annual International Meeting, SEG, Expanded Abstracts, 1695-1698.

Index, page 339

“spiderweb diagrams” ⇒ “spider diagrams”

Index, page 339

“spiderweb geometry, and salt-dome delineation, 95” ⇒ “spiderweb geometry, 18, 95”