UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
PETROLEUM GEO-SERVICES INC. Petitioner
v.
WESTERNGECO LLC Patent Owner
Case IPR2014-01477 U.S. Patent No. 7,080,607

### PETITIONER'S EXHIBIT LIST



## IPR2014-01477 ('607) APPENDIX OF EXHIBITS

Exhibit No.	Description
PGS 1001	U.S. Patent No. 7,080,607 B2 ('Hillesund)
PGS 1002	Declaration of Dr. Brian J. Evans, Ph.D.
PGS 1003	Declaration of Dr. Jack H. Cole, Ph.D.
PGS 1004	U. S. Patent No. 5,790,472 (Workman)
PGS 1005	U. S. Patent No. 5,532,975 (Elholm)
PGS 1006	Gikas, V. et al., The Hydrographic Journal. 77; pp. 11-24 (1995)
PGS 1007	U. S. Patent No. 3,581,273 (Hedberg)
PGS 1008	U. S. Patent No. 3,605,674 (Weese)
PGS 1009	U. S. Patent No. 4,809,005 (Counselman)
PGS 1010	U. S. Patent No. 4,404,664 (Zachariadis)
PGS 1011	U. S. Patent No. 4,033,278 (Waters)
PGS 1012	U. S. Patent No. 3,412,704 (Buller)
PGS 1013	PCT Application No. WO 98/28636 ('636 Application)
DCC 1014	R. P. Loweth, Manual of Offshore Surveying for Geoscientists and
PGS 1014	Engineers (1st ed. 1997)
PGS 1015	'607 Patent file history, Office Action Dated November 21, 2005
PGS 1016	'607 Patent file history, Notice of Allowability Dated May 17, 2006
PGS 1017	Trial Transcript Vol. 17 (pp. 5186-88) in re: WesternGeco L.L.C. v. ION Geophysical Corporation, Civil Action No. 4:09-CV-01827, dated August 15, 2012
PGS 1018	WesternGeco's Opposition to ION's Renewed Motion for Judgment as a Matter of Law and Alternative Motion for New Trial Regarding Non-Infringement in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> , Civil Action No. 4:09-CV-01827, DE 569, dated October 26, 2012
PGS 1019	WesternGeco's Opposition to Defendants' Motion for Summary Judgment of Invalidity of the Bittleston Patents in re: WesternGeco L.L.C. v. ION Geophysical Corporation, Civil Action No. 4:09-CV-01827, DE 287, dated April 20, 2012



PGS 1020	Trial Transcript Vol. 5 (pp. 1276, 1279, 1283, 1345-46, 1350-52) in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> , Civil Action No. 4:09-CV-01827, DE 449, dated July 27, 2012
PGS 1021	Jury Verdict in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> , Civil Action No. 4:09-CV-01827, DE 536, dated August 16, 2012
PGS 1022	Memorandum and Order in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> , Civil Action No. 4:09-CV-01827, DE 634, dated June 19, 2013
PGS 1023	ION's Rule 59 Motion for New Trial on Invalidity Under 35 U.S.C. §§ 102 and 103 in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> , Civil Action No. 4:09-CV-01827, DE 550, dated September 28, 2012
PGS 1024	Memorandum and Order in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> in re: Civil Action No. 4:09-CV-01827, DE 120, dated July 16, 2010
PGS 1025	WesternGeco's Opening Claim Construction Brief in re: WesternGeco L.L.C. v. ION Geophysical Corporation, Civil Action No. 4:09-CV-01827, DE 61, dated February 10, 2010
PGS 1026	Hearing Transcript (pp. 14-16, 45, 64) in re: <i>WesternGeco L.L.C.</i> v. <i>ION Geophysical Corporation</i> Civil Action No. 4:09-CV-01827 Hearing, DE 109, dated May 14, 2010
PGS 1027	WesternGeco's Opposition to ION's Motion for a New Trial on Invalidity Under 35 U.S.C. §§ 102 and 103 in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> Civil Action No.4:09-CV-01827, DE 574, dated October 26, 2012
PGS 1028	WesternGeco's Reply Claim Construction Brief in re: WesternGeco L.L.C. v. ION Geophysical Corporation Civil Action No. 4:09-CV-01827, DE 77, dated March 12, 2010
PGS 1029	U.S. Patent No. 5,353,223 (Norton)
PGS 1030	Trial Transcript Vol. 2; pp. 509, 578 in re: <i>WesternGeco L.L.C. v. ION Geophysical</i> Corporation Civil Action No. 4:09-CV-01827, DE 443, dated July 24, 2012
PGS 1031	Trial Transcript Vol. 1; pp. 142, 145-146 in re: <i>WesternGeco L.L.C. v. ION Geophysical Corporation</i> Civil Action No. 4:09-CV-01827, DE 429, dated July 23, 2012
PGS 1032	U. S. Patent No. 5,200,930 (Rouquette)
PGS 1033	'017 Patent File History, Applicant Response to Office Action



	D + 10 + 1 = 16 2002
D.C.C. 102.4	Dated October 16, 2003
PGS 1034	U. S. Patent No. 4,992,990 (Langeland)
PGS 1035	Richard C. Dorf and Robert H. Bishop, Modern Control Systems
1 35 1050	(8th ed. 1998) [supplemented with Ex. PGS 1077]
PGS 1036	Gregory E. Upchurch., Intellectual Property Litigation Guide: §
	15:5 Overview – Effective filing date, 2 IP Litigation Guide:
	Patents & Trade Secrets [supplemented with Ex. PGS 1067]
PGS 1037	Stuart Bennett, A Brief History of Automatic Control, 17-25 (1996)
PGS 1038	Karl J. Åström and Björn Wittenmark, Computer-Controlled
	Systems: Theory and Design (3rd ed. 1997)
PGS 1039	Karl J. Åström and Björn Wittenmark, Computer-Controlled
	Systems: Theory and Design (1984)
PGS 1040	U.S. Patent No. 6,011,753 (Chien)
	Vassilis N. Gikas, Least Squares Filtering and Testing for
PGS 1041	Positioning and Quality Control During 3D Marine Seismic
1 05 1041	Surveys, Full Thesis, dated August 1996 [supplemented with Ex.
	PGS 1073 and Ex. PGS 1076]
PGS 1042	U. S. Patent No. 6,011,752 (Ambs)
PGS 1043	Evans, A Handbook for Seismic Data Acquisition in Exploration
DCC 1044	(David V. Fitterman & William H. Dragoset, Jr. eds., 1977)
PGS 1044	E. J. W. Jones, Marine Geophysics (1999)
PGS 1045	W. R. Cotton and J. J. Sanders, <i>The Reality of Trace Binning in 3-D Marine Surveying</i> (1983) [supplemented with Ex. PGS 1068]
PGS 1046	Biondo L. Biondi, 3D Seismic Imaging, 123-24 (2006)
PGS 1047	Christopher L. Liner, Elements of 3-D Seismology (1999)
1031047	
PGS 1048	Gerald H.F. Gardner & Anat Canning, <i>Effects of irregular</i> sampling on 3-D prestack migration (SEG Abstracts, 1994).
1 05 1046	[supplemented with Ex. PGS 1069]
	Ralph Gobeli and Christopher Liner, Bin Size and Linear v(z)
PGS 1049	(Society of Exploration Geophysics Technical Program Expanded
FUS 1049	Abstracts (1996). [supplemented with Ex. PGS 1070]
PGS 1050	WO 96/21163
1 05 1050	D.L. McKeown, Acoustic Positioning of Oceanographic
PGS 1051	Instruments, IEEE – Engineering in the Ocean Environment
	Conference. Vol. 2; pp. 150-54 (1974) [supplemented with Ex.
	PGS 1075]
PGS 1052	Peter S. Maybeck, Why Stochastic Models, Estimation and
	Control, Vol:1; pp. 1-16 (1979)
	Connot, vol.1, pp. 1-10 (1777)



PGS 1053	U. S. Patent No. 6,932,017 (the '017 Patent)
PGS 1054	'607 Patent file history, Terminal Disclaimer Dated February 21,
	2006
PGS 1055	Ted L. Amrine et al., Investigation of Interactions Between Cable
	Leveling and Heading Measurement, SEG Expanded Abstracts,
	640-642 (1989) [supplemented with Ex. PGS 1071]
PGS 1056	U. S. Patent No. 4,890,568 (Dolengowski)
	Shashank Upadhye., Generic Pharmaceutical Patent and FDA Law
PGS 1057	§ 1:71 Section 119 Claiming foreign priority – Section 102(b)
	[supplemented with Ex. PGS 1072]
PGS 1058	U. S. Patent No. 3,560,912 (Spink)
PGS 1059	PCT Application No. WO 97/11394 ('394 Application)
PGS 1060	Information Disclosure Statement dated December 15, 2005
PGS 1061	U. S. Patent No. 3,159,806 (Piasecki)
PGS 1062	U. S. Patent No. 6,079,882 (Chien)
PGS 1063	MicroChip 17C756 Data Sheet
DCC 1064	Motorola DSP56002 Data Sheet [supplemented with Ex. PGS
PGS 1064	1074]
PGS 1065	U.S. Patent No. 5,404,339 (Cole)
PGS 1066	U.S. Patent No. 4,912,684 (Fowler)
	Gregory E. Upchurch., Intellectual Property Litigation Guide: §
PGS 1067	155 Overview – Effective filing date, 2 IP Litigation Guide:
	Patents & Trade Secrets [supplement to Ex. PGS 1036] [Not filed]
	W. R. Cotton and J. J. Sanders, <i>The Reality of Trace Binning in 3-</i>
PGS 1068	D Marine Surveying (1983) [supplement to Ex. PGS 1045] [Not
	filed]
	Gerald H.F. Gardner & Anat Canning, Effects of irregular
PGS 1069	sampling on 3-D prestack migration (SEG Abstracts, 1994).
	[supplement to Ex. PGS 1048] [Not filed]
	Ralph Gobeli and Christopher Liner, Bin Size and Linear v(z)
PGS 1070	(Society of Exploration Geophysics Technical Program Expanded
	Abstracts (1996). [supplement to Ex. PGS 1049] [Not filed]
PGS 1071	Ted L. Amrine et al., Investigation of Interactions Between Cable
	Leveling and Heading Measurement, SEG Expanded Abstracts
	(1989) [supplement to Ex. PGS 1055] [ <b>Not filed</b> ]
PGS 1072	Shashank Upadhye., Generic Pharmaceutical Patent and FDA Law
	§ 1:71 Section 119 Claiming foreign priority – Section 102(b)
	[supplement to Ex. PGS 1057] [Not filed]



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