1	UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF TEXAS				
2	HOUSTON DIVISION				
3					
4	WESTERNGECO LLC * 09-CV-1827				
5	VS. *				
6	ION GEOPHYSICAL * 7:30 a.m.				
7	CORPORATION, FUGRO * GEOTEAM, INC., ET AL * July 30, 2012				
8					
9	JURY TRIAL				
10	Volume 6 Morning Session				
11	BEFORE THE HONORABLE KEITH P. ELLISON				
12	UNITED STATES DISTRICT JUDGE				
13					
14	APPEARANCES:				
15	FOR THE PLAINTIFF:				
16	Lee L. Kaplan & VESELKA, LLP				
17	700 Louisiana, Suite 2300 Houston, Texas 77002				
18	713.221.2300				
19	Gregg F. LoCascio				
	KIRKLAND & ELLIS ILP 655 Fifteenth Street Northwest				
21	Washington, DC 20005 202.879.5290				
22					
	Sarah Tsou Timothy K. Gilman				
	KIRKLAND & ELLIS LLP Citigroup Center TRUE COPY I CERTIFY ATTEST:				
	153 East 53rd Street New York, New York 10022 212.446.6435				
	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com				

```
1 FOR ION GEOPHYSICAL CORPORATION:
   David L. Burgert
   Susan Kopecky Hellinger
   Jonathan M. Pierce
   Jonna N. Stallings
   Ray T. Torgerson
 4 Eric D. Wade
 5
   PORTER & HEDGES LLP
 6 Reliant Energy Plaza
   1000 Main Street, 36th Floor
   Houston, Texas 77002
   713.226.6694
 8
 9
   FOR FUGRO GEOTEAM, INC.:
10 Gordon T. Arnold
   Jason A. Saunders
11 | Anthony Hong
   ARNOLD KNOBLOCH LLP
12|4900 Woodway Drive
   Suite 900
13 Houston, Texas 77056
14
   James M. Thompson
15 ROYSTON RAYZOR VICKERY & WILLIAMS LLP
   Pennzoil Place
16 711 Louisiana Street, Suite 500
   Houston, Texas 77002
17 713.890.3218
18
19
   Court Reporter:
20 Johnny C. Sanchez, RPR, RMR, CRR
515 Rusk, #8016
21 Houston, Texas 77002
   713.250.5581
   Proceedings recorded by mechanical stenography.
                                                       Transcript
23 produced by computer-assisted transcription.
24
25
               Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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		1601
1	INDEX	
2		
3	WITNESS	PAGE
4	ROBIN WALKER	
5		
6	DIRECT EXAMINATION BY MR. LOCASCIO	1606
7		
8	CROSS-EXAMINATION BY MR. TORGERSON	1703
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

	1	THE COURT: You may.
	2	MR. LOCASCIO: Thank you. WesternGeco calls
	3	Robin Walker as its next witness.
	4	THE COURT: Okay. Mr. Walker, if you could
07:36:52	5	make your way up here. If you could raise your right hand,
	6	Mrs. Loewe will administer the oath.
	7	CASE MANAGER: Do you solemnly swear that the
	8	testimony you are about to give in the matter before the
	9	Court will be the truth, the whole truth and nothing but
	10	the truth?
	11	THE WITNESS: I do.
	12	THE COURT: Make yourself as comfortable as you
	13	can. Do speak directly into the mike, if you would.
	14	THE WITNESS: Thank you.
07:37:10	15	MR. LOCASCIO: Robin Walker is WesternGeco's
	16	director of marketing and vice-president of sales. He
	17	began his job with the company in 1985 and has been in
	18	various sales and marketing roles with WesternGeco ever
	19	since. His involvement with the Q-Marine system started in
07:37:29	20	1993 while he was the marine marketing and technique
	21	manager. WesternGeco calls Mr. Walker to explain the
	22	development of Q-Marine from a marketing and sales
	23	perspective, as well as discuss the lateral steering
	24	marketplace and how it has been impacted by ION and Fugro's
07:37:48	25	infringement.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
		<u> </u>

	1	ROBIN WALKER,
	2	after having been first cautioned and duly sworn, testified
	3	as follows:
	4	DIRECT EXAMINATION
07:37:09	5	BY MR. LOCASCIO:
	6	Q. Good morning, Mr. Walker.
	7	A. Good morning.
	8	$oldsymbol{Q}$. I gave a little bit of your background, but not to
	9	cut it short, can you tell the jury if you have any
07:37:57	10	degrees and where from?
	11	A. Yes. I have a bachelor's in geology from the
	12	University of London in 1980.
	13	$oldsymbol{arrho}$. And in your role as director of marketing and
	14	vice-president of sales, can you explain to the jury your
07:38:09	15	responsibilities, sir?
	16	A. Yes. So I have three real responsibilities: I have
	17	to responsible for the revenue. So WesternGeco's
	18	revenue is about last year, it was \$2.2 billion out of
	19	a market of 11.5 billion. And I have to run the sales
07:38:31	20	team, sales and marketing team. They're in three groups.
	21	It's a total of 135 people.
	22	And most importantly, I have to work with
	23	customers, engage with customers, to find out what they
	24	want, what they need and what they're planning to do.
07:38:50	25	Q. Thank you, sir.
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1 Can you explain how you and your team 2 engage and interact with your customers? 3 Yes. So we have several ways where we engage. We Α. have formal ways. Some of our -- mainly one of the teams 5 is the global account managers, and they look after our 07:39:06 6 top 20 accounts. And we engage with those. I manage my colleagues. Our management team and the customers' 8 management team have a annual review. And there we will review the projects we've done, the -- what their projects 07:39:25 10 are planning to do and technology needs and business 11 issues. So that's one. 12 We engage at trade shows. We have -- there 13 are two major trade shows for our industry: One in the 14 U.S., one is somewhere in Europe. And we'll have a lot of 15 engagement with customers around there. 07:39:42 16 We have a lot of one-on-one meetings, 17 technical meetings. I still do technical presentations. 18 love it. Technical meetings, business meetings, around the 19 sale cycle and separate to that. So we keep close. And a 20 lot of these people I've been -- since 1985 been dealing 21 with customers, so long, we've grown old and gray together. 22 So deal with them. 23 And then, of course, there's the formal 24 tender process where we bid for work and respond, and 25 that's -- that's very formal and a less open engagement, 07:40:16 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	but that's very important.
	2	Q. Thank you.
	3	Do you, sir, from your experience with
	4	customers, believe there's a need for lateral steering in
07:40:28	5	your industry?
	6	A. I do, yes, absolutely.
	7	Q. When was the first time you saw that need?
	8	A. So I saw it when when I was in the Far East you
	9	mentioned, I went to Oslo to do the marine marketing
07:40:42	10	technique role. Before that, I was in the Far East, and I
	11	saw there was a real need for surveys to be more cost
	12	effective and so they need to be better quality. And that
	13	was one way of doing that.
	14	$oldsymbol{Q}$. When you moved to WesternGeco or Geco-Prakla, was the
07:41:02	15	company already working on that project?
	16	A. When I moved to Oslo, we well, I moved to
	17	Stavanger, the group is the engineering group was in
	18	Oslo, yes, it was already underway.
	19	$oldsymbol{Q}$. And after you were in Stavanger, what was your next
07:41:16	20	role with the company?
	21	A. In 1998, I followed Q-Marine and the other stuff we
	22	were doing up through until '98, and then '98, I moved to
	23	Houston, here, had three lovely years in Houston, really
	24	enjoyed it, and I was the manager of geophysics and
07:41:30	25	marketing at that stage.

1 Q. And did you have any interaction with Q-Marine when 2 you were here in Houston? 3 Yes, I did. We normally -- it was going to go into Α. its initial testing in the wet testing, in-the-water testing, and we normally do that in the North Sea. But 07:41:45 5 6 since it had been my baby, I said, rather I want to do it in the Gulf of Mexico. So I was engaged with it on two 8 tests here. 9 Q. And what did you do after that? 07:41:57 10 Α. So after that, WesternGeco was formed right at the 11 end of 2000, and then I moved to the London office, Gatwick, where I became the market research manager. 12 13 At some point did you ever have responsibility for Q-Marine as a whole? 14 15 Yes. So we introduced Q-Marine and O-Line which is 07:42:14 16 land system, around the same time, Q-Line slightly earlier in 2001. And by 2004, the company decided we needed to 17 181 have one person to look after all of that business and 19 make sure it grew right, so I was appointed to that role 20 in 2004. 07:42:38 21 I hand you binder some of exhibits. Also a cup in 22 case you need that with water. 23. A. Thank you very much. 24 Yes, sir. Before we look at a few exhibits, I want Ο. to ask you at a high level, can you explain how you see 25 07:43:05

1 Q-Marine, what it consists of and how it works? Yes. Of course. So it's got four parts, it's got 2 Α. 3 the lateral steering, that puts the streamers where you 4 want them to be, it's got the acoustic full brace acoustic 5 07:43:26 network, that tells the streamers where they are, and it's got what we call calibrated marine source, that controls 6 the quality of the energy, we put into the earth, and it 8 has the single sensor streamer, which is used to get rid of the noise. Is one of those a primary feature or the primary 07:43:41 10 Q. 11 feature of Q-Marine? 12 Α. The one our customers want is lateral steering. 13 Q. And how do you know that? 14 Because that's the one they keep asking for in quotes. And in the informal engagement to a big extent. 15 07:43:55 16 Why is it that your customers put the most value on 17 lateral steering? Because it speeds up projects, it makes them more 18 efficient, and it allows to improve data quality, so you 20 can't really operate with streamers close together when 07:44:15 they're very long, so you need to have lateral steering 21 22 and then they will just -- streamers be closer together, 23 and that's allows better quality. 24 How does the streamer spacing -- is that the word you

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25

07:44:32

used?

1 Α. Spacing, yes. 2 How does the streamer spacing improve quality? 3 Α. Well, you want your sampling of the earth because doing this 3D sampling of the earth, you want the size of 5 each little cube of earth you're investigating to be as 07:44:45 6 small as possible, and if your streamers a long way apart, then your bits of earth it's like that big, you want them 8 to be smaller the only way to bring that smaller is to have your streamers closer together. Was there a typical streamer spacing that the 07:45:00 10 11 customers used or sought before they were able to steer 12 the streamers laterally? 13 A. Pretty much everything was a hundred meters. That's 14 the length of a football field. 15 Q. Between each streamer? 07:45:12 16 A. Between each streamer, sideways yeah. 17 Between lateral steering and Q-Marine product have 18 you been able to offer narrower spacing in those 19 streamers? 20 Yes. We've done 75 meters, we've done 50 meters. 07:45:21 21 half a football field on a lot of projects. We did one at 37 and a half, that was a bit hairy. 22 23 With streamers that are 5 or 6 kilometers long are you able to do 50 or 75 kilometers -- pardon me -- 50 or 07:45:44 25 75-meter spacing safely without lateral steering?

	1	A. Yeah.
	2	Q. Without lateral steering?
	3	A. Sorry. Without lateral steering, no, it's a
	4	hundred meters is fine, but if you need, with lateral
07:45:55	5	steering, with lateral steering, it works, yes.
	6	THE COURT: Does anybody ever ask that lateral
	7	steering not be included for any reason?
	8	THE WITNESS: Since about 2006, 2007, it's
	9	either they explicitly ask for it or it's silent. I've
07:46:16	10	never seen anyone say: We actually don't want it.
	11	THE COURT: Okay. And going back to your
	12	introduction of yourself, where are you now working, sir?
	13	THE WITNESS: So now I'm still in the Gatwick
	14	office, which is our headquarters.
07:46:27	15	THE COURT: All right. Thank you.
	16	THE WITNESS: Yeah.
	17	BY MR. LOCASCIO:
	18	Q. Can you give the jury a relative an idea of the
	19	relative magnitude of the Q-Marine project?
07:46:37	20	A. It was the biggest project we were doing in
	21	engineering. The engineering center in Oslo covers land
	22	marine systems, if you like, and it was by far the biggest
	23	project going in Oslo at the time.
	24	Q. Was this something that was viewed as a easy one to
07:46:55	25	decide it was going to be a guaranteed winner?
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1 Α. It was -- it was a gamble. When it came out, the CEO talked about Q technology as being his hundred 3 million-dollar gamble. 4 Why is that? Q. 07:47:08 5 Α. Because over all, that's what we'd invested in the 6 technology and we didn't know if it would, the market would accept it. 8 And why did you think there might be some lack of acceptance by the marketplace? 10 The industry is a little conservative. 07:47:21 Α. 11 projects are very, very important, and they're very big, a 12 typical 3D seismic, it could be five, 10, \$20 million even 13 then, now that we do big surveys, it could be a million 14 dollars easily. And if it didn't work, then you could end 15 up with the things all ending up a massive pile of 07:47:46 16 spaghetti, customers a little bit show me that it works 17 and then I'll buy into it, which we understood, that's 18 part of what we do. 19 You indicated the engineering development side of **Q**. 20 bringing Q-Marine to the market was a hundred 07:48:03 21 million-dollar gamble was described as, do you know the exact breakdown of where those funds were or how it breaks 22 231 down? 24 No, I don't. The lateral steering was a big part of Α. 25 07:48:19 it, but that was, it over all -- I found the reference the Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 other day. It was over all Q technology. So there was a 2 little bit on the land side and the single sensor was 3 shared and the rest was marine. I don't have a breakdown, I'm afraid. 4 07:48:33 5 Were there essential funds necessary to get it 6 through market accepted after that initial hundred million dollars? 8 Yeah, that was -- the hundred million was like a entry ticket really because we had to put it into the 10 water, put it out, do projects for customers and do -- and 07:48:43 11 prove to customers that it worked, that we wouldn't end up 12 with more tangles -- which might have happened -- and it 13 actually gave the quality that it did. So we did a couple of multiple client projects which were... 14 15 The jury's heard a lot of things. I don't think 07:49:04 16 they've actually heard about a multi-client job. Can you 17 very briefly just explain what that is? 18 Okay. Sorry. So a multi-client job, a normal 19 proprietary job the company commissions us to shoot a 20 survey. And we give them the -- provide the data. A 07:49:20 21 multi-client job project we invest our own money in a 22 survey. For example, in the Gulf of Mexico we have 23 projects going on right now. And we spend our money to 24 invest in the survey, and then customers license the data 25 and as anyone who wants to can license that data, and just 07:49:41 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

as much or as little as they want, the whole survey or 1 2 just one block, and then for a fee. So it's a different 3 business model. You indicated that there was a demand for lateral 5 07:50:00 steering both for better quality surveys as well as more efficient or faster surveys. The jury has heard a little 6 7 bit about that. Can you briefly explain the key benefits 8 from your perspective in those two areas? 9 Yes. So, faster, more efficient surveys with lateral 07:50:21 10 steering, you can, first of all, what we call mobilize, 11 which is put the kit into the water quicker because you 12 can stern out, and then you can line up and you have -- if 13 you can steer your streamers and control them then you get 14 less infill, which you mentioned in the opening this thing 15 about little bits of grass left. 07:50:41 16 That one I think the jury has heard a lot about. 17 Right. Okay. And then on doing the line change when 18 you're doing kind of a hand-brake turn but with a big 19 spread, these -- a seismic spread is the biggest moving 20 07:50:57 thing on the earth, so it may be a half a mile wide and 21 four or five miles long, and you want to turn it around as 22 quickly as possible because we don't make money turning 23 around, we make money shooting data. So you have to turn 24 around and then those streamers have to be absolutely 25 straight before you fire your first shot. 07:51:15

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	1	So it steers them around and snap them
	2	straight, so it saves a lot of time there. And that cuts
	3	down the project duration.
	4	Q. Is survey repeatability spreadsheet something that's
07:51:29	5	also valuable from your perspective?
	6	A. That's very valuable.
	7	Q. The jury has heard about 4D, but you've got a
	8	demonstrative in there that
	9	A. Yes.
07:51:42	10	Q. Can we switch it? If you can briefly explain what
	11	customers have told you about 4D and its impact on the
	12	marketplace.
	13	A. Right. So the idea of shooting 4D isn't new because
	14	as we develop technology, customers they might reshoot a
07:52:10	15	survey anyway and do what we call accidental 4D, in other
	16	words, I've shot it, I'll reshoot it, I might as well look
	17	at the difference.
	18	But then in the early '90s, mid '90s, we
	19	started saying: Well, let's have a go at actually trying
07:52:28	20	to do it deliberately. So this shows a 3D over a survey,
	21	a 3D survey over a field.
	22	Q. Go to the next slide.
	23	A. And the idea what we get out of good quality seismic
	24	are attributes, you know, here's what the rocks look like,
07:52:47	25	here's what the geology looks like. And so, we can see
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	1	here that there's a reservoir and we can see oil and water
	2	and gas and this is derived from the information we
	3	acquire.
	4	Now, if you go and reshoot that after a
07:53:05	5	certain period of time, then of course the rocks haven't
	6	changed, the only thing that's changed is the fluid, and
	7	so, you've produced oil and you can see and highlighted
	8	areas is where the oil is produced from.
	9	Now, a reservoir it's not just a big tank
07:53:24	10	full of oil, it's the oil is stuck in between in the
	11	pores between the sands and it's split up by faults and it
	12	splits and faulted and it's got little lithology changes.
	13	So for our customers to produce from a reservoir, they
	14	really need to understand all of this information. The
07:53:49	15	only way they can do that is with seismic. And we don't
	16	necessarily know exactly if a fault is there, let's say
	17	here's a bit of reservoir and another separated by a
	18	fault. Well is oil going up that fault or not? We don't
	19	know. We don't know.
07:54:07	20	So from the customers' the perspective, if
	21	it is, I can sit here and this will eventually drain. If
	22	it isn't, well, I've got to put a hole in here and drain
	23	it.
	24	So managing the reservoir, drilling in the
07:54:18	25	right place, because they keep drilling it. It isn't
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1 you know, you develop a reservoir and it doesn't stay, it 2 keeps changing. So that information what this highlights 3|is, that is the area that's changed. And after a time -thank you. Q. 07:54:37 5 Go ahead. 6 Then you separate -- you take one volume, subtract the other and this is meant to come out and show up really clearly and concisely the way -- where I've drained and where I haven't drained. 07:54:51 10 Q. You mentioned that there were 4D surveys before 11 lateral steering. What's the big deal about it? 12 A. Well, the -- the problem is we did a survey and we did a 4D survey for Statoil over at Ekofisk, not Ekofisk. 13 14 Gofax. 15 07:55:12 Q. And that's a place? 16 Yeah, that's the field name -- and in the Norweigian 17 section of the North Sea. You can Google it. It's still 18 one of the textbook presented in number of technical 19 papers. Gave a good result, but it was 10 years between 20 the two surveys. And it had to be 10 years because you 07:55:25 2.1 couldn't control that repetition. You had poor repeatability, so the 4D single if you like, had to be 22 23 really loud so you can see it with clarity. You had to wait 10 years to see the difference 25 between the original formation and what happened?

1 Α. Exactly, yeah. 2 Is 10 years a desirable amount of time to wait for 3 that 4D survey in the industry? 4 Α. No, it isn't. If you look at fields around the 07:55:55 5 world, they are. Most fields, they are switched open, but 6 most fields are in kind of terminal design by that stage. So a field will produce oil, and if we imagine it over 8 time, it starts out like that and then it trails off. 9 As the fresh decreases, becomes harder to 07:56:12 10 produce. And there comes a point where they say, okay, 11 we're done. 12 And so, during that time to keep the 13 production up, you want to inject water to increase 14 pressure, whole bunch of stuff the oil companies do. If I 15 can do a snapshot every two years, then I can do some 07:56:28 16 redevelopment on that field, whatever I want to do, and I 17 end up with a much greater production. In, fact because 18 of 4D, the Norwegian government mandates that 50 percent 19 of the oil in place should be produced from every 20 07:56:50 reservoir in Norway. Around the world on average it's around 30 percent. 21 22 And is that difference the ability to get a 4D image 23 in a two-year stretch, the contribution of lateral 24 steering versus having to wait 10 years? 25 07:57:06 Α. It is. Absolutely it is, we couldn't do it before,

1 just couldn't do it.

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- Q. What does it take to be able to get that image over a shorter period of time?
- A. You have to be -- you have to repeat where your streamers are, so here's my streamers on the underlying survey and I want the new ones to be sitting right on top of the old ones.
- 8 Q. Does it -- is it essentially like having a better 9 camera?
- 10 Α. Yeah. That's the way of putting it. My daughter 11 turned 20 a couple of weeks ago, and we always take 12 birthday photos and line up with the criminals parade. So 13 if I look back and when my daughter was 10, any -- a poor 14 quality camera I can tell the difference, I know the 15 difference. But if I want to look at a picture of my 16 daughter at 19, the picture of my daughter at 20, picture 17 of my daughter at 21, you need to line it up, take a 18 picture in the good place, take a light, clothes won't to 19 be same, fashions will change. But, you know, just on her 20 fact I would tell the difference. But I would need a
- fact I would tell the difference. But I would need a
 better quality camera. It's a camera. Yeah, it is.
 That's what doing. We're taking pictures of the
 reservoir.
- 24 **Q.** Did you have any personal experience with the efforts to test Q-Marine for the marketplace?

1 **A.** I did. 2 **o.** Tell u

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 \mathbf{Q} . Tell us about that.

A. So I said when I they moved me to Houston, I felt kind of cheated because this had been my baby, but it was good because I went out and the first thing we do is we do just a test of the equipment, really. We want to know that it will work. So we just put a streamer -- a single streamer in the water just to test it. And we test it, we could steer it and test that the electrics works and all the rest of it because posed a high risk. And normally we just do that in and we don't really get some data, but I had a, there was a customer worked for Kerr-McGee, who was -- who had a particular problem at that stage and we signed a mutual nondisclosure agreement and he told me about his problem, and I told him about something we were doing. So we actually went out and actually got a bit of money out of him to do that test.

- 18 Q. You mentioned Kerr-McGee. Is that an oil company?
- 19 A. That's an oil company, yes.
 - Q. Were there some companies that were earlier adopters of this technology, once you launched?
 - A. Yes. You always get an adoption cycle, some come on early. So the guy, Kerr-Magee, he went from the U.S. to Aberdeen and the first thing he did was phone up and commission a Q-Marine survey.

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1 I said I'd done a couple of surveys in the 2 Gulf of Mexico. The second one was -- the first of that 3 little multi-client project, which we didn't expect to sell, but it was over Shell acreage. And they loved it, 07:59:59 5 the chief geophysicist at the time from Shell, Barbara 6 Bone said this was a new start for the Gulf of Mexico, so it was really -- was fantastic. We were very pleased to 8 get that. 9 Q. When was the product ultimately commercialized? 08:00:13 10 Α. So it was commercialized in 2001, in the North Sea, 11 and we had -- the first project was BP, they did a 4D, and 12 then Statoil picked it up immediately. So Geco was a very 13 Norweigian company. As I said, I'd been in Norway. So 14 Statoil, which is the stage oil company in Norway, were 15 very close. 08:00:36 16 We told them what we were doing we told 17 them a little bit about the technology, so they were 18 really just waiting. And the moment we said okay now it's 19 ready, they said right. We're going to go and try it. 20 Was WesternGeco the first company in the market with 08:00:51 0. a lateral steering system for its streamers? 22 Α. Yes. 23 And how long was WesternGeco the only company in that 241 market offering that technology? We were on our own until 2007 in the marketplace in 25 08:01:02 Α. Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

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Q. During that time, were there WesternGeco customers that developed a preference for using steerable streamers?

A. Yes, there were a lot. I said Statoil had done the first project and then once they'd done it and they saw that we could control the streamers, then they said, okay, right, all 4D going forward, immediately, we want lateral steering on all of them.

Shell used it, so we did a project in Malaysia in late 2001 to early 2002. And they were delighted because we just — is this picture — yeah, the picture is still up. One of the other things you can do with it if we — customers have an irritating habit of having production facilities in a producing oil field, and they want us to be as close as — they want us to get as close as we can to it.

- 17 \mathbf{Q} . To the rig?
- 18 A. To the rig.

Now, we normally steer our streamers to be straight. That's what you do. But you may say: All right. What I want to do because the vessel has a -- can't get that close to the rig because of safety concerns, absolutely right -- that you can actually deliberately steer your streamers sideways so that you can get coverage very near the rig, just by careful survey, planning and

Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

08:02:08

08:02:27

careful operation, so they were interested in doing that, so they came onboard quite early. 3 Q. Are there other conditions at certain places of the world that get a real benefit from this technology? 5 08:02:40 Α. Yes. There are areas where you've got a lot of 6 currents, and the boats is going at four and a half knots, something like that, which is about five and a half miles an hour. And so, if you have a cross current, then your 8 streamers are going to be pushed out sideways. Well, if they're regular, you can live with 08:03:02 10 11 that, but if you have odd currents and you get odd currents 12 maybe where you have a change in water depth, currents by 13 the outflow of rivers, big rivers, particularly around 14|Brazil, imagine what the Amazon water flow does, or in West 15 Africa we have projects there. So that's an area you want 08:03:26 16 to be able to steer them. There's another -- another very 17 specialized area which is in the Arctic, because the 18 shooting window in the Arctic is very short. You've 19 obviously -- you've got to wait for the ice to break up. 20 So if you can steer your streamers then even though there 21 are icebergs floating around and you have to do some fairly 22|hairy maneuvers, you can steer around them and you can get 23 started. And you can add a month to your shooting window, 24 and that's very, very important for our customers. 25 Were there companies during this window after you 08:04:00 Ο.

	1	launched Q-Marine that give direct awards to WesternGeco
	2	because you were the only ones that could offer this
	3	technology?
	4	A. Yes. We had lots of them. I said Statoil after the
08:04:14	5	first survey. They gave us we had a five-year contract
	6	that was about 15 surveys, 15, 4D surveys. We had direct
	7	awards from Shell, direct towards from Total, direct
	8	awards from Chevron in the 2003 area.
	9	And we also had direct awards, quite big
08:04:36	10	ones from ONGC for example, which is the National Oil
	11	Company of India. That was about \$300 million, that was
	12	about three or four seasons work.
	13	We had direct awards from Petro Gas. They
	14	had a very complicated 4D, 3D, 4D they wanted. And a
08:04:55	15	direct award from PEMEX, which is the Mexican National Oil
	16	Company for two seasons work, our vessel for a couple of
	17	years.
	18	Q. Was it unusual for companies, particularly national
	19	oil companies to award direct awards?
08:05:10	20	A. Unheard of.
	21	Q. Why?
	22	A. Because they spend effectively they are spending
	23	taxpayer dollars, and so they have to be open and
	24	transparent and they do genuinely open public bids
08:05:23	25	openings or everyone bids and they set quite often fairly
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low technical criteria, and then take the cheapest because 1 2 it's the taxpayers' money they're spending, and they have 3 to look after. 4 But in these cases what they wanted to do they knew they needed lateral steering, so it was a direct 5 08:05:34 6 negotiation. A fairly tough one, but it was direct. Due to your ability to be the only company offering 8 this patented technology, were you able to get premiums 9 from your customers on price? 08:05:49 10 Α. We were, yes. We started with quite a high price and 11 then as we built up the fleet, we adjusted that and we 12 settled by about 2000, late 2000, late 2004, which is when 13 I was -- took over responsibility. I said: Look, let's 14 aim for about a 40 percent revenue increase. And it 15 didn't really look like 40 percent to the customers, but 08:06:14 16 that was 40 percent. 17 Can you explain what you mean by if you're going to 18 increase your revenues as a company by 40 percent, how 19 that can be anything but a 40 percent increase for the 20 customer? 08:06:30 21 Yes. I said we're more efficient. So you imagine 22 that I'm doing 4Ds in the North Sea, and it takes me a 23 month and I've got maybe -- conventionally I'd have 24 \$10 million revenue, and another month of \$10 million, if I can do that in three weeks, then and I've got a bit of 25 08:06:46

```
an uplift mash it's $12 million, then, I can get on to the
         1
         2
            next job.
         3
                  Can -- make sure I understand that. So the example
            you just gave, sir, say that's the start of a year, so you
            have the first two months of the year. Under the first
08:07:25
         5
         6
            example you gave with conventional streamers, how long did
            you say that first job would take?
         8
            Α.
                 Well, let's say it took a month.
         9
                 And how much would you typically in this example say
            Q.
08:07:46
        10
            charge for that job?
        11
            Α.
                 At the time about 10 million a month.
        12
            Q.
                 And after you finished that job what would you do in
        13
            the second month?
        14
            Α.
                 Go on straight on to the next one.
        15
08:07:57
            Q.
                 And how long that would take?
        16
            A.
                 If it was the same size, it would be another month,
        17
            let's say.
        18
            Q.
                 Same price?
        19
            Α.
                 Yeah.
        20
08:08:11
            Ο.
                 So with conventional in that one month, how much
        21
            would you get paid?
        22
            A.
                 You'd get.
        23
            Q.
                 On that two-month?
        24
            Α.
                 Two months you'd get 20 million.
       25
                 With lateral steering, how would these two jobs play
08:08:29
            Ο.
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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1 out? 2 A. So lateral steering we may do it in three weeks, 3 three weeks instead of a month, let's say. 4 So call that job one and that job two. Job one would Q. 5 now take how long? 08:08:44 6 Α. Let's say three weeks. 7 Q. And how much would you be able to be able to charge 8 that customer for doing it with lateral steering? Α. If we wanted a bit of after premium, then maybe 12 10 million because the customer doesn't care. They'd like it 08:08:59 to take less time. They'd like it to happen instantly if 11 12 we could. 13 Did they also get any benefit from that additional 14 \$2 million? 15 08:09:10 Α. Yeah. Because it's a better quality product. 16 the point they get a better quality product out of it. 17 And were you able to charge premiums like that 12 million instead of the 10? 19 Yes. Although it was very stainable the customers 20 were very happy with that engagement. 08:09:24 21 Job two, would that take again three weeks in this 22 example? 23 A. Yes. 24 Q. And again 12 million? 25

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Α.

Yeah.

08:09:39

	1	Q. So in the example you were giving a second ago you've
	2	done both jobs in six weeks roughly instead of 8 and
	3	A. Yeah.
	4	Q you charged a little bit more so you made more
08:09:52	5	money?
	6	A. Absolutely.
	7	Q. Is there additional benefit to WesternGeco?
	8	A. Well, we go on to job number three. The North Sea
	9	season, it wouldn't maybe start in January but North Sea
08:10:03	10	season starts in April through to October you want to line
	11	your jobs up back-to-back, so you have no dead time
	12	between jobs.
	13	Q. So in that example, you just gave, you'd have half a
	14	job you got in or a little more than half a job in the
08:10:18	15	same month?
	16	A. Yeah.
	17	Q. And for that piece of that job, in those two weeks,
	18	about how much would you make?
	19	A. Maybe 6 million, maybe half a job. Yeah.
08:10:32	20	Q. And for that same two-month window or as you made 20
	21	million with conventional streamers, how much money would
	22	WesternGeco have made using lateral?
	23	A. You'd make 30 million, so 50 percent 50 percent
	24	increase in revenue, even though it's not a 50 percent
08:10:49	25	increase in price to our customers. Yeah, that's it.
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1 In this example, you're able to charge more to your Q. 2 customers but that additional time amount is what percent? 3 Α. Well, it's 20 percent more to our customers, but 50 percent more revenue to us. 5 Thank you. 08:11:11 Q. 6 MR. LOCASCIO: Go ahead and mark this as Walker Demonstrative 1A. 8 BY MR. LOCASCIO: Were customers willing to make these payments of an additional 20 percent or so to have their surveys done 08:11:31 10 11 quicker and better? 12 Oh, absolutely. They thought that was good exchange. Can you give an example of a customer who saw 13 particular benefit from 4D repeatability? 14 08:11:45 15 Α. So Statoil was the first, what we had decided that 16 the real, the risk reduction point, the point of market 17 acceptance would come when we'd done the first Q project, and then put another Q project on top of it, which we call 18 19 Q-on-Q, really to prove that the repeatability would work. 08:12:06 20 And Statoil did that very early on in the piece. 21 If you can turn in your binder to Plaintiff's 22 Exhibit 95. 23 Α. Oh, yeah. 24 Q. Can you find it? We've got Plaintiff's Exhibit 95 on 25 the screen. You also have a paper copy.

	1	What is that we're looking at, sir?
	2	A. So this is a press release. So "Schlumberger
	3	RealtimeNews" at the time was industry articles; but
	4	obviously, we would contribute to it. So that was a press
08:12:55	5	release by us done with Statoil's agreement about the new
	6	contracts that we'd been awarded by them.
	7	MR. LOCASCIO: Dave, you can blow up the second
	8	paragraph again, "We selected"?
	9	THE WITNESS: Yeah.
08:13:09	10	BY MR. LOCASCIO:
	11	Q. Again, can you tell us what that what that relates
	12	to, sir?
	13	A. So that was that was Eric was very keen to go and
	14	get a Q-Marine project to do a Q-on-Q. And there you see,
08:13:26	15	we can say, "We selected the WesternGeco Q-Technology
	16	because of the repeatability provided by streamer steering
	17	and minimum azimuth variation between base and monitor
	18	surveys."
	19	So the azimuth, if you've got a survey
08:13:40	20	like that and the repeat is all off even if they're
	21	perfectly separate, they're all offset, then it's still
	22	not repeatable. So you have to have the same orientation
	23	as well.
	24	Q. And was there any discussion about how the accuracy
08:13:54	25	of WesternGeco's survey impacted their plans on the field?
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 Α. There was because this was Q-on-Q. 2 And the other thing we did was give them a difference Q very, very quickly, three weeks after the 3 project. So now we've processed the base data, processed the new data, gave them a difference Q. And they changed 5 08:14:12 their drilling plans. They were going to drill four 6 wells, and they changed the location of all four of those 7 wells within 30 days of the last shot on the survey. So 8 they were absolutely ecstatic. 10 08:14:27 I think if you go down -- I think there's 11 a reference, if you go to Paragraph 5. 12 MR. LOCASCIO: Scroll down a little bit. 13 you go. 14 BY MR. LOCASCIO: 08:14:35 15 Which paragraph is that, the "Our first Q surveys" 16 paragraph? 17 Yes. It says, "Our first Q surveys on Norne," which is the field in the North Sea, "confirmed repeatability 18 was accurate enough to detect subtle 4D effects and 19 20 08:14:50 resulted in changed drilling plans." 21 Now, that was -- you see the reference in Paragraph 4. It says Q-on-Q performed in 2001 and repeated in 2003, so that was just 22 months. And this is 23 24 a survey for 2004, so then it's just one year. 25 two years, got a result out of two years and said, Let's 08:15:08

try it with just one year between the survey. And we've 1 2 shot it every year since up until about 2009. 3 And how much did you get paid for the survey and how much did Statoil save or benefit from the survey? 5 That's -- we got paid about \$30 million for these 08:15:25 Α. surveys, and they were a bit coy for a while, but actually 6 they published a paper at -- a technical paper at SEG where they were talking the -- that's -- sorry -- that's the Society of Exploration Geophysicists, so that's our technical body -- where they disclosed in that that they 10 08:15:45 generated \$240 million of value out of those surveys. So 11 12 that was a great data point for the industry. We realized 13 we had sold it cheap. Were there other studies or surveys you did involving 14 either rigs or obstructed areas where this technology 08:16:05 15 16 showed its benefit? 17 Yes. We'd done -- I said we had a direct role to Petrobras. That was over a field called Marlim, which 18 was -- it was either one or two fields. They didn't know. 19 One was in production. They were going to develop the 08:16:19 201 next one. And that had -- there were 46 obstructions that 21 22 we had to shoot around and in between, so getting close to those absolutely critical for the coverage. 23 24 I think there was there's a press release 25 or article. 08:16:40

	1	Q. If you turn to PTX 114.
	2	
	3	
	4	if you look at the second paragraph.
08:17:01	5	MR. LOCASCIO: Blow that up. Thank you.
	6	THE WITNESS: Zoom in on that.
	7	Another example where Q-Marine's enhanced
	8	acquisition techniques is in maximizing subsurface coverage
	9	3D surveys. So this was this is actually a magazine
08:17:16	10	article. It's a final draft which was sent for me for fact
	11	approval. But it's a magazine article having to do with a
	12	trade show.
	13	And over the Marlim complex of fields
	14	operated by Petrobras in Campos basin, heavily obstructed
08:17:31	15	area, known for unpredictable currents and sea states.
	16	Innovative utilization, remote source vessel, continuous
	17	recording and streamer steering enabled subsurface
	18	coverage.
	19	So on that project, say it was a direct
08:17:46	20	award, we acquired it and they could tell from given the
	21	quality of the data, which they'd never got before, they
	22	could see that there were actually two fields, that the two
	23	bits weren't actually connected. And so, that completely
	24	changed their development plans for the second field.
08:18:02	25	MR. LOCASCIO: Dave, can you zoom out a second?
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 BY MR. LOCASCIO: At the bottom left, it's sort of looks like there's a 3 Q video game. 4 Do you see that? 08:18:11 5 Α. Yeah. 6 Q. Can you tell us about that? 7 We have -- we do have fun sometimes. This -- we Α. 8 wanted to get the -- find a way of getting the point over to our customers, because this was still very new. And so, we $\operatorname{--}$ this was on the trade show floor for two or 08:18:25 10 11 three years, and we invited our customers to sit down. 12 And it's -- the graphics were fairly simplistic, but behind it was -- we'd introduced the enhancement to Q 13 14 called "advanced spread control," and that really 15 08:18:47 automated and got these different modes. 16 So we had them steer the vessel through some obstructions, around some obstructions, and they did 17 it twice. The first time they did it conventionally, and 18 the second time we switched the streamer steering on and 20 they could get through the -- get through the 08:19:02 21 obstructions. It proved to be very popular, and we gave 22 them -- there was a PS3 as a prize at the end of each day 23 for the highest score, and you basically started from 20,000 to down when you were offline. 25 08:19:19 There was interest because we had -- it Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	was great for us because the students all came along, but
	2	the people who won it every day were the older people
	3	because the students are doing this, and older people are
	4	just a little bit more calm. So they tended to win. And
08:19:37	5	they said, PS3. What the hell am I going to do with that?
	6	Q. Sir, was the technology behind the scenes, if you
	7	will, running this similar to the actual lateral steering
	8	technology you used on the boat?
	9	A. It was exactly. It was a massive computer actually
08:19:56	10	behind it. Didn't look very graphically that exciting.
	11	No, it was exactly that.
	12	So we put currents into it, and it behaved
	13	exactly the way the streamers do behave in the real world.
	14	So it was it was a bit of entertainment, but it was
08:20:12	15	serious as well.
	16	Q. I want talk to you about other customer reactions.
	17	If you can turn to PTX 94 in your binder.
	18	Were there oil companies that believed
	19	that lateral steering was critical to 4D efforts?
08:20:24	20	A. There were. So this is this is a magazine article
	21	for "Offshore Technology." And of course, they phoned us
	22	up and asked us for pictures, but we had no control over
	23	what went into this one. So you can't say you're not
	24	going to do it. I was pleased when it came out.
08:20:43	25	So "Offshore Technology" is one that is used
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

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1 for all our industry, the oil industry. So some of you
         2 guys may be in the oil industry if we're in Houston. You
         3 may read this magazine. I don't know.
                           So to get a seismic article in "Offshore
         5|Technology" was quite -- at the time quite unusual.
08:21:01
         6
                           Anyway, yes, so it's --
         7
                 If you look at this top section --
            Q.
         8
                       MR. LOCASCIO: Dave, can we pull up this?
         9 BY MR. LOCASCIO:
08:21:15
       10
                 It says, "WesternGeco's marine seismic solution is
        11
            gaining acceptance among E&P companies for it's high
        12
            definition images and vast improvement in repeatability."
                             Are the E&P companies the oil companies?
        13
        14
                       The E&P stands for exploration and production.
       15
           I was very happy with that headline.
08:21:32
        16
                       MR. LOCASCIO: And if you turn to the second
       17 page. Dave, if you can flip.
       18 BY MR. LOCASCIO:
                 There's a picture down here at the bottom that I want
       20
           to ask you about.
08:21:42
       21
           Α.
                 Right.
       22
                 Can you tell the jury what that is?
       23
                 Yes. This is a screen dump. So on the boat, the
           navigators who are monitoring where everything is in the
       25
           instrument room are watching continuously where everything
08:21:54
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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	1	is. And we position everything so we know where it is.
	2	So the convention on the left-hand side is
	3	a screen dump. It was a Q-Marine vessel, but we switched
	4	the steering off. And this I wanted this picture.
08:22:14	. 5	Switch the steering off, and there was a
	6	bit of a cross-current, and you can see where I think
	7	that this was about the last shot point before we switched
	8	the gun. You can understand they bottled at that point.
	9	Q. Looks like you're flying pretty close to the edge
08:22:28	10	there.
	11	A. Very close to the edge, yeah. I was I thought it
	12	was a great shot, but I was glad I saw it after. I think
	13	if I'd been on board, I would have whew.
	14	Anyway, so that's conventional, and then
08:22:40	15	we switched the steering on. So it's the same vessel.
	16	And then the second the picture on the right-hand side
	17	is the steered streamers. And those two pictures were
	18	taken 20 minutes apart.
	19	Q. So that's real data. That's not just somebody's
08:22:55	20	cartoon of what this looks like?
	21	A. Oh, no, no. That's real screen data. That's a
	22	screen dump from the on board vessel.
	23	MR. LOCASCIO: Thanks, Dave.
	24	BY MR. LOCASCIO:
08:23:06	25	Q. Sir, what's WesternGeco's policy on licensing its
	1	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	technology to others?
	2	A. We don't.
	3	Q. Why not?
	4	A. Because we use our technology to provide services,
08:23:17	5	and we're constantly trying to make better services and
	6	improve the industry overall. And if we we want to do
	7	what we do, and we encourage others to do what they want
	8	to do and innovate and do different things.
	9	Q. And is that part of your culture of inventing is
08:23:38	10	investing in your technology and then using it with your
	11	customers?
	12	A. Exactly, yes.
	13	Q. Is it valuable to have the benefits of that
	14	investment so you can differentiate yourself in the
08:23:48	15	marketplace?
	16	A. Yeah. That's what we want to do is make money from
	17	providing better services or more valuable services to our
	18	customers so they've got a better quality of product, and
	19	they because, you know, these surveys, they may only
08:24:05	20	cost millions, but the companies are making saving through
	21	better optimized billions. In Jack with BP, I remember
	22	once, said, you know, this 3D seismic will save us
	23	billions, because that's that's very highly geared.
	24	Q. Prior to the launch of Q-Marine, how did companies
08:24:28	25	differentiate themselves? Was it just sort of a price
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 | war?

2

3

5

6

7

8

- A. It was a price war, yeah.
- Q. And if you can talk to us for a few minutes about how oil companies actually choose a company to perform their surveys, I'd like to talk to you about that.

A. Okay.

- Q. How does it start the process? So if somebody, let's say, ExxonMobil has a field and they want to get a survey, what's the first you learn of that?
- So, they will talk to -- we'll hear about that two Α. ways, and this is probably a year in advance of a tender actually appearing. But we have -- as I said, I have an organization of geographical salespeople, and they're close to what are called the "op co's," the operating companies. So let's say it's -- you said Exxon --ExxonMobil in Malaysia. Our guys know the chief geophysicists of ExxonMobil in Malaysia. I also have a global account manager who talks at headquarters level, and he will know the manager of acquisition worldwide. And it may come from either of those places, and it's normally expressed as, Hey, we want to talk to you. We're planning a survey. We're thinking about doing something next year, and it starts a conversation rolling. And so, we log that in our database as -- we call that an opportunity. So that's a conversation with a customer.

Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

08:24:52 10

11

12 13

Τ,

08:25:14 15

16 17

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19

08:25:31 20

21

22

23

24

08:25:50 25

	1	Q. And then does it proceed into a more formal process
	2	over time?
	3	A. Yes. So we may the customer may be talking
	4	your example of ExxonMobil, they would know exactly what
08:26:05	5	they wanted. But a lot of other companies may want to use
	6	our expertise and say, Look, this is what we want to
	7	achieve. We don't know quite how to go about it, so can
	8	you help us design the survey?
	9	So we do quite a lot of that.
08:26:19	10	So it gets gradually a little more and more
	11	formal, and it also at some point ends up in a tender,
	12	someone sending out a formal request for proposal for work.
	13	$oldsymbol{Q}$. You put together a demonstrative to talk about how
	14	these factors play into the bidding process.
08:26:39	15	MR. LOCASCIO: Dave, can we switch to Walker
	16	Demonstrative 3.
	17	THE WITNESS: Yes.
*	18	BY MR. LOCASCIO:
	19	Q. Can you explain to the jury what you put together
08:26:49	20	here, what's going on?
	21	A. Yeah. So we're at the stage now where a customer is
	22	asking for proposals, they send out a formal tender with
	23	requirement. And that tend to be a bunch of legalese and
	24	stuff of that nature, saying all the rest of it. But it
08:27:09	25	will have a specification of what the project should be,
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 including technical requirements, and they will send out a 2 request for proposal to -- quite broadly to companies. 3 And the way I've drawn it I've got four people coming in and putting in proposals. And the first 4 08:27:29 5 thing that happens is a customer will specify technology. 6 It may be the number of streamers. Lateral steering is something which is very often specified these days because of its benefit. 8 9 Now, if you have -- if you don't have the 10 technology, you're number one or number four, then your 11 technical proposal will be rejected. Very often they're 12 actually in two envelopes, your technology and then your turnaround and price. And you'll be rejected technically. 13 14 So you want to sort of make it through the bull's eve. 15 And Guy 2 and 3 I've got here are -- have got inside, and 08:28:12 16 those have been accepted technically, they've made the 17 barrier. And then there will be a discussion about price 18 and availability and how long the project will take and 19 operational risks and all that kind of stuff. 20 08:28:27 And then they'll make a decision, they'll 21 seek clarification from people and some of them will win 22 and some won't. 23 For the people that get over the technology barrier, you've got that triangle on the left side with, it looks like, money, risk and timing. 25 08:28:41

1 A. Yeah. 2 How do those play into each other? Q. 3 So those -- a customer comer will need -- will want Α. 4 to get the right deal for them. And what they want on a 5 particular time may vary, in just the same way if you book 08:28:54 6 an airline ticket and you want to go tomorrow, timing is 7 more important to you and it's more expensive, and 8 that's -- that's it. 9 If a customer is well planned, they say, 10 Well, there's no particular rush on this project, price is 11 very important, then that would be the issue. 12 And the risk is the operational risk. 13 It's a little bit of an assessment of, Are they going to 14 turn on up on time? Have they done projects like this 15 before? You know, it's a soft delineation requirement. 08:29:23 16 In your experience, do the customers even get to that analysis until they've looked at the technology they want? 17 18 Α. No. As I say, very often it's two -- very 19 formalized. Send it in two envelopes. The technology 201 08:29:41 analysis is done by the technical people, by the 21 geophysicists because they're going to be accountable 22 drilling in the right place, which is it's all about. And 23 the procurement people are just looking at this triangle. 24 Can you give us an example in everyday life where you might have this technology wall that's the first step in 25 08:29:57

1 your decision-making process? 2 Yes. If I have four kids, which I haven't, but if I A. 3 had four kids and I was going to buy a car, I'd want three 4 rows of seats, and I'd want to have seatbelts in all of 5 them. So it wouldn't really matter. I may personally 08:30:14 6 lust after the convertible on one side, but I know that's not what I'm going to end up buying. I'm going to end up 8 buying a people-mover with three rows of seats, and nothing else will do. It's like that. 10 Can you explain to the jury how exceptions to tenders 08:30:31 11 work? There was a little bit of discussion that you're 12 not privy to about exceptions to tender couple of days back. 13 14 A. Okay. So every supplier puts in exceptions. 15 are -- which is are not -- this is, I'd rather not live 08:30:47 16 with this or whatever. So contractual exceptions come in 17 into that triangle. They're part of the risk analysis. 18 If you get -- if you have the technology and you've made 19 it through technology barrier or over the technology wall, 20 then that's part of the customer's analysis. They may 08:31:04 21 say, This is important. They may say, It's not that 22 important; or they may say, Look, you've got to back down 23 on this. That's usually what they say. That's usually 24 what happens, actually.

And for lateral steering, is that something that's

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25

08:31:18

Q.

usually negotiated in the back end or that's a technology 1 2 barrier? 3 No, that's always a technology barrier. always a technology barrier. 08:31:28 5 Q. I'd like to talk more specifically about the tender 6 itself. Α. Right. 8 So you talked about how you talk with the customers and find out this was coming down the pipelines. 08:31:38 10 Α. Yes. 11 Q. What happens next? They have to issue some document. 12 So then we've had have a lot of communication, and Α. 13 then you go into lockdown mode really. Customer says, 14 Okay. We can't talk to you now, which is fair enough, and 15 then we get a tender document which is going to be a big 08:31:49 16 thing. It's got legalese, technical requirements and all 17 the rest of it, and we work from that. And how do you evaluate on a particular tender what 18 is actually required for that job? 20 08:32:04 So we will look at the operations, because the 21 customer, the first thing they'll always have is a map, 22 and they'll have the outline specifications, and the map 23 will tell us a lot. The map's really important, and we'll look at it and say, Where is it? Is there shallow water? 08:32:22 Are there obstructions? You know, they -- what's the

	1	shape of the survey? That kind of stuff. So that's very
	2	important.
	3	We'll split up, and we'll have a look at
	4	the technology, the outlying technical specifications.
08:32:39	5	And we'll look at the very detailed technical specs as
	6	well.
	7	So we have a small bid team that works on
	8	that. So there will be six or eight people under the lead
	9	of one marine sales. So we have about 20 people who are
08:32:55	10	just marine sales around the world. They will work on two
	11	or three may have two or three bids we're working on at
	12	the time. And they and only that bid team can interact
	13	on that project.
	14	Q. Does the specific customer give you insight as to
08:33:07	15	whether or not something, for instance, steerable
	16	streamers is a requirement?
	17	A. Yes, they do. There are several places that can be.
	18	The obvious place is in the tender document itself. It
	19	may say it.
08:33:22	20	Q. It may just say it.
	21	A. Yes, may just say explicitly, very often.
	22	It may be implicit. For example, if
	23	you've got long streamers close together, I talked about
	24	how you really couldn't do five-, six-kilometer streamers,
08:33:36	25	75 or 50 meters apart, without lateral steering. So then
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1 it's an implicit requirement. 2 There are also some companies who say at 3 headquarters level, We want lateral steering on every project, so there are several like that. 4 5 And who has that requirement? What customers have 08:33:54 Q. put out that global requirement for lateral steering? 6 So Statoil did after 2001 to us. And Total says it. 8 They were quite early. 2004 they said -- in one of the annual business reviews we had, they said, Lateral 08:34:16 10 steering is our top technology requirement for marine. 11 BP said it in 2005, the head of subsurface 12 technology, Peter Carragher, said, We only want to see streamer steering from here on. 13 14 So we take that massage seriously 15 because -- when it's delivered like that at the annual 08:34:37 16 business, you know, it's me and my boss who's the president and their top level people, we say, Yes, sir we 17 18 take note. 19 Were there any other companies that required lateral 201 steering for the jobs? 08:34:49 21 Petrobras did. We -- Shell have said they want to A. 22 see it. ExxonMobil have said they want to see it as well. 23 Q. How about Apache? 24 Α. Apache did, but a bit later. They -- Dave Monk was a 25 bit, Okay, I'm not certain if this is really for me. 08:35:06 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

But then once he decided, he said, Okay, 1 2 yeah, I want streamer steering everywhere. 3 And has that been the case for several years? It was from the -- late 2008. 4 Α. Yes. Are there situations where a technical requirement 08:35:23 5 Q. 6 might not explicitly be in the tender? And if so, why? Very often, yes. So the big oil companies very often 8 work in areas like Africa, and actually their relationship 9 is they are a contractor to the government. It's kind of 10 a weird model, but they're a contractor to the government 08:35:44 11 and they are commissioning surveys from us on behalf of 12 the government. And the government then says, Well, I 13 want a certain minimum number of qualified bidders who can 14 bid this work. 15 08:36:01 So then it becomes a little bit of a game. 16 So they will then have to expand the universe of -- this is -- there's apparently technically accepted people, and 17 18 they will have a -- they will then kind of look at what 19 they've got and say, Right, how can we make sure the 20 people who have the real technology we need are in there? 08:36:22 But the tender itself will -- they will deliberately lower 21 the apparent technical specifications in order to get the 22 23 right number of qualified bidders. 24 Do they ultimately choose the ones that they have 25 lowered the standards to meet typically? 08:36:39

Direct-Walker/By Mr. LoCascio

	1	A. No, not usually.
	2	Q. How many tenders does WesternGeco receive every year?
	3	A. Several hundred.
	4	Q. And how many do you bid on?
08:36:48	5	A. We try to bid on pretty much all of them.
	6	Q. Why?
	7	A. Well, we're not going to win all of them, of course,
	8	but we there are a couple of reasons.
	9	In some areas, like Indonesia, if you
08:37:03	10	don't if you turn down three bids and you don't bid,
	11	then you get taken off the bid list and you have to go
	12	through a bunch of administration to get back on the bids.
	13	So then we'll put a bid in anyway.
	14	The other thing is we want to showcase our
08:37:21	15	technology, and one good clear way of showcasing it is to
	16	put it in as an alternative or a base offering to the
	17	customer. So the tender process can be used that way,
	18	because you can always put in alternatives if you want to.
	19	Q. Are there any companies that oil companies that
08:37:41	20	either don't let you bid or for whom you don't bid out of
	21	personal choice?
	22	A. No.
	23	Q. Is there something called a master agreement you have
	24	with some oil companies?
08:37:53	25	A. Yes. So quite a lot of the big oil companies want to
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
	,	

1 have a master service agreement, so that's all the --2 sorry -- the lawyer stuff, the Ts and Cs, that are all 3 sorted out, so that when they come to bid a project, then they all they have to do is look at this famous triangle 4 there and technology. So it's much quicker for everyone. 08:38:14 5 6 So there is some companies where we have agreed exceptions, and it looks -- you talked about exceptions 8 earlier. When you look at the looks frightful, but in fact, with Total, we put in our 24 pages and they say, 10 Yes, they're all acceptable. And our different service 08:38:33 11 companies will have a different set of 24 pages, and they 12 all go through the same process. 13 Are there some companies that you don't have a master agreement with and you proceed job by job? 15 Yes. So the one we have with Statoil takes us 08:38:45 through the end of 2012. We're operating under that this 16 17 year, and we haven't agreed to what the procurement 18 department want to do after that. So what we've done is 19 we will bid on a job-by-job basis, and E&I, the Italian 20 oil company, the same, we say, We won't sign your master 08:39:05 21 agreement, but we've come to an agreement with them where 22 they will send us the bid and we will bid on a 23 case-by-case basis. 24 And do you get work in that situation as well? Q. 25 Α. Yes. We do, yeah. 08:39:19

 ${\it Johnny~C.~Sanchez,~RMR,~CRR~-jcscourtreporter@aol.com}$

	1	Q. With more than a hundred tenders a year, how do you
	2	keep track of them all?
	3	A. Several hundred, I said.
	4	We put them into a database called CRM.
08:39:32	5	Q. What does C
	6	A. Customer relationship sorry.
	7	Q. What does CRM stand for?
	8	A. Customer relationship management. It's not specific
	9	to us. I mean, it's used in a lot of industries. It's an
08:39:44	10	approach. And Schlumberger uses it for all we use it
	11	for all Schlumberger bids.
	12	Q. How did CRM or customer relation management get its
	13	start at WesternGeco?
	14	A. Well, actually, I started it a good long time ago
08:39:58	15	because what you have to have we started with a vessel
	16	schedule, where you live or die by the vessel schedule.
	17	And that vessel schedule is our vessels, of course, but
	18	it's also the competitor vessels.
	19	When you lose a bid, which of course, we
08:40:13	20	do, then it goes to one of your competitors, and we want
	21	to know where or when. So having a schedule put in helps.
	22	So I did that, and then I linked the
	23	module that's we used to cost the survey, because it's a
	24	lot of parameters. It's a quite complicated thing, and
08:40:30	25	you pull up statistical databases and all the rest of it.
	PANA AND ELECTRICAL PARA	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	And that was some big Excel application, which was
	2	actually ended up being quite hairy. And then that was
	3	all put in to a web application, and then that was
	4	incorporated into we bought this third-party software
08:40:52	5	from I don't know who, Oracle, I think, and adapted it for
	6	Schlumberger's needs. So we have now have the vessel
	7	schedule in there, and the survey costing tool linked. So
	8	the price we are putting on a survey goes in there.
	9	Q. And when you're at the desk or on the road with your
08:41:10	10	computer, do you have access to the CRM?
	11	A. Yes. I've been using it a lot recently.
	12	Q. And the information that's in there, is there
	13	information on each of the jobs or tenders you get?
	14	A. Yes. Every every opportunity, when and I said,
08:41:26	1.5	when we start with a new opportunity, which can be very
	16	vague at that point, every opportunity gets its own
	17	identifier, and then the project team gradually builds up
	18	around it.
	19	Q. As information comes in, is it put into the CRM
08:41:44	20	database at or around the time that you get the
	21	information?
	22	A. Yes. It's part of the salesman's job to update CRM
	23	on basically on a daily basis. Whenever something
	24	significant happens, then he's supposed to put that into
08:41:59	25	the database. That's his job. Or their job. Sorry.

	1	Q. When tenders come in, is information then put into
	2	the CRM database?
	3	A. Yeah, the tender, the contract goes in and that's the
	4	shared document or the shared database where the bid team
08:42:17	5	will work from. So they will put all the information into
	6	the CRM, and the sales, accounting manager whose putting
	7	the bid together will consolidate them.
	8	Q. And does the team responsible for a bid, are they the
	9	ones with access to that entry in the database?
08:42:36	10	A. Yes. You can't have anyone messing around with it
	11	the way you were.
	12	Q. Do the people who input the information, are they the
	13	folks who actually have the knowledge of what the bid was
	14	and what the customer said?
08:42:48	15	A. Oh, absolutely. Right from the beginning when the
	16	customer first has a conversation that says, you know, I'm
	17	looking for a boat for next year, then that gets logged
	18	into CRM and the guy gets back to his office, or as you
	19	say, you don't have to be in the office. I can access it
08:43:06	20	remotely.
	21	Q. And does the CRM contain the best information you
	22	have about what's going on in the marketplace at any
	23	particular point in time?
	24	A. Absolutely, yes.
08:43:14	25	Q. Do you and other companies at the company rely on it
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	1	

	1	in the course of your work?
	2	A. We rely on this, absolutely, yes.
	3	Q. How so?
	4	A. Because I said we live or die by the vessel. We want
08:43:26	5	to know exactly where competitor boats are when we're
	6	bidding because that will impact our pricing. I also when
	7	the we have a weekly operations meeting called and CRM
	8	is used. Basically if it isn't CRM you don't have to talk
	9	about it on a weekly call because it must be in CRM. It
08:43:49	10	must be there. So that's pulled up from and the president
	11	and all the regional managers and me attend that call.
	12	So if the regional sales managers haven't
	13	got it absolutely clear, then they're in big trouble, and
	14	I use it monthly because I'm compiling statistics monthly.
08:44:09	15	$oldsymbol{Q}$. Do you use the CRM to determine how to price bids to
	16	customers?
	17	A. Yes.
	18	Q. How?
	19	A. We're looking at the mark rate, so when one
08:44:19	20	someone when we lose a bid, or when we win it, even,
	21	the customer may have put in five or six different survey
	22	designs, different options, different technical
	23	parameters, and we don't know at the time of award, which
	24	one the customer will choose.
08:44:39	25	And so, obviously, whether we lose one,
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the competitor wins, we don't know which one they've 1 2 selected because the customer hasn't chosen. But what we 3 do know is when we look, when we win it, we do our best to find out what the price is and the customers will usually 4 08:45:01 5 tell us, they're quite pleased to tell us if we lost 6 something on price, and we know what the scope was, so we know the price and the scope and that gives us an idea of 8 what people are charging per vessel month and we're watching that very closely. 10 Where else do you get information that finds its way 08:45:17 11 into the CRM -- about what your competitors are doing? 12 Α. So we get it directly from the customer. We may get 13 it from public bidder, so it's a small, like 10 percent of 14 the country -- of the world, where the bids are opened in 15 public, even when it's a western oil company ExxonMobile 08:45:36 16 or Chevron, they're all public, and they're all published 17 so that you know the price and usually the duration for 18 the specification of work. 19 So that is very clear and then we'll have a clear idea and we'll put that in that data. 201 08:45:54 21 Is there a standard policy about entering data in a 22 timely fashion? 23 Oh, yeah. I want it to be put in very clearly in a 24 timely fashion and example for marine Sam Gracon who is my 25 marine sales manager, which she just changed roles, she 08:46:12

	1	will be phoning people up and nagging them if there wasn't
	2	something, and she was or she is very obsessed about it
	3	being accurate. So if we're not certain if we don't think
	4	it's reliable, it doesn't go in there.
08:46:27	5	So I wouldn't to be honest I wouldn't
	6	say it's complete, its incomplete, but I trust what's in
	7	there and that is what I'm I need to use in my
	8	business.
	9	Q. Have you ever seen a print out of some piece of the
08:46:39	10	CRM?
	11	A. I did see a yeah, I think you had that in the
	12	office, yeah. That's not what I use.
	13	Q. You don't carry the this is Plaintiff's 547, you
	14	don't haul this around with you like this?
08:46:54	15	A. No, I don't even haul it around. I think that's an
	16	Excel. I don't haul it around in Excel either.
	17	THE COURT: Could you tell us what you do?
	18	THE WITNESS: Yes, absolutely.
	19	THE COURT: You put that on the screen?
08:47:03	20	THE WITNESS: I look at it on the screen. It's
	21	a Web application, so I can log in from anywhere, it's
	22	obviously secure, log in from anywhere I am in the world,
	23	get on to the application, then I can search by
	24	opportunity.
08:47:17	25	And then we've got something called
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"Reporter," which outputs the results and then I look at
           that from the point of view weekly, monthly revenue
         3 updates.
         4 BY MR. LOCASCIO:
08:47:29
         5
                 Have you taken any screen shots of the CRM so you can
         6
            explain to the jury what it looks like?
                 Yes, I did. You asked he to do that a little while
            Α.
         8
            ago.
         9
                       MR. THOMPSON: Your Honor, ION reiterates its
        10 objections as to the admissibility that's under Rule 26 and
        11|37 for failure to produce previously.
        12
                       THE COURT: You may take him on voir dire, if
        13 you want.
        14
                       MR. THOMPSON: It's not a foundational issue,
        15 Your Honor. It's a discovery issue.
08:47:51
        16
                       MR. LOCASCIO: We produced this giant set of
        17 the data, Your Honor. From the beginning it was always
        18 clear from everyone's talked about it that you need to see
        19 it if you want to interact with it. There was never a
08:48:04
       20 request to see it. For source code, for instance, they
        21 asked to see it, we provided it. They never did for this.
        22
                       MR. THOMPSON: Au contraire. We didn't learn
        23 only a certain amount has been produced. It was first
       24 learned about during the deposition Samantha Graycon and we
       25 expected a full supplementation and we didn't receive it.
08:48:21
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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Direct-Walker/By Mr. LoCascio

	1	MR. LOCASCIO: No request was made to see it.
	2	These are demonstratives of what the screen shot looks like
	3	as opposed to the exhibits.
	4	MR. THOMPSON: They are not demonstratives.
08:48:29	5	They are substantive material evidence of what they use on
	6	a daily basis. And the first time we see it is in a
	7	context of the so-called demonstrative.
	8	MR. LOCASCIO: I'm not moving demonstratives
	9	in, Your Honor.
08:48:40	10	THE COURT: You don't want to admit this?
	11	MR. LOCASCIO: 547 we do, but the
	12	demonstratives that we're about to show, just to show how
	13	it looks to people who use it are for demonstrative
	14	purposes only, Your Honor.
08:48:51	15	MR. THOMAS: You Honor, we'd note also if
	16	they're trying to admit them as 1006, they haven't offered
	17	to produce the underlying data and make it available for
	18	inspection or copy, so we don't think it comes in that way
	19	either.
	20	
	21	
	22	
	23	
	24	
	25	
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1
                        THE COURT: Well, very difficult for me to
         2 understand what was and what was not requested and what was
         3 or was not produced. I do think that it qualifies as a
         4 business record. I didn't originally anticipate that it
08:49:18
         5|would, but Mr. Walker has persuaded me. I'm going to allow
         6 it. Sorry.
         7 BY MR. LOCASCIO:
         8
               Pull up RW-4, please, Dave.
         9
                             So, we've got picture of your laptop using
        10
           the CRM?
08:49:37
        11
                 That's my laptop screen, so that's me logged on.
            Α.
        12
                        THE COURT: Okay.
        13 BY MR. LOCASCIO:
        14
                 Dave, if we can blow this part up, just this top
           header here.
        15
08:49:48
        16
                             And if we need to, Mr. Walker, if you want
            to point us to a different piece of the screen you have a
        17
        18
            printout.
        19
            A.
                 Yeah.
       20
                 If you let us know, we can zoom it in --
08:49:55
            0.
        21
                 Yeah.
            Α.
                 -- a little bit better. I can do it with the ELMO.
        22
            Q.
       23
            Α.
                 Okay.
       24
                        Thank you, Ms. Loewe. You were one step ahead
            Ο.
                 Sure.
       25
           of me.
08:50:10
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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1 And so, what we have here. 2 A. So --3 Explain what we're looking at here. So this is my home page, if you like, there's one 4 Α. 5 08:50:26 welcome screen, so you can see it says "opportunities" 6 across there, so that's our language for a business 7 opportunity, and you can see "opportunity home," and then also they say "opportunity chart application." If you go 8 across you can see there's one that says "contacts" and 9 "WesternGeco." And the top there and that's where the --08:50:49 10 11 Is this here? Q. -- that's where the vessel charts and the vessel 12 13 schedule is hidden. And I can just draw any combination 14 of vessels there. So that's what it looks like, and I 15 type in -- I search by customer, I search by country, and 08:51:02 16 down at the bottom you can see there's it's actually off 17 the bottom, but there's a ID and I have -- when we talk on the weekly calls, then it's always the CRM ID that people 18 19 are talking about so anyone can find it. So, anyway, I 20 answered that. 08:51:28 21 If you can go to the next slide and show us what we're telling the jury what we're seeing here. And I'll 22 23 show it on the screen. 24 So this is where we're looking and I did a search on 25 the customer and the search on the country, and we can see 08:51:37

it's not absolutely clear. There are two pieces of 1 2 business that we have with that customer in that country. 3 And because it's French Guiana it's not a very active country. 4 08:51:52 5 Q. The French Guiana is where? 6 Α. It's Latin America. It's just north of Brazil. There's a series of small countries there. So this was a 3D survey. We were bidding and you can see the other one says, well site, poor pressure services. That's nothing 10 to do with WesternGeco. That's one of the other business 08:52:09 11 segments. So I can't do anything with that, but I can see 12 it. So I get an overview of what the customer's business 13 looks like by the global account director. 14 Q. And if you look here for that entry you've 15 08:52:26 highlighted, it says "new tender," and then "new tender 16 received," and then a revenue number. Do you see that? 17 Α. Yes, I do. 18 Q. Is that information that's inside that entry on the 19 CRM? 20 Α. It is, yes. 08:52:35 21 Q. And how do you then find out more about this job? 22 So I then click on that and it goes to the next slide 23 and it's out of focus. So this is the -- this is my front 24 page to that project, so we've sort of gone down one level. And in my front page I can see on the top it says, 25 08:52:57

"Tullow Group Services," so that's the customer, sales 1 2 stage, that's closed, last, French Guiana is the country 3 I've got closed date, I've got significant dates of what 4 goes on WG Marine acquisition. So I know what it was 08:53:18 5 because I use this -- when we're looking at Marine 6 acquisition I use it for land, I use it for data processing, I use it for multi-client licenses. 8 If you go down just a little bit you can 9 see the revenue. And that says "total revenue, read 10 only," and that's -- even though I'm the VP of sales, I'm 08:53:34 11 not allowed to mess with that number because I'm not on 12 the sales team. 13 So only the sales team can mess with that number and that's transferred from the survey costing 14 15 08:53:47 tool, and that's what goes in. That's what we put it in. 16 That was our estimate of what the final cost would be, 17 based upon the customer's calculation of square 18 kilometers. 19 And then there's a field called "awarded value" under 2.0 that, and over here on this side it looks like there's 08:54:01 21 some additional fields. Can you explain what these are? 22 Yes. The comment section is kind of like a running 23 commentary. And it's -- this is the start of it. So 24 customers request so there the account manager who was 25 Steve Whitten in this case. I know that because I can see 08:54:20

1 the ID of his name. 2 Is the next slide a blowup of those so it might be a Q. 3 little bit easier to see. Α. 4 That may be better actually. We tied it with script 08:54:33 5 because it wasn't there. 6 And so, in the comments field, what does it say? Q. So that was the customer request where Steve Whitten Α. was talking to the chief geophysicists of Tullow for 8 9 French Guiana. And they said we want to get an idea of 10 availability of 10 streamer vessels, 75-meter separation. 08:54:48 11 I apologize for his spelling. Steerable streamers in offshore French Guiana. 12 13 And so, that would be -- that's the beginning of the chain where we would start to have a 14 15 discussion. So that would have been a business meeting, a 08:55:03 1.6 phone call, a face-to-face discussion, and that it gets 17 locked into CRM and that's the beginning of the 18 opportunity and then -- so this customer request 19 doesn't -- this comment section, doesn't contain 20 everything. There's a lot that's going on. I don't need 08:55:21 21 to know every single phone call, but before I go and see a 22 customer, obviously I want to know what's going on, so I 23 will just pull up CRM, all the active opportunities, all 24 the recently closed opportunities, and I'll flick through

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them before I go and talk to the customers. I want to be

25

08:55:37

	1	informed.
	2	And this is a good way, people who aren't
	3	on the project team to get kind of a running commentary.
	4	Q. Did you pull up a second job as another example?
08:55:49	5	A. Yeah.
	6	Q. This is Slide 8.
	7	A. So this one is total E&P Angola. Then you can see if
	8	you look, it says contact's last name, so Phillip Kapell
	9	is the chief geophysicists.
08:56:10	10	Q. Here?
	11	A. Yes, of Total Angola.
	12	Q. This also tells you who the person is you're dealing
	13	with this?
	14	A. Yeah, we have the whole customer organizational chart
08:56:19	15	in here. But this is the main contact name, which would,
	16	you know, Phillip would be the person that I would expect
	17	to be in charge of that project on the customer side.
	18	Q. And for this job again, we blew up the comments as
	19	you read, can you explain to the jury what this says?
08:56:38	20	A. So this is a little bit further down the role, he's
	21	keeping this comment refreshed and updated, so 4D baseline
	22	pass law tender has landed now, bid is due in on Luander
	23	on Monday, 31st of May at noon latest.
	24	THE COURT: Let me slow you down a little bit.
08:56:58	25	THE WITNESS: Yeah.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

Direct-Walker/By Mr. LoCascio

	1	THE COURT: The court reporter has got to keep
	2	
	3	THE WITNESS: I'm sorry. Funny British accent
	4	1
08:57:05	5	THE COURT: It's something we all have to be
	6	reminded of, including myself.
	7	THE WITNESS: Right.
	8	BY MR. LOCASCIO:
	9	$oldsymbol{ iny Q}$. At the time, sir, it says "4D baseline," and looks
08:57:14	10	like the word is "Paz floor"?
	11	A. "Paz floor." So that's the field that Total are
	12	going to develop. So that's why it's a 4D baseline.
	13	Q. And so, it's the first of two in the 4D timeline?
	14	A. The first of many, hopefully in the 4D timeline.
08:57:32	15	$oldsymbol{ iny Q}$. And then under that it discusses 10 streamers minimum
	16	6,000 meters long, 50-meter separation?
	17	A. Exactly.
	18	Q. Does that give you an insight into your customer's
	19	desire for lateral steering?
08:57:43	20	A. Well, three things on the sheet gives me insight on
	21	the customer, first of all it's Total and they always want
	22	streamer steering, secondly it's Phillip who regards
	23	himself has the inventor of fan shooting, so I'll know
	24	he'll I'll bet he'll want it shot fan, so that needs
08:58:01	25	lateral steering.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
		Journal of Sammer, Tank, Sam Journal of Sammer, Com

	1	And the six meet, six kilometer long
	2	50-meter separation close to which Paz floor, if you look
	3	at it, is an adjunct to the Girassol Dahlia complex, so we
	4	probably have to do line change around shall I spell
08:58:16	5	that for the Court?
	6	THE COURT: Yes, that would be good.
	7	THE WITNESS: G-I-R-A-S-S-O-L, strike, at
	8	Dahlia, D-A-H-L-I-A. It's they're actually flowers in
	9	Angola.
08:58:35	10	BY MR. LOCASCIO:
	11	Q. It then goes on to say, "Steerable streamers are
	12	requested. Fan mode requested." Does that tell you
	13	anything about what they want?
	14	A. Obviously, it says steerable streamers are requested,
08:58:46	15	and he's requesting fan mode as well. Yeah. So I know
	16	that lateral steering will be needed for this.
	17	Q. And are these typical examples of how in your job you
	18	look to the CRM to see what customers really want?
	19	A. Yes. Absolutely.
08:59:02	20	Q. You talked a little bit about customer needs for
	21	lateral steering. How early did you see that in the
	22	trade? When did you start to see customers say I want
	23	lateral steering?
	24	A. So it started to appear I said we had this meeting
08:59:26	25	with Total in 2004, when they said lateral steering is our
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

top technology requirement. So they made that clear to us 2 then. It started to appear in about 2007, in quite a lot 3 of tenders. 4 And did you start to see it explicitly indicated as 08:59:45 5 required in all those tenders? 6 No. It started off saying -- sort of language that 7 said preferred, or a nice would be an advantage or 8 something like that. 9 Q. And as of today, 2010 or 2011, what percent of your 10 customers require lateral steering on their jobs? 11 A. So about 30 percent put it in as a requirement. 12 Are they or others that tell you it's their 13 preference, or you know that's what they want? 14 Yeah, there's another 20 percent, I would say, who 15 say it's a preference. 09:00:17 16 I want to look at a couple of tenders. The jury's seen I think one tender so far. I want to ask you to look 17 18 at a tender or two and tell us where it indicates if they 19 want lateral steering or not. 20 A. Okay. 09:00:32 21 Q. Start with PTX 594. And so, what are we looking at 22 here in PTX 594? 23 So this is Statoil Hydro U.S.A. and it's a bid for the 24 3D on Chukchi Sea. That's in Alaska -- offshore Alaska. 25 09:00:58 Q. And did you bid on this job? Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

- 1 A. We did, yes.
- 2 Q. Did you get this job?
- 3 A. No, unfortunately we lost this.
- 4 Q. Who did you lose it to?
- 09:01:07 5 A. We lost it to Fugro with ION DigiFIN.
 - 6 **Q.** Do you believe this tender indicates lateral required?
 - 8 A. Ido. Yes.
- 9 Q. Can you tell us why you think for this job lateral
 09:01:20 10 steering was required, either generally or from the tender
 11 itself?
 - 12 **A.** Yeah. So first of all it says Statoil. They would merge with Hydro, StatoilHydro. But this would have been the first time they'd not used lateral steering on a job since 2001.
- o9:01:34 15 since 2001.

 16 Q. So if it wasn't a requirement on this, it would have
 - 17 been an exception?

09:01:45

- 18 A. It would have been very new usual.
- 19 Q. And you know, in fact, that they did use lateral 20 steering; correct?
 - A. They did. I've since found out they did use lateral steering. We suggested to operate fan mode on this in our tender response, which they adopted. It wasn't specified but they adopted it.
- 09:01:57 25 Q. The jury's has seen some pictures of fan mode, does

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1 that require lateral steering? 2 It does, yes. Α. 3 Did the location of the survey indicate a need for 4 lateral steering? 09:02:06 5 A. So the map isn't in this exhibit, but when you 6 look at the map, you're in the Arctic and on -- or I said -- I mentioned when you asked me awhile ago, the 8 ability to avoid icebergs and steer around icebergs can extend the shooting window quite significantly in this 10 09:02:25 case. 11 Does the tender have any information that also 12 supports that view? It did. If you go to page -- I think it's 701 --13 Α. 14 it's 702. 15 Ο. Okay. 09:02:35 16 Α. If you go to that. 17 At the bottom, Dave. Q. 18 A. Yes, at the bottom. 19 What's the tender say about steering or lateral Q. 201 steering? 09:02:48 21 Α. It says, "Streamer geometry tolerances and criteria." 22 The first two are how they want. And the third one says, 23 "Lateral streamer position control, in case the turn to 24 technology encompassing lateral streamer position is 25 chosen, the above two criteria related to streamer 09:02:56

```
1
            separation location --"
         2
                        THE COURT: You're going too fast. Slow down.
         3
                        THE WITNESS:
                                     Yes.
                                            Sorry.
         4 BY MR. LOCASCIO:
         5
            Q.
                 You need to slow quite a bit.
09:03:09
         6
            A.
                 Sorry.
                 It says --
            Q.
         8
            Α.
                 "Natural streamer position control." My apologies to
            the Court.
            Q.
                 Does this paragraph you've just read on the screen
09:03:20
        10
        11
            right now, that says, "In case an alternative technology
        12
            encompassing lateral streamer position control is chosen
        13
            for a particular survey, the above two criteria related to
        14
            streamer separation and location shall apply to all offset
        15
            groups," give you information about the customers' desire
09:03:38
        16
            for lateral steering?
                 Yes, it does. They're not saying how we are how to
        17
        18
            do it, whatever the alternative is, but they're saying
        19
            they want it, yeah.
       20
           0.
                 The jury's already heard that on this job,
09:03:51
        21
            WesternGeco proposed the ship with lateral steering, but
        22
            also proposed a different ship. Are there instances where
        23
            you'll give customers two choices, even though you know
       24
            they want lateral steering?
       25
            Α.
09:04:08
                 Yes.
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 Q. Why? 2 Well, there's two reasons: One, I talked about 3 someone having -- putting a bid in a country where the government may have a say, so you may say we would put in 4 something -- and probably our competitors would as well --09:04:23 5 6 not just specific to ours -- put in something that just meets that technical requirement, even though you don't know that's a real technical requirement, and then we'd 8 put in an alternative that meets the technical 10 requirement. The only thing is we want to demonstrate the 09:04:40 11 value of our technology. 12 What do you mean? Q. Well, we can -- we can show customers, well, if you 13 14 did it without, then you can work through in cost. We may 15 work up a costing on exactly what a project would cost 09:04:55 16 without, and demonstrate the saving costing with, and then they can make up their mind. And it's there in black and 17 white because it's our opportunity. It's our shop window 18 19 to -- the technical people are convinced, but we need to 20 deal with procurement departments as well. 09:05:14 21 Q. Let's look at another tender, sir, PTX 543. Dave, can we pull that up some. Thank you. If we can just 22 23 blowup from this piece right here. 24 Can you explain to the jury what we're 25

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looking at here in Plaintiff's 543?

09:05:35

	- 1	
	1	A. So this is Apache PA Australia. So this is when you
	2	look at it, this is three surveys. It says "WA261P334P"
	3	and "246" and "247P" combined.
	4	So the northwest shelf of Australia is a
09:06:01	5	very perspective area. It's a very interesting area.
	6	It's partly there's quite lot of production from it and
	7	it's open, and Apache is particularly active. It's got a
	8	lot of blocks out there.
	9	Q. Okay. Did you bid on this job?
09:06:17	10	A. We did bid on this job.
	11	Q. And did you get this job?
	12	A. No, we didn't, unfortunately. Which was particularly
	13	a shame on this one because this three was just the start
	14	of a whole sequence of projects.
09:06:30	15	Q. Do you know who got this job?
•	16	A. Fugro did with ION DigiFIN.
	17	Q. And how do you know that Apache wanted lateral
	18	steering on this job?
	19	A. So if you go down a bit on this so first of all,
09:06:45	20	it's Apache, and it's February 2010. So I know Dave
	21	Marcus, who is a very dominant character, chief physicist
	22	for Apache will be saying I want streamer steering on all
	23	this project because he decided at the end of 2008. So if
	24	I had nothing else, again, that would be a big clue.
09:07:06	25	Q. Does the letter we're looking at here, tell you
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	something as well?
	2	A. Yeah. If you go to the middle, the big paragraph
	3	there's a bit that's underlined.
	4	$oldsymbol{Q}$. Did you underline that or did it come that way from
09:07:17	5	Apache?
	6	A. No, it came that way from Apache. They want to be
	7	absolutely clear on their requirements.
	8	Q. And what does it say?
	9	A. So if you look at the don't read it all, but that
09:07:28	10	first line preferred acquisition, it says 10 times 75
	11	times, 5000 meters.
	12	Q. Is that right here in that first sentence?
	13	A. Yeah. And underneath it just two lines down it says,
	14	10 times 75 times 6,600 meters.
09:07:46	15	Q. Now, that way of describing a streamer array with 3
	16	numbers, 10 times 75 times 5000 meters. What does that
	17	say?
	18	A. So that says I want 10 streamers, I'd like 10
	19	streamers. I want them 75 meters apart, and they will be
09:08:05	20	for these remember this is three projects. One project
	21	wanted 5,000 meters, and the other two projects I think
	22	wanted 6,600 meters long. So I've got a very long spread
	23	with streamers quite close together for that part of the
	24	world.
	I	

09:08:22 25 Q. Okay. And what does that indicate to you about the

	1	customer's requirements for this job?
	2	A. He's obviously the needs have that streamer
	3	separation, so even if it wasn't Apache, we'd be looking
	4	and saying we'd want to do streamer steering on this
09:08:37	5	project.
	6	Q. Because for a 6,600-meter streamer
	7	A. 75 meters apart, that's a very dense spread without
	8	lateral steering.
	9	Q. Did they tell you anything else, or did you have to
09:08:50	10	just go on that basis?
	11	A. No. If you turn to the next page and you can see
	12	there's a bit in bold, right in the middle. And they
	13	said you can read that, "Proposals offering streamer
	14	lengths greater than 6,500 and 5,000 meters, and number of
09:09:15	15	streamers fully steerable of 4 or more will be
	16	considered."
	17	Q. What does that mean?
	18	A. So that means I must, I'm not going to compromise on
	19	streamer length, go ahead and 6,500 and greater than
09:09:30	20	5,000. Now, because the streamer length really controls
	21	how deep you can get your seismic image from, so that's
	22	streamer length is really important and number of
	23	streamers fully steerable, so they must be fully
	24	steerable. At the time some people were saying I'll just
09:09:50	25	steer the tail. So fully steerable. And what's
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	1	interesting here is it says four or more.
	2	-
	3	
	4	compromise on the number of streamers. That's a soft
09:10:07	5	
	6	
	7	Q. If we can turn to the next header, 822 in your
	8	binder. If we can pull that up.
	9	A. By the way, he also puts it explicitly underlined
09:10:26	10	in in case we didn't get the point, it's on Page 008,
	11	it says, "A method for steering the streamers will be
	12	considered as a prerequisite."
	13	Q. Okay. Dave, can you pull that up?
	14	A. A little bit belt and suspenders maybe, but I think,
09:10:44	15	you know
	16	MR. LOCASCIO: 543.
	17	THE WITNESS: You couldn't fail to get the
	18	message on that one.
	19	BY MR. LOCASCIO:
09:10:47	20	Q. Where did you see that it was a prerequisite in this?
	21	A. If you look at Page 008
	22	Q. Okay.
	23	A. If you look Section 1, which has been underlined.
	24	Q. Okay. This is the first sentence where it said, "A
09:11:08	25	method for steering of the streamers will be considered a
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	1	
	1	prerequisite"?
	2	A. Yeah.
	3	Q. That's pretty clear indication that you have to have
	4	it on this job?
09:11:15	5	A. Yeah. If we missed the subtle and the unsubtle,
	6	that's the kick where it hurts, just in case we were
	7	asleep on and the person doing the bid was asleep.
	8	Q. Dave, if we can go to 822 again, please.
	9	Mr. Walker, if you turn to the binder to PTX
09:11:32	10	822. Can you tell us what tender this is?
	11	A. Yes. So this is a Tullow for Cote d'Ivoire, which is
	12	Ivory Coast.
	13	Q. Where is that?
	14	A. That's in the Gulf of Guinea. We're doing a lot of
09:11:49	15	Guinea. This is the gulf of Guinea in West Africa. So
	16	it's two or three countries to the west of Nigeria for
	17	that job.
	18	Q. And did you bid on this job?
	19	A. We did bid on this job.
09:11:57	20	Q. And did you get this job?
	21	A. No. We lost this.
	22	Q. To who?
	23	A. To Fugro with ION DigiFIN.
	24	Q. Does this tender tell you anything that indicates you
09:12:08	25	need to use lateral steering?
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1 Α. If you go to Page 866. And you can see it says 2 "Currents" there. 3 Let me just make sure we're all on the same page. 4 MR. LOCASCIO: And if we could blow up the page 09:12:24 5 for the jury. 6 BY MR. LOCASCIO: Is it 4.3.1? Q. Uh-huh. 4.3.1. 8 Α. 9 Q. What does this tell you? 10 It says -- it doesn't say streamer steering at this 09:12:30 Α. 11 point explicitly; but if you go at the end then in 12 "Execution," will see -- January to March will see effects 13 and these upwelling. They're talking about the currents 14 sentence. 15 This is the end of the sentence? 09:12:46 Q. 16 Α. Yeah. And some other inconsistencies which may cause rip currents which will disrupt spread geometry. 17 18 What are the currents like in the Ivory Coast? Q. 19 Α. Remember I mentioned that there are water --201 freshwater rivers coming down, and there's quite a lot of 09:13:01 21 project -- quite a lot of acreage where the -- that's 22 impacted by the water coming out. And then you get -- you 23 know that picture I showed you with the streamers all 24 about to tangle, that's what it looks like when you get a 25 rip current coming through. 09:13:19

	1	Q. Okay. Is there anything else in this tender other
	2	than the fact that it's going to be used in a place with
	3	these currents that indicates the customer is interested
	4	in lateral steering?
09:13:30	5	A. Yes. If we go I need to flip my way through this.
	6	There was section on geophysical objectives on 870.
	7	Q. Okay. Is this Paragraph 6.4?
	8	A. Yeah. 6.4, it says, "Additional requirements (as
	9	requested by Company)."
09:13:59	10	Lateral streamer control system, Number 1
	11	of that list.
	12	Q. And does the paragraph below talk all about lateral
	13	steering as well?
	14	A. Yes. That says, "Deployments of lateral control
09:14:12	15	systems, either partial or a full deployment."
	16	This project was quite interesting. This
	17	was like the Australia project. You know, I said,
	18	actually Australia, there was that was for three
	19	projects; but in fact, there were another two or three,
09:14:29	20	and whichever vessel is there will obviously win the
	21	followup work.
	22	Q. Why is that?
	23	A. Because a lot of these surveys are in very remote
	24	areas. Some areas like the North Sea, there's quite a lot
09:14:41	25	of boats in the summer. But areas like here, there will
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only be one vessel around. 2 Is there not that much exploration off the Ivory 3 Coast? 4 Α. No, it's not that busy a country. It's just coming 09:14:53 5 in. I hope it will be busy in the future, but it's not 6 business at the moment. And you indicated there was a follow-on job? Q. 8 Well, there was because we got a job from Apache -not Apache, Anadarko, and Anadarko, in their tender 10 document, sent us a note saying they were partners with 09:15:10 11 Tullow on this project, so oil companies do risk-sharing 12 by two of them. So Tellow is the operator on here; 13 Anadarko is the partner. 14 And they said, You will soon get a bid 15 09:15:29 from Tellow. It is our intention to acquire these two 16 projects back-to-back with the same contractor, and you'll find our technical specifications are substantially the 17 18 same. 19 So it was clear to us that you win both or 20 lose both. 09:15:41 21 After Fugro won the Tellow job for Ivory Coast, who 22 won the Anadarko job you were just referring to? 23 A. Fugro won the Anadarko job as well with DigiFIN. 24 Let's look at one last tender. If you can turn to Ο. 25 PTX 742. 09:16:01

	1	Can you tell us a little bit about this
	2	job?
	3	A. So this is ConocoPhillips. This is another one in
	4	Australia.
09:16:18	5	Q. And did you bid this job?
	6	A. We did, yes.
	7	Q. Did you win this job?
	8	A. No, we didn't.
	9	Q. Who did you lose this job to?
09:16:25	10	A. We lost this one to CGGV. I believe it was DigiFIN
	11	they used.
	12	Q. If you look at this tender, does this tender require
	13	you to use lateral steering?
	14	A. It does, yes.
09:16:40	15	Q. Can you explain to the jury how you recognize that?
	16	A. So if you look at the this is an area, if you look
	17	at the there's an obstacle in the middle of the map,
	18	well, middle of the project, which is identified in
	19	Page 414, if you can flip quickly to this. I don't want
09:17:01	20	to spend too much time on this.
	21	Q. Sure. If we look at "Optional Acquisition Services,"
	22	is this the Paragraph A you were looking at?
	23	A. Yeah. And the contractor will perform perpendicular
	24	reef acquisition lines. And, in fact, further down, it
09:17:17	25	talks about there's obstacle reef, Seringapatam Reef. And
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
	-	

```
1
            this is a coral reef that's in the middle of the project,
         2
            so having --
         3
                       MR. LOCASCIO: If we could turn to 866, Dave,
           it's Page 4418. I think that reef seems to be showing.
         5
                       THE WITNESS:
                                     Yeah. This is a close-up --
09:17:29
         6
                       MR. LOCASCIO: One more?
                       THE WITNESS: Well, if we look at this one,
         8 yeah, you can see one, two different configurations. This
         9 is interesting, actually, whilst we're looking at it, that
        10 shows two different designs.
        11
                             They will have asked for a price for each,
        12 and we won't know when we're awarded which one will do.
        13 But both of them have this Seringapatam Reef in the middle
        14 of it.
       15
                 I take it the name if the reef is the Seringapatam?
09:17:53
        16
            Α.
                 Yes.
        17
                       MR. LOCASCIO: Dave, turn to the next page.
        18 BY MR. LOCASCIO:
        19
                 Do you see it there.
           Q.
       201
           Α.
                 Yeah. I don't know whether that's important for the
09:17:59
        21
           Court records.
        22
                       MR. LOCASCIO: Can you blow up that picture?
        23 BY MR. LOCASCIO:
                 And explain to the jury what we're seeing on this
       25
            slide now.
09:18:08
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

So this is -- that's the reef, so it's a coral reef. 1 Α. 2 So it's a pretty fragile environment. And obviously, you can run the vessel through it, but you can't run -- the 3 4 streamers will break the coral. So very important to look after this. 09:18:26 So we can see what looks like four sets of 6 lines around the outside of the reef. Those are -- that's what they were talking about wanting to do, which were the 8 perpendicular lines around the reef. And that's all about 10 getting close to an obstruction. 09:18:45 11 So with 4D, we talked about 4D, and how there's always -- almost always a production platform. 12 13 Well, this is a different sort of obstruction, a natural 14 obstruction, and it's very important to get close. And you can also see, if you look up in the top left-hand 15 09:19:03 16 side, those lines going northwest/southeast. 17 shows --18 This set up here? Q. 19 -- these lines. Α. 20 That shows part of the basic Yeah. 09:19:11 21 survey, and those are what's called the deadhead, which 22 means, our normal patent is this racetrack pattern. And 23 this is -- in order to get in as close as possible, get as 24 much data as possible and then to do a real hand-brake

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25

09:19:28

turn to void the reef.

	1	So they're saying how close they want us
	2	to be, and our guys will have calculated how tight a turn
	3	they have to make. So we would expect you really have to
	4	have lateral steering in order to do this.
09:19:43	5	Q. Did the contractor or the oil company also tell you
	6	that you needed to use lateral steering to pull this off?
	7	A. They did. If you look in fact, the next Page 419,
	8	it's down the bottom it says, "Steerable Streamers.
	9	Streamers must use lateral steering control devices
09:20:03	10	starting after the first" it's bunch of technical
	11	specifications of how that lateral steering will be run.
	12	Q. But this set of parameters indicated that the
	13	customer wanted you use lateral streamers?
	14	A. The lateral streamer control is mandatory, yes.
09:20:19	15	Q. Are you familiar with other jobs in Australia, such
	16	as the TGS job?
	17	A. Yes. TGS, they're not an oil company. I talked
	18	about multi clients. So TGS is a company that does
	19	multi-client but doesn't have its own boat. So they
09:20:44	20	charter boats from companies like us, and then they ask
	21	you know, it's a fairly informal tender process. And, in
	22	fact, their tender to us was just an e-mail that said,
	23	Here's what we want, give us a price.
	24	So in that case, it was a very simplistic
09:21:04	25	specification, and then they wanted it was quite a big
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1 project to shoot, and it's a shame we missed that. Did they want lateral steering? Q. 3 They wanted lateral steering. That was specified in Α. 4 the e-mail, yes. 5 Q. And who did you lose the job to? 09:21:16 6 Α. We lost that to Fugro with DigiFIN. How do you price these jobs? Q. I priced them to win. 8 Α. 9 Q. Were these the only surveys, the five or six we've 10 looked at now, where WesternGeco lost because a competitor 11 like Fugro had ION's DigiFIN equipment? 12 No. This is a small subset. I think there were more Α. than 200 that we found, but these -- this is -- I think it 13 14 was 25 in total. Those are the ones where it was very 15 clear that lateral steering was mandatory in those cases. 09:21:48 16 So in this case, WesternGeco is seeking its profits on all of those jobs or only of a small subset? 17 18 Α. Only on that small subset. 19 Have you lost jobs even in the past few months to Ο. 20 Fugro? 09:22:06 21 Α. Yes. Frustratingly, we lost one a little while ago, 22 which is a project for Total, the Pistolet survey in 23 Holland, which is 20 -- I've got 26 obstructions under it, and they've come and spoken to us over a year ago. And 24 25 09:22:29 where they were going to do it with OBC, ocean bottom

cable, because of so many obstructions. 2 And we did some design and convinced them 3 that, with lateral steering, we'd be able to do it with 4 towed marine, which would be about half the price of OBC. 5 So --09:22:45 6 Q. So they thought there would be too many obstructions even to do it with a marine seismic vessel? 8 No one other than the NASA dynamic ^ splg project 9 with that complexity, I was talking about Marlim. So they 10 thought they couldn't do it with towed marine. 09:23:00 11 And if you can't get the ships in, their suggestion 12 was that they would put cables on the ocean floor to do it? 13 14 Α. Yes, absolutely. 15 Sort of like a land-based system, but lowering it to 09:23:07 16 the bottom of the ocean? 17 Α. A full OBC. We have a big OBC crew as well. 18 Q. And what did you do to convince them otherwise? 19 A. So we did some very detailed survey design. They 20 gave us a map with all the obstructions, all the layout, 09:23:20 the area they wanted covered. And then our technical 21 22 specialists drew the design for them where all the 23 sections would go and where the heads would go. 24 And after you did all that, who did they use for the Q. 25 survey? 09:23:38

A. They used Fugro with ION DigiFIN. \$64 million. 1 2 Can you tell us about any trends you've seen in the Q. 3 industry towards lateral steering? Α. It's gone from being a nice to have to a must 5 have. I think it's really mandatory for 4D, and it's 09:23:54 becoming very much a must have on exploration as well. 7 Are more and more customers doing a 3D survey as a 8 baseline for an eventual 4D job? 9 Α. They are, yes. So we're seeing more and more a trend 10 to finer -- smaller separation between the streamers, even 09:24:15 11 in the exploration stage. And even where customers stick 12 with a hundred meters because they want -- you know, they 13 want to cover as much acreage as they can, to identify 14 their prospect, then they'll say, Well, the good thing is 15 if I -- this one's a hundred meters apart, then if I've 09:24:36 16 got 50 meters for baseline, then I can put it in between 17 and my every other streamer then is my baseline, but I've 18 got a good quality 4D as well. 19 Are you familiar with a company called Welling and 20 company? 09:24:55 21 A. I am, yes. 22 Q. What do they' do? 23 Α. They do market research for all businesses in the oil 24 field. 25 09:25:03 THE COURT: Are you approaching the end? Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

Direct-Walker/By Mr. LoCascio

	1	MR. LOCASCIO: This is a good spot. I have a
	2	little bit left, but this Welling Company is a good break.
	3	THE COURT: Okay. Morning break. All rise for
	4	the jury.
09:25:48	5	(Recessed at 9:25 a.m.)
	6	(The following was held before the jury)
	7	THE COURT: Members of the jury, you may be
	8	seated. Okay. You may resume your inquiry.
	9	MR. LOCASCIO: Thank you, Your Honor.
09:44:36	10	BY MR. LOCASCIO:
	11	Q. Right before we took a break, Mr. Walker, I asked you
	12	about a company called Welling and Company?
	13	A. Yes.
	14	Q. Who is Welling and Company?
09:44:45	15	A. So Welling do market research for all companies in
	16	the oil field services. Schlumberger use them a lot and
	17	we use them, so. They do market market surveys.
	18	Q. So you do surveys where you survey a field for
	19	reservoirs, these folks do a different kind of survey;
09:45:05	20	correct?
	21	A. Yes, they're surveying professionals in the
	22	organization, our customers.
	23	Q. And are they used throughout the industry, not just
	24	by you, but by your competitors?
09:45:16	25	A. They're used by everyone, yes. I assume other
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	ļ	

1 people. 2 And you've seen enough about them in trades and other 3 things to know they're reliable and are use in the industry? 4 09:45:26 5 Yeah, we've been using them since 2001. 6 Turn to PTX 132, sir. What is PTX 132 just at a high level. We'll focus on the details in a second. 8 Yes. So this is a graph -- this is a graph of results of that survey, posted into PowerPoint. 10 And so, can you tell us a little bit and explain to 09:45:50 the jury -- I know you took some screen shots for 11 12 demonstratives, what the Welling survey is and how you use 13 it at WesternGeco? 14 Absolutely. So we use it -- it's first of all, they 15 09:46:06 do it every two years or so. And they will interview 16 around 200 people, our customers, and put it in context. 17 The decision-makers in our industry for seismic 18 geophysicists is about 6- or 700 around the world. 19 this is a big slice of those people that we're they're 20 interviewing. 09:46:30 21 They do it face-to-face, so we're not involved, which is you got much more accurate results if 22 23 people aren't involved. And they do it face-to-face as an 24 interview, or they may do it over the phone because it's 25 09:46:47 customers all around the world.

Can you pull the microphone a little closer. 1 Q. 2 Α. Oh, I'm sorry. 3 You don't need to move. You can just move the mike. And with the demonstratives we've got on the screen, can you explain to the jury what these are and what you did? 09:46:59 5 6 Α. Yes. We can move back. Dave, if you can blow this part up Q. 8 here, this top part. 9 So this is -- this is the user interface. One of the 09:47:17 10 really useful things about Welling is we get hundreds and 11 hundreds and hundreds of PowerPoint graphs, but I can get 12 into it and use it as an application, so thanks for 13 cutting it up. 14 This is from the 2010 survey, as it 15 happens. And you can see on the left-hand side there's a 09:47:36 16 column with a bunch of questions. And I click on the question, and that will then show up on the top screen on 17 18 the right-hand side, and then the bottom, down at the 19 bottom, the results will be posted. 20 09:47:56 Ο. And so, this is how you get information from the 21 marketplace, one way to see what customers are interested 22 in? 23 Α. One way. Nice thing is that it's, you know, it's 24 fairly objective. We don't necessarily believe what they

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say about price, but it's fairly objective.

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09:48:08

1 If you can turn to the next slide, Dave. If you can Q. 2 pull that up. 3 What are we looking at here? 4 Dave, if we can blow up the middle chart. 5 A. So this is -- the question was company type. And so, 09:48:21 6 they asked each individual person what company do you work for? And then they have their categorization or I can make my own, but they have their categorization as you 8 see, "major, large independent, medium independent, and national oil company." So that's -- it shows me this is a 10 09:48:42 11 good spread. Very good spread. 12 And can you then use this information to determine 13 what they think about a particular technology? 14 Yes. So I can -- I can then ask, I can then pull up Α. 15 any of these questions and look at the answers to that 09:49:00 16 question. I can do it with a whole sample or I can do it 17 with a sub sample, which may be one of these they defined, 18 or it may be very specific. 19 For instance, if we pull up RW 14, Dave. Thank you. 20 Is this an example of that? 09:49:16 21 Yes. So this is -- this is over the whole sample. A. 22 And you notice just before you blow it up, you can see on 23 the main sheet right at the bottom right-hand side, it 24 says "graph." So it's nice and easy. You just click the 25 graph and up pops the graph that you see. And then that 09:49:36 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

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1
              graph I click "export," that goes into PowerPoint.
           2
              that's how the PowerPoint data appeared.
           3
                               So this says, "prefer to us steerables,"
           4
              and that's for the -- and this is the whole sample, and
  09:49:58
           5
              you can see it says, "strong reject, slight reject, slight
              prefer, strong prefer -- "I'm sorry. I'm speaking too
              fast, again -- my apologies -- "strong prefer, or no
           8
              preference."
           9
              Q.
                   So your customers and others in the industry are
         10
              asked if they have a strong preference, slight preference,
         11
              a slight rejection or a strong rejection to the concept
              of using lateral streamers?
         12
                   Exactly. When you asked me earlier was there anyone
         13
              Α.
         14
              who said they didn't want to use lateral steering, this
         15
              makes our point.
  09:50:27
         16
                   And so, does this lone person up here in this
         17
              category of 85 respondents that said they strongly reject
              and there's a couple that slightly reject, looks like two
         18
         19
             people?
         20
                   Yeah.
             Α.
  09:50:43
         21
             Q.
                   And there are, what, 34 people that said a slight
         22
             prefer?
         23
             Α.
                   Exactly.
                   And 24 that strongly prefer?
         24
             Q.
         25
             Α.
                   Yes, that's the overall sample. As you see in the
09:50:51
                         Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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bottom, that's 85 respondents. So they -- the subset in
         1
         2
            this case is the people who said that they use marine
         3
            seismic acquisition or marine services. So they're a
         4
            qualified sample.
                 Can you focus that on a particularized set of
09:51:08
            customers, not just all people in the oil and gas
         6
         7
            business?
         8
            Α.
                 Yes, I can pull up a company name, and then I can
            include or exclude a subset based on who they work on.
                 And did you do that?
09:51:23
        10
            Q.
        11
                 I did, yes.
            Α.
        12
                 If we can go to the next slide, please. If you can
        13
            blow that up a bit.
        14
                           We've got on the bottom, it says "23
        15 respondents, SM." What's "SM"?
09:51:40
        16
                 So "SMs" is super majors. So that's ExxonMobile,
        17
            Chevron, Chevron Texaco, Chevron, BP, Shell,
        18
            ConocoPhillips and Total. Those are the big six major oil
        19
            companies.
       20
                 And is this the same question, do they prefer to use
09:51:58
        21
            steerable streamers, but across only that set of super
        22
           majors?
        231
                 Exactly.
                           It's exactly the same question, and it's --
            the response you can see, it's a smaller sample is 23, but
       25
            that's, you know, 23 chief geophysicists super major,
09:52:12
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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1 that's good from my perspective. If we can go to Slide 17, which shows it a little 3 clearer. And what does the Welling survey about the super 4 majors? That shows -- it's interesting if you remember the 5 09:52:25 6 previous patent where there was a slight preference, strong preference, which was quite marked. Here it's even 8 more marked. The strong preference is even more dominant. It's something like 89 or something percent of the total 10 sample had either a slight or a strong preference. 11 Were there also questions about what particular 12 benefits customers saw from lateral steering? 13 A. There were, yes. 14 Q. And did you get that data. Go to RW 8. 15 I did. That was 18. 09:52:58 16 Q. And so, if we blow up the very bottom, Dave, if you can do that that would be great. 17 18 It says, "First subset WG across market 82 19 respondents." What's that? 201 09:53:12 Α. So I've gone through and I've looked at -- I've taken 21 the by job title. I don't know the people, obviously. 22 It's an anonymous survey. But I've taken the job titles 23 of our top 30 customers and then put in the most senior 24 people from the sample by job title for just those 30

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customers also.

09:53:34

	1	Q. You can actually select what level of the employees
	2	you want to include?
	3	A. Yeah. One-by-one, yes.
	4	Q. And what's the result of the data? If we could go to
09:53:43	5	the next slide, Dave.
	6	For this question about value and steerable
	7	streamers, what were the results for your approximate
	8	market?
	9	A. So you can see for our approximate market, this is
09:53:54	10	the question was asked was: Do you see how do you
	11	value where 10 is actually the, you know, gang busters and
	12	1 is I don't care. And you can see this is the mean of
	13	the medians, so two average responses. And we can see
	14	it's around eight for those six categories of value in
09:54:21	15	steerable streamers.
	16	Deployment is a little bit lower, which we
	17	would expect, because we charge a lump a fixed sum for
	18	deployment. So the customer it takes us a day or three
	19	days. The customer isn't paying. He doesn't really care.
09:54:37	20	He wants it done quickly.
	21	Q. Okay. Thank you, Mr. Walker.
	22	I want to talk to you a little bit about the
	23	damage to WesternGeco from ION introducing DigiFIN into the
	24	marketplace and its use by Fugro.
09:54:53	25	First of all, who are WesternGeco's main
	ļ	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	competitors?
	2	A. Our main competitors are Fugro CGV and PGS.
	3	Q. And what companies are currently competing against
	4	WesternGeco Q-FIN lateral steering, using ION's DigiFIN
09:55:10	5	equipment?
	6	A. Fugro had it on I think all their fleet, and CVG and
	7	PGS have some.
	8	Q. What was the lateral steering market like before
	9	DigiFIN entered the market?
09:55:23	10	A. So lateral steering market was stable, it was
	11	constantly growing. We obviously had a hundred percent of
	12	it, but it was growing year on year.
	13	Q. And what happened after DigiFIN entered the market?
	14	A. Well, then we started losing jobs and the premium
09:55:47	15	which I discussed that we could get in the marketplace,
	16	evaporated very quickly.
	17	Q. Was there a decrease in your market share as a result
	18	of ION's introduction to this technology?
	19	A. Yes. We started losing jobs with lateral steering.
09:56:04	20	Q. There are I think 200 or so jobs, 25 of those are
	21	jobs where WesternGeco is seeking its lost profits for the
	22	infringement. Did WesternGeco bid on all those jobs?
	23	A. Yes, we did.
	24	Q. Did you have the capability of actually doing the
09:56:23	25	work on all those jobs if you had gotten them?
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 Α. Yes, we did. 2 How so? Q. 3 Well, after DigiFIN was introduced, we -- and we started losing market share, as you've said, then we -- we had in 2009, we had some empty slots on the vessel 09:56:42 5 6 schedule. So that's the vessel is there willing to do work, but we couldn't find a project for it. So they were tied up at the dock cite, not for a long time, but that is time that we would have used in doing these projects. 09:57:00 10 Have you looked specifically at those 25 jobs to see 11 if there was a ship that would be able to have done that 12 work, if it wasn't for the infringement? 13 There was in some cases. We couldn't have done all 14 of them, we could have done some of them, yes. 09:57:13 15 You couldn't have done all the hundreds, but you 16 could have done the 25? 17 Just with the slots we might have done, but we had 18 extra capacity we could have used anyway. 19 Q. So you had some you could have the boats you had. 20 What's the excess capacity? 09:57:29 21 Α. We had -- we built six vessels. And the last two of 22 those we held back. We held back for -- one for 13 months 23 and the other one for 15 months. So we could have brought 24 them out earlier, and we didn't because of the loss of 25I 09:57:48 market share. So we didn't have the -- we didn't have the

1 work for them to do. 2 Which ships are those? Q. 3 That was the TAZMAN and the COOK. 4 0. Were there any other ships you could have used to do 5 this work? 09:57:59 6 Α. Yes. We had three 8 streamer Q-marine vessels, so 8 for Fugro. I talked about earlier, Fugro started that with an 8 streamer, a lateral steering boat. So it's 8 perfectly saleable in the market today. 09:58:17 10 We had three of those vessels, the TOPAZ, 11 THE SEARCHER and the PRIDE, that were equipped with 12 Q-Marine, and we actually derigged them. So we could have 13 just kept those operating. We turned them into source 14 boats. 15 Q. A source boat is the same type of boat, but it only 09:58:32 16 has the airgun? 17 It only has the airgun, but when we're doing 18 undershoot projects or we're doing azimuth, then we need source boat for some of that time as well. 19 201 When you're in a situation where you have a job and 09:58:42 Q. 21 you need to be there, but you don't have a ship, are there 22 other ways you can solve that? 23 Well, we could if we wanted to charter a vessel and 24 put our equipment on it. And very often the customer may be -- the timing may be critical, it may not be critical. 25 09:58:57

1 If we say, we'll always be very honest about the vessel 2 availability, and we'll say we can do it, but maybe we 3 can't start on the first of the month, maybe it's the middle of the month, or the first of the month afterwards and say that's fine. 09:59:13 6 I want to ask you a couple of questions about the 7 market share. Were you here for opening statements? 8 I was here for opening statements, yes. Α. 9 Q. Did you hear Mr. Torrgeson for ION talk about how 10 WesternGeco's market share went down and it was WesternGeco's own fault? 11 12 I heard that, yes. Α. 13 Pull up -- do you remember ION put this slide on the 14 screen and suggested the market share went from '01 to '07 15 down because, if I remember right, Q-Marine wasn't very 09:59:53 16 good, customers didn't like you, and you overpriced your 17 product. Do you remember that? 18 I do remember that, yes. 19 It didn't have any numbers on it. Do you know what Q. 20 the actual numbers that go with these graphs would be? 10:00:09 21 Α. Yes. So our revenue in 2001 was \$1.8 billion, and in 2007 it was a slight under \$3 billion. 22 23 And so, ION had these on its slide as being the same 24 size pie. Is that accurate or is that misleading? 25 10:00:35 Α. No. The overall seismic industry in 2001, was Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	between 4- and \$5 billion, and it was \$12 billion in 2007.
	2	Q. And from a profitability standpoint, what was the
	3	profit in '01 versus the profit in '07?
	4	A. So in 2007, we made, it was about 12 percent profit,
10:00:58	5	and then in 2007 it was 36, 37 profit.
	6	$oldsymbol{Q}$. And so, what actually happened between 2001 and 2007
	7	that resulted in the shrinking of your market share?
	8	A. So we formed WesternGeco right at the end of 2000,
	9	and that was Western had a float fleet and Geco had
10:01:24	10	a fleet, and we were very dominant in a lot of vessels.
	11	But we decided that there were too many
	12	vessels in the industry. There was overcapacity and
	13	prices were very low. So we decided to be proactive and
	14	take vessels away, in the hope that others would kind of
10:01:44	15	follow suit and the thing would stabilize out.
	16	So from 2001 to 2003 we took nine vessels
	17	away. We removed nine vessels.
	18	Q. And the result of that was your market share went
	19	down. Did your revenues go up?
10:02:01	20	A. Yes. Yeah.
	21	Q. Did your profitability go up?
	22	A. Yes.
	23	Q. If you wanted to accurately represent these two
	24	different stages to the market, would you need to take the
10:02:12	25	size of the pie into account?
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 Α. Yes. The pie was smaller. Q. So as we've got it now, is that a more accurate way 3 to depict the market than ION showed it on it? 4 A. I believe so, yeah. 10:02:25 5 Q. Now, this is all before Fugro and ION entered the 6 marketplace; correct? A. Absolutely, yes. 8 And so, in the window before infringement begins your profitability had gone from 12.2 up to 36.7 percent; 10 correct? 10:02:41 11 A. Yes. 12 What happened after that? Can we go compare to 2007 to 2011? 13 14 A. Yeah. So in 2011, the overall market you can see --10:03:00 15 and this is, when I looked at it, I was trying to get 16 where the 40 percent came from, and I think, but I'm not certain, that it includes seismic services and equipment. 17 18 That came up with 40 percent. 19 And that data is available to you? Q. 20 10:03:15 Yeah. It's -- we monitor competitor quarterly 21 revenue on a quarterly basis. 22 So, for instance, your revenues are publicly 23 disclosed as well as Fugro's, et cetera? Our revenue was publicly disclosed up until end of 24

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2010. So 2011 they're not -- we've reconfigured and we

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10:03:34

1 became part of the reporting of Schlumberger was a group level. 3 So your numbers, you know them? Q. Α. I know them. 10:03:47 0. Okay. 6 Α. I know them. I know our numbers. And for your competitors' numbers they're available 8 to you because they're published? 9 A. It's public domain information, yes. 10 In 2007, the market was 12.2 billion. What was it in 10:03:55 Q. 11 2011? It was 12.4 billion. Services went down and 12 13 equipment sales went up. 14 And the profitability of your business in this period 15 after ION and Fugro launched DigiFIN went from what to 10:04:08 16 what? 17 So it went from 37 percent down to 20 percent. 18 And so, on opening, ION only showed '01 to '07, but Q. 19 in the window that matters in this case, '07, after they 20 lost the infringing product to 2011, did your market share 10:04:26 21 go down? 22 A. It did, yes. 23 Did your profitability go down dramatically? Ο. 24 Α. It did, yes. 25 Q. 10:04:36 Are you saying that all of that is Fugro and ION's Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

- 1 fault?
- 2 **A.** No, absolutely not. There was a downturn in the industry and would expect it to go down.
- 4 Q. But you believe some of it is?
- 10:04:48 5 A. I do, yes.

6

7

8

10

10:05:05

10:05:18

- \mathbf{Q} . And why so?
- A. Because if you look at the -- in a downturn in the industry -- and ours is a cyclic industry -- you would expect everyone to go down. And we went down, CGV went down, PGS went down, but Fugro went up.
- 11 Q. If could you pull up RW20.
- Did you look at the actual revenues at
 market share of the big four? You weren't here, but there
 was a chart shown to one of the witnesses of the big four's
 market share. Are these the big four, WesternGeco on the
 left, CGGV, PGS and then Fugro?
- 17 A. They are, yes.
- 18 Q. And did you compare their market share amongst each other in '07 and 2011?
- 10:05:32 20 **A.** Yeah.
 - 21 **Q.** And what did it show?
 - 22 A. So you can see here that CGV and PGS went down 8,
 - 23 10 percent, which is inline with the way the market went
 - 24 down. But WesternGeco went down a lot more than that. We
- 10:05:46 25 went down 26 percent and Fugro went up 55 percent.

	1	Q. So in this window in the market for seismic services
	2	shrunk and WesternGeco went down 26 percent, and two of
	3	the other big four went down a little bit, Fugro went up a
	4	great deal?
10:06:05	5	A. Yes.
	6	Q. And is the window when Fugro was offering lateral
	7	steering using ION and DigiFIN equipment?
	8	A. It is, yes.
	9	MR. LOCASCIO: Pass the witness, Your Honor.
10:06:14	10	MR. TORGERSON: May I proceed, Your Honor?
	11	THE COURT: You may.
	12	CROSS-EXAMINATION
	13	BY MR. TORGERSON:
	14	Q. Good morning, Mr. Walker.
10:07:08	15	A. Good morning.
	16	Q. My name is Ray Torgerson. I represent ION
	17	Geophysical. We met previously at your deposition. How
	18	are you today?
	19	A. Yes.
10:07:18	20	Q. I've got a couple of questions that I'd like to start
	21	with you. In your testimony on direct actually started us
	22	off in the right direction.
	23	I'd like to turn, if we can, to
	24	demonstrative 22, that was just shown to you. If we could
10:07:37	25	switch to the ELMO, please.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	We were just discussing this with
	2	Mr. LoCascio. You would agree with me that in between
	3	2007 and 2009, WesternGeco's market share was 25 percent;
	4	correct?
10:08:01	5	A. Overall, yeah.
	6	Q. So if we were to write in 2009, we could say
	7	25 percent; fair?
	8	A. Yes.
	9	Q. What was WesternGeco's profit, in terms of dollars in
10:08:16	10	2009?
	11	A. In 2009, we made and to check this I think it
	12	was 600, 500 million IBT.
	13	Q. 500 million?
	14	A. I think. These are all IBT and I was looking at data
10:08:39	15	point. I need to check.
	16	Q. What is IBT, for the benefit of the jury?
	17	A. It's income before tax.
	18	Q. But all of these numbers here, the 1.1 billion profit
	19	in 2007, and the 431 million in 2011, that's under the
10:08:54	20	same IBT standard, so we're dealing with apples to apples;
	21	fair?
	22	A. We are, yes.
	23	Q. And let's go back to and to be clear, this
	24	25 percent market share had stayed the same between 2007
10:09:10	25	and 2009 during that two-year period that DigiFIN was in
	**************************************	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	the market?
	2	A. It would have stayed about pretty reasonably flat,
	3	yes.
	4	Q. All right. And if we go back to Page 21 of your
10:09:23	5	demonstrative, right there. I apologize. I don't have
	6	the timing pie that you were showed. I don't have that
	7	slide. I just have this slide. But would you agree with
	8	me that in the data set between 2001 and 2007, let's take,
	9	for example, 2004, you would agree with me that
10:09:45	10	WesternGeco's market share had dropped already to
	11	25 percent?
	12	A. It was on its way there. It was about between 20
	13	about 28, 30 percent. It took a dip. As I said, we
	14	reduced the fleet in 2001.
10:10:03	15	Q. And that was the result of the overcapacity in the
	16	general towed marine seismic market that had nothing to do
	17	with the competitor for lateral steering?
	18	A. Yes, I've said that.
	19	Q. Some three years before DigiFIN entered the market;
10:10:16	20	yes?
	21	A. Yes.
	22	Q. Now what was WesternGeco's profit in 2004?
	23	A. In 2004, I think it was it was about 300 million,
	24	something like that, IBT.
10:10:43	25	Q. Fortunes had increased between 2004 and 2007, from a
	- Control of the Cont	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 dollar standpoint; agreed? 2 Α. Yes. 3 Would you agree that that was a good time in the industry and that essentially, all companies were doing 10:11:01 well, not just WesternGeco? 6 Yes, all companies were -- well, yes, they were doing well, yeah. 8 Now, in 2011 -- going back to Demonstrative 22 -- in 2011, you testified that your market share was about 10 18 percent. Have you ever told me that your market share, 10:11:26 11 by way of revenue, was actually 25 to 30 percent? I did, because I was looking at the services revenue 12 Α. 13 for marine I think at that stage, in the question. But 14 some of these services I didn't include equipment, which 10:11:46 15 we did because I was trying to match your 40 percent to 16 start with. 17 So when you told me previously in connection with this case, that the market share for WesternGeco in 2011, 18 19 at least by September of 2011, was between 25 and 201 30 percent, we were comparing apples and oranges? 10:12:02 21 Α. Yes. 22 All right. Ο. 23 I think we may have been talking about capacity or revenue. You'd need to remind me. It was awhile ago. 25 Is there a difference between capacity and revenue 10:12:12 Q.

	1	for purposes of arriving at these numbers?
	2	A. So if we were dealing with marine revenue, there
	3	would be because capacity is split between the third party
	4	and the multi-client market. And I think our previous
10:12:28	5	conversation we were talking about the proprietary market
	6	and bids won and lost.
	7	Q. And when you say proprietary market, did that include
	8	the multi-client work that WesternGeco does for itself?
	9	A. No, we treat that separately.
10:12:44	10	Q. Okay. Now, you've testified that the big four and we
	11	saw your demonstrative 20 included WesternGeco, CGGV, PGS,
	12	and Fugro; correct?
	13	A. Yes.
	14	Q. Looking at the last slide, your estimate is that, for
10:13:05	15	2011, WesternGeco's market share is 18 percent?
	16	A. Of the overall services plus equipment, yes.
	17	Q. What is the share market of CGGV?
	18	A. They are slightly bigger than us. I think they're
	19	the biggest because they have Sercel as well. So
10:13:28	20	Q. Can you give me an approximate of their market share?
	21	A. They're about 30 percent, something like that.
	22	Q. What about PGS?
	23	A. They are they are smaller. They are CGGV might
	24	be a little bigger than that actually and might be
10:13:55	25	33 percent and PGS must be 30 30 percent or something
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	İ	

- 1 like that.
- 2 Q. And what is Fugro's market share?
- 3 **A.** I think Fugro's market share is about 15 percent. So it's the smallest of the big four.
- 10:14:13 5 Q. Who are the next two largest seismic companies that 6 are your competition for bids?
 - **A.** You mean for marine?
 - 8 Q. Yes, towed marine?
- 9 **A.** Towed marine. Towed marine, it's Polarcus. And then the one after that is Dolphin.
 - 11 **Q.** What is your estimate of the market share size for towed marine seismic for Polarcus?
 - 13 **A.** They are -- can we -- are we dealing with third party or overall marine?
- 10:14:51 15 Q. Let's focus on overall marine.
 - 16 A. Okay. Overall marine, then I think the third --
 - 17 Polarcus is -- they have five boats. So out of six -- out
 - 18 of about 60 boats, they've got -- 46 boats, they've got
 - 19 five, so they'd be that -- what does that make it? About
- 10:15:17 20 10 percent, 9 -- 8 percent, something like that.
 - 21 Q. How about Dolphin?
 - 22 A. They're fairly new. I think they're probably half
 - 23 Polarcus's size.
 - 24 Q. So maybe about 4 percent?
- 10:15:29 25 **A.** Yeah.

And whatever percentage between this total and a Q. hundred, assuming we haven't exceeded it, those would be 3 other companies? 4 Yes. Α. 5 All right. And all of these companies bid actively 10:15:35 Q. 6 on the same tenders that WesternGeco's bidding on? They do, yes. Α. 8 Q. All right. And in connection with the technology for lateral steering, does each of these companies provide a 10 lateral steering solution in its tenders? 11 I think -- I have to say obviously, we don't get a 12 copy of their tenders, but we see some -- I think Polarcus do. I think they also operate with DigiFIN, and I'm not 13 14 certain about Dolphin. 15l Have you heard that Dolphin actually utilizes 10:16:08 16 Nautilus, which is Sercel's device? 17 I've seen they advertise it. Whether they won a 18 project with it, I don't know. 19 You understand that they offer it to the market? 0. 20 A. I understand they offer it to the market, yes, sir. 10:16:20 21 Q. We know that Fugro utilizes DigiFIN? 22 Α. Yeah. 23 Were you aware that Fugro had used Nautilus in the Q. 24 past? 25 A. I did not know that, no. 10:16:29

	1	Q. And what about PGS? What does PGS currently use?
	2	A. So PGS started with DigiFIN, and I think they were
	3	early on. And I believe they have put in the eBird from
	4	Konigsberg. They certainly made a statement they were
10:16:49	5	going to go that way. We haven't we're not certain
	6	whether they're operating it yet.
	7	Q. Your market intelligence that you have hasn't given
	8	you a clear indication that PGS has actually used eBird in
	9	the field on an actual survey?
10:17:04	10	A. We believe they have. We have no absolutely proof.
	11	Q. What about CGGV? What devices do they use?
	12	A. Again, I think they started with a DigiFIN system,
	13	probably tested; but I think they are mainly my
	14	apologies they're mainly Sercel, Nautilus.
10:17:22	15	Q. And that would be the Nautilus device.
	16	As you sit here today, do you know whether
	17	CGGV is using DigiFIN at all on any vessel?
	18	A. I do not know that, no.
	19	Q. So that's a question?
10:17:33	20	A. That's a question, whether they still use it. They
	21	may have stopped using it.
	22	MR. TORGERSON: I'm going to, for the record,
	23	mark this as Demo 20A, 22A, and 21A respectively. Then
	24	we'll come back to these.
10:17:54	25	BY MR. TORGERSON:
	ĺ	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	Q. Would you agree with me that, for some period of
	2	time, WesternGeco secured about 25 to 30 percent of the
	3	bids that it tendered for?
	4	A. Yes.
10:18:24	5	Q. And would you agree with me that that 25 to
	6	30 percent roughly equates with your market share that we
	7	just looked at in terms of revenue?
	8	A. It equates to the capacity market share, yes.
	9	Q. Now, all players bid on 4D projects, don't they?
10:18:42	10	A. The big ones do. I I haven't seen any evidence.
	11	I Polarcus I've had bid. I don't know. I think
	12	they've won at least one. They may not have won more than
	13	that. I haven't seen that Fugro has won one. That's
	14	my apologies Dolphin has won a 4D as yet.
10:19:05	15	Q. Now, would you agree with me that some of these
	16	players were bidding on 4D projects before they had a
	17	lateral steering device competitive to Q FIN?
	18	A. They were bidding on them, yes.
	19	Q. Were they securing them?
10:19:20	20	A. Yes. They would have secured some 4D, yes.
	21	As I said, it's we know 4D existed
	22	before lateral steering.
	23	Q. So can you explain to us why a company that didn't
	24	have lateral steering technology could secure a 4D bid
10:19:36	25	when you were the only one offering lateral steering? Why

	1	ever would an oil company agree to go with a nonlateral
	2	solution for 4D survey if one were available?
	3	A. So not all customers came to the party at the same
	4	time. There were I spoke about Apache. They were not
10:19:55	5	really believers in lateral steering until late 2008,
	6	2009, when they said, Okay, then our next 4D we'll have
	7	lateral steering. Then it was 4Ds, and we secured that.
	8	Q. All right. I've got a followup question with regard
	9	to 22A, and specifically, let's look at 2011.
10:20:22	10	Your estimate is that the total available
	11	revenue for all surveys in the I assume this is towed
	12	marine seismic; correct?
	13	A. No. That's all seismic plus services.
	14	Q. Okay.
10:20:38	15	A. Plus seismic services plus equipment, so I was
	16	looking for something that would correspond to your
	17	opening slide on 40 percent, and that's what I'm not
	18	saying what you had. That's what I had.
	19	Q. Okay. Of the 12.4 billion what percentage of that or
10:20:52	20	dollarwise is towed marine seismic?
	21	A. So probably about \$7 billion, if I include towed
	22	marine proprietary and offshore multi-client.
	23	Q. But if you can combine multi-client?
	24	A. If I combine them together, yeah.
10:21:14	25	Q. And what percentage is multi-client out of that 7
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		Cross-Walker/By Mr. Torgerson
	1	billion?
	2	A. It's probably about 4 billion.
	3	Q. So we're really talking about a \$3 billion market for
	4	using towed arrays in the 2D, 3D and 4D context?
10:21:34	5	A. So I'm not really including 2D there because I'm
	6	really it's really our business. We're not in 2D. But
	7	it it's a small part of multi-client where we don't
	8	play, so it's probably in that 4 billion for multi-client.
	9	But apart from that 3 and 4 $3D/4D$, yes.
10:21:55	10	Q. What's percentage of the 12.4 billion relates to 2D
	11	surveys?
	12	A. I would not hazard a guess. It's not a business
	13	we're in, so I can't really.
	14	Q. And that 2D number, is it even reflected in the
10:22:11	15	12.4 billion?
	16	A. I think it's pretty much all multi-client, so it
	17	would be in that 7 billion of multi-client.
	18	Q. Okay. So in other words, the 4 billion of the 7?
	19	A. The 4 yes. My apologies. The 4 of the 7, yes.
10:22:22	20	Q. And you can't hazard a guess as to an approximation
	21	for the jury of the percentage of 2D surveys in that \$4
	22	billion multi-client business on an annual basis?
	23	A. I can't because it's not something we monitor. We're
	24	not looking at it.
10:22:37	25	Q. And in fact, because you're not interested in the 2D

- 1 part, the only thing that you have any involvement in the 2D market relates to a high-tech aspect in the so-called 3 over/under types of surveys; is that correct? Α. On 2D, we've done a few under/over surveys, yeah. And an under/over survey is simply two streamers, one 10:22:54 Q. being towed at a higher depth and the other streamer being 6 7 towed at a lower depth? 8 Α. No. 9 Explain that for us. Q. 10 Α. It's a mini 3D spread. It's a very configured CAD 3D 10:23:05 spread. So you have two lateral streamers, and one and 11 12 two vertical streamers. So it's four streamers.
 - Q. Okay. Fair. But there is an over/under component which gives you that terminology?
 - 15 A. There is an over/under component, yes.
 - Q. How many of those has WesternGeco shot?
 - 17 **A.** We've done four or five small projects, really test projects, and we did one quite sizeable one in India.
 - Q. Do you know whether your competition, these big four, and perhaps these other two, participate in the 2D market?
 - A. I don't. Fugro does -- I think Fugro has some 2D. I think Polarcus is really their boats are 3D. And Dolphin, as far as I know, is equipped for 3D, as well. CGV and PVS, like us, have generally quite big 3D vessels, so we probably don't play in the 2D market.

10:23:20

22

16

```
Now, if we're looking at Demonstrative 20A, of the
          1
             Q.
             companies in the big four, two of them have actually
          3
             worked to develop their own competitive product to Q FIN;
          4
             correct?
          5
 10:24:23
             A.
                  Yes.
          6
                  And that would be Sercel, which is a wholly owned
             Q.
          7
             subsidiary of CGGV; correct?
          8
             Α.
                  Uh-huh. Yes.
          9
                  And they developed the Nautilus device?
             Q.
         10
             A.
                  Nautilus, yes.
 10:24:33
         11
             ο.
                  And Nautilus device is a three-winged bird?
         12
                  Two wings with an anchor, as we understand it.
                                                                     Ιt
         13
             looks like three wings.
         14
                  All right. And PGS worked with Konigsberg to launch
         15
             the eBird, which is another three-wing device?
 10:24:48
         16
                  Yes.
             Α.
         17
             Q.
                  Let's look, if we can, at Defendant's Exhibit 259.
         18
                         MR. TORGERSON:
                                          I apologize.
         19
                               Would you turn that on its side.
        20 BY MR. TORGERSON:
 10:25:06
         21
                  As part of your market research, Mr. Walker, do you
         22
             from time to time go to your competitor's Websites?
         23
             Α.
                  Yes, I do.
         24
                  And do you recognize this Web site Defendant's --
        25
             Ion's Exhibit 259 as being from the Sercel Website
10:25:19
                        Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

	1	describing the Nautilus device?
	2	A. I do yes.
	3	Q. And you recognize the photograph of the three-wing
	4	device coming up out of the water, and you've probably
10:25:32	5	seen one live in a trade show?
	6	A. I've seen it in a trade show, yes.
	7	Q. Yes. Let's go to Page or rather 260. ION 260.
	8	This is a brochure for Nautilus. Have you
	9	seen this before?
10:25:49	10	A. I've seen it on their their stand. I haven't seen
	11	inside it.
	12	Q. These brochures are available for the public at trade
	13	shows?
	14	A. Yes.
10:25:57	15	Q. So you might have on a stand at a convention trade
	16	show an actual device standing there and takeaways,
	17	written takeaways that you can take with you?
	18	A. Yes.
	19	Q. All right. Let's go to ION's Exhibit 258 and look at
10:26:19	20	the Konigsberg device.
	21	Have you had occasion to go to
	22	Konigsberg's Website and look at what they said about the
	23	eBird?
	24	A. I did, yes.
10:26:25	25	Q. Can you recognize this photograph?
	-	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	A. Yes.
	2	Q. Let's look at ION or Exhibit 263. This is
	3	likewise another brochure. And if we highlight the
	4	photograph in the middle, you can see the three wings
10:26:40	5	there?
	6	A. I can, yes.
	7	Q. All right. And you understand that the Nautilus
	8	device and the eBird device are intended to provide
	9	lateral steering for towed marine surveys?
10:26:53	10	A. Yes.
	11	Q. And they are currently being utilized by CGGV and
	12	PGS0 respectively?
	13	A. They've been implemented recently, yes.
	14	Q. And in connection with Nautilus, Dolphin is likely
10:27:06	15	using that device?
	16	A. Yes, I believe so, and you've made that point.
	17	Q. Now, do you understand that a PGS was the launch
	18	partner for DigiFIN's device back in 2007?
	19	A. I remember hearing it at the time vaguely, and I've
10:27:23	20	heard it since.
	21	Q. Let's turn briefly you made some comments that I'd
	22	like to develop a little bit about the way that
	23	WesternGeco sees itself in the market.
	24	Would you agree with me that WesternGeco
10:27:42	25	separates itself from the competition, if you will, by its
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

```
technology differentiation?
                 It's a big part of what we do, yes.
         3
                        MR. TORGERSON: Could we look at ION
         4 Exhibit 274?
         5 BY MR. TORGERSON:
10:27:52
         6
                 Do you recognize this document?
                 Not specifically, but I'm sure I've seen it our R&D
            Α.
         8
            portfolio meeting sort of thing I would go to.
         9
                        MR. TORGERSON: My apologies. I've been remiss
        10 in not handing out copies of these, but they've been fairly
        11 straightforward.
        12
                             May I approach, Your Honor? Your Honor,
        13 may I approach the witness?
        14
                        THE COURT: You may.
        15
10:28:30
                        THE WITNESS: Thank you, sir.
        16 BY MR. TORGERSON:
                 Now, I believe if you flip through a couple of pages
        17
        18
            of ION Exhibit 274, Mr. Walker, you contributed to the
        19
            content of this PowerPoint?
       20 A.
                 I'm sure I did.
10:28:49
        21
                       MR. TORGERSON: And if we go back to the first
        22 page, Mr. Carlock.
        23 BY MR. TORGERSON:
        24
                 It indicates that it's a WesternGeco technology
       25
10:28:57
           strategy and R&D portfolio review meeting?
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 A. Yes. 2 And it was conducted in Houston in June 2005? Q. 3 Α. Yes. 4 Q. You attended this meeting? 5 I'm sure I did. 10:29:06 Α. 6 All right. Now, you mentioned something earlier on 7 direct examination from Mr. LoCascio that, before O, it 8 was very difficult to distinguish technologically between or among the different competitors in the field; correct? 10 A. Yes. 10:29:22 11 MR. TORGERSON: Go to the third page if you 12 would, Mr. Carlock. 13 BY MR. TORGERSON: 14 We see here at the top -- I just love this slide 15 apparently there is a Ernest Hemingway look-alike 10:29:28 16 competition in Florida every year. And so, all of these 17 guys with white beards and hair show up and they act like 18 Hemingway. Is that fair? 19 Yeah. As we understood it. Α. 20 Q. All right. Fair. And so, before Q, it was very 10:29:43 21 difficult to distinguish between the real Hemingways? 22 Α. That was the point being made by the presenter here. 23 But if you turn the page, WesternGeco has a different 24 model. And these are two rugby players getting after it;

Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

25

10:30:02

right?

```
1
            A.
                 Yes.
                 And you would agree that WesternGeco's view of
         3
            technology differentiation can sometimes be a little rough
            and tumble?
                 Well, we want to differentiate in the marketplace,
10:30:12
         6
            absolutely.
         7
                 All right. If we turn to Page 727 --
         8
                        MR. TORGERSON: Some eight pages back,
         9 Mr. Carlock.
       10 BY MR. TORGERSON:
10:30:23
        111
                 Market summary; correct? And we look at the middle,
           there's a bullet point?
        12
        13
            A.
                 Sorry. Would you say 737, did you say?
        14
                 727. I apologize.
            Q.
       15
           Α.
                 727. I didn't hear you.
10:30:33
        16
                 It's on Page 8 of the PowerPoint slide.
            Q.
        17
            Α.
                 Yeah.
        18
                 The middle point reads: "Towed 4D Time-lapse seismic
            Q.
        19
           becoming a global tool."
       20
           Α.
                 Yes.
10:30:45
        21
                 You would agree with me that in June 2005 in
       22
           connection with this PowerPoint that lateral steering was
       23
            only provided by WesternGeco at that stage?
       2.4
            A.
                 Yes.
       25
            Q.
                 And yet, 4D time-lapse seismic was becoming a global
10:30:52
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 tool. 2 Explain how that could be possible. 3 So we had worked on 4D very much in the North Sea. Α. And at this -- by this time, we had done Q-on-Q or Q baselines in the Far East, we'd done them in West Africa, 10:31:13 5 we'd done them -- I talked about Petrobras in Latin 7 America, and we'd even done them in the Gulf of Mexico. 8 Would you agree that there were other players, your 9 competitors, in the field also providing 4D solutions 10 without lateral steering in 2005? 10:31:29 Outside of the North Sea, I don't think there were 11 Α. 12 that many 4D projects being done. There may have been 13 some. 14 Were you -- you are familiar with a company called Concept Systems in Edinburgh, Scotland? 15 10:31:46 16 Α. Yes. 17 Q. And you understand that that's now a subsidiary or 18 affiliate of ION? 19 Α. I do, yes. 201 And you understand at one point that they were 10:31:55 Ο. 21 free-standing? 2.2 Α. Yes. 23 Did you understand -- or did you have an Q. 24 understanding of the work that Concept was doing on 4D 25 planning before lateral steering? 10:32:03

1 Well, I'd certainly seen it at trade shows. Α. 2 Give us some examples of what Concept was doing that Q. 3 you recall? 4 So I think they were -- their approach was optimizing tides to minimize differences. For example, when there 10:32:20 was a tidal cover and steering for source points, to do 6 7 what was possible to improve repeatability. 8 MR. TORGERSON: If we could go back towards the 9 end of the documents, Mr. Carlock, to Page 27 which is 746. 10 BY MR. TORGERSON: 10:32:39 11 "Marine threats." Let's look at this. 12 And as a regular part of your competitive intelligence, Mr. Walker, you and others within 13 14 WesternGeco evaluate perceived threats from a competitive landscape standpoint; fair? 15 10:33:00 16 A. Yes. Yeah. 17 You see on the first bullet point, it reads: "Only O 18 competition we know for certain is I/O DigiFIN"; right? 19 Α. Yes. 20 So by June of 2005, WesternGeco knew that ION, at 10:33:10 Q. 21 that time called I/O, was developing a lateral steering 22 device called DigiFIN? We knew it was being developed. We hadn't seen it 231 offered for sale. We hadn't seen it in the marketplace; 25 but by that stage, we knew it was under development. 10:33:27

	1	Q. And you knew it was coming to the market?
	2	A. We would expect it to come to the market.
	3	Q. We can also see on the third bullet point, "First
	4	possible development of single sensor systems 2007-2008."
10:33:42	5	Would you agree with me that is some
	6	sort of future prediction of a competitive technology
	7	being offered against this single sensor measurement
	8	capability of Q-Marine?
	9	A. Yes.
10:33:53	10	Q. Has that emerged as of today?
	11	A. As of today, no.
	12	Q. So as of today, from 2001 when it was commercially
	13	launched, to 2012, WesternGeco is the only company on the
	14	planet in towed marine seismic that can offer this single
10:34:12	15	sensor recording capability?
	16	A. It's a way of doing noise attenuation. So that's our
	17	way.
	18	Q. Do you think that noise attenuation is important?
	19	A. I think noise attenuation is always important.
10:34:22	20	Q. Do you recall that lateral steering is the most
	21	important aspect of Q-Marine?
	22	A. I do, yes.
	23	Q. You always
	24	A. That's what customers want.
10:34:30	25	Q. All right. That's a fair point.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	But you personally, Mr. Walker, as the
	2	head of marketing for WesternGeco, you believe that
	3	lateral steering of the four aspects of Q is the most
	4	important?
10:34:39	5	A. It's the one our customers ask for, yes.
	6	Q. Have you ever held a different view?
	7	A. I originally had a lot of hope that the single sensor
	8	would lead to our customers' adopting change in the way
	9	they acquire data; but in fact, that didn't happen.
10:35:00	10	Q. We've talked about this differentiation in the
	11	market, Mr. Walker.
	12	Would you agree that WesternGeco sees
	13	itself in the higher end from a product-offering
	14	standpoint?
10:35:14	15	A. We try to, yes.
	16	Q. And you understand that the market has some views
	17	that you personally fielded that WesternGeco is viewed as
	18	too expensive for everything, not just Q-Marine?
	19	A. That's we've been told sometimes that.
10:35:32	20	Q. You would agree with me that regardless of what some
	21	company might feel or what you personally might feel about
	22	the importance of the four aspects of Q-Marine,
	23	WesternGeco has never attempted to allocate from a dollar
	24	standpoint what is the driver of these among these
10:35:56	25	aspects?
	WHAT	Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 Α. You mean what is the driver? 2 Let me restate it. Q. 3 Α. Yes. That was a long question. I want to be compact for 4 10:36:05 5 you on this. 6 At no time has WesternGeco attempted to allocate any portion of revenue attributable to a single 8 aspect of Q-Marine; for example, lateral steering? 9 We only -- we have a kilometer rate that includes Α. 10 whatever is there, yes. 11 So there's the premium -- likewise, the premium price 12 that you charge to your customers, say, for example, X times over conventional, that would be as a result of the 13 combined suite of all the different technical aspects of 10:36:37 15 Q-Marine, not just lateral steering? 16 We can separate out the CMS, because that's on the whole fleet, and we've never succeeded in sort of selling 17 18 that as an add-on to the conventional. 19 Remind us of CMS again. Q. 20 That's the source -- I'm sorry. That's the source 10:36:50 Α. 21 component. So that's -- in marketing terms, it's added to 22 Q-Marine, but it isn't really linked to it. 23 Q. Okay. 24 It was preexisting. So that we know we haven't been A. 25 10:37:04 able to sell despite trying.

1 We know that, of the remaining three elements, lateral steering is the one that's asked for. 3 And yet even though it's the one that's asked for, there is no attempt within WesternGeco to break out and 10:37:20 5 say, This particular survey was won because of lateral 6 steering? 7 If it says lateral steering on the tender and we won 8 the project, then that's our assumption. 9 Would you also agree, then, if you lost a survey to another company, like Fugro, we've heard several examples 10 10:37:35 11 today with Mr. LoCascio, that somewhere within WesternGeco's records, there would be an indication that 12 you lost a survey because of lateral steering? We would know lateral steering -- lateral steering 14 15 10:37:52 was a requirement and we lost it, then we would know that would be -- that would mean that another company that won 16 17 it had lateral steering and they had got through that 18 technical barrier I was talking, and then it's into that triangle. 19 10:38:10 20 Well, we'll get into the specifics of the CRM 21 database in a moment, Mr. Walker. 22 But would you expect if, in connection 23 with a monitoring of a competitive tender situation, that if WesternGeco lost a survey bid because of a competitor 10:38:24 25 using lateral steering, you would expect someone to make

1 an entry in that database that says, We lost because of 2 lateral steering? 3 It would depend on -- the CRM is used by all of Schlumberger. So we've got thousands of technologies, so we couldn't have a tick box that would tell us that. It 10:38:43 would be either in the comments or it would be in the system, maybe in one of the e-mails. 8 Would you expect to see any kind of record that specifically says, Mr. Walker, WesternGeco lost this 10 Tellow survey, for example, to Fugro because of lateral 10:38:58 11 steering? Would you expect to see that some sort of 12 record at WesternGeco? 13 Not necessarily. Because we have -- if there's more than one -- if lateral steering is a specification and 14 15 there's more than one that are qualified that meet that 10:39:16 16 specification, then the reason, once you may be one of the 17 others on the triangle; but without the specification --18 oh, my apologies I hit the mike -- without the -- meeting 19 the specification, we'd be the only people. Well, let's look. 20 10:39:36 Q. 21 MR. TORGERSON: If we could go back to the 22 ELMO, please. 23 BY MR. TORGERSON: Under Demonstrative 6 -- do you still have your 25 10:39:52 demonstratives up there with you, sir?

1 Α. I do. Let me get them. 2 Sure. You have it in front of you? Q. 3 I do, yes. Α. Q. Page 6, you see this "Comment" section here? 5 A. Yeah. 6 We've seen other pages, but as this prospect is 7 updated, wouldn't you think it would be useful for WesternGeco to track the reasons why it lost a bid to a 8 competitor; for example, to Fugro? 10 We would expect to do -- get some update and some Α. 11 idea of the reason for it, yeah. 12 And once that attempt had been made and, hopefully, 13 some reason had been obtained, you would agree with me, 14 sir, that that should be entered into this CRM database? 15 It may be entered in CRM. Once the thing is lost, it 16 may also be collated by the marine marketing manager who 17 is responsible for putting the -- the technology plan 18 together for marine, as I did when I was doing that job. 19 Tell me what you mean by "collated." Q. 20 If you have a trend of technology or other issues 21 that result in -- you understand that are a reason for 22 winning or losing a job, let's say a technical barrier, 23 then the marine marketing manager and sales manager is

10:40:10

10:40:26

10:40:46

10:41:09

10:41:38

24

25

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interested in finding those, so they may interact with the

sales team via CRM, or they may do it directly, good old

e-mail and a phone. End Dolly 1-7 Rosie 1-8. 1 And so, in addition to the CRM database there might 3 be some additional documents generated in maintaining within WesternGeco, like e-mails or other reports that 5 might reflect the reasons why WesternGeco could win a 10:41:58 6 competitor secure a survey over WesternGeco? 7 It may be e-mail conversations. We did since the start of this case, we did the -- we did collect 8 9 survey's -- we did collect projects where survey lateral 10 steering was a decision. 10:42:27 11 ο. Were you shown in connection with these demonstratives of excerpt screen shots you said from your 12 13 own laptop, from the CRM database, were you shown any 14 comments in connection with any of these surveys that were 15 lost based during your discussion with Mr. LoCascio that 10:42:40 16 were attributable to the competitor having lateral 17 steering? 18 In each of the cases where I went through we 19 determined the lateral steering was a requirement and 20 therefore, it was the technical barrier no one without 10:42:58 21 lateral steering could have -- would have won that job, 22 once they were in that technical barrier, then the 231 decision may be written, may be ascribed to lateral steering or it may be ascribed to availability or price. 24 25 Q. And I appreciate that rational, that line of 10:43:20

thinking. What I'm asking more is a little bit more 1 2 specific and, that is, in connection with any of these 3 surveys that you saw, demonstratively put up for you, 4 accepted or excerpted from your CRM database, did any of them specifically say WesternGeco lost this survey because 10:43:38 6 the competitor had lateral steering or words to that 7 effect? 8 I wouldn't expect to see that because we have lateral 9 steering as well. 10 10:43:52 Q. Would you expect to see some sort of commentary 11 blaming the loss of the bid on the other company being 12 able to offer lateral steering? 13 Α. It would be more like that the other company having 14 lateral steering if they were available and cheaper, then 15 we may look and say we lost it on price. Some of these 10:44:11 16 they said they lost it in price. 17 Well, let's look at some of these issues in connection with the CRM database itself. I'd asked 18 19 whether you agree or disagree with the following 20 statements. 10:44:25 21 Would you agree, that at least part of the 22 CRM database is based on rumor and hearsay? 231 I would say -- depends what you mean by rumor Α. No. and hearsay. So we tend to be keen that our salespeople 25 have a conversation with a customer and before they put 10:44:46

	1	information in or we see it from some public source.
	2	So if, for example, a customer says
	3	something to us, then we would regard that as useful
	4	information. We wouldn't regard that as hearsay.
10:45:05	5	Q. So you know, Mr. Scoullios here in the courtroom?
	6	A. Yeah.
	7	Q. And he used to be work in North America region for
	8	sales and was responsible for tendering?
	9	A. Yeah.
10:45:17	10	$oldsymbol{Q}$. And we know that he actually helped put together
	11	WesternGeco's bid for the Chukchi survey for against
	12	Fugro for Statoil up off the coast of Alaska?
	13	A. Yes. I think so.
	14	$oldsymbol{ iny Q}$. And if he stated that the CRM database was founded at
10:45:35	15	least in part on rumor and hearsay, you would think that
	16	would not be an accurate description?
	17	A. I would I'm still asking what exactly rumor and
	18	hearsay means. We try to qualify everything that goes
	19	into it. Now, there may be something that is just a
10:45:53	20	customer's opinion, and if that counts as rumor, then it
	21	would be rumor.
	22	Q. Fair. Would you agree that some groups agree or
	23	disagree is the same, would you agree or disagree that
	24	different sales groups have varying utilizations of
10:46:10	25	actually putting information into the CRM database?
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

They are more or less certain about the information, 1 Α. so if they're less certain they put less in. 3 I'm not asking about certainty of information that's 4 putting in. I'm talking about frequency of utilization. 5 So what I mean by that, is are there some groups who are 10:46:26 out there, despite your best efforts or perhaps 6 7 Ms. Graycon's best efforts at diligence, that there are 8 some groups who are better than others about inputting 9 that information? 10 Α. They input it in a timely fashion when they do input 10:46:38 it, and they don't necessarily get as much information. 11 12 ٥. And some groups do not put in information with the frequency that others do, is that fair? 14 When they -- all the salespeople using it, it's 15 their job to log the information in CRM. 10:46:59 16 I appreciate that it's their job, and that you 17 certainly expect them, to. But if Mr. Scoullios said that 18 some of us aren't very good at putting stuff in the CRM, would you agree or disagree with him? 10:47:14 20 Α. Well, if that's what he said, I would agree with him 21 and I could understand at his level in the organization he 22 probably gets other people to do it for him. 23 Fair point. But would you agree or disagree that other people under his charge, were not very good at 25 10:47:29 entering that information either. Would you agree or

1 disagree with that? 2 I would say I don't have the information to hand to Α. 3 state one way or the other. Q. Agree or disagree with this statement. It's 5 difficult to utilize the CRM database? 10:47:44 I don't have any problem with it. So if it's a 7 question to me personally, then I'll say, no. But I know 8 that it's very demanding. 9 And so, if Mr. Scoullios testified that it's a very Q. difficult database to use, you don't have any reason to 101 10:48:07 11 disagree with that? 12 Again, since he's not a full-time salesman, I would 13 absolutely understand that it's a tool he would use less 14 frequently than others. 15 Agree or disagree, that the CRM database is only as 10:48:20 16 good as the information that's put into it? 17 A. I'd agree with that. 18 All right. At some stage, Mr. Walker, WesternGeco as Q. 19 a company, evaluates other companies for acquisition; 20 fair? 10:48:45 21 Α. Yes. 22 Are you aware of a time that WesternGeco evaluated Q. 23 the acquisition of ION? 24 Α. No, I'm not. 25 10:49:02 MR. TORGERSON: May I approach, Your Honor?

```
1
                        THE COURT: Yes, you may.
           BY MR. TORGERSON:
         3
                 I'm showing you, Mr. Walker, Exhibit 99, ION
            Exhibit 99, which is entitled "Oslo Technology Center
            Technical evaluation of I/O, November 2004."
         5
10:49:23
         6
                           Now, you've seen this before; right?
         7
                 No, I haven't seen this before, even though it's
            Α.
         8
            obviously and no doubt about its authenticity, when we do
            a look at a company with a view to purchase we keep it
        10
            very, very tight. So there's a team, and if you're on the
10:49:50
        11
            team you don't need to know.
        12
                 Do you know whether you would have been involved in
        13
            November 2004, from a marketing standpoint of evaluating
        14
            the acquisition or at least the evaluation of I/O?
        15
                 I wasn't sir, no.
10:50:03
        16
            Q.
                 All right. If you go to the third page, I want to
        17
            ask you about a concept here, under "evaluation summary,"
        18
            and specifically the middle paragraph, the middle bullet,
        19
            "Threats for WesternGeco." The first subbullet reads,
        20
            "Working on streamer steering devices, Digi-Wing."
10:50:20
        21
                           Before the term DigiFIN had come out, do you
        22 remember hearing the term Digi-Wing being utilized within
        23 WesternGeco to describe the lateral steering device.
            Α.
                 I don't, actually, no.
        25
10:50:37
            Q.
                 And somebody noted at the bottom a few DigiCOURSE
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

```
1
           product components as the encompasses could possibly be
         2
            integrated into our Q systems. Do you recall that in this
         3
            time period, even to this day, that WesternGeco utilizes
            ION's compasses?
                 We do. It proved to be a step too far when we tried
10:50:52
         5
            to get rid of compasses. Our customers said they wanted
         7
            them.
         8
            Q.
                 And you would agree with me that ION's compasses are
            the gold standard in the industry?
        10
10:51:02
            A.
                 They are the ones that are used and I don't know
        11
            whether -- and they used that language at the opening.
            don't use them, really, in the positioning, but our
        12
        13
            customers want us to have them there.
                 Well, now, wait a minute. That confuses me,
        141
        15 Mr. Walker. Why would you put extraneous equipment on
10:51:22
        16
            these streamers being drugged through the water for
        17
            5 miles or so, only at the insistence of your customers?
        18
                 Because that's what they want.
        19
                 That adds weight to the streamer?
        20
            Α.
                 Yes.
10:51:36
        21
                 That adds noise to the system?
            Q.
        22
           Α.
                 It is noisy, yeah.
        23
           Q.
                 Have you ever attempted to persuade your customers
           not to use ION's compasses on your streamers?
       25
           Α.
10:51:48
                 Multiple times.
```

And that hasn't worked? 1 Q. 2 And they've said we're used to compasses, we've A. 3 always specified compasses, we want compasses to be there, and it just ended up being too big a fight and not that 5 important. 10:52:04 If you could, Mr. Carlock, go to Page 349911. Next 6 7 one, please. Keep going. I apologize. Go back -- there 8 it is. 9 "Positioning products and peripherals." We 10 see up in the upper right-hand corner, is that what appears 10:52:32 to be a the Digi-Bird, upper right-hand corner? 111 12 Α. It's not a particularly good quality thing, but I'm 13 sure that would have been some mood image, so probably. 14 If we could, Mr. Carlock, if you'd highlight this 15 section down here. This is the end of this template, this 10:52:52 16 evaluation template, WesternGeco was evaluating ION. 17 Could we blow that up just by itself, 18 Mr. Carlock. 19 The IP position, you understand IP to mean 10:53:09 201 intellectual property position? 21 Α. Yes. 22 And it says, "Patent 6525992, two wing steerable 23 bird." Do you know what that means? 2.4 That's the -- I think that's an ION -- to be honest 25 10:53:25 the IP, the numbers of which patent is which, I am not

PGS v. WESTERNGECO

- 1 sure about.
- 2 Q. I can't keep up with them either, but in connection
- 3 with this, are you familiar with ION having a patent on a
- 4 two wing steerable bird?
- 10:53:40 5 A. I've become aware of it in the course of this.
 - 6 Q. And what does the word steerable bird mean to you, if
 - 7 anything?
 - 8 A. That means a bird which is used as part of an overall
 - 9 system command and the control for affecting lateral
- 10:54:02 10 steering.
 - 11 Q. If you look under threats it says, "could develop
 - 12 inline components." Now, the Q FIN is what's been
 - 13 described many times as an inline solution; correct?
 - 14 A. It's built into the streamer.
- 10:54:13 15 Q. And so, as it's built into the streamer, the parlance
 - 16 is that it's inline?
 - 17 A. Yes.
 - 18 Q. And the DigiFIN device, or perhaps other devices, are
 - 19 so-called external devices; is that fair?
- 10:54:26 20 A. Yes. Attached to the streamer.
 - 21 Q. Do you know whether -- did you have any conversations
 - 22 with people within WesternGeco in this 2004 timeframe,
 - 23 about being threatened by inline components?
 - 24 A. No. I was expecting -- as I said, I haven't seen
- 10:54:46 25 this before. I was expecting at the time that DigiCOURSE,

```
as it was then, was continuing the external birds.
         2
                 And would it be fair to say that WesternGeco, because
         3
            it wasn't interested in an external device, wasn't
            threatened by an external device?
         5
                 It's a different way of achieving the same goal.
10:55:08
         6
            the end result of lateral steering can be achieved with an
            inline or an external device.
                 I want to step back in time for just a moment and
         8
            touch on what might be some interesting or important
        10
            history.
10:55:30
        11
                           The merger between WesternGeco --
        12
                Are you finished with this now?
            Α.
        13
                 You can put that down, absolutely, sir.
        14
                           The merger between WesternGeco and
        15 Geco-Prakla happened in -- was finalized in December 2000;
10:55:42
        16 is that right?
        17
            Α.
                 Yes.
        18
                 Now, the merger of these two groups caused some
        19
            internal discord with regard to the approach at Q-Marine;
       20 right?
10:55:55
        21
            A.
                 There was -- there were people on both sides of the
        22
            technology camp.
        23
                 And Western Geophysical was known for its solid
        24
            streamer technology at the time?
       25
10:56:09
            Α.
                 It had built a solid streamer, yes.
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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1 And Q-Marine was in the process of being launched or Q. had been launched and was certainly being tested at the 3 time of that merger; right? Yeah, we were just doing final testing. So Geco-Prakla had invested some time and money into 10:56:19 Q. 6 this Q-Marine product that was going to merge four different aspects into a ground breaking new product; 8 fair? Α. Yes. And there was some tension in that the WesternGeco 10 Q. 10:56:30 11 physical camp, which then included the president Gary 12 Jones, was somewhat skeptical of Q; right? 13 Α. He wanted to be convinced, yes, absolutely. 14 And he was more interested and the Western Q. Geophysical people were more interested in moving into a 15 10:56:47 16 solid streamer platform? 17 They also invested time and effort in the solid 18 platform. 19 And the -- did -- Mr. Jones, the then president, eventually left WesternGeco over this? 201 10:56:58 21 A. He left, that was -- that may or may not have 22 contributed to it. I wasn't part of those discussions, as 23 you can imagine. But Q prevailed, nonetheless; fair? 24 Ο. 25 Α. Q prevailed. 10:57:12

IPR2014-01478

PGS v. WESTERNGECO

WESTERNGECO Exhibit 2100, pg. 138

Q. And that was in 2003? 2 Α. Yes. 3 So for two years from the time of its commercialization until 2003, when Mr. Jones left and was 5 replaced by Dolton Boutte --10:57:21 6 A. Dolton Boutee. -- that there was some internal strife or internal disagreement within WesternGeco about what we're going to do with this Q-Marine product; fair? 10 10:57:33 Α. Yeah. 11 All right. And would you agree or disagree, that 12 that contributed to an external, an outside WesternGeco 13 lack of confidence in the Q-Marine product? I wouldn't -- I wouldn't agree with that, no. 14 15 would think that we -- our customers liked the lateral 10:57:48 16 steering and the improved resolution it gave. And they 17 were, they were happy with it. 18 There was no criticism of Q-Marine before 2003? 19 At the very beginning we had -- we shuffled around Α. 201 10:58:14 with our customers on business issues and pricing, and we 21 started with a very high price, and that really settled 22 down by 2003, 2004. 23 Let's look at the pricing for a moment. Let's turn to that. The original plan was to price Q-Marine at about 24 25 10:58:38 twice WesternGeco's conventional rates; fair?

1 The introductory stage, yes. Α. So at the introductory stage, if WesternGeco was Q. 3 going to bid for a survey that cost \$10 million with a 4 conventional system, it would charge \$20 million for a 5 Q-Marine system? 10:58:55 It was twice the revenue, so maybe not exactly that, 6 7 but as we've discussed this morning, there was an 8 efficiency in improvement. 9 And you would agree that that price was intended to Q. 10 originally create sticker shock? 10:59:06 11 Α. Yeah. We wanted to wake people up. That was a 12 decision from above. 13 Q. And that mission was accomplished; right? 14 Α. It was accomplished, yes. 15 Ο. And you knew that that price was going for drop over 10:59:15 16 time; right? Yes. 17 Α. 18 Sort of like when you're in a negotiation and you 191 start high in order to end up where you really want to be; 20 is that fair? 10:59:25 21 Α. That's fair. 22 Okay. And this premium for the Q suite of 23 technologies, that was met with resistance by your 24 customers? 25 Not all of our customers. I testified about Statoil 10:59:34 Α. Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	
	1	adopting it straight off and Shell adopting it for the
	2	survey, and in the Far East Chevron adopted it and Total
	3	adopted it, but not everyone adopted it in the first two
	4	years.
10:59:53	5	Q. At the outset, Mr. Walker, you would agree with me
	6	that some companies made it clear to you or to
	7	WesternGeco, that they would never pay more for this
	8	single sensor technology?
	9	A. They'd never pay more for Q-Marine. That was the
11:00:06	10	statement made by a couple in the early days, yes.
	11	Q. Who was the couple in the early days?
	12	A. Chevron and ExxonMobil were.
	13	Q. Now, there's a word, I don't know if it's been used
	14	today, but it's been used in the past in this trial about
11:00:23	15	commoditization?
	16	A. Yes.
	17	Q. What does commoditization mean to you, sir?
	18	A. So, commoditization means the flattening of the
	19	equalization of technical operational consideration, so
11:00:39	20	that really all that's left is people fighting on price,
	21	so spreading uniformity of specification.
	22	Q. Some of these oil companies attempted to commoditize
	23	Q-Marine by pushing down the price; right?
	24	A. Well, most oil companies will push down on price,
11:01:00	25	they're big projects, yeah.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	Q. That's sort of in their best interest, isn't it?
	2	A. That's in their best interest.
	3	Q. And especially when you get some sort of new
	4	technology and you want a premium associated with it, it's
11:01:10	5	not unusual for the oil companies to say, well, that's
	6	nice, but that's new, but we're not going to pay anymore
	7	for it?
	8	A. That happens.
	9	Q. And you still hear that even in recent history;
11:01:22	10	right?
	11	A. Every once in awhile we do, people there are
	12	people who are not not aware of it, that haven't used
	13	it, and they have they have questions about it. The
	14	companies that adopted it, we resolve the questions,
11:01:41	15	they're happy.
	16	Q. Well, let's look at Defendant's Exhibit or ION's
	17	Exhibit 178. Anadarko is a
	18	MR. TORGERSON: May I approach, Judge?
	19	THE COURT: Yes, you may.
11:02:03	20	BY MR. TORGERSON:
	21	Q. Anadarko is a long time customer of WesternGeco's?
	22	A. Yes.
	23	Q. And there was some discussion earlier about Anadarko
	24	being a partner of some sort on these two surveys with
11:02:19	25	Tullow, and if you got one, you were going to get two. Do
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	you recall that testimony?
	2	A. I do.
	3	Q. If you look at the ION Exhibit 178, this is an
	4	e-mail, if you'd look at the top portion, Mr. Carlock, so
11:02:32	5	we get our context.
	6	This is an e-mail from John Paul Herman on
	7	November 11th, 2009. Who is Mr. Herman?
	8	A. He was the account manager for Anadarko and other
	9	customers in Europe for Europe, Africa.
11:02:51	10	Q. And you're copied on this e-mail?
	11	A. I am, yes.
	12	Q. And it's about feedback from jubilee partner meeting
	13	Q-Marine. Do you recall this discussion?
	14	A. I recall the meeting. I joined it remotely.
11:03:08	15	Q. What was the jubilee?
	16	A. The jubilee was a project. That's the name of the
	17	project, and Cos (phonetic) Moss was the operator, and
	18	Anadarko and other companies I'm afraid I can't
	19	remember who were partners, and we had operated the
11:03:33	20	project for Cos Moss ^ ? and there had been a lot of
	21	internal decent as it later emerge between the members of
	22	that partnership about the survey design that Cos Moss ^ ?
	23	had run with.
	24	They wanted to get a particular data set,
11:03:55	25	and the way you design a survey will cause you to get a
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 certain data set. 2 Do you recall that Anadarko was critical of the 3 Q-Marine technology in connection with this discussion? 4 In this discussion they were critical of what they'd A. seen on this particular project. 11:04:12 5 6 Let's look at number 2, specifically, Mr. Carlock, and can we blow that you? 8 Let's reset it, if we can. And just focus on that Paragraph 2. "They found the jubilee survey to 10 have been slow, problematic and expensive and gave them a 11 finished product that they felt was no better than a 12 conventional shoot." Do you agree or disagree with that 13 assessment by Anadarko. 14 Α. I agree that's what they said. 15 11:04:47 And if you go down to number six, "Excessive feather busted their budget, Cosmos had not factored in feather 16 17 over 15 percent, that was included. The 35 to 40 percent 18 infill was more than they expected. They are also 19 concerned about using this data with so much feather and 2.0 infill for 4D." Do you recall that being discussed? 11:05:11 21 It was -- I mentioned it was a survey designed and we had told Cosmos that we didn't think what they wanted to 22 23 do was the right way to shoot it and it turned to be the 24 case.

Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

All right. If we can pull back out to the larger

25

11:05:26

Q.

```
1
            documents, Mr. Carlock, and focus on these last few points
            here at the bottom.
          3
                           General Q-Marine and technology comments.
           "Number one, Q-Marine document's and advertising does not
         5 live up to expectation with Anadarko." Number 2, "Anadarko
11:05:43
         6 has yet to see an uplift with Q-Marine over conventional on
         7 their few proprietary projects."
         8
                           Number 3. "Anadarko prefers not to use
         9|Q-Marine on their proprietary work. They don't believe it
        10 would be better than conventional."
11:06:03
        11
                           And number 4, "Anadarko does not see
        12 anything wrong with Q-Marine and if it was priced equally
        13 with conventional, would not have a problem with Q-Marine,
        14 they just don't see the uplift."
        15
11:06:19
                           Now, the term uplift, would you agree that
        16 that's a synonymous with premium?
        17
            Α.
                 It is synonymous with premium, yeah.
        18
            Q.
                 And do you recall Anadarko tapping on these comments
            about its perception of Q in November 2009?
        201
11:06:35
           Α.
                 They didn't have a lot of experience, and I remember
        21
            all five of those comments. If you look at five as well.
        22
                 Sure. Let's look at five. Made a comment that the
            ο.
        23
            conventional WAZ, that's white azimuth?
        2.4
            Α.
                 Azimuth.
       25
            Q.
11:06:49
                 Data.
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 Α. They have in the GOM, Gulf of Mexico. 2 Α. Gulf of Mexico. 3 "Is the best white azimuth data they have seen in comparison to other white azimuth data. After I corrected him that this was Q-Marine data, he was surprised and a 5 11:06:58 6 little more accepting." 7 Fair point. But that white azimuth data, that's in relation to the single sensor technology; fair? 9 A. No. 11:07:11 10 Q. It's not? 11 Α. No. 12 It's actually a combination of the different aspects of Q, for example, lateral steering, with single sensor 13 14 technology and all the other technical benefits? 15 No. It's essentially putting the streamers in the 11:07:19 16 right place to illuminate the subsurface. That's what 17 makes the difference. 18 Well, it's not talking about positioning, it's talking about data, isn't it? 20 Well, the data is the result, what they're looking at 11:07:30 21 this is a multi-client project. So they're looking at the 22 end result. And that's a very well illuminated and well 23 focused image. 24 So they had not really used Q marine that 25 11:07:44 often. And this was the start of the meeting, actually.

Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

```
This meeting started a better engagement with them where
         1
            they actually did look at them. We -- because, bear in
         2
         3
            mind, don't forget this is a partner meeting and the
            partners have been handed a bill for something they didn't
         5
11:08:04
            like because we were caught a little bit in the crossfire.
         6
                 You've talked about licensing briefly with
            Mr. LoCascio. We understand that WesternGeco's policy is
         8
            to not license its technology as a general rule and it's
            true that no aspect of Q-Marine has ever been licensed to
11:08:20
        10
            another company; fair?
        11
            A.
                 Except we had to do an internal license to our
        12
            Mexican subsidiary to work for Pemex.
                 But that was a Geco to Geco?
        13
            Q.
        14
            Α.
                 Geco to Geco, yes.
       15
                 Now, companies had wanted WesternGeco very early on
11:08:37
        16
            to license this technology to other companies; right?
        17
            Α.
                 They did ask us to, yes.
        18
            Q.
                 And you refused?
        19
            Α.
                 Yeah.
       201
11:08:45
            Q.
                 All right. Let's look at ION 269.
        21
                       MR. TORGERSON: May I approach, Your Honor?
        22
                       THE COURT: Yes, you may.
        23 BY MR. TORGERSON:
        24
                 Do you recognize this document?
            Q.
       25
            Α.
                 Yes, I collated this.
11:09:19
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 Q. And by "collated," you mean put it together? Α. Yes, sorry. 3 That's fair. If we could go to the -- this is essentially a three-year plan we see in the upper third of the document for 2001, 2004. And now just generally 11:09:36 5 6 speaking, Mr. Walker, with somebody with firsthand experience with it, what's the point of this three-year 8 plan? So we were a 70, 30 joint venture between 10 Schlumberger and Baker-Hughes and one of the requirements 11:09:53 11 of the joint venture master formation agreement is we had 12 to have and keep updated a business plan, and this is that document. 13 14 If we turn to the sixth page. This paragraph here, 11:10:18 15 Mr. Carlock, under the role of Q, and specifically this 16 second sentence. If you're with me, Mr. Walker, it reads, "Although take up for Q-Marine was split between super 17 18 majors and independents." 19 Now the timeframe we're talking about is 20 what, 2001? 11:10:39 21 Α. Yes. 22 All right. "We have already seen attempts at 23 commoditization from the super majors, making independents 24 a natural initial market bridgehead." What does that 25 mean? 11:10:53 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 Α. They had -- they had done exactly what you commented 2 earlier, they asked us to license the technology to other 3 companies. 4 They had also asked you to drop the price? Yeah. 11:11:08 5 Α. 6 Q. All right. The price did drop over time to -- from double in 2000, 2001, to about one and a half by 2004? 8 Α. Yes. 9 Q. And that was without any competition in the market? 10 That was part of planned business growth. 11:11:23 A. 11 Q. And that was due to pressure from companies not 12 wanting to pay more than conventional surveys, as opposed to this uplift or premium for Q-Marine; right? 13 Α. It was more to start with we'd go to all these direct 15 11:11:40 towards but we know that was -- you can't build a global business on direct towards. So it's seismic surveys are 16 17 too big, too few of those. So we knew if we were going 18 out to the boat market and we were responding to tenders 19 with an alternative for Q, then it was unsustainable to 20 have two times or something. We needed to find that 11:11:58 21 number. 22 Was there ever an attempt to tier or layer the 23 pricing that was offered by Q-Marine? 24 We did. We tried up streamer of the day -- our 25 commodity streamer is called Nessie-4, and we tried a mode 11:12:18 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

called Nessie-4 emulation that was not a success. 1 a go, part of settling down the product. 3 Do you recall -- and essentially, if that was sort of 4 a low-end application for O? 11:12:35 5 A. We would -- yes. 6 Q. Okay. As near to conventional as you could be on a Q platform? 8 Α. Yeah. 9 Q. All right. Was there ever an attempt to price or 10 create tiers at varying levels of price over conventional 11:12:45 11 as the base depending on the quality of the data that 12 would be provided? 13 Α. So we had a go at a -- so the single sensor data is there for noise attenuation, and that's what it does. 15 you can do some cool things with it. And one of the 11:13:05 16l things you can do is output different data density along the streamer. And we had several goes at marketing that 17 18 as an upper tier. 19 Q. Do you recall who tried to institute that tiering? 2.0 It was -- I put it together and with the marine 11:13:28 21 marketing manager at the time and probably the director of 22 marketing at the time. 23 Q. Who was director of marketing at the time? 24 A. It would have been Ken Williamson, I think. 25 11:13:40 Ο. And Ken Williamson now works for ION? Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

```
1
            Α.
                 He does, yeah.
         2
                             It didn't work. We had a go, but it
         3
            didn't work.
         4
                 It was a strategy to try to squeeze some more value
11:13:50
         5
            or rank value depending on who your customer was?
         6
                 Well, the logic was, if we knew the base price would
            have to go down, we wanted to institute a second tier if
            we could make money that way.
         9
            Q.
                 Now, let's turn back to something quickly about your
        10
            belief that lateral steering is the most important aspect
        11
            of Q-Marine, specifically Defendant's or ION's
        12
            Exhibit 268.
        13
                             Actually in the interest of time let's
        14
           move on. No, let's stay with that. 268.
        15
11:14:32
                       MR. TORGERSON: May I approach the witness,
        16 Judge?
        17
                       THE COURT: Yes, you may.
        18 BY MR. TORGERSON:
        19
                 Do you recognize 268?
           Q.
       20|
                 I think I do. It was probably -- I may well have
11:14:47
           Α.
        21
           written this given the job I was doing at the time, 2001.
        22
                       MR. TORGERSON: If we could turn to Page 4 of
       23 the document, Mr. Carlock. Actually let's go back to the
       24 first page. I apologize.
      25 BY MR. TORGERSON:
11:15:06
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
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	1	Q. Let's get the context for this and see what we're
	2	looking at.
	3	The top sentence reads: "Please describe
	4	in short paragraphs what the three marketing and financial
11:15:18	5	achievements for WG have been over the full year of 2001."
	6	What's the point of this document?
	7	A. So this is input for the financial reporting process.
	8	So we'd need to really preparing Q and A and marketing
	9	and business points.
11:15:37	10	MR. TORGERSON: Go to the fourth page,
	11	Mr. Carlock. Under here, number 2, highlight that first
	12	paragraph.
	13	BY MR. TORGERSON:
	14	Q. "What is the differentiating capability of the
11:15:50	15	Q-land/marine suite?"
	16	It reads: "Put simply, Q technology is
	17	based on sampling for the noise field (which requires
	18	denser sampling than the effective seismic energy
	19	signal)"
11:16:02	20	THE COURT: Slowly. Slowly.
	21	MR. TORGERSON: Sure.
	22	BY MR. TORGERSON:
	23	Q "then digitizing every sensor, which enables
	24	improved (digital), filtering of noise in various smart
11:16:10	25	and adaptive ways, as well as enhancing signal to preserve
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1 full bandwidth. 2 "The result of this is better calibrated, 3 more repeatable, higher fidelity seismic data - which 4 already have proven to add great value to scientific data 5|in general but is certainly set to change the game for 11:16:26 6 markets that require/depend on" -- and then a bunch of 7 technical language. 8 Is this essentially, Mr. Walker, the point that the differentiating capability is a technical one in 10 the sense of as it relates to the single sensor data? 11:16:43 11 This means that we could eliminate the noise Α. No. 12 better, and that would enable everything else to happen. 13 And that was our view at the time, that we'd done the 14 right thing to eliminate the noise by single sensor 15 instead of solid. 11:17:02 16 And that would be sometimes called noise attenuation? 17 Α. Noise attenuation. 18 MR. TORGERSON: If you turn to the next page, 19 Mr. Carlock, this first paragraph here, "Future Situation," 20 under that heading. 21 BY MR. TORGERSON: 22 It reads: "Q-Marine needs for deliver significantly 23| quieter data -- Q is better, but not go markedly so, than solid streamers today. Whether a solid route or denser sensor spacing is the route to go we have not yet 25 11:17:33 Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

```
decided."
         2
                              So my question, Mr. Walker: Is this an
         3
            acknowledgement that -- we had talked about these
            different camps from Western Geophysical and Geco-Prakla.
            This was part of that internal reconciliation of the Q
         5
11:17:49
         6
            platform versus a solid streamer platform?
                 It was -- it was -- yes, we did a back-to-back tow,
         8
            and we found that we weren't quite as smart as we thought
            we were.
11:18:02
        10
                       MR. TORGERSON: If you pull up out -- back to
        11 the larger document, Mr. Carlock, under the bottom quarter
        12 here, "Competition Note" -- and, yes.
        13 BY MR. TORGERSON:
        14
                 "To compete with Q technology requires the hardware,
        15
11:18:16
            a service capability and a software process and technology
        16 to do the noise attenuation and signal enhancement prior
            to array forming. This latter point" -- meaning noise
        17
        18
            attenuation -- "and signal enhancement" --
        19
            Α.
                 Yeah.
       20
11:18:28
            0.
                 Yes.
        21
                             -- "is the critical element to defend --
       22
           which is why we are refusing (so far successfully) to
       23
           release to single sensor data to any clients."
       24
                             What does that mean?
       25
                 So at the time, we firmly believed -- and this is a
11:18:42
           Α.
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

1 long time ago. 2 Now, we firmly believed that you wouldn't 3 be able to do the noise attenuation very well with solid 4 streamers. As your clients know, you make a business out 5 of successfully steering streamers, leaving aside the 11:19:02 6 legal issues. So you can do it very well with solid streamer, but at the time, we thought you would need to 8 have the single sensor to do that. 9 Q. What does this mean about, "We are refusing (so far 10 successfully) to release the single sensor data to any 11 clients"? 12 Α. So we -- when you make a streamer, a conventional analog group streamer, you have a series of sensors, and 13 this -- sorry -- this is going to be technical. 15 11:19:37 A series of sensors, you wire it up 16 together. A different way of doing it, which is the way we do it, is to treat each sensor as a separate channel 17 18 and then send all that information back to the boat and 19 then do the noise attenuation on computers, and input 20 field data to take in exactly the same way you would with 11:20:00 21 any other vessel. So the output from a Q-Marine project 22 is exactly the same as an output from a conventional 23 project. 2.4 But the oil companies, in touting this single sensor

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technology, wanted the raw measurements?

25

11:20:16

```
1
            Α.
                  Originally they wanted to know what we'd done.
            were saying, Wait a minute. We want to see this black
          2
          3
            box. Tell us what you're doing.
          4
                              And when we sat down with them and
11:20:27
         5
            explained what we were doing, then the whole thing went
         6
            away. It was a bit of drama.
                 Has WesternGeco released -- agreed to release that
            data as you sit here today?
         9
                 No, we haven't. It's the measurements. It's not
        10
            data. It's noise.
11:20:45
        11
                 Okay. And this was an issue, this refusal to release
            the raw sensor measurements? At least back historically,
        12
        13
            in the 2001 timeframe, that was a concern expressed to you
        141
            by Chevron?
        15
            Α.
                 Yes.
11:21:02
        16
            0.
                 Exxon?
        17
            Α.
                 Yeah.
        18
                 Total?
            Q.
        19
            A.
                 Total raised it.
        2.0
            Ο.
                 Kerr-McGee?
11:21:07
        21
                 Kerr-McGee said they wanted it and we had a
            discussion and it was a storm in a teacup.
        22
        23
            Q.
                 You think you resolved it favorably?
        24
            Α.
                 Yes.
       25
                 Now, if you keep reading on this document, right
            Q.
11:21:21
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

```
1 here, "Q over samples" --
         2
                        MR. TORGERSON: This entire paragraph,
         3 Mr. Carlock.
           BY MR. TORGERSON:
11:21:35
         5
                  "Q over samples that reflected energy in order to --"
         6
                        THE COURT: Too fast. Too fast. Start over
         7 again.
         8
                        MR. TORGERSON: Apologies.
           BY MR. TORGERSON:
        10
                 "Q oversamples that reflected energy in order to
11:21:40
        11
            sample the noise. We have several patented methods to
        12
            achieve the noise attenuation and our service competitors
        13
            are already claiming that they can do whatever we can
            do -- in order to help break the value chain by splitting
        14
        15
            acquisition and processing, naturally with the full
11:21:58
        16
            encouragement of the oil majors."
        17
                             Now, what were your service competitors
            saying in 2001 about being able to do -- perform this
        18
        19
            noise attenuation?
                 What they were saying is, We've got different ways
       201
11:22:13
        21
            where we could do it and we could -- we would like to --
        22
            like to give it a go.
        23
                 And this was your competition -- your competition
        24
            trying to distinguish themselves in the field saying, We
       25
            can do something that they can do, and you were
11:22:30
                       Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
```

	1	disagreeing with that?
	2	A. We didn't disagree they couldn't do it.
	3	We said, We've invested a lot of money in
	4	this technology. We've put some great scientists on to
11:22:46	5	work for it, and we believe we can do better.
	6	And in fact, when the customers came and
	7	worked with us and sat down through our work flows and
	8	said, Well, I tell you what, can we try this way? Can we
	9	try this way? then they agreed that our way was better.
11:22:59	10	Q. And it says here, "Naturally with the full
	11	encouragement of the oil majors.
	12	Was it the case, Mr. Walker, that the oil
	13	companies were encouraging this competition?
	14	A. Yes. They always encourage competition.
11:23:10	15	Q. In fact, oil companies don't like a one-supplier
	16	market?
	17	A. Well, oil companies would always prefer to have
	18	multiple suppliers for everything.
	19	Q. And that brings the price down on things; fair?
11:23:22	20	A. Yeah.
	21	Q. But you would also agree with me that competition and
	22	this drive to distinguish one another technologically can
	23	lead to better seismic?
	24	A. Innovation is good.
11:23:34	25	Q. All right. And here we've seen some documents and
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

thought that Statoil and Apache and other oil companies 1 2 wanted over time an alternative product to Q-Marine; 3 right? They wanted lateral steering, yes. Α. 5 11:23:47 Q. And they knew, they had experience with that Q-Marine 6 product, including Q FIN; right? Yeah. A. 8 Ο. And they went to other companies and said, We want you to work on your own solution; fair? 11:23:59 10 Α. Yes. 11 Q. And they chose, Statoil, for example, in connection with these, chose to go with Fugro or PGV or CGGV instead 12 13 WesternGeco; right? 14 They've done a project, yeah. 15 Q. Isn't the right of these oil companies, to select who 11:24:14 16 they want to do business with? It's the right of the oil companies to use any 17 technology. The question is whether that technology does 18 or doesn't infringe your patent. 20 11:24:24 Ο. And in this case, WesternGeco's position is that's 21 not possible. You can't perform lateral steering at all without infringing our patents. Is that fair? 22 23 I think I'm the wrong person to ask about the exact scope of the -- of the patent. 25 Q. 11:24:40 Okay.

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	1	A. It's our understanding that the approach taken, not
	2	to say there are no other approaches the approach taken
	3	was infringing.
	4	Q. Mr. Walker, as you sit here today, do you have an
11:24:52	5	understanding that could be an approach to lateral
	6	steering in the towed seismic market that would not
	7	infringe WesternGeco's patents?
	8	A. Well, people tried chaining the roping streamers
	9	together. Now that doesn't help with steering, but it
11:25:10	10	helps prevent a trousering, which is where streamers pull
	11	apart.
	12	But it's our view that an integrated
	13	system with central command and control and birds
	14	contravenes the patent.
11:25:24	15	Q. So any integrated system with birds and a control
	16	system you believe would violate WesternGeco's patents in
	17	this case?
	18	A. Well, that's what our IP experts say to me. Like I
	19	say, I'm a businessman rather than an IP expert. So
11:25:41	20	Q. Do you believe that Statoil and Apache and these
	21	other companies were encouraging contractors such as Fugro
	22	or others to violate WesternGeco's patents?
	23	A. They were asking for services, including lateral
	24	steering.
11:25:57	25	Q. Do you believe that that encouragement was asking
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

	1	contractors to violate WesternGeco's patent rights?
	2	A. If they were found to be infringing, then, to an
	3	extent, yes.
	4	Q. Excuse me. Now, WesternGeco relies on its customers
11:26:27	5	which are these large oil companies for its business;
	6	right?
	7	A. Yes.
	8	Q. WesternGeco has promised not to sue Statoil in
	9	connection with this case; right?
11:26:40	10	A. We've said we don't intend to take any oil company to
	11	court.
	12	Q. And you've made that message quite clear?
	13	A. Yes, we have.
	14	Q. And is that because WesternGeco doesn't want to bite
11:26:52	15	the hand that feeds it?
	16	A. In a way, yes.
	17	Q. All right. Let's turn to ION 74?
	18	THE COURT: We are you need to look for a
	19	place where we can break for lunch.
11:27:11	20	MR. TORGERSON: This is a great break.
	21	THE COURT: Okay. Ladies and gentlemen, we're
	22	going to take a little bit longer at lunch. I have a
	23	criminal matter to handle, and we need to conduct some
	24	lawyer business in this case. So I'll ask you to be back
11:27:23	25	at 12:30.
		Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com
	-	

Cross-Walker/By Mr. Torgerson Would all please rise for the jury. (Recessed at 11:28 a.m.) COURT REPORTER'S CERTIFICATE 5 I, Johnny C. Sanchez, certify that the foregoing is a 6 correct transcript from the record of proceedings in the above-entitled matter. Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com

1	UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF TEXAS
2	HOUSTON DIVISION
3	
4	WESTERNGECO LLC, 4:09-CV-01827 . HOUSTON, TEXAS
5	PLAINTIFF,
6	VS.
7	ION GEOPHYSICAL . CORPORATION, FUGRO GEOTEAM, .
8	INC., ET AL, AFTERNOON SESSION
9	DEFENDANTS . JULY 30, 2012
10	
11	TRANSCRIPT OF JURY TRIAL BEFORE THE HONORABLE KEITH P. ELLISON
12	UNITED STATES DISTRICT JUDGE
13	
14	APPEARANCES:
15	FOR THE PLAINTIFF:
16	Lee K. Kaplan
17	SMYSER KAPLAN & VESELKA LLP Bank of America Center
18	700 Louisiana, Suite 2300 Houston, Texas 77002
19	Gregg F. LoCascio
20	KIRKLAND & ELLIS LLP 655 Fifteenth Street Northwest
21	Washington, DC 20005
22	Sarah Tsou Timothy K. Gilman TIMOTHY ATTEST:
23	KIRKLAND & ELLIS LLP Citigroup Center 153 Fast 53rd Street
24	153 East 53rd Street New York, New York 10022
25	

		192
1	APPEARANCES - CONTINUED	
2		•
3	FOR THE DEFENDANT:	
4	David L. Burgert	
5	Susan Kopecky Hellinger Jonathan M. Pierce Jonna N. Stallings	
6	Ray T. Torgerson Eric D. Wade PORTER & HEDGES LLP Reliant Energy Plaza 1000 Main Street, 36th Floor Houston, Texas 77002	
7		
8		
9	nouscon, reads //ouz	
10	FOR FUGRO GEOTEAM, INC.:	
11	Gordon T. Arnold Jason A. Saunders	
12	ARNOLD KNOBLOCH LLP 4900 Woodway Drive	
13	Suite 900 Houston, Texas 77056	
14	James M. Thompson	
15	Christine Raborn Michael E. Streich	
16	ROYSTON RAYZOR VICKERY & WILLIAMS LLP Pennzoil Place	
17	711 Louisiana Street, Suite 500 Houston, Texas 77002	
18		
19		
20		
21		
22		
23		
24		
25		
	Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net	

APPEARANCES - CONTINUED OFFICIAL COURT REPORTER: Mayra Malone, CSR, RMR, CRR U.S. Courthouse 515 Rusk, Room 8016 Houston, Texas 77002 Proceedings recorded by mechanical stenography. Transcript produced by computer-aided transcription. Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

- 1		1794
1	INDEX	
2		
3		
4	ROBIN WALKER	
5	Cross-Examination (Continued) by Mr. Torgerson	1822
6	Cross-Examination by Mr. Thompson	1869
7	Redirect Examination by Mr. LoCascio	1915
8	Recross-Examination by Mr. Thompson	1922
9		
10	PAUL WINSPEAR	
11	Direct Examination by Mr. LoCascio	1927
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
	Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net	

surveys anywhere. So when the reference is made to defendants, 1 2 it is somebody other than ION. MR. THOMPSON: I don't know if I could -- I can try 3 and make my point orally if that's fine or elicit a question 4 5 and answer. But if they are going to take the position that the Statoil job performed by Fugro was in the EEZ and, 6 7 therefore, in the territorial waters, I would note that since WG bid on that survey, they would be bidding and attempting to 8 perform a survey in the territorial waters of the United 9 States, that the decision is overturned and I would ask the 10 witness if he knows whether or not they marked their patents. 11 THE COURT: Any response, Mr. LoCascio? 12 MR. LoCASCIO: I don't know if the witness has any 13 idea if they do or not, but I expect it is a service performed 14 inside the United States, so --15 THE COURT: Have y'all talked about this? 16 MR. LoCascio: We have not discussed it. 17 THE COURT: Why don't you talk about it? We will take 18 some more evidence if we need to or take some more proffer if 19 we need to. 20 21 (Jury present) THE COURT: You may inquire. 22 23 MR. TORGERSON: Thank you, Your Honor. ROBIN WALKER, PREVIOUSLY SWORN, FURTHER TESTIFIED: 24 25 CROSS-EXAMINATION (Continued)

1	BY MR. TORGERSON:
2	Q Mr. Walker, welcome back. Are you ready to proceed?
3	A I am.
4	Q I want to turn back to your earlier opinions about the
5	value of Q-Marine.
6	MR. TORGERSON: I'd ask if we could pull up ION
7	Exhibit Number 74.
8	BY MR. TORGERSON:
9	Q I believe you testified before the break that your early
10	thoughts were that the value of Q was in connection with the
11	noise attenuation and rather than specifically the lateral
12	steering, but then effectively you have come around to the
13	customer's way of thinking, which is lateral steering is where
14	it's at. Is that a fair summary?
15	A We had hoped to make money out of the other components, but
16	the lateral steering is the one that our customers said was of
17	value.
18	MR. TORGERSON: And specifically if we can look,
19	Mr. Carlock, at the first full paragraph and actually look at
2.0	the email.
21	THE WITNESS: Do I have a copy of this document?
22	BY MR. TORGERSON:
23	Q I will get one for you. I apologize.

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

MR. TORGERSON: May I approach?

THE COURT: You may.

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THE WITNESS: Thank you, sir.

BY MR. TORGERSON:

- Q ION 74 is an email from you to Julie Marshall and Jens Olav Paulsen and we have a dating issue with regard to how this document was printed. It is not actually from the year 4501.
- 6 A I think I will be retired then.
- Q Likewise. If you can verify that the date of the preceding email was on October 24, 2005?
- 9 A Yes.

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- Q So essentially the late 2005 is the time frame that we are dealing with, fair?
- 12 **|** A Yes.
- Q All right. And this is an email from you to Julie
 Marshall?
- 15 A Yes.

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- Q And in connection with that, she was then the product champion for Q-Marine, fair?
 - A She was the product champion for the advanced spread control, which is that particular component of advanced steering. So that was her area of expertise.
- 21 Q Okay. Who was Jens Olav Paulsen?
 - A He was the -- at the time in 2005, he was -- by that point he probably would have been in engineering, had a little time when he was a global contract manager. He was probably in engineering at that stage.

- Q And this is a discussion about, in part, streamer steering involving Chevron, fair?
- A Yes.

- MR. TORGERSON: And if we could highlight the sentence here, Mr. Carlock, on the streamer steering issue and just read along with me.
- 7 BY MR. TORGERSON:
 - Q "on the streamer steering issue, I agree. Also, don't forget that this was only presented under an NDA" -- a nondisclosure agreement?
 - A Yeah.
 - Q "...which Chevron people do take seriously and which Steve Doherty reminded everyone about prior to the presentation. My intent, as I discussed with you, was to position streamer steering as one element of Q. In other words, without the ability to attenuate the noise, no element of streamer steering will have any value."

Would you agree with me that the introduction of lateral streamer steering introduced noise into the system?

A It generated noise in just the same way that other -- that other activities generate noise.

- Q Certainly. And devices that are outside the streamer can contribute or exacerbate that noise. Is that fair?
- A It is generally the noise on the streamer going -- pushing it -- you are trying to push it sideways through the water.

- Q And that's the problem with the noise that you need to attenuate or minimize?
 - A Yes.

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- Q All right. If we keep reading, it says: This point was not lost on the CVX guys -- which I assume is an acronym for some Chevron folks?
- 7 A Yes.
 - "...who were particularly interested in the fact that the model data -- they asked a bit about that. I told them absolutely nothing about any of the method, by the way, as we agreed -- would simply be swamped by analog group data, which reinforced their view that the IO product would never work or at least it would not be effective. I prefer this."

Was there doubt by the Chevron folks in November 2005 about the efficacy of the then to be introduced DigiFIN product?

- A I think they were -- they were certain -- they raised the issue of noise attenuation and noise attenuation is important, was important.
- Q And other than a single streamer -- single sensor capability of Q-Marine, nobody else had the ability or had the ability in '05 to attenuate noise the way WesternGeco did?
- 23 A You could have done it with solid streamer.
 - Q Okay. Fair. Now, when -- there was a change at some point in connection with Q-Fin about the size of the wing. Do you

- 1 | recall that?
 - A Yes.

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- Q And there was sometimes an internal reference to Q-Fin 2?
- 4 A Indeed, yes.
 - Q Can you explain to the jury what that change was, what was the reason for that?
- A Yes. We wanted to keep the body the name, the in-line bit, and put on larger wings with the intention of being able to increase the amount of steering we could put on it.
- 10 Q Has that been brought to market yet?
- 11 A No, it hasn't.
- Q When did the engineering work on Q-Fin 2, these larger wings, start?
 - A It started probably about -- I think about 2006. To be honest, I'm not really sure.
- Q And it now being 2012, these larger wings have not been implemented into the Q-Marine fleet?
 - A No.
- 19 Q Why not?
 - A We ran the -- by the time we got it out and tested it, the first iteration, the model we got of how a streamer behaves on the steer -- the model we got of the streamer under steer seemed to be to us a bit unstable and we had a case when a bird was spinning and that created tie up on the streamer and we said, Okay, it is nice to have, it is not absolute. Let's put

- 1 \parallel it on the back burner.
 - Q Was the point of the larger wing to increase the level of steerage capable?
 - A Yes.

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- Q And there was a point in time at which WesternGeco marketed this anticipated offering to the market, correct?
- A We did, yes.

MR. TORGERSON: May I approach?

THE COURT: You don't need to ask permission to approach. We have gone over that.

- 11 BY MR. TORGERSON:
 - Q I'm showing you ION Exhibit 229, sir. And it appears to be a PowerPoint, Q-Marine SEG with four topics: Coil shooting, discover, upscaled Q-Fin and wave height corrected seismic.

Do you recognize this document?

- A I'm sure I should. It would have been input to SEG and what we were promoting to our customers.
- Q Coil shooting is an instance where you have the boats go around in a circle like a coil?
- A Indeed, yes.
 - Q Discover, is that the over/under capability?
- A Yes. It is the over/under to get more band activity.
- 23 Q Okay. Let's look at the upscaled Q-Fin.
 - MR. TORGERSON: And it is specifically, Mr. Carlock, page 7 of this document. Let's highlight that if we can.

- 1 BY MR. TORGERSON:
- Q It says: Upscaled Q-Fin currently in testing, available 2009.
 - So this was for the 2008 SEG?
 - A Yes.

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- Q Do you remember what city the 2008 SEG was?
- 7 A It might have been here actually.
- 9 A Maybe it was Las Vegas. After 20 of them, you tend to 10 forget.
- 11 Q I have never been to one of those. I don't get to go to 12 those.
 - But just for purposes real quick, the SEG is the American trade show and the EAG is the European trade show?
- 15 A Yes.
- 16 Q The EAG is usually in June and the SEG is usually in the fall?
- 18 A Yes.
- Q All right. And here we see at the bottom: WG response to
 DigiFIN and Nautilus. Any client who claims our leadership is
 being eroded, needs to see this and read our frequently asked
- 22 | questions.
- 23 A Yes.
- Q Would you agree with me, Mr. Walker, that WesternGeco was marketing this potential increased steerage of the Q-Fin 2 to

- respond to the market reaction to DigiFIN and Nautilus?
- 2 A Yes.

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- Q And you would agree with me that you were, consistent with what we discussed before lunch, trying to make something new to Q-Fin that would differentiate it technologically from the rest of the competitive field?
- 7 A Yes.
- Q And clearly you are touting your leadership in the industry at that stage, fair?
- 10 A We had a lot of experience and we wanted to lead on the experience.
- Q All of that experience, in fairness, was a monopoly. You were the only one in the field until late 2007, right?
 - A It had originally been a monopoly. It wasn't at this stage.
 - Q And the reaction from WesternGeco at that point was to say:
 We have been working in anticipation of this new device. We
 are going to give it some new capabilities and tout those
 capabilities?
 - A We were trying to extend leadership, yes.
 - MR. TORGERSON: If we could go to the Elmo, Ms. Loewe. BY MR. TORGERSON:
 - Q We talked about some reasons for losing bids in this industry. And can we all agree that probably the number one reason for losing bids is price?

- A The people who are technologically qualified, price and availability are very important.
 - Q And when you say availability, do you mean availability of vessels?
- 5 A Availability of vessels in the time slot.
- Q What are some other issues for why a company might lose a bid?
 - A Those are the two main ones.
 - Q You had talked about technical requirements, right?
- 10 A In the context of all people being technically equal,
 11 amongst those are the technically qualified.
- 12 Q Can we call it "technical qualifications"?
- 13 A Technical qualifications is good.
- Q And specifically we talked about -- at the beginning, we saw your graphic of the gentleman running into the brick wall.

 Do you remember that?
- 17 A Yes.

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- Q And specifically this is an older version, but this poor gentleman and this poor gentleman didn't have the technical capability and so they didn't get to get to the second stage of negotiation with the company, right?
- 22 A Yes.

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Q All right. Now, one of the technical requirements -- actually, I believe that there are generally three major technical requirements or qualifications. And you described

- those to me before as lateral steering, broadband data and solid streamer, correct?
 - A They are not related, but those are three big drivers at present.
 - Q Fair. And I'm not implying that they are related. I'm just saying those are sort of the three large ticks that you look in the box and say you will typically see three primary drivers, solid streamer, lateral steering and broadband data, right?
- A So the solid streamer is about noise attenuation generally, yes.
- Q Until 2010, specifically with regard to the TASMAN vessel,
 WesternGeco did not have solid streamer capability on any
 Q-Marine vessel?
- 15 A No. We delayed its rollout because TASMAN was delayed.
- Q Why weren't solid streamers put on the other Q vessels before 2010?
- 18 A Because they were already equipped.
- 19 Q And they had gel filled streamers?
- 20 \blacksquare A They had a fluid filled streamer.
- 21 Q What was the fluid?
- 22 A Isopar, Isopar N. My apologies. If I'm going a bit fast,
- 23 I will slow down.

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Q One of the reasons for not replacing the fluid filled streamers with solid streamers is you wanted to age those out

- 1 of -- sort of the depreciation out of your fleet? They were -- we didn't have a problem selling them in the 2 marketplace, so we certainly weren't going to write them off. 3 4 Was there a technical problem, Mr. Walker, with introducing solid streamers to the Q-Fin before 2010? 5 We had some challenges on getting the long-term longevity 6 and we wanted to be absolutely certain of that before we 7 released it into the field. 8 Were there any issues, to your knowledge, sir, about 9
 - Q Were there any issues, to your knowledge, sir, about twisting or spinning problems of the Q-Fin device and its impact on solid streamers?
 - A That was the Q-Fin 2, which would have had the same impact on any streamer. It is fairly complicated technically and you screw it up and tie it up like that, you will do it irreparable damage.
 - Q I guess my question is a little more specific, and let me try to be more clear. In connection with a solid streamer, it would take less torsion or twisting to cause damage to the electrical parts inside than, say, a --

THE REPORTER: I'm sorry?

BY MR. TORGERSON:

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Q Sure. So would you agree with me that in a solid streamer, that twisting or spinning, it would be easier to cause damage to the electrical parts inside a solid streamer than, say, a fluid filled streamer? Do you agree or disagree with that?

- 1 I would disagree and state that I'm not an engineer, so I'm not sure. But I can't see how it would be that different 2 because it is a gel, a streamer is a gel, a reversible gel. 3 4 Fair. And you would agree with me that until 2010 with the TASMAN -- and what month in 2010 did the TASMAN come out with a 5 solid streamer? 6 7 We came out in April 2010. So before April 2010, as it relates to Q-Marine vessels 8 being bid on projects, you would agree with me that WesternGeco 9 10 could only meet two of the technical qualifications and not all three? 11 It would depend upon why the solid streamer was required. 12 13 Because if the solid streamer was a way of reducing the noise -- which it is, it's a big selling point -- then we did 14 that perfectly well with the single sensor approach. 15 You would agree with me that some oil companies, just like 16 you have testified about with lateral steering having primary 17 importance, some oil companies had primary importance of solid 18
 - A I have seen it expressed as a preference. I don't think we have ever lost a job because we don't have solid streamer. It is expressed as a preference because of noise generally.

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streamers?

Q And we have seen in connection -- we will get to the specific document in a moment -- with regard to the Statoil survey and the Chukchi that was lost to Fugro, that WesternGeco

- 1 actually made two bid proposals?
- 2 A Yes.
- Q And one of them was with the TASMAN with its new solid streamer, correct?
- 5 A Yes.
- Q And one was with the TRIDENT with its also solid streamer just made by another manufacturer?
- 8 A Yes.
- 9 Q Specifically Sercel's Sentinel streamer?
- 10 A Yes.

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- Q Was there any thought or discussion within WesternGeco to place its Q-Fin device on its non-Q vessels, specifically the Sentinel streamers, which were solid?
 - A So the Sentinel streamers, no. During the development, we put steerable streamers -- we put the Q-Fin on to the Nessie-4 streamer, which was a fluid filled analogue group streamer.
- Q When did WesternGeco put Q-Fin on its fluid filled Nessie-4 streamer?
 - A That was during development and it would have been '98, maybe '97, something like that.
- Q And since that time, in any commercial setting, any commercial setting has WesternGeco ever deployed a Q-Fin device on a Nessie-4 fluid filled streamer?
- 24 A No. It was a test.
- 25 | Q Coming forward, was there any discussion within WesternGeco

- to place Q-Fin devices on its solid streamers non-Q boats before 2010?
 - A There was a discussion and people looked about whether it would be worthwhile from the point of view of engineering the coupling because a lot of sections have particular coupling and particular requirements and then you go through the other end.
 - Q But to be clear, it was never actually done?
- 8 A No. And I don't think it was tested.
 - Q So if there was a demand for a streamer with lateral steering capability, WesternGeco never really investigated putting Q-Fins on its non-Q vessels?
- 12 A No. We -- it was just on the Q streamer. It was designed
 13 to work with the Q streamer.
 - Q How many vessels are in WesternGeco's fleet today?
- 15 A 16 -- 15.

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- 16 Q And how many of those are seismic vessels?
- 17 A Sorry. Those -- I thought you meant -- those are 15
- 18 3D seismic vessels.
- 19 **∥** Q All right.
- 20 A We have an additional five or six vessels that we use for 21 source of command.
- Q And of those 15 3D capable vessels, how many are equipped with Q?
- 24 A 11.
- 25 Q And of those 11 that have Q, how many have Q solid

- 1 | streamers?
- 2 A Seven.

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- Q What are some other reasons for losing bids? We can talk about -- we've talked about technical qualifications. What are some non-technical reasons or perhaps business reasons why bids
- A We have -- we talk about whether we have -- we have contractual discussions and relationship, and operational experience is very important.

are won or lost, based on your experience?

- Q Especially in a given area that might have peculiar
 specific physical characteristics, like riptides or things of
 that nature?
- A Yes. Obviously I mean lack of operational experience from operational experience.
- 15 Q What about age of vessels?
- A Age of vessels, if they are not purpose built for seismic is a question mark with one oil company at the moment.
- 18 0 Who is that?
- 19 A Total.
- Q Operational experience, I could also add -- for example, I believe you also mentioned business experience, like the
- 22 history of the companies together?
- 23 A Yes.
- 24 Q That's important, right?
- 25 A Hope so.

- Q What else am I missing on the different reasons that a company might lose a seismic bid?
- A We talked about contracts, which is a part of the negotiation. And other than that, I don't -- I can't think of anything else.
- Q You feel like this is a pretty comprehensive list?
- 7 A I would think so, yeah.

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manner.

- Now, you would agree with me that you often don't know why
 a particular bid was won or lost, correct?
- 10 A If we have met the key technical specifications, we will
 11 always try and find out. We will usually find out on price,
 12 where were we on price. Usually find out on availability and
 13 who won. We usually get, with Total, a clear message on vessel
 14 age, so they signal that very loudly.
 - O You had agree -- go ahead. I'm sorry.
- 16 A So we have that mix.

bids are won or lost?

- Q You would agree with me, Mr. Walker, that information is actually rarely available to WesternGeco or even its competitors because oil companies decline to say the reason why
- 21 A It is rarely available in a concise, clear, transparent
 - Q And specifically when you approach them, if an oil company says, Well, here is the reason why you lost the bid, you would agree with me that you can't believe them?

- A We will believe them if -- in general we will believe them what they -- what they will tell us. There may be something else that they don't tell us. We can't possibly know what they don't tell us, but we will believe the words coming out of their mouth. Of course we will.
- Q You are going to believe the words that come out of their mouth?
- A We are going to take them that they are not necessarily out and out lying to us. We may have a view that they are watching what they say carefully.
- Q Mr. Walker, do you remember having your deposition taken in this case in September of 2011?
- A I do, yes.

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- Q Do you remember being asked that very often you don't know firsthand from a client or a customer what their rationale might be as to selecting Contractor A versus Contractor C, D or
- 17 F? Do you remember that question being posed to you?
- 18 A Yes. I personally don't necessarily know.
 - Q And at the time you said, in response to that specific question: No, we don't, we don't necessarily know, right?
- 21 A Yes.
- 22 Q And you continued: And if we asked them, I don't want to 23 sit having made notes and say, I believe what they say.
 - In September 2011, Mr. Walker, you told me you can't believe what they say when they do tell you a reason,

- 1 | right?
- 2 | A Right. What I said is I can't take it absolutely unedited.
- If they say we were more expensive, for example, I would ask
- 4 how much. They may -- I wouldn't necessarily say they
- absolutely give me the number difference.
- 6 Q That's fair. You would agree with me that oil companies
- 7 don't want to divulge to you their decision-making process?
- 8 A They don't want to divulge they -- if they have those
- 9 awaiting on the options, so we have the must have
- 10 | requirements and then the optional or the -- let's say the
- 11 soft -- the evaluation criteria. And they don't generally want
- 12 to tell us how that goes. I would love to be a fly on the
- 13 wall.
- 14 Q That would be a huge advantage to you, wouldn't it?
- 15 A It would be a huge advantage to everyone who's on the wall,
- 16 yes.
- 17 | Q And that is why the oil companies don't divulge that to you
- 18 or Fugro or to the other companies, so that there is a level
- 19 playing field, right?
- 20 A Yeah.
- 21 O All right. In fact, I believe you testified with
- 22 | Mr. LoCascio that the public bids that are opened after the
- 23 | fact are only available in about 10 percent of those
- 24 circumstances?
- 25 A Yes. In that it's very clear.

- Q Now, I want to show you something, if we stay on the Elmo. In connection with your demonstratives from earlier -- Slide 18, I will just show it to you. This is your Demonstrative 18.
- Now, this was the Welling survey from 2002, right?
- 7 A No. It was the Welling survey from 2010. If you look -- 8 if you zoom it up to the corner --
- 9 Q I apologize. 2010.
- 10 A 2010, yes.

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- 11 | Q What is the reference to MRAS 2002?
- Analysis Software, and they launched it in 2002.
 - Q Okay. And so in 2010, you are asking the Question 127:
 The industry also seems to be moving to steerable streamers.
 How much value do you see in the following benefits steerable streamers claim to provide? Scale 1 to 10. And we have talked about all of these operational benefits.

My question to you is: Before 2010, WesternGeco was certainly marketing to these oil companies the benefits and advantages of lateral steering when it was the only player in the market with it, right?

- 23 A Yes.
- 24 Q You would agree with me that WesternGeco was also working 25 to suggest that oil companies put lateral steering as a

- 1 | requirement or a preference in their tenders?
 - A Well, we will propose our technology and seek to influence the customers whenever we can.
 - Q And that would be financially to your benefit to attempt to influence the oil companies by saying, Listen, this lateral steering is so great, let me show you why, so in your tenders, make lateral steering a requirement or preference. That would benefit you as the only player in the market during that period, correct?
 - A We tended to talk about all those four elements of Q and promote them because we were always interested to get the best degree of differentiation that we can.
 - Q And you wanted to transfer or translate that technological differentiation into a dollar differentiation over your competition, right?
 - A Yes. We wanted to get a return on our investment. We want to provide better quality data to our customers.
 - Q Now, you said this morning that lateral steering is a technological barrier to entry. Do you recall that?
- 20 A Yes.

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- Q And specifically with these four gentlemen at the up and bottom of Walker Demonstrative 1, they didn't have some of the technical requirements and were turned away, right?
- 24 | A Yes.
 - Q Now, you recall in connection with the Chukchi survey, I've

told you before -- we have talked about before --

MR. TORGERSON: Let's go ahead and pull up Plaintiff's Exhibit 767.

BY MR. TORGERSON:

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- Q This was shown to others in this case, and I'm going to see if you recognize it. This is Appendix 1, pricing of tender alternative proposal, and it relates to the Chukchi survey.

 Are you familiar with these documents, Mr. Walker?
- A I have seen this, yes.

MR. TORGERSON: All right. Let's turn to the second page, if we can. Let's blow that up.

- 12 BY MR. TORGERSON:
 - Q This, again, is the WESTERN TRIDENT numerical budget example. Again, this was an alternative proposal, right?
- 15 A So we had the -- yes, the multiple proposals.
- 16 Q And WESTERN TRIDENT is a non-Q vessel?
- 17 A Yes.
- 18 0 Not steerable streamers?
- 19 A Yes.
- Q And your testimony with Mr. LoCascio was quite clear that
 the Chukchi survey for Statoil was a lateral steering required
 survey, yes?
- 23 A So we put in -- we like to show the value of the technology, so we put in two alternatives, yes.
- 25 Q And I guess my question is --

1 MR. TORGERSON: If we could switch back to the Elmo, 2 Ms. Loewe. BY MR. TORGERSON: 3 Explain to the jury, then, why WesternGeco, with its 4 alternative proposal, isn't this poor fellow running into the 5 brick wall because if lateral steering is a requirement, one of 6 7 your alternatives is not providing lateral steering? That's why we put in one that is compliant and one that is 8 an alternative. 9 So explain to us why you would try to offer them something 10 that they are not asking for that would be, to use your own 11 words, a technological barrier to successfully earning that 12 13 bid. We just like to show the incremental value of the 14 technology. If you look at the Q proposal on that --15 Sure. 16 -- we were suggesting also different ways of acquiring the 17 project. We suggested -- and there is a separate document 18 there, which is more of a marketing document, which you may or 19 may not have, of different ways of doing it in order to reduce 20 the survey time. And one of them was Fan-Mode, for example. 21 So we just wanted to give our customer as many choices but 22 ensuring that the one that is prime bid is technologically 23 24 compliant. Do you remember that the non-Q bid was for 25 Back to 767.

- 1 | 27,731,000, right?
- 2 A I remembered the round numbers, yeah.
- 3 | Q And if we go to the third page to contrast that 27,7 number
- 4 to the one for the TASMAN, which is your Q vessel, the bid was
- 5 | for 28,871,000?
- 6 A We'd acquire it a great deal quicker in our estimation with
- 7 | Q, yes.
- 8 Q And specifically the estimation of the acquisition for the
- 9 Q was going to be in about 63 days. Is that fair?
- 10 A I don't -- I don't recall. I have looked at this. I don't
- 11 recall the detail, if it is on the --
- 12 MR. TORGERSON: Pull back, if we can, Mr. Carlock, to
- 13 right here.
- 14 BY MR. TORGERSON:
- 15 | Q Tell me if I'm reading this right. The print is very
- 16 small, and it is not my document.
- 17 A The print is very small, isn't it?
- 18 \mathbb{Q} Right here, 63.3, and that is \$1,472 per day. Am I reading
- 19 | that correctly?
 - MR. LOCASCIO: Would it help if the witness has a copy
- 21 of this?

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- 22 MR. TORGERSON: That's fair. He can look at mine.
- 23 THE WITNESS: Thank you.
- 24 BY MR. TORGERSON:
- 25 | Q You see that it is 63 days approximately and that is

- 1 contrasted with the TRIDENT non-Q survey --
- 2 A 63 days, yeah.
- 3 | Q Versus 72.4 days or 72.6 days?
- 4 A Yes.
- 5 Q Am I reading that correctly?
- 6 A Yes.
- 7 Q Okay. So to be clear, the TASMAN, the Q survey was
- 8 expected to be 63.3 days and the TRIDENT non-Q was going to be
- 9 | 72.6 days?
- 10 A Yes. Can I just look at this?
- 11 Q Absolutely. I want to make sure I'm right.
- 12 A So that is the operational time. It is the time when we
- 13 | have got -- the link there is the PAM system operator, who is
- one of the onboard supports. But yeah, yes.
- 15 0 Okay. And including that -- or taking that time
- 16 differential into account of approximately nine days, it is
- 17 about a \$1.1 million price difference, more for Q?
- 18 \parallel A Yeah. What we would need to check is whether this is the
- 19 Fan or the baseline. I'm not certain.
- 20 Q That's fair. But when we go and look at your example, back
- 21 \parallel to the Elmo with Mr. LoCascio from earlier this morning, do you
- 22 remember this diagram?
- 23 | A Yes.
- 24 Q Where the notion was you could do a lateral steering survey
- 25 | faster and get more work in, you would agree with me if we look

at this possibility here that has a couple of assumptions.

One of the assumptions is that another job is waiting for WesternGeco?

- A Yes. That's an assumption.
- Q Another assumption is that WesternGeco would secure that survey, such that it could leave survey 2 and go to survey 3, right?
- A Yes.

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- Q And that's a bid process, that you have told us before lunch, WesternGeco is successful about 25 to 30 percent of the time?
- A So that's a global number. This was, for example in the North Sea, where once you have secured work, you would look to secure further work behind the vessel.
- Q And you would agree with me that from 2009 to 2011, and perhaps even today, that the demand isn't there such that jobs are not waiting for you back to back to back?
- A So we have very little dead time on the vessels. In 2011, we had a little bit of dead time in 20- -- 20- -- at the end of 2011 we had some planning lost time, but many people in the industry have planning lost time. But apart from that, our vessels were fully occupied.
- Q And that's a good point. Let's talk about your capacity.

 You would agree that the recession had an impact
 not just on the entire seismic market, but also on WesternGeco,

- right?
- 2 A Yes.
- 3 \parallel Q And specifically, the total seismic spend was down
- 4 **∥** 30 percent in 2009 versus 2008, right?
- 5 A Yes.
- 6 Q And you would agree with me that there were two obstacles
- 7 | facing the industry: Number one, fewer surveys, right?
- 8 A There were fewer surveys, yeah.
- 9 Q And everybody, all the big players, PGS, CGGV, and
- 10 WesternGeco, reduced their vessel fleet size as a result of
- 11 that?
- 12 A Yes. We are taking Q off three of our boats.
- 13 Q And there was also a lower price?
- 14 A Yes.
- 15 Q There was essentially a price war for the work that was
- 16 available, right?
- 17 A It was -- the margins went down. I suppose you could call
- 18 it a price war.
- 19 Q The margins went down for WesternGeco by 50 percent, didn't
- 20 | they?
- 21 A Yes.
- 22 | Q So you would agree that in 2009, comparing revenue versus
- 23 2008, it was a 50 percent drop that was a direct result of
- 24 competition over fewer surveys. Yes?
- 25 A It's a combination of things, but it's -- certainly the

entrance of FUGRO into the market meant that we were competing on the steerable -- lateral steering market, where we hadn't been doing so before.

Q All right.

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MR. TORGERSON: I'm sorry, Ms. Loewe, for the back and forth. But if we could go to the computer and pull up ION Exhibit 271.

THE WITNESS: Thank you.

BY MR. TORGERSON:

Q This is a PowerPoint update to the board. We will get to the data in a second.

It was prepared by you or in part by you for Mr. Kibsgaard, correct?

- A It was, yes. I -- I made at least some of these.
- Q All right. And if we could turn to the third page overview, talking about trends, marine update, and the outlook for second quarter 2009.

Would you agree with me that this PowerPoint relates -- or was prepared in approximately the first third of 2009?

- A Yes.
- Q Now, you would agree that -- that the recession really trickled into the oil and gas industry in about 2008, when commodity prices dropped like a rock?
- A That's -- yes. The end of 2008, yes.

- 2 You would agree with me -- or do you recall the heavy days 2 in the summer of 2008, when the price of oil per barrel was
- 3 about \$145?
 - A Yes.

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- Q And do you remember that by November of 2008 that oil had dropped below \$60 a barrel?
- 7 A Yes.
- 8 Q All right.
- 9 MR. TORGERSON: So let's go to the fourth page. I 10 apologize. Right there.
- 11 BY MR. TORGERSON:
- 12 | Q Seismic market trends, impact of downturn.
- 13 A Yes.
- Q We see right here the seismic spend '95 to 2009, and we see some dollars.
- 16 A Yes.
- 17 Q Is this total seismic including land, OBC, marine,
- 18 combined?
- 19 A It's land, OBC, and it's the companies who report to a
 20 financial authority somewhere so that we have got public
 21 figures, and it excludes equipment manufacturers.
- Q All right. And we see here "Total spend down 30 percent versus 2008"?
- 24 A Yes.
- Q And we see that some small competitors are struggling, for

L	example,	ION?

A Yes.

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- Q Do you remember that in the first quarter of 2009 that ION, as a company, was struggling?
- A It was our understanding at the time that that was related to the GXT business, the data processing arm of ION.
- Q And this last bullet here says: "Overcapacity in marine becoming evident."

And this relates to the issue that there's less surveys and too many boats hanging out there. And this is when the big three decided to pull some vessels from their fleets, right?

- A Yes.
 - Q Send those Q-boats to dry dock or whatever, right?
- A Well, we derigged three Q-Marine vessels and a couple of conventional vessels.
- 17 Q And we see that on the next slide, in the upper portion.

This is specifically on the total marine market vessel outlook for April. PGS reduced five vessels, CGGV reduced four vessels, and WesternGeco had a net reduction of four vessels, right?

A Yes.

MR. TORGERSON: If we could go three more pages
forward, Mr. Carlock.

Next one, please. I'm sorry, bidding and

WESTERNGECO Exhibit 2100, pg. 196

PGS v. WESTERNGECO

IPR2014-01478

1 pricing. It's page 7488.

BY MR. TORGERSON:

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- Q And we see here, with regard to the bidding and pricing, again in the first quarter of 2009, that there's an overall bidding level drop of 40 percent in 2009 versus 2008, right?
- A There was, yes, at that point.
- Q And we see WesternGeco pricing trends: "Pricing now reduced by 50 percent versus third quarter 2008."

So in the span of about six months, WesternGeco had dropped its price for marine surveys, presumably Q and nonQ, by 50 percent, correct?

- A Yes.
 - Q And we see under the success rate, low success rate in recent quarters. And we know that your standard is about, historically, 25 to 30 percent success rate, right?
- 16 **A** Yes.
- Q And you wanted to reestablish that 30-plus percent win rate, right?
 - A So in fact, on this we kept -- we had a go at keeping our prices up through Q4, through Q1 2009. And at that point, given -- you see it's the board meeting -- we were signaling to the board that we would have to move significantly on pricing.
 - Q And that's a classic reaction to the larger industry problems, which is when the oil companies tighten their belts, they are more interested in production of established fields

- 1 \parallel rather than in exploring new areas, correct?
- 2 A (No verbal response.)
 - Q This is a cycle that you've seen in the industry several times?
 - A Yes.

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- Q All right. And the reality is, because of the recession that hit at the end of 2008, 2009, and 2010, and perhaps even in 2011, were in the low part of that cycle, the trough, if you will?
- 10 A It was the trough --
- 11 Q All right.
- 12 A -- exacerbated by the loss of that market we had.
- Q And this led WesternGeco to increase the monitoring, the level of intelligence on its competitors.
 - Would you agree with that?
 - A We -- we monitor what our competitors do. We always have monitored what our competitors do closely, so I wouldn't necessarily say there was an increase at that point.
 - Q Well, something new was put in place in 2009 with regard to DigiFIN, right?
- 21 **A** Yes.
- 22 Q Yeah. Specifically ION Exhibit 207, we have an email.
- MR. TORGERSON: If we could highlight the top portion,

 Mr. Carlock.

25

- 1 BY MR. TORGERSON:
- 2 \parallel Q From Andy Coutts to a list of people that includes you,
- 3 right --
- 4 A Yes.
- 6 A Absolutely, yes.
- 7 Q And it says: "DigiFIN activity tracking. Importance,
- 8 | high."
- 9 A Yes.
- 10 Q Do you see that?
- 11 A Yes.
- 12 Q Let's scroll down to the bottom half and see this email
- 13 here.
- MR. TORGERSON: And if we could include the chart at the bottom, too, that would be good.
- 16 Thank you.
- 17 BY MR. TORGERSON:
- 18 Q This is an e-mail from Rob Ross to a long list of people on
- 19 May 8, 2009. It says: "Folks, to strengthen our understanding
- 20 of the adoption of DigiFIN, we urgently need the following
- 21 | information for presentation to management. Please check with
- 22 your teams, marine sales managers, and recent DP tenders" --
- 23 that means data processing tenders?
- 24 A Data processing, yes.
- 25 Q -- "DP sales managers, or with your client internal

communications, GAMs and others, and complete ASAP, preferably today, and e-mail back to me. Please check, particularly DP sales, that I have not missed someone crucial from the list."

And we see the fields that were asked to be filled out. And specifically, these were competitors using DigiFIN, right?

A They are, yes.

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Q Competitor name, vessel name, spread, client, location, percent certainty DigiFIN, and any other details like steering methodology.

Why was WesternGeco suddenly interested in tracking the specific activity of DigiFIN use in May of 2009?

A Because FUGRO, where ION had proven you could do lateral steering without -- with our way of doing it and it was, therefore, a very everyday commercial threat, to my understanding.

- Q You would agree with me by May of 2009 Sercel's Nautilus product was also in the market and also eroding your position, correct?
- A That had really just been introduced at that stage. It had been out on the trade shows. We didn't, at that stage, have evidence that it was actually being used.
- Q And other companies besides FUGRO were using DigiFIN, including PGS, right?
- 25 A The DigiFIN, yes.

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

WESTERNGECO Exhibit 2100, pg. 200

PGS v. WESTERNGECO

IPR2014-01478

Q All right.

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- A This, as you can imagine, was linked to the -- because the -- this issue between us had just started at that stage, and this was part of trying to check the information.
 - MR. TORGERSON: ION 236, please.
- BY MR. TORGERSON:
- Q Do you recognize this Comp Watch form?
- 8 | A I don't recall it, but I'm sure I would have seen it.
- 9 Q Well, at the top part -- you've seen some of these before
- 10 in the trial. But this is a template that WesternGeco
- maintains to get feedback on its competitors at various events,
- 12 correct?
- 13 | A Yes.
- 14 Q And this is specifically related to the 2009 SEG, which was
- 15 | in Houston, right?
- 16 A Yes.
- 17 MR. TORGERSON: And if you'd go to the last page,
- 18 Mr. Carlock.
- 19 BY MR. TORGERSON:
- 20 Q We see here that the contributors are three: Rob Ross, Ken
- 21 Walker, and yourself?
- 22 A Yes.
- 23 \parallel Q Do you recall contributing to this report related to PGS at
- 24 the 2009 SEG?
- 25 | A I would have done -- I would have been -- Rob Ross reported

to me, so I would have been supporting him.

MR. TORGERSON: If you'd go to the second page of this document, Mr. Carlock.

BY MR. TORGERSON:

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In this top paragraph here it states: "Kongsberg released eBird, a steering solution for GeoStreamer."

GeoStreamer is PGS's proprietary streamer?

- That's their streamer, yes.
- And it reads on: "It was not entirely clear how this solution generated less noise than the already rejected DigiFIN."

Do you know what is meant there by the "already rejected DigiFIN" by PGS?

- It was our understanding that the original test with DigiFIN hadn't worked with the GeoStreamer. That's what we understood to be the case. Or what -- why it didn't work we didn't know, but that was our understanding.
- And you understood at the time that PGS, as one of your major competitors, was moving on to another device to enable lateral steering, which was the Kongsberg eBird device?
- A And we looked at the Kongsberg, and we looked at the Sercel, and we were very interested to understand exactly how they both worked from the point of view of assessing whether we thought they infringed, as well.

THE COURT: And Kongsberg, for the reporter, is

Mayra Malone, CSR, RMR, CRR

mayramalone@comcast.net

K-O-N-I-G-S-B-E-R-G (sic). EBird is E-B-I-R-D.

MR. TORGERSON: If we'd go to the next page of this document, Mr. Carlock.

BY MR. TORGERSON:

PGS do not seem to have a defensive patent strategy.

Everything they publish they seem to at least try. This is in contrast to WG. Therefore, future PGS innovations can be predicted accurately from the patents they publish."

This page right here: "An interesting PGS observation.

What does this mean, sir?

A So when we engineer something, because we do a lot of engineering, not everything works. And our strategy is to patent the things that we may -- all the possible approaches we may use, and then we'll see which one we do use, and then we'll maintain the patent of the one we do use.

In contrast, PGS seems to patent at a later stage.

- Q So when WesternGeco comes up with an idea, even if it's something they decide perhaps even early on that they choose not to go down that road and build that project, WesternGeco has a strategy of defensively filing patents to block its competition, correct?
- A No. It is not to block the competition, really. It's to make sure that we, in our own side, are not blocked by the competition filing something that we are working on.

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

IPR2014-01478

- Q All right. Is it your understanding that WesternGeco intends to continue the expansion of Q-Marine across its entire fleet?
- A We would certainly plan to do that, yes.
- Q And you testified with Mr. LoCascio that you certainly think that lateral steering remains a requirement, right?
- A Absolutely, it does.
- Q And you also testified, I believe, that you think that
 WesternGeco will continue to operate more streamers spaced even
 closer together in the future.
- A We will -- well, with the streamers we've got today,
 50 meters, with the length we have got, that's probably about
 the limit.
- Q But you think that lateral steering on a go-forward basis is critical to maintain that small spacing?
- 16 A Yes.

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MR. TORGERSON: May we approach, Your Honor? We have a limine point.

THE COURT: Yes.

(At the bench)

MR. TORGERSON: In deference to your rulings, we had raised an issue of Isometrix, which is a new product offering. It has nothing to do with damages, but I think the door has been opened by the direct examination of Mr. LoCascio to Mr. Walker to show that their new product solution is not to

Torgerson Cross of Robin Walker have more streamers spaced closer together, but it is actually 1 2 fewer streamers --THE COURT: This goes to lost profit and damages? 3 MR. TORGERSON: It relates to also his credibility as 4 to what he just said. It is impeachment of the point. 5 MR. LOCASCIO: Mr. Torgerson I think at the beginning 6 7 said it doesn't go to damages --THE COURT: One at a time. 8 MR. LOCASCIO: It doesn't go to damages. I don't 9 think their position is it does. 10 MR. TORGERSON: Here's the point: It's not a 11 historical look back. It doesn't relate to the damages being 12 calculated. 13 What we are saying is, and what we have already 14 seen on some issues, is this is a natural art and a product 15 line that is toward the end of its life, and they have moved on 16 to the next product. The jury needs to hear that. 17 They have just heard that this is going to 18 19 continue and we are going to keep doing this, and a month and a 20 half ago they told the world they are not. We are entitled to explore that. 21 MR. THOMPSON: I think this does go to damages, 22 23 because the life shows --

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

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it.

THE COURT: I'm going to allow it. I'm going to allow

(Open court)

- 2 BY MR. TORGERSON:
 - Q Mr. Walker, in connection with the EAGE meeting in Copenhagen -- in June of 2012, right?
 - A Yes.

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- Q WesternGeco launched its new technology called IsoMetrix, right?
- 8 A Yes.
 - Q Explain IsoMetrix in 30 words or less.
 - A Let me see. So IsoMetrix is a stream- -- a new streamer that takes different measurements which will be able to reconstruct data between the physical streamers by actually bouncing energy off the sea surface, which the sea is a mirror.

So that means we will be able to create a fine grid of measurements and finally address this cross-line sampling challenge, which still remains a bit of a challenge.

MR. TORGERSON: If we could go to the Elmo, Ms. Loewe.

For the record, I will mark our list of reasons for losing bids as Walker ION Demo 1, and I will mark this new document as Walker ION Demo 2.

- 21 BY MR. TORGERSON:
- Q One of the aspects of IsoMetrix -- did I spell that correctly?
- 24 A We will fight about branding.
- 25 Q Is that registered? Fair enough.

(Laughter)

BY MR. TORGERSON:

- Q With regard to IsoMetrix, it might actually discount the importance of lateral steering in complex surveys, correct?
- 5 A No.

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- Q You don't think that this new technology will discount the importance of lateral steering in complex surveys?
- 8 A It will extend it.
 - Q Well, in particular, part of the thing with IsoMetrix that's sort of one of the advantages of it, is that WesternGeco now claims it can create virtual streamers at closer spacing distances, correct?
 - A Yes.
 - Q And so if we normally have our vessel here and our streamers at 100-meter standard spacing, what IsoMetrix is intended to do is to allow you to run actually fewer streamers that would be able to reconstruct virtual data down to six and a half meters, correct?
- 19 A And the cross-line spacing, yes.
- 20 Q So in other words, at six-and-a-half-meter spacings, it's
 21 like you've got all of these virtual streamers in here along -22 across --
- 23 A We treat it as a grid of data, yes.
- 24 Q I'm sorry?
- 25 \parallel A We treat it as a grid of data. We think about it as a grid

- 1 of data.
- 2 \mathbb{Q} And the point here is that you don't -- you can actually
- 3 | run fewer streamers across the width of the array to get an
- 4 even better sample, right?
- 5 A But you still need to know where they are, and you still
- 6 need to put them where you need them to be, yes.
- 7 Q And this virtual streamer spacing that's essentially
- 8 extrapolated after the fact. Is that fair?
- 9 A It's reconstructed on board, but, yes.
- 10 Q Okay. And that leads to a much denser data acquisition
- 11 than even your single-sensor technology, right?
- 12 A Yes.
- 13 \parallel Q Now this would reduce the need, in a 4D context when we
- 14 talked about repeatability, to place the streamer in exactly
- 15 the same location as the baseline survey, right?
- 16 A No.
- 17 \ 0 You don't think so?
- 18 **A** No.
- 19 Q All right.
- 20 A If you are going to -- the big benefit of this is if --
- 21 | let's take your -- this is a baseline. Okay.
- 22 0 Sure.
- 23 | A Let's call this is a baseline, and I want to repeat that
- 24 | baseline. Now, let's -- assuming that's imperfect. Streamers
- 25 are a little bit all over the place.

Where I am today, if I'm an oil company, I'm coming -- I have a decision. Do I want to have a 4D, which attempts to replicate the baseline, or do I want to wave good-bye to that investment and a 4D which is a perfect baseline going forward?

So what we have said with IsoMetrix is you don't have to make a compromise.

Could you bring the Elmo here and I'll draw on it?

- Q You can come up here if you want to.
- 11 A Okay.

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- 12 Q It's all yours.
- 13 A Okay. So here (indicating) is my baseline survey.
- 14 0 Sure.
 - A Now, my exact location of the streamers, if I'm going to have a new baseline and I'm going to be backwards compatible on that, then my new spread has to make certain that it's outside and completely contains the underlying spread within it.
- 19 So -- can I have a new sheet of paper?
- 20 Q Sure.
- 21 A I will let you label this after.
- 22 Q Sure.
- 23 A So let's say my underlying spread at one point looks like that (indicating).
- 25 So at one point the underlying -- if this

(indicating) is line 1 and that's (indicating) line 2 -- am I losing everyone? That's line 1 and line 2.

So line 1 on the underlying survey was shot when the streamers were feathering to port, to the left; and line 2 was when the streamers were feathering to the right, a nonsteered one, or a -- a difficult controller.

So if I come back with IsoMetrix here (indicating), I must do one of two things: Either do that (indicating) or do, maybe, that (indicating).

And then when I come with the second pass, I have to be able to steer from that to the new spread. And I'm making a little bit of a mess of that, so I apologize.

- Q That's okay.
- A So in fact, we are looking at having steerable birds every 200 meters instead of every 400 meters.

I know it seems counterintuitive, but it's the exterior spread which we have to manage.

Q Okay.

- 19 A And we also have to manage the streamers within it.
 - Q And you would agree with me, though, that the streamer spacings in the second survey using IsoMetrix can actually be further apart than the 100-meter spacing than baseline, and you can extrapolate finer detail within?
 - A Well, we've -- we've tested it to 75 meters, and we would hope to go further. So I would say yes to 75 meters. I

- 1 \parallel wouldn't yet go beyond that.
 - Q Okay.

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- A That's our business goal.
 - Q Okay. Fair enough. And with regard -- please have a seat.

With regard to your business goal, you would agree with me at the EAGE, there was some discussion about getting down to 6.5 meters?

A So the idea is the grid output is at 6.25 meters in both directions. That -- that's -- geophysically, that is a point receiver. So that's -- once you have got to that grid size, the earth is not going to give you back any finer information. So you know, this is as close to a perfect data search as can you get.

- Q And this used to be called, in its R and D days within WesternGeco, as Nessie-6?
- A Nessie-6, yes. It is still -- the streamer itself is called Nessie-6. IsoMetrix is the branding.
- MR. TORGERSON: And this, for the record, is marked as Walker ION Demo 3, demonstrative 3.
- 20 BY MR. TORGERSON:
- Q Is this -- and would it be fair to characterize this new technology, while -- clearly, you think it's a game changer, right?
- 24 A I hope so.
- 25 | Q All right. This is your new technological differentiation

- 1 | from the market, right?
- 2 A Yeah.

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- Q Nobody has this, right?
- 4 A Not at the moment.
 - Q Okay. And you would agree with me that this is, in a sense, oversampling, a -- a 2012 version of what the industry has called oversampling before?
 - A Yes. So what we are hoping is, by having this very fine sampling that we will -- we have ideas on how to process this data, and our customers have ideas on how to process the data.

If you talk about oversampling, we would say six and a quarter is correct sampling.

- Q Okay. Are you familiar with PGS's HD3D offering back in the mid 2000s?
- 15 A Yes.
- 16 | Q Was that an approach to oversampling?
 - A That was still undersampled, because they were -- that was a branded approach to streamers 50 meters apart.
 - Q Now you would agree with me, Mr. Walker, that at the end of the day, based on what we have talked about for reasons for losing bids and that you might not necessarily be able to believe the oil companies when they tell you why, you would admit, would you not, that you don't ultimately know the reason why oil companies select another company other than WesternGeco
- 25 for a particular survey?

A We some- -- well, sometimes we know. We talked about the 10 percent where it's clear.

We know if we've met the technical, the must-have technical specs written in the tender.

We know if we've not met the technical requirements, for example on broadband. If we haven't got a broadband offering, that is -- then that would be very clear. We don't win all of them.

- Q And is WesternGeco taking the position in this lawsuit that every survey bid that it lost between today and before, that had a preference for lateral streamer steering, was because of ION's DigiFIN or some other competing technology related to lateral steering?
- A No. It's a very small proportion of them.
- Q And in fact, you don't know the reasons from these companies?
 - A What they are saying is there were -- as I understand it -- 200-something projects, and we're just looking at the 25 where lateral steering was required.

And if there had not been anyone else in the market to provide lateral steering, then we're saying we would have won those projects.

Q And that lateral steering, that might be a dominant component or it might be a smaller component. You just don't know how those companies are weighting those decisions, right?

- A What we are saying, looking at it, is we believe those are that is a technological barrier. From what we have seen in the tender documents, what we have seen as a requirement, lateral steering is a must-have, and other qualifications are nice to have. The weighting will be on the nice-to-haves and not on the must-haves.
- Q Do you recall, when I took your deposition in September 2011, Mr. Walker, I asked you that very question?

And you answered, in talking about the components, and you admitted that you don't know the reasons and the weights that oil companies provide to lateral steering.

A I said -- no. I said, in general, we would -- if it's -- let me clarify.

In general, if it's not written in the tender as a requirement as a must-have, then if there are multiple requirements, that is one of them. And we can't say what the weighting is at this distance.

If it's a definite requirement in the tender, then we say that is a priority.

- Q So with regard to these 25 surveys that you are claiming lost profits on, can you confirm for me that every single one of those surveys took place more than 12 miles outside the coast of the United States?
- A If that is relevant to the extent, yes, as far as I know.
- O You can confirm that every one of these surveys of these

	Thompson Cross of Robin Walker		
1	lists of lost profits, 25, they all occurred more than 12 miles		
2	outside the U.S., yes?		
3	A They offshore?		
4	Q Yes.		
5	A No, you said outside the U.S.		
6	Offshore, the coast.		
7	Q Off the coast. 12 miles off the coast of the		
8	United States, yes.		
9	A Yes.		
10	MR. TORGERSON: I pass the witness.		
11	CROSS-EXAMINATION		
12	BY MR. THOMPSON:		
13	Q Good afternoon, Mr. Walker.		
14	A Good afternoon.		
15	Q We haven't had a chance to meet. My name is James		
16	Thompson. I'm representing Fugro-Geoteam.		
17	You will be happy to know that Mr. Torgerson has		
18	covered most of my areas of inquiry, so we will be quicker.		
19	I want to follow back up, if we could, and go		
20	back and talk a little bit more about the Statoil job.		
21	A Yes.		
22	Q If I understood your testimony correctly, you indicated		
23	that Statoil was one of the early adopters of streamer		
24	steering, correct?		
25	A Yes.		

Thompson Cross of Robin Walker

- Q And I believe you testified that as of 2001, they started making streamer steering a requirement, correct?
- A They certainly did at the time on 4D, yes.
- Q Okay. What about the 3D?
- A When it's not for field development, if it is exploration.

 At that time, in 2001, they talked to us about 4D because that was most of the business they were doing with us.

I don't think we discussed 3D with them in exploration until about 2006, 2007.

- Q Okay. So if WG lost jobs -- or we can agree that up until 2007, no other seismic provider was offering lateral steering, correct?
- A Yes.

- Q So if WG lost 3D jobs offered by Statoil to other providers prior to 2007, you would agree it had nothing to do with whether Statoil required lateral steering?
- 17 A I would say I don't know why.
 - Q But if they had a requirement for lateral steering, and you were the only provider and they didn't pick you, wouldn't that lead you to believe that it wasn't really a requirement for 3D? A Well, Mr. Torgerson was talking to me making the point that if it's -- if it's a preference rather than a requirement, I don't know what the weighting is. And I've already said I don't know what the weighting is if it's a preference.

Now, they stated -- remember that -- that I said

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

IPR2014-01478

we got a direct award, which we did, a five-year -- which occurred in 2001 through 2006.

So the technology was written in that that it's a direct award. So I couldn't necessarily say it is or it isn't for something that was tendered.

- Q What about -- staying on that subject, you indicated Total made it a requirement in 2004. Was that for just 4D surveys as well, or was that for all surveys?
- A That was -- they said for 4D at the time. And then in the technology adoption it starts here, and then you look and you say, okay, well, we wanted that.
- Q Okay. So again, if Total was awarding 3D surveys to other seismic companies besides WG before 2007, you would agree that would lead you to believe it wasn't a requirement for 3D?

 A It would depend. Same answer. It would depend upon what the weighting is.

And also, a 3D may also be a baseline 4D.

Q Okay.

A So a finely sampled 3D, for -- for example, if you've got 50 meters between the streamers, that's probably for what we call development. So a customer is going to spend a lot of money developing a field, and they want the best resolution data to do that.

So there may be a 3D where streamer steering will be either a preference or a must-have, or there may be one

- where they -- a 100-meter streamer where they may say it's not so important.
 - Q Did I hear you correctly that that's how you described the Chukshi Sea survey for Statoil, that it would be one of those that was going to be a baseline, you believed?
 - A For -- I think for Statoil, they -- they make the position that every 3D is a potential baseline 4D.
 - Q Okay. So then let's -- let me back up, then, to Statoil.

So if -- as of 2001, it's your testimony they had a requirement for 4D, and a requirement for any 3D that might be a baseline. But what you just said is all of their 3Ds are going to be baselines.

Do you know whether or not Statoil awarded all of their 3D surveys to WG between 2000 and 2007?

- A No, I don't know that.
- Q Okay. Would -- would you be surprised if they awarded surveys to other seismic companies besides WG?
 - A No, I wouldn't.

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- Q Okay. And would you agree that those seismic companies during that time period performing 3D surveys for Statoil would not be using lateral steering?
 - A I -- I would expect -- I'm not exactly certain of the introduction when -- DigiFIN, I think was introduced a little earlier, and I now understand that it was definitely used by PGS earlier.

So I'm not going to say that no one had it available. We are talking about big market adoption.

Q Okay. So let's back up to the Chukchi Sea survey.

Is it your opinion that that was the -- Statoil says all 3Ds are baselines, or did they specifically say this is going to be a baseline for a future 4D survey?

A I think Statoil, when -- in the conversation I had with Peter Sable, they -- they did want it to be a 4D baseline. But I think the main reason they wanted streamer steering was because it was in the arctic. And in order for -- to be efficient, and they -- they liked the idea that we proposed on doing fan mode, and that would -- that would be more efficient in the survey. And then we would have that -- as they would have that as an efficient -- efficiency thing rather than necessarily a data quality thing.

Q And I believe earlier, with Mr. LoCascio, you looked through Statoil's request for coil, and it didn't specifically require lateral steering, but you pointed to some sections that led you to believe it was a requirement.

Do you remember that?

- A I -- yes. And I also made the comment that we proposed to do fan mode which, in fact, your clients did operate it in fan mode, which does require lateral steering. So lateral steering was required on the project.
- Q And what do you base your knowledge on that Fugro used fan

1 \parallel mode on the Statoil survey?

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- 2 A I understand from -- from information that people have said 3 to me that it was.
 - Q Do you recall who told you that?
- A I don't. I think it was one of the legal team, apparently, that was something in discovery.
 - Q So that isn't anything you would have learned out in the industry or that would have been on your CRM database?
- 9 A The CRM database didn't include a reference to fan. I
 10 think the -- the other place that fan came from was from the
 11 global account manager.
- 12 Q Now, when the tender -- when WG responded to the Statoil
 13 tender, or request for quote, were you in a position that you
 14 had to approve the tender that was going out the door?
 - A I didn't have to approve that one directly. I think it was -- Tom approved it. I didn't have to approve that one.
 - Q Okay. Do you know, based on your testimony that Statoil was going to use this as a baseline, that they wanted fan mode, and that they required lateral steering -- this was shown earlier to the jury, Plaintiff's Exhibit 746.

This was WesternGeco's base case proposal for the Statoil job.

Earlier, you testified that in the alternative proposal Mr. Torgerson showed you, that you offered a nonQ vessel to show off your Q differentiation and to show off the

1 value of Q.

A Yes.

Q Do you know why, in the base case scenario, that WG submitted a nonlateral steering vessel, given everything you have said, that Statoil requires lateral steering, that this was going to be a baseline 4D survey, and that they wanted fan mode?

A I think, since I did -- you have asked me a question. I didn't approve it directly. I think the salesman was probably making the point, because Q had a reputation for being expensive, which we discussed.

And we had moved, so that the cost was very comparable to products -- in our view -- products without streamer steering.

And our approach here, I think -- and I'm thinking -- was that we wanted to make a point that lateral steering, despite maybe a higher kilometer rate -- and I haven't gone through this -- would end up in our model being pretty much the same cost.

- Q Before seeing this base case right here, were you aware that WG submitted a base case proposal with a nonlateral steering model?
- 23 A No, I wasn't.
 - Q Would you agree that it is important, in responding to a tender with your base case, your first offer, that you meet all

- of the technical requirements that you believe the E&P company is asking for?
 - A I believe in one of the offers you put in, which have equal -- all the offers had equal stages -- you must have one that is compliant.
 - Q Okay. So you don't believe that by submitting this base case proposal that WG is going to be one of those poor fellows hitting the brick wall?
 - A Our relationship with Statoil is good enough that they will -- would understand that this -- by "base," I think we mean low end rather than primary or secondary in any way.
 - Q Well, I understand that's your position. But you would at least agree with me somebody within Statoil, when responding to this request for quote, felt that a nonlateral vessel met all of the technical requirements asked for by Statoil, correct?
- 16 A No.

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- 17 0 You don't believe so?
- 18 A I'm not saying -- I'm not saying it met all the technical
 19 requirements. I'm saying it was put in as an al- -- as a
 20 demonstrative alternative.
 - Q So you believe the base case proposal is a demonstrative alternative?
 - A I think that all -- what I said is they are all equal stages. There's no A has priority over B has priority over C. We put our shop, we -- we are showcasing our technology. We

- are putting the shop out and we're putting -- letting the customer choose.
 - Q Do you think it was a mistake to make your base case a nonlateral vessel?
- A I don't think it made any difference. I think it will have demonstrated that the uplift for Q was -- was very limited --
- Q If you --

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- A -- and the efficiency of the project would bring the value.
- 9 Q If you were submitting this proposal again today, would you 10 make your base case scenario a nonQ vessel?
 - A I don't know that I would, I don't know that I wouldn't.

In -- in terms of the relationship with Statoil, we have known Statoil for years. We've been talking -- as I said, we have been talking to Statoil for nine months about this project, so we knew absolutely what -- what they wanted.

This is a little way of demonstrating that -- to my understanding -- a little way of demonstrating that Q really doesn't cost that much more, which was a point we wanted to make in 2009.

- Q Okay. But you agree you made that point in the alternative proposal, as well. So it wasn't necessary to make the point that Q is not that much more expensive twice, because you already made that point in your alternative proposal that you looked at with Mr. Torgerson.
- A Well, without a base -- without a comparator -- because if

we said the $$ the Q we turned to was 28 million, and this
case, this nonsteerable is 27 million. Without putting in the
27 million, then it may well be that our customers would still
have thought, wow, you know, that's 27 million of the the
base would have been 16 million or something. I don't know.
Q Do you see here on the bottom the base case here was
actually 29 million?

A Okay. I wouldn't -- yeah.

MR. THOMPSON: If we could pull up Walker Demo 20, please?

THE COURT: Do you have much more?

MR. THOMPSON: Yes, Your Honor, not near as long as
Mr. Torgerson but probably --

THE COURT: Do you-all need a break?

Okay. Would all please rise for the jury.

(Jury not present)

THE COURT: Once again, I'm grateful to have so many good lawyers in the courtroom and I appreciate the obviously extensive efforts of everyone to be prepared. I do think we continue to strap an awful lot on the jury. I really do. These are witnesses who are on for — this is one witness we have had today and he has been on for an awfully long time.

I don't mean to pretermit anyone's cross, but I do ask you to imagine yourself as a juror in this case and continue to try to be as short and simple as you can be in the

1 | examination.

These are important points. I'm not inclined to interfere, but I am mindful of the jury's time and attention.

Okay. Thank you very much.

(Court recessed at 2:10 p.m.)

(Court resumed at 2:23 p.m.)

(Jury not present)

THE COURT: What is the issue?

MR. Locascio: The issue is questions relating to indemnity, discussions between ION and Fugro about who would pay in the event of infringement. We briefed this in response to a motion in limine that Your Honor didn't grant at the time. Their case is in this context that say it relates to particularly willfulness as well as the inducement problem of 271.

THE COURT: What is the other side of the argument?

MR. TORGERSON: We just disagree with how they are spinning it, Judge. We believe it doesn't really relate to willfulness and doesn't relate to this after the fact. I mean, there is no dispute that there was no indemnity on the table when this case emerged, when the dispute arose. And the testimony is clear that everyone was operating that indemnity didn't exist. So there was a subsequent agreement that, frankly, was an accident and that the companies are dealing with --

THE COURT: Why was it an accident?

MR. TORGERSON: Well, it was -- an agreement was sent over with a provision and it was immediately rejected and then there were still negotiations ongoing. When a provision hits an agreement and somebody signs it and doesn't realize it, that's our position. And now all of a sudden we have an exploitation of it by WesternGeco.

MR. LoCASCIO: Even the fact of discussions of indemnity would be relevant to both these issues of willfulness and inducement. If our position is even though they signed it and then they initialed every page, if they want to have a dispute with Fugro about whether it's a binding agreement is not my fight, Your Honor, but it doesn't change the fact that it goes to --

THE COURT: I understand both sides.

(Pause)

THE COURT: I'm going to let it in. Y'all can argue about what it means, but I'm going to let it in.

(Jury present)

BY MR. THOMPSON:

Q Mr. Walker, just briefly, we have been talking about certain surveys and spent a lot of time on that. But just briefly, could you explain the difference in your understanding as to an E&P company's preference in a tender versus a requirement?

- A As I understand it?
 - Q Yes.

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- A Yes. So if you have a preference, then that is a soft requirement. It's something that may or may not go into the evaluation matrix. If you have a hard requirement, then you are saying, This, I must have it. So it is a barrier to entry but once you get over it it may be a tick box. Once you get over it, the soft requirements may be part of an evaluation.
- 9 Q What is an exception?
 - A An exception usually is not there are two exceptions, contractual or technical exception. So which do you mean?
- 12 | Q A technical exception.
 - A technical exception is if a detail of the way your equipment operates means you cannot under any circumstances meet both the high level requirements but some of the very down detailed level requirements, then you put in a technical exception that says, you know, we have a different number of hydrophones per trace or something like that.
 - Q Is it possible to win a survey or be awarded a survey if you have submitted exceptions to even what the E&P company said was a requirement?
 - A I'm not certain and I would not say that you can or would not say that you can't. Generally, I would say in a practical level, if you put in something that's a requirement, then you put in an exception saying I haven't got it at all, I wouldn't

expect to win it.

Prior to 2010

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- Q Prior to 2010 when Q-Solid was available, do you know if WG had ever had to submit any exceptions when a request for tender had solid streamers as a requirement?
- A At that time we put in exceptions saying we do our attenuation different ways.
- Q Were you ever awarded any of those surveys?
- 8 A Yes, very often.
 - Q So wouldn't that be an example of you winning a survey on a technical requirement when you had to submit an exception?
- 11 A No. Well, you said a preference.
 - Q No. If there's a requirement, if solid streamer is a requirement and WG submits an exception, have you ever been awarded a job like that for solid streamers?
 - A In the case of solid streamer, we have because we raise a challenge to say -- we raise -- usually we would raise a clarification. So you send a formal clarification in and say, What do you need solid streamer for? Is it for noise attenuation or because you don't like fluid filled streamers or is it because of some other reason?
 - Q So it is fair, then, to say it is possible, because WG has done it, to win a survey even when you submit a technical exception?
 - A If it's -- if you can find another way of achieving the same goal and you can demonstrate a way of achieving the same

- \blacksquare goal, then yes.
- 2 Q Okay. For example, let's say hypothetically an E&P company
- 3 wants lateral steering because of in-fill concerns. Would it
- 4 be possible to submit a technical exception saying, We don't
- 5 have lateral steering but we, the contractor, will take on all
- 6 the risk of in-fill? Will that count as a technical exception?
- 7 A It would depend if in-fill was the only reason the customer
- 8 wanted lateral steering.
- 9 0 If it was?
- 10 A If it was declared that we want lateral steering purely for
- 11 in-fill, then that's their decision. It's not ours.
- 12 | Q But would that be a fair example of a technical exception?
- 13 **∥** One way to get around lateral steering is take on the risk of
- 14 | in-fill, in that scenario?
- 15 | A In that scenario, if the reason for doing lateral steering
- 16 **∥** is in-fill, then that would be something you could -- you could
- 17 | submit, yeah. Whether it would be accepted or not, I can't
- 18 say.
- 19 MR. THOMPSON: Can we pull up Walker Demo 15, please?
- 20 BY MR. THOMPSON:
- 21 | Q Now, we looked at these earlier. I won't go back through
- 22 \parallel them in detail. But would you at least agree with me -- and
- 23 **∥** you have indicated, you've testified you believe this was a
- 24 2010 survey, correct?
- 25 A 2010, yes.

- Q And there would be similar charts and graphs as this for all of the questions they ask an E&P company. It is not just about lateral steering, correct?
- A No. No. All of them, yes.
- Q Okay. So all the jury got to see was this one nice little chart pulled out and the one that goes with it, but they didn't see all the other things about solid streamers and everything else?
- 9 A 130 odd questions.
 - Q Okay. So even as of 2010, would you agree with me that the E&P companies are not having to put in were not even offered the option to say that steerable streamers are a requirement?

 A Well, I didn't write the question. I probably need to explain this.

I said -- in terms of input to the survey because Welling, in doing the survey for 10 years or 12 years, and each time they do it, they canvas people who are going to participate in that survey and say, Well, what's new? What's interesting? What would you like to have added to the set of questions?

And I and, I'm sure, other people will raise things and say, Well, I'm interested in finding out about this. But we don't write the questions. Welling writes the questions and asks them. I don't have the right to do that.

And so if you looked at when is technology -- if

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

you looked at it on, you know, all the ones where technology came up in that whole survey, their whole style is: Do you say strong reject, slight reject, slight prefer, strong prefer, no preference -- I'm sorry, I'm going terribly fast -- or not applicable, don't know. So that is their house style. So I didn't dictate the question about whether requirement versus preference.

Q I understand you didn't write the question. What I'm asking is: Is it fair that in this Welling survey from 2010, none of the E&P companies are indicating that lateral steering is a requirement? The best they can get is a strong prefer?

A They weren't given the option of saying it is a drop dead requirement from that graph.

MR. THOMPSON: Can we pull up Walker Demo 20, please?
BY MR. THOMPSON:

Q Now, Mr. Torgerson covered this in some detail, so I just want to highlight.

Again, is it fair to say it wasn't your intention to somehow allege between 2007 and 2011 that Fugro has garnered 55 percent of the market, correct?

- A No, no, no. No, its market share change --
- Q Okay. So this is a change in the market share?
- 23 A Yeah.

Q And you indicated that you thought Fugro was in about
15 percent of the market. If I said the number might be closer

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

PGS v. WESTERNGECO

IPR2014-01478

- to nine, would you dispute that?
- 2 | A In terms of revenue, I -- you mean 2007 or 2011?
- Q Between 2007 and 2011? Do you think Fugro was closer -you guesstimated earlier at 15 percent. Do you think it is
- 5 closer to 15 or closer to nine?
- 6 A In 2007 or 2011?

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- Q Well, the time period we have got is between those. But if it changes during the years, let me know.
 - A Well, so my point is this is starting at 2007 and looking at 2011. So at the beginning of that period, I would agree that Fugro's business -- now, recall, I'm only using publicly quoted information, so Fugro's numbers are for all of seismic, so I don't subdivide -- and all the other numbers are all of seismic services. So this isn't just marine.

So Fugro's share at the beginning of the period, 8 or 9 percent, would make sense and at the end of the period, I'm saying it was about 14 or 15 percent.

- Q And if your numbers are correct -- and let's just keep those for now. If you think it went from 8 to -- I'm sorry, did you say 11 or 12?
- A I think it was -- I thought it was 14 percent.
- Q Okay. We will just go with 8 to 14. Is it your testimony you believe that entire percentage increase was because of DigiFINs?
- 25 A No, not at all. My testimony was exactly the opposite. I

1 | said it was one of the factors.

Q Okay. Now, I want to go back. You mentioned a term "total marine seismic." And I'm not sure it has been covered a whole lot. So I want to briefly touch on it.

Isn't it true that if an E&P company uses

Q-Marine to shoot the seismic survey, they also have to use WG
to process the data?

A Not now. We -- so up until about the end of 2008, we said, You get the tapes, you process the data wherever you want exactly as you would with Fugro or anybody else, but we want to -- out of that bigger price, the part we will pay for is we will process it because we want to demonstrate the improvement on the technology. And by the end of 2008, we sort of said, Okay, we have done that. Everyone knows, and we didn't -- we then dropped it.

- Q So from the time Q came out in, say, 2000 until around 2008, the only way an E&P company could use Q is if they were also willing to use WG to process the data, correct?
- A No.
- 20 Q Isn't that what you just said?
 - A No. What I said is they get a set of field tapes that they take wherever they want and process them. They may process them in-house. They may process for CGV, and they may process with Fugro's data processing center. They process it wherever they want. There is no limitation whatsoever on processing.

- Q Does it make it harder to process when the E&P company doesn't have access to the raw data?
 - A No, you've got the raw data. The field tape is exactly the same as every other contractor.
 - Q What is the raw data that you've testified about that WG would not provide the E&P companies then?
- 7 A The raw sensor measurements is the noise. So at
- 8 3.125 meters, it's oversampled for reflected seismic energy and
- 9 that is a lot of noise and a very little bit of signal. And
- 10 then we remove the noise with digital filters in exactly the
- 11 same way as Fugro removed the noise in analog filters and then
- 12 | it is put to tape. And the customer gets a field tape exactly
- 13 | the same as they do with any other contractor.
- Q Going back to Demo 20, do you recall how many vessels Fugro had prior to 2007?
- 16 A I don't.

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- Q Was Fugro -- were they very involved in the 3D seismic surveys prior to 2007?
- 19 A They started to be, yes.
- 20 Q Do you recall around this time frame of 2007, 2011, that 21 Fugro began launching new vessels and reconditioning their
- 22 | older vessels?
- 23 A Yes. In a fleet expansion mode, yes.
- Q Do you understand they launched what was called the C class vessels?

- 1 A Yes.
- 2 Q And just briefly, what is a C class vessel?
- A That's a big capacity vessel comparable to other big capacity vessels in the fleet.
- Q And prior to the C class vessels -- when you say big capacity, you mean the ability to tow more streamers?
- 7 A The ability to tow more streamers and generally to tow a 8 bit wider.
- 9 Q Okay. And so prior to the launch -- in fact, do you recall 10 how many C class vessels were launched between 2007 and 2011?
- 11 A I think four, but I'm not certain.
- 12 | Q Okay. And these were brand-new vessels, correct?
- 13 **A** Yes.
- Q Did you at least see Fugro marketing that in the industry to all the E&P companies, that we have a whole fleet of brand-new high capacity vessels?
- 17 A The whole industry was going through a period of growth at that stage and everyone was advertising new vessels, yes.
 - Q So this percentage of market share, part of what we are talking about is capacity, correct, percentage of capacity versus percentage of revenue?
- 22 A Yes.

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Q Okay. So would you agree with me that launching four
brand-new high capacity vessels that Fugro never had before is
going to necessarily increase their percentage of capacity

- 1 \parallel because there is brand-new capacity on the market?
- 2 A The question was not that they were launching the capacity.
- 3 Everyone has got the right to do that. The question is
- 4 | launching the capacity with the technology onboard.
- 5 Q That wasn't my question. Would you agree with me that by
- 6 | launching four new high capacity vessels and adding capacity to
- 7 the market, that Fugro would now own that capacity? Their
- 8 percentage of the capacity, the seismic capacity, is going to
- 9 increase just on that fact?
- 10 A It depends how many old vessels they take away. But
- 11 | assuming if there is a netback, then they will add capacity.
- 12 In fact, all companies add capacity at that stage.
- 13 Q I want to go back briefly through a couple documents
- 14 Mr. LoCascio showed you.
- 15 MR. THOMPSON: If we could pull back up Plaintiff's
- 16 | Exhibit 543, please?
- 17 BY MR. THOMPSON:
- 18 \parallel Q There was some talk on this one about the Apache job. And
- 19 | just briefly if you could turn -- do you still have this
- 20 document in front of you?
- 21 A I'll have it in my folder, yes.
- 22 | Q Okay. It is 543. And if we could go to Bates number
- 23 ending in 9011. It is near the back of the document. It says
- 24 | Data Delivery on top.
- 25 A Okay. Yeah.

- So here Apache is requesting that each data shipment contain the raw seismic data. Is this a situation that you 2 believe WesternGeco is able to provide this or is this going to 3 be part of the stuff that is being withheld on the raw sensor 4 5 data? The raw seismic data means the tapes from -- containing the 6 7 reflected entry coming up from the subsurface, which will be perfectly processed to produce an image. 8 Okay. And with regard to -- you were talking about the 9 North Sea earlier about if you send a vessel out, you are 10 willing to do it because you generally know you can line up 11 more work right afterwards because it's hard to get out there 12 and there is a short season? 13 In the North Sea, I said the jobs go back to back. You 14 will tend to have -- not just us, everyone will tend to have a 15 vessel there for the season. 16 17 Would you agree that necessarily because of a shortened season but because it is further out and harder to get to, 18 19
 - that's also the same for Australia, it's basically once you get out there and get a job, you are going to be more likely to tend to line up more back to back?
 - I made exactly that point, yes.
 - MR. THOMPSON: If we could go to Plaintiff's Exhibit 822, please?

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BY MR. THOMPSON:

Q Now, there was some talk earlier about the Tullow survey, and I believe you testified you believe this was one of the surveys you lost to Fugro because of their use of DigiFINs.

A Yes.

Q Okay. And it was briefly discussed, but I just want to make sure I understood. You understood this survey to be that Tullow and Anadarko were going to conduct back-to-back surveys, so to speak, and they wanted the same vessel for both surveys? A Yes, it's not on this. It's on the other, the Anadarko tender. There was a note on the front of the spec that said this is — you will be receiving a tender from Tullow. So to be clear, Anadarko, this is Tullow, the operator. Anadarko is a partner, so they are taking a proportionate risk in the block.

And in the other block, Anadarko is the operator and what they said is we will be -- it is our intention to shoot these two surveys back to back, Tullow going first, Anadarko going second. And Anadarko will take the Tullow vessel and what it said is you will find our technical specs are substantially the same.

Q You will agree that Anadarko, because it was going to be back-to-back surveys and they wanted the same vessel, Anadarko was going to have some say-so in who performed these two surveys?

- 1 A I wouldn't be able to say one way or the other on that.
- Q Do you know about the time period that Tullow's request for services came out, do you recall if that was about
- 4 **∥** November 2009?
- 5 A Well, I didn't see it at the time, but is this dated?
- 6 0 I don't believe that is.
- 7 A I think there will be a cover letter.
- 8 MR. THOMPSON: If we could briefly pull up FD1027.
- 9 BY MR. THOMPSON:
- 10 Q Is this the Anadarko corollary?
- 11 A It is, yes.
- 12 | Q Okay. So you see the proposed deadline for proposals is
- 13 November 12, 2009?
- 14 A Yes, that's fine.
- 15 Q So you would agree, then, that the Tullow survey is going
- 16 to be somewhere at least in the fall of 2009?
- 17 A Yes.

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- 18 MR. THOMPSON: Okay. If we could pull back up just
 19 briefly what was already entered as ION 178.
- 20 BY MR. THOMPSON:
 - Q This would have been a document Mr. Torgerson gave you. If you still have your copies. Just briefly, this was the meeting you had and you've talked quite a bit about -- I'm not going to go back through it. But at least in November 2009, Anadarko actually had a preference not to use Q-Marine for their

1 proprietary work?

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A As I testified, it was at this meeting when they were surprised that the phase that they liked so much was Q-Marine and that was a pivotal meeting that we had.

Q Wouldn't you agree that if Anadarko in November 2009 had a preference not to use Q-Marine, that would have made it more difficult for WG to win the Tullow job that was conditioned upon the following Anadarko job?

A I think what they said is they would accept it if it was the same price. One of the issues about this particular meeting is we had a problem on a vessel which happened to be manifested there and they were — which we addressed a technical fault. Part of this meeting, which wasn't mentioned here, was pointing out that problem would not happen again.

So I think they would have -- they probably wouldn't be queuing up to pay a premium, but they would have -- it is my belief they would have been very happy if there hadn't been much of a premium.

Q So it is your testimony you don't believe any preference — we have talked a lot about the word "preference." But if

Anadarko had a preference not to use Q-Marine, you don't think
that had any part in WG not being awarded the survey?

A I'm saying I can't say it was or wasn't. What I'm saying
is at that stage, they did begin to agree with us and

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

understand.

- Q If you will go back quickly to the document --
- A The FD document, I think, on your side.

MR. THOMPSON: Give me one second.

And before everybody sighs, I'm not entering all of these. Most of them have already come in. They were just put together in a binder earlier.

BY MR. THOMPSON:

- Q You wanted to go back to -- let me find my other one.
- 9 A The cover note on the Anadarko?
- 10 Q Yes.

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- A If you go down to the bottom of that page, I think it says tender sequencing considerations, along with Anadarko, Tullow Oil, PLC and its affiliate holds interests in both --
- THE COURT: You are going way too fast. Start over again.

THE WITNESS: So along with Anadarko, Tullow Oil, PLC, through affiliate entities hold interests in both Ivory Coast Block CI-105 and Ivory Coast block CI-103.

You go down a couple of lines, it says: It is the objective of both operators, Anadarko and Tullow, to select a single seismic vessel to acquire these two surveys back to back. Notwithstanding the following, Anadarko and Tullow shall operate their own survey within their representative operating fields and, likewise, will negotiate their own contracts with the successful bidder.

So this document is -- to me is saying quite clearly that whoever wins the Tullow will win the Anadarko because they intend to use the same vessel for both.

BY MR. THOMPSON:

Q Do you know, if Anadarko could not offer the same vessel for both the Tullow and the Anadarko back to back, do you think that would have had an effect on WG not winning the award?

A I think the interest of Anadarko and Tullow was to get an

- A I think the interest of Anadarko and Tullow was to get an efficient operation. And their way of looking at it was let's do the two jobs back to back, so I'm not able to answer that question.
- Q At least in the document you just read from, it was their objective to use one boat for both surveys, correct?
- A Yes.

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- 15 Q Do you know, did WG offer the same boat for both surveys?
- 16 A I'm afraid I don't know.
 - Q Let's go to FD1047, please, and this should be in the binder I just handed you. We have already skipped a lot of the documents. Would this be -- does it appear to be WG's response to the Tullow request for proposal?
- 21 A It is, yes.
- Q Okay. If you could turn with me to Bates number ending in 2475. About 13, 14 pages in. Do you see that?
 - MR. THOMPSON: Could we highlight the name of that vessel, please?

- 1 BY MR. THOMPSON:
- 2 Q At the time -- this was fall of 2009. Do you know, was the
- 3 ₩ESTERN PATRIOT a Q vessel?
- 4 | A No. It would have been solid streamer vessel.
- 5 Q Okay. So WesternGeco, in response to Tullow here, is
- 6 offering -- again, we are offering a nonlateral steering vessel
- 7 | just like you did with Statoil, correct?
- 8 A Yes. So I hadn't seen this proposal before.
- 9 Q And if we flip a few pages to 2479, in fairness, you also
- 10 offer the WESTERN SPIRIT?
- 11 A Yes.
- 12 | Q And that was a Q vessel?
- 13 | A Yes.
- 14 Q It was Q liquid, correct?
- 15 A Q wet, yeah.
- 16 Q Do you know whether Tullow had any preference for solid
- 17 streamers?
- 18 | A No, I don't recall them saying they had a preference.
- 19 Q What about Anadarko having a preference for solid
- 20 streamers?
- 21 | A Anadarko, I think they were still in the mode of analog
- 22 I fluid filled streamers are noisy and from that perspective,
- 23 | they wanted better noise performance. But I don't know whether
- 24 | they had a hard and fast for solid streamers. I don't remember
- 25 seeing it in their technical spec.

- 1 If we could turn to that same document, Bates number ending in 0215 under the section "Free Timing." 2
 - Which one is this?
 - I'm sorry. I skipped ahead. It wasn't marked.
- MR. THOMPSON: Are we still on FD0265? Can we put up 5 FD0265?
- 7 BY MR. THOMPSON:
- It should be in your binder. 8
- 9 Α 265?

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- Is this part of the scope of work for the Tullow 10 O Yes. survey we have been talking about? 11
- Can I just get to it? 12
- Sure. 13
- MR. THOMPSON: Let's highlight the top where it says 14 "Tullow." 15
- THE WITNESS: Yes. It is the scope of that. 16
- 17 BY MR. THOMPSON:
- Okay. So if could go a couple pages in to Section 3, 18
- 19 "Timing, correct?
- 20 Α Yes.
- Do you see that Tullow was wanting to commence this survey 21
- between February 1 and February 10, 2010? 22
- 23 Α Yes, I see that.
- If we could go now in the same document to Section 6.4, 24 which is ending in Bates Number 0220. 25

Do you see here this is for steering?

2 A Yes.

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- Q And this says, "In this section, the company" -- that would be Tullow, correct?
- A Yes.
 - Q It says: "The company, at its option, may require one or more of the following additional technologies."

It includes lateral steering, correct?

- A Yes.
- Q So are they saying they may at some point require an additional technology, but it's not a requirement?
- A No. What they are saying is if you look at the currents in this area, they build up and slow down. And so what they are saying is, we want it on board. We will -- in the same way, when I rent a car in Houston, I'm going to specify air conditioning. Whether I use it is my choice.

And so my read of that -- and I will specify, I didn't do the bid. But you quite often say the company wants this to be available, and 127 miles off the coast of Azerbaijan is not the place to suddenly decide you need it.

- Q Okay. Do you see in that same Section 6.4.1, Tullow is actually leaving it to the contractor, that if the additional technology is going to be offered, there's a couple different ways in which it can be offered?
- 25 A Yes.

- Q So there's no set requirement as to full spread or partial spread or even -- aside from the current situation, there's no set requirement for lateral steering?
- A Well, it says may be either a partial, which -- last two-thirds of streamer length or full deployment. This would be primarily to maintain streamer separation. So the first thing -- the value we discussed of being equal separation, the company may also require the systems to be used to effect fan mode shooting over the prospect, so if you do fan mode shooting when your streamers are pulled apart from the front all the way to the tail. And again, they are saying we may require it.

So for us -- obviously for us, this is a whole streamer system anyway. But we would assume that it would be used on the whole streamer network to --

- O Okay. I'm sorry. I didn't mean to cut you off.
- A No, no. Over the whole streamer network to do fan mode.

Do you know -- are you there yet?

Q Okay. If we could turn to Section 7.1.4, please.

I just -- I have a question for you here.

20 A 7.1.4?

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- 21 0 Yeah.
- 22 A Yeah.
- Q Do you know what is meant when they say "all vessels shall have a minimum endurance at sea of 40 days"?
 - A Yes. It means your vessel does -- "endurance at sea" means

- absent being replenished at sea, which all vessels are, that you would be able to maintain endurance, to be operating for 40 days without having to go to port.
 - Q Would -- endurance at sea, would you take that, based on your experience, to mean the same thing as endurance in production?
- 7 A I think that's reasonable.
 - Q Okay. If we could turn to FD1046. It should be in your binder.

Do you see here we are still talking about the Tullow survey, and it's a WesternGeco technical proposal?

12 A Yes.

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Q Okay. If we could turn to proposal summary -- it's 7133
Bates number.

And again, just briefly --

- 16 **|** A 7133?
 - Q Yes. If we could go down to the "Proposes the following acquisition offering."

And again, this is two different boats being offered. And one is a Q-Marine, and one is nonlateral steering?

- A Yes.
- Q Okay. If you could flip with me, and stay in that document, to Bates Number 712106. It's Section T1.1.
- 25 A Okay.

Q Do you remember in the other document we looked at Tullow was -- well, first off, let me back up.

We talked about, aside from technical requirements, the other big factors in awarding a survey are price and availability, correct?

A Yes.

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- Q Okay. So with regard to Tullow and Anadarko, we know they wanted the same vessel, correct?
 - A Wanted the surveys back to back, yes.
- Q And we've looked at the documents. Tullow was wanting the vessels available between February 1 and February 10, 2010?
 - A Yes.
- Q Okay. When did WesternGeco say it would make its vessels available? When was the WESTERN PATRIOT made available?
- 15 A So that says mid April.
- 16 Q Would that be before or after February 2010?
- 17 A That would be a couple months afterwards.
- 18 Q Okay. What about the WESTERN SPIRIT?
- 19 A The WESTERN SPIRIT, the first week of March.
- Q Okay. So is it fair that neither of the vessels you offered were available during the projected start time that
- 22 Tullow was requesting?
- 23 A They were very close to it.
- 24 | Q But they weren't available in February?
- 25 A No. They weren't available in February.

- Q Okay. If we could go two more pages. It's the T1.3 schedule.
 - Do you see here where it says "Estimated vessel endurance in production"?
- 5 A Yes.

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- Q You see the WESTERN SPIRIT is 24 days and the WESTERN PATRIOT is 25 days?
- 8 A Yes.
- 9 Q And so neither of these meet the endurance requirement of
- 10 40 days that we just saw in the Tullow document?
- 11 A No. That is -- that's an incorrect assessment, because you
 12 can refuel at sea. So we would probably have raised that point
 13 and said we would refuel at sea, so to not interrupt
- 14 production.
- Q Would that be an exception you had to file to the endurance?
- 17 A I didn't put in the bid, so I don't -- I don't know.
- Q Well, if -- if the vessel doesn't have the required
 endurance and it's going to require refueling at sea, would
- 20 that be an exception?
- 21 A No. It's -- it's two every day. Everyone refuels at sea.
- 22 So I think we would simply make it as a comment.
- But I haven't read the whole document, so I can't tell you.
- 25 Q But you agree -- because you agreed with me earlier -- that

endurance at sea, in your mind, would equal endurance in production. And we can at least agree that 24 and 25 days are less than 40 days.

- We can agree that 24 and 25 days are less than 40. But it is irrelevant, because we can refuel at sea.
- So it's your position that it's irrelevant.

If it was irrelevant, why would Tullow bother putting it in their document?

Because if you have endurance where you have to go back into port for other purposes, then that impacts the productivity of the project, because you have got to pick up all of your equipment to go back into port.

With us, we have vessels in the Gulf of Mexico here, which are out for a year at a time. We have a process for refueling at sea. We would go through that process.

And probably somewhere in this 150 pages is the refuel at sea process. I don't know. We may not have published that. I haven't seen that.

Q Okay.

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It's not the same as a technical requirement, when they said they wanted streamer steering. That would impact -- a lack of lateral steering would impact the quality of the data, impact the way the operation would work; whereas, simply coming alongside with the vessel bows and refueling the vessel would not impact productivity at all.

Mayra Malone, CSR, RMR, CRR

mayramalone@comcast.net

- Q Okay. I want to move on to -- earlier, you talked about some direct awards. And that's when there's -- the E&P company doesn't send out a request for quote, they just pick someone, correct?
- A Well, they still negotiate hard, but, yes.
 - Q Well, they negotiate, but they negotiate with one provider?
- 7 A Yes.

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- Q And you indicated that WG was a winner of quite a few direct awards between 2000 and 2007.
- 10 | A | I said between 2000 and 2004.
 - Q Okay. Between 2000 and 2004, would it be fair that a reasonable component that drove those direct awards was the fact that WG had the single-sensor recording?
- 14 A No.
 - Q That wasn't the big differentiator when Q first came out?
 - A No. We tried very hard, because it does two things. It does noise attenuation, which everyone does different ways, and you do short groups and the high in-line sampling.

And we've never got anyone interested in the short groups of the in-line sampling, so that's not really what's made the difference.

- Q Okay. Do you know -- have you -- well, first off, do you know who Mr. Raymond Sims is as it relates to this case?

 A I -- I've met him and we have discussed he is the damage.
- A I -- I've met him, and we have discussed he is the damages expert.

- 1 | Q And he is the damages expert hired by WesternGeco?
- 2 A I'm not sure. He may have been hired -- retained by the lawyers.
- 4 Q Fair enough. But he's WG's damages expert in this case?
- 5 A Yes.
- Q And as part of his work in preparing his opinions and his report, did he meet with you on occasion?
- 8 A He did, yes.
 - Q And did he talk with you on occasion?
- 10 **|** A Yes.

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- 11 Q And he was able to ask you any questions and rely on you as
- 12 | a source of information?
- 13 A Yes. That was part of the purpose.
- 14 Q Did he discuss any of his opinions that he was reaching as
- 15 to the valuation of lateral steering, his ultimate conclusions?
- 16 A No. That wasn't his role. His role -- my role was to feed
- 17 | him experience and information.
- 18 **|** Q Okay. Is it -- you indicated earlier today that within
- 19 | Q-Marine, the suite, there's the lateral steering, the single
- 20 sensor, the calibrated source, and the fully abrasive
- 21 acoustics.
- 22 A Yeah.
- 23 | Q I think you've already said the calibrated source was
- 24 pretty much a failure, and that you didn't get as much upswing
- 25 in the single sensor as you had hoped.

But you testified that you believed customers today are wanting lateral steering the most of those -- of the technology in the suite, correct?

A That's what they are saying in their tenders and in their communication to us at these trade shows.

- Q Okay. And we talked a little bit -- do you know, has WesternGeco ever attempted to allocate any of the Q-Marine revenue broken down by these discrete components of Q-Marine?
- A No. We just have a kilometer rate.
- Q And would you agree with me -- and you have actually said that would be impossible to do, to break out the valuation of the different technologies?
 - A Yes. Because if I give you one kilometer rate, then that's it. It's -- I -- I can't make a value judgment about what you find important.
 - Q And actually, do you remember, sir, at your deposition, you actually said that would be impossible to do?
- A Yes.

- Q Okay. And so it would be impossible for WesternGeco to break out by percentage of total survey revenue the value of lateral steering?
 - A We tried to do -- at one stage internally, we messed around with sort of a Chinese menu where we just stuck numbers on it, but it didn't go anywhere, and I don't think we ever sent it as a proposal.

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

WESTERNGECO Exhibit 2100, pg. 253

PGS v. WESTERNGECO

IPR2014-01478

- Given that you have tried to do it and you weren't successful, would it be information that you would like to have if it was available?
- If our customers told us what their internal evaluation 5 was, yes.

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Well, no, not just what your customers told you. You said internally, WesternGeco has even tried to figure out the valuation of, say, lateral steering as opposed to the other Q elements, but it was impossible and your internal efforts failed.

I'm asking: If somebody was able to do that, would that be information you would want to use in your business?

- If I could pinpoint, yes, it would be useful.
- Okay. Are you aware, sir, that Mr. Sims actually has made and come to the ultimate opinion in this case that the benefits of lateral steering, at least as to Fugro, are 20.8 percent of the total survey revenue on every survey?
- I had heard it in the court here just -- just today. I was unaware of it before.
- And you have said, sir, that was impossible to do, and your efforts internally within WesternGeco failed. But, apparently, Mr. Sims has done the impossible, correct?
- No. What I said is I -- of the incremental uplift, I cannot evaluate what is useful for the customer.

Mayra Malone, CSR, RMR, CRR

We can make a model of save so much downtime, 1 save so much line change time, yes, of course, we can do that, 2 3 but that's not evaluation of what the customer wants. Have you internally, for your business purposes -- now that 4 it is available, have you implemented and done any business 5 calculations or research using Mr. Sims' breakdown of 6 7 20.8 percent of total survey revenue? No, because I only heard it just now. 8 9 Okay. So WesternGeco, is it fair, is not using that for any business purposes, correct? 10 To -- lateral steering as against whatever else is in Q in 11 terms of its uplift? 12 13 Yes. No. It's either Q or it isn't Q. 14 15 Okay. MR. THOMPSON: If we could switch back to the Elmo. 16 BY MR. THOMPSON: 17 I'm just about done, sir. I just want to follow back up, 18 and I'm going to try and move quickly. 19 Do you recall at your deposition there was some 20 discussion about the gross profitability of Q between 2008 and 21 2011? 22 Yes. I remember. 23 Okay. And is it -- if you don't recall, that is fine. 24

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

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can look at your deposition.

But to speed things up, is it fair to say that 1 for 2008 you said the gross profitability of Q was 2 approximately 20 percent? 3 Does that sound about right? 4 It sounds about right. 5 Okay. In 2009, it was just above break even? 6 7 Α Yes. And in 2010, just above break even? 8 9 Are we talking about Q-Marine or were we talking about marine in general? 10 11 Q-Marine. O-Marine. Okay. If that was the conversation, then, yes. 12 Α 13 And in 2011, it was break even? Yes. 14 Α And so if we very quickly map this out -- and this is 15 16 gross. Forgive my handwriting. I get ragged on it -- I 17 get ragged about it all the time. 18 We have 10 percent, 20 percent, 30 percent, 19 20 40 percent, 50 percent, 60 percent. And so we know, based on the numbers, that 2008 21 was around 20 percent, correct? 22 23 Α Yes. We will just go ahead and put it 20 percent. 24

> WESTERNGECO Exhibit 2100, pg. 256 PGS v. WESTERNGECO

> > IPR2014-01478

You said 2009 was close to break even, correct?

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

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- Q That would be right about here.
 - 2010 would be close to break even?
- 4 A Yes.
 - Q And in 2011, break even?
 - A We recovered a bit in 2011. Gross profitability has picked up a little.
- Did we say gross profitability or did we say net?
- 9 Q Gross.
- 10 A Gross. Okay.
- 11 Q Where do you want me to put 2011?
- 12 A Just a little bit up.
- 13 O Above break even?
- 14 A Yeah. Just...
- 15 Q About right here?
- 16 A Yeah.
- 17 Q All right. So if we -- starting out, we see about that
- 18 sort of decline, correct?
- 19 A Yes.
- 20 Q And this would be the decline coming down in 2008 from the
- 21 prior years, right?
- 22 | A Yes.
- 23 Q Okay.
- 24 MR. THOMPSON: I'm going to mark this FD Walker Demo
- 25 001 for the record.

1 BY MR. THOMPSON:

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Q And if we could, I would like to show you FD1005B.

MR. THOMPSON: And for the record, we have taken one page out of what was previously marked FD1005, and the page we are going to be offering is this one, and we've marked 1005B.

THE COURT: Very well.

BY MR. THOMPSON:

Q Do you see, sir --

related to 2005 to 2010.

MR. THOMPSON: Could we go to that one? It's 654696.

BY MR. THOMPSON:

Q The jury has actually seen a different version of this with Mr. Scoulios, and it was blocked out. And there was some concern with Mr. Scoulios as to he didn't think the time

But do you see here below, we see Q-Marine is 2005 and we see Nessie-6, which would be the N6, is 2010?

A Yes. That was certainly the aspiration.

Q Okay. And do you -- at least within -- internally within WesternGeco, do you see with regard to Q-Marine --

MR. THOMPSON: Can we highlight the curve? It may be hard to do the curve.

In fact, why don't we just switch to the Elmo, if we could go back to the Elmo.

24 BY MR. THOMPSON:

Q Do you see, with regard to the Q-Marine curve, which is

this one, there was an anticipated decline of price over time.

Do you see that?

- Well, I see that we planned to put in advanced spread control, which we did to offset the decline, yes.
- But you would agree with me that at least internally, within WesternGeco even as far back as 2000, you understood that there was a shelf life, so to speak, of any technology including Q-Marine?
- If you don't update it, yes. 9
- And at some point, the prices are going to go down? 10
- Yes. 11

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- Okay. 12
- If you don't update it, which we did. 13
- And according to this chart -- well, even with the update 14 it's going to decline, as well, before 2010, right? 15
- I -- well, that's not -- not extrapolated forward. And as 16 we discussed, Nessie-6 proved to be a serious challenge, and we have only just field tested it. 18
 - So I would say, in terms of viability in the marketplace, we are continuing to do coil shooting and Discover and new configurations, which are adding value to the platform.
- Okay. 22 0
- 23 The Nessie-6 was replaced maybe by Discover. Let's put 24 that.
- 25 I understand Nessie-6 didn't come out on time. I'm asking

- internally, WesternGeco predicted a decline in the price of Q-Marine before 2010, correct?
 - A We predicted the need to continue to innovate.
 - Q Okay. And so if we just -- and I'm going to make this a demonstrative.

If we take that down to its logical conclusion, would that somehow go with this curve which is Walker Demo 1, which saw the decline in 2008, flattening out to 2011?

- A If we hadn't implemented the advanced spread control, which we did.
 - Q And advanced spread control, also, you see a decline before 2010?
 - A Well, I mean, this is a graphic that someone has drawn to make the point. This is not proven revenue or anything. It's no more than a cartoon.
 - Q And the point of this graphic, when it was drawn, is that WesternGeco internally knew that the price of Q-Marine was going to decrease and that the product itself has a shelf life like any other product?
 - A And if we didn't innovate, it would be -- we would need to innovate, which we did.
 - MR. THOMPSON: No further questions, Your Honor.
 - THE COURT: Is that it?
 - MR. THOMPSON: No further questions.
 - THE COURT: Your redirect will be mercifully brief?

Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

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LoCascio Redirect of Robin Walker MR. LOCASCIO: It's all in my head, right here. 1 MR. THOMPSON: And just for the record, this writing 2 3 is going to be FD Walker Demo 002. REDIRECT EXAMINATION 4 BY MR. LOCASCIO: 5 Let's start where Mr. Thompson left off, sir. 6 7 That Q-ASC --Yes. 8 Α 9 -- is that patented? Α Yes. 10 And whose patent is that? 11 12 Α That's the Zajac patent. Q And so this line right here --13 MR. LOCASCIO: I won't draw on your demonstrative, 14 Mr. Thompson. 15 BY MR. LOCASCIO: 16 -- that goes out that way, that is all covered by 17 WesternGeco's patents, correct? 18 Yes. 19 Α You were asked a lot of questions about the Tullow job and 20 21 the availability date of the vessel. Do you recall that? 22 23 Α Yes. I gather suggesting you wouldn't have had a boat there on 24

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time.

- 1 A Yes.
- 2 Q From FD1046 -- you were shown this -- that indicated you
- 3 told them you would have a vessel there available in March of
- 4 2010?
- 5 A Yes.
- Q Now, I want to show you what Fugro has provided to us about
- 7 when they actually performed these jobs, sir.
- Do you see the two that I've highlighted?
- 9 A Yes. Yeah.
- 10 Q Are those the two jobs we have been talking about for
- 11 | Tullow and Anadarko?
- 12 A 103 and 105. Yes, they are.
- Q And when did -- you can see the heading -- I'm sorry, I quess you can't see that. Let me zoom out.
- When did Fugro start -- well, let's back up.
- 16 Did they do any jobs in February 2010 for either
- 17 | Anadarko or Tullow?
- 18 | A No.
- 19 | Q And when did Fugro start the Anadarko job?
- 20 A They started the Anadarko job on the 3rd of March 2010.
- 21 Q The same month your vessel was available?
- 22 | A Yes.
- 23 Q And when did they perform the Tullow job, sir?
- 24 A That was in the middle of April 2010.
- 25 Q After your vessel was available?

- Α Yes. 1
- You were asked a handful of questions about Mr. Sims. 2

Now, you are not an expert witness in this case, 3

4 correct.

No.

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- Has Fugro -- have Fugro and ION allowed you to see all 6 7 their internal documents, or is that something that only
- Mr. Sims is privy to?
- No, I haven't seen any internal documents. 9
- So in terms of how they have treated their own 10 profitability and how much money they thought they would make 11 from infringement, that's not something they have let you see? 12
- 13 Α No.

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Both Mr. Thompson, under the name Nessie-6, and 14 Mr. Torgerson, under the name of IsoMetrix, asked you some 1.5 questions about the next step in your innovation.

Do you recall that?

- 18 Α I do, yes.
 - Is that how it works at WesternGeco? You are always investing in innovating?
 - Yes. We spent \$120 million on engineering last year.
- Does it still matter, under your new products or your old 22 products, where you put the streamers with lateral steering? 23
- Yes. 24 Α
- 25 And the --

- A The cartoon wasn't very good. But the point about it is if you are trying to repeat a baseline survey that could be not steered, which we can't do today, we would actually have to do more steering, not less.
- Q The jobs you are seeking damages for, are they all jobs that have happened in the past or are you seeking some future jobs?
- 8 A No, they have happened in the past.
- 9 Q Before IsoMetrix?
- 10 | A Yes.

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- 11 Q Is IsoMetrix even commercialized today?
- 12 A No.
 - Q Once you come out with Version 3.2 of your technology, does that mean it's okay for people to use and take your technology that's in Version 3.1 and 3.0?
 - MR. TORGERSON: Objection.
 - THE COURT: I'm going to allow it.
 - THE WITNESS: No. We -- we invest in technology. And the length of time it takes to build technology, you know, if you file a patent, you -- half the life of that patent may have elapsed before you ever get the technology into the field, and then have you to prove it in the marketplace.
- 23 BY MR. LOCASCIO:
 - Q You were asked about Statoil and whether they have hired Fugro to use ION's equipment to perform their surveys.

	1919
	LoCascio Redirect of Robin Walker
1	Do you recall that?
2	A Yes.
3	Q And it was suggested that, you know, you should have gone
4	off and sued Statoil also.
5	Do you recall that?
6	A Yes.
7	Q Who decided to offer DigiFIN components for use in those
8	surveys?
9	A Fugro.
10	Q And who actually made the equipment that they used in those
11	surveys?
12	A ION.
13	Q And who made money from the infringement?
14	A ION and Fugro.
15	Q Is that why you sued them and not Statoil?
16	A Yes.
17	Q You were shown by Mr. Thompson the tenders for the Chukshi
18	job.
19	A Yes.
20	Q And do you recall he showed you the two prices and said
21	they were essentially not that different, the 27 million and
22	the \$28 million?
23	A Yes.
24	Q If I might find a piece of paper.
25	We have one right here.
	Mayra Malone, CSR, RMR, CRR mayramalone@comcast.net

- Do you still have the document that is PTX767 with you?
- A I think that was the one that was -- was a rare bird. I don't think I ever --
- 5 Q I will just give you mine, sir.
- 6 A Let me just check. Oh, no, I do have it.
 - No, that was -- wait a minute. No, I think that was the one that we were short of.
 - Q Here you go, sir.
- 10 A Thank you.

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- Q Can you tell me what price you quoted Statoil for the conventional streamers?
- 13 A Conventional? I just -- let me check this. This is both 14 reimbursables, business models. They are the same.
- 15 Q So these are apples to apples?
- 16 A That's apples to apples. 27.7 million.
- 17 Q Can you give me the exact number?
- 18 A 27 million, seven hundred and -- either 30 or 81 -- 31,000, 19 384 dollars.
 - Q And you were asked, I believe by Mr. Torgerson, if it would take you a certain number of days, and I think it was 72.6.

Do you see that?

A 72.6, which I'm interpreting, as I didn't -- I didn't do this bid. I didn't see the bid before it went in, so I think that's first -- first line shop, I'm not sure.

- Q Now, for the lateral steering Q job that you proposed, how much were you going to charge for that job?
 - A \$28,871,967.

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- 4 Q And was that the 63.3 days?
- 5 A That was the 63.3 days, yeah.
- 6 Q I'll save you the trouble of bringing up a calculator.
- 7 A That's a relief.
- 8 Q Per day for conventional, you would have been charging
- 9 | \$381,975 for that vessel. Is that about right?
- 10 A Looks -- yeah, looks about right.
- 11 Q And for the lateral steering version, you would have
- charged \$456,113 per day. So 19.4 percent difference for
- 13 | lateral steering versus conventional.
- 14 A Yes.
- 15 \parallel Q Is that consistent with what you anticipated and received
- 16 | from customers?
- 17 A Yes.
- 18 Q And the suggestion was you wouldn't actually be making much
- 19 more money. Would you be making a significant amount more per
- 20 day and over the course of the year with lateral steering on a
- 21 job like that?
- 22 A Absolutely, yes.
- 23 MR. LOCASCIO: I'm going to call this Walker Demo 2A.
- 24 BY MR. LOCASCIO:
- 25 Q A couple other questions, sir. You were asked a question

	1922
	LoCascio Redirect of Robin Walker
1	about whether ultimately ION and Fugro used the infringing
2	equipment in other parts of the world or this part of the
3	world.
4	Is your business global?
5	A Yes, it is.
6	Q Does the injury to WesternGeco from ION and Fugro's
7	infringement stop at the border?
8	A Absolutely not.
9	Q You were asked a fair number of questions about this.
10	The suggestion was that, well, there was a
11	recession during this period of time.
12	Do you recall that?
13	A Yes.
14	Q And did that recession should it have affected everyone
15	equally?
16	A I believe so, yes.
17	Q And in a recession, does infringement hurt even more than
18	during the good times?
19	A Yes, it does.
20	MR. LOCASCIO: No further questions, Your Honor.
21	THE COURT: Okay.
22	MR. THOMPSON: Your Honor, may I respond to two
23	points?
24	THE COURT: All right. All right.
25	RECROSS-EXAMINATION

1 BY MR. THOMPSON:

Q Mr. Walker, just briefly.

You and -- Mr. LoCascio asked you if Q-ASC was related to the Zajac patents, correct?

A Yes.

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- Q Is it fair, then, that Q-Marine was related to the Bittleston patents?
- A I think there are components in both, but I'm -- I'm not a patent expert.
 - Q Okay. And so within Q-Marine -- or within WesternGeco, the Bittleston patents were expected to reach their shelf life, so to speak, by 2008?
 - A No, I'm not saying that -- that -- when I said it's -- the ASC is the Zajac patent, there are elements of both that are needed for both.
 - Q Now, I apologize. I don't have copies of this. I wasn't expecting to need it.

Mr. LoCascio showed you a spreadsheet and said, "Well, Fugro couldn't even offer the Tullow job on time because it said April and March."

Do you remember that? You just looked at it?

- A Yes.
 - Q Does this appear to you to be -- based on your experience -- would be a cover letter responding to a tender request?

- 1 A It would, yes.
 - Q And just briefly, you see this as coming from Fugro?
 - A Yes.

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- Q Okay. Do you see here in my highlighted paragraph, when was -- when did Fugro offer its vessels to Tullow?
- 6 A They were promising it late January, early February 2010.
 - Q Okay. So Fugro's response met the requirements of vessel availability by February, correct?
- 9 A No. Fugro's promise met the requirements.
 - Q And you have no reason to know why the survey took place in April versus when Fugro promised the vessels would be available by January/February?
 - A We've -- we've seen that there are some players who will put in and say this is -- we will promise the vessel availability when the customer wants to have it, so that vessel availability is not a factor in their decision. Whether they can make that or not is another matter.
 - Q Are you somehow implying to the jury that Fugro is one of these people that promises vessel availability and knows they can't meet it?
 - A No. What I'm saying is a lot can happen in advance of a project. A previous project can run on, you may want to have another job that goes in front, an urgent job.
 - I'm saying that a lot can happen between a bid coming in and a bid turning out, the vessel turning up.

Q But you're not implying to the jury that Fugro somehow has some reputation that they make promises they can't keep?

A I would not like to make that assertion, no.

MR. THOMPSON: No further questions.

MR. TORGERSON: Nothing further.

THE COURT: You may step down. Thank you very much.

THE WITNESS: The jury has heard enough of me for today.

THE COURT: Yes.

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Do you wish to call another witness?

MR. LOCASCIO: We do, Your Honor. At this point, we're going to -- it's a deposition. We have agreed on an instruction, although you, frankly, don't need our explanation.

THE COURT: You can hand it to Ms. Loewe.

I think I have already told you something like this, but it's inoffensive just to read what has just been handed to me, instructions on what depositions mean.

Prior to trial, both sides have the opportunity to ask questions of the other side's witnesses under oath in what is called a deposition. These depositions are videotaped, and as part of this trial, we may hear testimony from such witnesses by playing excerpts of these videos.

The witnesses are given the same oath as they would be in court, and their testimony is entitled to the same consideration as if they had given it live.