

1 PUBLIC MEETING

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3 IN RE: )  
4 )  
5 PROPOSED GEOLOGICAL AND )  
6 GEOPHYSICAL ACTIVITIES IN THE )  
7 MID- AND SOUTH ATLANTIC OCS )  
8 PLANNING AREAS, )  
9 \_\_\_\_\_ )

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8 A Public Meeting, Programmatic Environmental  
9 Impact Statement, Proposed Geological and Geophysical  
10 Activities in the Mid- and South Atlantic OCS  
11 Planning Areas, under the Georgia Civil Practice Act,  
12 reported by Elise M. Napier, CCR-2492, in the offices  
13 of The Coastal Georgia Center, 305 Fahm Street,  
14 Savannah, Georgia, on Wednesday, April 18, 2012 at  
15 1:12 p.m.

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1 APPEARANCES OF THE BUREAU OF OCEAN ENERGY MANAGEMENT

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(Reporter's disclosure statement attached to back of transcript.)

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E X H I B I T S

(No Exhibits were marked.)

1 MR. GOEKE: Let's go ahead and get  
2 started. Good afternoon. Thank you all for  
3 coming out. My name is Gary Goeke. I'm the chief  
4 of regional assessment section, chief for the  
5 regional assessment section with the Bureau of  
6 Ocean Energy Management in New Orleans. The  
7 Bureau of Ocean Energy Management is the agency  
8 who has created an environment that will document  
9 what we're here to speak about this afternoon and  
10 tonight.

11 We have, this is the second set of  
12 meetings that we're having. We're having a whole  
13 series of meetings and you came I hope to get in  
14 some information that listed a lot of background  
15 material including where we're going to be having  
16 the meetings over the next few days and next week.  
17 So we're here to get your thoughts on the document  
18 that we've created.

19 We have spent about a year, a little  
20 more than a year, putting together the latest  
21 information that we can on a specific topic on a  
22 specific proposal. What we need from you tonight  
23 are thoughts on that proposal and if we can keep  
24 the comments and keep the suggestions to the topic  
25 at hand, which is the offshore geological and

1 geophysical document that we've created, that  
2 would be great. That helps us a lot.

3           What we have to do as an agency is  
4 create an administrative record. While we're  
5 writing these documents and while we're creating  
6 these decisions, we have to create a track of how  
7 we make the decisions and how we reach the  
8 decisions and that's called our administrative  
9 record. So we want to keep our record this  
10 evening to the topic at hand, which is the  
11 document that we've created.

12           We have a number of people who work for  
13 our agency who is here. If you have related  
14 questions on anything else, we would be glad to  
15 talk to you about it but we would like to keep  
16 this record on our topic this evening. We have a  
17 court reporter here this afternoon to take a  
18 verbatim record of what is said so all of the  
19 comments that you give us, all of the testimony  
20 that you make will be dutifully recorded and will  
21 be considered in our document.

22           Again, like I said, my name is Gary  
23 Goeke and I want to thank all of you for coming  
24 out this evening. Sitting to my right is Dr. Tom  
25 Bjerstedt. Tom Bjerstedt is the project lead for

1 the geological and geophysical EIS. Tom is  
2 generally in charge of creating these technical  
3 documents, taking comments and morphing the  
4 comments into the document to make sure that  
5 whatever information is brought during the comment  
6 period is folded into our document. So Tom is  
7 going to run the session this afternoon. Tom.

8 MR. BJERSTEDT: As Gary mentioned, my  
9 name is Tom Bjerstedt. I'm the NEPA coordinator  
10 for preparation of this environmental impact  
11 statement. I'm also the contracting officer  
12 representative for the contract that the  
13 department advertised and offered for preparing  
14 the technical aspects of this program.

15 I will speak to you about the overall  
16 structure of sort of an overview of the draft  
17 document that's at hand now and I'll after that  
18 I'll introduce William Sloger from CSA  
19 International, Inc., the contractor that prepared  
20 the technical basis for modelling for impacts for  
21 marine mammals.

22 This is our public meeting. This is the  
23 second one on the programmatic environmental  
24 impact statement. I'm probably going end up using  
25 acronyms sooner or later. It's just engrained but

1 we're talking about our geological and geophysical  
2 activities in the Mid- and South Atlantic planning  
3 areas. That's the prime of the document. This is  
4 the second venue of eight meetings that we'll be  
5 holding along the eastern seaboard, cities along  
6 the coast that would be most effected by the post  
7 work offshore. You can see the schedule for the  
8 places we'll be visiting between now and next  
9 week.

10 We've distributed the draft  
11 environmental impact statements. There is two  
12 volumes and our copies are sitting there so there  
13 is objective evidence, so that does exist. I  
14 don't just have to point to a website but it's  
15 here, but we've put it on to our website. We  
16 published a document, formerly announced that it's  
17 available in the Federal Register. That's the  
18 outlet that discusses federal divisions activities  
19 and such. That was done on March 30th.

20 We have a 60 day comment period that is  
21 in process now. We're here today to either record  
22 or receive written comments that you may have on  
23 the document itself so hopefully you've had a  
24 chance to at least crack it open from our website  
25 and see what it's all about because what's most

1 helpful for us are your comments we can use to  
2 respond and react to in the document before it  
3 goes final. Public input is very important.  
4 Aspects of the National Environmental Policy Act,  
5 when I say NEPA, that's what that is for people  
6 who use that all the time. It will eventually be  
7 a decision document used by the secretary of the  
8 interior to act on the proposed action, which I'll  
9 discuss here is to conduct this work offshore.

10           The purpose of the EIS itself is to  
11 assess the potentially environmental impacts of  
12 various types of G&G activities on the outer  
13 continental shelf. We evaluate or project a level  
14 of activity based on inputs that we receive from  
15 industry and based on our own expertise as to what  
16 industries and interest might be offshore. We  
17 identify mitigation measures for the work that's  
18 being proposed and we also project the kind of  
19 impact that work would have on environmental  
20 resources that are out there.

21           The EIS provides information and  
22 analysis of the impacts for our agency to make  
23 decisions and also for other agencies having  
24 responsibilities under environmental law or before  
25 these permits or activities are allowed to



1 proceed. The proposed action, that's sort of the  
2 way that NEPA structured is that there is  
3 something proposed to be done and what we've  
4 proposed to do is authorize these activities  
5 required to support three program areas that our  
6 bureau is responsible for: Oil and gas activity,  
7 renewable energy and marine minerals, which tend  
8 to be sand and gravel, which is used for beach  
9 regeneration and coastal restoration, whatnot.

10 The maps that you see evolved on easels  
11 and here, this is the South Atlantic planning  
12 area, offshore Georgia, North Florida, South  
13 Carolina; the Mid Atlantic planning areas offshore  
14 North Carolina, Virginia and the northern parts  
15 are Maryland, Delaware.

16 This line here is the edge of the  
17 exclusive economic zone for the United States.  
18 This is all the area inland inshore of that line  
19 are waters and submarine, the seabed is owned by  
20 the United States. This line here in purple is  
21 the edge of an extended continental shelf. It's  
22 not, this area between our exclusive economic zone  
23 and this extended continental shelf is currently  
24 not territorial waters of the United States;  
25 however, there are provisions in treaties that

1 we've signed with other countries and through the  
2 United Nations whereby a country if the outer  
3 continental shelf has certain type of morphology,  
4 the country offshore of where it sits can petition  
5 or try to inhabit, incorporate as part of their  
6 exclusive economic zone.

7           The economic zone itself is set up by  
8 treaties with other countries so we can extend it  
9 out if the United States chooses to do so. It  
10 hasn't yet but it's in a data collection phase and  
11 if or when the United States decides to do that,  
12 as we did this work, we decided to not only look  
13 at the resources that are the end of the 200 mile  
14 exclusive economic zone from shore but also all  
15 the way out to 350 nautical miles. Take a look at  
16 that whole area just in case there might be some  
17 point the United States might try to pursue adding  
18 this extended continental shelf into our  
19 territorial waters.

20           The types of activity that we're  
21 discussing here are geological and geophysical in  
22 nature. For geological, it tends to refer to  
23 either direct sampling of the sea bottom or  
24 shallow penetrations of the sea bottom purpose.  
25 Shallow test drilling tends to be regarded as

1 penetrations of the sea bottom less than 500 feet  
2 deep and deep stratigraphic tests are penetrations  
3 of the sea bottom that are generally greater than  
4 500 feet. This is not exploration drilling for  
5 oil and gas, this is research and understanding  
6 what might be there.

7 Geophysical activities, what we're  
8 talking about is two and three dimensional seismic  
9 surveying. We're talking about control source  
10 electromagnetic surveys. These are techniques  
11 that industry uses to understand what sorts of  
12 gases and fluids are in the rocks and sediments  
13 that's below the seabed. Also as part of the  
14 geophysical suite are what we call high resolution  
15 geophysical surveys. These tend to be more  
16 geo-engineering in nature as opposed to direct  
17 exploration for resources that might be buried.  
18 It's for the placement of facilities on the sea  
19 bottom for renewal of energy facilities. It could  
20 be also for oil and gas structures.

21 The kind of techniques that are used are  
22 electrobeam echosounders, these determine the  
23 symmetry. Also a sidescan sonar is a technique  
24 that's used to look at obstructions on the sea  
25 bottom, ship wrecks, perhaps or also marine hard

1 bottoms where you have living animals and corals  
2 that are on the sea bottom and a technique here or  
3 a tool called a boomer. It's not as intimidating  
4 as it sounds. It's an electromechanical device,  
5 it's not an airgun. It uses an electrical charge  
6 and the reaction is of a plate of metal to have a  
7 signal that goes into the water and that's what  
8 the energy source is, is to bounce off of the sea  
9 bottom and also the layers that are -- the shallow  
10 layers in the subsurface.

11 Also we're talking about gravity and  
12 magnetic surveys. These tend to be conducted  
13 along with the seismic surveys that are taking  
14 place. The tools are brought along with the  
15 survey instrumentation. Also airborne site of  
16 gravity and magnetic surveys, we also permit  
17 those. These are the suite of activities that  
18 we're talking about in the environmental impact  
19 statement.

20 When you examine opposed action, you  
21 have to take a look at what are the impact  
22 reducing factors. It's kind of a fancy word for  
23 what sort of stresses are you placing on the  
24 environment by doing that work. You have routine  
25 activities that are -- that you know will happen

1 as a consequence of the work by the nature of the  
2 tools. You have also accidental events which are  
3 unpredictable and by their nature. So you role --  
4 you take a look at both. What are the operational  
5 activities that are going on, what stressors are  
6 being placed on the environment and what can also  
7 result from an accident.

8           And our routine operations, we expect to  
9 have air time sources, active acoustical sound  
10 sources, seismic surveying, electromechanical  
11 sound sources, these are the tools I just  
12 mentioned to use multibeam echosounders, boomers,  
13 sparkers, sidescan sonars. Drilling and coring,  
14 any time you penetrate the sea bottom you have  
15 drill cuttings that are involved especially at any  
16 depth and things are brought to the surface and  
17 they tend to be discharged at the seabed. Also  
18 operational weights of any drilling of that nature  
19 are the kinds of chemicals that you use to  
20 lubricate the drilling bit to bring the cuttings  
21 out of the hole.

22           Bottom sampling, that's sea floor  
23 disturbances is what you imply here any kind of  
24 sampling, grabbing, touching, drilling and coring,  
25 anything you may discharge on the bottom.

1 Placement of anchors, cables and sensors; on shore  
2 base support services are also a component because  
3 the time people are working on the water you have  
4 on shore support activities that take place. The  
5 ships have to berth somewhere. They buy supplies  
6 from suppliers on shore and then the people that  
7 work offshore live somewhere. So these are all  
8 direct impacts as a result of this kind of work.

9 Vessel traffic, the noise, exclusion  
10 zones for safety issues, any waste generated by  
11 the boats on the water and any time you have  
12 people working on the water you've got trash and  
13 debris issues. As far as accidental events are  
14 concerned, since we're not exploration drilling,  
15 we're not talking about producing oil and gas,  
16 we're not talking about pipeline, we're talking  
17 simply about boats on the water so the accidental  
18 event that you could conceive of for this activity  
19 are collisions or accidents at sea that spill  
20 diesel fuel in the water.

21 Once you have an array of impacting  
22 factors that you assess that are part of your  
23 proposed action, you take a look at what are the  
24 biological, the physical and the socioeconomic  
25 resources in the area that you're proposing to

1 work. For us in our purposes we've looked at  
2 benthic communities, we've looked fish and  
3 fisheries both commercial and recreational and  
4 essential fish habitat, which are the life  
5 conditions that are needed for vibrant and healthy  
6 fisheries of both types, recreational and  
7 commercial.

8 Birthing mammals; sea turtles; coastal  
9 and marine birds; protected species that would be  
10 in any of those categories I mentioned; the  
11 socioeconomic issues; archeological resources;  
12 eastern seaboard have a long history of human  
13 activity on it, got lots of ship wrecks out there,  
14 that's part of the sort of thing we want to be  
15 concerned about. Marine protected areas, the  
16 Federal Government has designated special places  
17 as marine, natural marine sanctuaries. There are  
18 two in the both areas of interest, the South  
19 Atlantic has three natural marine sanctuaries and  
20 the Mid Atlantic has the monitor national marine  
21 sanctuary.

22 Human resources and land use, as I  
23 mentioned, the onshore component of activities  
24 that support offshore work and other marine uses  
25 would be taking a look at what other sorts of

1 activities are going on out there at the same time  
2 you're proposing to do this. And in our case on  
3 the eastern seaboard there are fast tracks of  
4 those areas that are used by the military. The  
5 Department of Defense has range complexes out  
6 there in which they conduct all manner of  
7 submarine testing, sea surface testing and even  
8 aircraft testing that drops things in the water.  
9 These are fast tracks of real estate that are  
10 either designated by regulation or other authority  
11 that are out there already so we have to look at  
12 our proposed action in context.

13           The heart and soul of EIS are the  
14 alternatives that are looked at. In our case we  
15 formed three of them. They are based on a  
16 structuring for a time area closure that have been  
17 identified already on the sea. The National  
18 Oceanic and Atmospheric Administration, NOAA, has  
19 already designated large tracts in the South  
20 Atlantic and Mid Atlantic planning areas close to  
21 shore as seasonal activities that have  
22 restrictions at certain times of the year  
23 primarily for whales that are migrating up and  
24 down the coast and that have spawning activities  
25 off the Georgia and Northern Florida coastlines.



1           We've looked at these seasonal  
2 management areas and we've said, okay, they are  
3 recognized already in current regulation. We'll  
4 restrict these areas during the period that NOAA  
5 has recognized them for, a vessel speed control.  
6 That means during certain times of the year  
7 vessels transiting those areas need to go slower  
8 because there is a better chance of seeing little  
9 sea marine mammals at the surface when the boat is  
10 going slower, it's just a physical fact. So our  
11 proposed action is saying we'll restrict those  
12 areas during those periods that NOAA already  
13 recognizes do not have airguns operate during  
14 those periods.

15           The other aspect for the structural  
16 alternative is to look the Gulf of Mexico  
17 practices and operating procedures. These  
18 activities have been going on in the Gulf of  
19 Mexico for a long time. We have existing  
20 mitigation suites that we apply to operators that  
21 are doing this work in that area. We are  
22 examining it for applicability in the Atlantic and  
23 we call these notices to lessees. These are  
24 explanations that are available for operators and  
25 industry that explain how we interpret our

1 regulations.

2 Our operating regulations are specific  
3 to a degree but they don't account for every  
4 single thing so we need amplified guidance on  
5 certain aspects. They don't identify setbacks as  
6 being ultra specific to things. For example,  
7 these NTL's tend to do that. They identify, for  
8 example, protected species observers for marine  
9 mammals that are out there, vessel strike  
10 avoidance requirements, marine trash and debris  
11 awareness. Together what these NTL's in our  
12 operating practices is sort of a design element  
13 for surveys. They guide how under what conditions  
14 you review a survey, they guide under what  
15 conditions you identify -- conditions under which  
16 you would curtail that activity and these are all  
17 what we call design elements for a survey. Survey  
18 protocols is what the document calls them.

19 We've fashioned our alternatives around  
20 timely closure and applicability of the guidance  
21 that we use in the Gulf of Mexico. Best proposed  
22 action, those primary closures I mentioned,  
23 alternative A are considered.

24 Alternative B, the philosophy for this  
25 alternative is an enhanced suite of mitigation and

1 also is an extended primary of closures that are  
2 based on NOAA time frames that I mentioned to you  
3 earlier. We also recognize alternative B a  
4 closure area offshore Central Florida Coast for  
5 nesting sea turtles and separation between surveys  
6 that might be taking place at the same time.

7 Required passive acoustic monitoring, what that is  
8 tends to be referred to, did you hear of PAM?

9 It's sensitive hydrophones that are in the water  
10 that an operator listens to and try to determine  
11 some of the characteristic noises of marine  
12 mammals under the water, creeks and various  
13 things, sounds; therefore, you can have  
14 opportunities and know whether animals might be in  
15 the area that aren't at the surface. You can't  
16 see them, you don't know if they are there or not.  
17 This technique gives you some insight whether  
18 they're in the area but you can't see them. They  
19 are under water.

20 Alternative C is required by a NEPA  
21 evaluation. It's a no action alternative and the  
22 way that we defined it that since there is no  
23 current G&G activity in the Atlantic, that aspect  
24 of our program is a no action alternative. It  
25 means that if you don't have it, if you select

1 alternative C, you're not going to do this work.  
2 Those other program elements we've selected a  
3 status quo aspect to them, which is they are  
4 allowed by NEPA, meaning that we're not seeking to  
5 foreclose things that are already happening, we  
6 are just examining the wisdom of going forward for  
7 things that are not currently permitted.

8 Removal of any of these programs and  
9 sand and gravel work currently authorized across  
10 the enter Atlantic seaboard so we're not proposing  
11 to top any of that, we are just proposing to let  
12 it go on. It's just not covered under the  
13 programmatic elements that the EIS is covering.

14 I mentioned the time area closures and  
15 especially for alternative A, if you look at the  
16 map here, this hatched area is critical habitat  
17 for the Northern Right Whales has been identified  
18 by NOAA fisheries. It's offshore, the  
19 Jacksonville area extends along the shore line all  
20 the way to the boundary of the South Atlantic  
21 planning area.

22 This orange area that encompasses most  
23 of that they call the southeastern seasonal  
24 management area and according to identified air  
25 seasons you can see that time area closure is

1 recognized by NOAA fisheries already for activity  
2 for vessel speed in these areas. We're saying no  
3 airguns for those same time periods.

4           The middle, the seasonal management area  
5 is just north here from the Brunswick area of  
6 Georgia along the coastline to Wilmington and  
7 these small space areas coastline to regions that  
8 enter large estuaries and ports that are busy so  
9 there tends to be a lot of vessel traffic there  
10 and that's why NOAA has identified primary time  
11 speed restrictions for those areas. During these  
12 periods of time they are supposed to be going  
13 slower. The reason being is that the marine  
14 mammals they live during the summer time offshore  
15 in New England States and as summer, as the year  
16 progresses they migrate down the shoreline usually  
17 within 20 nautical miles. Most mammals are safe  
18 within that band between shore and about 20  
19 nautical miles out. They are all over the place  
20 out there but they tend to go along the shoreline.  
21 They migrate down in the summer months and then  
22 they over winter in this critical habitat area,  
23 seasonal management area.

24           Alternative B, as I mentioned, the  
25 philosophy for B is to lay on an extra enhancement

1 for some mitigation and expand some of the time  
2 area closures for the same rationale that I just  
3 explained to you, there are seasonal migration of  
4 these animals along the coastline. So part of  
5 alternative B involves expanding the north Mid  
6 Atlantic seasonal management area to fill in all  
7 of these small -- this whole band continuous. So  
8 if there is a continuous band from the northern  
9 part, from the Mid Atlantic planning area boundary  
10 all the way along the seashore to this southern  
11 edge of the South Atlantic planning area. For the  
12 southeastern seasonal management area to extend  
13 that area south so it creates a continuous belt  
14 whereby you would not have airgun usage at the  
15 same time period NOAA recognizes those speed  
16 controls.

17           Alternative B also includes this area  
18 along the Brevard County, Florida with an area  
19 that has a lot of activity that has loggerhead  
20 seals, loggerhead turtles and leatherback turtles.  
21 There are live nesting sites I've identified here,  
22 tens of thousands of them and during this time of  
23 the year they come ashore to lay their eggs,  
24 eventually hatch and go out to sea. What we're  
25 saying is that this is probably an area that's

1 worthwhile to restricting airgun activity for that  
2 reason, so that's why it's alternative B.

3           What you'll see in the EIS if you want  
4 to take -- have a good rollup of the work that  
5 we've done, take a look at table two, dash, two.  
6 What you'll see is a rendering that shows all the  
7 resources along one axis, all the impacting  
8 factors that apply to those resources. This is  
9 just an example, all the alternatives across the  
10 top and then an assessment of impact significance  
11 for each of those resources for each of those  
12 impacting factors. And this is what you'll see:  
13 Qualitative descriptors that ranges from  
14 negligible minor, moderate to major. All of the  
15 assigned impacts have been assessed for the work  
16 that's being proposed and none of them have a  
17 major impact on any resource. They are all  
18 something other than major or smaller. So if you  
19 want to take a look if and when you look at the  
20 EIS, go to 2.2 to get a good rollup of the whole  
21 picture.

22           Consultations are required to be done  
23 under environmental law. These tend to be done  
24 when the environmental impact statement is  
25 written, drafted and then finally finalized. So

1 this current activity among them are Section 7 of  
2 the Endangered Species Act and the Marine Mammal  
3 Protection Act. We've done, we've begun informal  
4 consultations under these laws and we'll be  
5 carrying them out to conclusion as we finish up  
6 the environmental impact statement.

7 The next steps that are on the table  
8 ahead of us here is that we have a public comment  
9 period that began. We're in the middle of April  
10 and May, 60 days for public comment. We'll take  
11 all of the input that are received from folks like  
12 yourself, from federal agencies and state agencies  
13 that comment on the document; we'll revise it into  
14 a final; we'll review and begin to construct a  
15 recommendation for management to consider for how  
16 to decide what they are going to do and the  
17 environmental consultations is taking place  
18 concurrently all the time.

19 Record of decision is what happens at  
20 the end of the NEPA evaluation. It's what  
21 happened, what's your decision. It's called a  
22 record of decision and under the current schedule  
23 you project that to be early December before the  
24 end of the calendar area. I mentioned to you that  
25 the common period closes May 30. We are expecting



1 testimony in meetings like this, oral testimony  
2 that the court reporter takes down also written  
3 anything that's submitted in writing, we take  
4 that. We have a dedicated e-mail box for  
5 comments, GGEIS@boem.gov. A copy of the draft is  
6 out there. All the materials that you may have  
7 received at the tables in front, they have the  
8 website identified where you can go and just click  
9 up the documents and take a look at it right  
10 there. If you want to comment on using the United  
11 States postal, the address is here. It's also in  
12 all the literature you may have picked up coming  
13 in.

14           And so in closing what I would say is  
15 that our agency has spent over a year preparing  
16 this proposal, this evaluation. It involves state  
17 of the practice modelling for noise in the ocean,  
18 caused by this sort of activity. It's rather  
19 complicated. It needs to be digested so what I  
20 ask is when you do take a look at it and you do  
21 offer comments, paw through the document, take a  
22 look at it, try to understand the rationale for  
23 the mitigations, understand why they are proposed  
24 and then prepare comments that would help us make  
25 a better document using that incite, whatever

1 incite you can bring to bear is what we ask.

2 Now, I'll introduce Mr. Will Sloger,  
3 he's from CSA International, Inc., the contractor  
4 that did the modelling for us on impacts on marine  
5 mammals and we'll talk a little bit about that so  
6 that you can have some idea, get an overview of  
7 how we approached that issue of noise in the  
8 water. Will.

9 MR. SLOGER: Thanks, Tom. I would like  
10 to briefly describe the assessment of potential  
11 impacts to marine mammals from the proposed  
12 action. Marine mammals are one of 15 resources  
13 that were evaluated in the EIS and you saw a  
14 previous slide that listed all 15 of those. Those  
15 resourced areas were identified as having  
16 potential to be impacted by the proposed action.

17 The impact assessment process is a  
18 multistep process, the first step being to  
19 identify resources in the case of marine mammals  
20 that involved identifying species, distribution  
21 density. The next step is to define criteria that  
22 defines significance of the impact to those  
23 resources. Once that's done, we then identify  
24 factors that might impact marine mammals category  
25 of resources. Once all those areas were defined,

1 data was then collected by the proposed action  
2 resources and potential mitigation measures and  
3 then with all that the analysis followed to  
4 determine takes, intentional takes, if any.

5 Okay. Now, I'm going in the right  
6 direction. In the area of interest -- and I'll  
7 probably use that phrase a number of times, as Tom  
8 mentioned, the area of interest is two planning  
9 areas: The Mid Atlantic and South Atlantic  
10 planning areas off the Atlantic Coast. But in the  
11 area of interest 38 species of marine mammals are  
12 they are all listed here. As you'll see there is  
13 a category of Sirenians, which is the West Indian  
14 manatee. That and the pinnipeds are unlikely to  
15 be impacted as they rarely occur within the area  
16 of interest.

17 To help us in establishing impact  
18 criteria you must first look at federal laws that  
19 apply in this case, Endangered Species Act and the  
20 Mammal Protection Act. The Endangered Species  
21 Act, of course, lists mammals that might be  
22 threatened or endangered, which comes in play in  
23 the consultation process, Section 7 under the  
24 Endangered Species Act, acquires consultation,  
25 which BOEM is in the process of doing with

1 National Fishery Service. It's important to note  
2 that operators in the future will have to apply  
3 for incidental take authorizations for their  
4 specific surveys.

5           Again, within the area of interest there  
6 are seven listed species perhaps in this area most  
7 notable would be the North Atlantic Right Whale,  
8 which Tom talked about earlier. In determining  
9 levels of impacts, the Marine Mammal Protection  
10 Act is very important as it defines two levels of  
11 classes: Level A and level B. Those are used in  
12 the impact evaluation process. To help us with  
13 assessing impacts criteria must be developed to  
14 determine levels of impact. These are done partly  
15 by using things like the harassment levels of the  
16 MMPA as well as looking at recent other documents  
17 and environmental assessments that were done in  
18 those. We ended up with criteria that four  
19 different levels of impact criteria and those  
20 levels were based on a number of parameters first  
21 being detectability, that is impact measurable or  
22 detectable. Secondly, duration is a short term or  
23 long term impact. Next is spacial extend. Impact  
24 whites spread that were in a very small area and,  
25 finally, severity.

1           Here we've listed the impact producing  
2 factors that might affect marine mammals. There  
3 are only five that comes from a larger list that  
4 Tom showed earlier. As Tom mentioned, with the  
5 exception of first factor of acoustic sound  
6 sources is the impact level for all the remainder  
7 was either negligible or minor.

8           For assessing impacts there are three  
9 steps, three primary steps that have to be  
10 followed: Collection and support of information;  
11 establishment of mitigation measures and, finally,  
12 determination of potential impacts. The G&G  
13 surveys is a proposed factored into the evaluation  
14 of the proposed action. To define the sources of  
15 sound, we reviewed all those proposals and  
16 developed a list of six sound sources that are  
17 representative of all surveys: Two airgun values,  
18 two seismic airgun arrays large and small and four  
19 electromechanical sources, which Tom described  
20 earlier.

21           The measure of the survey as far as  
22 overall amount of survey is line kilometers and  
23 here we have a table showing the line kilometers  
24 the anticipated surveys that occur over the nine  
25 year period that the EIS looks at 2012 to 2020.

1 As you can see two of these surveys are the Lyon's  
2 share of line kilometers listed here. All of  
3 these are -- all of these different types of  
4 surveys are seismic surveys. This table is just a  
5 visual representation of where surveys might  
6 occur. It shows you all the information that was  
7 on the previous slide and as you can see there are  
8 certain areas, the darker colored areas where  
9 survey levels or survey intensity is greatest.

10 In gathering information one of the  
11 areas we looked at was one of the specifics about  
12 marine mammals. They are frequency range of  
13 hearing the thresholds, which they are able to  
14 hear, evaluation also used a couple different  
15 methods of assessing those impact thresholds. The  
16 primary one, of course, is the NIPS approach,  
17 sound level and there is also a second approach,  
18 the proposed assessment.

19 The modelling study was conducted  
20 estimated propagation underwater sound. Six sound  
21 sources, as I mentioned, were used. We then  
22 looked at 22 different sites throughout the area  
23 of interest. Those sites were chosen to address  
24 physical conditions such as water depth, the odd  
25 compensation also water temperature, which could

1 affect sound speed profiles. The combination of  
2 those 22 areas and the six sources gave us 35  
3 different propagation scenarios, you know,  
4 modelling for 105 different acoustic field  
5 estimates. This is one of the intermediate  
6 products in the assessment process. These figures  
7 are sound pressure level diagram showing  
8 differences in sound pressures at different  
9 points, one on the continental shelf, one out in  
10 the continental slope in the area of interest.

11           The acoustic impact model A was the  
12 means software that was used for the assessment  
13 and it assesses the levels and number of marine  
14 mammals that might be exposed to sound within the  
15 area of interest. It does have by creating a  
16 virtual environment taking a lot of the parameters  
17 listed here into account. It models for sound  
18 source properties and movement that comes from the  
19 acoustic provocation model. It takes into account  
20 key distribution and dive patterns and also the  
21 environmental factors that I just mentioned. It  
22 also factors in certain mitigation methods, not  
23 all the ones that will be applied, but many that  
24 can be modelled are input into that model.

25           This is a summary of impacts from the

1 seismic airguns. One point that's very important  
2 to note is that because the model doesn't take  
3 into account certain, certain mitigation factors  
4 such as presurvey observers, a couple of the other  
5 factors that are going on, it's very conservative  
6 in the estimate of take a result. You see in the  
7 slide very similar to this earlier, this is a list  
8 of mitigation measures and how they are applied to  
9 the three alternative. A, of course, is the  
10 proposed action, alternative B has different  
11 mitigation measures. And I guess it's important  
12 to note that alternatives A and B are largely the  
13 same as the proposed action. The difference is in  
14 the mitigation efforts that are applied and  
15 alternative C, of course, is no action. I guess  
16 the two points, two mitigation measures most  
17 noteworthy here are the passing of the acoustic  
18 monitoring, which is optional in the alternative  
19 A, required under alternative B and also the  
20 separation distance alternative A does not require  
21 one. Alternative B requires a 40 kilometer  
22 separation distance between simultaneous surveys.  
23 The slide you've seen also showing the  
24 areas that are closed largely due to right whale  
25 habitat near shore along the area of interest.



1 Alternative B expands those areas both north and  
2 south and also has an area posed due to turtle  
3 nesting down at the southern end of the area.

4 Again, this table is similar to an  
5 earlier table showing the level of impact  
6 ultimately determined through the assessment for  
7 the five factors that might affect marine mammals.  
8 All of them, of course, are negligible to minor.  
9 Only the acoustic sound sources has the moderate  
10 level of impact.

11 And that's the end of my presentation  
12 this takes us back to the beginning of the comment  
13 process. I'll turn it over to Gary for that.

14 MR. BJERSTEDT: Thank you, Will. When  
15 you came in today, you had the chance to sign up  
16 to speak in order of your arrival. That's what  
17 we'll be doing at this point. There is not a lot  
18 of people here. There is only five people that  
19 are signed up to speak, so I don't think we need  
20 to impose speaking limits but be reasonable,  
21 please. Mr. Richard Cobb.

22 MR. COBB: Good afternoon. My name is  
23 Richard Cobb. I'm the executive director of the  
24 Georgia Petroleum Council, which is the division  
25 of the American Petroleum Institute. Thank you

1 for the opportunity to speak today about this  
2 PEIS, which will support the issuance of permits  
3 to conduct geological and geophysical studies,  
4 activities on the Atlantic OCS.

5           The oil and natural gas industry has a  
6 long history of working with the Department of  
7 Interior to develop this country's natural  
8 resources to the benefit of the U.S. economy and  
9 all to Americans. Our industry stands ready to  
10 invest in exploration in the Atlantic OCS and this  
11 PEIS is an immediate first step to generating the  
12 data that will allow for a more accurate estimate  
13 of potential for oil and natural gas development  
14 in this area. Generating new data is very  
15 important for the Atlantic OCS given the current  
16 estimates are based on decades of old data as have  
17 the technologies and seismic surveying and  
18 computer modelling in use by the industry today.

19           Although it's difficult to accurately  
20 estimate the amount of resources without the  
21 benefit of drilling, our past experiences have  
22 shown that active exploration and development  
23 often leads to increased revenue estimates;  
24 however, the belief that moving forward with this  
25 decision can quickly lead to filling the

1 information gap on potential Atlantic OCS oil and  
2 gas resources is misguided. In fact, the data  
3 collections activities and envisioned by the  
4 administration will not likely happen unless  
5 companies are convinced the prospects for leasing  
6 Atlantic OCS in the near future are real. As you  
7 know, current OCS policy does not allow for lease  
8 sale Atlantic until 2017 at the earliest.

9 It's important to remember that  
10 government does not generate this data, seismic  
11 companies do, and they generally do this on a  
12 speculative basis hoping to sell the data to  
13 operators who are willing to purchase leases in  
14 the area. With no lease sale scheduled for the  
15 Atlantic seismic companies have little incentive  
16 to gather new data excluding the North Atlantic  
17 planning area, the PEIS a short sighted policy  
18 decision. There is great deal of interest in  
19 surveying and eventually developing this area.  
20 Without new seismic information, the significant  
21 data gap will remain for the North Atlantic  
22 planning area.

23 We can create more jobs and general more  
24 revenue to allow to responsibly develop and  
25 produce here in the United States more of the oil

1 and natural gas we need. The more development  
2 requires the industry and government share a  
3 vision of the potential benefits and act as  
4 partners to fully realize them. The Wood  
5 Mackenzie study shows that developing the offshore  
6 areas that have been subject to congressional  
7 moratoria as well as the resources in Alaska's  
8 Arctic National Wildlife Refuge as well as a  
9 portion of unavailable federal lands in the  
10 Rockies would, number one, lift U.S. crude oil  
11 production by as much as 2.8 million barrels a day  
12 in 2025; two, increase natural gas production by  
13 6.5 billion cubic feet per day by 2025; create  
14 530,000 new jobs and, finally, add 206 billion in  
15 cumulative government revenue by 2025.

16 While Atlantic OCS leasing and  
17 development would also have a significant positive  
18 affect on Georgia's economy. It would bring much  
19 needed jobs and a variety of industries. The  
20 study shows that opening of the Atlantic offshore  
21 areas could bring 2,600 new jobs to Georgia.

22 In addition offshore development could  
23 generate much needed revenue for critical services  
24 including roads, environmental conservation and  
25 education. An additional \$285 million in revenue

1 could be generated for the state of Georgia from  
2 2012 to 2030 if offshore development were allowed  
3 to take place in areas that occur off limit.

4 I appreciate the opportunity to comment  
5 on this PEIS for the Atlantic OCS and the oil  
6 natural gas industry stands ready to invest in  
7 safe exploration and development should  
8 administration policies change to take full  
9 advantage of our opportunities. Thank you.

10 MR. BJERSTEDT: Matthew Padon.

11 MR. PADON: Thank you, Richard. My name  
12 is Matthew Padon and I'm here with Seaboard  
13 Exploration and here today representing the  
14 International Association of Geophysical  
15 Contractors, the IAGC. The IAGC is the  
16 International Trade Association representing the  
17 industry that provides geophysical services to the  
18 industry including both the conventional and  
19 renewable energy sectors.

20 IAGC members have expressed interest to  
21 conduct some geophysical activities on the  
22 Atlantic offshore continental shelf. It is the  
23 IAGC member companies who play an integral role in  
24 the successful exploration and development of  
25 offshore energy resources through the acquisition

1 and processing of geophysical data. There is a  
2 need in value of geophysical data. Geophysical  
3 surveys are key tools to use in exploration of oil  
4 and natural gas and siting of renewable energy  
5 facilities.

6 Geophysical data is critical to the  
7 successful discovery and efficient development in  
8 production and oil of natural gas. When applied  
9 early in exploration process geophysical data aids  
10 E&P companies of focusing their analysis and  
11 illuminates the most prospective areas for future  
12 oil and natural gas exploration allowing for the  
13 elimination of those areas that are unlikely to be  
14 prospective.

15 Geophysical data is critical for the  
16 development of renewal energy providing important  
17 key data required to site renewal energy  
18 facilities and design the foundation of structures  
19 that will be required for the development of  
20 renewable energy. Geophysical data is also very  
21 valuable to the federal government and even to  
22 state governments. Geophysical data is critical  
23 in understanding the oil and natural gas resources  
24 bases off the U.S. offshore continental shelves.

25 Advancements over the last ten years in

1 data acquisition and processing technology has  
2 resulted in fewer dry holes and smaller  
3 exploration and development production footprints.  
4 Specific comments regarding the draft PEIS of the  
5 three alternatives listed, the IAGC supports  
6 alternative A. The proposed action, which allows  
7 the greatest coverage using deep penetration  
8 seismic and includes seasonal closure of areas for  
9 the Right Whale.

10 We don't support a 40 kilometer  
11 separation distance between simultaneous seismic  
12 operations which is included in the mitigation  
13 measures proposed as part of alternative B.  
14 Notwithstanding that geological and geophysical  
15 permits recently approved in the Gulf of Mexico  
16 Western and Central planning areas include this  
17 mitigation measure as a condition of permit and  
18 approval, it was not developed using any  
19 scientific or anecdotal evidence.

20 We believe the PEIS should be expanded  
21 to include the North Atlantic planning area as  
22 well. E&P companies need geophysical data that  
23 they can use to tie past and current production  
24 data from offshore Nova Scotia to the U.S.  
25 Atlantic basins. Without this new data there is a

1 very significant gap in the regional work that E&P  
2 companies will want to perform.

3 The incremental cost and time to extend  
4 the PEIS to the Northern Atlantic planning area  
5 would be minimal and allow for geophysical data  
6 acquisition to occur for renewable energy siting  
7 requirements as well as when this area is finally  
8 considered for natural gas and oil exploration  
9 production.

10 If the North Atlantic planning -- if the  
11 North Atlantic planning area is not included, we  
12 encourage BOEM to conduct individual, project  
13 specific environmental assessments as needed that  
14 will allow geological and geophysical operations  
15 to take place.

16 Lastly, each of the G&G permit  
17 applications currently on file with BOEM are for  
18 the purposes of acquiring nonexclusive seismic  
19 data which would be licensed to E&P companies as  
20 they develop a better understanding of the  
21 hydrocarbon resource potential in preparation on  
22 pending lease sales. Thank you.

23 Although the Atlantic PEIS will pave the  
24 way for seismic activity in the area of great  
25 interest with exploration companies, without any



1 planned leasing in the next five years the  
2 likelihood of seismic contractors investing in  
3 nonexclusive seismic data acquisition is very  
4 uncertain.

5 Our sector of the energy industry that  
6 is geophysical operators meet the environmental  
7 challenges that are upon us. Our industry  
8 conducts operations globally in a variety of  
9 environments. In particular geophysical industry  
10 has 50 years of experience in the U.S. Gulf of  
11 Mexico offshore continental shelf and 40 years of  
12 experience in the U.S. Arctic OCS. During that  
13 time there has been no scientifically supported  
14 evidence that routine seismic surveys result in  
15 population levels impacts for any marine mammal  
16 species.

17 Our industry routinely employs  
18 operational practices which protect whales,  
19 dolphins and other marine mammals. With these  
20 appropriate risk based mitigation measures, we  
21 feel that seismic surveys have and will continue  
22 the undertaking with little or no biological  
23 significant impact to marine mammal population and  
24 to marine life in general. In addition, it's  
25 important to remember that seismic surveys are

1 temporary and transitory and use a low frequency  
2 short duration source signal.

3 The IAGC values the stakeholder process  
4 and are committed to participating in a dialogue  
5 with all stakeholders to explain what we do, why  
6 we do it and the measures that we take to protect  
7 the environment.

8 I have with me several educational items  
9 that explain modern marine geophysical data  
10 acquisition here at my desk if anyone cares to  
11 take some home with you. Measures geophysical  
12 industry implements to ensure minimal impacts of  
13 our operations on the environment. This  
14 information is available for BOEM and those in  
15 attendance in the back of the room.

16 In conclusion, the IAGC wishes to,  
17 again, express our appreciation for this  
18 opportunity to voice our support and commitment to  
19 work with BOEM and all stakeholders in the  
20 development of the Atlantic PEIS. Tom, Gary,  
21 thank you both very much.

22 MR. BJERSTEDT: Vicky Weeks.

23 MS. WEEKS: Thank you for the  
24 opportunity to speak here today and make these  
25 comments. My name is Vicky Weeks, W-e-e-k-s, and

1 I'm representing myself as a person who is  
2 interested in our environment and our ability for  
3 us to support the cohabitation by all of these  
4 here.

5 In the summary of the document I noticed  
6 that the BOEM is receiving permit requests for  
7 seismic airgun surveys and it was pretty much the  
8 reason given for the initiation of this process  
9 and this study and the intent is to support the  
10 expansion of the oil and gas exploration. And one  
11 would assume if one would guess or assume, we  
12 don't want to just explore for it, we would  
13 actually want to begin producing it and that's  
14 where the bigger problems enter into as we look at  
15 this process it is the precursor process of the  
16 ability of the industry to implement offshore  
17 drilling and oil and gas.

18 As we look at this specific study, I  
19 noticed that most of the survey was focused on the  
20 seismic airgun but I also notice that  
21 electromagnetics are basically involved and in  
22 terms of marine mammal navigation I believe we've  
23 seen some substantial scientific evidence showing  
24 that marine mammals use magnetic orientation in  
25 their navigational and biological processes and I

1 don't see that that was at all addressed here. In  
2 terms, that's pretty much your operational events.

3 In terms of accidental events, well,  
4 spills and accidents from those in the process of  
5 doing the surveying can be listed as minimal with  
6 regard to the survey process but as we've all seen  
7 in the Gulf of Mexico, I find it interesting we  
8 base so much stuff on all the work that was done  
9 in the Gulf of Mexico to ensure the environmental  
10 protection and then we had the BP Oil spill, which  
11 shows us how well we did in that job.

12 So, again, while we may not have  
13 accidental spills in the process of the search for  
14 the oil and the seismic testing for the oil, once,  
15 again, the intention here is to build oil and gas  
16 exploration wells.

17 Finally, one of the things that I saw  
18 that the report briefly addresses is the broader  
19 cumulative impacts those being climate change and  
20 the cumulative sea noise. I'm sorry to say that I  
21 did not see -- I didn't have time to go through  
22 515 pages of the report to identify what the  
23 assessment on the cumulative sea noise was, but I  
24 was glad to see you were looking at it.

25 As we talk about the marine mammal

1 population here with regard to this specific  
2 seismic exploration, I also noticed that it was no  
3 mention of the sea turtles here on Tybee and  
4 Coastal Georgia, which I believe we do have a  
5 fairly substantial population in this area. And,  
6 additionally, I noticed, I know that the coastal  
7 bottom dolphins are not listed as a threatened or  
8 endangered species, but they are in terms of the  
9 tourism in this area, a key draw to people coming  
10 to visit the area.

11 And when you talk about the incidental  
12 taking, the killing is one level of impact but  
13 there is also the behavioral changes and those  
14 behavioral changes can be substantial to these  
15 populations of other marine mammals that are  
16 really crucial to our tourism industry here.

17 The gentleman who spoke earlier spoke  
18 about how leasing, that this wasn't an imminent  
19 process that was about to occur because the option  
20 and the opportunity for offshore leasing for  
21 production wells wasn't going to occur until  
22 2017 as thought that was a long time from now.  
23 2015 is five years from now.

24 In terms of job creation I do not have  
25 the specific data here to speak into the record

1 but I will be submitting a written record, but  
2 there are numerous studies to show that the job  
3 production capacity of the alternative and  
4 renewable fuel industry far exceed the capacity of  
5 the fossil fuel industry and do so without the  
6 time commitment environmental threats and dangers.  
7 As a result of all of those pieces, I will  
8 strongly urge that we adopt option C. Thank you.

9 MR. BJERSTEDT: Jeff Hamling.

10 MR. HAMLING: H-a-m-l-i-n-g. Good  
11 afternoon. My name is Jeff Hamling and I'm the  
12 Vice President of Federal Affairs for the Georgia  
13 Chamber of Commerce. I'm here to represent the  
14 membership of Georgia's business community and  
15 voice support for the Bureau of Ocean Energy and  
16 Management's decision to allow seismic studies of  
17 the Atlantic outer continental shelf. We believe  
18 these studies are important because they will  
19 determine the potential resources of oil and  
20 natural gas available for domestic production.

21 Georgia Chamber members employ nearly  
22 one million Georgians. Our companies span almost  
23 every major industry that drives the U.S. economy  
24 including agriculture, manufacturing,  
25 transportation, technology and healthcare. We

1 have members that are Fortune 500 companies as  
2 well as small businesses that are just starting  
3 up.

4 I'm here because Georgia businesses  
5 understand the value of oil and natural gas and  
6 the need to produce more of this energy  
7 domestically. Our member companies are similar to  
8 millions of businesses throughout the country that  
9 are relying on oil and natural gas powering  
10 factories and offices, transporting goods to  
11 market or using the products created by these rich  
12 resources.

13 Producing more oil and natural gas  
14 domestically will provide a steady, reliable  
15 source of energy helping to keep input costs  
16 stable. Studies show that developing oil and  
17 natural gas reserves in offshore waters and other  
18 federally controlled areas could create thousands  
19 of jobs and generate hundreds of billions of  
20 dollars in new revenue for government programs.  
21 In Georgia alone a Wood Mackenzie study concluded  
22 that thousands of jobs in over 285 million in  
23 state revenue between 2012 and 2030 would be  
24 generated the area off the Atlantic OCS is  
25 developed. But we need to begin now. Our Chamber

1 believes that government policies should be based  
2 on sound science and data. With this mind we  
3 fully support the government's decision to conduct  
4 seismic analyses. The data available regarding  
5 the offshore Atlantic area is over 20 years old  
6 and new seismic survey technologies would give  
7 producers a clear more detailed accounting of OCS  
8 resources as they make business decisions  
9 regarding exploration.

10 Our organization understands the  
11 important balance between environmental impacts  
12 and economic opportunity; therefore, it is  
13 reassuring that the seismic survey techniques will  
14 be carefully managed by the operator to avoid  
15 impacting marine mammals. And as there have been  
16 significant strides from both the government and  
17 industry to improve offshore drilling safety, we  
18 appreciate the continued efforts to safely develop  
19 offshore resources.

20 Thank you, again, for the opportunity to  
21 comment and in conclusion we ask that the  
22 government allow seismic studies to move forward  
23 and to allow the oil and natural gas companies to  
24 begin leasing land for development.

25 MR. BJERSTEDT: Claudia Collier.



1 MS. COLLIER: I'm going to try not to  
2 read but I don't feel so bad, everybody else is  
3 reading theirs. I'm a nontechnical citizen  
4 activist so forgive me if my comment is going to  
5 be simple and common sense. There is an old wise  
6 saying that advises against putting all your eggs  
7 in one basket. Both of our political parties as  
8 well as our current administration have professed  
9 to believe in the all of the above energy strategy  
10 and since we're already drilling for gas and oil  
11 in the north, in the west -- I mean, the west and  
12 massively in the south as well as all across our  
13 land, I contend that we have many, many eggs in  
14 the gas and oil basket.

15 So on the East Coast we have determined  
16 that there is already a lot of win potential on  
17 and mostly on the shallow shelves where there is  
18 going to be keen competition for the oil and gas  
19 exploration as well. I think it will probably be  
20 cheaper for both oil and gas to choose these  
21 shallow shelves first. And with the corporate  
22 elephant in the room, I'm sure you can imagine who  
23 is going to win that competition.

24 So I will read my last statement. I  
25 would suggest that we designate the East Coast our

1 wind energy basket. All your study work, all your  
2 great study work here can be utilized to develop a  
3 truly diverse energy portfolio that will wisely  
4 navigate an uncertain environmental and economic  
5 future. Thank you.

6 MR. BJERSTEDT: Laura Kreski.

7 MS. KRESKI: Hi. I'm opposed to  
8 offshore drilling but I don't think that's what  
9 we're discussing today. I think we're discussing  
10 the environmental impacts of these surveys and I  
11 hope that you will do the best that you can to  
12 protect the wildlife in these areas and I think  
13 you're really taking steps and I hope you take  
14 extra steps as possible. I think option B will be  
15 my focus.

16 MR. BJERSTEDT: That's the end of the  
17 people who have signed up to speak. Is there  
18 anybody else who would like to say something?

19 MR. MOORE: My name is Sammy Moore,  
20 S-a-m-m-y, and two O's in Moore. I just retired  
21 after 32 years in the offshore oil industry,  
22 started working off the Coast here back in 1979,  
23 ended up -- I worked for Transocean, lost friends  
24 over there, but we're not talking about offshore  
25 drilling, we're talking about defining our

1 resources. I'm in favor of proposal B. I think  
2 we need to clearly define our resources in this  
3 country. I think it could be a good bit of the  
4 proposal so I like what I've seen and I think you  
5 have done an excellent job on it and I think  
6 mitigations are in place. Thank you.

7 MR. BJERSTEDT: Anyone else wishing to  
8 speak? Okay. That will conclude our afternoon  
9 meeting.

10 (The presentation concluded at 2:22  
11 p.m.)

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1 CERTIFICATE

2 GEORGIA:

3 CHATHAM COUNTY:

4 I, Elise M. Napier, Certified Court Reporter  
5 for the State of Georgia, do hereby certify:

6 That the foregoing deposition was taken  
7 before me on the date and at the time and location  
8 stated on Page 1 of this transcript; that the witness  
9 was duly sworn to testify to the truth, the whole  
10 truth and nothing but the truth; that the testimony  
11 of the witness and all objections made at the time of  
12 the examination were recorded stenographically by me  
13 and were thereafter transcribed by computer-aided  
14 transcription; that the foregoing deposition, as  
15 typed, is a true, accurate and complete record of the  
16 testimony of the witness and of all objections made  
17 at the time of the examination.

18 I further certify that I am neither related  
19 to nor counsel for any party to the cause pending or  
20 interested in the events thereof.

21 Witness my hand, I have hereunto affixed my  
22 official seal this 2nd day of May 2012, at Savannah,  
23 Chatham County, Georgia.

24

25

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ELISE M. NAPIER CCR-2492

1 D I S C L O S U R E

2

3 Pursuant to Article 8.B. of the Rules and  
4 Regulations of the Board of Court Reporting of the  
5 Judicial Council of Georgia, I make the following  
6 disclosure:

7 I am a Georgia Certified Court Reporter. I  
8 was contacted by my office of McKee Court Reporting,  
9 Inc. to provide court reporting services for this  
10 deposition.

11 I will not be taking this deposition under  
12 any contract that is prohibited by O.C.G.A.  
13 15-14-37(a) and (b).

14 I have no contract/agreement to provide  
15 reporting services with any party to the case, any  
16 counsel in the case or any reporter or reporting  
17 agency from whom a referral might have been made to  
18 cover the deposition.

19 I will charge its usual and customary rates  
20 to all parties in the case, and a financial discount  
21 will not be given to any party to this litigation.

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ELISE M. NAPIER CCR-2492

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