NATIONAL ENERGY BOARD
OFFICE NATIONAL DE L'ÉNERGIE

Public Review of the TGS NOPEC Geophysical ASA (TGS), Petroleum Geo-Services (PGS) and Multi Klient Invest (MKI) Northeastern Canada 2D Seismic Survey Application

Examen public de la demande d'autorisation de levés sismiques bidimensionnels dans le nord-est du Canada présentée par TGS NOPEC Geophysical ASA (TGS), Petroleum Geo-Services (PGS) et Multi Klient Invest MKI)

VOLUME 3

Meeting held at
Réunion tenue à

Awiujaq Gymnasium
Qikiqtarjuaq, Nunavut

May 1, 2013
Le 1er mai 2013

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PUBLIC MEETINGS
RÉUNIONS PUBLIQUES

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Multi Klient Invest (MKI)

MEETING LOCATION/LIEU DE LA RÉUNION

Meeting held in Qikiqtarjuaq (Nunavut), Wednesday, May 1, 2013
Réunion tenue à Qikiqtarjuaq (Nunavut), mercredi, le 1er mai 2013

BOARD PANEL/COMITÉ D'AUDIENCE DE L'OFFICE

D. Hamilton Member/Membre

APPEARANCES/COMPARUTIONS

APPLICANTS/DEMANDEURS

NEXUS Coastal
- Mr. Chris Milley

Petroleum Geo-Services (PGS)
- Mr. Garry Morrow
- Mr. Magnus Christiansen

TGS NOPEC Geophysical Company ASA (TGS)
- Mr. Troy Nelson

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--- Upon commencing at 7:03 p.m./L'audience débute à 19h03

1274. **MEMBER HAMILTON:** Well, I think maybe we'll get started.

1275. Good evening and welcome. My name is David Hamilton and I am a Board Member with the National Energy Board of Canada and we're here tonight with the proponents for the application for seismic to hear the comments and answer questions from the people of Qikiqtarjuaq.

1276. But before we start -- and I have a brief presentation, I'd like to ask Lootie to say a prayer, please.

---(Opening prayer/Prière d'ouverture)

1277. **MEMBER HAMILTON:** Qujannamiik, Lootie.

1278. The National Energy Board regulates oil and gas off-shore activities in the Canadian Arctic. Companies can ask the National Energy Board the permission to undertake these types of activities. One of the Board's roles is to review proposed projects and the Board can either approve with conditions or the Board can deny an application.

1279. The National Energy Board has been asked to consider the application by MKI and its Partners who would like to undertake a 2D seismic work in Baffin Bay and Davis Straits. Some of you may recall that I was here along with the Chair of the National Energy Board in November last year and we committed to come back to listen to your comments on the application by MKI.

1280. Before I ask the representatives of MKI to make a brief presentation, I'd like to introduce the people from the Board that we have with us this evening and I would like to ask them to stand.

1281. We have Galina Doubrovina who is our Project Manager; Christy Wickenheiser is our Environmental Specialist; Marie-Anick Elie is our -- she's over there in the dark -- our Northern Coordinator; Julie Fisk is our legal counsel and Bharat Dixit is our Technical Leader of Exploration and Production. We also have the assistance of our two very capable interpreters, Mali Curley and Loseosie Paneak.

1282. We will be using these microphones which will assist the interpreters

and the recorder. We will be recording all the comments as I want to ensure that we accurately hear what you are saying, as it will assist me in making a recommendation to the Board whether to approve or deny the application.

1283. So if -- when you're speaking if you could identify yourself, it would be very helpful. And if you would like copies of the transcripts from this meeting as well as the meetings that we've had in Clyde River and Pond Inlet and we'll be meeting in Iqaluit tomorrow night, please let one of the NEB staff know and we'll be pleased to get you copies so you know what everybody is saying from each of the communities.

1284. The purpose of the meeting is to hear from you on the proposal by MKI to conduct off-shore marine seismic in Baffin Bay and Davis Bay. Your comments will help the Board shape its decision.

1285. The -- in making your comments, please keep in mind that the National Energy Board is an independent Federal Agency and it operates on a quasi-judicial Federal Board. So it's independent and operates a bit like a court. It can approve or deny proposed seismic or drilling activities.

1286. The *Canada Oil and Gas Operations Act* requires the Board to regulate activities associated with oil and gas operations in the Canadian Arctic -- such as the geophysical operations such as the seismic as we are doing today -- if there was any drilling and well operations in the Arctic and the production facilities operations if one was built.

1287. The purpose of the *Canadian Oil and Gas Act* is to promote the safety of communities, the public and workers, the protection of the environment and conservation of oil and gas resources. That is the most important thing that we have to ensure, the safety of the communities and the protection of the environment.

1288. Just to confirm, before a company like MKI can carry out activities in the Canadian offshore, they need to obtain an authorization from the National Energy Board. They need to obtain an operating license, also from the National Energy Board and they must file a benefits plan with Aboriginal Affairs and Northern Development Canada and obtain a Certificate of Fitness by a recognized certifying authority.

1289. The National Energy Board takes a lifecycle approach to regulating

offshore seismic programs. Perhaps a better way to explain that, as we are -- as we were told during the Arctic review of offshore drilling in Inuvik, we are the watchdog and that communities will hold us accountable, as we hold companies accountable. What that means is that we are not just here today and you never see us again.

1290. The National Energy Board approach includes assessing the application, which we are concluding with these community meetings, and if approved, the NEB undertakes monitoring and inspection during operations and the review of the data and the reports.

1291. Applications for projects are assessed to ensure that they meet strict safety, environmental and geological standards and requirements. A company making an application must provide the Board with a safety plan, a contingency plan, an emergency plan, all for technical review by the Board. They must provide an environmental assessment that outlines the risks of the project and the mitigation measures and they must have proof from other requirements have been fulfilled.

1292. Since MKI applied for their certificate, there has been a lot of material provided to the Board and to the communities. We also require MKI to have consulted with affected communities and we have received the reports from those community meetings.

1293. We have received letters of comment from the following organizations, the Qikiqtani Inuit Association, Environment Canada, the Arctic Fisheries Alliance, the Baffin Fisheries Coalition, Fisheries and Oceans Canada and the Government of Nunavut.

1294. We also have received -- letters were also received from Shari Gearheard on behalf of the Clyde River residents. The NEB has been conducting an environmental assessment as part of our consideration for the project.

1295. To assist organizations and residents in communities we prepared a discussion paper that outlines the potential environmental effects that have already been identified by organizations and residents of the communities. The paper outlines the potential effects the proposed project may have and the various measures and actions that MKI are proposing to take to mitigate those potential impacts.

1296. There are copies of the paper and of these overheads on the table as you came in.

1297. This brings us to why we are here this evening, to allow you the opportunity to make comments on the proposed project. All the comments we receive will assist me in making a recommendation to either approve the application with conditions that should be required to be followed or to deny it.

1298. The MKI representatives are here to explain their project and help us understand how they intend to mitigate activities that might concern you.

1299. With that, I'd like to ask MKI to make a presentation on the project and then we'll -- floor will be open for you to ask questions or to make comments.

1300. **MR. TROY NELSON:** My name is Troy Nelson; I'm -- I work with TGS partner in the program, based out of Calgary, Alberta and born and raised in Halifax.

1301. **MR. CHRIS MILLEY:** My name is Chris Milley; I'm a consultant with NEXUS Coastal Resource Management and an Adjunct Professor at Dalhousie and I've been working on behalf of the companies, helping in facilitating discussions with the communities.

1302. **MR. GARRY MORROW:** My name is Garry Morrow; I'm with Petroleum Geo-Services or MKI. I am a Project Manager for the company and for the project.

1303. **MR. MAGNUS CHRISTIANSEN:** My name is Magnus Christiansen; I'm with Petroleum Geo-Services or MKI. I'm our Environmental Manager based in Oslo, Norway.

1304. **MR. GARRY MORROW:** Thank you very much.

1305. This first slide up here is a picture of the ship that would carry out the survey if we get our authorizations. The name of this ship is the Sanco Spirit. It is a very modern vessel. It was constructed just about five to six years ago. So it is a purposely constructed research vessel.

1306. And the length of this vessel is right at 88 to 89 metres in length, from

the front to the back and then across -- cross ways, the width of the vessel is 16 metres. So it's a quite sizeable ship.

1307. We can go to the next one.

1308. So the project area that we're looking at for 2013 is on the black lines that you see here. Those would be the intended survey lines for this year and the total amount of kilometres for that would be 5,000 line kilometres. That would be the area that the ship would traverse on those lines while doing the survey work.

1309. So when the vessel is actually surveying, it will be going at a speed of 4.2 to 4. knots or right at 8 kilometres per hour. That is the general average survey speed that they do with the equipment in the water.

1310. So the survey area that we're looking at is outside the 12 -- outside 12 miles of the coastline and it's also outside of the land fast area. So in between when the survey ship is not on these black lines, they will be going and transiting, as we call it, to another line.

1311. And during those periods where it's transiting and not on that particular survey line, the source would not be activated or just a minimum source would be activated while it's doing those transits.

1312. This is the picture inside the ship itself and this is the actual control room and this is where they monitor everything that's going on. So the cable that they tow and the sound source that they tow are all monitored from inside this room.

1313. They're also all controlled from inside this room. So the room is pretty much staffed with -- around eight people at a time. And you also -- we also have marine mammal observers onboard the ship that are located up above in the wheelhouse of the ship. And those marine mammal observers, if they see anything within the mitigation zone of the vessel, can call down to the control room and have them stop the recording and the sound when that happens.

1314. So the control room always has people in it. So 24 hours a day, there's always people in that room, whether the vessel is surveying or not. This picture here on the right-hand side is actually of the cable that is towed out behind the boat. On this particular project, the cable is 8,100 metres in length and the sensors that record everything are in between each one of these little, yellow

blocks that you see there inside that cable.

1315. So the cable records the different sounds coming up from the earth, as the survey ship goes along its survey lines. So -- and the cable itself is actually filled with a gel or foam type material that's environmentally friendly. So there's nothing that -- if this outer skin would be punctured or anything like that, that would actually go into the water. So it acts more along the lines of a solid type of gel inside the cable itself.

1316. Now, this is a picture of the stern of the vessel and this is where all the equipment comes out. So the sound source comes out of this lower area here and the cable that you just saw in the previous picture comes out of the top over here and goes back into the water.

1317. The picture on the right actually shows the sound source down here on those lower silver things that you see and they are about 1.5 metres in length. The grey round tubes that you see on top are the ones that keep everything afloat in the water and so those act as the floatation devices to keep everything steady inside the water.

1318. So all of that equipment that goes in the water is positioned with global positioning. So on the surface of each one of these buoys is GPS receivers and, likewise, inside the cable, there is -- and outside the cable, there is controlling devices to make sure that the cable stays even in the water. And with each one of those devices, there is a compass in there and that information gets fed back up to the control room and so they can monitor exactly where that cable's at and exactly where the source ray is at. So it's very, very accurate positioning for all the equipment.

1319. And this is just kind of a depiction of the picture here with the boat up here at this end and, in blue, if you can see it, that would be the sea surface and, below the sea surface, the other long line there would represent the cable with all the sensors in it. And then, of course, this would be the sound source here.

1320. And so, basically, what you're doing is emitting the sound down through the earth and then back up and this is the type of picture you would get to ascertain or see if there would be any formations that might have any oil in them so …

1321. And this picture here to the right actually shows the diagram of an air gun, of the source, and what this does is it has a piston in it -- it's just like a regular motor would be -- and the piston moves back and then the air is allowed to escape out of the chamber there on the front and that's how that works. So it's basically like a piston method where it comes back, lets the air out and then it closes again.

1322. And with that, in explaining that, if you have any questions, we'll be happy to answer them.

1323. **MR. RICHARD CARBONNIER:** How strong is the ---

1324. **MEMBER HAMILTON:** Just one sec, just we'll get the microphone for you so that everybody can hear you and we are -- and if you could indicate your name, it would be helpful. Thank you.

1325. **MR. RICHARD CARBONNIER:** Yes, can you explain -- my name is Richard -- can you explain how strong is that sound coming out of that cannon and give an example of something we know out of a cannon?

1326. **MR. GARRY MORROW:** Yeah, we've been asked that in the other community meetings so we're going to put together -- Troy here is going to put together an example video giving some demonstrations of the sound and how loud it would be comparative to other things that people would be familiar with.

1327. And so that information's going to be sent out.

1328. The sound itself is compressed air and so ---

1329. **MR. RICHARD CARBONNIER:** We understand that, but ---

1330. **MR. GARRY MORROW:** Yeah.

1331. **MR. RICHARD CARBONNIER:** --- give us an example.

1332. Is it like a -- how big of a cannon does it sound like; you know?

1333. **MR. CHRIS MILLEY:** When we were here in December with one of Troy's colleagues, he actually had a video and showed what it was like from the surface at the back of the vessel and where people are standing around. It was

a test of one of the sources.

1334. The sound is actually an underwater clap because what happens is it pushes the air out and when the water rushes back in, it produces a clap underwater and that's the source of the sound.

1335. So it's not -- the sound isn't actually generated by the -- any mechanical means, it's the water itself. So it pushes the air out, claps back in. So it's ---

1336. **MR. RICHARD CARBONNIER:** But give us an idea of how strong is that ---

1337. **MEMBER HAMILTON:** Maybe we could just one at a time if I may and slowly because we're in –

1338. **MR. CHRIS MILLEY:** Sorry.

1339. **MEMBER HAMILTON:** --- interpreting this.

1340. So just maybe one at a time and talk slowly.

1341. **MR. CHRIS MILLEY:** The -- when we were coming on this, we weren't expecting to give the same level of presentation but we have some things that were prepared before showing a list of the level of decibels and the distance that there are, you know, concerns as far as, you know, what people might consider to be loud.

1342. And that information's going to be sent to all the communities, as well as the NEB. And Troy is going to be putting something together as well so that will be coming.

1343. **MR. RICHARD CARBONNIER:** Do you have any studies that have been done on marine mammals with this that could be brought to everybody's attention?

1344. **MR. CHRIS MILLEY:** Yeah, yes.

1345. In fact, in the environmental assessment documents, there's two things: One is references to other studies that have been done on marine

mammals because this is not the first place in the world where these kind of studies have been done; and the other is a sound modelling.

1346. There's a company that has been hired. They do this for other environmental assessments south in the -- well, one is being done right now offshore Nova Scotia. And that company did the modelling of the sound here as well because sound doesn't travel necessarily the same in each direction because of the currents and all sorts of things. And they've actually modelled the sound.

1347. And that's in the environmental assessment documents, which I believe are available on the NEB site.

1348. Is that correct?

1349. Yeah, so ---

1350. **MR. TROY NELSON:** And also, on the NEB's website, there was -- a bunch of the comments in the communities were compiled and broken down into categories. Some questions were about the proposed survey, other were effects on marine mammals and there's lot of information included in that document that's for public view on the NEB's website as well.

1351. **MR. RICHARD CARBONNIER:** Has this -- such study has been done on the Greenland start side?

1352. **MR. CHRIS MILLEY:** Well, different regulatory requirements, but I'm -- my understanding is that most places where this work is done, they do the same kind of work.

1353. **MR. RICHARD CARBONNIER:** But has it been done on the Greenland ---

1354. **MR. CHRIS MILLEY:** I'm not ---

1355. **MR. RICHARD CARBONNIER:** Okay.

1356. **MR. CHRIS MILLEY:** Yeah, I'm -- we -- I can't comment on that because the -- I don't ---

1357. **MR. TROY NELSON:** Is your question the effects on marine

mammals or seismic survey?

1358. **MR. RICHARD CARBONNIER:** If such a survey has been done on the Greenland ---

1359. **MR. TROY NELSON:** Yes, it has ---

1360. **MR. RICHARD CARBONNIER:** --- portion of the ---

1361. **MR. TROY NELSON:** --- TGS and PGS both have done seismic surveys on the Greenland side as well.

1362. **MR. RICHARD CARBONNIER:** Have they had any environmental feedback on what they've done?

1363. **MR. TROY NELSON:** I would have to look in it and gather some more information on the exact either requirements and/or studies and results from that and get back to the community on that one.

1364. **MR. RICHARD CARBONNIER:** Can that be made available?

1365. **MR. TROY NELSON:** We could look into it.

1366. I can't give a timeframe on that because we'd have to contact some different departments in our companies but I -- if it is available, we will try and come up with it, yes.

1367. **MEMBER HAMILTON:** The gentleman at the back there, Bharat? Thank you.

1368. **MR. STEVIE AULOQLOY (through interpreter):** Stevie. I will be speaking in Inuktitut, although I speak some English.

1369. I think it's been three or four years. I'm just going to talk about the dew lines.

1370. When they were doing the contamination cleanup, the American left some contaminated sites. Just past the air strip, there was an oil drum that was destroyed by -- with -- because it was making sound waves or it was seeping. And I do -- I'm a qualified diver.

1371. When we were looking for -- looking for clams, it's about nine miles. When we were under the water, there was a big oil tank that was on the land. Not in the water.

1372. When we heard a big noise, we went right back to the land because we knew there was some danger because we were hearing it. It seems like it was right beside us that -- making a thunder sound. When we went to the land there was absolutely no noise. It was apparently an earthquake not -- so we went back out to the water because we weren't finishing clam digging.

1373. And it's -- we were still listening to the -- that thunder sound within the nine miles radius. We knew that there was a danger underwater, so we had to go on land because we didn't know what was going on but we knew there was some danger.

1374. We know that the sea mammals have very good hearing and I'm sure that they will be scared or relocate just like we get scared of the loud sounds.

1375. This is going to be dangerous to the sea mammals and they will run away from the sound and relocate. And we will have to be very careful in thinking of what this proposal will do. And the communities will have to be involved to see how much affect it will have on their food because we don't have -- we do not have vegetation or farm, we only have animals. We have no vegetables, no vegetation.

1376. And it will -- you will have to be very careful in assessing to see whether they're going to be negative or not -- negative effect or not and be -- and involve the communities near because I have -- I am a qualified diver and I'm -- when you hear a thunder under water, it's very scary. It's very loud.

1377. There are a lot of things -- new things. When we hear new thunder sound or any noise, it gets really scary.

1378. When I came back to Qikiqtarjuaq it was apparently the old tank that they were cutting with big scissors or whatever you call them. But it was nine miles away from where we were diving, just behind the RCMP. We were down diving at that time, clam digging and that's the kind of noise we heard.

1379. And my partner, diving partner -- and he could tell you the same thing

because we were in a scary situation for a while.

1380. I think we have to be very careful in thinking about -- we have to work together to make sure that there is no negative effect. It's okay what you're want to do, but what you have to know is what we're concerned about. You have to make sure that there's not going to be a negative effect to the communities.

1381. As a representative from QIA to Broughton Island, I want to protect the community and the mammals from these effects from these studies.

1382. Thank you for allowing me to speak.

1383. **MEMBER HAMILTON:** Response from the company if they'd like to add? Please.

1384. **MR. CHRIS MILLEY:** Thank you for your comments.

1385. There's -- one of the reasons that the company has started the interaction and discussion with the community is to learn what the concerns are. But also, even when the project is -- you know, once it's approved and moving forward, is to maintain that contact.

1386. One is to learn more as time goes on through Inuit knowledge, but also to have people who are on the vessels who are constantly looking for any marine mammals that would be there. That's the marine mammal observers. And also having community liaison so that there's constant interaction between the project and each of the communities so that -- both ways. It's not just the project talking to the communities, but also the community able to talk to the project and keep people informed of what people are planning to do, as well as what their concerns are, and also to know where the project is at any time.

1387. **MEMBER HAMILTON:** Go ahead.

1388. **MR. SAMUEL NAQINGAQ:** Thank you. I'll speak in English. I'm the Chairperson for Hunters and Trappers, Samuel.

1389. If I understood correctly what you were saying, do you have information when they did surveying -- seismic surveying in the Beaufort Sea? Do you have any information on that?

1390. **MR. TROY NELSON:** Unfortunately, neither one of our companies have actually done any seismic surveys in the Beaufort, so I can't really comment on what activity kind of went on there, so -- unfortunately.

1391. **MR. SAMUEL NAQINGAQ:** Okay. On behalf of the hunters in the community, we still have a concern what you are proposing because it's -- I'm pretty sure -- well, a lot of us think that it's going to affect our animals, what we eat.

1392. So there's the 50/50 chance what's going to happen. We don't know yet until you find out. But I don't know if National Energy Board has information what I asked earlier.

1393. Like before we agree what you want to do, that stuff that we eat, the marine mammals, if it's going to affect our animals, we don't want that because like what Steven was saying, we don't have foods that comes out up here and we don't always eat southern foods.

1394. And I really want that to be quite considered, our concern about our marine mammals that what we eat every day. And I'm hoping that you'll listen to our concern.

1395. Thanks

1396. **MEMBER HAMILTON:** Maybe to help you out on your question on, you know, what's happened in the Beaufort, there's been a lot of seismic in the Beaufort over -- I don't know -- many years.

1397. And I know that the Inuvialuit Game Council have been monitoring it. They've done their own studies. And they -- so there's -- they have a lot of information that would be able to help your hunters and trappers out that you could get. They have a tremendous amount of information.

1398. **MR. RICHARD CARBONNIER:** To continue ---

1399. **MEMBER HAMILTON:** It is on. It will come.

1400. **MR. RICHARD CARBONNIER:** To continue on the same direction here, can you explain what do you know to have us -- all of us, what is the impact on marine mammals that you know that we don't know? Please explain.

1401. **MR. CHRIS MILLEY:** The -- how can I say this? I'm not an expert on this.

1402. I have worked on environmental assessments wearing a different hat. In Atlantic Canada, we've looked at the issue of marine mammals because it's obviously of concern there as well.

1403. The studies that were done for the Gulf of St. Lawrence and the studies that were done for the offshore Nova Scotia concluded that there was no significant impact on the movement of marine mammals with the exception that, at times, there would be a delay in migration movement of, you know, hours or days, but no permanent adjustment of migration because, when the migrations are taking place, they're going after the foraging species. The foraging species are what they're after. They're not going to run away from eating.

1404. So they ended up continuing to go into the Gulf of St. Lawrence and continuing to go into the Bay of Fundy. So there's been no long-term effect of any of the seismic surveys that has been noted in the work that was done in Atlantic Canada.

1405. **MR. RICHARD CARBONNIER:** But are these surveys were done at the same extent that you have in mind?

1406. **MR. CHRIS MILLEY:** Yes, and, in fact, more intensive surveys because they've done 3D surveys not these 2D surveys.

1407. **MR. RICHARD CARBONNIER:** With the same kind of equipment?

1408. **MR. CHRIS MILLEY:** Recently, yes.

1409. In the past, they were more intrusive because the technologies changed considerably. They used to use a much more intrusive source of sound.

1410. **MR. RICHARD CARBONNIER:** Do you know anything on the migratory runs of these in this area that you have in mind?

1411. **MR. CHRIS MILLEY:** Environmental assessment they were compiling the information.

1412. But I don't work for the company that did the EA. And I know that there's been work on -- I know the Qikiqtarjuaq hunters and trappers are part of a project with DFO and we've looked at that data.

1413. And, in fact, when I was here last, we had considerable discussions on that very issue.

1414. The company I do represent has been working with the WWF, DFO and with the QIA on a study in -- on a narwhal study in Grise Fiord. So that's an area of particular concern for the company that I work for.

1415. **MR. LOASIE AUPIAKIAK (through interpreter):** Thank you. I'm Loasie Aupiakiak.

1416. First of all, I want to ask a question: How long would they be in the waters during the seismic testing? How long would it take?

1417. And that's my first question.

1418. **MR. GARRY MORROW:** The plan for 2013 would take approximately two months. So we're looking at September and October for the testing.

1419. **MR. LOASIE AUPIAKIAK (through interpreter):** Thank you.

1420. This is not to play with, it's serious. It's good in certain ways for the -- when we look at our future. It can help benefit us in the future. We know that. But there's certain things that makes us think twice because there's concerns about them, especially about our future and especially if we want to take care of our future generations. And this is serious stuff. And it would help benefit the community.

1421. I believe that this is when the serious stuff is going to happen just to be -- there has to -- you have to check it out properly not just go to work and do assessments and do wildlife assessments and, when you're going to do serious things like that, that's what you should do first.

1422. When it's like that, us Inuit, even though if we just try and stop things, it can make us fall behind. But we just -- we can look at the future but not all the

future, we have to look back sometimes. And we want to hear more from you in the future about this project and how this project will go ahead.

1423. For example, if you talk to us tonight and if you never talk to us again, there won't be any benefits. When you start making the plans that us people from Qikiqtarjuaq, we have to be included in the plans that if you want to see this project to go ahead. We have to look at it to the future.

1424. Yeah, we want to hear from you more in the future. Thank you.

1425. **MR. GARRY MORROW:** One of the steps in this process is Chris here is working on the IQ study that will involve all of the hunters and trappers here. So, as you said, we need to work closely together and that's what we intend to do.

--- (A short pause/Courte pause)

1426. **MR. GARRY MORROW:** Yes, and also, for each one of the communities, there will be, as we mentioned before, a community liaison that will be able to liaison with the project as it's being conducted.

1427. So there'll be -- those will be forms of communication amongst us.

1428. **MR. STEVIE AULOQLOY (through interpreter):** I just wanted to mention something I forgot. One of the questions.

1429. Please note, just before I came here, I was watching TV, one minute 53 seconds trying to score. Please note, I'm trying to support. I get excited when Toronto scores.

1430. The question I want to impose was: As I heard from -- there'll be an observer on the vessel. And I don't want you to just grab somebody from the community to be on the vessel. You will have to keep in mind, if you need to select an observer for the vessel, have HTO to be a contact if you were going to have an observer in vessels.

1431. **MR. CHRIS MILLEY:** As the -- there's two types of people that will be involved: one is the community liaison and that's obviously somebody that the hunters and trappers will have to be communicating with, if not, somebody from the hunters and trappers organizations working as the community

liaison.

1432. And then, there's the marine mammal observers. These will be people who will be -- who will be trained or already have been trained. The company ran a course at the Arctic College in Pond Inlet and trained, I think, 12 candidates already, and those people would be obviously key in whose going to go.

1433. One is having the skill but also having the knowledge that they could record exactly what they see because they have a lot of power when they're at sea. They have the ability to shut down the operation while there's -- if they observe any marine mammals within a mitigation zone. So they have to be properly trained to know exactly what to do and that's an important part.

1434. But the hunters and trappers, obviously, is the critical point of contact with the community because those are the people who have the most interest.

1435. **MR. SAMUEL NAQINGAQ:** Thank you. What they said, because it's going to help us out as well.

1436. Like what he was saying, you'll do the survey in September and October. That's kind of a bad season for us because that's -- those months are our narwhal hunting season. And it might affect the narwhal, we don't know yet. But September, October it's not a very good time because that's when we get our narwhals around this area.

1437. And also you said you all start from Grise, is the -- are you starting from Grise or are you starting from south? Are you going up or coming down?

1438. **MR. GARRY MORROW:** It would of course depend on how much ice there is. But we have flexibility in that plan on where we would start, whether it'd be south or north. And so that would be with feedback from the communities and where we need to start. And so we have flexibility in that. And so part of these processes here gives us a good idea. So the information that you just fed back to us is doing that, it's…

1439. **MR. SAMUEL NAQINGAQ:** Okay. Let's say National Energy Board approves your proposal and do the survey in September, October and for us if we notice a big difference on marine mammals in our area, who do we contact and tell them it's affecting our animals? Can that seismic survey stop?

1440. **MR. GARRY MORROW:** You would -- obviously as we've said before, through the community liaison person that would be the direct contact to us who operate the vessel. And so that -- I would believe would be the first approach. And then we would definitely discuss that and see what was going on and the movements and the observations between the vessel and shore and your associations.

1441. **MR. SAMUEL NAQINGAQ:** Okay, thank you.

1442. **MEMBER HAMILTON:** If I could add to that, there's also the -- if there's a concern raised and if -- and as the company indicated, a condition could be that the marine mammal observers have the authority to shut it down.

1443. If they're independent of the company, they have complete authority to shut it down. And if there are any incidents that are occurring, they can report it to the National Energy Board, they can also report it to -- even the Fishery Liaison Officer has responsibilities as well, as well as DFO can also be reported to, to take care of any concerns that arise. Yeah.

1444. **MR. RICHARD CARBONNIER:** Just to clarify, your graphic up here, your plan, should we understand that the line -- the density of the lines is the density of the survey -- of the seismic survey and there's less survey down south then north of Baffin?

1445. **MR. GARRY MORROW:** The map that you're taking a look at is -- encompasses what goes on during the potential five-year period of the program. The map that I showed up here is the density that we would start with.

1446. **MR. RICHARD CARBONNIER:** Oh, it's a five-year program, every year from September to October?

1447. **MR. GARRY MORROW:** Not every year from September to October. It would depend on when we would be able to come back and start the season, depending on ice.

1448. **MR. RICHARD CARBONNIER:** So should we understand that this is being done on five-year time? So everybody understand that this is for five years, they're going to be surveying and doing seismic sounding in the whole area for five years. Five years of mammal intrusion; is that the understanding?

1449. **MR. GARRY MORROW:** No, it's not -- it's not that density for the five years. What it is it will be done in stages. Stages as you can see the density that I showed on the earlier map. So I would reference the map that I showed for ---

1450. **MR. RICHARD CARBONNIER:** So every year -- every year there'll be seismic ---

1451. **THE INTERPRETER:** Maybe can you tell him to slow down.

1452. **MEMBER HAMILTON:** Could we just slow down and allow each answer to go back and forward because the interpreters do need to keep up with everybody, please.

1453. **MR. GARRY MORROW:** Yes, there's a multiple grid that is there, but the density is not going to be the same each year.

1454. **MR. RICHARD CARBONNIER:** Okay, fine. And you have no clue on marine mammals' life and migration routes on this area. You have no clue of that at this time or do you?

1455. **MR. CHRIS MILLEY:** As I was saying earlier, in the environmental assessment document that information was included in the EA review. So when -- the document that sits with the National Energy Board, that information was documented.

1456. The -- what I think the confusion is that this is the long -- this grid gets filled in over five years. But it's not every year for five years, the whole thing, it's -- once some area is done -- the first one is a course grid where they're 100 kilometres apart, the distance between the blocks on the grid.

1457. And then some areas where they use that to say "Okay, this is an area of more interest", then they would work in that area after that. So that grid that you see there is something that gets filled in over five years.

1458. Obviously as year one goes and they see that there's information -- and they'll get feedback about marine mammal movements and things that that are there -- that would be accommodated into the next survey plan, so it's an interactive thing.

1459. And this is where the community and liaisons and the community input is very important. And that's why the building of the relationship with the communities is important. To inform people when you go back into year two or year three or year four, you've got that information that people can say "This is what we think, you know, you must change the time you do it or when you do the different areas may vary". So it builds the assessment with local knowledge.

1460. **MR. RICHARD CARBONNIER:** And just to come back to Greenland, nobody was interested of seeing what Greenland had as the reports on the environmental impact of those seismic testing in their country?

1461. Is there -- like I'm saying, a study should be available and recommendations should be available from what they have experienced. And nobody was interested of seeing what happened there?

1462. **MR. GARRY MORROW:** I think with Greenland a lot of those surveys that took place -- and I don't know if Troy wants to add in to this -- the information that is collected is given back to the regulatory authorities there. And they're the ones who have the numbers and the information that is done from the seismic surveys. Same as this here, the information that we collect on sightings and observations and everything are passed on to the regulatory authorities in any of the local communities that want it.

1463. And so that's what -- that's what transpires in Greenland and basically that's what transpires here in Canada.

1464. **MR. RICHARD CARBONNIER:** So -- but you don't know?

1465. **MR. GARRY MORROW:** With the questions you're asking on Greenland, I can tell you that some of that information is probably public, you can look it up.

1466. And also we have -- we have that information -- we have the information on the sightings and all the data that we collected from the surveys we did in Greenland. But you have to remember, in those there are other companies involved and some of them might have that, we're not able to release it.

1467. **MR. RICHARD CARBONNIER:** But more specifically on environmental impact, do you have any information from Greenland on that that

you could share with us?

1468. **MR. GARRY MORROW:** No, no, as Troy said earlier, we'd have to look and see if that information was available.

1469. **MR. RICHARD CARBONNIER:** I think it's important to see what happened with our neighbours and see what they've learned from that and what their recommending now before hopping into anything here because it's the same zone.

1470. They did it on their side; they're drilling. They know what's happening. I think it would be a good lesson learned and maybe reassure people or really say to people no, it's not right or it's right, you know.

1471. I mean you have to do your homework here. You have to reassure people here. You know, if you don't know it, we don't know it. So please know it and tell us. Be an open book; if there's issues with that, you have to tell us.

1472. You know, to have somebody on the boat and to look and listen is something different. That's monitoring the moment. But if there's any studies that has been done of these seismic testing around the world or here or with our neighbours, we should know about it.

1473. And you should not tell us to go on the internet and check it out. You should be telling us what -- how secure it is and how insecure it is. You have to tell us that. You know things that we don't know.

1474. We're not here to do your homework. You are here to tell us what to do or tell us what is happening with this. You have to be an open book on this. And with an open book, then we'll be more reassured on it.

1475. Thank you.

--- (Applause/Applaudissements)

1476. **MR. STEVIE AULOQLOY (through interpreter):** I was -- after looking at the diagram, I have a question.

1477. The airgun that you'll be using, according to that, there will be a difference within shallow and deep water -- deeper water. Which one is louder, is

it in the shallower or deeper water, or is the sound the same thing all the way?

1478. **MR. TROY NELSON:** That's a very good question. We've had that question actually answered in some of the other -- or asked in some of the other communities.

1479. And the sound of the source will not change depending on water depth. So it won't be any louder whether it's in shallow water or deeper water. How the sound does travel does vary on water depth. So it may go -- it may go longer distances or dissipate, depending on the water depth, but the actual sound from the seismic source is the same.

1480. **MR. STEVIE AULOQLOY (through interpreter):** Even the sound -- even if it's shallow, have you done any study how far it goes under the seabed? Whether a shallow or deep, what study have you done that it will be the same before you reach the depth or the seabed?

1481. What's -- how is it? If it's very deep and the seabed is very deep, how many metres is it and how many metres does it go even if it's in shallow or -- shallow waters?

1482. **MR. TROY NELSON:** So you're wondering if the sound penetrates to the sea floor differently in shallow or versus deep water?

1483. **MR. STEVIE AULOQLOY (through interpreter):** Yeah, that's the question I'm asking.

1484. **MR. TROY NELSON:** The sound, the way it penetrates the sea floor and the way we can record it back into the vessel through the instruments, I mean, it can vary somewhat.

1485. I'm unfortunately not a geologist and -- but I mean, as a company, that's the kind of data we are collecting, trying to map the substructures beneath the sea floor for potential oil and gas reserves.

1486. But I couldn't give you exact measurements of how deep and how further it would go because that's beyond my knowledge, actually.

1487. **MR. STEVIE AULOQLOY (through interpreter):** Who would know about this, and can we invite them to the community?

1488. **MR. GARRY MORROW:** We're going to be recording on this particular survey for around 10 seconds, and the velocity of the sound at that point in time will vary through the substructures of the earth -- through the water. It's about 1,500 metres per second. But we'll be recording for 10 seconds -- 10 seconds plus.

1489. **MEMBER HAMILTON:** Just be careful because we do want everybody to hear everything and get everything, so try and keep side conversations so we can all hear.

1490. I know it's -- we all want to get our questions put and answered, so let's try -- if we can make sure. So Troy can ---

1491. **MR. TROY NELSON:** The way I'd like to answer this is that's probably the reason why we're doing the seismic survey, is to map and see the substructures beneath the sea floor because companies like ourselves don't know, so that's why we do these surveys.

1492. And how the sound is reflected back up will depend on the geology of the -- underneath the sea floor, so it will vary. And that's the kind of data that we'll have to analyze after the project. And that kind of information can take up a year to -- after we collect it and determine.

1493. **MR. RICHARD CARBONNIER:** So if I go back to the map again, the density that is shown on the deep portion, the 5,000 metres are closer to each another because it's deeper. Is that correct? No?

1494. **MR. TROY NELSON:** Those lines were set out by some geologists and geophysicists within our companies, so those basically were set because of certain formations they would have seen in the geology substructure that they have areas of interest. So that's basically the reasoning for that.

1495. **MR. RICHARD CARBONNIER:** So if you're deep or not deep, it's the same distance between the lines. That's what you're saying to me?

1496. **MR. TROY NELSON:** Yeah, it can vary, depending on the geology. We have people within our companies that do analysis before we put these lines out, and sometimes water depth has nothing to do with it.

1497. It's what they see below the surface that's of interest to them, and some areas they want to have more attention to and some areas they need a less coarse grid.

1498. **MR. RICHARD CARBONNIER:** So the density of the lines is the interest of the area. Is that right? That means there's more -- there's more seismic movement there in those areas?

1499. **MR. TROY NELSON:** More potential for investigation.

1500. **MR. RICHARD CARBONNIER:** Investigation. So that means more sounding in those areas.

1501. **MR. TROY NELSON:** If we do more lines, there will be more sound, yes.

1502. **MR. RICHARD CARBONNIER:** Absolutely. So more closer together, probably?

1503. **MR. TROY NELSON:** Over time. We do this in phases.

1504. Once we do one line, we will not come back and do the line again.

1505. **MR. RICHARD CARBONNIER:** In between, let's say. You'll go in between the lines?

1506. **MR. TROY NELSON:** In a next phase, yes.

1507. **MR. RICHARD CARBONNIER:** Yeah. On a five-year period. Okay.

1508. And you have no idea on the migratory routes of these marine mammals?

1509. **MR. TROY NELSON:** We do have baseline studies through DFO and through other studies that have been factored into our EA. That is in the EA.

1510. And another big component of this is gathering traditional knowledge through the communities to find out the traditional knowledge side of things. And we believe the communities have vast knowledge in that. So aside from the

scientific, that is taken into strong consideration as well.

1511. **MEMBER HAMILTON:** Up front here, yeah, Peter, yeah, and then followed by Lootie.

1512. Go first, and then Lootie.

1513. **MR. SAMUEL NAQINGAQ:** Yeah, thank you.

1514. You are -- are you aware that there's a box around the Cape Dwyer? You'll definitely stay away from that?

1515. **MR. TROY NELSON:** Yes, that was factored into our planning. That is a protected area, and we will not go into that area.

1516. **MR. SAMUEL NAQINGAQ:** And also, just last month there is another company came to the community and they were talking about similar what you're telling us right now.

1517. They're -- I forget which company they were with. And they want to do some survey as well.

1518. And that lady should know, the one sitting in the back, who they are.

1519. We're -- like we're starting to recognize Nunavut waters and Nunavut land is like a gold mine to the southern people now and there's money out there. We all know that. And it seems like there's so many people fighting for it and -- but I'm glad you're asking the communities first how they feel.

1520. And I remember about two years ago, because I love hunting narwhals and my friend told me when they did the drilling in Greenland area, they noticed totally different how the narwhals were acting up in Home Bay.

1521. And, like, all the hunters kept telling us, when we were out hunting, not even to throw a rock in the water, it's going to scare the narwhals away. Even one little bullet, if we shoot it in the water, it will scare narwhal away. And two years ago, when he was hunting, even shooting at a narwhal, they didn't go away. They kept staying around. They heard something.

1522. That's how he was thinking because, when they were drilling the

Greenland area, it might do the same thing again. Even doing a seismic survey, who knows? Nobody knows; right?

1523. If you could approve, then we'll find out. I'm hoping that we'll get a report if you -- if the National Energy Board approves what you're -- what you want to do and, like I said, after, and come back to the communities what you learned, then I'm pretty sure there will be totally different views and the hunters will probably say what they have learned as well.

1524. So don't think that we're totally against what you want to do but we have different concerns as well. Thank you.

1525. **MEMBER HAMILTON:** Go ahead.

1526. **MR. CHRIS MILLEY:** Just on that comment, you -- one thing that I can say is that I sit here because the company has shown that it's interested and concerned and that's important for me.

1527. While I was in Pond Inlet and in Clyde River, I was explaining to the people there, I have a graduate student that's going to be coming to do some research no traditional knowledge and shipping.

1528. The level of shipping that's going to be going on because of some of the other new developments is quite significant and we don't know what the effect of that is going to have on marine mammals, it's going to have on fish because the fishing industry has to accommodate shipping lanes and there's going to be a lot of change from that as well.

1529. And that's why I think it's important for the kinds of things that you're talking about now and interacting with the company and developing that relationship is something that you should be doing with every project.

1530. And I -- this -- these companies have made the commitment to continue to have that interaction, not just with the marine mammal observers and the liaisons but through the research projects and that of varying Inuit knowledge but just to build that -- you know, a working relationship so you can pick up the phone and know who you're going to talk to. I think that's very important.

1531. **MEMBER HAMILTON:** Lootie?

1532. **MR. LOOTIE TOOMASIE**: Thank you. Okay.

1533. Lootie Toomasie. I'm speaking as being a community member. I don't know, the guy over there is speaking on behalf of Inuit. I thought it's from the MKI rep. I don't know him so -- but he's my good friend the way he talked.

1534. So you're talking about five years project. I was down in the workshop in Iqaluit last -- a year ago or so. My understanding was that it was going to be for two years at that time. I thought. But I'm not too sure about that but this time -- this is the first time I heard about a five-year project.

1535. So that's a big question. When the guy sitting over here asking you about that what was in the Greenland -- so they are -- so we want to keep an eye on what's going on over there because they are our neighbours according to -- we're sharing the same water here as they are.

1536. So my understanding now, David, seems to be the plan is not accurate because they don't have all this information from what's going on in the Greenland because there are now -- we're sharing the same mammals over here as they are. We have narwhal down here. That's fine with the community between Greenland and here.

1537. So I think this -- you still have a lot of big homework to do before the actual project taking place. Thank you.

--- (A short pause/Courte pause)

1538. **MR. RICHARD CARBONNIER**: I have a comment or a question to the NEB.

1539. I understand that one of the mandates that you have, you're going to provide licenses for doing their work under certain conditions. You are advocate of the environment -- protecting the environment.

1540. How come you have not invited environmental people that have the knowledge on seismic sounding? I understand these people don't. They're only there for business and you have not invited people here being able to explain to everybody here what are the impacts behind that.

1541. And you're supposed to be the advocate and the protection of the

environment. How come? Explain to us.

1542. **MEMBER HAMILTON:** When a company, such as MKI, wish to apply for an application for seismic, they have -- part of it, they have to file a large number of documents and including that is the environmental assessment.

1543. And in that environmental assessment, they have to comply with a number of things to advise us -- to show to us that they have done a very good environmental assessment, they have covered the bases and they are bringing to us the most recent knowledge that is available in their application.

1544. And through that, we will do an environmental assessment and that is what we're doing right now. And that's part of that document that you see as our Discussion Paper is what we have reviewed and then what we have heard from the communities and we're now asking the company what they are doing to mitigate any of the potential environmental impacts that they may have on the project.

1545. So we are doing that process and that's part of the process is being here and hearing the comments from the communities. And based on all of that, then we will reconsider whether we should approve an application to do it or deny it.

1546. I don't know -- have you seen the environmental assessment?

1547. **MR. RICHARD CARBONNIER:** Well, no. Honestly, I haven't seen it.

1548. But I see here a party who's wanting a permit. I see the NEB here but I don't see the third arm out here, the environmental people that are able to explain to us, explain to everybody here the other side of the coin. I only see people here that are only explaining their project.

1549. I don't -- people here want to know what's the impact on the environment. That's their main concern. They're not against having drilling or having different industries starting. They want to know the environment -- the impact on the environment and that's what we want to hear: People that are specialized in that know -- that know all these studies and that are able to explain it to us.

1550. **MEMBER HAMILTON:** Part of that review of that assessment, it is reviewed by Environment Canada, by Department of Fisheries and Oceans and they have already -- they are -- they have already filed letters of comment. They have filed very detailed assessment.

1551. Fisheries and Oceans have also filed a detailed questions and concerns with the project and that's all been filed after they have also reviewed the environmental assessment that was provided.

1552. So the number of agencies that have responsibility for all of this have already reviewed it and have filed and it's being considered their aspect of their take on it as well.

1553. **MR. RICHARD CARBONNIER:** Well, what ---

1554. **MEMBER HAMILTON:** Including along with what we have heard so far, we have had submissions from the Government of Nunavut, from the Qikiqtani Inuit Association, form the Baffin Fisheries Coalition, from the Arctic Alliance Association and from -- we already have had a number of documents filed by those interested and I would say, based in this area, have already filed things raising questions and concerns as well, from their perspective, which includes whatever agency or whichever group they are representing.

1555. **MR. RICHARD CARBONNIER:** Well, I don't see any information on that here. Absolutely nothing. You're telling me it's available, okay, but why isn't it printed here with the major concerns that these people have to tell you.

1556. You know, it's simple enough to give us a third opinion here, another way of looking at things, to make -- understand what it is, you know, people in this town, what it is. It's very simple. There's one side and there's the other side and you're in the middle. And it's okay to tell what's on the other side, you know.

1557. We don't know necessarily what's in all these -- we don't read necessarily all these studies, you know. But to have a document explaining what's the major impact and what was done in that situation would be very interesting to see.

1558. **MEMBER HAMILTON:** The discussion paper that you've been looking at has captured a lot of the concerns that you have interest in and that's

why we are here assessing that now. It's part of a -- this has been part of a -- nearly two years of work to where we are today.

1559. **MR. CHRIS MILLEY:** Excuse me ---

1560. **MEMBER HAMILTON:** Yes, there is -- the documents have been available, and I regret if you haven't been able to see them, but they are available and there is still time to provide comments if you wish to provide those comments to us. That's part of the processes tonight but also there is time to submit comments on it further review.

1561. **MR. CHRIS MILLEY:** I just wanted to add that the expertise you're talking about, when we were here in December we had with us one of Troy's colleagues, who is an expert on seismic surveys and like sound in the marine environment, kind of a very -- a guru of that field, and as well as my colleagues who are cetacean biologists and marine biologists, whale biologists, and they were here, questions were asked.

1562. We went back and we got the answers for them and sent them back. So it's not the first time that this has been discussed, and we've been, each time, getting more and more information.

1563. And the document itself, the environmental assessment document, they're huge. I think you probably have seen environmental assessment documents. So a lot of the things you're asking -- I haven't read the EA myself but I -- the issue about Greenland, it may actually be in that document, but you have to look at the EA to find out. And obviously, because of your interest, I'm going to go and find out and I will get back to you.

1564. **MR. RICHARD CARBONNIER:** So why are you here today?

1565. **MEMBER HAMILTON:** For the interpreter, the question was "Why are you here today".

1566. They're here as part of the process of the evaluation of their application to get a licence. And it's the responsibility of the National Energy Board to ensure that, and it was part of our process to have to come back to the communities and to bring the company with us so that the company can answer the questions. That's why they're here.

1567. **MR. RICHARD CARBONNIER:** Yeah, but come back with something interesting. Come back to convince people that there is no impact on the environment. Don't try to sell us the vessel that looks good. We don't care about that.

1568. You know, it's important to make people understand what's the impact on the environment. They're not going to read a Bible for you. He hasn't read it. Did you read that Bible? No. So who's going to read that Bible, not me or them. You have to explain to us what's the impact on the environment, honestly, openly, then we could take a clear decision if there's really a good impact or not, you know, a strong impact.

1569. It's important. You don't understand what's the key element here. The migration routes; September, October is the hunting season, that's when animals get stranded under the ice if they're scared or being attacked by predators. If you're going to start doing seismic sounding in these areas you might have animals stuck in the Pond Inlet under the ice. Like it happened before, not because of that but for other reasons.

1570. So you have to be sure of what they're doing here on five years. Explain to everybody the real impact it will have. Take examples on Greenland. Tell us. I'm not going to read a 2,000 page Bible for you and make a résumé, it's not my job. We're here to listen but you're not telling us that.

1571. You're having a -- what are you -- I don't see why you're here for actually. To do what, to show us a boat. I don't care about the boat. You have to tell us what's the impact on the environment and then I think people could be comfortable and they could take a wise decision on it, but without that they're not going to read 2,000 pages and I'm not going to read 2,000 pages.

1572. Thank you.

1573. **MEMBER HAMILTON:** Thank you.

1574. Yes, Nigel?

1575. **MR. NIGEL QAUMARIAQ (through interpreter):** I'm Nigel Qaumariaq from Iqaluit.

1576. CLO, community liaison officer, fishery liaison officer, and marine

mammal observers, how many of each are you employing and for how long?

1577. **MR. GARRY MORROW:** There are other projects we are going to employ two, one on the fjord going scow boat, one on the main seismic boat, plus there will be two additional MMOs there, and then there's a second rotation, so the second rotations comprises of the same amount of people.

1578. There will be one FLO on the operation so -- and then of course you'll have the community liaison officers in each of the communities.

1579. **MR. NIGEL QAUMARIAQ:** How long will they be employed?

1580. **MR. GARRY MORROW:** In the past and what we've done down in Newfoundland and in Labrador they've still been employed with us for two years. As long as they wanted employment they've been able to work on the projects.

1581. The skills that they receive and the training that we did are skills that can be used world-wide. So that is quite a high demand position in our industry. So if they want employment and to continue employment that's available to them.

1582. **MR. NIGEL QAUMARIAQ:** So your program is going to be two months. You also mentioned that the CLOs will be a conduit for the company -- for the community to interact with the company. So I'm just wondering how long you'll employ them beyond the two months.

1583. **MR. GARRY MORROW:** That's going to be a discussion point.

1584. **MR. NIGEL QAUMARIAQ:** Okay. I can say that I've read the environmental assessment. It's about 100 and I think 20 pages. I've read every single piece. There's scant anything on Greenland.

1585. And comparing Baffin Bay and Davis Strait to the Gulf of St. Lawrence where the anthropogenic sources of sound is magnitudes different than Baffin Bay and Davis Strait, more comparable would be Greenland because that's our neighbour, right next door, and they're doing activity, and they have the -- we share the same animal population. Beaufort would be a better comparison than Gulf of St. Lawrence to Baffin Bay and Davis Strait.

1586. Stevie is a diver. He mentioned it. He goes for clams and other ocean creatures. What is the safe distance that he can go diving while you're doing your

survey?

1587. **MR. GARRY MORROW:** Yeah, I would say there would be quite some distance away from where he would be diving.

1588. But to look up known diving distances from general diving operations, if you look at elsewhere in the world, the general -- the general distance from a vessel is anywhere from 500 to 1,500 metres.

1589. **MR. NIGEL QAUMARIAQ:** Okay. You've mentioned IQ study. My -- I'm still an employee with QIA, and that was one of the big points that QIA said, that IQ study needs to be done. It's been two years, and no IQ study has been done.

1590. We wanted the NEB to require it. We want an independent party to conduct it and carry it out, not the company doing this study or their consultants. So this is very positive.

1591. Because this is a five-year program, is it going to be 2D the whole time or will there be 3D seismic acquisition during that time?

1592. **MR. GARRY MORROW:** All we're conducting is 2D.

1593. **MR. NIGEL QAUMARIAQ:** Thank you. That's all my questions.

1594. **MEMBER HAMILTON:** Lootie?

1595. **MR. LOOTIE TOOMASIE:** I have a handout that I gave out. You may have the copies. I speak on behalf of the Arctic Fisheries Alliances offshore fishery.

1596. This is exactly where we -- we fish in summer, that's the same area you want to explore, survey.

1597. So the Arctic Fisheries Alliance is -- we acquired about -- fishing vessel Suvak, a 100-foot factory freezer fixed gear vessel. And this year, 2013, we acquired sister ship, same kind of boat. It's Atlantic Prospect.

1598. We harvest Greenland halibuts in OA. That's where -- OA. Start from Cape Dwyer area all the way up to -- all the way up to this mouth of James --

Jonestown greensfield area and further down from Cape Dwyer area, further south.

1599. So we fish in that area in the summer. Actually, this Arctic Fishery Alliance is -- it became a company and a partnership for HTOs, and it became a company in 2008, an Inuit owned -- 100 percent Inuit owned it, and we managed it.

1600. So we have a -- mitigation measures in Section 5.2 include seismic activity will not take place near any native harvest area. The community liaison officer will maintain communication with the company to provide updates to the Hamlet Council, HTO and the community. A fisheries liaison officer will maintain communication with all fishing vessels near the vicinity of the seismic survey. The seismic vessel will avoid all active fishing area. The seismic activity will not take place near any native harvesting area.

1601. So AFA requests that the phrase near any harvesting area be clarified. How will this native harvest area be identified? What will the defined minimum safe distance be?

1602. And fisheries liaison officer will maintain communication between all fishing vessels near the vicinity of the seismic survey.

1603. The statement "near the vicinity" lacks a specific definition. AFA thinks that should be better defined. AFA insists that this measure be expanded to include wording to the effect the fisheries liaison officer will send a daily email to the four turbot quota holders of daily vessel location and plan a track. Seismic vessel will avoid all active fixed gear fishing area.

1604. At what distance will the seismic vessel circumvent active fishing gear? AFA insists that a minimum safe distance between the seismic vessel, its array and the fishing gear be established and loaded in the mitigation measure.

1605. To ensure the MSD, the fisheries liaison officer should communicate fixed gear -- fixed gear fishing gear area with the seismic vessel.

1606. If catch rates are determined to have reduced as a result of the testing, how would it be compensated?

1607. So these are our questions.

1608. **MR. GARRY MORROW:** Yes, thank you very much.

1609. Most of the questions that you have in here and most of the practices that you would like to do in here are what we do elsewhere, so we do this in Labrador and Newfoundland with the FLOs on board the boat, the fishing liaison officers, the MMOs, and also through the process here.

1610. And the way that we've laid out the survey lines as such is to do most of this avoidance and, you know, what I've seen here, I think the way our survey is laid out and with the communications that you would like to do from the FLO to the other fishers that are out in the area, that's not an issue.

1611. You know, we have -- email reports can be done on a daily basis. That's routine for us to do and for the FLO to send those in to the communities. So we really -- I don't see any issue in any of this.

1612. And it's standard practice for us, what you put in here. So that's part of our procedures that we use when conducting surveys.

1613. **MR. LOOTIE TOOMASIE:** Thank you.

1614. So we -- actually, we're asking for better clarification, so you just said that it's not an issue. So what does that mean?

1615. **MR. GARRY MORROW:** Yeah. We discuss with you and take a look at this and look at scheduling, so how we schedule the survey activities. And as I -- you know, when I look in here and -- you know, you have the seismic activity will not take place near any native harvest areas.

1616. We've -- I think we've outlined that and where our survey program is and in looking at where your harvest areas are.

1617. If we have the information back from the community liaison officer to the fishing liaison officer on board the boat, then we would know where any of the turbot fishermen are or anything like that.

1618. When we do the seismic operations, it's not something that we want to do, is get around any type of fixed fishing gear or any type of fishing vessels that might have gear out for obvious reasons for both parties.

1619. **MR. LOOTIE TOOMASIE:** Yeah, thank you.

1620. So, actually, I didn't really get what I'm hoping to get a response from you. There are main -- two main issues I really talk about, is Native harvesting area and another -- other areas to incorporate our desire for better clarification.

1621. So I mean -- what I mean -- can we get -- can we get feedback from you in writing according to what we said here?

--- (A short pause/Courte pause)

1622. **MR. GARRY MORROW:** I guess -- if I understand your question right, as I kind of said, we don't have any issues with the communication. That's what we want to do, is we want to work with you.

1623. And so I guess between the fishing liaison officers, community liaison officers, we would be able to coordinate back and forth where we're doing the survey lines and, if there was any activity, you know, that was planned ahead of us or around us, we would be able to take a look at what we could do operationally and change the operation if necessary. That's sort of what we do off the Labrador Coast and the Newfoundland Coast.

1624. So we pretty much coordinate through the FLOs and through the observers and stuff on where key points of activity are, where there's -- where there's fishing going on and we adjust our survey plan.

1625. Is that ---

1626. **MR. LOOTIE TOOMASIE:** Yeah, okay, thank you.

1627. And the last -- I need more clarification -- is the -- since the project will last for five years, so what -- we already learned that the activity taking place down in Labrador Coast that was -- there's impact on fishing. Fish were scattered, they move away from the regional location and so the catch rate was reduced in the Labrador Coast during your activities. So we expecting that the same thing will happen once the seismic survey taking place.

1628. So for that reason, we are asking clarification. If that happened, the catch rate is reduced, what kind of compensation you had put in place?

1629. **MR. GARRY MORROW:** We would look at that on a case-by-case basis based on the communications back to us on -- if there was a reduced catch rate.

1630. We would have to take a look at that and take a look at where the vessel was in relation to that.

1631. You know, if somebody was claiming a reduced catch rate and it was, you know, 300 miles away from us, you know, we'd have to take a look at that and, likewise, if it was right next to us.

1632. So that would be done on a case-by-case basis with the communications that we receive back from the community.

1633. **MR. LOOTIE TOOMASIE:** Thank you.

1634. I hope it's not just making believe -- making believe me -- to believe you. I hope it's real.

1635. **MR. GARRY MORROW:** Yeah, obviously, no, the key here is communications, communications amongst us all and constant communications and that's what we have to do. We realize that.

1636. **MR. LOOTIE TOOMASIE:** Thank you.

1637. **MEMBER HAMILTON:** I think -- if I may, in support of the submission by the Arctic Fishery Alliance and I honour their request that perhaps you could file in writing a written response to the questions that have been posed by the Arctic Fishery and that would close the loop on it. And I think that's -- because they've been in the project a while.

1638. So I'll require the company to file a written -- full written response to their submission by May 15th. And it will all be posted on our record as well and forwarded to the Alliance so that they have a written response to this.

--- (A short pause/Courte pause)

1639. **MR. SAMUEL NAQINGAQ (through interpreter):** I think it would be good if you report to all four fishing industries, Baffin Fisheries

Coalition, Cumberland Sound Fisheries, Qikiqtaaluk Corporation and AFA.

1640. **MEMBER HAMILTON:** If it is filed with us, they will automatically all get copies of it as well; it will be on the Public Registry.

1641. But it's correct and right, everybody will get a copy of it as well. We'll do -- copy that to the four organizations.

1642. **MR. GARRY MORROW:** If you don't mind, I actually have a question.

1643. **MEMBER HAMILTON:** To me? That's fine or to anybody.

1644. **MR. GARRY MORROW:** Okay.

1645. Yeah, if you don't mind, if I can ask a question: With the fishing off of Labrador and Newfoundland, we actually -- on board the -- on board the vessel and back in our office receive VMS data. So we actually know the position of the fishing vessels, likewise, we trade that information as we just agreed to here.

1646. Do you know if we would be able to receive the VMS data?

1647. Because the VMS data and knowing where the fishing vessels are at, allows us to plan accordingly in real time, actually. So we're actually able to take a look at where concentration of vessels are and stuff like that and plan ahead of what our activities are going to be.

1648. **MR. LOOTIE TOOMASIE:** Yeah, we will -- we will show you our catch rates, daily data.

1649. Comparison from last year, before the activity is taking place and this year if it's happening going on. Thank you.

1650. **MR. SAMUEL NAQINGAQ (through interpreter):** No, I have a question. Lootie's question wasn't answered very well about compensation.

1651. His question was -- the way I understood him -- if it's going to hurt the fishing industries for the four fishing companies, are they going to be compensated?

1652. What they have last -- what they have catched in the past.

1653. **MR. CHRIS MILLEY:** This is an Atlantic Canadian question and it comes up in other areas as well. And as you know, I work in the world of fisheries management so it's an issue that comes up in other areas.

1654. Trying to pinpoint the reason for a decline -- and I'm not trying to say this just to side step it either -- trying to pinpoint the reason for a decline in the fishery is much more complex than saying "That caused it".

1655. For example, you might see changes in narwhal distribution because of the turbot fishery. Because when you're fishing turbot, you're actually fishing foraging species of the narwhal. So as your fishery quota goes up, you actually have an impact on narwhal.

1656. Similarly, other things will affect the turbot. It could be -- well, you're seeing species changes, species distributions here. Capelin populations have increased in places like Pangnirtung Fjord over the years whereas, in Newfoundland, capelin are disappearing.

1657. It's easy to point the finger and say: "Ah, it's because of climate change", but it may be other things. And maybe that -- what they're eating has changed and moved around.

1658. So all these adjustments are happening at the same time. So to say it's, you know, "That's the reason for it" is difficult.

1659. In Atlantic Canada, we have the issue of: Where are the cod? Why aren't they coming back? The water quality has changed, weather conditions have changed, water temperature has changed, seal predation is up. But you can't say it's because of that, it's a number of factors.

1660. So to put the onus on one industry to compensate the other solely for the decline is difficult because you could actually create other hardships, economic hardships. So it's one of those things that requires a lot of discussion going back and forth to say if there's compensation and what level of compensation or to say whether there's no compensation is something that has to happen when it occurs and you negotiate.

1661. **MR. SAMUEL NAQINGAQ:** Yeah, I understand what you're

saying but OA is fairly new for a fishing area and they would definitely learn what they have caught in the past and compare it after you do your seismic survey. And if they see a big decline, who's going to be blamed? You guys. Right away, because they'll see there's an increased decline. What they're catching in the past but they're not getting anymore.

1662. I know there's so many different scientists are explaining climate change. For example, for us Inuit, we see so many polar bears and scientists say there's not enough polar bears. There's always somebody finger pointing different people.

1663. So I got a good quick question, who's going to get -- are they going to get compensated? Because they'll definitely see a big difference if they -- what they used to catch in the past. Like for example, last year and when you do your assessment this year, if they catch less what they catch last year, they'll know right away it's from seismic.

1664. Thank you.

1665. **MR. CHARLIE ALIKATUHAUK (through interpreter):** First of all, I would like to ask -- Charlie Alikatuhauk is my name.

1666. How often would you do seismic testing in one evening? That's my question. I mean, one day, how many seismic shots would you do within a day?

1667. **MR. GARRY MORROW:** It'd calculate out the amount of impulses for each day but, to explain, it would be an impulse every 15 to 20 seconds during the day.

1668. Yes, while we're recording. So that would be while we were on the survey line there would be an impulse every 15 to 20 seconds.

1669. **MR. CHARLIE ALIKATUHAUK (through interpreter):** That's too much. That's a lot. It is also my concern.

1670. I'm also a diver, qualified diver here in Qikiqtarjuaq in summertime. More often in summer we can hear a lot of noise even if they're long distance.

1671. When we were going under the ice to dive, there were a lot of sea urchins where we dive. What we noticed when we first started diving, there were

a lot of sea urchins on the rocks and all over the seabed. And afterwards when we start diving again, the place where we dive, it makes noise when we dive. When they start hearing those, they started moving just from the noise of the boat maybe 30 feet down.

1672. I think it was just from the sound us diving that they started moving away to a deeper water and decreasing, maybe from their hearing or from their feeling, you know, so -- and during summer when I was diving, as Steven said, it's exactly true what we experienced.

1673. And I've also heard a ship noise. It's very noisy when you're under the water. When we were diving, we heard a thundering sound and I had to get off the water. It was apparently a ship far away from where we were. It's about -- it was about 15 miles from where we were and it was the noise of the boat's motor and I was down -- 30 feet down underwater and that's what I heard. And the ship, the vessel was quite far.

1674. And I've also heard some whales and I -- but I never saw them to see how far they were. When they were coming closer to Qikiqtarjuaq and we heard lot of noise of the whales, they were probably quite far. When you're underwater and when you're above the air, the sound wave travel faster under water beside the air. It travels very fast. And this is concerns that I have when you guys are going to do some seismic testing.

1675. Mammals will probably be affected. The mammals that we harvest for food, they will probably be affected from this seismic testing. From what I've experienced and from what I heard underwater, I'm pretty sure that they will be affected because when you're under the water, the sounds travels a lot faster than the air.

1676. And I wanted to bring that up because it's a concern of mine. Thank you.

1677. **MR. SAMUEL NAQINGAQ:** Now, this -- after what you said, every 15 seconds. I'm more concerned now. Seriously.

1678. **MR. GARRY MORROW:** Well, it's not 24 hours a day. When you take a look at the map that I had up there, it's only when you're on those black survey lines that we're running up through there that the impulses would go off.

1679. And then, you'll have periods of time where up to 15 to 24 hours a day where there's no impulses. There's no survey going on and so it's -- to explain it to you, it's intermittent. It's not constantly, for 24 hours a day, seven days a week, you know, for the whole period of time.

1680. So I probably didn't explain that good enough previously.

1681. **MR. SAMUEL NAQINGAQ (through interpreter):** And what kind of feedback did you guys get from Pond and Clyde?

1682. How did they feel?

1683. **MR. CHRIS MILLEY:** Every time I've gone to communities in the past, each community asked what the other community thinks and we've -- you know, when we were here in Qikiqtarjuaq and we've gone on to other communities, they've asked. And we've always said the same thing: We respect the opinions of each community. It's not for me what to say what others think. It's for you to communicate that yourself.

1684. And I'm sure you can appreciate that we respect that so I will say the same thing. In this case, the comments of each community will be on the NEB's but I think the principles of engagement is that each community's information is theirs and should be respected.

1685. **MR. SAMUEL NAQINGAQ (through interpreter):** Thank you for your answer but I'm going to ask my colleagues that are two Chairs from two communities and they'll tell me what the community felt and I'll just ask them.

1686. Like, every 15 seconds is lots and what we eat -- if it's going to affect what we eat, it's very concerning because we don't have money all the time to go buy food from both stores in the community.

1687. Whatever we catch, we either freeze it up or give it out to people that need food. And there's not a whole lot of jobs in the community and there's a lot of people who are unemployed and just depend on Welfare.

1688. And if it's going to affect our animals, what we eat, I have a major concern on that -- big time major concern. The seismic -- animals, what we eat -- what I eat is more important than seismic. And I'm pretty sure that the people here feel the same thing, what I'm saying right now because we live up here and

we've been eating it all our lives and it's a bit concerning.

1689. Every 15 seconds, even though it's not going to be 24 hours because we don't really know what the outcome is going to be when you do the survey because we don't know and you don't know. After you do the survey, we'll know and I'm hoping National Energy Board and yourself, if you get approved to do what you want to do, come back and tell us and the community will tell you for sure what they have learned because five years is a long time.

1690. Why don't we take it one year at a time, find out first? If it really affects our animals, we won't like it whatsoever, for sure. Thank you.

1691. **MR. RICHARD CARBONNIER**: Good idea to have a permit for one year first.

1692. If, for example, your vessel was located, let's say mid -- 100 kilometres away from Clyde River, right in the middle of the sound there, in the middle of the 3,000 metres, for example, and that you're blasting every 30 seconds or 20 seconds a sound, if I was a diver, diving right here in Qikiqtarjuaq, would I hear the sound of that canon that is about, I would say, 200 kilometres away?

--- (A short pause/Courte pause)

1693. **MR. TROY NELSON:** One thing I can say and I know some other communities have asked us to model distances of how the sound dissipates with distance.

1694. We can provide -- what's that -- we can provide that information. It is in the EA, the table of model distances over and so how the sound dissipates over distance.

1695. At some point, it will dissipate and not -- the sound won't be there anymore. It gets lower. One comparison I do like to make is about 120 decibels, that's about the same in water as a conversation between you and I right now. So that -- something like that would be in the table so that's something we can provide.

1696. **MR. RICHARD CARBONNIER:** So you can't tell me now if I'm going to hear it or not, if I'm under water?

1697. **MR. GARRY MORROW:** The International Association of Diving Contractors has worked with the International Association of Geophysical Contractors, which we're all members of, and, of course, you have a lot of areas around the world that have a lot of diving activity and oil field activity while it's going on.

1698. And they have minimum guidelines for seismic operations to be near divers and their distance is between 5 and 1500 metres and it's generally 1500 metres worldwide.

1699. So not 100 miles, 1500 metres.

1700. **MR. RICHARD CARBONNIER:** Okay.

1701. So if there's activity in front of Clyde River, it should not have an effect here in this area?

1702. **MR. GARRY MORROW:** No, not typically.

1703. **MR. RICHARD CARBONNIER:** Have you done a model of the channel here -- that is here, that is, at 3,000, 4,000 metres, in length like that and how it would react?

1704. **MR. TROY NELSON**: Yes, that is part of the standard EAs.

1705. They take locations and do sound propagation modelling and how the sound, like I mentioned, dissipates over distance. So, yes, that is in the EA and it will vary depending on the different locations that they model on.

1706. **MR. RICHARD CARBONNIER:** Thank you.

--- (A short pause/Courte pause)

1707. **MEMBER HAMILTON:** I was conferring with my legal counsel.

1708. Was there a question? I'm not quite sure. You've answered it? Okay.

1709. Any further comments or anybody want to take -- oh, Nigel. I apologize.

1710. **MR. NIGEL QAUMARIAQ:** Yeah.

1711. This is about NEB process post this hearing and the company you granted an authorization.

1712. With CEAA changing and you acknowledging that an environmental assessment is not required under CEAA, what is the process moving forward because this is an operation permit for one year? How about moving forward?

1713. Will you be conducting hearings or would the company be required to -- there are a lot of questions still and I know that there's a trip planned in May or June to talk about benefits. And your process for -- your process online is very scant on the details of how you grant authorizations for this.

1714. For example, the Nunavut Impact Review Board publishes guidelines and timelines. I have not seen any -- anything like that from NEB.

1715. So moving forward, how will the communities communicate with National Energy Board?

1716. **MEMBER HAMILTON:** Just before I give you a detailed answer, communicate on what part?

1717. What issues do you want the Board to communicate with the communities on?

1718. **MR. NIGEL QAUMARIAQ:** To get the community's feedback from the project if it's granted in 2013 ---

1719. **MEMBER HAMILTON:** Okay.

1720. **MR. NIGEL QAUMARIAQ:** --- and it moves forward into 2014, 2015, 2016.

1721. **MEMBER HAMILTON:** Yeah. Okay.

1722. If you just give me a second and I'll give you a detailed answer.

--- (A short pause/Courte pause)

1723. **MEMBER HAMILTON:** It's always good to get a question to make sure I give the correct answer. I don't want to leave any misunderstanding of the answer so I apologize for taking the time necessary to do that and maybe follow up.

1724. The Board has the option normally when giving an application. They've applied for a project for five years -- over a period of five years. The Board can give a year only -- a permit for one year or it could consider giving it for multi years. It would depend on what the Board decides to do from feedback. And that may be a question I may put to you, what would you like the Board to do, would it be an annual one, renewable for so many years, or multi-year, or single year, and then they would have to come back for another renewal.

1725. But even if they got it -- if they are granted a permit authorization for one year they are required to report back annually through all the matters through the communities. They are required to provide a report at the end of that year on their activities. And if there was another year then they would have to report again on that activity. So they are required to report and those reports are made public, they're available to the communities and they report back. So that's the present process.

1726. So we would be open to know whether what people in the community feel about the length of the permit. It's -- a five-year application can be given, and a single year or a multi-year, and it can be renewed. Those options are all open to the Board to consider. So I'd be happy to have any feedback or questions on that.

1727. **MR. SAMUEL NAQINGAQ:** How much timeframe do they have to report back to the community? Like what I have learned in the past, some organizations reports back six months after what they did or some of them over a year. Do they have certain days to report back to the community? Thanks.

1728. **MEMBER HAMILTON:** Yes, and I'll just confirm that from the experts that have dealt with all the seismic applications that the Board has. So I just want to make sure I give you the correct answer what our process has been with other applications.

--- (A short pause/Courte pause)

1729. **MEMBER HAMILTON:** There's been -- procedures have been that if they provide a -- after the first year they have another year before they have to report. But we could condition them to report earlier than that year. That's on the report on the whole operation for that particular application.

1730. But when it comes to the MMO reports, for example, Chevron did some seismic in the Beaufort and those MMO reports -- the project finished in November, the reports were filed last month. So there are different time zones. And they were conditioned to do that, to keep it accurate on those reports.

1731. **MR. NIGEL QAUMARIAQ:** My next question is to the company. You mentioned that 1,500 metres for a diver, what effect would that have at 1,500 metres, lethal effect, sub-lethal?

1732. **MR. GARRY MORROW:** That's standard in the oil industry. I mean, you can -- we can get that information and send it to you if you'd like.

1733. **MR. NIGEL QAUMARIAQ:** So therefore -- very good example is Gulf Coast that has very high concentration of exploration as well as active development so therefore you require a lot of divers. What is the safety zone for those divers, and is there any hearing protection required or special hearing protection to mitigate?

1734. **MR. GARRY MORROW:** No, that's why the paper was jointly done in between the IAGC and the IADC, which is the International Association of Drilling Contractors. You can go work in a field in the Gulf of Mexico and those -- since you've mentioned Gulf of Mexico, and I'm pretty familiar with that area, you can go into those areas and if there's dive operations going on you can contact the diving superintendent and he'll give you the minimum distances that he wants from his operations, and generally that goes from 500 metres to 1,500 metres.

1735. **UNIDENTIFIED SPEAKER:** Go ahead, Nigel.

1736. **MR. NIGEL QAUMARIAQ:** No, that's -- that was my final question.

1737. And I've just found out that the weather in Iqaluit is not good and I'm the only one from the group that doesn't have a place to crash tonight. So if somebody has a couch for me, thank you.

1738. **MR. SAMUEL NAQINGAQ:** Do you have board members? Like your company, does it have board members?

1739. **MR. GARRY MORROW:** Yes, we're publicly traded, we're a public company. So yes, we have board members, correct.

1740. **MR. SAMUEL NAQINGAQ:** The reason why I asked that question was, like the people that will be involved, like for the communities that you visited, might be better if you get some community member to joining the board members. That might be optional. I don't know.

1741. Like if the hunters notice a big difference on marine mammals are you guys going to listen to us? Like older people have said in the past, they were afraid to open their mouth, but we don't sit in the corner anymore, we can say how we feel these days cause when it's going to affect the animals I have a major concern on that.

1742. So that might be optional. I don't know if we can -- if you guys can have the communities sit on your board where -- talk to the senior position. I don't know. That's just a question. Thanks.

1743. **MR. GARRY MORROW:** That's something that I think both I and Troy will go back and speak to our upper management about.

1744. One thing for certain is what we said earlier, with the marine mammal observers onboard the vessel, that's a very, very key role and it's a very independent role and, you know, and so we're kind of regulated with that. And so they have firsthand eyes on, and so it's not something new to us, these mitigation measures worldwide and how we conduct that and mitigate those zones. So …

1745. **MR. SAMUEL NAQINGAQ:** I'm talking about community members, like, community harvesters if they see a difference.

1746. I'm not talking about the observer on board. He'll see animals on -- near the boat but near the community what they see, if there's a decrease of animals what they saw in the past, they're going to report to HDO anyway.

1747. **MR. GARRY MORROW:** Yeah.

1748. **MR. SAMUEL NAQINGAQ:** And are you going to listen to HDO, their concerns?

1749. Thanks.

1750. **MR. CHRIS MILLEY:** I think I know what you're getting to. There's -- that's one of the things that I think we've been talking about of building that relationship. And I -- how that relationship is set up is going to vary from community to community, obviously, because different players and different interests.

1751. But, yes, that's one of the things that we were going to be talking about.

1752. We were originally planning to come back a little earlier than this, but because the NEB had organized this hearing, we were told, you know, it might be best to wait. But we want to continue that kind of dialogue.

1753. **MEMBER HAMILTON:** There's a couple more.

1754. I think maybe we'll take just a quick five-minute break, give our interpreters a quick break and our sound recorder and then we'll come back and finish off your comments because I was just being told we might be here for two days -- the storm's coming in -- so we've got all the time in the world.

--- (Laugher/Rires)

--- Upon recessing at 9:21 p.m./L'audience est suspendue à 21h21
--- Upon resuming at 9:29 p.m./L'audience est reprise à 21h29

1755. **MEMBER HAMILTON:** Maybe we'll just see. They're just organizing beds over there for us all, which is -- or floors or chesterfields.

1756. Okay, I think there was somebody back here had a -- two people back here. My friend here. Thank you.

1757. **MR. LOASIE AUPIAKIAK (through interpreter):** Qujannamiik. Thank you.

1758. Unfortunate it's bad weather. I do have a shack that you can use but

it's quite far. It's not in this community.

1759. **MEMBER HAMILTON:** (Off mic)

1760. **MR. LOASIE AUPIAKIAK:** Thank you.

1761. Listening to the conversations or comments makes you think about more things. And it's getting a little clearer and we're having better understanding of what is being discussed and when we do have more things to consider.

1762. I would like to re-ask -- ask the question again, within our community that you're going to do some study in our land and we have some concerns with our mammals, sea mammals, not just fish. This community has to be the biggest concern because if there was to be an incident to our mammals, what kind of plan do you have to replace the loss of food if it should happen?

1763. Do you have any kind of plan for compensation or -- to replace what we lost?

1764. And this would be the biggest concern that we have. And if you have any plans or agreement, I would like to hear about it.

1765. Thank you.

1766. **MR. CHRIS MILLEY:** …somewhere to the issue with the fishery and the issues around.

1767. There's no set plan at this time but it's obviously with the community liaison and the process that goes on when the project is going on. If people are seeing changes, that's the advice that goes to the project.

1768. One of the things that people have to be aware is that the company isn't trying to figure a way of changing your food supply. It's trying to do everything it can so that there is no change in your food supply. And if there's anything that is observed during the course of the project, obviously, the timing of the project will be adjusted to accommodate that.

1769. If there is something that is observed, then that is something that is discussed between the community and the company at the end.

1770. **MR. LOASIE AUPIAKIAK (through interpreter):** Yeah, qujannamiik. Thank you.

1771. A lot of time when you have some activities proposal and it seems like they have a good plan, something tends to go wrong when you don't -- even if you don't want it to go wrong. And I think I understood that there is no plan for the compensation area. The only time you would start discussing it is if there was to be an accident or any kind of incident. For me, I'm not very happy about this situation, the way it is, according to what I understood.

1772. From my understand, if there was to be any changes or any accident, then they would -- that would -- the only time that they would start dealing with the compensation after the people of the community is affected. I think that's how I understood it.

1773. Thank you.

1774. **MR. CHRIS MILLEY:** Maybe to clarify, one of the things that give you -- as I said before, it's hard to pinpoint what causes a change.

1775. This project would be one thing that's going on in Baffin Bay and Davis Strait. At the same time, there's going to be a lot more shipping going on because of other developments. The ships that are going to be taking supplies to the construction of Baffinlands, the proposed shipping out of Baffinlands, for example, there's going to be a significant number of ships going through the region if that's approved.

1776. So you have to look at what's really -- you know, how do people come together to the table to make sure that there's no net loss, I guess?

1777. **MR. NIGEL QAUMARIAQ:** Can -- you mentioned the power that the MMO officers have.

1778. Can you talk about how many times -- you mentioned Labrador and Newfoundland. a project that happened last year -- how many times the MMO officer required a shutdown?

1779. **MR. GARRY MORROW:** I don't have -- Nigel, I don't have the exact statistics in front of me. I can certainly look those up for you and let you

know.

1780. **MR. NIGEL QAUMARIAQ:** Okay.

1781. One of the concerns expressed from the Elders with the -- in Pond Inlet about the MMO officers and them being trained, I believe those are Envirotech students that are being trained in Pond Inlet. There's concerns about -- typically, these are younger people with not much experience with marine mammals in the ocean.

1782. How can you ensure that you get people with the right constitution and the right knowledge, the right training -- "constitution" and I mean that they have a lot of power to shut down the boat and have the constitution to actually follow through with that?

1783. **MR. GARRY MORROW:** The role when they're trained -- that's part of the training process -- is for them and the procedures that need to be adhered to and so that's part of the training process that they would receive during those MMO training.

1784. **MR. NIGEL QAUMARIAQ:** Okay. Thank you.

1785. I did find a place for tonight, so thank you. And that's it.

1786. **MR. LEVI NUTARACAK (through interpreter):** I'm going to speak in English first. No, kidding, just kidding.

--- (Laughter/Rires)

1787. **MR. LEVI NUTARACAK (through interpreter):** My apologies for coming in late. And from also my understanding is also is that from the project that you're proposing.

1788. What I'd like to say is: The vessels that you'll be using to do the study, they will kill so many sea mammals. The fisheries are not -- are fishing not just to try to kill, this will be a totally different ship and when you will be using seismic in our waters, in our abundant wildlife waters, there are seabed animals and also the other crustacean will be dead.

1789. How are you going to collect all these -- if there was to be a massive

die-off of any type of animal?

1790. It’s -- we know for sure that many animals will die off from this study. Any animals that die, like halibut and other animals, do you have any plans to avoid killing type of animal?

1791. Although I have a lot of things that I could make a comment, but I'd like to know about this question.

1792. **MR. CHRIS MILLEY:** The purpose of the process of doing an environmental assessment and the history of seismic surveys around the world which there's been hundreds and hundreds of thousands of surveys done over the years, the question about the effect of sound on marine mammals or on animals has been asked. And it's been the subject of a lot of research.

1793. For example, I know one research project that was just completed recently in Atlantic Canada on the effects of seismic surveys on snow crab because people were concerned, is the seismic survey going to affect snow crab. And they've always concluded that the -- while the regular operation of seismic surveys is conducted, there is no lethal effect on snow crab.

1794. If you were to take and expose any animal to super-intense sound, you can eventually find the point where it does cause an effect, but that's not the same as the sound that's coming from a seismic survey vessel.

1795. The intention is not to harm animals. The intention is to collect the data without harming animals, and that's why the research has been done by the companies and by government scientists.

1796. I think that one of the things people are expressing their concern -- and they're not alone. All over, you know, Atlantic Canada, all over Eastern Canada, all over the world people are concerned about this. But these surveys have been going on and there have been, you know, minor, if any, long-term effects.

1797. **MR. SAMUEL NAQINGAQ:** What you answered earlier was kind of funny for me. We all know there will be a lot of ships coming through around this area. They're not going to do a seismic survey. That's -- one of the guys was -- that was his concern about the animals. And those different boats that will go through around this area, they're not doing a seismic survey at all.

1798. And that was not a very good excuse. Thank you.

1799. **MR. CHRIS MILLEY:** I raised the issue of ships because the -- one of the biggest effects on marine mammals is ships' collisions.

1800. We've, in fact, had to change the routing of shipping lanes in the Bay of Fundy because of the whale population and to avoid collisions.

1801. **MR. SAMUEL NAQINGAQ:** Yeah, I understand what you're saying. But we live up here and depend on animals. And five years is a long period. I know that. But when you finish the project, you'll be living down south and we'll be stuck up here. And if it really affects our animals, we're going to pay the consequences, not you guys.

1802. I'm hoping that you understand what I'm saying because you'll be sitting in the sunshine down there. And when it's affecting our animals, I care about that because it's our food.

1803. Thanks.

1804. **MR. LOASIE AUPIAKIAK:** Thank you. I'd like to go back to our liaison officers. Now, I seem to understand that because the training is taking place in Pond Inlet, so you are more likely to hire from Pond Inlet for this -- the Baffin Bay area and Davis Strait area during the seismic survey.

1805. But I'd like -- what I'd like to see, if you were starting to covering adjacent to the community, so the STA would hire -- well, recommend liaison officers for this -- for that adjacent area, for example, for the community here.

1806. So that's our -- I think that's our understanding, but I seem to started to understand -- started talking about Pond Inlet trainees. Thank you.

1807. **MR. CHRIS MILLEY:** The only reason I mentioned Pond Inlet because another course had been done earlier in Iqaluit at the Arctic College there is it brings people to come to a place where they can all be trained at the same time. And that's why it had been done there.

1808. I don't know where the students were from, but that could be found out.

1809. But I think your suggestion is one that can be definitely looked at, so that's good.

1810. **MEMBER HAMILTON:** If I may, can I have a follow-up question?

1811. How are you -- how is the company proposing to select the fisheries liaison officer for the project? You indicated there would be one fishery liaison officer on the boat. How is the process of you -- have you negotiated or are you working out to hire that individual?

1812. **MR. GARRY MORROW:** We are looking -- oops. Now it's nice and loud. The volume is up there.

1813. We're -- we'll look at any candidates that are proposed to us and go through a selection process there.

1814. **MEMBER HAMILTON:** Follow-up question. Proposed by who?

1815. **MR. GARRY MORROW:** By the community.

1816. **MEMBER HAMILTON:** Just get that on the record because -- yeah. I'd just like to seek clarification how that ---

1817. **MR. LOASIE AUPIAKIAK:** So that means -- so I had understanding that three communities will be select -- will send their candidates when the boat is adjacent to the community?

1818. **MR. GARRY MORROW:** What we'd like to see is that there is crew changes taking place at intervals during that survey, so if we have some candidates from different communities, we'd like to have that selection process and have those candidates -- have a candidate on board the vessel, so…

1819. **MR. LOASIE AUPIAKIAK:** So what we'd like to see for sure, I mean -- because we know -- we know this area, the mammals, their behaviours, the mammals. We know their behaviours, their migrations, all that.

1820. So what I'd like to see the project might happen to go ahead, so fisheries officers and other -- those liaison officers be selected from each community when the boat about to be adjacent to the community.

1821. **MR. GARRY MORROW:** Absolutely. That's a very good idea, and that's what we'd like to see.

1822. **MEMBER HAMILTON:** I apologize. It's not clear to me. And if I haven't got it right, I'd like to make sure it's clear to -- if it's not clear to me, I'm not going to be able to know what's clear.

1823. So correct me if I'm wrong; there will be -- there will be four marine mammal observers; correct, three on the ship, the seismic ship, and one on the support ship?

1824. **MR. GARRY MORROW:** That is correct. And ---

1825. **MEMBER HAMILTON:** And they will be rotated every five weeks?

1826. **MR. GARRY MORROW:** That is correct.

1827. **MEMBER HAMILTON:** There will be one fishery liaison officer for the five weeks and then another one for the second five weeks?

1828. **MR. GARRY MORROW:** Correct.

1829. **MEMBER HAMILTON:** And there'll be a community liaison officer based in each community as well?

1830. **MR. GARRY MORROW:** Yes.

1831. **MEMBER HAMILTON**: Okay.

1832. **MR. GARRY MORROW:** Yeah.

1833. **MEMBER HAMILTON:** I want to make it -- I hope if I understand it. Now, I still haven't answered my -- I'm not clear how you will select the fishery liaison officer, not the marine mammal officer.

1834. I'd like to know, am I -- I hope I'm -- just for clarity. It's still not clear to me who you would consult with to hire. I'm sure that would be important to the fishery alliances and the thing as -- and the Baffin Coalition as well.

1835. Thank you.

1836. **MR. GARRY MORROW:** Yes. We're reliant on the communities to propose candidates to us.

1837. **MEMBER HAMILTON:** Thank you. That's clear to me if it's clear to everybody. I apologize; I just want to make sure the record was clear on that.

1838. Thank you.

1839. **MR. RICHARD CARBONNIER:** No problem. That's okay. Can you clarify the MMO? Who is training the MMO?

1840. **MR. GARRY MORROW:** There are different companies around the world that train MMOs. So there's probably about four companies world-wide that train MMOs.

1841. **MR. RICHARD CARBONNIER:** Oh. So it hasn't started yet, naturally, no?

1842. **MR. GARRY MORROW:** There was -- we sponsored a class at the Arctic College. So there's already been people trained.

1843. **MR. RICHARD CARBONNIER**: Okay.

1844. **MR. GARRY MORROW:** Yeah.

1845. **MR. RICHARD CARBONNIER:** And those companies are under contract, under you?

1846. **MR. GARRY MORROW:** No they're not. No, they did it with the Arctic College and those companies that do the MMO training are not anything to do with us.

1847. **MR. RICHARD CARBONNIER:** Okay.

1848. **MR. GARRY MORROW:** Okay.

1849. **MR. RICHARD CARBONNIER:** I had some technical questions but I think your friend here is not here.

1850. Okay, compared to a sonar system, the seismic locator or the seismic sound, how does that compare to the -- a typical boat sonar, for example? How strong is it or how much stronger is it or is it comparable?

1851. **MR. GARRY MORROW:** I can't answer that one. I don't -- I'm not an expert in sonar.

1852. **MR. RICHARD CARBONNIER**: It's not comparable?

1853. **MR. GARRY MORROW (off mic):** Yeah. We don't do sonar…

1854. **MR. RICHARD CARBONNIER:** No but sonar is -- it's the same principle of a sound travelling in the water and that bounces off an object.

1855. **MR. TROY NELSON:** I -- we can't answer that. We're not experts in sonar so I can't compare to something that I'm not an expert in.

1856. **MR. RICHARD CARBONNIER:** But would you be agreeable that it's much stronger because you're penetrating ---

1857. **MR. TROY NELSON:** I can't agree to something that I don't know. There are technologies about it.

1858. **MR. RICHARD CARBONNIER:** You don't know. I think there has been documented studies or there has been studies done on the impact of sonars, for example, on marine mammals that use echolocation and I think it's well documented.

1859. And there has been theories on that and you know, speculation of what the causes and effect on these animals are. Has there been any studies done on echolocation mammals like bull whales or narwhals or belugas with this type of seismic study?

1860. **MR. CHRIS MILLEY:** One of the things that we committed in other communities was to provide information about the different responses to marine mammals to sound. And you know sonar is -- it's comparing apples and oranges because it's different frequencies. You know, I can't hear 20,000 hertz anymore but I could when I was young. I mean, you know, like the story about the kids hearing the phones.

1861. I mean, different frequencies are -- have different effects. So you're asking something that is not necessarily comparable. But the studies have been done on the sound that whales emit themselves and how that -- how they communicate and those are different frequencies.

1862. One of the things that was communicated when we were at the last community -- and that information is what I'm having my colleagues resend because it was sent previously but obviously wasn't sent out to everybody when it get to the person who's receiving it -- was the intensity of sound that whales emit themselves.

1863. And some of the whales actually emit sounds much higher than anybody even -- you know, it would deafen you if you were in the water. So if a whale communicates that loud, it's questionable about what -- you know, what frequencies would affect them, what they hear because they themselves are tuned to a certain type of sound.

1864. **MR. RICHARD CARBONNIER:** But just to come back to my question, there has been no studies done with the seismic on these echo sounding animals?

1865. **MR. MAGNUS CHRISTIANSEN:** The short answer is yes and that's a part of the environmental impact assessment. So in the impact assessments, there's an assessment of the different species in the bay, their migration and also the signs on impact of seismic on those species or comparable species and then an assessment of the risk.

1866. And there was also some issues brought up in some of the previous meetings, I understand, and more information has been provided subsequent to that, to complete the picture as -- with respect to the impacts.

1867. So it's there and it's unfortunate that we didn't bring the marine biologists here today with us. We apologize for that and that is why we have a bit of a hard time giving you specific impacts right now but I can assure you that it's part of the assessment that is also being looked at by the NEB now. And we've tried to address all concerns as best we can there and in subsequent communications.

1868. And what Chris is saying here is that there was still some concerns in

these meetings and that's why we're now compiling some more information to clarify even further, so you can have that with respect to the sound and everything. Not the answer you want right now perhaps but maybe when we forward this very shortly, it will be more helpful.

1869. **MEMBER HAMILTON:** Bharat is holding up the microphone of MD; we'd like -- to make any further comment? Thanks. The Mayor?

1870. **MS. MARY KILLIKTEE (through interpreter):** Please feel welcome and we're having a quiet resting time now. It's snowing out there.

1871. I have a question. Listening to what's going on and you guys are also listening and also David, and since you're in the middle of these opponents or when the concerns are being raised for the people of this community, there are concerns.

1872. We're not just these people that are concerned, there are other people outside this community who are concerned and if this project was to be approval -- approved, the Hamlet Fisheries and the HGOs -- if you're going to approve this project for this year and give it license or permit, I know that when people keep talking to talk about their concerns and we have seen that in the past.

1873. For those of us who are the leaders of the different community groups in the -- within the community, if we don't -- if nobody can hear our concerns or our complaints, if we should have a complaint, the concerns and the effect that has happened that are -- we are concerned about and if they were to proceed, and if we were to have a meeting within the community, can we give you our concern and ask you to come to the community to hear the concerns?

1874. From what I'm hearing, because this is a really big project and it's going to affect a lot of people and people are concerned and there are questions and answers and there are things that cannot be answered.

1875. For those reason, I just wanted to say that, from what I hear this evening. Some of the questions that I had wanted to bring up were already brought up. So that's all I wanted to say because it's a concern -- because I don't think anybody asked that.

1876. Thank you.

1877. I hope everyone will have a place to sleep. There is Seeko (ph) Hotel; there's another hotel here. We would like everyone to have a place to sleep.

1878. **MEMBER HAMILTON:** Thank you.

1879. Well, I think we're all taken care of, even Nigel, so we've been told.

1880. And from experience, Christy just reminded me that, in the Beaufort where there's been quite a lot of seismic over the -- over a number of years, the HT -- Hunters and Trappers Associations there do send in letters of concern. They make phone calls to the NEB if they've got concerns.

1881. Once the -- if the project's approved and the company's doing work, they can phone us, they can complain or they can lay concerns and we have staff that would go out and look into their concerns, talk to them about their concerns and to ensure the company is doing exactly what it said it would do. So we have a monitoring, we have qualified, very experienced staff in those areas.

1882. So there is a process, if an application is approved, that we will continue to hold the company accountable for what they said and local hunters and trappers have come to us -- am I right, Christy? -- on a number of occasions with concerns and we've investigated them to look into it.

1883. So there is processes in place if an application is approved.

1884. **MR. GARRY MORROW:** And we want to continue dialogue with the communities, not only leading into the start of the project but during the project.

1885. So we're committed to that as we've previously mentioned and, also, not only through your community liaison officers, but we also have support staff that would be located amongst the communities too, from our own company. So there would be very good dialogue, I hope, and continued dialogue.

1886. **MEMBER HAMILTON:** Is there any further -- oh, the gentleman -- oh, one and then gentleman behind you again.

1887. **MR. SAMUEL NAQINGAQ (through interpreter):** I'm going to speak Inuktitut for a change.

1888. And there is a question didn't seem to be answered. If a community find a problem and if they want a vessel or the seismic study to be stopped right away and if we were to write a letter to you in regards to our concern and wanting the ship to be hauled or stopped from doing its study, would you be able to?

1889. **MEMBER HAMILTON:** Yes, we would entertain any concerns, complaints or anything that come along and we would investigate it.

1890. And if it was of a serious enough that would affect any of the -- an environmental issues or any matter that would affect the safety of communities, safety of the environment, we can put a stop on the project.

1891. Yes, we can. We have the authority to do that.

1892. **MR. SAMUEL NAQINGAQ (through interpreter):** Qujannamiik. Thank you.

1893. **MR. RICHARD CARBONNIER:** …assessments that you have in hand. And I've, you know, just tell me, I don't -- I'm not going to go and look at it.

1894. Do you have any idea of the counts of mammals and behaviours that are occurring in the Strait here?

1895. Is there any assessment done at the present time on that?

1896. Do we know how many bowhead whales? Do we know how many narwhales? Do we know how many species and the counts on that that is occurring and their migration routes?

1897. Do we know anything of all that at the moment?

1898. **MEMBER HAMILTON:** Magnus can ---

1899. **MR. MAGNUS CHRISTIANSEN:** Yes, and I can't comment on the data source, maybe you can.

1900. But in the environmental impact assessment, there is catch data for different kinds of fishes -- turbots and whatnot -- density maps for different kinds of marine mammals and their migration routes and also for seabirds and other

species in here.

1901. So there is knowledge about where they are, how many they are and how they move, where they breed and where they feed. That is part of a standard environmental impact assessment.

1902. **MR. CHRIS MILLEY:** And to add to that, when we were here the last time, the HTO arranged for us to have access to information that is proprietary to the HTOs.

1903. We are not in a position to release that information because it belongs to the HTOs. It's shared to DFO but, again, it's maintained as proprietary information.

1904. There is an ocean tracking network information that is available. That's a database that's accumulating and getting stronger each year and we've had access to that information as well.

1905. The biggest part is the -- the level of knowledge is never going to be enough to keep everybody happy because we'll never know for certain what's going on in nature. The endeavour is to try to understand.

--- (A short pause/Courte pause)

1906. **MEMBER HAMILTON:** By all means.

1907. **MR. SAMUEL NAQINGAQ (through interpreter):** Even Department of Fisheries and Oceans do not know the information that you said that they knew. You don't know.

1908. The Fisheries and Ocean don't even know the belugas and the only time -- this is the only year that they're doing this study, first time. But you said you knew. Now, you don't know?

1909. Thank you.

1910. **MR. CHRIS MILLEY:** …to the data. And then -- but I was trying to say is that it's in an area where people are trying to learn more and more each time.

1911. And, in fact, one of the things that the MMOs will be able to do is to contribute to that information because there's now going to be new sources of information on the movement and sightings of marine mammals.

1912. **MR. NIGEL QAUMARIAQ:** It's very interesting when you talk about the environmental impact assessment and looking at the marine mammal information and you mention that there is no feeding in sensitive areas.

1913. I've looked through that document and, for some marine mammals that have been studied a lot -- let's say, that are on the endangered species list -- there's a lot more information than other species that aren't.

1914. So that's a product of, basically, the priority of DFO and other organizations, how they collect science here. The science is very scant for most mammals. Polar bears, there's a lot of information, the iconic species.

1915. The narwhal information which is very important to Pond Inlet and these communities is very scant compared. They have very high hearing sensitivities compared to a lot of other whales and there's absolutely nothing in the environmental assessment where you tie in the scientific information and what is known and how it informs your project design and how you shoot your lines. There's no connection at all.

1916. So that's why I very much think it's a desktop study, it's a very much -- just looking at the science but doesn't tell you how it informs your project design. And that's the big concern that these communities are expressing.

1917. Thank you.

1918. **MEMBER HAMILTON:** Is there anybody else would like to ask question, make a comment? I ---

1919. **MR. RICHARD CARBONNIER:** What he just said, it follows what I was asking as a question. You answered in one way and he -- I'm happy he read the report, I didn't. So he's talking for me and I'm happy about that.

1920. And he's saying that there's not real good information that could sustain a viability here of that -- the impact on these mammals. It seems like that. It seems very scarce and it seems very -- we're going here in the unknown. And we're letting a business go in the unknown on the impact that might have on these

mammals. And I find that very risky, it's a high risk. Like he was saying, narwhals are in the Pond area. How will this affect the narwhal?

1921. I mean, maybe nobody here knows and we're going here into this blindness just for the fact of doing a geophysic study for future development of industry. That's about it. Nothing else. It's not for the benefit of anybody here because we all know that the benefit of these industries is for the industry, not for the individual necessarily.

1922. So we have to watch out on that and I think there should be more concern on the environment because the environment touches directly the people here and that's very critical.

1923. To go blindly is not necessarily we're going to be here doing things. What's going to be the observation? Is this going to be a visual observation on the ocean of how many mammals are going around or is it going to be a sonar or you know, interpretation of what's in the water? What is the whole story here?

1924. **MR. MAGNUS CHRISTIANSEN:** Well, as I said -- well as I said, we based it on the science we had available. We've -- subsequent to having the meetings, informed with additional information that goes beyond the environmental impact assessment documents that's mentioned here.

1925. And with regards to mitigation, we follow the Joint Nature Conservation Guidelines from the UK which is considered best practice. And that involves using marine mammal observers for doing visual observation around the ship, and it also includes the option to do passive acoustic monitoring with hydrophones, so you listen for them.

1926. And there's also other mitigation measures like doing soft starts, starting with low sound intensity to notify species in the area that something is going on before you go full volume.

1927. This is what is being done all over where there's requirements for mitigation measures on seismic surveys. And that is the current best practice based on the science available today.

1928. **MR. RICHARD CARBONNIER:** We're still going in a blind way in the -- I don't necessarily agree on that process. The whole process here is for the industry, nothing else. Okay, basically, the industry. And maybe, you know,

we could ask ourselves the question, why are -- maybe part of our plan is being screwed up in many ways and many species are being disturbed and, you know, it's maybe a lot of impact of a lot of things. But maybe this also is part of an impact, you know?

1929. We never did this in the Strait here. We never did that. There never been shipping lanes in this area. It's like this is a resort of mammals, this is a place that should be considered by a world heritage.

1930. And you know, most likely before we screw up in this area, we should know better what we're doing before even trying to come in up here. We're only coming up here because there's a drive for money and that's about it. Nothing else.

1931. **MR. SAMUEL NAQINGAQ:** I'll speak in English.

1932. I just want to clarify what I said in Inuktitut about narwhals that you don't know where they are and DFO. It's up in Home Bay; it's between here and Clyde River halfway. They're around that area now until they start migrating back. They're up there all the time just like Pond.

1933. Those -- I was talking about those narwhals up in Home Bay area. They start heading up there now until they start migrating back to that box. So I just wanted to clarify on that. Thank you.

1934. **MEMBER HAMILTON:** If I don't see anybody else that wants to -- any questions, any comments?

--- (No response/Aucune réponse)

1935. **MEMBER HAMILTON:** Well, with that I'd like to -- I really appreciate on behalf of the Board and the staff that are with us for you allowing us to come to Qikiqtarjuaq and now that we're allowing to stay us even a couple more days than we had planned. And I'll phone my wife tonight and tell her that I'm spending time in this community, where she was a nurse before I met her in 1971 or '02 I think. She was here as a midwife. So she'll be semi-jealous I think, I'm not sure, that I'm staying here for at least one more night anyway.

1936. And I'd also like to thank those who attended today for your comments, your questions and all will be taken into consideration. And I thank

MKI and its partners for also attending and being open to receiving the questions and the follow-up responses.

1937. I'd like to actually thank also Mali and Loseosie for their good work as interpreters, for Lynn who has been recording everything, and for Jimmy and Joseph for keeping us all listening and being able to hear each other.

1938. So now what happens, what happens now from the results of this visit? We have one more community to visit. We have a meeting in Iqaluit planned and once that is concluded and I will take into consideration all the material that has been filed, the comments from all the communities, the responses from MKI, and the material that they said that they will provide to us that we've asked them -- we've asked them to give us more material, to provide us more information.

1939. There were questions in Pond Inlet; they are providing more information. They were providing the responses that have been made comment on here tonight.

1940. And I will prepare a report and the report will contain a recommendation for consideration by the full Board, the full Board. I only report to the full Board with my recommendation, whether the project should be approved with conditions or whether the project should be denied.

1941. Once that report has been prepared, the full Board will make its decision and it will be posted, whatever that decision is, on the Board's website. And I commit to having all copies of that report sent back to all the communities so you can see the decision, whichever way it goes, has been made.

1942. So with that, qujannamiik. It must be time to go. Qujannamiik. Thank you for allowing us to be here.

--- Upon adjourning at 10:42 p.m./L'audience est ajournée à 22h42