

National Energy
BoardOffice national
de l'énergie

OUTGOING FACSIMILE - MESSAGE À EXPÉDIER

OPERATIONS BUSINESS UNIT - SECTEUR DES OPÉRATIONS

Exploration & Production - Exploration et production

MESSAGE TO	CONTACT / AFFILIATION	FAX
Mr. Bob White	WesternGeco	867-678-2556
Mr. Joe Acorn	MVEIRB	867-920-4761
c.c. Marry Swagar	WesternGeco	509-4217

MESSAGE FROM:	Laura Van Ham	Environmental Specialist
PHONE:	(403) 299-2769	FAX: (403) 292-5876
DATE:	27 May 2002	# of Pages including this cover page 12

REMARKS/COMMENTAIRES:

Subject/Sujet:	WesternGeco Mackenzie River 2D Seismic Program 2002
<p>Following, for your information and project file, are the responses the NEB has received to the Preliminary Screening Notification and Request for Review and Comment that was sent out on 2 May 2002, including a response from:</p> <ul style="list-style-type: none"> • Sahtu Land & Water Board • Prince of Wales Northern Heritage Centre • Indian and Northern Affairs Canada Water Resources Division • Transport Canada • Liidlii Kue First Nation • Government of Northwest Territories Resources Wildlife and Economic Development <p>WesternGeco already has some of these responses as they were copied on the original distribution. The deadline for response was 23 May 2002. Fisheries and Oceans Canada (DFO) requested an extension due to time constraints for review of the program information. A response from DFO is anticipated early this week. Should the NEB receive any more correspondence on this project, it will be forwarded to both WesternGeco and the MVEIRB. We are reviewing the responses and other program information and anticipate sending out an Information Request this week.</p> <p>Please contact the undersigned if you have any questions.</p> <p>Sincerely, Laura Van Ham, M.E.Des. Environmental Specialist</p>	

444 Seventh Avenue SW
Calgary, Alberta T2P 0X8444, Septième Avenue S.-O.
Calgary (Alberta) T2P 0X8

Canada

Telephone/Téléphone : (403) 292-4800
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<http://www.neb.gc.ca>



SAHTU Land & Water Board
P.O. Box 1
Fort Good Hope, NT
X0E 0H0

May 6, 2002

Terry Baker,
Chief Conservation Officer
National Energy Board
444 Seventh Avenue SW
Calgary, Alberta T2P 0X8

Our File: Public Information
Your File:

Dear Mr. Baker;

Re: **Proposed WesternGeco Mackenzie River 2D Seismic Program**
Comments from Sahtu Land & Water Board

Thank you for including the Sahtu Land & Water Board on your list of referral organizations for the above-mentioned application. Our review comments are limited to regulations affecting Land Use Permits or Water Licences. Based on the information available, no aspect of the proposed development would require a Land Use Permit, Water Licence, or notification about a Small Fuel Cache.

I trust our clarification on the matter has been of assistance.

Yours truly,

SAHTU Land & Water Board

Edna Tobac
Land Technician

Cc: Bob White, WesternGeco-Inuvik, NT

From: "Tom Andrews" <tandrews@ece.learnnet.nt.ca>
To: <tbaker@neb-one.gc.ca>
Date: 5/8/02 10:47AM
Subject: Files: 9180-W730-1 and 9180-W730-2

Dear Mr. Baker:

Re: WesternGeco Mackenzie Delta River 2D Seismic Program 2002 application (9180-W730-1)

WesternGeco Mackenzie River 2D Seismic Program 2002 application (9180-W730-2)

We understand that this program will be restricted to the Mackenzie River and delta waterway and that the research vessel will use existing docking facilities. Consequently we have no concerns regarding potential impact to archaeological resources

Regards,

Tom Andrews
Territorial Archaeologist
Prince of Wales Northern Heritage Centre
Government of the Northwest Territories
P.O. Box 1320
Yellowknife, NT X1A 2L9

(867) 873-7688
(867) 873-0205 fax
email: tom_andrews@ece.learnnet.nt.ca

CC: <lvanham@neb-one.gc.ca>



Indian and Northern
Affairs Canada
www.inac.gc.ca

Affaires indiennes
et du Nord Canada
www.ainc.gc.ca

Water Resources Division
P.O. Box 1500
Yellowknife, NT X1A 2R3

Your file - Votre référence

May 13, 2002

Our file - Notre référence

Your file: 9180-W730-2
Our file: GT-0001

Mr. Terry Baker
Chief Conservation Officer
National Energy board
444 Seventh Avenue SW
Calgary AB T2P 0X8

Dear Mr. Baker:

RE: Preliminary screening of Western Geco's proposal to conduct a 2D seismic program along the Mackenzie and Liard rivers

As requested in your May 02, 2002 letter, Water Resources Division has reviewed the above captioned application currently undergoing preliminary screening by the NEB. Additional comments may be forthcoming from our district offices, as you have sent this package to them as well.

It would appear from the information provided, that this project is very similar to the NRS proposal currently undergoing an environmental assessment by the MVEIRB. I also understand that this Western Geco project extends into the Inuvialuit Settlement Region, and that this component is being reviewed separately? It will be interesting to see if the MVEIRB calls this one up as a well, and how it will be handled if the EISC has no concerns with the downstream delta portion, which arguably would be more environmentally sensitive than the upstream river component! We have sent back your CEAA screening notification on this one.

Water Resources has taken a quick look at this project, and concurs that no water licence is necessary, and based on the material provided, has no water related concerns at this point. It is assumed that waste management and disposal practices will utilize approved on shore facilities such as in the communities en route (like the NRS proposal), and that a fuel spill contingency plan will be in place. Should this project also be referred, Water Resources would be able to provide "specialist advice" if the EA or its Terms of Reference turns up water related issues.

Should you require further information or clarification, please contact me at 669-2656, or Shannon Pagotto directly, at 669-2658. Thank you.

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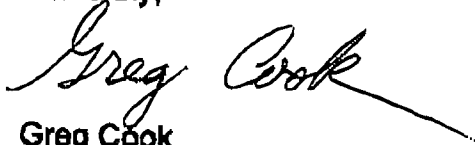
Canada

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Sincerely,

A handwritten signature in black ink that reads "Greg Cook". The signature is fluid and cursive, with the first name "Greg" and last name "Cook" clearly distinguishable.

Greg Cook
Environmental Assessment Coordinator
Water Resources Division

c.c. South Mackenzie District, Yellowknife
North Mackenzie District, Inuvik
Eric Yaxley, Env. & Conservation



Transport Canada
Prairie & Northern Region - Marine (RME)
11th Floor, Canada Place,
1100 - 9700 Jasper Avenue,
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Transports Canada
Région des Prairies et du Nord - Marine (RME)
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1100 - 9700, avenue Jasper
Edmonton, AB
T5J 4E6

Your file Votre référence
NEB 9180-W730-1 and 9180-W730-2

Our file Notre référence
SM 8500-6-40

May 14, 2002

T.M. Baker
Chief Conservation Officer
Operations Business Unit
Exploration & Production
National Energy Board of Canada
444 Seventh Avenue SW
Calgary, AB T2P 0X8

By Facsimile to (403) 292-5876

Dear Sir:

Re: **WesternGeco Applications to Conduct Mackenzie River Delta and Mackenzie River Seismic Programs - 2002**

I refer to the letters dated 16 April 2002 and 2 May 2002 regarding WesternGeco Mackenzie River Delta 2D Seismic Program and WesternGeco Mackenzie River 2D Seismic Program 2002, pursuant to the *Canadian Environmental Assessment Act*, Section 5 and *Canada Oil and Gas Operations Act*, Paragraph 5(1)(b), respectively.

This office received the two Project Descriptions on May 13, 2002 following a request to Mr. Bob White and Mr. Marty Swager of WesternGeco.

Our comments on both project descriptions are attached. Mr. White and Mr. Swager have been provided a copy of the comments (by facsimile).

The Project Descriptions will be retained on our files unless instructed otherwise.

Yours truly,

Clark Norris
Manager, Marine Safety
TCC Edmonton

CN/

cc Bob White - WesternGeco
Marty Swager - WesternGeco
Peter Timonin, Director, Marine Safety, Prairie and Northern Region

Canada

Telephone (780) 495-4023 Facsimile (780) 495-6472 Web Site: www.te.gc.ca

NEB File 9180-W730-2

2 May 2002

WesternGeco Mackenzie Delta River 2D Seismic Program 2002

Canada Oil and Gas Operations Act, 5(1)(b)

Comments:

1. MV ARCTIC STAR I, formerly a United States registered vessel and now a Panamanian registered vessel, would have to have a Coasting Trade licence to operate in Canadian waters. The vessel would have to meet applicable Canadian regulations.
2. All vessels, including "scout boats", to be in accordance with the *Canada Shipping Act (CSA)* and the *Arctic Waters Pollution Prevention Act (AWPPA)* and their applicable regulations. Vessels will have to be registered as commercial vessels and inspected by Transport Canada Marine Safety. Small Vessel Regulations will apply to vessels not exceeding 15 tons gross tonnage not carrying passengers and to vessels not exceeding 5 tons gross tonnage carrying not more than 12 passengers.
3. The Mackenzie River is classed as Minor Waters II and the northern and southern limits are defined as follows:
 - (A) **The Mackenzie River Northern section**
Canadian Charts : 7650 & 7600
Within 69 Degrees and 20 minutes North Latitude and 136 Degrees 00 Minutes West Longitude.
 - (B) **The Mackenzie River Southern Section**
Canadian Charts : 6452, 6453 & 6454
In the North Channel **Nothing East of 116 Degrees 42 Minutes West Longitude** and In the South Channel **Nothing East of 116 Degrees 33 Minutes West Longitude.**
1. TP 10783, Arctic Waters Oil Transfer Guidelines applies only to Arctic Waters (as defined in the *AWPPA*). The Part XV of the *CSA* and the Oil Pollution Prevention Regulations apply.
2. Appendix V does not contain any preventative measures nor does it make reference to the Northern Transportation Company Limited (NTCL) oil transfer procedures.
3. All vessels shall be crewed in accordance with the Crewing Regulations.
4. The Marine Certification Regulations apply. Familiarization and safety training for non-marine and "scout boat" personnel is not defined.

5. The provisions of the Collision Regulations apply (for example, requirements for vessels restricted in their ability to manoeuvre). Consider having Notices to Mariners updated daily regarding locations of seismic activity. Vessels undertaking seismic work to have capability of communicating with all vessels. Advance notice to be provided to communities and other interested parties.
6. Appendix III – Emergency Response Plan and Spill Contingency Plans
 - all reference to MV ARCTIC STAR I to be deleted. Insert name of responsible vessel.
 - Emergency telephone numbers not attached.
 - Page 6 – The RCC is Trenton I believe (check with Canadian Coast Guard) and not Halifax. See note below.
 - Page 7 – Why is Halifax Marine Communications Traffic Services Centre VTS listed? NORDREG Canada is to be listed and also the Canadian Coast Guard Radio Station Inuvik telephone numbers. There is also an NWT Oil Spill 24 Hour Hot Line. Consider including RCMP detachment telephone numbers.
7. The Liard River from Fort Simpson has limited depths and it is questionable whether the proposed vessels can make the voyages.



Liidlii Kue First Nation

May 22, 2002

Terry Baker
Chief Conservation Officer
National Energy Board
444 Seventh Avenue, S.W.
Calgary, AB T2P 0X8

Re: Western Geco application to conduct the Mackenzie River 2D Seismic Program

Dear Mr. Baker,

Liidlii Kue First nations staff and leadership have met with western geco and discussed the proposed seismic program on the Mackenzie River.

During the consultation session Western Geco provided fisheries, wildlife and operations experts to answer and address any concerns. They made reference to other similar seismic programs conducted on the Mississippi and Amazon Rivers. They report that there has been no adverse impacts on the environment as a result of the seismic program conducted on the rivers.

We feel satisfied with the consultation and do not have any further concerns at this time. Without the technical resources to conduct our own assessment we take Western Geco as a reputable and environmentally conscious company.

Sincerely,

Ria Letcher
Land Administrator/Coordinator

c.c. Western Geco

P.O. Box 469
Fort Simpson, NT X0E 0N0
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E-mail: deneres@cancom.net website: www.cancom.net/~lkfndir



Northwest Territories Resources, Wildlife and Economic Development

May 24, 2002

By fax: 403-292-5503

Ms. Laura Van Ham
Environmental Specialist
National Energy Board
444 Seventh Avenue
Calgary, Alberta T2P 0X8

Dear Ms. Van Ham:

WesternGeco Mackenzie River Valley 2-D Seismic Program

The Department of Resources, Wildlife, and Economic Development (RWED) has reviewed the above application to conduct a 2-D seismic program along the Mackenzie River Valley, and has the following comments to offer for consideration by the National Energy Board.

General

RWED has had some difficulty assessing the merits of the proponent's discussion of sound intensity. In particular, the methodology has not been effectively described. The proponent should provide additional information detailing where and how the water ambient noise level was obtained, including whether the 140dB was averaged over a period of time and whether it was obtained by sampling the Mackenzie and Liard Rivers.

The proponent states on page 11 that: "In water, due to the higher acoustic impedance, similar sound intensities will give a pressure that in water is 61 times lower than that in air, or a difference of 35.6dB. Correcting for the difference in reference levels and the specific acoustic impedance, 62 dB must be added to measurements taken in air to compare with measurements taken in water." The proponent goes further to indicate that the relative background noise in water is therefore 140dB. Has the proponent added 62dB to *all* measurements of sound intensity? Please clarify.

Figure 7 displays the Sound Pressure Level (dB) Vs Range graph that was measured from a 480 in³ airgun array. This figure shows that it took at least 1000 m or 1 km for the dB level to drop to the ambient noise level of approximately 132 dB. However, Figure 9 displays a Sound Intensity (dB) Vs Distance graph as measured from a 1500 in³ airgun array. This figure shows that for the dB level to drop to 132 dB, it takes approximately



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600 m. The proponent should explain why the larger 1500 in³ airgun array reaches 132 dB in a shorter distance than the 480 in³ airgun array.

The proponent does not discuss monitoring efforts to determine the noise level (or sound intensity) at various distances parallel to the airguns. RWED suggests that the proponent employ a monitoring program that will enable quick responses to adverse impacts caused by the sound intensity of the airgun arrays. This monitoring will determine if the seismic program is herding fish. If the monitoring shows that the seismic program is causing harmful impacts across the width of the river, the seismic program should be cancelled or at a minimum, the operational air pressure should be lowered.

The proponent has indicated that seismic activity will not be conducted around the Ramparts at Fort Good Hope. Are there any other sensitive areas the proponent will avoid?

The proponent has also failed to provide a complete waste management plan. RWED suggests that the proponent provide this information for review.

Wildlife

RWED has concerns about the potential impact this project could have on the hearing and behaviour of freshwater fish and aquatic mammals. The proponent states that at 162dB fish and crustaceans will exhibit avoidance behaviour. However, it is not clear how this behaviour or dB level will affect the hearing and behaviours of freshwater aquatic mammals. Although the proponent indicates that encounters with freshwater aquatic mammals along the Mackenzie River will be minimal, RWED suggests that the proponent be required to undertake measures to mitigate the uncertainty.

The United States Government Department of Commerce's National Marine Fisheries Service (NMFS) Marine Mammal Protection Acts (MMPA), Incidental Harassment Authorizations (IHA) required that proponents monitor for marine mammals and shut down the airguns when mammals are detected within designated safety radii (Richardson, 1999). The NFMS established 180dB as the shutdown radius for a project undertaken in the Beaufort Sea. RWED suggests that the proponent undertake similar precautions during this 2-D geotechnical program.

RWED further suggests that it would be an appropriate condition of this project approval for the proponent to institute a study to determine the effects of overpressure and noise on freshwater aquatic mammals. RWED would be pleased to review the study proposal.

Spill Contingency Plan

The proponent indicates on page 15 that the Oil Transfer Preventative Measures, located in Appendix III will be followed to prevent spills while refueling. However, this was in fact not supplied. If this document is important for preventing spills and has been referred to in the application, then the proponent should be expected to supply this information.

In addition, Appendix III is entitled "*Oil Spill Contingency Plan and Emergency Response Plan*". However, it appears that an actual copy of the Transport Canada approved Spill Contingency Plan alluded to on page 15 has not been provided in this appendix. To ensure that an effective review of this application is undertaken, a copy of a complete Spill Contingency Plan should be provided to reviewers.

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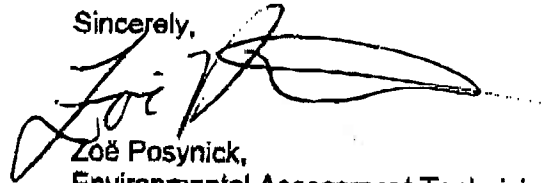
The proponent also did not supply a copy of the *Maritime Shipboard Contingencies Manual* and *Shipboard Oil Pollution Emergency Plan*, which were alluded to in Appendix III. Once again, to ensure that the proponent has appropriate spill contingency measures in place, all documents that are referred to as part of the spill contingency or emergency response measures should be provided in the information package for review.

Thank you for the opportunity to review and provide comments on the WesternGeco Mackenzie River Delta project. If you have any questions or require any clarification on the above comments, please do not hesitate to contact myself at 867-920-6392.

Reference:

Richardson, W.J. 1999. Marine mammal and acoustical monitoring of Western Geophysical's open-water seismic program in the Alaskan Beaufort Sea, 1998. LGL Ltd., Environmental Research Associates, and Greeneridge Sciences Inc. For Western Geophysical and National Marine Fisheries Services.

Sincerely,



Zoë Posynick,
Environmental Assessment Technician

C Ron Morrison
Inuvik Regional Office, RWED

Paul Kraft
Deh Cho Regional Office, RWED

Celina Stroeder
Sahtu Regional Office, RWED

Al Gibson
Environmental Protection, RWED

Jason McNeill
Wildlife and Fisheries, RWED

Larry Adamson
Parks and Tourism, RWED

Deb Archibald
Minerals, Oils and Gas, RWED

Linda Graf
Joint Secretariat, EISC/EIRB

TOTAL P.12