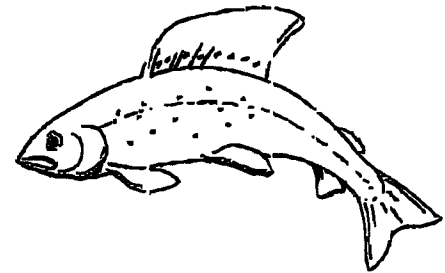




Fisheries
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Western Arctic Area
Fish Habitat Management
P.O. Box 1871,
Inuvik, Northwest Territories, X0E 0T0

Friday, July 15, 2002

TO/A:

FAX

Linda Graf - EISC
John Korek/Laura Van Ham - NEB
Barry Putt - CCG
Zoe Posynick - RWED
Bob Bell/Kevin Bill - FJMC
Melanie Van Gerwen-Toyne - GRRB
Jody Snortland - SRRB
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DFO File No. SC02052

page 1 of 4

MESSAGE:

RE: Acoustic and Biological Test 2002 in Support of WesternGeco, Mackenzie River & Delta 2D Seismic Programs: DFO Letter of Advice

FROM/DE:

Pete Cott
Area Habitat Biologist
Western Arctic Area

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Your file Votre référence

Our file Notre référence

SC02052

July 15, 2002

Marty Swagar
WesternGeco
Suite 2300, 645-7th Ave SW
Calgary, Alberta
T2P 4G8**RE: Acoustic and Biological Test 2002 in Support of WesternGeco, Mackenzie River/ Delta 2D Seismic Programs: DFO Letter of Advice**

Dear Mr. Swagar

The Department of Fisheries and Oceans, Western Arctic Area, Fish Habitat Management (DFO-Habitat) has reviewed the latest iteration of the "Acoustic and Biological Test for the Mackenzie River/Delta" (the Plan) prepared by Golder Associates Ltd. for WesternGeco. This latest version of the plan has incorporated various recommendations and requirements by DFO provided to WesternGeco and Golder in letters, meetings, e-mails and conference calls.

DFO-Habitat endorses this test as we believe it will provide information that will be useful to determine if the mitigation outlined by WesternGeco is adequate in minimizing impacts to fish and fish habitat. The following advice, in addition to what is outlined in the Plan, should be adhered to.

1. The test program should not proceed until a minimum of nine fish representing three species are collected for each of the 10 cages for the cage fish trials and an additional 10 to 20 whitefish collected for the pen net trial. All fish must be species that are found in the Mackenzie River, however it is not necessary that the fish are collected from the Mackenzie River.
2. At least one fish from each species for a minimum total of three fish from each of the 10 cages and the one pen net are to be necropsied following the caged fish study and examined (as per the discussions with DFO). All remaining fish should be released alive after information on species, weight, length, age, sex (if possible) and overall condition has been recorded for each fish.
3. Full operational mitigation procedures will be followed in the Test Program as outlined in the project description for the Mackenzie River/Delta seismic programs including:

- A scheduled minimum one hour shut down period (of airguns) for every six hours of operation.
 - Full airgun ramp-up procedures following any shutdown of airgun arrays (scheduled or otherwise). Both vessels will begin their ramp-up procedures while side by side, prior to the lead vessel proceeding forward.
4. Due to the sensitive nature of fishery resources in certain locations, airguns should not be operated within 5 km upstream and 5 km downstream of the following areas:
 - Great Bear River
 - Travillant River
 - Keele River
 - Redstone River
 - South of Kalinek Channel to 5km South of Point Separation (this incorporates Horseshoe Bend)
 - Bar C
 - Pete's Creek
 - Holmes Creek
 5. Golder staff (fisheries biologist or fisheries technician) in charge of conducting the biological aspects of the test will have full authority from WesternGeco to cease all airgun operations if dead or stunned fish are seen. Airguns will remain off until the problem is investigated and appropriate mitigation can be employed.
 6. A scout boat will be in-front of the seismic vessels at all times looking for the presence of fish (via echo-sounder) and navigational hazards. A separate boat will be monitoring the Biosonics equipment. Scout boats will also follow the seismic vessels looking for any dead or stunned fish, which they will collect and keep on ice for subsequent analysis. Scout boats will be suitably equipped with appropriate fish location and retrieval gear, and will have radios to contact the biologist or technician in charge.
 7. In the event that dead or stunned fish are seen, one of the following DFO-Habitat staff should be contacted immediately:
 - Pete Cott – (867) 777-7520
 - Kathleen Barron – (867) 777-7521
 - Gerry Leering – (867) 777-7522
 - Bruce Hanna – (867) 669-4931
 8. All field data will be made available to DFO as it is collected. In addition, a final report (including raw and analysed data) will be submitted to DFO as outlined in the schedule of deliverables provided by Golder on behalf of WesternGeco.

9. DFO will be observing the test program from the vessel at different times throughout the duration of the program (scheduling to be finalized with WesternGeco).
10. If DFO finds that monitoring results are insufficient, additional testing may be required at the discretion of DFO.

Please note that this Letter of Advice does not release the proponent of the responsibility for obtaining any permits or additional permission that may be required.

This Letter of Advice should be kept on site during the test program and be understood by staff working on the test program.

DFO is pleased that WesternGeco is investigating an alternate technique to explosives to collect seismic information, and is hopeful that this test program will reveal that seismic programs of this type can be conducted without negative effects to the aquatic environment.

If you have any questions regarding this letter feel free to contact me at (867) 777-7520 or Bruce Hanna at (867) 669-4931.



Pete Cott
Area Habitat Biologist
Fish Habitat Management
Department of Fisheries and Oceans - Western Arctic Area

Copy: DFO

Bruce Hanna, Kathleen Barron, Gerry Leering – Habitat Biologists - DFO
Ron Allen – Area Director, Western Arctic Area – DFO
Julie Dahl – Area Chief, Habitat – DFO
Dennis Wright – Chair, Animal Care Committee – DFO
George Low – Fish Management Biologist – DFO
Sam Stephenson – Environmental Science Biologist - DFO
Daryl Johannesen – Golder Associates Ltd.
John Korek, Laura Van Ham- NEB
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