



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

**Northern Affairs Program:
Environmental Research Projects
1969 to 1987**



Canada



CONTRACTS ISSUED

APRIL 1 - 1969

to MARCH 31, 1987

ALUR RESOURCE STUDIES, ESP-NP, ENVIRONMENTAL STUDIES, EAMES, BIOS, NOGAP

ALUR - ARCTIC LAND USE RESEARCH
EAMES - EASTERN ARCTIC MARINE ENVIRONMENTAL STUDIES
ESP-NP - ENVIRONMENTAL SOCIAL PROGRAM - NORTHERN PIPELINES
BIOS - BAFFIN ISLAND OILSPILL PROGRAM
NOGAP - NORTHERN OIL AND GAS ACTION PLAN

Compiled by

Bert Shaw Head, Coordination
December, 1987

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INTRODUCTION

This report contains a listing of all contracts funded by the Northern Environment Directorate and its predecessor, the Arctic Land Use Research Program, since 1970.

Where the contractor prepared a report, the report number is given in the final column of the table and appendix contain the report numbers, titles and authors.

This report will be updated annually.

Bert Shaw
December, 1987

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SUMMARY

<u>YEAR</u>	<u>NO. OF CONTRACTS ISSUED</u>	<u>ACTUAL CONTRACT TOTAL</u>	<u>FUNDED BY</u>
1969-70	3	\$ 43,310	ALUR
1970-71	7	283,336	ALUR
1971-72	36	1,010,716	ALUR Resource Studies ESP-NP
1972-73	43	1,456,635	ALUR Resource Studies ESP-NP
1973-74	42	1,305,398	ALUR Resource Studies ESP-NP
1974-75	28	890,251	ALUR Resource Studies ESP-NP
1975-76	19	887,531	ALUR Resource Studies ESP-NP
1976-77	24	938,333	ALUR Resource Studies
1977-78	24	922,465	ALUR Resource Studies, EAMES
1978-79	17	681,648	ALUR, EAMES
1979-80	29	623,596	ALUR, EAMES, BIOS
1980-81	27	916,858	ALUR, EAMES, BIOS
1981-82	16	529,176	ALUR, BIOS
1982-83	31	751,560	ALUR, BIOS
1983-84	39	1,108,994	ALUR, NOGAP
1984-85	48	1,619,517	ALUR, NOGAP
1985-86	45	1,563,692	Env. Studies, NOGAP
1986-87	33	<u>1,413,527</u>	Env. Studies, NOGAP
		\$16,946,543	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1969-70	Laval University	TB-689473 25.10.69	11,000.00	Keewatin - Ecological Zoning - <u>Water Quality</u>	
	Laval University	TB-691012 6.8.69	20,310.00	Ecological Zoning - <u>Water Quality</u>	
	University of British Columbia	TB-691009 6.8.69	12,000.00	Soils and Vegetation - <u>Land Use Operation</u> , Liard River - <u>Ecological Mapping (Forestry)</u>	
			<u>\$ 43,310.00</u>		
1970-71	Muskeg Research Council	TB-698162 12.8.70	16,000.00	<u>Terrain Disturbance Studies</u> <u>Tracked Vehicles on Tundra</u>	43 pgs.
	University of Alberta - Dr. J. Verschuren	TB-698162 12.8.70	21,447.00	Hydrology and Geomorphology-Liard River, <u>Forestry Hydrology</u>	84 pgs.
	University of Saskatchewan - Drs. J. Murray and S. Rowe	TB-698162 12.8.70	62,972.00	Environmental Classification and Land Use <u>Forestry Ecology</u>	85 pgs.
	Laval University	TB-698162 12.8.70	136,000.00	Mine Waste Containment - <u>Water Quality Studies</u> - Water Quality	
	University of British Columbia - Dr. L. Lavkulich	TB-698162 12.8.70	30,417.00	Land Use associated with resource development in an area of boreal forest in continuous permafrost. Ecological mapping (<u>forestry</u>)	120 pgs.
	University of Alberta, Dr. L.C. Bliss	TB-698162	11,000.00	Land Use - Problems and development activities on the Tundra regions - Mackenzie Delta and Arctic Islands - <u>Terrain disturbance</u>	25 pgs.
	Carleton University, Dr. J.D. Lambert	TB-698922	5,500.00	Land Use Problems & development activities on Tundra Regions - Mackenzie Delta and Arctic Islands - <u>Terrain Disturbance</u>	8 pgs.
			<u>\$283,336.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1971-72	University of Alberta - Dr. D.W.S. Westlake, Dr. F.D. Cook	OTT-71-169	3,828.00	Biodegradability of Northern <u>Crude Oil</u>	
	Miss K.E. Bowlby	OTT-71-175	2,000.00	Library Services Information System - ESP	
	Brock University - Dr. D.E. Kerfoot	OTT-71-156	500.00	Computer analysis data on <u>surface disturbance</u> Mackenzie Delta	13 pgs.
	University of Calgary - Dr. G.W. Hodgson - Faculty of Environmental Design	OTT-71-177 TB-710299	14,300.00	Detection of <u>Oil Leaks</u> into Water	
	Carleton University - Dept. of Biology, Dr. J.D. Lambert	OTT-71-157	1,691.00	<u>Monitoring Seismic Lines</u> on Banks Island. (Elf & Dominex Oil Co.)	
	Jacques Cinq-Mars	OTT-71-192	800.00	Literature survey - <u>Archaeological collection</u> Canadian Universities	
	Julian K. Greenwood	OTT-71-132	5,000.00	<u>Waste disposal</u> from mobile exploration camps - Semi-permanent construction camps	
	Research Council of Alberta - Dr. J.C. Wood	OTT-71-134 TB-708648	12,500.00	Land Base <u>Oil Spills</u> - Canadian Arctic	
	F.F. Slaney & Co. Ltd.	OTT-71-164	8,500.00	Assessment <u>Env. Factors</u> - <u>Construction</u> of gas gathering <u>pipeline</u> at Pointed Mountain	
	Stanley Associates Engineering Ltd. Dr. S.A. Hart	OTT-71-186	3,250.00	<u>Waste disposal</u> from Northern Pipeline Camps	
	Tremblay Héroux & Associés	OTT-71-105	4,500.00	<u>Inventory-availability</u> - <u>portable</u> <u>sewage units</u>	
	Muskeg Research Institute 71-62 18.3.71	TB-703512	16,000.00	<u>Terrain Disturbance</u> Studies - Forested & tundra regions	ALUR 71-72-13

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1971-72 (cont'd)	Brock University - Dr. D.E. Kerfoot 18.3.71	71-59 TB-703516	10,247.00	<u>Terrain Disturbance</u> Studies - forested & tundra regions	ALUR-71-72-11
	Carleton University - Dr. J.D.M. Lambert 18.3.71	71-60 TB-703509	12,125.00	<u>Terrain Disturbance</u> Studies - forested & tundra regions	ALUR 71-72-12
	University of Alberta - Dr. J. Verschuren 30.3.71	71-63 TB-703508	62,617.00	Hydrology & Fluvial Geomorphology - Liard River <u>Forestry</u>	ALUR 71-72-02
	University of Saskatchewan, Drs. Murray & Rowe 30.3.71	71-64 TB-703511	54,200.00	Environmental Classification Resource Use <u>Forestry</u>	ALUR 71-72-03
	Laval University 4.3.71	71-58 TB-703198	33,500.00	Pine Point - <u>Mine Waste</u>	
	Laval University 30.3.71	TB-703514	112,000.00	Ecological Zoning Eastern Portion - N.W.T. <u>Water Quality</u>	ALUR 71-72-31
	University of Alberta, Dr. L.C.Bliss 30.3.71	71-57 TB-703513	20,000.00	<u>I.B.P. Sites</u>	
	University of Alberta, Dr. L.C. Bliss	71-56	27,830.00	<u>Surface Disturbance</u> and Vegetation Re-generation	ALUR 71-72-14
	University of Saskatchewan - Dr. D.M. Gray 14.9.71	TB-707785	17,828.00	Troxler Soil Density Probe - <u>Energy</u> <u>Budget</u> - High Arctic	
	University of Saskatchewan - Dr. D.M. Gray 30.3.71	71-61 TB-703515	11,638.00	<u>Energy Budget</u> Studies - High Arctic	ALUR 71-72-21
	University of British Columbia Dr. L. Lavkulich 18.3.71	71-65 TB-703510	34,787.00	<u>Seismic Line Disturbances</u> - Ft. Liard	ALUR 71-72-01
	University of British Columbia Dr. L. Lavkulich 27.8.71	71-87 TB-705379	44,000.00	Soils & Vegetation - Liard River <u>Revegetation</u> (Fort Simpson area)	ALUR 71-72-51

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1971-72 (cont'd)	Dept. Energy, Mines & Resources - GSC Dr. J.G. Fyles		220,000.00	<u>Terrain Sensitivity Mapping</u>	
	Dept. of Environment - CWS		37,000.00	<u>Impact of Geophysical Operations</u> - Arctic Islands (Banks Island)	
	Dept. of Fisheries - Forestry		6,000.00	Geography Section <u>Environmental Atlas</u>	
	Arctic Institute of North America		4,500.00	<u>Information System</u>	
	Dept. of Environment		120,000.00	<u>Environmental Sensitivity Mapping</u>	
	F.F. Slaney	OTT-71-73	5,000.00	<u>Pipeline Study</u>	
	Kates, Peat, Marwick	OTT-71-45	9,000.00	<u>Pipeline</u>	
	F.F. Slaney	OTT-71-88	24,500.00	<u>Faro Project - Mapping</u>	
	Underwood, McLellan & Associates	TB-709509 14.7.71	14,000.00	<u>Waste Disposal</u> - Arctic Sub-Arctic	
	Reid Collins		21,700.00	Lower Liard River Survey. <u>Water Quality</u>	
	Shultz, Therreault		30,200.00	Upper Liard River Survey. <u>Water Quality</u>	
	T. Ingledow & Associates		5,175.00	Water - Summary <u>Water Power</u> - Mackenzie	
			<u>\$1,010,716.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1972-73	University of Alberta - Dr. L.C. Bliss, Dept. of Botany	TB-711592 21.3.72 OTT-72-74	20,118.00	Maintaining plant cover in the High Arctic in relation to Northern Development - <u>Terrain Disturbance</u>	ALUR 72-73-14
	University of Alberta - Dr. L.C. Bliss, Dept. of Botany	TB-711593 OTT-72-73	28,450.00	Mechanism for re-establishing plant cover on different kinds of surface disturbance - <u>Terrain disturbance</u>	
	University of Alberta - Dr. J.P. Verschuren - Dept. of Civil Engineering	OTT-72-64 TB-711710	51,804.00	Forest harvesting and other land use operations and to develop guidelines for management - <u>Forest hydrology</u>	ALUR 72-73-02
	University of Alberta, Drs. D.W.S. Westlake and F.D. Cook, Dept. of Microbiology	OTT-72-65 TB-711712	45,018.00	Biodegradability of Northern Crude Oil on the Terrain - <u>Oil Spills</u>	ESP-NP-73-20
	Miss K.E. Bowlby	OTT-72-59 TB-712235	12,000.00	<u>Library Services</u> - Information System	
	University of British Columbia - Dr. L. Lavkulich, Dept. of Soil Science	OTT-72-88 TB-711714	47,679.00	Forest harvesting and other land use operations. Ecological Mapping (forestry).	ALUR 72-73-01
	University of British Columbia - Dr. L. Lavkulich, Dept. of Soil Science	OTT-72-87 TB-711795	48,009.00	Relationships among soils, vegetation and landforms in the Wrigley area, N.W.T. <u>Ecological Mapping (forestry)</u>	ESP-NP-73-18
	Brock University - Dr. D.E. Kerfoot Dept. of Geography	OTT-72-50 TB-711769	58,228.00	<u>Terrain Disturbance Studies</u> - Western Canadian Arctic	
	University of Calgary - Dr. R. Hartland-Rowe, Dept. of Biology	OTT-72-100 TB-712658	17,745.00	Using swampland as a natural sink for the reception of sewage effluent under Northern conditions. <u>Waste disposal</u>	ESP-NP-73-15

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1972-73 (cont'd)	University of Calgary, Dr. G.W. Hodgson, Faculty of Environmental Design	OTT-72-127 TB-713756	30,370.00	Measurement of fluorescence as a means of detecting oil leaks into water - <u>Oil Spills</u>	ESP-NP-73-17
	University of Calgary - Dr. D. Parkinson, Dept. of Biology	OTT-72-70 TB-711830	10,494.00	Effects of <u>oil spillage</u> on micro- organisms in northern Canadian soils.	ESP-NP-73-25
	Carleton University - Dr. J.D.H. Lambert, Dept. of Biology	OTT-72-61 TB-711828	10,057.00	Surface Disturbance in the tundra region. <u>Terrain Disturbance</u>	
	Julian K. Greenwood	OTT-72-01	4,500.00	Report preparation on <u>waste disposal</u> from mobile exploration camps	
	Ken R. Heuchart	OTT-72-01	14,000.00	<u>Waste disposal</u> from mobile camps and semi-permanent construction camps	
	Laval University - Dr. A. Soucy Centre de recherches sur l'eau	OTT-72-78 TB-711984	106,893.00	<u>Water Quality</u> in relation to mine wastes and mine waste disposal	4 reports: ALUR 71-72-31 71-72-32 71-72-33 71-72-34
	A.H. Marsh	OTT-72-46 TB-711723	9,597.00	<u>Terrain damage</u> in the Boreal Forest Region	
	Muskeg Research Institute	OTT-72-48 TB-711711	20,800.00	Analysis of disturbance effects of operation of off-road vehicles on tundra - <u>Terrain disturbance</u>	ALUR 72-73-12
	Muskeg Research Institute	OTT-72-153 TB-714472	6,430.00	<u>Terrain damage</u> by wheeled vehicles at Tununuk, N.W.T.	ALUR 72-73-13
	Renewable Resources Consulting Services	OTT-72-73 TB-714482	100,000.00	Consulting Services for <u>Mackenzie</u> <u>Highway Overview Study</u> for that portion of the highway from 297 to Tuktoyaktuk	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1972-73 (cont'd)	University of Saskatchewan - Dr. D.W. Gray, Dept. of Agricultural Eng.	OTT-72-60 TB-711770	14,500.00	Energy Budget Components in an Arctic Environment - Energy Budget - <u>Terrain disturbance</u>	ALUR 72-73-21
	University of Saskatchewan, J.M. Murray and J.S. Rowe, Dept. of Agr. Eng. & Dept. Plant Ecology	OTT-72-63 TB-711713	42,662.00	Forest harvesting and other land use operations - <u>Forest Ecology</u>	ALUR 72-73-03
	F.F. Slaney & Co. Ltd.	OTT-72-77 TB-711612	8,500.00	Preliminary Study on <u>Land Use in Southern Yukon</u>	
	J.C. Sproule & Associates Limited	OTT-72-242 TB-717801	50,695.00	Terrain Sensitivity Photomosaics and related <u>land use classifications</u> - Arctic Islands	
	Dr. R. Steffansen	OTT-72-210 TB-716941	9,900.00	Evaluation of Potential Use of <u>ERTS</u> satellite imagery for <u>land use studies</u> in the Canadian North	
	University of Toronto, Drs. T.C. Hutchinson, J.A. Hellebust, Institute of Environmental Science & Engineering	OTT-72-89 TB-711768	55,411.00	Short and long term effects of <u>crude oil spills</u> on terrestrial and aquatic vegetation	ESP-NP-73-43
	University of Toronto, Drs. D. Mackay et al, Dept. of Chemical Engineering and Applied Chemistry	OTT-72-90 TB-711829	53,000.00	Physical aspects of <u>crude oil spills</u> on northern terrain	ESP-NP-73-42
	Tremblay Héroux & Associés	OTT-72-235 TB-713751	32,830.00	<u>Granular materials survey</u> - Mary River Area Baffin Island	
	Underwood McLellan & Associates Ltd.	OTT-72-66 TB-711766	10,000.00	Preliminary Study on <u>Land Use Management</u> in the Southern Yukon	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1972-73 (cont'd)	Underwood McLellan & Associates Ltd.	OTT-72-42 TB-712030	15,000.00	<u>Waste disposal</u> from mobile exploration and construction camps in Arctic and Sub-Arctic	
	Dr. K.L. MacInnes	OTT-72-344	1,122.00	<u>Land Use Classification</u> - re petroleum exploration	
	Julian T. Inglis	OTT-72-220	240.00	International Symposium on <u>Moose Ecology</u>	
	Julian T. Inglis	OTT-72-223	1,200.00	Evaluation of <u>vegetation</u> and <u>wildlife</u> aspects - Mackenzie Highway	
	Dept. of Energy, Mines & Resources - GSC	Comm.No.13	40,000.00	<u>Drilling</u> - Ft. McPherson, Arctic Recl. area - using <u>helicopter transported drill</u>	
	Dept. of Environment, Lands Directorate	Comm.20, 11,005	159,974.00	<u>Land Use Information Series</u> - Mapping	
	Dept. of Environment, EPS	Comm.21	21,000.00	<u>Waste Disposal</u> Studies	ESP-NP-73-19
	Dept. of Energy, Mines & Resources - GSC Dr. J.G. Fyles	Comm.12	220,000.00	<u>Terrain</u> Studies	
	Dept. of Agriculture	OTT-72-82	1,000.00	<u>Int. Symposium on Biting Flies</u> - Control and Env. Concern	
	Laurentian Institute for Social and Economic Development	OTT-72-87	3,179.00	Information Paper on <u>Water Resource Development</u> in Mackenzie River Basin	
	National Museums of Canada	Comm.005	49,630.00	<u>Archaeological Studies</u> along Pipeline Corridor	ESP-NP-73-10
	DIAND - Mapping & Technical Services		21,000.00	<u>Forestry Mapping</u> and photographic requirements	
	Paul Pudlat - Coral Harbour	OTT.72	1,200.00	Witness and determine results of an air gun demonstration in the Bedford Basin NS	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1972-73 (cont'd)	Sandy Saleona - Coral Harbour	OTT.72	1,200.00	Witness and determine results of an air gun demonstration in the Bedford Basin NS	
	Paulusee Nakoolak - Coral Harbour	OTT.72	1,200.00	Witness and determine results of an air gun demonstration in the Bedford Basin NS	
			<u>\$1,456,635.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1973-74	University of Alberta - Dr. L.C.Bliss Dept. of Botany	OTT-73-78 TB-719040	60,000.00	I.B.P. - Devon Island Project on Biological Productivity in the High Arctic tundra	
	University of Alberta - Dr. L.C.Bliss Dept. of Botany	OTT-73-77 TB-719366	17,000.00	Revegetation of disturbed areas in the high arctic - <u>Terrain Disturbance</u>	
	University of Alberta - Dr. J.P. Verschuren, Dept. of Civil Engineering	OTT-73-62 TB-719113	23,625.00	Forest harvesting and other land use operations - <u>Forest Hydrology</u>	ALUR 73-74-02
	University of Alberta - Drs. D.W.S. Westlake & F.D. Cook, Dept. of Microbiology	OTT-73-63 TB-719367	52,790.00	Microbiological aspects of <u>oil spills</u> on northern terrain	ESP-NP-74-1
	Beak Consultants Limited	OS03-0448	34,970.00	Development of Guidelines for preparation of <u>Oil Spill Contingency Plans in Northern Yukon and Mackenzie Valley</u>	ESP-NP-74-23
	Beak Consultants Limited	OSR3-0052	16,184.00	Possible atmospheric contamination caused by a potential pipeline rupture in the Mackenzie Valley - <u>Oil Spill</u>	ESP-NP-74-3
	University of British Columbia - Dr. L.M. Lavkulich, Dept. of Soil Science	OTT-73-83 TB-719112	32,738.00	<u>Forest Harvesting</u> and other land use operations - Ecological Mapping (Forestry)	ALUR 73-74-01
	University of British Columbia - Dr. A.R. Thompson, Faculty of Law	OTT-73-03	3,655.00	<u>Legal Aspects</u> of Land Use Planning in Canadian North	
	University of Calgary - Dr. R. Hartland-Rowe, Dept. of Biology	OTT-73-65 TB-719372	9,087.00	Using swampland as a natural sink for the receipt of sewage effluent from small northern communities - <u>Waste Disposal</u>	ESP-NP-74-4
	University of Calgary - Dr. D. Parkinson, Dept. of Biology	OTT-73-66 TB-719368	8,786.00	Effects of <u>oil spillage</u> on micro-organisms in the <u>tundra</u> region	ESP-NP-74-2

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1973-74 (cont'd)	Carleton University - Dr. M.W. Smith, Dept. of Geography	OTT-73-76 TB-719369	42,635.00	Numerical simulation of micro-climatic and active layer regimes in a high arctic environment - <u>Terrain disturbance</u>	
	Dept. of Environment - Inland Waters Directorate	Comm.038	2,000.00	Computer time - <u>Hydropower inventory</u> on selected rivers in the Mackenzie River Basin	
	Dept. of Environment - Lands Directorate	Comm.002	165,056.00	<u>Land Use Information Maps</u> - Mapping	
	Carleton University - Dr. J.D.H. Lambert, Dept. of Biology	OTT-73-87 TB-719369	15,500.00	Effects of <u>disturbance to tundra ecosystems</u> in a high arctic environment	
	Carleton University - Dr. P.E.Barrett	OTT-73-70	2,750.00	<u>Revegetation of Track Vehicle Disturbance</u> on Truelove Lowlands - Devon Island, NWT	ALUR 73-74-71
	Dept. of Environment - EPS, Edmonton	Comm.003	86,900.00	<u>Waste Disposal Studies</u> - Arctic Solid and Liquid Wastes	ESP-NP-74-10
	Dept. of Energy, Mines & Resources - G.S.C., Dr. J.G. Fyles	Comm.025	100,000.00	<u>Terrain Sensitivity Maps</u> - Mackenzie Valley - North Yukon	
	Dept. of Energy, Mines & Resources - G.S.C., Dr. J.G. Fyles	Comm.037	113,000.00	Permafrost, <u>terrain properties</u> , performance and hazards	
	K.R. Heuchert	OTT-73-02	1,500.00	<u>Waste Disposal</u> - from Mobile Exploration camps	
	Helen Kerfoot	OTT-73-43 TB-722819	8,858.00	Field Assistance - terrain sensitivity - Mackenzie Delta and Arctic Islands - <u>Terrain Disturbance</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1973-74 (cont'd)	Laval University - Dr. A. Soucy, et al. - Centre de Recherches sur l'eau	OTT-73-74 TB-719373	94,070.00	Mine Wastes and mine waste containment in a northern environment - <u>Water Quality</u>	4 Reports: ALUR 73-74-31; 34; 35; 36
	Dr. K.L. MacInnes	OTT-73-32 TB-719835	23,960.00	To establish a scheme for the determination of acceptable practices in resource exploration activities - <u>Terrain disturbance</u>	
	McMaster University, Drs. K.A. Kershaw, W.R. Rouse, B.T. Bunting, Depts. of Biology and Geography	OTT-73-85 TB-719042	34,737.00	Impact of fire on forest and tundra ecosystems <u>Forest Fire</u>	
	University of Saskatchewan - Dr. D.M. Gray, Dept. of Agr. Engineering	OTT-73-64 TB-719370	19,781.00	Energy Budget components in an Arctic environment - <u>Energy Budget-Terrain disturbance</u>	ESP-NP-74-18
	University of Saskatchewan - J.S. Rowe, J. Murray, Dept. of Plant Ecology and Agricultural Engineering	OTT-73-67 TB-714109	28,500.00	Forest harvesting and other land use operations - <u>Forest Ecology</u>	ALUR 73-74-03
	University of Saskatchewan - Dr. J.S. Rowe, Dept. of Plant Ecology	OTT-73-68 TB-719047	40,690.00	Effects of Fire on terrain in the Upper Mackenzie Valley, NWT. <u>Forest Fires</u>	ALUR 73-74-61
	National Museums of Man	Comm. 014	55,000.00	<u>Archaeological Studies</u> in connection with northern pipelines	ESP-NP-74-11
	University of New Brunswick - Dr. R.W. Wein, Dept. of Biology	OTT-73-57 TB-719046	16,923.00	<u>Wildfire</u> and its relation to <u>land use</u> <u>management</u> in mainland arctic regions	ESP-NP-74-6
	J.C. Sproule & Associates Ltd.	OTT-73-200 TB-724305	15,618.00	<u>Terrain sensitivity photomosaics</u> and related land use classification charts	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1973-74 (cont'd)	Dr. R. Steffansen	OTT-73-210 TB-716941	9,900.00	Evaluation of potential use of <u>ERTS satellite imagery</u> for Land Use Studies in the Cdn. N.W.T.	
	University of Toronto - Dr. T.C. Hutchinson et al. Dept. of Botany, Zoology, and Inst. & Env. Sciences	OTT-73-88 TB-719371	85,305.00	Effects of crude spills on northern terrain, aquatic and terrestrial vegetation - <u>oil spills</u>	ESP-NP 74-14
	University of Toronto - Dr. D. Mackay et al, Dept. of Chemical Engineering and Chemistry	OTT-73-89 TB-715371	60,715.00	Physical Aspects of <u>crude oil spills</u> on northern terrain	ESP-NP 75-25
	Laurentian Institute - Ottawa	OTT-73-	5,000.00	To identify basic <u>aircraft transportation requirements</u> of N.N.R. Env. Branch by reviewing existing travel and financial reserves	
	Jake Vos	OTT-73-36	1,995.00	Asst. on field studies Mackenzie Valley <u>Terrain Disturbance</u>	
	John Todd	OTT-73-37	1,995.00	" " " " "	
	Peter Smith	OTT-73-33	1,995.00	" " " " "	
	John Perman	OTT-73-34	1,995.00	" " " " "	
	Margaret E. MacInnes	OTT-73-41	2,130.00	" " " " "	
	Marsha I. Joynt	OTT-73-61	1,995.00	" " " " "	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1973-74 (cont'd)	Michael Jacobs	OTT-73-35	1,995.00	Asst. on field studies Mackenzie Valley <u>Terrain Disturbance</u>	
	Paul G. Daly	OTT-73-56	1,995.00	" " " " "	
	George R. Court	OTT-73-38	2,070.00	" " " " "	
			<u>\$1,305,398.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1974-75	University of Alberta, Dr. L.C. Bliss, Dept. of Botany	OSW-40040	12,727.00	Effects of <u>disturbances to plant communities</u> and potential for revegetation in the High Arctic - <u>Terrain disturbance</u>	ALUR 74-75-73
	University of Alberta, Dr. L.C. Bliss, Dept. of Botany	OTT-74-291	3,000.00	Preparation of <u>IBP Devon Island Project</u>	
	University of Alberta - Dr. D.W.S. Westlake, Dept. of Microbiology	OSY4-0073	50,160.00	Microbiological aspects of <u>oil spills</u> on northern terrain	ALUR 74-75-81
	B.C. Research Council - Dr. D.W. Duncan	OSU4-0218	6,192.00	Leachability of Anvil Mine Y.T. - Waste Rock and Tailings - <u>Water Quality</u>	ALUR 74-75-37
	University of Calgary - Dr. D. Parkinson, Dept. of Biology	OSY4-0069	9,056.00	Effects of <u>oil spillage</u> on micro-organisms in the Tundra region	ALUR 74-75-82
	Carleton University - Dr. M.W.Smith Dept. of Geography	OSY4-0056	18,211.00	Microclimatic and related energy exchange modifications associated with tundra disturbances in the High Arctic - <u>Terrain disturbances</u>	ALUR 74-75-72
	Dept. of Environment - A.R. Milne Fisheries and Marine	Comm. No.	25,000.00	<u>Beaufort Sea Project Publication costs</u>	
	Dept. of Environment - Lands Dir.	Comm. 001	124,625.00	<u>L.U.I.S. Maps</u>	
	Dept. of Environment - EPS, Edmonton	Comm. 047	54,000.00	<u>Waste Disposal Study</u>	
	Laval University - Dr. Y. Bérubé Dept. of Mines and Metallurgy	OSY4-0072	20,171.00	Control of <u>Arsenic Levels</u> in <u>Mine Waste Water</u>	ALUR 74-75-35
	McMaster University, Drs. Kershaw, Rouse & Bunting, Depts. of Biology and Geography	OSW4-0078	84,915.00	Impact of <u>Fire</u> on forest and tundra ecosystems	ALUR 74-75-63

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1974-75 (cont'd)	National Museums of Man	Comm. 004	10,000.00	<u>Archaeological Studies</u> - Northern Pipelines	
	University of New Brunswick - Dr. A.J. Kayll, Fire Science Centre	OTT-74-034	2,865.00	Characterisitc of Northern plant associations affecting fire behaviour - <u>Forest fires</u>	
	University of New Brunswick, Dr. R.W. Wein, Dept. of Biology	OSW4-0076	19,924.00	Wildfires and their relation to land use management in mainland arctic regions <u>Forest fires</u>	ALUR 74-75-62
	University of Saskatchewan, Dr. J.S. Rowe, Dept. of Ecology	OSW4-0091	44,298.00	Fire effects on terrain in the Upper Mackenzie Valley and adjacent highlands <u>Forest fires</u>	ALUR 74-75-61
	Université de Sherbrooke	OTT-74-108	2,573.00	Translation ALUR Reports (French)	
	Sir George Williams University, Dr. G. Leduc, Dept. of Biological Sciences	OSW4-0087	30,261.00	Toxicity Study of Pollutants - Associated with Northern Mining Operations - <u>Water Quality</u>	ALUR 74-75-34
	J.C. Sproule & Associates Ltd.	OSY4-0077	36,025.00	<u>Terrain Sensitivity Photomosaics</u> and related land use classification charts for Banks Island	
	J.C. Sproule & Associates Ltd.	OSW4-0137	116,914.00	<u>Terrain Sensitivity Photomosaics</u> - Canadian Arctic Islands	
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSY4-0071	59,170.00	Effects of <u>Crude Oil Spills</u> on Northern Terrain on Aquatic and Terrestrial vegetation on soil fauna	ALUR 74-75-83
	University of Toronto - Dr. D. Mackay et al, Dept. of Chemical Engineering	OSW4-0089	48,194.00	Physical Aspects of <u>Crude Oil Spills</u> on Northern terrain	ALUR 74-75-84
	Western Ecological Services Ltd.	A7111-4-0345	12,200.00	Ecology of Can. Arctic Archipelago - Selected References	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1974-75 (cont'd)	Western Ecological Services Ltd.	C7111-4-1051	14,520.00	Vol. 3, Ecology of Cdn. Arctic Archipelago	
	National Museum of Man		45,000.00	<u>Archaeological studies</u> - Arctic Pipeline Corridor	ALUR 74-75-92
	Unies Ltd. Winnipeg	OTT-94	1,500.00	Site Location of new climatologic station in Liard Basin	
	Cyril Bassett Communications	OTT-74	2,750.00	Summarization of proceedings of Mackenzie Basin Intergovernmental Seminar	
	Technical Services Branch, DIAND - Mapping		26,000.00	<u>Mapping requirements</u> 1974	
	M. Ozers		10,000.00	Aerial photograph interpretation	
			<u>\$890,251.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1975-76	University of Toronto - Dr. T.C. Hutchinson et al., Dept. Botany and Chemical Engineering	OSU5-0002	21,104.00	Monitoring studies of short and long term effects of <u>crude oil spills</u> on terrestrial and aquatic vegetation	ALUR 75-76-83
	University of Toronto - Dr. D. Mackay, Dept. Chemical Engineering	OTT-76-028	900.00	Monitoring <u>spilled oil</u> in N.W.T.	
	J.C. Sproule & Associates Ltd.	OSU4-0237	164,000.00	<u>Terrain Sensitivity Photomosaics</u>	
	University of Alberta - Dr. J. Verschuren, Dept. of Civil Engineering	OSU5-0029	6,199.00	<u>Flood Prediction</u> Ross & Stuart Rivers, Y.T.	
	Dept. of Environment, Freshwater Institute	Comm.5-019	100,000.00	Inventory of Aquatic resources of Mackenzie Delta as related to gas development - <u>Oil Spills</u>	
	Dept. of Environment, CWS	Comm.5-020	100,000.00	Strathcona Sound - Baseline monitoring <u>Water Quality</u>	
	Hatfield Consulting Limited	OSU5-0061	16,345.00	Effects of Disposal of Mine tailings into Strathcona Sound - <u>Water Quality</u>	ALUR 75-76-38
	University of Alberta, Dr. L.C. Bliss	OSW4-0040	12,727.00	Effects of Disturbances to Plant Communities and the potential for revegetation in the High Arctic - <u>Terrain Disturbance</u>	ALUR 75-76-73
	University of Alberta - Dr. D.W.S. Westlake, Dept. of Microbiology	OSU5-0003	19,200.00	Factors affecting the Biodegradability of Northern Crude Oil - <u>Oil Spills</u>	ALUR 75-76-81
	Dept. of Environment, Water Pollution Control Directorate		10,000.00	Workable Technology for the removal of arsenic from gold mining effluents - <u>Water Quality</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1975-76 (cont'd)	DIAND - Whitehorse		7,000.00	Review of immediate and long term range <u>hydropower requirements in southern Yukon</u>	
	Acres Consulting Services Ltd.	0SU5-0193	62,080.00	<u>Water Resources Inventory</u> - N.W.T.	
	Dept. of Environment, Lands Directorate	Comm.5-001	163,268.00	<u>LUIS</u> - Mapping	
	Carleton University, Dr. M.W. Smith, Dept. of Geography	0SU4-0245	26,791.00	Numerical Simulation of Microclimatic and Active Layer Regimes in a High Arctic Environment - <u>Terrain disturbances</u>	ALUR 75-76-72
	Concordia University - Dr. G. Leduc Dept. of Biological Sciences	0SU5-0010	36,096.00	Toxicity Studies of Arsenic and Cyanide associated with Northern mining operations <u>Water Quality</u>	
	University of Saskatchewan - Dr. J.S. Rowe, Dept. Plant Geology	0SU5-0001	21,655.00	<u>Fire Effects</u> on Terrain in the Western N.W.T.	ALUR 75-76-61
	University of Ottawa - Dr. H.M. French, Dept. of Geography & Reg. Planning	0SU5-0008	34,898.00	<u>Terrain Disturbance</u> Studies - Banks Isl.	
	McMaster University - Dr. K.A. Kershaw, Depts. of Biology and Geography	0SU5-0015	69,978.00	Impact of <u>Fire on Forest</u> and Tundra Ecosystems	ALUR 75-76-63
	Western Ecological Services Ltd.	A7111-5-0559	15,290.00	Selected References - Ecology Cdn. Arctic Archipelago - Vol. 4	
			<u>\$887,531.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1976-77	Dept. of Environment, CWS - Edmonton	Comm.6-030	5,000.00	<u>Polar Bear and Seal Populations in Beaufort Sea</u>	
	Dept. of Environment, Inst. of Ocean Sciences	Comm.6-031	10,000.00	Preparation of a Scientific <u>Oil Spill</u> Response Plan	
	Shawinigan Engineering Co. Ltd.	ISU76-00002	10,000.00	Relationship between hydrological, hydromorphological, and basin characteristics in the North - <u>Water Quality</u>	
	Charles Howard & Associates Ltd.	OSU76-00121	26,500.00	Preliminary Environmental Quality Assessment of Bathurst Inlet Watersheds, NWT, <u>Water Quality</u>	
	Dept. of Environment - Lands Directorate	Comm.6-002	184,720.00	<u>LUIS Mapping</u>	
	Carleton University - Dr. M.W. Smith, Dept. of Geography	OSU76-00011	16,163.00	Computer Prediction of Thermal Effects of Sumps in Permafrost - <u>Terrain Disturbance</u>	
	Dept. of Environment, Fisheries and Marine Service	Comm.6-027	4,000.00	Short term Microbiological Assessment of waters in the Parsons Lake Region, <u>Water Quality</u>	
	Dept. of Environment, CWS - Edmonton	Comm.6-025	10,000.00	Strathcona Sound Environmental Baseline Studies	
	Dept. of Environment, Atmospheric Environment Service	Comm.6-035	1,875.00	Env. data review (wind & wave study)	
	Dept. of Environment, Beaufort Sea Project	Comm.6-034	12,998.00	Env. data review (General)	
	Dept. of Environment, Arctic Biological Station	Comm.6-037	3,000.00	Microbiological Investigation - Davis Str.	
	Dept. of Environment, Arctic Biological Station	Comm.6-038	4,000.00	Microbiological Investigation - Davis Str.	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1976-77 (cont'd)	Marine Biological Consultants Inc.	OSU5-0236	28,476.00	Toxicity of <u>Mine Tailings</u> on marine polychaeta	
	Concordia University - Dr. G. Leduc, Dept. of Biological Sciences	OSU76-00015	45,339.00	Toxicity Studies and Arsenic and Cyanide associated with Northern mining operations <u>Water Quality</u>	
	University of Ottawa - Dr. H.M. French, Dept. of Geography & Regional Planning	OSU76-00014	54,640.00	<u>Terrain Sensitivity & Disturbance</u> Studies - Canadian Arctic	ES-6
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSU75-0272	34,190.00	<u>Revegetation</u> of northern tailings and mining areas using materials from acid heavy metal arctic areas	
	McMaster University - Dr. W.R. Rouse, Dept. of Geography	OSU5-0265	40,000.00	A classification of <u>Fire Effects</u> on the microclimate of forest and tundra ecosystems - Final Report	ES-2
	McGill University - Dr. F.H. Rigler, Dept. of Biology	OSU76-00041	32,095.00	Prediction of effect of increased <u>phosphorous loading on sub-arctic lakes</u>	
	McGill University - Dr. F.H. Rigler	OTT-76-018	115.00	Travel expenses - Water Quality	
	R&R Research Limited, Winnipeg	OSU76-00004	57,702.00	<u>Interaction between fur bearing mammals and seismic-lines</u>	
	Epec Consulting Western Ltd.	OSU5-0268	24,870.00	Impact of <u>seismic exploration on Muskrat</u> population in the Mackenzie Delta	ES-15
	Western Ecological Services Ltd.	OSU5-0274	28,650.00	<u>Revegetation and reclamation</u> - literature review with special reference to areas disturbed by mining	ES-3

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1976-77	F.F. Slaney & Company Ltd. (2 yr. (cont'd) funding) (multi-funding)	0SU4-0223	294,000.00	<u>Yukon Land Use & Resources Inventory</u>	
	Dept. of Environment - CWS	Comm.6-039	10,000.00	<u>Strathcona Sound - Biological Study - Water Quality</u>	
			<u>\$938,333.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1977-78	Interdisciplinary Systems Limited	0SU76-00255	88,526.00	Study of past and <u>potential land use in Area "A" proposed Tuktoyaktuk landfreeze</u>	
	Interdisciplinary Systems Limited	0SU77-00092	126,086.00	Effects of <u>Resource exploration and development on hunting and trapping and on traditional economy of the Eskimo in the Baker Lake Area</u>	
	Geo-Analysis Ltd. - M.A. Roch	OTT-77-085	12,770.00	Comparison of potential environmental impact due to geological geotechnical conditions - Alcan & Mackenzie Valley Pipeline	
	D.A. Westworth	0SU76-00231	55,897.00	<u>Impact of Seismic Activity on Muskrat populations on the Mackenzie Delta</u>	ES-1
	Aquatic Environments Ltd.	OTT-77-087	5,000.00	Assessment of information from Gulf Oil re Parsons Lake Gas Development Project	
	G.P. Reilly	OTT-77-030	4,680.00	Assessment of info Gulf Oil - re Parsons Lake	
	M.A. Roch	OTT-77-065	5,000.00	Assessment of info - Gulf Oil re Parsons Lake	
	James Riddle	OTT-77-009	4,500.00	Collate geotechnical & hydrologic data from multi-sources	
	A. Barry Roberts Consultants Ltd.	OTT-77-356	825.00	Preparation of position descriptions	
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	0SU76-00055	63,038.00	<u>Tailing reclamation of Acidic & metal contaminated Arctic Sites using pre-adapted vegetation</u>	
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	0SU76-00274	4,679.00	<u>Monitoring Crude & Diesel oil spills on Arctic Vegetation - Oil Spills</u>	
	University of Toronto Dr. D. Mackay, Dept. of Chemical Engineering	0SU76-00723	7,788.00	<u>Fate and effects of burned and unburned oil spills on Arctic Terrain</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1977-78	Western Ecological Services Ltd.	OSU77-00252	17,650.00	Vol. 6 - Ecology of the Cdn. Arctic Archipelago	
	Western Ecological Services Ltd.	OSU76-00272	16,509.00	Vol. 5 - Ecology of the Cdn. Arctic Archipelago	
	R. & R. Research Ltd.	OSU77-00011	45,284.00	<u>Interaction between fur bearing mammals and seismic lines</u>	ES-9
	Templeton Engineering Co.	OSU76-00205	60,870.00	Research & Documentation of <u>Winter Roads</u> technology for Northern Canada	ES-4
	University of Ottawa - Dr. H.M. French, Dept. of Geography	OSU77-00033	35,475.00	<u>Permafrost conditions and terrain disturbances</u> <u>resulting from sump construction</u>	
	Dept. of Environment, Fisheries & Oceans, Victoria	Comm. 7-020	12,872.00	Drafting - production costs - Lancaster Sound Environmental Review	ES-7
	Dept. of Fisheries & Environment - Arctic Biological Study	Comm. 7-023	2,000.00	Equipment Storage, St. John's, Nfld.	ES-7
	Dept. of Fisheries, Environment - Arctic Biological Study	Comm. 7-019	12,993.00	<u>Microbiological investigation - Davis Strait.</u>	ES-7
	University of Guelph - Dr. D.W. Smith, Dept. of Botany and Genetics	OSU77-00042	47,634.00	Biological changes resulting from <u>terrain</u> <u>disturbances</u> - Cdn. Arctic	
	McGill University - Dr. F.H. Rigler, Dept. of Botany	OSU77-00044	80,161.00	Prediction of Effect of Increased Phosphorus Loading on Sub-Arctic Lakes - <u>Water Quality</u>	
	Carleton University - Dr. M.W. Smith, Dept. of Geography	OSU77-00028	23,228.00	Computer Simulation of the Thermal Effects of Drilling Fluid Disposal in Permafrost Region - <u>Terrain Disturbance</u>	
	Dept. of Environment - Lands Dir.	Comm. 7-003	189,000.00	<u>LUIS Mapping</u>	
			<u>\$922,465.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1978-79	Dept. Energy, Mines & Resources G.S.C. Paul Egginton	Comm.8-008	2,500.00	<u>Ice Jamming Study - Northern Rivers</u>	
	Aquatic Environments Limited	OSU77-00157	68,542.00	Effects of <u>Siltation</u> on the <u>Ecology of YaYa Lake</u>	ES-13
	University of Guelph - Dr. D.W. Smith, Dept. of Botany and Genetics	OSU78-00001	70,918.00	Biological changes resulting from <u>terrain disturbances</u> in the Canadian Arctic	
	Dept. of Environment - Lands Directorate	Comm.00198	208,000.00	<u>LUIS Mapping</u>	
	McGill University - Dr. F.H. Rigler, Dept. of Biology	OSU77-00434	89,891.00	Prediction of the effect of <u>increased phosphorus loading on sub-Arctic lakes</u>	
	McGill University - Dr. F.H. Rigler, Dept. of Biology	OTT-78-385	964.00	Travel expenses - re ALUR results Regional Offices	
	University of Ottawa - Dr. H.M. French, Dept. of Geography	OSU78-00028	30,462.00	<u>Waste Drilling Fluid Disposal Problems</u> associated with Arctic Gas & Oil Exploration	ES-14
	R. & R. Research Ltd.	OSU78-00006	25,967.00	<u>Interaction between fur bearing mammals and seismic lines</u>	ES-12
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSU78-00012	72,385.00	<u>Mine Tailings Reclamation of Acidic and Metal contaminated Arctic sites</u> - using pre-adapted vegetation	ES-43
	University of Toronto - Dr. D. Mackay, Dept. of Chemical Engineering	OSU78-00004	6,608.00	Physical weathering of <u>oil spills</u> on Arctic Terrain with & without burning	ES-18
	Western Ecological Services Ltd.	OSU77-00426	18,847.00	Vol. 7 - Cdn. Arctic Archipelago Selected References	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1978-79 (cont'd)	University of Arkansas - Dr. A.P. McCartney	OTT-78-117	8,000.00	<u>Study of Archaeological Whale Bones for reconstruction of Canadian Arctic Bowhead Whale stocks</u>	
	Miss Carol Brice-Bennett	OTT-78-111	7,500.00	<u>Historical review of available literature on the inshore cetaceans of South Baffin and Labrador from pre-historic to the present</u>	
	Dr. Allen B. Clarke	OTT-78-110	4,000.00	<u>Size and inferred age composition of Bowhead Whale found in Thule Eskimo sites</u>	
	MacLaren Marex Ltd.	ISU-78-00005	12,064.00	<u>Primary Productivity in the open sea - Associated with Pack Ice in the Davis Strait</u>	
	Dept. Fisheries and Oceans - Env. Emerg. Branch	Comm.00896 OSS78-00338	40,000.00	<u>Govt. Contingency Plan for possible spills/oil blow-outs in Eastern Arctic Marine Environment</u>	
	Defence Research Establishment	A7111-8-0603	15,000.00	<u>Analysis of Ice draft. Data from Robeson Channel</u>	
			<u>\$681,648.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1979-80	LGL Limited	OTT-79-035	4,950.00	<u>Narwhal sampling</u> , Pond Inlet, N.W.T.	
	Miss Micheline McLaughlin	OTT-77-249	1,500.00	<u>Bowhead Whale</u> Baseline Data Compilation	
	Miss Micheline McLaughlin	OTT-78-118	4,400.00	<u>Bowhead Whale</u> Baseline Data Compilation	
	Maudie Qitsualik	OTT-79-013	600.00	Translation Services	
	Maudie Qitsualik	OTT-78-568	850.00	Interpreting Services	
	Maudie Qitsualik	OTT-78-330	150.00	Interpreting Services	
	Maudie Qitsualik	OTT-78-001	5,000.00	Translation - Summary EIS Davis Strait	
	Helen Silverman	OTT-77-399	8,500.00	Behavioural Study of <u>Narwhal-Pond Inlet</u> area	
	Micheline Stawski	OTT-78-332	4,000.00	Preparation of bibliography	
	Micheline Stawski	OTT-78-109	9,200.00	Data compilation - referencing & indexing	
	Dept. Fisheries & Oceans - Freshwater Institute	Comm.32	5,488.00	Strathcona Sound, marine monitoring program	
	Dept. Fisheries & Oceans - Freshwater Institute	Comm.30	8,625.00	<u>Narwhal tissue</u> samples	
	Dept. Fisheries & Oceans - Freshwater Institute	Comm.31	2,200.00	<u>Narwhal tissue</u> samples - heavy metal analysis	
	Mrs. L. Idlout-D'Argencourt	OTT-79-067	589.00	Translation - EIS Davis Strait	
	Office Overload		4,000.00	Salary - Micheline Stawski	
	Dept. Environment - Lands Directorate	Comm.03	215,000.00	<u>LUIS Mapping</u>	
	University of Guelph - Dr. D.W. Smith, Dept. of Botany & Genetics	OSU78-00372	105,704.00	<u>Biological Change</u> , resulting from <u>terrain</u> <u>disturbances</u> in Cdn. Arctic	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1979-80 (cont'd)	McGill University - Dr. F.H. Rigler Dept. of Biology	OSU79-00335	104,654.00	Prediction of <u>Effect of Increased Phosphorus Loading on Sub-Arctic Lakes</u>	
	University of Ottawa - Dr. H.M. French, Dept. of Geography	OSU78-00366	23,746.00	Terrain <u>Land Use and Waste Drilling Fluid Disposal Problems associated with gas and oil exploration</u>	ES-19
	R. & R. Research Limited	OTT-79-004	3,250.00	Present results of 1978-79 field studies to northern settlements	
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSU78-00367	50,533.00	Development of Grass Varieties for <u>mine tailings revegetation</u>	
	Western Ecological Services Ltd.	OSU78-00361	22,050.00	Vol. 8 Ecology of Canadian Arctic Archipelago	
	Max S. Perchanok	OTT-79-136	10,700.00	Prepare improved <u>flood estimates on Donjek River, Y.T.</u>	
	University of British Columbia	OTT-79-135	4,000.00	Estimate magnitude of <u>outburst floods from Donjek Lake, Y.T.</u>	
	Dr. L.W. Belbeck	OTT-79-189	1,534.00	Observer at <u>Polar Bear Oil Spill Study - Churchill, Man.</u>	
	American Symposium Drilling Fluid		5,000.00	Research on Environmental Fate & Effects on <u>Drilling Fluids & Cuttings</u>	
	M. Charbonneau		1,000.00	Translations	
	Baffin Building Systems	80101	5,373.00		
		00281	11,000.00	Marine Biology	
			<u>\$623,596.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1980-81	Miss Moira Dunbar	OTT-80-188	400.00	Review Scientific Content-Ice Environment at Eastern Lancaster Sound and Northern Baffin Bay	
	Arctic Research Establishment	OTT-80-169	13,500.00	<u>Ground truthing of radar measurements of sea ice and icebergs - Borden Peninsula at Baffin Island</u>	
	National Museums of Man - Entomological Society of Canada	ISZ 78-00167	15,000.00	<u>Review & Synthesis of Knowledge on Northern Arctic Insects</u>	
	Dept. Energy, Mines & Resources, G.S.C., Dr. Larry Dyke	OGD	11,113.00	<u>Monitoring tracked vehicle performance related to geotechnical properties and soil centre</u>	
	Dept. Environment - Lands Directorate	OGD	208,000.00	<u>LUIS Mapping</u>	
	Dept. Environment - EPS CC 34006	OGD	50,000.00	DIAND 1st Year Funding <u>AMOP</u>	
	Dept. Environment - EPS Edmonton 79-80	OGD	50,000.00	Fate & Effects of <u>Chemically dispersed oil</u> in the Arctic	
	Dept. Environment EPS 34017	OGD	7,500.00	Additional funding BIOS	
	Dept. Fisheries & Oceans - Freshwater Inst.	34002	4,000.00	Nanisivik Heavy Metal Monitoring	
	Dr. R. Engelhardt	OTT-80-020	9,865.00	Monitor <u>Polar Bears</u> and perform hematological and petroleum residue studies	
	Dept. Fisheries & Oceans - Freshwater Inst.	34003	3,842.00	<u>Narwhal</u> Tissue Samples	
	Dr. H.M. French	OTT-80-007	1,000.00	Attend workshops on Env. Protection on Permafrost	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1980-81 (cont'd)	Hardy Associates (1978) Ltd.	OSU80-00045	102,311.00	Evaluation of Natural Habitat Recovery of <u>Placer Mining Sites</u>	
	University of Guelph - Dr. D.W. Smith, Dept. of Botany & Genetics	OSU79-00329	92,223.00	<u>Biological Changes</u> resulting from <u>terrain disturbances</u> - Canadian Arctic	ES-16
	R.J. Hurst	OTT-80-006	350.00	Accompany bears - Churchill to Winnipeg Zoo	
	Dr. F.A. Juck	OTT-80-027	8,374.00	Perform autopsies on dead <u>polar bears</u>	
	J.B. Kemper	OTT-80-029	478.00	Transportation charges - re whale contracts	
	Province of Manitoba	OTT-80-008	4,624.00	Transportation <u>Polar bears</u> - Churchill to Winnipeg	
	Dr. Nils Oritsland	OSU78-00002	95,744.00	Effects of <u>oil on polar bears</u>	ES-24
	Petro-Canada Ltd.	Comm.6-34020	10,500.00	Cost sharing EAMES Booklet	
	McGill University - Dr. F.H. Rigler, Dept. of Biology	OSU79-00335	121,562.00	Prediction of effects of increased <u>Phosphorus loading on sub-Arctic lakes</u>	
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSU79-00352	37,961.00	<u>Monitoring mine tailings-revegetation studies</u> and selection of especially tolerant plants	ES-21
	University of Toronto - Dr. T.C. Hutchinson, Dept. of Botany	OSU79-00348	2,269.00	<u>Post oil spill recovery</u> of Arctic vegetation	ES-22
	Ken Weagle Environmental Consultants	80-245	3,575.00	Review and evaluate Foothills Pipeline Yukon Ltd. EIS	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1980-81	Ken Weagle Environmental (cont'd) Consultants	80-019	14,414.00	Organize & chair technical workshop on effects of suspended solids on the Aquatic Biota of the Yukon	
	Dr. N.O. West	80-023	23,840.00	Collection of wildlife data as part of a <u>Placer Mining Study</u>	
	Western Ecological Services (B.C.) Ltd.	0SU79-00331	24,413.00	Vol. 9 Ecology Cdn. Arctic Archipelago	
			<u>\$916,858.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1981-82	Titus Allooloo	81-011	1,900.00	To attend Montebello Workshop	
	Suzie Huskie	81-008	1,600.00	To attend Montebello Workshop	
	Dept. Energy, Mines & Resources G.S.C., Dr. Larry Dyke	39013	19,250.00	Monitoring <u>tracked vehicle performance</u> and related to geotechnical properties of soil - <u>Central Keewatin</u>	ES-36
	Dept. of Environment - EPS	c.c.39070	90,000.00	BIOS	
	Govt. Northwest Territories	39064	7,500.00	<u>Polar Bear</u> Deterrent Study	
	University of Guelph - Dr. D.W. Smith, Dept. of Botany	0SU81-00218	54,986.00	Biological changes resulting from <u>terrain</u> <u>disturbances</u> - Canadian Arctic	ES-35
	R.J. Hurst	81-231	4,900.00	Energetic consequence of oil contamination in <u>Polar Bears</u>	
	Interdisciplinary Systems Ltd.	0SU81-00247	40,000.00	Development of Guidelines <u>(Land Use) Mineral</u> <u>Exploration N.W.T. & Yukon</u>	
	McGill University - Dr. F. Rigler, Dept. of Biology	0SU81-00013	120,000.00	Prediction of effect of increased <u>phosphorus loading on sub-Arctic Lakes</u>	
	McMaster University - Drs. M.K. Woo, J.J. Drake, Dept. of Geography	0SU81-00029	50,000.00	Effects of <u>Uranium Mining Tailings</u> on a <u>Permafrost Environment</u>	
	MacLaren Plansearch		40,000.00	<u>Pits and Quarries</u>	
	Karl E. Ricker Ltd.	81-186	8,100.00	Evaluation of Foothills EIS - Dump-site Highway Pipe	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1981-82 (cont'd)	University of Toronto - Dr. D. Mackay, Dept. of Chemical Engineering	OSU81-00103	8,500.00	Crude Oil Samples from Terrestrial spills and Norman Wells Analysis and interpretation	ES-32
	University of Toronto, Erindale Campus - Dr. J. Svoboda, Dept. of Botany, & Dr. H. Taylor, Dept. of Physics	OSU81-00134	53,000.00	Survey of <u>Keewatin Uranium Mineralization</u> area with respect to <u>natural occurrences of</u> <u>radionuclides</u> in vegetation, Soils or Sediment	
	Michael P. Wong	81-291	2,500.00	Technical laboratory services for the analysis of biological samples	
	Western Ecological Services (B.C.) Ltd.	OSU81-0030	26,940.00	Vol. 10, Canadian Arctic Archipelago - Selected References	
			<u>\$529,176.00</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1982-83	LGL Limited	OSU82-00131	41,910	Effects of <u>Ship Traffic on Narwhals</u> at the Admiralty Inlet Ice Edge	
	Dr. R.G. Trucco	OSU82-00168	20,776	Assess the <u>Effects of Dispersed Oil on Arctic Benthic Organisms</u> at Cape Hatt, N.W.T.	
	Canadian Petroleum Association	82-207	2,634	Participation in Northern Oil and Gas Workshop	
	Dr. J.E. Keys	82-333	10,000	Review of <u>Beaufort Sea EIS</u> as related to physical environment	
	Seakem	OST82-00132	6,930	Extraction & Hydrocarbon Analysis of Water Samples from DIAND 1982, study tank	
	ERCO	OST82-00128	7,200	Analysis of Hydrocarbon Content & Composition in Biological Tissues - from DIAND 1982- Study Tank	
	C.K. Consulting	82-455	4,425	Editing - Scientific Report	
	Jefran	82-456	2,800	Editing - Scientific Report	
	R.W. Wein	82-478	600	Scientific review of research report	
	Avatuag Services	82-669	9,875	Collection of tissue samples from ringed seals from Strathcona Sound Vicinity	
	Dept. of Environment - CWS Halifax	OGD	18,000	Production of <u>Atlas of Seabird Distribution off Canada's East Coast</u>	
	IDS Winnipeg	82-615	14,000	Preparation of Booklet on Arctic Land Use Research Program	
	Dr. N.A. Oritsland	OST82-00185	3,890	Marine Mammal Computer Modelling	
	C.K. Consulting	82-570	3,500	Editing - Scientific report	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1982-83 (cont'd)	Dept. of Environment, BIOS	OGD	150,000	Department's participation in BIOS program	
	McMaster University Dr. K.A. Kershaw, et al.	OSU82-00054	96,000	Pattern of <u>Uranium & Associated Radioisotopes</u> in Lichen Heath, Associated with the Uranium Deposits <u>near Baker Lake, N.W.T.</u> , Prior to Mining Operations	
	McMaster University, Dr. H. Woo, J.J. Drake, Dept. of Geography	OSU82-00055	91,325	Model the Effect of Uranium Mining Tailings on a <u>Permafrost Environment</u> - Short Term Effects	
	McGill University, Dr. F. Rigler Dept. of Biology	OSU82-00050	89,466	Prediction of Effect of Increased <u>Phosphorus Loading of Sub-Arctic Lakes</u>	
	University of Toronto, Erindale Campus, Dr. J. Svoboda, Dept. of Botany & Dr. H. Taylor, Dept. of Physics	OSU82-00044	71,364	Survey of <u>Keewatin Uranium Mineralization Areas</u> with respect to <u>Naturally-Occurring Radionuclides</u> in Vegetation Soils & Sediments - Phase II	
	Western Ecological Services Ltd.	OSU82-00037	29,700	Volume 11 - Ecology of the Canadian Arctic Archipelago	
	University of Guelph Dr. F.W. Beamish, Dept. of Zoology	OSU82-00038	8,911	Historical Evaluation of Water Quality of <u>Scanning X-Ray Analysis of Fish Scales</u>	
	Arctic Laboratories Ltd.	LSG82-00018	17,000	<u>Impact of Lead-Zinc Mining Operation on Marine Environment of Strathcona Sound, N.W.T.</u>	
	Govt. of Northwest Territories	OGD	7,500	<u>Polar Bear</u> Detection & Deterrent Study	
	Dept. Energy, Mines & Resources - Bedford Institute	OGD	10,000	<u>Permafrost Project</u> - data collection and interpretation of results from Beaufort Sea Area	
	Dept. Energy, Mines & Resources - Bedford Institute	OGD	10,000	<u>Sediment Dynamics Project</u> - data collection on Granular Resources Distribution	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1982-83 (cont'd)	Arctic Laboratories Ltd.	YK82-83/071	5,000	<u>Marine Geochemical Survey of the Nanisivik and Polaris Mines, NWT</u>	
	Margaret Kalin	82-537	600	Seminar - re Uranium Mine Tailings Rehabilitation Long-Term Ecological Concerns	
	Hudson Bay Oil & Gas Committee		13,154	Expenses of Members While Attending Meeting	
	ESSA Limited	82-629	1,600	Participation at Meetings of Beaufort Sea Monitoring Program	
	Environmental Sciences Ltd.	82-680	900	Participation at Meetings of Beaufort Sea Monitoring Program	
	Arctec Canada Limited	82-690	2,500	Simulating Propeller Generated Noise during Icebreaking - John A. MacDonald	
			<u>\$751,560</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1983-84	Brock University	L of A	5,500	Report Preparation - 4th International Reindeer/Caribou Symposium	
	Centre de Recherche Noranda	OST83-00402	15,000	<u>Toxicity of Thiocyanate to Rainbow Trout</u>	
	Dept. Energy, Mines & Resources Bedford Institute	L of A	12,000	Sediment Dynamics Projects	
	Dept. Fisheries & Oceans, Institute of Ocean Sciences	L of A	5,000	Bowhead Whales - Beaufort Sea	
	IDS	82-615	4,000	ALUR Brochure	
	LGL Limited	A7135-3-0011	118,232	<u>Marine Mammals Monitoring Study</u>	
	LGL Limited	IST83-00002	418,545	Beaufort Environmental Monitoring Project (<u>BEMP</u>) 1983-84	ES-34
	LGL Limited	OST83-00359	88,848	Phase II - Study of <u>Sound Physics and the Responses of Marine Mammals to Arctic Marine Transportation</u>	
	McGill University, Dr. F. Rigler V.H. Smith, Dept. of Biology	OST83-00024	42,360	Effect of Increased <u>Nutrient Loading on Sub-Arctic Lakes</u>	ES-33
	McMaster University, Drs. H. Woo & J.J. Drake, Dept. of Geography	OST83-00020	109,968	Modelling the Effects of <u>Uranium Mining Tailings on a Permafrost Environment</u>	
	McMaster University, Dr. K. Kershaw, et al.	OST83-00011	51,120	Pattern of <u>Uranium & Associated radioisotopes in Lichen Heath Associated with Uranium Deposits near Baker Lake</u>	
	Polar Research Labs.	83-058	2,200	Marine Sound Workshop	
	Reid, Crowther & Partners	OST83-00038	43,425	Preliminary Study of the Potential Use of Flocculants in the <u>Placer Industry</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1983-84 (cont'd)	University of Toronto (Erindale) Dr. J. Svoboda - Dept. of Botany Dr. H. Taylor - Dept. of Physics	OST83-00029	40,368	<u>Radionuclides in Keewatin Vegetation & Soils</u>	
	Leslie Treseder	83-142	4,875	To determine Geographic & Jurisdictional Relationships Amongst Northern Conservation	
	Western Ecological Services	OST83-00012	6,500	Volume 12 - Selected References Canadian Arctic Archipelago	
	Battelle Memorial Institute	OST83-00194	28,360	<u>Analysis of Hydrocarbon Content & Composition of Biological Tissue (BIOS)</u>	
	McGill University - B. Stacey	OST83-00323	9,188	<u>Reduction & Analysis of Data Collected during 82-83 Field Season (BIOS)</u>	
	Dr. R.G. Trucco	A7135-3-0014	19,767	<u>Cape Hatt Study Phase II (BIOS)</u>	
	Baffin Regional Council	83-330	1,075	Hudson Bay Oil & Gas Committee	
	Baffin Regional Inuit Assoc.	83-331	1,033	Hudson Bay Oil & Gas Committee	
	Keewatin Regional Government	83-328	971	Hudson Bay Oil & Gas Committee	
	Makivik Corporation	83-332	483	Hudson Bay Oil & Gas Committee	
	Canadian Institute of Resource Law	83-619	5,000	Conservation - Legal Implication	
	Westwater Research Centre	83-620	4,500	Conservation Legislation & Institution Arrangements	
	Hal Mills	83-571	6,162	Conservation Discussion Paper (Arctic Marine Conservation Policy)	
	Tom Beck	83-415	4,459	Conservation Task Force	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1983-84 (cont'd)	Canadian Institute Consulting Economists	83-441	11,882	Conservation Task Force (R. Schwass)	
	Robert Cathro	83-412	5,718	Conservation Task Force	
	Nancy MacPherson	83-413	6,917	Conservation Task Force	
	W. Winston Mair	83-416	9,626	Conservation Task Force	
	Dr. E.B. Peterson	83-414	6,032	Conservation Task Force	
	Wally Firth	83-486	1,091	Caribou Management Board	
	Government of N.W.T.	L of A	4,200	Polar Bear Detection	
	Keewatin Wildlife Federation	L of A	5,219	Wildlife Survey - Keewatin	
	Dr. Max Dunbar	83-131	3,550	Attendance Beaufort Sea Workshop	
	Dr. Max Dunbar	83-430	3,570	Attendance Beaufort Sea Workshop	
	Dr. Donald Schell	83-130	750	Attendance Beaufort Sea Workshop	
	Dr. Donald Schell	83-481	<u>1,500</u>	Attendance Beaufort Sea Workshop	
			<u>\$1,108,994</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1984-85	Boojum Research Ltd.	OST84-00445	27,739	Synthesis & Analysis of Information on <u>Inactive Hardrock Mining Sites</u> in the NWT and Yukon	
	Centre de Recherche Noranda	OST83-00402	15,000	<u>Toxicity of Thiocyanates to Rainbow Trout</u>	ES-47
	Dept. of Environment (Env. Emerg.)	OGD	20,000	<u>Laser Ignition of Oil Spills</u>	
	Dept. of Environment (EPS)	OGD	63,528	Flocculant Demonstration Project - <u>Placer Mining</u>	
	Dept. External Affairs	OGD	34,000	<u>Humane Trapping</u>	
	Hardy & Associates	OSU84-00115	44,012	<u>Literature Review - Northern Disturbance & Reclamation Study</u>	
	Laurie Henderson	84-458	7,500	Trapping as a Tool - <u>Wildlife Management</u>	
	Kelly Management Consulting	84-116	4,050	Review NOGAP Professional Requirements	
	LGL Limited	OST83-00359	47,608	Phase II - Sound Study	
	McMaster University, Drs. H. Woo & J.J. Drake, Dept. of Geography	OST84-00026	58,746	<u>Modelling the Effects of Uranium Mining Tailings on Permafrost</u>	
	Government of NWT	L of A	10,000	Trapper Education - Workshops	
	Resource Mgt. Consultants Ltd.	84-524	8,885	Provide Draft Guidelines & Bylaws for Environmental Guidelines	
	Robert D.L. Stevenson	84-448	12,258	<u>Humane Trapping</u>	
	Dr. J. Svoboda	L of A	636	Symposium - Uranium Related Studies	
	University of Toronto, Dr. J.G. Henry, Dept. of Civil Engineering	OST84-00158	49,534	<u>Microbiological Evaluation of Northern Lagoons</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1984-85 (cont'd)	University of Toronto, Dr. T. Hutchinson, Dept. of Botany	OST84-00134	9,811	Report Preparation - Vegetation Studies	
	Yarranton Holdings	OST84-00432	28,975	Proposed Guide for Establishing Environmental Monitoring Requirements for Linear Land Projects	
	Yarranton Holdings	84-011	5,509	Preparation of Brochure re Climate Workshop	
	Government Yukon Territory	L of A	13,000	Trapper Education - Workshop	
	Archer Cathro & Assoc.	84-139	3,804	Conservation Task Force	
	Tom Beck	84-138	4,635	Conservation Task Force	
	Dr. R. Schwass	84-134	12,699	Conservation Task Force	
	W. W. Mair	84-136	22,809	Conservation Task Force	
	Nancy MacPherson	84-135	12,556	Conservation Task Force	
	Dr. E.B. Peterson	84-137	9,473	Conservation Task Force	
	Bruce E. MacDonald	84-214	5,766	Editing Report - Northern Conservation	
	Hal Mills	84-202	300	Discussion Paper - Marine Conservation	
	Westwater Research Centre	L of A	390	Conservation Task Force Meeting	
	Arctic Labs Ltd.	IST84-00504	13,766	<u>Suspended Particulates - Hydrocarbon - Mackenzie River</u>	
	Canadian Coast Guard	L of A	40,000	<u>Ice Dynamics - Sverdrup Basin</u> NOGAP	
	Canarctic Shipping	OST84-00117	65,000	Project M.V. Arctic & Its Effects in Admiralty Inlet NOGAP	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1984-85 (cont'd)	Dept. of Environment, CWS	L of A	5,454	Caribou Publication - 1st Annual North American Caribou Workshop NOGAP	
	Dobrocky Seatech Ltd.	OST84-00324	63,775	<u>Coastal Instability - Beaufort Sea</u> NOGAP	
	Energy, Mines & Resources, COGLA	L of A	3,000	Effects of Explosive Use in Marine Environment	
	ESL Limited	OST84-00338	136,443	Beaufort Environmental Monitoring Project (BEMP) 1985-86	ES-40
	ESL Limited	OSU84-00114	61,717	Distribution of <u>Bowhead Whales</u> in Beaufort Sea (Pack Ice Marginal Zone) NOGAP	
	Dept. Fisheries & Oceans Freshwater Institute - Dr. D. Muir	OGD	54,063	<u>Fish Contaminant</u> Project NOGAP	ES-42
	Dept. Fisheries & Oceans Freshwater Institute	OGD	14,400	<u>Arctic Cod & Food Chain</u> Project NOGAP	
	John K. Ford	L of A	600	Scientific Review of Research NOGAP	
	Hardy & Associates	OSU84-00115	79,898	<u>Literature Review - Northern Disturbance & Reclamation Study</u>	
	LGL Limited	OST83-00359	33,881	Phase III - <u>Sound Study Arctic Transportation on Marine Mammals</u> NOGAP	
	LGL Limited	IST84-00191	232,808	<u>Aerial - Photogrammetry</u> on Bowhead Whales to Offshore Industrial Activities - Beaufort Sea	ES-44
	LGL Limited	OST84-00484	102,091	Mackenzie Environmental Monitoring Project (MEMP) NOGAP	
	Dr. P. McLaren	OST84-00492	19,287	<u>Coastal Oilspill Mapping Byam Channel</u>	
	Government of Northwest Territories	L of A	46,913	<u>Polar Bear</u> Detection Deterrent Study	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1984-85 (cont'd)	Keith Philpott Consulting	OST84-00332	103,332	Numerical Estimation of <u>Sediment Transport</u> & <u>Nearshore Profile - Beaufort Sea</u>	
	Bruce Stacey	OST84-00419	6,777	Energetics as a Tool for Population Estimates	
	Dr. P.J. Usher	84-566	<u>3,089</u>	Mackenzie Environmental Monitoring Project (<u>MEMP</u>)	
			<u>\$1,619,517</u>		

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1985-86	Baffin Region Inuit Assoc.	OST85-00028	60,354	<u>Wildlife Harvest Study</u> - Baffin Region	
	Boojum Limited	OST84-00445	23,826	Analysis of Information on <u>Inactive Mining Sites in NWT and Yukon</u>	
	Dept. of Energy, Mines & Resources	L of A	15,000	<u>Tailings Dam Monitoring</u>	
	Envirocon Limited	OST85-00028	177,749	Sedimentation from Yukon <u>Placer Mining Operations</u>	ES-45
	Dept. of Environment	L of A	21,500	Statistical Methods to the Analysis of Radionuclide Distribution in Vegetation	
	Dept. of Environment, EPS, FEARO	L of A	5,000	Proposed Practical Steps for Scientific Institutional Analysis	
	Dept. of Environment, EPS	L of A	2,600	Improve Effectiveness of Aquatic Env. Assessment	
	Fisheries & Oceans, Bedford Institute	L of A	20,000	<u>Arctic Ocean Pollutants</u>	
	High Arctic DIZ Society	85-254	2,400	Workshop Ship Traffic Lancaster Sound	
	Inuvialuit Game Council	85-105	2,575	Resource Harvesting Workshop - YK	
	Keewatin Wildlife Federation	OST85-00083	167,289	<u>Wildlife Harvest Study</u> - Keewatin	
	Keewatin Wildlife Federation	L of A	3,478	Participation 4th Int. Reindeer Caribou Symposium	
	Labrador Inuit Assoc.	L of A	5,265	Participation 4th Int. Reindeer Caribou Symposium	
	LGL Limited	OST85-00252	49,881	Workshop - <u>Environmental Impact on Ship Traffic in Lancaster Sound</u>	
	McMaster University Drs. H. Woo & J.J. Drake Dept. of Geography	OST84-00026	12,447	<u>Uranium Mining Tailings</u> on a <u>Permafrost Environment</u> , Phase IV	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1985-86 (cont'd)	Government of Northwest Territories	85-189	27,150	Study of Government Management Agreement	
	Government of Northwest Territories	85-190	30,000	System of <u>Protected Areas Within the NWT</u> , Phase I	
	Harriet Rueggeberg	OST85-00312	12,783	<u>Protection of Cultural Areas</u> - Yukon & NWT	
	Stanley Associates Ltd.	OST85-00387	34,348	<u>Waste Management</u> in the North	
	University of Toronto, Dr. J.G. Henry, Dept. of Civil Engineering	OST84-00158	20,000	<u>Microbiological Evaluation - Northern Lagoons</u>	
	Yukon Conservation Society	OST85-00406	15,000	Conservation Organizations & Trapping Controversy	
	Michael P. Wong	OST85-00107	33,151	<u>Native Diets - Chemical Residues in Fish & Wildlife in Northern Canada</u>	ES-46
	Arctic Laboratories Ltd.	IST84-00504	64,488	<u>Petroleum Hydrocarbons</u>	
	Beaufort Env. Services	OMC85-01109	23,487	Charter of the Sequel <u>Bowhead Whale Food</u> Available Study	
	Dobrocky Seatech Ltd.	OST84-00324	9,600	<u>Coastal Instability - Beaufort Sea</u>	
	Dome Petroleum	OST85-0008	5,000	Evaluation of Infra-red Detection Techniques - Surveying Arctic Animals	
	Dept. Energy, Mines & Resources Polar Continental Shelf	L of A	15,970	Logistics Services	
	Dept. Energy, Mines & Resources GSC Bedford Institute, Dr.R.Taylor	L of A	4,035	Videotapes - Coastal areas - Byam Martin Channel	
	Dept. of Environment, CWS	L of A	5,000	Parry Caribou Project	
	Dept. of Environment	L of A	15,000	Acute & Chronic <u>Toxicity of Base Muds & Cuttings</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1985-86 (cont'd)	ESL Limited	OST85-00397	16,800	<u>Compilation of Industrial Activities Beaufort Sea 1985</u>	
	ESL Limited	OST84-00330	12,884	Continuation of (Beaufort Environmental Monitoring Project (<u>BEMP</u>))	
	Dept. Fisheries & Oceans	L of A	50,000	<u>Fish Quality - Lower Mackenzie</u>	
	Great Bear DIZ Society	L of A	4,901	Norman Wells Meeting - <u>MEMP</u>	
	Inuvialuit Game Council	85-231	1,027	Inuvik Community Meeting - <u>MEMP</u>	
	Keith Philpott Ltd.	OST84-00332	19,377	Numerical Estimation of <u>Sediment Transport & Nearshore Beaufort Sea</u>	
	LGL Limited	OST85-00343	79,587	Beaufort Environmental Monitoring Project (<u>BEMP</u>) - Phase III 1984-85	ES-39
	LGL Limited	OST84-00484	245,796	Mackenzie Environmental Monitoring Project (<u>MEMP</u>)	
	LGL Limited	OST85-00162	125,757	<u>Bowhead Whales</u> - Food Availability - Offshore Yukon	
	LGL Limited	OST83-00359	4,459	<u>Sound Physics</u> - <u>Marine Mammals & Arctic Transportation</u>	
	LGL Limited	OST85-00189	46,794	<u>Cameron Island</u> - <u>Bent Horn Baseline Community Description</u>	
	LGL Limited	OST85-00340	10,000	Reproduction Parameters - <u>Bowhead Whale</u> & Status of Western Arctic Population	
	John Parsons & Assoc.	OST85-00405	12,586	<u>Environmental Implications of Year Round Icebreaker Activities in the Arctic</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1985-86 (cont'd)	P.N. Research	0ST85-00114	15,967	Photographic Monitoring	
	N.H. Richardson Consulting	0ST85-00528	<u>33,381</u>	Workshop re World Conservation Strategy Conference	
			<u>\$1,563,692</u>		

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1986-87	University of Toronto, Dr. Svoboda Dept. of Botany, Dr. H. Taylor, Dept. of Physics	A7135-6- 003/01ST	9,000	<u>Radioactivity</u> in Northern Canada	ES-41
	Dept. of Energy, Mines & Resources Polar Continental Shelf	L of A	79,268	Logistical Support	
	Dept. of Energy, Mines & Resources COGLA	L of A	5,000	Loss of Rheology in Drilling Muds	
	McMaster University, Drs. H. Woo & J.J. Drake, Dept. of Geography	OST84-00026	20,762	Modelling the <u>Effects of Uranium Mining Tailings</u> on <u>Permafrost</u>	
	Michael Wong	OST85-00107	750	<u>Country Foods & Native Diets</u> in Northern Canada	
	MacPherson Consulting	A7135-6- 00014/01ST	33,999	<u>Evaluation</u> of the " <u>Protected Area</u> " Concept for the <u>Yukon</u>	
	Avocet Environmental Mgmt.	A7135-6- 0019/01ST	20,000	Design & Creation - <u>Computer Data Base</u> for <u>Chemical Residues</u> - <u>Arctic Biota</u>	
	Keewatin Wildlife Fed.	OST85-00083	71,555	<u>Wildlife Harvest Study</u> in the <u>Keewatin</u> Region	
	Seakem Oceanographic Ltd.	A7135-6- 0025/01ST	59,884	Strategy for Investigating <u>Organic</u> <u>Contaminants</u> in <u>Arctic Biota</u>	ES-38
	Gormely Process Engineering	A7135-6- 031/01ST	5,990	<u>Heap Leaching</u> Literature Review	
	Boojum Research Ltd.	A7135-6- 0040/01ST	24,184	Development of Ecological Engineering Methods - <u>Base Metal Mining Operation YT & NWT</u>	
	Band Council - Old Crow	L of A	365	Travel - Reindeer-Caribou Symposium	
	Canarctic Shipping	A7135-6- 0006/01ST	55,699	Effect of " <u>M.V. Arctic</u> " New Bow on the Ship's <u>Track in Ice in Admiralty Inlet</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1986-87 (cont'd)	Arctic Laboratories Ltd.	IST84-00504	42,614	<u>The Flux of Suspended Particulates Petroleum Related Hydrocarbons - Trace Metal - Mackenzie River during Winter</u>	ES-48
	LGL Limited	A7135-6-0018/01ST	2,633	Mackenzie Environmental Monitoring Project (MEMP) Workshop June 5-6, 1986	
	LGL Limited	OST84-0049	4,930	Mackenzie Environmental Monitoring Project (MEMP) Publication	
	L.A. Harwood	A7135-6-0034/01ST	13,404	<u>Bowhead Whales</u> Survey - Southeast Beaufort Sea	
	Dept. of Energy, Mines & Resources GSC Bedford Institute	L of A	30,000	Hudson Seismic Voyage	
	LGL Limited	A7135-6-0016/01ST	192,954	<u>Bowhead Food</u> Availability Study	
	ESL Limited	A7135-6-0017/01ST	52,753	Beaufort Environmental Monitoring Project (BEMP) IV	
	Government of Northwest Territories	86-061	24,000	<u>Polar Bear</u> Detection & Deterrent Study	
	Government of Yukon	86-078	28,596	<u>Impacts of Oil & Gas</u> Related Activities on <u>Caribou</u>	
	Dept. of Environment CWS	L of A	32,000	<u>Body Conditions</u> as an Indicator of <u>Porcupine Caribou Herd</u> Conditions	
	Dept. of Fisheries & Oceans Freshwater Institute	L of A	60,000	<u>Fish Studies</u> in <u>Lower Mackenzie River</u>	
	Dept. of Environment EPS	L of A	30,000	<u>Beaufort Sea Oil Spill Atlas</u> Project	
	ESL Limited	A7135-6-0028/01ST	15,372	<u>Compilation & Mapping of 1986 Industrial Activities - Beaufort Sea</u>	

YEAR	CONTRACTOR-PRINCIPAL INVESTIGATOR	CONTRACT NO.	CONTRACT TOTAL	SUBJECT/REMARKS	REPT. NO.
1986-87 (cont'd)	World Wildlife Federation	A7135-6-0028/01ST	60,000	Continuing Studies of Eastern Arctic <u>Bowhead Whale</u> - Isabella Bay, NWT	
	L.A. Harwood	A7135-6-0017/01ST	14,589	Aerial Surveys in Canadian Beaufort Sea	
	Hardy Associates Ltd.	A7135-6-0033/01ST	48,486	<u>Containment & Disposal - Waste Drilling Fluids Petroleum Exp.</u> Drilling on Land - NWT & YT	
	N.H. Richardson	A7135-6-0004/01GT	26,087	World Conservation Strategy Conference Workshop	
	Arctic Transportation Ltd.		287,100	Vessel Charter - <u>Bowhead Whale</u> Food Availability Study	
	Ewan Cotterill & Assoc.	T.B.#800246	21,157	Environmental Impact Screening Committee	
	Carson Templeton	"	40,396	Environmental Impact Screening Committee	
			<u>\$1,413,527</u>		

APPENDIX 11970-71

Soil and Vegetation in the Liard River Watershed
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Hydrology and Fluvial Geomorphology of the
Liard River Watershed
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Environment Classification and Resource Use Study
in the Liard River Watershed
J.M. Murray
Division of Hydrology
Department of Agricultural Engineering
J.S. Rowe
Department of Plant Ecology
University of Saskatchewan

Surface Disturbances and Vegetative Regeneration on
the Mackenzie River Delta
L.C. Bliss
R.W. Wein
Department of Botany
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Seismic and Related Disturbances in the Mackenzie
Delta Region
J.D.H. Lambert
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Carleton University

Seismic and Related Disturbances in the Mackenzie Delta Region
D.E. Kerfoot
Department of Geography
Brock University

Tests of Terrain Damage by Tracked Vehicles on Tundra
J.R. Radforth
Muskeg Research Institute
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Arctic Ecosystems
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APPENDIX II