SECURITY

SPECIAL HANDLING / *TRAITEMENT SPÉCIAL* ▶ **TOP SECRET**

ASSOCIATED OCCURRENCES - *INCIDENTS CONNEXES*

DIV. FILE No. - *Nº DE DOSSIER DIV.*: Y-A 78G-000-2

EXHIBIT REPORT No. / *Nº DE RAPPORT SUR LES PIÈCES*: Y-A –

"G" Div. - Yellowknife
78-G-000-2
Soviet Satelite

TRANSACTION 8	LINE NO / Nº DE LA LIGNE 9	STATISTICS CANADA / *STATISTIQUE CANADA* O.S.R. CLASS / *CATÉGORIE DE S.O.* 10 11	INVESTIGATING/SUPPORT UNIT / *SERVICE D'ENQUÊTE/DE SOUTIEN* 12	JURISDICTION / *JURIDICTION* 13	ASSISTANCE TO / *AIDE À* 14	ZONE 15	REPT'D / *SIGNALÉ* 16	UNF'D / *NON FONDÉ* 17	OUTCOME / *RÉSULTAT* 18	CLEARED / *INFRACTION CLASSÉE*: CHARGE / *MISE EN ACC.* 19	CLEARED / *INFRACTION CLASSÉE*: OTHER / *AUTRE* 20	PERSONS DATA - ADULTS / *ADULTES* - CHARGED / *ACCUSÉS*: MALE / *HOMME* 21	PERSONS DATA - ADULTS / *ADULTES* - CHARGED / *ACCUSÉS*: FEMALE / *FEMME*

DORMANT RECO'D

HISTORICAL MATERIAL / MATÉRIEL HISTORIQUE

ACCOMPANYING TALLY SHEETS
FEUILLES DE POINTAGE ANNEXÉES

B	C	D	E						

C.P.I.C. TRANSACTIONS – *TRANSACTIONS DU C.I.P.C.*

CATEGORY / *CATÉGORIE*	ADD / *INSCRIRE* DATE Y-A. M. D-J.	REMOVE / *RADIER* DATE Y-A. M. D-J.	ADD / *INSCRIRE*	REMOVE / *RADIER*
PERSON / *PERSONNE*				
PROPERTY / *BIENS*				
VEHICLE / *VÉHICULE*				
BOAT/MOTOR / *BATEAU/MOTEUR*				

CROSS REFERENCE / RENVOIS

DIV. ....
DET. ....
HQ. ....
DG

DIARY DATES
DATES D'AGENDA

CODE
1. INVESTIGATION - *ENQUÊTE*
2. COURT - *COMPARUTION*
3. EXHIBITS - *PIÈCES À CONVICTION*
4. C.P.I.C. - *C.I.P.C.*
5. OTHER - *AUTRE*

DATE Y-A. M. D-J.	CODE	DATE Y-A. M. D-J.	CODE

REVIEW / AUDIT – *REVISION*

CODE
1. UNIT COMMANDER - *CHEF DE SERVICE*
2. SUPERVISOR - *SUPERVISEUR*
3. SECTION N.C.O. - *CHEF DE SECTION*
4. OTHER - *AUTRE*

NAME - *NOM*	DATE Y-A. M. D-J.	CODE

COURT DATES
DATES DE COMPARUTION

CODE
1. APPEARANCE - *COMPARUTION*
2. BAIL - *CAUTIONNEMENT*
3. PLEA - *PLAIDOYER*
4. PREL. HEARING TRIAL / *AUDIENCE PRÉL. PROCÈS*
5. SENTENCE
6. OTHER - *AUTRE*

DATE Y-A. M. D-J.	CODE	DATE Y-A. M. D-J.	CODE

☐ COMPLAINANT NOTIFIED / *PLAIGNANT AVISÉ*

CONCLUDED / *TERMINÉE* 27 DATE Y-A. M. D-J.	FILE STATUS / *ÉTAT DU DOSSIER* 27 DATE Y-A. M. D-J.	CODE	DATE Y-A. M. D-J.	CODE

INVESTIGATOR - *ENQUÊTEUR*

CAPTION - *RUBRIQUE*

THIS VOLUME WAS REMOVED FROM BOX # 7431

RCMP GRC 2098 (85-03) 7530-21-888-4834

SÉCURITÉ

TOP SECRET

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78G-000-2
Soviet Satelite

Enquiries for technical data:

Mr. F. C. Boyd
Atomic Energy Control Board
General Delivery
Hay River, N.W.T.

Room 223
Fed. Bldg
874-3505

or Dr. W. K. Gummer
Atomic Energy Control Board
Box 1046
Ottawa, Ont.
K1P 5S9

Requests for Info:
See files:
790-700-23

X-Ref: GVR 1584-24
Letter In: 1987-10-06
Letter Out: 1987-10-09

FILE NO. — DOSSIER N° 6e Div. Yellow Knife. 78-6-000-2

SUBJECT — OBJET

CHARGED OUT — TRANSMIS			CHARGED OUT — TRANSMIS		
TO — À	DATE	BY — PAR	TO — À	DATE	BY — PAR
Ans. Cncl'pt	87-11-19	R.			

GC 95 7540-21-868-5383

Government of Canada Gouvernement du Canada

FILE CHARGE-OUT CARD **FICHE DE TRANSMISSION DE DOSSIER** 000000

FILE NO. — DOSSIER N°

SUBJECT — OBJET

CHARGED OUT — TRANSMIS			CHARGED OUT — TRANSMIS		
TO — À	DATE	BY — PAR	TO — À	DATE	BY — PAR

GC 95 7540-21-868-5383

Government of Canada / Gouvernement du Canada

FILE CHARGE-OUT CARD

FICHE DE TRANSMISSION DE DOSSIER

000000

OPERATION MORNINGLIGHT
GREAT SLAVE LAKE, NORTHWEST TERRITORIES
1978/01/24

HQ - OTTAWA VRS
HQ-485-35
G - YELLOWKNIFE
78-G-000-2
G - YELLOWKNIFE DET
78-427

Information received through the Intelligence Advisory Committee of the federal government revealed COSMOS 954, a Soviet Radar Ocean Reconnaissance Satellite (RORSAT) with a small nuclear power source was out of ground control. On 1978/01/06, the satellite began tumbling towards earth. It was to re-enter the earth's atmosphere but at that time the location was unknown. On 1978/01/24, the satellite survived re-entry and crashed near Great Slave Lake, NWT. The RCMP's presence was requested for guarding some of the debris as well as performing any police duties which may have arisen. When the clean-up was completed, the Department of External Affairs requested the RCMP's input into the preparation of a claim against the USSR for compensation for damage incurred by Canada in the search and recovery of the radioactive parts of the satellite. The cost of the clean-up was over $14,000,000.00 of which Canada requested just over $6,000,000.00 compensation.

6947.AHS

SEQUENTIAL RECORD

Div: G Mun: YELLOWKNIFE Rec Off: Prov: NWT
INITIAL: TDP Archives SCIS: Archives PIRS:
File Number: 78-G-000-2 Breakdown:N (Y/N) OSR Code:
Related Files: Y (Y/N) Charge-Outs: N (Y/N)
Caption: SOVIET SATELLITE

Notes:

Correspondence
From: To:

Date of Entry: 1993/03/31
Volumes: 1 Supplements: 0 Microfilm: 0 BF Date:

Disposition: HISTORICAL Disposition Date: 1994/10/04
Storage Location: VAULT
Accession Number: Label:
Special Status:

Related Files: HQ OTTAWA VRS HQ-485-35; G YELLOWKNIFE DET 78-427

Div: G Mun: YELLOWKNIFE Rec Off: Prov: NWT
File Number: 78-G-000-2

CHARGE-OUTS

USER IDENTITY	VOLUMES	OUT DATE	RETURN DATE
U1: U2:	V1: V2:	OD1: OD2:	RD1: RD2:

OF OVERDUE NOTICES SENT

NOTICES 1: 0 NOTICES 2: 0

PAST CHARGE-OUTS

CHARGE-OUT 1: RETURN DATE 1:
CHARGE-OUT 2: RETURN DATE 2:
CHARGE-OUT 3: RETURN DATE 3:

RCMP GRC

SPECIAL HANDLING FILE
DOSSIER NÉCESSITANT UN TRAITEMENT SPÉCIAL

File no. — *N° du dossier*: 78G-000-2

KEEP ON TOP OF CORRESPONDENCE
GARDER SUR LA CORRESPONDANCE

(✓)

☐ **GRIEVANCE AND SUGGESTION AWARDS – *GRIEF ET PRIMES À L'INITIATIVE***

FILE
DOSSIER:

ACCEPTED
ACCEPTÉ ☐

REJECTED
REFUSÉ ☐

FILE
DOSSIER:

DATE CONCLUDED
TERMINÉ LE .....

☑ **HISTORICAL INTEREST – *VALEUR HISTORIQUE***

Forward to HQ Archives Unit when file has no operational or administrative value.
Transmettre le dossier à la Sous-section des archives de la D.G. lorsqu'il n'a plus de valeur opérationnelle ou administrative

IDENTIFIED BY
IDENTIFIÉ PAR: J.R. Parkhouse Records Manager

☐ **RESTRICTED HANDLING – *TRAITEMENT RESTREINT*** RENEWED ANNUALLY *RENOUVELÉ ANNUELLEMENT*

Renewal of file to be
Le renouvellement du dossier doit être

CONTINUED
POURSUIVI ☐

DISCONTINUED
INTERROMPU ☐

Person(s) Authorized to handle — *Personnes autorisées à traiter le dossier*

Comments-*Remarques*

.....

.....

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AUTHORIZED BY
AUTORISÉ PAR

Date

1821 (86-06) 7530-21-902-0453

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EDMONTON JOURNAL - Tuesday, December 11, 1979

Soviets in no rush to pay bill

OTTAWA (CP) — The Soviet Union is in no hurry to pay the clean-up bill for the crash of a spy satellite, Ambassador Alexander Yakovlev said Monday.

Addressing students at Carleton University, he said that under international law his country doesn't have to respond to the Canadian bill until next March.

He added another year of negotiations could then follow. The satellite crashed in the Northwest Territories early in 1978.

O/c C.D.B.
O/c A & D
Info & P.A. to appropriate file
29-12-79

786-000-2

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Government of Canada / Gouvernement du Canada

ACTION REQUEST / **FICHE DE SERVICE**

To — À	File No. — Dossier N°
Rounds	Date

From — De

Brown

☐ Please call / Prière d'appeler	Tel. No. — N° de tél.	Ext. — Poste

☐ Returned your call / Vous a rappelé	☐ Will call again / Vous rappellera	☐ Wants to see you / Désire vous voir

Date	Time — Heure	Message received by / Message reçu par

☐ Action / Donner suite	☐ Approval / Approbation	☐ Note & return / Noter et retourner
☐ Comments / Commentaires	☐ Draft reply / Projet de réponse	☐ Note & forward / Noter et faire suivre
☐ As requested / Comme demandé	☐ Signature	☐ Note & file / Noter et classer

PA this to
OPERATION MOONLIGHT
COSMOS [redacted] 549 file

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GC 12E

7540-21-868-3907

RCMP GRC **TRANSIT SLIP** / ***FICHE DE SERVICE***

BIN / BD

Classification

File No. – *N° du dossier*

• TYPEWRITE – *ÉCRIRE À LA MAIN*

TO – *À*	FROM – *DE*	Date
File	BOLTON	80-01-15

- ☐ Comments / *Commentaires*
- ☐ Action / *Donner suite*
- ☐ Prepare Brief / *Préparer un exposé*
- ☐ Return with Current File / *Retourner avec le dossier actuel*
- ☐ Perusal and P.A. / *Lire et classer*
- ☐ Prepare Reply / *Rédiger une réponse*
- ☐ Make File(s) / *Ouvrir un dossier*
- ☐ Check Records / *Vérifier les dossiers*

CARDED

SUBJECT – *SUJET*

Cosmos ~~544~~ 954 Russian Satellite - Operation Morning Light

REMARKS (Use same A-5 for Reply when space permits) – *REMARQUES (Si l'espace le permet, répondre sur cette formule)*

Call rec'd 11[45] pm from Sandy McDonald DND 873-4011 Loc 36. He advised they rec'd info that ABC and NBC News were chartering A/C to Y/K to check out the finding of a large chunk of the Russian Satellite. Enquired if we had info.

11[50] Call rec'd from CBS News Los Angeles 213-852-2202 Tom Delloyd. He asked if we had any info & confirmed ABC on the way.

11[55] S/Sgt Dore asked to check with Dets.

11[55] CO advised & he advised Comm Porter.

12 Noon Called Dep Post Whitehorse to see if they had any reports on a find as they had a meteorite or similar object reported 2 weeks ago which crossed Dawson & Old Crow. He advised NO & would call if any info rec'd.

~~Det check completed~~ advised ~~No reports~~ DND rec'd. No further action

Diary Date – *Date d'agenda*

80-01-16 –

Meeting Date – *Date de la réunion*

P.A. – *A.C.*

Date 80-01-16 Init./*N°* [illegible]

A-5 (80-08) 7530-21-029-4767

Ned Potter CBS CHICAGO
312- 337-1341

Soviets get a discount

OTTAWA — The Soviet Union will pay Canada $3 million, half the amount requested, to settle all claims from the crash of a Soviet nuclear-powered satellite over the Northwest Territories three years ago.

A statement released Friday by External Affairs Minister Marc MacGuigan announced the agreement, subject to ratification by both countries.

Canada had sought $6 million for damages and costs.

-- Edmonton Journal
November 22, 1980

80-11-24

80-11-24

Government of Canada / Gouvernement du Canada

ROUND TRIP MEMORANDUM
NOTE ALLER RETOUR

FROM / DE: NCO i/c Coppermine DET

File No. (originator) — Dossier n° (source):

TO / À: CIB - YELLOWKNIFE

File No. (addressee) — Dossier n° (destinataire):

Subject - Objet: RADIATION DETECTION EQUIPMENT

--

I HAVE CONCLUDED MY COMPL. ON THE RUSSIAN SATALITE THAT CRASHED NEAR HERE. ALL FURTHER INVEST. TO BE DONE BY D.N.D. - YELLOWKNIFE. AS I HAVE NO FURTHER NEED FOR THIS EQUIP. I AM RETURNING IT.

Signature R. Reid Date 79/11/19

Reply - Réponse

--

Reid 79-11-19

Russian satellite file
PA to ol Coppermine

7540-21-029-0717

GC 59

Signature Date

1 ADDRESSEE / DESTINATAIRE — Please add reply — Keep this copy and return No. 2 to originator. / Ajouter la réponse — Garder cet exemplaire et renvoyer le n° 2 à la source.

000000

On Loan to R.C.M.P.

79/9/14

1. 1 - Radiacmeter
2. 1 - Radiacmeter Detector Charger
   Serial # 001269 Model # 5120A
3. 1 - Low Range Survey Meter
   Serial # 89805 Model # CCD100-10A

Loan To: Jay Evans, Cst. Yellowknife Det.

D. Bohnet

D.E. Bohnet,
Environmental Co-ordinator.

Returned personally to Mr Dan Billing C210 by S/Sgt Bolton on 79-11-20.

525.

20/22 VIA YK MC

C[illegible], DORSET, NWT AUGUST 29,1979

NATIONAL DEFENCE HQ OTTAWA

INFO: C O G DIV

O C FROBISHER BAY S/DIV

CD61 RE: OPERATION MORNING LIGHT IN REPLY TO YOUR TELEX DHIST138 0?- PLEASE BE ADVISED OF THE FOLLOWING:

1. CST ROBERT AITKEN, CST GIL CARLSON AND CPL JOHN MANTON MEMBERS INVOLVED IN INVESTIGATION.

2. NUNA PARR(SURNAME) REPORTED HOLE IN ICE TO MR. TERRANCE RYAN GENERAL MANAGER OF WEST BAFFIN CO-OP CAPE DORSET NWT

3. PERSONS INVOLVED IN INITIAL INVESTIGATION:

-A. SCIENTISTS- JACQUES RICHARD AND JOSEPH TINNEY

B. INUITS- NAUDLA OSHUITOK (SURNAME) AND NUNA PARR(SURNAME)

C. MEMBERS OF RCMP-- CST. GIL CARLSON AND CPL JOHN MANTON

R C M POLICE

CAPE DORSET DET

TELEX:06-315510

PHONE/MAR

O/c C.I.B.

Info

Correct. Your bucks what this is about?

Sig Yes for DND history file. Info requested direct to C. Dowd

B.

OUTGOING MESSAGES — ● INSTRUCTIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	78G-000-2	V.R. KAWALESKI, CPL.	
	Br. or Section — *Sous-direction ou section*: C.I.B.	Phone No. — *N° de téléphone*: 920-8326	
Precedence for Action Addresses *Priorité pour suite à donner*: ROUTINE	Precedence for Infor. Addresses *Priorité pour renseignements*	Date: 79-08-01	Security, CLASSIFICATION *sécuritaire*: UNCLASSIFIED

FROM / *DE*: "G" DIVISION C.I.B.

TO / *À*: N.D.H.Q. OTTAWA

INFO. / *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GCIB 416/3 *N° DU MESSAGE ORIGINAL*

REFERENCE YOUR D HIST 121 - OPERATION MORNING LIGHT.

CST. LUCHTMEIJER DID GUARD DUTY AT SNOWDRIFT WITH CANADIAN FORCES MEMBERS, LOVEJOY, CHARBONNEAU AND DE LAURIER.

HE WAS APPARENTLY WITH THE OTHER GROUP AT FORT RELIANCE.

"G" DIVISION C.I.B.

VRK/dh

Signature of person releasing message — *Signature de l'expéditeur*	Time Released (time of signature) — *Heure d'expédition (heure de la signature)*
C.J. DENT, SUPT., OIC "G" DIV. C.I.B.	3:35

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T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

NNNNVVVVVVVVVVVVVVVVVVVVVVVV GEA030 AGA241

RR RCWDO

DE RCCWC 275 2121550

ZNR UUUUU

R 301645Z JUL 79

FM NDHQ OTTAWA

TO RCMP YELLOWKNIFE

BT

UNCLAS D HIST 121

ATTN: CST WILLEM LUCHTMEIJER

SUBJECT: OP MORNING LIGHT

1. WHEN CST LUCHTMEIJER WAS SENT TO GUARD SEVEN HITS NEAR SNOWDRIFT ON 10 FEB HE WAS ACCOMPANIED BY 3 CF PERSONNEL

2. AS OF NOW I HAVE TWO LISTS

A. MCPL VIC MCLEOD, CPL PAUL CHARBONNEAU (NRHQ) AND NAST MEMBER CPL DEL ST JACQUES Reliance

B. DAVE LOVEJOY, CPL CHARBONNEAU, AND CPL ART DE LAURIER (NAST) Snowdrift

3. CAN YOU CLARIFY THIS IN COOP WITH CHARBONNEAU. THANKS

BT

#0275

MAR 19 10 35 AM '79

22 REALY OTT1

955001AVC072 UU
RR RCCWCP
DE RCCWC 0956 0752337
ZNR UUUUU
R 161830Z MAR 79 ZEX
FM NDHQ OTTAWA
TO RCWBOCA/AIRCOMD WINNIPEG
RCWDQ/NRHQ YELLOWKNIFE
INFO RCWDG/ CFB EDMONTON
RCWBPDA/CFB WINNIPEG
RCWDG/408 SQN NAMAO
RCWBPDA/429 SQN WINNIPEG
RCWDG/435 SQN NAMAO
RCWDG/440 SQN NAMAO
RCWDP/CABC EDMONTON
RCWDG/447 SQN NAMAO
RCWDQ/440 SQN DET YELLOWKNIFE
RCWBPDA/402 ARS WINNIPEG
RCCWCP/RCMP YELLOWKNIFE
BT
UNCLAS D HIST 039
SQN [illegible]FOR CO
ATTN: LCOL MORRICE AIRCOM HQ
CAPT TERRY LAWRENCE, CFB WINNIPEG
LCOL BUTCHART NRHQ
MAJ V. KEATING, EDMONTON
CAPT J. LYNE, EDMONTON
SUBJ: OP MORNING LIGHT VISIT-INTERVIEWS
REF: DHIST 019 062300Z FEB 79.
1. SERVICE FLT SCHEDULES HAVE BEEN CUT BACK FROM THREE PER WEEK TO TWO.
2. NOW PROPOSE FOLLOWING ITINERARY AND HOPE AGREEABLE ALL PARTIES.
DEP ARR.

PAGE 2 RCCWC 0956 UNCLAS
SF 712 OW 301315Z APR WG 301700 APR
SF 714 WG 041730 MAY ED 041830 MAY
ED 090900 MAY ZF 091330 MAY
ZF 110900 MAY ED111330 MAY
SF715 ED 121315 MAY OW 122125MAY
3. PLAN TO CONDUCT INTERVIEWS WG TUES - WED 1-2 MAY. VISIT PINAWA THU 3 MAY. INTERVIES ED MON-TUE 7 - 8 MAY YELLOWKNIFE 9- 10 MAY
4. PLEASE ADJUST RESERVATIONS AND [illegible] U-DRIVE AND EXPLORER HOTEL ACCORDINGLY ONCE CONFIRMATION THAT NEW ITINERARY OK RCVD.
5. TRUST CC138 WILL BE AVAILABLE 9 AND 11 MAY FOR ED-ZF-EDU

FOR ED-ZF-ED TPT. DEP TIME 11 MAY NOW FLEXIBLE AS NO BOEING TO MEET SAME DAY.

6. PLEASE ADVIS

BT
0956

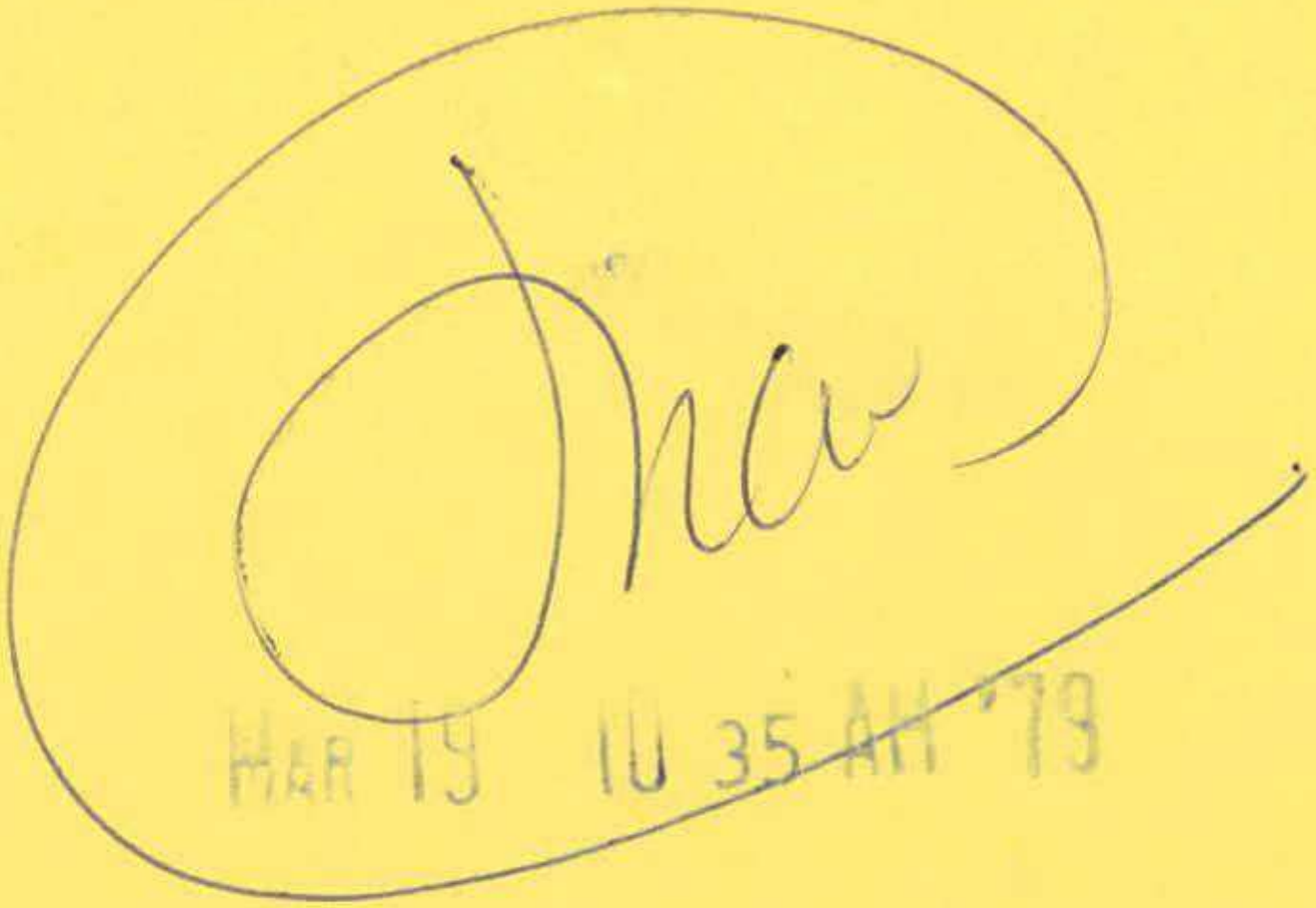
PSE ACK

YK ACK MSG

O/c C.D.B.
Info att'd.

Norme Comeau
PA 79-05-10

000000



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CIPHER MESSAGE

MAR 1
~~FEB 26~~ 2 41 AM '79

002 RELAY OTT1 79.03.01
OTT001 UU
RR RCCWCP
DE RCCWC 0616 0592305
ZNR UUUUU
R 282200Z FEB 79 ZEX
FM NDHQ OTTAWA
TO RCWBOCA/AIRCOMD WINNIPEG
RCWDQ/NRHQ YELLOWKNIFE
RCWDG/CFB EDMONTON
RCWBPDA/CFB WINNIPEG
RCWDQ/440 SQN DET YELLOWKNIFE
RCWDG/408 SQN NAMAO
RCWDG/435 SQN NAMAO
RCWDG/447 SQN NAMAO
RCWDG/440 SQN NAMAO
RCWDP/CABC EDMONTON
RCCWCP/RCMP YELLOWKNIFE
ZEN/MR BRUCE STEWART WHITESHELL NUCLEAR RESEARCH ESTAB, PINAWA, MAN
BT
UNCLAS D HIST 031
ATTN: LCOL MORRIS AIRCOM HQ
LCOL BUTCHART NRHQ
CAPT LYNE OPI CFB EDMONTON
SUBJ: OP MORNING LIGHT
REF: A. DHIST 019 062300Z FEB 79
B. TELCON LYNE- MORRISON
1. PROPOSED VISIT APPROVED BY ALL CONCERNED. ITINERARY AS OUTLINED SUBJ TO CONFIRMED BOOKINGS SF712 AND SF713
2. REQUEST R AND Q AT WG 03-08 MAY INCL. ACK WITH THANKS R AND Q, U-DRIVE STAFF CAR, AND ALL OTHER ARRANGEMENTS MADE CFB EDMONTON.
3. REQUEST ROOM RESERVATIONS MADE EXPLORER HOTEL YELLOWKNIFE 14-15 MAY INCL.
4. LOOK FORWARD TO SEEING YOU ALL
BT
#0616

MON. and TUES.

NNNN
PSE ACK TKS

G DIV YK ACKS UR MRSG THKS

CIPHER MESSAGE

FILE NO.
DOSSIER Nº
REQUESTED BY
DEMANDEUR
REMARKS
REMARQUES
CANCEL
ANNULEZ
ORIGINATO
ORIGINATE
RCMP GRC-701 (5/

BF this please to CIBO 74-05-11 Thanks

C.D.

3 copies enclosed.

000000

#46

FEB 8 7 14 AM '79

009 RELAY OTT1 FEB 08

OTT002 UU
RR RCW

OTT002 UU
RR RCCWCP
DE RCCWC 0417 0381622
ZNR UUUUU
R 062300Z FEB 79 ZEX
FM NRHQ OTTAWA
TO RCWOIA/AIRCOM WINNIEG
RCWDQ/NRHQ YELLOWKNIFE
RCWDG/CFB EDMONTON
RCWDG/408 SQN NAMAO
RCWDG/435 SQN NAMAO
RCWDG/440 SQN NAMAO
RCWDG/447 SQN NAMAO
RCWDQ/440 SQN DET YELLOWKNIFE
RCWDP/RCMP YELLOWKNIFE
ZEN/MR BRUCE STUART, WHITESHELL NUCLEAR RESEARCH ESTABLISHMENT
PINAWA MAN
BT
UNCLAS DHIST 019
ATTN: LCOL MORRIS AIRCOM HQ LCOL BUTCHART NRHQ
CO CAC EDMONTON MAJ W. WEST, MILITIA EDMONTON MAJ V KEATING,
EDMONTON CAPT J LYNE EDMONTON CFB FOR COMD, SQNS FOR CO
SUBJ: OPERATION MORNING LIGHT
1. PROPOSE SENDING DHIST OPIFOR SUBJ OPERATION CAPT CA (DICK)
MORRISON TO WINNIPEG, PINAWA, EDMONTON AND YELLOWKNIFE FOR THE

Helicopter pilot during exercise

PAGE 2 RCCWC 0417 UNCLAS
PURPOSE OF CONDUCTING INTERVIEWS WITH KEY CF, AECL, AND
RCMP PERSONNEL IN MAY 79.
2. PROPOSED ITINERARY FOLLOWS (TIMES LOCAL).

	DEP		ARR
SF712	OW 031315	WG	031615
SF712	WG 081715	ED	081810
	ED 140900	ZF	141300
	ZF 160800	ED	161200
SF713	ED 161330	OW	162010

3. THIS PROPOSAL IS DEPENDENT ON AVAILABILITY OF
ADDRESSEES. PLEASE INDICATE IF THESE DATES/TIMES SUITABLE. IF
SO WILL MAKE BOEING RESERVATIONS
4. WHILE

IN WG PLAN VISIT WHITESHELL NUCLEAR RESEARCH
ESTAB AT PINAWA. WOULD MUCH APPRECIATE STAFF CAR FOR THIS ON
MON 7 MAY 79. HAVE VALID DND 404.
5. RQST ASSISTANCE NAMAO SQN OR ZF DET IN GETTING A
RIDEFROM ED-ZA-ED ON INDICATED DATES. OUR TD FUNDS LIMITED
SO PWA NOT REALLY POSS.
6. WOULD APPRECIATE MEETING AND CONDUCTING TAPED INTERVIEWS ?
WITH ANYONE WHO HAS SOMETHING OF INTEREST TO CONTRIBUTE TIME

PAGE 3 RCCWC 0417 UNCLAS
PERMITTING, OF COURSE. ALSO WOULD APPRECIATE ADDRESSEES SUSSESTIONS
FOR KEY INTERVIEWS
7. REPLY DHIST ATTN CAPT MORRISON
BT
#0417

Director of History
DND HQ
Tenth Floor
Mackenzie Building
Ottawa, Ontario
K1A 0K2

May wish to see CO
but probably members and
on the ice or at other
times as suspect continuation

NNN
SE ACK

29-02-08
O/c C.A.B.
Pls ascertain from Col. Butchard
what this is all about.

All copies attached.

G DIV ACK MSG THANKS KKK

No further action necessary now.

Bietenholz keeps us in the picture time lets please

000000

Re: Cosmos 954 - Claim
Against the USSR

O.C. YELLOWKNIFE SUB/DIVISION

FORWARDED 79-01-02 for your information. Please refer any calls in this regard accordingly.

Original Signed by
C.J. Dent, Supt.,
Officer in Charge,
Criminal Investigation Branch

"G" DIV.

VRK/dh

Government of Canada / Gouvernement du Canada

MEMORANDUM NOTE DE SERVICE

TO / A: OIC LIAISON BRANCH

FROM / DE: OIC SECURITY SYSTEMS BRANCH

SECURITY CLASSIFICATION - DE SÉCURITÉ	
OUR FILE - N/RÉFÉRENCE	HQ-485-35
YOUR FILE - V/RÉFÉRENCE	
DATE	19-12-78

SUBJECT / OBJET: COSMOS 954 - CLAIM AGAINST THE USSR

Attached is a self-explanatory letter from the Assistant Under-Secretary of State for External Affairs, dated 78 Dec 14 regarding Cosmos 954.

2. As you may be aware, the Force was involved to a limited extent in the cleanup operation of Cosmos 954 in the Northwest Territories. As pointed out by Mr. Taylor, the Canadian Government is about to press a claim against the USSR and, should anyone enquire into this incident, i.e. Cosmos 954 and/or the claim, they should be referred to the Secretary of State for External Affairs.

F.F. Fedor, Supt.
OIC Security Systems Branch

Att.

cc: DCI (Federal Policing Branch);
C.O. "G" - Yellowknife

O/C C.I.B.
& A.I.P.
O/C

For your info. should we be in receipt of any enquiries. Possible client should also alert O.C. Yellowknife

S/Dir.

78.12.29

000000

CSSB STANDARD FORM 177

Office of
The Under Secretary of State
for External Affairs

Canada

Cabinet du
Sous-Secrétaire d'État
aux Affaires extérieures

OTTAWA K1A 0G2

December 14, 1978

Dear Inspector Jenkin,

The Prime Minister and most of the Ministers to whom the Memorandum and annexed legal studies on the Cosmos 954 claim were submitted have now approved the proposals made by officials contained in this material. Pursuant to the agreement reached at the meeting of the Interdepartmental Committee on Cosmos 954 held on September 29, 1978, officials in the Department of Justice and this Department have been preparing the actual claim document.

As we approach the time when the claim will be presented to the USSR, and in the expectation of a period of diplomatic negotiations on the claim, you will appreciate the need for caution in public statements. There should be one voice for statements on the claim in order to prepare most effectively for presentation of the case to the USSR. As this Department will have the primary responsibility for conducting the negotiations with the USSR, it should also have the responsibility of responding to all future inquiries on the claim. For this reason, I am asking for the cooperation of all Departments and Agencies that have been involved in aspects of work on the claim to ensure that inquiries with respect to the status of the claim are referred to the Secretary of State for External Affairs or this Department, as appropriate, for consideration and reply.

If representatives of your Department are pressed to answer inquiries, they could respond that as the claim will soon be the subject of diplomatic negotiations between Canada and the USSR, all comments about it are being handled by the Department of External Affairs.

Yours sincerely,

J.H. Taylor

J.H. Taylor
Assistant Under-Secretary

Inspector T.C. Jenkin
Office in Charge
Security Policy Section
Security Systems Branch
RCMP
Vedic Building, Room 118
720 Belfast Road
OTTAWA K1A OR2

Bag 000,
Yellowknife, N.W.T.
X0E 1H0

"G" DIVISION 78G-000-2

78-12-14

Captain C.A. MORRISON,
Directorate of History,
National Defense Headquarters,
OTTAWA, Ontario
K1A 0K2

Dear Sir:

Re: Cosmos 954 Incident
Operation Morning Light

Your message DHIST223 of December 8, 1978 refers.

The following members were involved in guarding the satellite debris at the places indicated. All times given are approximate only:

1. MACLEOD BAY (SATELLITE I)

Arrived: 3:30 p.m. 30 JAN 78 Departed: 12:30 p.m. 3 FEB 78
Reg. No. 31538 Cst. Wendall OTTMAN
Reg. No. 29706 Cst. Reginald REINHARDT

Arrived: 12:30 p.m. 3 FEB 78 Departed: 2:30 p.m. 5 FEB 78
Reg. No. 32913 Cst. Roland WOODS
Reg. No. 30406 Cst. Willem LUCHTMEIJER

2. WARDEN'S GROVE (SATELLITE II)

Arrived: 12:00 noon 30 JAN 78 Departed: 4:00 p.m. 5 FEB 78
Reg. No. 31244 Cst. Harold RAYNER

Arrived: 10:00 a.m. 31 JAN 78 Departed: 4:00 p.m. 5 FEB 78
Reg. No. 32913 Cst. Robert GRINSTEAD

Arrived: 12:00 noon 4 FEB 78 Departed: 3:30 p.m. 7 FEB 78
Reg. No. 29766 Cst. Austin MACKENZIE
Reg. No. 33844 Cst. Andrew BOWDEN

..../2

3. SNOWDRIFT

Arrived: 9:30 a.m. 10 FEB 78 Departed: 3:30 p.m. 10 FEB 78
Reg. No. 27081 Cpl. Larry GREBER

Arrived: 3:30 p.m. 10 FEB 78 Departed: 4:30 p.m. 13 FEB 78
Reg. No. 30406 Cst. Willem LUCHTMEIJER

4. FORT RELIANCE PATROL

Done by Reg. No 27081 Cpl. Larry GREBER on 30 JAN 78 between approximately 10:30 a.m. and 4:00 p.m. to notify people in the area of possible dangers.

5. ESCORTING OF ADVENTURERS FROM WARDEN'S GROVE

From: 3:00 p.m. 29 JAN 78 to 7:30 p.m. 29 JAN 78
Reg. No. 27943 Cst. Leon WISHNOWSKI
From: 3:00 p.m. 29 JAN 78 to 8:30 p.m. 29 JAN 78
Reg. No. 31538 Cst. Wendall OTTMANN

I trust the foregoing information is in accordance with your requirements. However if we may be of further assistance, please contact us at your convenience.

C.J. Dent, Superintendent,
Officer in Charge,
Criminal Investigations Branch

VRK/dh

NAKUCUUKCAVVVVVVVVVV' 'VVVVVVVVVVVVVVVVVV GGE 22AGA105 UU

RR RCWDC

DEC 8 15 20 '78

IE EC 0222 3411504

DEC 8 20TH '78

ZNR UUUUU

R 061550Z DEC 78

FM NDEC OTTAWA

TO RCMP YELLOWKNIFE

ET

UNCIAS DEIST 223

ATTN: SUPERINTENDENT

SUBJ: MORNING LIGHT

REF: LETTER DENT-MORRISON 78C-000-229 SEP 78

1. THANKS YOUR LETTER REF ABOVE. WOUID APPRECIATE RANKS PIUS FIRST ANT LAST NAMES CF MEMBERS INVOLVED IN GUARDING COSMOS DEBRIS MCLEOD BAY AND WARDENS GROVE. ALSO DATES/TIMES CF ROTATION

2. SIMILARLY RANKS PIUS FIRST AND LAST NAMES ESCORTS FOR ADVENTURERS, FORT RELIANCE SURVEYOR, ANT GUARDS SNOWDRIFT AREA

3. MANY THANKS YOUR CCOP

ET

#0222

28.12.11

B/F satellite file for info

000000

TRANSIT SLIP **FICHE DE SERVI**

Date

TO / À

FROM / DE

Comments	*Commentaires*	Make File(s)	*Dossier(s) à ouvrir*
Perusal — No Action Required	*Pour information — aucune suite requise*	Return with Current File	*Retourner avec le dossier courant*
Examination and Action	*Pour examen et suite*	Check Records	*Vérifier les archives*
Prepare Reply	*Réponse à rédiger*	Instructions	*Directives*
Prepare Brief	*Exposé à préparer*		
See Sender	*Voir l'expéditeur*		

REMARKS / COMMENTAIRES

29560 Cst. Jack T.R. DRYSDELLE

(Sect I) McLeod Bay - 2 Members In 78-01-30
(Rotation/Relief) Out 78-02-05 at 2:30 Pm -

Escorts for Warden's Grave Adventurers:
27943 Cst Leon V. WISHNOWSKI 29 Jan 78 -
31538 Cst. WENDAHL BLOTTMANN - 30 Jan 78

REPONSE / RÉPONSE

(Sect II) Warden's Grave - One Member 78-01-30
Secondon 78-01-31
Withdrawn 78-02-06 - One Rotation during
Period (on 4 Feb-78) out at 2:30 Pm - 6 Pm.
30406 Cst. William HUCHTMEIJER - 12 Noon 3 Feb-78 to 3 Pm - 5 Feb 78

Snowdrift One Member Snowdrift 78-02-10
+ replaced some Pers by Y.K. members
until 78-02-13. / /
30406 Cst William HUCHTMEIJER 4:Pm 10 Feb 78 to 4:Pm-13 Feb-78
5-ord Reliance Patrol - 78-01-30

000000

Robert Skinner

Warden's Grave: SA TII.

32913 CST ~~3 1556 C.S.T. Wendall O'Hanlon~~ J.C. GRANSTEAD
In 10:AM 78-01-30 Out 4:PM 78-02-05

31244 C.S.T. Harold W. RAYNER
In 12 NN 78-01-30 Out 4:PM 78-02-05

29766 C.S.T. Austin A. MACKENZIE
In 12:NN 78-02-04 Out 3:20PM 78-02-08

33844 C.S.T. Andrew A. BOWDEN
In ~~78~~ 12:NN 78-02-04 Out 3:20PM 78-02-08

Snowdrift:

27081 C.P.L. Larry A. GREBER
From 9:30AM 78-02-10 TO 3:30PM - 78-02-10

30406 C.S.T. William LUCHTMEIJER
From ~~12:00~~ 3:30 PM 78-02-10 TO: 4:30 PM 78-02-13

Fort Reliance Patrol: 78-01-30

27081 C.P.L. Larry A. GREBER.
From Approx 10:30 AM 78-01-30 TO Approx 4:00PM 78-01-30

C.V.L. Mann
Manpower & Imm. Man

Cpl Rowbotham
Baker

MacLeod Bay - (Sat I) Wendall OTTMANN
31538 CST. ~~Jack J.K. DRYSDELL~~
In - 3:30PM - 78-01-30 Out - 12:15PM 78-02-03
CST. Reginald REINHARDT
In 3:30PM 78-01-30 Out 12:15PM 78-02-03
32913 CST. R ~~J.GRINSTEAD~~ WOODS
In 12:15PM - 78-02-03 Out 2:30PM 78-02-05
30406 CST. Willem LUCHTMEIJER
In 12:15PM. 78-02-03 Out 2:30PM - 78-02-05

Escort & Guard Adventurers
27943 CST LEON O. WISHNOWSKI
From 3:00PM. 78-01-29 TO 7:30PM. 78-01-29
31538 CST. Wendall OTTMANN
From 3:00PM. 78-01-29 TO: 8:30PM 78-01-29

TRANSMITTAL AND DIARY DATE REQU' / F 'ULE D'ENVOI ET DEMANDE DE LA DATE .GENDA

TO — *AU*

C.O. / *Commandant* "G" Div.

O.C. / *Commandant* S/Div.

I/C / *C/D* Det.

FROM — *DU*

C.O. / *Commandant* Div.

O.C. / *Commandant* S/Div.

I/C / *C/D* Det.

Security Policy Sec
"P" Dir. OTT

Date: 78.11.02

HQ File No. — *Dossier de la 'DG' n°*: HQ 485-35

Div. File No. — *Dossier de la div. n°*: 484-000-2

S/Div. File No. — *Dossier de la S/div. n°*:

Det. File No. — *Dossier du dét. n°*:

Copies to — *Copies au*

Re: Operation Morning Light

☑ **Correspondence attached — Dated** *Ci-joint le rapport en date du* 78.10.18

☐ **Warrant attached** *Mandat ci-joint*

☐ **Summons(es) Subpoena(e) attached** *Citation(s) mandat(s) de comparution ci-joint(s)*

☑ Information / *Renseignements*

☐ Action / *Suites*

☐ Enclosures / *Pièces jointes*

☐ Service/Execution required / *A signifier/A exécuter*

☐ Not served for reasons indicated / *Non signifié pour les raisons indiquées*

☐ Served — Original and Affidavit returned / *Signifié — original et affidavit retournés*

DIARY DATE EXTENTION

Extend to / *Prolorigée jusqu'à* ⇨

☐ Disposition of exhibits / *Disposition des pièces à conviction*

☐ Further enq. neg. / *Autre recherche nulles*

☐ Awaiting instructions / *Dans l'attente de directives*

☐ Trial date not set / *Date du procès non fixée*

☐ Report overdue / *Rapport en retard*

☐ Unable to execute warrant (summons) / *Impossibilité d'exécuter le mandat (sommations)*

☐ Fine and costs paid / *Amende et frais payés* — Date

☐ Adjourned to / *Renvoyée au* — Date

☐ Awaiting payment of fine & costs / *Dans l'attente du paiement de l'amende et des frais*

REMARKS — *REMARQUES*

O/c c2 B

Info: 2 note copies in duplicate: possibly O.C. may like to peruse

Copy sent 78.11.07

78-11-07 78.11.07

2000000 4

Atomic Energy Control Board
Commission de contrôle de l'énergie atomique

News Release
Communiqué

NEWS RELEASE 78-11

FOR IMMEDIATE RELEASE
October 18, 1978.

PHASE II OF COSMOS SATELLITE SEARCH ENDS

OTTAWA - The Atomic Energy Control Board (AECB) announced today that Phase II of the search and recovery operation for debris from the Russian satellite, Cosmos 954, has ended. No further search and recovery program is anticipated.

Phase II, extending from mid-July to mid-October, was carried out by James F. MacLaren Ltd. and associated firms, under AECB direction. In addition to re-examination of areas searched in the first phase, winter operations in the Northwest Territories, the summer work extended into northern Saskatchewan and Alberta in an effort to locate and remove tiny radioactive particles that drifted south of the main satellite re-entry trajectory over Great Slave Lake.

The Phase I winter operation began on Jan. 24, 1978, following the early-morning plunge to earth of the satellite over the frozen northland, and continued to mid-April. The first phase was carried out entirely by federal agencies, assisted by the U.S. Department of Energy and affiliated experts, under the joint leadership of the Department of National Defence and the AECB. A prime role was played by the Geological Survey of Canada with its unique airborne detection expertise.

more...

A total of less than 100 kilograms of material were recovered. Included in the findings were a number of cylinders and short rods of beryllium, some of them appearing remarkably fresh and unaffected by the temperature of re-entry, but others being partially destroyed.

A number of flakes and chips, mostly of highly oxidized steel, presumably representing original structural members of the satellite, were recovered. There was also an incomplete assembly of control rods and tubes, about one metre long, and one section of stovepipe-shaped tubing roughly 50 cm by 25 cm.

The rod-and-tube assembly fell on the frozen surface of the Thelon River, northeast of Great Slave Lake, and was found in early February by a group of men wintering in the area. The stovepipe-shaped tube was spotted on the ice at the east end of Great Slave Lake and was the only piece of debris located that was not radioactive. This fragment is being loaned by the AECB to the National Museum of Science and Technology in Ottawa for display purposes.

In addition, approximately 3,000 tiny particles were detected and removed from towns and settlements, roads and railroads, camps and lodges. These particles, some so small they cannot be seen by eye, appear to be remnants of the fuel of the small nuclear reactor known to have been the source of power on board the satellite.

The radiation levels of recovered debris varied widely. The field from one small fragment was 200 roentgens per hour near contact when found, a level sufficient to kill a person in continued contact with it for a few hours. At the other end of the scale, the tiny particulate sources measured only a few thousandths or millionths of a roentgen per hour.

more...

Most of the Phase II effort was expended on the recovery of the tiny particles. Although minute, their radioactivity has been strong enough that in view of the potential risk to people if they were accidentally inhaled or ingested, it was considered appropriate to locate and remove as many as possible.

The solubility of the particles was unknown at first, but as laboratory test work by the Department of National Health and Welfare later showed, they were in general relatively insoluble. With the radioactivity levels recorded, it was estimated that if a particle were ingested it would, in the normal time it would take to pass through the body, offer no greater radiation dose than would a medical X-ray examination of the gastric area.

For external hazards, it appeared that risks from the particles were low or non-existent in the normal course of events, but that there might be some risk to people if, for example, a particle were lodged in clothing, offering prolonged close contact.

In view of the internal and external risk considerations, it was agreed to search all frequented areas and to remove all particles whose presence was detected. A start was made in the towns in the Northwest Territories during winter, and then during the summer very detailed surveys of streets, yards, schools, playgrounds, water reservoirs, etc., were made in the expanded area embracing northern Saskatchewan and Alberta as well. Fishing camps, roads and railroad beds were also investigated.

Localities visited in the Northwest Territories included Hay River, Pine Point, Fort Resolution, Snowdrift, Reliance, and Fort Smith, in all of which a significant number of particles were found, and Fort Providence and Enterprise where nothing was detected.

more...

In Saskatchewan, Camsell Portage and Fond-du-Lac were searched without turning up anything. In Alberta, nothing was discovered at Embarras Portage, but a few minute particles were found and removed from Fort Chipewyan, Hay Camp and Fitzgerald.

It is recognized that particles fell far and wide over the area south of Great Slave Lake. Indeed, several uranium prospecting parties turned up particles during their detailed studies in the bush, and this was one of the reasons for extending the search area in the summer phase. Prospectors were advised that if any particles were found, they should be marked, authorities notified, and the location avoided.

Much of the country in the search area is underlain by rock with high natural radioactivity, a fact that increased the problems in the search for debris.

The particles of reactor core are steadily weakening in radioactivity as time passes. In September it was found that radiation levels were down to one-fifth of what they had been when the first measurements were made. This means that the particles left in tundra, muskeg and bush areas will simply decay to below natural background levels and no longer be detectable.

Furthermore, the particles are far enough apart that the chance of direct encounter is very slight. Particles that fell on lake or river ice will have long since settled to the bottom, becoming part of the natural sediment.

With respect to environmental concerns, the data from solubility studies will apply to wildlife as well as to humans. Calculations suggest that there is no need for concern, and in an effort to verify this, the federal Department of the Environment is sampling and analyzing fish from Great Slave Lake, and the Department of National Health and Welfare will be monitoring caribou meat from migrating herds.

more...

National Health and Welfare has also been monitoring ground level air at Hay River and water supplies in townsites and has found no detectable contamination.

A final report on the clean-up operation is in preparation. This will provide details of the field work as well as the analytical studies carried out by Atomic Energy of Canada Ltd. at the Whiteshell Nuclear Research Establishment (WNRE) on a variety of debris to identify health and safety hazards.

With the exception of the non-radioactive stovepipe fragment sent to Ottawa, and some particles consumed in solubility testing in Ottawa, recovered debris is stored at WNRE's waste management facility at Pinawa, Man.

A claim is being prepared for presentation to the U.S.S.R. seeking some cost recovery for the massive clean-up operation. Pending action on the claim, all debris is considered as evidence.

The AECB is grateful to the governments of Saskatchewan, Alberta and the Northwest Territories for the cooperation and assistance provided during the search and recovery program.

- 30 -

Contact:

Hugh J.M. Spence
Chief, Office of Public Information
AECB, Ottawa
(613) 995-5894

TRANSIT SLIP **FICHE DE SER**

Date 78-10-30

TO / À [redacted] Insp. Latremouille

FROM / DE S/Sgt. Clark

Comments	*Commentaires*	Make File(s)	*Dossier(s) à ouvrir*
Perusal — No Action Required	*Pour information — aucune suite requise*	Return with Current File	*Retourner avec le dossier courant*
Examination and Action	*Pour examen et suite*	Check Records	*Vérifier les archives*
Prepare Reply	*Réponse à rédiger*	Instructions	*Directives*
Prepare Brief	*Exposé à préparer*		
See Sender	*Voir l'expéditeur*		

REMARKS / *COMMENTAIRES*

Read your call from Sgt. Cooper, Fin. Man. Br. Ottawa, wanting to know if we have incurred any further costs re: Comox. I replied NO.

M.C.

REPLY / *RÉPONSE*

Comox 954

P/K

@

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TRANSMITTAL AND DIARY DATE REQUEST
F ULE D'ENVOI ET DEMANDE DE LA DATE . GENDA

TO — *AU*

C.O. *Commanda* 'G' Div.

O.C. *Commandant* S/Div.

I/C *C/D* Det.

FROM — *DU*

C.O. *Commandant* Div.

O.C. *Commandant* S/Div.

I/C *C/D* Det.

Security Policy Section 4' DIR!

Date 78.09.29

HQ File No. — *Dossier de la 'DG' n°* HQ 485-35

Div. File No. — *Dossier de la div. n°*

S/Div. File No. — *Dossier de la S/div. n°*

Det. File No. — *Dossier du dét. n°*

Copies to — *Copies au*

☑ **Correspondence attached — Dated** 78.09.25
Ci-joint le rapport en date du

☐ **Warrant attached**
Mandat ci-joint

☐ **Summons(es) Subpoena(e) attached**
Citation(s) mandat(s) de comparution ci-joint(s)

☑ Information
Renseignements

☐ Action
Suites

☐ Enclosures
Pièces jointes

☐ Service/Execution required
A signifier/A exécuter

☐ Not served for reasons indicated
Non signifié pour les raisons indiquées

☐ Served — Original and Affidavit returned
Signifié — original et affidavit retournés

DIARY DATE EXTENTION

Extend to
Prolorigée jusqu'à

☐ Disposition of exhibits
Disposition des pièces à conviction

☐ Further enq. neg.
Autre recherche nulles

☐ Awaiting instructions
Dans l'attente de directives

☐ Trial date not set
Date du procès non fixée

☐ Report overdue
Rapport en retard

☐ Unable to execute warrant (summons)
Impossibilité d'exécuter le mandat (sommations)

☐ Fine and costs paid
Amende et frais payés
Date

☐ Adjourned to
Renvoyée au
Date

☐ Awaiting payment of fine & costs
Dans l'attente du paiement de l'amende et des frais

REMARKS — *REMARQUES*

Re: Operation Morninglight

78-10-04
Copy to O.C. Y.K. Info
-SIB Info

OA

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RCMP GRC A-151-1 (3/73) 7530-21-029-4502

Atomic Energy Control Board
Commission de contrôle de l'énergie atomique

News Release
Communiqué

NEWS RELEASE 78-9
FOR IMMEDIATE RELEASE
September 25, 1978

NORTHERN SASKATCHEWAN GETS CLEAN BILL
RE RADIOACTIVE DEBRIS FROM COSMOS 954

OTTAWA - The Atomic Energy Control Board (AECB) announced today that it has completed a survey of the northwest section of the province of Saskatchewan for radioactive particles from the Soviet Cosmos 954 satellite which re-entered the earth's atmosphere on January 24. The lack of any finds in inhabited areas leads to the conclusion that there is no identifiable risk to the general public in the area due to contamination from the nuclear-powered spacecraft.

The AECB included the Lake Athabasca region in its summer search and recovery operations following reports this past spring that uranium prospectors had discovered a few isolated particles northwest of the lake in Saskatchewan, and in a few areas around the western end of the lake in Alberta.

The search area was extended east of the discoveries to see how far airborne particles might have drifted in that direction.

The AECB's program manager for the summer operations, James F. MacLaren Ltd., conducted thorough surveys of selected inhabited areas and communications routes as far east as Fond-du-Lac on the eastern tip of Lake Athabasca.

(more)

No particles were found at Fond-du-Lac, 90 kilometers to the east of Uranium City on the northern shore of the lake, nor were any detected in the community of Camsell Portage, 40 kilometers west of Uranium City. Uranium City itself was not searched as it is already subject to a radiation clean-up program related to uranium mine waste rock and natural radioactive occurrences.

Prospectors may continue to encounter small and isolated particles in the regions south and west of Lake Athabasca, but the AECB reports that radiation levels have decreased significantly since the satellite plunged to earth eight months ago, such that the radioactivity from the particles is not much greater than normal background in an area known for uranium deposits. The radioactivity of any particles undetected in remote areas will continue to decrease to insignificant levels.

Search operations are continuing in northern Alberta and the Northwest Territories south of Great Slave Lake. The current activities, a follow-up to the intensive winter program conducted between January and April, are scheduled to end by mid-October.

- 30 -

Contact: Hugh J.M. Spence
Chief, Office of Public Information
AECB, Ottawa
(613) 995-5894

[redacted]
Bag 5000,
Yellowknife, N.W.T.
X0E 1H0

78G-000-2

September 29, 1978.

Captain C.A. Morrison,
Directorate of History,
National Defence Headquarters,
Ottawa, Ontario.
K1A 0K2

Dear Sir:

Re: COSMOS 954 Incident

In response to your request by telephone on September 21, 1978 please find attached summary of R.C.M. Police activities concerning the captionally noted incident.

If we may be of further assistance, please contact us at your convenience.

Yours truly,

C.J. Dent, Superintendent,
Officer In Charge,
Criminal Investigation Branch

Attachments.

VRK;bjs

SUMMARY OF RCMP INVOLVEMENT
COSMOS 954 INCIDENT

As a result of the crash of COSMOS 954 on 78-01-24 our members were involved as follows.

78-01-29

Satellite debris located at McLeod Bay on Great Slave Lake (Fort Reliance area). On 78-01-30 two members were sent in to assist DND personnel in guarding scene. Members were withdrawn from site on 78-02-05 when basic clean-up completed. Members at site were rotated during this period.

Members provided escort for the four possibly contaminated persons at Warden's Grove when they were brought to Yellowknife for examination. This consisted of an escort from the airport to the hospital and a check of the hospital for security purposes prior to DND personnel taking over the guarding of these individuals.

78-01-30

Satellite debris located in Warden's Grove area. One member sent in with DND on 78-01-30 to guard scene and a second member was sent in on 78-01-31 to assist. These members were withdrawn from the site on 78-02-06 when military camp was firmly established to conduct clean-up and further search. Members at site were rotated during this period.

A member from Snowdrift Detachment patrolled to Fort Reliance and cabins in the surrounding area via police aircraft to inform people of this matter and warn them to stay clear of the affected area.

..../2

78-01-31

Some of the radioactive material was brought into Yellowknife for shipment to southern points. Our members guarded these exhibits from approximately 1800 hours 78-01-31 to approximately 1030 hours 78-02-01 when it was flown out.

78-02-10

Radioactive material located in area approximately four miles west of Snowdrift, N.W.T. on Great Slave Lake. Member of Snowdrift Detachment to scene forthwith and replaced later same day by member of Yellowknife Detachment who remained at site until 78-02-13.

Miscellaneous:

In addition to the foregoing specific incidents involving our members, daily liaison was maintained with local military personnel as well as members of Atomic Energy Control Board. This included meetings during staging segments of the operation. Administrative and Operational personnel were also required from time to time to arrange for guards at debris sites, arrange for aircraft, check out reports concerning the sighting of the satellite and provide transportation for members involved in the operation.

R.C.M.P. Twin Otter aircraft was utilized to move the R.C.M.P. member to and from the various locations where they were required to guard the scene. Our ski-equipped single otter was utilized in the Snowdrift - Fort Reliance areas to enable a member to contact all people living out on the land and make them aware of this incident and not to handle any debris if they should happen to find same, etc.

Our members at Detachments bordering the south shore of Great Slave Lake are also assisting the Atomic Energy Control Board by distributing dosimeters to persons travelling in the areas along the path of COSMOS 954. This enables any person(s) to identify radioactive materials encountered during travel in the bush.

SUMMARY OF RCMP MEMBER INVOLVEMENT
COSMOS 954 INCIDENT

As a result of the crash of COSMOS 954 on 78-01-24 our members were involved as follows.

78-01-29

Satellite debris located at McLeod Bay on Great Slave Lake (Fort Reliance area). On 78-01-30 two members were sent in to assist DND personnel in guarding scene. Members were withdrawn from site on 78-02-05 when basic clean-up completed. Members at site were rotated during this period.

Members provided escort for the four possibly contaminated persons at Warden's Grove when they were brought to Yellowknife for examination. This consisted of an escort from the airport to the hospital and a check of the hospital for security purposes prior to DND personnel taking over the guarding of these individuals.

78-01-30

Satellite debris located in Warden's Grove area. One member sent in with DND on 78-01-30 to guard scene and a second member was sent in on 78-01-31 to assist. These members were withdrawn from the site on 78-02-06 when military camp was firmly established to conduct clean-up and further search. Members at site were rotated during this period.

A member from Snowdrift Detachment patrolled to Fort Reliance and cabins in the surrounding area via police aircraft to inform people of this matter and warn them to stay clear of the affected area.

..../2

78-01-31

Some of the radioactive material was brought into Yellowknife for shipment to southern points. Our members guarded these exhibits from approximately 1800 hours 78-01-31 to approximately 1030 hours 78-02-01 when it was flown out.

78-02-10

Radioactive material located in area approximately four miles west of Snowdrift, N.W.T. on Great Slave Lake. Member of Snowdrift Detachment to scene forthwith and replaced later same day by member of Yellowknife Detachment who remained at site until 78-02-13.

In addition to the foregoing specific incidents involving our members, daily liaison was maintained with local military personnel as well as members of Atomic Energy Control Board. This included meetings during staging segments of the operation. Administrative and operational personnel were also required from time to time to arrange for guards at debris sites, arrange for aircraft, check out reports concerning the sighting of the satellite and provide transportation for members involved in the operation.

● HANDWRITE – *ÉCRIRE À LA MAIN*

Classification | File No. – *N° du dossier*

	TO	FROM – *DE*	DATE
1			
2	O/c C.A.B.	C.O.	78-09-21
3			
4			

SUBJECT – *SUJET* 78H0002

☐ Comments *Commentaires*
☐ Perusal – No action required *Pour information – aucune suite requise*
☑ Examination and Action *Pour examen et suite*
☐ Prepare Reply *Réponse à rédiger*
☐ Prepare Brief *Exposé à préparer*
☐ See Sender *Voir l'expéditeur*
File
☐ Make File(s) *Dossier(s) à ouvrir*
☐ Return with Current File *Retourner avec le dossier courant*
☐ Check Records *Vérifier les archives*

REMARKS – *COMMENTAIRES*

REPLY – *RÉPONSE*

Re: Soviet Satellite

Rec'd a N.D. call from Capt. C.A. Morrison of D.N.D. HQ, Ottawa. He is i/c Directory of Hestory (Historian) for D.N.D. & will be writing up the story of the Russian Cosmo which crashed in N.W.T., last winter.

This story will be for historical purposes. What he wants is a run down on R.C.M.P. involvement. I don't feel we should send copies of our reports, etc, however as I related to him verbally our involvement was rather low-key once D.N.D.

A-5 (4/77) 7530-21-029-4767

ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

See ml

TRANSIT SLIP / ***FICHE DE SERVICE***

PA	Initial - Initiales	Date
		000000

● HANDWRITE — *ÉCRIRE À LA MAIN*

Classification	File No. — *N° du dossier*

	TO	FROM — *DE*	DATE
1			
2			
3			
4			

SUBJECT — *SUJET*

- ☐ Comments — *Commentaires*
- ☐ Prepare Reply — *Réponse à rédiger*
- ☐ Make File(s) — *Dossier(s) à ouvrir*
- ☐ Perusal — No action required — *Pour information — aucune suite requise*
- ☐ Prepare Brief — *Exposé à préparer*
- ☐ Return with Current File — *Retourner avec le dossier courant*
- ☐ Examination and Action — *Pour examen et suite*
- ☐ See Sender — *Voir l'expéditeur*
- ☐ Check Records — *Vérifier les archives*

REMARKS — *COMMENTAIRES*

(2)

became aware of established these operation known as "Warning Light"

There is no rush on matter as Capt Morrison has no dead-line to meet & merely writing it up for historical purposes. He apparently has made no contact with our HQ in Ottawa.

Morrison's Ph No. 992-3757

REPLY — *RÉPONSE*

A-5 (4/77) 7530-21-029-4767

ROYAL CANADIAN MOUNTED POLICE — GENDARMERIE ROYALE DU CANADA

TRANSIT SLIP — ***FICHE DE SERVICE***

PA	Initial - Initiales	Date
		000000

SEP 26 8 09 AM '78

RCMP YK

CI ROUTINE OTT SEPT26 UNCLAS

G DIV YK

LO/78 REUR GC 1B463/3 MAILING ADDRESS OF CPT. C.A. MORRISION

DIRECTORATE OF HISTORY,

NATIONAL DEFENCE HQ'S,

OTTAWA, ONTARIO.

K1A 0K2

COMMR OTT

78.09.26

C.I.B.

RCMP YK

M

OUTGOING MESSAGES — ***MESSAGES SORTANTS***

● INS :TIONS ON REVERSE — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	78G-000-2	V.R. KAWALESKI, CPL.	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3480	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security. CLASSIFICATION *sécuritaire*
ROUTINE		78-09-25	UNCLASSIFIED

FROM *DE* "G" DIVISION

TO *À* COMMISSIONER, OTTAWA

INFO. *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GCIB 463/3 *N° DU MESSAGE ORIGINAL*

ATTN: O.I.C. LIAISON BRANCH

CAN YOU PROVIDE US WITH A MAILING ADDRESS FOR A CAPT. C.A. MORRISON OF D.N.D. H.Q. HE IS APPARENTLY I/C DIRECTORY OF HISTORY (HISTORIAN).

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
C.J. DENT, SUPT., O.I.C. "G" DIVISION C.I.B.	11:35 AM

000000

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Government of Canada / Gouvernement du Canada

MEMORANDUM — NOTE DE SERVICE

TO / À: THE COMMISSIONER, OTTAWA

Attention: D.S.S.

FROM / DE: OFFICER IN CHARGE ADMIN. & PERSONNEL
"G" DIVISION

SECURITY-CLASSIFICATION-DE SÉCURITÉ	CONFIDENTIAL
OUR FILE—N/RÉFÉRENCE	78G-000-2
YOUR FILE—V/RÉFÉRENCE	GS785-47
DATE	78-09-14

SUBJECT / OBJET: Expenditures Attributable to the Cosmos 954 Incident

Your telex FMB/162 and our reply telex GFSS1825/1 refers. Original 1393's and supporting documents are attached.

C.R. Latremouille, Insp.,
Officer In Charge,
Admin. & Personnel

PA PD

ROUTINE CONFIDENTIAL

SEP 13 9 20 AM '78

MA41 ROUTINE OTT2 SEPT13 CONFIDENTIAL

G DIV YK

FMB/162 ATTN: OIC ADMIN. PERSONNEL REUR GFSS/752/1 RE: COSMOS 954 CLAIMS AGAINST THE USSR
PLESE FORWARD ORIGINAL F-93S AND SUPPORTING DOCUMENTS TO THIS HQ AND RETAIN A COPY FOR AUDIT PURPOSES. ALSO ADVISE BY RETURN TELEX THE BATCH NUMBERS AND DATE PROCESSED OF THE OVERTIME CLAIMS AND THE TWO ACCOUNTS. THIS IS NECESSARY TO RETRIEVE THE ORIGINALS FROM THE D.S.O.
COMMR OTT

ACK PLSE

G DIV ACK

CIPHER MESSAGE

O/c A&P & F&S

This is a CLASSIFIED MESSAGE. All copies or references to it must bear the security classification stamped hereon, unless downgraded by proper authority.

OUTGOING MESSAGES — **MESSAGES SORTANTS**

● INSTRUCTIONS ON REVERSE 78G-000-2 ● DIRECTIVES AU VERSO

Time of Receipt — *Heure de réception*	File No. — *N° de dossier* ~~78-09-14~~	Drafter's Name — *Nom du rédacteur* Clark	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section* F.S.S.	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner* Routine	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 78-09-14	Security CLASSIFICATION *sécuritaire* Confidential
FROM *DE* G Div			
TO *À* Comm Ott			
INFO. *POUR RENSEIGNEMENTS*			

ORIGINATORS MESSAGE NO. GFSS 1825/1 *N° DU MESSAGE ORIGINAL*

Rear FMB/162 Original 13935 and
supporting documents in mail.
Batch Nbrs for overtime as F/W5;

G07	78-03-15	Luchtmeijer, W. 30406
G06	78-03-14	Reid, W. D. 30303
G05	78-03-14	Sabey, A.L. 23516
G04	78-03-14	Grinstead, R.J. 32913
		MacKenzie, A.A. 29766
G03	78-02-13	Drisdelle, J.J.R. 29560
		Ottman, W. B. 31538
		Eccleston, J.L. C/1935
G04	78-02-13	Wishnowski, L.V. 27943
G02	78-02-13	Phelan, A 5/396
		Reid, W.D. 30303

One account attached to 1393 in mail

G23	77-07-06	Cardinal Electronic #A150283

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
M C Clark	

000000

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

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C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

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C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Government of Canada / Gouvernement du Canada

ACTION REQUEST / **FICHE DE SERVICE**

TO - *A*
A-PR

Processed 30 June 77

FILE NO. — *DOSSIER N°*

DATE

FROM - *DE*

Batch - G23 July 6/77

	TEL. NO. - *N° DE TEL.*	EXT. - *POSTE*
☐ PLEASE CALL *PRIÈRE D'APPELER*		
☐ WANTS TO SEE YOU *DÉSIRE VOUS VOIR*	DATE	TIME - *HEURE*
☐ WILL CALL AGAIN *DOIT RAPPELER*		
CALL RECEIVED BY *MESSAGE REÇU PAR* ▶		

☐ ACTION *DONNER SUITE*	☐ APPROVAL *APPROBATION*	☐ NOTE & RETURN *NOTER ET RETOURNER*
☐ COMMENTS *COMMENTAIRES*	☐ DRAFT REPLY *PROJET DE RÉPONSE*	☐ NOTE & FORWARD *NOTER ET FAIRE SUIVRE*
☐ MAKE *FAIRE* ..... *COPIES*	☐ SIGNATURE	☐ NOTE & FILE *NOTER ET CLASSER*

Cardinal Cohoctawiy

8-18-72

INV # 3A150283

Ch-Batt

000000

CGSB STANDARD FORM 12d — FORMULE NORMALISÉE 12d

Feb

Batch	Date forwarded	Name + Reg No.		
G09	78-3-15	Luchtmeijer, W.	30406	51.5 ~~22.5~~
G06	78-3-14	Reid, W.D.	30303	34.5 ~~5~~
G05	78-3-14	Dubey, A.L.	23516	26
G04	78-3-14	Grinstead, R.J	32913	8
		Mackenzie, A.A.	29766	17

Jan

G03	78-2-13	Drisdelle, J.J.R.	29560	7.5
		Ottmans, W.B.	31538	13
		Eccleston, J.L.	C/935	11
G04	78-2-13	Wishnowski, L.V.	27943	3.5
G02	78-2-13	Phelan, A.	S/396	11
		Reid, W.D.	30303	48

RESTRICTED SEP. 7 2 39 PM '78

RCMP YK

17 ROUTINE FROB BAY 78-09-07 R E S T R I C T E D

G DIV YK

FB1222/2 ATT CIB UPDATE OPERATION MORNING LIGHT AECB INTEREST CAPE DORSET AREA ON REQUEST PAUL KENNEDY WE ARRANGED HELICOPTER FLIGHT TODAY CAPE DORSET TO POINT OF INTEREST CPL MANTON REPORTS UNABLE TO SEE BOTTOM FURTHER OFF SHORE THAN 10 YDS. UNABLE TO SEE BOTTOM IN IMMEDIATE AREA OF INTEREST, BUT NOTHING CLOSE TO SHORE INFO PASSED TO DR BILL GUMMER AECB OTTAWA NO FURTHER ACTION BY US UNLESS REQUESTED BY AECB OR DND

FROBISHER BAY S/BNB

File
Received 78-09-07

78-09-07

C.I.B.

RCMP YK

OUTGOING MESSAGES | **MESSAGES SORTANTS**

● INSTRUCTIONS ON REVERSE | ● DIRECTIVES AU VERSO

Time of Receipt — Heure de réception	File No. — N° de dossier	Drafter's Name — Nom du rédacteur	Time of Dispatch — Heure d'envoi
	78G-000-2	Clark	
	Br. or Section — Sous-direction ou section: F.S.S.	Phone No. — N° de téléphone	
Precedence for Action Addresses — Priorité pour suite à donner: Routine	Precedence for Infor. Addresses — Priorité pour renseignements	Date: 78-09-01	Security CLASSIFICATION sécuritaire: CONFIDENTIAL

FROM / DE: G D.V

TO / À: Commr Ott

INFO. / POUR RENSEIGNEMENTS

ORIGINATORS MESSAGE NO. GFSS 1752/1 — N° DU MESSAGE ORIGINAL

Reur FMB/144 Originals of overtime claims and accounts held by D.S.O. Original 1393's and supporting documents will be Fwd providing HQ audit unit will accept foto copies on annual audit

KA.

Signature of person releasing message — de l'expéditeur	Time Released (time of signature) — Heure d'expédition (heure de la signature)
M.G.B. Clark.	000000

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

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B) All information addresses usually deferred.

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TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

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B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

AUG 31 12 15 PM '78

SALGTHQBXNA

BV

ROUTINE CONFIDENTIAL

A60 ROUTINE OTT2 AUG31 CONFIDENTIAL

G DIV YK

FMB/144. ATTN OIC ADMIN. AND PERSONNEL
RE COSMOS .954 - CLAIM AGAINST THE USSR. FURTHER TO YOUR CORR DATED 1978-08-04 PLEASE FORWARD ORIGINALS OF THE SUPPORTING DOCUMENTS (OVERTIME CLAIMS F-93S AND ACCOUNTS) TO THIS HQ. THESE ORIGINALS WILL BE RETAINED AT THIS HQ IN THE EVENT WE ARE REQUIRED TO PRODUCE SAME AT A FUTURE DATE

COMMR OTT

P
S
E ACAKA

G DIV ACK

CIPHER MESSAGE

This is a CLASSIFIED MESSAGE. All replies or references to it must bear the security classification stamped hereon, unless downgraded by proper authority.

Copy 263 Destroyed

C

Government of Canada / Gouvernement du Canada

MEMORANDUM NOTE DE SERVICE

TO / À: C.O. "G" Division,
Yellowknife, N.W.T.

FROM / DE: OIC Security Policy Section
'P' Directorate - Ottawa

SECURITY - CLASSIFICATION - DE SÉCURITÉ	
OUR FILE - N/RÉFÉRENCE	HQ-485-35
YOUR FILE - V/RÉFÉRENCE	78G-000-2
DATE	78-08-11

SUBJECT / OBJET: Radiation Dosimeters

Attached is a copy of correspondence from A.E.C.B. dated 78-08-02 regarding the control of dosimeters loaned to inhabitants of the Great Slave Lake district, together with instructions as to the use of the equipment.

2. It is our understanding that the dosimeters have already been shipped to Hay River and that you were previously advised.

T.C. Jenkin, Insp.,
OIC Security Policy Section,
Security Systems Branch

Att.

O/C C.I.B. Info only pls.

O.C. YELLOWKNIFE SUB/DIVISION

FORWARDED 78-08-18 for your information and action as required.

fwd to O.C. Yellowknife for appropriate action

C. J. Dent, Supt.,
Officer in Charge,
Criminal Investigation Branch

78G-000-2

VRK/sp

000000

Atomic Energy Control Board
Commission de contrôle de l'énergie atomique

PLANNING AND ADMINISTRATION DIVISION

Your file *Votre référence*

Our file *Notre référence*

15-200-24-0-0

August 2, 1978

Inspector Terry C. Jenkin
Security Police Section
Royal Canadian Mounted Police
720 Belfast Road
Ottawa, Ontario
K1A OR2

Dear Mr. Jenkin:

This will confirm our telephone conversation yesterday concerning provision of radiation dosimeters to inhabitants of the Great Slave Lake district.

1. After reconsideration of the matter, officials of the Department of Indian and Northern Affairs have agreed that personal dosimeters may be made available, under some control, to residents in the Cosmos 954 "fallout" area. Attached is a copy of a letter stating this; I was advised that the letter was signed on 17 July, 1978.

2. The AECB will maintain a "coordinator" in Hay River during the summer "Phase 2" clean-up operations. The present coordinator, Mr. F.C. Boyd, has been in touch with the Hay River RCMP detachment and reports that no problem is foreseen in handling the dosimeters.

3. RCMP and Mr. Boyd do emphasize, however, that there may be little need to send dosimeters to the six detachments that have previously been discussed. In their opinion, the most sensible place to have a supply of dosimeters is Snowdrift. This is because the natives from there travel in the Artillery Lake area and eastward. The local Chief

.../2

P.O. Box 1046
Ottawa, Canada
K1P 5S9

C.P. 1046
Ottawa, Canada
K1P 5S9

has been asking for dosimeters. I suggest that we can leave it to your people in the area, and to Mr. Boyd or his successors (on roughly a monthly rotation) to decide exactly how to lend out dosimeters from the stock of 36 that I understand are available. They have a better feel for the needs and wishes of local populations than we have, and should have some flexibility to meet these needs.

4. We request that RCMP officers distribute dosimeters in a controlled fashion, i.e. first make some sensible decision as to need for dosimeter based on area of travel and on reliability of person requesting an instrument; keep a record of who receives one and what report he makes, if any; and instruct recipients on life of the batteries and that the instrument is the property of the AECB. Also attached is a brief introduction to the Victoreen dosimeter, and a set of directions for their loan and return. I will send a number of copies of this to our coordinator for use in Hay River and elsewhere as appropriate.

Mr. Boyd will be returning to Ottawa towards the end of this week, and is being replaced by Mr. M.C. White for the month of August.

I hope that the above is satisfactory to you.

Yours truly,

W.K. Gummer
Manager, Planning and
Coordination Division

Encls.

cc: Mr. John Fowler
Chief, Audio Visual and
Exhibits Planning
Public Communications and
Parliamentary Relations Board
Department of Indian and Northern
Affairs

Assistant Deputy Minister
Indian and Northern Affairs

Northern Affairs

Sous-ministre adjoint
Affaires indiennes et du Nord

Affaires du Nord

Mr. A. Kroeger
Deputy Minister

Your file Votre référence

Our file Notre référence

DISTRIBUTION OF POCKET DOSIMETERS TO NORTHERN RESIDENTS

From the beginning of the Cosmos satellite clean-up consideration has been given to making pocket dosimeters available to northern residents to enable them to identify radioactive materials encountered during travel in the bush.

On the basis of information from Atomic Energy Control Board and Health and Welfare Canada we have resisted this as likely to be of little need or value and possibly productive of unwarranted alarm on the part of northerners and unwarranted sensationalized media coverage.

Some time ago an AECB official, while visiting the North, inadvertently made a public statement that these detection units would be available to meet requests, and there has been public demand recently that cannot be denied without possible misunderstanding.

Accordingly, we have agreed to have AECB distribute these units, through the RCMP, on a controlled basis which will serve further to reassure northerners. A total of 36 units will be made available from six RCMP detachments to responsible citizens for use in areas that have not already been searched.

Our department will not be involved in the distribution or public awareness activities with regard to these dosimeters. AECB will make all necessary arrangements. All calls from the media will be referred to them but officials will acknowledge our awareness and support of AECB's efforts.

A.E. Belcourt/cl
July 10, 1978

Ewan Cotterill.

c.c. John Hoyt
Phil Gibson
Dr. W.K. Gummer, AECB

400 Laurier Ave. West
Ottawa, Ontario
K1A 0H4

400, av. Laurier ouest
Ottawa (Ontario)
K1A 0H4

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PERSONAL DOSIMETERS

Description of dosimeter

The Victoreen Model 885 "VIP" Pocket Dosimeter is designed to record the gamma radiation exposure and to give an audible signal at a rate that depends upon the intensity of the radiation.

Pictures of the front and back views of the dosimeter in Figure 1 show the main features that are explained briefly below.

ON-OFF Switch

The instrument must be switched ON in order to work. The ON-OFF switch is protected by two tabs to prevent accidental operation of the switch - it may be necessary to use some sort of narrow tool to operate the switch.

"Press to read" button

When the instrument is "ON", pressing this button will light the exposure display and the battery charge light.

Battery charge light

The light comes on when the instrument is "ON" and the "press to read" button is pushed. This light indicates that the battery is sufficiently charged.

Exposure Display

Three numbers in the display window show the exposure received in 1 milliroentgen (usually shortened to mR) steps up to 999 mR; for example:

a 2 mR exposure would be displayed as 002

a 17 mR exposure would be displayed as 017

Speaker (audible signal)

The dosimeter produces an audible signal or "beep" when switched ON. The signal is given at a rate of 40 "beeps" per mR; this means that for an exposure rate of, say, 3 mR per hour, a "beep" will be heard every 30 seconds. The natural radiation rate is much lower than this and is usually about 10 microroentgens per hour; at this low rate, the "beeps" will be heard every 2½ hours and it will take about 4 days before the exposure display changes by 1 mR.

Batteries

The dosimeter uses a 9-volt transistor battery (an alkaline battery is preferred for better performance) which lasts for 30 days with the dosimeter switched "ON" all the time.

Changing batteries

The battery must be changed if the battery charge light does not light when the "press to read" button is pushed. A fresh battery should also be connected when the dosimeter is first issued to somebody.

The steps for changing a battery are simple and you may find the attached pictures in Figure 2 helpful.

1. Note the number shown in the exposure display and then switch the instrument OFF.
2. Remove the 4 screws that secure the cover.
3. Remove the cover, but be careful not to damage the wires connected to the speaker.
4. DO NOT TOUCH THE RADIATION DETECTOR. It may have an electric charge on it and will give you a shock.

../3

5. Carefully lift out the old battery and disconnect the battery connectors.
6. Attach the connectors to a fresh battery. The connectors are designed so that you cannot properly connect the battery in the wrong polarity - do not force the connection; if you have difficulty try reversing the connectors.
7. Replace the freshly connected battery in the dosimeter case.
8. Replace the cover.
9. Fasten the 4 screws to secure the cover.
10. Switch the instrument "ON" and check that it "beeps" once.
11. Push the "press-to-read" button and check that three zeroes appear in the exposure display window and the battery charge light comes on.
12. If the dosimeter is to be used right away, leave the switch "ON" otherwise switch it "OFF" to save the battery until it is needed.

../4

Action required when issuing dosimeters:

1. Determine that the proposed trip is in an area where sources may be found, and that there is a bona fide need for a dosimeter.
2. Ask the individual to identify himself/herself.
3. Record name, address, phone number (if appropriate) and have individual sign for dosimeter.
4. Provide simple written instructions on how to use dosimeter and where to return it.
5. Ensure that dosimeter has a fresh battery and is working. (Follow the instructions given under "changing batteries".)

../5

Action required by the user:

1. When you go on your trip, take a piece of paper and a pencil with you to keep any notes that become necessary.
2. At the start of your trip, note the date and the names and addresses of all the members of your party. Switch the dosimeter "ON" and check that it "beeps" once, then push the "press-to-read" button and check that three zeroes appear in the exposure display window and the battery charge light comes on. Leave the dosimeter switched "ON" at all times until the end of your trip; the only exception is if it becomes necessary to change the battery during a long trip (more than 4 weeks). Carry the dosimeter in a pocket where you can hear the "beeps".
3. When you complete the different stages of your trip, make a note of the number shown in the exposure display, as in the following example:

July 12	Started trip. Switched "ON"	000 mR
July 13	Camped at Fish Lake	000 mR
July 14	Camped at Bear Creek	000 mR
July 15-17	Camped at Trout Lake	001 mR
July 18-20	Camped at Rock Point	002 mR
July 21	Camped at Buffalo Rapids	002 mR
July 22	Camped at Pine Bluffs	002 mR
July 23	Returned home. End of trip.	003 mR

../6

4. The "beep" rate will probably be about once every 2½ hours during your whole trip, but if it changes significantly, then you should follow the recommended action given below:

Approximate "Beep" period	Recommended action
Every 2½ hours to every ¼ hour.	Probably due to the natural background - no particular action recommended.
Every 15 minutes to every minute.	Might be a small piece of the satellite nearby, but might be a natural 'hot spot'. Make a note of the location and do not plan to spend more than 1 day at this spot.
More than one per minute.	Good chance that there is a piece of the satellite nearby. Do not remain in this spot and make a note of the location.

5. When you complete your trip, return the dosimeter and your notes to your local RCMP Detachment. Report anything unusual that happened including any difficulties you may have had with the dosimeter or these instructions.

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Action required by issuing officer upon return:

1. Record name and address of all members of group (if appropriate), or confirm that person who signed for dosimeter also carried it.
2. Record dose on digital display, period (dates) of trip, route taken, location of any abnormal activity or any unusual observations.
3. Notify AECB Co-ordinator in Hay River of any abnormal activity or unusual observations.

   Phone number (403) 874-3505.

2 August 1978

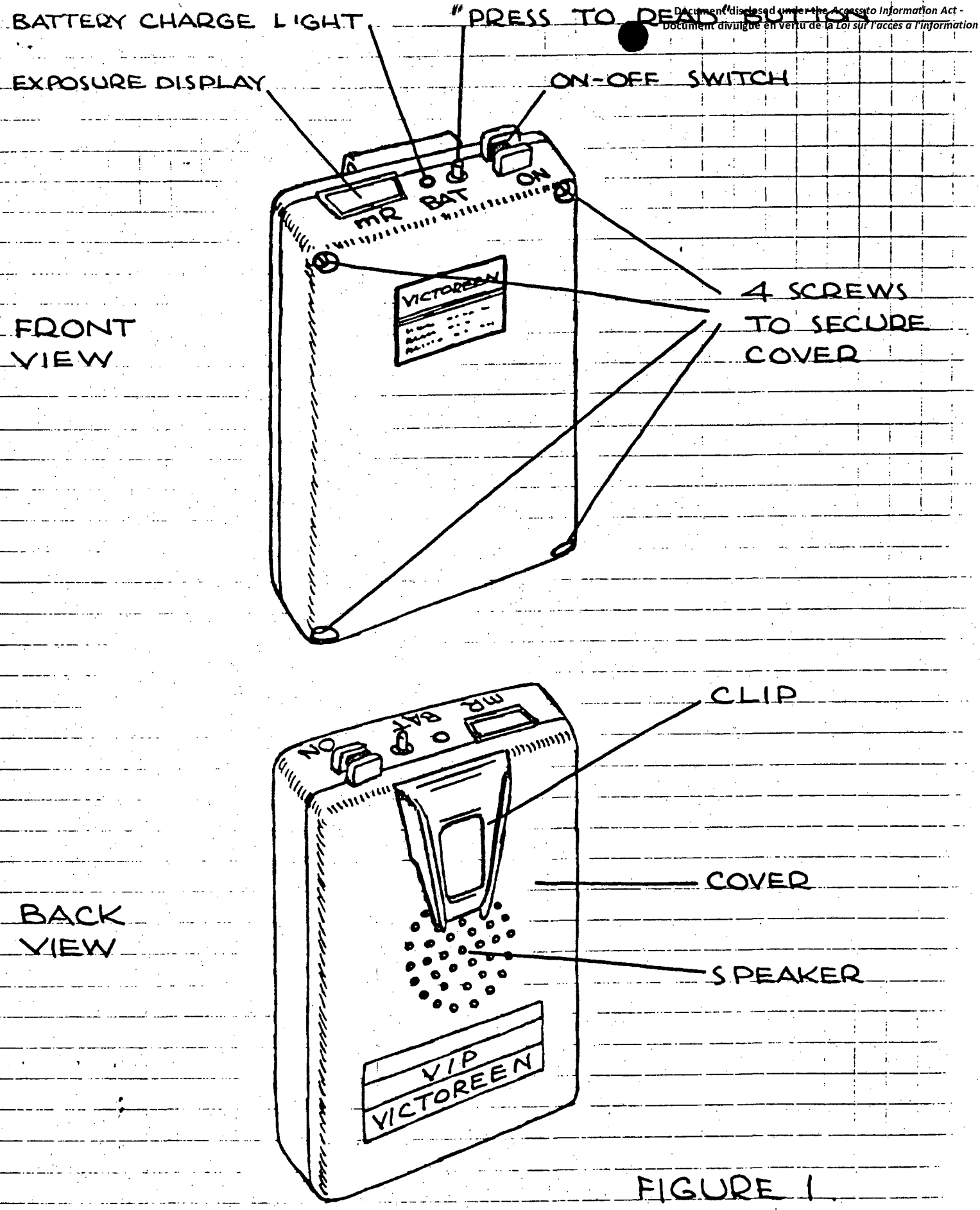
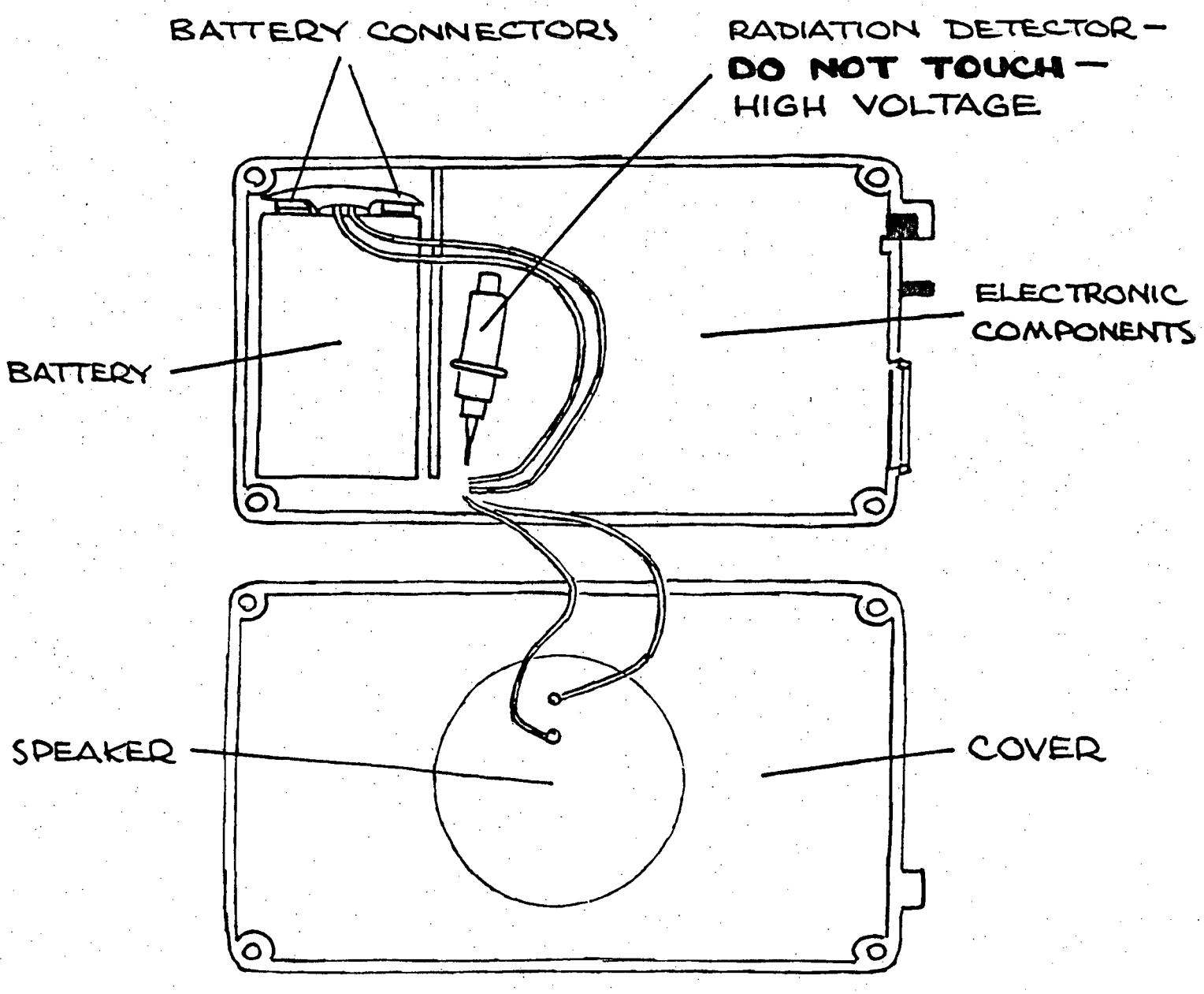
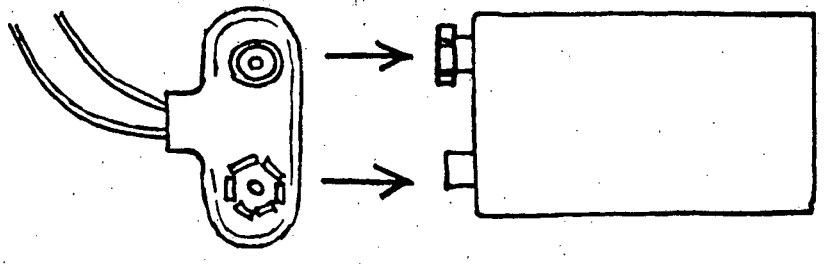


FIGURE 1

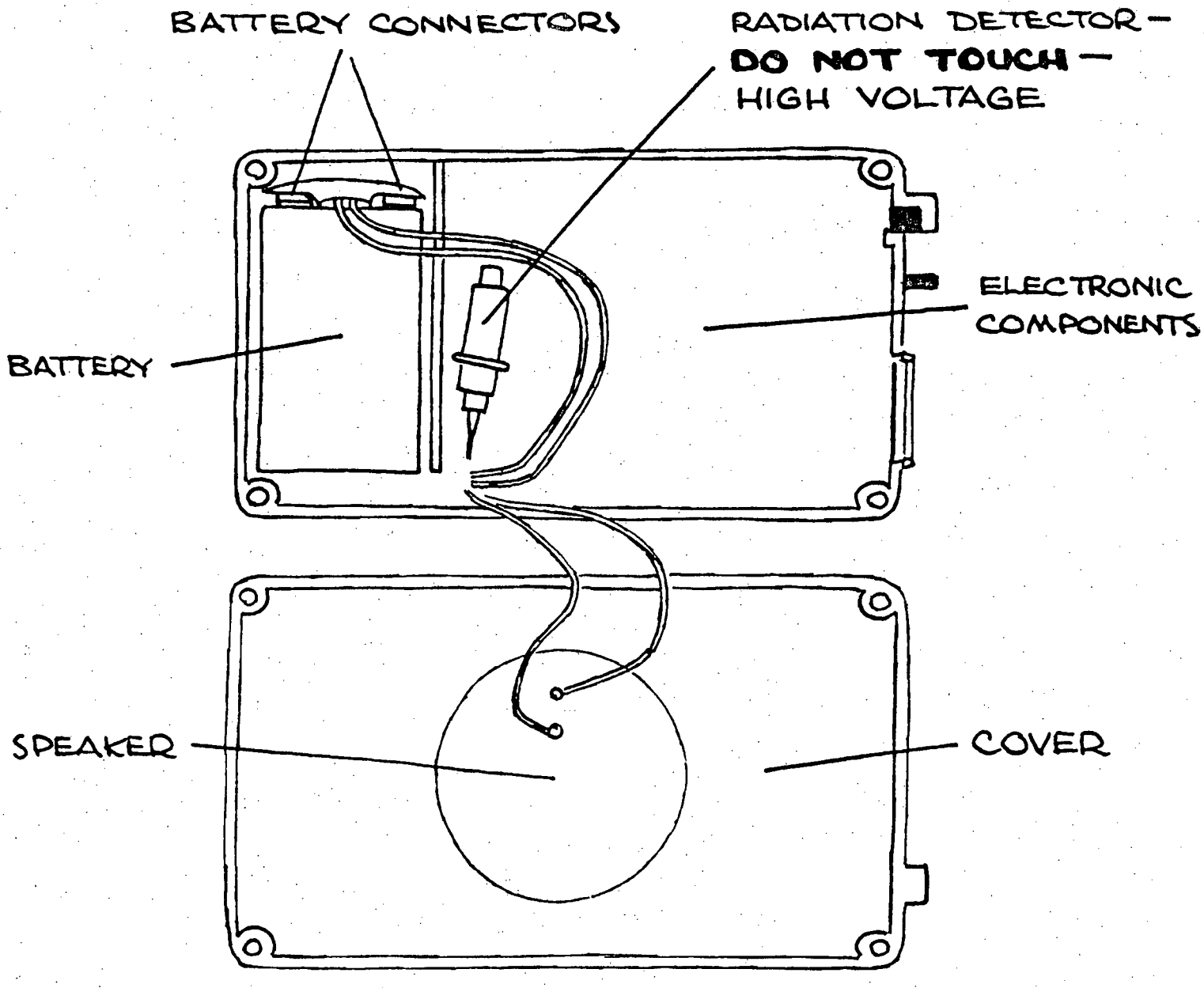


VIEW WITH COVER REMOVED

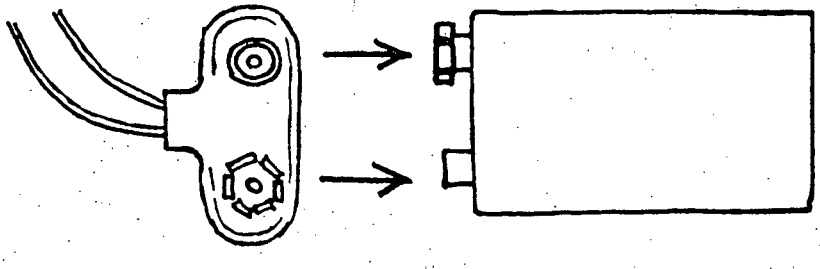


CONNECTING A NEW BATTERY

FIGURE 2



VIEW WITH COVER REMOVED



CONNECTING A NEW BATTERY

FIGURE 2

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: THE COMMISSIONER, OTTAWA

Attention: D.S.S. (Fin. Man. Branch)

FROM / DE: OFFICER IN CHARGE ADMIN. & PERSONNEL
"G" DIVISION

SECURITY - CLASSIFICATION - DE SÉCURITÉ: CONFIDENTIAL
OUR FILE — N/RÉFÉRENCE: 78G-000-2
YOUR FILE — V/RÉFÉRENCE: GS 785-47
DATE: 78-08-04

SUBJECT / OBJET: Expenditures Attributable to the Cosmos 954 Incident

Memo of the O.I.C. Fin. Man. Branch dated 78-07-12 refers. Attached, is the information requested. For more information, please contact Inspector CHAIROT of the Federal Policing Branch, who has been kept apprized of the happenings in "G" Division since its beginning.

M C B Latremouille 5/84.

C.R. Latremouille, Insp.,
for Officer In Charge,
Admin. & Personnel

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File copy

SUMMARY OF EXPENSES

1.	SALARIES	$3,899.94
	OVERTIME	1,707.66
2.	TRAVELLING EXPENSES	373.30
3.	POLICE AIRCRAFT	8,342.28
	POLICE CAR	100.00
	SKI-DOO	15.00
4.	PURCHASE OF BATTERIES	94.67
	TOTAL	$14,532.85

DATE(s)	NAME	RANK	REG.NBR.	HRS.	RATE	TOTAL	O/T HRS	CONVERTED O.T.	RATE	TOTAL
78-01-29	HORSMAN,G.R.	CPL.	25510	4	9.52	38.08				
78-01-29	WISHNOWSKI,L.V.	CST.	27943				3.5	5	9.10	45.50
78-01-29	OTTMAN,W.B.	CST.	31538				4.5	7	8.34	58.38
78-01-29 to 78-02-3 incl.	OTTMAN,W.B.	CST.	31538	40	8.34	333.60				
78-01-29 to 78-02-3 incl.	REINHARDT,R.P.	CST.	29706	40	9.10	364.00				
78-01-29	WALKER, S.K.	CST.	31037	4	9.10	36.40				
78-01-29	ARMSTRONG,J.A.	S/SGT.	19103	1	11.58	11.58				
78-01-30	ARMSTRONG, J.A.	S/SGT.	19103	1	11.58	11.58				
78-01-31	ARMSTRONG, J.A.	S/SGT.	19103	8	11.58	92.64				
78-02-01	ARMSTRONG, J.A.	S/SGT.	19103	8	11.58	92.64				
78-02-02	ARMSTRONG, J.A.	S/SGT.	19103	5	11.58	57.90				
78-02-03	ARMSTRONG, J.A.	S/SGT.	19103	5	11.58	57.90				
78-02-04	ARMSTRONG, J.A.	S/SGT.	19103	1	11.58	11.58				
78-02-05	ARMSTRONG, J.A.	S/SGT.	19103	1	11.58	11.58				
78-02-06	ARMSTRONG, J.A.	S/SGT.	19103	2	11.58	23.16				
78-01-31	PHELAN, A.	S/CST.	396				4	6	6.39	38.34
78-01-31	HOBBS,R.W.	CST.	29401	1.5	9.10	13.65				
78-01-31	HARTWIG,B.H.	CST.	28149	1.5	9.10	13.65				
78-01-31	DRISDELLE,J.J.R.	CST.	29560	.5	9.10	4.55	2	3	9.10	27.30
78-02-01	WESTWOOD,A.K.	CPL.	21935	2.5	9.88	24.70				
78-02-01	NORTH, E.	CST.	29547	3	9.10	27.30				
78-02-01	HARRISON, R.S.	CST.	30726	4	9.10	36.40				
78-02-01	LUCHTMEIJER,W.	CST.	30406	3	9.10	27.30				
78-02-10	LUCHTMEIJER,W.	CST.	30406	1	9.10	9. 10	5	7.5	9.10	68.25
78-02-11	LUCHTMEIJER,W.	CST.	30406	8	9.10	72.80	5	7.5	9.10	68.25

DATE(s)	NAME	RANK	REG.NBR.	HOURS	RATE	TOTAL	O/T HRS	CONVERTED O/T	RATE	TOTAL
78-02-12	LUCHTMEIJER,W.	CST.	30406	8	9.10	72.80				
78-02-13	LUCHTMEIJER,W.	CST.	30406				8	12	9.10	109.20
78-02-11	McCARTHY,R.G.H.	CPL.	22363	3	9.88	29.64				
78-02-13	McCARTHY, R.G.H.	CPL.	22363	3	9.88	29.64				
78-02-11	WOODS, R.G.	CST.	31699	8	8.34	66.72				
78-02-12	WOODS, R.G.	CST.	31699	8	8.34	66.72				
78-02-13	WOODS, R.G.	CST.	31699	8	8.34	66.72				
78-02-03	LUCHTMEIJER,W.	CST.	30406				8	12	9.10	109.20
78-02-04	LUCHTMEIJER,W.	CST.	30406				8	12	9.10	109.20
78-02-05	LUCHTMEIJER,W.	CST.	30406				8	12	9.10	109.20
78-01-30	REID, W.D.	CPL.	30303				1.5	2	9.88	19.76
78-01-31	REID, W.D.	CPL.	30303				11	16.5	9.88	163.02
78-02-04	REID, W.D.	CPL.	30303				8	12	9.88	118.56
78-02-05	REID, W.D.	CPL.	30303				4.5	7	9.88	69.16
78-02-06	SABEY, A.L.	S/SGT.	23516	4	11.58	46.32				
78-02-08	SABEY, A.L.	S/SGT.	23516	7	11.58	81.06				
78-02-04	SABEY, A.L.	S/SGT.	23516				8	12	11.58	138.96
78-01-31	ECCLESTON,J.L.	C/M	1935	8	8.09	64.72				
78-01-31	ECCLESTON,J.L.	C/M	1935				3.5	5.0	8.09	40.45
78-01-31	LOK, K.	CPL.	26857	3	9.52	28.56				
78-02-01	GRINSTEAD, R.J.	CST.	32913	3	9.52	28.56				
78-02-02	GRINSTEAD, R.J.	CST.	32913	3	9.52	28.56				
78-02-03	GRINSTEAD, R.J.	CST.	32913	2	9.52	19.04				
78-02-04	GRINSTEAD, R.J.	CST.	32913	2	9.52	19.04				
78-02-05	GRINSTEAD, R.J.	CST.	32913	1	9.52	9.52				
78-02-06	GRINSTEAD, R.J.	CST.	32913	1	9.52	9.52				
78-02-09	GRINSTEAD, R.J.	CST.	32913	1	9.52	9.52				
78-01-31	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				

DATE(s)	NAME	RANK	REG.NBR.	HRS	RATE	TOTAL	O/T HRS	CONVERTED O.T.	RATE	TOTAL
78-02-01	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				
78-02-02	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				
78-02-03	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				
78-02-04	GRINSTEAD, R.J.	CST.	32913				8	12	7.62	91.44
78-02-15	GRINSTEAD, R.J.	CST.	32913				8	12	7.62	91.44
78-02-06	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				
78-02-26	GRINSTEAD, R.J.	CST.	32913	8	7.62	60.96				
78-02-27	GRINSTEAD, R.J.	CST.	32913	4	7.62	30.48				
78-02-04	BOWDEN, A.A.	CST.	33844	12	6.47	77.64				
78-02-05	BOWDEN, A.A.	CST.	33844	12	6.47	77.64				
78-02-06	BOWDEN, A.A.	CST.	33844	13	6.47	84.11				
78-02-07	BOWDEN, A.A.	CST.	33844	12	6.47	77.64				
78-02-08	BOWDEN, A.A.	CST.	33844	4	6.47	25.88				
78-02-04	MacKENZIE, A.A.	CST.	29766	8	9.10	72.80	4	6	9.10	54.60
78-02-05	MacKENZIE, A.A.	CST.	29766	8	9.10	72.80	4	6	9.10	54.60
78-02-06	MacKENZIE, A.A.	CST.	29766	8	9.10	72.80	5	7.5	9.10	68.25
78-02-07	MacKENZIE, A.A.	CST.	29766	8	9.10	72.80	4	6	9.10	54.60
78-02-08	MACKENZIE, A.A.	CST.	29766	4	9.10	36.40				
78-02-03	GREBER,L.A.	CPL.	27081	6	9.52	57.12				
78-01-31	RAYNER,	CST.	31244	4	8.34	33.36				
78-02-01	RAYNER,	CST.	31244	8	8.34	66.72				
78-02-02	RAYNER,	CST.	31244	8	8.34	66.72				
78-02-03	RAYNER,	CST.	31244	8	8.34	66.72				
78-02-04	RAYNER,	CST.	31244	8	8.34	66.72				
78-02-05	RAYNER,	CST.	31244	8	8.34	66.72				

DATE(s)	NAME	RANK	REG.NBR.	HRS	RATE	TOTAL	O/T HRS	CONVERTED O/T	RATE	TOTAL
78-02-06	RAYNER	CST.	31244	4	8.34	33.36				
78-01-29* to 78-02-15 incl.	RECHNER, G.	INSP.	0.920	16	13.20	211.20				
78-01-29 to 78-02-15 incl.	*LAMBERT, J.G.	S/SGT.	18580	10	11.58	115.80				

REGULAR TIME TOTAL $3899.94

OVERTIME TOTAL $1707.66

GRAND TOTAL $5607.60

* MEMBERS ARE O.C. & S/DIVISION N.C.O. OF YELLOWKNIFE SUB-DIVISION INVOLVED IN THE ADMINISTRATION AND CO-ORDINATION OF MEMBERS AND FLIGHTS. HOURS SHOWN ARE ESTIMATED.

DU CANADA

VERTIME COMPENSATION CLAIM
DE..ANDE DE RÉTRIBUTION DU SURTEMPS

PAGE 1 OF/DE 1

TRIBUTION: 1 o Div. "H.Q.;" 3 to S/Div: 4 Office — *DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau*

* CODE:		
After Duty	A	*Après la journée de travail*
Before Duty	B	*Avant la journée de travail*
Call Back	C	*Rappel au travail*
Stand By	D	*En disponibilité*

O. / IO	SHIFT / *PÉRIODE DE RELEVE*	DATE(S)	FROM- *DE*	TO- *À*
1.	LAST / *DERNIÈRE*	29 Jan 78	8:00 AM	4:00 PM
	NEXT / *PROCHAINE*	30 Jan 78	8:00 AM	4:00 PM

E NO.- *Nº DU DOSSIER*: 386

TION- *TITRE*: Russian Satellite - Major West Assist DND

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: required to provide Security at Airport & Hospital, aiding D.N.D with subjects exposed to Radiation

OVERTIME — SURTEMPS

DATE(S)	29 Jan 78
FROM- *DE*	4:00 PM
TO- *À*	7:30 PM
HOURS CLAIMED / *HEURES À RÉTRIBUER* — * CODE	A
OVERTIME / *SURTEMPS*	3 1/2
RECOMMENDED / *RECOMMANDÉ* — INITIALS- *INITIALES*	Cpl.
DATE	30 Jan 78.

	SHIFT	DATE(S)	FROM- *DE*	TO- *À*
	LAST / *DERNIÈRE*			
	NEXT / *PROCHAINE*			

E NO.- *Nº DU DOSSIER*

TION- *TITRE*

OVERTIME: DATE(S) / FROM- *DE* / TO- *À* / * CODE / OVERTIME *SURTEMPS* / RECOMMENDED *RECOMMANDÉ* / INITIALS- *INITIALES* / DATE

	SHIFT	DATE(S)	FROM- *DE*	TO- *À*
	LAST / *DERNIÈRE*			
	NEXT / *PROCHAINE*			

E NO.- *Nº DU DOSSIER*

TION- *TITRE*

OVERTIME: DATE(S) / FROM- *DE* / TO- *À* / * CODE / OVERTIME *SURTEMPS* / RECOMMENDED *RECOMMANDÉ* / INITIALS- *INITIALES* / DATE

	SHIFT	DATE(S)	FROM- *DE*	TO- *À*
	LAST / *DERNIÈRE*			
	NEXT / *PROCHAINE*			

E NO.- *Nº DU DOSSIER*

TION- *TITRE*

OVERTIME: DATE(S) / FROM- *DE* / TO- *À* / * CODE / OVERTIME *SURTEMPS* / RECOMMENDED *RECOMMANDÉ* / INITIALS- *INITIALES* / DATE

ORD OF LIEU TIME—*RELEVÉ DES CONGÉS DE SURTEMPS*

RS.- *H.*	
8.5	Previous Balance / *Total précédent*
1.5	Balance this month / *Heures accumulées au cours du mois*
0.0	TOTAL
—	L.T.O. taken / *Congés pris*
30	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	3.5
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	
TOTAL	3 1/2

X1.5 → 5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

ADJUSTMENTS—*AJUSTEMENT*	
TOTAL	5 5
BANKED / *RÉSERVE*	1.5
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	3 3.5

MANT (Signature)- *DU REQUÉRANT*

COLLATOR NO. / *Nº DE COLLATION*: G0042

-SERVICE	LOCATION- *LIEU*	
Yellowknife Det	Yellowknife N.W.T.	
K-GRADE: Cst	REG. NO.- *Nº MATR* 1 27943	NAME- *NOM* 2 L. V. WISHNOWSKI

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE* 4 9.10

107 5) 7530-21-036-3497

OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 & 2 to Div. "H.Q.;" 3 to S/Div; 4 Office

DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty / Après la journée de travail — A
Before Duty / Avant la journée de travail — B
Call Back / Rappel au travail — C
Stand By / En disponibilité — D

O.	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À	OVERTIME — SURTEMPS: DATE(S)	FROM- DE	TO- À
	LAST / DERNIÈRE	19-01-78	4:00 P.M.	12:00 M.N.	20-01-78	2:00 P.M.	4:00 P.M.
1.	NEXT / PROCHAINE	20-01-78	4:00 P.M.	12:00 M.N.			

E NO.- N° DU DOSSIER: 78/111
PTION- TITRE: Assist Gov't Dep't / Red Serge Duty

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: Member called in to assist with th opening of the N.W.T. Council Member acted as flag bearer.

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALS	DATE
'C'	3.0	DBK, GP.	21-01-78

		DATE(S)	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À
	LAST / DERNIÈRE	26-01-78	8:00 A.M.	4:00 P.M.	26-01-78	4:00 P.M	6:00 P.M.
2.	NEXT / PROCHAINE	27-01-78	8:00 A.M.	4:00 P.M.			

E NO - N° DU DOSSIER: 77-111-10
PTION- TITRE: Dale Gordon PYSMENNY / Hit & Run - C.C.C.

Member required for Prelim.

* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALS	DATE
'A'	2.0	DBK, GP.	27-01-78

		DATE(S)	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À
	LAST / DERNIÈRE	29-01-78	8:00 A.M.	4:00 P.M.	30-01-78	4:00 PM	8:30 PM
3.	NEXT / PROCHAINE	30-01-78	8:00 A.M.	4:00 P.M.			

LE NO.- N° DU DOSSIER: 78/386
APTION- TITRE: Assistance to Dep't National Defence

Member req'd for Security Duty during the period when supposed contamination of persons was thought to have taken place. No other available member.

* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALS	DATE
'A'	4.5	DBK, GP.	30-01-78

		DATE(S)	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À
	LAST / DERNIÈRE						
	NEXT / PROCHAINE						

ILE NO.- N° DU DOSSIER:
CAPTION- TITRE:

* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALS	DATE

RECORD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
62.5	Previous Balance / *Total précédent*
0	Balance this month / *Heures accumulées au cours du mois*
62.5	TOTAL
0	L.T.O. taken / *Congés pris*
62.5	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	8.5
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	Nil
TOTAL	0

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY / *NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE*

ADJUSTMENTS—*AJUSTEMENT*

	13.0
TOTAL	5 13.0
BANKED / *RÉSERVE*	Nil
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	3 13.0

CLAIMANT (Signature)- *DU REQUÉRANT*: W.B. Ottmann

COLLATOR NO. / *N° DE COLLATION*: 60042.

UNIT- SERVICE: DETACHMENT.

LOCATION- LIEU: YELLOWKNIFE.

RANK- GRADE	REG. NO.- N° MATR	NAME- NOM
CST.	1 31538 2	W.B. OTTMANN.

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 4 8.34

1112 (10/75) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

PAGE 1 OF / DE 1

DISTRIBUTION: 1 & 2 to Div. "H.Q.," 3 to S/Div; 4 Office

DIFFUSION: 1 & 2 au q g div, 3 au q.g. s.-div ; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
LAST DERNIÈRE	16-1-78	8 30 Am	5 00 PM
NEXT PROCHAINE	17-1-78	8 30 Am	5 00 Pm

IC.- Nº DU DOSSIER

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*

ON- TITRE

COURT DOCKET 16-1-78

PRIS ESCORT
MAC COURT
YELLOWKNIFE NWT

	DATE(S)	FROM- DE	TO- À
LAST DERNIÈRE	16-1-78	8 30 AM	5 00 PM
NEXT PROCHAINE	17-1-78	8 30 AM	5 00 PM

O.- Nº DU DOSSIER

ON- TITRE

COURT DOCKET 16-1-78

PRIS ESCORT
MAC COURT
YELLOWKNIFE NWT

	DATE(S)	FROM- DE	TO- À
LAST DERNIÈRE	31-1-78	8 30 PM	5 00PM
NEXT PROCHAINE	1-2-78	8 30AM	5 00 PM

O.- Nº DU DOSSIER

ON- TITRE

SSION SATELLITE - ST TO D.N.D. AT SLAVE LAKE AREA. N.W.T. 24 JAN 78

GUARDING RADIO-ACTIVE MATERIAL AT AIRPORT IN YELLOWKNIFE, N.W.T.

	DATE(S)	FROM- DE	TO- À
LAST DERNIÈRE			
NEXT PROCHAINE	DATE(S)	FROM- DE	TO- À

- Nº DU DOSSIER

N- TITRE

OVERTIME — SURTEMPS

DATE(S)	FROM- DE	TO- À	HOURS CLAIMED HEURES À RÉTRIBUER * CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ	INITIALS- INITIALES	DATE
16-1-78	12 NOON	1 PM	A	1		GML	17/1/78
16-1-78	5 00 PM	7 30 PM	A	2.5		GML	17-1-78
31-1-78	6 00 PM	10 00 PM	C	4		[illegible]	1-2-78
DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ	INITIALS- INITIALES	DATE

D OF LIEU TIME—RELEVÉ DES CONGÉS DE SURTEMPS

H.

Previous Balance
Total précédent

Balance this month
Heures accumulées au cours du mois

TOTAL

L.T.O. taken
Congés pris

Balance
Excédent

TOTAL THIS PAGE *TOTAL DE CETTE PAGE*	7,5
TOTAL FROM PREVIOUS PAGE *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	
TOTAL	7.5

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

(Signature)- *DU REQUÉRANT*

COLLATOR NO. *Nº DE COLLATION* 60042

ADJUSTMENTS—*AJUSTEMENT* 11

CE

DET

LOCATION- *LIEU* YELLOWKNIFE N.W.T

TOTAL 5 11

DE

ST

REG. NO.- *Nº MATR* 1 5/396

NAME- *NOM* 2 A PHELAN

BANKED *RÉSERVE* 11

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE *TAUX HORAIRE* 4 6 72

TOTAL FOR PAYMENT *TOTAL À RÉTRIBUER* 3

21-036-3497

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PAYMENT

ERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

3 to S/ Div; 4 Office ——— DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

	FROM- DE	TO- À	OVERTIME — SURTEMPS DATE(S)	FROM- DE	TO- À	HOURS CLAIMED HEURES À RÉTRIBUER * CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ INITIALS- INITIALES	DATE
4	12:00 am	8:00 am	5 Jan 78	10:00 pm	1:30 am	C	3	[signature]	8-1-78
28	8:00 am	4:00 pm							

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*

Required for Court

	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ INITIALS- INITIALES	DATE
	8:00 am	4:00 pm	30 Jan 78	10:00 pm	12:00 am	B	2	[signature] Sgt.	1 FEB 78
	12:00 am	8:00 am							

Required on Surveillance

D.- Nº DU DOSSIER

N- TITRE: Russian Satellite
Ops 1 to 2 - 12 - 78
Great Slave Lake Area
Yk. T. 27 Jan 78

	DATE(S)	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ INITIALS- INITIALES	DATE
LAST DERNIÈRE										
NEXT PROCHAINE										

D.- Nº DU DOSSIER

N- TITRE

	DATE(S)	FROM- DE	TO- À	DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ INITIALS- INITIALES	DATE
LAST DERNIÈRE										
NEXT PROCHAINE										

D.- Nº DU DOSSIER

N- TITRE

D OF LIEU TIME—*RELEVÉ DES CONGÉS DE SURTEMPS*

H.
- Previous Balance *Total précédent*
- Balance this month *Heures accumulées au cours du mois*
- TOTAL
- L.T.O. taken *Congés pris*
- Balance *Excédent*

TOTAL THIS PAGE *TOTAL DE CETTE PAGE*	5
TOTAL FROM PREVIOUS PAGE *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	—
TOTAL	5

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

T (Signature) *DU REQUÉRANT*: J.R. Drisdelle

COLLATOR NO. *Nº DE COLLATION*: 60042

ADJUSTMENTS—*AJUSTEMENT*

VICE: YELLOWKNIFE DET | LOCATION- *LIEU*: YELLOWKNIFE N.W.T

ADE: 4 | REG. NO.- *Nº MATR* 1: 29560 | NAME- *NOM* 2: J. J. R. DRISDELLE

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE *TAUX HORAIRE* 4: 9.10

TOTAL 5: 5.5

BANKED *RÉSERVE*

TOTAL FOR PAYMENT *TOTAL À RÉTRIBUER* 3: 5.5

) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 to Div. "H.Q."; 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À	OVERTIME — SURTEMPS DATE(S)	FROM- DE	TO- À
1	LAST / DERNIÈRE	02 FEB 78	12. MN	8.00 am	03 FEB 78.	12 Noon.	8.00 pm
	NEXT / PROCHAINE	06 FEB 78.	8.00 am	4.00 pm.			

LE NO.- Nº DU DOSSIER: 427/78.
APTION- TITRE: Operation Morning Light Assist D.N.D. 04/05 FEBRUARY 1978. AS PER TELEX YK ADM 31/21

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: Required for guard duty on Operation Morning Light at Satellite # 2 on R.I.O

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE: C; OVERTIME / SURTEMPS: 8
RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [signature]; DATE: 6-2-78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À	OVERTIME — SURTEMPS DATE(S)	FROM- DE	TO- À
2	LAST / DERNIÈRE	02 FEB 78	12 MN	8.00 am	04 FEB 78.	7.00 am.	3.00 pm.
	NEXT / PROCHAINE	06 FEB 78	8.00 am	4.00 pm.			

LE NO.- Nº DU DOSSIER: 427/78
APTION- TITRE: CAPTION AS ABOVE.

Explain why overtime was unavoidable: See Claim # 1

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE: C; OVERTIME / SURTEMPS: 8
RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [signature]; DATE: 6-2-78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À	OVERTIME — SURTEMPS DATE(S)	FROM- DE	TO- À
3	LAST / DERNIÈRE	02 FEB 78	12 MN	8.00 am	05 FEB 78	7.00 am.	3.00 pm.
	NEXT / PROCHAINE	06 FEB 78	8.00 am	4.00 pm			

LE NO.- Nº DU DOSSIER: 427/78
APTION- TITRE: CAPTION AS ABOVE

Explain why overtime was unavoidable: See Claim # 1

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE: C; OVERTIME / SURTEMPS: 8
RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [signature]; DATE: 6-2-78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À	OVERTIME — SURTEMPS DATE(S)	FROM- DE	TO- À
4	LAST / DERNIÈRE	10 Feb 78	8.00 am	4.00 pm.	10 FEB 78	4.00 pm	9.00 pm.
	NEXT / PROCHAINE	11 Feb 78	8.00 am	4.00 pm.			

LE NO.- Nº DU DOSSIER: 427/78
APTION- TITRE: Operation Morning Light Assist D.N.D. 10-13 FEB 78

Explain why overtime was unavoidable: Required for guard duties at Snowdrift site of radioactive lifts. Req to establish base camp after leg duties.

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE: A; OVERTIME / SURTEMPS: 5
RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [signature]; DATE: 15/2/78.

RECORD OF LIEU TIME—*RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.

Previous Balance / *Total précédent*

Balance this month / *Heures accumulées au cours du mois*

TOTAL

L.T.O. taken / *Congés pris*

Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	29
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	0
TOTAL	29

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY / *NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE*

CLAIMANT (Signature)- *SIG REQUÉRANT*: [signature]

COLLATOR NO. / *Nº DE COLLATION*: G0042

ADJUSTMENTS—*AJUSTEMENT*

UNIT- SERVICE: DETACHMENT

LOCATION- *LIEU*: YELLOWKNIFE

RANK- *GRADE*: CST

REG. NO.- *Nº MATR*: 1 30406 2

NAME- *NOM*: LICHTMEIER, W.

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 4 9.10

TOTAL 5

BANKED / *RÉSERVE*

TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER* 3

12 (10/75) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 & 2 to Div. "H.Q.;" 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO. / NO	SHIFT PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À	OVERTIME -- SURTEMPS: DATE(S)	FROM- DE	TO- À
5		LAST DERNIÈRE	11 FEB 78.	8.00 am	4.00 pm.	11 FEB 78	4.00 pm	9.00 pm.
		NEXT PROCHAINE	12 FEB 78	8.00 am	4.00 pm.			

FILE NO.- Nº DU DOSSIER: 427/78

DESCRIPTION- TITRE: Operation Manning light Assist DND. 10-13 February 1978.

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: Required to assist U.S. and Can scientists locate and recover radioactive particles from vicinity of Snowdrift

HOURS CLAIMED / HEURES À RÉTRIBUER: * CODE: A; OVERTIME SURTEMPS: 5

RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [illegible] SGT.; DATE: 15/2/78

NO. / NO	SHIFT PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À	OVERTIME -- SURTEMPS: DATE(S)	FROM- DE	TO- À
6		LAST DERNIÈRE	12 FEB 78	8.00 am	4.00 pm	13 Feb 78	8.00 am	4.00 pm
		NEXT PROCHAINE	15 FEB 78	4.00 pm	12 Midnight			

FILE NO.- Nº DU DOSSIER: 427/78

DESCRIPTION- TITRE: CAPTION AS ABOVE.

Required to assist cleanup on R.T.O. at Snowdrift site.

* CODE: C; OVERTIME SURTEMPS: 8

RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [illegible] SGT.; DATE: 15/2/78

NO. / NO	SHIFT PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À	OVERTIME -- SURTEMPS: DATE(S)	FROM- DE	TO- À
7		LAST DERNIÈRE	16 FEB 78	4.00 pm	12 Midnight	17 FEB 78	12 Midnight	1.00 am
		NEXT PROCHAINE	17 Feb 78	4.00 pm	12 Midnight			

FILE NO.- Nº DU DOSSIER: 711/78

DESCRIPTION- TITRE: Gary HOCKRIDGE 236 CC over 08. 16 FEB 78 Yellowknife NWT to end of shift.

Required for Breath Test as operator exist prior

* CODE: A; OVERTIME SURTEMPS: 1

RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [illegible]; DATE: 17/2/78

NO. / NO	SHIFT PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À	OVERTIME -- SURTEMPS: DATE(S)	FROM- DE	TO- À
8		LAST DERNIÈRE	16 Feb 78	4.00 pm	12 Midnight	17 Feb 78	1.00 am	3.00 am
		NEXT PROCHAINE	17 Feb 78	4.00 pm	12 Midnight			

FILE NO.- Nº DU DOSSIER:

DESCRIPTION- TITRE: Gary Frank SMITH 236 cc over 08 Yellowknife NWT 17 Feb 78

Required for Breathalyzer overtime as operator had not returned home from previous claim #7.

* CODE: A; OVERTIME SURTEMPS: 2

RECOMMENDED / RECOMMANDÉ: INITIALS- INITIALES: [illegible]; DATE: 17/2/78

RECORD OF LIEU TIME—*RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
80	Previous Balance / *Total précédent*
16	Balance this month / *Heures accumulées au cours du mois*
96	TOTAL
16	L.T.O. taken / *Congés pris*
80	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	16
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	29
TOTAL	45

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

CLAIMANT (Signature)- *REQUÉRANT*: [signature]

COLLATOR NO. / *Nº DE COLLATION*: 60042

ADJUSTMENTS—*AJUSTEMENT*

	61.5
TOTAL	5 61.5
BANKED / *RÉSERVE*	16.0
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	51.5

UNIT- SERVICE: DETACHMENT

LOCATION- *LIEU*: YELLOWKNIFE, N.W.T

RANK- GRADE: CST

REG. NO.- Nº MATR.: 30406

NAME- NOM: WUCHTHEINER, W.

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "A" DEVANT TAUX HORAIRE

HOURLY RATE / *TAUX HORAIRE*: 4 1.10

12 (10/75) 7530-21-036-3437

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d. 4/68 - 6c

OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

PAGE 1 OF / DE

DISTRIBUTION: 1 to Div. "H.Q.;" 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
1	LAST / DERNIÈRE	24 JAN 78	8.30 AM	4.30 PM.
	NEXT / PROCHAINE	25 JAN 78	7:00 AM	3.00 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: FRT. YK - Combridge Bay / Spence Bay - Cambridge Bay.

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: To complete flight.

OVERTIME — SURTEMPS

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED / RECOMMANDÉ	INITIALS / INITIALES	DATE
24 JAN 78.	5.00 PM.	9:30 PM.	A	4.5			27-1-78

NO.	SHIFT	DATE(S)	FROM- DE	TO- À
2.	LAST / DERNIÈRE	25 JAN 78	7:00 AM	3:00 PM.
	NEXT / PROCHAINE	26 JAN 78.	8:30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: CF - MPB.

To complete flight. Combridge Bay - Gjoa Haven - Combridge. Bay Yellowknife. - SUDDEN DEATH AT GJOA HAVEN.

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED / RECOMMANDÉ	INITIALS / INITIALES	DATE
25 JAN 78	3:30 PM	12 MN.	A	8.5			1-2-78

NO.	SHIFT	DATE(S)	FROM- DE	TO- À
3.	LAST / DERNIÈRE	29 JAN 78	4:30 PM.	11:30 PM.
	NEXT / PROCHAINE	1 FEB 78	~~8:30 AM~~	~~4:30 PM.~~

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: FRT - YK - Snowdrift - FT Reliance - Snowdrift - YK.

Call back required as both aircraft tasked this date. Air Det under strength. Plumber & Satellite 6 & 1.5

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED / RECOMMANDÉ	INITIALS / INITIALES	DATE
30 JAN 78.	8.30 AM.	4:30 PM.	C	1.5 8.0			1-2-78

NO.	SHIFT	DATE(S)	FROM- DE	TO- À
4.	LAST / DERNIÈRE	29 JAN 78	4.30 PM	11:30 PM.
	NEXT / PROCHAINE	1 FEB 78.	8.30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: FRT - YK - Snowdrift / Warden's Grave - YK.

Call back required as both aircraft tasked this date. Air Det. under strength

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED / RECOMMANDÉ	INITIALS / INITIALES	DATE
31 JAN 78	8.30 AM.	7.30 PM.	C	11.0			1-2-78

RECORD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
	Previous Balance / *Total précédent*
	Balance this month / *Heures accumulées au cours du mois*
	TOTAL
	L.T.O. taken / *Congés pris*
	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	32.0
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	
TOTAL	32.0

COMPLETE BEYOND HERE ON FINAL PAGE ONLY / *NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE*

X1.5 — 48.0.

CLAIMANT (Signature)- *SIGNATURE DU REQUÉRANT*: W.D. Reid

COLLATOR NO. / *Nº DE COLLATION*: G0592.

ADJUSTMENTS— *AJUSTEMENT*

UNIT- *SERVICE*: Yellowknife Air Det.

LOCATION- *LIEU*: Yellowknife N.W.T.

RANK- *GRADE*: Cpl.

REG. NO.- *Nº MATR.* [1] 30303

NAME- *NOM* [2]: William D. REID

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE* [4]: 9-88

TOTAL	[5] 48.0.
BANKED / *RÉSERVE*	48.0
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	[3]

1112 (10/75) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 & 2 to Div. "H.Q.;" 3 to D. Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE
After Duty — A — *Après la journée de travail*
Before Duty — B — *Avant la journée de travail*
Call Back — C — *Rappel au travail*
Stand By — D — *En disponibilité*

NO. No	SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
1	LAST DERNIÈRE	3 FEB 78	8:30 AM	4:30 PM.
	NEXT PROCHAINE	6 FEB 78	8:30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: CF-MPB.

Explain why overtime was unavoidable- Dire pourquoi le surtemps n'a pu être évitable: Call back to transport members in + out of Satellite II.

OVERTIME — SURTEMPS

DATE(S)	FROM- DE	TO- À	HOURS CLAIMED HEURES À RÉTRIBUER * CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
4 FEB 78	9 AM.	5 PM.	C	8.0	INITIALS- INITIALES: DATE 7-2-78

NO. No	SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
2.	LAST DERNIÈRE	3 FEB 78	8:30 AM	4:30 PM.
	NEXT PROCHAINE	6 FEB 78	8:30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: CF-MPB.

Call back to transport members out of Satellite I.

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
5 FEB 78	10 AM.	2:30 PM.	C	4.5	INITIALS- INITIALES: DATE 7-2-78

NO. No	SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
3	LAST DERNIÈRE	7 FEB 78	8:30 AM	4:30 PM.
	NEXT PROCHAINE	8 FEB 78	8:30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: FLT- Byron Bay Cambridge - Spence Bay - Pelly Bay. Spenc - Cambridge.

To complete flight.

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
7 FEB 78	5:00 PM.	11:00 PM.	A	6.0	INITIALS- INITIALES: DATE 10-2-78

NO. No	SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM- DE	TO- À
4.	LAST DERNIÈRE	14 FEB 78	11:00 AM.	7:00 PM.
	NEXT PROCHAINE	15 FEB 78	8:30 AM	4:30 PM.

FILE NO.- Nº DU DOSSIER

CAPTION- TITRE: FLT - Rankin Inlet - Whale Cove - Eskimo Pt. - Rankin Inlet - Churchill.

To complete flight.

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
14 FEB 78	7:30 PM.	12 MN.	A	4.5	INITIALS- INITIALES: DATE 17-2-78

RECORD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
	Previous Balance / *Total précédent*
	Balance this month / *Heures accumulées au cours du mois*
	TOTAL
	L.T.O. taken / *Congés pris*
	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	23.0
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	
TOTAL	23.0

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY / *NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE*

	34.5
ADJUSTMENTS— *AJUSTEMENT*	
TOTAL	34.5
BANKED / *RÉSERVE*	34.5
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	

CLAIMANT (Signature)- *LE REQUÉRANT*: W.D. Reid.

COLLATOR NO. / *Nº DE COLLATION*: G0592.

UNIT- SERVICE: Yellowknife Air Det.

LOCATION- *LIEU*: Yellowknife. N.W.T.

RANK- GRADE: Cpl.

REG. NO.- *Nº MATR.*: 30303.

NAME- *NOM*: William. D. REID.

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 4.88

(10/75) 7530-21-036-3497

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GENDARMERIE ROYALE DU CANADA

OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

PAGE 1 OF / DE 1

DISTRIBUTION: 2 to Div. "H.Q."; 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
1	LAST / DERNIÈRE	5-Feb 78	8 15 AM	4 30 PM
	NEXT / PROCHAINE	6 Feb 78	8 AM	4 30 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: FLT CF-MPB

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: TO COMPLETE FLT YELLOWKNIFE - HAY RIVER - WARDEN'S GROVE - SATELITE II - YELLOWKNIFE

OVERTIME — SURTEMPS

DATE(S)	FROM-DE	TO-À	HOURS CLAIMED / HEURES À RÉTRIBUER	RECOMMENDED / RECOMMANDÉ
4-2-78	8 30 AM	5 00 PM		

* CODE	OVERTIME / SURTEMPS	INITIALS- *INITIALES*
C	8	

DATE: 7-2-78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
2	LAST / DERNIÈRE	9 - Feb 78	7 30 AM	3 30 PM
	NEXT / PROCHAINE	10 Feb 78	8 30 AM	4 30 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: FLT-CF-MPB

TO COMPLETE FLT YELLOWKNIFE - FT-RESOLUTION - YELLOWKNIFE - FT-RESOLUTION - HAY RIVER - YELLOWKNIFE.

DATE(S)	FROM-DE	TO-À	HOURS CLAIMED / HEURES À RÉTRIBUER	RECOMMENDED / RECOMMANDÉ
9 Feb 78	4 00 PM	7 30 PM		

* CODE	OVERTIME / SURTEMPS	INITIALS- *INITIALES*
A	3.5	

DATE: 10 Feb 78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
3	LAST / DERNIÈRE	13 Feb 78	8 15 AM	4 15 PM
	NEXT / PROCHAINE	14 Feb 78	8 00 AM	4 00 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: FLT-MPP

TO COMPLETE FLT YELLOWKNIFE - FT-SIMPSON-LITTLE DOCTOR LK - CLI LK - NAHANNI BUTTE - BIRCH LK - FT-SIMPSON - JEAN MARIE RIVER - FT-SIMPSON

DATE(S)	FROM-DE	TO-À	HOURS CLAIMED / HEURES À RÉTRIBUER	RECOMMENDED / RECOMMANDÉ
13-2-78	4 15 PM	8 30 PM		

* CODE	OVERTIME / SURTEMPS	INITIALS- *INITIALES*
A	4	

DATE: 15-2-78

NO. / NO	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
4	LAST / DERNIÈRE	24-2-78	8 15 AM	4 30 PM
	NEXT / PROCHAINE	27-2-78	8 15 AM	4 30 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: FLT-MPB

TO COMPLETE FLT - YELLOWKNIFE - FT-FRANKLIN-TERRA - PT-BADHAM - FT-FRANKLIN - YELLOWKNIFE

DATE(S)	FROM-DE	TO-À	HOURS CLAIMED / HEURES À RÉTRIBUER	RECOMMENDED / RECOMMANDÉ
24-2-78	5 00 PM	7 00 PM		

* CODE	OVERTIME / SURTEMPS	INITIALS- *INITIALES*
A	2	

DATE: 27-2-78

RECORD OF LIEU TIME—*RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- *H.*	
	Previous Balance / *Total précédent*
	Balance this month / *Heures accumulées au cours du mois*
	TOTAL
	L.T.O. taken / *Congés pris*
	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	17.5
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	—
TOTAL	17.5

X1.5

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CLAIMANT (Signature)- *DU REQUÉRANT*

COLLATOR NO. / *Nº DE COLLATION*: 60542

ADJUSTMENTS—*AJUSTEMENT*

	26.0
TOTAL	26.0
BANKED / *RÉSERVE*	—
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	26.0

UNIT- SERVICE: YELLOWKNIFE AIR

LOCATION- *LIEU*: YELLOWKNIFE NWT

RANK / GRADE: S/SGT

REG. NO.- *Nº MATR.*: 23516

NAME- *NOM*: A-LAN L. SABEY

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "A" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 11.50

1112 (10/75) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 & 2 to Div. "H.Q."; 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div; 4 au bureau

* CODE: After Duty A *Après journée de travail*
Before Duty B *Avant journée de travail*
Call Back C *Rappel travail*
Stand By D *En disponibilité*

SHIFT PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
LAST DERNIÈRE	10-1-78	8 15 AM	4 30 PM
NEXT PROCHAINE	11-1-78	8 15 AM	4 30 PM

NO.- Nº DU DOSSIER

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*

T.O. RTN TO HANGAR RE: UNSERVICEABILITIES ON MPB FROM TRIP RTN'D 6 00 PM TRIPS BOOKED AM 11-1-78

ON- TITRE: F-MPB

OVERTIME — SURTEMPS

DATE(S)	FROM-DE	TO-À
10-1-78	7 00 PM	9 00 PM

HOURS CLAIMED HEURES À RÉTRIBUER	
* CODE	OVERTIME SURTEMPS
C	3

RECOMMENDED RECOMMANDÉ
INITIALS- INITIALES
DATE 11-1-78

	DATE(S)	FROM-DE	TO-À
LAST DERNIÈRE	12-1-78	8 15 AM	4 30 PM
NEXT PROCHAINE	13-1-78	8 15 AM	4 30 PM

NO.- Nº DU DOSSIER

ON- TITRE: F-MPB

REPAIR BOOST PUMPS IN PREPARATION FOR FLT 13-1-78

DATE(S)	FROM-DE	TO-À
12-1-78	4 30 PM	5 30 PM

* CODE	OVERTIME SURTEMPS
A	1

RECOMMENDED RECOMMANDÉ
INITIALS- INITIALES
DATE 15-1-78

	DATE(S)	FROM-DE	TO-À
LAST DERNIÈRE	31-1-78	8 00 AM	4 00 PM
NEXT PROCHAINE	1-2-78	8 15 AM	4 30 PM

NO.- Nº DU DOSSIER

ON- TITRE: F-MPB

ASSIST ON FLT. TO WARDENS GRIVE SATELITE SITE AS CREW

DATE(S)	FROM-DE	TO-À
31-1-78	4 30 PM	8 00 PM

* CODE	OVERTIME SURTEMPS
A	3.5

RECOMMENDED RECOMMANDÉ
INITIALS- INITIALES
DATE 1-2-78

	DATE(S)	FROM-DE	TO-À
LAST DERNIÈRE	DATE(S)	FROM-DE	TO-À
NEXT PROCHAINE	DATE(S)	FROM-DE	TO-À

NO.- Nº DU DOSSIER

ON- TITRE

DATE(S) FROM-DE TO-À

* CODE	OVERTIME SURTEMPS

RECOMMENDED RECOMMANDÉ
INITIALS- INITIALES
DATE

RD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

H.

Previous Balance *Total précédent*

Balance this month *Heures accumulées au cours du mois*

TOTAL

L.T.O. taken *Congés pris*

Balance *Excédent*

TOTAL THIS PAGE *TOTAL DE CETTE PAGE*	7.5
TOTAL FROM PREVIOUS PAGE *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	
TOTAL	7.5

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
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(Signature)- *DU REQUÉRANT*: James L. Eccleston

COLLATOR NO. *Nº DE COLLATION*: G0592

ADJUSTMENTS—*AJUSTEMENT*

11.0

RVICE: YELLOWKNIFE AIR

LOCATION- *LIEU*: YELLOWKNIFE NWT

RADE: M

REG. NO.- *Nº MATR.*: 4G1935

NAME- *NOM*: JAMES L. ECCLESTON

TOTAL

BANKED *RÉSERVE*

TOTAL FOR PAYMENT *TOTAL À RÉTRIBUER*: 11.0

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE *TAUX HORAIRE*: 8.09

(5) 7530-21-036-3497

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OVERTIME COMPENSATION CLAIM
DEMANDE DE RÉTRIBUTION DU SURTEMPS

DISTRIBUTION: 1 & 2 to Div. "H.Q.;" 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div; 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO. / NO	SHIFT / PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À
1	LAST / DERNIÈRE		3 FEB 78	10 AM	6 PM
	NEXT / PROCHAINE		6 FEB 78	10 AM	6 PM

FILE NO.- Nº DU DOSSIER:

CAPTION- TITRE: ASSIST D.N.D. OPERATION MORNINGLIGHT SATELLITE #1 CAMP

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: TRANSPORTATION FOR REPLACEMENTS WAS NOT AVAILABLE.

OVERTIME — SURTEMPS

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
4 FEB 78	10 AM	6 PM	C	8	INITIALS- INITIALES: [illegible] DATE: 8/2/78

HOURS CLAIMED / HEURES À RÉTRIBUER

NO. / NO	SHIFT / PÉRIODE DE RELÈVE		DATE(S)	FROM- DE	TO- À
2	LAST / DERNIÈRE		3 FEB 78	10 AM	6 PM
	NEXT / PROCHAINE		6 FEB 78	10 AM	6 PM

FILE NO.- Nº DU DOSSIER:

CAPTION- TITRE: ASSIST D.N.D. OPERATION MORNINGLIGHT SATELLITE #1 CAMP

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: TRANSPORTATION FOR REPLACEMENTS WAS NOT AVAILABLE.

OVERTIME — SURTEMPS

DATE(S)	FROM- DE	TO- À	* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
5 FEB 78	10 AM	6 PM	C	8	INITIALS- INITIALES: [illegible] DATE: 8/2/78

HOURS CLAIMED / HEURES À RÉTRIBUER

	LAST / DERNIÈRE	DATE(S)	FROM- DE	TO- À	DATE(S) / FROM- DE / TO- À
	NEXT / PROCHAINE	DATE(S)	FROM- DE	TO- À	

FILE NO.- Nº DU DOSSIER:

CAPTION- TITRE:

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*:

OVERTIME — SURTEMPS

* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
		INITIALS- INITIALES / DATE

HOURS CLAIMED / HEURES À RÉTRIBUER

	LAST / DERNIÈRE	DATE(S)	FROM- DE	TO- À	DATE(S) / FROM- DE / TO- À
	NEXT / PROCHAINE	DATE(S)	FROM- DE	TO- À	

FILE NO.- Nº DU DOSSIER:

CAPTION- TITRE:

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*:

OVERTIME — SURTEMPS

* CODE	OVERTIME SURTEMPS	RECOMMENDED RECOMMANDÉ
		INITIALS- INITIALES / DATE

HOURS CLAIMED / HEURES À RÉTRIBUER

RECORD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
0	Previous Balance / *Total précédent*
0	Balance this month / *Heures accumulées au cours du mois*
24	TOTAL
16	L.T.O. taken / *Congés pris*
8	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	16
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	0
TOTAL	16

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

CLAIMANT (Signature)- *DU REQUÉRANT*: R.S. GRINSTEAD

COLLATOR NO. / *Nº DE COLLATION*: 60632

ADJUSTMENTS— *AJUSTEMENT*

UNIT- SERVICE: BAKER LAKE DET

LOCATION- LIEU: BAKER LAKE

RANK- GRADE: CST.

REG. NO.- Nº MATR: 1 32913

NAME- NOM: 2 R.S. GRINSTEAD.

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 4 7.62

TOTAL: 5 24

BANKED / *RÉSERVE*

TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*: 3 8

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112 (10/75) 7530-21-036-3497

OVERTIME COMPENSATION CLAIM
D ANDE DE RÉTRIBUTION DU SURTEM

PAGE ___ De

N: 1 - 2 to Div. "H.Q.," 3 to S/Div; 4 Office — DIFFUSION: 1 & 2 au q.g. div, 3 au q.g. s.-div.; 4 au bureau

* CODE: After Duty A *Après la journée de travail*
Before Duty B *Avant la journée de travail*
Call Back C *Rappel au travail*
Stand By D *En disponibilité*

NO.	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
1.	LAST / DERNIÈRE	4 Feb 78	9:00 AM	5:00 PM
	NEXT / PROCHAINE	5 Feb 78	9:00 AM	5:00 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: Satellite Site Operation Morning Star

Explain why overtime was unavoidable- *Dire pourquoi le surtemps était inévitable*: Required to guard satellite site at Warden's Grove N.W.T.

OVERTIME — SURTEMPS

DATE(S)	FROM-DE	TO-À	HOURS CLAIMED / HEURES À RÉTRIBUER * CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ
4 Feb 78	5:00 PM	9:00 PM	A	4	INITIALS- *INITIALES*: AB Cpl; DATE: 1 Mar 78

NO.	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
2.	LAST / DERNIÈRE	5 Feb 78	9:00 AM	5:00 PM
	NEXT / PROCHAINE	6 Feb 78	9:00 AM	5:00 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: Satellite Site Operation - Morning Star

Required to guard satellite site at Warden's Grove N.W.T.

DATE(S)	FROM-DE	TO-À	* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ
5 Feb 78	5:00 PM	9:00 PM	A	4	INITIALS- *INITIALES*: AB Cpl; DATE: 1 Mar 78

NO.	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
3.	LAST / DERNIÈRE	6 Feb 78	9:00 AM	5:00 PM
	NEXT / PROCHAINE	7 Feb 78	9:00 AM	5:00 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: Satellite Site Operation Morning Star

Required to guard satellite site at Warden's Grove NWT

DATE(S)	FROM-DE	TO-À	* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ
6 Feb 78	5:00 PM	10:00 PM	A	5	INITIALS- *INITIALES*: AB Cpl; DATE: 1 Mar 78

NO.	SHIFT / PÉRIODE DE RELÈVE	DATE(S)	FROM-DE	TO-À
4.	LAST / DERNIÈRE	7 Feb 78	9:00 AM	5:00 PM
	NEXT / PROCHAINE	8 Feb 78	9:00 AM	5:00 PM

FILE NO.- *Nº DU DOSSIER*

CAPTION- *TITRE*: Satellite Site Operation - Morning Star

Required to guard satellite site at Warden's Grove NWT

DATE(S)	FROM-DE	TO-À	* CODE	OVERTIME / SURTEMPS	RECOMMENDED / RECOMMANDÉ
7 Feb 78	5:00 PM	9:00 PM	A	4	INITIALS- *INITIALES*; DATE

RECORD OF LIEU TIME— *RELEVÉ DES CONGÉS DE SURTEMPS*

HRS.- H.	
21.5	Previous Balance / *Total précédent*
	Balance this month / *Heures accumulées au cours du mois*
	TOTAL
	L.T.O. taken / *Congés pris*
	Balance / *Excédent*

TOTAL THIS PAGE / *TOTAL DE CETTE PAGE*	17
TOTAL FROM PREVIOUS PAGE / *TOTAL REPORTÉ DE LA PAGE PRÉCÉDENTE*	—
TOTAL	17

X1.5

COMPLETE BEYOND HERE ON FINAL PAGE ONLY
NE REMPLIR LES CASES SUIV. QUE SUR LA DERNIÈRE PAGE

ADJUSTMENTS— *AJUSTEMENT*

	25.5
TOTAL	5 25.5
BANKED / *RÉSERVE*	8.5
TOTAL FOR PAYMENT / *TOTAL À RÉTRIBUER*	3 17.0

CLAIMANT (Signature)- *DU REQUÉRANT*: A.A. MacKenzie

COLLATOR NO. / *Nº DE COLLATION*: 6-0536

UNIT- *SERVICE*: Hay River H.P.

LOCATION- *LIEU*: Hay River, N.W.T.

RANK- *GRADE*: Cst.

REG. NO.- *Nº MATR*: 1 29766 2

NAME- *NOM*: A.A. MacKenzie

WHEN IN ACTING POSITION PLACE "A" IN FRONT OF HOURLY RATE
EN CAS DE SUPPLÉANCE, METTRE UN "S" DEVANT "TAUX HORAIRE"

HOURLY RATE / *TAUX HORAIRE*: 4 9.10

1112 (10/75) 7530-21-036-3497

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AIRCRAFT

DATE	TYPE	CODE	DETAILS	HOURS
78-01-30	Single Otter	CF/MPP	Siting Patrol Snowdrift/ Reliance	1.2
78-01-31	Single Otter	CF/MPP	Transport members to Wardens Grove	7.2
78-02-06	Single Otter	CF/MPP	Return members from Wardens Grove to respective Dets.	2.3
78-02-08	Single Otter	CF/MPP	Return members from Wardens Grove to respective Dets.	1.5
				12.2

12.2 hours x 110 mph(average) = 1,342 miles x $3.82 per mile = $5,126.44

78-02-04	Twin Otter	CF/MPB	Rotate members Wardens Grove	6.1
78-02-05	Twin Otter	CF/MPB	Return members from Reliance	2.1
78-03-11	Twin Otter	CF/MPF	Flew team Canadian Forces to Lake, 25 miles Northwest Cape Dorset and return	1.9
				10.1

10.1 hours x 160 mph (average)=1,616 miles x $1.99 per mile = $3,215.84

Total Aircraft: $8,342.28

SKI-DOO

DATE	CODE NUMBER	DETAIL	HOURS
78-02-03	G49-3	Patrol to area approx. 4 miles west of Snowdrift while helicopter absent from site, refuelling.	6

6 hours @ $2.50 = $15.00

POLICE CAR

DATE	MILES	DETAILS
78-02-11 78-02-13	140 140	Transporting personnel to and from Rae, to meet aircraft in Yellowknife. Members required for guard duties at satellite sites.
	220	Misc. miles by Yellowknife, Hay River, Snowdrift, Baker Lake, Cape Dorset and Frobisher Bay Dets.
	500	

500 miles @ 20¢ per mile = $100.00

SPECIAL PURCHASES

9 EA CH4 Batteries - Rechargeables - for portable radios @ $9.80 =$77.62 plus $1.10 postage ---------- $ 78.72
(Invoice Cardinal Ind. attached)

5 EA Batteries - non-rechargeable, for portable radios (Receipt from MacLeod's attached) ---------- 15.95

TOTAL----- $ 94.67

CARDINAL INDUSTRIAL ELECTRONICS LTD.

NAME R C M P TELECOMMUNICATIONS DATE 6 21 77

ADDRESS BAG 5000 YELLOWKNIFE N W T

YOUR ORDER NO.	REQUISITION NO.	FEDERAL SALES TAX NO.	TERMS - NET 10TH OF MONTH FOLLOWING. SERVICE CHARGE OF 1½% PER MONTH (18% PER ANNUM) ON OVERDUE ACCOUNTS.
EDM76-13421	GR57-1		

	QUANTITY	DESCRIPTION		B.O.	SHIPPED	NET		AMOUNT	
1.	9	CH4 Batt. C.R.		2	9	9	80	8	20
2.				1					
3.									
4.		11.75 ea.							
5.		replacement value							
6.									
7.									
8.									
9.		CERTIFIED WORK PERFORMED OR MATERIALS SUPPLIED OR SERVICES RENDERED AND THAT THE PRICE CHARGED IS ACCORDING TO CONTRACT, OR, IF NOT SPECIFIED BY, CONTRACT IS REASONABLE.							
10.									
11.		27-6-77		Less 12%				10	58
12.									
13.									

SHIP TO

VIA P.P.

SUB TOTAL	77 62
F.S. TAX	
SUB TOTAL	
Post	1 10
INVOICE TOTAL	78 72

RETURNS ARE SUBJECT TO RESTOCKING CHARGE AND WILL NOT BE ACCEPTED WITHOUT OUR AUTHORIZATION AND MUST BE ACCOMPANIED BY ORIGINAL INVOICE NUMBER. BACK-ORDERED ITEMS WILL BE SHIPPED LATER UNLESS REQUESTED OTHERWISE.
EXEMPTION FROM TAXES IS EXTENDED TO YOU WITHOUT PREJUDICE TO OUR RIGHTS TO CHARGE YOU WITH THE TAXES AT ANY SUBSEQUENT DATE SHOULD THE TAXING AUTHORITIES DETERMINE THAT THE MATERIAL COVERED BY THIS INVOICE IS TAXABLE.
ITEMS ORDERED BUT NOT LISTED ARE PLACED ON BACK-ORDER UNLESS OTHERWISE ADVISED.

A-2026.5

INVOICE COPY

DETAIL: Above batteries were sent out to Fort Reliance, N.W.T. with our Members in the S.S.B. radio. Members were not made aware that these were re-chargeable batteries and disposed of same when they could no longer be utilized. Batteries required to be replaced and the present cost of same is $11.75 each (Total - $105.75).

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TRAVELLING EXPENSES (FORMS 1393 attached)

Reg.Nbr.	Rank	Name	Date(s)	Amount
31244	Cst.	RAYNER, H.W.	78-01-31 to 78-02-06 incl.	$157.20
30406	Cst.	LUCHTMEIJER,W.	78-02-10 to 78-02-13 incl.	55.55
30406	Cst.	LUCHTMEIJER, W.	78-02-03 to 78-02-05 incl.	31.20
29766	Cst.	MACKENZIE, A.A.	78-02-04 to 78-02-08 incl.	67.90
33844	Cst.	BOWDEN, A.A.	78-02-04 to 78-02-08 incl.	35.30 26.15
			TOTAL	373.30

TRAVELLING

Expenses incurred to, from and at sites being guarded. Where patrol cabin rates shown, members purchased food to take to site to supplement rations supplied by D.N.D.

ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

EXPENSE CLAIM / DEMANDE D'INDEMNITÉ

COLLATORNO. / N° DE COLLATION: 6004-2

UNIT-SERVICE: Yellowknife Det.

DATE	DETAILS-DÉTAILS	EXPENSES DÉPENSES	DIV. USE ONLY RÉSERVÉ À LA DIV.
	SUPPLIES & SERVICES PAID IN CASH.		
	MacLeods - Purchase of batteries for use in the portable S.S.B. radio being utilized near Fort Reliance, N.W.T. Receipt # 1	15.95	
	Norms - Purchase of map tacks. Receipt # 2	1.65	
	- -		
	F-93 of Cst. J.J.R. DRISDELLE	63.35	
	F-93 of Cst. J.J.R. DRISDELLE	96.70	
	F-93 of Cst. R.W. HOBBS	82.53	
	F-93 of Cst. R.S. HARRISON	85.45	

I certify that these expenses were incurred on Government business.
Je certifie que les dépenses indiquées ci-dessus ont été occasionnées par suite d'affaires gouvernementales autorisées.

CLAIMANT / RÉCLAMANT

(J.A. Armstrong) S/Sgt.

SIGNATURE

I certify that these services were performed, that the prices are reasonable and just, and that travel was authorized.
Je certifie que les services susmentionnés ont été rendus, que les prix sont justes et raisonnables, et que le voyage a été autorisé.

UNIT COMMANDER / COMMANDANT DE L'UNITÉ

(J.A. Armstrong) S/Sgt.

SIGNATURE

TOTAL EXPENSES *TOTAL DES DÉPENSES*	$	345.63
LESS TEMPORARY PERSONAL ADVANCE *MOINS L'AVANCE PERSONNELLE*	$	Nil
AMOUNT DUE CLAIMANT *MONTANT DÛ AU RÉCLAMANT*	$	345.63
AMOUNT DUE DIVISION CONTINGENCY ACCOUNT *MONTANT DÛ AU COMPTE DIV. D'ÉVENTUALITÉS*	$	

CLAIMANT / RÉCLAMANT — Given Name-*Prénoms*: James — Initial-*Initiale*: A. — Surname-*Nom de famille*: ARMSTRONG — Reg/Officer No. *N° matricule/officier*: 19103

CERTIFIED PURSUANT TO SECTION 27 OF THE FINANCIAL ADMINISTRATION ACT.
CERTIFIÉ EN VERTU DE L'ARTICLE 27 DE LA LOI SUR L'ADMINISTRATION FINANCIÈRE.

Reviewed by-*Révisé par*

Audited by-*Vérifié par*

CHEQUE NO. *N° DE CHÈQUE* — DATE

000000

4 ORIGINATOR - RÉCLAMANT

1393 (Formerly *anciennement* - F-93) 4/77(7530-21-036-4371)

Receipt #1.

MACLEODS
AUTHORIZED DEALER

TELEX 034-45513
TELEPHONE 873-4474

MERCHANDISERS LTD.

BOX 640
YELLOWKNIFE

DATE, Feb. 2 19 X

NAME R. C. M. P.

ADDRESS

QUANTITY	DESCRIPTION	PRICE	AMOUNT	
5	Lotteries	3.00	15	00

I HAVE RECEIVED A COPY OF THIS INVOICE AND FULLY UNDERSTAND AND AGREE TO THE FOLLOWING TERMS.
NET 30 DAYS - 2% PER MONTH (24% PER ANNUM) CHARGED ON OVERDUE ACCOUNTS.

TOTAL $

SIGNATURE

CLERK	CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D	PAID OUT
	✓					

FLATPAKIT - MOORE BUSINESS FORMS

35602

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G1133

EXPENSE STATEMENT – ÉTAT DE COMPTE

DIVISION	DETACHMENT - DÉTACHEMENT
"G"	Snowdrift
SUB-DIVISION - SOUS-DIVISION: Yellowknife	PERIOD - DURÉE: 14-jan-15 FEB 78

DETAILS - DÉTAILS	PATROL & CASE INVESTIGATION EXPENSES DÉPENSES: PATROUILLE ET ENQUÊTE	"HQ" USE ONLY RÉSERVÉ À LA "DG"

#31244, Cst. H.W. RAYNER,
Transfer Expenses

G0412

14 Jan Attached receipt located after last F-93 submission.
Ampunt claimed as per receipt #1 attached. . . . . $56.52 – 220

SATELLITE SECURITY
ASS'T BAKER LAKE DET.
THELON GAME SANCTUARY AREA, N.W.T. 31 JAN-6 FEB78

Member departed Snowdrift, N.W.T. 12:00 Pm 31 Jan, via CF-MPP. Member remained in Thelon area until 5 Feb, at which time returned to Yellowknife, N.W.T.. Lodging and meals claimed on personal d credit card for self and Cst. GRINSTEAD, Baker Lake Det.. Member returned to Snowdrift via CF-MPP 12:00 PM 6 FEB 78.

JAN to FEB	Patrol Cabin Composite Allowance 5 days @ ~~$12.35~~ 13.10	65.50 ~~61.75~~
FEB	1 (B) @ $~~2.10~~ 2.15, 1 (L) @ $2.75	4.90 ~~4.85~~
	2 (D) @ $8.50.	17.00
	Lodging Expenses at Explorer Hotel (Receipt #2 att.)	55.35
	Incidental Expenses. . . Raynor 3.40 Grinstead 2.65 . . .	3.90
FEB	2 (B) actual $price $6.65 (charged to room neither member carrying cash while in 'bush'.)	6.65
	Incidental Expenses.	3.90

G0632

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157.20

Rayner

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ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

EXPENSE CLAIM
DEMANDE D'INDEMNITÉ

COLLATION V-1002

UNIT-SERVICE: Detachment

DATE	DETAILS-DÉTAILS	EXPENSES DÉPENSES	DIV. USE ONLY RÉSERVÉ À LA DIV.
10 FEB 78	Airporter Bus Transport from Edmonton to the International airport.	3.00	
	OPERATION MORNING LIGHT * ASSIST D.N.D. Snowdrift Site 10 - 13 FEB 78		
	Depart for Snowdrift site 3.30 pm 10 FEB 78. Return to Yellowknife at approx. 4.30 pm the 13 FEB 78.		
10	MEALS: Patrol Cabin Rates 1(D)	5.95	
	INC EX	2.25	
11	MEALS " " " 1(B)	2.15	
	1(L)	2.75	
	1(D)	5.95	
	INC EX	2.25	
12	MEALS " " " 1(B)	2.15	
	1(L)	2.75	
	1(D)	5.95	
	INC EX	2.25	
13	MEALS " " " 1(B)	2.15	
	1(L)	2.75	
	INC EX	2.25	
15	Drycleaning expenses re: Articles of Uniform badly stained and damaged on Operation Morning light at Sattellite One and at the Snowdrift site. Receipt attached.	14.00	
		~~14.00~~	
		55.55	

Okay

I certify that these expenses were incurred on government business.
Je certifie que les dépenses indiquées ci-dessus ont été occasionnées par suite d'affaires gouvernementales autorisées.

SIGNATURE: [signature] CLAIMANT

I certify that these services were performed, that the prices are reasonable and just, and that travel was authorized.
Je certifie que les services susmentionnés ont été rendus, que les prix sont justes et raisonnables, et que le voyage a été autorisé.

SIGNATURE: [signature] Sgt.

TOTAL EXPENSES / TOTAL DES DÉPENSES	$ 148.55 ~~151.65~~
LESS TEMPORARY PERSONAL ADVANCE / MOINS L'AVANCE PERSONNELLE	$ .00
AMOUNT DUE CLAIMANT / MONTANT DÛ AU RÉCLAMANT	$ 148.55
AMOUNT DUE DIVISION CONTINGENCY ACCOUNT / MONTANT DÛ AU COMPTE DIV. D'ÉVENTUALITÉS	$

CLAIMANT / RÉCLAMANT — Given Name-*Prénoms*: Willem — Initial-*Initiale*: — Surname-*Nom de famille*: LUCHTMEIJER — Reg/Officer No. *N° matr. de l'officier*: 30406

CERTIFIED PURSUANT TO SECTION 27 OF THE FINANCIAL ADMINISTRATION ACT.
CERTIFIÉ EN VERTU DE L'ARTICLE 27 DE LA LOI SUR L'ADMINISTRATION FINANCIÈRE.

Reviewed by-*Révisé par* — Audited by-*Vérifié par* — CHEQUE NO. *N° DE CHÈQUE* — DATE

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DIV. F.S.S. - S.-D.F.A. DE LA DIV.

1393 (Formerly *anciennement* - F-93) 4/77(7530-21-036-4371)

ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

EXPENSE CLAIM
DEMANDE D'INDEMNITÉ

NR. DE COLLATION G00442

UNIT-SERVICE
Detachment

DATE	DETAILS-*DÉTAILS*	EXPENSES *DÉPENSES*	DIV. USE ONLY *RÉSERVÉ À LA DIV.*
eb 78	OPERATION MORNING LIGHT * ASSIST D.N.D. Reliance Site 03-05 February 1978 Depart for Reliance Site, Satellite One, at approx. 10.00 am, 03 FEB 78. Return to Yellowknife at approx. 2.30 pm the 05 FEB 78.		
03	MEALS: Patrol Cabin rates 1(L)	2.75	
	1(D)	5.95	
	1 Inc Ex.	2.25	
04	MEALS " " " 1(B)	2.15	
	1(L)	2.75	
	1(D)	5.95	
	1 INC EX	2.25	
05	MEALS " " " 1(B)	2.15	
	1(L)	2.75	
	1 INC EX	2.25	
	SAKITO. G. Prisoner Escort to Edmonton		

31.20

Leichtmeijer

EXPENSE CLAIM
DEMANDE D'INDEMNITÉ

COLLATION NO. / N° DE COLLATION: G0536

UNIT-SERVICE: Hay River High. Pat.

DETAILS-DÉTAILS	EXPENSES DÉPENSES	DIV. USE ONLY RÉSERVÉ À LA DIV.
Cosmos Satellite Site Recovery Operation - Morning Star		
Departed Hay River 4 Feb 78 for Warden's Grove, NWT via CF-MPB. Arrived Warden's Grove at 1:45 PM. Departed Satellite Site 1 at 7 Feb 78, 3:20 PM for Yellowknife. Arrived Yellowknife at 9:00 PM. Departed Yellowknife at 9:00 AM, 8 Feb 78 via CF-MPP for Hay River. Arrived Hay River at 11:30 AM		
b78 Incidental Expenses	2.25	
b78 Incidental Expenses	2.25	
eb78 Incidental Expenses	2.25	
eb78 Accommodation at Yellowknife Inn, Yellowknife, NWT @ $35.00. Receipt #1 attached.	35.00	
1 (D) @ $8.50	8.50	
Incidental Expenses	~~2.25~~ 3.90	
eb78 1 (B) @ $3.10	3.10	
Incidental Expenses	3.90	
Dry cleaning of one Northern Parka and one pair of long blues. Clothing soiled while at Satellite Site at Warden's Grove. Receipt #2 attached..... Also cleaned were three shirts.	~~8.70~~ 6.75	

I certify that these expenses were incurred on government business.
Je certifie que les dépenses indiquées ci-dessus ont été occasionnées par suite d'affaires gouvernementales autorisées.

(A. MacKENZIE) Cst.
SIGNATURE

I certify that these services were performed, that the prices are reasonable and just, and that travel was authorized.
Je certifie que les services susmentionnés ont été rendus, que les prix sont justes et raisonnables, et que le voyage a été autorisé.

(D.G. Sveinbjornson) S/Sgt.
SIGNATURE

TOTAL EXPENSES / TOTAL DES DÉPENSES	$ ~~69.35~~ 68.20
LESS TEMPORARY PERSONAL ADVANCE / MOINS L'AVANCE PERSONNELLE	$ 0.45
AMOUNT DUE CLAIMANT / MONTANT DÛ AU RÉCLAMANT	$ ~~68.90~~ 67.75
AMOUNT DUE DIVISION CONTINGENCY ACCOUNT / MONTANT DÛ AU COMPTE DIV. D'ÉVENTUALITÉS	$

CLAIMANT / RÉCLAMANT — Given Name-Prénoms: Austin — Initial-Initiale: A. — Surname-Nom de famille: MacKENZIE — Reg/Officer No. N° matr. de l'officier: 29766

CERTIFIED PURSUANT TO SECTION 27 OF THE FINANCIAL ADMINISTRATION ACT.
CERTIFIÉ EN VERTU DE L'ARTICLE 27 DE LA LOI SUR L'ADMINISTRATION FINANCIÈRE.

Reviewed by-Révisé par

Audited by-Vérifié par

CHEQUE NO. / N° DE CHÈQUE

DATE

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ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

EXPENSE CLAIM
DEMANDE D'INDEMNITÉ

SOLAT/ORA 1985

UNIT-SERVICE: Hay River Detachment

DATE	SUPPLEMENTARY — DETAILS-DÉTAILS	EXPENSES DÉPENSES	DIV. USE ONLY RESERVÉ A LA DIV.
	Cosmos Satellite Site Recovery Operation - Morning Star Departed Hay River 4 FEB 78 for Warden's Grove, N.W.T. via CF-MPB. Arrived Warden's Grove at 1:45 PM. Departed Satellite Site, 8 FEB 78 at 3:20 PM for Yellowknife. Arrived Yellowknife at 9:00 PM. Departed Yellowknife at 9:00 AM, 8 FEB 78 via CF-MPP for Hay River. Arrived Hay River at 11:30 AM. Following meals taken at patrol cabin rates		
04 FEB 78	Lunch @ $2.75 Dinner @ $5.95	2.75 5.95	
05FEB78	Breakfast @ $2.15 Lunch @ $2.75 Dinner @$5.95	2.15 2.75 5.95	
06FEB78	Breakfast @ $2.15 Lunch @ $2.75 Dinner @ $5.95	2.15 2.75 5.95	
07FEB78	Breakfast @ $2.15 Lunch @ $2.75	2.15 2.75	

G0632

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I.E. Pardon previous 1393

I certify that these expenses were incurred on Government business.
Je certifie que les dépenses indiquées ci-dessus ont été occasionnées par suite d'affaires gouvernementales autorisées.

A/ A. Bowden

I certify that these services were performed, that the prices are reasonable and just, and that travel was authorized.
Je certifie que les services susmentionnés ont été rendus, que les prix sont justes et raisonnables, et que le voyage a été autorisé.

UNIT COMMANDER / RESPONSABLE DU DETACHMENT

SIGNATURE

TOTAL EXPENSES / TOTAL DES DÉPENSES	$ 35.30
LESS TEMPORARY PERSONAL ADVANCE / MOINS L'AVANCE PERSONNELLE	$
AMOUNT DUE CLAIMANT / MONTANT DÛ AU RÉCLAMANT	$ 35.30
AMOUNT DUE DIVISION CONTINGENCY ACCOUNT / MONTANT DÛ AU COMPTE DIV. D'ÉVENTUALITÉS	$

CLAIMANT / RÉCLAMANT — Given Name-*Prénoms*: Andrew; Initial-*Initiale*: A.; Surname-*Nom de famille*: Bowden; Reg./Officer No. / *N° matr. de l'officier*: 33844

CERTIFIED PURSUANT TO SECTION 27 OF THE FINANCIAL ADMINISTRATION ACT.
CERTIFIÉ EN VERTU DE L'ARTICLE 27 DE LA LOI SUR L'ADMINISTRATION FINANCIÈRE.

Reviewed by-*Révisé par* | Audited by-*Vérifié par*

CHEQUE NO. / *N° DE CHÈQUE* | DATE

000000

DIV. F.S.S. - S.-D.F.A. DE LA DIV.

1393 (Formerly / *anciennement* - F-93) 4/77(7530-21-036-4371)

ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

EXPENSE CLAIM
DEMANDE D'INDEMNITÉ

N° DE COLLATION: G0695

UNIT-SERVICE: Hay River Detachment

DATE	SUPPLEMENTARY DETAILS-*DÉTAILS*	EXPENSES *DÉPENSES*	DIV. USE ONLY *RÉSERVÉ À LA DIV.*
	Cosmos Satellite Site Recovery Operation - Morning Star Departed Hay River 4 Feb 78 for Warden's Grove, NWT via CF-MPB. Arrived Warden's Grove at 1:45pm. Departed Satellite Sitel, 7 Feb 78 at 3:20pm for Yellowknife. Arrived Yellowknife at 9:00pm. Departed Yellowknife at 9:00am, 8 Feb 78 via CF-MPP for Hay River. Arrived Hay River at 11:30am.		
4 Feb 78	Incidental Expenses	2.25	
5 Feb 78	Incidental Expenses	2.25	
6 Feb 78	Incidental Expenses	2.25	
7 Feb 78	Accommodation at Yellowknife Inn, Yellowknife, NWT. Accommodation shared with Cst. MacKENZIE and paid for in full by him. 1 (D) @ $8.50 Incidential expenses	8.50 ~~3.25~~ 3.90	
8 Feb 78	1 (B) @ $3.10 Incidental Expenses	3.10 3 90	
	Dry cleaning of one Northern Parka, one pair of issue trousers, Receipts #1 and #2 attached.	6.75	

G0632

200

-474

26.15

26.15
25.20
61.45

Bowden

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / A: C.O. "G" Division - Yellowknife

FROM / DE: OIC, Financial Management Branch

SUBJECT / OBJET

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*
CONFIDENTIAL
OUR FILE - *N/RÉFÉRENCE*
G.S. 785-47
YOUR FILE - *V/RÉFÉRENCE*
DATE
1978-07-12

EXPENDITURES ATTRIBUTABLE TO THE COSMOS 954 INCIDENT

Enclosed for your information and attention is a copy of correspondence dated 7 July 1978 received from the Department of Justice. In order to complete the affidavit, the following information is required:

A) A detailed summary of our involvement including dates, places, etc.

B) A detailed breakdown of expenditures. ($14,523.76)

1. Salaries ($3,826.69) and Overtime ($1,673.94) - dates, names, rank, regimental number, hours, rate etc.

2. Travelling Expenses ($452.60). Copies of F-93's with sufficient explanation of claims.

3. Police aircraft ($8,342.28); Police car ($100.00); skidoo hrs. ($6.60) - Sufficient detail should include types of vehicles and patrols; rates, etc.

4. Radio batteries ($121.65) - types, prices and invoices if possible.

Please provide this information by 21 July 1978.

B.T. Lynch

B.T. Lynch, Officer i/c
Financial Management Branch

Read 78-07-18

000000

Department of Justice | Ministère de la Justice

Ottawa, Canada
K1A 0H8

July 7, 1978

The Commissioner
Royal Canadian Mounted Police
Ottawa, Ontario
K1A OR2

Attention: Mr. B.T. Lynch, Officer I/C
Financial Management Branch

209528
Re: Cosmos 954 - Claim against the Soviet Union for Costs incurred in Operation Morning Light
(Your File: GS785-47)

Dear Mr. Lynch:

I have your letter dated May 15, 1978 addressed to Mr. W.H. Montgomery setting out your final expenditures in this matter.

I have been asked to coordinate the marshaling of the evidence with respect to the expenditures of all departments involved in Operation Morning Light. The 1972 Convention on International Liability for Damage caused by Space Objects provides that the party claiming against the launching state shall submit documentation of its claim. It has been decided that the itemization of expenses and the explanation for these expenses from the various departments shall be submitted to the Soviet Union in the form of affidavits.

The first affidavit to be prepared by your department should be from the responsible and knowledgeable financial officer with respect to this operation. It should be noted that this financial officer may be required to submit to cross-examination by counsel from the Soviet Union. I am enclosing herewith a sample affidavit which can be used as a guide by your department.

. . . / 2

It will be necessary to detail the breakdown of expenditures as has been done by the Atomic Energy Control Board in the enclosed annexures. Therefore would you please detail the expenditures under each of the headings which you have labeled *(a)* to *(g)* in your letter dated May 15, 1978. This breakdown would be part of paragraph 4 in the enclosed sample affidavit. The breakdown of expenses under the headings should include an explanation of the reasons for these expenses under each heading.

As well in paragraph 3 of the sample affidavit it is suggested that the financial officer provide an explanation of the involvement of your department in the search and recovery operation so that these expenses can be seen in perspective. If the deponent of the affidavit does not have personal knowledge with respect to the nature of the department's involvement in the operation or with respect to the specific reasons for the particular expenses under the different headings, then he should inform himself and state these facts with this preface:

> *"I am informed by Mr. ABC, Manager of XYZ department, and I verily believe that:"*

Please note that international tribunals require vouchers, receipts and other records substantiating the expenses. Accordingly please ensure that the financial officers keep all records in some order in some central location. It may be necessary to forward a copy of all of these records to the Soviet Union.

Since it has not been decided whether the claim will be submitted for the total costs of your department or simply the incremental costs, it will be necessary to include all costs. However it should be evident from the breakdown of the costs which costs are incremental. But please do not label the costs under the headings "total" and "incremental". Rather this should be evident from an examination of the breakdown. Then if it is necessary to claim only for the incremental costs this information will be evident from this affidavit.

. . . / 3

If you have any questions please do not hesitate to contact me at 995-9650.

A copy of this letter with enclosures has been sent to the Officer in Charge of the Legal Branch of the RCMP. I am asking the Officer in Charge by copy of this letter to provide any assistance you or the financial officer may require in the preparation of this material.

Yours truly,

Michael A. Kelen
Civil Litigation Section

Encl.

cc: Royal Canadian Mounted Police
Headquarters
1200 Alta Vista Drive
Ottawa, Ontario
K1A OR2

Attention: Supt. J.V. Cain, Officer I/C
Legal Branch

Mr. W.H. Montgomery
Director
Legal Advisory Division
Department of External Affairs
4th floor, Room 140
125 Sussex Drive, Tower "A"
Ottawa, Ontario
K1A OG2

Mr. F.J.E. Jordan
Director
Constitutional, Administrative and
International Law Section
Department of Justice
Ottawa, Ontario
K1A OH8

Dr. Gerald F. FitzGerald
Constitutional, Administrative and
International Law Section
Department of Justice
Ottawa, Ontario
K1A OH8

7. Costs

Costs as requested are presented here in two parts: those incurred prior to 21 April, and those coming on or after 21 April. This division is an arbitrary one and it should be realized that many expenditures that were cleared after 21 April represent costs incurred prior to that date. Thus, all costs post-21 April do not neatly refer to"Phase II" of the Cosmos 954 Search and Recovery Program.

7.1 Prior to 21 April, 1978

7.1.1 Travel

Costs of travelling from Ottawa to Edmonton, Yellowknife and Pinawa, and for accomodation on site, are summarized in ANNEX I, based on expense accounts paid by AECB in the period.

Additional travel charges, billed directly to AECB, are given in ANNEX II.

7.1.2 Transportation of equipment & samples

Costs of shipping equipment to the field are given in ANNEX III. DND covered costs of almost all sample shipments from Edmonton to Winnipeg, where they were taken to Pinawa by AECL truck, for which costs are included in the AECL bill (ANNEX IV).

7.1.3 Professional and Temporary Services

Costs for such services are summarized in ANNEX IV. The computer services were required to support Geological Survey airborne detection surveys. The AECL bill includes costs of analysis, salaries, sample transport (Winnipeg Airport to Pinawa), handling and storage.

7.1.4 Rentals

ANNEX V shows costs of personal paging service devices, which were needed to ensure that key personnel could b contacted quickly, & a telecopier so that data could be received without delay from Pinawa and from Edmonton.

7.1.5 Materials & Supplies

ANNEX VI lists materials and supplies purchased to operate field offices, and particularly items required to ensure proper identification and recording of samples for evidence record purposes. The photographic bill is an extreme example of this aspect of records.

7.1.6 Equipment

Radiation measuring equipment and approved containers for handling and shipping radioactive materials requir to be purchased to meet the needs of expanding search and recovery operations. Costs of these (as billed prior to 20 April 1978) are given in ANNEX VII.

7.1.7 Other Expenditures

Other expenditures are given in ANNEX VIII. Radiation warning signs were prepared in Inuit and one of the Indian written languages. "Nu-con Smears" represent standard swipes for checking for contamination on containers, etc.

7.2 Post 21 April, 1978

7.2.1 Expenditures since 21 April and up to 24 May, 1978, are presented in the same order:

Travel - ANNEX IX. The National Research Council bill is for travel and living expenses of an ice expert at Cape Dorset, Baffin Island.

Transportation-ANNEX X.

Professional and Special Services-ANNEX XI

Rentals-ANNEX XII.

Materials and Supplies-ANNEX XIII.

Equipment-ANNEX XIV. Many of the charges represent equipment ordered prior to 21 April, but also some of this equipment was purchased in order to be able to equip properly the new search teams of Phase II.

Other Expenditures-ANNEX XV.

8. Salaries

Salaries for those involved in Operation Morning Light from 24 January to 20 April, are given in ANNEX XVI. This tabulation also shows the cost of recorded overtime, and the dollar equivalent of this.

ANNEX XVII gives salaries for personnel involved between 21 April and 23 May. In this period there was no overtime work recorded.

WKG 1-XI-79

ANNEX I

TRAVEL (Ottawa to Edmonton, Yellowknife, Pinawa, and Return as Needed)

The total travel cost incurred by A.E.C.B. in connection with Operation Morning Light for the period January 24 - April 20, 1978 is $44,213.56, a figure that represents the total of related expense accounts in the period.

The total travel cost incurred by A.E.C.B. for the period April 21 to the present is $1,548.11.

The toal average cost to maintain an A.E.C.B. employee in Edmonton for a 2 week period for Operation Morning Light:

Pre-20 April		Post-20 April	
Airfare Edmonton Return	$354.00		$354.00
Meals (14 day period) and Incidental (rates to Mar. 31, 1978)	265.00	Meals (14 day period) and Incidental (new rates effective April 1, 1978)	272.00
Accomodation (14 nights at an average of $24.00 per night)	336.00		336.00
	$955.00		$992.00

Cosmos 954 - Expenses from January 24 - April 20, 1978

ADDITIONAL TRAVEL CHARGES (EDMONTON AND YELLOWKNIFE-DIRECT BILLINGS)

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Pine Point Hotel	Accomodation in Pine Point for AECB staff member(s)	20/3/78	$ 245.20
Avis	Car rental for AECB staff. (W. Courneya)	23/3/78	346.43
Avis	Car rental for AECB staff. (W. Courneya)	23/3/78	211.52
Tilden	Car rental for AECB staff. (Dr. R. Eaton)	10/4/78	1,020.00
Ptarmigan Inn	Accomodation in Yellowkinfe for AECB staff.	18/4/78	117.01
	SUB-TOTAL		1,940.16

Cosmos 954 - Expenses from January 24 - April 20, 1978

TRANSPORTATION

Name of Supplier	Product or Service Supplied	Date Paid	Amount
CP Air	Charges for shipment of equipment	31/3/78	$ 36.65
CP Express	Charges for shipment of equipment	10/4/78	27.25
CN	Charges for shipment of equipment	10/4/78	71.15
Air Canada Cargo	Charges for shipment of equipment	14/4/78	330.00
CN	Charges for shipment of equipment	14/4/78	84.50
	SUB-TOTAL		$ 549.55

Cosmos 954 - Expenses from January 24 - April 20, 1978

PROFESSIONAL & SPECIAL SERVICES (including Temporary Service)

Name of Supplier	Product or Service Supplied	Date Paid	Amount
University of Alberta	Computing Services to support Morning Lite Operation	13/4/78	$ 2,440.11
Atomic Energy of Can. Ltd.	Analytical work done at WNRE & cost of personnel from CRNL.	20/3/78 – 18/4/78	260,437.16*
D. Kemp Edwards	Asbonite Sheet	7/3/78	6.24
D. Kemp Edwards	Asbonite Sheet	16/3/78	6.24
Office Overload	Temporary assistance in office in Edmonton	7/3/78	218.50
"	"	16/3/78	413.25
"	"	20/3/78	413.25
"	"	29/3/78	394.25
"	"	5/4/78	308.75
"	"	10/4/78	232.75
Health & Welfare Canada	Film Service Photo Detection	31/3/78	1,122.00
	SUB-TOTAL		$265,992.50

*This sum comprises the following:

Salaries	$164,621.76
Analytical Services	69,760.00
Travel	13,190.53
Materials & Supplies	7,811.13
Contracts	3,068.73
Vehicle mileage	840.00
Vehicle rental	32.58
Express charges	27.00
Overhead	1,085.43
TOTAL	$260,437.16

Cosmos 954 - Expenses from January 24 - April 20, 1978

RENTALS

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Beeper Co. Ltd.	Monthly Rental of Radio Pager NEC. - insurance	17/2/78 7/3/78	$ 110.00
Xerox Ltd.	Rental of Xerox 410 - Telecopier	20/3/78 16/4/78	236.90
A.E.C.L. Comm. Products	Container rentals	7/3/78	100.00
	SUB-TOTAL		$ 446.90

COSMOS 954 - Expenses from January 24 - April 20,1978

MATERIALS AND SUPPLIES

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Camera House	Film for photographic equipment	17/2/78	$ 34.68
Cal Cop	Acetate Transparency	07/3/78	8.00
Safety Supply	WTT300 Tru Touch Gloves - Disposal gloves	29/3/78	44.40
Wallacks	Clear Acetate Water Soluble Pens	17/3/78	37.45
Wallacks	Transparent Ruler (24")	03/4/78	2.40
Robert E. Cole Co.	Kim-Pack Embossed No. 6361	17/2/78	38.08
Ken Anderson Office Supp.	Packing Pockets	17/3/78	77.45
Xerox	Paper for Telecopier	20/3/78	33.75
Cal Cop	Labels	07/3/78	175.00
Lomor Printers	Tags ("Radioactive Material", Contaminated)	17/3/78	200.20
Northwest Color Labs Ltd.	Contract developing film	07/3/78 10/4/78	11,491.77
McBain Camera Ltd.	Camera Filters	11/4/78	20.95
Uncle Bens' Sporting Goods	Kerosene Model	11/4/78	48.00
Lomor Printers	Labels ("Radioactive")	17/3/78 03/4/78	469.95
		SUB TOTAL:	$12,682..

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Cosmos 954 - Expenses from January 24 - April 20, 1978

EQUIPMENT

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Superior Electronics	Beta Gamma radiation Survey Meter	20/3/78	$ 9,811.20
Datamex	Contamination Dector equipped with mounted speaker and 5 foot cables	10/4/78	5,969.00
Roctest Ltd.	Saphymo-Stel Scintillometre Type S.P.P. 2NF	7/3/78	4,351.20
Datamex	Eberline Sample Holder Model SH-4	17/3/78	900.00
Datamex	Hand Probe (EBERLINE) with cable - Model HP-210	17/3/78	1,980.00
Datamex	Personal Air Sampler & Filter Paper	17/3/78	6,120.00
A.E.C.L. Comm. Products	F-112, F-113, F-239 containers	7/3/78	13,078.80
A.E.C.L. Comm. Products	Containers Type F-113	7/3/78	11,592.00
	SUB-TOTAL		$ 53,802.20

Cosmos 954 - Expenses from January 24 - April 20, 1978

ALL OTHER EXPENDITURES

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Mr. Joe Toby	Translation services for A.E.C.B. signs	23/2/78	$ 45.00
Datamex	Nu-con Smears	7/3/78	575.00
	SUB-TOTAL		$ 620.00
	TOTAL		$380,246.97

Cosmos 954 - Expenses from April 24 to present

TRAVEL

Name of Supplier	Product or Service Supplied	Date Paid	Amount
			$
N.R.C.	Charges for travel expenses of N.R.C. personnel	24/4/78	836.71
A.E.C.L. (Pinawa, Manitoba)	Charges for travel expenses of A.E.C.L. and A.E.C.B. staff	11/5/78	211.40
	SUB-TOTAL		$ 1048.11

Cosmos 954 - Expenses from April 24 to present

TRANSPORTATION

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Superior Electronics	Freight charges for shipment of equipment	2/5/78	$ 579.00
Air Canada Expedair	"	2/5/78	44.00
"	"	15/5/78	55.00
Purolator Courier	Charges related to shipment of supplies to Edmonton	25/4/78	12.00
	SUB-TOTAL		$ 690.00

Cosmos 954 - Expenses from April 27 to present

PROFESSIONAL & SPECIAL SERVICES

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Dr. M.J. Apps	Gamma Spectroscopic Analysis of five samples	25/4/78	$ 50.00
University of Alberta	Analysis of Samples from Cosmos Lake and Cape Dorset	15/5/78	300.00
Dr. L. Wiebe (University of Alberta)	Tritium analysis consulting services	25/4/78	250.00
Office Overload	Temporary staff for Edmonton A.E.C.B. office	2/5/78	394.25
"	"	"	394.25
	SUB-TOTAL		$ 1388.50

Cosmos) - Expenses from April 21) present

RENTALS

ame of Supplier	Product or Service Supplied	Date Paid	Amount
A.E.C.L. Comm. Products	Rental of E-233 #3 Containers	26/4/78	$ 86.00
	SUB-TOTAL		$ 86.00

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Cosmos) 4 - Expenses from April 2[illegible]) present

MATERIALS & SUPPLIES

Name of Supplier	Product or Service Supplied	Date Paid	Amount
Lomor Printers	Radioactive Labels	26/4/78	$ 63.00
A.E.C.L. Comm. Products	Gaskets for container F-112 and F-113 and shipping charges	26/4/78	243.40
Shippers' Supply	Kim-Pack	2/5/78	77.20
Safety Supply Company	Radiation Hazard Signs	11/5/78	31.00
A.E.C.L. Comm. Products	5 gallon pails with lids and ring clamps	3/5/78	217.00
Northwest Color Labs	Contract for developing film	28/4/78 16/5/78	2,579.20
Southam Printing	Printing films	24/4/78	7.00
	SUB-TOTAL		$ 32,17.40

Cosmos 24 - Expenses from April 2 present

EQUIPMENT

Name of Supplier	Product or Service Supplied	Date Paid	Amount
A.E.C.L. Comm. Products	4 foot long tongs	24/4/78	$ 36.00
Canadian Tire Corp.	Transistor Battery	15/5/78	15.00
Datamex	Personal Digital Dosimeters - Model Prime-V	3/5/78 15/5/78	10,300.00
Datamex	Eberline Beta Gamma Geiger Counter Eberline Beta Gamma Portable Ion Chamber Survey Meter	26/4/78	11,594.00
Ludlum Measurements	Micro-R-Meters	15/5/78	7,088.00
Datamex	Eberline Portable Gamma Dose Rate Meter Eberline Portable Scaler	3/5/78	9,368.00
Datamex	Eberline Portable Beta Gamma Geiger Counters Eberline Beta Window Pancake Probes with cables	3/5/78	2,790.00
Datamex	Vacuum Cleaner with filters	3/5/78	2,030.00
A.E.C.L. Comm. Products	Steel drums (16 gallon)	25/4/78	1,200.00
Radionics Ltd.	Victoreen Personal Dosimeters	24/4/78	4,700.00
Bond Brass Ltd.	Fabrication of 20 Shipping Containers	25/4/78	10,487.02
Superior Electronics	Berthold end window counter tube with cable and adapter jack	25/4/78	5,402.88
A.E.C.L. Comm. Products	Special 5 gallon pails, steel cables with snaps, caulking and 1 gallon pails	25/4/78	239.50
A.E.C.L. Comm. Products	Special 5 gallon pails, lead bricks, lead sheets	25/4/78	546.70
Provincial Cancer Hospitals Board	Construction of 3 containers for Operation Morning Light	25/4/78	649.82
			000000
	SUB-TOTAL		$ 65,446.92

Cosmos 954 - Expenses from April 24 - present

ALL OTHER EXPENDITURES

Name of Supplier	Product or Service Supplied	Date Paid	Amount
A.E.C.L. (Whiteshell Nuclear Labs)	Storage facilities for samples and debris from Cosmos 954.	25/4/78	$ 3,635.94
W.K. Gummer	Telephone call to P. Kennedy in Cape Dorset	3/5/78	3.73
Border Brokers	Shipment of equipment	26/4/78	1,553.41
	SUB-TOTAL		$ 5193.08
	TOTAL (includes $1548.11 Travel from Annex I)		$ 79,618.12

ANNEX XVI

Salary Expenditures 24 Jan. to 20 April, 1978

Name	Days Worked		Salaries	
	A*	B	Regular Days**	Total
Beaudry	10	18.2	562.00	1584.84
Blackburn	9	11.4	1260.72	2857.63
Boyd	9	11.9	1190.16	2763.81
Brown	11	4.5	1054.02	1485.21
Cahill	21	35	1609.86	4292.96
Cameron	42.8	11.6	4183.27	5317.05
Campbell	36.6	26.7	3693.67	6388.23
Charlebois	34.5	0	1860.24	1860.24
Chatterjee	18	33.3	1776.60	5063.31
Courneya, O.	9	22.4	843.40	2942.80
Courneya, W.	19	38.9	1948.07	5936.48
Davediuk	10	6.7	1181.80	1973.60
Eaton	22	16	2462.24	4252.96
Elagupillai	33	35.5	3255.78	8731.41
Elks	33.9		3118.46	3118.46
Goyette	26	35.8	1913.34	4547.86
Gummer	39.8	0	5405.63	5405.63
Henry	10	0	1069.40	1069.40
Horvath	13	22.7	924.30	2538.27
James	6	15.8	625.56	2272.86
Jennekens	11	9.6	1763.08	3301.76
Kealy	22.1	4.7	1490.86	1807.92
Kennedy	6	3.5	524.34	830.20
Knight	18	9.9	2337.84	3623.65
Marleau	21	23	1674.33	3508.12
McLellan	26	14.9	2591.16	4076.09
Meloche	2.3	0	146.35	146.35
Molloy	17	22.1	629.00	1446.00
Prince	3	0	557.70	557.70
Ricard	15	22.6	1465.20	3672.76
Robertson	18	25.8	1780.02	4331.38
Shultz	23	32.5	2503.78	6041.73
Smythe	6	0	837.00	837.00
Spence	8	0	803.36	803.36
Tallim	- 9	0	464.04	464.04
Utting	20	25.4	1839.80	4176.34
White	11	6	1280.95	1979.65
			62,626.63	116,007.06

*A - regular working days
B - overtime credits in days

** Salary for regular working days. The total includes equivalent compensation for overtime credits.

ANNEX XVII

Salary Expenditures 21 April to 23 May, 1978

Name	Days Worked	Salaries
Cameron	4.5	439.83
Campbell	10.3	1039.48
Charlebois	4.5	242.64
Courneya, W.	2.0	205.06
Davediuk	3.0	354.54
Eaton	14.0	1566.88
Elks	7.0	643.93
Elagupillai	2.0	197.32
Gummer	9.7	1317.45
Kealey	5.0	337.30
Knight	8.0	1039.04
Prince	1.0	185.90
Ricard	14.8	1445.66
Wawrychuk	2.0	214.00
	87.8	9229.03

IN THE MATTER OF A CLAIM FOR COMPENSATION PRESENTED BY CANADA TO THE SOVIET UNION FOR DAMAGES INCURRED AS A RESULT OF THE INTRUSION ON CANADIAN TERRITORY ON JANUARY 24, 1978 OF THE COSMOS 954 SATELLITE LAUNCHED BY THE SOVIET UNION

AFFIDAVIT OF JOHN HENRY DOE

I, JOHN HENRY DOE, of the City of Ottawa, of the Province of Ontario, public servant, MAKE OATH AND SAY AS FOLLOWS:

1. I am employed in the position of Chief Accounting Officer of the Department of (*insert name of Department*) (hereinafter referred to as the "Department") of the Government of Canada and as such I have knowledge of the matters hereinafter deposed.

2. In that position my regular duties include: being aware of expenditures incurred by the Department; being shown the invoices and other business records which document the amounts owed for services and materials rendered to the Department; being responsible for the necessary steps to determine if these invoices and business records accurately reflect the amounts owed for services and materials rendered to the Department; being certain that payments are made to

. . . / 2

the persons and the companies who have submitted the invoices and other business records for these services and materials rendered to the department; and, being responsible for the administration of the salary expenditures to the employees of the Department.

3. Between January 24, 1978 and April 20, 1978 the Department was actively involved in the search and recovery operation for the debris from the Cosmos 954 Satellite. (*Here set out the nature of the department's involvement, the actual services the department performed, the place where these services were rendered, and the manpower devoted to the operation. If the financial officer does not know this information then he should inform himself from the knowledgeable and responsible officer of the department and he should so state as follows:*

> *"I am informed by Mr. ABC (give his title), and I verily believe that: (and then give the information)"*)

4. The total amount spent by the Department to April 20, 1978 inclusive in the search and recovery operation was dollars. These

. . . / 3

expenditures were incurred for the following goods and services:

> *(Please specify these expenses under headings as was done by the Atomic Energy Control Board. Also include an explanation of the reasons for these expenses under each heading. Do not include any expenses incurred after April 20, 1978. No reference should be made to total and incremental costs, however it should be evident from the breakdown of the expenses which costs are incremental. Note: this paragraph will be several pages.)*

5. The accounts, vouchers, receipts and other records relating to these expenses are in my control at the City of Ottawa.

SWORN BEFORE ME IN THE CITY OF)
OTTAWA, IN THE REGIONAL)
MUNICIPALITY OF OTTAWA-)
CARLETON THIS DAY OF)
JULY, A.D. 1978.)
)

_____ _____

A Commissioner etc. John Henry Doe

OUTGOING MESSA(/ *IESSAGES SORTANTS*

• INSTR''CTIONS ON REVERSE • *DIRECTIVES AU VERSO*

Time of Rece... *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
		INSP. LATREMOUILLE	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner* PRIORITY	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 78-07-26	Security, CLASSIFICATION *sécuritaire* CONFIDENTIAL

FROM *DE* "G" DIVISION YELLOWKNIFE

TO *À* THE COMMISSIONER OTTAWA

INFO. *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GAP152 *N° DU MESSAGE ORIGINAL*

ATTN: F.M. BRANCH COSMOS 954 YOUR TELEX FMB72. ONLY LOSS WE CAN IDENTIFY AS A RESULT OF DIVERSION OF PERSONNEL FROM NORMAL ACTIVITY INVOLVES A MEMBER CALLED TO DUTY GUARDING A RADIOACTIVE SITE ON GREAT SLAVE LAKE NEAR SNOWDRIFT. REG. NO. 29706 CST. REINHARDT, R.P. (SINGLE MEMBER) STATIONED AT YELLOWKNIFE HAD SHOT A CARIBOU AND HAD CARCASS HUNG IN CRAWLSPACE OF HOUSING UNIT TO CURE, BEFORE PROCESSING. CALLED AWAY ON SHORT NOTICE 78-01-29 TO DO GUARD DUTIES AS AFOREMENTIONED FOR "SHORT PERIOD" WHICH EVENTUALLY STRETCHED INTO 6 DAYS OF ABSENCE. ON HIS RETURN FOUND MEAT SPOILED AND THREW SAME INTO GARBAGE DUMP. SUBSEQUENTLY CHARGED BY GAME BRANCH WITH ALLOWING MEAT TO SPOIL. CASE DISMISSED BUT CST. REINHARDT CHARGED $913.30 FOR LEGAL SERVICES IN HIS DEFENCE. WE ARE NOT SURE IF INTENT OF YOUR TELEX WAS TO COVER ITEMS OF THIS NATURE HOWEVER EVENTS OF COSMOS 954 WERE DIRECT CAUSE OF MEMBER'S LOSS OF $913.30 IN LEGAL FEES. ANYTHING YOU COULD DO TO RECOVER THIS LOSS ON BEHALF OF CST. REINHARDT WOULD BE APPRECIATED. PLSE ADVS.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
C.R. LATREMOUILLE, INSP. OIC A. & P.	

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Dan #395

JUL 26 9 48 AM '78

PRIORITY CONFIDENTIAL

A50 PRIORITY OTT2 JUL26 CONFIDENTIAL

G DIV YK

FMB/72 RE: COSMOS 954 - CLAIM AGAINST THE USSR. FURTHER TO OUR CORRESPONDENCE OF 1978-07-12, THE DEPT. OF JUSTICE HAS REQUESTED THAT WE SUPPLY ANY INFORMATION OF ANY TANGIBLE LOSSES WHICH HAVE RESULTED AS A RESULT OF THE DIVERSION OF OUR PERSONNEL OR RESOURCES FROM NORMAL ACTIVITY TO OPERATION MORNING LIGHT. THESE LOSSES WOULD BE SEPARATE FROM OUR TOTAL COSTS ALREADY SUBMITTED . PLEASE REPLY BY TELEX

COMMR OTT

O/c A&P
Dan not aware of any

PSE ACK...

To: C.O.

G DIV ACK MSG THANKS AND GUD DAY

2 copies destroyed

CIPHER MESSAGE

This is a CLASSIFIED MESSAGE. All replies or references to it must bear the security classification stamped hereon, unless downgraded by proper authority.

OUTGOING MESSAGE / **...ESSAGES SORTANTS**

● [redacted]TIONS ON REVERSE ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier* 78G-000-2	Drafter's Name — *Nom du rédacteur* Clark	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section* F.S.S.	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner* Routine	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 78-07-19	Security. CLASSIFICATION *sécuritaire* CONFIDENTIAL

FROM / *DE* G' Div.

TO / *À* Commr Ott

INFO. / *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GFSS 1441/1 *N° DU MESSAGE ORIGINAL*

Re memo 1978-07-12, File G.S. 785-47
Frm O i/c Fin. Man. Br. Rec'd late 1978-07-18.
will provide info ASAP

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
A.E. Clark.	

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T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Ba 3000,
Yellowknife,
Northwest Territories.
Canada
X0E 1H0

"G" DIVISION

78G-700-43

18 JULY, 1978

Mr. Lothar Klatt,
Meisenweg 4,
4057 Bruggen I,
WEST GERMANY.

Dear Mr. Klatt:

Your letter dated July 12, 1978 which was postmarked at Norman Wells, Northwest Territories, is acknowledged.

The Royal Canadian Mounted Police initially provided assistance to the Canadian Armed Forces when the Cosmos satellite incident occurred, and this was mainly in the area of security of the main sites and education of the public in some settlements. The second phase of search and recovery is now under way and is under the direction of Mr. F. C. Boyd, c/o Atomic Energy Control Board, General Delivery, Hay River, Northwest Territories.

Although we are still providing some assistance, we are not in a position to offer you any technical data regarding the matter, and it is suggested that you direct any questions you have to Mr. Boyd. I can assure you, however, that all necessary investigation by the authorities has been expertly handled and will continue, and the quality of life has not deteriorated in the area as a result of this incident.

A copy of your letter has been sent to Mr. Boyd and should you still feel that you have questions, please do not hesitate to write him.

Sincerely,

Copy sent to Yellowknife

D. R. Barker, Superintendent,
Officer in Charge,
Criminal Investigation Branch

JEH/sp

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5000,
Yellowknife, N.W.T.
X0E 1H0

"G" DIVISION

78G-700-43

18 JULY, 1978

Mr. F. C. Boyd,
Atomic Energy Control Board,
General Delivery,
HAY RIVER, N.W.T.
X0E 0R0

Dear Sir:

Attached is a copy of a letter recently received from Mr. Lothar Klatt, from whom you may receive further correspondence in due course.

Yours truly,

D. R. Barker, Superintendent,
Officer in Charge,
Criminal Investigation Branch

Attachments
JEH/sp

PACIFIC WESTERN AIRLINES

12/7/78

IN FLIGHT BETWEEN
YELLOWKNIFE AND NORMAN WELLS

RCMP
YELLOWKNIFE,
N.W.T.

CAPE DO

DEAR COLLEAGUES,
I'M A POLICEMAN FROM WESTERN GERMANY: POLICE FORCES DÜSSELDORF (AIRPORT-POLICE).
COMING FROM EDMONTON I INTENDED TO FLY TO NORMAN WELLS - WITH PACIFIC WESTERN, AS YOU CAN SEE. BUT THE AIRCRAFT WAS FORCED TO MAKE A BREAK IN YELLOWKNIFE! TO CHANGE TIRES. I DETESTED TO GO TO THAT TOWN ON ACCOUNT OF THE RADIOACTIVE PIECES OF THE RUSSIAN COSMOS - SATELLIT THAT CAME OFF LAST WINTER. I HEARD THAT THE NUCLEAR COSMOS PIECES FELL INTO LAKE SLAVE - THE LAKE FROM THAT ONE YOUR TOWN PROBABLY GETS ITS DRINKING-WATER. IN ADDITION TO THIS FACT THERE

PW920

000000

O. E. OF THE PILLPODS IN THE AIRPORT BUILDING (FROM DEPARTMENT OF NORTHERN AND INDIAN AFFAIRS) THAT WARNS FOR UNIDENTIFIED PIECES IN THE BUSH, THAT PROBALY OR POSSIBLY BELONG TO THE RADIOCTIVE COSMOS AIRCRAFT — AND THAT COULD BE RADIOACTIVE. I'M AFRAID OF HAVING USED THE WATER THERE!

I DON'T KNOW WHETHER THERE IS ANY REASON FOR THIS.?!

PLEASE LET ME KNOW FACTS ABOUT THE SITUATION CONCERNING THAT SUDDEN COSMOS CRASH —!

ARE MY FEARS ABSOLUTELY IN VAIN? POSSIBLY MY FOLLOW WILL HAVE THE DISADVANTAGES OF MY STAY AT YELLOW KNIFE .....

THANK YOU FOR THE INFORMATIONS. I BAG YOU FOR!

BEST WISHES TO YOU AND YOUR FAMILIES. I HOPE YOU CAN UNDERSTAND MY WORDS. KIND REGARDS,

Arthur Wolf

CARDED

Polizei kommissar

Lothar KLATT

NO RECORD

DER POLIZEIPRÄSIDENT
IN DÜSSELDORF

LEH - Polizeiwache Objektschutz
Flughafen

4 Düsseldorf
Flughafen, T 2

Telefon 8701

PRIVAT

WEST-GERMANY

FROM:
LOTHAR KLATT
PP DÜSSELDORF-LEH
FLUGHAFEN, T 2
POLIZEIWACHE OBJEKTSCHUTZ
4000 DÜSSELDORF
VIA AIR MAIL
PAR AVION
WEST-GERMANY

AT PRESENT
NORMAN WELLS, N.W.T.

NORMAN WELLS 14 VII 14 Canada

TO
ROYAL CANADIAN
MOUNTED POLICE
YELLOKNIFE, N.W.T.

Your function will be merely that of loaning it to those who request the same, and recording the necessary information as set out above to identify the receipt and issue of the equipment. Our responsibility, indicated here, was an agreement reached between Headquarters Federal Policing Branch and A.E.C.B. then described in a memorandum to this Division Headquarters by the Federal Policing Branch dated 78/04/11, copy of which is held on file at Sub/Division Headquarters.

(G. Rechner) Insp.,
O.C. Yellowknife Sub/Division.

N.C.O.'s i/c HAY RIVER, FORT SMITH, PINE POINT & RESOLUTION DETACHMENTS

FORWARDED 78/07/14. For your information. When BOYD calls your office to introduce himself, return any Dossimeters held by you to him.

2. Hay River supply Mr BOYD with the information contained in this memorandum.

Rechner

(G. Rechner) Insp.,
O.C. Yellowknife Sub/Division.

YELLOWKNIFE:
78/07/14

c.c. O.I.C. "G" Division C.I.B.

78.07.18

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / A: N.C.O. i/c SNOWDRIFT DETACHMENT

FROM / DE: O.C. YELLOWKNIFE SUB/DIVISION

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*
OUR FILE - *N/RÉFÉRENCE* 78YK-000-1
YOUR FILE - *V/RÉFÉRENCE*
DATE 78/07/14

SUBJECT / OBJET: U.S.S.R. SATELLITE COSMOS 954
MALFUNCTION (OPERATION MORNING LIGHT)

Atomic Energy Control Board (A.E.C.B.) has opened a temporary office in Hay River, N.W.T. with respect to covering Phase II of the search for particles of this landing in the N.W.T. Mr Fred BOYD is temporarily in charge of the office, to be replaced by another in approximately one month.

2. BOYD met with me on 78/07/12 for the purpose of informing this Force that Phase II is now operational. He reports the actual search and recovery work is now handled under contract with a private firm.

3. The visitor requested his introduction to Unit Commanders south of Great Slave Lake as he will be visiting with them shortly. Names of the Detachment Commanders at Hay River, Pine Point, Resolution, Fort Smith and your office were passed to him. He also advised that Dossimeters will be held by his office for the use of any individual travellers who may be moving through the area of the suspected landing. As Dossimeters are now held by some Units and certainly at Hay River and Fort Smith, BOYD will be retrieving those instruments for his own stores. However, because of your strategic and isolated location from his office, he has requested we allow some Dossimeters to be placed with your Detachment. On the condition that Mr BOYD take back the six (6) Dossimeters along with an LB 1200 Detector and its Control Check Box we held here, I agreed he send you six (6) Dossimeters along with operating instructions. He took those held here back.

4. Should any traveller request the use of such Dossimeter from your office, please issue them one obtaining a receipt and the address of the recipient, also quoting the Dossimeter Serial Number on the receipt.

5. You will be handling the Dossimeter without responsibility for the equipment once it leaves your hands, nor will you be responsible for any action necessary to recover this equipment not returned by the people taking these on loan. Also repair and upkeep of the equipment will not be your responsibility but that of the A.E.C.B.

...2/

TRANSMITTAL AND DIARY DATE REQUEST
FOR E D'ENVOI ET DEMANDE DE LA DATE D'AGENDA

TO – AU

C.O. *Commandant* "G" Div.

O.C. *Commandant* ~~[redacted]~~ S/Div.

I/C *C/D* Det.

FROM – DU

C.O. *Commandant* 'P' DiR Div.

O.C. *Commandant* Security Policy S/Div.

I/C *C/D* Section Det.

Date 78-07-10

HQ File No. – *Dossier de la 'DG' n°* HQ 485-35

Div. File No. – *Dossier de la div. n°*

S/Div. File No. – *Dossier de la S/div. n°*

Det. File No. – *Dossier du dét. n°*

Copies to – *Copies au*

Re: Operation Morninglight

☑ **Correspondence attached – Dated** *Ci-joint le rapport en date du* Sentinel (3 copies) 1978/2

☐ **Warrant attached** *Mandat ci-joint*

☐ **Summons(es) Subpoena(e) attached** *Citation(s) mandat(s) de comparution ci-joint(s)*

☐ Information *Renseignements*

☐ Action *Suites*

☐ Enclosures *Pièces jointes*

☐ Service/Execution required *A signifier/A exécuter*

☐ Not served for reasons indicated *Non signifié pour les raisons indiquées*

☐ Served – Original and Affidavit returned *Signifié – original et affidavit retournés*

DIARY DATE EXTENTION

Extend to *Prolorigée jusqu'à* ⇨

☐ Disposition of exhibits *Disposition des pièces à conviction*

☐ Further enq. neg. *Autre recherche nulles*

☐ Awaiting instructions *Dans l'attente de directives*

☐ Trial date not set *Date du procès non fixée*

☐ Report overdue *Rapport en retard*

☐ Unable to execute warrant (summons) *Impossibilité d'exécuter le mandat (sommations)*

☐ Fine and costs paid *Amende et frais payés* Date

☐ Adjourned to *Renvoyée au* Date

☐ Awaiting payment of fine & costs *Dans l'attente du paiement de l'amende et des frais*

REMARKS – *REMARQUES*

File is now handled by 'P' Dir.

Discussions on going with AECB re detectors.

J

Attn: S/S: We already have a Detachment Memo re Distribution. Please see file for same. J.

000000

ROYAL CANADIAN MOUNTED POLICE — GENDARMERIE ROYALE DU CANADA

TRANSMITTAL & DIARY DATE REQUEST — **FORMULE D'ENVOI ET DEMANDE DE LA DATE D'AGENDA**

TO / AU	Outside P.D. — *Autres S.P.*	Commr. / *Com.*	C.O. / *C.D.*	O.C. Sub — *C.S.-D.*	I/C Det. — *Resp. Dét.*	Copies to — / *...ies au*
			G			

FROM / DU					Date
					JUN 27 1978

H.Q. File — *Dossier de la D.G.*	D/Div. File — *Dossier de la div.*	S/D/V. File — *Dossier de la s.-div.*	DET. File — *Dossier du dét.*

ATTACHMENTS — ***PIÈCES JOINTES***

☐ Correspondence / *Correspondance*	☐ Warrant / *Mandat*	☐ Summons (es) / *Assignation(s)*	☐	Dated — *Daté du*

FOR YOUR — ***POUR***

☐ Information / *Votre gouverne*	☐ Action / *Donner suite*	☐ Execution / *Exécution*	☐

REMARKS (if reply - arrow to return address) — ***REMARQUES*** *(dans le cas d'une réponse, indiquer par une flèche l'adresse de retour)*

Forwarded for info & ...
as you deem necessary.

Distributed to Dets - ...

☐ SERVED - Original & Affidavit returned — *Signifié - original et affidavit retournés*

☐ NOT SERVED for reasons indicated — *Non signifié pour les raisons indiquées*

DIARY DATE EXTENTION
PROLONGATION DE LA DATE D'AGENDA

- ☐ Disposition of exhibits / *Disposition des pièces à conviction*
- ☐ Further enquiries negative / *Autres recherches nulles*
- ☐ Awaiting instructions / *Dans l'attente de directives*
- ☐ Awaiting payment of fine & cos... / *Dans l'attente du paiement...*
- ☐ Report overdue / *Rapport en retard*
- ☐ Unable to execu... / *Impossibilité d'...*
- ☐ ...al Date not ... / *Daté du proc...*

Keep 1 for file please

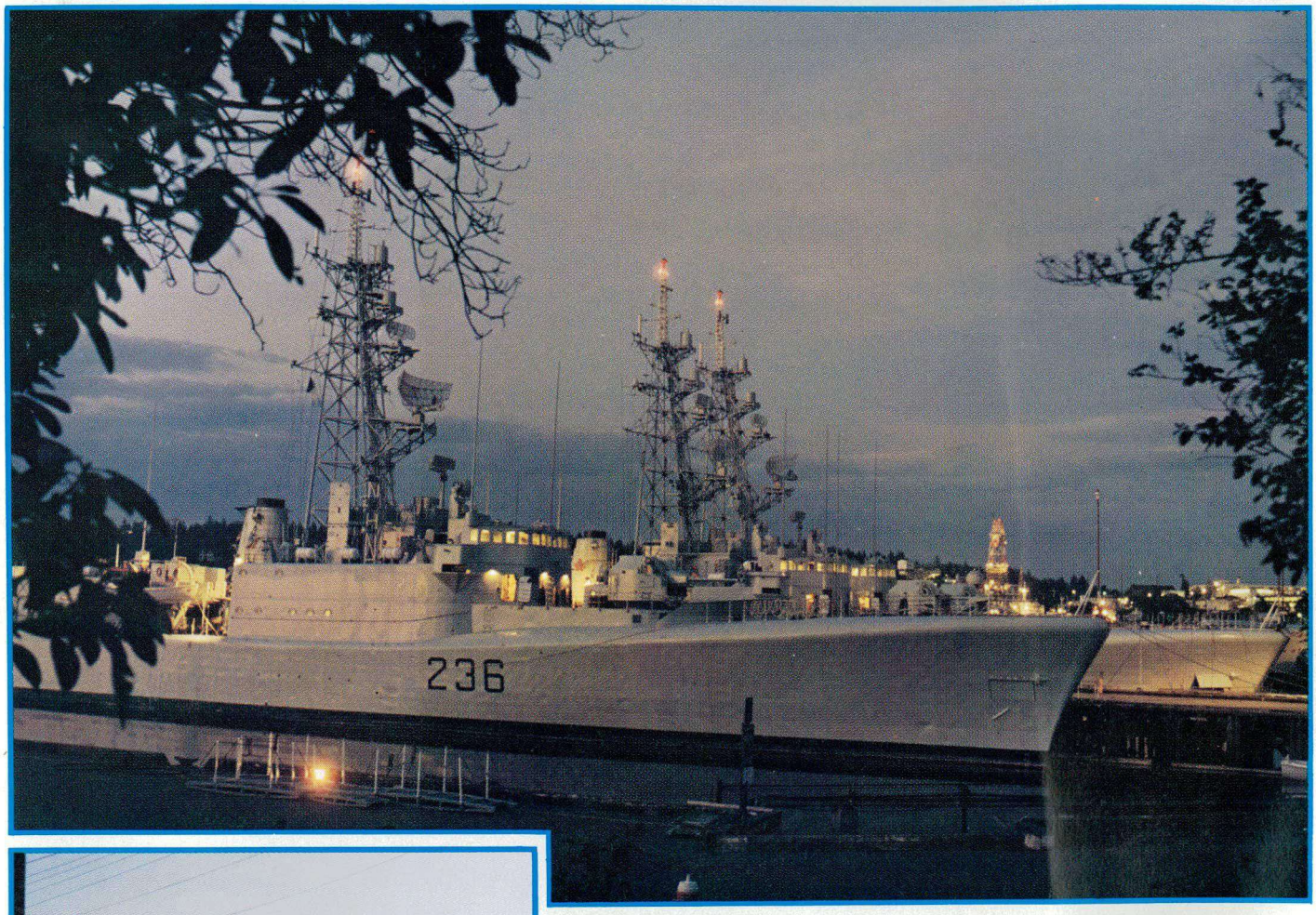
sentinel

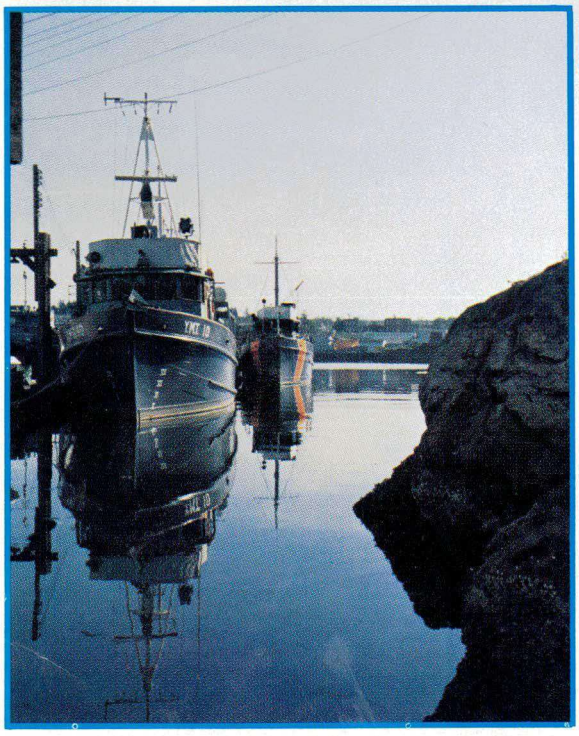
1978/2

OPERATION MORNING LIGHT

page 4

Alongside in Esquimalt





The tranquility that gave the Pacific Ocean its beautiful name had descended over Esquimalt harbour when these photos were taken. M/Cpl Andy Cabouche made an evening visit to record HMCS Gatineau alight and alongside. (REC 76-234) Sgt Andy Leduc captured the same calm beauty in a daytime photo of YMT 10 and a smaller harbour vessel at rest. (IXC 77-195) M/Cpl Cabouche and Sgt Leduc are CF photographers.

Sentinel
1978/2
magazine of the Canadian Forces

Volume 14, Number 2
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Sentinel **Managing Editor Maj. Bill Aikman observes readings on a Hercules-mounted gamma ray spectrometer during a search mission over Warden's Grove. (Dave Jackson photo)**

OPERATION MORNING LIGHT

When Cosmos 954 plunged to earth in the Northwest Territories in late January, the eyes of the world focused on Canada's North and the Canadian Forces.

Within hours, CFB Edmonton was transformed into a huge search centre, crammed with scientists and their exotic equipment. During the next few weeks, aircraft roared off at all hours on their Arctic search missions.

In the months following those frigid January days, Canadian Forces personnel, scientists, and technicians from both Canada and the United States worked together on an operation for which there were no precedents.

Sentinel spent 17 days on Operation Morning Light, following the search team from Edmonton to Yellowknife and Baker Lake, and finally to Camp Garland near Warden's Grove. We found it a rewarding experience to observe Canadian-American professionalism and cooperation working under most demanding conditions.

Our challenge then was to capture the essence of this complex operation in a magazine article. Inevitably there are a large number of people whose efforts deserve a place in the story, but who through lack of space simply could not be included.

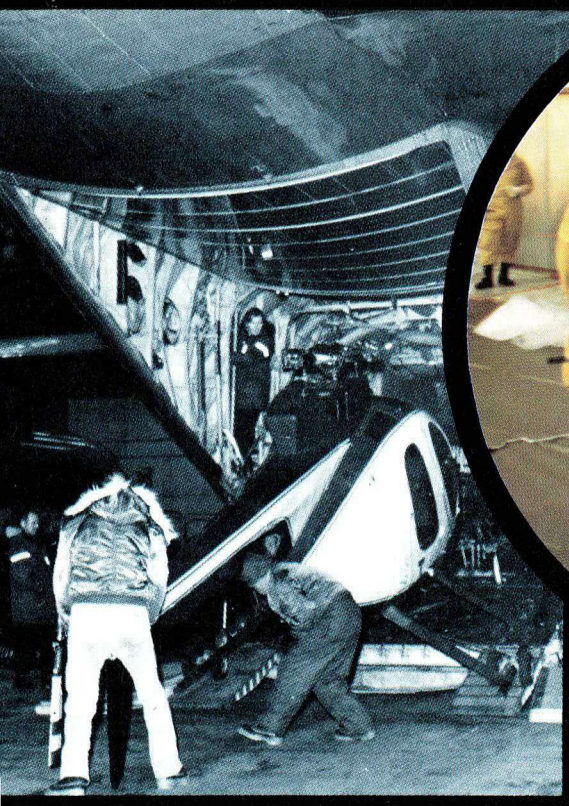
Many of the photographs in the magazine are credited to "E.G.&G. photo team." These were taken by photographers from the American Nuclear Emergency Search Team. For their excellent coverage of many key incidents in the search and their generosity in providing us with the photos, we extend our sincere appreciation.

We hope that this *Sentinel* article will give our readers an insight into the biggest CF operation since the 1976 Olympics.

W.R.A.

Cover. Bundled up to protect themselves against the Arctic cold (with wind chill factors below −100°C), scientists and CF Nuclear Accident Support Team members trudge across the ice of Great Slave Lake, looking for debris from satellite Cosmos 954. (EG&G photo 1503-26)

CONTENTS



Clockwise from above. A scientist checks snow around a hit site for possible further radiation sources (ISC 78-1073). *Hercules* crew member straps down cask containing satellite debris. (IS 78-1094) Part of the operations centre at CFB Edmonton. (EG&G photo 1561-9). American helicopter containing radiation detection equipment is pushed aboard CF *Hercules* in preparation for first search mission. (EG&G photo). Discovery of satellite remains on Great Slave Lake. (IEC 78-108). Centre. NAST members at Yellowknife handle contaminated material. (IEC 78-252). Right. Debris found on Thelon River. (EG&G photo 1495-3).

OPERATION MORNING LIGHT

by Major Bill Aikman

At 4:40 a.m. on January 24, at NORAD's Space Defence Centre deep inside Cheyenne Mountain, Colorado, Captain David Tholen, Chief Orbital Analyst receives a message from a telescopic camera station at Maui, Hawaii. The trackers there report that a Russian satellite on a trajectory towards Canada's Queen Charlotte Islands is glowing with heat and is beginning a fiery reentry into the earth's atmosphere.

Capt. Tholen reaches for his emergency phone to notify his NORAD superiors.

Fifteen minutes later, a patrol car carrying two RCMP constables along the darkened wintry streets of Yellowknife, N.W.T. skids to a halt. They stare in amazement as a bright red, incandescent object streaks in a northeasterly direction across the black sky. As it plunges towards the earth, dozens of little pieces break off and tumble over and over on their way to the ground. The constables immediately radio their headquarters.

Cosmos 954, a nuclear-powered Russian satellite, has disintegrated and fallen to earth in Canada's Northwest Territories.

The plunge to earth of this maritime surveillance satellite was not unexpected. Launched on September 18, 1977, the Russian satellite began behaving abnormally within weeks. Soon NORAD's computers were predicting that the satellite would fall in April, 1978.

However, in early January the computer predictions were revised to January 23, plus or minus 48 hours. During this critical period, Cosmos 954 would orbit the earth several times, and would overfly Australia, New Zealand and North America. On January 19, the American government notified all nations potentially involved of the developing danger, and offered American assistance.

The next day, senior Canadian government and military personnel discussed the situation. After the meetings, National Defence Headquarters sent warning orders to all regional commanders and Nuclear Accident Support Teams (NAST) at bases across Canada.

The conferences continued for several days. Still no one could be certain of where the satellite would re-enter the earth's atmosphere.

DND was assigned the lead role in the potential search for the radioactive debris, and the Atomic Energy Control Board (AECB) was assigned responsibility for the recovery of any debris.

Then came the fiery re-entry of Cosmos 954 somewhere over the Northwest Territories.

Fourteen minutes later, President Carter of the United States telephoned Prime Minister Trudeau to advise him of the situation, and to repeat the offer of American assistance.

The Canadian government was now faced with several urgent questions. Had the intensely radioactive core disintegrated while re-entering the earth's atmosphere? Or had it crashed, with its potentially lethal fragments radiating from the depths of the all-encompassing snow? Or had both occurred?

OPERATIONS BEGIN

President Carter's offer was accepted. Soon the wires between the two capitals were humming as commanders made their initial contacts and plans.

Operation Morning Light, the search for the radioactive elements of Cosmos 954, had begun.

Operational responsibility was assigned to the Commander of Air Command, Lieutenant-General William Carr. He in turn assigned on-scene command to the Base Commander of CFB Edmonton, Colonel David Garland.

The first search efforts were directed towards identifying major radiation sources, particularly in inhabited areas. NORAD's calculations indicated that the satellite, after a fifteen minute re-entry through the earth's atmosphere, had crashed somewhere between Yellowknife on Great Slave Lake and Baker Lake, 800 km to the northeast. This was in a sense fortunate, for the land between the two points consists of the Barrenlands; for the most part a treeless, uninhabited area.

South of the computed track on Great Slave Lake lay the communities of Fort Reliance, Snowdrift, Hay River and Pine Point.

Col. Garland immediately dispatched 25 members of the CFB Edmonton NAST team to Yellowknife, 1,000 km farther north by air. They were to check

Above. NAST members in their full kit. Below. The first American C-141 lands at CFB Edmonton.

The American commander, Brig-Gen (ret'd) Mahlon Gates and the Canadian commander, Col. David Garland, discuss search operations. (EG&G photo 1561-41)

the city (population 10,000) and the other smaller communities for radiation.

Under the command of Capt John Lyne, the NAST team departed shortly after noon for Yellowknife, and arrived in time to carry out a detailed survey of the town that evening. The normally easy-going citizens of Yellowknife were startled by the sight of yellow-garbed troops walking the streets, reading radiation meters and taking air samples. Tension dropped when negative results were announced.

By noon that day, American search activity had begun. One U-2 and one KC-135 jet aircraft with special radiation monitoring equipment aboard were winging their way north to check the upper atmosphere along the satellite's path, to ascertain whether or not a radioactive cloud had been created by the disintegration of the nuclear reactor and its Uranium 235 core. The results were negative.

The first search efforts had provided no hint as to what had happened to Cosmos 954.

SEARCH FORCE ORGANIZES

Meanwhile, back at Edmonton, the entire base prepared itself for the onslaught of technicians and scientists, both Canadian and American, and for extended search operations. The Morning Light Operations Centre was set up, and supply technicians, transport drivers, cooks and telephone operators readied themselves and their equipment for days or weeks of round the clock operations. At the same time aircrew, groundcrew and maintenance personnel for 435 Squadron's *Hercules,* 408 Sqn's *Twin Hueys* and *Kiowas,* 440 Sqn's *Twin Otters* and 450 Sqn's *Chinooks* went on standby for search operations.

Far to the south the Americans were mobilizing their search effort. Several years ago, the U.S. Department of Energy (DOE) organized Nuclear Emergency Search Teams (NEST) to search for and locate lost or stolen radioactive materials. The NEST expertise proved to be tailor-made for the Cosmos 954 search.

The NEST system is based at DOE's Las Vegas, Nevada operations office (the same office that runs the Nevada nuclear test site). Under the direction of Brig.-Gen (ret'd) Mahlon Gates, the NEST organization had been preparing itself for the plunge of Cosmos 954 for several weeks. Team members had been detailed, equipment had been selected and loaded on pallets, and by January 22 five fully-loaded C-141 *Starlifters* were sitting on the ramps at McCarren International Airport near Las Vegas, at Andrews A.F.B., Washington, D.C. and at Travis A.F.B., Cal., all ready to go.

Since there was no reliable information on where the satellite would land, many of the scientists had two bags packed; one with summer clothing, the other with winter clothing.

By mid-morning of January 24, arrangements between Canada and the U.S. were falling into place. It was agreed that the NEST organization would operate out of Edmonton under the direction of Col Garland. Two C-141's lifted off from McCarren and Andrews just after noon with over 70 Americans aboard, and by suppertime were touching down at Edmonton's Namao Airport.

At almost the same time, Dr. Bob Grasty of the Geological Survey of Canada arrived at Edmonton from Ottawa. Dr. Grasty, a specialist in aerial survey for radioactive materials, was the first of approximately 30 Canadian scientists and technicians from the Atomic Energy Control Board (AECB); Energy, Mines and Resources (EMR) and Environment Canada who would work with the CF and the Americans in the search and recovery organization.

That night the Americans moved their equipment into a hangar at Namao, picked up CF winter clothing, and met with the Canadians to work out the plans of operation.

One of the first points resolved was the search area. Using computer reentry predictions, the scientists plotted a 50 km wide zone starting at a point on Great Slave Lake 80 km southeast of Yellowknife and running 800 km northeast towards Baker Lake. The potential "hit" area was huge, approximately 40,000 sq km. For planning purposes it was divided into eight equal sectors.

HERCULES SEARCH

Search procedures were also clarified. First, there would be a general search of the area, using the C-130 *Hercules* of CFB Edmonton's 435 Transport Squadron. Each *Hercules* would carry a gamma ray spectrometer, a device designed to determine the amount of radiation emitted from a ground source. Each aircraft would fly a grid pattern 1,000 ft over the suspected satellite crash area, with the lines of the grid one nautical mile apart. If the equipment detected a hit (the search teams' term for a suspicious reading on the spectrometer), the location would be noted for detailed checking later by helicopter-borne recovery teams.

One Canadian gamma ray spectrometer (designed for uranium exploration

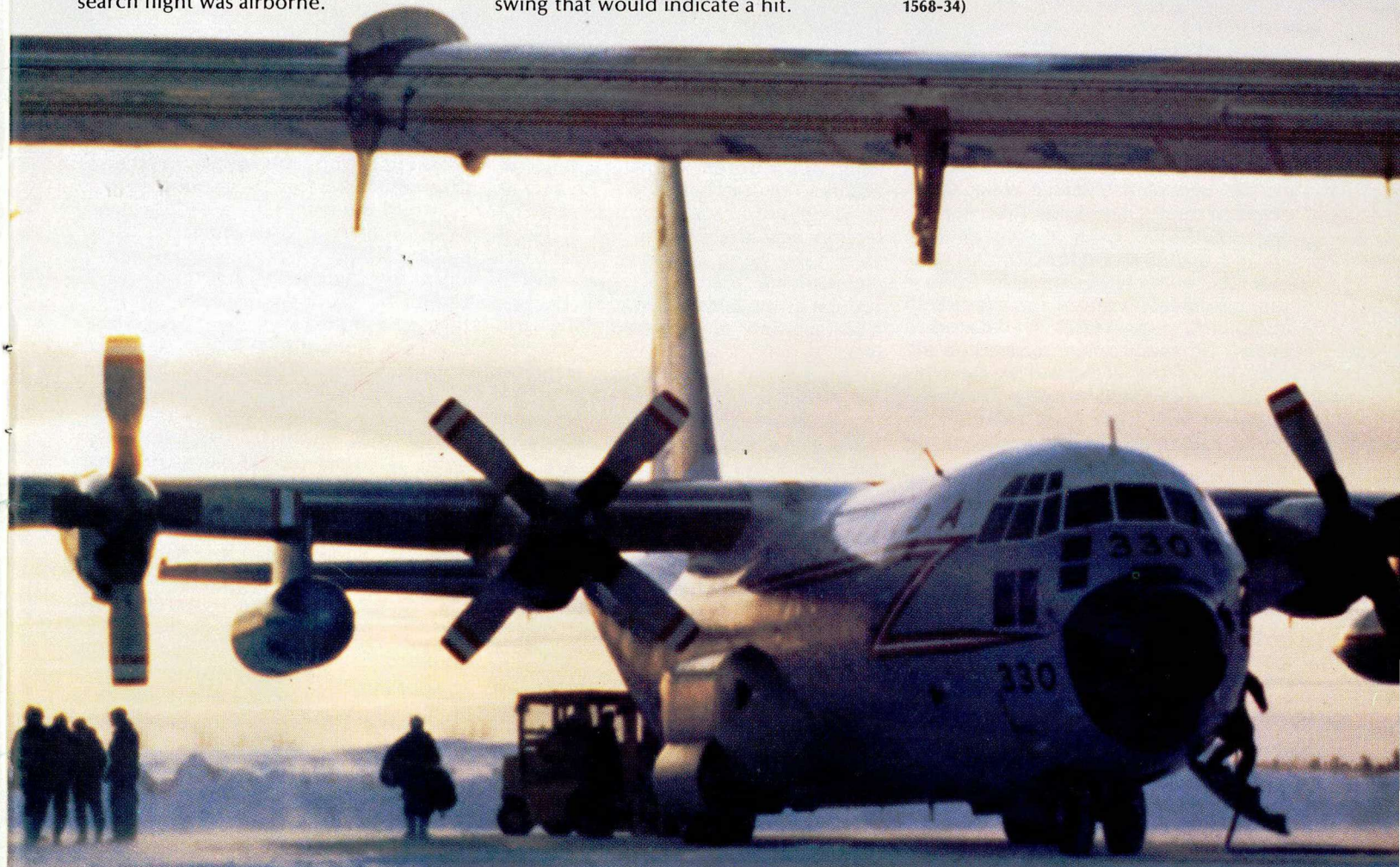
and geological mapping), was shipped from O a. In the meantime, the Americar. NEST organization arrived with three. Two spectrometers were already mounted in two *Hughes 500* helicopters, which had been transported to Edmonton by the *Starlifters.*

However, the limited range of the helicopters precluded their use in the vast North. Rather than waste time dismantling and transferring the equipment, one of the helicopters was pushed into the back of a CF *Hercules,* and at 1:30 a.m. on January 25, the first search flight was airborne.

clear reference points. North of the treeline the pilots looked out on a white featureless land where only instruments could assist in maintaining accurate lines. In an area with few navigational aids and a reputation for compass unreliability, the aircrew and scientists had cause to worry about their ability to pinpoint a hit.

Meanwhile, back in the cargo compartment, the scientists took turns watching several needles as they slowly swayed up and down across a piece of graph paper, waiting for the telltale swing that would indicate a hit.

Above. Scientists spent hours in the back of *Hercules* aircraft, watching for the swing of a graph needle which will indicate a hit. (EG&G photo 1447-5). Below. The workhorse of Operation Morning Light; a CF *Hercules.* (EG&G photo 1568-34)



Three *Hercules* carried out five search missions that day. Soon the rhythm of the search developed. An aircraft would take off for a 12 to 14 hour mission. Upon return it would refuel and take off again with a new crew and team of technicians. Fourteen hours later the cycle would begin again with another crew.

In the air, the work was tedious. The aircrew took meticulous care to keep on course as the aircraft lumbered up and down imaginary lines one mile apart across the tundra.

Navigation was a major problem. South of the treeline (which cuts across the projected satellite track just northeast of Great Slave Lake) there were

Late Wednesday night they had their first success. A *Hercules* with an American team aboard reported a hit in sector five, approximately 300 km east-northeast of Great Slave Lake. But, when the tapes from the gamma ray spectrometer were run through a computer in Edmonton, the proportions of uranium, thorium and potassium were not what could be expected from a Uranium 235 core. The scientists faced one of the classic problems of this search. The rocks of the North are full of uranium, thorium and potassium in varying concentrations. Was this hit an outcropping of natural uranium, or was it a piece of the reactor core so dense that it had buried itself deep into the tundra? Or was the search equipment simply miscalibrated? Exhaustive discussions on this matter continued for the next few days.

BAKER LAKE

It soon became clear that if downrange hits were to be checked out, a forward search detachment had to be set up nearer that end of the search area. On January 26, the centre of the search shifted to the east when Lieutenant-Colonel Donald Davidson flew into Baker Lake with a mixed American-Canadian scientific team, a photographer, a rescue specialist and communications personnel.

The two men who discovered satellite debris on the Thelon River, Mike Mobley and John Mordhorst, point out the hit site on a map. (EG&G photo 1581-34). Below. The first search team at the Thelon River hit site. (EG&G photo 1495-13).

The same day a 450 Squadron *Chinook* helicopter arrived from Yellowknife with three NAST team members. The *Chinook* had flown 3,000 km directly from an army exercise in the Chilcotin area of British Columbia.

That night, the detachment carried a radiation check of Baker Lake, a community of approximately 1,000 Inuit. Operations were set up in the Iglu Hotel, a large quonset hut. During the next two days, in -40°C temperatures, they carried out the first helicopter searches at the far end of the search zone, with negative results. (See Baker Lake story on p. 22).

HITS CONFIRMED

At the operations centre in Edmonton, resources available for the search continued to increase. The Canadian gamma ray spectrometer arrived on the morning of the 26th, and was quickly installed in a fourth *Hercules.* The Canadian scientists were keen to watch its performance, as the spectrometer had been designed and built only last year by Quentin Bristow of the Geological Survey of Canada.

A U.S. DOE *Convair* turboprop aircraft arrived the same day to begin flying infrared search and photographic runs over the satellite track. On January 29, two *Argus* maritime patrol aircraft arrived from CFB Summerside to assist in the search. The *Convair's* infra-red searches were to prove fruitless, but its photographic runs plus those of the two *Argus* provided invaluable aerial photos of hit sites and the entire search area. In the afternoon a team of AECB scientists arrived in Edmonton to round out the initial Canadian-American search team.

At this point, the tally of CF aircraft now involved in Operation Morning Light included four *Hercules,* four *Twin Otters,* three *Twin Hueys* and two *Chinooks.*

On the night of the 26th, a *Hercules* carrying the Canadian spectrometer loaded up with its crew and technical team plus a dozen journalists, eager to observe the search activity. The aircraft lifted off and headed north to search a section near the eastern end of Great Slave Lake. Soon everyone aboard was experiencing the monotonous search routine as the aircraft began the steady, laborious job of tracking along grid lines.

On the 17th and final pass, reporter Sid Handleman from the Toronto Star leaned over the shoulder of spectrometer operator Bob Grasty and asked why the needle was swaying so much. Grasty replied enthusiastically "I think we've got a hit." As everyone crowded around, the scientists and aircrew pinpointed the radiation source on near Great Slave Lake, just off the mouth of the Hoarfrost River, 27 km north of Fort Reliance.

Computer analysis confirmed the hit. Two days later a second aircraft not only reconfirmed it, but also found several more hits in the same area. Operation Morning Light had its first unqualified success.

THELON RIVER

However, these discoveries were all but forgotten with the news that two young men had found pieces of metal at a site farther east. On January 28, the Yellowknife meteorological station received a radio message from six men camping for the winter at Warden's Grove on the Thelon River, halfway between Yellowknife and Baker Lake. They reported that pieces of metal were protruding from the frozen surface of the river, 12 km from their camp.

Two of the men, John Mordhorst and Mike Mobley, had left the campsite on January 25 to travel by dogsled north along the Thelon River to learn more about the barrenlands. That morning they saw nothing as they passed the crash site along the far side of the river. Returning on January 28, the men turned off their trail to discover more about the area to the west of the Thelon. As they mushed around the river bend, they saw several pieces of metal extending out of a re-frozen crater. Mike Mobley walked up to the crater and touched the strange metallic structure. Not knowing exactly what he was dealing with, he backed off. The two men cut their trip short, and returned directly to the camp at Warden's Grove.

The four other campers had already learned of the satellite's crash on their radio, after querying Yellowknife about the frequent overflights of search aircraft. The group immediately reported the discovery.

An incredible chain of unlikely events had occurred. A satellite with little likelihood of coming down on land or of surviving re-entry through the earth's atmosphere had done both. It had then broken up and spread across hundreds of kilometres of almost totally uninhabited snow-covered land. And two men, in the midst of that vast expanse, had stumbled upon several pieces within four days of the fiery crash.

The immediate effect of this report and the [redacted]frost River area discoveries was to bring the centre of the search back to Yellowknife. For the past few days, the staff at Northern Region Headquarters had monitored the search activity, but apart from a NAST check of Fort Reliance which revealed negative radiation readings, there had been little activity.

All this changed within hours. Under the command of LCol Alex Bialosh, a combined Canadian-American scientific team flew north, arriving in Yellowknife late in the night of January 28. By the next morning the new forward search detachment was functioning out of the NRHQ operations room.

The main objective that morning was to get into Warden's Grove and get the six adventurers out for a medical examination. The Thelon hit site was dead on the predicted satellite track, and the men's description of the crater gave the impression that something large and dense (perhaps the nuclear core) had penetrated the ice. If Mobley and Mordhorst had been exposed to enough radiation, they and their friends could be in grave danger.

A *Chinook* helicopter at Baker Lake lifted off for Warden's Grove as soon as the technicians could warm it up enough to start (a major problem at 40 below), and a *Twin Otter* flew east from Yellowknife carrying NAST members and Dr. Savino "Beanie" Cavender, M.D., an American nuclear medicine specialist. From Edmonton a *Hercules* took off carrying a gamma ray spectrometer, to check the hit site and to provide navigation assistance if required.

The *Twin Otter* picked up the four men who had not been to the crash site, and returned directly to Yellowknife. Mobley, Mordhorst and Dr. Cavender climbed aboard the *Chinook* for the short trip to the crash site, soon to be known as "Satellite One".

Faced with a radiation source of unknown strength, the search team was extremely wary of landing at the site. The helicopter came down on a small rise 500 metres away (where, a week later, a military camp would rise). LCol Davidson, NAST member Pte Mona Wilson, two American scientists and a photographer then waded through hip-deep snow towards the hit site, carefully monitoring their radiation meters.

The tree line extends north here, following the protection of the river valley. The search team gamely floundered through the snow and scrub brush until they reached the hard-packed wind-swept surface of the river. Then they slowly moved forward. The radiation readings remained relatively low. The protruding metal produced readings of 10 to 100 milliroentgens per hour; not the several hundreds of roentgens per hour that the solid core would produce.

Had a major piece of the satellite crashed through the ice and imbedded itself in the river bed? The scientists could not immediately resolve that question. Time was running out.

The team was experiencing one of the major problems of the search. Satellite One was 400 km from the nearest airport (Baker Lake), and a one way trip took 2½ hours. Coupled with the extremely short Arctic day (approximately seven hours in late January), possible on-site time was a maximum of two hours.

Soon the helicopter pilots were urging the team to pack up and return. There was just enough time to photograph the site, take basic measurements, collect samples for later analysis and leave.

As the *Chinook* flew back to Baker Lake, the team learned that the gamma ray spectrometer in the overflying *Hercules* had discovered several more hits in the area.

The search force did not know it at the time, but fortune had been with them. The Arctic high pressure area which had brought frigid cold but calm weather to the area since the beginning of the search was about to end. By next morning, high winds would obliterate the Satellite One site. The opportunity to take detailed photos of the splash pattern (so valuable later in analyzing what had happened) would have been gone.

That night, Mike Mobley and John Mordhorst were flown from Baker Lake to Edmonton and placed in hospital to be tested for radiation exposure. The doctors soon concluded that they were perfectly healthy, with no more radiation exposure than one would receive from one or two X-rays.

The next day at a news conference they cheerfully related their experience to the world. When asked how he felt, Mike jumped and kicked his heels.

Upon their release from hospital, the two men were hired by the CF to act as guides in the Thelon River area. When that job ended they returned to their small campsite at Warden's Grove.

That night the CF became concerned about the security of the Satellite One crash site. The radiation situation was still not clear, and there were rumours that members of the news media were chartering aircraft to fly into the primitive Warden's Grove airstrip.

The media flight never materialized. Instead, before dawn on January 31, four paratroopers from the Canadian Airborne Centre in Edmonton parachuted into Warden's Grove to set up a guard and take care of the dog team left behind when the men flew out. (See paratroopers' story on page 11).

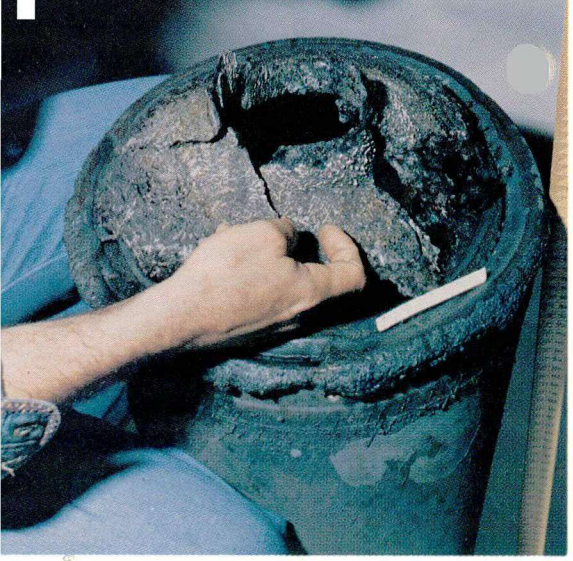
GREAT SLAVE LAKE SEARCH

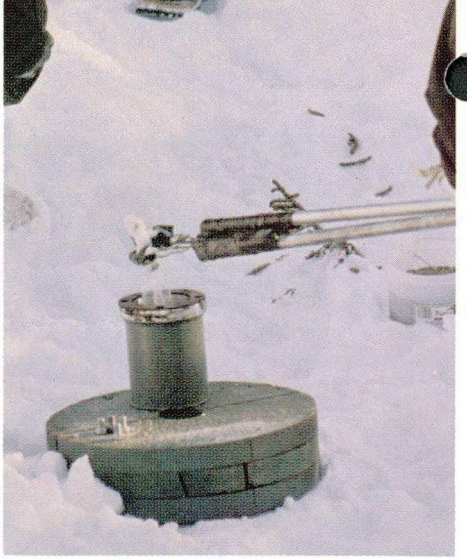
As the scientists analyzed the puzzling results of the Satellite One find, and reporters from around the world scrambled to interview the adventurers, operations out of Yellowknife continued. LCol Bialosh flew in with several NAST members and scientists to the Fort Reliance area to pinpoint the initial hits.

At this point in the search, the *Hercules* crews could give only an approximate position of the hits they discovered. *Twin Hueys* carrying radiation monitoring equipment then flew low over each hit site, circling until the hit was confirmed and its general location narrowed down. Then the scientists accompanied by NAST members would disembark from their *Chinooks,* spread out across the ice, and sweep the area. When the meters started to indicate a reading, the team would home in on the signal until they found the source. It was a process which demanded long hours on the wind-swept ice, in the bitter cold of the Arctic winter.

In this manner a 20 R/hr piece was located at hit one. It was a small metal bar, only a few inches long. The site was marked with flags and tape so that

Searcher puzzles over the debris at Satellite One hit site. (EG&G photo 1469-35)





Far left. The pieces of the puzzle start to come together. (EG&G photo 1507-6). Using long tongs, a scientist places small pieces of radioactive debris in a lead container. (EG&G photo 1591-3).

recovery crews could return with a lead-lined cask to pick up the piece. Later the radioactive material would be shipped to the Atomic Energy of Canada Ltd's Whiteshell Nuclear Research Establishment (WNRE) at Pinawa, Man.

On Jan 30, the search teams returned to the eastern end of Great Slave Lake. This time they took with them two RCMP constables and two NRHQ military policemen to guard the hit sites. Aware that the radioactive pieces were only a short snowmobile ride from Fort Reliance, they were determined to prevent casual visitors. The weather had changed for the worse, forcing the site guards to pitch their tent out of the wind in the lee of a point of land 200 metres away.

With this job complete, the searchers turned to the task of checking hit two, a short distance away. Out on the open ice, with winds now so high that the wind chill factor was dropping below -100°C, the team set up their search pattern.

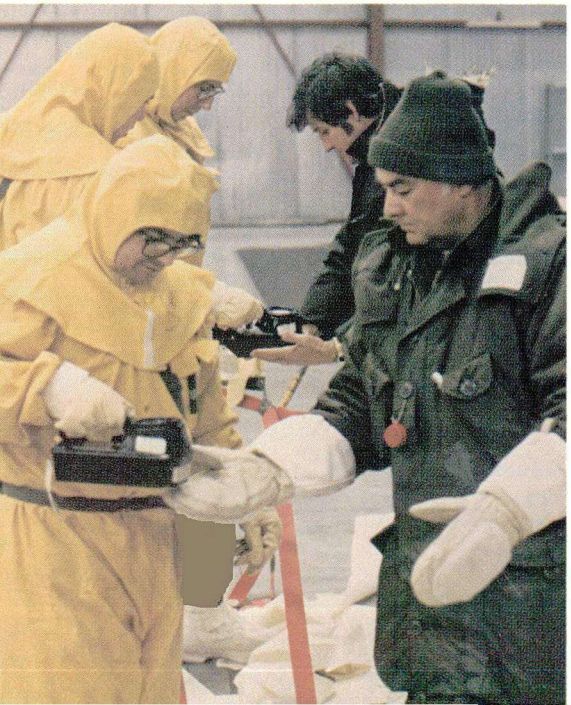
As they started to walk towards the suspected hit site their personal radiation dosimeters began emitting a high pitched chirping sound. Soon the air was filled by what sounded like a field of crickets. Suddenly needles on hand-held instruments began to bounce off the low range scales. The team had located a small piece of metal emitting 200 R/hr.

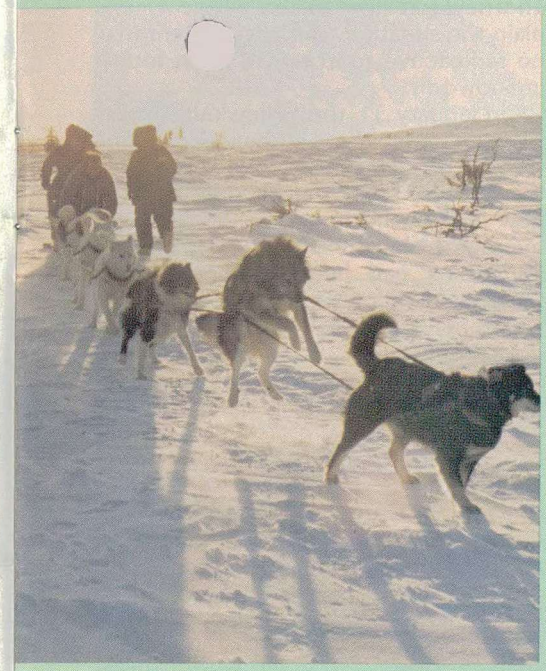
The search team carefully marked the site, and, again faced with limited onsite time, returned to Yellowknife.
There the scientists puzzled over the problem of recovering the 200 R/hr source.

None of the normal AECB lead-lined casks were designed to provide protection against such a powerful source, and a man exposed to only two hours of such radiation would probably die. The only solution was to manufacture an appropriate container. The job was given to technicians at the University of Alberta, while the search teams continued with other search and recovery efforts.

That same day, a NAST element flew to Snowdrift, to check the 90 Indian residents for radiation. As the team disembarked from its aircraft and spread throughout the village, the natives fled indoors. They didn't know what was happening, and they didn't like it. The next day NRHQ commander, BGen Ken

Above. Lead pig used to protect people from 200 R/hr source was so heavy that a recovery vehicle was used to transport it from aircraft to storage area. (EG&G photo 1540-18). Below left. NAST members carefully check the clothing of all recovery team members to ensure it is not contaminated. (EG&G photo 1522-20). Below right. NAST member checks Snowdrift natives for contamination. The results in all cases were negative. (News of the North photo)





JUMP INTO NOWHERE

there to prevent unauthorized personnel from inspecting the Cosmos 954 crash site.

It would mean a night drop into an unknown area, 400 km away from the nearest community. It would also be the CF's first operational night drop in many years.

That evening the four men packed and rigged their equipment for airdrop and drew personal weapons, ammunition and rations for five days. They were advised that six men had been hurriedly flown out of Warden's Grove, and that six Husky dogs had been left behind.

By midnight the paratroopers were on their way north in a C-130 *Hercules*. At Yellowknife they received a note from the Warden's Grove residents on an important subject — the care and feeding of the dogs.

On a quiet Sunday evening at the end of January, Sergeant John Phillips received a phone call from his headquarters at the Canadian Airborne Centre in Edmonton. He was to report immediately, with his winter clothing in hand.

When he arrived at Griesbach Barracks, he met three other men with the same task: Sgts Doug Riddell, Chris Cableguen and Cpl John Wickstrom. Their mission — to parachute into Warden's Grove in the middle of the Arctic barrenlands, and secure the crude airstrip

The stop in Yellowknife was just long enough to confirm the drop procedures. Then the *Hercules* was off again, roaring through the night towards Warden's Grove. By early morning the plane was circling over the site in total darkness, while the weather below deteriorated. Reports indicated temperatures of −40°C, and winds in excess of 30 knots.

With the assistance of an Edmonton-based rescue specialist, flares were dropped, and under their brilliant light the paratroopers surveyed the scene. The adventurers' campsite consisted of two small cabins, a tent and a small dog kennel, all under the lee of a 100 metre high ridge. The Thelon River is approximately 400 metres away. The airstrip runs between the river and the camp.

Once orientation was complete and a drop zone selected, they dropped lighted drift indicators to ascertain wind strength and direction. On the basis of that information, the aircraft descended to 1,000 feet and a heavily-laden toboggan, followed by the four men, hurtled out into space.

Caught in a swirl of cross winds, only the first man in the stick, Sgt Phillips, landed on the drop zone. The other three, after only a few swings under their chutes, landed on the top of the boulder strewn ridge.

The three less-than-lucky paratroopers bounded among two metre high boulders before their chutes collapsed. Fortunately no one suffered anything worse than bruises.

The next task was to find the toboggan. The wind had caught its parachute, and without anyone to collapse it the toboggan had careened off the ridge, down the slope and across the tundra. Following its tracks across the snow, the men were relieved to find both parachute and toboggan caught in a stand of stunted trees on the river bank. If the equipment hadn't been stopped by the bushes, the wind would have dragged it across the treeless tundra for kilometres.

Re-united at the campsite, the paratroopers radioed the still-circling *Hercules* and advised the aircrew that all was well. Only then did the aircraft leave.

On the ground, the four men checked the campsite and found the sled dogs sound asleep. The activity hadn't bothered them a bit.

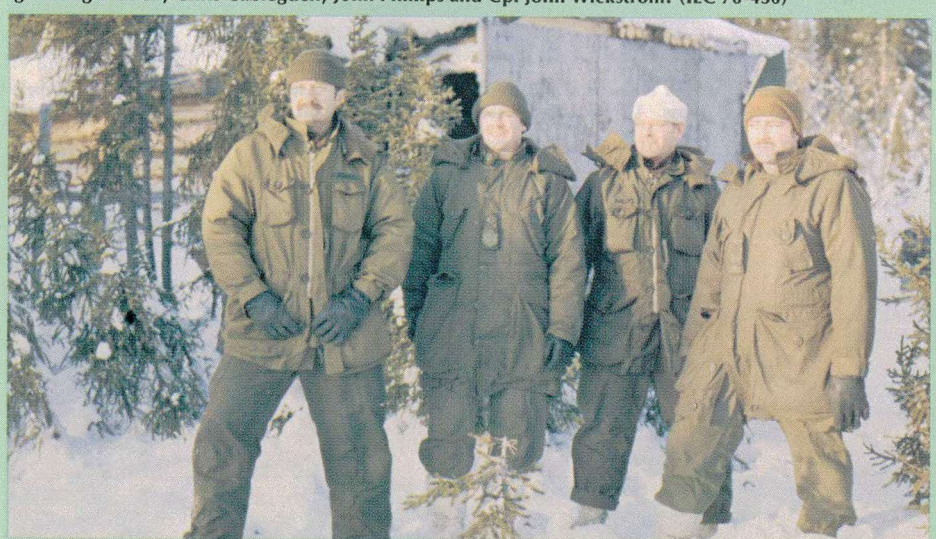
A day later, a *Chinook* from Baker Lake dropped M/Cpl Pat Callaghan, a CF rescue specialist, and RCMP Constable Bob Grimstead at the satellite crash site 12 km from Warden's Grove. From that point on the paratroopers' prime task became secondary.

The paratroopers remained at Warden's Grove for a week, receiving occasional visits from supply aircraft and from the RCMP, who flew in two constables to assist in protecting the crash site. The only other visitors were the animals that abound in the Thelon River area, a federal game preserve.

One Arctic fox, nicknamed Grover, was so friendly that he would go right up to the soldiers. He lost some of his popularity the night he discovered that toboggan lines sweaty from human hands contain salt. He ate three metres worth before he was stopped.

On February 7, the first of the original Warden's Grove residents returned, and the paratroopers flew out. After the excitement of the first night, the paratroopers found their quiet week just fine.

Above left. During their stay at Warden's Grove, paratroopers worked out with the adventurers' dog team (IEC 78-448). Below. The four paratroopers in front of the Warden's Grove cabin. Left to right are Sgts Doug Riddell, Chris Cableguen, John Phillips and Cpl John Wickstrom. (IEC 78-436)



Above. A *Twin Huey* waits while a scientist prepares to change the batteries on a microwave ranging system beacon. In the extreme cold, the batteries had to be changed every 48 hours. (EG&G photo 1566-19).

Above. A CF/scientific search team uses radiation meters to locate a small piece of radioactive debris. (EG&G photo 1571-24). Below. A scientist approaches debris found on Great Slave Lake. (EG&G photo 1501-16).

Thorneycroft flew to the village to explain the situation, and advised them that no radioactive sources had been found in Snowdrift.

On January 31, the Yellowknife-based recovery teams flew by helicopter over the ice of Great Slave Lake to recover the 20 R/hr source at hit one. As they flew eastward, they received a radio message from a nearby CF *Twin Otter*. Something had been spotted on the windswept ice of the lake.

The helicopters landed. This time the dosimeters did not break into their peculiar chirping. Instead the searchers came across a large stovepipe-shaped tube, charred from re-entry. Lying about in snow were a large number of smaller pieces. All were non-radioactive, and were quickly bundled up for transport to Yellowknife. The markings on these fragments furnished conclusive proof that Operation Morning Light had located parts of a Russian satellite.

The team then continued on its mission to recover the 20 R/hr source. Using long tongs, an AECB scientist carefully picked up a small metal rod and dropped it into a lead-lined cask.

But something in the area still emitted radiation. The 20 R/hr source had masked the presence of other radioactive pieces. After a brief search the team found another fragment, and it too was deposited in the cask. Multiple sources were to become a common discovery over the next few weeks.

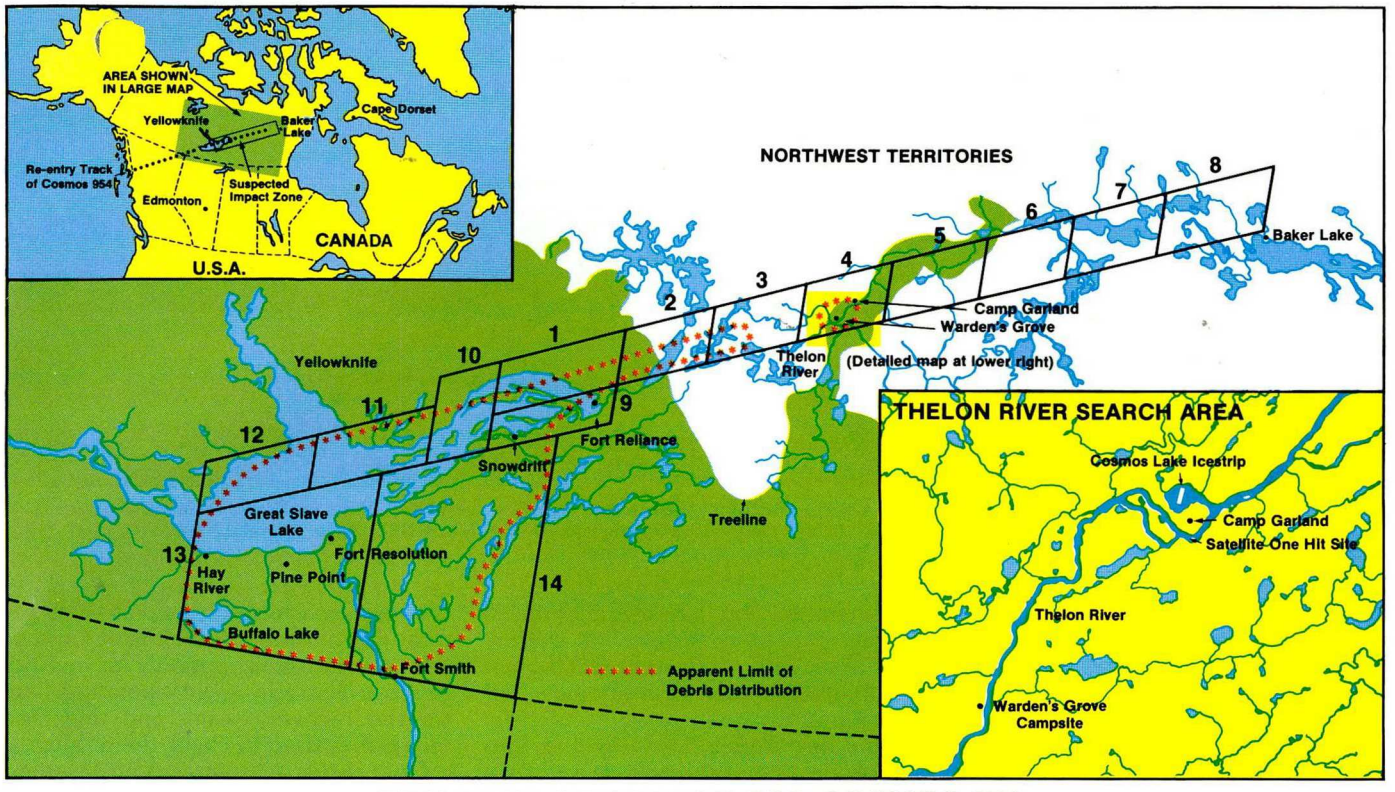
Properly sealed, the lead-lined cask was flown back to Yellowknife, and later to Pinawa.

Recovery teams and aircrew were checked for radiation after every mission. NAST members carefully monitored their clothing for contamination. Frequently the snow around a hit site was contaminated by minute radioactive particles, and mukluks or pants could be easily contaminated. Any item of clothing which produced a reaction on the meters was immediately removed. Wrapped in plastic for security during transport, the material was later shipped to WRNE in Manitoba for disposal.

PROGRESS ASSESSED

The scientific team had recovered satellite fragments. Now, the first steps could be taken towards completing the jigsaw puzzle that Cosmos 954 had become. Each fragment, when studied and analyzed, told more of the story of how the satellite re-entered, burned and broke up. This information improved the search team's ability to predict the locations of other satellite debris.

Simply stated, the probable position of a satellite fragment depended on its



THE AREA OF SEARCH FOR COSMOS 954

density and its shape. The scientists expected the lightest pieces with the largest surface areas to have the greatest resistance against the air, and to fall short in the westernmost section of the re-entry zone. Dense pieces with minimal drag would have travelled farther downrange, to the vicinity of Warden's Grove or farther.

The military commander now decided to enlarge the search area. With so many small hits in Sector One, two more sectors (numbered nine and ten) were added to the search area at the westernmost end.

By Jan. 31 the *Hercules* search aircraft had completed their general search of all ten sectors, and all hits created a "footprint" within a narrow ten km-wide strip, right down the centre of the predicted re-entry path.

However, neither the aircrew nor the scientists were satisfied with the accuracy of the grid patterns flown by the *Hercules*. The navigation problem was just too great to guarantee a properly spaced search pattern over the entire area. On February 1 the commanders attempted to resolve this problem by flying three *Hercules* in a "V" formation, with the aircraft 200 metres apart. The planes flew up and down the entire length of the prime search area, in the hopes that all the prime terrain would be covered without any troublesome gaps.

The results were mixed. The spectrometers detected several more hits that day, but the pilots found that the strain involved in keeping such a tight formation for hours on end was extremely tiresome. The experiment was abandoned.

On February 2, the Americans flew in the solution to the navigation problem — a microwave ranging system (MRS). The MRS consists of directional beacons which are placed on two high points of land 20 to 50 km apart. A receiver/computer mounted in the aircraft receives the two signals and, using triangulation principles, monitors the exact position of the aircraft and enables the pilot to fly along a specific path.

Accurate coverage was now assured, and hits could be pinpointed to within 200 metres.

The beacons were placed in position in Sector One by helicopter, and on Feb. 3 the MRS went into operation. From that point on one MRS-equipped *Hercules* aircraft flew a 20 to 50 km square area each day. It would clearly take weeks to cover the entire search area at this rate, but at least it would be covered accurately and completely.

Search and recovery operations continued at the eastern end of Great Slave Lake throughout the first week of February, and on Feb. 4 the scientists were ready to recover the 200 R/hr fragment. The U of A technicians had constructed a lead container (nicknamed "the pig") weighing more than ½ of a ton.

That morning, with Defence Minister Barney Danson and 30 members of the media observing, a recovery team dragged the pig from a helicopter and using tongs quickly put the source into the pig.

The observers obtained a clear idea of the problems involved in the search. They spent 1½ hours flying to the site, then stood in the open in −40°C temperatures and high winds to watch the recovery operation. Cameras froze, and when bare flesh touched metal, it stuck. It was not an enjoyable experience.

RIDDLE SOLVED

During this week, the Baker Lake search detachment was experiencing its share of problems. The scientific team had flown into Satellite One again on Jan. 31. Through the winter's worst blasts of icy cold and wind, the scientists dug out the drift-filled crater in an attempt to find out what was below. Gas-powered ice augers froze in the bitter cold, and the team reverted to Inuit ice chisels to chip through the metre of ice. Underneath the scientists found a few centimetres of water and then sandy river bottom, but no sign of radiation.

This left them thoroughly puzzled. The only way the light strut-like rods

The Baker Lake search team spent a night in tents beside the Satellite One hit site. Red tape in background marks the contaminated area. (EG&G photo 1549-25)

LCol Donald Davidson and two scientists cook rations from their survival kit during night at Satellite One. (EG&G photo 1550-10).

found on the surface would have been dragged so far downrange was by something dense. But where was the dense object?

The search commanders had already considered this question, and plans were in the making for a detailed search of the entire area. There were even thoughts of damming the Thelon River in order to study the river bottom.

With an extensive search in mind, Col Garland directed LCol Davidson to pick a site for a landing strip and a forward base camp.

As the scientists continued taking their measurements on the river, LCol Davidson checked a nearby backwater-cum-lake (soon to be known as Cosmos Lake) for its feasibility as an airstrip. Then time ran out. Leaving M/Cpl Pat Callaghan, a rescue specialist, and an RCMP constable to guard the site, the team flew back to Baker Lake.

The next day 450 Sqn maintenance crews fought the bitter cold to keep the *Chinook* serviceable, and a day later the team returned to the site to take more measurements.

On February 3, a *Twin Otter* and a second *Chinook* (recently arrived from 450 Sqn headquarters in Ottawa) carried the scientific team into Satellite One. After more hurried measurements, the scientists packed up and returned to the shut-down helicopter.

With everyone loaded in, the pilot attempted to start up. One rotor turned; but the other would not budge. Eighteen people faced a night outside in the middle of the Arctic winter.

This sort of predicament was exactly why rescue specialist Pat Callaghan was there. As darkness enveloped the scene and the temperature plunged, Callaghan instructed the Canadian and American scientists, the aircrew and NAST member Pte Mona Wilson to quickly erect a second Arctic tent. (Callaghan and the RCMP constable already had one set up).

Soon the search team divided into two groups (smokers vs non-smokers) and settled into their tents to a meal from the aircraft survival pack. It was a memorable experience for everyone, particularly for the American scientists, who had been working in balmy Las Vegas ten days before.

The aircraft breakdown was a blessing in disguise. It meant the scientists could spend all of the next day at the site, while LCol Davidson completed his ice thickness tests and plans for the airstrip at Cosmos Lake. By the time a *Twin Otter* returned to pick up the search team, the scientists had confirmed that nothing lay beneath the ice.

That night Defence Minister Barney Danson flew in to Baker Lake with senior officers from Edmonton to assess the situation. The search commanders also brought the results of laboratory tests conducted in Edmonton on Satellite One snow samples. It contained lithium, an element used in the shielding of nuclear reactors. When it contacts water, lithium reacts violently (in the same manner as sodium). The violent reaction of lithium and snow had created a large puddle which when refrozen caused the huge crater at Satellite One. The lithium then dissolved in the reaction. The mysterious crater was explained.

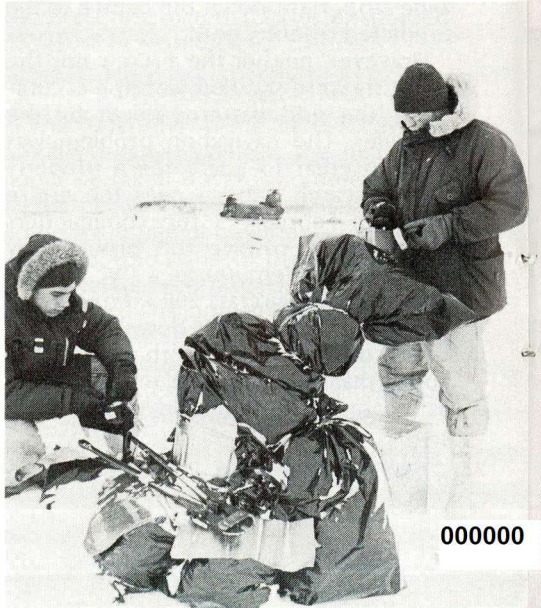
CAMP GARLAND BEGINS

The Thelon River area was becoming the focal point of search activity, particularly as the MRS search completed its survey of the western Great Slave Lake area and moved downrange. It was clear that a camp and airstrip at Cosmos Lake were essential not only for logistics support, but also as an operating base for the recovery teams and the *Twin Hueys* they used to check the hit sites.

On February 5, Operation Morning Light moved into a new phase. The Baker Lake operation began to close down, and Cosmos Lake began to build up. That day, 10 pioneers and a medical assistant from the 1st Battalion, Princess Patricia's Canadian Light Infantry, plus a bulldozer driver from 1 Combat Engineer Regiment flew in by *Chinook* from Yellowknife to set up the first tents of what was to become Camp Garland.

The bulldozer needed to clear the 1,600 metres of ice airstrip on Cosmos Lake arrived next; dropped from a low flying *Hercules* by LAPES (Low Altitude Parachute Extraction System) on February 6. Cat driver M/Cpl Sid Behme immediately went to work. Snow, wind-driven until it packed like concrete,

Two NAST members check the low radiation levels around collected debris found at Satellite One.



slowed the operation. Another bulldozer and two more drivers would be required before the strip would be completed on Valentine's Day. (See Camp Garland story on page 17).

When the first 424 Sqn *Buffalo* aircraft touched down on the ice strip on February 15, three scientists were aboard, keen to unpack their equipment and get on with the detailed search of the area. Camp Garland was about to become operational.

During the next six weeks, up to 100 people made Camp Garland their home. *Twin Huey* helicopters operated from an inflatable hangar, carrying out detailed searches for hits in the area and taking scientists to them.

In addition to normal military communications systems, DND contracted with Telesat Canada to provide a satellite communications terminal at the camp. The 955 kg dish-type antenna was flown into Cosmos Lake on March 3, and within 48 hours the scientists and military commanders at Camp Garland could discuss plans and problems with Edmonton (or anywhere else in North America) simply by picking up a phone.

NEW DIMENSIONS

In the meantime, there had been dramatic developments elsewhere.

Even before Camp Garland officially opened, the search had taken a new direction. On February 10, a 408 Sqn *Twin Huey* with a two-man scientific team was diverted from the search area to the western end of Great Slave Lake to check a peculiar hole in the ice. After inspection, scientists attributed the hole to natural causes, and the helicopter returned to the main search zone. But as it flew above the Snowdrift area, the radiation monitoring equipment started to register hits.

Circling low, the crew soon discovered a dozen hits on the ice of Great Slave Lake, five to eight km northwest of Snowdrift. The low flying helicopter had discovered radiation sources in the low milliroentgen range, too weak to be picked up by the higher flying *Hercules*.

That afternoon, recovery teams flew to this new site. They discovered many tiny particles, ranging in size from microscopic to peppercorn.

Later testing indicated that these minute pieces were fissionable material — the reactor core.

Over the next few days search missions along the south shore of Great Slave Lake turned up more low-range hits.

At last the searchers had an inkling of what had happened to Cosmos 954's reactor. It had possibly burned up on re-entry, but without complete combustion. Instead, minute pieces had fluttered down from the upper layers of the atmosphere. These radioactive particles, caught in the northerly winds of the night of Jan. 24, had drifted southwards to "dust" a huge area south of the predicted re-entry path.

The search effort was now aimed at defining the boundaries of the area of dust contamination. On Feb. 21, helicopters discovered low level radiation hits near Hay River and Fort Resolution. By the end of February the boundary of the additional contaminated area was defined. It contained 80,000 sq km from Hay River in the west to Buffalo Lake in the south, and east to a line drawn roughly from Snowdrift to Fort Smith.

The commanders of Operation Morning Light now faced a new problem. A huge area was contaminated by a fine sprinkling of radioactive particles, spread in random fashion, frequently hundreds of metres apart.

Left. Search team drags its equipment across the wind-swept surface of a lake near Cape Dorset to investigate a suspicious crater in the lake ice. (OPML 27-18). Above. In the latter stages of the search, recovery teams checked shovelfulls of snow for radiation, and deposited contaminated snow in garbage cans. (EG&G photo 1498-14). Below. NAST members check the community of Hay River for radioactive particles. (IE 78-59)

With the prospect of spring breakup in early May, neither time nor resources would permit clearance before the snow melted and the particles settled into the soil or the water of lakes and rivers.

AECB scientists recommended the search of all inhabited areas with ground teams to remove all contamination. In addition, *Twin Hueys,* capable of flying low and picking up lower radiation levels than the *Hercules,* would survey and clear all transportation routes within the area. Finally, the entire area would be divided into sectors and searched using the radiation detector-equipped *Twin Hueys.*

During the early part of March, Pine Point, Hay River, Fort Resolution and other southern Great Slave Lake communities were surveyed. In the vicinity of most of the communities the NAST team and scientists discovered a few dozen particles in the micro-roentgen range. There was no question of isolating each particle; a small amount of snow was simply shovelled into a plastic bag and carried away for disposal.

During March the search continued. There were some exciting moments when Inuit hunters on Baffin Island reported discovering a huge re-frozen crater on a lake 25 km northwest of Cape Dorset. The site was on the satellite track, and trajectory experts concluded that it was possible for an aerodynamically-shaped piece of Cosmos 954 to skip along the upper layers of the atmosphere and crash to the earth that far away from the other debris.

A *Twin Huey* helicopter was quickly dismantled and airlifted to Cape Dorset, where it flew a military/scientific team to check the site. No radiation was discovered in the area. After studying the site carefully the scientists (including ice experts from the National Research Council) concluded the refrozen crater was a natural phenomenon.

WINDING DOWN

Along the main satellite track itself, several more hits (including one of 500 R/hr) were made between Great Slave Lake and Cosmos Lake. These were quickly picked up. By late March, it was apparent that the Cosmos Lake area was cleaned up, and the time had come to close Camp Garland. On March 29, the last flight departed from the ice strip that had been built with such great effort seven weeks before.

Even before this, the American element of the Operation Morning Light team had started winding down. At its peak, the American contingent numbered 115 people. Their knowledge and assistance had been invaluable, particularly during the early stages of the search. The last American scientist left Camp Garland on Mar. 7, and the last American gamma ray spectrometer was flown out on March 21.

The next day the Canadians bid farewell to the last group departing for their home base at Las Vegas. Canada's appreciation was expressed that day in a message from Prime Minister Trudeau to President Carter.

During April, a complete assessment of the operation took place in Edmonton and Ottawa. The search objectives had been met: all radioactive debris identified by the *Hercules* search aircraft had been picked up (from more than 60 sites); all communities and campsites plus their environs had been cleared, as had all transportation routes in the search zone. Radiation sources being recovered were now in the same strength range as the earth's background radiation. In addition, the scientists calculated that the radiation from the satellite core pieces was decaying rapidly.

The danger to human and animal life had been minimized, and the search effort was now producing limited results. The time had come to reduce the military recovery operation.

On-going monitoring programs will continue throughout the spring and summer of 1978. As has been the practice thus far, DND and other federal departments and agencies will continue to support AECB, which is responsible for protecting the health, safety and security of Canadians with regard to nuclear energy.

Operation Morning Light has been an expensive venture for Canada. At the time of writing, DND expenses alone stood at more than nine million dollars.

There are hidden costs as well. CF aircraft flew more than 4,700 hours on search and resupply missions, taxing aircrew and the people who support them, and disrupting long-planned exercises and maintenance schedules.

In return, everyone involved has gained superb operational experience under extremely difficult conditions.

THE WORLD WATCHES

Have you ever tried to answer seven telephones at once? Two Canadian and one American information officers attempted that during Operation Morning Light - not just once, but for seven straight 20-hour days.

When Cosmos 954 crashed in the N.W.T., the world's news media considered it the hottest thing since sliced bread, and for two weeks it was front page news. Several score national and international reporters invaded Edmonton and Yellowknife to cover the search. At the same time, media queries were phoned in constantly from as far away as Australia, Europe and Japan.

So many reporters tried to use the telephones to gather and pass information that their activities threatened to affect operations. So a section of CFB Edmonton's aircraft passenger waiting room became a media centre. There, Majors Vic Keating and Wally West and U.S. DOE information officer Dave Jackson handled media queries round the clock. All seven available phones were frequently busy, and CFB Edmonton telephone operators had to keep media waiting lists.

The story was so big and complex that the major television networks had several news teams reporting on the search, some using Learjets to fly them between Edmonton and Yellowknife.

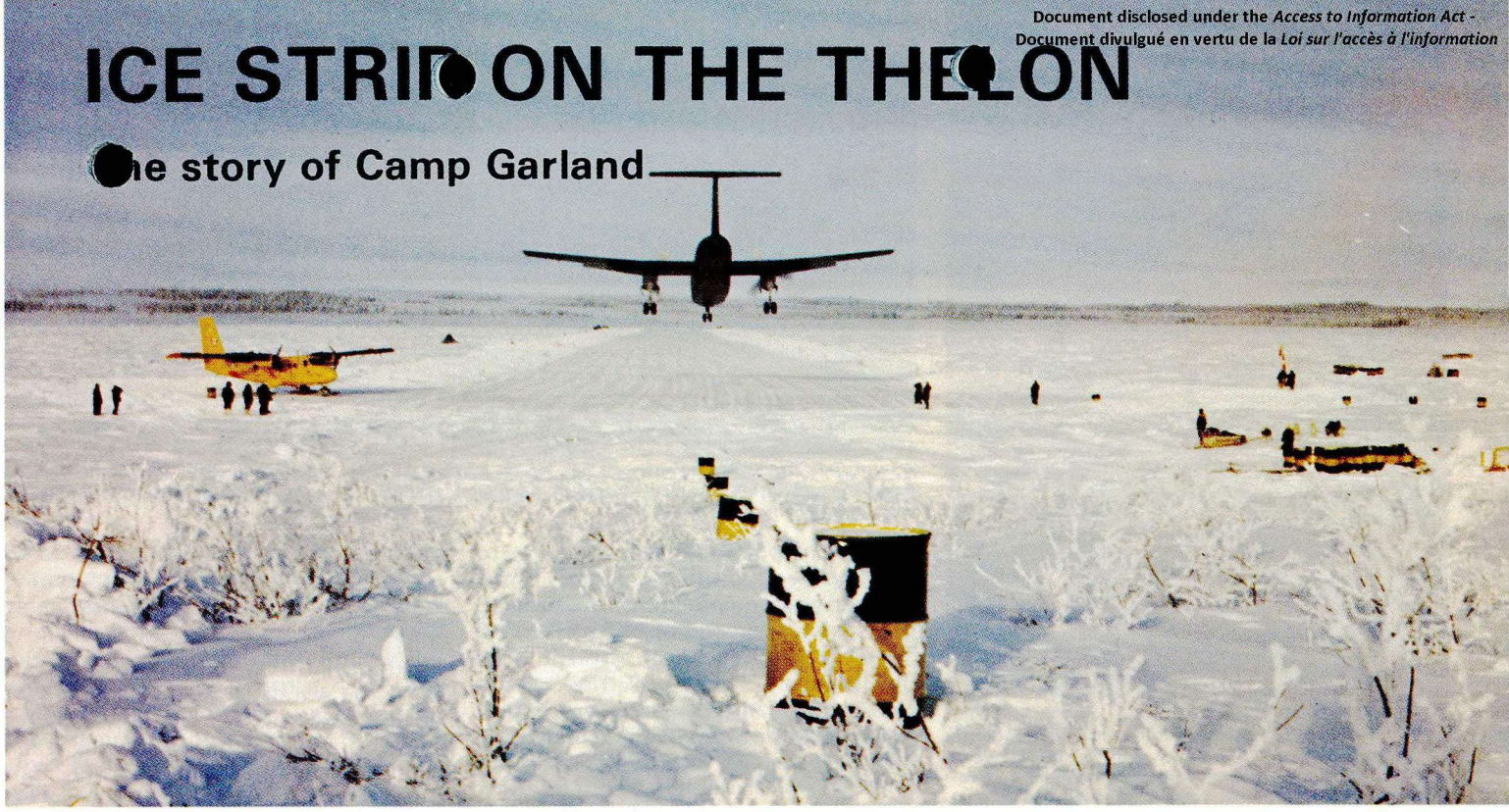
In the midst of this, information officer Capt. Craig Mills returned to Edmonton from a six-month tour in the Middle East, not even aware that a satellite had crashed. Before he had his bags unpacked, he was called in to help.

As the days passed and media interest increased, more information officers were sent to Edmonton and Yellowknife to assist the initial team. At the height of the operation, seven Canadian and two American information officers were involved.

At Yellowknife, Maj. Wally West briefs the news media about the six adventurers at Warden's Grove. (News of the North photo)

ICE STRIP ON THE THELON

The story of Camp Garland



by Maj. Bill Aikman

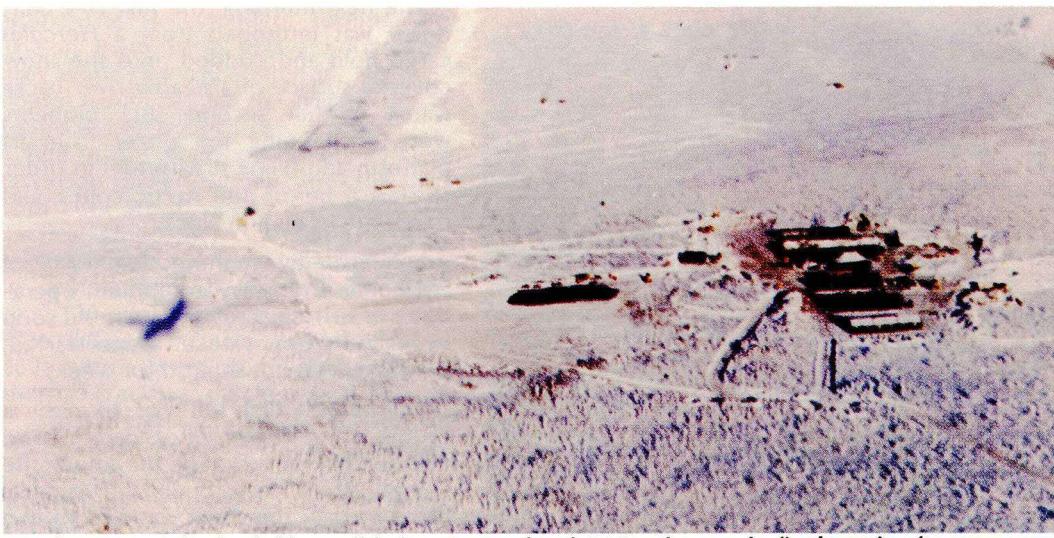
A small group of Canadian servicemen now scattered on bases from Chilliwack to Trenton know what it's like to live in the eye of a hurricane.

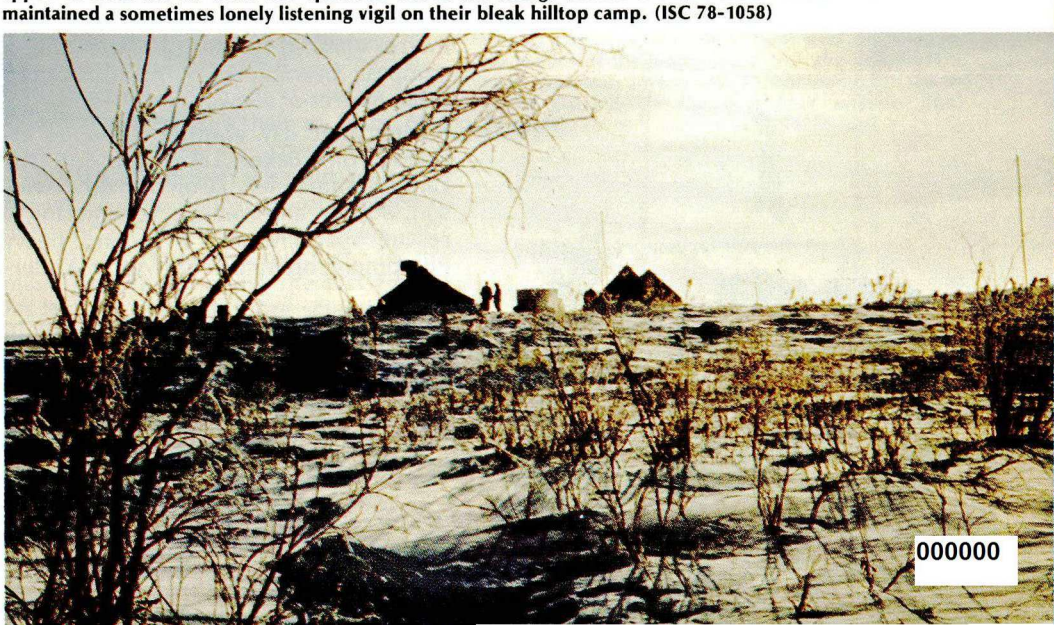
They've experienced a kind of loneliness and isolation on the tundra in midwinter that even Robert Service would have been hard pressed to describe.

For while the world clamoured to learn more about the chunk of Cosmos 954 that plummeted onto the Thelon River, 30 servicemen lived and worked a few minutes walk from the crash site. Their task — to build an ice runway long enough to accommodate *Hercules* aircraft.

The airstrip was an operational necessity. Behind the decision to build it was the suspicion that the satellite's nuclear core might be found nearby. The recovery team, which had been making 800 km round trips to the crash site by helicopter, needed better access and more time on the ground to conduct investigations. And so Camp Garland, named for the commander of Operation Morning Light, came into existence.

It was to be an almost solitary existence for the first ten days. Bad weather sometimes prevented resupply helicopters from reaching the site, and the temperamental ionosphere prevented radio communications for days at a time. So, unaware of what was happening beyond the low hills that surrounded the camp, each man carried on, fighting his own private war against the piercing cold.





Top of page. Over the threshold. A Buffalo from Trenton-based 424 Sqn. became the first large aircraft to land on the Cosmos Lake strip Feb. 15. The whole camp turned out to watch the touchdown and greet the arriving scientists. (ISC 78-1051) Above. Camp Garland and the Cosmos Lake airstrip as they appeared from the air while the operation was in full swing. (OPML 071-2). Below. ATCCT members maintained a sometimes lonely listening vigil on their bleak hilltop camp. (ISC 78-1058)

Above. Cpl Andy "S.B." Anderson and M/Cpl Duncan MacIntosh (on dozer) worked in frigid weather to clear 1,600 meters of runway. (ISC 78-1052) Below. M/Cpl Sid Behm proudly sits aboard his dozer moments before the first large aircraft landed on the runway behind him. (ISC 78-1053)

Below. Flags, taped music, the roar of an aircraft engine, and a deft slice with a snow knife marked the official opening of the airstrip. While the new camp CO, LCol Steve McGowan, left, and camp residents watched, LCol Donald Davidson (the outgoing camp commander) and M/Cpl Behm cut a piece of fluorescent tape. (ISC 78-1088)

Adventurers from Warden's Grove pay a visit by dog team to the fully operational Camp Garland, providing a diversion for scientists and CF personnel. Having neighbours in the midst of Arctic isolation was a great luxury. (ISC 78-1082)

Two *Chinooks* pounded their way to the Satellite One site February 5, carrying men and equipment for the project. Under the command of Lt Ted Bain, 10 pioneers and a medical assistant from the 1st Battalion Princess Patricia's Canadian Light Infantry, and a heavy equipment operator from 1 Combat Engineer Regiment tackled the job of setting up camp on a bleak hillside.

The next morning, the first D-4 bulldozer was jettisoned from a *Hercules* cargo hold and skidded onto the snow covered surface of a nearby river backwater. Within seconds the pioneers were unstrapping the dozer from its platform and filling it with fuel in order to start it before the Arctic cold could penetrate its engine block.

Less than five minutes later, M/Cpl Sid Behm, the heavy equipment operator, was driving across what would soon be called Cosmos Lake. Once started, the dozer was not shut off for weeks.

Sid Behm's first job was to clear a campsite and a network of roads around it. It was not an easy task, for among the stunted trees that fought for survival this far north the snow was one to two metres deep.

The pioneers began to mark out the airstrip, which fitted neatly on the lake between two low-lying hills. Using a 32 metre (100 ft) piece of rope and a compass bearing, they measured out 1,600 metres of runway.

Later that day another *Chinook* arrived from Baker Lake, carrying the camp commander, LCol Donald Davidson, supply and vehicle technicians, a rescue specialist and a second heavy equipment operator, Cpl Andy Anderson.

Aware of the urgent requirement to clear the strip, the two drivers worked continuously from first light until after dark.

It was not so much the darkness that stopped them as the cold. The -30 to -40°C temperatures made sitting on the high, exposed seat of a cat thoroughly uncomfortable.

During the first three days of operations the winds gusted to 60 km/hr, driving snow against the drivers faces and through their heavy clothing. Each night the men returned to the tent damp from snow that had melted inside their parkas, and stiff-jointed from sitting still in the cold all day.

The rescue specialist and medical assistant took turns manning a tent beside the slowly growing airstrip, where the cat drivers occasionally stopped to talk and get warm.

Sid Behm and Andy Anderson not only had to fight the cold to do their job, they had to fight the snow. Driven by the wind, the ¼ metre to a metre deep snow on the exposed lake was as hard as concrete. It took at least two cuts to clear one blade width. By Feb. 9, only 300 metres of the strip had been cleared.

Late that day a second bulldozer was dropped, and the pace picked up. On Feb. 11 the strip measured 800 metres. On Feb. 12, the drivers reached 1,000 metres. M/Cpl Duncan MacIntosh arrived the same day to help share the driving duties. The small advance party at Camp Garland began betting on when the first *Hercules* would touch down.

While the runway grew, other problems began to appear. At one metre thick, the ice barely met the minimum landing standards for a 65-ton *Hercules.* In radio conversations with Edmonton, it became clear that the *Hercules* pilots weren't enthusiastic about landing under such conditions.

The construction party let time and weather solve this difficulty. When the surface ice lost its insulating blanket of snow the cold penetrated deeper, and

Above. Hardpacked snow, wind-driven to the consistency of concrete, was difficult to move. Heavy equipment operators braved the extreme cold from dawn til after dark for eight days to clear the strip. (ISC 78-1062)

bit by bit the ice began to thicken.

But the bare ice was much colder than the water below, causing another problem. The ice temperature at the surface was -40°C. A metre below the water was 1°C. The ice began to contract and thermal cracks appeared. This, combined with the weight of the snow ploughed to each side, caused a narrow fault line to run right down the centre of the strip.

As the days passed, this crack grew to two and in some places three centimetres wide. Fearful that the fault could endanger aircraft operations, LCol Davidson ordered the cracks be filled. So for two days the pioneers combed the strip with jerricans, filling the cracks with a quick-freezing mixture of water and snow.

While the effort continued on the ice of Cosmos Lake, life carried on apace for the 30 persons living in the collection of tents that made up Camp Garland. During the day three cooks produced hearty meals in a modular tent which doubled as sleeping quarters.

Lt Mike Bolohan from 1 Construction Engineering Unit at CFB Winnipeg bounced between the tent and runway studying the feasibility of using an ATCO ablution trailer at the site, tabulating ice thickness and researching lakebed information.

A short walk away from the main tent, on the highest point of land near the camp, stood the tents of the Air Transportable Communications and Control Team (ATCCT).

ATCCT is a Trenton-based organization which has the capability of setting up the communications, radar and airfield lighting systems at forward airheads. Originally deployed to Baker Lake and Yellowknife, several of its men flew to Camp Garland on Feb 7. Soon the camp had communications with the outside world, an internal VHF radio system, and a TACAN radar beacon to assist aircraft in reaching the airstrip.

The radio link was tenuous. In this part of the world the aurora borealis dominate the skies, frequently playing havoc with communications. On Feb. 12 the nightly display of eery lights reached its height, and at the same time fouled communications. For the next 48 hours, the communicators couldn't raise another station with either morse or voice transmissions.

The weather also caused difficulties again. The sky clouded, turning the Thelon River basin into a horizonless grey world. Ice fog settled in. No helicopter would be able to navigate its way to this isolated post.

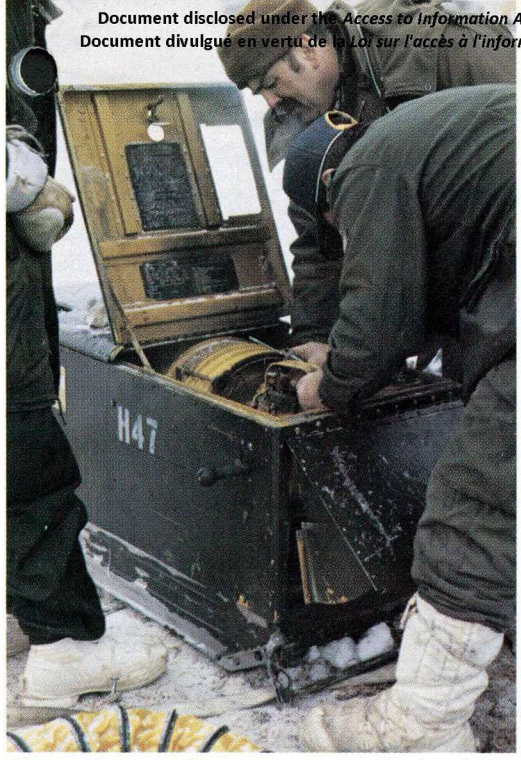
Late in the afternoon of Feb. 14 LCol Davidson walked the length of the strip with LCol Steve McGowan, CO of 408 Tactical Helicopter Sqn, who was to take command of Camp Garland upon its completion. (Or, as he commented to C-130 pilot Davidson, "After the first *Hercules* goes through the ice".) All but 200 metres were complete, and the thermal crack was patched up.

When a *Hercules* aircraft flew low on yet another LAPES delivery mission, the camp commander radioed that the airstrip would be ready to receive heavy aircraft the next day.

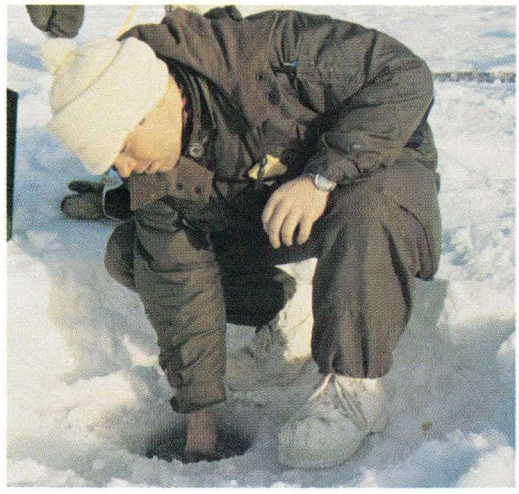
That night, well after dark, three cold and hungry but jubilant bulldozer operators burst into the dining tent. The strip was complete.

Shortly after noon on February 15, a 424 Sqn *Buffalo* aircraft from CFB Trenton touched down on Cosmos Lake. When it taxied to a halt in front of a cheering group of spectators, out stepped a three-man scientific team, led by Dr. Norm Bailey. Soon pallets of scientific equipment were being offloaded and towed by bulldozer to the main tent. The next day the first *Hercules* landed, carrying more scientists and their equipment.

Camp Garland had entered its second phase — the downrange search and recovery centre for Operation Morning Light.



Above. C-c-c-c-cold temperatures made keeping warm a priority. Camp members inspect a temperamental Herman Nelson heater outside the mess tent. (ISC 78-1071)



Above. Lt Mike Bolahan of 1 CEU gamely dips his hand for a sample of water from Cosmos Lake. A couple of minutes later he had to break surface ice with a pick to continue the job. (ISC 78-1060). Below. Camp Garland's communications problems were solved by a Telesat Canada earth station. In the camp's early days, communications were restricted by the whims of the ionosphere. With the introduction of the terminal, anyone with a telephone could talk to Camp Garland via Canada's Anik satellite. (ISC 78-1087)

BAKER LAKE

The Search Moves Downrange

by Maj. Bill Aikman

How do you explain the concept of a nuclear-powered satellite to people who have no words to describe a satellite, let alone nuclear radiation?

The task demands some effort and imagination, as LCol Donald Davidson discovered when he spoke to several hundred Inuit people in a Baker Lake school gymnasium last winter.

LCol Davidson was at the school to tell the native people about the potential danger of Cosmos 954, the Soviet satellite that had crashed in the north. Pausing frequently while an interpreter translated his words into Inuktitut, LCol Davidson explained why military personnel and scientists had descended upon the community (population 1,000) and why airplanes and helicopters were constantly flying overhead.

His audience was concerned. They wanted to know what radiation could do to the caribou, to the fish and to them. In the end they accepted his explanations and welcomed the strangers into the community. It was an excellent example of community operation at work.

Three days later, the entire search team was back in the gymnasium, this time to watch a native drum dance put on in their honour.

Such was life at Baker Lake. During 12 days of operations, the Morning Light detachment developed a character all its own.

The detachment was set up January 26 with the arrival of LCol Davidson, three NAST members and a mixed Canadian-American scientific team. They began operations in the only place in town big enough to accommodate them — the Iglu Hotel.

The Iglu Hotel is a large quonset hut owned by the village. It contains double rooms and bunkhouse-style sleeping quarters. No alcoholic beverages are sold, at the request of the Inuit community.

The new customers were surprised by the $63-a-day room and board charge, until they realized that everything they ate had to be brought in by air freight. Later, as the search team grew and overtaxed the hotel's resources, a CF cook joined the staff to help prepare meals.

Top. As darkness settles over Baker Lake, a *Chinook* helicopter returns from Warden's Grove. (E.G.G. 1455-04) Above. NAST member Pte Mona Wilson dresses against Arctic cold. (E.G.G. 1479-4)

The scientific team began their search January 27, leaving behind Capt John Lyne, of the NAST team, and team member Pte Mona Wilson to talk to school children about all the puzzling activity. Their school visit sparked the request for an explanation to the whole community.

Pte Wilson's presence intrigued the Inuit girls, who were astonished to discover that women serve in the Forces. The young Edmonton servicewoman spent more time answering personal questions than queries about satellites.

On the same day LCol Davidson spoke to the community, word was received that pieces of Cosmos 954 had been found on the Thelon River. The Baker Lake detachment was ordered to investigate the site, and the next day LCol Davidson headed the search party

Above. LCol Donald Davidson explains the Comos 954 search situation to Inuit at Baker Lake. (E.G.G. 1458-45) Below. Herman Nelson heaters had to run for three hours before a *Chinook* would start. (ISC 78-2000)

Five Baker Lake detachment members were the first searchers to reach Thelon River hit site. Four pictured above are Paul Mudra, Pte Mona Wilson, LCol Don Davidson and Tom Crites (E.G.G. 1495-09) Below. Baker Lake community. Quonset hut at centre right is Iglu Hotel. (E.G.G. 1552-09)

to the edge of the mysterious crater.

The Baker Lake group travelled 400 km to the hit site in a *Chinook* helicopter.

Initially, 450 Sqn's powerful helicopters provided the best means of getting people and equipment into Satellite One. However, the long distances required that each helicopter be outfitted with three rubber fuel bladders; a situation which reduced the load capacity.

In addition, the *Chinooks* were operating to the limits of their capabilities in the cold Arctic environment. Helicopter serviceability problems and harsh weather plagued the operation for the next week.

The *Chinook* is a complicated aircraft. It has five transmissions and three hydraulic systems, which in cold weather require 14 to 16 man-hours of maintenance for every hour flown. In the Arctic winter, where rubber seals deform and oil freezes solid, the strain was just too much.

It was tough on the maintenance crews as well. Working without a hangar in temperatures that dipped below -100°C with the wind chill, the technicians were restricted to 2½ minutes work in the open at a time.

Even simple procedures such as starting the aircraft engine were extremely difficult. The heat from a Herman Nelson heater had to be directed into the engine and transmission compartment for three hours before a cold-soaked engine could be started. Any less time would damage the seals.

Such maintenance difficulties restricted flights to Satellite One to every second day.

While the technicians performed their heroics at the Baker Lake airstrip, the scientists developed methods of photographing underneath the ice in preparation for the search to come on the Thelon River.

Pte Wilson was busy as well; gathering souvenirs for the cub pack she leads and arranging pen pal relationships between children in Baker Lake and Edmonton. She even acted as an impromptu recruiting officer, making a return trip to the village school to explain more about life in the Forces.

But Pte Wilson never allowed these activities to interfere with her NAST duties. She was one of three people who made the trip to Satellite One on every expedition up to the formation of Camp Garland.

With the decision to open up a base camp at Satellite One, the Baker Lake detachment lost its raison d'être. The detachment closed shop with a grand finale — a visit by Defence Minister Barney Danson.

While detachment members rushed to buy souvenirs and thank the Inuit people for their hospitality, Pte Wilson got ready to leave with something extra. She had been "adopted" by 450 (West) Sqn. And she proudly displayed the squadron crest to prove it.

LAPES FLIGHT 6840

by Lt. Wendy Tighe

These men, the ones who work at CFB Edmonton loading big pallets with 45-gallon drums of fuel, skidoos and sometimes even bulldozers, must have been up all night.

It took ten of them six long hours to strap together 9,100 kg of aviation gas, hoist the loaded pallet onto a roller-equipped truck bed with a crane, drive it to a waiting *Hercules,* hydraulically lift the truck bed up level with the landing ramp, and then slide the pallet onto the aircraft cargo rollers and strap it down again.

Now the same men are at work under the bright lights of the nose dock in an old alert hangar, carefully packaging a D-4 bulldozer with layers of two by fours and horsehair, reams of nylon straps and heavy metal buckles.

Late this afternoon the "cat" will be delivered to the Canadian Forces' Cosmos Lake base camp site in the Northwest Territories, only metres from a spot where a chunk of the Soviet Cosmos 954 satellite still sticks out of the snow.

It will be delivered at a speed of 130 knots from a *Hercules* flying about one to two metres above a frozen lake. Three large parachutes will bring it to a snow-spewing halt. Minutes later, somebody will drive it off the pallet and put it to work, stopping only long enough to reassemble the blade.

The fuel load now aboard the aircraft faces a similar fate. In a few hours it will be dropped on Great Slave Lake alongside the tiny community of Fort Reliance.

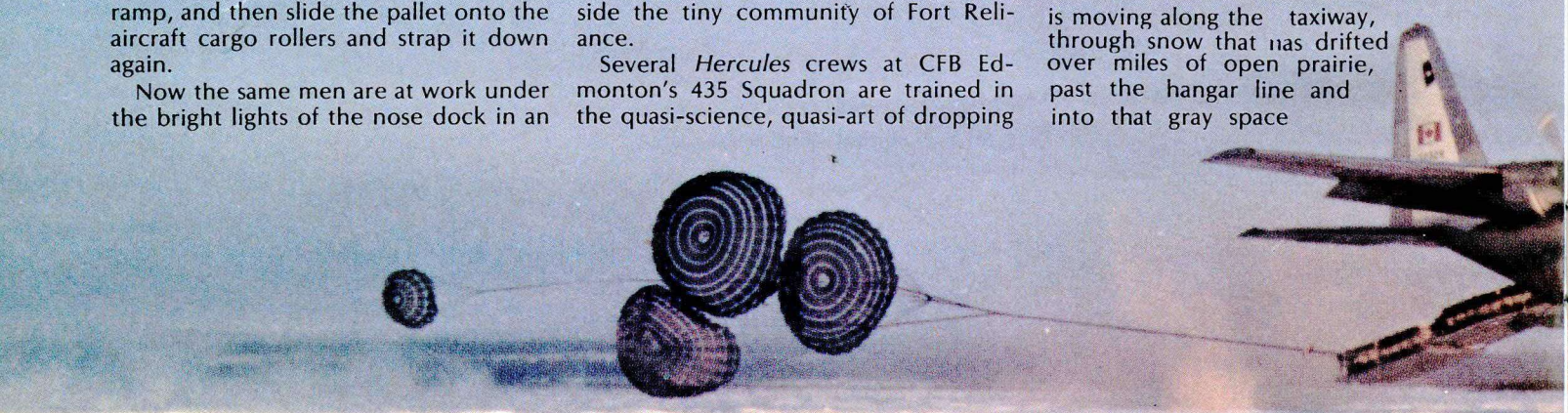
Several *Hercules* crews at CFB Edmonton's 435 Squadron are trained in the quasi-science, quasi-art of dropping cargo via the Low Altitude Parachute Extraction System (LAPES).

To the layman, a routine LAPES drop is a death defying spectacle. The sight of all that ground coming up under all that aircraft is enough to leave one permanently bug-eyed.

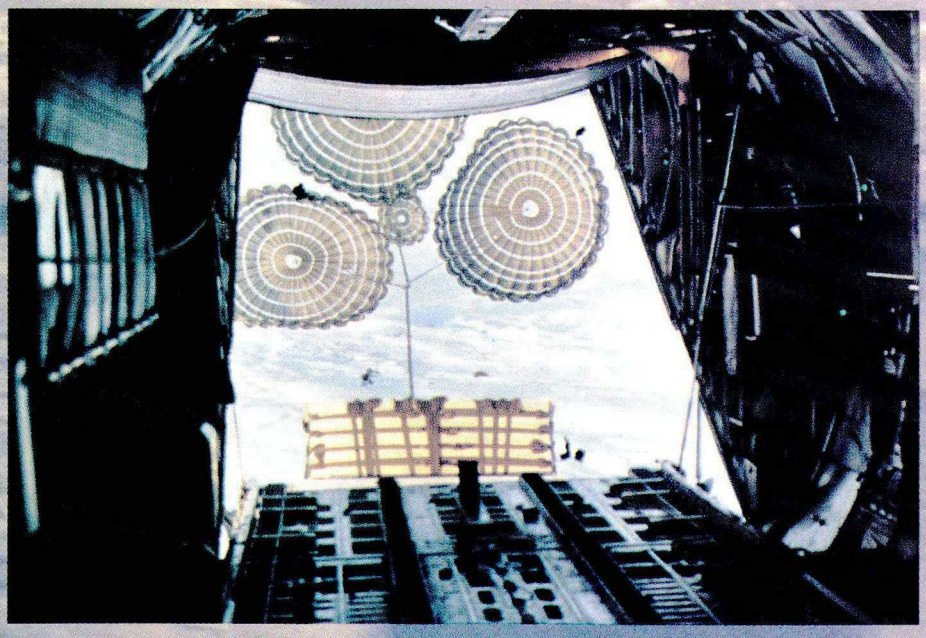
To the pilot it's a skill; a matter of keeping the plane level, nose slightly up, wheels off the ground. It's a marriage of experience and aerodynamics; a business where efficiency outweighs the risks.

To those on the ground, a LAPES drop often means the difference between survival and comfort, getting a job done or sitting idle; especially in the north.

And that's where flight 6840 out of Namao is headed. The crew from 435 Squadron scrambles aboard the Herc and minutes later it is moving along the taxiway, through snow that has drifted over miles of open prairie, past the hangar line and into that gray space between night and morning.



Above and Below. A fuel-laden pallet kicks up snow as it shoots out of a *Hercules* flying feet above Cosmos Lake. These pictures were snapped at almost exactly the same moment by photographers on the ground and in the aircraft. (ISC 78-1046, E.G.G. 1594-31)



The pilots, Captains Bob Lee and Mike Taylor, lift 68,000 kg of loaded aircraft off the runway, their hands working the throttle together.

Clouds obscure the flat earth below as the plane climbs and swings northwards. A great orange ball of a sun appears, prompting somebody to make a joke over the intercom about listening for the crack of dawn.

Breaks in the cloud cover reveal Fort McMurray, and beyond it a changed landscape. Bald prairie has given way to rolling hills.

The loadmaster prepares a hearty breakfast for the six-man crew. They finish up as the landscape ahead begins to change again. Rocky hill tops, deep trenches and winding ridges spread in every direction, monuments to the relentless drive of the glaciers.

The lakes begin. Here they are called by polite surnames. Farther north men named them from experience; a not entirely pleasant experience as Lakes

Disappointment, Desperation, Defeat and Per[illegible]escribe.

Beyond the snow covered pockmarks of the small lakes is the big daddy in this neck of the woods — Great Slave Lake. And perched on a spit of land which juts into the broad expanse of McLeod Bay is Fort Reliance.

Four, perhaps five houses and a communications building make up this tiny community, augmented today by a yellow ski-equipped *Twin Otter* from 440 Squadron detachment in Yellowknife.

Smoke marks the drop zone on the lake below. Aircraft Commander Bob Lee is satisfied with the pre-drop arrangements, and the Herc makes a big circle before beginning a gradual descent.

In the cargo hold, loadmasters Sergeant Rick Grinham and Master Corporal Andy Robicheau have checked and rechecked the equipment; the drogue chute, the main chute and the loaded pallet. Their job now is to wait for the go ahead from the cockpit.

The once smooth-looking lake surface takes on a rippled appearance through the open ramp. The wind packs the snow like concrete up here, then sculptures it into shallow dunes.

The plane is low now. A quick exchange between the cockpit and the loadmasters and the drogue chute spreads out; bright red stripes taut in the cold, clear Arctic air.

Up front Bob Lee works the flight controls; keeping the aircraft level as the interval between the deployment of the drogue chute and the main chute stretches to ten seconds, then past ten . . . "Cut the drogue" is the terse order from the cockpit. The jettisoned canopy bursts away with a crack like a rifle shot, and milliseconds later the aircraft wheels cut through the hard packed snow surface. Something has gone wrong.

With a roar, four powerful engines pull the Herc off the snow and over the rocky ridge. Capt Don Ward, a Herc pilot who came along to see how a LAPES drop is done, slides into the aircraft commander's seat. Bob Lee goes back to the cargo hold to find out what the problem is.

The culprit, it seems, is a lynch pin that didn't pull out of the way to allow the drogue chute to haul the main chutes and the load off the ramp. Bob Lee decides to try the drop again.

Silhouetted on the open ramp, the loadmasters begin rigging another drogue. Behind them, trees, snow and sky turn topsy turvey as Don Ward and Mike Taylor mark time with big, lazy circles.

The chutes are checked and rechecked. Bob Lee takes command, and circles Fort Reliance one more time. Again the plane descends to 250 feet above the lake surface. The drogue chute unfurls and is pronounced "good" by the senior loadmaster.

75 tons of aircraft descend to five feet. The seconds are like hours. Time drags unbearably as the plane hurtles along above the snow. A sudden whoosh, and the wait is over as the main chutes whip off the ramp and fill the air. It's a matter of one, two, three before the load slides along the rollers and sails out the door.

9,100 kg lighter, the Herc gathers speed and height. Below, the pallet has come to a stop, and the *Twin Otter* begins to roll and bob towards it. The delivery will keep airborne a small fleet of *Hueys, Chinooks* and *Otters* covering this area as part of Operation Morning Light, and needless to say, the residents of Fort Reliance will have something to talk about for the rest of the winter.

On board the aircraft the crew relaxes. They've completed a tough job with consummate skill, exhibiting all the confidence of a professional team; no raised voices or pointing fingers, just calm, collected concentration at even the most critical moments.

With the task at hand over, the aircraft turns for home and everybody begins watching the snow below for wildlife.

Back in Edmonton, a 15,000 kg bulldozer sits securely anchored to a steel pallet, ready for the trip north. Today, at last light, this same crew will drop it out of the sky at Cosmos Lake — affectionately known at 435 Squadron as LAPES Lake. After all, in a week the squadron has dropped almost a quarter million kilograms of fuel and equipment at Fort Reliance and the Cosmos Lake base camp site.

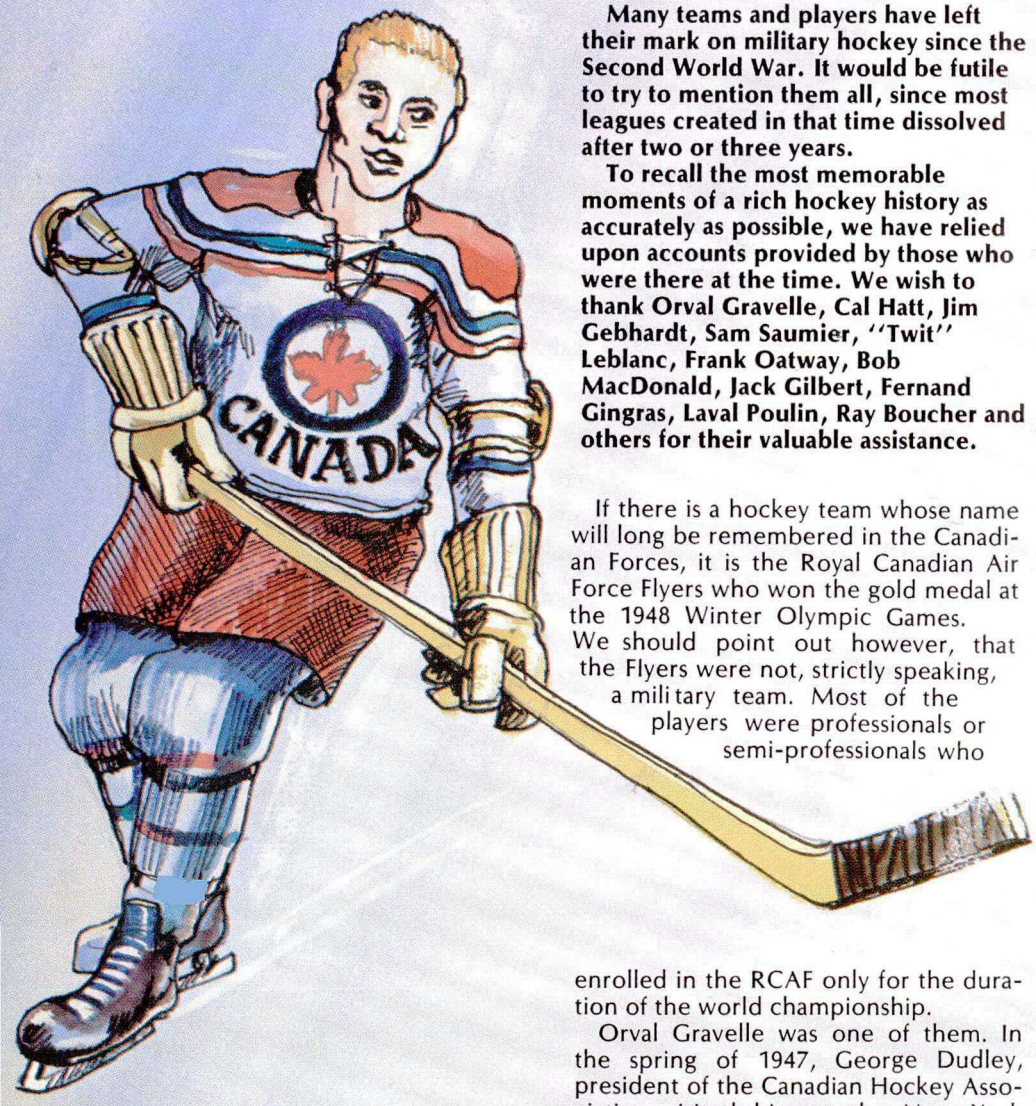
But for now, there are caribou tracks below, and somebody has just spotted a wolf prowling through what has to be the most spectacular scenery in the world. Like any other job, a LAPES flight does have its perks.

Below. Tense moments during Flight 6840. Still carrying its cargo, *Hercules* climbs to clear the ridge at Ft. Reliance, seconds after its wheels cut through the snow on Great Slave Lake during an unsuccessful LAPES drop. Photo was snapped by Dan Petrunik of the Ft. Reliance weather station. (ISC 78-1047)

Hockey in Uniform

30 years of service hockey

by Capt. G. Baril



Many teams and players have left their mark on military hockey since the Second World War. It would be futile to try to mention them all, since most leagues created in that time dissolved after two or three years.

To recall the most memorable moments of a rich hockey history as accurately as possible, we have relied upon accounts provided by those who were there at the time. We wish to thank Orval Gravelle, Cal Hatt, Jim Gebhardt, Sam Saumier, ''Twit'' Leblanc, Frank Oatway, Bob MacDonald, Jack Gilbert, Fernand Gingras, Laval Poulin, Ray Boucher and others for their valuable assistance.

If there is a hockey team whose name will long be remembered in the Canadian Forces, it is the Royal Canadian Air Force Flyers who won the gold medal at the 1948 Winter Olympic Games. We should point out however, that the Flyers were not, strictly speaking, a military team. Most of the players were professionals or semi-professionals who enrolled in the RCAF only for the duration of the world championship.

Orval Gravelle was one of them. In the spring of 1947, George Dudley, president of the Canadian Hockey Association visited him at the New York Rangers' training camp and suggested that he join the Canadian team that was to play in the Olympic games at St. Moritz, Switzerland the following year.

Gravelle, scarcely 19, was interested; but there was one hitch. Because the RCAF was the only organization that could meet the needs of such a team, Gravelle would have to enrol for several months. He accepted.

Thirty years later, Orval Gravelle is still congratulating himself on his decision. After the champions [illegible] he was one of two team members who decided to stay in uniform.

He still vividly remembers that first taste of adventure. He also remembers the bitter 7 — 0 defeat at the hands of the powerful McGill University team in Montreal a few weeks before the championship games. Eight players were cut the day after that disappointing match, and replaced by eight more.

A victory over the Montreal Royals, a strong senior team of the period, soon restored the spirit and confidence the Flyers would need to face the best amateur teams in the world.

Then it was off to Europe for a long series of exhibition games, followed by the Olympic games at St. Moritz.

The experts of the day rated the Flyers' Olympic chances as slim. At best, it was conceded that they might finish fourth. But the experts failed to take into account the determination of such men as Gravelle, Guzzo, Dunster and Mira.

Canada finished the series (which was held outdoors) with seven wins and one tie. Czechoslovakia's tally was identical, but the Canadians had scored more goals. The Flyers took home the gold medal.

A whirlwind of banquets and receptions followed the team's arrival home. So did an exhibition game against the mighty Montreal Canadiens. The final score was 4 — 4.

The Flyers continued to compete in a senior league in the Ottawa area until 1954. The team's glorious accomplishments were in the past by then; it failed to attract good players and was disbanded.

About the same time the Flyers hung up their skates, RCAF Station Saint Jean boasted one of the best military hockey teams. The Saint Jean team won the Eastern Tri-Service Hockey League championship in 1954 and 1955.

The tri-service league drew its players from military bases in the Montreal area. Chief Warrant Officer Laval Poulin and Captain Jim Gebhardt played for Saint Jean during those years. CWO Poulin recalls the strong opposition RCAF players provided young hotshots such as

Henri Richard, Ralph Backstrom and John Hanna, all of whom lined up for the Mor[illegible]l Junior Canadiens.

Jim Gebhardt remembers a particularly rough exhibition game between Saint Jean and a military team from Ottawa. In particular he remembers getting into a fight with opposition player Orval Gravelle. Some years later both he and Gravelle found themselves together on the same team, and the two former combatants became the best of friends.

Both Gravelle and Gebhardt play on "Old Timers" teams now, one at CFB Borden, the other for the town of Trenton.

THE HEYDAY

Canadian Forces hockey enjoyed a heyday between 1953 and 1957. Strong teams developed in Clinton, Aylmer and Ottawa, Ontario; Saint Jean, Quebec; Greenwood, Nova Scotia and Zweibrucken, Germany. Hockey remained less popular in the west.

The Nova Scotia Armed Forces Senior Hockey League provided what many considered to be the best hockey in the Maritimes. Games between teams from Cornwallis, Shearwater, Aldershot, Greenwood and Halifax were televised, at a time when such media coverage was rare.

The Greenwood Bombers won the league championship repeatedly, through excellent teamwork and the considerable talent of players Danny Carroll and Fraser Dunn.

Carroll was a natural scorer. Dunn, on the other hand, had the style and physique of Gordie Howe. Besides displaying a powerful wrist shot, he was one of the first to develop the slapshot.

Bob MacDonald, goaltender for the Aldershot team at the time, still remembers his first game against Greenwood. "Dunn let fly such a hard slapshot at me that I flew backwards into my net," he said. "I had never seen anything like it."

Military hockey developed in Europe gradually during the mid-50s. In 1954 and 1955, the 3 Wing (Zweibrucken) Flyers played exhibition games against German teams. The following season they joined the German "A"

Division Hockey League, mustering a superline of Frank Oatway at centre, "Twit" Leblanc, right wing and Johnny Johnson, left wing.

Vic Nolan, "Muck" Reading, Yves Garand, "Bud" White and Jim Gebhardt (who, although stationed in England, occasionally came to lend the Flyers a hand) also played on the team.

During those years, the Flyers faced a line up of visiting North American teams which included the formidable Penticton, "Vs", the 1954 world champions, the United States national team, the Kitchener-Waterloo Dutchmen and the Whitby Dunlops, who won the world championship in 1958.

The 3 Wing Flyers withdrew from the German league in 1959 to join the three other wings in Germany and Marville, France, to form the strictly Canadian Air Division Hockey League.

In the late 1950s and 1960s, the 4 Canadian Brigade Hockey League provided exciting hockey in northern Germany. The Black Watch Regiment reigned supreme, winning the championship and the finals on three occasions.

Centred around two brothers, Jim and Doug Wilson, the members of this team had played together since 1955. In 1960 the Black Watch team travelled to England to play the English national team, which had just won the "B" class world championship.

The English team consisted mainly of expatriate Canadians pursuing a hockey career abroad. More than 12,000 spectators watched the game in London's Wembley Stadium. Programs sold at the gate proclaimed "Canada vs England" in large, bold letters; an introduction which put a great deal of pressure on what was simply a regimental hockey team. Although the second period ended in a 5 — 5 tie, the English team won 10 — 5.

Maj Bob MacDonald, manager of the Black Watch team at the time, still maintains that his team should have won.

"We were beaten more by poor ice conditions than by the superiority of the English team," he said. "There was almost half an inch of water on the ice during the third period. We weren't used to those conditions, but they didn't seem to hamper the English team in the least."

BACK IN CANADA

Meanwhile, hockey was still enjoying great popularity back home. In 1958, a six team league was created in the Ottawa area, representing RCAF stations Rockcliffe and Uplands, Air Force Headquarters, Army Headquarters, the Navy and the RCMP.

Frank Oatway lets one fly past the opposition goaltender during a game between the 3 Wing Flyers and the United States national team in 1958.

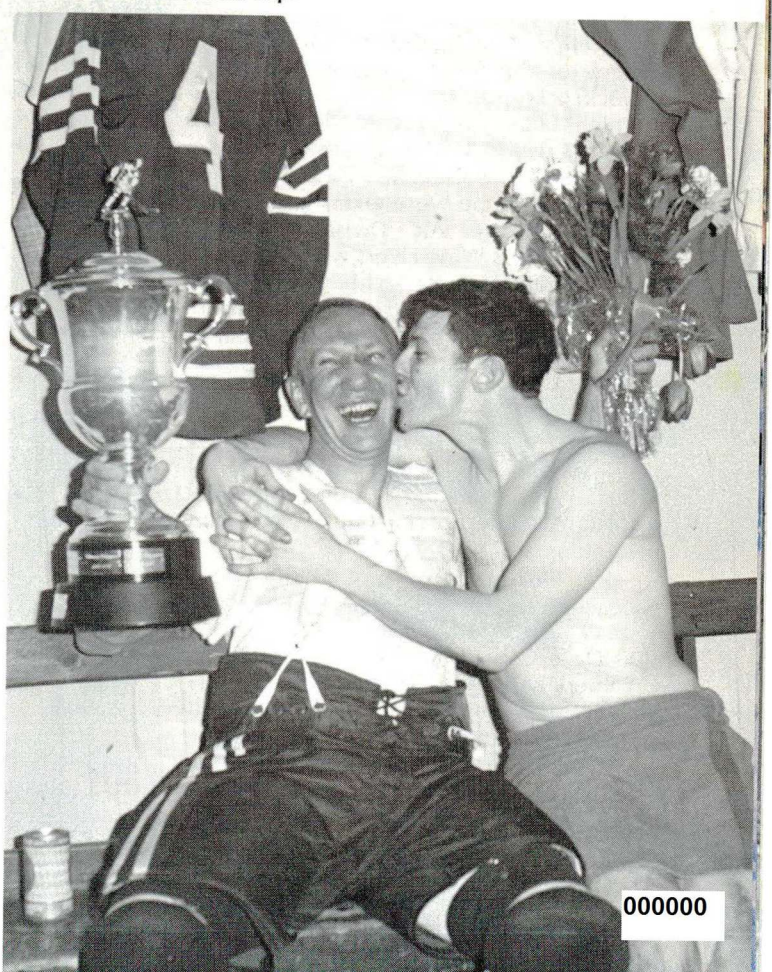
Above. One of the RCAF Flyers prepares to move up the ice during an Olympic game against the Swedish national team. Below. One of the powerful teams of the 1960s — The Black Watch regimental team.

HOCKEY SITREP 1978

	HAS A HOCKEY TEAM	LEAGUE PLAYED	HAS AN INTER–UNIT LEAGUE	TAKES PART IN THE REGIONAL HOCKEY CHAMPION–SHIP	LAST SEASON TEAM PLAYED	REASONS FOR DISBANDMENT
GERMANY	Yes	Exhibi–tion games.	Yes	Yes		
BAGOTVILLE	Yes	Civilian intermedi–ate league	Yes	Yes		
BORDEN	Yes	Exhibi–tion games.	Yes	Yes		
CALGARY	No		Yes	Yes. Will send inter-unit champions	1973-74	Shortage of personnel. Too costly. No arena on the Base
CHATHAM	Yes	Industrial league	Yes	Yes		
CHILIWACK	Yes	Civilian league	Yes	Yes		
COLD LAKE	Yes	Civilian intermediate "C" league	Yes	Yes		
COMOX	Yes	Exhibi–tion games	Yes	Yes	1976-77	Players not available
CORNWALLIS	No		Yes	Yes. With best inter unit league players	1976-77	Civilian League disbanded
EDMONTON	Yes	Industrial league	Yes	Yes		
ESQUIMALT	No		Yes	Yes	1974-75	Scarcity of good players
GAGETOWN	Yes	Exhibi–tion games	Yes	Yes		
GREENWOOD	Yes	Civilian league	Yes	Yes		
HALIFAX	Yes	Civilian and military leagues.	Yes	Yes		
KINGSTON	Yes	Exhibi–tion games	Yes			
LONDON	No		Yes	No	1972-73	Players not available No arena. Too costly.
MONTREAL	Yes	Will play exhibition games	Yes	Yes	1975-76	Poor planning.
MOOSE JAW	Yes	Civilian league	Yes	Yes		
NORTH BAY	No		Yes	Undecided	1975-76	No arena. Too costly.
OTTAWA	Yes	Civilian league	Yes	Yes		
PENHOLD	Yes	Civilian league	No	Yes		
PETAWAWA	No		Yes	Undecided	1975-76	Players not available
PORTAGE LA PRAIRIE	Yes	Exhibition games	Yes	Yes	1972-73	Lack of interest among the players
NATIONAL DEFENCE HQ	No	None	Yes	Undecided	1976-77	Scarcity of players
SHEARWATER	Yes	Civilian league	Yes	Yes		
SHILO	Yes	Civilian intermediate "B" league	Yes	Yes		
SAINT JEAN	Yes	Prac–tises only.	Yes	Undecided	1973-74	Lack of unit support
SUMMERSIDE	Yes	Exhibi–tion games	Yes	Yes	1975-76	Lack of personnel to look after it
TORONTO	Yes	Civilian intermedi–ate "C" league	Yes	Yes		
TRENTON	No		Yes	Undecided	1974-75	Players not available
VALCARTIER	Yes	Prac–tises only	Yes	Yes	1974-75	Players not available
WINNIPEG	Yes	Exhibi–tion games	Yes	Yes	1972-73	No arena. Too costly. Civilian league disbanded.

Above. The jubilant Flyers after their 1948 Olympic win.

Above. The Cold Lake Packers show the style that helped them win the 1970 and 1972 national championships. Below. Jack Roussel shows his enthusiasm to teammate Jim Gebhardt after the Baden-Soellingen Raiders won the 1972 International Cup.



At the end of the 1960-61 season, a team of league all-stars skated away with the Citizen Shield at the Ottawa Valley intermediate championship.

The RCAF Globetrotters from Trenton also made their mark on Ontario hockey. This team, which included old friends Orval Gravelle and Jim Gebhardt, won the Ontario intermediate "A" championship in 1961 and 1962.

In 1963, Gravelle was posted to RCAF Station Summerside, where, together with Tony Licari (one of the best centres in the Canadian Forces), he was largely responsible for the famous reign of the Eagles.

In the 1964-65 season, the Eagles won championships in two leagues; a civilian senior league and a military league that included teams from Shearwater, Halifax, Greenwood, Dartmouth, and Summerside.

The Eagles also played in the Allan Cup series, but their hopes were short-lived. They were eliminated by a senior team from Moncton, N.B.

In 1965, while the Eagles were still on top, a long-sought exhibition game was organized at Valcartier between the R22eR and the Black Watch, then stationed at Gagetown. The Black Watch won by a score of 6 — 3, ending a debate that had gone on between the soldiers of the two regiments for several years.

The Black Watch team reached its peak in 1965. The following season it was eliminated in the seventh and last game of the Southern New Brunswick Hockey League by a Fredericton team, which went on to win the Canadian intermediate "B" championship.

In 1965, the Canadian Forces hockey teams in Europe were growing stronger again. In the Air Division Hockey League, the 3 Wing Flyers were enjoying considerable success with players such as Marcel Lamouche, Denny Carpenter, Frank Oatway and Wayne Mitchell, a young recruit who would soon prove to be one of the best stick handlers in the Forces.

In northern Germany, the still active 4 Brigade Hockey League boasted a number of strong teams, including a powerful R22eR line up coached by WO Sam Saumier.

In 1967-68, the 4 Wing Raiders, coached by Tony Licari, were at the top of the Air Division league. Players such as Dave Carlyle, Réal Francoeur, "Jack" Gilbert and Yves Garand showed considerable talent.

Despite their strength, administrative difficulties prevented the Raiders from taking part in the first Canadian Forces hockey championship in Petawawa in 1968. CFB Chilliwack won that year.

Base closures in Europe during the late 60s led to the demise of the Air Division league.

To fill the gap, the commander of CFB Europe asked Major (now Lieutenant Colonel) Ray Boucher to examine the possibility of forming a European league. The result was the International Cup, top prize for a league consisting of four Dutch, two French and two Canadian teams (representing Baden-Soellingen and Lahr). Belgian, German and American teams joined the league in following years.

In 1971-72, Canada entered a team made up of the best players from the two detachments at Lahr and Baden-Soellingen. The Canadian entry won the league championship. But the composite team, remembered as one of the strongest of the decade, was barred from the Canadian Forces National Championship in 1972 because its players were considered to be drawn from two bases.

Canada was last represented in International Cup competition in 1972. The Canadian bases in northern Germany were closed. The service population moved south to Lahr and Baden-Soellingen in 1970, where a new military league — the Canadian Forces Europe Senior Hockey League — was formed.

THE CANADIAN FORCES NATIONAL CHAMPIONSHIP

The National Championship has been an annual event since 1968, with the exception of 1975 (when it was cancelled because of budget restrictions). By 1977, six teams represented the Maritimes, Quebec, Ontario, the Prairies and the Pacific region. Chilliwack won the first championship, the Europe Selects won three times, the Cold Lake Packers twice, the Ottawa Falcons twice, and the Chatham Golden Hawks once.

CFB Shearwater held the championship from March 28 to April 1 this year, and the CFB Chatham Golden Hawks emerged victorious.

Although the National Championship filled a gap left empty for too long, the heyday of Forces hockey has ended, according to those who have followed the sport over the years.

Some blame a decline in the calibre of play on the Forces' reduction in strength. A few, such as Frank Oatway, say National Hockey League expansion teams have lured away young players who have preferred to try their luck in professional hockey, rather than join the Forces.

Others blame the attitude of today's young servicemen, who despite their talent, are no longer willing to subject themselves to rigorous training.

"Better paid recruits don't join hockey teams for the opportunity to travel inexpensively like they used to," says Captain Jack Gilbert, who played organized hockey in the Forces for many years.

Fortunately, this story doesn't have to end on a bleak note. Hockey is still a popular game in the Canadian Forces. Most bases can muster a team able enough to play in high-calibre civilian leagues; a good indication that there are still plenty of lively chapters to add to the history of Canadian military hockey.

The Summerside Eagles dominated both a military and a civilian league during the 1960s.

SPANNING THE EAGLE

The Bridge that Winter Built

Up where the cold really begins, Canadian Forces engineers have built a 100 metre single span bridge. It stands as a monument to man's ingenuity in overcoming tough environmental problems found nowhere else.

It is the Eagle River Bridge on the Dempster Highway in the Yukon, completed and opened to traffic last year a month ahead of schedule.

The single span through truss bridge at mile 237 of the Dempster is the last major river crossing along the highway which eventually will stretch from the Arctic Ocean north of Inuvik, N.W.T. to Dawson City in the Yukon and on to Whitehorse.

Only 16 km south of the Arctic Circle, where it can get cold enough for a hammer blow to shatter steel, the weather was both a boon and bane to the engineers.

Under the direction of Capt. Steve Irwin, the project commander drawn from 1 Combat Engineer Regiment, CFB Chilliwack, the bridge was constructed for the Department of Indian and Northern Affairs.

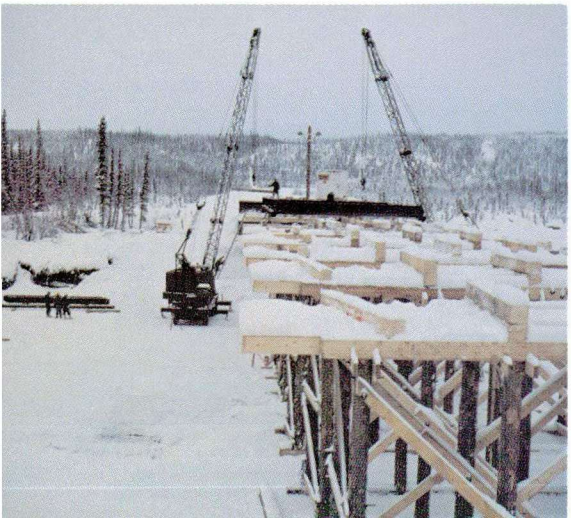
The highway, dubbed the "road to resources", may well become the eventual route for the Dempster pipeline, which will connect with the Alaska pipeline to tap the resources of Arctic gas and oil.

The Eagle River Bridge is the second built on the Dempster by CF engineers. They also built the George A. Jeckel Bridge over the Ogilvie River at mile 123 in 1971.

The $2.6 million Eagle River Bridge contract required an unusual kind of expertise. Consider the problems; long hauls over gravel roads, miles from any supply sources; perma-frost on one

Story by Doug Stuebing

Photos by MWO Wilf Spellmier and M/Cpl Stan Coe



Above. Sapper Mike Gardiner hangs by his safety belt to torque nuts. (REC 77-204) Middle. The bridge site in the summer of 1976 (REC 76-116). Below. Freeze-up has provided the foundation for other false work, on which the first steel is being laid. (REC 77-116)

bank and not on the other; a frozen river which had to be frozen deeper to support the bridge building; and short daylight working hours on high steel in sub-zero temperatures.

Who would want it? Hardly anybody, really. So the challenging job went to 1 CER with support from 1 Canadian Brigade Group, 1 Construction Engineering Unit, Winnipeg, and the Director Military Engineering Operations at National Defence Headquarters.

In the end it came down to 26-year-old Capt. Irwin and the 157 people who worked for him.

The operation got underway in July, 1976, when the men in the first of five shifts that would rotate through in a year pitched their tents at Eagle River. Then came the back-breaking work of building 810 massive wire baskets, into which almost 360 tons of rock had to be hand-laid, and placed along the river bank as shoring to prevent spring washouts.

In October of that year, Warrant Officer Ralph "Reb" McKinnon and six other sappers travelled to the Hamilton, Ontario yards of the Bridge and Tank Company. There they assembled half of the bridge in 10 days, for instructional training. Then they dismantled it and packed it for shipping.

More than 350 tons of steel, including 11,327 nuts and bolts, made the journey across Canada by train, boat and truck from Hamilton to the Eagle River.

It was a long, dusty 900 km haul over the Dempster from Whitehorse to the bridge site; but all the material was trucked in during the short summer season.

The abutments, embankments and cement pourings were completed during good summer weather. But it was winter which proved both a help and a hindrance to construction.

Capt Irwin had calculated that the nature of the river bed required strong winter ice to support the false work needed to build the span. He calculated that 152 cm of ice would provide safe support.

Freeze-up brought him half of that, and flooding by sappers provided the other 76 cm. The false timber work which would support the steel was then built on top of the ice.

"We had to have the cold weather because we could only build the bridge on the ice," Capt. Irwin said. "We couldn't put in a centre support due to the silty river bottom and because the ice break-up would take the support out. So it had to be a single span bridge."

Day after day the engineers flooded the ice, further strengthening it with steel mesh and criss-crossed timbers.

Large wooden support piers were built near the site and erected on the ice. Then the steel was placed on the piers, and the bridge began to take shape.

The weather also inhibited the work. Master Corporal Lou Bryson recalled one day "when it was so cold, a half-inch steel rod just shattered when it was pounded with a sledge hammer".

The temperatures were extreme. One day minus 60 degrees Celsius was recorded.

Sgt. Jim "Flipper" Fitzgerald took his men out in minus 52 degree weather, and they worked the entire shift.

Said Irwin, "We planned on 30 percent downtime because of the weather, but we didn't need it."

On the high rigging, in the steel shattering cold, the men carried on with their work, straddling the narrow girders or hanging upside down in monkey positions. But in spite of the cold and the danger, there were no serious inju-

ries.

This is a remarkable record, considering that 157 men worked in excess of 13,000 man-days, much of them spent on structural steel 20 metres above the ice in temperatures that frequently fell to −40 degrees Celsius.

The most serious accident, requiring a few stitches, occurred during a broomball game, when Sapper Dave Johnson was decked by Lt. Duncan Watt's elbow.

Morale was unusually high in the confined environment of tents and then trailers, where men lived almost on top of each other. No small amount of credit for this must go to the cooks, under WO "Sourdough" Don Watt.

In "Sourdough's Happy Hash House" a sign read, "we specialize in French, German, Chinese, Japanese and Italian". Almost everyone had an environmental nickname, and the cooks were no exception. Such colourful characters as Klondike Hippy (MCpl Jerry Hipson), Ptarmigan Ron (MCpl Ron Rothermal), Cariboo Bill (Cpl Bill Mahoney), Matanuska André (Cpl André Baron), and Skookum Norm (Pte Norm Schubert) all helped in the food preparation, uninhibited by their nicknames.

The men had visitors, mainly caribou, wolves, bears, ravens and ptarmigans. MCpl Lou Bryson claimed, "I saw one herd of about 2,000 caribou, with about 10 wolves moving right through the centre of the herd.

"The wolves were bigger than any dogs you've ever seen . . . sleek and well fed . . . maybe 180 or 200 pounds each," he said.

They also had other guests. The largest party arrived in late February, 1977, headed by the Deputy Chief of the Defence Staff, MGen Kenneth Lewis. He was accompanied by Northern Region Commander, BGen Kenneth J. Thorneycroft; and several other senior officers.

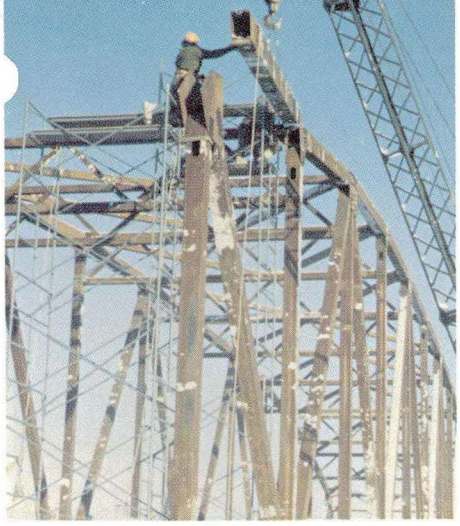
A complete visual record of the bridge building was filmed by members of the CF Photo Unit, under the direction of MWO Wilf Spellmier. The finished 30-minute movie is entitled "Wings Across the Eagle".

A shorter, three-minute version was produced for TV, and distributed to about 100 television stations across Canada.

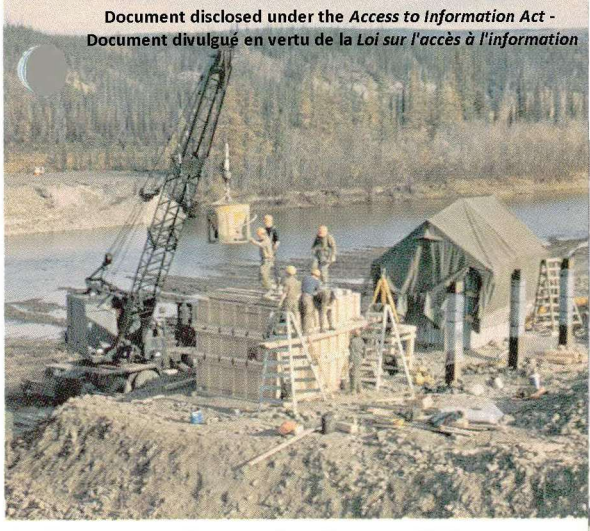
The Eagle River Bridge was a major achievement for the sappers, and one in which they can take justifiable pride.

Said Warrant Officer "Reb" McKinnon, "The men really put their hearts into this.

"It's their bridge."



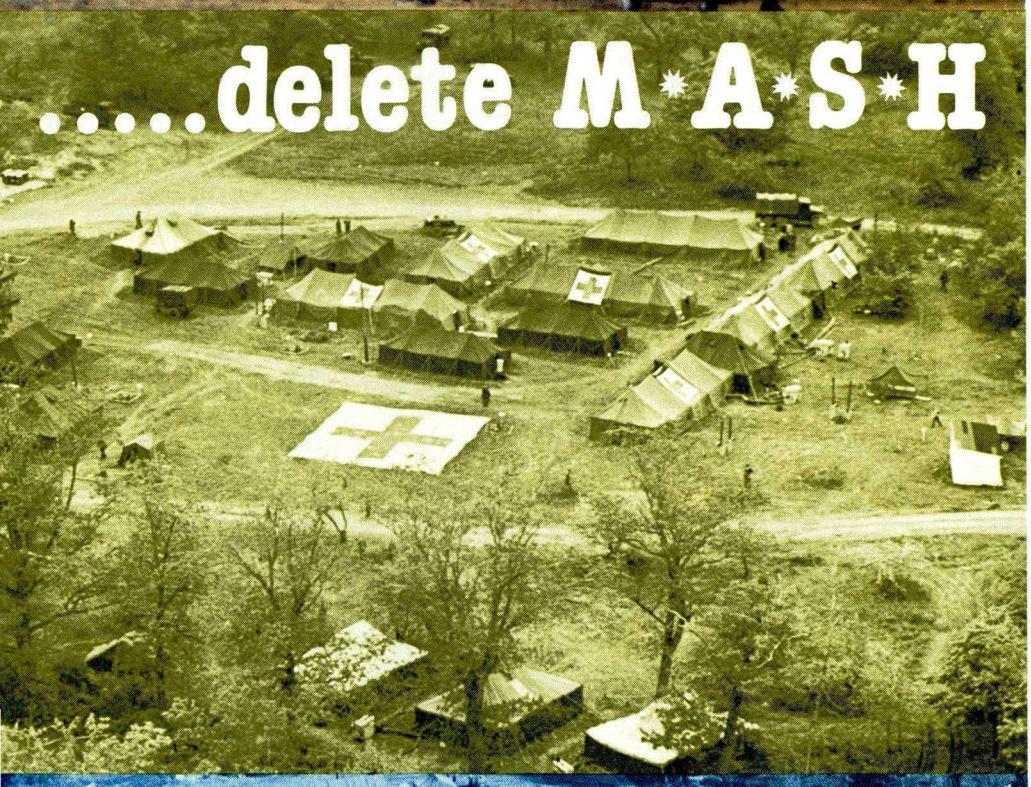
A sapper guides a major section into position. (REC 77-208)



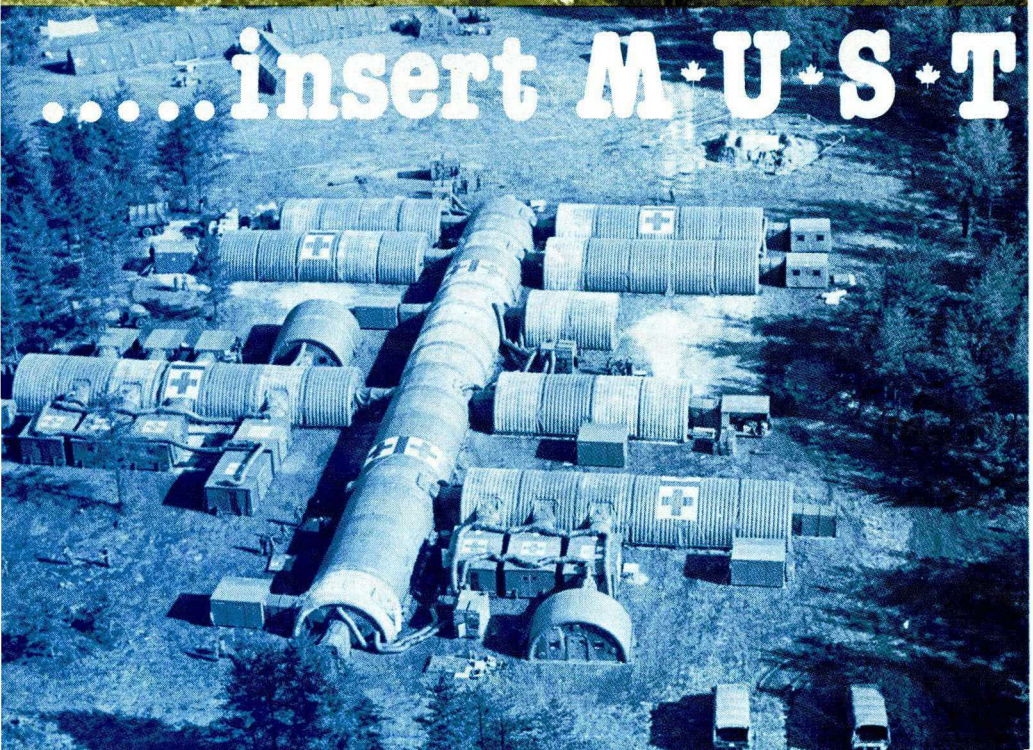
Pouring concrete for a main pile cap. (REC 76-864)

Above. Maj B.E. Crow, CO 3 Fd Engr Sqn presents a plaque to DCDS MGen K.E. Lewis in Feb 77. (REC 77-208) Below. The engineers work to place the final pieces before spring thaw. (CWC 77-467)

.....delete M*A*S*H



.....insert M*U*S*T



by Lt. Wendy Tighe

Collectors of military acronyms — prepare to add another to your already strained vocabularies. Delete M*A*S*H, insert M*U*S*T.

The "Medical Unit, Self-contained Transportable", the inflatable field hospital that pops out of 27 containers, inflates in hours and accommodates 100 patients has arrived. The Canadian Forces recently purchased one complete MUST and assigned it to the 1st Canadian Field Hospital at CFB Petawawa.

The $3.5 million unit, developed in the United States for the American Army, rose above the Petawawa landscape for the first time last fall, providing the medical staff of the 1st Cdn Field Hospital with an opportunity to work in their new environment.

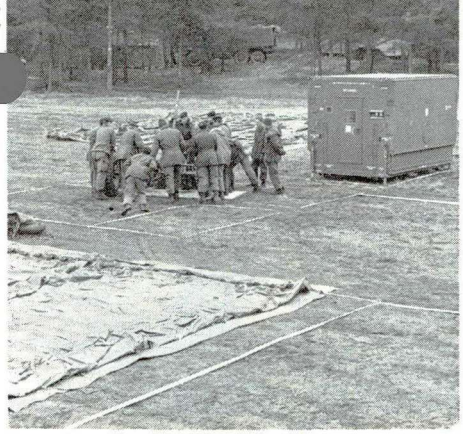
In scenes reminiscent of M*A*S*H, the popular American movie that spawned a television series, simulated casualties arrived by helicopter swaddled in army blankets. Doctors, nurses and medics dressed in combat clothes worked amongst the wounded, tending their "battle injuries" in eight aluminum operating and x-ray rooms, and making them comfortable in 11 rubberized wards.

It's difficult to discuss a field hospital without making reference to the famous MASH unit, even though that veteran of the Second World War and the Korean conflict is a generation removed from MUST. Exit the labyrinthine arrangement of canvas tents, and enter aluminum-faced styrofoam honeycomb panels, synthetic rubber-coated Dacron, hot and cold running water, and a constant indoor temperature of 22 degrees Celsius, whether it's 55°C below or 50°C above outside.

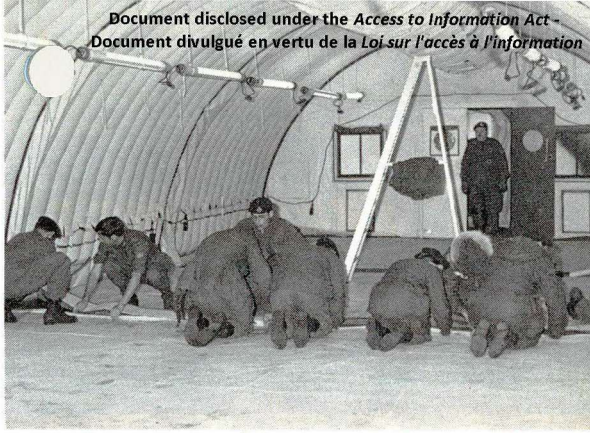
In an emergency, MUST can accommodate up to 200 patients. Last fall, a total of 224 simulated casualties were treated within a 48-hour period by a medical staff brought together from across the country for MUST's first Canadian trial.

Under the command of Major Bill Edgecomb, 1 Cdn Field Hospital consists of a permanent cadre of 28 medical personnel stationed at Petawawa. Another 150 or so augmentees are drawn from bases from Halifax to Esquimalt to operate the hospital

Top left. A simulated casualty arrives by helicopter. Middle. The same type of field hospital that housed Canadian wounded during the Second World War and Korean conflict deployed on exercise in 1969. Bottom. The tented field hospital's 1977 replacement.



Ease of assembly is the keyword with MUST. An experienced crew can off load and assemble a compartment and connect air, water and electrical lines in less than 30 minutes.



The hospital can be put into operation within less than 24 hours, providing sophisticated medical treatment for 100 patients housed in four rubberized wards.

Maj. Edgecomb pronounced the MUST unit's first shakedown a great success. Morale was high among the staff who worked within its confines, and the hospital structure itself met expectations, he said.

The new hospital is composed of both inflatable and expandable elements. Each 25-bed ward (there are four) is made of inflatable double-walled rubberized dacron. Six utility packs keep the walls of the wards inflated, and also provide heat, hot water, air conditioning and ventilation.

A system of air chambers within each compartment allows the hospital to sustain a fair amount of damage before it collapses. In Vietnam an American MUST unit withstood 100 shrapnel hits with no interruption to medical activities.

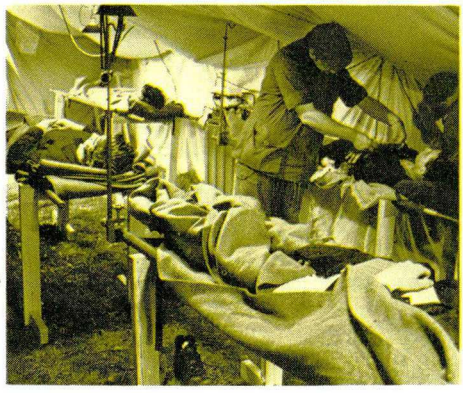
Each expandable unit is constructed of rigid panels, which stretch like an accordion to three times the size of its container. With practice, a four-man crew can assemble a unit in less than 30 minutes and connect it with electrical cables, water and air ducts. Each multipurpose expandable unit can serve as an operating room, sterilization room, pharmacy, laboratory, dental clinic or x-ray room.

The Petawawa medical exercise demonstrated MUST's many advantages under operational conditions. But the methods used to transport MUST are also an important factor in the hospital's evaluation.

One of the MUST concept's main claims to fame is its transportability. The entire hospital can be packed in 27 containers, measuring 2.4 m x 1.2 m x 3.7 m, each weighing from two to five tons. Then it simply becomes a matter of loading the containers onto ships, into aircraft or onto land vehicles for transport. In special cases, the units can be slung beneath helicopters or even hauled along on snow sleds.

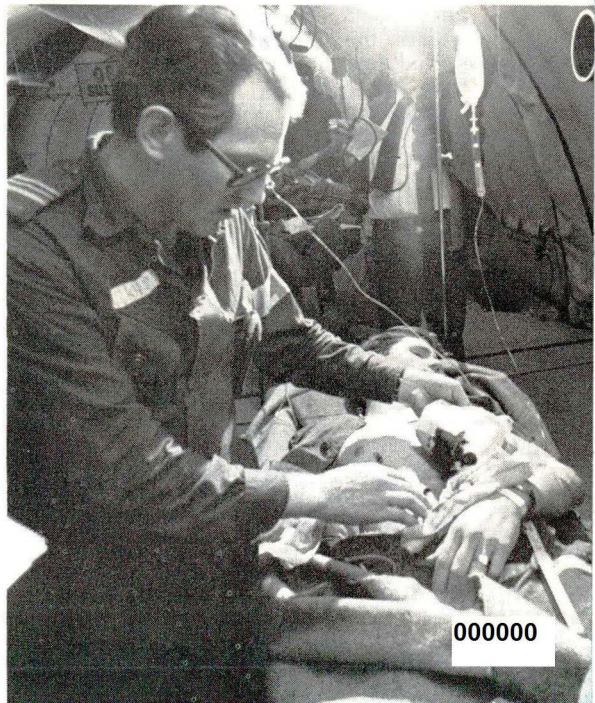
The end result is a modern hospital which can provide prompt aid to members of the Canadian Forces, no matter where they serve.

Defence Minister Barney Danson observed the medical team at work during MUST's first field trial.

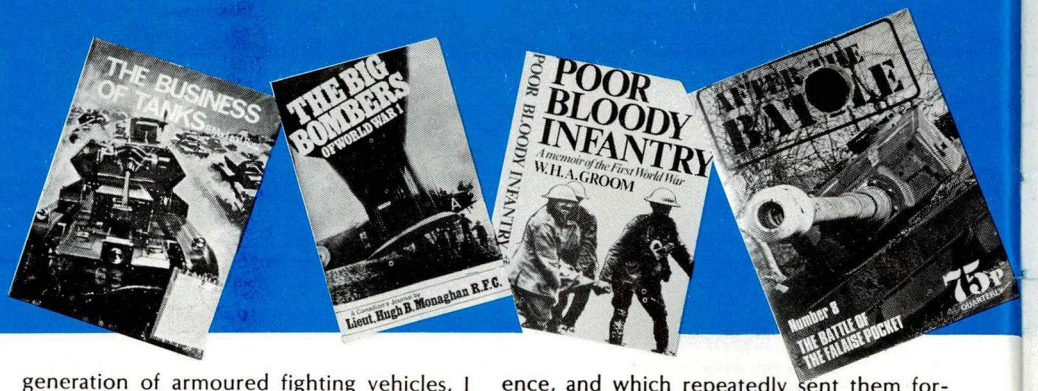


Above. Tented field hospitals often had no floors.

Right. Today, casualties can be treated in a climate controlled environment.



books



The Business of Tanks by G. MacLeod Ross. 340 pp. Illustrated. Published by Arthur H. Stockwell Ltd., Elms Court, Ilfracombe, Devon, England. Available in Canada through B.O.T., P.O. Box 461, Goderich, Ont., N7A 4C7. (Cheques payable to B.O.T.). $12.00

Anyone who has studied the history of armour has no doubt wondered what the British tank designers were doing in the early stages of the Second World War, when they were designing inadequate tanks with pop-gun-like two-pounder barrels while the Germans and Russians were producing superb fighting machines.

Other writers have attempted to explain this anomaly with reasons that are not totally plausible. However, the author of *The Business of Tanks* was at the vortex of the British tank design organization during the 1930s, and without mincing words he gives the inside story. The internecine quarrels, petty red tape, and narrowness of vision that dominated the tank design organization were no doubt as depressing to experience then as they are to read about 40 years later.

In 1942, Colonel (and later Brig.-Gen.) Ross was assigned to the British liaison mission to the U.S. Army Ordnance Corps operation in Detroit, where the American automotive industry was gearing up to produce the thousands of Sherman tanks that would be omnipresent in the Allied armies during the latter half of the Second World War. The author is full of praise for the dedication and efficiency of the American automotive industry during that critical period.

The American effort was not without its problems, however. The most serious of these was the lack of a sufficiently powerful gun on the Sherman. The British finally resolved their internal difficulties and came up with their excellent 17-pounder gun to be mounted on the Sherman. Here, the author's vitriol turns towards the U.S. Army Ordnance Corps, which he claims ignored the gun merely because it was not American. He also claims that the Corps was so involved with the idea of a totally new follow-on tank to the Sherman that it ignored the U.S. Army's pleas to quality-improve the existing tank. The end result was that neither was produced in time to influence the war.

Unfortunately, the book is very poorly edited, and rambles frequently. It is therefore not for the layman. But for anyone interested in the history of armour, it provides an invaluable insight to one of the least understood periods of that history.

I closed the book thinking about another matter. As NATO moves towards its next generation of armoured fighting vehicles, I sincerely hope that such internal and international rivalries are being overcome for the betterment of the NATO whole . . . Maj. W.R. Aikman

The Big Bombers of World War I by Lt. Hugh B. Monaghan, R.F.C. published privately in Memoriam by Ray Gentle Communications Ltd., Burlington, Ont. Paperback, 101 pages, some photos.

"The Big Bombers of World War I" is a somewhat misleading title to a narrative which one is tempted to call a "rollicking good yarn", though, certainly, it is much more than that.

Born in Deseronto, Ontario in 1894, Hugh Monaghan's account of his service with an overseas infantry battalion and the R.F.C. during W.W. I will surely capture the interest of a wide range of readers, especially aviation buffs.

Mr. Monaghan uses an easy flowing style to describe his life and training in Britain, prior to embarkation for France to serve in the Royal Flying Corps, where he flew first as a gun-layer, then later as a pilot of a Handley Page bomber aircraft. The gripping account of the primitive way in which war was waged from the air, in the "early" days, will astound many, especially younger readers.

Including an interesting account of life in a prisoner-of-war camp and subsequent rehabilitation, *Big Bombers of World War I* is more than a collection of anecdotes and incidents related to World War I; it is an unusual story of one Canadian's war . . . *Lt. C.G. Wragg (LR)*

Poor Bloody Infantry, by W.H.A. Groom. Published by William Kimber and Co. Ltd., London England. Hard cover, 179 pp., illustrated. Available in Canada from Clarke, Irwin, & Co. Ltd., 791 St. Clair Ave. W., Toronto, Ont. M6C 1B8. $11.25

The author of this book is a veteran of the trenches of the First World War. Specifically, he was a private and later a lance-corporal in a Lewis gun section in a British regiment until he was gassed in May, 1918. He points out that most histories of the war were written either by people who weren't there, or by officers, and he claims that the result is a glossing over of the misery of the common soldier - the PBI - who lived in the hell of the front lines. This has spurred him to tell that story.

The result is a very moving narrative, relating the experiences of young men caught up in a war machine that they could not influence, and which repeatedly sent them forward under incredible circumstances to their death. He makes it clear that for the private soldier, the sole motivation was survival, as much against "the system" as the enemy. The private soldier spent his life feeling that he was totally expendable, and that his commanders were more interested in "offensive spirit" than in saving lives. It made for deep bitterness and cynicism among all soldiers, which of course showed itself in the attitudes of the common people of many nations through the decades following 1914-18.

I cannot agree with the author that all accounts of the first World War gloss over the misery of the front line soldier. In the past few decades there have been a large number of works which have emphasized that point of view. However, his report from the perspective of an intelligent and articulate private does add a new dimension. And one can find much food for thought in his concluding chapter, which condemns the present-day repetition of the world-wide arms race, and calls for love and understanding amongst us all . . . *Capt. W.R. Aikman.*

After the Battle, a quarterly magazine published by Battle of Britain Prints International Ltd., 3 New Plaistow Rd., Stratford, London, England E15 3RA. Available in Canada through Beadmore Enterprises, 2439 Eglinton Ave. E., Scarborough, Ont. M1K 5B8. Back copies $2.75 each, annual subscription $10.95.

Sentinel does not normally review magazines, but we feel that our readers should be aware of this one.

After the Battle is a quarterly magazine which returns the reader to the scene of at least one major battle of the Second World War per issue. The magazine consists of a summary of the battle, plus a careful detailing of the locations of major actions through the use of maps and then and now photographs. Great efforts have been made to relocate the scenes of famous photographs of the battles.

The result is an interesting tour of the battle area for the armchair military history buff, and an invaluable aid for those who wish to walk the sites of famous battles.

As of February, 1978, 19 issues of the magazine have been produced, containing studies of battles such as Normandy, Arnhem, Dunkirk, the Bulge, and (of special interest to Canadians) Dieppe and the Falaise Pocket. If you write for a subscription, be sure to ask for the brochure on back issues.

This magazine is highly recommended . . . *Maj. W.R. Aikman*

letters

BATTLE OF HAMBURG

I am writing a book about the four heavy raids carried out by R.A.F. Bomber Command against the German city of Hamburg at the end of July and in early August 1943. I know that many Canadian airmen took part in these raids and I am anxious to include their experiences in the book.

If any of your readers flew on these raids and would be willing to help, could they please write to me giving their name and address, their squadron at that time and their aircraft captain's name. I will then give them more details about the type of information I am seeking.

Martin Middlebrook
48 Linden Way
Boston
Lincs. PE21 9DS
England

WELL-EARNED CREDIT

I read with interest the article in *Sentinel* 77/2 on the 1977 Ottawa marathon. However, I was disappointed to discover that my name was not mentioned. I was very happy to come in third in the CF part of the competition, with a time of 2:50:23.

L.N. Doe (Cpl)
CFS Barrington
Stone Horse
Nova Scotia

(We're sorry that Cpl Doe did not receive a mention in the article. We listed the first and second place winners, plus the winner of the "over 40" division. Cpl Doe did place third, but limited space prevented us from mentioning either him or the remainder of the CF runners who pounded along more than 26 miles of Ottawa's streets to complete the marathon. They certainly deserve credit . . . Editor)

CANCEL LA DIFFERENCE

I must say your answer in the Letters column of *Sentinel* 77/3 to the query about the girl on the cover of the *Sentinel* Olympic issue is typical of the attitude of nearly all male personnel involved in the Games. Did you forget that there were over a hundred female personnel there, doing a difficult job? Or did you feel that we were best ignored and treated as second-class citizens? Yes, we were there, and although our role was minor, we did a very good job wherever we were employed. Perhaps few of us could win a modelling contest (especially in our work dress), but I didn't realise that appearance was more important than ability, cooperation and a good attitude towards the job.

My memories of the Olympics are not very pleasant or inspiring; the only good thing about it was meeting foreign athletes and being at the "sharp end" for a change.

When I read something as frustrating and insulting as the reasons and attitudes behind the *Sentinel* coverage of the Games, I begin to wonder if perhaps such a popular publication needs a change of staff. Personnel across the country read the *Sentinel*, regular force and reserves, as well as our forces in Europe; if it presents such a "put down" attitude towards service women, it could do more harm than good to the status and treatment of women in the Forces.

Maureen James, Cpl (W)
DPCOR/LORE
NDHQ
Ottawa, Ont

(Methinks we struck a nerve.

But we feel you missed the point. The young lady's photograph was not intended as any kind of commentary on CF women.

In addition, we take issue with your comments on ***Sentinel's*** *assessment of the role of CF women at the Games.* ***Sentinel*** *was very much aware of the contribution of CF women (not only the members of the security detachment at the Olympic Village, but also those who served with the COJO Support Group), and reflected this throughout the magazine.*

For example, that same cover has photographs of both CF men and women at the Games. A quick check inside the magazine indicates that 14 of the photographs included a total of 17 CF servicewomen. In addition, the activities of the 100 women with Task Force 1 were described in the article on that organization.

We now fear another problem. When the 15,000-plus men who served at the Olympics discover that such a sizable proportion of CF women were pictured in ***Sentinel,*** *perhaps we'll be deluged with complaints of an anti-male bias . . . editor).*

426 SQN REUNION

426 (Thunderbird) Squadron will be receiving its Colours in August 1978. In addition to the actual presentation, 426 Squadron and the 426 Wartime Reunion Committee are planning a squadron reunion. Celebrations will take place at CFB Trenton, Ontario on the weekend of August 19-20, 1978. All former Thunderbirds, both service and retired, are cordially invited to attend.

Anyone who answered our request for historical material a year ago is already on the mailing list, and will receive a registration form shortly. All other ex-Thunderbirds please write:

Major Noel Funge
Executive Co-ordinator
426 (T) Training Squadron
Canadian Forces Base Trenton
Astra, Ontario
K0K 1B0

PPCLI RECORD AVAILABLE

The recording entitled "Princess Patricia's Canadian Light Infantry Band Salutes the Diamond Jubilee of the Regiment — 1974" is once again available, after having been out of stock for two years.

As before, it is available only through Regimental Headquarters of Princess Patricia's Canadian Light Infantry, Currie Barracks, Calgary, Alta., Canada, T3E 1T8 at a cost of $6 (postage not included).

L.P. Barbeau
Regimental Major
Regimental Headquarters
Princess Patricia's Canadian Light Infantry
Currie Barracks
Calgary, Alta.
T3E 1T8

HMCS WEYBURN PLAQUE UPDATE

(The following letter was mailed to Mr. Gillespie of the Snr NCO Reserve Mess in Kingston as a result of his letter published in Sentinel *77/3 . . . editor)*

Dear Mr. Gillespie:

The photograph accompanying your letter in *Sentinel* 1977/3 represents one of 24 plaques made in HMC Dockyard, Halifax, and now in the Protestant chapel at CFB Halifax. The Base Chaplain (P) has confirmed that HMCS Weyburn's plaque is in its place. Evidently the one in Kingston is a duplicate. I am unable to suggest a likely place where it may have been erected except for Weyburn, Saskatchewan, or Victoria, B.C., LCdr Golby's home town. Incidentally, his name is misspelled on the plaque.

W.A.B. Douglas
Director
Directorate of History
National Defence Headquarters
Ottawa, Ontario
K1A 0K2

ROYALS CELEBRATE 95th

The Royal Canadian Regiment, Canada's senior regular force infantry unit, will be celebrating its 95th anniversary with a regimental reunion this year. This will be a major gathering of the regimental family, and will be held at Wolseley Barracks, London, Ontario from July 7th to 9th.

Program information and registration kits are available through the secretary, The Royal Canadian Regiment Association, Regimental Headquarters, Wolseley Hall, CFB London, London, Ontario, N5Y 4T7.

D.A. Stickland, Captain (ret'd)
Reunion Committee
The RCR Association
London, Ontario

LETTERS

Sentinel welcomes letters. Correspondents should be brief and to the point and letters should be signed and bear a return address and postal code. We reserve the right to edit letters for taste and brevity.

Collectors letters are not accepted for publication due to lack of space. There are two organizations which can help collectors with their hobbies.

The Military Heraldry Society operates a collector's exchange and publishes four journals yearly. Annual subscription is $3.00. The address is Military Heraldry Society, 37 Wolsey Close, Southall, Middlesex, England. UB2 4NQ

The Military Collector's Club of Canada has more than 600 members. Mailing address for the club is P.O. Box 56, Medicine Hat, Alta. T1A 7E5

keeping posted

Above. A CH 113 Voyageur of 413 Sqn, resplendent in new SAR colours and bilingual markings, lifts off at CFB Summerside. With the extension of Canadian territorial waters to 200 miles, DND is expanding its SAR Voyageur/Labrador fleet. Four Voyageurs drawn from reserve storage are being modified to Labrador standards with the installation of Omega navigation systems, auto-hover and weather search radar. (ISC 78-134)

Above. Three CF airmen representing NORAD's 22nd, 23rd and 24th Regions were among 16 American and Canadian NCOs selected as 1977 Outstanding Enlisted Personnel in the two-nation command. From left, Cpl Ernie Bremner, air defence tech; Sgt. Bob Hedley, clerk admin; and M/Cpl Jerry O'Brien, radar tech, with plaques awarded to them when they visited NORAD HQ at Colorado Springs. NCOs Bremner, Hedley and O'Brien serve at CFB North Bay, CFS Alsask, Sask. and CFS Lowther, Ont. respectively. (ISC 78-1001)

JUST PART OF THE JOB

A private pilot who lost his way above northern Vancouver Island last fall, owes a big chunk of his good fortune to two corporals at CFS Holberg.

Cpl Wayne Buan and Cpl Lee Morrison were on duty the night that the 25th NORAD Region Control Centre (RCC) at McChord US Air Force Base in Washington received a relayed distress call from the pilot of a single engine aircraft who was lost, low on fuel and battling bad weather.

The RCC called CFS Holberg in an effort to establish a firm radio relay. With the aid of Cpls Buan and Morrison and the pilots of two Alaskan airliners, the relay was arranged.

To ensure the worried pilot was getting the guidance he needed from the RCC, Cpl Buan suggested that he shut off his emergency squawk. When the pilot complied, RCC personnel were able to confirm he was receiving their radio instructions.

At the same time, Cpl Morrison kept the RCC up to date on the plane's position, using Holberg's heightfinder.

As a final precautionary measure, a search and rescue aircraft left from CFB Comox, but in the end was not required. The pilot landed safely in Port Hardy, B.C.

So hats off to the Canadian and American units of NORAD who proved, through their quick and able response, the high level of co-operation that exists in NORAD.

Above. Grace McCarthy, British Columbia's minister of tourism presented an official Captain Cook bicentennial flag to LCdr Robert Walker, centre, CO of HMCS Oriole, which will compete in the Hawaii to Victoria tall ships race in July. Rear-Admiral M.A. Martin and "Captain Cook" looked on. Below. A section of the 3rd Battalion, The Royal Canadian Regiment advances across a German Bridge during exercises last fall. The battalion, based on the now defunct 3 Mechanized Commando, was taking part in its first major exercises in Germany. (IL 77-691)

Maj Vic Keating, regional information officer in Edmonton, gave flowers and a hug to Charlene Dew of the base telephone exchange section. Base long distance operators placed calls all over North America so that Op Morning Light information could be passed on to world-wide news media.

The Blue Pine Construction Co. of Port McNeill, B.C. thought highly enough of Cpl Mickey Hargreaves' cooking to present him with a culinary award. Cpl Hargreaves, a cook at CFS Holberg received a trophy entitled "Culinary Award, Cuisine Par Excellence, Plat Gastronomique of the Year".

As part of the continuing CF Civil Artists Program (CAFCAP), Edmonton artist Meredith Evans spent four days at Camp Garland gathering his impressions for his paintings on Op Morning Light. His completed works will be turned over to DND and held on permanent display at the National War Museum in Ottawa. (OPML 025-6)

Above. HMCS Scotian in Halifax topped 17 other divisions last fall to win the Naval Reserve's annual award of excellence. Cdr Rowland Marshall, left, retiring CO of Scotian, accepted the award from Capt (N) C.G. Pratt, middle, director of Naval Reserves, with the help of the new CO, Cdr Bruce Waterfield.

Below. Gen James E. Hill, new commander-in-chief of NORAD pinned on his fourth star last December at Peterson AFB near Colorado Springs. Taking part in the ceremony were (left to right) Mrs. Hill; retired USAF Gen Earl Partridge, first commander-in-chief of NORAD; Gen Hill; retired CF Air Marshal C. Roy Slemon, the first deputy commander; and CF LGen David Adamson, present deputy commander. Gen Hill took command from Gen Chappie James. Gen James died while on retirement leave in February. (NORAD photo)

RESERVES WITH REGULARS

The Militia has a Military Police Platoon that has demonstrated the potential of the "total force" concept. The platoon, part of the 28 (Ottawa) Service Battalion, has completely integrated with the local regular force MP units, and its 18 members carry out patrols alongside local regular force MPs.

Under the direction of Capt Don Tresham, the platoon members began the project over a year ago with a concentrated in-house training program, which ended with a series of tests by the regular force. With these hurdles overcome, the reservists began working with the regular force unit one day a week instead of their usual two nights a week with the Militia.

The Militia has clearly benefited from the program as well. Last March the 28 (Ottawa) Service Battalion MP platoon was judged the best reserve MP unit in Canada.

In August, the platoon provided total police and security services when more than 600 reservists gathered for two weeks of field training at CFB Petawawa. During the Militia's jubilee celebration in Toronto, 28 MP Platoon formed the core of an MP company that worked with city police to handle a crowd of 20,000.

In November, the NDHQ Military Police Unit recognized the reservists' work by presenting them with framed photographs of the security branch badge and flag, and the Canadian Forces School of Intelligence and Security badge, bearing the Queen's signature.

Above. The uniforms may not be authentic, but the young men wearing them are real servicemen. Pte. J.A. Demarais top, and Pte Bernard Leduc volunteered to work as extras in Montreal last fall, during the filming of Hugh MacLennan's novel *Two Solitudes.* Pte Demarais and Leduc were English language students at CFB St. Jean at the time.

SOUNDS OF WAR

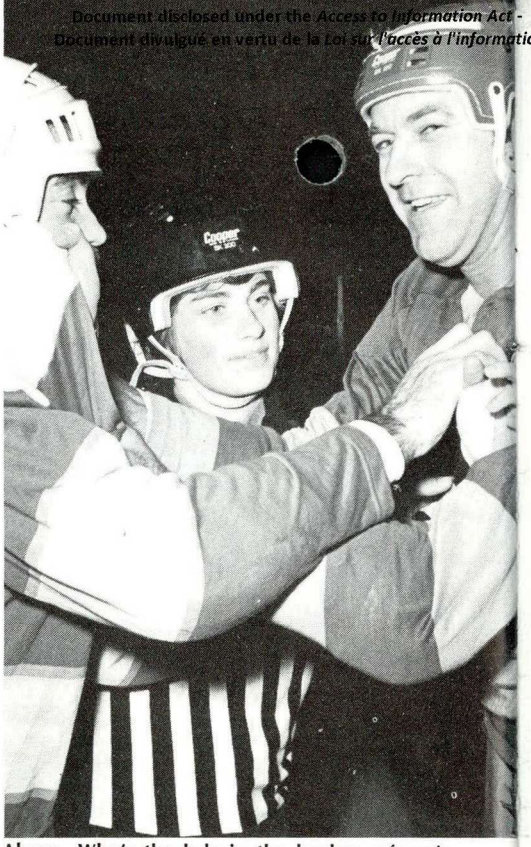
Visitors to Great Britain's Imperial War Museum can listen to military history as well as observe it. The museum recently opened its sound archives to the public.

The museum has approximately 3,500 hours of recorded material. The recordings include Second World War BBC news reports, actualities, interviews and personal narratives made during, or immediately after, the events they describe. In addition, there are a large number of recordings of veterans relating their experiences from the First World War.

In a less complete state of organization are recordings used as the basis for several BBC television series on the world wars, various speeches by Nazi leaders, recordings of the Nuremburg trials and other military subjects, such as the British Army in India.

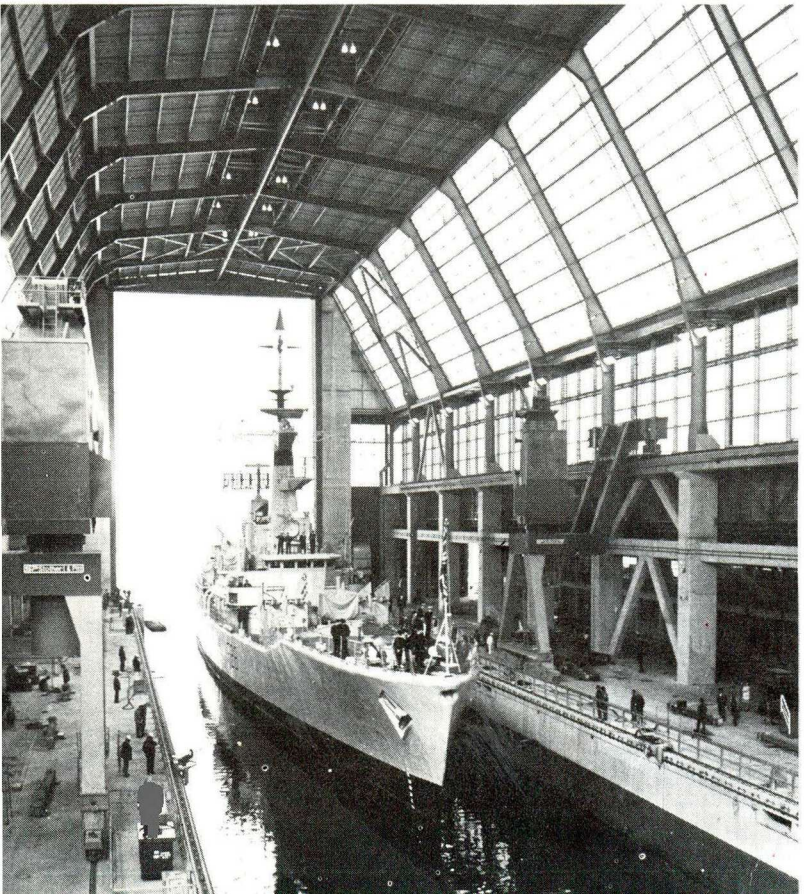
Visitors to the museum can listen to the recordings in special facilities, and copies of some of the recordings are available for purchase.

Enquiries should be addressed to the Department of Sound Records, Imperial War Museum, Lambeth Road, London SE1 6HZ, England.



Above. Who's the lady in the hockey referee's shirt you ask? She's Pte Alison Clarke, an admin clerk at Air Command Headquarters in Winnipeg. She's also a referee for the Inter-Section Men's Hockey League at CFB Winnipeg. Pte Clarke became the first woman to qualify as a referee in the Ontario Minor Hockey Association in Bramalea, Ont. two years ago.

Below. The Royal Navy's dockyard operations have moved indoors in Devonport, England, where three under-cover drydocks can service a trio of frigates simultaneously. Built at a cost of £18 million, the new complex features a 131-foot door clearance which allows ships to enter with masts and aerial arrays intact. Dockyard workers no longer have to contend with poor weather; but they do have to put up with high flying birds, who, finding it cozier inside than out, litter ships decks and anyone who gets in the way. (Navy News Photo)



Exercise Prevailing Chill lived up to its name in January when Petawawa's Special Services Force joined Britain's Queens Royal Irish Hussars for a week of manoeuvres in the Gatineau Hills of Quebec. Above. 8 CH Ferret Scout cars receive a final tarpaulin check at the end of the day. Below. British troops help cover a Canadian APC with snow camouflage.

Scotty

"Hello! Control, we've just located the satellite, but we have a slight problem with recovery!"

"Who do I sue?!"

"I guess I've been up here too long, I've plumb forgot just what a beautiful girl looks like!"

Tutor Overview

Precision formation flying is not the sole preserve of the CF Snowbirds team as members of 2 Flying Training School, "the best in the west", based at Moose Jaw demonstrate. 32 of the school's silver Tutors flew over Saskatchewan for this picture, taken by Lt Dick Bos flying above in another Tutor. Lt Bos, an exchange pilot from the Royal Netherlands Air Force, instructs at 2 FTS.

sentinel

MAY 3 6 09 AM '78

RCMP YK

10 RLY OTT MAY 03

P5 ROUTINE OTT 3MAY UNCLASS

G DIV YK

P8/15/29 REUR GC1B220/1. CONTACTED DR GUMMER, A.E.C.B. REGARDING YOUR SUGGESTION THAT TWO MORE LB-1200 DEVICES PLUS TWO MORE EBERLINE SOURCE BOXES BE PROVIDED. DR GUMMER DID NOT CONSIDER THIS EQUIPMENT TO BE NECESSARY AND STATED IN HIS OPINION THE ALARM DOSIMETERS ARE SUGGICIENT. AFTER FURTHER DISCUSSION HE STATED HE WOULD REFER THE ENTIRE MATTER OVER TO THEIR HEALTH PHYSICIST FOR A FIRM RECOMMENDATION AS TO WHAT TYPE OF EQUIPMENT WOULD BEST SERVE THE REQUIRED PURPOSE. YOU WILL BE FURTHER ADVISED

COMMR OTT

RCMP YK

COPY SENT TO O.C. YELLOWKNIFE.

3-5-78

OUTGOING MESSAGE / **MESSAGES SORTANTS**

● UCTIONS ON REVERSE / ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
		D.R. BARKER, SUPT.	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3488	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
ROUTINE		28 APR 78	UNCLASSIFIED

FROM
DE "G" DIVISION

TO
À COMMISSIONER, OTTAWA

INFO.
POUR RENSEIGNEMENTS

ORIGINATORS MESSAGE NO. GCIB 220/1 *N° DU MESSAGE ORIGINAL*

ATTN: "P" DIRECTORATE SECURITY POLICY SECTION CARDED

RE TELCON INSP. JENKINS/SUPT. BARKER CONCERNING RESPONSE TO RADIATION CHECK REQUESTS. WE WERE PROVIDED INITIALLY WITH A FEW ALARM DOSIMETERS FOR THE EXPRESS PURPOSE OF LOANING OUT TO PERSONS TRAVELLING OUT IN BUSH WHO MIGHT ENCOUNTER RADIATION. THE UNDERSTANDING WAS THAT CONTROL WAS NOT OUR RESPONSIBILITY AND THAT IF SOME WERE LOST NO PARTICULAR FUSS WOULD BE MADE. THESE DOSIMETERS ARE SIMPLY DEVICES TO REGISTER ACCUMULATION OR TO BEEP WHEN HIGH LEVEL RADIATION IS ENCOUNTERED AND NOT TO BE USED LIKE A GEIGER COUNTER. ON 10 APR 78 DR. V. ELAGUEPILLAI AND MR. M.F. JAMES, A.E.C.B. OTTAWA ARRIVED WITH ADDITIONAL SIX DOSIMETERS FOR DISTRIBUTION TO DETACHMENTS. THEY CONFIRMED PREVIOUS ARRANGEMENTS OF LOANING OUT TO PERSONS AND NO PARTICULAR CONCERN OVER CONTROL AND RESPONSIBILITY. THEY ALSO BROUGHT A BERTHOLD LB-1200 DETECTION DEVICE WHICH IS MORE THE STYLE OF A GEIGER COUNTER. WE ASKED TO HAVE ANOTHER TWO OF THESE SO THAT WE COULD CENTRALLY LOCATE THEM BETWEEN LIKELY DETACHMENTS WHO MAY GET CALLS FOR RESPONSE. WE ARE PREPARED TO RESPOND TO COMPLAINTS OF SUSPECTED SATELLITE DEBRIS PROVIDED WE HAVE TWO MORE LB-1200 DEVICES PLUS TWO MORE EBERLINE SOURCE BOXES TO TEST THEM WITH. 001583

../2

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

OUTGOING MESSAGES — ● INSTRUCTIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*

FROM
DE

TO
À

PAGE 2

INFO.
POUR RENSEIGNEMENTS

ORIGINATORS MESSAGE NO. _____ *N° DU MESSAGE ORIGINAL*

IF SENT TO YELLOWKNIFE WE WILL DISTRIBUTE THEM TO APPROPRIATE DETACHMENTS.

cc: O.C. YELLOWKNIFE SUB/DIVISION

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D. R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	

001585

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13 . . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*	
OUR FILE - *N/RÉFÉRENCE*	78HQ-102-15-4
YOUR FILE - *V/RÉFÉRENCE*	
DATE	11 April 1978

TO / A: C.O. "G" DIVISION

FROM / DE: A/O i/c FEDERAL POLICING BRANCH

14.4.78 O/C C.S.B.

SUBJECT / OBJET: U.S.S.R. COSMOS SATELLITE MALFUNCTION

Attached hereto please find copy of latest available fact sheet on this matter as prepared by D.N.D. on the recovery operation.

The receipt and distribution of dosimeters, and/or other radiation detection devices have been subject of considerable discussion here, and in keeping with your wishes the following points have been brought to the attention of A.E.C.B., who have accepted same:

(a) The equipment will be located in areas designated by the R.C.M.P. at Yellowknife;

(b) Proper written instructions for the use of the equipment be available for issue with it;

(c) Training or some form of familiarization be afforded R.C.M.P. personnel who will have the equipment on hand;

(d) The R.C.M.P. will not be held responsible for the equipment once it leaves their hands, nor will they be held responsible for any action necessary to recover any equipment not returned by persons taking the dosimeters on loan.

Repair and upkeep of the equipment will be the responsibility of A.E.C.B. and our function will be merely that of using it, where local residents require reassurance that a particular object is radioactively safe; or loaning the equipment to responsible parties who request same. The minimum recording necessary to identify receipt and issue of the equipment will be carried out, but as pointed out above, we will not be responsible for non-returns.

D. Chiarot, Insp.
A/Officer in Charge
Federal Policing Branch

IGR Encl
64479
Att:

001587

CGSB STANDARD FORM 22d 7540 - 21 - 865 - 6699 FORMULE NORMALISÉE 22d DE L'ONGC

OPERATION MORNINGLIGHT

GENERAL INFORMATION FACT SHEET

CONTRIBUTING DEPARTMENTS AND AGENCIES

Department of National Defence

Department of Energy, Mines and Resources

- Atomic Energy Control Board

- Geological Survey of Canada

Department of External Affairs

Ministry of the Solicitor General

- RCMP

noted
Sgt 7/76

FORWARDED 17 Apr 78
C.O. _____ DIVISION
O.C. Yellowknife S/DIV
I/C _____ DET/SEC
INFO. ☒
ACTION ☐
D.D. _____ CONCLUDED ☐
V R KAWALESKI, CPL.
"G" DIVISION C. I. B.

REVISED 17 MAR 78

DEPARTMENT OF NATIONAL DEFENCE ACTIVITIES - OPERATION MORNINGLIGHT

Note: All timings, where included, are given in the time zone where they occurred with Ottawa local time in brackets. e.g. 1900 MST (2100).

Responsibilities

OPERATION MORNINGLIGHT is under Canadian control with the U.S. providing welcome and valuable assistance. The on-scene commander is Canadian Forces Colonel David Garland who is responsible for overall operations including activities of both the U.S. and Canadian personnel. Lieutenant Colonel Stu McGowan has been appointed commander at Wardens Grove.

24 Jan 78

Soviet Cosmos 954 entered the earth's atmosphere at 0353 PST (0653) north of the Queen Charlotte Islands on Canada's Pacific coast. Following approximately a three minute burn period during re-entry, pieces of the satellite impacted in the Northwest Territories between Great Slave Lake (62°30'N 114°W) and Baker Lake (64°30'N 96°W).

At 0910 EST (0910) the U.S. Department of Energy contacted the Canadian Department of National Defence to ask what assistance Canada might require from the U.S. Following discussions it was determined that USAF transport aircraft (C141s) would deliver U.S. gamma radiation detection equipment to Edmonton for installation in Canadian CC130 Hercules aircraft. During the morning U.S. aircraft, on request, also conducted high altitude air sampling flights for gamma radiation.

The gamma radiation detection equipment arrived by USAF C141s at 1738 MST (1938). Four Canadian CC130 Hercules aircraft were standing by for installation of the equipment. Meanwhile, the radiation monitoring section of the Edmonton nuclear accident support team arrived in Yellowknife, NWT.

25 Jan 78

By early morning the radiation monitoring equipment was installed in the Hercules and three aircraft started searching along the satellite track between Fort Reliance, near the northeast end of Great Slave Lake, and Baker Lake, some 500 miles to the northeast. At 1000 EST (1000), U.S. aircraft commenced a second air sampling mission over Michigan and Northern Ontario. Results of these tests also showed no abnormal radiation levels.

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During the day the radiation monitoring section conducted ground radiation monitoring in both Yellowknife and Fort Reliance. Results of monitoring also showed no abnormal radiation levels.

26 and 27 Jan 78

The search continued during both days with no conclusive detection of satellite debris. On 26 Jan the radiation monitoring section was flown to Baker Lake where ground monitoring showed no increase in normal radiation levels. Also on 26 Jan, the Canadian radiation monitoring kit from the Department of Energy, Mines and Resources arrived in Edmonton and was installed in a Hercules aircraft. Up to 12 aircraft (11 Canadian) were involved in the search during the two days: three CC130 Hercules, three CC138 Twin Otters, three CC135 Twin Huey helicopters, one CH147 Chinook heavy lift helicopter and one U.S. Department of Energy Convair with infra red equipment. On 27 Jan the first radiation hot spot was detected using the Canadian radiation monitoring kit in the McLeod Bay area north of Fort Reliance in the northeast end of Great Slave Lake.

28 Jan 78

During the morning three radiation hot spots were detected by search aircraft on McLeod Bay. Two of the spots were later confirmed as satellite debris. By late afternoon, it was reported that two men of six in the Wardens Grove area, some 200 miles northeast of Fort Reliance, had discovered and touched an object on the nearby Thelon River ice. All six men from the Wardens Grove area were evacuated for radiation testing at Yellowknife and Edmonton. Tests indicated that none had picked up any radiation.

29 and 30 Jan 78

Two CP 107 Argus aircraft, one equipped for aerial photography, were added to the search. RCMP personnel were guarding the debris on McLeod Bay and Canadian Forces personnel were guarding the debris near Wardens Grove.

31 Jan 78

The search was now concentrated in the McLeod Bay and Fort Reliance areas with a total of 15 aircraft (14 Canadian) involved. The radiation monitoring kits, three from the U.S. and one from the Canadian Department of Energy, Mines and Resources, were all in use in the Argus and Hercules aircraft. The debris from McLeod Bay was taken to Yellowknife for analysis while scrapings from the debris on the Thelon River were taken to Edmonton in special containers for analysis by the Atomic Energy Control Board. Two RCMP constables joined the four Canadian Forces personnel at Wardens Grove.

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1 Feb 78

By 1 Feb a number of radiation hot spots had been detected by air and then isolated by ground parties in the McLeod Bay area. Operations continued in removing the debris to Yellowknife and cleaning up each impact area to a radiation level of less than 100 micro rads/hour.

2 and 3 Feb 78

By 2 Feb it seemed apparent that most of the satellite debris had impacted in the McLeod Bay and Wardens Grove areas with a few impacts between the two and between Wardens Grove and Baker Lake. Only one piece of debris contained enough radioactivity to require very special handling techniques. For this piece a lead container was constructed by the University of Alberta and flown to the site.

Air searching continued along the debris track, with impact areas being marked by ground parties.

4 and 5 Feb 78

Over the weekend preparations were made to establish a base camp at Wardens Grove and air search activity increased. New impact areas were isolated in both the McLeod Bay and Wardens Grove areas. The highly radioactive piece of debris on the McLeod Bay ice was removed to Edmonton in the special lead container. Clean up activity of other impact areas continued.

By the end of the weekend, some 250 Canadian Forces personnel and about 115 U.S. personnel were directly involved in the operation. Aircraft had flown over 700 hours in the search to this point.

6 Feb 78

No searching or localizing activity was carried out but preparations continued with establishing a base camp near Wardens Grove so that recovery and clean-up activity could commence in that area. A Hercules positioned a bulldozer and other supplies in the area using the low altitude parachute extraction system. The bulldozer is being used to construct a landing strip.

7 Feb 78

By 7 Feb 78, 24 personnel were at the base camp (now referred to as Cosmos Lake) near Wardens Grove preparing the camp and airstrip. The U.S. Convair aircraft had returned to the U.S.A. and the Argus aircraft were also released from the search operation.

.../4

Activity will be concentrated in the Fort Reliance-McLeod Bay area to search for and recover any remaining debris with aircraft and personnel working out of Yellowknife. Following this stage, activity will be concentrated in the Wardens Grove area using the new Cosmos Lake camp as a base of operations.

8 and 9 Feb 78

Activity continued on both days in preparing the Cosmos Lake landing strip and establishing a main campsite, Camp Garland, a few hundred meters to the south of Cosmos Lake. Hercules aircraft positioned more fuel, supplies, and another bulldozer, again using the low altitude parachute extraction system.

A Hercules aircraft also located six new radiation hot spots in the area northeast of Fort Reliance.

10, 11, 12 Feb 78

On 10 Feb and during the weekend slightly less than 100 hours were flown, bringing the total aircraft flying hours to over 1100. Twelve aircraft, all Canadian, are still involved in the operation. At Cosmos Lake the landing strip is 3000 feet long and will soon be suitable for landings by Hercules aircraft. All accumulated radioactive material recovered to date is to be moved from Edmonton for further analysis at the Whiteshell Nuclear Research Establishment operated by Atomic Energy of Canada Limited (AECL) at Pinawa, Manitoba.

13, 14, 15, 16 Feb 78

During the week of 13 Feb search, location and recovery of satellite debris continued in the area around the northeast end of Great Slave Lake. On 14 Feb in Snowdrift, a small community on Great Slave Lake west of Fort Reliance, an AECB team, accompanied by the Snowdrift tribal band secretary, conducted a radiological survey which indicated no contamination of any people or buildings.

On 14 Feb the first fixed wing aircraft, a Twin Otter, landed on the 4900 foot ice strip at Cosmos Lake. A Buffalo aircraft made the second landing on 15 Feb. During the day (15 Feb) the 21 person joint Canadian - U.S. search and survey team was moved into Cosmos Lake by Chinook and Twin Huey helicopters and by Buffalo. A Hercules aircraft positioned an inflatable aircraft shelter, tents and snowmobiles onto Cosmos Lake again using the low altitude parachute extraction system.

The first Hercules aircraft, carrying 20,000 pounds of supplies, landed successfully on the Cosmos Lake landing strip on 16 Feb.

17, 18, 19, and 20 Feb 78

Twin Huey helicopter operations continued in the Snowdrift and Fort Reliance areas in an effort to clean up the dozens of minute particles.

By 20 Feb the personnel at Cosmos Lake totalled 54 (38 Canadian Forces, 1 Canadian civilian and 15 U.S. civilians). Fourteen aircraft are presently committed to the operation and the Canadian military flying time totalled approximately 1560 hours.

21, 22 Feb 78

On 21 Feb activity was concentrated in three areas: Snowdrift, Fort Reliance, and Cosmos Lake. Twin Huey helicopters, equipped with radiation detectors, flew missions south and east of Snowdrift to determine the extent of the small radioactive particles dispersed south of the satellite trajectory. These particles range from buckshot to pepper grain in size. Similar missions were flown on 22 Feb to the north and east of Fort Smith.

The debris found on the Thelon River ice by the men from Wardens Grove on 28 Jan was recovered and removed on 22 Feb by the team at Cosmos Lake.

23, 24 Feb 78

On 23 Feb the two Twin Huey helicopters were able to further define the area of low level contamination caused by the small particle dispersion at the western end of the search area. Approximate boundaries were established on the north, east, and south sides. The northern boundary follows the track of the satellite trajectory; the eastern boundary runs from Fort Reliance to a point approximately 30 miles north of Fort Smith; the southern boundary is an east-west line to an as yet undefined western boundary. The helicopters were attempting to establish the western boundary on 24 Feb.

No radioactive contamination has been found in Fort Smith. On 24 Feb the radiation monitoring section was conducting a survey in the area of Fort Resolution and nearby hunting camps. As of early 24 Feb Canadian military flying time totalled approximately 1830 hours.

28 Feb - 3 Mar 78

Atomic Energy Control Board (AECB), Health and Welfare Canada and Environment Canada authorities have reported their opinion that people living in the area where the satellite debris fell should not be concerned about changing their lifestyle or recreation activities.

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Canadian Forces and AECB personnel were actively involved in the recovery of small, detectable particles in the townsites of Snowdrift, Pine Point and Fort Resolution. Because of their small size, these particles lost momentum quickly and under the influence of a northerly wind drifted over a wide area in a random fashion. They have been found as far west as near Hay River and as far south as Buffalo Lake. Measurements have shown the particles will not have added significantly to the natural background radiation. Nevertheless, to avoid possible health risks from close contamination and ingestion of particles in water melted from snow, it was agreed that clean-up activities would be conducted in the townsites.

Uranium and thorium-bearing rocks are found in this part of Canada, and the natural background radiation may locally be much higher than the figures given. However, in general, the natural radiation background on land in the area may be about 7 to 10 microR/hour, and the search instruments are sensitive enough to detect an increase of about 2 microR/hour at this level. The background over lakes is about half that on land.

Particles have not been distributed in a dense pattern but are scattered randomly and quite far apart. For example, in Snowdrift six particles were found roughly 200 feet apart. Thus clean-up in towns or wherever crowds of people are expected to congregate is perfectly feasible.

7 Mar 78

The search for particles continued in the areas of Lac La Prise and Artillery Lake, while the survey of Hay River was commenced. A new communications link between Edmonton and Cosmos Lake was established.

8 Mar 78

Clean-up in the area of Lac La Prise and Artillery Lake has been completed, and most of Hay River has been surveyed with all detected particles removed. A Hercules aircraft and two Twin Huey helicopters continued the search in the area between Yellowknife and Lac La Prise, while an Argus aircraft from Summerside completed coverage of approximately 750 miles around Cosmos Lake to provide pictures on a scale of 1:20,000 for the production of mosaics.

9, 10, 11, 12, and 13 Mar 78

Twin Huey helicopter search operations continued in the Hanbury Lake area and were commenced in the area east of Yellowknife. Coverage of the area east of Cosmos Lake is now complete.

On 10 Mar 1600 MST (1800) the RCMP at Cape Dorset notified Edmonton that a 25 year old Inuit had discovered a hole in the ice of an unnamed lake 25 miles north west of Cape Dorset. The RCMP have also advised local residents to avoid the area.

On 11 Mar a combined team of Canadian Forces, AECB and U.S. personnel were flown by Hercules to Frobrisher Bay. An RCMP Twin Otter flew them to Cape Dorset and they then were taken out to the lake by skidoo. On arrival they discovered a crater approximately 18 feet in diameter. Chunks of ice had been thrown as far as 75 feet from the hole, with the largest chunk being 18' X 10' X 2'. The ice thickness is approximately 5 feet and the lake is estimated to be 15 feet ~~thick.~~ deep. No radiation was detected.

On 13 Mar a Twin Huey was dissassembled for shipment to Frobisher Bay by Hercules. The Twin Huey is to be placed on standby at Cape Dorset for use by the scientific staff.

Maritime Command has been tasked to provide an underwater camera and operators for use at Cape Dorset. They will be despatched as soon as they can be employed.

14 Mar 78

Aerial survey of the Hanbury Lake area has been completed, and both aerial survey and recovery operations are continuing in the area south of Yellowknife. In an attempt to determine particle distribution in cleared areas around Great Slave Lake, ten sites have been selected in which 20 samples will be taken from each site. The samples will then be analysed to determine the particle distribution.

A check of the water reservoirs and intake filters has been completed at Pine Point and no contamination was found.

15 Mar 78

The Twin Huey helicopter arrived in Cape Dorset and a short reconnaissance flight was conducted over the crater site.

16 Mar 78

The underwater TV camera and a three man crew arrived in Cape Dorset. They plan to establish a tented camp at the crater site and after determining the physical characteristics of the ice they will prepare the surface for the introduction of underwater detection equipment. As of early 16 Mar the Canadian military flying time totalled approximately 3,402 hours.

17 Feb 78

ATOMIC ENERGY CONTROL BOARD ACTIVITIES - OPERATION MORNINGLIGHT

Background Information

The Atomic Energy Control Board (AECB) is the federal regulatory authority responsible for protecting the health, safety and security of Canadians with regard to all aspects of nuclear energy. As such, in the Cosmos 954 nuclear-powered satellite incident, the AECB is the prime technical consultant concerned with the safe recovery of any radioactive debris, and its custody, transportation and laboratory analysis. The Board is also technical consultant to the External Affairs Department with respect to its negotiations on this matter with the Soviet Union at the United Nations.

Working in close cooperation with the Department of National Defence, the Geological Survey of Canada, and technical experts volunteered by the United States government, small teams of AECB scientists are involved in the identification and physical recovery of pieces of the satellite discovered on the ground through aerial surveys.

All samples recovered are being sent to the Whiteshell Nuclear Research Establishment (WNRE) at Pinawa, Man., a laboratory operated by Atomic Energy of Canada Limited. WNRE is particularly well suited to conduct the types of tests needed on the samples, and also operates waste management and storage facilities in which material from the satellite can be held pending a decision on its ultimate disposition.

Where packaging is available which meets air transport regulations concerning hazardous cargoes, certain shipments of small samples have been made by commercial air carrier. The remainder are shipped on regularly-scheduled Canadian Armed Forces flights.

At Whiteshell, the samples undergo metallurgical, chemical, radiological and other tests, with the results forwarded to the AECB in Ottawa for further interpretation and transmittal to other agencies as required.

Feedback from the laboratory tests will assist field operations in further detection work. In this regard, one of the purposes of the testing program is to attempt to identify the likely origin of each piece in the original satellite. Of particular importance would be the discovery of anything which might have been near or formed part of the satellite's highly

.../2

radioactive power plant. The recovery location of such a sample would be a valuable clue to the possible whereabouts of the most hazardous portion of the spacecraft - its reactor core containing fuel elements and fission products - if indeed the core survived the burn-up of re-entry through the earth's atmosphere.

Based on assumptions as to the probable type of nuclear fuel used in the Cosmos 954 satellite, there is a strong likelihood that all or most of the fuel would have burned up, while high melting point alloys used in other components would not.

Following receipt of reports from WNRE, the AECB will be in a position to determine the need for and extent of any further remedial or clean-up action required to protect public health and minimize environmental impact.

FOR FURTHER INFORMATION:

Hugh J. M. Spence
Chief, Office of Public Information
(613) 992-9206

EMP IPUT FOR GENERAL INFORMATION FA SHEET

15 Mar 78

ENERGY, MINES AND RESOURCES ACTIVITIES - OPERATION MORNINGLIGHT

Geological Survey of Canada's Contribution

The Geological Survey of Canada (GSC), an agency of the Department of Energy, Mines and Resources, was informed about the re-entry of the Soviet satellite Cosmos 954 by the Atomic Energy Control Board at 10 a.m. on 24 January 1978. The GSC is the main centre in Canada for research and development into airborne radioactivity measuring equipment and, as such, it both operates its own aircraft with equipment, and maintains an on-going contract with Canadian service companies. A scientist was despatched to Edmonton immediately and arrived at the same time as the American team. Arrangements were set in motion for the movement of the Geological Survey's airborne gamma-ray spectrometer to Edmonton where it was installed in a Canadian Forces Hercules C-130 aircraft and became operational 24 hours after the U.S. systems. This Canadian spectrometer was only completed in September 1977, possesses greater sensitivity than the U.S. systems being employed in the search, and is self-contained with respect to the ability to analyse the radiation spectrum. The U.S. systems are dependent on post-flight computer processing of the data. On its second flight in the early hours of January 27, the Canadian equipment provided the first certain evidence of radioactive debris. The system has been in continuous operation since that time, and in terms of sensitivity, versatility, and reliability, has demonstrated its superiority over the U.S. equipment. It is now in the process of being interfaced with the Microwave Ranging system (MRS) airborne navigational equipment obtained by DND. Three research scientists and six technicians from the Geological Survey have participated in the operation of this equipment. One scientist and three technicians must be retained on a continuing basis for as long as it is used in the search. This excludes extra scientific and technical assistance required to interface with navigation systems on the military aircraft.

GSC is now making arrangements to obtain through Canadian contractors the use of additional airborne gamma-ray spectrometer systems for use in Canadian Forces helicopters, to replace the U.S. equipment presently being used for the detailed search and recovery of radioactive debris.

.../2

GSC provided a scientist and a technician with neutron borehole logging equipment to go in with the advance party to inspect the Wardens Grove Site. This was in the event that part of the reactor core was present under the ice in the Thelon River. In fact, the specialized equipment was not required, but general assistance was given by the GSC personnel who have considerable experience in scientific work under Arctic conditions.

On March 1, 1978, the Geological Survey of Canada gamma-ray spectrometer system, interfaced with DND MRS navigational equipment commenced surveying west of Snowdrift. On the first flight, one area of increased radioactivity was recorded and recovery teams located and picked up 2 beryllium rods. The GSC system has continued in operation since March 1, with 2 days down time (1 day for unserviceable aircraft, 1 day due to loss of MRS antenna). On March 14 surveys of the area south and west of Snowdrift and Christie Bay were completed and several additional areas of high radioactivity were located. After spectrometer maintenance on March 15, work will begin on March 16 in the area between McLeod Bay and Artillery Lake, where the MRS coverage is to be extended approximately 5 kilometres to the north and south of existing coverage. The U.S. MRS system completed surveying in the area east of Artillery Lake on March 14, and the MRS search operation is now a totally Canadian operation.

A GSC computer system has been set up at CFB Edmonton for postflight processing of spectrometer data tapes for detection of radiation anomalies and flight path recovery.

GSC staffing for the MRS search operation includes 1 supervising scientist, 3 airborne spectrometer operators, and 2 data analysis technicians.

Two of the three spectrometer equipped helicopters are now carrying Canadian instrumentation and operators. Present staffing for the helicopter operation includes 1 GSC scientist and 3 contractor technicians.

The first McPhar spectrometer system was picked up by DND at Toronto on March 3, for transport to Edmonton and installation in CH135. The system was test flown in Edmonton on March 6 and departed for Cosmos Lake on March 7. The second McPhar system was transported to Yellowknife on March 12 to begin operation in a CH135 out of Yellowknife on March 15. The third helicopter spectrometer system is scheduled for delivery from Saintrex on March 19. Data processing capability for the helicopter spectrometer tapes has been set up at the University of Alberta.

DE NPUT FOR GENERAL INFORMATION F SHELT

16 Feb 78

DEPARTMENT OF EXTERNAL AFFAIRS ACTIVITIES - OPERATION MORNINGLIGHT

Canada/USSR Contacts - Soviet Cosmos 954

The Canadian Government has been in close contact with the Soviet authorities on this matter since January 24. The Soviets have provided some information on the technical characteristics of the satellite which could assist us in the ongoing search for radioactive debris. We have requested further information. The USSR has also offered the assistance of specialists in the recovery of remnants of the satellite, but this has not yet been required.

In accordance with our obligations under Article 5 of the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, Canada officially notified the Secretary-General of the UN and the Government of the Soviet Union on February 8, 1978, of the discovery on Canadian territory of component parts of a space object, believed to be Cosmos 954. In a statement at the UN on February 14, a Soviet representative acknowledged that the Canadian description of the facts surrounding the re-entry of the satellite was correct, and that the USSR would fulfil its obligations under international law to reimburse Canada for any damage. Since the search and recovery operations are still under way, no claim has yet been submitted by Canada.

Follow-up Action in the United Nations

On February 13, Canada raised the question of the international implications of the Cosmos incident in the Science and Technology Sub-Committee of the UN Committee on the Peaceful Uses of Outer Space. In his statement, the Canadian Ambassador to the UN described as the overall objective the development of a régime for the use of nuclear energy sources in outer space which would ensure the highest standards of safety for mankind and protection for the environment. In this aim, Canada is supported by a large number of member nations of the UN.

SOLICITOR GENERAL INPUT FOR GENERAL INFORMATION FACT SHEET

17 Feb 78

ACTIVITIES OF THE MINISTRY OF THE SOLICITOR GENERAL - OPERATION MORNINGLIGHT

Responsibilities

The search for radioactive debris from the Soviet Cosmos 954 satellite which impacted between Great Slave and Baker lakes, Northwest Territories, is under the overall control of the Department of National Defence. The responsibilities of the Ministry of the Solicitor General to date have been:

a) to safeguard the press and public from radioactive contamination by providing an RCMP presence at each accessible impact site, and

b) area patrols to inform isolated personnel to stay clear of affected areas.

Constant liaison is maintained with Canadian Forces personnel so that RCMP may attend when new finds are made.

General Comment

On-scene RCMP report there has been very little public reaction over the satellite incident in the general area affected except for some initial concern at Snowdrift, a settlement near the Fort Reliance debris site. These concerns were allayed by a special visit by military officials and radiation experts who advised there was no danger. RCMP present at debris sites have not as yet encountered unauthorized persons during their tours of duty.

* Future Involvements

It is anticipated that an RCMP presence will continue to be required at each site discovered until cleanup operations are completed. Projections of resources expenditures are not possible at this time as resources required will depend on such factors as number of sites discovered and accessibility to the public.

It is also expected that native peoples and other residents in the area affected will turn to the RCMP for reassurance whenever they discover isolated bits of metal or other debris or even suspect fish or animals. The Atomic Energy Control Board has offered to provide the necessary detection equipment for RCMP Detachments at Baker's Lake and Snowdrift.

News of the North
Mar 15/78

Satellite search now in Dorset

A hole in the ice of an unnamed lake, 35 kilometres northwest of Cape Dorset, on Baffin Island, could lead to the discovery of the largest piece yet found of the nuclear-powered satellite that splattered thousands of square miles of the NWT Jan. 24.

On Saturday, March 11, Canadian Forces Base Edmonton reported the finding of the crater by two Inuit hunters. It measures five metres in diameter and is frozen over with new ice of a yellowish tint.

The crater is surrounded by two-foot thick chunks of ice measuring 18 to 20 feet square. There were also smaller pieces of ice scattered up to 75 feet around the hole.

"We don't know yet what it was but it had to be big and heavy," commented Canadian Force information officer Jim Grey Monday.

The crater was first discovered by two Inuit hunters who reported it to the RCMP in Cape Dorset who then in turn informed the Canadian Forces.

The RCMP are warning people in the area to stay away from the site until an investigation has been completed.

QUICK ACTION

Because the hole is right in line with the recorded flight path of the plunging satellite, the army took quick action. On Saturday morning, a six-man scientific team was sent in a Hercules aircraft to Frobisher Bay. A police plane took the group to Cape Dorset and then on Sunday they went on snowmobiles to the site. It was a four hour ride.

According the Grey, the scientists got no readings on their radiation detection devices.

This does not mean there is no debris at the site. If it is covered by the estimated 15 feet of water in the lake, there is a possibility nothing could be detected on the surface because water has an insulating effect on the radiation.

The scientists also failed to get any significant readings on either the hunters, who first discovered the crater, or other residents back at Cape Dorset. Its population is 660.

On Monday another Hercules was dispatched from Edmonton to Frobisher Bay with a dismantled Twin Huey helicopter and Canadian Forces personnel aboard. They will use the helicopter to get to the site. They hope to find out what's in the crater by using ice augers, Grey said. The ice is five feet thick.

He estimates it will take three or four days before anything is known for sure.

If a large piece of debris is found near Cape Dorset, it fits in well with the "ballistics theory" that has been suggested by both scientists and the Canadian Forces. The theory calls for the smaller particles to be found in the west and as one searches east the pieces discovered are larger and larger.

(SATELLITE - PAGE 3)

Minute particles have been found as far west as Hay River.

The Cape Dorset site is some 500 miles east of Baker Lake which was the farthest east the Canadian Forces have been looking in the past. The biggest piece of debris, recovered so far, has been from the Thelon River in the Thelon Game Sanctuary west of Baker Lake.

Besides Cape Dorset and Baker Lake, the other communities involved include Pine Point, Fort Smith, Fort Reliance and Snowdrift.

DA
001602

TRANSIT SLIP **FICHE DE SERVICE**

Date 22-3-78

TO / À C.O.

FROM / DE O/C CIB

Comments — *Commentaires*
Perusal — No Action Required — *Pour information — aucune suite requise*
Examination and Action — *Pour examen et suite*
Prepare Reply — *Réponse à rédiger*
Prepare Brief — *Exposé à préparer*
See Sender — *Voir l'expéditeur*

Make File(s) — *Dossier(s) à ouvrir*
Return with Current File — *Retourner avec le dossier courant*
Check Records — *Vérifier les archives*
Instructions — *Directives*

22.3.78 Perused. P.A.

REMARKS / COMMENTAIRES

OPERATION MORNING LIGHT - ALARM DOSIMETERS

S/SGT DORE HAS ADVISED THAT 4 OF THESE DEVICES WERE RECEIVED BY FT. SMITH DETACHMENT DIRECT FROM EDMONTON SHORTLY AFTER THE TELEPHONE CONVERSATION BETWEEN INSP. RECHNER AND MR. EATON A.E.C.B AND INSP. CHIAROT A COUPLE OF WEEKS AGO. NOTHING ELSE HAS YET BEEN RECEIVED. THE INTEREST AND ACTIVITY AROUND GREAT SLAVE LAKE SEEMS TO HAVE

REPLY / RÉPONSE

DIED IN THE LAST TWO WEEKS, THEREFORE THERE MAY NOT BE MUCH CALL FOR THE DEVICES IF THEY DO ARRIVE. ACTUALLY I SUPPOSE IT WILL NOT CAUSE US ANY PROBLEM HAVING THEM AND I PROPOSE TO LET THE O.C. YELLOWKNIFE DISTRIBUTE THEM AS HE FEELS WARRANTED SINCE IT IS ALL IN HIS AREA. THE CAPE DORSET SITUATION IS SEPARATE AND WE HAVE HAD NO WORD OF ANY RADIATION ACTIVITY THERE. IF SUCH IS SUBSEQUENTLY RAISED WE CAN DEAL WITH IT AT THAT TIME.

001603

ROYAL CANADIAN MOUNTED POLICE
TRANSMITTAL & DIARY DATE REQUE

GENDARMERIE ROYALE DU CANADA
FORMULE D'ENVOI ET DEMANDE DE DATE D'AGENDA

HANDWRITE
ÉCRIRE À LA MAIN

	Outside P.D. — *Autres S.P.*	Commr. *Com.*	C.O. *C.D.*	O.C. Sub — *C.S. - D.*	I/C Det. — *Resp. Dét.*	Copies to — *Copies au*
TO *AU*			"G"	Yellowknife		
FROM *DU*		✓				Date 16-3-78

H.Q. File — *Dossier de la D.G.*	DIV. File — *Dossier de la div.*	S/DIV. File — *Dossier de la s.-div.*	DET. File — *Dossier du dét.*
78 HQ-102-15-4	78G-000-2		

ATTACHMENTS — *PIÈCES JOINTES*

☑ Correspondence *Correspondance* ☐ Warrant *Mandat* ☐ Summons (es) *Assignation(s)* ☐

Dated — *Daté du* 15-3-78

FOR YOUR — *POUR*

☑ Information *Votre gouverne* ☐ Action *Donner suite* ☐ Execution *Exécution* ☐

REMARKS (if reply - arrow to return address) — ***REMARQUES*** *(dans le cas d'une réponse, indiquer par une flèche l'adresse de retour)*

Re: Operation Morning Light

4 ET S-M1-4

21-3-78 O/C C.D. Briefed on the above matter and will keep you informed of further developments.

☐ SERVED - Original & Affidavit returned — *Signifié - original et affidavit retournés*

☐ NOT SERVED for reasons indicated — *Non signifié pour les raisons indiquées*

Date fine & Costs paid
Amende et frais payés le

DIARY DATE EXTENTION
PROLONGATION DE LA DATE D'AGENDA

☐ Disposition of exhibits
Disposition des pièces à conviction

☐ Further enquiries negative
Autres recherches nulles

☐ Awaiting instructions
Dans l'attente de directives

☐ Awaiting payment of fine & costs
Dans l'attente du paiement de l'amende et de frais

☐ Report overdue
Rapport en retard

☐ Unable to execute Warrant (Summons)
Impossibilité d'exécuter le mandat (assignation)

☐ Trial date not set
Date du procès non fixée

EXTEND TO — *PROLONGÉE JUSQU'À*

Adjourned to
Renvoyée au ▶ ---------- 001604

DEPARTMENT OF THE SOLICITOR GENERAL
MINISTÈRE DU SOLLICITEUR GÉNÉRAL
CANADA

POLICE AND SECURITY PLANNING AND ANALYSIS GROUP
CENTRE DE PLANIFICATION ET D'ANALYSE DE LA POLICE ET DE LA SÉCURITÉ

Ottawa, K1A 0P8
March 15, 1978

Dr. W.K. Gummer
Chief, Coordination and Planning
Atomic Energy Control Board
Martel Building
270 Albert Street
P.O. Box 1046
Ottawa, Ontario
K1P 5S9

Dear Dr. Gummer:

CANCELLED

With reference to the matter raised at the Operation Morning Light meeting on March 14, 1978, concerning the issue of alarm dosimeters to R.C.M.P. detachments in the search area, discussions have taken place between officers of the Federal Policing Branch of the R.C.M.P. Headquarters and senior personnel at the R.C.M.P. office in Yellowknife, N.W.T. There is now general agreement that the location of this equipment in R.C.M.P. detachments for use by the members and by other officials, trappers, prospectors, etc., would be acceptable.

The officers in the N.W.T. consider it important that proper written instructions for the use of the dosimeters be issued at the same time as the equipment. Furthermore, it is also considered important that training, or at the least, some form of familiarization be afforded to R.C.M.P. personnel at the various detachments.

The latest estimate from Yellowknife sets the required quantity of dosimeters at six each for six detachments, plus a further six to be held in reserve at Yellowknife, for a total of forty-two. This estimate was made without regard to possible developments in the Cape Dorset area.

...2

It is stressed that, while the R.C.M.P. will take all reasonable steps to safeguard the equipment in their care, they cannot be held responsible for it while in the possession of others. Neither can they be held responsible for actions necessary to recover any equipment not returned by persons taking the dosimeters on loan.

Yours sincerely,

Robin Bourne
Assistant Deputy Minister
(Police and Security)

c.c. Commissioner, R.C.M.P.
1200 Alta Vista Drive
Ottawa, Ontario

Attention:
Inspector Chiarot
Federal Policing Branch
'C' Directorate

OUTGOING MESSAGES — ● INSTRUCTIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	78G-000-2	J.E. HISCOCK, S/SGT.	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3489	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
ROUTINE		27 FEB 78	UNCLASSIFIED

FROM / *DE*: "G" DIVISION

TO / *À*: NCO I/C HAY RIVER DETACHMENT

INFO. / *POUR RENSEIGNEMENTS*:

ORIGINATORS MESSAGE NO. GCIB 119/2 *N° DU MESSAGE ORIGINAL*

ATTN: S/SGT. SVEINBJORNSON

REUR HR 128/1 AND HR 97/1 CONCERNING REQUESTS FOR TECHNICAL DATA CONCERNING COSMOS 954. ENQUIRERS ARE TO CONTACT CANADIAN FORCES BASE, EDMONTON 475-3611 ASK FOR OPERATIONS. ANY WRITTEN OR TELEXED REQUESTS SHOULD BE PREFIXED WITH REFERENCE TO OPERATION MORNING LIGHT.

PA

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
Signature for JEH D.R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	4:32 pm

001607

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)
B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .
C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)
B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13. . . . . .
C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

BEST COPY AVAILABLE

DET. TO "E" DIV. C.I.B.

FURTHER TO OUR [illegible] CONCERNING REQUESTS FOR TECHNICAL
CONFIDENTIALITY OF COSMOS 954. PLEASE ADVISE AT YOUR
EARLIEST CONVENIENCE AS TO WHERE SUCH REQUESTS CAN BE FORWARDED.

[illegible]
SEPTEMBER 10, 1978

[illegible]

Edwin
3,40"

CFB
Edm

475-3611

001609

OUTGOING MESSAGES — **MESSAGES SORTANTS**

INSTRUCTIONS ON REVERSE — DIRECTIVES AU VERSO

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
FEB 21 / 55 PM '78	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 21-2-78	Security CLASSIFICATION *sécuritaire*

FROM / *DE*: Yellowknife SDO

TO / *À*: Fort Smith, Fort Resolution N/Sto. 4/8/4/9

INFO. / *POUR RENSEIGNEMENTS*: 2 Div C/B

ORIGINATORS MESSAGE NO. YKADM 7/20 — *N° DU MESSAGE ORIGINAL*

Further to YKADM 7/20 of 21-2-78.
Two members of military arriving your point by CAF aircraft early a.m. 22-2-78 to conduct Radiation testing of uranium reports to RCMP. Request use of our office facilities for the testing and permission granted.
Please meet their aircraft, which will report arrival time through mot and assist as necessary. They may also request assistance to locate commercial lodging as they intend to remain your point for a number of days.

C.O.

Yellowknife A/Div

DISCUSSED WITH O.C. YK THIS A.M. THERE IS NOTHING OF CONCERN HERE BUT D.N.D. ARE JUST TRYING KEEP THE LID ON SCARES AND SHOW THAT THEY ARE READY TO RESPOND TO CONCERNED PEOPLE.
ROH Smith 22-2-78.

23.2.78 P.A. C/B

Signature of person releasing message — *de l'expéditeur*	Time Released (time of signature) — *Heure d'expédition (heure de la signature)*
	5:30 p.m.

001610

OUTGOING MESSAGES / **MESSAGES SORTANTS**

INSTRUCTIONS ON REVERSE / DIRECTIVES AU VERSO

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
FEB 21 7 55	Br. or Section — *Sous-direction ou section* A 78	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner* Routine	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 21 Feb 78	Security CLASSIFICATION *sécuritaire* Routine

FROM / *DE* Yellowknife S/Dvn

TO / *À* Yellowknife* Fort Smith, Fort Resolution, Hay River, Snowdrift Klute.

INFO. / *POUR RENSEIGNEMENTS* (by hand-R) Ops Div CIB, Ottawa A/Dvn

ORIGINATORS MESSAGE NO. YKA3m-478 — *N° DU MESSAGE ORIGINAL*

Re. Cosmos Satellite landing military area
Press Release 6.30 pm 21 Feb. for persons who
feel they may have been exposed to radiation
from the landing satellite to report to their
local RCMP office if they want radiation
test. RCMP will contact military who
release being made as these places
~~North Slave~~ River area have already contacted
military.

Therefore if any persons contact your detachment ~~office~~ for testing inform CIB MRHQ Yellowknife, attention Mjr Dowsett Phone 873-4011 or through this S/Dvn H.Q. without delay.

Yellowknife S/Dvn

CIB Copy to

Signature of person releasing message *de l'expéditeur* T.T. Adams

Time Released (time of signature) *Heure d'expédition (heure de la signature)* 7.45 pm

001611

OUTGOING MESSAGES — *MESSAGES SORTANTS*

● INSTRUCTIONS ON REVERSE — ● *DIRECTIVES AU VERSO*

Time of Receipt – *Heure de réception*	File No. – *N° de dossier*	Drafter's Name – *Nom du rédacteur*	Time of Dispatch – *Heure d'envoi*
		INSP. LATREMOUILLE	
	Br. or Section – *Sous-direction ou section*	Phone No. – *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner* PRIORITY	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 16 FEB 78	Security, CLASSIFICATION *sécuritaire* RESTRICTED

FROM *DE* "G" DIV, A & P SEC

TO *À* COMMR, OTTAWA

INFO. *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GAP37 *N° DU MESSAGE ORIGINAL*

FOR THE PERSONAL ATTENTION OF INSP. CHARROT FEDERAL POLICING BRANCH

OPERATION MORNING LIGHT. "G" DIVISION'S COSTS FOR SATELLITE RECOVERY TO DATE:

(A)	MANHOURS IN STRAIGHT TIME AND OVERTIME	$5,500.63
(B)	TRAVELLING EXPENSES	452.60
(C)	POLICE AIRCRAFT	8,342.28
(D)	POLICE CAR MILEAGE	57.50
(E)	SKIDOO HOURS	10.00
(F)	RADIO BATTERIES	121.65
	TOTAL ----------	$14,484.66

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
INSP. C.R. LATREMOUILLE, A & P OFFICER	

001612

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13 . . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

Government of Canada / Gouvernement du Canada

ACTION REQUEST / FICHE DE SERVICE

To — À	File No. — Dossier N°
ج.ك.ك.	
	Date

From — De

O.I.C. A.T.P.

☐ Please call / Prière d'appeler	Tel. No. — N° de tél.	Ext. — Poste

☐ Returned your call / Vous a rappelé	☐ Will call again / Vous rappellera	☐ Wants to see you / Désire vous voir

Date	Time — Heure	Message received by / Message reçu par

☐ Action / Donner suite	☐ Approval / Approbation	☐ Note & return / Noter & retourner
☐ Comments / Commentaires	☐ Draft reply / Projet de réponse	☐ Note & forward / Noter et faire suivre
☐ As requested / Comme demandé	☐ Signature	☐ Note & file / Noter et classer

▽

001614

Admin Staff
approx time
from 1/15
involvement

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / *À*: OFFICER i/c "G" DIVISION
ADMIN. & PERSONNEL

FROM / *DE*: O.C. YELLOWKNIFE SUB/DIVISION

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*:

OUR FILE - *N/RÉFÉRENCE*: 78YK-000-1

YOUR FILE - *V/RÉFÉRENCE*:

DATE: 16 FEB 78

SUBJECT / *OBJET*: COSMOS SATELLITE RECOVERY COSTS

In compliance with your related memorandum of 9 FEB 78, the following requested information is submitted with regard to costs.

	(1)Straight Time	(2)Overtime Converted	(4)Travelling Expenses
Insp. RECHNER *	16		
S/Sgt. LAMBERT*	10		
S/Sgt. ARMSTRONG	26	9	
S/Sgt. SABEY	11	12	
Cpl. LOK	16		
Cpl. McCARTHY	6		
Cpl. WESTWOOD	2.5		
Cpl. GREBER	6		
Cpl. REID	8	25	
Cpl. HORSMAN	4		
Cst. WOODS	24		$24.50
Cst. WISHNOWSKI		6	
Cst. OTTMANN	40	7	
Cst. REINHARDT	40		
Cst. LUCHTMEIJER	3	63	$70.50
Cst. HARRISON	4		
Cst. NORTH	3		
Cst. DRISDELLE		3	
Cst. HARTWIG	1.5		
Cst. HOBBS	1.5		
Cst. WALKER	4		
Cst. GRINSTEAD	45	30	$137.75
Cst. RAYNER	45		$137.75
Cst. McKENZIE	53	17	$ 41.05
Cst. BOWDEN	53		$ 41.05
S/Cst. PHELAN guarded exhibits at airport		6	
C/M ECCLESTON	8	6	

(3) Aircraft Operation - Twin Otter - 10.1 hours
- Single Otter - 12.2 hours.

(5) Miles by Police Vehicles (Yellowknife Rae) - 500 by car and 6 hours by police ski-doo. G49-3 Snowdrift

Total of $121.65 was expended on batteries for our portable SSB radios. Armstrong 593.

...2/

001616

2. No doubt other costs will surface or be incurred should we be involved in further assistance in this operation and same will be forwarded when and if received.

(G. Rechner) Insp.,
O.C. Yellowknife Sub/Division.

0,0 0	+
21 1,2 0	+
11 5,8 0	+
40 5,3 0	+
26 6,3 4	+
15 2,3 2	+
5 9,2 8	+
2 4,7 0	+
5 7,1 2	+
32 6,0 4	+
3 8,0 8	+
22 4,6 6	+
5 4,6 0	+
39 1,3 8	+
36 4,0 0	+
57 1,1 0	+
3 6,4 0	+
2 7,3 0	+
2 7,3 0	+
1 3,6 5	+
1 3,6 5	+
3 6,4 0	+
76 9,2 5	+
51 3,0 5	+
67 9,6 5	+
38 3,5 6	+
3 8,4 4	+
1 1 3,2 8	+
321 5,8 4	+
51 2 6,4 4	+
1462 9 5,5 1	+

RAS says:
Hourly Cost for our Comparison
as twin flies so much
faster. The gain
Cost per mile at
3.82 for single
1.99 for twins.

If we wish to convert
we as an average
110 M.P.H single
160 MPH twins.

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: OFFICER i/c "G" DIVISION
ADMIN. & PERSONNEL

FROM / DE: O.C. YELLOWKNIFE SUB/DIVISION

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*:

OUR FILE - *N/RÉFÉRENCE*: 78YK-000-1

YOUR FILE - *V/RÉFÉRENCE*:

DATE: 16 FEB 78

SUBJECT / *OBJET*: COSMOS SATELLITE RECOVERY COSTS

In compliance with your related memorandum of 9 FEB 78, the following requested information is submitted with regard to costs.

	(1)Straight Time		(2)Overtime Converted		(4)Travelling Expenses	
Insp. RECHNER	16	13.20		211.20		211.20
S/Sgt. LAMBERT	10	11.58		115.80		115.80
S/Sgt. ARMSTRONG ✓	26	11.58	9	405.30		405.30
S/Sgt. SABEY ✓	11	11.58	12	266.34		266.34
Cpl. LOK Baker ✓	16	9.52		152.32		152.32
Cpl. McCARTHY ✓	6	9.88		59.28		59.28
Cpl. WESTWOOD ✓	2.5	9.88		24.70		24.70
Cpl. GREBER ✓	6	9.52		57.12		57.12
Cpl. REID ✓	No record (8)	9.88	(25)	326.04		326.04
Cpl. HORSMAN ✓	4	9.52	Straight	38.08		38.08
Cst. WOODS	24	8.34		200.16	$24.50 Didn't Submit	224.66
Cst. WISHNOWSKI ✓		9.10	6	54.60		54.60
Cst. OTTMANN ✓	40	8.34	7	391.98		391.98
Cst. REINHARDT ✓	40	9.10		364.00		364.00
Cst. LUCHTMEIJER ✓	3	9.10	63	600.60	~~$70.50~~ 31.20	671.10
Cst. HARRISON ✓	4	9.10		36.40		36.40
Cst. NORTH ✓	3	9.10		27.30		27.30
Cst. DRISDELLE ✓		9.10	3	27.30		27.30
Cst. HARTWIG ✓	1.5	9.10		13.65		13.65
Cst. HOBBS ✓	1.5	9.10		13.65		13.65
Cst. WALKER ✓	4	9.10		36.40		36.40
Cst. GRINSTEAD ✓ Week's 52	(45)	7.62	16 (30)	571.50	~~$137.75~~ Didn't Submit	709.25
Cst. RAYNER ✓ Straight 48	(45)	8.34		375.30	~~$137.75~~ Submit	513.05
4 FEB Cst. McKENZIE ✓	53	9.10	Straight (17)	637.00	$ ~~41.05~~ 157.20	678.05
Cst. BOWDEN ✓	53	6.47		342.91	$ ~~41.05~~ 61.45	383.96
S/Cst. PHELAN ✓		6.39	6	38.34		38.44
C/M ECCLESTON ✓	8	8.09	(6) 5	113.26		113.26

(3) Aircraft Operation - Twin Otter - 10.1 hours ×160 = 1616 MILES × 1.99 = 3215.84
- Single Otter - 12.2 hours × 110 = 1342 miles × 3.82 = 5126.44
14,295.51

(5) Miles by Police Vehicles - 500 by car and 6 hours by police ski-doo. 11.5 × 500 = 57.50 car; 10.00 ski-doo = 67.50 — 67.50
Total of $121.65 was expended on batteries for our portable SSB radios. — 21.65

Rae/YK - 70 Miles

...2/ 001620

2. No doubt other costs will surface or be incurred should we be involved in further assistance in this operation and same will be forwarded when and if received.

(G. Rechner) Insp.,
O.C. Yellowknife Sub/Division.

ROUTINE YD FEB2 UNCLAS

FEB 2 3 19

YELLOWKNIFE S/DIV

SD12/1 FURTHER TO SD11/1 CAMP OF WHITE TRAPPERS LANCE AND EDDY (LAST NAME UNKNOWN) 3 MILES EAST OF RELIANCE CHECKED 30 JAN 78 AND FOUND UNOCCUPPIED MESSAGE LEFT WITH D C C PERSONNEL PERSONNEL RE THE SATTELITES THEY ADVISED THAT THE TRAPPERS WOULD BE STOPPING IN RELIANCE PRIOR TO RETURNING TO THERE CAMP 30 JAN 78 ONLY OTHER KNOWN CAMP IN THAT AREA IS NOEL DRYBONES HE WAS CONTACTED 31 JAN 78 IN SNOWDRIFT AND INFORMED OF THE SITUTATION

SNOWDRIFT DET

YK.S/DIV

PHONE/CC

C

JAN 31 1 36 PM '78

R FINEYK

ROUTINE SD JAN31 UNCLAS

YELLOWKNIFE S/DIV

SD1141 RE SATTELITE FT RELIANCE AREA. PATROL MADE TO FT RELIANCE 30JAN78 VIA CF-MPP . PERSONNEL-DOC SITE ADVISED TO STAY OUT OF AFFECTED AREA. CABINS AND TRAPPING AREA OF RELIANCE TRAPPERS WERE CHECKED BUT OCCUPANTS CLD NOT BE LOCATED. 2 MSGS LEFT WITH DOC PERSONNEL TO BE PASSED ONTO LOCAL TRAPPERS ASAP

SNOWDRIFT DET

PHONE/DA

S/DIV

YELLOWKNIFE(February 3, 1978) Attached please find a copy of a telegram sent to the Honorable Barney Danson, Minister of National Defence, on January 30, 1978.

We felt we should voice our concern on behalf of the N.W.T. consumers.

Had the satellite landed in downtown Yellowknife emergency procedures would not have been activated immediately to ward off the possibility of hysteria. Why? Because our emergency measures people did not even know of the possibility of impending danger.

13/2/78
O/C C.J.B.
Info & P.A.

I note from telex to Ottawa that R.C.M.P. are mentioned, however I don't feel it necessary to further arouse incident by letting them know here in Yellowknife that we had heard from E.M.O. in Edm entirely

Lynda Sorensen
N.W.T. Representative
Executive Director for
Board of Directors

15.2.78
P.A.

Telegram sent to Honorable Barney Danson, Minister of National Defence
House of Commons, Ottawa - January 30, 2:30 p.m.

Consumers' Association of Canada, Yellowknife Branch finds it inexcusable N.W.T. E.M.O. Officer, R.C.M.P. and Commissioner and the Mayor were not alerted to possibility of Soviet Satellite landing in N.W.T. thereby preventing the organizing of standby emergency procedures.

Lynda Sorensen
N.W. T. Representative
Executive Director for
Board of Directors

CONSUMERS' ASSOCIATION OF CANADA
ASSOCIATION DES CONSOMMATEURS DU CANADA
AT POINT OF MAILING - POINT D'EXPÉDITION
CONSUMER INFORMATION
SERVICES (CAC),
Bo 793, Ph. 873-3730,
Yellowknife, N.W.T.,
X0E 1H0,

YELLOWKNIFE 5:30 PM 10 11 1978 N.W.T.

HAY MA ARCT D

Chief Superintendent A.H. Butler
Bag Service 5,000
Yellowknife, N.W.T.
X0E 1H0

001626

PA

TAKEN FR(EDMONTON JOURNAL
ISSUE DATED: Saturday, JAN 28, 1978

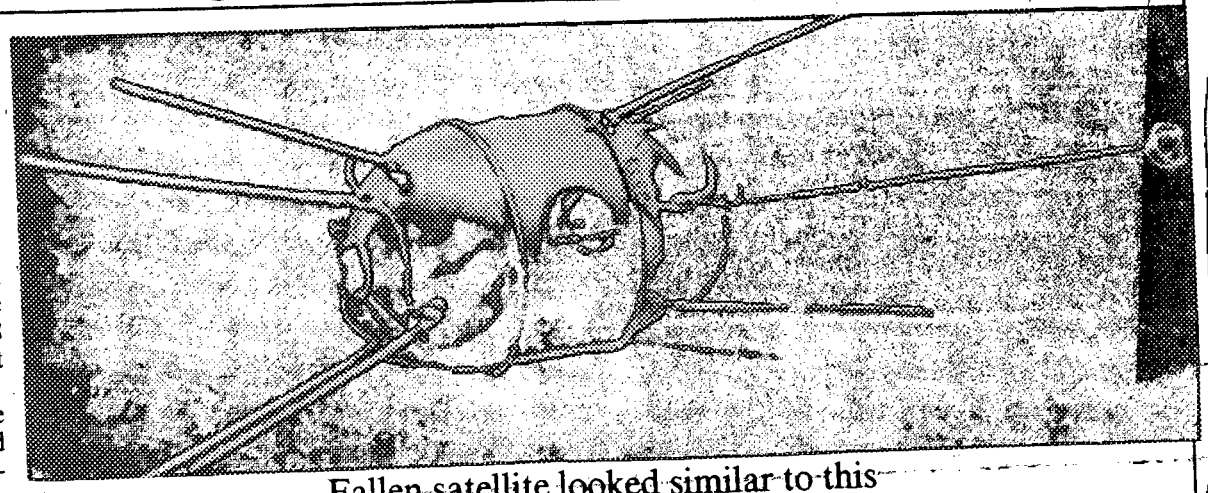
Week's news in review

Canada

Satellite search no easy task

Searching for remnants of the crashed Russian Cosmos satellite is not unlike looking for a needle in a haystack, as hundreds of Canadian and American scientists and armed forces personnel are finding as they comb a desolate 38,848 square-kilometre region of the Northwest Territories.

The nuclear-powered spy satellite wobbled out of its orbit and crashed through the atmosphere in what eyewitnesses called a spectacular ball of fire.



Fallen satellite looked similar to this

MB

FEB 10 9 57 AM '78

[redacted]

Maj. Ebrick
Led Meeting from
Them as of 3:15 pm. 10.2.78 JH 10/2
hoie let us know.
5/58t. S. informed of delay.

10RB 10-2

CIB

TAKEN FROM: NEWS OF THE NORTH
ISSUED: 25 JAN 78

Sputnik down in NWT

BY ALEX SALEMINK

A malfunctioning nuclear-powered Russian Cosmos satellite is believed to have crashed 60 miles east of Great Slave Lake. It happened just before 5 a.m. Tuesday morning (Jan. 24).

Northern Air Defence Command (Norad) officials at the U.S. army base in Colorado Springs and Canadian armed forces personnel state the satellite poses no threat to people or the environment. The area is unpopulated.

The satellite, about the size of a grandfather clock, was powered by a nuclear reactor which contained about 100 pounds of enriched uranium, a NORAD spokesman says.

A U.S. security advisor has told the media in that country that the uranium probably burned up in the atmosphere and the radioactivity that resulted would be similar to that released if a nuclear bomb had exploded in the atmosphere. In other words, radioactivity would be dispersed in minute portions all around the globe.

However, the U.S. air force acting in conjunction with the Department of National Defence in Yellowknife have sent several airplanes with monitoring equipment in an attempt to locate the site of the crash. They also intend to sample the air in the immediate area for radioactive content.

Local DND officials say they were not informed of the incident until it happened. However, NORAD officials say they were informed that the Russian satellite was in a decaying orbit Jan. 14 and they have been in touch with their Russian ambassador ever since.

Capt. Caesar Jordan, of the local DND office, said Tuesday morning he could not give an exact location as to the site of the crash because he fears other pilots in the area could hinder the high-altitude search the army has planned.

He said the army is not sure if the satellite completely disintegrated or if some portion of it landed intact.

The Soviets are not saying what the satellite was being used for.

In the Northwest Territories, Yellowknife weatherman, Rob Lions, reported Tuesday morning that he had received reports of a flaming object in the sky from Ministry of Transport radio operators in High Level, Alberta, Hay River and Fort Simpson. One of the reports originated from two RCMP officers in Pine Point and yet another came from a woman in Yellowknife.

Const. Dale McLeod, of the Pine Point detachment, said he and Crp. Dennis Botterill saw "a white ball of fire" at 4:45 a.m. travelling south, southwest to a north, northwest direction. "I watched it for some distance. It seemed to have a red light on it or just behind. Small balls of fire were spread out behind it on an angle to it," he said.

The officers assumed it was a meteorite and reported it to the Ministry of Transport air radio operator in Hay River.

Mrs. Marie Ruman said later she was just on her way to work, a few minutes before 5 a.m. when she saw the flaming object. "It came from the airport," she said, "and I thought, oh golly, it's a jet on fire. Then I realized it was something else. I ran inside the house to get my son and daughter and they saw it too. There was a red flame following it and dozens and dozens of pieces each with a tail of red flame as well."

She said it appeared to travel across the sky no faster than a plane.

TAKEN FROM: EDMONTON JOURNAL
ISSUE DA[illegible] 28 JAN 78

Looking for a 'hot' spot in frozen North

By DON THOMAS

It was just another routine flight, the tenth by Canadian Forces Hercules aircraft in the hunt for a nuclear-powered Soviet satellite that went down Jan. 24.

But there was nothing ordinary about the equipment and men (and woman) aboard this flight from the Canadian Forces Edmonton (Namao) base.

Most flights had so far involved use of radiation detectors developed in the United States and manned by U.S. personnel. That bruised Canadian egos.

The gamma ray detectors are used to pick up radiation from remains of the reactor that powered the Soviet satellite.

This was to be Canada's sovereignty flight, carrying a highly sensitive gamma ray spectrometer developed by the Geological Survey of Canada (GSC) to locate uranium deposits.

It is the only one in Canada and it made its maiden search mission in this same Herc earlier Thursday.

Manning it were Dave Grasty, a physicist and Peter Molman, a technician, both with the GSC in Ottawa.

The only Americans on board were reporters for Newsweek, the New York Post and a camera crew for ABC-TV and this time it was Canadian technology in the limelight.

We took off trying to solve a puzzle: two higher-than-usual radiation sources had been detected during an earlier Herc flight and we would come back still uncertain about one of them.

Our evening began about 8 p.m. Thursday when we were told to be at Namao in half an hour for a flight to the northeast tip of Great Slave Lake, 1040 kilometres away.

When we arrived at Hangar 5, we had to leave behind our own winter clothing and put on military outfits: heavy khaki parkas, leather mitts, nylon wind pants and wool and nylon mukluks.

Our mission was to fly a quadrant 90 by 50 kilometres just to the north of Fort Reliance on the northeast tip of Great Slave Lake and 190 kilometres east of Yellowknife.

This was close to the spot where the nuclear-powered Cosmos 954 satellite was first believed to have come down about 5 a.m., Jan. 24.

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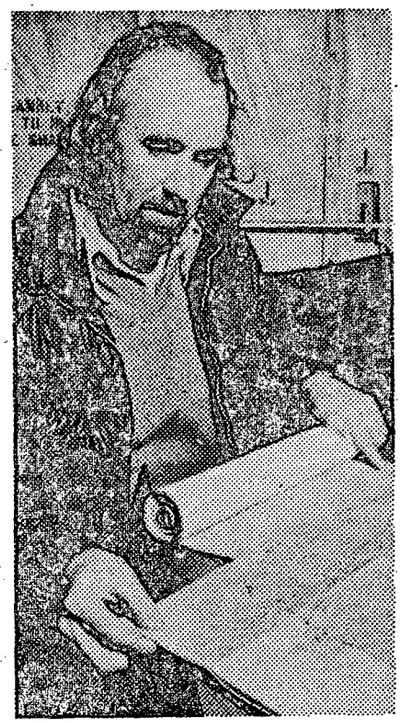

Dave Grasty checks location on map

and we were to check them out on our flight.

At about 10:15 p.m. we climbed into the Herc.

In the centre was the spectrometer, about 10 feet along and four feet high, with a cathode ray tube, keyboard, and graph facing the operator.

It's connected to an array of sensors that emit light of varying intensities depending on the radiation source. On this flight they will constantly show levels of background radiation.

Peter Holman and Dave Grasty will huddle over this machine for 10 hours watching for squiggles on the graph paper that might indicate an unusually strong radiation source.

Captain John Oliver, 34, is at the Herc's controls.

He's been on four real-life search and rescue missions before, including the Marten Hartwell search in 1972.

"This is pretty well a normal search and rescue mission," he says. "There's flat terrain and not too much to worry about in the way of obstacles.

Others in his crew include Capt. Serge Cote, first officer; Capt. Steve Lucas, navigator; W/O John Thibault, flight engineer; Cpl. Mike Whelan, rescue specialist; and Master Cpl.

For the next 8½ hours we will maintain this same speed and altitude, flying 18 times up and down our quadrant.

A full moon hangs above our port wing as we begin the first leg, its light occasionally glinting off a frozen lake below.

As we cross from McLeod Bay at the northeast tip of Great Slave Lake to the shoreline, jagged peninsulas of rock line up pointing northeast-southwest, the line the glaciers took.

Our Omega navigation system is intended for long-distance flying so navigator Capt. Lucas and the pilots rely heavily on the landforms to pinpoint our position.

Cockpit chatter on the headsets as they discuss their position goes like this:

"This is a good altitude to fly . . . if you were any lower, it would be hard to distinguish stuff . . ."

As we move from the land back toward the lake:

"See that little bay to your left? Put your wing on it."

The spectrometer keeps etching little squiggles on the graph paper. But it doesn't interest the technicians and soon most of us try for a few hours sleep.

At 7 a.m. it is still dark, the moon still bright, while on the eastern horizon a dull smear of orange shows where the sun will rise two hours later.

The Herc's turbo-prop engines have gulped more fuel than expected — our load has dropped from 62,000 pounds to 23,000 pounds — and Captain Lucas says we must head home.

"After this exciting instalment, I'm not sure I really mind," says Capt. Oliver.

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As Dave Grasty re-checks the map and his graphs, he sees a prominent squiggle only two miles from the point where the Americans got one on Wednesday and 20 kilometres north of Fort Reliance.

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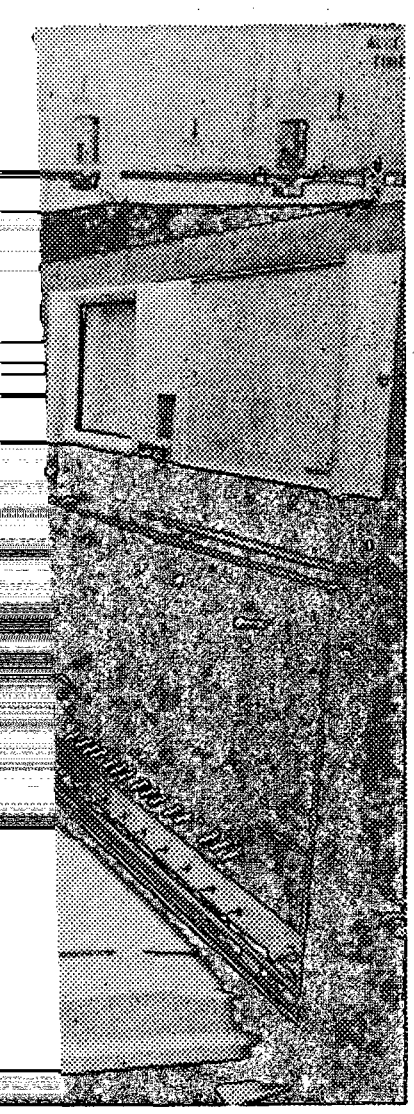

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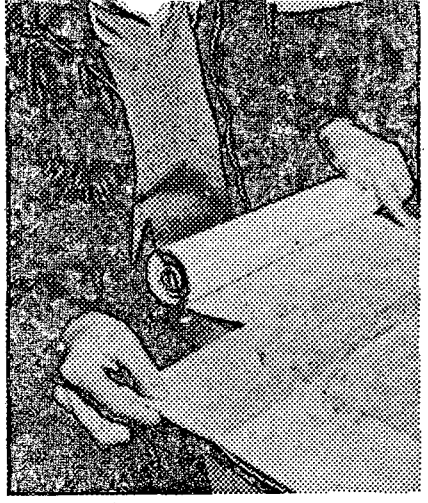

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Photos by Jim Cochrane

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The puzzle is still with us as we stumble numbly from the plane back at Namao, just about exactly 12 hours after we left.

We have covered 2,138 miles on this trip, burned up 56,000 pounds of fuel. Had we been on a commercial jet that long, we could have been in Hawaii by now.

But the plane will be turned around in about an hour and will go up again for another search once it was been refuelled and another crew comes on.

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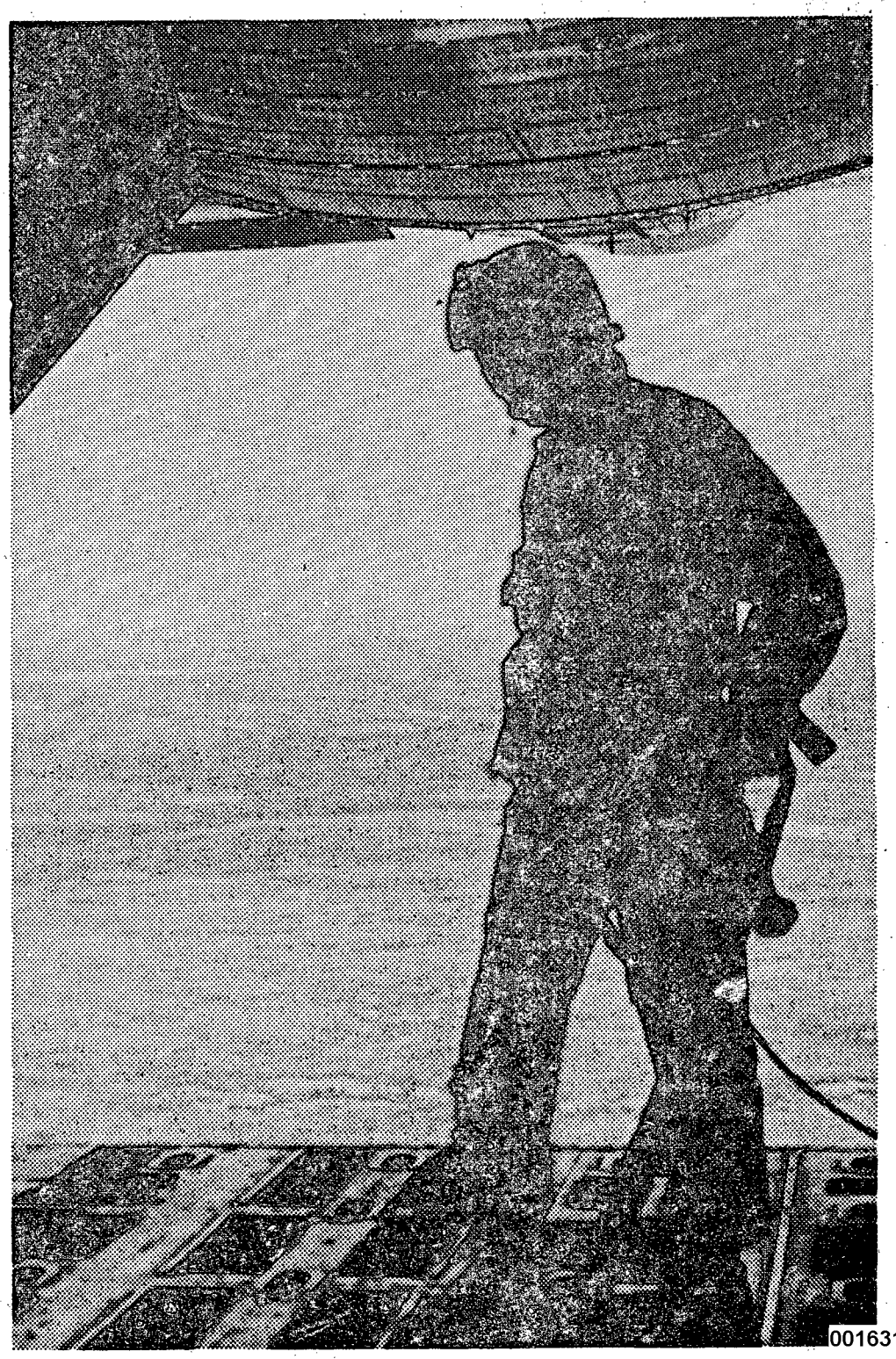

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Canadian serviceman views search area from open ramp of C-130.

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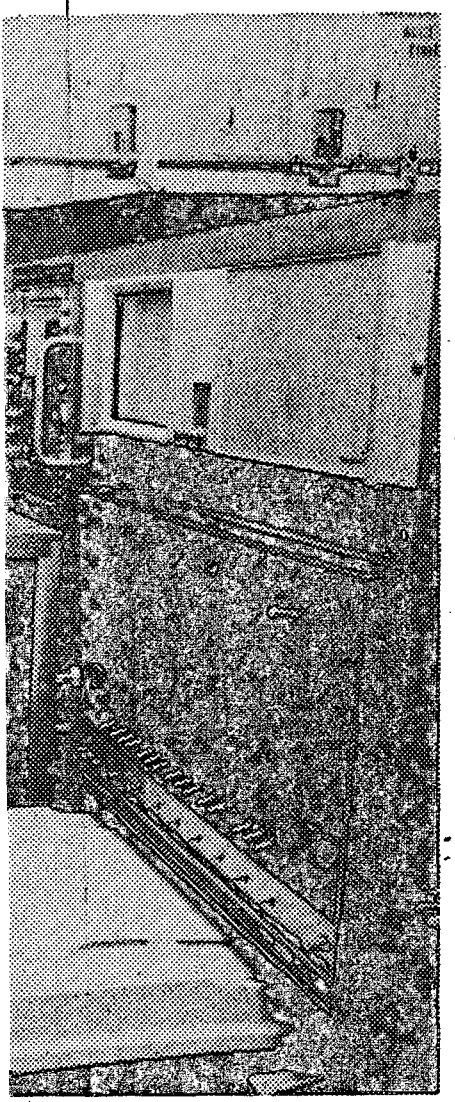

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001632

Canadian serviceman views search area from open ramp of C-130.

'I guess we have a little bit of egg on our faces'

By HUBERT JOHNSON

YELLOWKNIFE — Embarrassed Canadian military officials and American scientists are "back to square one" in their search for radioactive fragments of the Soviet satellite which is believed to have crashed near here.

Earlier reports of contacts with man-made radioactive material in the Northwest Territories were due to faulty equipment, Canadian Forces authorities said Friday.

"I guess we have a little bit of egg on our faces, but that's the way it goes," said Canadian Forces Regional Headquarters Information Officer Capt. Caesar Jordaan.

A possible radiation source had been located midway between Yellowknife and Baker Lake this week and had been connected with the reentry sighting of the missing Russian satellite.

A crew of up to 30 Canadian military experts and U.S. department of environment technical experts flew to Baker Lake Thursday, expecting to begin searching operations Friday for the exact source of radiation emissions about 300 kilometres from there.

But low-flying aircraft tried to locate the spot five times without success Friday, Captain Jordaan said. The aircraft were equipped with gamma detection equipment from the U.S., and American technicians were on board to interpret the information.

"They're blaming it on an equipment malfunction," Captain Jordaan said, "but what the source of the malfunction was, I just can't say."

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Get your souvenirs here

YELLOWKNIFE — The missing Russian satellite is costing the Canadian government plenty of money while some local residents are collecting the bucks from the incident.

One silk-screen merchant is marketing T-shirts and sweatshirts to satirically commemorate the occasion. The T-shirts sell for $6 and the sweatshirts sell for $10. Each depict a black raven astride a falling satellite with Russian identification and the words "What, me worry?"

Manufacturer Michael Lane says it's a "takeoff on Dr. Strangelove where he rode the missile to Moscow, except here is a raven riding the satellite to Baker Lake."

Another local craftsman is selling bone-based penholders bearing the words "Yellowknife-Satellite City."

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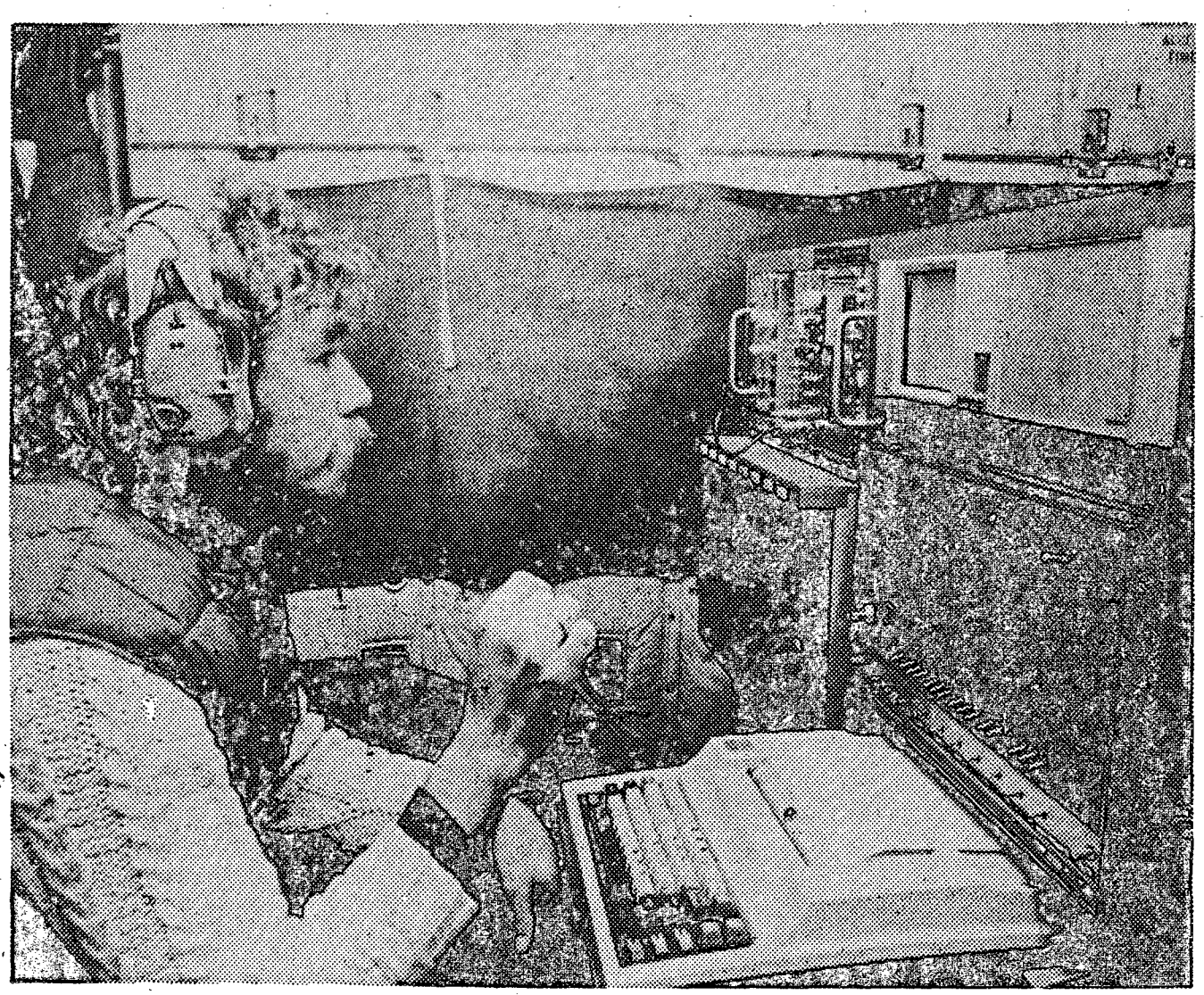

Technician Peter Holman keeps watch on gamma spectrometer

Canadian serviceman views searc... ...or

OUTGOING MESSAGE / ***MESSAGES SORTANTS***

● IN TIONS ON REVERSE / ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier* 78G-000-2 78YK-000-1	Drafter's Name — *Nom du rédacteur* INSP. RECHNER	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section* SUB/DIVISION	Phone No. — *N° de téléphone* 873-3484	
Precedence for Action Addresses *Priorité pour suite à donner* ~~PRIORITY~~ Routine	Precedence for Infor. Addresses *Priorité pour renseignements* ~~PRIORITY~~	Date 16 FEB 78	Security. CLASSIFICATION *sécuritaire* ~~SECRET~~ UNCLAS

FROM / *DE* ~~O.C. YELLOWKNIFE SUB/DIVISION~~ "G" Div.

TO / *A* COMMISSIONER, OTTAWA

INFO. / *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GCIB 099/1 *N° DU MESSAGE ORIGINAL*

ATT'N: INSP. CHAIROT - FEDERAL POLICING BRANCH
(TELECOMS - DELIVER TO INSP. CHAIROT ASAP 17/2/78)

RE:"OPERATION MORNING LIGHT" OR SOVIET SATELLITE

TO COMMENCE OPERATION OUR TELEX GCIB 055/9 OF 23 JAN 78, H.Q. CIPHER MESSAGES DCI/1/4 OF 23 JAN 78, DCI/1/5 WERE EXCHANGED ON MATTER.

24 JAN 78 ALL DETACHMENTS IN YELLOWKNIFE SUB/DIVISION WERE CANVASSED FOR REPORTS THEY MAY HAVE RECEIVED OF UNUSUAL OCCURRENCE OR SIGHTING OF UNUSUAL OBJECT. INSTRUCTION ISSUED AT SAME TIME NO COMMENT BE MADE TO MEDIA. MEMBERS AT HAY RIVER AND PINE POINT OBSERVED THE SATELLITE TRAVELLING EARTHWARD. AN EMPLOYEE OF M.O.T. AT HAY RIVER ALSO OBSERVED THE FALLING SATELLITE.

ON 27 JAN 78 "F" DIVISION INFORMED US CONCERNS WERE EXPRESSED BY INDIANS AT STONY RAPIDS AND FOND DU LAC ABOUT THE LANDING AS IT BORDERED THEIR TRADITIONAL HUNTING AREA. THIS CAME TO US VIA C.P.I.C. WITH COPY TO COMMISSIONER (ATT'N: NATIVE POLICING BRANCH). OUR REPLY BY GCIB 066/1 OF SAME DATE WITH COPY TO COMMISSIONER (NATIVE POLICING BRANCH).

.../2

OUTGOING MESSAGES — ***MESSAGES SORTANTS***

● IN ...TIONS ON REVERSE — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
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Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
FROM *DE*			
TO *A*			
INFO. *POUR RENSEIGNEMENTS*			

PAGE 2

ORIGINATORS MESSAGE NO. GCIB 099/1 *N° DU MESSAGE ORIGINAL*

EVENING 29 JAN 78 C.I.B. OFFICER SUPT. BARKER AND YELLOWKNIFE SUB/DIVISION O.C. INSP. RECHNER ATTENDED MEETING WITH D.N.D. OFFICIALS AND GEOFF KNIGHT OF ATOMIC ENERGY CONTROL BOARD. RESULTS REPORTED H.Q. BY TELEX GTEL/66/2 30 JAN 78.

30 JAN 78 TWO MEMBERS MOVED TO SITE IN FORT RELIANCE AREA TO GUARD A SCENE. THEY WERE ACCOMPANIED BY TWO MILITARY PERSONNEL. THIS SITE WAS GUARDED UNTIL 5 FEB 78, WITH ONE MOVEMENT OF THE CAMP AS CLEANUP WAS PROGRESSING. ON 5 FEB 78 MEMBERS WERE WITHDRAWN FROM FORT RELIANCE AREA AS CLEANUP COMPLETED.

ON 30 JAN 78 ONE MEMBER ACCOMPANIED BY 1 MILITARY MOVED TO WARDENS GROVE AREA TO GUARD MAIN SITE. A SECOND MEMBER FOLLOWED ON 31 JAN 78. WARDENS GROVE SITE WAS GUARDED UNTIL 6 FEB 78. BY THAT DATE RECOVERY OF SATELLITE REMAINS MADE AND READY TO TRANSPORT OUT. OUR TELEX GCIB 080/1 REFERS.

30 JAN 78 SNOWDRIFT DETACHMENT PATROLLED VIA POLICE AIRCRAFT TO FORT RELIANCE AND AREA TO INFORM PEOPLE TO STAY CLEAR OF AFFECTED AREA. PATROL CONSISTED OF VISIT TO KNOWN TRAPPERS CABINS AS WELL. MESSAGES LEFT FOR THOSE NOT SPOKEN WITH.

001635

...3/

OUTGOING MESSAGE — *MESSAGES SORTANTS*

● I: ICTIONS ON REVERSE — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
FROM *DE*			
TO *À* INFO. *POUR RENSEIGNEMENTS*			

ORIGINATORS MESSAGE NO. _____ *N° DU MESSAGE ORIGINAL*

PAGE 3

DAILY LIAISON MAINTAINED WITH LOCAL MILITARY OPERATIONS PERSONNEL. 10 FEB 78 MILITARY REPORTED FINDING SEVERAL RADIO ACTIVE HOT SPOTS ONE TO FOUR MILES WEST OF SNOWDRIFT. SAME DATE OUR PERSONNEL ACCOMPANIED BY MILITARY MOVED TO SITE FOR GUARD DUTY. NO PHYSICAL MATERIAL LOCATED BY MILITARY. SEEMS RADIO ACTIVE ASH SETTLED IN THE SNOW. OUR TELEX GCIB 092/2 REFERS. OUR PERSONNEL WITHDRAWN 13 FEB 78. THROUGHOUT OPERATION, MILITARY SUPPLIED THIS FORCE WITH CAMPING EQUIPMENT FOR USE AT VARIOUS SITES. MOVEMENT OF RCMP PERSONNEL WAS MADE BY MILITARY AND POLICE AIRCRAFT. OUR INVOLVEMENT WILL CONTINUE AS AND WHEN REQUIRED. COMMUNICATION LOCALLY BETWEEN MILITARY AND THIS FORCE IS GOOD AND WE ARE PREPARED TO ATTEND WHEN NEW FINDS MADE. THERE HAS BEEN VERY LITTLE PUBLIC REACTION OVER THE SATELLITE INCIDENT IN THE GENERAL AREA AFFECTED EXCEPT FOR SOME INITIAL CONCERN AT SNOWDRIFT WHICH IS A SETTLEMENT NEAR THE FORT RELIANCE DEBRIS SITE. THEIR CONCERN WAS RELIEVED AFTER A SPECIAL VISIT BY MILITARY OFFICIALS AND RADIATION EXPERTS ADVISED THERE WAS NO DANGER. THE SIX PERSONS WINTERING AT WARDENS GROVE WHO FIRST ENCOUNTERED SATELLITE DEBRIS WERE NOT UNDULY001636

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

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B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)
B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .
C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

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C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

OUTGOING MESSAGE / ***MESSAGES SORTANTS***

● INSTRUCTIONS ON REVERSE ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
FROM *DE*			
TO *À* INFO. *POUR RENSEIGNEMENTS*			

ORIGINATORS MESSAGE NO. _____ *N° DU MESSAGE ORIGINAL*

ALARMED AND THEY HAVE NOT EXPRESSED ANY CONCERN TO US. THEY HAVE SINCE RETURNED TO THEIR CABIN AT WARDENS GROVE WHICH IS TWELVE MILES FROM DEBRIS SITE WHERE MILITARY ARE SETTING UP CAMP AND AN AIRSTRIP. OUR MEMBERS WHO GUARDED THE VARIOUS DEBRIS SITES NEVER ENCOUNTERED ANY UNAUTHORIZED PERSONS DURING THEIR TOUR OF DUTY.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D. R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

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DIRECTIVES

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PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

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OUTGOING MESSAGES — ● INST "IONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	78G-000-2	J.E. HISCOCK, S/SGT.	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3489	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
PRIORITY		10 FEB 78	UNCLASSIFIED

FROM *DE* "G" DIVISION

TO *À* COMMISSIONER, OTTAWA

INFO. *POUR RENSEIGNEMENTS* OC YELLOWKNIFE SUB/DIVISION (By Hand)

ORIGINATORS MESSAGE NO. GCIB 092/2 *N° DU MESSAGE ORIGINAL*

ATTN: D. C. I. and

INSP. CHAIROT - FEDERAL POLICING BRANCH

RE COSMOS SATELLITE. AT APPROXIMATELY 12:30 PM MST TODAY, A MILITARY HELICOPTER PICKED UP SEVERAL RADIOACTIVE HOT SPOTS IN AREA ONE TO FOUR MILES WEST OF SETTLEMENT OF SNOWDRIFT LOCATED SOUTH WEST OF RELIANCE ON GREAT SLAVE LAKE, N.W.T. IMMEDIATE ACTION UNDERTAKEN TO CORDON OFF AREA AND ONE MEMBER WITH MILITARY ASSISTANCE DISPATCHED TO SCENE. LOCAL MILITARY, COL. BUTCHART, INFORMED. AT THIS TIME, NO PIECES HAVE BEEN DISCOVERED TO OUR KNOWLEDGE AND THESE ARE READINGS ONLY.

Ruchtmeier + 3 mil. will watch c/mte plus 1 mil. will be taking on-the-ground readings upon arrival.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D.R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	3:15 pm

001640

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

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INFO: Enter all information addresses.

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DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

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RESTRICTED

PRIORITY SNOWDRIFT FEB10 R E S T R I C T E D

FEB 10 1 25 PM '78

YELLOWKNIFE SUB/DIV

SN14/1 APPROX 12:30PM THIS DATE A MILITARY HELICOPTER FOUND SEVERAL RADIO-ACTIVE HOT SPOTS IN AREA ~~124~~ one to four MILES WEST OF SNOWDRIFT AREA TO BE CORDED OFF FURTHER INFO TO BE FORWARDED WHEN KNOWN

SNOWDRIFT DET

RECEIVED
FEB 10 1978
2 00 PM
/D

Cpl. Greber was contacted via phone @ 2 PM this date to clarify location & same was 1 to 4 miles from Snowdrift rather than 124. Greber advised the Military were having a few problems with their helicopters however the area was being guarded and the military were returning ASAP with additional Manpower. Col. BOUCHART @ local N.R.H.Q., was contacted by phone to Ascertain if assistance was required; he advised that he had not been advised of this incident and would get back to our Office (2:15PM).

At 2:45 PM Maj BOHERICK phoned and requested 1 member of the RCMP accompany 3 Military Men who will depart Yellowknife RCMP/DND Hangar at 3:20 P.M. Sgt. SCHOLAR contacted and Cst. LUCHTMEIJER detailed to accompany the DND Crew in their A/C.

001642

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: O.C. YELLOWKNIFE SUB-DIVISION

FROM / DE: OFFICER IN CHARGE ADMIN. & PERSONNEL
"G" DIVISION

SECURITY - CLASSIFICATION - *DE SÉCURITÉ*:

OUR FILE - *N/RÉFÉRENCE*:

YOUR FILE - *V/RÉFÉRENCE*:

DATE: 9 FEB 78

SUBJECT / *OBJET*: Cosmos Satellite Recovery Costs

It is expected that Headquarters will be asking for a complete listing of costs directly associated with the recovery of fragments of the Cosmos Satellite. In anticipation of this, we must develop a breakdown of such costs incurred by the Force.

2. I am not sure of what our total involvement was but among other items I foresee:

1. Number of hours spent by each member on this operation. On account of the various pay levels of personnel involved perhaps the members should be listed by name with their hours worked and we can compute the dollar figure here.

2. Number of overtime hours (converted) by each.

3. Number of hours devoted to this operation by our police aircraft - twin and single identified separately. Here again we will attach the price tag.

4. Travelling expenses incurred by each member.

5. Number of miles put on by police vehicles.
You can identify probably other expenses as well that can be charged against this exercise. In any event, please provide as complete a list as you can.

C.R. Latremouille, Insp.,
Officer In Charge,
Admin. & Personnel

FORMULE NORMALISÉE 324

001643

OUTGOING MESSAGES — ● IN TIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt – *Heure de réception*	File No. – *N° de dossier* 78G-000-2	Drafter's Name – *Nom du rédacteur* D.R. BARKER, SUPT.	Time of Dispatch – *Heure d'envoi*
	Br. or Section – *Sous-direction ou section* C.I.B.	Phone No. – *N° de téléphone* -3488	
Precedence for Action Addresses *Priorité pour suite à donner* ROUTINE	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 7 FEB 78	Security, CLASSIFICATION *sécuritaire* UNCLASSIFIED

FROM / *DE* "G" DIVISION

TO / *À* COMMISSIONER, OTTAWA

INFO. / *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GCIB 080/1 — *N° DU MESSAGE ORIGINAL*

ATTENTION: D.C.I.

RE: COSMOS SATELLITE. POLICE PRESENCE AT TWO DEBRIS SITES NO LONGER REQUIRED. MEMBERS AT FORT RELIANCE SITE WERE WITHDRAWN 6 FEB 78 AFTER ALL DEBRIS REMOVED. FIFTEEN D.N.D. MEMBERS AT WARDEN'S GROVE SITE HAVE REMAINING DEBRIS READY FOR REMOVAL TODAY. ARRANGEMENTS BEING MADE TO WITHDRAW OUR MEMBERS TODAY IF POSSIBLE. D.N.D. REMAINING AT WARDEN'S GROVE FOR CLEAN-UP. THERE ARE NO OTHER DEBRIS SITES IDENTIFIED TO DATE.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D.R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

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TO: Enter all action addresses.

INFO: Enter all information addresses.

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DIRECTIVES

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B) à titre de renseignements: ordinaire habituellement

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POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

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Operation Morning Light

For the past week, and perhaps for some time in the future, the attention of the world has been on the Northwest Territories because of the crash of the Cosmos-954 satellite.

It is the first time an accident has occured involving nuclear materials and, as such, it has a great deal of bearing on the current dispute between those in favor of and against the use of nuclear energy.

In this special section News of the North attempts to give a pictorial and story documentation of the events that have led to the finding of a large piece of the satellite in the Thelon Game Sanctuary.

The tiny community of Fort Reliance was a peaceful place until it was made known that fragments of the nuclear-powered Soviet Satellite may be in the area.

Tuesday, Jan. 24

Marie Ruman, of Yellowknife, calls the local weather office to report she saw a flaming object in the sky just before 5 a.m. which looked like "a jet on fire." She said the main part of the flaming object was bright red in color and it was followed by "dozens of little pieces" all with flaming tails.

Weatherman Rob Lines takes down the information and checks the sighting with reports he has received from Ministry of Transport stations in High Level, Alberta, Hay River, and Fort Simpson.

One of those reports originated from RCMP Cons. Dale McLeod, of the Pine Point detachment. "It seemed to have a red light on it or just behind. Small balls of fire were spread behind it on an angle to it." He said it was travelling south, southwest to a north, northwest direction.

'It seemed to have a red light on it or just behind. Small balls of fire were spread behind it and on an angle to it.'

At about 8 a.m. reports from the defence ministry in Ottawa suggest that a malfunctioning nuclear-powered Soviet satellite (Cosmos-954) may have crashed at the east end of Great Slave Lake.

North America Air Defence Command (NORAD) headquarters in Colorado Springs, Colorado, issues a statement to the U.S. press informing the world that they were aware that the satellite was in a decaying orbit. It was tracked by radar until it disappeared at the east end of Great Slave Lake.

In co-operation with the Canadian Forces Base Edmonton (Namao), American U-2 spy planes are sent to the area to do some high altitude testing for radiation contamination.

It was felt that there was a 98 per cent chance that the 100 pounds of Uranium 235 aboard the satellite burned up on re-entry into the atmosphere. It is the same type of uranium that currently powers most nuclear reactors including Canada's Candu reactor.

Gamma ray detectors and a special Nuclear Accident Support Team (NAST) arrive in Yellowknife from Las Vegas, Nevada, and Andrews Air Force Base, Washington, D.C.

According to Captain John Lyne, in charge of the group in Yellowknife, the team is called into action whenever there is a situation of uncontained nuclear materials.

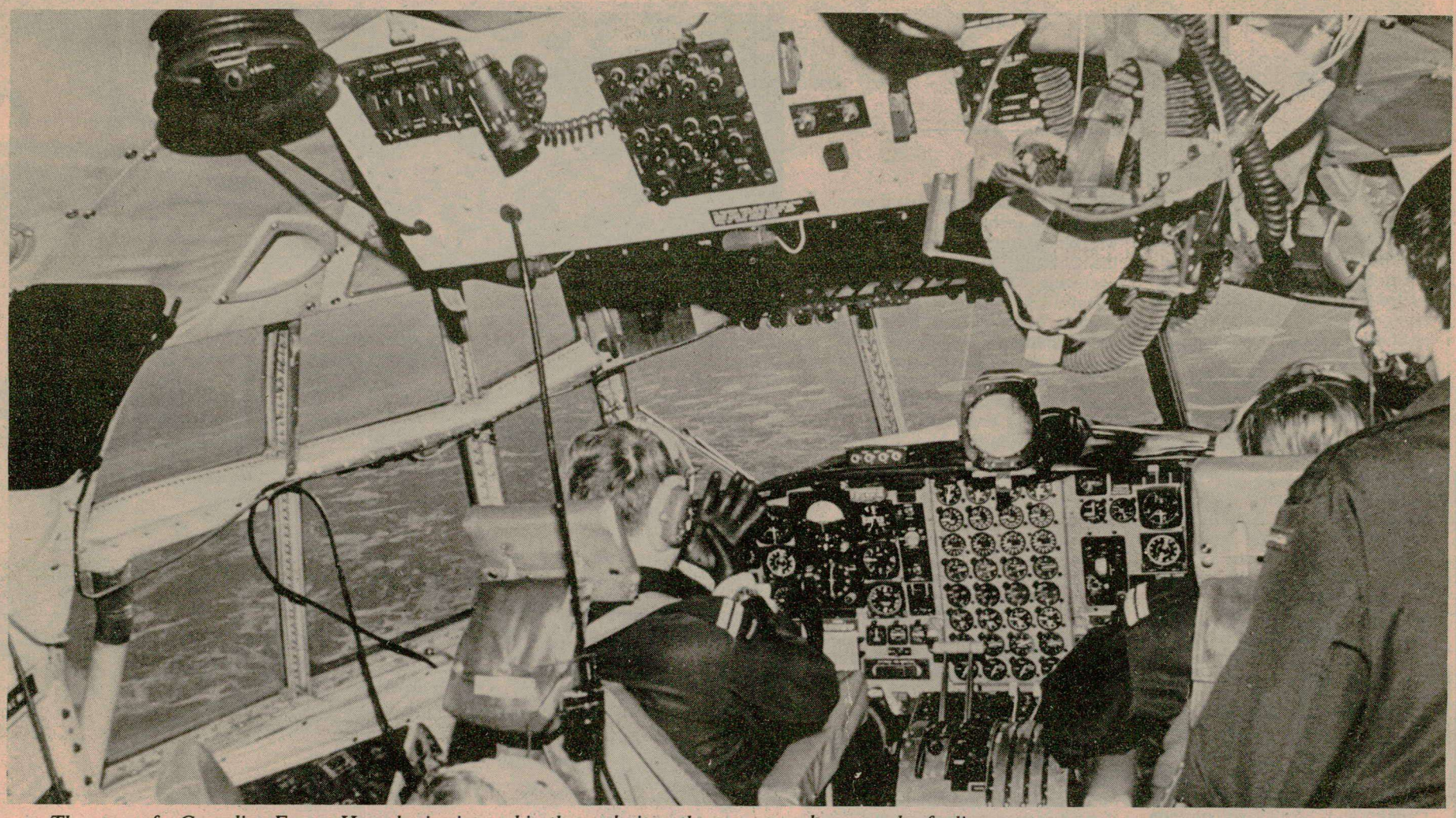
Half the the group, 22, are in Yellowknife and immediately start testing for radiation. The other half of the group remains in Edmonton waiting for the crash site of the satellite to be located.

Meanwhile, the trickle of calls from all over the world to local journalists has become a deluge.

Late that night the Canadian Forces base in Edmonton sends out the first of three Hercules planes with radiation monitoring equipment.

Twenty-two members of the Nuclear Accident Support Team check into the Yellowknife Inn last Tuesday night. They went out an hour later to check radiation levels in the city but nothing unusual was found.

A nuclear response team member unloads gear from a Canadian Forces Twin Otter last Wednesday at the Yellowknife airport. The team had just returned from checking radiation levels in the Fort Reliance area.



The crew of a Canadian Forces Hercules is pictured in the cockpit as they return from BAker Lake to the Namao base, after a 12-hour shift, for a crew change and refueling.

Alfred Villare, from the U.S. department of energy, grabs a quick bite to eat as he continues to monitor the readouts from the on-board computer in the Hercules aircraft.

Wednesday, Jan. 25

All three Canadian Forces Hercules, carrying gamma ray detectors on loan from the U.S., are in the air either heading to, travelling over, or returning from the search site.

Th site is identified as an area stretching from a point 50 miles east of Yellowknife to some 600 miles further east to Baker Lake, an Inuit community of 1,000. The zone is 30 miles wide.

The Hercules are to be in the air round the clock making the two hour trip back to the Namao base only for crew changes every 12 hours.

Col. David Garland, commander at the Namao base, reports the high-flying U-2 aircraft from the U.S. have detected nothing.

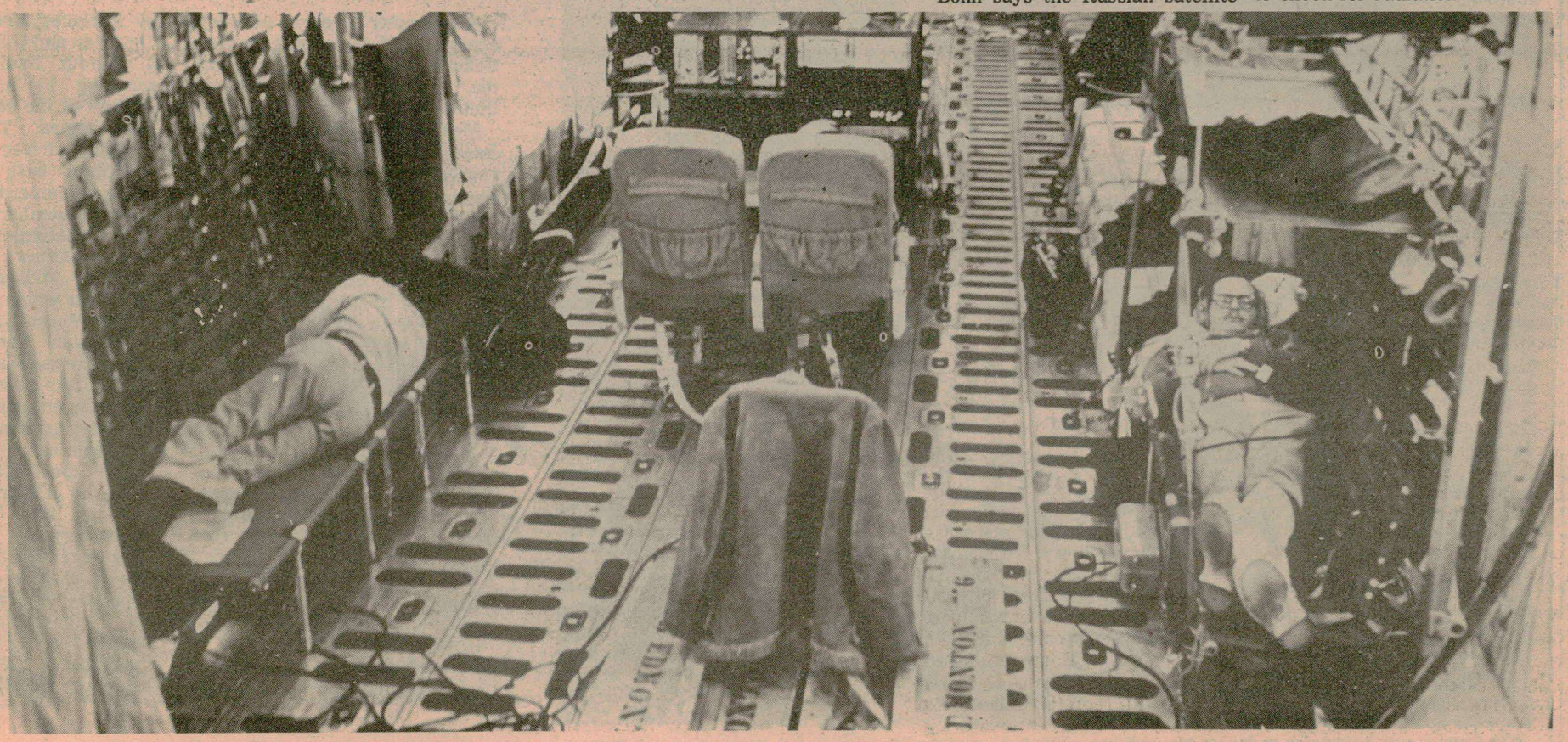
However, West Germany's Institute for Space Observation in Bonn says the Russian satellite has left behind a large radioactive trail in the upper atmosphere.

It says radioactive particles will begin to fall to the ground in a few weeks. The West Germans say the fallout could effect any part of the earth between the Equator and the 52nd parallel.

Later in the day Canadian Forces Base Edmonton call on a fourth Hercules to provide special radio communications assistance. Three Twin Otters, one Chinook helicopter and two "Twin Huey" helicopters are on standby.

The nuclear response team testing the Yellowknife area reports there is no indication of radiation contamination.,

Part of the team flies to Fort Reliance, a community of 20 on the east end of Great Slave Lake to check for radiation there.



A tired crew rests on bunks in the huge body of the Hercules as it returns to Canadian Forces Base Edmonton to pick up a another crew and some provisions.

Thursday, Jan. 26

Canadian Forces Base Edmonton reports that a possible radiation source has been located midway between Yellowknife and Baker Lake.

The Ministry of Transport has issued a warning to all aircraft to stay away from the search area because of low-flying military aircraft.

A team of Canadian military military experts and U.S. department of environment technical experts are sent to set up a post in Baker Lake. Part of the nuclear response team is sent from Fort Reliance to Baker Lake as well. No radiation has been detected in Reliance.

Baker Lake residents are told by the military that the possible radiation source poses no health hazard.

Meanwhile, an aerial search for possible contamination has spread to the more populated regions of northern Canada and as far south as Michigan, Wisconsin and Illinois.

Defence department officials say the search may be extended to the eastern seaboard of Canada and the U.S. to continue scanning of the rapidly-moving air mass that could have been contaminated by the burning satellite.

That day, the Soviets hand over to Canada technical information which could help in dealing with the possible aftermath of the accident.

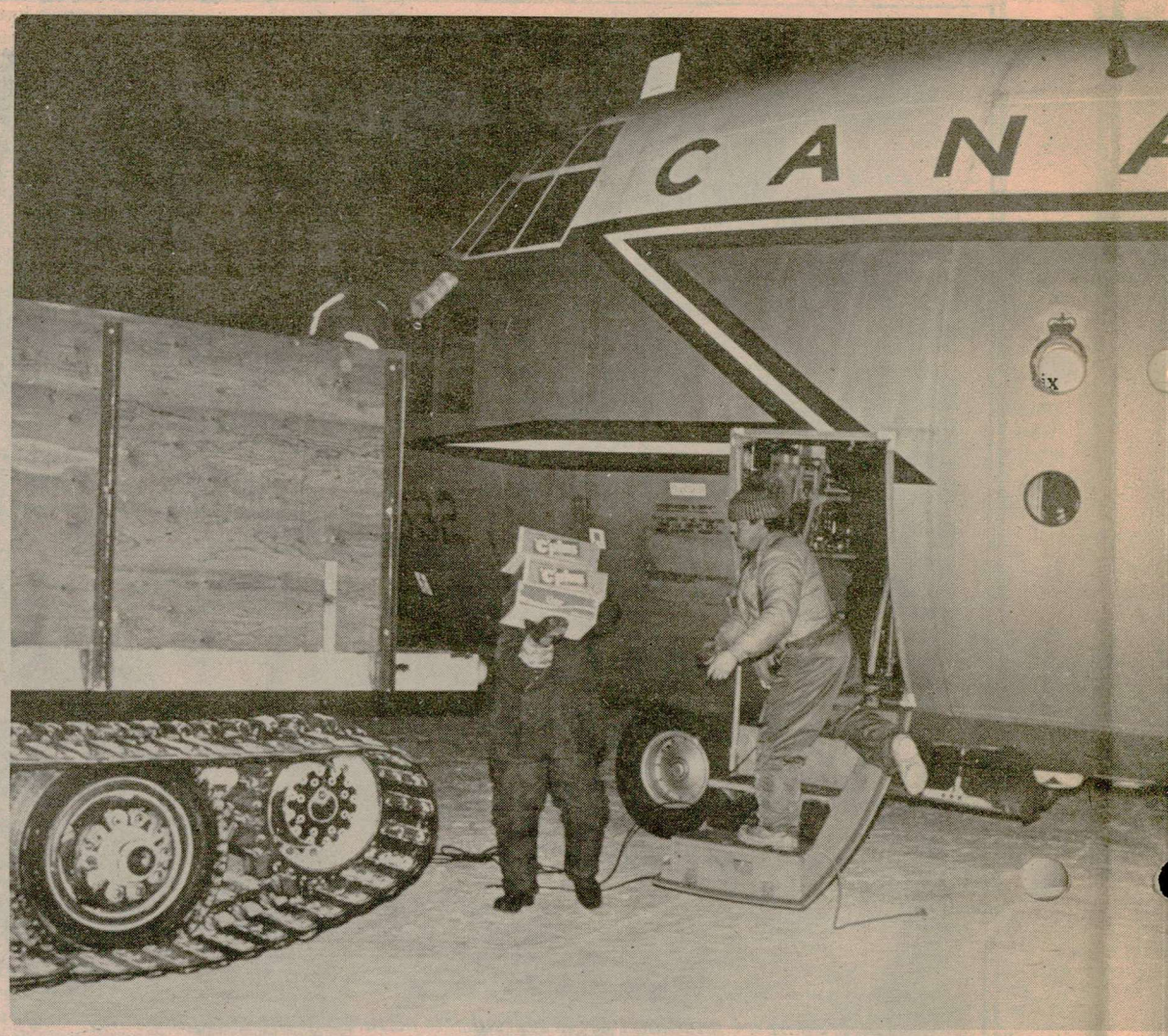
Defence Minister Barney Danson expresses concern that the Canadian government was not informed of Russia-U.S. talks early in the month on the possibility that the satellite would fall on North America.

In Yellowknife, Mayor Fred Henne is miffed that he wasn't warned of the satellite's fall and fires off a telegram to Danson asking why.

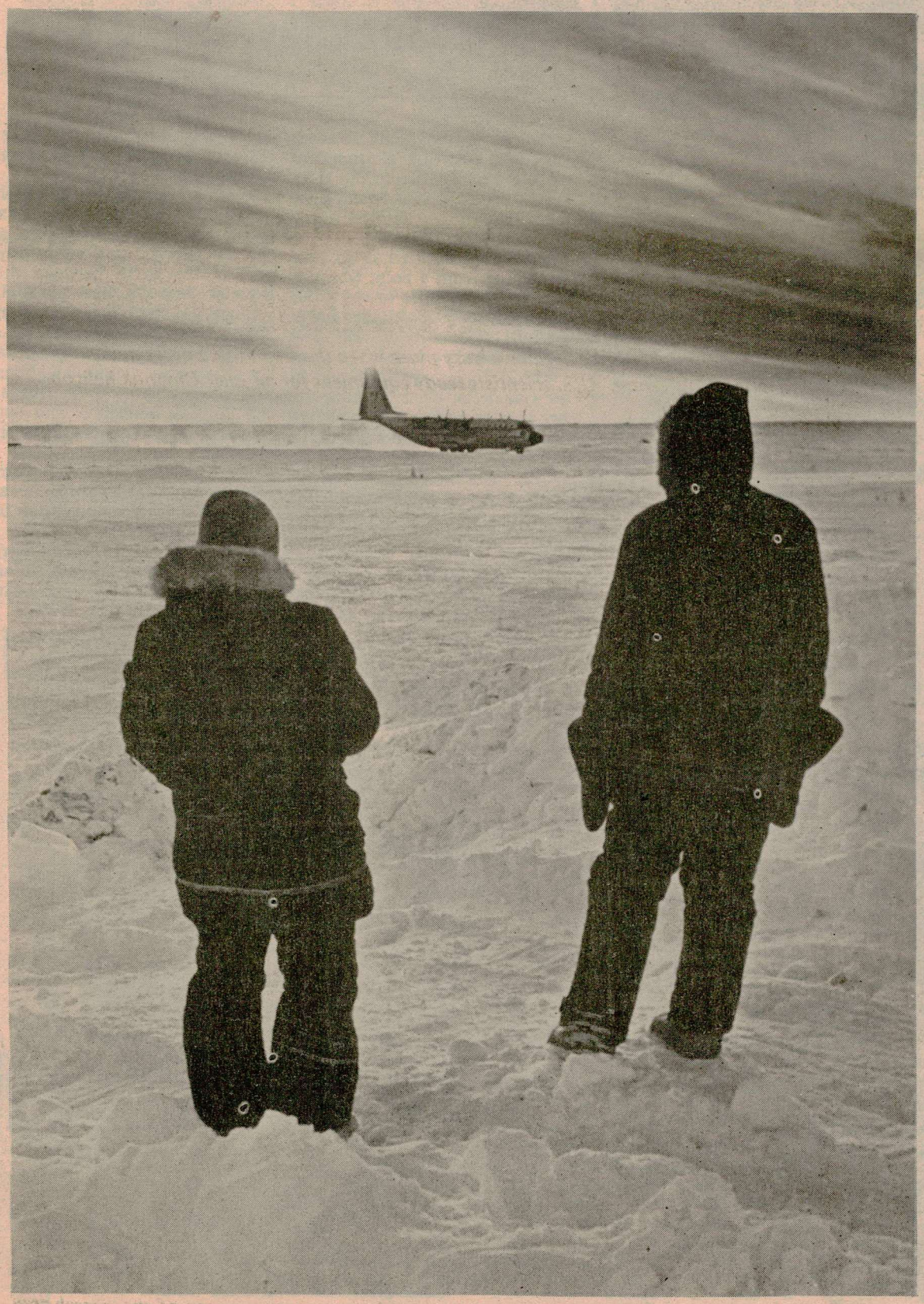
Capt. Ceasar Jordaan, the Canadian Forces northern regional headquarters information officer, reports late in the day that the possible radiation source is one of three being investigated. He speculates the other two sites, east of Fort Reliance, are natural uranium deposits.

He says the nuclear response team has found no indication of unusual radiation in Baker Lake.

There is some alarm in Baker Lake because the people see a lot of military activity there and understand little of what it's all about.



A night drop of supplies is unloaded aboard a village bombadier by the military with the aid of some helpful Baker Lake residents in community.



Two curious Baker Lake residents watch as a CF Hercules lands in that community of 1,000.

The community of Baker Lake, with a population of 1,000, was assured by the military that there was nothing to fear. No hig

Friday, Jan. 27

A helicopter crew of military experts and scientists leaves Baker Lake to try and confirm the Thursday sighting west of that community.

Meanwhile Canadian Forces Base Edmonton and Yellowknife regional headquarters report they have lost contact with the possible radiation source.

Capt. Ceasar Jordaan, an information officer in Yellowknife, explained that on the advise of U.S. scientists and as a precautionary measure low-flying Hercules flew alongside the site concerned instead of directly over it. The levels obtained Thursday apparently were dangerously high.

However, no radiation could be detected alongside the site. He speculates that perhaps the piece of the satellite giving off the radiation is lodged in a rock crevice or buried in dirt and ice.

Capt. John Lyne, of the nuclear response team, tells school children in Baker Lake what has happened and that there is no need to worry.

A sweeping search continues by Hercules aircraft with both Canadian and U.S. specialists, on a 24-hour basis. Infra-red scanning by a U.S. Convair aircraft of the satellite's plotted track begins. The twin-engine, propeller driven plane is also equipped with high quality mapping cameras.

A five-member scientific team from the Atomic Energy Control Board in Ottawa is in Edmonton to act as advisors in the search operation which has been code-named Morning Light.

Canadian Forces Lieut.-Col. Don Davidson arrives back in Baker Lake aboard a helicopter after a fruitless search by his 19-member team of military men and scientists.

The possible source of radiation is narrowed down to a site in the Thelon Game Sanctuary.

Late in the afternoon observers are astounded by an announcement from Ottawa that the high radiation readings obtained earlier in the week may have been the result of an equipment malfunction.

Stories by

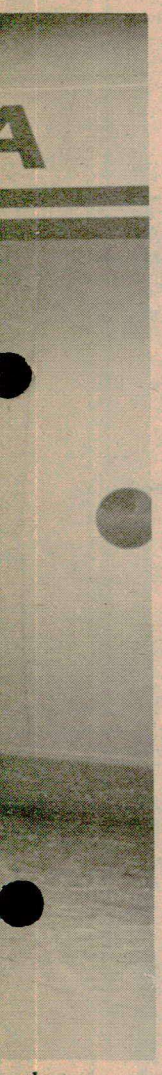
Alex Salemink

and

Rhondda Snary

Photos by

Ken Faught



n that

gh readings of radiation were obtained there.

The airport garage in Baker Lake became a busy place when the Canadian Forces made it into a communications centre. U.S. scientists ready equipment for another Chinook helicopter flight to search the area.

Camera equipment used to photograph the search area west of Baker Lake is loaded aboard a Chinook helicopter for yet another sweep of the search area.

Saturday, Jan. 28

Mahlon Gates, of the U.S. department of energy, and Col. David Garland, commander of Namao base near Edmonton, answer questions from reporters in that city Sunday.

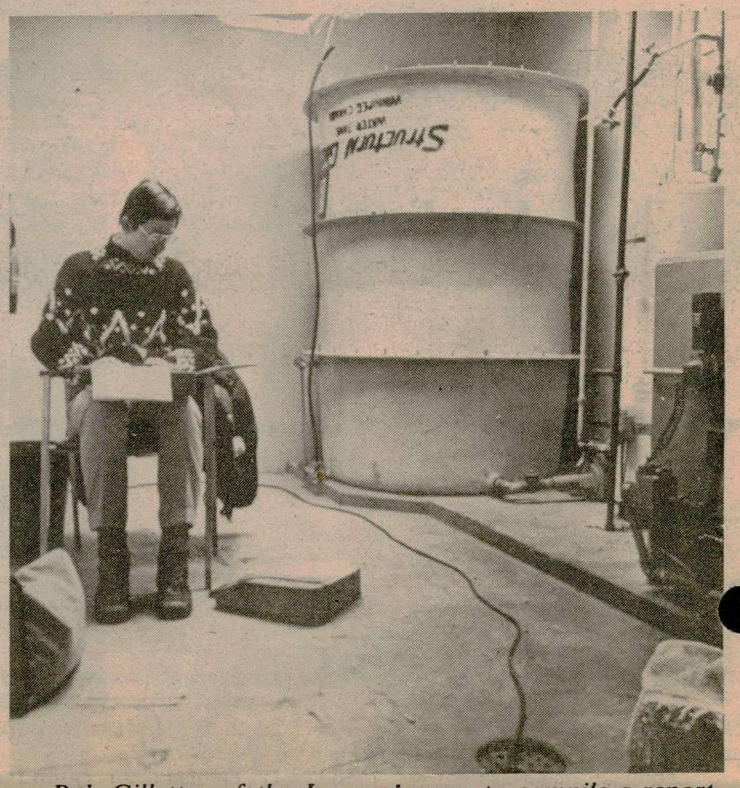
At a press conference in Edmonton, Canadian Forces' officials state they may have been premature in assuming the high radiation readings obtained west of Baker Lake were due to an equipment malfunction.

They now say radioactive material surveyed is "quite probably man made." The other site in the Fort Reliance area has not been discounted either.

Capt. John Lyne, of the nuclear response group in Baker Lake addresses an adult education group and explains there is no need to fear contamination from eating caribou or fish which may have been exposed to the radiation source.

Late Saturday, a group of six wildlife researchers in the Thelon Game Sanctuary call Yellowknife by radio to say they have discovered a six to nine foot crater with metal debris in it and surrounding it.

Press representatives from all over the world crowd around Maj. Wally West, a CF spokesman, Sunday at the Yellowknife airport shortly before the six adventurers were evacuated here away from the satellite debris area.



Bob Gillette, of the Los Angeles Times, finds himself a spot at the DND hangar to compile a report for his paper's readers.

Maj. Wally West, a Canadian Forces information officer announces to reporters in Yellowknife Sunday night that a large portion of the downed Soviet satellite has been found near Wardens Grove, in the Thelon Game Sanctuary.

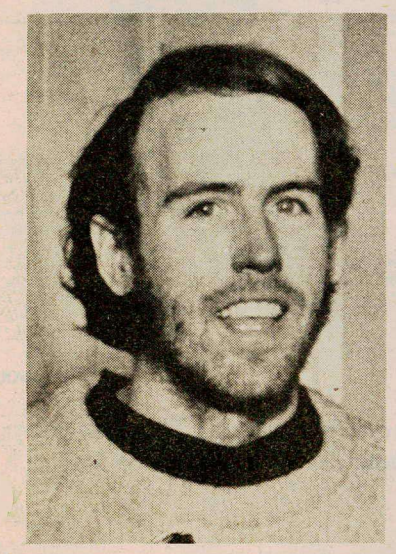
'It's totally bizarre ... I wish it could have landed anywhere else' - Norment

BY RHONDDA SNARY

The discovery of a portion of the Russian satellite that re-entered the earth's atmosphere early Jan. 24 has put a crimp in the plans of six men who had hoped to spend a total of 15 months co-existing with the land in Canada's North, unaided, unhindered, and unaffected by modern technology.

The five Americans and one Canadian have been located in one cabin and one Arctic tent at Warden's Grove about 180 air miles east of Fort Reliance, since Aug. 20, 1977.

On Jan. 25 Mike Mobley and John Mordhorst left the camp



Mike Mobley
CF photo

with their dog team to do some exploring and were not expected back until around Feb. 1.

The four who remained, Gary Anderson, Robert Common, Kurt Mitchell, and Christopher Norment were awakened at about 2:30 a.m., Jan. 26, by the sound of planes overhead. They contacted the Atmospheric Environment Service (AES) in Yellowknife on a small bush radio they had been using to send in weather reports, to discover why the planes were in the area. They were informed of the satellite incident and on the night of Jan. 27, they received a telegram from the AES advising them that the spacecraft had gone down in their area and warning them to stay away from it.

STILL UNAWARE

Mobley and Mordhorst were still unaware of the occurrence, but when they came across a strange sighting about 10 miles from Wardens Grove near the shore of the Thelon River, they decided they had better head back to camp.

What the two men saw was related by Anderson at a news conference in Yellowknife, Jan. 30. Mobley and Mordhorst were flown to Edmonton by the military for examination.

Anderson said his companions had been about 15 or 20 feet from the shore of the river around 1:30 p.m., Jan. 28, when they spotted a crater-type hole in the ice near the edge of the river.

He said Mobley and Mordhorst described three "strut-like objects" protruding from the ice and a mass of melted or "scorched" metal.

Mordhorst, however, had said the metal had been a grey color while Mobley maintained it was "copperish" in color.

The two both had the impression, Anderson said, that something had gone right through the ice, was resting on the river bottom. A thin layer of ice had frozen over the surface again. Anderson estimates the river is about three feet deep at that point. He added Mobley and Mordhorst joked at the time that their discovery could be a satellite.

When Mobley and Mordhorst returned to camp and related their story, the group again radioed AES. This time they were told the material could be radioactive and to stay 1,000 feet away from it, Mitchell said. said.

The final disruption for the men in the wilderness came when they remembered Mordhorst had been very close to the satellite and Mobley had actually touched it. They radioed back to AES who sent them a telegram later in the day with news for them to prepare to evacuate the next morning.

BLOOD TESTS

Jan. 29, a Twin Otter flew Mitchell, Anderson, Common,

John Mordhorst
CF photo

Sunday, Jan. 29

Canadian Forces Base Edmonton and Yellowknife northern regional headquarters scramble to evacuate the six men who report seeing debris in a crater at the Thelon Game Sanctuary.

Four of the six arrive at the Stanton Yellowknife Hospital under heavy military and police security. They are there for medical observation.

Late in the day, Maj. Wally West, a Canadian Forces information officer, holds a press conference. He says the group came upon the crater and two went right up to it "and may have touched some metal objects." Those two are flown via Baker Lake to a hospital in Edmonton for observation.

Maj.. West says a team from Baker Lake went to the scene and took pictures. Radiation levels at the site are described to be equivalent to five or six x-rays if the two had stayed at the site for an hour. They, apparently, remained only for 10 minutes.

The Canadian Forces is convinced that this, indeed, is a large piece of the satellite. More debris has been marked with dies about 27 miles west of Fort Reliance in Great Slave Lake.

Orders go out to drop four armed para-troopers at the game sanctuary site to cordon off the area. RCMP have been called upon to secure the Fort Reliance site.

and Norment to Stanton Yellowknife Hospital to undergo blood tests. It was confirmed they had not been contaminated by radiation and they were released from hospital Monday (Jan. 30) morning.

Mobley and Mordhorst were taken by military Chinook helicopter to identify the site and continued to Edmonton after refuelling in Baker Lake.

Both men were reported to be in good condition at press time.

"The dream some of us had was to spend a very primal existance in the wilderness," says Mitchell. But man and modern science managed to locate these men in the remote section of the Thelon Game Sanctuary where they were commemorating the fatal 1927 journey of NWT explorer John Hornby.

The men hope to get back to their camp as soon as possible and plan to continue their way of life until spring break-up when they can proceed to Chesterfield Inlet on Hudson Bay.

While re-enacting a portion of history in Canada's barrens, far from the turmoils of society, these four men and their two companions suddenly had another history-making event land on their remote doorstep - the Cosmos 954. These men spoke of the event that disrupted their lifestyle at a press conference Jan. 30 following their release from Stanton Yellowknife Hospital. From left to right are: Mitchell, Common, Norment and Anderson.

Monday, Jan. 30

The six adventurers, who discovered remains of the satellite embedded in the Thelon River ice, are released from hospital with a clean bill of health.

Doctors say the two men who approached the wreckage were only exposed to a small amount of radiation equivalent to about two medical x-rays.

Meanwhile, at the site, armed paratroopers are standing guard.

Another possible high radiation site near Fort Reliance is being guarded by RCMP.

In Edmonton, U.S. and Canadian scientists issue a statement to the Canadian government asking for Russians to come and help identify what has been found.

In Yellowknife, Maj. Wally West, an information officer, issues a statement assuring the communities of Fort Reliance, Snowdrift, and Baker Lake that no radioactive contamination has been found in those areas.

Maj. West also says the possible effects on wildlife and vegetation will be minimal. There is no need for concern about eating meat or fish in the area, he adds.

A warning is issued to all hunters and fishermen in the area to stay away from strange objects and report them to the authorities.

CF photo

A scientist approaches the object for a closer look on the weekend. The piece has a radiation reading of about 100 millirentogens per hour or the equivalent of five or six x-rays per hour.

CF photo

The fragment of the Soviet satellite found embedded in the ice of the Thelon River is described by some to be the antennae. Military officials are certain this object is not part of the main reactor core which contained some 100 pounds of enriched uranium.

RESTRICTED

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RCMP 10 OTT

1 ROUTINE YK JAN 30 R E S T R I C T E D

COMMR OTT

GTEL/66/2. PERSONAL ATTENTION COMMISSIONER SIMMONDS. FURTHER TO TELEPHONE CONVERSATION WITH SUPT BARKER SUNDAY EVENING. MEETING HELD WITH GENERAL THORNEYCROFT, DND OFFICIALS AND MR. KNIGHT ATOMIC ENERGY CONTROL BOARD. LEARNED THAT THERE ARE TWO DEBRIS SITES LOCATED. MAIN SITE IS AT WARDENS GROVE ON THELON RIVER AND OTHER NORTHWEST OF FORT RELIANCE. DND OFFICIALS IMMEDIATELY ADVISED THAT THEIR SUPERIORS IN OTTAWA INDICATED THAT THE SOLICITOR GENERAL HAD WAIVED CIVIL RESPONSIBILITY FOR GUARDING THE MAIN SITE BUT THAT THE RCMP SHOULD BE INVITED TO GUARD THE SECONDARY SITE NEAR FORT RELIANCE. IT HAS BEEN ARRANGED FOR TWO RCMP MEMBERS PLUS TWO DND MEMBERS UTILIZING DND EQUIPMENT AND TRANSPORTATION TO GUARD FORT RELIANCE SITE AFTER SPECIAL DND TEAM DELINEATES SAFE DISTANCE FROM DEBRIS AND ERECTS PHYSICAL BARRIER. IN ORDER TO SATISFY MEDIA CURIOSITY DND IS ORGANISING SUPERVISED VISIT TO FORT RELIANCE SITE WITH DND AIRCRAFT SOMETIME IN AM MONDAY. MR KNIGHT OF ATOMIC ENERGY STATES THAT EMPHASIS WILL BE ON CLEAN UP AT EARLIEST POSSIBLE TIME AND GETTING DEBRIS AWAY FROM THE TWO AREAS. TECHNICAL PROBLEMS TO EXECUTE THIS NOT YET KNOWN. IT IS SUGGESTED IF GUARDING BECOMES PROLONGED THAT DND BE ASKED TO TAKE OVER COMPLETELY AS THEY HAVE RESOURCES. WE ARE ALSO CONCENTRATING ON HAVING OUR MEMBERS VISIT ALL PEOPLE IN FORT RELIANCE AREA TO PROPERLY INFORM OF SITUATION AND DANGERS. PERSONS EVACUATED FROM WARDENS GROVE WERE NOT ENVIRONMENT CANADA EMPLOYEES AS FIRST BELIEVED BUT ARE MEMBERS OF THE HORNBY EXPEDITION. TWO OF THESE MEMBERS BELIEVED HANDLED DEBRIS AND ARE CONTAMINATED AND PRESENTLY IN EDMONTON HOSPITAL CONDITION UNKNOWN. WILL ADVISE ANY FURTHER DEVELOPEMENTS OF NOTEM

C DIV

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RCMP 10 OTT

SUPT BARKER REQUESTS THAT THIS BE ON COMMRS DESK IN MORNING IF YOU CAN ARRANGE IT

OUTGOING MESSAGES — ● IN CTIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
	796-000-2	D.R. BARKER, SUPT.	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3488	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security. CLASSIFICATION *sécuritaire*
PRIORITY		27 JAN 78	UNCLASSIFIED

FROM *DE* "G" DIVISION

TO *À* C.O. "F" DIVISION, REGINA

INFO. *POUR RENSEIGNEMENTS* COMMISSIONER, OTTAWA (ATTN: NATIVE POLICING BRANCH)
O.C. PRINCE ALBERT SUB/DIVISION

ORIGINATORS MESSAGE NO. GCIB 066/1 *N° DU MESSAGE ORIGINAL*

REUR CIB 759. THE SATELLITE, OR DEBRIS OF IT, APPEARS TO BE LOCATED IN THE THELON GAME SANCTUARY APPROXIMATELY 400 MILES DUE NORTH AND 100 MILES EAST OF STONY RAPIDS. NOTHING DEFINITE HAS BEEN CONFIRMED YET AS NO GROUND PARTY HAS YET MOVED IN. FOR YOUR INTEREST, VERY LITTLE CONCERN GENERATED FROM NATIVE TRAPPERS, ETC., IN N.W.T. SO FAR EVEN THOUGH SOME MAY BE RIGHT IN THE AREA. THE FOLLOWING M.O.T. NOTICE TO AIRMEN (NOTAM) IS IN EFFECT: "ALL NON ESSENTIAL TRAFFIC BELOW 18,000 FT TO AVOID AREA 62 DEGREES NORTH BY 96 DEGREES WEST - 62 DEGREES NORTH BY 112 DEGREES WEST - 66 DEGREES NORTH BY 96 DEGREES WEST - 66 DEGREES NORTH BY 112 DEGREES WEST. CAUTION ADVISED ABOVE 18,000 FT UNTIL FEB 3". THIS NOTICE SHOULD INDICATE TO PILOTS THAT THEY SHOULD STAY AWAY FROM THE AREA AND ESPECIALLY NOT TO LAND. THERE, OF COURSE, IS NO WAY OF ENFORCING THIS BUT AFTER NOTICE, SELF PRESERVATION WILL BE MOTIVE ENOUGH.

PA

DRB. 27/1

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D.R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	

001655

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13 . . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

JAN 27 1 09 PM '78

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JAN 25 10 27 AM '78

PASSED TO MAJ. ELRICK
1101 AM 25-1-78

YK Secb
CID

RCMP PNPT

1 ROUTINE PP 24 JAN UNCLAS

G DIVISION

JAN 24 1 40 PM '78

PP78/27 RE OUR PREVIOUS NUMBER PP26 OBJECT SIGHTING

ED CARTER OF PINE POINT (TEL. NO 393-2572) CALLED THIS OFFICE 12:45 PM TO REPORT THAT HE SIGHTED AN OBJECT IN THE SKY OVER POLAR LAKE AT APPROX 5:00AM THIS DATE. DESCRIBED AS HAVING TWO SEPARATE VAPOUR TAILS AND APPEARED TO BE SPARKLING AS THOUGH METAL DISINTEGRATING. AT FIRST THOUGHT IT WAS A COMET BUT THEN THOUGHT MAYBE A BURNING PLANE. NO MORE THAN HALF A MILE HIGH AND TRAVELLING AT SPEED OF LOW FLYING JET. MOVING DIRECTLY NORTH OVER GREAT SLAVE LAKE. HE STATED THAT FIRE SEEMED TO GO OUT AND OBJECT WAS GLOWING RED WHEN IT DISAPPEARED. FOR YOUR INFO POLAR LAKE IS 23 MILES WEST OF PINE POINT. WITH CARTER WERE GABRIEL POIRIER, GERALD MCINTYRE AND DON CARRIER WHO LIVE AT POLAR LAKE BUSH CAMP.

BOUCHER

ABOVE INFO PASSED TO THE ARMED FORCES DUTY OPERATIONS OFFICER

PINE POINT DET

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RCMP YK

C.I.B.

24-1-78

PASSED TO COL BUTCHART
25-1-78 9 AM

// NOW??

JAN 24 12 30 PM '78

RCMP HRV

G DIV

HR44/3 RE: ADDITIONAL CIVILIAN SPACECRAFT SIGHTINGS. SUBMITTED AS PER TELEX GCIB56/1.

CHARLIE KEENAN COACHLINES BUSDRIVR OF YELLOWKNIFE NWT PHONE 873-8601 . KEENAN WAS PARKED AT FT.PROVIDENCE AND WAS OUTSIDE THE BUS WHEN HE SPOTTED A WHITE BLOB TRAVELLING TO THE ENE ON A HORIZONTAL PLANE. HE ESTIMATES THE SIZE AS ABOUT THAT OF A 3/4 TON TRUCK AND IT WAS DROPPING SPARKS AS IT STOPPED ITS HORIZONTAL FLI FLIGHT AND WENT TOWARD THE GROUND
IT WENT FURTHER TO THE ENE OF HIM AND HE BELIEVES IT WENT INTO THE GREAT SLAVE LAKE. A PASSENGER ON THE BUS, CECILLIA BONNETROUGE, REPORTED TO HIM THAT SHE HAD SEEN THE LIGHT COME FROM THE WNW AND SHE DESCRIBED IT AS BEING THE SIZE OF THEBUS WITH SPARKS COMING OFF OF IT AND CONFIRMS ITS DIRECTION OF TRAVEL.

:V-4

CHARLENE ALLAN, OF HAY RIVER, SPOTTED THE LIGHT AT ABOUT 5 A.M. WHILE DRIVING IN TH E AREA 16 MILES SOUTH OF HAY RIVER. THE LIGHT APPEARED ALMOST STATIONARY TO HER BUT WA S MOVING FROM THE WEST TO THE EAST. WHEN LAST SEEN IT WAS STILL MOVING AND DROPPING SPARKS.

PASSED TO CCIL RUTCHANCE 9 AM 25-1-78

NCO I/C HAY RIVER DET 24-1-78

24/1 24/1

JAN 24 12 16 PM '78

PRIORITY FT PROVIDENCE JAN 24 UNCLAS

G DIV CIB

YELLOWKNIFE SUB DIV

FPS RE UFO SITING NEAR FT PROVIDENCE NWT 24-1-78. OBJECT SITED PASSING OVER FT PROVIDENCE AT 5:00 AM AND WAS HEADING IN A NORTH EASTERLY DIRECTION - WAS A BRIGHT WHITE IN COLOR - PARTICLES BREAKING OFF AS IT TRAVELLED AND APPEARED TO BE THE SIZE OF A LOW FLING JET. SITING MADE BY JOHN TRANCHE (9 JUN 29)

FT PROVIDENCE DET

IN BY PHONE

PASSED TO COL. KUTCHARCT
9 AM 25-1-78

Government of Canada / Gouvernement du Canada

ACTION — FICHE DE ?UEST SERVICE

TO — *À*

FILE NO. — *DOSSIER N°*

DATE

FROM — *DE*

Capt. JORDAAN

☐ PLEASE CALL *PRIÈRE D'APPELER*	TEL. NO. — *N° DE TÉL.*	EXT. — *POSTE*
☐ WANTS TO SEE YOU *DÉSIRE VOUS VOIR*	DATE	TIME — *HEURE*
☐ WILL CALL AGAIN *DOIT RAPPELER*		
CALL RECEIVED BY *MESSAGE REÇU PAR* ▶		

☐ ACTION *DONNER SUITE*	☐ APPROVAL *APPROBATION*	☐ NOTE & RETURN *NOTER ET RETOURNER*
☐ COMMENTS *COMMENTAIRES*	☐ DRAFT REPLY *PROJET DE RÉPONSE*	☐ NOTE & FORWARD *NOTER ET FAIRE SUIVRE*
☐ MAKE *FAIRE_____ COPIES*	☐ SIGNATURE	☐ NOTE & FILE *NOTER ET CLASSER*

Prime Ministers
Press Secretary

613 - 992 - 4211

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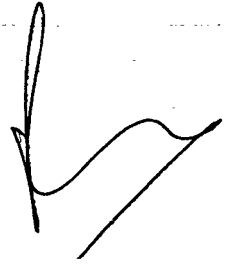
7540-21-868-3907

JAN 24 9 46 AM '78



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JAN 24 9 36 AM '78

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RCMP PNPT

1 PRIORITY PINE POINT 24 JAN UNCLAS

G DIV

ATT YK SUB

PP26 RE ASSISTANCE NATIONAL RESEARCH COUNCIL THE FOLLOWING SUBMITTED ON OBJECT SIGHTING THIS POINT

(1) SIGHTED 24-1-78 APPROX 4:555 AM

(2) CLEAR SKY CONDITIONS

(3) CPL D J BOTTERILL AND CST D A MCLEOD

(4) DOWNTOWN AREA PINE POINT

(5) UNKNOWN IF OTHERS PERSONS OBSERVED OBJECT

(6) DESCRIBED AS WHITE LIGHT APPEARING LIKE A FIREBALL ABOUT THE SIZE OF A V MEDIUM SIZE PLANE. HAD A TAIL OF MATERIAL APPEARED FALLING FROM OBJECT. OBJECT EST TO BE ABOUT 2000 FEET HIGH. BELIEVED TRAVELLING TOWARDS FORT RESOUTION AREA

(7) OBSERVED FOR ABOUT 30 TO 45 SECONDS

(8) NIL

PINE POINT * 10K 24-1-78

RCMP YK

CID

YK Sub

OUTGOING MESSAGES — ● INS ,TIONS ON REVERSE

MESSAGES SORTANTS — ● *DIRECTIVES AU VERSO*

Time of Receipt — *Heure de réception*	File No. — *N° de dossier*	Drafter's Name — *Nom du rédacteur*	Time of Dispatch — *Heure d'envoi*
		D.R. BARKER, SUPT.,	
	Br. or Section — *Sous-direction ou section*	Phone No. — *N° de téléphone*	
	C.I.B.	-3489	
Precedence for Action Addresses *Priorité pour suite à donner*	Precedence for Infor. Addresses *Priorité pour renseignements*	Date	Security, CLASSIFICATION *sécuritaire*
PRIORITY		24 JAN 78	UNCLASSIFIED

FROM *DE* "G" DIVISION

TO *À* ALL DETACHMENTS YELLOWKNIFE SUB/DIVISION (Yellowknife Det - by hand)

INFO. O.C. YELLOWKNIFE SUB/DIVISION (BY HAND)
POUR RENSEIGNEMENTS

ORIGINATORS MESSAGE NO. GCIB 056/1 *N° DU MESSAGE ORIGINAL*

SHOULD YOU RECEIVE ANY REPORTS OF ANY UNUSUAL OCCURRENCE OR SIGHTING OF UNUSUAL OBJECT, PLEASE TAKE ALL PARTICULARS AND REPORT DIRECT TO C.I.B. OFFICER IMMEDIATELY. ABSOLUTELY NO COMMENTS ARE TO BE MADE TO THE MEDIA.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D. R. BARKER, SUPT., O.I.C. "G" DIVISION C.I.B.	9-20 AM.

001665

T. 329 (7/75) (7530-21-029-4387)

INSTRUCTIONS

FILE NUMBER, BRANCH OR SECTION, DRAFTER'S NAME, ETC: – Originator **MUST** complete all boxes to facilitate prompt handling of a reply or query.

PRECEDENCE: – Enter for

A) All action addresses, i.e. **DEFERRED, ROUTINE, PRIORITY, OPERATIONAL IMMEDIATE OR EMERGENCY.**

B) All information addresses usually deferred.

SECURITY CLASSIFICATION: – Enter in all cases including unclassified.

TO: Enter all action addresses.

INFO: Enter all information addresses.

ORIGINATOR'S MESSAGE NUMBER: –

A) Enter originator's message number (it will be transmitted as first word of text of message.)

B) When replying to a message quote original message number, e.g. KCIB 62 your NPSIC 1284/13. . . . . .

C) When sending follow-up message, quote original message number, Date and Subject Caption, e.g. KCIB 62 further to KCIB 59 of 12-2-72 re FPS 100001 John Smith fraud. . . . . .

DIRECTIVES

Nº DU DOSSIER, SOUS-DIRECTION OU SECTION, NOM DU RÉDACTEUR, ETC.: *L'auteur* ***DOIT*** *remplir toutes ces cases afin de faciliter l'acheminement rapide d'une réponse ou d'une demande.*

PRIORITÉ: *À indiquer dans tous les cas*

A) où il faut donner suite à une affaire: ***DIFFÉRÉ, ORDINAIRE, PRIORITAIRE, OPÉRATION IMMÉDIATE OU EXTRÊME URGENCE.***

B) à titre de renseignements: ordinaire habituellement

CLASSIFICATION SÉCURITAIRE: *À indiquer dans tous les cas, y compris non classifié.*

À: *Inscrire l'adresse de toutes les personnes qui doivent donner suite à l'affaire.*

POUR RENSEIGNEMENTS: *Inscrire l'adresse de tous ceux qui doivent recevoir le message à titre de renseignements.*

Nº DU MESSAGE ORIGINAL:

A) inscrire le nº du message original (il sera transmis comme premier mot du texte)

B) lorsque vous répondez à un message, citez le numéro de ce message, p.ex. KCIB 62 votre nº NPSIC 1284/13 . . . . . .

C) lorsque vous donnez suite à un message, citez le numéro de ce message, la date et le sujet en rubrique, p.ex. KCIB 59 du 12-2-72, objet: FPS 100001, John Smith, escroquerie . . .

CIPHER MESSAGE

PRIORITY

TOP SECRET

JAN 24 7 51 AM '78

KMM
8-21 PRIORITY OTT JAN 24/78 T O P S E C R E T

A B C D E-D1 E-D2 F G H J K L M O DIVS

DCI/1/5
FURTHER TO TELEX DCI/1/4 AND DCI/35/FPD WE ARE NOW ADVISED THAT PORTIONS OF THIS SATELLITE SURVIVED RE-ENTRY AND LANDED APPROX-IMATELY 6:55 A.M. THIS DATE NEAR GREAT SLAVE LAKE, N.W.T. CANADAIN MILITARY AND AECL HAVE MATTERS IN HAND WITH ASSISTANCE BEING RENDERED IF NECESSARY BY C.O. "G" DVISION. DETAILS ARE STILL TOP SECRET AND THIRD PARTY RULE STILL APPLIES. ANY MEDIA ENQUIRIES ARE TO BE REFERRED TO LT. COL. CHAMPAGNE AT 992-6160 OTTAWA.

COMMR OTT

ACK PSE '''
G DIV ACK

This is a CLASSIFIED MESSAGE. All replies or references to it must bear the security classification stamp on the top, unless downgraded by proper authority.

KOR 24-1-78

CO called 8 7 59 AM MS

PRIORITY

SECRET

JAN 23 5 45 PM '78

53-86 PRIORITY OTT1 JAN23/78 S E C R E T

A B C D E-1 E-2 F G H J K L M O DIVISIONS [redacted]

DCI/35/FP5
FURTHER TO TELEX DCI/1/4. THIRD PARTY RULE IN FORCE WITH RESPECT TO ALL INFORMATION REGARDING THIS MATTER THEREFORE REGIONAL DIRECTORS EMERGENCY PLANNING CANADA CANNOT/NOT PRIEF PROVINCIAL OFFICIALS AT THIS TIME. INFO ONLY FOR THOSE AUTHORITIES ALREADY ADVISED. SHOULD YOU RECEIVE QUERIES REFER ALL TO DND H.Q. OTTAWA (LT.COL. E.D. CHAMPAGNE). LATEST INFO ON SATELLITE INDICATES THERE IS ONE IN EIGHT CHANCE IT WILL ENTER ATMOSPHERE OVER CANADA AND 98 PERCENT PROBABILITY IT WILL TOTALLY BURN UP BEFORE IMPACT. BEST ESTIMATE OF AREA ORBITTED DURING TIME OF POSSIBLE ENTRY COVERS ARC TOUCHING VANCOUVER, WHITEHORSE, EASTERN COAST OF LABRADOR AND NEWFOUNDLAND WITH TIME OF ENTRY BETWEEN 0300 HRS AND 1300 HRS EST. 24 JAN 78.

COMMR OTT

PLSE ACK FOR 2 MSGS

G DIV YK ACKS 2 MSGS

6:15 23/1/78

This is a CLASSIFIED MESSAGE. All replies or references to [redacted] security classification [redacted] unless downgraded by proper authority.

C.I.B.
3 copies ins

001668

CIPHER MESSAGE

SECRET

JAN 23 5 42 PM '78

PAGE TWO DCI/1/4 OTT1 JAN23/78 S E C R E CT
(b) BRIEFED EMERGENCY PLANNING CANADA ON THE SITUATION, WITH A REQUEST THAT USING SECURE COMMUNICATIONS IT INFORMS ITS REGIONAL DIRECTOR IN EACH PROVINCE, SO THAT IF AND WHEN ANY THREAT OF IMPACT ON CANADIAN TERRITORY IS IDENTIFIED, HE WILL BE IN A POSITION TO BRIEF THE COMMANDING OFFICER OF THE PROVINCIAL POLICE AND, WHEN APPROPRIATE, PROVINCIAL OFFICIALS;
(C) THE RCMP BE NOTIFIED WITH THE SUGGESTION THAT THE COMMANDING OFFICER IN EACH PROVINCE BE ALSO INFORMED:
(D) ARRANGED FOR THE HEAD OF THE NUCLEAR SAFETY DIVISION IN THE DEPARTMENT OF HEALTH AND WELFARE TO BE NOTIFIED:
(E) ARRANGED THAT IF AND WHEN A RISK TO ANY PART OF CANADIAN TERRITORY IS IDENTIFIED THE APPROPRIATE PROVINCIAL OFFICIALS WILL BE INFORMED IMMEDIATELY;
(F) CONSULTED WITH THE CANADIAN FORCES IN ORDER TO COORDINATE THIS ACTION;
(G) CAUTIONED ALL TO TREAT AS SENSITIVE INFORMATION. UNQUOTE CARE MUST BE TAKEN TO PREVENT PUBLIC SCARE BY INDISCRIMINATE RELEASE OF THIS INFORMATION. EMERGENCY PLANNING CANADA OFFICIALS HAVE UNDERTAKEN TO ALERT OPP AND QPF AT THE APPROPRIATE TIME WHEN MORE ACCURATE INFORMATION IS AVAILABLE. YOU MAY EXPECT ADDITIONAL CONTACT DIRECT WITH REGIONAL E.P.C. AUTHORITIES. BEST ESTIMATE OF CO-ORDINATES TO DATE IS 52.8 DEGREES NORTH, 69 DEGREES WEST. ESTIMATED TIME OF IMPACT 11:30 A.M. 24 JAN 78.

COMMR OTT

C.I.B.
3 copies encl

KKKK

CIPHER MESSAGE

JAN 23 3 42 PM '78

PRIORITY SECRET

44-52 PRIORITY OTT1 JAN23/78 S E C R E T

A D E-1 E-2 F G K M DIVISIONS

DCI/1/4
FOLLOWING INFORMATION RECEIVED THROUGH THE INTELLIGENCE ADVISORY COMMITTEE OF THE FEDERAL GOVT. QUOTE. COSMOS 954, A SOVIET RADAR OCEAN RECONNAISSANCE SATELLITE (RORSAT) WITH A SMALL NUCLEAR POWER SOURCE, HAS APPARENTLY BEEN OUT OF GROUND CONTROL AND IN A DECAYING ORBIT SINCE 29 OCTOBER 1977 (WIR 44/77). ON 6 JANUARY 1978, THE SATELLITE BEGAN TUMBLING AND ITS RATE OF DECAY INCREASED. AS IT IS NOW ESTIMATED THAT THE SATELLITE WILL RE-ENTER THE EARTH'S ATMOSPHERE ABOUT 24 JANUARY 1978, BUT THE LOCATION OR RE-ENTRY CANNOT BE PREDICTED WITH ANY ACCURACY UNTIL ONE OR TWO DAYS BEFORE RE-ENTRY AND THEN WITHOUT ANY PRECISION.THERE HAS BEEN NO SOVIET ANNOUNCEMENT OF THIS MALFUNCTION. (AT THE END OF THEIR USEFUL LIFE, RORSAT'S ARE USUALLY BOOSTED INTO A HIGH ORBIT WHICH DELAYS RE-ENTRY INDEFINITELY). SOME PORTIONS OF THE SATELLITE, INCLUDING PARTS OF THE NUCLEAR POWER PACKAGE MAY SURVICE RE-ENTRY AND IMPACT ON THE GROUND. THERE IS NO DANGER OF A NUCLEAR EXPLOSION BUT THERE MAY BE A MINOR LOCAL HEALTH HAZARD DUE TO DISPERSAL OF RADIOACTIVE MATERIAL BY IMPACT. THE CHANCE OF IMPACT IN A POPULATED AREA IS REMOTE BUT IF IT OCCURS OUTSIDE THE USSR IT COULD CAUSE THE SOVIET UNION CONSIDERABLE POLITICAL EMBARRASSMENT. UNQUOTE. I.A.C. HAVE TAKEN THE FOLLOWING ACTION QUOTE (A) AGREED THAT THE IMMEDIATE REACTION TO ANY IMPACT ON CANADIAN TERRITORY WOULD BE TO EVACUATE AND CORDON OFF THE AREA OF RISK FROM RADIATION; AND THAT THE OPERATION WOULD BE SIMILAR, THOUGH ON A MUCH SMALLER SCALE, TO THAT PLANNED TO HANDLE THE CRASH OF AN AIRCRAFT CARRYING NUCLEAR WEAPONS;
....2

6.23/1/78

This is a CLASSIFIED MESSAGE. All replies or references to it must bear the security classification stamped hereon, unless downgraded by proper authority.

C. I.B.
001670

OUTGOING MESSAGES — ***MESSAGES SORTANTS***

● IN ...TIONS ON REVERSE — ● *DIRECTIVES AU VERSO*

Time of Recei... — *Heure de réception*	File No. — *N° de dossier* 000-2 78G-[illegible]-1	Drafter's Name — *Nom du rédacteur* R.F. HELMSING, CPL.	Time of Dispatch — *Heure d'envoi*
	Br. or Section — *Sous-direction ou section* SECURITY SYSTEMS	Phone No. — *N° de téléphone* -6570	
Precedence for Action Addresses *Priorité pour suite à donner* PRIORITY	Precedence for Infor. Addresses *Priorité pour renseignements*	Date 23 JAN 78	Security. CLASSIFICATION *sécuritaire* CONFIDENTIAL

FROM *DE* "G" DIVISION — TOP SECRET

TO *À* COMMISSIONER, OTTAWA

INFO. *POUR RENSEIGNEMENTS*

ORIGINATORS MESSAGE NO. GCIB 055/9 *N° DU MESSAGE ORIGINAL*

ATTN: O.I.C. "P" DIRECTORATE

AT 11:30 A.M., 23 JAN 78 MR. J.M. HOFFMAN, REGIONAL DIRECTOR, EMERGENCY PLANNING, EDMONTON, ALBERTA CONTACTED OUR SECURITY SYSTEMS SECTION AND ADVISED THAT "NORAD" HAS PROJECTED THAT A ~~SOVIET SATELLITE~~ CARDED N.R., POWERED BY A RADIOACTIVE SOURCE, IS PRESENTLY TUMBLING IN ORBIT OUT OF CONTROL AND IS PROJECTED TO FALL on 24 JAN 78 AT 6:00 A.M., GIVE OR TAKE FIVE HOURS, AT OR NEAR BAKER LAKE, N.W.T. MR. HOFFMAN FURTHER ADVISED THAT EMERGENCY PLANNING CANADA HAD DIRECTED HIM NOT TO CONTACT PROVINCIAL OR TERRITORIAL GOVERNMENT AUTHORITIES. APPARENTLY A MEETING IS BEING HELD IN OTTAWA THIS DATE TO DETERMINE THE ROLES OF THE CANADIAN ARMED FORCES AND THE R.C.M.P. MR. HOFFMAN SUBSEQUENTLY ADVISED C/SUPT. A.H. BUTTLER, C.O. "G" DIVISION THAT THERE IS NOW A NEW PROJECTED FALLING SITE SOMEWHERE IN THE ATLANTIC OCEAN. THIS MATTER IS BEING REPORTED FOR YOUR INFORMATION AND NO FURTHER ACTION BEING TAKEN UNLESS OTHERWISE DIRECTED.

Signature of person releasing message *de l'expéditeur*	Time Released (time of signature) *Heure d'expédition (heure de la signature)*
D. R. BARKER, SUPT. O.I.C. "G" DIVISION C.I.B.	

001671

T. 329 (7/75) (7530-21-029-4387)

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786-000-2

Soviet Satellite

B. F. DATE 1987-11-20
DATE DE RAPPEL.

REVIEW FOR DISPOSITION
Revoir (destruction ou conservation)

TRAFFIC & COLLISION – *CIRCULATION ET COLLISIONS*

B

TRANSACTION 6	LINE NO. *N° DE LA LIGNE* 9	TRAFFIC - *CIRCULATION*			MOTOR VEHICLE COLLISIONS/*COLLISIONS-VÉH. MOTORISÉS*									SURVEYS *ENQUÊTES*						
		RADAR 10	UN-MARKED *VOITURE BANALISÉE* 11	AIR-CRAFT *AÉRONEF* 12	SCENE VISITED *LIEUX VISITÉS* 13	KILLED - *MORTS*					INJURED *BLESSÉS* 19	DRINKING DRIVER *CONDUCTEUR EN ÉTAT D'ÉBRIÉTÉ*			23	24	25	26	27	28	29
						DRIVER *CHAUFFEUR* 14	PASSG'R *PASS.* 15	PEDEST. *PIÉTON* 16	CYCLIST *CYCLISTE* 17	OTHER *AUTRE* 18		100+ *Mg* 20	−100 *Mg* 21	NOT TESTED *PAS DE TEST* 22						

DRUGS – *DROGUES*

C

TRANSACTION 6	LINE NO. *N° DE LA LIGNE* 9	O.S.R. CLASS *CATÉGORIE DE S.O.* 10	ESTIMATED STREET VALUE *VALEUR MARCHANDE APPROX.* 11	SEIZURES - *SAISIES*					PERSONS CHARGED CONSPY *PERSONNES INCULPÉES DE COMPLOT*	
				NO'S *NBRE* 12	GRAMS *GRAMMES* 13	PLANTS *PLANTES* 14	UNITS (SINGLE DOSE) *UNITÉS (UNE DOSE)* 15	MILLILITRES 16	IMPT'N *IMPORT.* 17	TRAF'G *TRAFIC* 18

CUSTOMS & EXCISE – *DOUANES ET ACCISE*

D

TRANSACTION 6	LINE NO. *N° DE LA LIGNE* 9	SEIZURES (IN NUMBERS) - *NOMBRE DE SAISIES*								QUANTITIES - *QUANTITÉS*			VALUE FOR DUTY *VALEUR IMPOSABLE* 22	REVENUE COLLECTED *SOMMES PERÇUES* 23	REFERRALS TO REV. CANADA *AFF. RENVOYÉES À REVENU CANADA*	
		VEHICLE *VÉHICULE* 10	VESSELS *NAVIRES* 11	AIRCRAFT *AÉRONEF* 12	OTHER *AUTRE* 13	STILLS - *ALAMBICS*				MASH *MOÛT l* 19	SPIRITS *EAU-DE-VIE l* 20	TOBACCO *TABAC Kg* 21			NO *NBRE* 24	VALUE *VALEUR* 25
						DOMESTIC *DOMESTIQUE*		COMMERCIAL - *COMMERCIAUX*								
						COMPL 14	PART 15	NO *NBRE* 16	CAPACITY *CAPACITÉ* 17	OPERATION AL DAYS *JOURS D'EXPLOIT* 18						

COMMERCIAL CRIME – *DÉLITS COMMERCIAUX*

E

TRANSACTION 6	LINE NO. *N° DE LA LIGNE* 9	DOLLAR VALUES - *VALEUR EN DOLLARS*		
		ESTIMATED VALUE *VALEUR APPROX.* 10	RECOVERIES *SOMME RECOUVRÉE* 11	FINES *AMENDES* 12

SECURITY CLASSIFICATION
CLASSIFICATION DE SÉCURITÉ

TOP SECRET