

APPLICATION FOR ECOLOGICAL RESERVE

1. Legal description of the area (or general "Metes and bounds" description)

2. Geographical location (relate to nearest settlement, mountain, river, etc.)
Trophy Mountain, S of Wells Gray Provincial Park, ca. 20 km NE of Clearwater; Shuswap Highland


3. Indicate the biogeoclimatic zone of which the reserve is representative.
ESSFx, AT; Subalpine Forest and Southern Alplands Biotic Areas

4. Approximate total acreage.
ca. 5,160 ha (12,750 acres)

5. Purpose of the reserve.
Conservation of representative subalpine and alpine plant communities of the wet and snowy Cariboo Mountains, and their associated fauna.
(a) Primary (state acreage)
A - ca. 2,000 ha
(b) Others if any (state acreage)
B - ca. 3,160 ha
(c) Buffer areas (state acreage)

6. Attach a map and indicate: (a) the perimeters and acreage of the areas detailed in 5 above, and
(b) indicate the species and total timber volumes in these areas.

Picea engelmannii
Abies lasiocarpa
Pinus contorta


Signature Jim Pojar, J.B. Foster,
Ida & Emile De Kolver
I.B.P. Surveyor

INTERNATIONAL BIOLOGICAL PROGRAMME

SECTION CT: CONSERVATION OF TERRESTRIAL BIOLOGICAL COMMUNITIES

CHECK SHEET (Mark VII) FOR SURVEY OF IBP AREAS*

To be completed with reference to the GUIDE TO THE CHECK SHEET

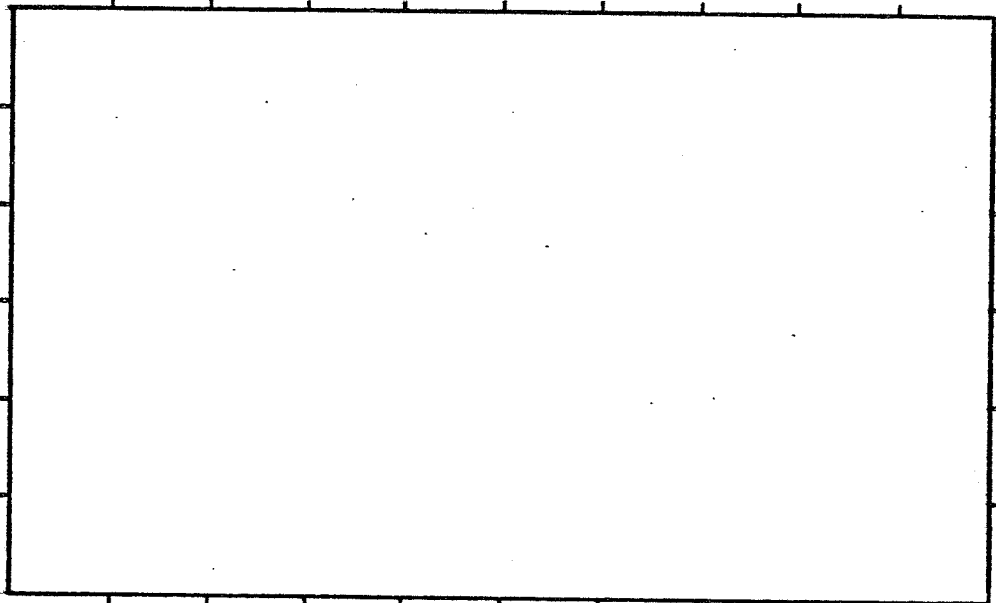
Serial Number

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For Data Centre Use only

1. 1. Name of surveyor*Jim Pojar,*J.B. Foster, **Ida & Emile De Kolver
2. Address of surveyor*Ecological Reserves Unit, Victoria, B.C. V8V 1X5
-**Box 63, Clearwater, B.C.
-
-
3. Check Sheet completed (a) on siteX..... (b) from recordsX.....
4. Date Check Sheet completedSeptember 1977.....

2. 1. Name of IBP AreaTrophy Mountain.....
2. Name of IBP Subdivision (or serial letter)ESSFx, AT.....
3. Map of IBP Area* showing boundaries attached? YesX..... No
4. Sketch map of IBP Area*. Please mark direction of north, the scale and grid numbers where applicable.



* For "IBP Area", read IBP Area and/or IBP Subdivision.

RAFT RIVER

KAMLOOPS DISTRICT

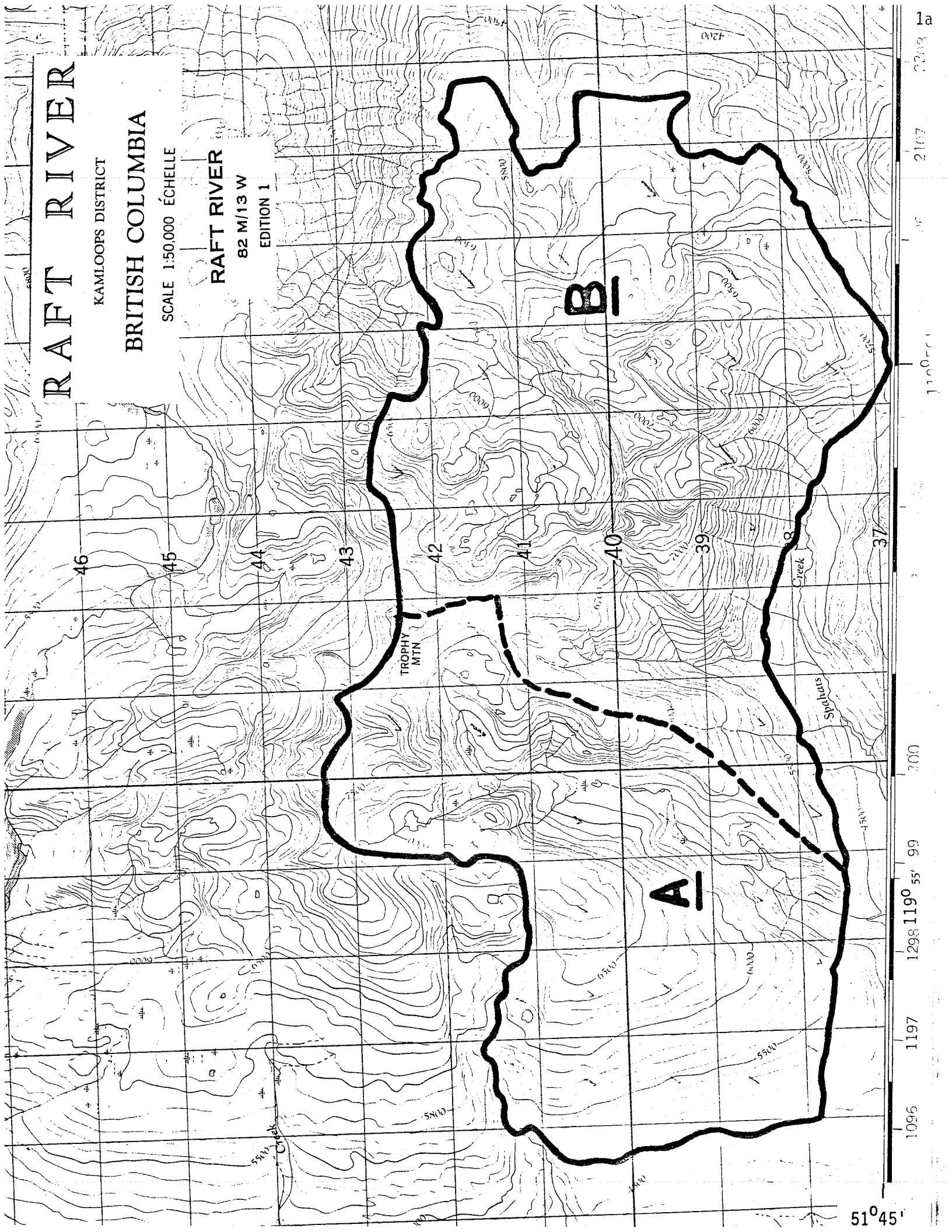
BRITISH COLUMBIA

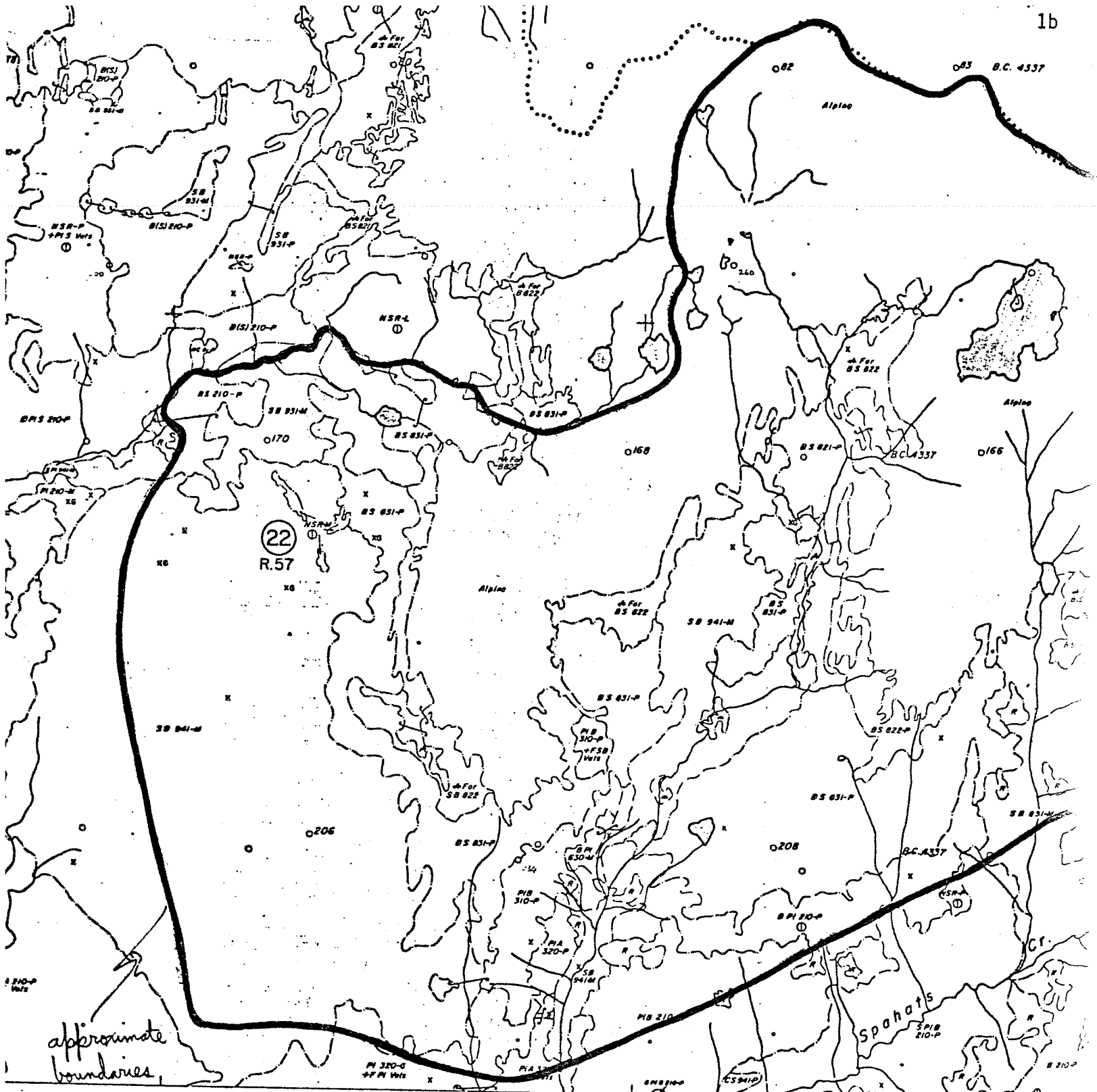
SCALE 1:50,000 ÉCHELLE

RAFT RIVER

82 M/13 W

EDITION 1

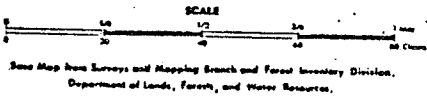




approximate boundaries

5194

FOREST COVER MAP 82-M-13-d



RAFT PSY.U.
1967

[Signature]
Project Supervisor

Map sheet, height, etc. 1 cell space.
Showing 90-100% of number of sheets.
Map of area per 1:50,000 or 1:75,000.
Scale: 1:50,000
1:75,000
1:100,000
1:150,000
1:200,000
1:250,000
1:300,000
1:400,000
1:500,000
1:600,000
1:750,000
1:1,000,000
1:1,500,000
1:2,000,000
1:3,000,000
1:4,000,000
1:5,000,000
1:6,000,000
1:7,000,000
1:8,000,000
1:9,000,000
1:10,000,000

Symbol	Description	Symbol	Description
①	1:50,000	②	1:75,000
③	1:100,000	④	1:150,000
⑤	1:200,000	⑥	1:250,000
⑦	1:300,000	⑧	1:400,000
⑨	1:500,000	⑩	1:600,000
⑪	1:750,000	⑫	1:1,000,000
⑬	1:1,500,000	⑭	1:2,000,000
⑮	1:3,000,000	⑯	1:4,000,000
⑰	1:5,000,000	⑱	1:6,000,000
⑲	1:7,000,000	⑳	1:8,000,000
㉑	1:9,000,000	㉒	1:10,000,000

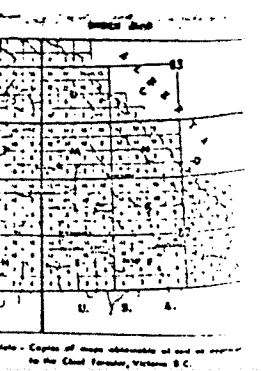
① - ①⑤ - Surveyed to 1960.
①⑥ - ①⑨ - Surveyed to 1965.
①⑩ - ①⑭ - Surveyed to 1970.
①⑮ - ①⑰ - Surveyed to 1975.
①⑱ - ②② - Surveyed to 1980.
②③ - ②⑥ - Surveyed to 1985.
②⑦ - ②⑩ - Surveyed to 1990.
②⑪ - ②⑬ - Surveyed to 1995.
②⑭ - ②⑯ - Surveyed to 2000.
②⑰ - ②⑲ - Surveyed to 2005.
②⑳ - ③② - Surveyed to 2010.
③③ - ③⑥ - Surveyed to 2015.
③⑦ - ③⑩ - Surveyed to 2020.
③⑪ - ③⑬ - Surveyed to 2025.
③⑭ - ③⑯ - Surveyed to 2030.
③⑰ - ③⑲ - Surveyed to 2035.
③⑳ - ④② - Surveyed to 2040.

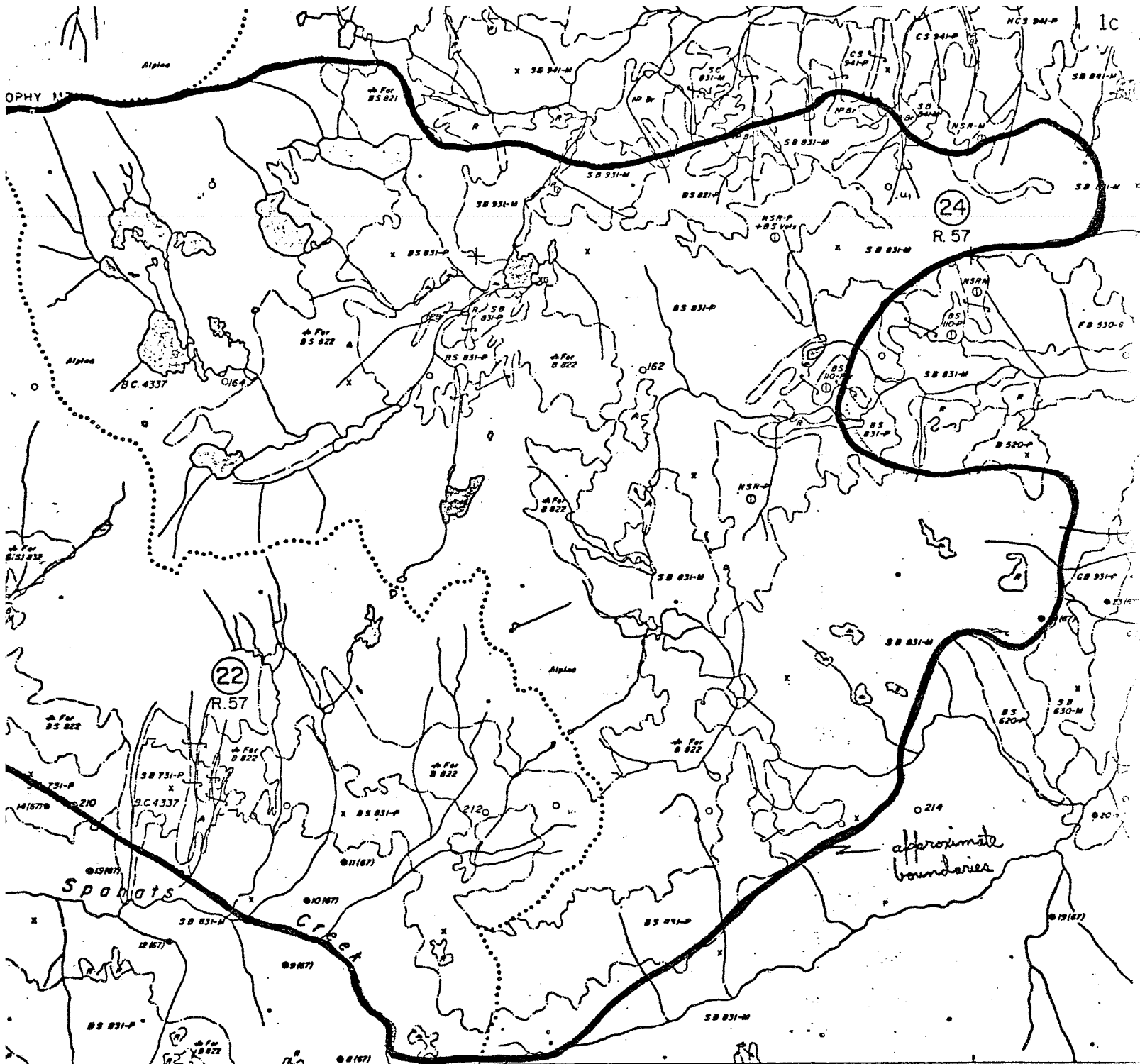
SURVEY SYMBOLS

- ① - ③② - Surveyed to 1960.
- ①⑥ - ①⑨ - Surveyed to 1965.
- ①⑩ - ①⑭ - Surveyed to 1970.
- ①⑮ - ①⑰ - Surveyed to 1975.
- ①⑱ - ②② - Surveyed to 1980.
- ②③ - ②⑥ - Surveyed to 1985.
- ②⑦ - ②⑩ - Surveyed to 1990.
- ②⑪ - ②⑬ - Surveyed to 1995.
- ②⑭ - ②⑯ - Surveyed to 2000.
- ②⑰ - ②⑲ - Surveyed to 2005.
- ②⑳ - ③② - Surveyed to 2010.
- ③③ - ③⑥ - Surveyed to 2015.
- ③⑦ - ③⑩ - Surveyed to 2020.
- ③⑪ - ③⑬ - Surveyed to 2025.
- ③⑭ - ③⑯ - Surveyed to 2030.
- ③⑰ - ③⑲ - Surveyed to 2035.
- ③⑳ - ④② - Surveyed to 2040.

SYMBOL DESCRIPTIONS

- ① - ③② - Surveyed to 1960.
- ①⑥ - ①⑨ - Surveyed to 1965.
- ①⑩ - ①⑭ - Surveyed to 1970.
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- ③⑳ - ④② - Surveyed to 2040.





TYPE DESCRIPTIONS

Labels on boundary lines: type symbols in descriptive labels which indicate species composition, age class, height class, etc., and use them. In brackets, descriptive labels, secondary values in secondary locations will occur.

DBH - diameters over 20% of gross volume stored in order of preference. Many species commonly 40-50% of gross volume are included. Some composition of younger forests check are based on number of trees.

AGE

Age Class	Symbol	Symbol
1-20	①	②
21-40	③	④
41-60	⑤	⑥
61-80	⑦	⑧
81-100	⑨	⑩
101-120	⑪	⑫
121-140	⑬	⑭
141-160	⑮	⑯
161-180	⑰	⑱
181-200	⑲	⑳
201-220	㉑	㉒

STOCKING

Stocking	Symbol	Stocking	Symbol
1	⊙	2	⊙
3	⊙	4	⊙
5	⊙	6	⊙
7	⊙	8	⊙
9	⊙	10	⊙

EXAMPLES OF FOREST AND DOW-FOREST MAP LABELS

PC 100-20-1 - 100 meters PC forest with 10-15% of gross volume, Age 121-140 years, height 95-125 feet, stocking of over 30 trees/ha (11.7 x 4.5).

NSR 220-10 - 100 meters NSR forest, Age 21-40 years, height 30-65 feet. Stocking same as above type 10 hectares, Medium site.

NSR 220-10 - 100 meters NSR forest, Age 21-40 years, height 30-65 feet. Secondary forest volume present in regular spacing. Good site.

NSR 220-10 - 100 meters NSR forest, Age 21-40 years, height 30-65 feet. Secondary forest volume present in regular spacing. Good site.

NSR 220-10 - 100 meters NSR forest, Age 21-40 years, height 30-65 feet. Secondary forest volume present in regular spacing. Good site.

NSR 220-10 - 100 meters NSR forest, Age 21-40 years, height 30-65 feet. Secondary forest volume present in regular spacing. Good site.

MOBILITY SYMBOLS

Distribution	Percent volume (estimated or determined)	
1-25%	26-75%	76-100%

Legend:

- ① - 100% Resident
- ② - 75% Resident
- ③ - 50% Resident
- ④ - 25% Resident
- ⑤ - 100% Migrant
- ⑥ - 75% Migrant
- ⑦ - 50% Migrant
- ⑧ - 25% Migrant

Legend:

- ⊙ - Logged in 1968
- ⊙ - Not satisfactorily restocked
- ⊙ - Residual stand of forest - spruce
- ⊙ - Other 1968 logging, that is, the
- ⊙ - remnants of a forest resulting from
- ⊙ - selective cutting. They are easily to
- ⊙ - stands affected by fire, windfall,
- ⊙ - insect or disease.

BRITISH COLUMBIA FOREST SERVICES
FOREST INVENTORY DIVISION

FOREST COVER MAP 82-M-13-c

SCALE
1:50,000
1/2" = 1 mile
1" = 2 miles

Base Map from Survey and Mapping Branch and Forest Inventory Division,
Department of Land, Forests, and Water Resources.

RAFT R.S.Y.U.
1967
R. S. Y. U.
Project Supervisor

Legend:

- ① - 100% Resident
- ② - 75% Resident
- ③ - 50% Resident
- ④ - 25% Resident
- ⑤ - 100% Migrant
- ⑥ - 75% Migrant
- ⑦ - 50% Migrant
- ⑧ - 25% Migrant

Legend:

- ⊙ - Logged in 1968
- ⊙ - Not satisfactorily restocked
- ⊙ - Residual stand of forest - spruce
- ⊙ - Other 1968 logging, that is, the
- ⊙ - remnants of a forest resulting from
- ⊙ - selective cutting. They are easily to
- ⊙ - stands affected by fire, windfall,
- ⊙ - insect or disease.

Legend:

- ① - 100% Resident
- ② - 75% Resident
- ③ - 50% Resident
- ④ - 25% Resident
- ⑤ - 100% Migrant
- ⑥ - 75% Migrant
- ⑦ - 50% Migrant
- ⑧ - 25% Migrant

Legend:

- ⊙ - Logged in 1968
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- ⊙ - Residual stand of forest - spruce
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- ⊙ - remnants of a forest resulting from
- ⊙ - selective cutting. They are easily to
- ⊙ - stands affected by fire, windfall,
- ⊙ - insect or disease.

3. Location of IBP Area*

- 1. Latitude..... 51 ° 45-48.4' N Longitude..... 119 ° 47.3-58' W
- 2. Country Canada
- State or Province British Columbia County North Thompson
- (State or Province County)

4. Administration

- National 1. Official category Crown Land
- 2. Address of administration Crown Land; Raft P.S.Y.U.
- Land Management Branch, Ministry of the
- Environment, and
- Ministry of Forests
- Parliament Buildings, Victoria, B.C.
- V8V 1X5

International Class

3. Included in U.N. List	Rejected from U.N. List	Area with formal conservation status	No formal cons. status
(A)	(B)	(C)	(D) X

5. Characteristics of IBP Area*

- 1. Surface area (state units of measurement) ca. 5,169 ha (12,750 acres)
- 2. Altitude (state units of measurement) Maximum 2577 m (8,455')
- Minimum 1385 m (4,550')

6. Climate

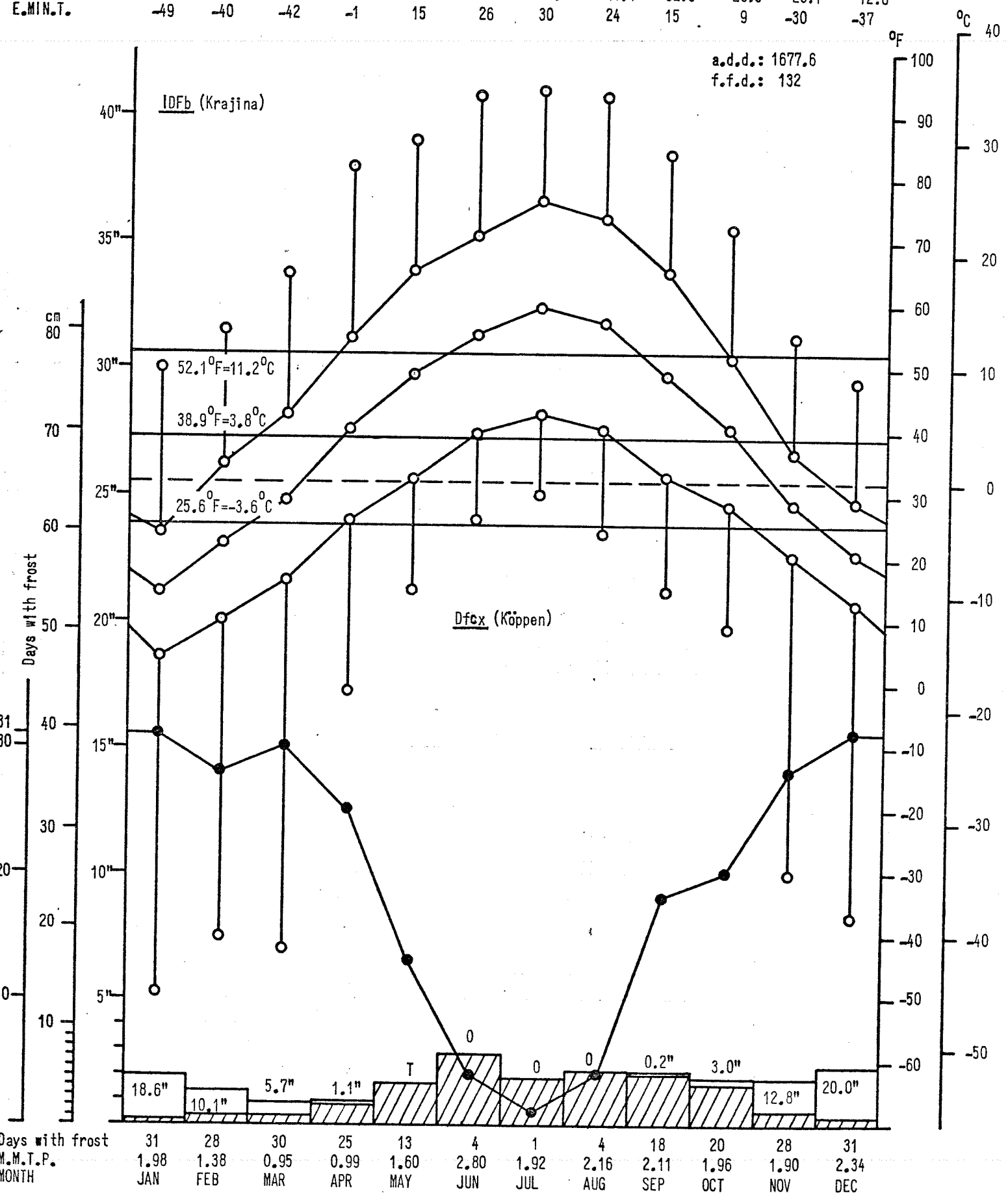
Nearest climatological station :

- 1. Name Hemp Creek Clearwater
- 2. Climatological station on IBP Area*? Yes No
- 3. If (2) not, distance from edge of IBP Area* (state units) 20 km
- 4. Direction from IBP Area* SW
- 5. Additional data sheet attached? Yes No

HEMP CREEK CLEARWATER 51°55'N, 120°03'W, 2100' ASL. Record: 8-10 years, adjusted.
 Months above 50°F: 3, below 32°F: 5, A.M.T.P.: 22.09", A.M.S.F.: 71.5", snow % A.M.T.P.: 32.36, days with frost, yearly: 233.

20

E.MAX.T.	50	56	65	82	86	93	94	93	84	72	55	48
M.D.MAX.T.	24.4	34.8	42.9	54.5	65.4	70.6	76.3	73.7	64.9	51.7	36.6	29.1
M.D.T.	14.5	22.5	29.6	40.5	49.0	55.2	59.5	57.1	48.9	40.1	28.4	20.9
M.D.MIN.T.	4.5	10.1	16.2	26.5	32.6	39.7	42.7	40.4	32.9	28.5	20.1	12.6
E.MIN.T.	-49	-40	-42	-1	15	26	30	24	15	9	-30	-37



7. Vegetation and Soil

1

Vegetation

Community Reference Number	Vegetation Code					Plant communities (give usual name using full Latin names of a species where applicable)	Area (state units)
	Primary Structural Group	Class	Group	Formation	Sub-Formation		
1	1	M	2	2		<i>Carex nigricans</i> community	
2	1	N	2	1		<i>Luetkea pectinata</i>	
3	1	N	2	1		<i>Lupinus latifolius</i>	
4	1	N	2	1		<i>Heracleum lanatum</i> - <i>Veratrum viride</i>	
5	1	C	1	2	c	<i>Cassiope mertensiana</i> - <i>Phyllodoce empetrifolia</i>	
6	1	B	2	1	a	<i>Salix (commutata, barclayi)</i> - <i>Senecio triangularis</i>	
7	1	A	1	7	a	<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> - <i>Rhododendron albiflorum</i>	
8	1	A	1	7	a	<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> - moss	
9	1	M	2	2		<i>Carex pyrenaica</i> - <i>Luzula piperi</i>	
10	1	M	2	2		<i>Carex nigricans</i>	
11	1	N	2	1		<i>Antennaria lanata</i> - <i>Salix (cascadensis, nivalis)</i>	
12	1	N	2	1		<i>Valeriana sitchensis</i> - <i>Lupinus latifolius</i> - <i>Erigeron peregrinus</i>	
13	1	N	2	1		<i>Antennaria lanata</i> - <i>Artemisia norvegica</i>	
14	1	C	1	2	c	<i>Cassiope mertensiana</i> - <i>Phyllodoce empetrifolia</i>	
15	? 2	F	2	1		<i>Salix (nivalis, cascadensis)</i> - lichen	
16	2	H	2			Alpine fellfield	
17	1	G	1	3		<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> krummholz	
18							
19							
20							

ESSFx:

AT:

SOME CHARACTERISTIC SPECIES OF THE PLANT COMMUNITIES OF E.R.P. No. 281 - TROPHY MOUNTAIN:

1. *Carex nigricans* snowbed community:

herb layer: <i>Carex nigricans</i>	<i>Luetkea pectinata</i>
<i>Epilobium alpinum</i>	<i>Deschampsia atropurpurea</i>
moss layer: <i>Pogonatum alpinum</i>	<i>Polytrichadelphus lyallii</i>

2. *Luetkea pectinata* snowbed community:

herb layer: <i>Luetkea pectinata</i>	<i>Deschampsia atropurpurea</i>
<i>Valeriana sitchensis</i>	<i>Lycopodium sitchense</i>
<i>Carex spectabilis</i> , <i>C. nigricans</i>	<i>Hieracium gracile</i>
moss layer: <i>Polytrichadelphus lyallii</i>	<i>Pogonatum alpinum</i>
<i>Dicranum</i> sp.	

3. *Lupinus latifolius* subalpine herb meadow:

herb layer: <i>Lupinus latifolius</i> var. <i>subalpinus</i>	<i>Valeriana sitchensis</i>
<i>Erigeron peregrinus</i>	<i>Arnica latifolia</i> , <i>A. cordifolia</i>
<i>Senecio triangularis</i>	<i>Carex spectabilis</i>
<i>Aquilegia formosa</i>	<i>Thalictrum occidentale</i>
<i>Erythronium grandiflorum</i>	<i>Mitella breweri</i>
<i>Veratrum viride</i>	<i>Deschampsia atropurpurea</i>
<i>Lilium columbianum</i>	<i>Pedicularis bracteosa</i>
<i>Trollius laxus</i>	<i>Anemone occidentalis</i>
<i>Phleum alpinum</i>	

4. *Heracleum lanatum* - *Veratrum viride* (lush subhygric forb meadows at base of steep colluvial slopes, or in seepage areas over gentler till):

herb layer: <i>Heracleum lanatum</i>	<i>Veratrum viride</i>
<i>Senecio triangularis</i>	<i>Epilobium angustifolium</i>
<i>Lupinus latifolius</i> var. <i>subalpinus</i>	<i>Valeriana sitchensis</i>
<i>Aquilegia formosa</i>	<i>Geranium richardsonii</i>
<i>Arabis drummondii</i>	<i>Bromus vulgaris</i> , <i>B. carinatus</i>
<i>Elymus glaucus</i>	<i>Calamagrostis canadensis</i>
<i>Deschampsia atropurpurea</i>	<i>Mitella breweri</i>
<i>Carex spectabilis</i>	

5. *Cassiope mertensiana* - *Phyllodoce empetriformis* subalpine heath:

herb/dwarf shrub layer: <i>Cassiope mertensiana</i>	<i>Cassiope mertensiana</i>
<i>Phyllodoce empetriformis</i>	<i>Luetkea pectinata</i>
<i>Lycopodium sitchense</i>	<i>Deschampsia atropurpurea</i>
moss layer: <i>Dicranum fuscescens</i>	<i>Rhacomitrium</i> sp.

6. *Salix* (*commutata*, *barclayi*) - *Senecio triangularis* (along subalpine streams):

shrub layer: <i>Salix commutata</i> , <i>S. barclayi</i>	
herb layer: <i>Petasites frigidus</i>	<i>Senecio triangularis</i>
<i>Equisetum arvense</i>	<i>Leptarrhena pyrolifolia</i>
<i>Mimulus lewisii</i>	<i>Parnassia fimbriata</i>
<i>Mitella breweri</i>	<i>Veronica wormsjoldii</i>
<i>Epilobium glandulosum</i> , <i>E. anagallidifolium</i>	
<i>Saxifraga lyallii</i> , <i>S. punctata</i>	<i>Habenaria dilatata</i> , <i>H. saccata</i>
<i>Heracleum lanatum</i>	<i>Veratrum viride</i>
<i>Trollius laxus</i>	<i>Juncus mertensianus</i>
<i>Carex spectabilis</i>	<i>Anemone parviflora</i>
<i>Ranunculus eschscholtzii</i>	<i>Viola glabella</i>

7. *Abies lasiocarpa* - *Picea engelmannii* - *Rhododendron albiflorum*:
- | | | |
|--------------|--|---|
| trees: | <i>Abies lasiocarpa</i> | (<i>Pinus contorta</i>) |
| | <i>Picea engelmannii</i> | |
| shrub layer: | <i>Rhododendron albiflorum</i> | <i>Menziesia ferruginea</i> |
| | <i>Sorbus sitchensis</i> | <i>Vaccinium membranaceum</i> , <i>V. ovalifolium</i> |
| herb layer: | <i>Arnica latifolia</i> | <i>Pedicularis racemosa</i> , (<i>P. bracteosa</i>) |
| | <i>Valeriana sitchensis</i> | <i>Mitella breweri</i> |
| | (<i>Veratrum viride</i>) | <i>Phyllodoce empetriformis</i> |
| | <i>Streptopus roseus</i> , <i>S. amplexifolius</i> | <i>Cornus canadensis</i> |
| | <i>Clintonia uniflora</i> | <i>Gymnocarpium dryopteris</i> |
| moss layer: | <i>Dicranum fuscescens</i> , <i>D. scoparium</i> | <i>Rhytidiopsis robusta</i> |
| | <i>Pleurozium schreberi</i> | |
8. *Abies* - *Picea* - MOSS:
- | | | |
|--------------------------------|-----------------------------|---|
| | <i>Rubus pedatus</i> | <i>Clintonia uniflora</i> |
| | <i>Pleurozium schreberi</i> | <i>Ptilium crista-castrensis</i> |
| | <i>Rhytidiopsis robusta</i> | |
| seepage over subalpine cliffs: | | <i>Saxifraga mertensiana</i> , <i>S. punctata</i> |
| | | <i>Suksdorfia ranunculifolia</i> |
| dry outcrops: | <i>Sedum lanceolatum</i> | <i>Selaginella densa</i> |
| | <i>Poa scabrella</i> | <i>Polygonum minimum</i> |
| | <i>Cryptogramma crispa</i> | |
9. *Carex pyrenaica* - *Luzula piperi* high snowbed tundra; low average plant cover:
- | | | |
|-------------|------------------------------|--|
| herb layer: | <i>Carex pyrenaica</i> | <i>Luzula piperi</i> , <i>L. arcuata</i> |
| | <i>Juncus drummondii</i> | <i>Oxyria digyna</i> |
| moss layer: | <i>Marsupella brevissima</i> | <i>Polytrichum</i> sp. |
| | <i>Solorina crocea</i> | |
10. *Carex nigricans* snowbed fen:
- | | | |
|-------------|----------------------------------|--------------------------|
| herb layer: | <i>Carex nigricans</i> | <i>Luetkea pectinata</i> |
| | <i>Deschampsia atropurpurea</i> | |
| moss layer: | <i>Polytrichadelphus lyallii</i> | <i>Kiaeria blyttii</i> |
| | <i>Lescurea radicata</i> | <i>Lepraria neglecta</i> |
11. *Antennaria lanata* - *Salix (cascadensis, nivalis)* (snowbed type):
- | | | |
|-------------|---|--|
| herb layer: | <i>Antennaria lanata</i> | <i>Salix cascadensis</i> , <i>S. nivalis</i> |
| | <i>Carex nigricans</i> | <i>Ranunculus eschscholtzii</i> |
| | <i>Epilobium anagallidifolium</i> | <i>Anemone parviflora</i> |
| | <i>Caltha leptosepala</i> | <i>Deschampsia atropurpurea</i> |
| moss layer: | <i>Polytrichum piliferum</i> , <i>P. norvegicum</i> | <i>Cetraria islandica</i> |
| | <i>Lepraria neglecta</i> | |
12. *Valeriana sitchensis* - *Lupinus latifolius* - *Erigeron peregrinus* mesic herb meadow:
- | | | |
|-------------|--|--|
| herb layer: | <i>Valeriana sitchensis</i> | <i>Lupinus latifolius</i> var. <i>subalpinus</i> |
| | <i>Erigeron peregrinus</i> | <i>Senecio triangularis</i> , (<i>S. integerrimus</i>) |
| | <i>Arnica latifolia</i> , <i>A. mollis</i> | <i>Castilleja miniata</i> |
| | <i>Pedicularis bracteosa</i> | <i>Anemone occidentalis</i> |
| | <i>Erythronium grandiflorum</i> | <i>Claytonia lanceolata</i> |
| | (<i>Trollius laxus</i>) | (<i>Veratrum viride</i>) |

12. herb layer (cont.):
- | | |
|-----------------------------------|--|
| <i>Veronica wormskjoldii</i> | <i>Epilobium lactiflorum</i> , <i>E. angustifolium</i> |
| (<i>Silene parryi</i>) | <i>Gentiana amarella</i> |
| <i>Deschampsia atropurpurea</i> | (<i>Antennaria lanata</i> , <i>A. umbrinella</i>) |
| <i>Poa cusickii</i> | <i>Phleum alpinum</i> |
| (<i>Saxifraga occidentalis</i>) | <i>Carex spectabilis</i> |
| <i>Agoseris aurantiaca</i> | (<i>Luzula hitchcockii</i>) |
| | <i>Achillea millefolium</i> |
13. *Antennaria lanata* - *Artemisia norvegica* (mesic - submesic herb meadow):
- | | |
|---|---|
| herb layer: <i>Antennaria lanata</i> | <i>Artemisia norvegica</i> |
| <i>Hieracium gracile</i> | <i>Arnica latifolia</i> |
| <i>Saxifraga ferruginea</i> | <i>Gentiana glauca</i> |
| <i>Potentilla diversifolia</i> | (<i>Silene parryi</i>) |
| (<i>Campanula lasiocarpa</i>) | <i>Poa cusickii</i> , <i>P. arctica</i> |
| <i>Luzula hitchcockii</i> , (<i>L. spicata</i>) | <i>Juncus drummondii</i> |
| (<i>Carex pyrenaica</i>) | |
| moss layer: <i>Polytrichum piliferum</i> | <i>Solorina crocea</i> |
| <i>Lecidea</i> spp. | <i>Lepraria neglecta</i> |
14. *Cassiope mertensiana* - *Phyllodoce empetrififormis* alpine heath:
- | | |
|---|---|
| herb/dwarf shrub layer: | <i>Cassiope mertensiana</i> , (<i>C. lycopodioides</i>) |
| <i>Luetkea pectinata</i> | (<i>Empetrum nigrum</i>) |
| <i>Phyllodoce empetrififormis</i> , <i>P. glanduliflora</i> | |
| <i>Juncus drummondii</i> | <i>Antennaria lanata</i> |
| <i>Sibbaldia procumbens</i> | <i>Erigeron peregrinus</i> |
| <i>Artemisia norvegica</i> | <i>Luzula hitchcockii</i> |
| <i>Phleum alpinum</i> | <i>Carex spectabilis</i> |
| (<i>Gentiana glauca</i>) | (<i>Vaccinium caespitosum</i>) |
| <i>Lycopodium sitchense</i> | |
| moss layer: <i>Lepraria neglecta</i> | <i>Cetraria islandica</i> |
| <i>Dicranum fuscescens</i> | <i>Polytrichum piliferum</i> |
| (<i>Solorina crocea</i>) | |
15. *Salix* (*nivalis*, *cascadensis*) high tundra:
- | | |
|--|--|
| herb/dwarf shrub layer: | <i>Salix nivalis</i> , <i>S. cascadensis</i> |
| <i>Dryas octopetala</i> | <i>Silene acaulis</i> |
| <i>Antennaria alpina</i> , <i>A. lanata</i> | <i>Artemisia norvegica</i> |
| <i>Luzula spicata</i> , <i>L. arcuata</i> | <i>Potentilla diversifolia</i> , (<i>P. villosa</i> , |
| <i>Arenaria nuttallii</i> | <i>P. uniflora</i>) |
| <i>Draba paysonii</i> | <i>Stellaria monantha</i> |
| <i>Saxifraga ferruginea</i> , <i>S. bronchialis</i> , <i>S. nivalis</i> | |
| <i>Taraxacum lyratum</i> | (<i>Sedum lanceolatum</i>) |
| <i>Poa alpina</i> , <i>P. arctica</i> | <i>Erigeron uniflorus</i> |
| <i>Carex phaeocephala</i> , <i>C. nardina</i> , <i>C. podocarpa</i> , <i>C. pyrenaica</i> | |
| <i>Sibbaldia procumbens</i> | <i>Gentiana glauca</i> |
| (<i>Solidago multiradiata</i>) | <i>Polygonum viviparum</i> |
| (<i>Selaginella densa</i>) | <i>Cassiope tetragona</i> |
| <i>Phyllodoce glanduliflora</i> | <i>Festuca brachyphylla</i> |
| <i>Trisetum spicatum</i> | |
| moss layer: <i>Polytrichum piliferum</i> , <i>P. juniperinum</i> | |
| <i>Cetraria nivalis</i> , <i>C. cucullata</i> , <i>C. islandica</i> , <i>C. ericetorum</i> | |
| <i>Thamnochloa subuliformis</i> | <i>Solorina crocea</i> |
| <i>Cornicularia aculeata</i> | <i>Lepraria neglecta</i> |
| <i>Cladina mitis</i> | <i>Stereocaulon paschale</i> |

16. Alpine fellfield:

herb layer: *Festuca brachyphylla* *Poa lettermannii*
Draba paysonii, D. ruaxes *Silene acaulis*
Potentilla diversifolia *Arenaria nuttallii, A. obtusiloba*
Saxifraga bronchialis, S. rivularis
Stellaria longipes *Campanula lasiocarpa*
Antennaria alpina *Carex nardina*
Luzula spicata, L. arcuata

moss layer: *Dactylina arctica, D. racemosa* *Alectoria pubescens*
Hypogymnia subobscura *Umbilicaria spp.*
Rhizocarpon geographicum agg. *Cetraria nivalis, C. cucullata*
Thamnia subuliformis *Racomitrium lanuginosum*
Polytrichum piliferum
numerous additional crustose lichens

17. *Abies lasiocarpa* - *Picea engelmannii* krummholz:

Abies lasiocarpa *Picea engelmannii*
Phyllodoce empetriformis, P. glanduliflora
Luetkea pectinata *Hieracium gracile*
Cassiope mertensiana *Antennaria lanata*
Juniperus communis *Luzula hitchcockii*
Tholurna dissimilis

7.
(cont.)

2

Soil

Community Reference Number	Soil type	Other notes
1	P ₂ /0	humic gleysol or humisol
2	F ₃ /I ₂ (P ₂)	(gleyed) shallow dystric brunisol or regosol
3	F ₄	eutric brunisol
4	0/P ₂ ; P ₂ /I ₂	humic gleysol or gleyed colluvial regosol
5	F ₄ /F ₅	dystric brunisol/mini-podzol
6	P ₂ /I ₂	gleyed cumulic regosol
7	F ₄ /F ₅	dystric brunisol or humo-ferric podzol
8	F ₄	eutric brunisol
9	I ₂	regosol
10	0	humisol
11	F ₃	shallow dystric brunisol
12	F ₄ /(P ₂)	(gleyed) eutric brunisol
13	F ₃	shallow alpine brunisol
14	F ₃	shallow dystric brunisol or humo-ferric podzol
15	F ₃	shallow alpine brunisol
16	I ₂	felsenmeer
17	F ₃	dystric brunisol
18		
19		
20		

9. Landscape

1. General Landscape (give brief description) an upland plateau of moderate relief,
 with ridges and summits rounded by glaciation

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				18	18
Gently dissected				82	82
Incised					
Skeletonised					
%				100	100%

3. Special landscape features (list)
 alpine tarns and cirques on northeastern exposures
 lava outcrops

10. Coastline of IBP Area*

NONE

1. Protected bays and/or inlets Many Few None

2. Substratum. % of coast

Rock	Boulder Beach	Shingle Beach	Sand Beach	Shell Beach	Mud	Coral	Ice
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Physiography. % of coast

Cliffed	Sloping	Flat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Special Coastal Features (list)

5. Tide. Maximum range (state units of measurement)

6. Total length of coastline :

Less than 1 km. 1-10 km. Above 10 km.

11. Freshwater within IBP Area*

1.

	Permanent	Intermittent
General	X	X
Standing	x	X
Running	X	X

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps				
Ponds	X	X	X	
Lakes	X		X	

3. Running Water

	Permanent	Intermittent
Springs, cold		
Springs, hot		
Streams	X	X
Rivers		

4. Special freshwater features
 numerous tarns

12. Salt and Brackish Water within IBP Area*

Salt Lakes	<input type="checkbox"/>	Lagoon	<input type="checkbox"/>	<input type="checkbox"/>
Estuaries	<input type="checkbox"/>	Salt pools	<input type="checkbox"/>	<input type="checkbox"/>

13. Adjacent Water Bodies (not within IBP Area*)

1. Fresh Lake River Stream

Clearwater River
Raft River

2. Salt and Brackish NONE

Estuary	Salt lake	Salt pool	Lagoon	Ocean		

14. Outstanding Floral and Faunal Features

- 1. None
- 2. Fauna

	Species diversity	Abundance of individuals	Superabundance of individuals	Rare species	Threatened/Relict species	Spp. of biogeographical interest	Exceptional Associations	Breeding or Nesting Populations	Migrating Populations	Wintering Populations		
Mammalia		X			X			X	X	X		
Aves		X			X			X	X	X		
Reptilia												
Amphibia												
Pisces												
Insecta		X						X				

3. Names of main threatened, endemic, relict and rare species

..... mountain caribou (Rangifer tarandus montanus)
 grizzly bear (Ursus arctos horribilis)
 - both threatened by loss of habitat and human disturbance

 golden eagle

4. Flora

	Species diversity	Abundance of particular species	Rare species	Threatened/relict species	Spp. of biogeographical interest	Exceptional associations	Outstanding specimens				
Angiospermae :											
trees											
shrubs		X									
herbs		X	X		X	X	X				
grass		X									
Gymnospermae		X									
Pteridophyta											
Bryophyta											
Lichens and Algae		X	X		X						

5. Names of main threatened, endemic, relict and rare species

Draba ruaxes, Cassiope lycopodioides, Tholurna dissimilis,

Dactylina ramulosa, Hypogymnia subobscura

15. Exceptional Interest of IBP Area*

Outstanding subalpine meadows; representative mature subalpine forest and alpine vegetation; habitat for mountain caribou and grizzly bears.

16. Significant Human Impact

1. General : None in entire IBP Area*
 None in part of IBP Area* X
 Impact on entire IBP Area*

2. Particular

	Past impact	Present impact	Trend			
			Increasing	Decreasing	No change	No information
Cultivation						
Drainage						
Other soil disturbance						
Grazing	X				X	
Selective flora disturbance						
Logging						
Plantation						
Hunting	X	X		X		
Removal of predators	X			X		
Pesticides						
Introductions — plants						
Introductions — animals						
Fire	X			X		
Permanent habitation						
Recreation and tourism	X	X	X			
Research						

- by sheep, 1960-1969

3. Additional details on each type of impact attached?

Yes No X

17. Conservation Status (required):

	Protection			Utilisation			Conservation Management			Permitted Research		
	none	partial	total	none	controlled	uncontrolled	none	to alter status	to maintain status	experimental	observational	prohibited
Flora			X	X					X	X	X	
Fauna			X	X					X	X	X	
Non-living			X	X			X			X	X	

18. References

1. List major biological/geographical references for the IBP Area.

Sheet attached? Yes No

2. List main maps available for the IBP Area.

82 M/13W (Raft River) (1:50,000)

List attached? Yes No

Forest Cover 82 M/13 - c,d

3. Aerial photographs for the IBP Area available?

B.C. 4337:81-83; 160-171; 205-214

For whole area For part of area None

19. Other Relevant Information

The De Kelvers grazed sheep on area "A" for nine years prior to 1969. Since then there has been no livestock grazing. The De Kelvers also hold trapping rights on the area, "but are willing to give this up if an ecological reserve is established."

Signed Jim Pojar

(Surveyor)

J. Pojar, J.B. Foster,
Ida & Emile De Kelter