

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.)

Strata Range (Spruce Creek)

3. Indicate the biogeoclimatic zone of which the reserve is representative.

CWHa, (MH) / ESSF, AT

4. Approximate total acreage.

14197 acres.

5. Purpose of the reserve. In comparison with the area of the application no. 121, to preserve the drier and less snowy, but cooler, coastal western hemlock zone and less snowy but still cooler subalpine (ESSF) zone, however still with some mountain hemlock in soils well protected by snow from freezing.
 - (a) Primary (state acreage)

A : 14,197 acres (CWHa)
 - (b) Others if any (state acreage)

B : 5,043 acres (ESSF and AT)
 - (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.

Major trees are; western hemlock, Engelmann spruce, white spruce (very little) subalpine fir, mountain hemlock, black cottonwood, aspen and paper birch.

V. J. Krajina *K. Klinka*
Signature V. J. Krajina, K. Klinka
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

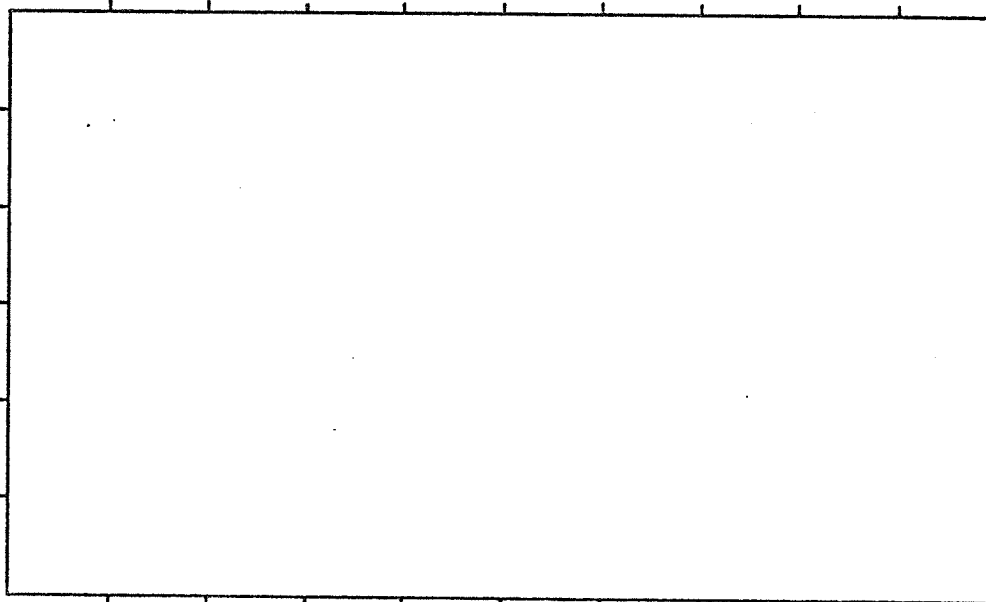
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For Data
Centre Use
only

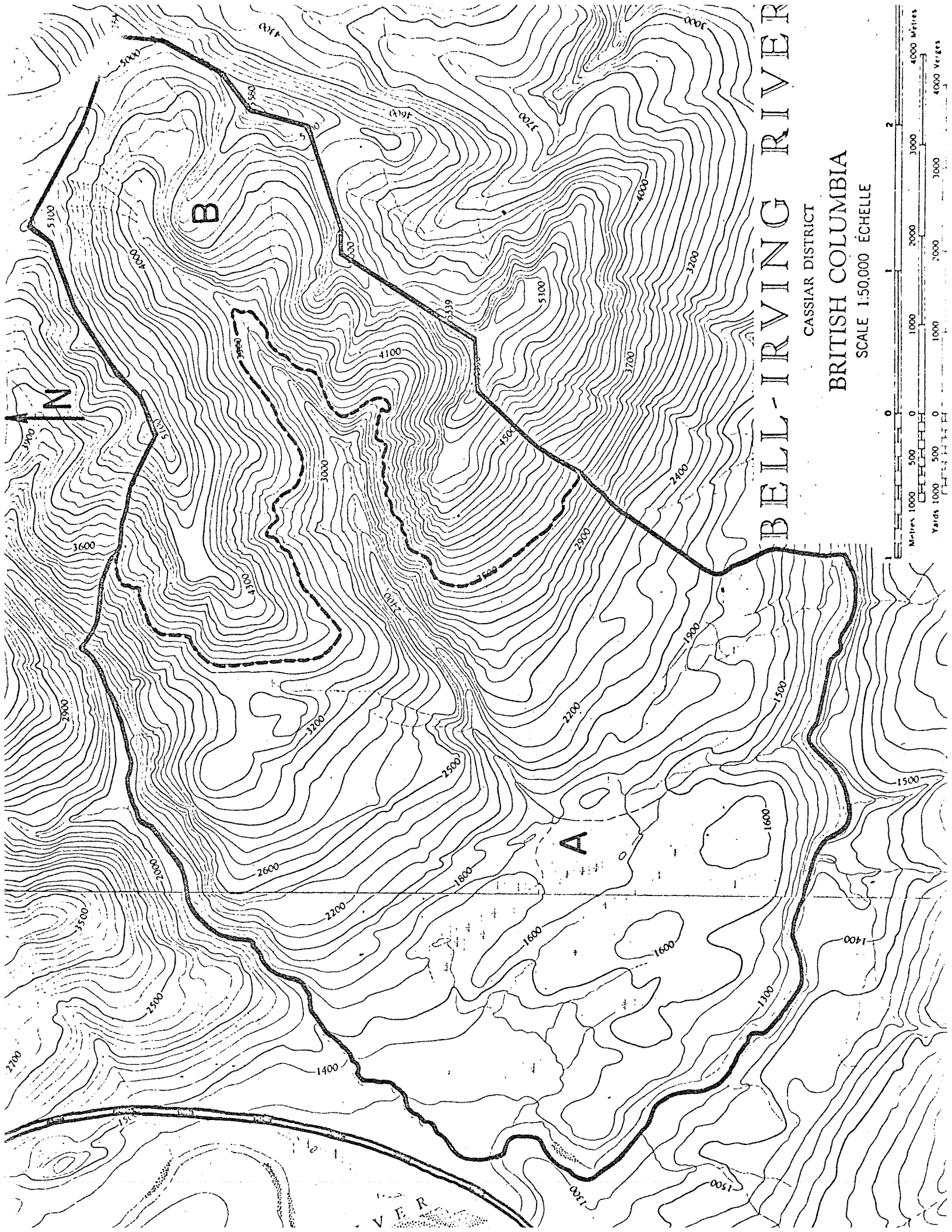
V.J.Krajina*, Peter Small, R.M.Annas, K.Klinka,

1. 1. Name of surveyor ~~J.B.Foster, R.G.McMinn and M.Feller~~.....
2. Address of surveyor *) Dept. of Botany, University of British Columbia, Vancouver, B.C.
3. Check Sheet completed (a) on site (b) from records
4. Date Check Sheet completed November 10, 1973

2. 1. Name of IBP Area Strata Range (Spruce Creek)
2. Name of IBP Subdivision (or serial letter) CWHa, (MH) / ESSF, AT
3. Map of IBP Area* showing boundaries attached? Yes 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.

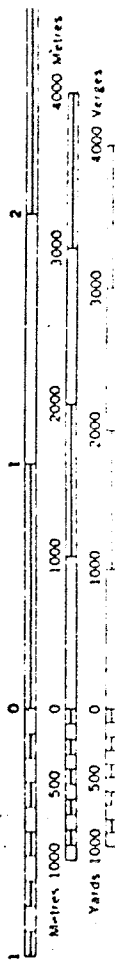


BELL-IRVING RIVER

CASSIAR DISTRICT

BRITISH COLUMBIA

SCALE 1:50,000 ÉCHELLE

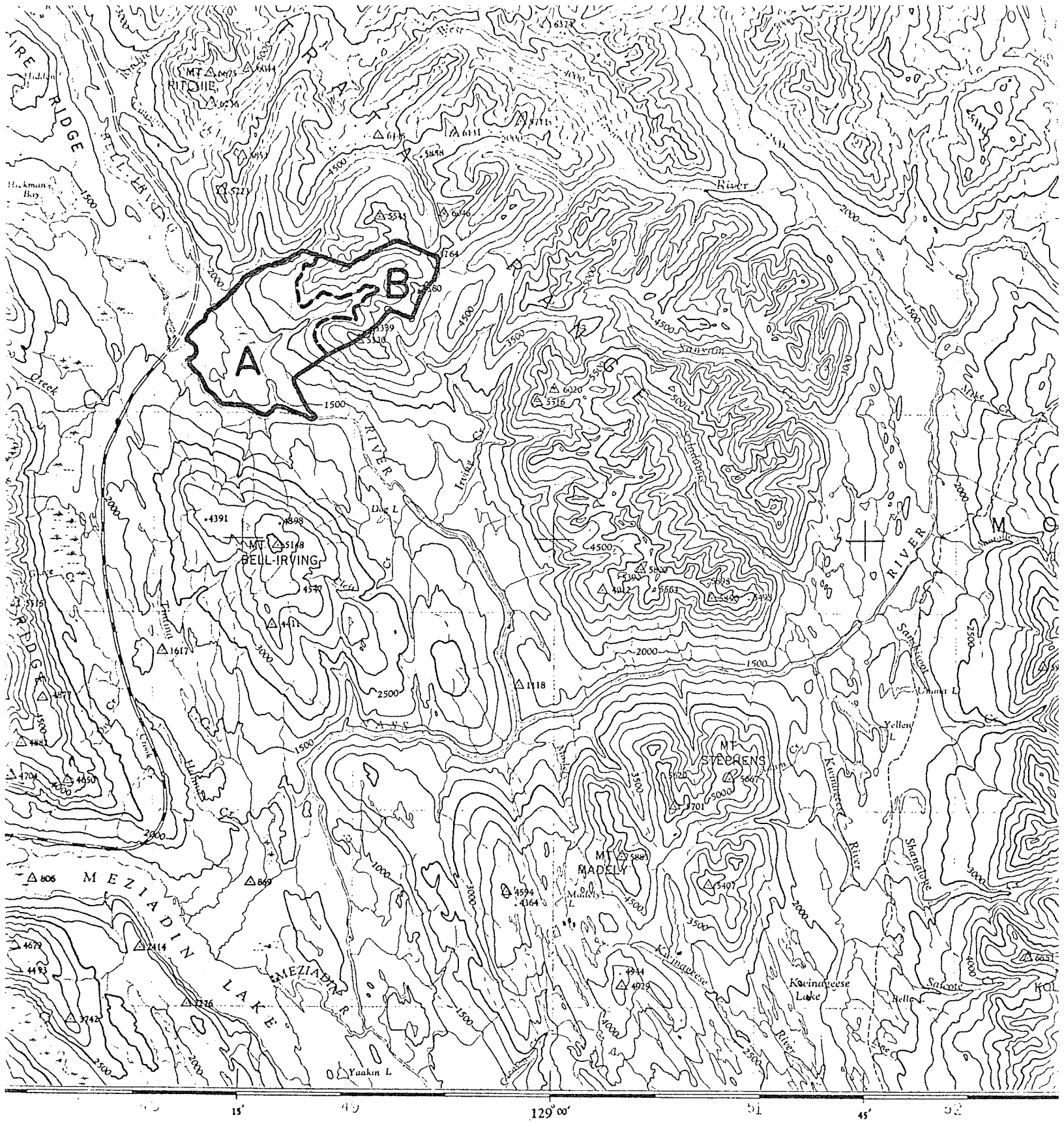


N

B

A

VER



OF
BRANCH,

BOWSER LAKE

BRITISH COLUMBIA

Contour inter-
All Elevations in Feet
North Amer

Scale 1 : 250,000
1 Inch to 4 Miles Approximately



3. Location of IBP Area*

1. Latitude...56.....° 18-23° N/W Longitude...129.....° 05-16° E/W

2. Country Canada

State or Province British Columbia County Terrace

(State or Province County

4. Administration

National 1. Official category Crown Land

2. Address of administration British Columbia Department of Lands, Forests, and Water Resources,
 Victoria, British Columbia, Canada.

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* Total: 14,197 acres

1. Surface area (state units of measurement) A: 14197 acres, B: 5043 acres (above 3,500')

2. Altitude (state units of measurement) Maximum 5580' (1674m)

Minimum 1100' (330m)

6. Climate

Nearest climatological station :

1. Name Stewart ; *Aiyansh

2. Climatological station on IBP Area*? Yes No x

3. If (2) not, distance from edge of IBP Area* (state units) 39mi. ; * 70mi.

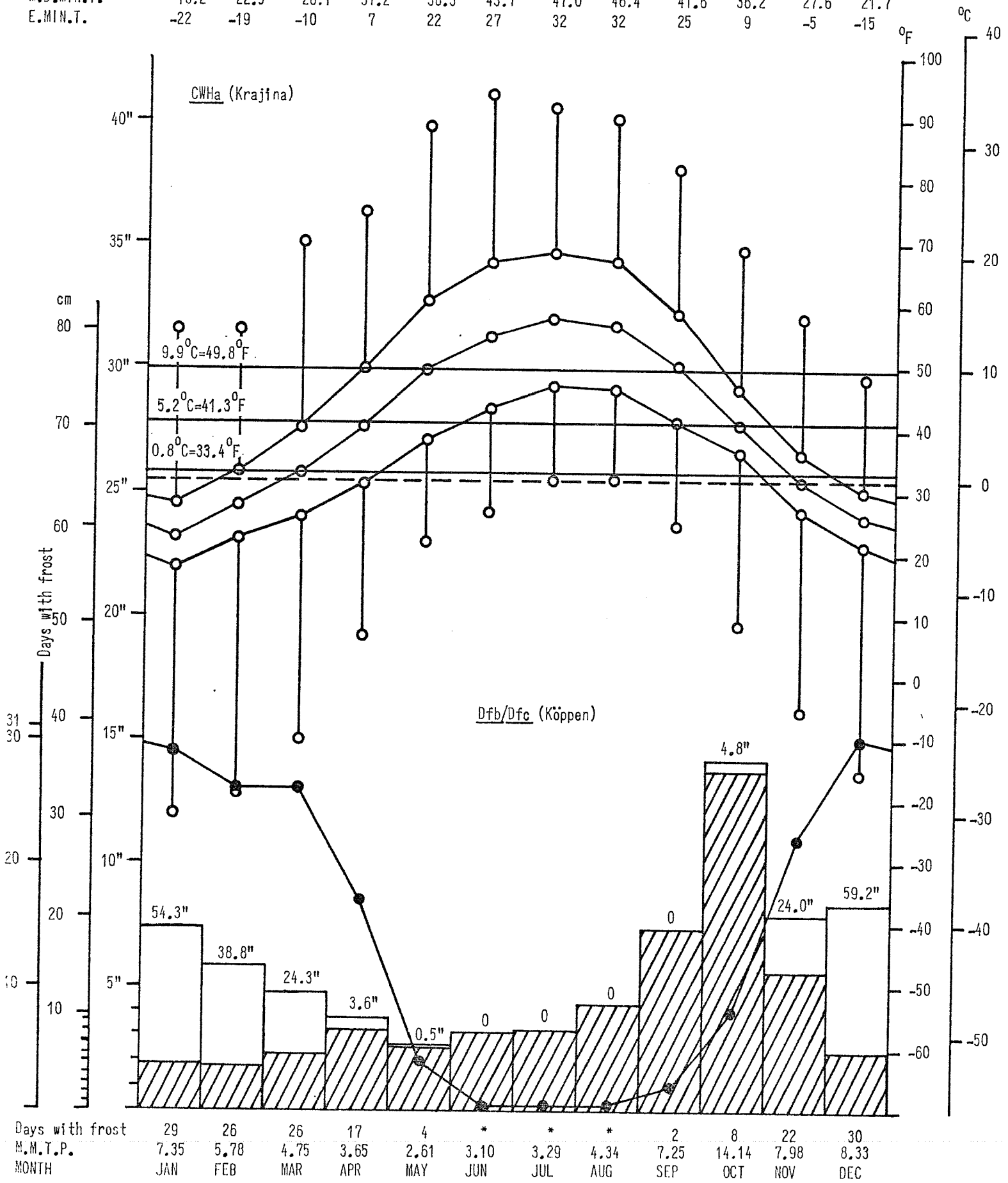
4. Direction from IBP Area* SW ; *S

5. Additional data sheet attached? Yes No x

STEWART 55°57'N, 129°59'W, 15' ASL. Record: 25-56 years.

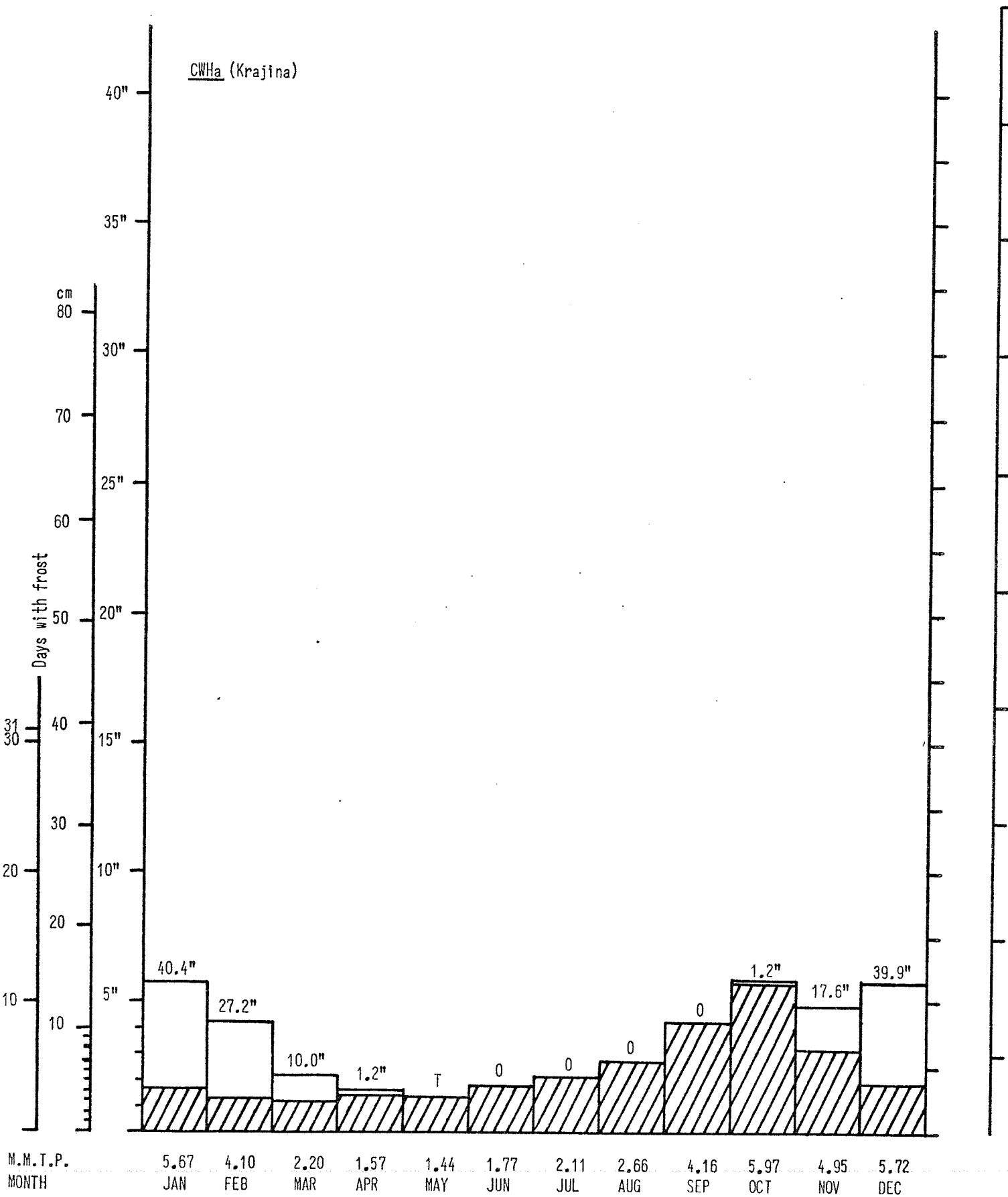
Months above 50°F: 4, below 32°F: 3, A.M.T.P. 72.57", A.M.S.F. 209.5", snow % A.M.T.P.: 28.86, days with frost, yearly: 73.

E.MAX.T.	56	56	70	75	89	94	92	90	82	69	58	48
M.D.MAX.T.	28.1	33.5	40.6	49.6	60.8	66.7	68.7	67.1	58.8	46.6	36.1	30.4
M.D.T.	23.2	28.0	33.4	40.4	49.5	55.2	57.8	56.8	50.1	41.4	32.0	26.0
M.D.MIN.T.	18.2	22.5	26.1	31.2	38.3	43.7	47.0	46.4	41.6	36.2	27.6	21.7
E.MIN.T.	-22	-19	-10	7	22	27	32	32	25	9	-5	-15



AIYANSH 55°14'N, 129°01'W, 750' ASL. Record: 25-29 years.

A.M.T.P. 43.32", A.M.S.F. 137.5", snow \bar{x} A.M.T.P.: 31.74.



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	A	1	7	a	Hylocomio (splendentis)-Rubo (pedati)-Vaccinio(membranacei)-Piceo engelmannii)-Tsugetum heterophyllae	
2	1	A	1	7	a	Rhizomnio(pseudopunctati)-Tiarello(unifoliatae)-Gymnocarpio dryopteridis)-Oplopanaco(horridi)-Piceo(engelmannii)-Abietetum lasiocarpae.	
3	1	A	1	7	a	Ptilio(cristae-castrensis)-Corno(canadensis)-Gymnocarpio (dryopteridis)-Piceo(engelmannii)-Abietetum(lasiocarpo)-Tsugetum heterophyllae .	
4	1	B	2	1		Corno(stoloniferae)-Oplopanaco(horridi) - Alnetum tenuifoliae.	
5	1	A	2	1		Salico(sitchensis)- Corno(stoloniferae)- Populetum trichocarpae.	
6	1	A	1	7	a	Hylocomio (splendentis) - Ptilio (cristae-castrensis) - Piceo (engelmannii) - Abieto (lasiocarpae) - Tsugetum mertensianae	
7	1	A	1	7	a	Rhizomnio (nudi) - Streptopo (rosei) - Piceo (engelmannii) - Abietetum lasiocarpae	
8	1	A	1	7	a	Pleurozio (schreberi) - Peltigero (aphthosae) - Piceo (engelmannii) - Tsugetum mertensianae	
9	1	A	1	7	a	Hylocomio (splendentis) - Piceo (engelmannii) - Tsugetum mertensianae	
10	1	A	1	7	a	Streptopo (rosei) - Gymnocarpio (dryopteridis) - Piceo (engelmannii) - Abietetum lasiocarpae	
11	1	B	2	1		Streptopo (rosei) - Petasiteto (frigidae) - Mertensio (paniculatae) - Alnetum sinuatae	
12	1	A	1	7	a	Hylocomio (splendentis) - Cassiopo (mertensianae) - Abietetum lasiocarpae	
13	1	C	1	2	b	Phyllodoco (empetriformis) - Cassiopetum mertensianae	
14	1	B	2	1		Castillejo (miniatae) - Petasito (frigidae) - Salicetum planifoliae - barclayi	
15	1	N	1	3		Philonotido (fontanae) - Petasito (frigidae) - Caltho (leptosepalae) - Leptarrhenetum pyrolifoliae	
16	1	H	1	3		Luetkeo (pectinatae) - Cassiopetum stelleriana	
17	1	H	1	3		Ranunculo (nivalis, eschoscholtzii et cooleyae) - Luetketum pectinatae	
18	1	M	2	1		Ranunculo (eschscholtzii) - Caricetum nigricantis	
19	1	B	1	6		Nano-Tsugetum mertensianae	
20	1	C	1	2	b	Cassiopetum mertensianae	
21	1	C	2	1	a	Carico (phaeocephalae) - Salicetum arcticum	

CWHa

ESSF/MH

AT

7.
(cont.)

2

Soil

Community Reference Number	Soil type	Other notes
1	ABC F ₅	Hume-Ferric Podzol
2	ABGC F ₅ /P ₂	Gleyed Brunisol
3	ABC F ₅	Luvisol
4	AC/AGC I ₂ /P ₂	Regosol (Gleyed)
5	AC I ₂	Regosol (flood plain)
6	ABC F ₅	Hume-Ferric Podzol
7	ABC F ₅	Luvisol
8	ABC F ₅	Mini Podzol
9	ABC F ₅	Hume-Ferric Podzol
10	ABC F ₅	Luvisol
11	AGC P ₂	Gleysol
12	ABC F ₅	Mini Podzol -- Brunisol
13	ABC F ₅	Brunisol
14	AGC P ₂	Gleysol
15	AGC P ₂	Gleysol
16	AGC P ₂	Shallow Gleysol
17	AGC P ₂	Shallow Gleysol
18	AC I ₂	Snow Basin Anmoor
19	ABC F ₅	Dystrophic Brunisol
20	ABC F ₅	Brunisol
21	AC F ₃	Ranker

ESSF/
MH

AT

6. Similar Communities in Country (or State)

Community Reference Number	Protected					Protected and Unprotected				
	Abundant	Infrequent	None known	Decreasing	Increasing	Abundant	Infrequent	None known	Decreasing	Increasing
1			X			X				
2			X			X				
3			X				X			
4			X				X			
5			X			X				
6			X				X			
7			X				X			
8			X				X			
9			X				X			
10			X				X			
11			X				X			
12			X				X			
13			X				X			
14			X				X			
15			X				X			
16			X				X			
17			X				X			
18			X				X			
19			X				X			
20			X				X			
21			X				X			

9. Landscape

1. General Landscape (give brief description) One Creek Drainage, starting in high mountains.

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				25	25
Gently dissected				75	75
Incised				--	
Skeletonised				--	
%				100	100%

3. Special landscape features (list)

10. Coastline of IBP Area*

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	
Standing	X	
Running	X	

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps	X			
Ponds	X			
Lakes	--			

3. Running Water

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

4. Special freshwater features

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12. Salt and Brackish Water within IBP Area*

nil

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

Bell-Irving River

2. Salt and Brackish nil

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								
Aves		X		X								
Reptilia												
Amphibia												
Pisces												
Insecta		X										

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

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4. Flora

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

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

Ranunculus cooleyae, Cassiope stelleriana

15. Exceptional Interest of IBP Area*

This area is with lower total precipitation than the area of the application No. 121. It has less of snow. This is why timberline as well as lower borders of every zone (subalpine and alpine) are higher up. These facts would become less observable if the vegetation here will be disturbed by logging or substantial other destruction (by mines)

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					X	
Drainage					X	
Other soil disturbance			X			
Grazing					X	
Selective flora disturbance					X	
Logging					X	
Plantation					X	
Hunting					X	
Removal of predators					X	
Pesticides					X	
Introductions — plants					X	
Introductions — animals					X	
Fire					X	
Permanent habitation					X	
Recreation and tourism					X	
Research					X	

By the mining road.

3. Additional details on each type of impact attached? See some pictures of road disturbance.
 Yes No X

17. Conservation Status (Future)

	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	
Fauna		X		X					X		X	
Non-living		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.

List attached? Yes No

3. Aerial photographs for the IBP Area available?

For whole area For part of area None

19. Other Relevant Information There is a road built up toward a mine (in very poor conditions, especially higher up in the subalpine zone), causing erosion which should be stopped by the users of the road (Dome Petroleum Ltd.). The remaining parts along the road are those which should serve as an ecological reserve. This road will allow the scientists to use this geographical area for their observational studies.

V.J. Krajina, K. Klinka

Signed V.J. Krajina, K. Klinka.....
(Surveyor)