

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.)  
 Morice Lake - Nanika Mtn., Bulkley Ranges of Hazelton Mountains
  
3. Indicate the biogeoclimatic zone of which the reserve is representative.  
 SBS (2500' - 3000'), ESSFb (3000' - 5350'), AT (above 5350')
  
4. Approximate total acreage.  
 6093 acres
  
5. Purpose of the reserve.  
 Outstanding ecosystems of the three zones and especially the most northern occurrence of Pinus albicaulis in British Columbia
  - (a) Primary (state acreage)  
 6093 acres
  
  - (b) Others if any (state acreage)  
 -----
  
  - (c) Buffer areas (state acreage)  
 Morice Lake
  
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.

Abies lasiocarpa, Picea engelmannii, P. glauca (?), Pinus contorta, P. albicaulis / only a narrow strip (up to about 3000') has a mediocre productivity/.

*V. J. Krajina*  
 Signature V. J. Krajina & Peter Small  
 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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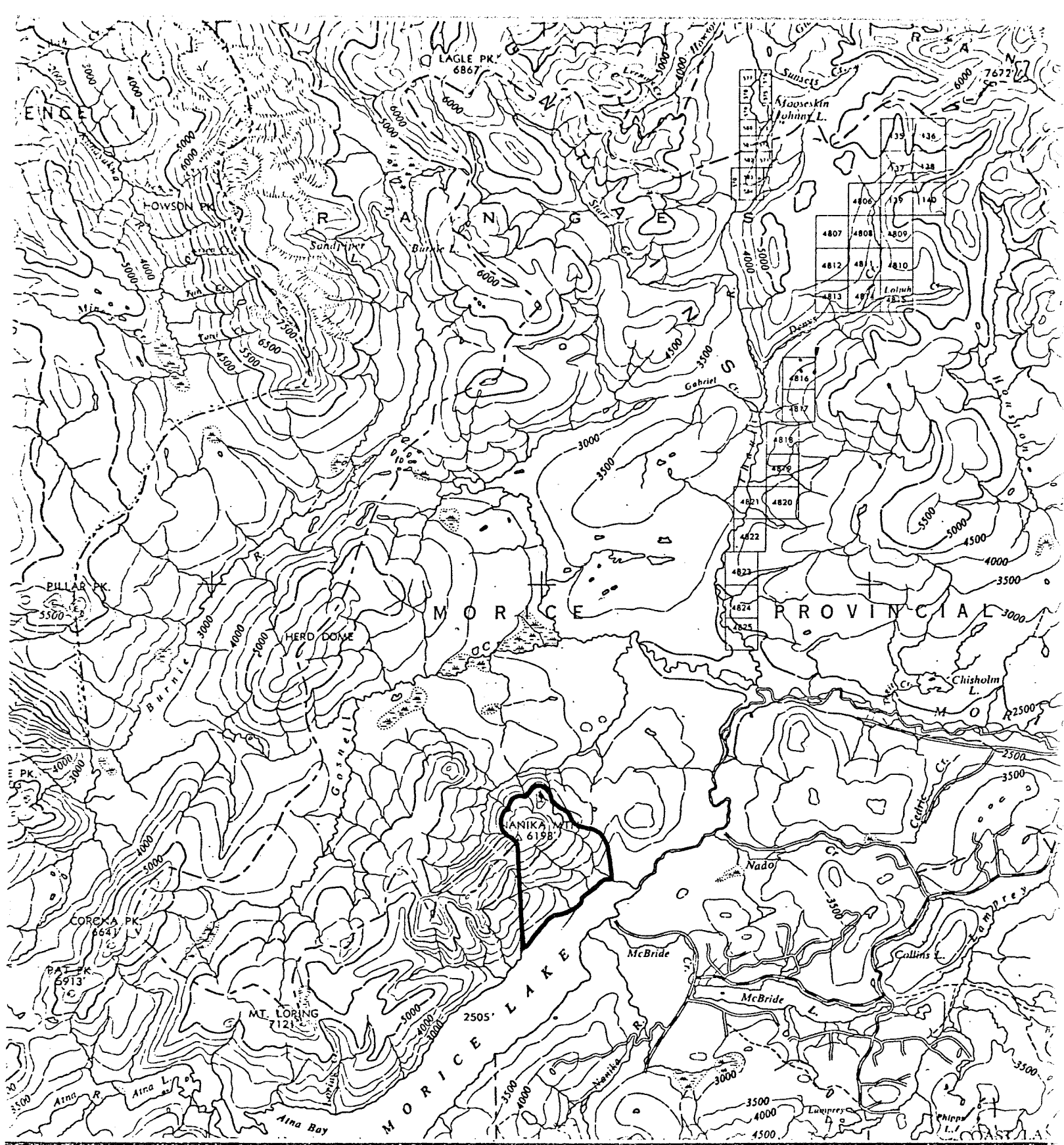
For Data  
Centre Use  
only

- I.
1. Name of surveyor ..... V.J. Krajina<sup>\*)</sup>, Peter Small
  2. Address of surveyor .....  
<sup>\*)</sup> Department of Botany  
 University of British Columbia  
 Vancouver, B.C., Canada
  3. Check Sheet completed (a) on site .....  ..... (b) from records .....
  4. Date Check Sheet completed ..... November 27, 1973

1. Name of IBP Area ..... Morice Lake - Nanika Mtn., Bulkley Ranges of Hazelton Mountains
2. Name of IBP Subdivision (or serial letter) ..... SBS, ESSFb, AT <sup>\*\*)</sup>
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.

\*\* ) SBS extends up to 3000' (900 m)  
 ESSFb occurs between 3000-5350' (900-1600 m)  
 AT occurs above 5350' (1600 m)

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



**SMITHERS**  
 BRITISH COLUMBIA  
 COAST LAND DISTRICT—RANGE 5

Scale 1:250,000 or approximately 1 Inch to 4 Miles



Scale of Kilometres

3. Location of IBP Area\*

1. Latitude.....54° 05.5-10' N Longitude.....127° 26.8-31.5' W  
 2. Country ..... Canada  
 State or Province ..... British Columbia County ..... Smithers  
 (State or Province ..... County .....)

4. Administration

- National 1. Official category ..... Crown Land (Morice Provincial Forest)  
 2. Address of administration ..... B.C. Dept. of Lands, Forests, and Water  
 Resources  
 Victoria, B.C., 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\*

1. Surface area (state units of measurement) ..... 6,093 acres  
 2. Altitude (state units of measurement) Maximum ..... 6198' (1859 m)  
 Minimum ..... 2505' (752 m) (Morice Lake)

6. Climate

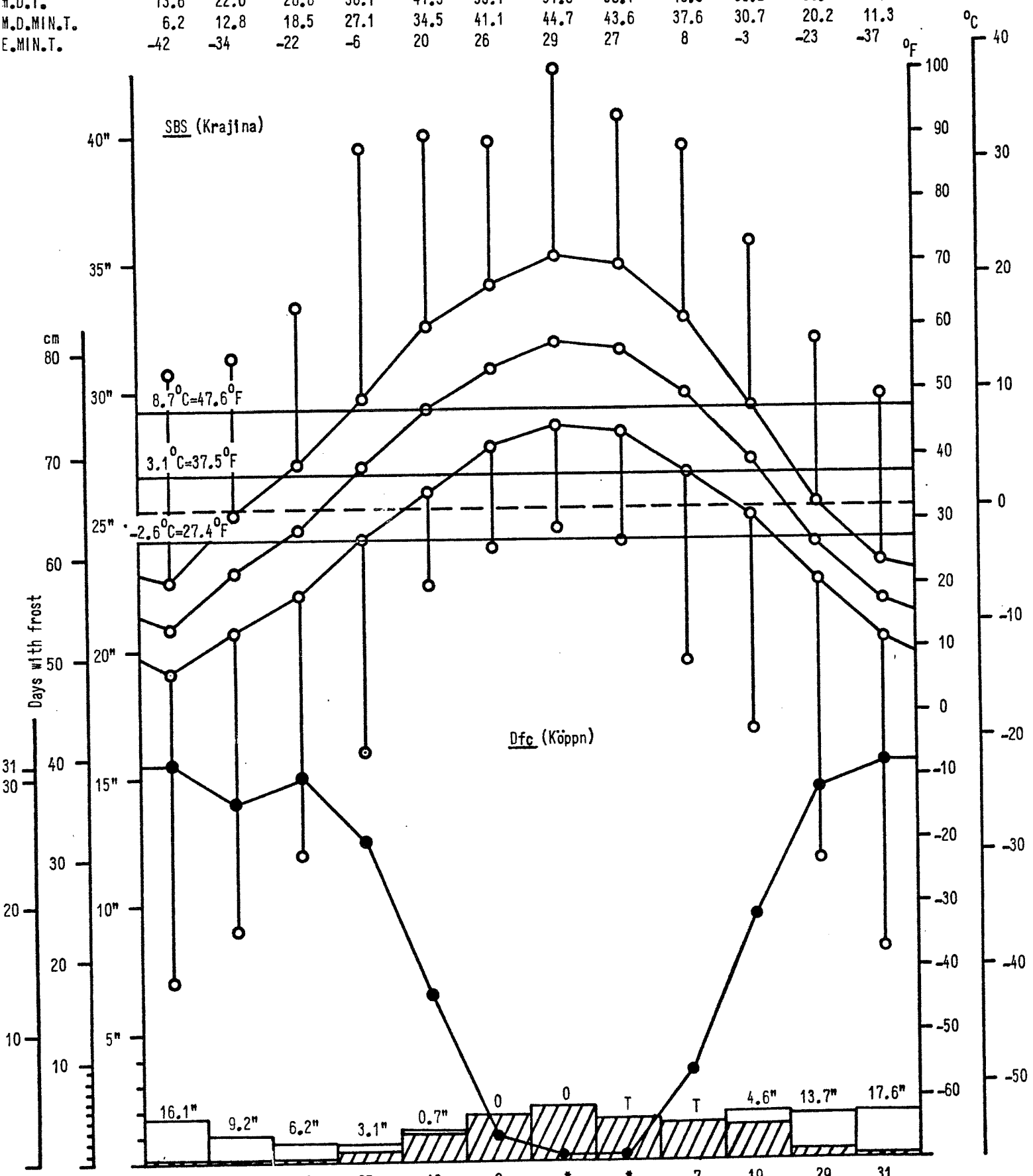
Nearest climatological station :

1. Name ..... Smithers; Telkwa \*)  
 2. Climatological station on IBP Area\*? Yes ..... No ..... X  
 3. If (2) not, distance from edge of IBP Area\* (state units) ..... 48 mi.; 42 mi. \*)  
 4. Direction from IBP Area\* ..... NNNE and NNE \*)  
 5. Additional data sheet attached? Yes ..... X No .....

In August, snow lies in many places of both the ESSF and AT areas. Some snow in the AT is permanent.

TELKWA 54°39'N, 126°50'W, 2240' ASL. Record: 25-46 years.  
 Months above 50°F: 3, below 32°F: 5, A.M.T.P. 18.39", A.M.S.F. 71.2", snow % A.M.T.P.: 38.71, days with frost, yearly: 215.

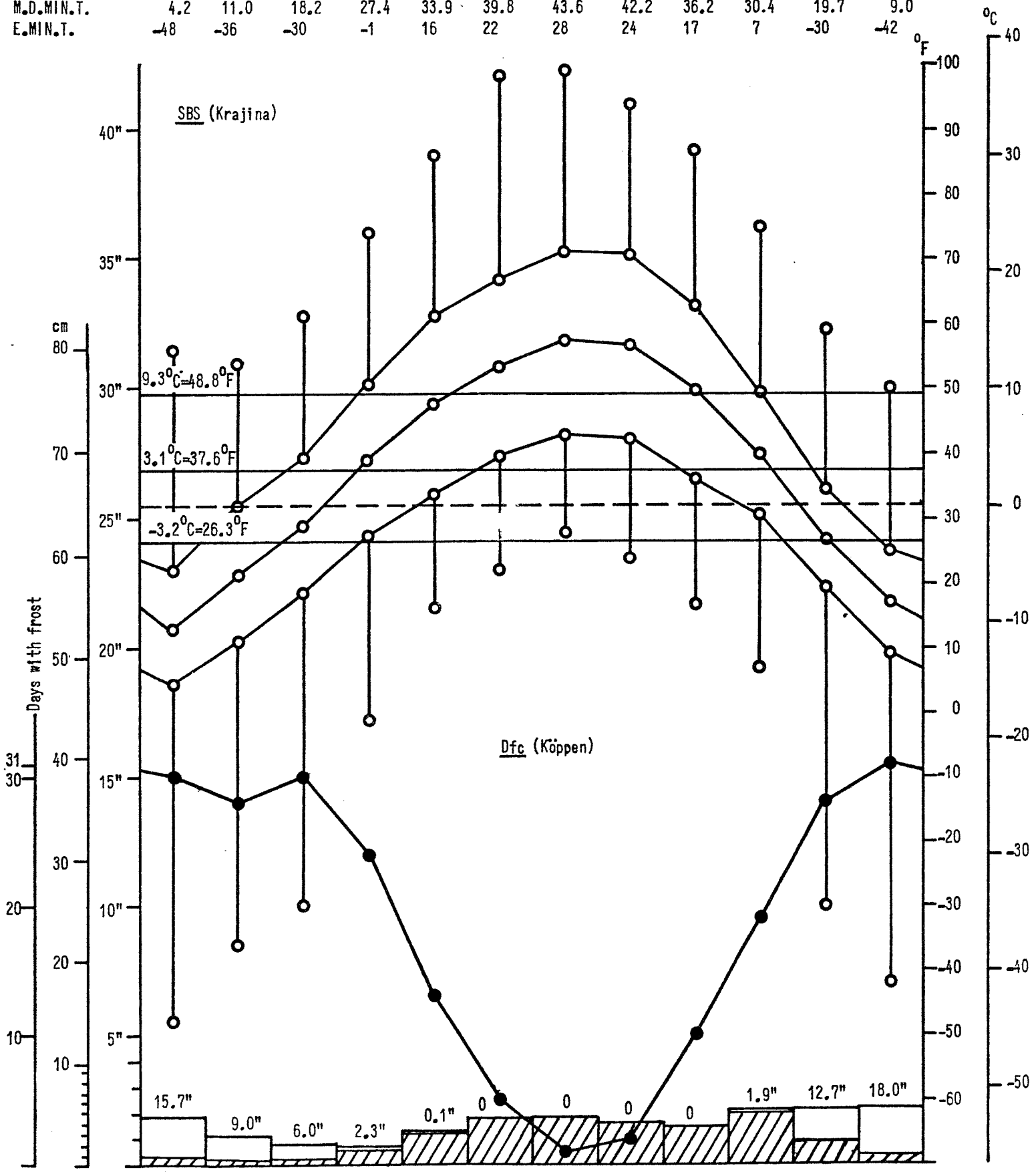
E. MAX. T.	53	55	63	88	90	89	100	93	88	73	58	49
M. D. MAX. T.	20.9	31.2	39.0	48.9	60.0	66.2	70.4	69.7	61.6	47.6	32.3	23.8
M. D. T.	13.6	22.0	28.8	38.1	47.3	53.7	57.6	56.7	49.6	39.2	26.2	17.6
M. D. MIN. T.	6.2	12.8	18.5	27.1	34.5	41.1	44.7	43.6	37.6	30.7	20.2	11.3
E. MIN. T.	-42	-34	-22	-6	20	26	29	27	8	-3	-23	-37



Days with frost	31	28	30	25	13	2	*	*	7	19	29	31
M.M.T.P.	1.74	1.05	0.78	0.77	1.25	1.95	2.06	1.64	1.50	1.90	1.80	1.95
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

SMITHERS (CDA) 54°44'N, 127°06'W, 1690' ASL. Record: 25-31 years.  
 Months above 50°F: 3, below 32°F: 5, A.M.T.P. 19.38", A.M.S.F. 65.7", snow % A.M.T.P.: 33.90, days with frost, yearly: 221.

E.MAX.T.	56	54	61	74	86	98	99	94	87	75	59	50
M.D.MAX.T.	22.0	32.0	39.6	50.2	61.5	66.9	71.0	70.5	62.8	49.1	34.3	25.5
M.D.T.	13.1	21.6	28.9	38.8	47.8	53.4	57.3	56.4	49.5	39.8	27.0	17.3
M.D.MIN.T.	4.2	11.0	18.2	27.4	33.9	39.8	43.6	42.2	36.2	30.4	19.7	9.0
E.MIN.T.	-48	-36	-30	-1	16	22	28	24	17	7	-30	-42



Days with frost	30	28	30	24	13	5	1	2	10	19	28	31
M.M.T.P.	1.90	1.10	0.88	0.81	1.38	1.74	1.89	1.64	1.54	2.18	2.13	2.19
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Smithers

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		
						The SBS zone was not surveyed. /between the lake and about 3000'(900 m)/.	
1	1	A	1	7	a	Pleurozio (schreberi) - Arctostaphylo (uvae-ursi) - Pino (contortae) - Piceetum engelmannii	
2	1	A	1	7	a	Hylocomio (splendens) - Corno (canadensis) - Linnaeo (borealis) - Gymnocarpio (dryopteridis) - Piceo (engelmannii) - Abietetum lasiocarpae	
3	1	B	2	1	a	Salico (barclayi) - Alnetum sinuatae	
4	1	D	1	4	a	Abietetum (lasiocarpae) - Pinetum albicaulis	
5	1	B	1	6		Cassiopo (mertensiana) - Pino (albicaulis) - Nano-Abietetum lasiocarpae	
6	1	G	1	4		Juniperetum nanae	
7	1	C	1	2	a	Saxifrago (tricuspidata) - Arctostaphyletum uvae-ursi	
8	1	M	2	1		Oxytropo (maydelliana) - Campanulo (lasiocarpae) - Trisetum (spicati) - Poetum glaucae	
9	1	M	2	1		Potentillo (diversifoliae - uniflorae) - Festucetum altaicae	
10	1	B	1	6		Festuco (altaicae) - Pino (albicaulis) - Piceo (engelmannii) - Nano-Abietetum lasiocarpae	
11	1	H	2	2		Cassiopeum mertensiana	
12	1	M	2	1		Caltho (leptosepalae) - Caricetum nigricantis	
13	1	H	2	2		Cassiopo (mertensiana) - Sibbaldietum procumbentis	
14	1	M	2	1		Astero (peregrini) - Castillejo (parviflorae) - Caricetum podocarpae	
15	3	C	1	1		Solorino (crocei) - Saxifragetum tolmiei	
16	1	G	2	1		Salicetum barrattiana	
17	1	N	2	1		Lupinetum nootkatensis	
18	1	G	2	1		Salicetum arcticae	
19	2	G	1	3		Oxyrio (digyna) - Poo (arcticae) - Silenetum acaulis	
20	1	H	2	2		Festuco (altaicae) - Phyllodoco (glanduliflorae) - Cassiopeum mertensiana	

ESSFb:

(up to  
about  
5350')

AT:

7.  
(cont.)

2

Soil

ESSFb:

Community Reference Number	Soil type	Other notes
1	ABC F <sub>5</sub>	Brunisol - Mini Podzol
2	A(B)C/ABC F <sub>4</sub> /F <sub>5</sub>	Brown earth - Luvisol
3	AGC P <sub>2</sub>	Gleysol
4	A(B)C F <sub>4</sub>	Brown earth
5	A(B)C F <sub>5</sub>	Brown earth
6	AC-ABC F <sub>3</sub> /F <sub>5</sub>	Ranker - Dystric Brunisol
7	AC F <sub>3</sub>	Ranker
8	AC F <sub>3</sub> /I <sub>2</sub>	Ranker - Regosol
9	A(B)C F <sub>5</sub>	Brown earth
10	A(B)C F <sub>5</sub>	Brown earth
11	A(B)C F <sub>5</sub>	Brown earth
12	AC I <sub>2</sub>	Regosol (Snow Basin Anmoor)
13	AC I <sub>2</sub>	Regosol (Snow Basin Anmoor)
14	AGC P <sub>2</sub>	Gleysol
15	AGC/AC P <sub>2</sub> /I <sub>2</sub>	Regosol Gleyed (Rawmark)
16	AC I <sub>2</sub>	Regosol (Snow Basin Anmoor)
17	AGC P <sub>2</sub>	Gleysol
18	AC P <sub>3</sub>	Ranker
19	AC P <sub>3</sub>	Ranker
20	A(B)C F <sub>4</sub>	Brown earth
21	AC I <sub>2</sub>	Regosol Colluvial (Scree)

AT:



8. 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

Alpine mountains

1. General Landscape (give brief description) .....  
 .....  
 .....

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				20	20
Gently dissected				80	80
Incised					
Skeletonised					
%				100	100%

3. Special landscape features (list) .....  
 very rounded general landscape  
 .....  
 .....

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		
Standing		
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 .....

.....

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  Morice Lake River  Stream

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												
Aves												
Reptilia												
Amphibia												
Pisces												
Insecta												

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

..... Grizzly is rare; moose is frequent; golden eagle is  
 rare.  
 .....

.....  
 .....

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											
herbs		X	X	X	X	X							
grass		X			X								
Gymnospermae		X			X	X	X						
Pteridophyta		?											
Bryophyta		X			X	X							
Lichens and Algae		X			X	X							

Pinus albicaulis

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

- Pinus albicaulis at its most northern distribution.
- Erysimum pallasii, new to British Columbia (most to the south).
- Campanula lasandra at its most southern distribution.
- Pedicularis ornithorhyncha and many other interesting plants.

15. Exceptional Interest of IBP Area\*

This is the most exceptional area (according to Peter Small, confirmed by Krajina).

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.....

.....

.....

.....

16.

**Significant Human Impact**

1. General: None in entire IBP Area\* ..... X (except a forestry fire lookout station)

None in part of IBP Area\* .....

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	

forestry fire lookout station

over summer at the forestry lookout

3. Additional details on each type of impact attached?

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

On the ridge between the Fire Lookout hill and the Pass toward Nanika Mtn. there are two mineral claims, one of which has the following information: Final Post no. 2 (22259M, 2260M). Claim name Nan #4 and Nan #3: W,H, Smith, Houston, Sept. 5, 1969; 74498 M 74499 M. Claim name C. Murphy, Houston, B.C.

I certainly hope that this area (even if some mine might develop here) will be sufficiently covered by conservation rules as to keep its biological uniqueness.

  
 Signed ..... V.J. Krajina .....  
 (Surveyor)