

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.)
 Most of the drainage system of a small S-flowing tributary ("First North Fork") of Skookumchuck Creek; Purcell Mountains.

3. Indicate the biogeoclimatic zone of which the reserve is representative.
 ESSF; AT; Southern Alplands Biotic Area

4. Approximate total acreage.
 ca. 3,237 ha (8,000 acres)

5. Purpose of the reserve.
 Conservation of Larix lyallii in excellent pure and mixed stands, along with Picea engelmannii - Abies lasiocarpa forest and other associated subalpine and alpine ecosystems.
 - (a) Primary (state acreage)
 ca. 3,237 ha
 - (b) Others if any (state acreage)
 - (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.
Larix lyallii, (L. occidentalis)
Pinus albicaulis, P. contorta
Picea engelmannii
Abies lasiocarpa

Signature



I.B.P. Surveyor

G. Utzig, M. Fenger, J. Pojar

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

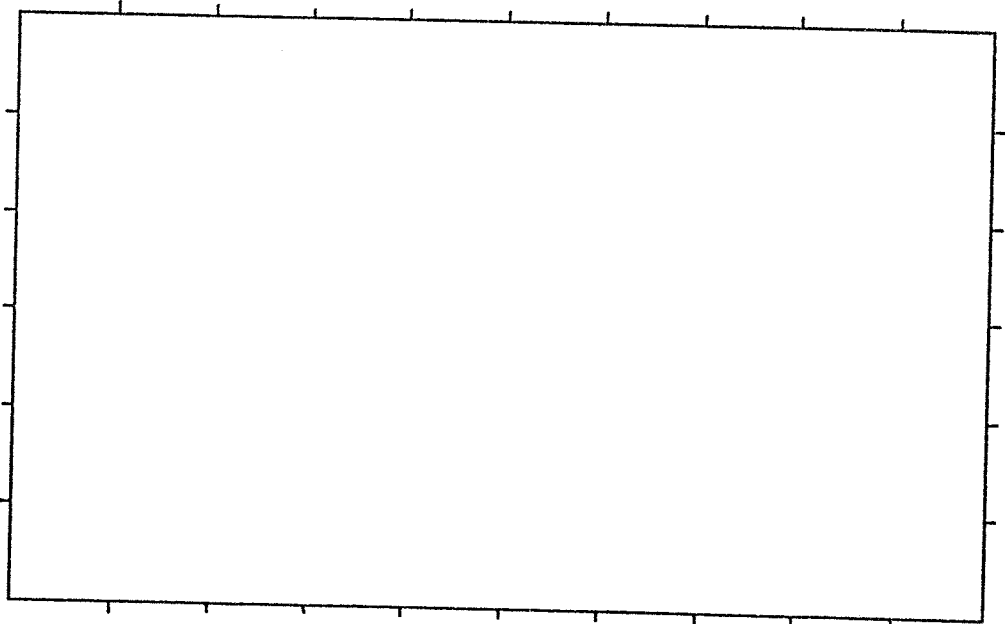
Serial Number

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For Data Centre Use only

1. 1. Name of surveyor *G. Utzig, **M. Fenger, ***J. Pojar
 2. Address of surveyor *B.C. Forest Service, Nelson, B.C.
 **Resource Analysis Branch, E.L.U.C. Secretariat, Kelowna, B.C.
 ***Ecological Reserves Unit, Ministry of the Environment,
 Parliament Buildings, Victoria, B.C. V8V 1X5
 3. Check Sheet completed (a) on site X (b) from records X
 4. Date Check Sheet completed November, 1977

2. 1. Name of IBP Area Skookumchuck Creek Alpine Larches
 2. Name of IBP Subdivision (or serial letter) ESSF, AT; Southern Alplands Biotic Area
 3. Map of IBP Area* showing boundaries attached? Yes X 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.

FINDLAY CREEK

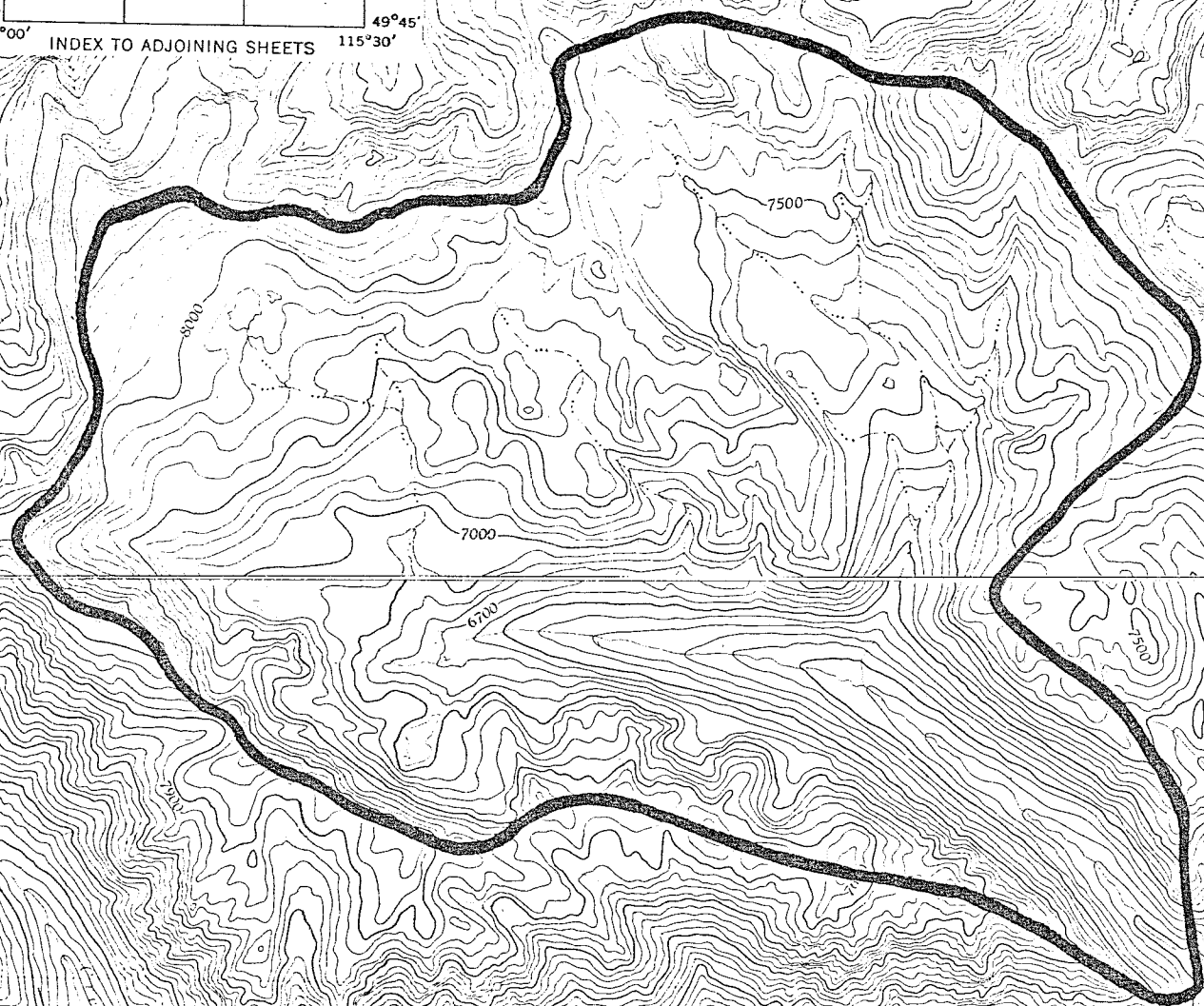
82 K/1 EAST HALF

FINDLAY CREEK

KOOTENAY DISTRICT
BRITISH COLUMBIA

SCALE 1:50,000

117°00'	82 K/7	82 K/8	115°30'
50°30'			82 J/5
	82 K/2	FINDLAY CREEK	82 J/4
			CANAL FLATS
49°45'	82 F/15	82 F/16	82 G/13
117°00'		DEWAR CREEK	SKOOKUMCHUCK
INDEX TO ADJOINING SHEETS			
			49°45'
			115°30'



DEWAR CREEK

KOOTENAY LAND DISTRICT
BRITISH COLUMBIA

DEWAR CREEK
82 F/16
EDITION 2

SKOOKUMCHUCK
116°08'

SL45

Creek

4600

6700

7000

7500

8000

8000

8200

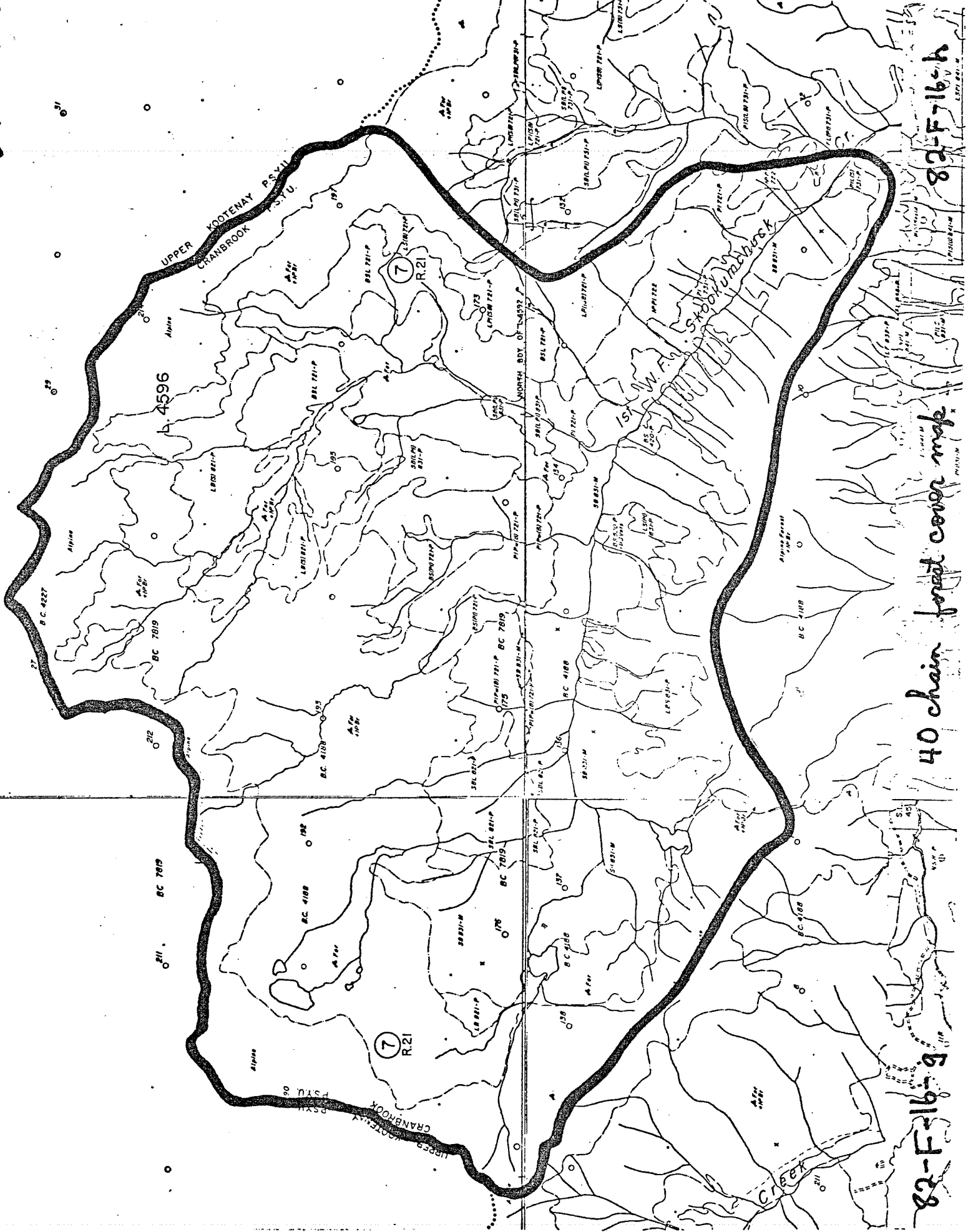
50°00'

4300

82-K-1-a

(REDUCTION)

82-K-1-a



82-F-16-a

40 chain forest cover map

82-F-16-b

3. Location of IBP Area*

1. Latitude 49° 59' - 50° 02' N Longitude 116° 03' - 10' W
 Canada
 2. Country
 State or Province British Columbia County East Kootenays
 (State or Province County)

4. Administration

National 1. Official category Crown Land; Cranbrook P.S.Y.U.
 2. Address of administration 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. 3,237 ha (8,000 acres)
 2. Altitude (state units of measurement) Maximum appr. 2740 m (9,000')
 Minimum appr. 1640 m (5,400')

6. Climate

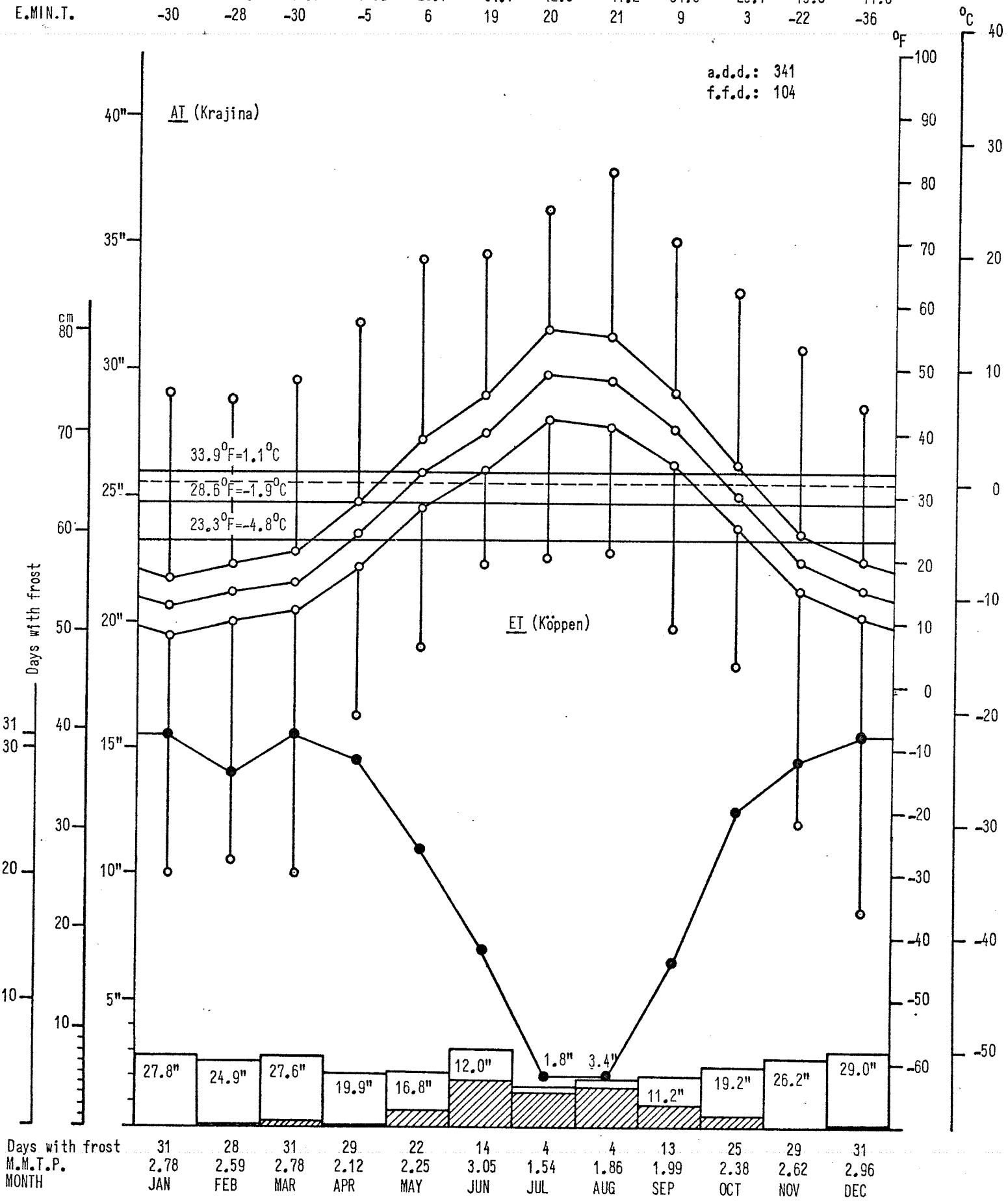
Nearest climatological station :

1. Name Old Glory Mountain, (Kimberley Airport)
 2. Climatological station on IBP Area*? Yes No
 3. If (2) not, distance from edge of IBP Area* (state units) 157 km, (50 km)
 SW, (S)
 4. Direction from IBP Area*
 5. Additional data sheet attached? Yes No

CLD GLORY MOUNTAIN 49°09'N, 117°55'W, 7700' ASL. Record: 20-24 years, adjusted.
 Months above 50°F: Nil, below 32°F: 7, A.M.T.P. 28.92", A.M.S.F. 219.8, snow % A.M.T.P.: 76.00, days with frost, yearly: 261.

2a

E.MAX.T.	46	45	48	57	67	68	75	81	70	62	53	44
M.D.MAX.T.	16.9	19.2	21.1	29.1	39.1	45.7	56.0	54.8	46.4	34.6	24.1	19.7
M.D.T.	12.3	14.7	16.4	23.8	33.6	39.9	49.0	48.0	40.6	29.9	19.6	15.3
M.D.MIN.T.	7.7	10.1	11.5	18.6	28.1	34.1	42.0	41.2	34.8	25.1	15.0	11.0
E.MIN.T.	-30	-28	-30	-5	6	19	20	21	9	3	-22	-36



Normal

ANS

DÉC

NOV

OCT

SEPT

AOÛT

JUIL

JUIN

MAI

AVR

MARS

FÉV

JANV

ÉLÉMENT et STATION

BRITISH COLUMBIA

000 KIMBERLEY A LATITUDE 49 44 N LONGITUDE 115 47 W ELEVATION 3016 FT ASL

	JANV	FÉV	MARS	AVR	MAI	JUIN	JUIL	AOÛT	SEPT	OCT	NOV	DÉC	ANS
MEAN DAILY TEMPERATURE (DEG F)	15.6	23.4	30.0	42.0	51.2	57.4	63.9	62.1	53.7	42.2	28.4	19.9	40.8
MEAN DAILY MAXIMUM TEMPERATURE	23.8	33.2	41.0	54.8	65.1	71.2	80.9	78.8	68.9	53.8	36.2	27.0	52.9
MEAN DAILY MINIMUM TEMPERATURE	7.4	13.4	19.0	29.2	37.2	43.6	46.8	45.5	38.5	30.6	20.4	12.7	28.7
EXTREME MAXIMUM TEMPERATURE	51	53	69	81	88	94	108	99	93	81	59	49	108
NO. OF YEARS OF RECORD	26	27	27	26	25	26	26	26	26	26	26	26	26
EXTREME MINIMUM TEMPERATURE	-40	-31	-26	2	10	27	29	31	20	-13	-26	-47	-47
NO. OF YEARS OF RECORD	26	27	27	27	26	26	26	26	26	26	26	26	26
NO. OF DAYS WITH FROST	30	27	29	21	7	1	*	*	5	19	27	30	196
MEAN RAINFALL (INCHES)	0.20	0.95	0.76	0.51	1.34	2.04	0.83	1.24	0.91	0.92	0.46	0.25	9.91
MEAN SNOWFALL	16.2	8.8	6.2	2.0	0.3	0.0	0.0	0.0	0.1	2.1	9.3	16.1	61.1
MEAN TOTAL PRECIPITATION	1.65	1.07	0.86	0.72	1.36	2.04	0.83	1.24	0.93	1.11	1.39	1.67	14.87
GREATEST RAINFALL IN 24 HRS	0.53	0.53	0.39	0.88	1.66	1.92	1.04	1.31	1.05	1.06	0.62	0.80	1.92
NO. OF YEARS OF RECORD	26	27	27	26	26	26	26	26	26	26	26	26	26
GREATEST SNOWFALL IN 24 HRS	12.7	9.3	7.0	7.3	2.6	1	0.0	1.3	4.0	15.0	12.2	15.0	15.0
NO. OF YEARS OF RECORD	26	27	27	26	26	26	26	26	26	26	26	26	26
GREATEST PRECIPITATION IN 24 HRS	1.27	0.93	0.70	0.88	1.66	1.92	1.04	1.31	1.05	1.06	1.50	1.22	1.92
NO. OF YEARS OF RECORD	26	27	27	26	26	26	26	26	26	26	26	26	26
NO. OF DAYS WITH MEASURABLE RAIN	2	2	3	6	8	10	6	7	7	7	5	3	66
NO. OF DAYS WITH MEASURABLE SNOW	12	8	6	3	*	0	0	0	*	2	7	12	50
NO. OF DAYS WITH M. PRECIPITATION	14	9	8	8	8	10	6	7	7	9	11	14	111

0

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	D	2	3		<i>Larix lyallii</i> - <i>Luzula hitchcockii</i>	
2	1	A	2			<i>Larix lyallii</i> - <i>Vaccinium scoparium</i> - <i>Luzula hitchcockii</i>	
3	1	A	² / ₁	7	a	<i>Larix</i> - <i>Picea engelmannii</i> - <i>Pinus albicaulis</i> - <i>Phyllodoce (empetriformis, glanduliflora)</i> - <i>Vaccinium scoparium</i>	
4	1	A	1	7	a	<i>Picea</i> - <i>Abies lasiocarpa</i> - <i>Vaccinium scoparium</i> - <i>Calamagrostis rubescens</i>	
5	1	A	1	7	a	<i>Picea</i> - <i>Pinus contorta</i> - <i>Vaccinium scoparium</i> - <i>Arctostaphylos uva-ursi</i>	
6	1	A	1	7	a	<i>Picea</i> - <i>Abies</i> - <i>Rhododendron albiflorum</i> - <i>Vaccinium membranaceum</i> - <i>Dicranum</i> spp. - <i>Pleurozium schreberi</i>	
7	1	B	1	6		<i>Abies lasiocarpa</i> krummholz	
8	1	B	¹ / ₂	6		<i>Larix lyallii</i> - <i>Pinus albicaulis</i> krummholz	
9	1	M	2	2		<i>Carex nigricans</i>	
10							
11						+ several unsurveyed forest, meadow, and	
12						tundra communities	
13							
14							
15							
16							
17							
18							
19							
20							

ESSF:

AT:

ADDITIONAL VEGETATION NOTES - E.R.P. No. 292 - SKOOKUMCHUCKCREEK ALPINE LARCHES:

The upper elevations with a southern exposure are dominated by open meadow grassland communities. High elevation north aspects are primarily rock and open colluvium. These are primarily non-forested with occasional Larix lyallii, Pinus albicaulis, and krummholz patches of Abies lasiocarpa.

The floor of the basin is dominated by almost pure stands of Larix lyallii associated with Vaccinium scoparium and various graminoids (e.g. Deschampsia atropurpurea, Luzula hitchcockii). There are a few Picea engelmannii and Pinus albicaulis. These stands cover approximately 50% of the proposed area.

Poorly drained areas, and low-lying areas with late snow retention in the basin have well developed alpine sedge communities with occasional stunted trees.

The southerly portion of the proposed area drops in elevation grading from Larix stands to typical Engelmann Spruce - Subalpine Fir forests. The western part of the proposal has been burned and offers an area to study successional development in upper elevations of the Engelmann Spruce - Subalpine Fir forest and the Larix lyallii types.

There are also a number of small lakes and adjacent wet meadow communities.

G. Utzig

7.
(cont.)

2

Soil

Community Reference Number	Soil type	Other notes
1	F ₅	brunisol
2	F ₅	brunisol
3	F ₅	brunisol
4	F ₄	shallow brunisol
5	F ₅	shallow humo-ferric podzols
6	F ₅	orthic humo-ferric podzols or dystic brunisols
7	F ₄	shallow dystic brunisol
8	F ₄	shallow sombric (?) brunisol
9	O/P ₂	humic gleysol
10		
11		
12		The soils of the area include sombric and dystic brunisols in the drier meadows, grading to regosols,
13		folisols, and non-soil areas of colluvium and bare rock. The wet meadows include humic gleysols and
14		gleyed ferro-humic podzols. The forested areas include dystic brunisols, humo-ferric podzols,
15		and minor sombric brunisols. There are numerous areas with lithic phases of these soils where
16		bedrock appears near the surface. G. Utzig
17		
18		
19		
20		

9. Landscape

1. General Landscape (give brief description) high alpine basin rimmed by
serrate rocky ridges and drained to the SE by a sharply dissected
to incised valley

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				45	45
Gently dissected				40	40
Incised				15	15
Skeletonised					
%				100	100%

3. Special landscape features (list)
hanging valley, cirque basins, arêtes

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)
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.....

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	
Running	X	X

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps				
Ponds	X		X	
Lakes				

3. Running Water

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

4. Special freshwater features
 tarns

12. Salt and Brackish Water within IBP Area*

NONE

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
 Greenland Creek (N forks)

2. Salt and Brackish

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		
Aves		X						X	X	X		
Reptilia												
Amphibia												
Pisces												
Insecta		X										

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

Rutting and summer-fall habitat area for Rocky Mountain elk
 (Cervus canadensis nelsoni).

Other species present include deer, mountain goats, wolverine,
 marmot, and pika.

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

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

.....
 - needs further investigation

15. Exceptional Interest of IBP Area*

Outstanding area for alpine larch (*Larix lyallii*) and other subalpine and alpine ecosystems; rutting grounds and summer-fall habitat for elk (*Cervus canadensis nelsoni*).

16. Significant Human Impact

X

1. General : None in entire IBP Area*
 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						
Drainage						
Other soil disturbance						
Grazing						
Selective flora disturbance						
Logging						
Plantation						
Hunting	X	X		X		
Removal of predators						
Pesticides						
Introductions — plants						
Introductions — animals						
Fire	X	X				
Permanent habitation						
Recreation and tourism						
Research						

- in W part of proposal

3. Additional details on each type of impact attached?

X

Yes No

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

cf. Arno, S.F., and J.R. Habeck. 1972. Ecology of alpine larch (*Larix lyallii* Parl.) in the Pacific Northwest. Ecol. Monogr. 42:417-450.

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

Sheet attached? Yes No

2. List main maps available for the IBP Area. 82 K/1E (Findlay Creek)(1:50,000)
82 F/16 (Dewar Creek)(1:50,000)
82 K/SE (Lardeau)(1:125,000)

List attached? Yes No 82 F/NE (Kaslo)(1:125,000)

3. Aerial photographs for the IBP Area available? 82-K-1-a, 82-K-1-b, 82-F-16-h, 82-F-16-g Forest Cover
Maps (40 chain)

For whole area B.C. 7819:173-177; 209-215; 87-88
For part of area None

19. Other Relevant Information

The proposed boundaries are chosen to include a natural watershed unit of subalpine forest which will be most useful for a wide range of research projects.

Signed Jim Pojar
(Surveyor)

G. Utzig, M. Fenger, J. Pojar