

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

HAT CREEK PROJECT

Transport Canada - Hat Creek Project - Airstrip Site Reconnaissance
and Assessment - July 1977, and Summary by B.C. Hydro - September 1978.

ENVIRONMENTAL IMPACT STATEMENT REFERENCE NUMBER: 10

HAT CREEK PROJECT

TRANSPORT CANADA

AIRSTRIP SITE RECONNAISSANCE & ASSESSMENT

JULY 1977

AND

SUMMARY BY B. C. HYDRO

SEPTEMBER 1978

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

HAT CREEK PROJECT
PRELIMINARY ENGINEERING

AIRSTRIP - SUMMARY

September 1978

AIRSTRIP

(a) Background

Swan Wooster Engineering Co. Ltd. undertook a preliminary review of possible airstrip sites near Hat Creek in 1976 as part of their transportation study for the thermal plant site selection work. This review recommended that the airstrip be located within the triangular area near Cache Creek-Ashcroft, bounded on the west by Highway No. 1, on the north by the Semlin Valley and on the south by the Thompson River. This study tentatively identified a possible site between Cache Creek and Ashcroft on the west side of Highway No. 1.

At the commencement of the preliminary design phase it was recognized that the existing temporary airstrips in the Hat Creek Valley and at Ashcroft would not be suitable for the air traffic that would be generated by the Hat Creek project. Therefore, if a new airstrip was not constructed closer to Hat Creek, all project air traffic would have to land at the Kamloops airport which is approximately 1 1/2 hours drive from the site. Furthermore, the existing Ashcroft airstrip would not be suitable to meet the future needs of the local communities. It was therefore concluded that possible airstrip sites should be investigated in preliminary design that would satisfy both community and project needs. The decision on whether or not to provide an airstrip as part of the project facilities will not be made until the decision is made to proceed with the Hat Creek project.

AIRSTRIP - (Cont'd)

(b) Potential Sites

In June 1977, Transport Canada was asked to make a recommendation for an airstrip location near the communities of Ashcroft and Cache Creek that would also be suitable for the project. The minimum requirements specified were Class C rating with a runway length of 1300 to 1500 m. This length would be suitable for most fully loaded executive jet type aircraft.

Transport Canada undertook calibration flights and a brief ground reconnaissance of six sites in the area and selected three as potential airstrip sites. The site originally suggested by Swan Wooster was rejected at this stage in favour of the alternatives identified. The selected sites, A, B and C are shown on Plate C2-32 which also shows typical runway details for a Class C airstrip. Transport Canada indicated that all three sites appeared to be acceptable from an operational point of view, although more detailed surveys would be required before a final decision could be made. They did indicate that they preferred Site C as it had the best ground clearances for planes landing and taking off. Site A would be their second choice with Site B third. As Site B offered no advantages to the communities or the project over the other two sites and may have required relocation of part of Highway No. 1, it was rejected.

(c) Site A

Site A is located on a terrace on the Cameron Ranch property at El. 625 m approximately 14 km south of Cache Creek and 1 1/2 km west of Highway No. 1. As this site was close to the proposed Cornwall Creek route for the project access road it was studied in more detail than Site C. The following drawings show the site in detail and illustrate a potential layout for a 1500 m Class C airstrip:

AIRSTRIP - (Cont'd)

<u>Plate No.</u>	<u>Title</u>
C2-33	Potential Airstrip - Site A - Runway Alignment - Alternative 1
C2-34	Potential Airstrip - Site A - Cross Sections - Alternative 1 Alignment
C2-35	Potential Airstrip - Site A - Location Plan - Alternative 1

The profile along the runway shown on Plate C2-35 illustrates clearly that it would not be possible to extend the runway beyond 1500 m. Furthermore, the site would not be suitable for instrument flight rules because the approach/take-off slopes would have to be one-half of those shown.

This profile along with Section F-F on Plate C2-34 also shows that considerable fill is required on the south end of the runway. If the requirement for the runway length could be shortened by 150 m the capital cost of an airstrip at this site could be reduced by about \$1 million.

Several alternative layouts on this site were studied for 1500 m runways. The layout shown with a 0.6 percent slope along the length of the runway requires the least quantities of excavation and fill.

subsurface exploration.

(d) Site C

Site C is located on the Semlin Ranch property at E1. 520 m, adjacent to Highway No. 1 and approximately 4 km east of Cache Creek. Transport Canada advise that the results of their surveys indicate that this site could be developed for a 1500 m

AIRSTRIP - (Cont'd)

visual flight rule runway and could be extended if necessary to about 1800 m. They further advise that approximately 900 m of the runway would meet the requirements for instrument flight rules. Therefore the potential for limited night operation would be available at this site.

Although no detailed mapping was prepared for this site, ground reconnaissance indicates that the topography is more level than Site A. Therefore less grading would be required at Site C.

(e) Comparison of Two Sites

An important aspect to consider when comparing the two sites is their location relative to the local communities and the project. The following table summarizes these distances.

DISTANCE IN KILOMETRES

	From Site	
	A (CAMERON)	C (SEMLIN)
To Ashcroft	9	15
Cache Creek	14	4
Powerplant : via Cornwall Creek	22	37
via Highway 12	58	48
Mine : via Cornwall Creek	30	45
via Highway 12	47	37

Both sites are relatively close to the existing communities. Site A is closer to Ashcroft while Site C is closer to Cache Creek. Site A would be closer to the project if the Cornwall Creek route is adopted for the project access road. Site C on the other hand would be closer to the project if Highway 12 is used for project access.

The following is a summary of the advantages for each of the two sites.

AIRSTRIP - (Cont'd)

Advantages of Site A - Cameron Ranch

1. Closest to the project via the new Cornwall Creek access road.
2. Property presently used for light grazing and is reported to have a low agricultural capability. Site C is on irrigated land of higher agricultural capability.
3. Reported to be in an area of slightly less cloud cover and more consistent wind direction.
4. Take-offs would not be directly over the adjacent towns. Therefore aircraft noise should not disturb the residents. Some take-offs from Site C would be directly over Cache Creek.

Advantages of Site C - Semlin Ranch

1. Lower construction cost for 1500 m runway.
2. Possibility of future expansion to about 1800 m.
3. Possibility of limited instrument flight rule operation.

(f) Conclusions

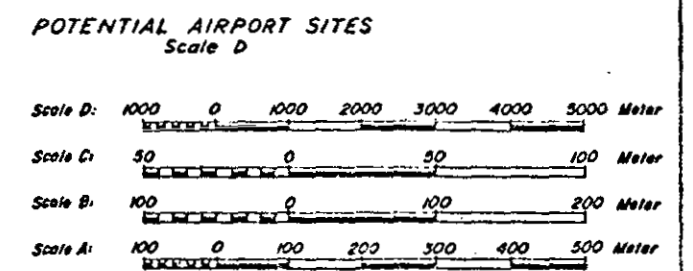
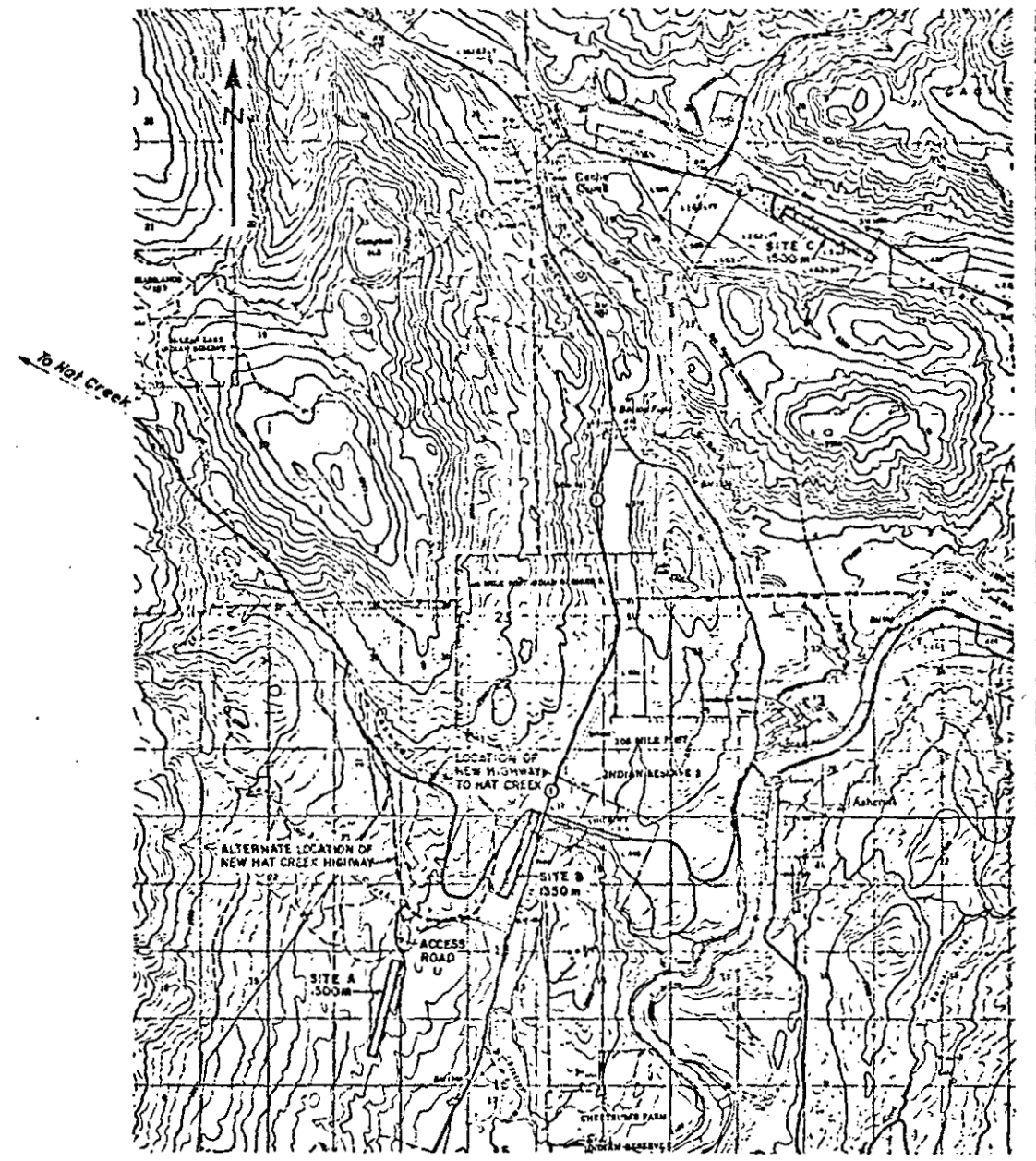
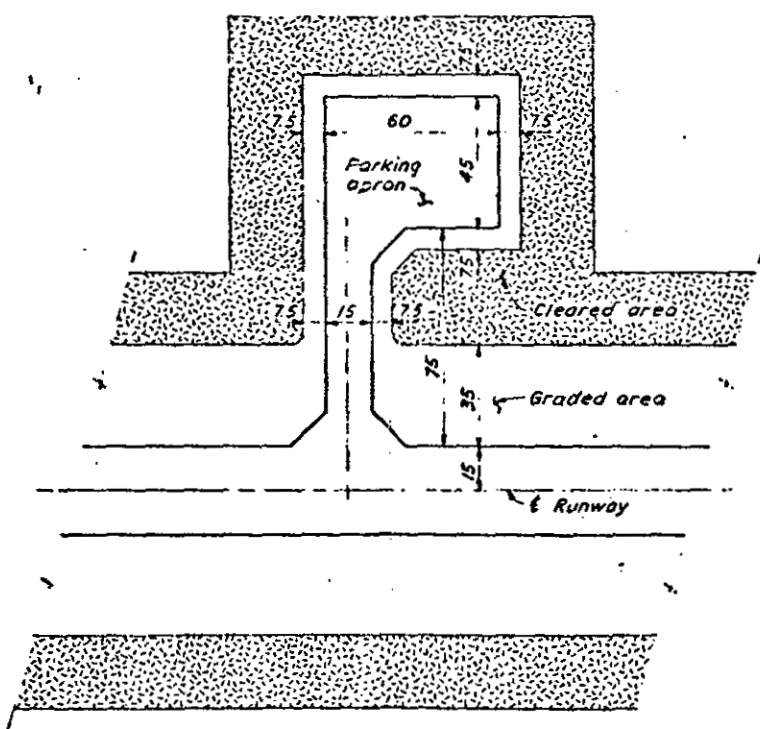
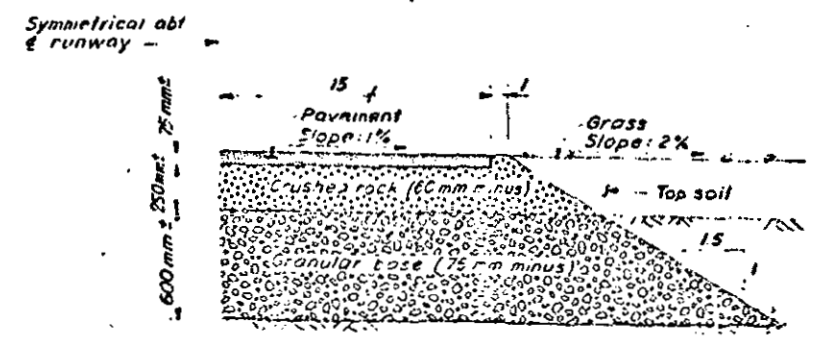
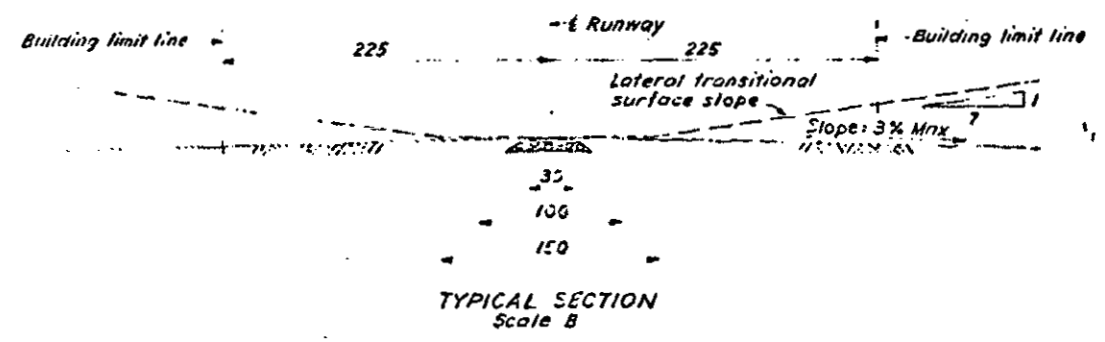
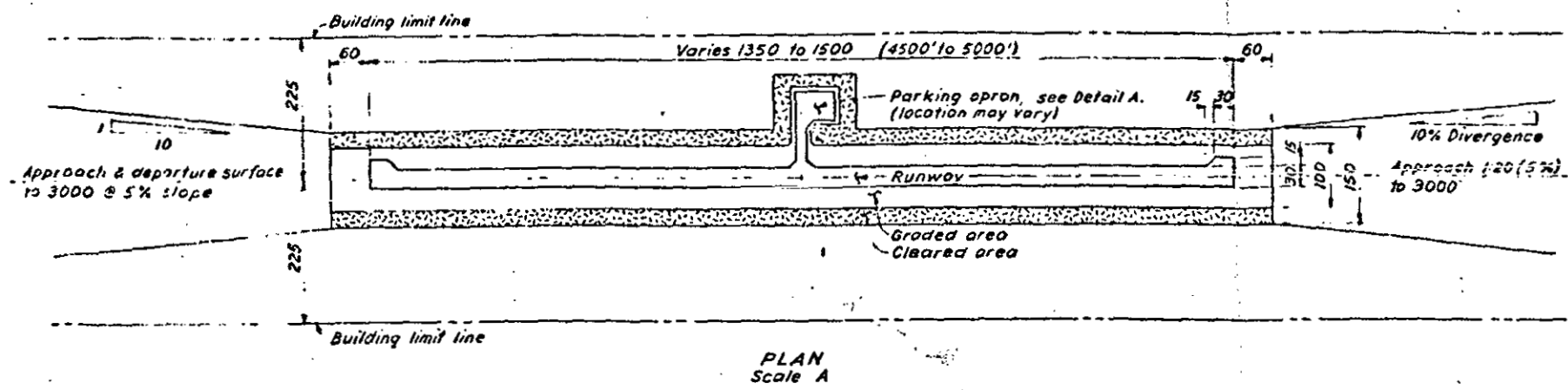
Either site would satisfy the project need for an airstrip relatively close to the site.

The choice between the two sites will therefore depend on the following two factors:

1. Which if any of the airstrip sites can be removed from the Agricultural Land Reserve.

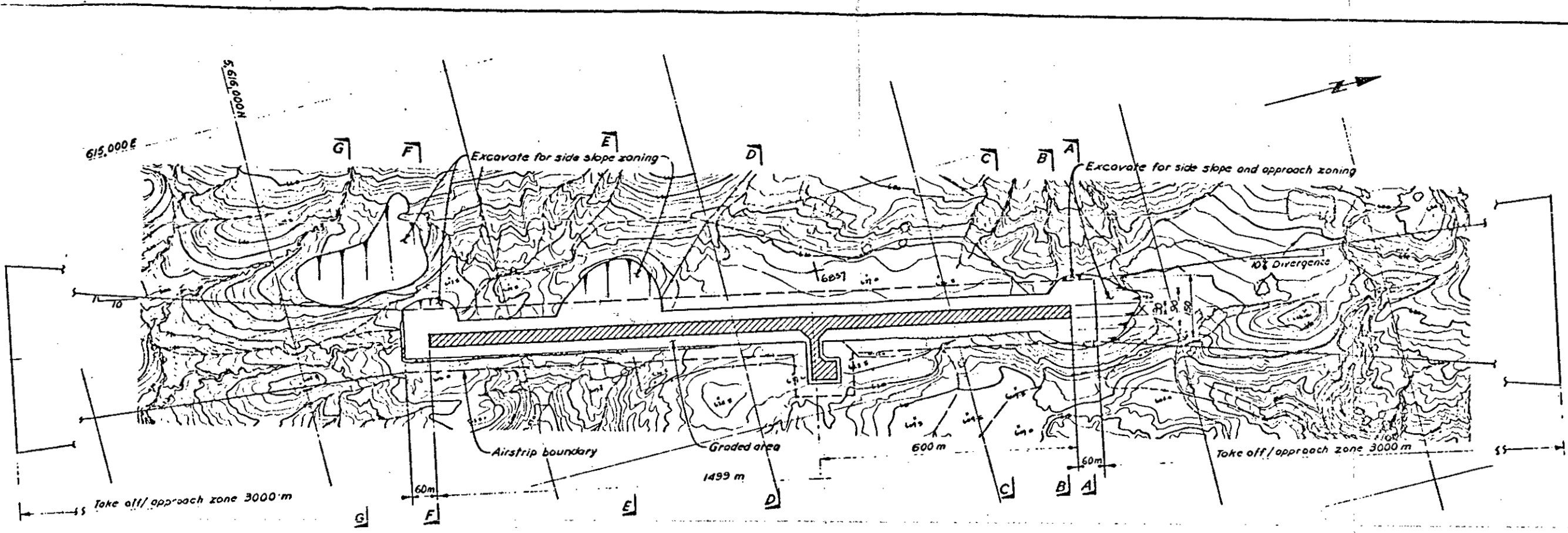
AIRSTRIP - (Cont'd)

2. Whether the long-term community needs would require an airstrip capable of expansion beyond 1500 m and capable of some instrument flight rule capability.

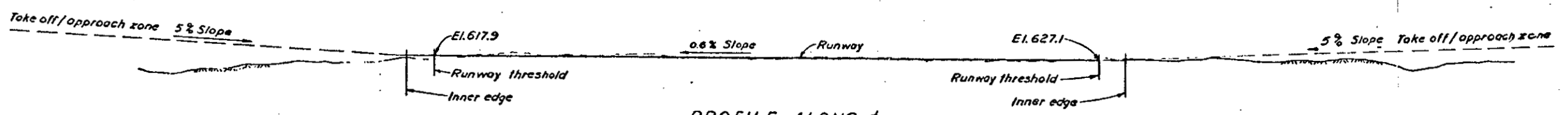


NOTES:
1. ALL DIMENSIONS SHOWN ARE IN METERS UNLESS OTHERWISE NOTED.

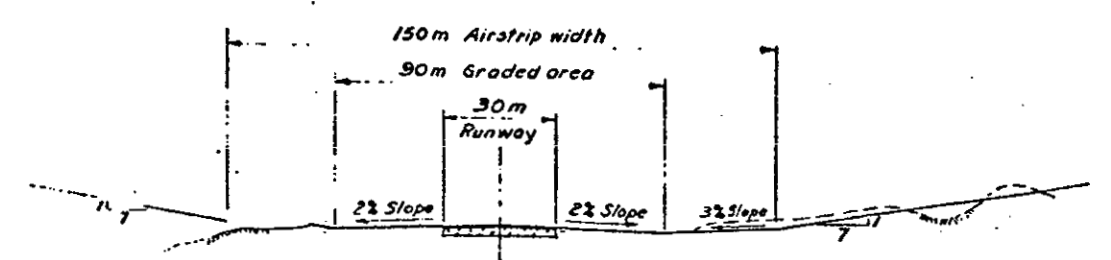
BRITISH COLUMBIA HYDRO AND POWER AUTHORITY		
HAT CREEK PROJECT		
POTENTIAL AIRSTRIP LOCATIONS & TYPICAL RUNWAY DETAILS		
DATE	PLATE C2-32	R
OWN N.O.	OWG No. 604H-C14-D27	



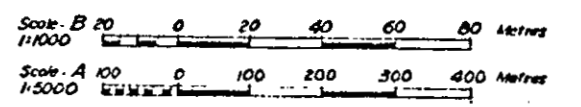
PLAN
Scale A



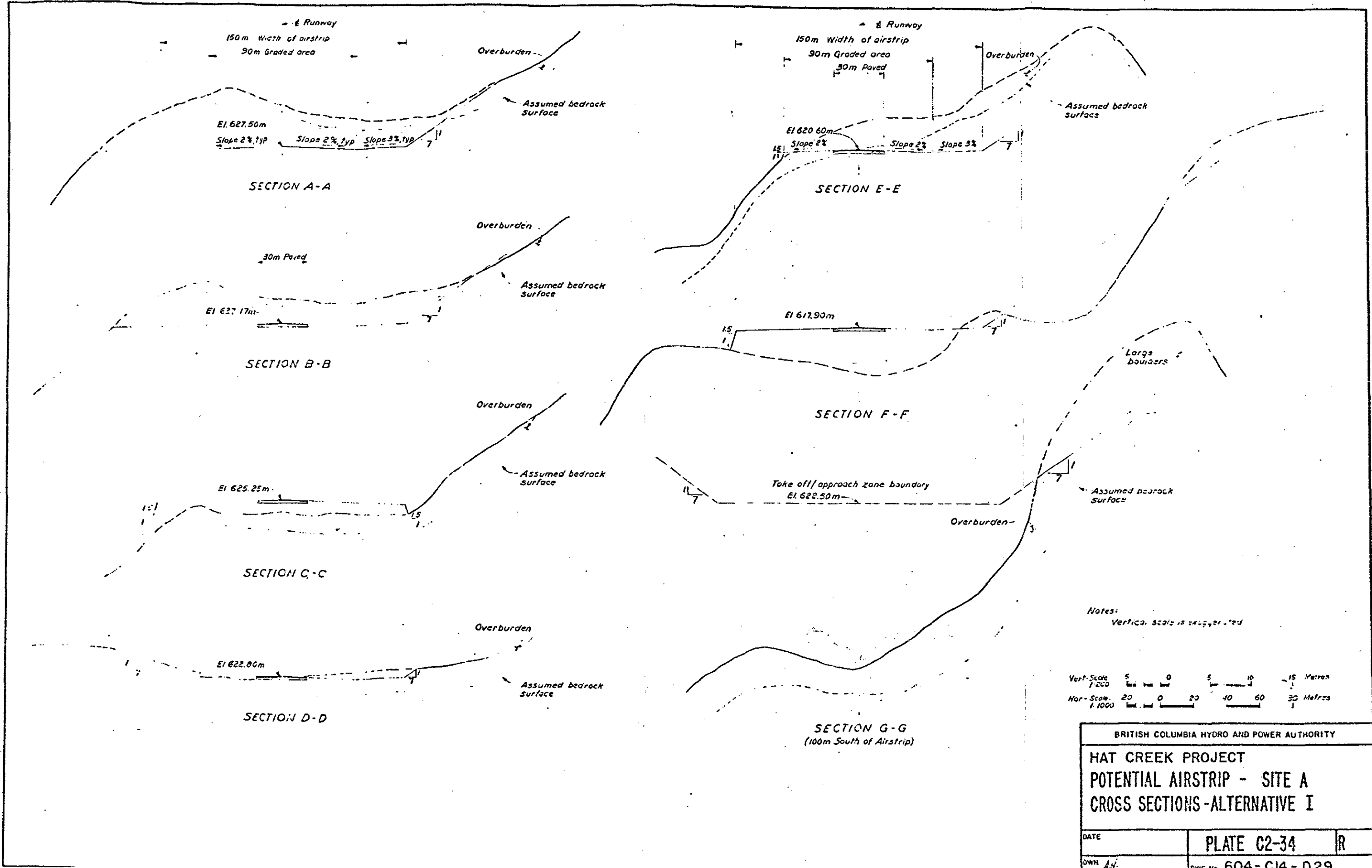
PROFILE ALONG E
Scale A



TYPICAL SECTION
Scale B



BRITISH COLUMBIA HYDRO AND POWER AUTHORITY		
HAT CREEK PROJECT		
POTENTIAL AIRSTRIP - SITE A		
RUNWAY ALIGNMENT - ALTERNATIVE I		
DATE	PLATE C2-33	R
DWN 14	DWG No 604-C14-D28	

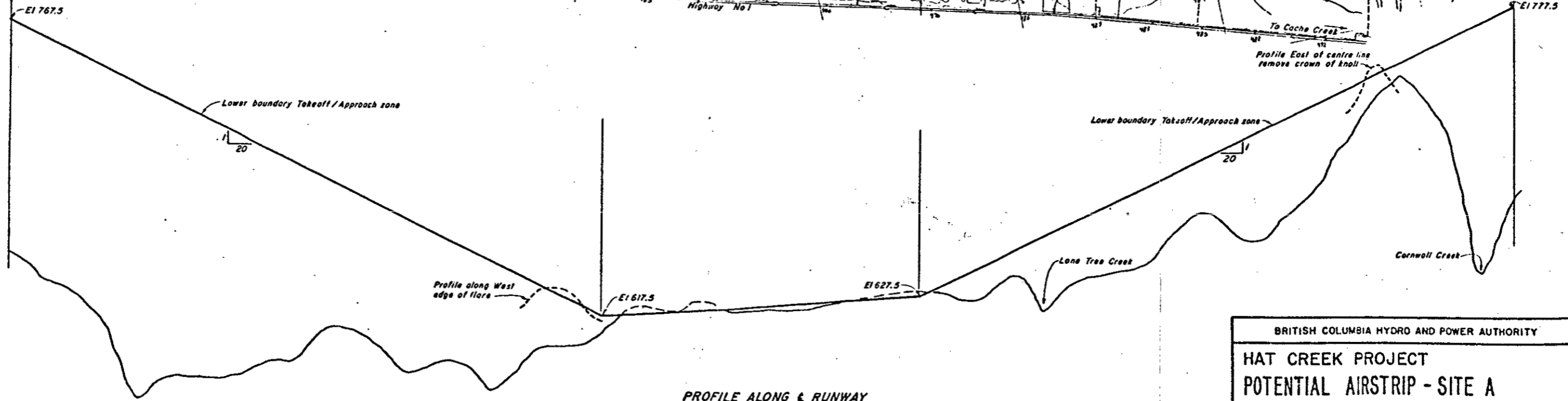
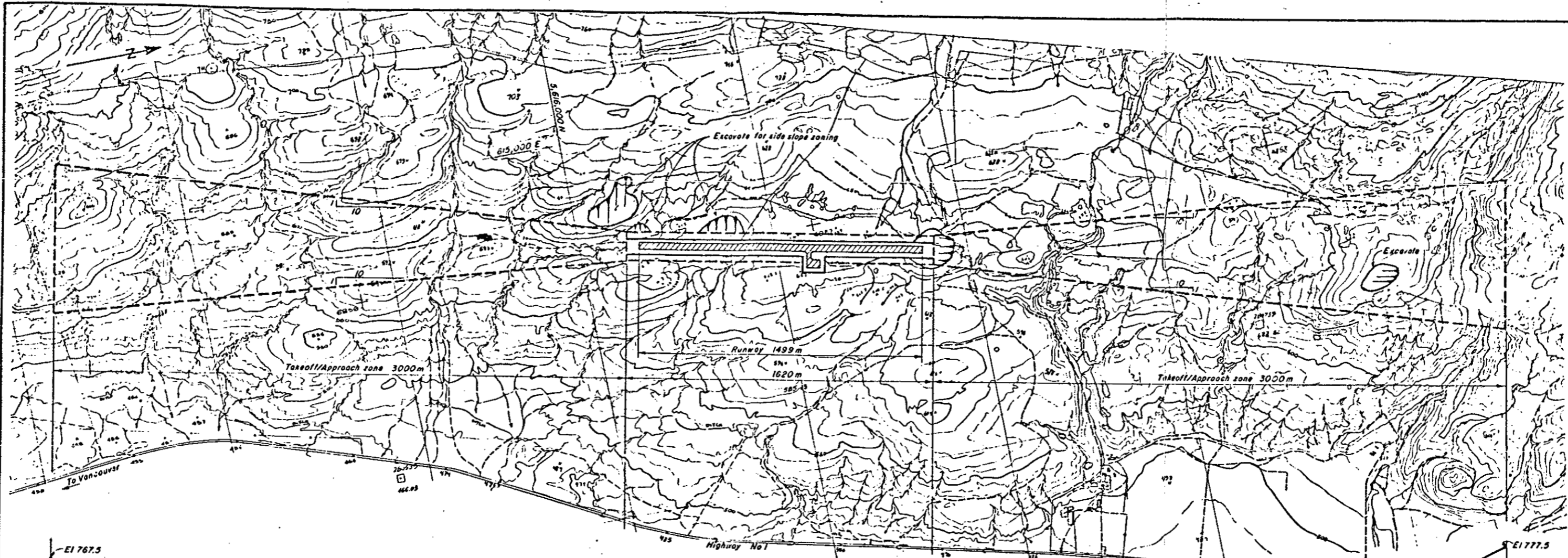


Notes:
 Vertical scale is exaggerated

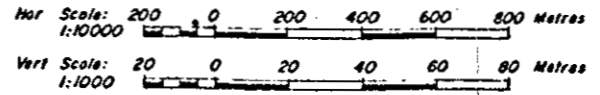
Vert. Scale 1:200
 5 0 5 10 15 Metres

Hor. Scale 1:1000
 20 0 20 40 60 80 Metres

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY		
HAT CREEK PROJECT POTENTIAL AIRSTRIP - SITE A CROSS SECTIONS-ALTERNATIVE I		
DATE	PLATE C2-34	R
DWH 1/1	DWG No 604-C14-D29	



PROFILE ALONG & RUNWAY
(Vertical scale exaggerated)



BRITISH COLUMBIA HYDRO AND POWER AUTHORITY		
HAT CREEK PROJECT POTENTIAL AIRSTRIP - SITE A LOCATION PLAN - ALTERNATIVE I		
DATE	PLATE C2-35	R
OWN <i>A.H.</i>	DWG No 604 - C14 - D30	

HAT CREEK PROJECT

TRANSPORT CANADA

AIRSTRIP SITE RECONNAISSANCE & ASSESSMENT

JULY 1977



Transport Canada Transports Canada

Air Air
 739 W. Hastings St.
 Vancouver, B.C.
 V6C 1A2

15 July 1977

B.C. Hydro and Power Authority
 700 West Pender Street
 Vancouver, B.C.
 V6C 2S5

Attention: Mr. C. K. Harman, Project Manager
 Offsite Facilities, Hat Creek Project

HAT CREEK OFFSITES		
JUL 18 1977		
	INIT.	DATE
CKH	CKH	18 VII
ACTION		
COPIES TO:		
RL	SN	18 VII

Your file Votre référence

Our file Notre référence

5151-1 (PCAW-J)
 5151-P105

Dear Sir:

Re: Proposed Hat Creek Airstrip

Proposed sites for the Hat Creek Airstrip were inspected from the ground and the air by Transport Canada officials on July 13, 1977. (See attached map).

The site suggested in Section 5 of the 1976 preliminary transportation study was not inspected from the ground because it appeared from the air to be undesirable due to rough terrain. In addition, sites 3, 4 and 5 previously thought acceptable were revealed to be unsuitable for the same reason.

Site 2 was a possibility, however it is located on top of a hill 2100' ASL and would allow for a maximum of 3000' to 3500' with no room for expansion.

Sites 1 and 6 offered the most potential.

Site 1 was inspected with an imaginary centerline west of Highway 1 on agricultural land and a centerline running down Highway 1. The west centerline may zone for a 3500' X 75' strip. If it was possible to relocate the highway and powerline from the present location to the east, a 4500' strip could be accommodated.

Semlin Ranch

{ Site 6 appears to be the best location and meets zoning requirements for a minimum of 5000'. It is located on private agricultural land.

*New Site
 Connon Ranch*

{ One other site located southwest of Site 1 was inspected from the air and may have potential for an approximate 3500' strip. (Marked on map). This strip should be investigated further before any decisions are made.

The Hat Creek Valley was inspected from the air and two possible sites were observed.

A report from Construction Branch will be available shortly. If you would like further details or assistance, we would be pleased to meet with you and discuss these sites or any others that you may have.

T. R. Forman

T. R. Forman
for Regional Superintendent, Airways

Attach.



Transport Canada Transports Canada

Air Air
739 W. Hastings St.
Vancouver, B.C.
V6C 1A2

21 July 1977

Your file Votre référence

Our file Notre référence

5151-1 (PCAW-C)
5151-P105

B.C. Hydro and Power Authority
700 W. Pender Street
Vancouver, B.C.
V6C 2S5

Attention: Mr. C. K. Harman, Project Manager, Offsite Facilities
Hat Creek Project

Dear Sir:

This is further to our letter of 15 July 1977 in which sites for an airstrip at Hat Creek were discussed.

Attached are comments made by Construction Branch on the relative merits and costs for construction of an airstrip on the various sites.

It should be noted that an additional site, referred to as "New Site" on the attached, is under consideration. When particulars are received from Construction Branch, they will be passed to you for your appraisal.

Please contact this office at any time if we can be of further assistance to you in this matter.

Yours truly,

B. D. Mawson
for Regional Superintendent, Airways

Attach.

PCAW

PCBFK

FROM
E

SUBJECT
OBJET

Proposed Airport - Cache Creek Area

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE 5151-P105 (PCBFK)
YOUR FILE - V/RÉFÉRENCE
DATE July 19, 1977

Reference is made to our recent site inspections for the purpose of locating a suitable airport which would serve the proposed Hat Creek project.

Submitted below are the Construction Branch comments on the four most promising sites for a 5,000 foot Runway. These are listed in the approx. order of priority from an approach zoning point of view; they are numbered as per your letter to BCHPA dated July 15, 1977.

SITE #6 - Land costs would be relatively high for the area due to the use of irrigated ranch property and highway frontage close to Cache Creek. Runway construction cost would be about average for this type of development (approx. \$1,500,000.00). It will be necessary to relocate two small streams. Excavation quantities would be moderate. Suitable gravel should be available within a few miles. Approx. one-half mile of access road would be required from Highway No. 1 to the Airport building area.

Semlin Ranch.

New Site (approx. one mile south-west of Site #1) - This site was not visited on the ground, however, it is located in the exact centre of aerial photograph MA1045-06315-0-6857. Land costs should be relatively low as this is the only site of the four which is located on land which is not presently being used. Construction costs would probably be about average. This will be confirmed after my site inspection next week. Approx. one mile of access road would be required from Hwy. No. 1 to the Airport building area; however, there is an existing gravel/dirt road to the site.

Cameron Ranch.

Site #1 (Highway location) - This site may be limited to approx. 4500' in order to meet standard 5% approach zoning. Land costs will be extremely high due to the use of highway frontage with existing farm, gas station and residences. Construction costs would be extremely low for the runway itself since a widening of the highway is all that would be required. However, approx. two miles of Highway No. 1 would have to be relocated, along with a powerline and the buildings, etc. No new access road would be required. Considering all factors, overall construction costs would

be in the average to high range (± \$1,500,000. to ± \$3,000,000.)

Site #1 (Farm location) - This site also would be limited to approx. 4,500 feet, and then only if parallel approach zoning were approved. Land costs would be fairly high. Construction costs would be low (approx. \$1,000,000.) due to the fact that the site appears to be located entirely on gravel and grading would be light.

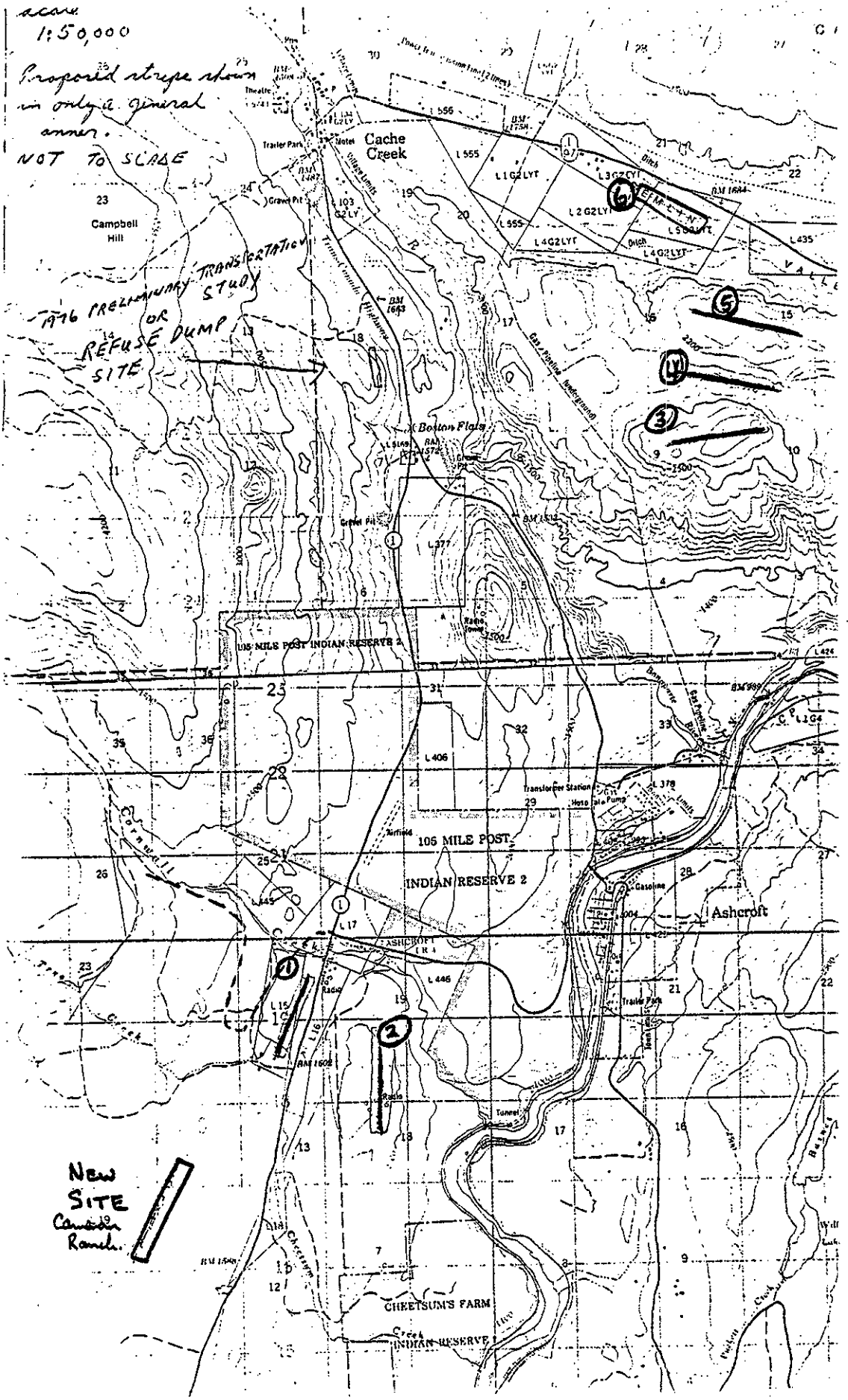
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PCBFK

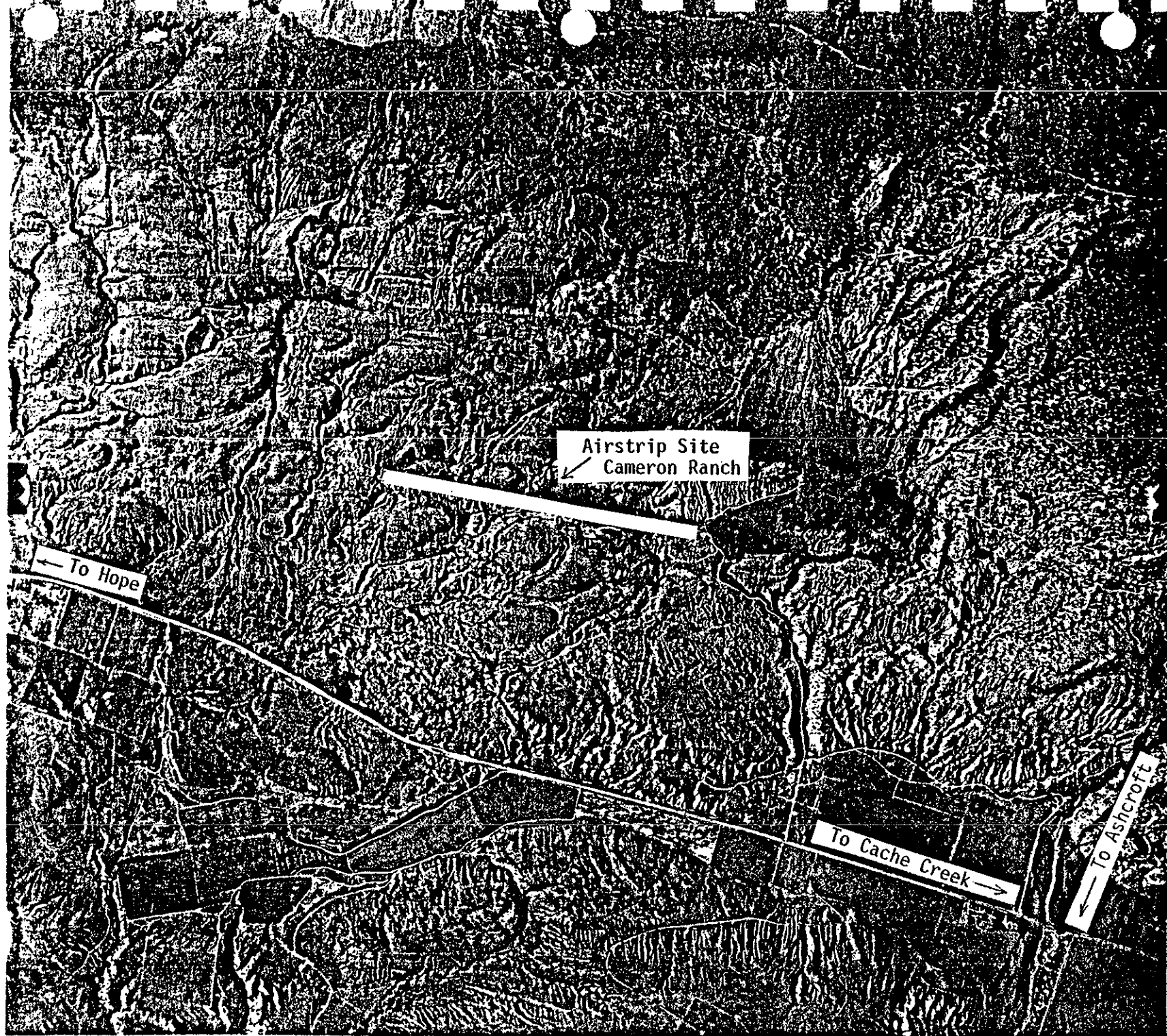
scale
1:50,000

Proposed route shown
is only a general
anner.
NOT TO SCALE

1976 PRELIMINARY TRANSPORTATION
STUDY
OR
REFUSE DUMP
SITE



New
SITE
Cassidy
Ranch.



Airstrip Site
Cameron Ranch

← To Hope

To Cache Creek →

→ To Ashcroft

← Cache Creek

← Airstrip Site
Semlin Ranch

To Kamloops →