

CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

GEOLOGICAL SURVEY OF CANADA
TOPICAL REPORT NO. 121

MACKENZIE RIVER DRAINAGE BASIN
DAM SITE INVESTIGATION

SITE No. 22

UPPER DIRECTION DAM SITE
(MAP AND NOTES)

E. B. OWEN



OTTAWA
1966

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Upper Direction Dam Site

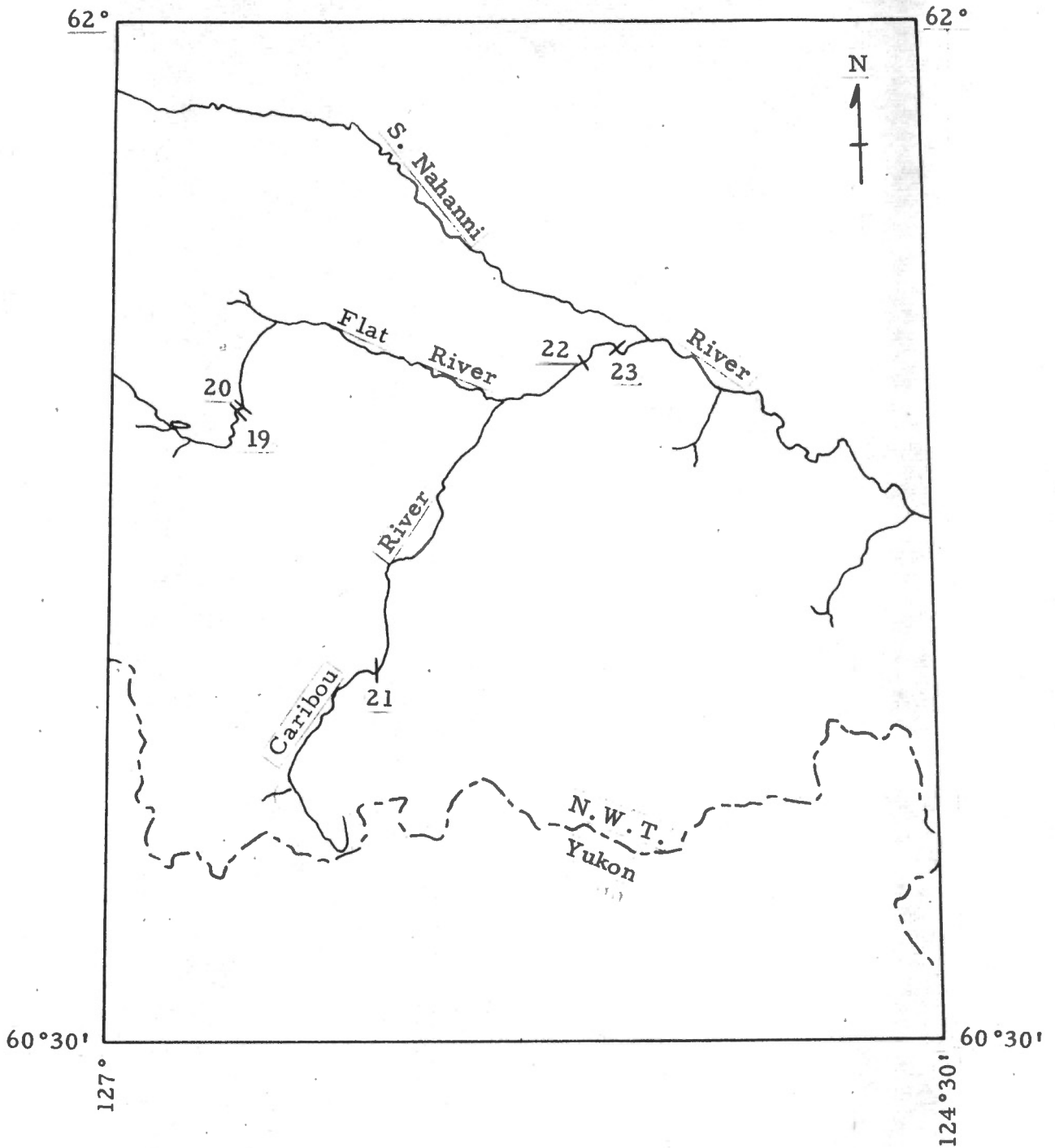
General Description

The examination of Upper Direction dam site was part of an investigation by the Water Resources Branch, Department of Energy, Mines and Resources of the hydroelectric power potential in the Mackenzie River drainage basin. Upper Direction dam site is situated on Flat River in the Northwest Territories about 9 miles upstream from the junction of Flat and South Nahanni Rivers. An alternate site (Lower Direction) is about four and a half miles downstream. Upper Direction dam site is included on National Topographic Series sheet No. 95F (Virginia Falls), scale 1:250,000 and on aerial photograph Al7428-12. The geology is described in Geological Survey of Canada, Paper 60-19¹.

The reasons for constructing a dam on Flat River are given in the report on Lower Direction dam site (Topical Report No. 120). The purpose of these reports is to furnish the engineer with general geological information regarding the proposed dam site. The data compiled are sufficient only to permit office studies and obtain general cost estimates.

As for the other dam sites on Flat River this report consists mainly of a geological map accompanied by descriptive notes. The limited time available prevented little more than a cursory examination of bedrock and overburden at the site. No attempt was made to investigate possible sources of construction materials.

¹ Douglas, R.J.W. and Norris, D.K.: Virginia Falls and Sibbeston Lake Map-areas, Northwest Territories, Geol. Surv., Can., Paper 60-19, 1960



LOCATION OF PROPOSED DAM SITES
MACKENZIE RIVER DRAINAGE BASIN
Scale: 1:1,000,000

| <u>Site No.</u> | <u>Name</u> | <u>River</u> |
|-----------------|-------------------|--------------|
| 19 | Upper Seaplane | Flat |
| 20 | Lower Seaplane | Flat |
| 21 | Caribou | Caribou |
| 22 | Upper Flat Canyon | Flat |
| 23 | Lower Flat Canyon | Flat |