

ADDENDUM TO
SOIL SURVEY OF
AREA ADJACENT TO CALLING LAKE, ALBERTA
and
INTERPRETATION FOR RECREATIONAL USE

by

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PREFACE

This report is one of a series describing detailed and semi-detailed soil surveys which were conducted in the following Alberta Provincial Parks during the summer of 1975: Gooseberry Lake, Big Knife, Rochon Sands, Vermilion, Pembina River, and Garner Lake. Also included were areas in the vicinities of Upper and Lower Kananaskis Lakes, Cold Lake (Lund's Point), Calling Lake, and the Notikewin River. The total area mapped was approximately 28,080 acres.

A separate report is written for each area; however, this particular report is much abbreviated. A soil survey report has been previously written (Greenlee, 1973), covering an area mapped along the southern shore of Calling Lake during 1973. The text of that report is pertinent to the area mapped along the southwestern shore of the lake during 1975, so is not repeated herein.

Also in 1975, soil samples were collected from an archaeological site excavated by the Parks Planning Branch in the Cypress Hills. A detailed field soil profile description was made, and a report will be written after the samples have been analyzed in the laboratory.

ACKNOWLEDGMENTS

The Alberta Research Council provided the staff and sixty percent of the funds needed to cover the total costs of the 1975 - 76 Provincial Parks soil survey program, including field, office, laboratory, and drafting work; as well as equipment and supplies. The Parks Planning Branch of Alberta Recreation, Parks and Wildlife contributed forty percent of the funds. The Alberta Research Council published the report and compiled the soils maps. The University of Alberta provided office and laboratory space.

Mrs. Pal Foster typed and assisted in compiling and proof reading the report, while Mr. Z. Widtman drafted the soils maps.

The field work was carried out by Mr. C. Veauvy, and able field assistance was provided by Messrs. R. Proudfoot and M. Hennie.

SUMMARY

The summary covers both the 1973 and 1975 mapped areas. They are situated about 30 miles north of the town of Athabasca, and comprise a total of about 17,400 acres along the southern and southwestern shores of Calling Lake. The surficial deposit over most of the study area consists of medium textured till. Two areas of sand are found along the lake shore, and numerous areas of organic deposits of variable extent also occur. The climate is the continental type characterized by warm summers and cold winters, and the natural vegetation of the area is of the boreal forest type. The dominant tree cover consists of aspen; while balsam poplar, white spruce and balsam fir are also common.

Eleven Map Units were recognized in the study areas. The key profile types are Gleyed Orthic Gray Luvisols, Degraded Eutric Brunisols, Gleyed Degraded Eutric Brunisols, Gleyed Orthic Regosols, Gleyed Dark Gray Luvisols, Rego Humic Gleysols, undifferentiated Mesisols, and Terric Humisols. These are distributed over the landscape in relation to parent material and drainage. Map Units consist of single soil series, groupings of series, or soil associations; and their distribution is shown on the Soils Maps.

Soil interpretations are made for each Map Unit for camp areas, picnic areas, intensive play areas, paths and trails, lawns and landscaping, permanent buildings, septic tank absorption fields, sanitary landfills - trench type, reservoir sites, road locations and sources of roadfill, sources of topsoil, and sources of sand or gravel.

Soils most suitable for recreational development in the mapped areas are those of Map Units 1 and 7; while soils of Map Unit 6 have moderate to severe limitations. Most of the soils have severe limitations for use as road construction materials, but the most suitable are soils of Map Units 4 and 6. The majority of the sandy soils have severe limitations for nearly all uses. The various soil areas can be located by careful study of the Soils Map and Table 4 (interpretations table).

A soil survey properly interpreted is a useful guide for general recreation planning, and in site selection. However, all soil differences which occur in the field cannot be shown on a soils map. Thus, for design and construction of specific recreational facilities, an on-site investigation is often needed.

SIZE AND LOCATION

The total area mapped along the southwestern shore of Calling Lake during 1975 was about 9,000 acres, and it comprises a western extension of the area covered during 1973. The sections mapped were numbers 29 to 32 inclusive, township 71, range 22; numbers 25 and 36, township 71, range 23; numbers 5 to 7 inclusive, township 72, range 22; and numbers 1, 2, 11 to 14 inclusive, and 23, township 72, range 23; all west of the fourth meridian.

PHYSIOGRAPHY AND SURFICIAL DEPOSITS

The study area is comprised predominantly of a till plain, which has a very gradual slope toward Calling Lake from the southwest. Only one very small area of beach deposits is located along the lake shore in section 13, township 72, range 23; and numerous organic deposits of variable extent are found. The study area is drained by small streams, which flow into the lake from the southwest.

The surficial deposit found throughout the study area is till, with the exception of the beach deposit mentioned above, which is sand.

CLIMATE, VEGETATION, SOILS

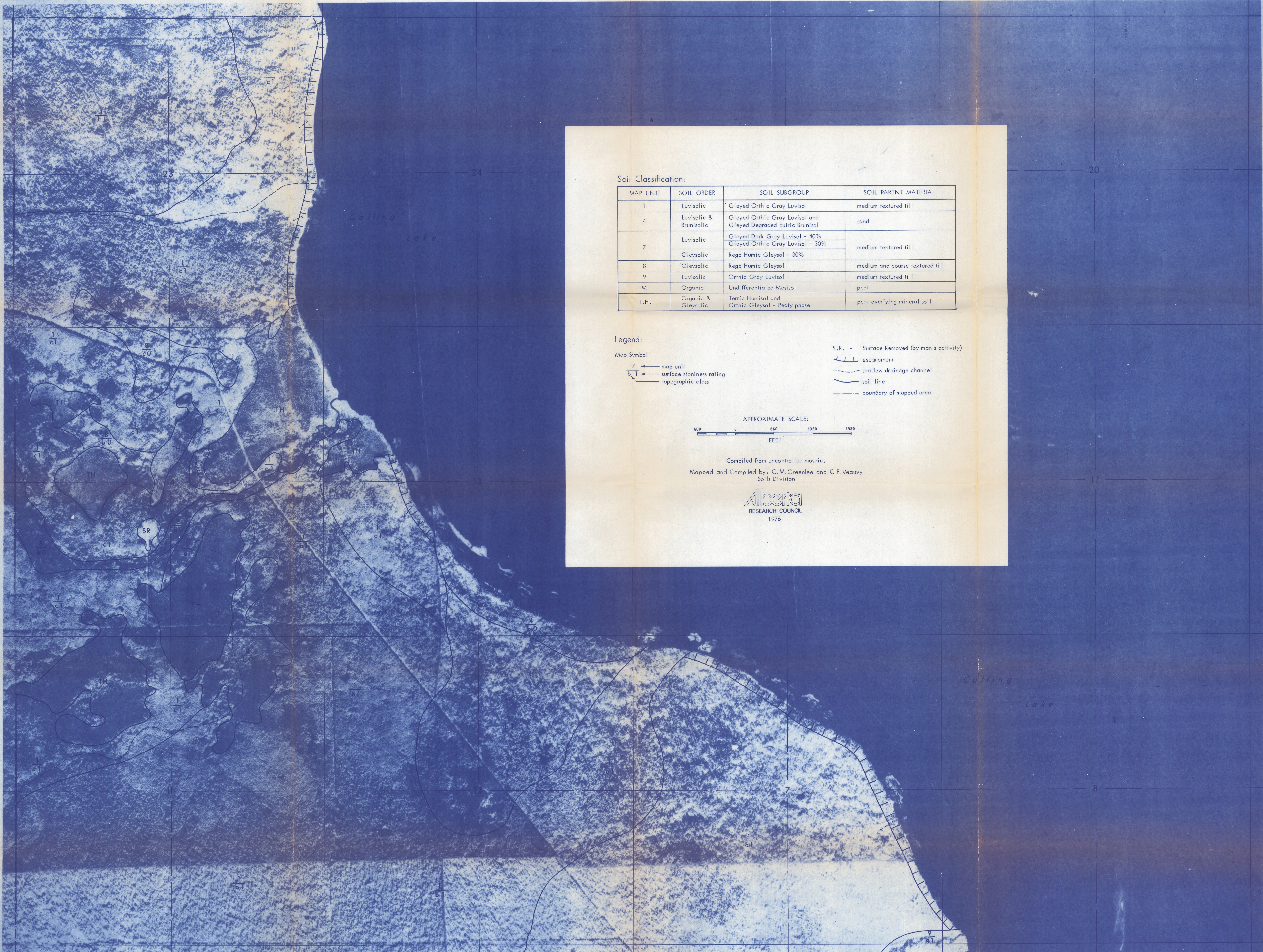
The reader is referred to the 1973 report (Greenlee, 1973) for information pertaining to these subjects, as well as the remainder of the report.

The Map Symbol, "7/c1", which appears on the 1976 Soils Map, is not listed in the interpretations table (Table 4) of the 1973 report (page 43). However, the ratings for this Map Symbol will be identical to those listed for the Map Symbol, "7/b1".

REFERENCE

- Greenlee, G. M. 1973. Soil Survey of Area Adjacent to Calling Lake, Alberta and Interpretation for Recreational Use. Alberta Inst. of Pedology Number M-73-16, Alberta Research Council, Edmonton. 61 pp.

MAP 1.
SOILS MAP OF ADDITIONAL AREA ADJACENT TO CALLING LAKE, ALBERTA
Tp. 71-72, R. 22-23, W. 4



Soil Classification:

MAP UNIT	SOIL ORDER	SOIL SUBGROUP	SOIL PARENT MATERIAL
1	Luvisolic	Gleyed Orthic Gray Luvisol	medium textured till
4	Luvisolic & Brunisolic	Gleyed Orthic Gray Luvisol and Gleyed Degraded Eutric Brunisol	sand
7	Luvisolic	Gleyed Dark Gray Luvisol - 40% Gleyed Orthic Gray Luvisol - 30%	medium textured till
	Gleysolic	Rego Humic Gleysol - 30%	
8	Gleysolic	Rego Humic Gleysol	medium and coarse textured till
9	Luvisolic	Orthic Gray Luvisol	medium textured till
M	Organic	Undifferentiated Mesisol	peat
T.H.	Organic & Gleysolic	Terric Humisol and Orthic Gleysol - Peaty phase	peat overlying mineral soil

Legend:

Map Symbol
 7 ← map unit
 b1 ← surface stoniness rating
 ← topographic class

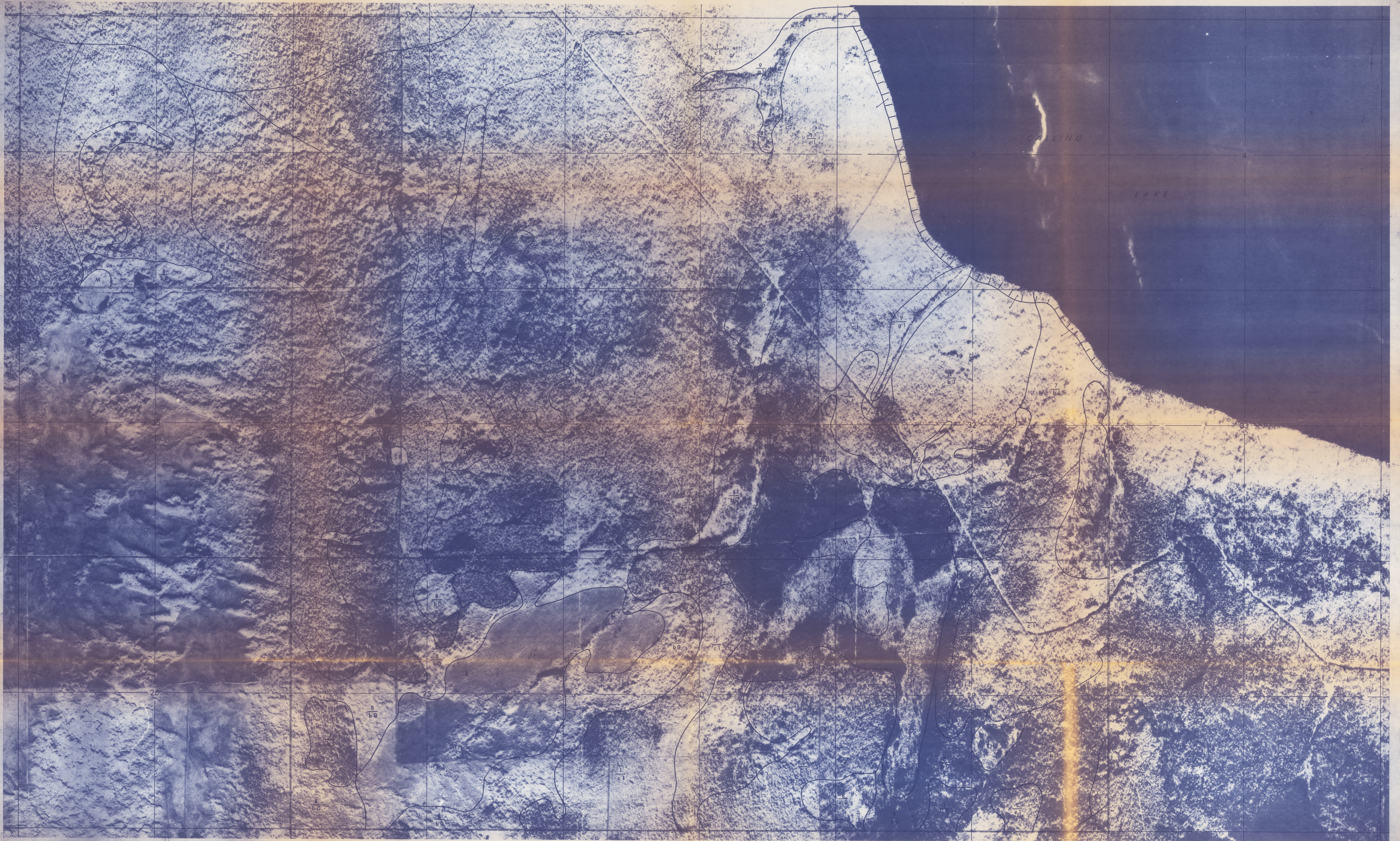
S.R. - Surface Removed (by man's activity)
 escarpment
 shallow drainage channel
 soil line
 boundary of mapped area



Compiled from uncontrolled mosaic.
 Mapped and Compiled by: G.M. Greenlee and C.F. Veauvy
 Soils Division



MAP 2.
SOILS MAP OF ADDITIONAL AREA ADJACENT TO CALLING LAKE, ALBERTA



Map
2
2
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