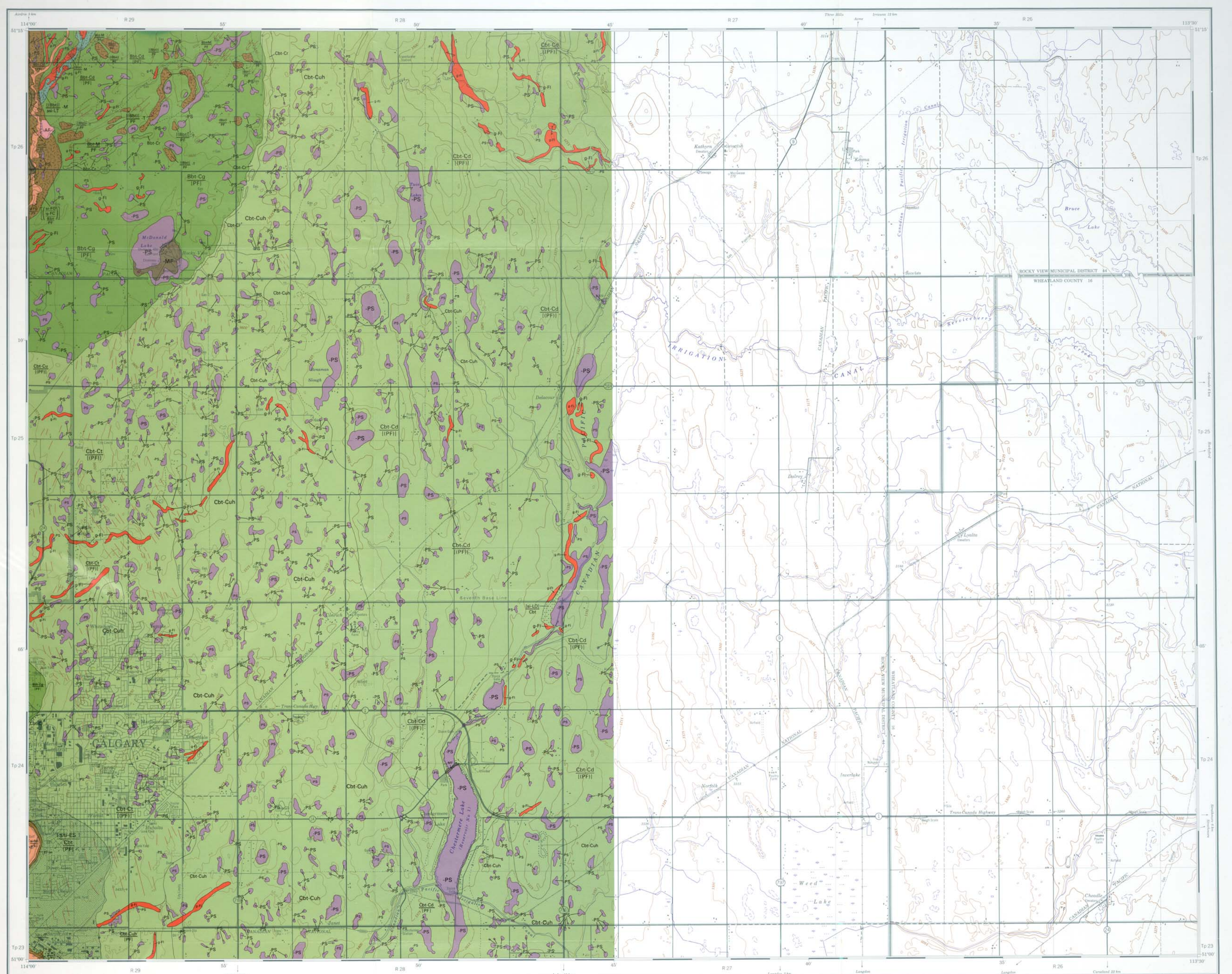


SYMBOL	STRATIGRAPHIC UNIT	LITHOLOGY (Descriptive)	LITHOGENESIS (Origin of material)	MORPHOLOGY (Descriptive unit or genetic)	COMMENT
PS		Plains sandstone, siltstone, clay and organic sediment, organic loam	sediment deposited in or beyond the limit of a river or glacial stream	flat to gently undulating	PS is of variable thickness and limited areal extent
AF		fine sand, gravel with minor clay	sediment deposited in or beyond the limit of a river or glacial stream	flat to undulating and surface inclined downstream, generally low shaped	sediment is commonly overlain by water for at least part of the year
ATC		gravel, minor sand	fluvial channel sediment	not included in unit definition	thickness of fluvial sediment is generally not known
PT		gravel, minor sand, pebbly sand, locally indurated, organic loam	fluvial channel sediment deposited on, within, or beneath glacial ice	flat to hummocky, commonly occurs in discontinuous, narrow ridges a few to 10 m across and a few metres high	potential source for fill gravel and road maintenance
PS-1	Bates Drift Unit B1	pebble loam (B1) overlying sand and gravel	glacial sediment covering fluvial channel sediment on, within, or beneath ice	smooth undulating surface, modified by ice flow	B1 is discontinuous but in places 2 to 3 metres thick, covering areas where contact fluvial channel sediment
PS-2	B1	PS-2	fluvial overbank sediment	not included in unit definition	B1 is generally 2 to 4 metres thick
PS-3	Quaternary sediment overlying Perseus Hills Formation and alluvium	alluvial overbank sandstone, siltstone, and shale	fluvial overbank sediment covering normative bedrock	not included in unit definition	B1 is generally 2 to 4 metres thick
PS-4	Bates Drift Unit B1	pebble loam (B1) overlying sand and silt	glacial sediment covering fluvial channel sediment	smooth undulating surface, modified by ice flow	B1 is less than 2 metres thick and the underlying bedrock is generally steep to plain
PS-5	Crossfield Drift Unit B1	pebble loam (B1)	superglacial outflow sediment	glacial collapse terrain	
PS-6	Crossfield Drift Unit B1	pebble loam (B1)	superglacial outflow sediment	glacial margin collapse ridge	contains isolated bodies of poorly sorted ice contact fluvial channel sediment
PS-7	Crossfield Drift Unit B1	pebble loam (B1)	superglacial outflow sediment	undulating to hummocky glacial collapse terrain	contains isolated bodies of poorly sorted ice contact fluvial channel sediment
PS-8	Crossfield Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	eroded bedrock draped by glacial collapse sediment	B1 is generally 4 to 8 metres thick but thickness exceeds 8 metres in places
PS-9	Crossfield Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	irregularly draped by glacial collapse sediment	B1 is generally 4 to 8 metres thick but thickness exceeds 8 metres in places
PS-10	Crossfield Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	undulating glacial collapse terrain	B1 is generally 4 to 8 metres thick but thickness exceeds 8 metres in places
PS-11	Crossfield Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	undulating to hummocky glacial collapse terrain	B1 is generally 4 to 8 metres thick
PS-12	Crossfield Drift Unit B1	silt overlying pebble loam (B1)	neotectonic alluvial sediment covering glacial sediment	not included in unit definition	B1 is generally less than 2 metres thick
PS-13	Crossfield Drift Unit B1	sand and silt overlying pebble loam (B1)	neotectonic alluvial sediment covering glacial sediment	not included in unit definition	neotectonic sediment is generally less than 2 metres thick
PS-14	Crossfield Drift Unit B1	sand and silt overlying pebble loam (B1) overlying sandstone, siltstone, and shale	neotectonic alluvial sediment covering normative bedrock	not included in unit definition	neotectonic sediment is less than 2 metres thick, contains commonly sorted fine to 8 metres beneath the surface
PS-15	Bates Drift Unit B1	pebble loam (B1)	superglacial outflow sediment	glacial margin collapse ridge	contains bodies of poorly sorted ice contact fluvial channel sediment
PS-16	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	eroded bedrock surface draped by glacial collapse sediment	B1 is generally 4 to 8 metres thick
PS-17	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	superglacial outflow sediment covering normative bedrock	gently undulating glacial collapse terrain	B1 is generally 2 to 4 metres thick
PS-18	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	glacial sediment overlying normative bedrock	smooth undulating surface, modified by glacial flow	B1 is generally 2 to 4 metres thick
PS-19	Perseus Hills Formation	sandstone, siltstone, and shale	normative bedrock	widest slope	
PS-20	Perseus Hills Formation	silt overlying gravel overlying pebble loam (B1) overlying sandstone, siltstone, and shale	example of discontinuous fluvial channel and fluvial channel sediment overlying normative bedrock	flat to undulating	contains remnants of discontinuous silt, gravel, and silt in less than 2 metres thick
PS-21	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	glacial sediment overlying normative bedrock, both defined by glacial recessional features (spiral scouring)	generally isolated knobs that are commonly elongated toward the southwest	contains mix of glacial sediment (B1) draped bedrock and gravel in contact with normative bedrock. The B1 is discontinuous and generally less than 2 metres thick
PS-22	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	glacial sediment overlying normative bedrock, both defined by glacial recessional features (spiral scouring)	generally isolated knobs that are commonly elongated toward the southwest	contains mix of glacial sediment (B1) draped bedrock and gravel in contact with normative bedrock. The B1 is discontinuous and generally less than 2 metres thick
PS-23	Bates Drift Unit B1	pebble loam (B1) overlying sandstone, siltstone, and shale	glacial sediment overlying normative bedrock	not included in unit definition	B1 is generally less than 2 metres thick



## Surface Materials of the Calgary Urban Area: Dalroy Sheet

NTS 82-P/4

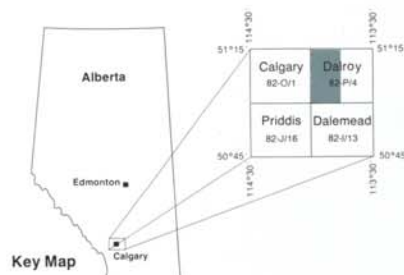
S.R. Moran

Revised 1981

Any revised or additional information will be retained by the Alberta Research Council.

Map was prepared by the Bureau and Mapping Department of Energy, Mines and Resources, Ottawa, Canada by Marie Research Council, Ottawa, Ontario, N6A 6K6.

ALBERTA RESEARCH COUNCIL  
National Research Division  
Alberta Geological Survey  
and Terrain Sciences Department



The general legend appearing below relates to all maps in this series. All symbols and map titles do not necessarily appear on each sheet.

**LEGEND**

Buried sand

Buried silt

Geologic contact, defined

Geologic contact, inferred

Minor watercourse channel

Minor watercourse ridge

**EXPLANATION OF MAP SYMBOL STRUCTURE**

The basic legend consists of 6 elements that describe (1) the stratigraphic unit, (2) the lithology, (3) the lithogenesis, and (4) the morphology of the unit. (5) The lithology, (6) the lithogenesis, and (7) the morphology of the unit are also described by a symbol that consists of only one or two elements where the other elements are not considered significant for definition of the unit. The general unit symbol has the form:

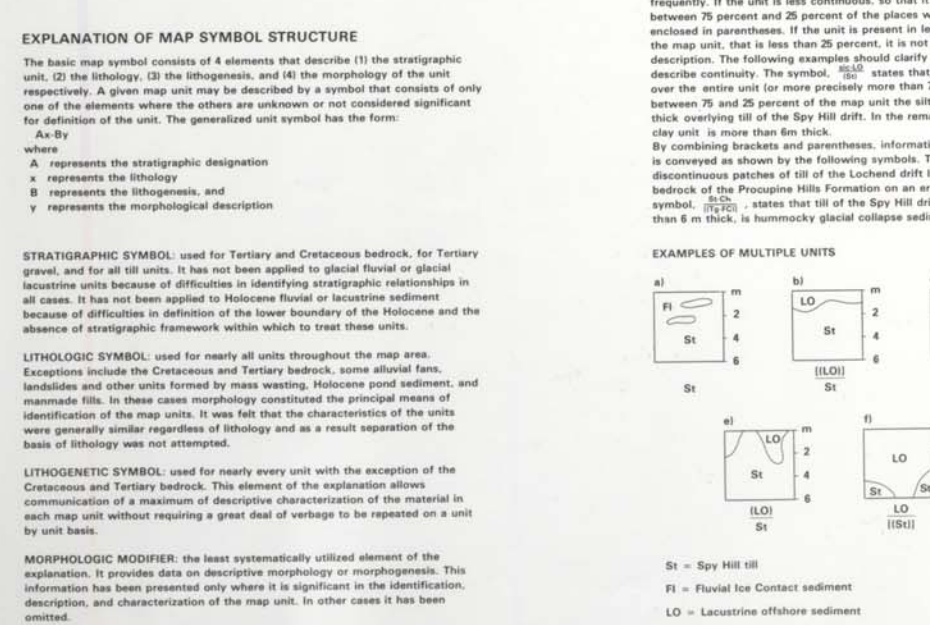
A - represents the stratigraphic designation  
B - represents the lithology  
C - represents the lithogenesis  
D - represents the morphology

**STRATIGRAPHIC SYMBOL** used for Tertiary and Quaternary bedrock, for Tertiary (T) and Quaternary (Q) units. The symbol consists of a letter and a number. The letter represents the geological period and the number represents the stratigraphic unit. The symbol is placed in the upper left corner of the map unit.

**LITHOLOGICAL SYMBOL** used for nearly all units throughout the map area. The symbol consists of a letter and a number. The letter represents the lithology and the number represents the lithogenesis. The symbol is placed in the upper right corner of the map unit.

**LITHOGENESIS SYMBOL** used for nearly all units throughout the map area. The symbol consists of a letter and a number. The letter represents the lithogenesis and the number represents the lithology. The symbol is placed in the lower left corner of the map unit.

**MORPHOLOGICAL SYMBOL** used for nearly all units throughout the map area. The symbol consists of a letter and a number. The letter represents the morphology and the number represents the lithology. The symbol is placed in the lower right corner of the map unit.



### COLOUR CONVENTION

The color of a map unit reflects the material at a depth of 2m below the surface. When this material is covered by another, which is less than 2m thick, a pattern indicates the composition of the top 2m.

PS - silt and clay, clay  
ATC - sand and silt  
PT - sand and silt

### DESCRIPTION OF STRATIGRAPHIC UNITS

**A. CROSSFIELD DRIFT**  
Glacial till and associated overbank drift. The till has a texture of 80-90 percent sand, 10-10 percent silt and 10 percent clay. Pebbles generally consist of abundant granite and gneiss rocks. Two units have been differentiated in the basal part of the area on the basis of composition. In a fine sandstone composition the basal part of the unit is composed of 10 to 15 percent sand, 10 to 15 percent silt and 10 percent clay. In a coarse sandstone composition the basal part of the unit is composed of 10 to 15 percent sand, 10 to 15 percent silt and 10 percent clay.

### DESCRIPTION OF LITHOLOGIC SYMBOLS

**PS - silt and clay**  
Silt and clay, clay  
ATC - sand and silt  
PT - sand and silt

### DESCRIPTION OF MORPHOLOGICAL SYMBOLS

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