

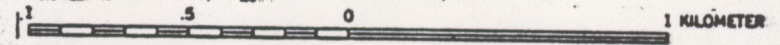
<p>Complex</p> <p>Duluth</p>	<table border="0"> <tr><td>daa</td><td>daa: medium-grained granular quartz-alkspar rock</td></tr> <tr><td>dz</td><td>dz: fine-grained decussate quartz-orthoclase-hornblende-plagioclase rock</td></tr> <tr><td>dy</td><td>dy: fine-grained decussate hypersthene-augite-plagioclase rock</td></tr> <tr><td>dx</td><td>dx: fine-grained decussate augite-plagioclase rock</td></tr> <tr><td>dv</td><td>dv: coarse-grained decussate augite-plagioclase rock</td></tr> <tr><td>dw</td><td>dw: coarse-grained granular tironals-augite rock</td></tr> <tr><td>du</td><td>du: medium-grained granular plagioclase-tironals-olivine rock</td></tr> <tr><td>dt</td><td>dt: medium-grained granular olivine-tironals rock</td></tr> <tr><td>ds</td><td>ds: medium-grained foliate augite-plagioclase rock</td></tr> <tr><td>dr</td><td>dr: undivided pyroxene-plagioclase and olivine-plagioclase rocks</td></tr> <tr><td>dq</td><td>dq: medium-grained foliate olivine-plagioclase rock</td></tr> <tr><td>dp</td><td>dp: fine-grained foliate augite-plagioclase rock</td></tr> <tr><td>do</td><td>do: very-coarse-grained decussate quartz-orthoclase-augite-plagioclase rock</td></tr> <tr><td>dn</td><td>dn: fine-grained granular tironals-plagioclase-augite rock</td></tr> <tr><td>dma</td><td>dma: coarse-grained decussate pigeonite-augite-plagioclase rock modified by introduction of quartz and alkspars</td></tr> <tr><td>dmaa</td><td>dmaa: coarse-grained decussate pigeonite-augite-plagioclase rock modified by introduction of quartz and alkspars</td></tr> <tr><td>dl</td><td>dl: medium-grained decussate pigeonite-augite-plagioclase rock</td></tr> <tr><td>dk</td><td>dk: fine-grained granular plagioclase-quartz-orthoclase rock</td></tr> <tr><td>dj</td><td>dj: coarse-grained foliate augite-plagioclase rock</td></tr> <tr><td>di</td><td>di: fine-grained decussate tironals-augite-plagioclase rock</td></tr> <tr><td>dh</td><td>dh: fine-grained foliate tironals-olivine-plagioclase rock</td></tr> <tr><td>dg</td><td>dg: coarse-grained foliate tironals-augite-olivine-plagioclase rock</td></tr> <tr><td>df</td><td>df: fine-to-coarse-grained decussate augite-olivine-plagioclase rock</td></tr> <tr><td>de</td><td>de: fine-grained granulodecussate augite-plagioclase rock</td></tr> <tr><td>dd</td><td>dd: very-fine-grained foliate olivine-tironals-augite-plagioclase rock</td></tr> <tr><td>dc</td><td>dc: very-fine-grained granular olivine-augite-plagioclase rock</td></tr> <tr><td>db</td><td>db: medium-grained foliate pigeonite-augite-plagioclase rock</td></tr> <tr><td>da</td><td>da: fine-grained foliate olivine-plagioclase rock</td></tr> <tr><td>ri</td><td>ri: inclusions of Rove Formation in the Duluth Complex</td></tr> <tr><td>r&amp;l</td><td>r&amp;l: undivided sandstones and argillites of Rove Formation and pyroxene-plagioclase rocks of the Logan Intrusions</td></tr> </table>	daa	daa: medium-grained granular quartz-alkspar rock	dz	dz: fine-grained decussate quartz-orthoclase-hornblende-plagioclase rock	dy	dy: fine-grained decussate hypersthene-augite-plagioclase rock	dx	dx: fine-grained decussate augite-plagioclase rock	dv	dv: coarse-grained decussate augite-plagioclase rock	dw	dw: coarse-grained granular tironals-augite rock	du	du: medium-grained granular plagioclase-tironals-olivine rock	dt	dt: medium-grained granular olivine-tironals rock	ds	ds: medium-grained foliate augite-plagioclase rock	dr	dr: undivided pyroxene-plagioclase and olivine-plagioclase rocks	dq	dq: medium-grained foliate olivine-plagioclase rock	dp	dp: fine-grained foliate augite-plagioclase rock	do	do: very-coarse-grained decussate quartz-orthoclase-augite-plagioclase rock	dn	dn: fine-grained granular tironals-plagioclase-augite rock	dma	dma: coarse-grained decussate pigeonite-augite-plagioclase rock modified by introduction of quartz and alkspars	dmaa	dmaa: coarse-grained decussate pigeonite-augite-plagioclase rock modified by introduction of quartz and alkspars	dl	dl: medium-grained decussate pigeonite-augite-plagioclase rock	dk	dk: fine-grained granular plagioclase-quartz-orthoclase rock	dj	dj: coarse-grained foliate augite-plagioclase rock	di	di: fine-grained decussate tironals-augite-plagioclase rock	dh	dh: fine-grained foliate tironals-olivine-plagioclase rock	dg	dg: coarse-grained foliate tironals-augite-olivine-plagioclase rock	df	df: fine-to-coarse-grained decussate augite-olivine-plagioclase rock	de	de: fine-grained granulodecussate augite-plagioclase rock	dd	dd: very-fine-grained foliate olivine-tironals-augite-plagioclase rock	dc	dc: very-fine-grained granular olivine-augite-plagioclase rock	db	db: medium-grained foliate pigeonite-augite-plagioclase rock	da	da: fine-grained foliate olivine-plagioclase rock	ri	ri: inclusions of Rove Formation in the Duluth Complex	r&l	r&l: undivided sandstones and argillites of Rove Formation and pyroxene-plagioclase rocks of the Logan Intrusions
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(colored if occurs in this quadrangle)

GEOLOGIC MAP OF THE DULUTH COMPLEX  
IN THE HUNGRY JACK LAKE QUADRANGLE

Geology by Harold D. Nathan 1967-68

Base map: USGS



- fault, approximately located
- contact, approximately located
- speculative contact
- gradational contact
- attitude of foliation
- rock occurrence of minor or uncertain extent
- dike and approximate strike
- other outcrops examined

