



DESCRIPTIVE NOTES

(1) Shows the inferred synclinal remnant of Proterozoic iron-formation immediately north of Winisk inlier. The surrounding rocks are Proterozoic carbonate-argillite of low magnetic intensity. Depth-to-anomaly calculations (two) suggest that unit 3 may lie within 200 feet of the surface in this area.

(2) Shows the proposed fault zone south of Winisk inlier. A high regional anomaly north of the fault zone originates at depth, and about 500 feet of combined Paleozoic and Proterozoic carbonates overlie seismically determined basement (Hobson, 1967). Archean gneisses to the south of the fault zone may lie at bedrock surface beneath about 300 feet of drift (see Hobson, 1969).

(3) Shows nearly flat-lying Proterozoic iron-formation capped by diabase northwest of Sutton Lake. The zone of low aeromagnetic relief west of the diabase is interpreted as reflecting a thick section of Proterozoic carbonate with Paleozoic rocks overlying it. Somewhat higher aeromagnetic relief farther west is thought to reflect a westward rise in Archean gneissic basement and consequent thinning of Proterozoic rocks.

(4) Shows the graben structure interpreted at Hawley Lake. It is supposed that the central part of the graben (outlined by linear aeromagnetic lows) is devoid of diabase cover analagous to a similar graben at Rockinghorse Lake, N. W. T. Iron-formation is more deeply buried in the central part of the graben where younger Proterozoic as well as Paleozoic sediments may be preserved.

(5) Shows an aeromagnetic pattern interpreted as reflecting a northeastward dipping monocline in Proterozoic iron-formation between the Wachi and Aquatuk River exposures. Anomalous areas at either end of the linear trend are interpreted as caused by more nearly flat-lying iron-formation overlain by diabase. Iron-formation dips steeply over the linear trend and its pattern is obscured down dip by overlying sediments. The alternative interpretation, that the linear trend represents a diabase dyke, appears less likely because magnetic susceptibility measurements on diabase in this area are low, and because three diabase outcrops southeast of Wachi lie on a trend that intersects the linear aeromagnetic trend at about 35 degrees.

(6) Shows interfering aeromagnetic trends due to Proterozoic iron-formation and Archean gneisses immediately southeast of Aquatuk Lake. A discontinuity of high contrast in Archean rocks is visible on the west and may be followed north-eastward where the Archean rocks pass beneath nearly flat-lying iron-formation represented by the short wavelength pattern.

(7) Shows the aeromagnetic anomaly pattern interpreted as reflecting rocks of granulite metamorphic facies (C. K. Bell, pers. comm. 1969) in the southwest corner of the map-area.

(8) Shows the aeromagnetic lineament [interpreted as a major fault of right lateral displacement (Ayres et al., 1969)] at the southwest margin of the area of northward concave, arcuate aeromagnetic trends.

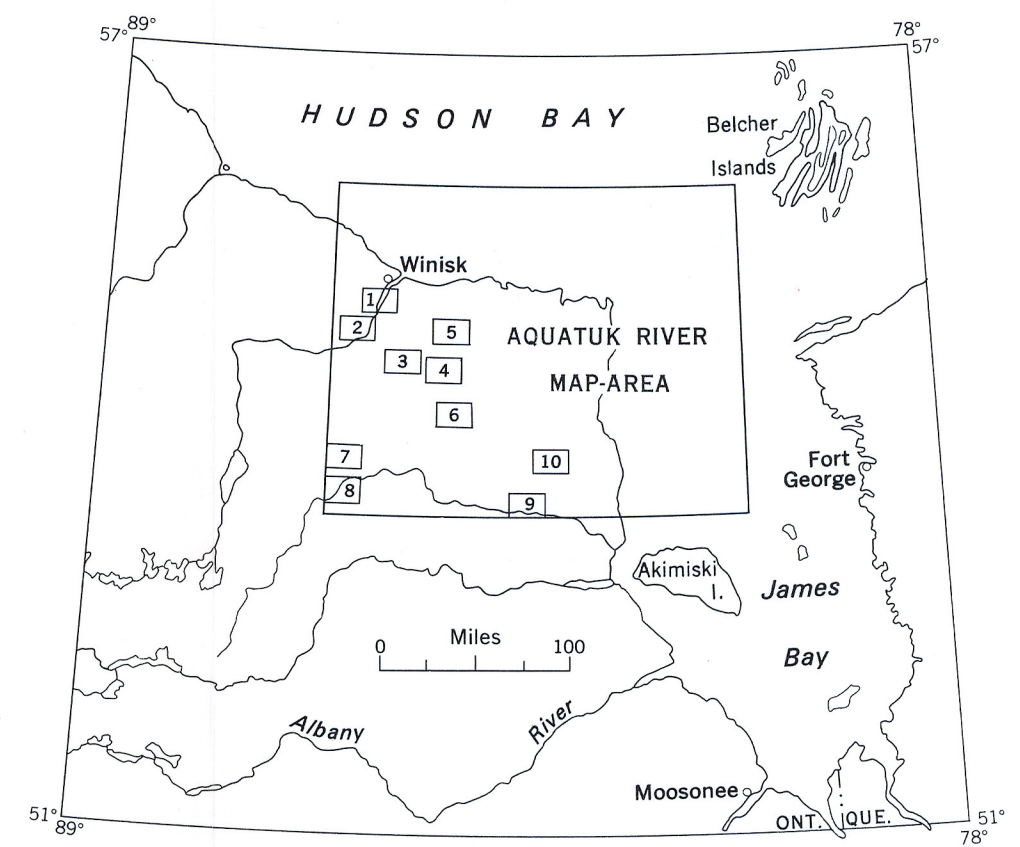
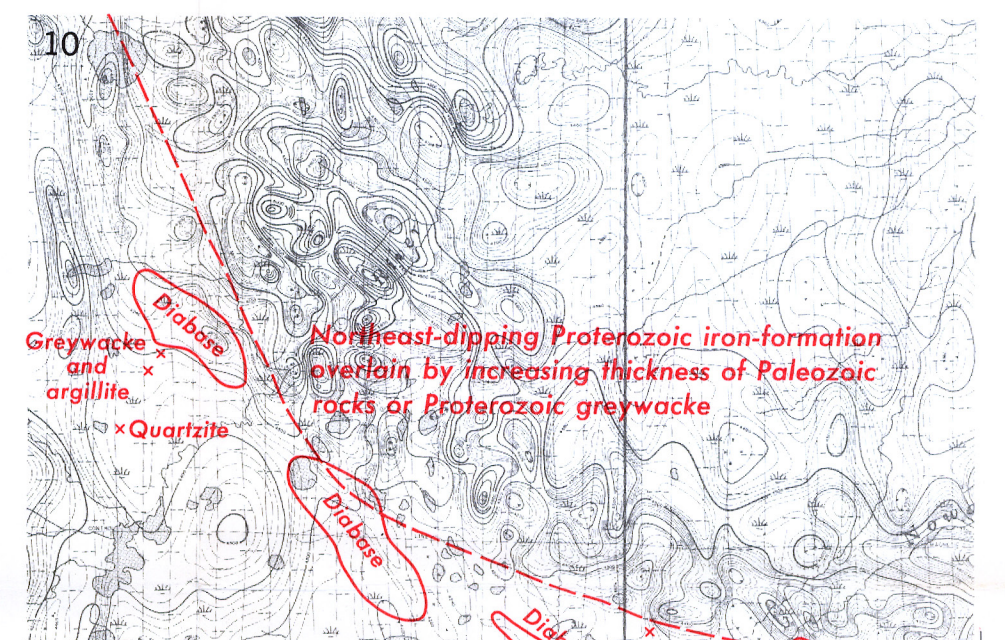
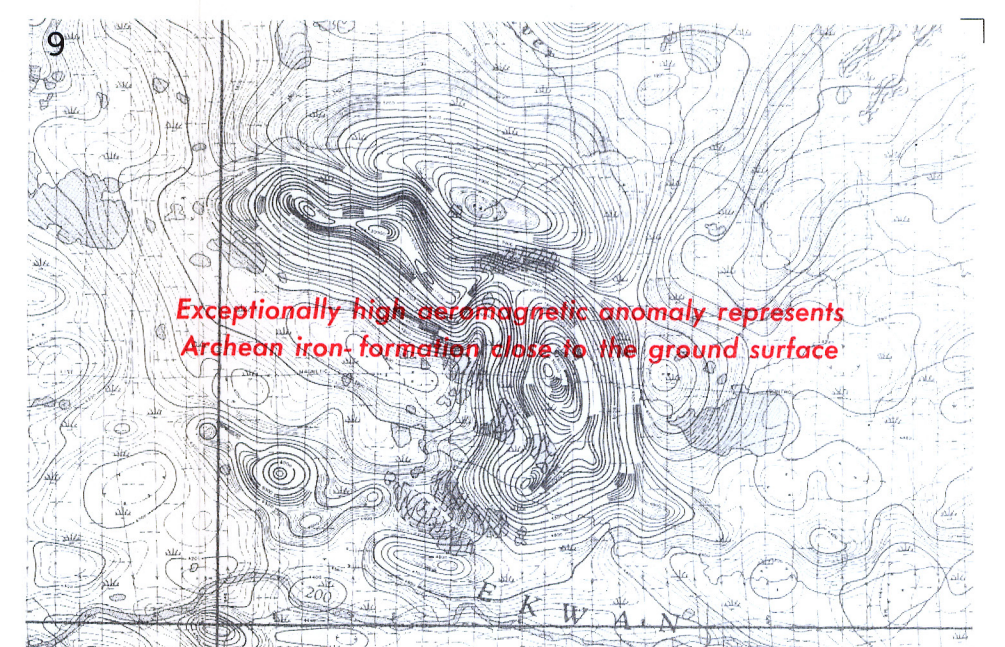
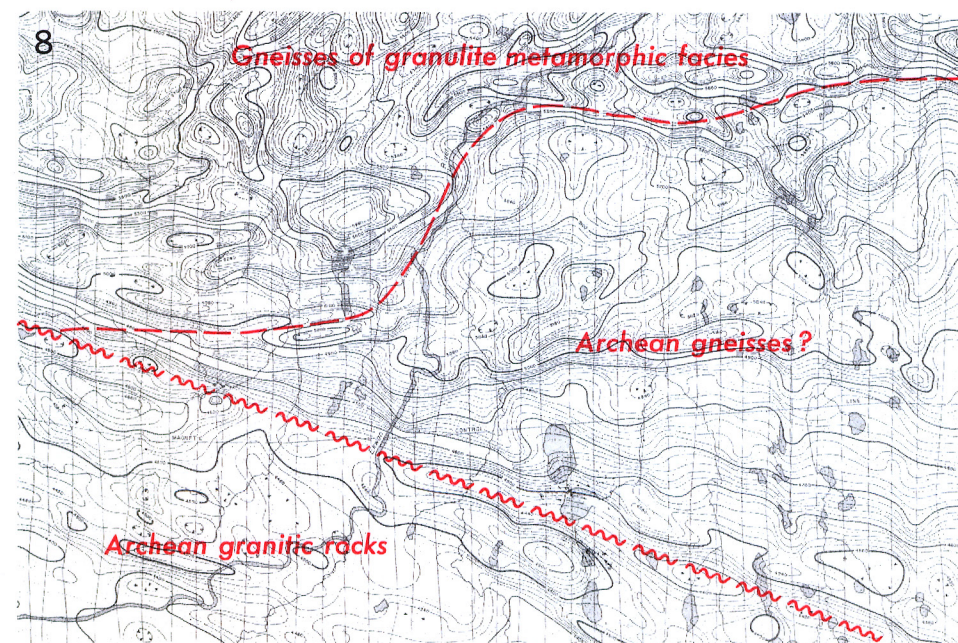
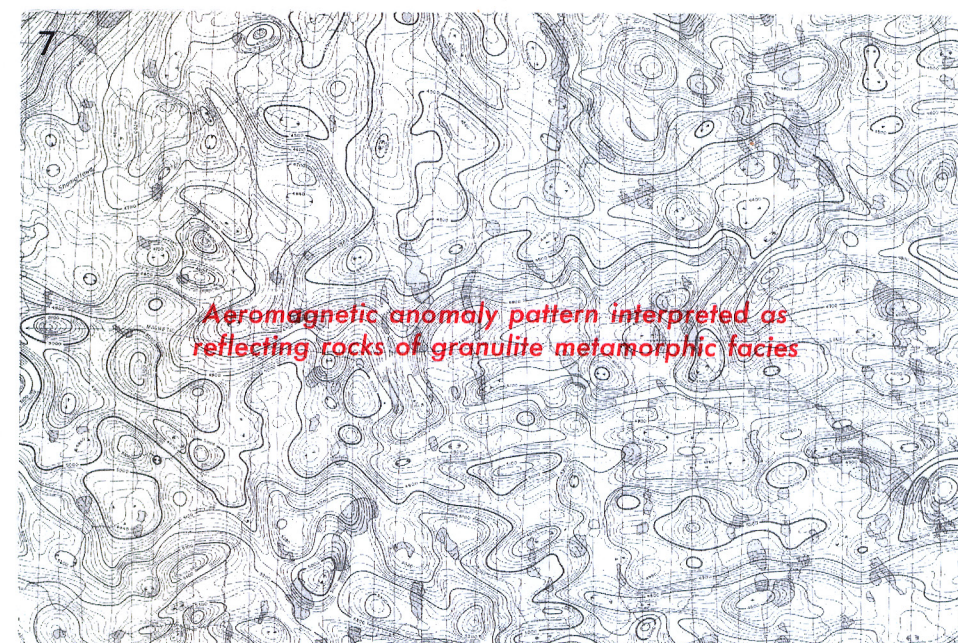
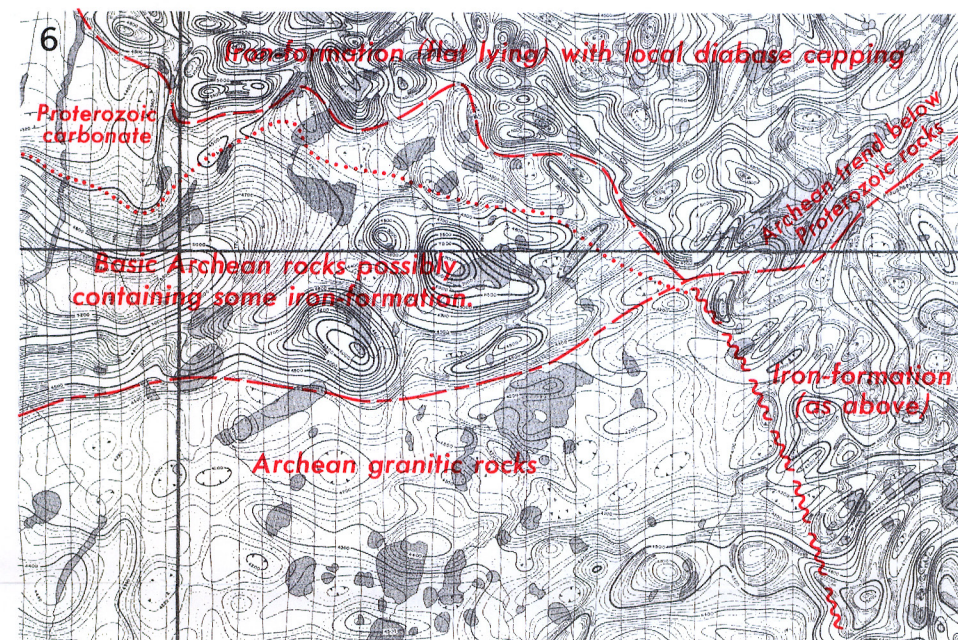
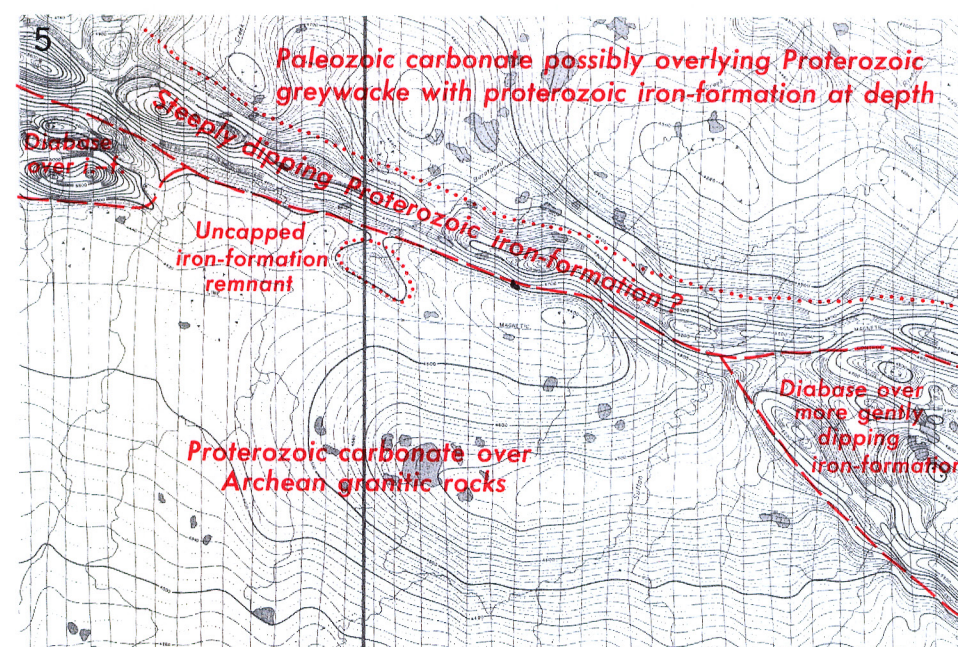
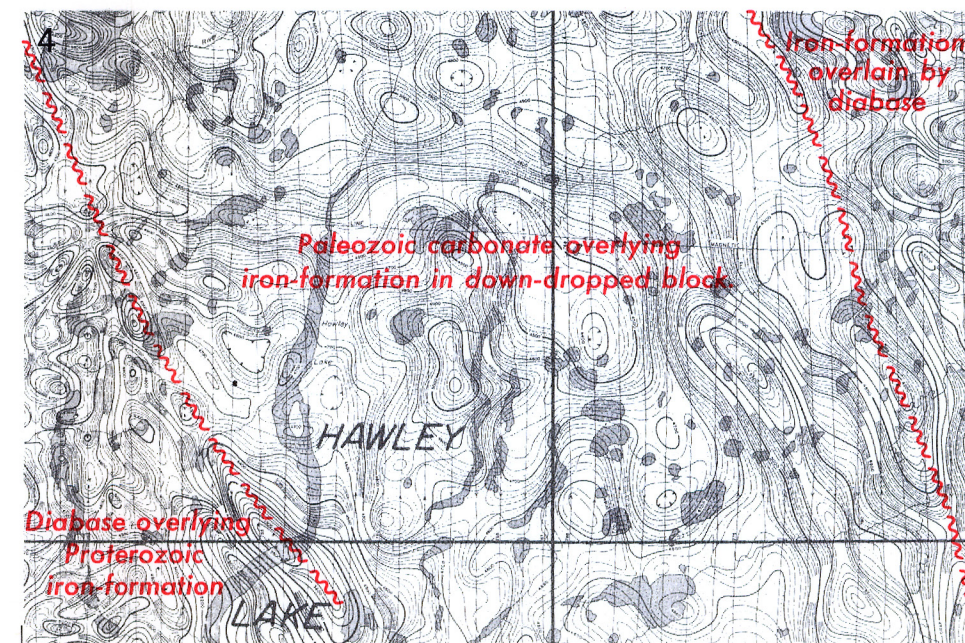
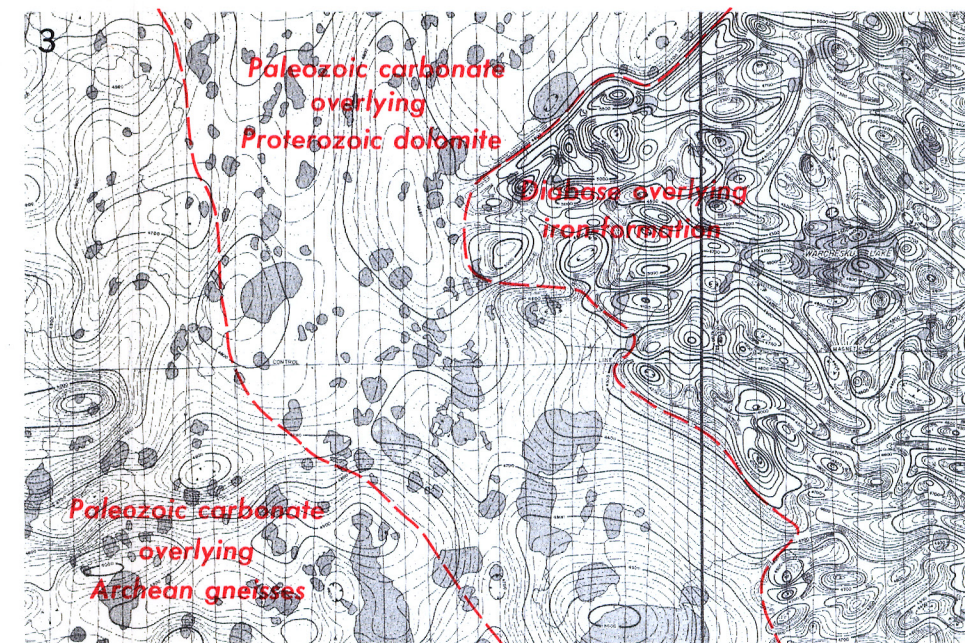
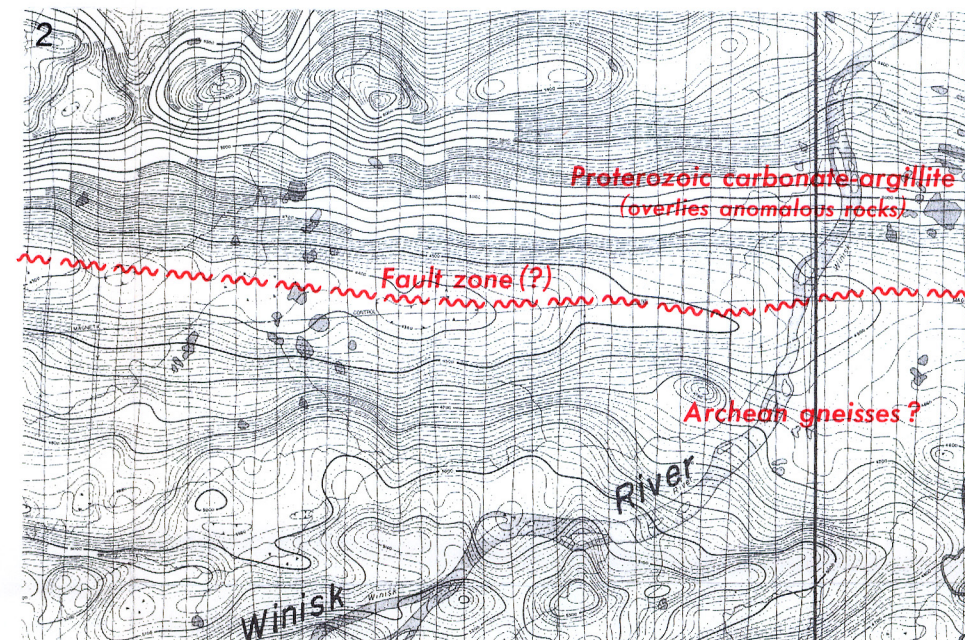
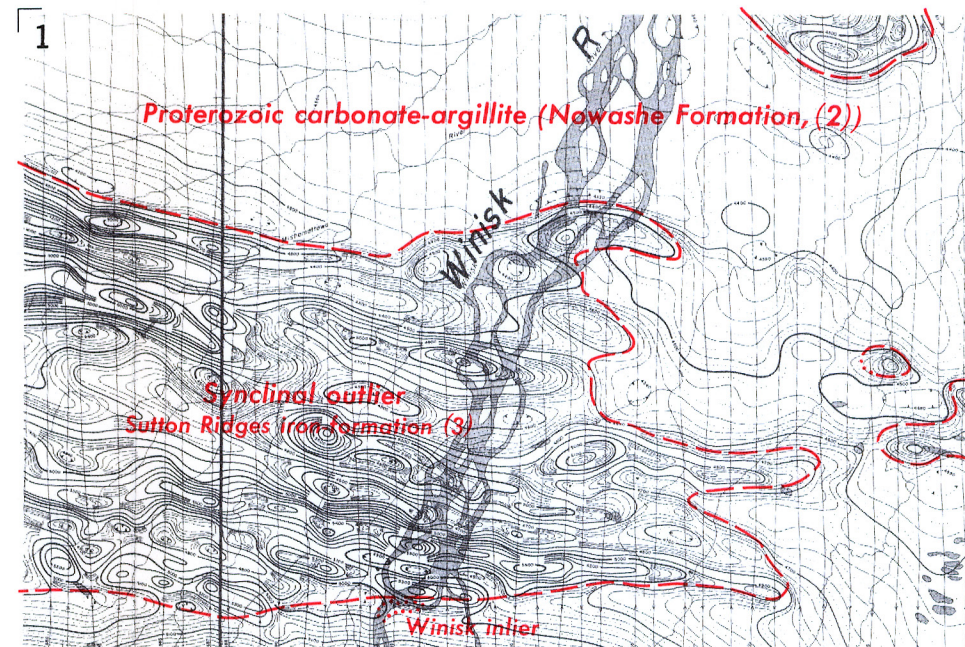
(9) Shows an exceptionally high aeromagnetic anomaly typical of Archean iron-formation, which lies just north of Ekwan River.

(10) Shows gently northeast dipping Proterozoic iron-formation northeast of Nowashe Lake. Diabase bodies lie to the southwest of anomalies to which they probably do not contribute. North-eastward attenuation of anomaly pattern, coincident with shallow northeast dips, may reflect increasing depth of burial of iron-formation.

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Scale 1:253,440
(1 inch to 4 miles)

Miles 4 0 4 8 12 Miles

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Figure 14. Aeromagnetic maps from parts of the Aquatuk map-area, Ontario.

Figure 14