Stratigraphy and Structure of the Scotsburn Anticline, Pictou County

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Talking Points

- Scotsburn anticline is doubly-plunging
  - a saddle and dome are exposed
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Two Diamond Brook Formation(s)
  • (lower facies) mostly mafic volcanic in the central Cobequids
  • (upper facies) mostly sedimentary in Scotsburn anticline
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A preliminary mineral exploration model!
  - in magnetic basement underlying the Scotsburn dome
Location Map

The Scotsburn Anticline
Old Mapping

Figure: Donahoe & Wallace (1982)
Old Mapping

Old Stratigraphy

- >323 Ma
- ~1400 metres: Millisville Formation
- ~1200 metres: Falls Formation
- ~400 metres: Diamond Brook Formation
- <300 Ma
- Mabou Group

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The Scotsburn Anticline
New Mapping

The Scotsburn Anticline
New Mapping

The Scotsburn Anticline
Diamond Brook Formation (upper & lower facies$^1$)

Figure: Pe-piper & Piper (2002)
Scotsburn Anticline is doubly-plunging
New Mapping

The Scotsburn Anticline
Alleghenian shortening

- Fyson, 1964
  - doubly-plunging, upright folding in Parrsboro Basin

Keppie, 2010
- doubly-plunging, upright folding in Windsor-Kennetcook Basin

This study
- doubly-plunging, upright folding in Scotsburn anticline
Alleghenian shortening

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Mineral exploration

Figure: Byers Brook REE (MacHattie, 2010); Lower Diamond Brook Formation epithermal Au (MacHattie, 2011). Figure from MacHattie, 2010).
Mineral exploration

The Scotsburn Anticline

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Figure: Magnetic basement (near surface) under Scotsburn Dome
Conclusions

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References

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