KING'S POINT

NEWFOUNDLAND

GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

Scale: One Inch to One Mile = 1/63,360

SHEET 12 H/9

Legend - KINGS POINT MAP-AREA

CARBONIFEROUS

- **C** — Reddish-brown to greyish red conglomerate and sandstone, olive-grey shale and siltstone, and minor limestone.

DEVONIAN OR LATER

- **Dg** — Pale reddish-brown to light brownish-grey, fine to medium grained granite and quartz syenite.
- **Dhm** — Light brown to pale reddish-brown, medium-grained hornblende monzonite and pyroxene hornblende diorite.
- **Dp** — Light brown to greyish-red quartz - feldspar porphyry.
- **Dpv** — Flow layered rhyolite, felsic lapilli tuff, tuff and agglomerate spatially related to Dp.
- **DFg** — Greyish-pink to pale red, coarse to medium-grained, porphyritic and porphyroblastic granite. (Intrudes Fleur de Lys Group).

SILURIAN OR DEVONIAN

SPRINGDALE GROUP (Ssa, Ssb, Sss)

- **Sss** — Brownish-grey to reddish-brown conglomerate, medium to coarse sandstone, fine sandstone, siltstone and mudstone.
- **Ssb** — Grey to red and purple, amygdaloidal andesite and basalt flows.
- **Ssa** — Pale red and greyish-red rhyolite and trachyte flows, tuff and agglomerate.

MIC MAC GROUP (Sma, Smb, Sms)

- **Sms** — Light grey to pale red, coarse to fine conglomerate, very fine to very coarse sandstone.
- **Smb** — Dark grey to reddish-purple amydaloidal basalt, basic agglomerate and tuff.
- **Sma** — Red to grey rhyolite, rhyodactie and trachyte flows, crystal lithic tuff and agglomerate.

ORDOVICIAN

- **OB** — BURLINGTON GRANODIORITE: greenish-grey to grey, medium grained, massive to foliated granodiorite. (Intrudes Baie Verte and Lushs Bight Groups.)
- **OC** — COLCHESTER PLUTONS: dark to light green and grey, medium grained diorite, quartz diorite, quartz monzonite and granodiorite. U - ultramafic pods in the plutons and also in the Lushs Bight Group.
- **Og** — Fine to coarse-grained porphyritic gabbro and diabase sills. (Intrude Western Arm Group).

LOWER ORDOVICIAN

- **1OC** — CATCHERS POND GROUP (undivided): light grey to greenish-grey and pale yellowish-brown silisic lava; pale yellowish-brown to grey tuff and agglomerate; bluish-grey to dark grey and green massive basalt, pillow lava and mafic agglomerate; thin beds of fossiliferous limestone and limestone conglomerate.

WESTERN ARM GROUP (1OS, 1OB, 1OW)

- **1OW** — WESTERN HEAD AGGLOMERATE and WELSH COVE TUFF (undivided): coarse, unbedded mafic agglomerate with thin lenses of tuff and cherty tuff; silisic srystal tuff, dacitic welded tuff, chert, argillite and mafic to intermediate tuff.
- **1OB** — BIG HILL BASALT: dark grey pillow basalt with minor lenses of chert and argillite.
- **1OS** — SKELTON POND TUFF: green, coarse crystal lithic tuff; banded red and green chert, fine-grained tuff, cherty tuff, grey argillite, and grey pillow basalt.

CAMBRIAN AND/OR LOWER ORDOVICIAN

LUSHS BIGHT GROUP (€0g, €0d, €0p, €0t, €0L)

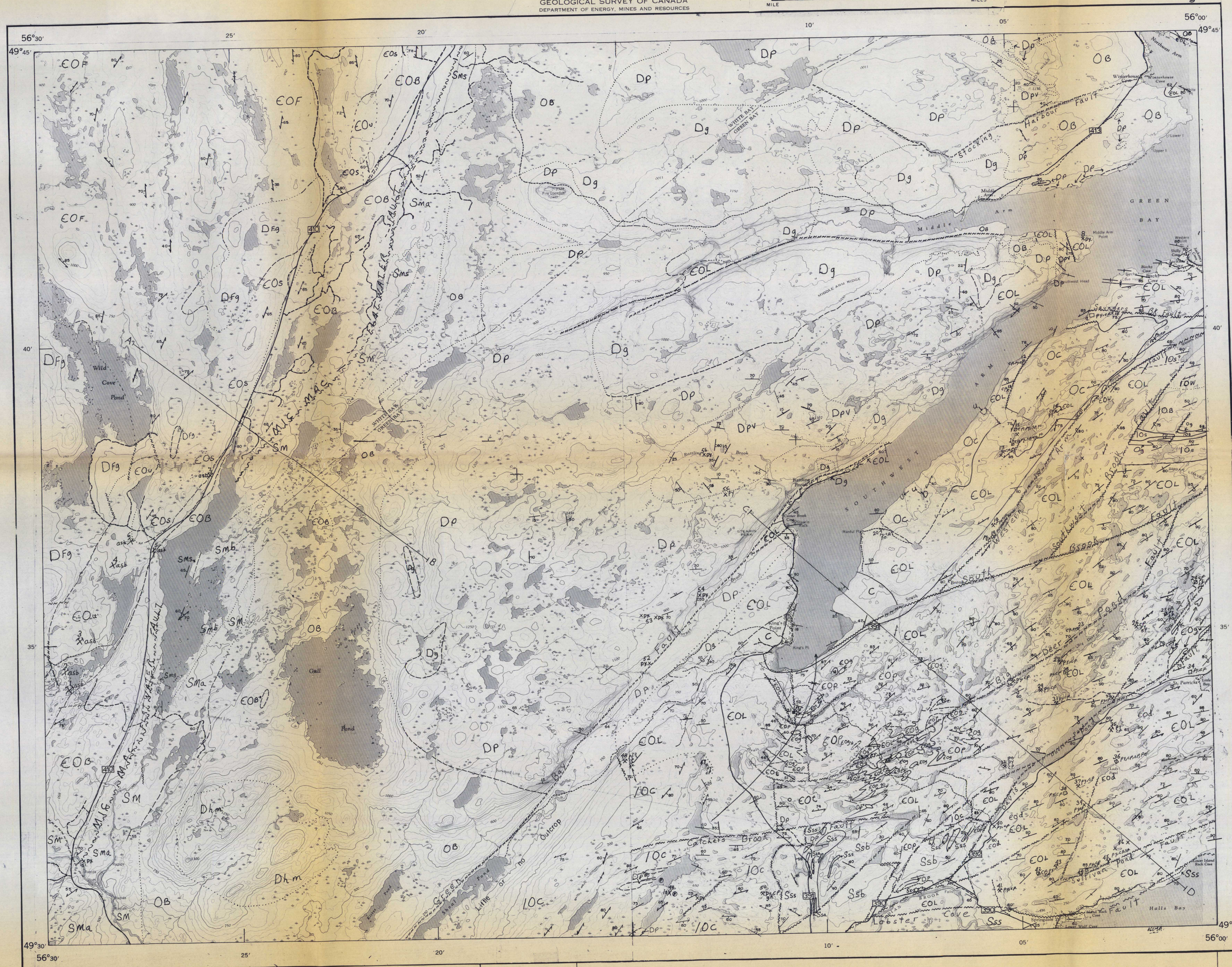
- **€0L** — Dark to light green massive to pillowed basalt, pillow breccia, aquagene tuff and chert, dark grey pillow basalt, sheeted diabase and gabbro.
- **€0t** — Dominantly dark to light green, irregularly banded aquagene tuff; and or chert and argillite lenses.
- **€0p** — Dark to light green, pillow basalt, pillow breccia, massive basaltic flows and flow breccia, and chlorite schist.
- **€0d** — Dark green to black, fine grained to aphanitic, sheeted diabase dykes.
- **€0g** — Dark to light green, medium to fine-grained, massive gabbro. (Possibly includes some sheeted diabase).

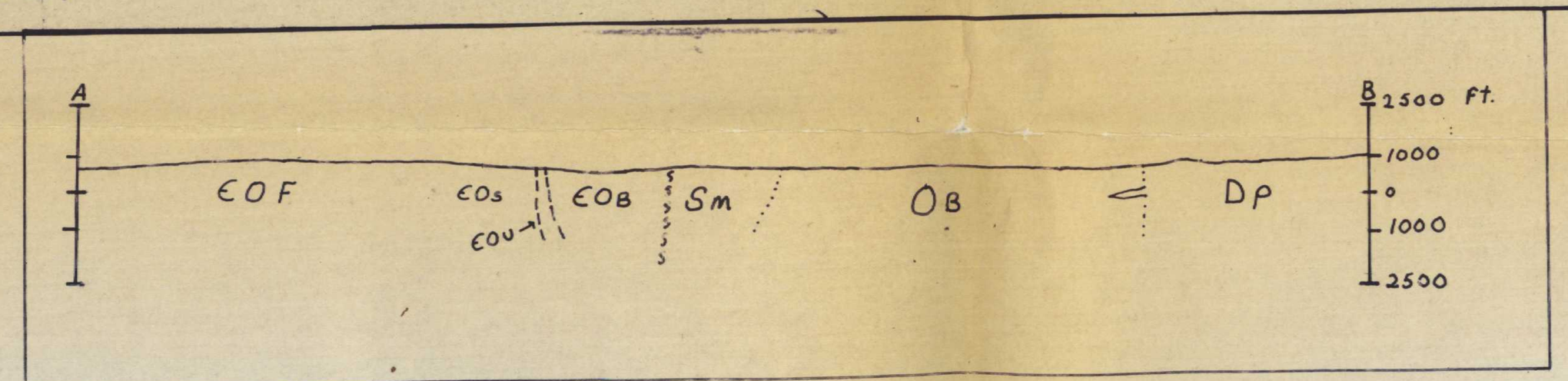
BAIE VERTE GROUP (€0u, €0B)

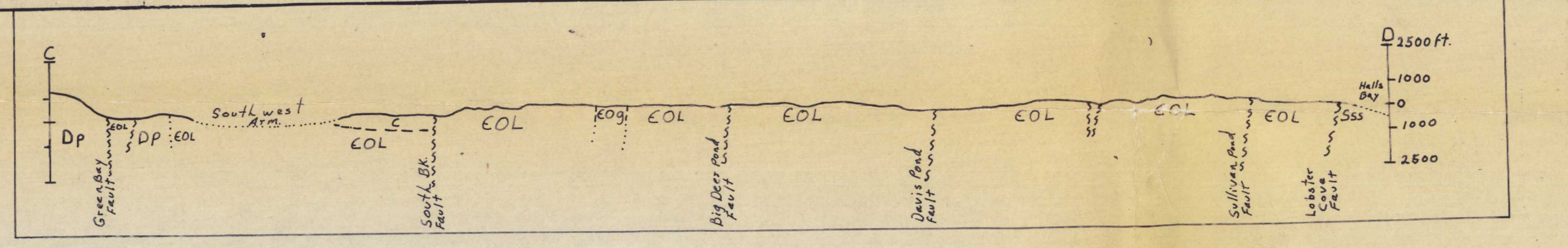
- **€0B** — Greenish-grey to dark greenish-grey pillow basalts, intermediate to basic agglomerate and tuff, metadiorite sills, minor greyish-red argillite and black slaty argillite.
- **€0u** — Yellowish-brown bluish-grey, serpentinized peridotite and dunite; serpentenite and mica-quartz-carbonate rock. (Virginite.)

FLEUR DE LYS GROUP (€0s, €0F)

- **€0F** — Light greenish-grey to medium grey, fine to coarse-grained, granoblastic to prophyroblastic micaceous quartzo-feldspathic schist and grneiss.
- **€0s** — Blue green to dark greenish-grey, fine grained chlorite-magnetite schist.







Mineral Occurrences, Prospects and Mines

1. Moose Antler Pond: Small amounts of asbestos fibre in serpentinized peridotite of Baie Verte Group.
2. Moose Antler Pond: Asbestos fibre up to 3/8 in. in nine occurrences of float which is estimated to be near source.
3. Jacobs Lake: Five occurrences of small thread asbestos fibres.
4. Jacobs Lake North: Small thread asbestos fibre (1/32 to 1/8 in.) veins.
5. Mic Mac Lake: Asbestos fibre up to 1/16 in.
6. Jacobs Lake-Martys Pond: Asbestos fibre less than 1/16 in. in drill holes.
7. Mic Mac Lake North: Four occurrences of cross fibre asbestos veins up to 3/4 in. wide.
8. Middle Arm Point: Pyrite in Lushs Bight Group volcanics.
9. Swatridge: Pyrite and chalcopyrite in a 21 in. wide chlorite schist zone and in quartz veins in Lushs Bight Group pillow lavas.
10. Swatridge East: Pyrite and chalcopyrite in a narrow chlorite schist zone.
11. Ferndale: Pyrite and chalcopyrite in a 3 ft. wide chlorite schist zone.
12. Old English Mine: Stringers and disseminated pyrite and chalcopyrite with minor sphalerite in chlorite schist and quartz veins in pillow lavas of the Lushs Bight Group.
13. South Naked Man: Pyrite and chalcopyrite in chlorite schist within aquagene tuffs.
14. Northwest Brook: Pyrite and chalcopyrite in quartz veins and chlorite schist near contact with Colchester Pluton.
15. Colchester Mine: Blebs, stringers and lenses of pyrite, chalcopyrite and pyrrhotite with minor sphalerite in chlorite schist zones within altered pillow lavas and diabase dykes of the Lushs Bight Group.
16. McNeily Mine: Disseminations, stringers and bands of pyrite, chalcopyrite and pyrrhotite with minor sphalerite in 15 ft. wide chlorite schist zone.
17. Southwest Colchester: Pyrite and chalcopyrite in chlorite schist.
18. Brown's Pond: Pyrite and chalcopyrite in chlorite schist.
19. Brown's Pond Shafts: Pyrite and chalcopyrite in chlorite schist.
20. Wells Prospect: Pyrite, chalcopyrite and pyrrhotite in a 10 ft. to 15 ft. wide chlorite schist zone in pillow lavas and amphibolitized pyroxenite dykes.
21. Rendall-Jackman Mine: Pyrite, chalcopyrite and sphalerite in two banded, massive lenses in a 30 ft. wide chlorite schist zone in aquagene tuffs of the Lushs Bight Group.
22. Nolan: Massive banded pyrite in a chlorite schist zone in massive basalt.
23. Hill Prospect: Pyrite and chalcopyrite disseminated in chlorite schist.
24. Whalesback Mine: Pyrite, chalcopyrite, pyrrhotite and sphalerite as disseminations, stringers, banded lenses and pods in a chlorite schist zone in pillow lavas.
25. Little Deer Mine: Pyrite, chalcopyrite, pyrrhotite and sphalerite in lenses and pods of massive sulphide in two zones within chlorite schist.
26. Duck Pond: Pyrite, chalcopyrite and sphalerite in chlorite schist.
27. Big Deer: Pyrite and chalcopyrite in chlorite schist.
28. Mine Pond: Nodules and crystals of pyrite with massive and disseminated chalcopyrite in chlorite schist zone within pillow lavas.
29. Mine Brook: Pyrite and chalcopyrite in quartz veins and quartz-carbonate schist.
30. Lard Pond: Pyrite and chalcopyrite in chlorite schist.
31. Vein Pond: Pyrite and chalcopyrite in chlorite schist.
32. Davis Pond Northeast: Pyrite and chalcopyrite in chlorite schist.
33. Delgado: Pyrite, chalcopyrite and pyrrhotite in quartz veins in chlorite schist.
34. St. Patricks: Pyrite and chalcopyrite in chlorite schist.
35. Lady Pond Northeast: Pyrite and chalcopyrite in chlorite schist.
36. Lady Pond Mine: Pyrite, chalcopyrite and pyrrhotite in a series of lenses in chlorite schist in pillow lavas and diabase dykes of the Lushs Bight Group.
37. Goodyear Pond: Pyrite and chalcopyrite in chlorite schist.
38. Goodyear Pond Shaft: Pyrite and chalcopyrite in chlorite schist.
39. Buckshee Brook: Pyrite and chalcopyrite in chlorite schist.
40. Little Bay Road: Pyrite and chalcopyrite in chlorite schist.
41. Old Mines: Pyrite with minor chalcopyrite in silicic volcanics.
42. Stirling Mine: Pyrite and chalcopyrite with minor sphalerite as massive lenses, pods and stringers in chloritic pillow lavas and siliceous tuffaceous schist.
43. Twin Pond: Pyrite and chalcopyrite in siliceous tuffaceous schist and chlorite schist.
44. Sullivan Pond: Pyrite and chalcopyrite in chlorite schist.
45. Sullivan Pond East: Pyrite and chalcopyrite with minor sphalerite in chlorite schist.
46. Sullivan Pond Northeast: Pyrite and chalcopyrite in chlorite schist.
47. Beetle Pond: Pyrite and chalcopyrite in chlorite schist.
48. Muir Pond: Pyrite, chalcopyrite, sphalerite and galena as massive patches and disseminations in sericite schist and schistose rhyolite.
49. South Catchers Pond: Limestone and limestone pebble conglomerate bed approximately 150 ft. thick.
50. Indian Brook: Pyrite, chalcopyrite and galena in rhyolitic and dacitic volcanics of the Catchers Pond Group.
51. Black Lake Brook: Disseminated pyrite in silicic volcanics of the Mic Mac Group.
52. Harry's Brook: Disseminated pyrite in rhyolite porphyry and tuff.
53. Corner Brook: Disseminated pyrite.
54. Corner Brook: Disseminated pyrite.
55. Rattling Brook South: Disseminated pyrite in rhyolite porphyry and associated felsic pyroclastics.
56. Rattling Brook: Disseminated pyrite in felsic pyroclastics.

Geological boundary (defined, approximate and assumed)
Bedding, tops known (horizontal, inclined, vertical, overturned)
Bedding, tops unknown (inclined, vertical)
Dyke trend (inclined, vertical)
Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical)
Fault (defined, approximate, assumed)
Anticline (upright, overturned)
Syncline (upright, overturned)
Fossil locality
Mineral occurrence
Mineral prospect, test pit or trench
Shaft or quarry (exploration, abandoned production, production, producing)
Adit or tunnel

Explanatory Notes - Kings Point Map-Area

The oldest rocks in the map-area are the metasedimentary rocks of the Fleur de Lys Group (€OF). These rocks represent the Cambro-Ordovician clastic sequence developed at the edge of the ancient continental margin of North America (Williams and Stevens, 1974), and are underlain by basement rocks farther north along strike (DeWit, 1974). Rocks of the Fleur de Lys Group were first deformed during the Taconic Orogeny, during which time the ophiolites of the Humber Arm allochthon of western Newfoundland were obducted onto the ancient continental margin, causing west-facing folds in the Fleur de Lys metasedimentary rocks (Kennedy 1975). The intensely deformed chlorite-magnetite schist unit (Birchy Schist) at the eastern contact of the Fleur de Lys Group is probably a zone of collision between the ancient continental margin (the Fleur de Lys Group) and the ancient oceanic crust represented by the Baie Verte Group.

The Baie Verte and Lushs Bight Groups are ophiolitic in their general character, stratigraphy, geochemistry and mineral deposits (Strong,1972; Norman and Strong, 1975) and are remnants of the oceanic crust of the Proto-Atlantic ocean. A complete ophiolite stratigraphy is not represented in the map-area but has been described for the Baie Verte Group in the Mings Bight area to the north (Norman and Strong, 1975).

The Baie Verte and Lushs Bight Groups are undated but are inferred to be dominantly Cambrian in age. The Lushs Bight Group is intruded, in the Pilleys Island area to the east (2E/12) by the Brighton gabbro complex which gives an $^{40}Ar/^{39}Ar$ age of 495±5 m.y. (Stukas and Reynolds, 1974). The Lushs Bight Group is conformably overlain by the Western Arm Group (Marten, 1971) from which a single Lower Ordovician brachiopod shell was collected by MacLean (1947).

The Western Arm Group is believed to represent part of a Lower to mid-Ordovician island-arc sequence which was built on top of the Cambro-Ordovician oceanic crust during the closing of the Proto-Atlantic ocean. Similar rocks of the Lower Ordovician Snooks Arm Group are found conformably overlying the Betts Cove ophiolite immediately north of the map-area (Upadhyay et al., 1971)

The Catchers Pond Group (10c), which was originally mapped as Silurian by Neale et al.,(1960, 1963), has since been shown to be Lower Ordovician (Dean 1970). The Catchers Pond Group possibly overlies the Lushs Bight Group but contacts are faulted where exposed. These volcanic rocks probably also represent part of a Lower to mid-Ordovician island arc constructed on the Lushs Bight oceanic crust. The lithologic contrast with the Western Arm Group i.e., the abundance of silicic volcanics, could possibly reflect proximity to a volcanic centre. The Lushs Bight and Baie Verte Groups are intruded by plutons of probable Ordovician age. The Colchester Plutons (0c), which intrude the Lushs Bight Group are calc-alkaline in nature and are believed to be associated with island-arc activity (Sayeed, 1970). The Burlington Granodiorite (0B), which intrudes the Lushs Bight and Baie Verte Groups, is compositionally similar to the Colchester Plutons but is of much greater extent and is locally deformed.

The Burlington Granodiorite is unconformably overlain by sedimentary and volcanic rocks of the MicMac Group (Neale and Nash, 1963). A Rb/Sr whole-rock isochron on a suite of MicMac mafic and silicic volcanic rocks has yielded an age of 393±24 m.y. (Neale and Kennedy, 1967). Rocks of the MicMac Group were formed dominantly in subaerial conditions, contrasting with the earlier volcanic sequences. The correlative Springdale Group has fault-contacts with most older rocks in the area; however an unconformity on the Lushs Bight Group possibly exists in the Davis Pond area (McGonigal, 1970).

A variety of Devonian and younger(?) intrusives are found throughout the area. Granites intruding the Fleur de Lys terrain are distinctly different from those to the east, being coarsely porphyritic and porphyroblastic. Intrusives in the eastern part of the map-area intrude all older rock-types.

Quartz-feldspar prophyries (Dp) are obviously high-level intrusions and numerous extrusive equivalents are present, sometimes in large area (Dpv).

The Devonian granitic rocks (Dg) in the eastern part of the map-area are generally quite alkaline in nature with syenitic varieties being common.

Red sandstones near Kings Point (C), which unconformably overlie the Lushs Bight Group, were previously mapped as Silurian and considered part of the Springdale Group (Neale and Nash, 1963). They are presently mapped as Carboniferous since they are much less indurated than the Springdale sandstones (Sss) and are more similar lithologically to Carboniferous rocks. These rocks are not intruded by the Devonian(?) porphyries (Dp) which intrude the Springdale Group.

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Compiled by P.L. Dean, Memorial University of Newfoundland, 1976.