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SUMMARY OF SOME ASPECTS  
OF PRECAMBRIAN GEOLOGY.

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PRECAMBRIAN GEOLOGY

Summary of Precambrian Geology. (2 copies)

A.G.E. 26/5/58

MICROFILMED

26th May,

8.

To: Mr. G.F. Hudspeth.

SUMMARY OF SOME ASPECTS OF PRECAMBRIAN GEOLOGY

- I. Precambrian (Carbine) Dolomites
- II. Distribution of Carbine Group.
- III. Relationship between Precambrian and Dundas.
- IV. Basic Igneous Bodies in Precambrian.

Precambrian (Carbine) Dolomites

North West Coast

1. Smithton Dolomite (300')

Lying below the Dundas Group and above the Bryant Hill Quartzite of Carey and Scott (1952). (Defined by Spry 1957, p.32). According to Spry it is probably the uppermost formation of the Rocky Cape Group, whilst Spry's (1957) Black River Dolomite is a thin, minor (less than 50 feet) formation near the base of the Rocky Cape Group.

The succession then would be on the N.W. Coast:

Spry (1957)

Cave Quartzite (1500')  
 Port Slate & Quartzite (1500')  
 Bluff Quartzite (1500')  
 Cowrie Siltstone (1500')  
 Black River Dolomite (50')  
 Burnie Quartzite & Slate (several 1000')

Carey and Scott (1952)

Smithton Dolomite  
 Bryant Hill Quartzite

The Rocky Cape Group consists of a series of quartzites, slates, dolomites and siltstones.

The Rocky Cape Group lies unconformably below the Dundas Group at

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Penguin, and appears to be conformable with the Dundas at Smithton (Spry 1957).

The succession at Smithton (Carey & Scott 1952) was correlated by them with the Carbine Group. Spry, however, would rather leave this correlation until further details are known.

Hastings

A considerable thickness of dolomite occurs at Hastings (Carey & Banks 1954). The dolomite may be underlain by the saecharoidal quartzite of Hoggs Back, two miles south of the Hastings Caves. This group has been inferred as underlying the Ida Bay Limestone (Gordon Limestone in part) and is thus a Tyennan unconformity.

Carey & Banks (1954) correlate the dolomite and quartzite with the Carbine Group on lithological grounds, thus the dolomite is at or near the top of the Carbine Group.

Ida Bay Limestone

Dolomite	
Quartzite	CARBINE

Tim Shea

Carey & Banks (1952) show the succession to be:

Owen Conglomerate

Stephens Dolomite (4000 ft.)  
Needles Quartzite  
Clark Group Undifferentiated.

The Stephens Dolomite is thus at the top of the Carbine Group here.

Franklin River Area

The Jane Dolomite is about 2000 feet thick. It is underlain by the Lachlan Conglomerate and then the schists of the Scotchfire Group. This dolomite is associated with quite strongly deformed sediments showing regional metamorphism up to garnet grade (Spry, 1957).

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Distribution of Carbine Group

1. Adamsfield - Tim Shea

Positive. Twelvetees (1908, 1909), Lewis (1940), Carey & Banks (1952) and Spry (1957) all describe them. Also Nye (19 ). Overlain by Owen Conglomerate.

2. Huon Valley and Arthur Plains

Positive. Blake (1936). Relationship to Owen not known.

3. Hastings

Carey & Banks (1954) correlate the dolomite and quartzite as Carbine. Overlain by Gordon Limestone (?).

4. H.E.C. Mapping Area

Unless the Jane Dolomite is Carbine there are no members of this Group present in this area. The Precambrian is of the Davey Group. Overlain by Owen Conglomerate.

5. Howth (North Coast)

Carey & Banks (1954) correlate the slates near Howth with the Carbine Group. Overlain by Owen Conglomerate.

6. Sticht Range

Carey & Banks (1954) correlate the Precambrian here as Carbine but from their description these are more likely Davey Group. They are overlain unconformably by the Dundas Group, or Stichtan Unconformity.

7. Elliott Range

Carey & Banks (1954) place the Precambrian of the Elliott Range as belonging to the Carbine Group. I would consider them Davey Group. They are overlain unconformably by the Owen Conglomerate, a Tyeman Unconformity.

8. N.W. Coast

Positive: Carey & Scott (1952) and Spry (1957). From Smithton to Penguin. Owen Conglomerate rests directly on the Carbine.

9. Dundas Area

Positive: Elliston (1954). Overlain by Dundas unconformably (?).

Relationship between Precambrian and Dundas

1. Sticht Range

Dundas unconformably on Davey Group (Carey & Banks, 1954).

2. Deloraine

Dundas unconformably on Davey Group (Wells, 1954).

3. Dundas

Dundas unconformably (?) on Carbine Group (Elliston, 1954).

4. Penguin

Dundas unconformably (?) on Carbine Group (Spry, 1957).

According to Carey and Banks (1952) the Stichtan Unconformity is between Carbine and Dundas, this is obviously not so. It should be redefined as between Dundas and Precambrian.

Basic Igneous Bodies in Precambrian

1. Older Group

These are the group of amphibolites which have been regionally metamorphosed along with the Precambrian sediments of the Franklin River area. This regional metamorphism would be due to the Frenchman Orogeny of Spry.

2. Younger Group

A group of dolerites which have not undergone the regional metamorphism that the enclosing metamorphics have. Spry (1957) correlates these with the Cocee Dolerites of N.W. Tasmania on petrographic grounds.