DEPARTMENT OF NATIONAL RESOURCES

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Record 1977/44

CATALOGUE OF FIELD COMPILATION SHEETS OF THE NEWCASTLE RANGE VOLCANICS AND ASSOCIATED ROCKS IN THE MOUNT SURPRISE, GALLOWAY AND NORTHERNMOST GEORGETOWN 1:100 000 SHEET AREAS

by

B.S. Oversby

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Catalogue of field compilation sheets of the Newcastle Range Volcanics and associated rocks in the Mount Surprise, Galloway, and northernmost Georgetown 1:100 000 Sheet areas

The geological maps which are reproduced here at about 1:100 000 scale have been compiled directly from basic field data and supplementary photo-interpretation recorded on overlays to 1:25 000 (approx.) scale colour air photographs. The numbers of the photographs whose overlays have been used in this compilation are noted in the left-hand margins of the maps. Because of their preliminary nature, the maps will probably be revised from time to time as study of the Newcastle Range volcanics progresses; hopefully, any such revisions will only be relatively minor.

The fieldwork on which these maps are based was undertaken as part of the joint Bureau of Mineral Resources (BMR) - Geological Survey of Queensland (GSQ) Georgetown Project. Work was aimed specifically at completing coverage of the Newcastle Range Volcanics and closely associated Upper Palaeozoic rocks, the main outcrop areas of which had previously been examined during semi-detailed regional mapping in the Forsayth and Georgetown 1:100 000 Sheet areas (Fig. 1) (Bain, and others, 1976; Oversby, and others, in prep.). Map symbols (Figs. 2a, 2b) and rock unit notations (Figs 3, 4) used on the Preliminary Editions of the Forsayth and Georgetown 1:100 000 Geological Series maps (BMR, 1975 and 1976 respectively) have been retained as far as practicable or desirable.

Most of the fieldwork in the Mount Surprise Sheet area was done during September 1975; a small part of the Galloway Sheet area was mapped at about the same time, but most of that area was studied during late June and early September 1976. The work in the Galloway Sheet area showed up inadequacies in the then-current geological picture of the Newcastle Range in the northernmost part of the Georgetown 1:100 000 Sheet area (as shown on the appropriate Preliminary Edition of the Geological Series map - BMR, 1976), which had originally been mapped during the 1974 field season. Consequently, the area was remapped during September and October 1976. Some data collected during 1:250 000-scale reconnaissance mapping of relevant areas (see Branch, 1966; Smart & Bain, 1976) have also been incorporated in the maps.

The revisions made in the northernmost Georgetown Sheet area will be included in the proposed First Edition of that 1:100 000 Geological Series map, but the other two areas will not be shown on standard maps in the foreseeable future. However, it is hoped to eventually produce a special map showing the geology of the whole Newcastle Range as a single entity.

The basic data accumulated during fieldwork (notes, annotated photo-overlays, hand specimens, thin sections, etc.) are housed in the Bureau of Mineral Resources, Canberra, and can be examined there.

Copies of these maps at their original 1:25 000 (approx.) scale can be obtained from - The Copy Service, Commonwealth Government Printer (Production), P.O. Box 84, Canberra, A.C.T., 2600: price on application. Comments on the usefulness, or otherwise, of the maps would be appreciated by the author, as would notification of errors, omissions, and any additional data and interpretations which might increase geological understanding of the Newcastle Range Volcanics.

Acknowledgements

I am indebted to Georgetown Project co-workers John Bain (Project Leader), Ian Withnall, and Max Baker (both GSQ) for encouragement to continue work in the Newcastle Range beyond the boundaries of systematically mapped sheet areas. The encouragement of company geologists involved with the areas mapped is also appreciated. Fieldwork would have been virtually impossible without the help of numerous people, notably field hands Kjell Ellingsen, Gary Ferrie, Alan Hoey, Clair Jolliffe, Jim Pollard, and Robin Wills. The maps were drawn by Peter Blythe, Phil Jorritsma, and Joe Mifsud of the BMR Geological Drawing Office.

References

BAIN, J.H.C., WITHNALL, I.W, and OVERSBY, B.S., 1976 - Geology of the Forsayth 1:100 000 Sheet area (7660), north Queensland. Bureau of Mineral Resources, Australia, Record 1976/4 (unpublished).

BMR, 1975 - Forsayth, Queensland - 1:100 000 Geological Series. Bureau of Mineral Resources, Australia, Sheet 7660 (Preliminary Edition).

BMR, 1976 - Georgetown, Queensland - 1:100 000 Geological Series. Bureau of Mineral Resources, Australia, Sheet 7661 (Preliminary Edition).

BRANCH, C.D., 1966 - Volcanic cauldrons, ring complexes, and associated granites of the Georgetown Inlier, Queensland. Bureau of Mineral Resources, Australia, Bulletin 76.

SMART, J., and BAIN, J.H.C., 1976 - Red River, Queensland - 1:250 000 Geological Series. Bureau of Mineral Resources, Australia Explanatory Notes SE/54-8.

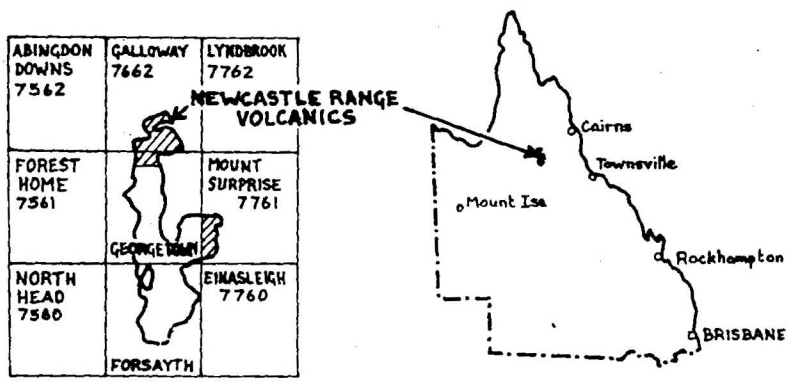

Fig. 1 Location of the outcrop area of Newcastle Range Volcanics in relation to 1:100 000 sheet areas. Diagonal shading denotes those parts of the outcrop area shown on the enclosed field compilation sheets

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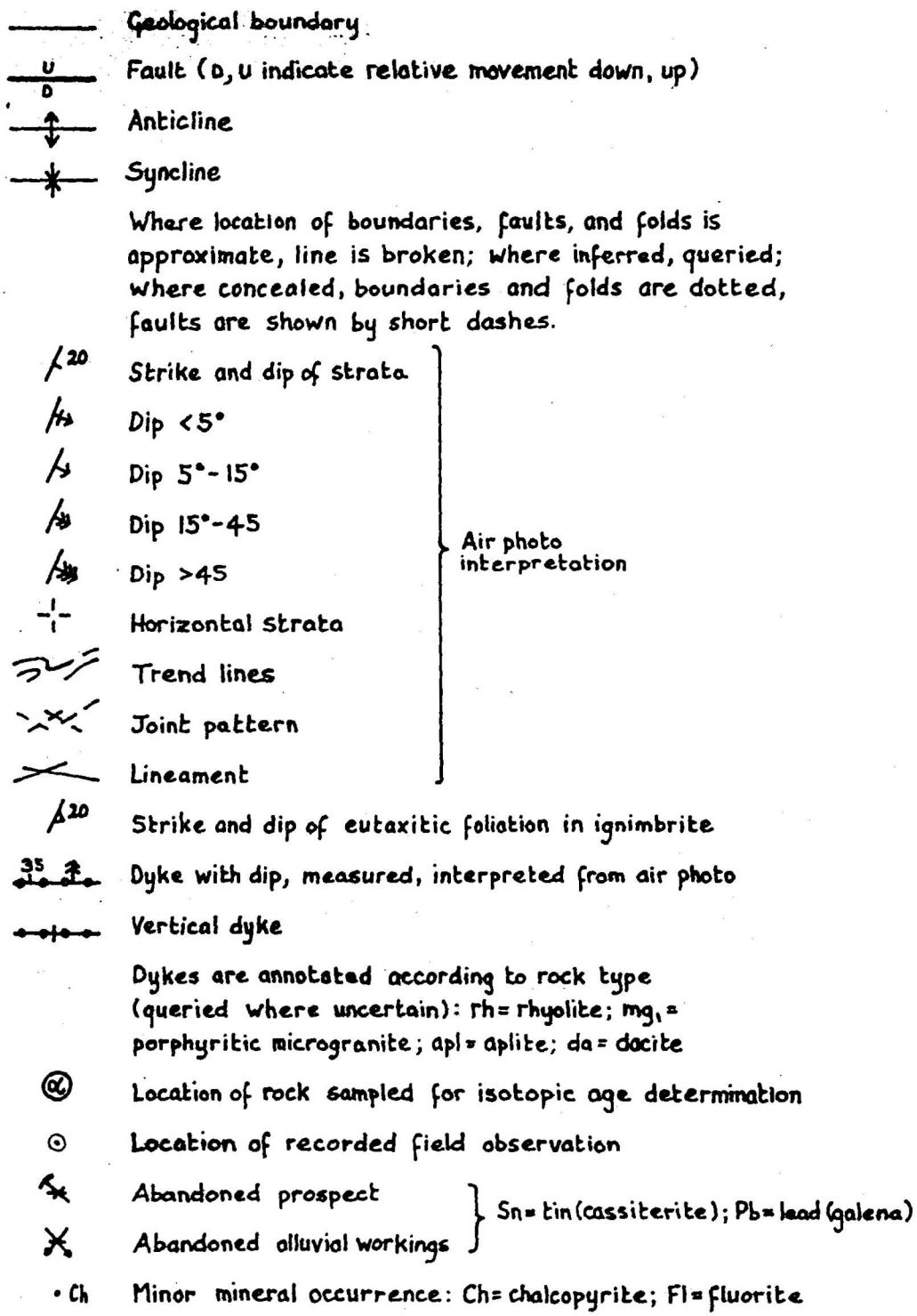

Fig. 2(a) Geological symbols used on the compilation sheets

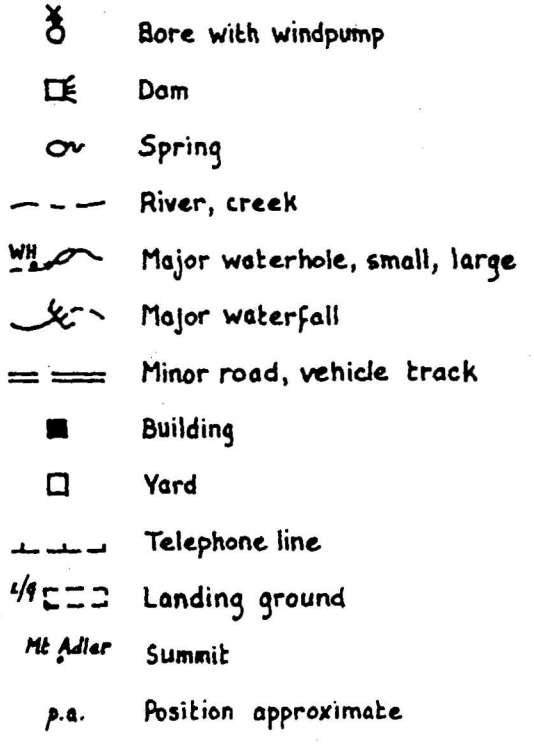

Fig. 2 (b) Topographic symbols used on the compilation sheets

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MOUNT SURPRISE SHEET AREA

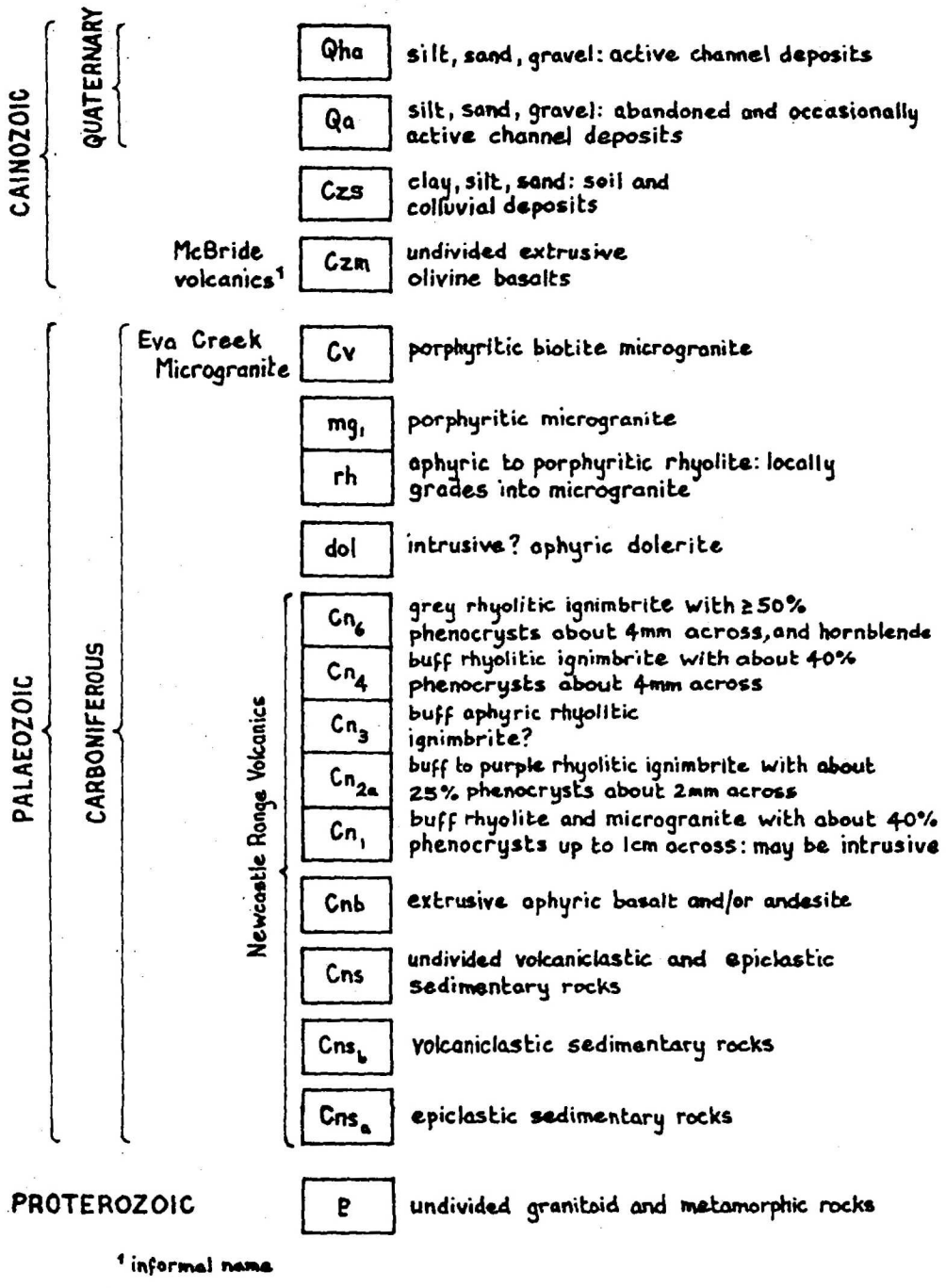
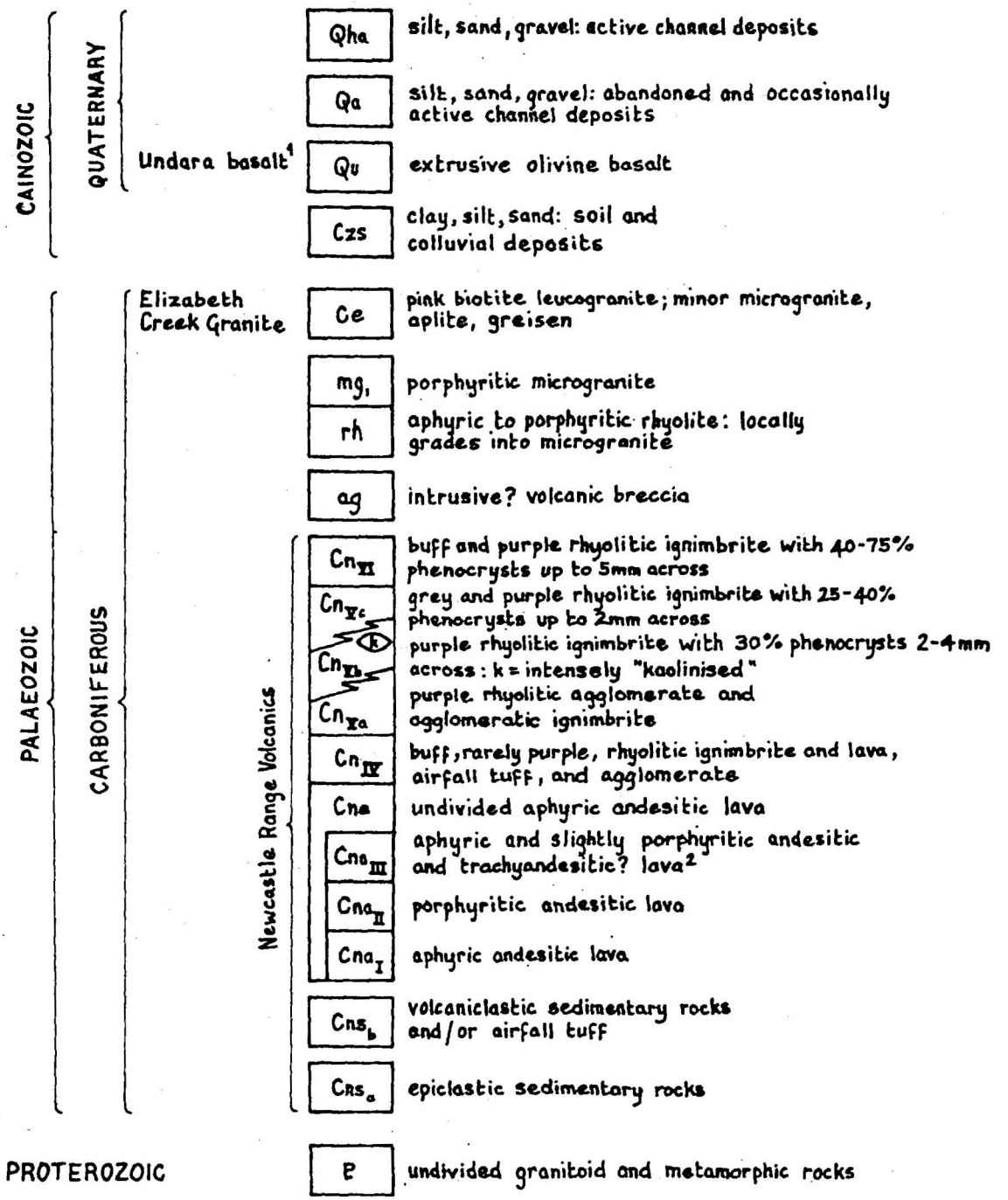


Fig. 3 Key to rock unit notations used on the Mt Surprise compilation sheets

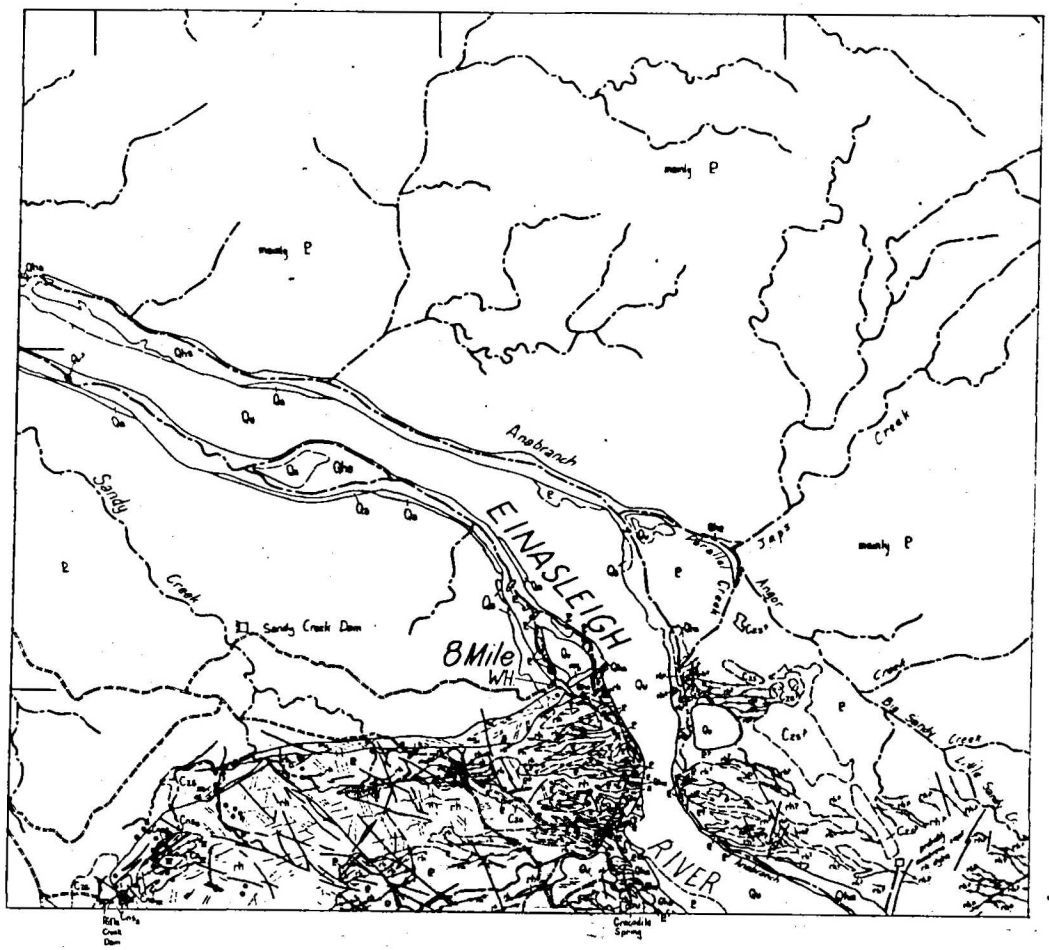
GEORGETOWN and GALLOWAY SHEET AREAS



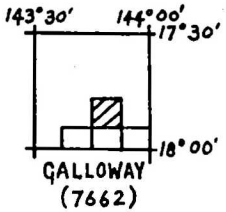
[1] informal name

[2] this unit designated Cn_{Va} on Prelim. Ed. of Georgetown 1:100 000 Geological Series Sheet 7661

Fig. 4 Key to rock unit notations used on the Galloway and Georgetown compilation sheets



RUN 11
GALLOWAY 2238, 2240, 2242, 2244

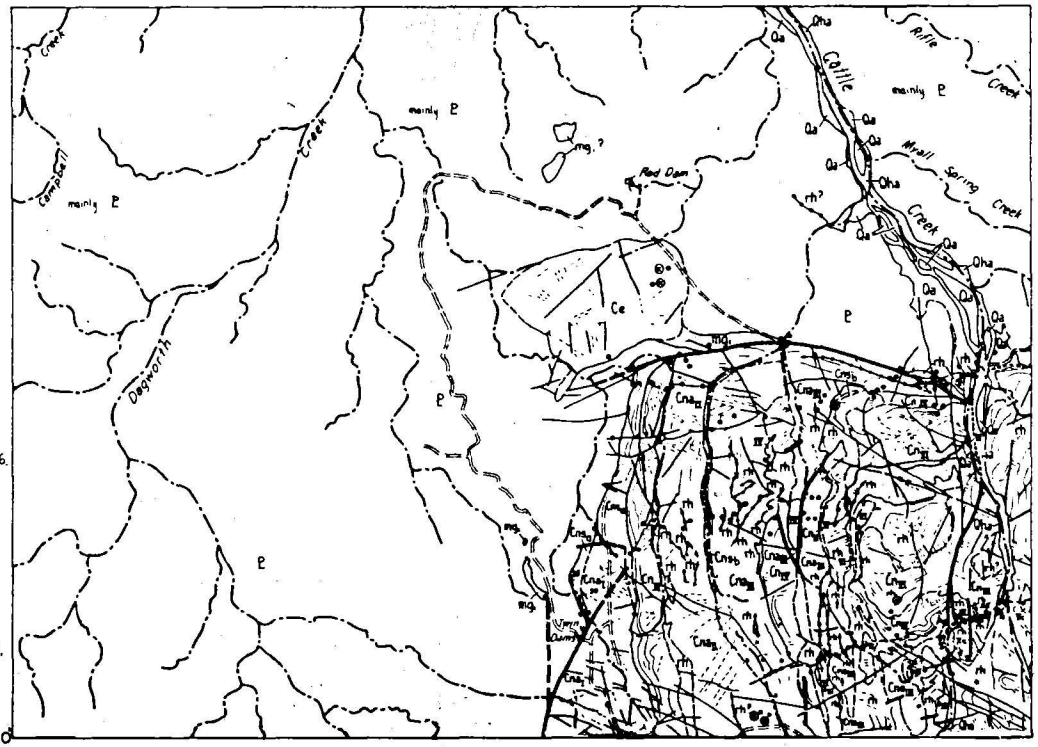


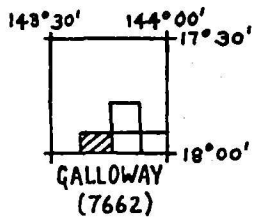
0 1 2 3 4 5 Km (approx.)

Mapped (1976) by B.S. Oversby (BMR)
Drawn by P.J. Jorritsma and J. Mifsud (BMR)

BMR Record 1977/44 - Compilation Sheet 1

E54/A12/39





0 1 2 3 4 5 Km (approx.)

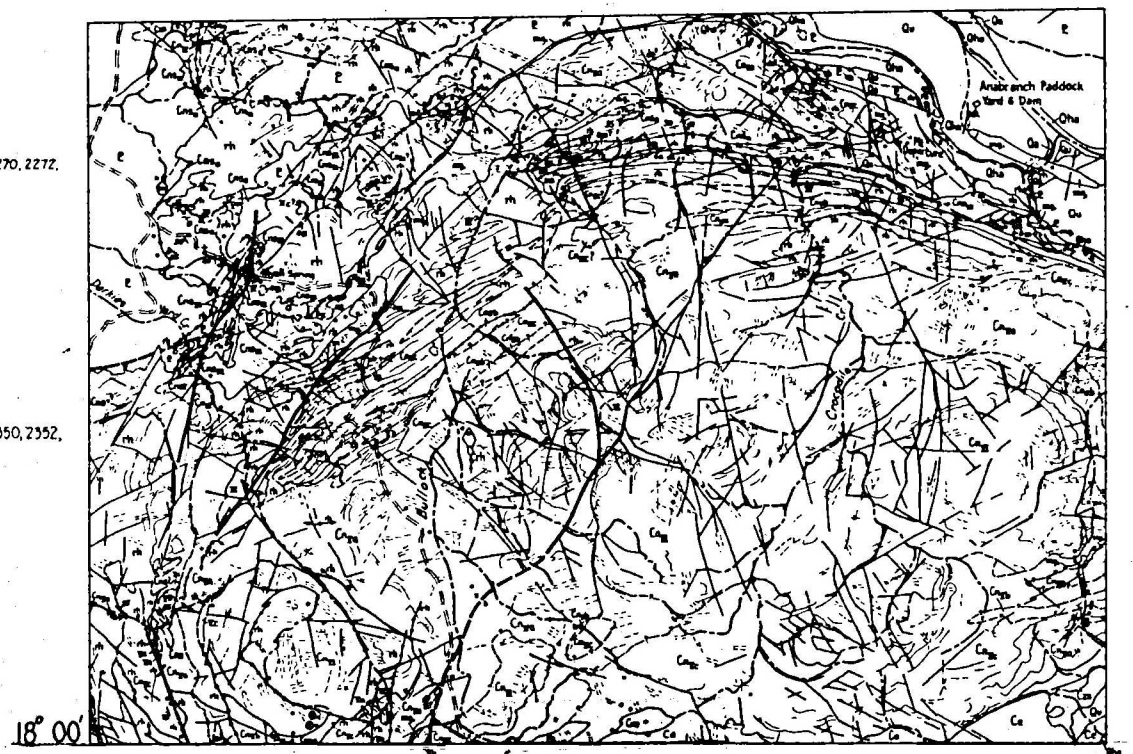
Mapped (1975, 1976) by B.S. Oversby (BMR)
Drawn by P.J. Jorritsma and J. Mifsud (BMR)

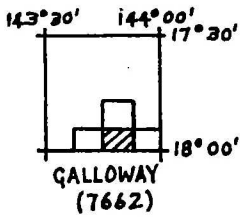
BMR Record 1977/44 - Compilation Sheet 2

E54/A12/40

RUN 12
GALLOWAY 2270, 2272, 2274

RUN 13
GALLOWAY 2350, 2352, 2354, 2356





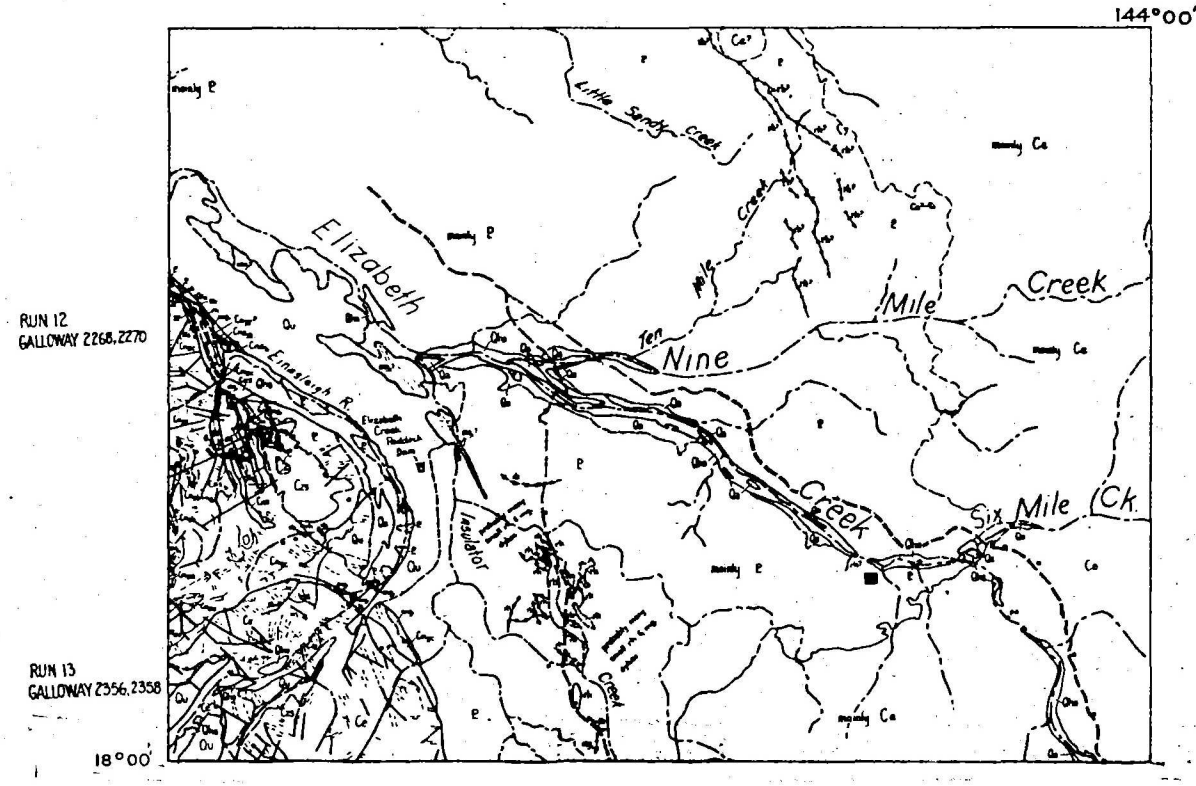
0 1 2 3 4 5 Km (approx.)

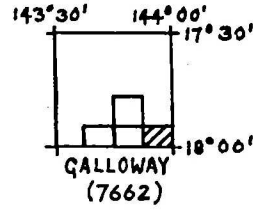
Mapped (1976) by B.S. Oversby (BMR)
Drawn by P.J. Jorritsma and J. Mifsud (BMR)

BMR Record 1977/44 - Compilation Sheet 3

E 54/A12/41

12





0 1 2 3 4 5 Km (approx.)

Mapped (1976) by B. S. Oversby (BMR)
Drawn by P. J. Jorritsma and
J. Mifsud (BMR)

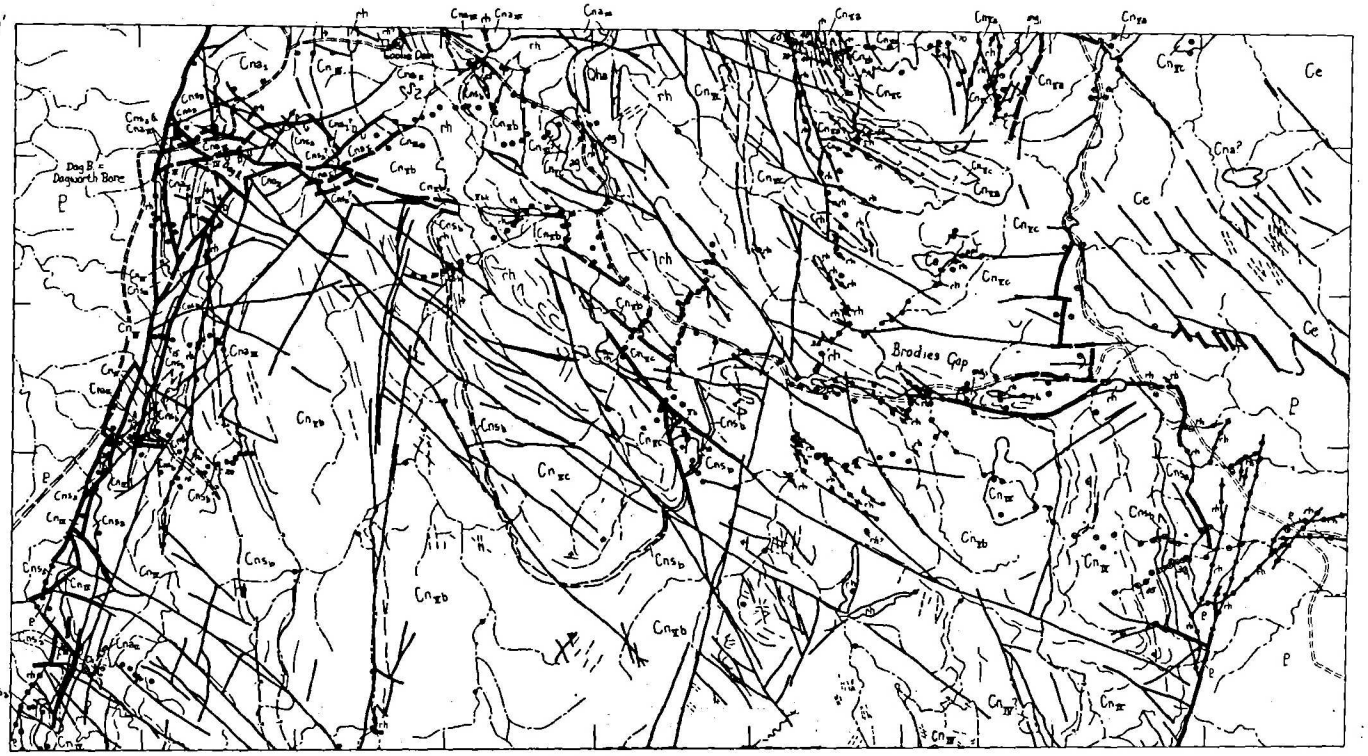
BMR Record 1977/44 - Compilation Sheet 4

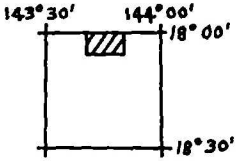
E54/A12/42

13

RUN 1
Georgetown 706,708,710
712

RUN 2
Georgetown 736,738,
740,742.





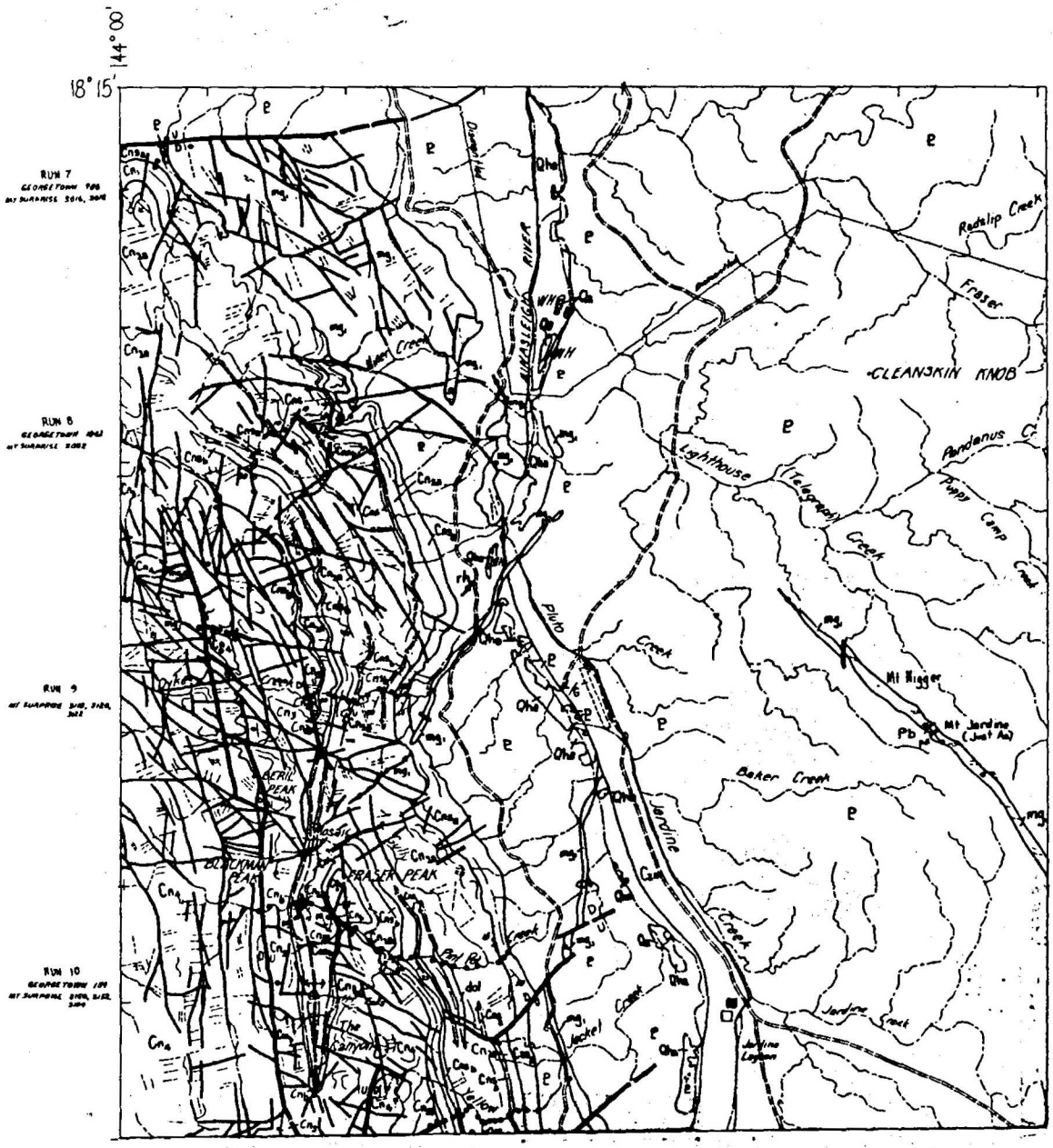
GEORGETOWN
(7661)

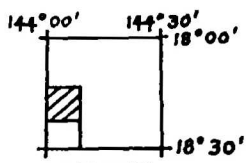
0 1 2 3 4 5 Km (approx.)

Mapped (1974, 1976) by B.S. Oversby (BMR)
Drawn by P.L. Blythe (BMR)

BMR Record 1977/44 - Compilation Sheet 5

E54/A12/43





MOUNT SURPRISE (7761)

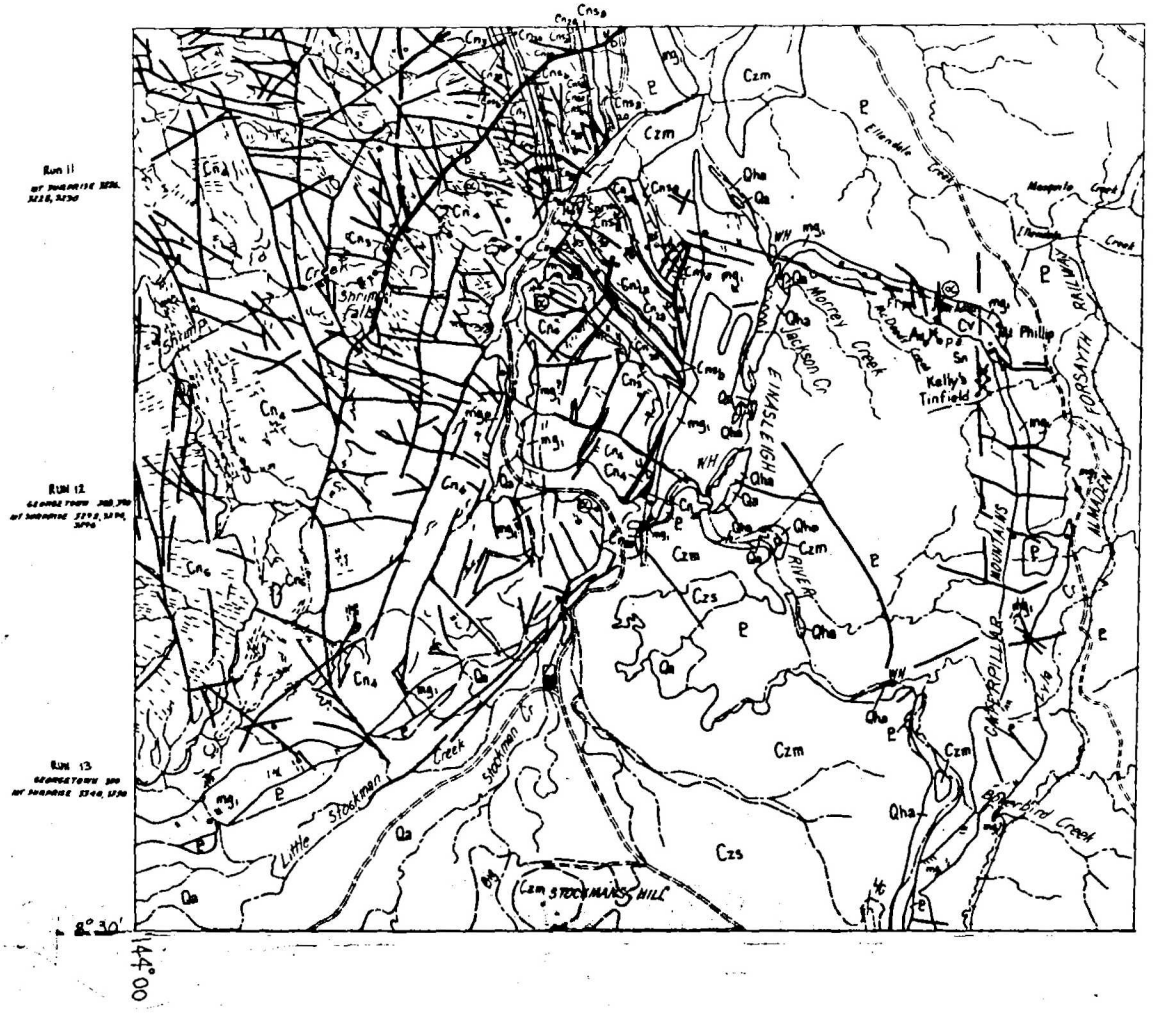
0 1 2 3 4 5 Km (approx.)

Mapped (1974, 1975) by B.S. Oversby (BMR)
Drawn by P.J. Jorritsma and J. Mifsud (BMR)

BMR Record 1977/44 - Compilation Sheet 6

E54/A12/44

15



144°00' 144°30'
18°00'
18°30'

MOUNT SURPRISE (7761)

0 1 2 3 4 5 Km (approx.)

Mapped (1975) by B.S. Oversby (BMR)
Drawn by P.J. Jorritsma and J. Mifsud (BMR)

BMR Record 1977/44 - Compilation Sheet 7

E54/A12/45