Bureau of Mineral Resources, Geology & Geophysics

R E C O R D

Record 1991/28

CATALOGUE OF FIELD COMPILATION SHEETS OF LATE PALAEOZOIC IGNIMBRITES AND ASSOCIATED ROCKS IN THE BURDEKIN FALLS DAM - "CONWAY" AREA (GLENDON AND ADJACENT PARTS OF RAVENSWOOD, STRATHALBYN, HARVEST HOME, AND COLLINSVILLE 1:100 000 SHEET AREAS), NORTHEASTERN QUEENSLAND

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INTRODUCTION

The geological maps which are reproduced here at approximately 1:100 000 scale have been compiled directly from basic field data and supplementary airphoto interpretation which were recorded on overlays to 1:28 000 (nominal)-scale colour airphotographs taken in April, 1988.

The fieldwork on which these maps are based was undertaken as part of a joint Bureau of Mineral Resources and Queensland Department of Resource Industries investigation aimed at elucidating the regional setting of epithermal-type gold mineralisation in the area of the northern Drummond Basin. The mapping was a continuation of systematic mapping undertaken previously by the-then Geological Survey of Queensland in the Mount Coolon and Byerwen 1:100 000 Sheet areas to the south of "Conway" (HUTTON, L. J., GRIMES, K. G., LAW, S. R., McLENNAN, T. P. T., & BELCHER, R., in press - Geological mapping in the Mount Coolon 1:250 000 Sheet area, 1986. *Geological Survey of Queensland Record* **1987/59**). The work was designed to complement specialist gold mineralisation studies being undertaken concurrently in the southern part of the area (EWERS, G., 1989 - Recognising sinters in epithermal gold deposits. *BMR Research Newsletter* **11**, 5-6; EWERS, G., 1990 - Epithermal sinters: a low-cost exploration tool. *BMR Research Newsletter* **12**, unpaginated supplement, second page; EWERS, G. R., WOOD, D. G., TEDDER, I. J., WHITE, N. C., & HOFFMAN, C. F., 1990 - Epithermal gold prospects in the Conway area, northern Drummond Basin, Queensland. *Pacific Rim 90 Congress Proceedings*, **II**, 357 - 362; EWERS, G. R., 1990 - The isotopic recognition of sinters in epithermal gold deposits (abstract). *BMR Record* **1990/95**, 17-18; EWERS, G. R., 1991 - Oxygen isotopes and the recognition of siliceous sinters in epithermal ore deposits. *Economic Geology*, **86**, 173-178).

Reconnaissance traverses by Oversby in 1987 were followed in 1988 by systematic studies by all personnel. Preliminary results were presented by: LAW, S., MACKENZIE, D., McPHIE, J., OVERSBY, B., WELLMAN, P., & WYBORN, D., 1989 - Geological setting of gold mineralisation in the northern Drummond Basin: significance of the Bulgonunna Volcanics (abstract). *NQ Gold '89 Conference Proceedings*, 47-50); and EWERS, G., MACKENZIE, D., McPHIE, J., OVERSBY, B., WYBORN, D., & LAW, S., 1989 - New mapping extends Drummond Basin gold potential. *BMR Research Newsletter* **10**, 1-4. All but Law also spent time in the field in 1989, with special attention being given to resolving problems introduced by isotopic dates obtained after the 1988 season. Revised interpretations arising from this final fieldwork phase of the research have also been presented briefly, in conjunction with some major conclusions of the specialist mineralisation studies, by: OVERSBY, B. S., EWERS, G. R., MACKENZIE, D. E., McPHIE, J., WYBORN, D., LAW, S., & BLACK, L. P., 1990 - Volcanic setting of epithermal

gold mineralisation in the northern Drummond Basin, Queensland. *Geological Society of Australia Abstracts* **25**, 36; McPHIE, J., BLACK, L. P., LAW, S. R., MACKENZIE, D. E., OVERSBY, B.S., & WYBORN, D., 1990 - Distribution, character and setting of mineralised Palaeozoic volcanic sequences, Burdekin Falls region, northeastern Queensland. *Pacific Rim 90 Congress Proceedings*, **II**, 465-471; BLACK, L., MACKENZIE, D., OVERSBY, B., & McPHIE, J., 1990 - Setting of epithermal gold mineralisation in the northern Drummond Basin further refined. *BMR Research Newsletter* **12**, 14-15; and EWERS, G., MACKENZIE, D., OVERSBY, B., & WYBORN, D., 1991 - Regional oxygen-isotope patterns - implications for epithermal gold exploration. *BMR Research Newsletter* **14**, 1-2.

The most recent zircon U-Pb isotopic data to have become available (L. P. BLACK, personal communication) strongly suggest that all of the Carboniferous extrusive rocks previously assigned to either a lower "Cv" sequence or an upper Bulgonunna Volcanics "proper" sequence accumulated during the same Late Carboniferous time interval, and to some degree originally interfingered laterally; these units are probably better regarded as volcanic facies associations than as traditional lithostratigraphic entities. Many of the granitoids in the study area also appear to have been emplaced during the same time interval. Even though some Carboniferous granitoids can be demonstrated from field evidence to antedate the extrusive activity, there do not seem to be any which are of Early Carboniferous age.

On the field compilation sheets, and in the key to rock units given below, different symbols separated by an oblique stroke (/) relate to what are known or inferred to be the same unit. The convention appears on compilation sheets in those areas where equivalence has been demonstrated, or most strongly inferred. At this stage, no serious attempt has been made to achieve uniformity of map unit symbol styles throughout the study area. Different styles were developed semi-independently in the four minimally overlapping areas of mapping responsibility (as indicated on the compilation sheets). The stylistic variability emphasises what appear to be some real stratigraphic differences between the areas, differences which presumably reflect original contrasts in local to semi-regional volcanic and/or volcano-tectonic environments. Some multiplicity of symbols applied to Mesozoic and Cainozoic units has also been inherited from mismatches between previously-published maps (e.g. Charters Towers, Sheet SF 55-2, and Bowen, Sheet SF 55-3, First Edition 1:250 000 Geological Series; *Bureau of Mineral Resources*, 1969 and 1971 respectively).

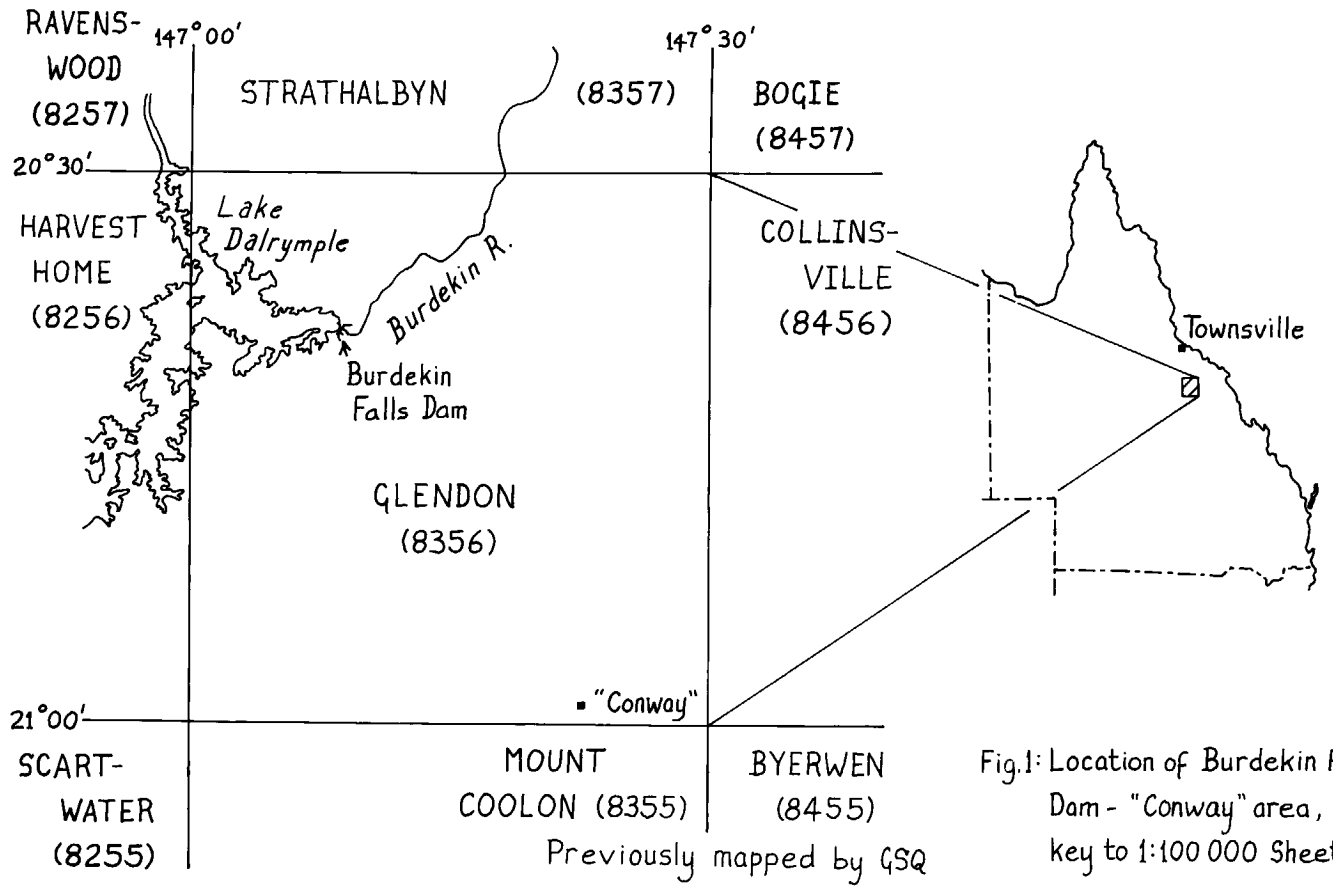


Fig.1: Location of Burdekin Falls Dam - "Conway" area, and key to 1:100 000 Sheets

KEY TO STRATIGRAPHIC UNITS

In the rock unit descriptions below, the following terminological convention regarding clast/crystal/phenocryst contents (volume %, mostly estimated visually) of pyroclastic rocks (including ignimbrites), lavas, and intrusive rocks is used as appropriate:

0	=	clast-/crystal-/phenocryst-free ≡ aphyric
>0 to 1%	=	very " -/ " -/ " -poor ≡ very sparsely porphyritic
1% to 5%	=	" -/ " -/ " -poor ≡ sparsely porphyritic
5% to 10%	=	moderately " -/ " -/ " -poor ≡ moderately sparsely porphyritic
10% to 25%	=	moderately " -/ " -/ " -rich ≡ moderately abundantly porphyritic
25% to 50%	=	" -/ " -/ " -rich ≡ abundantly porphyritic
50%+	=	very " -/ " -/ " -rich ≡ very abundantly porphyritic

Nomenclature of pyroclastic rocks is taken from Le MAITRE, R.W. (editor), 1989 - A Classification of Igneous Rocks and Glossary of Terms. *Blackwell Scientific Publications*.

Nomenclature of intrusive igneous rocks is based on STRECKEISEN, A.L., 1973 - Classification and nomenclature recommended by the IUGS Subcommission on the Systematics of Igneous Rocks. *Geotimes* **18**, 26-30; it is essentially the same as that of Le MAITRE (1989).

Suffixes applied to several units on the compilation sheets indicate, as and where appropriate: **(h)** = hornfelsed; **(a)** = intensely altered (indicated additionally by stippling); **(bx)** = brecciated.

* denotes reserved, but not formalised, name.

EXTRUSIVE AND SEDIMENTARY ROCKS

QUATERNARY (HOLOCENE)

Qha : *active alluvium*

Qa : *rarely active to inactive alluvium, commonly dissected*

TERTIARY and QUATERNARY

(w) : *deep weathering profile*

(r) : *residual soil*

Cz/Czs : *soil and colluvium, locally includes some inactive alluvium*

TERTIARY

T/Ts = Suttor Formation / **Tu** : *undivided epiclastic commonly clayey quartz sandstones, quartz-clast and polymictic pebbly to cobbly conglomerates; minor tuffaceous(?) mudstones and siltstones; commonly ferruginised; locally unlithified*

Td : *as T/Ts/Tu, intensely ferruginised to lateritised*

Tb : *moderately porphyritic pyroxene-olivine basalt*

MESOZOIC to TERTIARY

Mz : *quartz sandstone, locally pebbly*

LOWER PERMIAN

Plc = Collinsville Coal Measures: *undivided; mostly epiclastic rocks, locally calcareous*

Plz = Lizzie Creek Volcanics : *undivided; mostly basaltic to andesitic pyroclastic and epiclastic, and mixed pyroclastic-epiclastic, rocks*

UPPER CARBONIFEROUS

Bulgonunna Volcanics ("proper") association (northwest)

Cbi : *undivided medium to dark grey clast-poor to moderately clast-rich 2mm to 4mm-crystal-rich rhyolitic to rhyodacitic ignimbrite (Limey Dam area); buff clast-rich crystal-poor to moderatelyly crystal-rich rhyolitic ignimbrite ("Glenroy" area); grey to brown clast-poor moderately crystal-rich to crystal-rich (quartz up to 7mm) rhyolitic ignimbrite (extreme western area)*

Cb: *very dark grey clast-poor to moderately clast-rich moderately crystal-rich to crystal-rich hornblende-biotite rhyolitic ignimbrite*

Cbn : *very dark grey clast-free to clast-poor moderately 1mm to 2mm-crystal-poor to moderately crystal-rich (%quartz >> %feldspar) rhyolitic ignimbrite*

Cbm : *dark bluish-grey to very dark grey 2mm to 4mm-crystal-rich to very crystal-rich (%quartz > %feldspar) rhyolitic ignimbrite*

Cbl = Locharwood* rhyolite : *medium purplish- to -pinkish-grey clast-free to clast-poor moderately 2mm to 3mm-crystal-rich (%quartz < %[pink] felspar) rhyolitic ignimbrite with characteristic orangey-pink to reddish-brown fiamme up to 1.5cm ɪ 7cm*

Cbg = Collins Creek* rhyolite : *very dark grey to bluish- or greenish-grey clast-free to clast-poor very crystal-rich (%quartz [up to 8mm] > %feldspar) rhyolitic ignimbrite with conspicuous biotite*

Cbs : *epiclastic quartz-lithic sandstone, quartz-clast to polymictic conglomerate, and siltstone; minor epiclastic lithic sandstone*

Bulgonunna Volcanics ("proper") association (northeast)

Cbv : *undivided feldspar crystal-bearing and/or feldspar-phyric rhyolitic ignimbrites and/or lavas*

Cb_{rh} : *rhyolitic lava; may be intrusive locally*

Cbs : *stratified crystal- and locally pumice-rich mixed pyroclastic-epiclastic tuffaceous mudstone, sandstone, and conglomerate*

Cbi : *undivided rhyolitic ignimbrites*

Cb_8 : *purple moderately 2mm to 3mm-crystal-rich rhyolitic ignimbrite*

Cb_6 : *purplish-buff clast-poor moderately 2mm to 3mm-crystal-rich (quartz absent) rhyolitic ignimbrite*

Cb_5 : *pale green 1mm-crystal-poor rhyolitic ignimbrite*

Cb_4 : *dark blue 4mm to 5mm-crystal-rich rhyolitic ignimbrite*

Cb_3 : *purplish-buff and pink moderately clast-rich 1mm to 2mm-crystal-poor rhyolitic ignimbrite*

Cb_L = Locharwood* rhyolite : *medium grey to pink and buff locally moderately clast-rich moderately 3mm to 5mm-crystal-rich rhyolitic ignimbrite with orangey-pink neutrally-weathering fiamme*

Cb_1 = Collins Creek* rhyolite : *dark bluish-grey 4mm to 5mm-crystal-rich (mm quartz > mm feldspar) rhyolitic ignimbrite*

Bulgonunna Volcanics ("proper") association (central-west)

Cby = Arundel* rhyolite, main (upper) interval : *medium-grey to purplish-grey clast-poor moderately 1mm to 3mm-crystal-rich to crystal-rich (%quartz > %feldspar) rhyolitic ignimbrite with positively-weathering medium to large fiamme*

Cby_1 = Arundel* rhyolite, subsidiary (lower) interval : *medium-grey to buff moderately clast-rich to clast-rich moderately 1mm to 2mm-crystal-poor to moderately crystal-rich rhyolitic ignimbrite/s*

Bulgonunna Volcanics ("proper") association (southwest)

Cbl_r : *rhyolitic lava; may be intrusive locally*

Cb_{IIIb} = Locharwood* rhyolite, main (upper) interval : *medium grey to medium buff very clast-poor moderately 0.5mm to 3mm-crystal-rich rhyolitic ignimbrite with medium orangey-red feldspars and neutrally-weathering small fiamme*

Cb_{IIIa} = Locharwood* rhyolite, subsidiary (lower) interval : *very pale grey commonly "chalky" rhyolitic ignimbrite*

Cb_{IIb} = Pyramid* rhyolite, main (upper) interval : *medium purple or pale red to purplish-brown locally clast-rich moderately 0.5mm to 3mm-crystal-rich to crystal-rich rhyolitic ignimbrite with negatively-weathering fiamme*

Cb_{IIa} = Pyramid* rhyolite, subsidiary (lower) interval : *very pale greenish-grey to pale buff commonly "chalky" rhyolitic ignimbrite*

Cb_s : *fine to very coarse epiclastic conglomerate*

Bulgonunna Volcanics ("proper") association (southeast)

Cub$_l$: *undivided rhyolitic lavas with ash tuffs to agglomerates and breccias*

Cubi$_a$ = Bobby Dazzler* rhyolite : *pale grey to buff clast-rich and 0.5mm to 2.5mm-crystal-rich rhyolitic ignimbrite with biotite and very poorly developed fiamme*

Cubi$_l$: *buff moderately lithic-rich to lithic-rich moderately crystal-rich (%quartz << %feldspar) rhyolitic(?) ignimbrite with biotite*

Smedley* volcanic association (northwest)

Cv : *undivided quartz-poor rhyolitic to dacitic ignimbrites, andesitic rocks, and stratified lithic-rich pyroclastic and mixed pyroclastic-epiclastic(?) rocks*

Cvx : *undivided andesitic lavas, ignimbrites(?), and coarse to very coarse pyroclastic breccias*

Cve : *very dark-grey to black clast-poor moderately very small-crystal-poor dacitic ignimbrite; moderately abundantly porphyritic pyroxene dacitic lava, lithic- and vitric-bearing medium-ash crystal tuff with accretionary lapilli*

Cvd = "dam ignimbrite" : *medium to dark grey and purplish-grey clast-poor to moderately clast-rich moderately 1mm to 3mm-crystal-rich (quartz absent to << %feldspar) dacitic ignimbrite with hornblende and minor biotite and common medium to large porphyritic fiamme*

Cvc : *dark grey to very dark grey clast-free to very clast-poor moderately 1mm-crystal-poor (%quartz > %feldspar) rhyolitic ignimbrite*

Cvb : *pale to medium brownish-grey to dark grey clast-free to very clast-poor crystal-rich to very crystal-rich (%quartz >> %feldspar) rhyolitic ignimbrite*

Cva : *dark bluish-green clast-free to moderately clast-rich 2mm to 3mm-crystal-rich (%quartz < % feldspar) dacitic ignimbrite*

Cvs : *epiclastic polymictic pebble to cobble conglomerate and quartz-lithic sandstone*

Smedley* volcanic association (northeast)

Cv : *undivided quartz-poor rhyolitic to dacitic ignimbrites, andesitic rocks, and massive to stratified lithic-rich pyroclastic, mixed pyroclastic-epiclastic, and epiclastic(?) rocks*

Cvi : *undivided ignimbrites; probably includes "dam ignimbrite"*

Cvi_4 : *very dark bluish-grey moderately 2mm to 3mm-crystal-rich dacitic ignimbrite with diffuse attenuated fiamme*

Cvi_3 : *very dark bluish-grey clast-rich 2mm to 3mm-crystal-rich (%quartz < %feldspar) dacitic ignimbrite with porphyritic fiamme*

Cvi_2 : *medium brownish-grey 2mm to 3mm-crystal-rich (%quartz > %feldspar) rhyolitic ignimbrite with biotite*

Cvi_1 : *dark bluish-green clast-free to moderately clast-rich 2mm to 3mm-crystal-rich (%quartz < %feldspar) dacitic ignimbrite*

Cvs : *polymictic epiclastic(?) cobble conglomerate; minor fine- to coarse-ash tuff*

Smedley* volcanic association (southwest)

Cvt : *undivided stratified lithic to lithic-vitric-crystal fine-ash tuffs to fine agglomerates and breccias*

Cvi_r/Cvi_d : *rhyolitic/dacitic ignimbrites*

$Cvl_r/Cvl_d/Cvl_a$: *rhyolitic/dacitic/andesitic lavas; may be intrusive locally*

Smedley* volcanic association (southeast)

Cvi : *undivided rhyolitic and/or dacitic ignimbrites*

Smedley* volcanic association ? (southeast)

Cv: *undivided rhyolitic and dacitic ignimbrites*

$Cvi_f/Cvi_{ff}/Cvi_{fq}$: *dark grey very clast-poor 0.5mm to 2mm-crystal-rich to very crystal-rich (quartz absent to << %feldspar) rhyolitic(?) to dacitic ignimbrite without fiamme / as Cvif, moderately clast-rich to clast-rich and locally pale green / as Cvif, %quartz < %feldspar*

$Cv_{(l)}$: *dark grey moderately clast-rich to clast-rich crystal-rich (quartz absent to << %feldspar) dacitic ignimbrite with hornblende*

MID- to UPPER CARBONIFEROUS ?

Cr : *buff to dark grey flow-laminated sparsely porphyritic rhyolitic lava; minor fine- to coarse-ash quartz-feldspar, quartz-feldspar-lithic, and feldspar-lithic tuff; may be intrusive locally*

Csv : *undivided pale grey to greenish-grey or buff quartz-feldspar-rich fine- to coarse-ash tuffs, clast-poor to moderately clast-rich moderately crystal-rich rhyolitic ignimbrites, tuffaceous(?) quartz-feldspar sandstones*

Cs : *undivided pale greenish-grey to grey or buff locally lithic-pebble epiclastic(?) quartz to quartz-feldspar sandstones; minor epiclastic quartz-pebble conglomerates*

Cld : *dark brown to greenish-grey or grey moderately porphyritic pyroxene(?)-hornblende andesitic to basaltic lava (?)*

LOWER to MID(?)-CARBONIFEROUS

Star of Hope Formation

Cls : *undivided purple, purplish-grey, chocolate-brown, and reddish-brown locally pebbly epiclastic feldspar-lithic to lithic siltstones to sandstones, epiclastic granule- to pebble-conglomerates, epiclastic mudstones, dacitic to andesitic lavas with breccias and rare ash tuffs, clast-rich and crystal-poor rhyolitic ignimbrites and lavas; rare to sporadic fine to coarse lithic- and/or quartz-feldspar ash tuffs with local accretionary lapilli*

Cls_i : *dark bluish-grey to brownish-grey clast-rich moderately crystal-poor to crystal-rich (%qyartz < %feldspar) rhyodacitic to dacitic(?) ignimbrite*

Clc = Scartwater Formation : *undivided grey, greenish-grey, and brown epiclastic quartz-feldspar to quartz-feldspar-lithic sandstones to conglomerates with siltstones and mudstones; rare clast-rich rhyolitic ignimbrites and lensoidal algal limestones*

UPPER DEVONIAN to LOWER CARBONIFEROUS

St Anns Formation

DCa : *undivided buff to medium greenish-brown fine to very coarse epiclastic lithic and feldspar-lithic sandstones, pale to medium green to greenish-brown micaceous (muscovite) epiclastic siltstones and mudstones, medium to dark grey, commonly laminated and locally algal, silty to medium-sandy limestones*

DCa_i : *buff rhyolitic ignimbrite*

Stones Creek* formation

DCv : *undivided rhyolitic to andesitic lavas, breccias, agglomerates(?), and ignimbrites, with brown to purple epiclastic and/or mixed pyroclastic-epiclastic feldspar- and feldspar-lithic to lithic sandstones/tuffaceous sandstones to fine conglomerates/tuffaceous conglomerates; subsidiary siltstones/tuffaceous siltstones; rare algal(?) limestones and jasper*

DCv_s/$DCv_{(s)}$: *undivided, mostly epiclastic and mixed pyroclastic-epiclastic, rocks*

DCv_r : *undivided, mostly rhyolitic to rhyodacitic, lavas and ignimbrites*

$DCv_{(I)}$/DCv_i : *undivided, mostly dacitic, ignimbrites*

DCv_{ri} : *quartz-free to quartz-poor rhyolitic(?) to rhyodacitic ignimbrite*

DCv_{rl} : *quartz-free to quartz-poor rhyolitic to rhyodacitic lava*

DCv_{di} : *dacitic ignimbrite*

DCv_a/$DCv_{(A)}$: *undivided, mostly andesitic, lavas and pyroclastic rocks*

$DCv_{(B)}$: *basaltic lava*

UPPER DEVONIAN

Dum = Mount Wyatt Formation : *undivided epiclastic feldspar-lithic to lithic-feldspar sandstones and fissile mudstones; subsidiary epiclastic conglomerates*

MIDDLE DEVONIAN

Dk = Ukalunda Beds : *undivided fissile to cleaved(?) epiclastic mudstones and quartz-feldspar to feldspar-lithic-quartz sandstones; subsidiary epiclastic conglomerates, limestones, and cherts; quartz stringers and veins characteristic locally in the northeast*

CAMBRIAN and/or ORDOVICIAN

Seventy Mile Range Group

COs : *undivided medium to dark-grey fine to coarse epiclastic(?) quartz-feldspar (to arkosic) sandstones; minor quartz-feldspar ash tuffs and rhyolitic rocks of uncertain origin/s*

COw = Mount Windsor Volcanics : *intensely fractured and altered sparsely porphyritic rhyolitic rocks of uncertain origin/s; minor pyroclastic and/or epiclastic quartz-feldspar coarse-ash tuff/sandstone; rare andesitic lava(?)*

LOWER PALAEOZOIC ?

COc = Cape River Metamorphics : *undivided micaceous quartz-feldspar schists to gneisses with quartzites*

PALAEOZOIC

Pzv : *unassigned extrusive rocks*

INTRUSIVE ROCKS

UPPER PALAEOZOIC to MESOZOIC(?)

q : *vein quartz*

mg : *undivided aplites and microgranites to microgranodiorites(?)*

mg_1/po : *quartz-feldspar-phyric microgranite to very fine-grained granite*

mg_2 : *feldspar-phyric microgranite to leucocratic and mesocratic microgranodiorite(?)*

PRr = Mount Wickham Rhyolite : *commonly flow-banded and sporadically autobrecciated sparsely quartz-feldspar-phyric rhyolite*

rh/f : *undivided rhyolites to dacites(?); may be extrusive locally* (in the Mount Coolon area, most occurrences of the same rocks were annotated Cub_{rh})

rh_1 : *quartz-feldspar-phyric rhyolite; may be extrusive locally*

rh_2 : *feldspar-phyric rhyolite to dacite(?); may be extrusive locally*

rh_3 : *aphyric rhyolite to dacite(?); may be extrusive locally*

ad/Cx : *undivided dacites to andesites; may be extrusive locally*

t : *undivided trachytes*

mdi : *porphyritic melanocratic microgranodiorite(?) to microdiorite*

mgd: *porphyritic hornblende-biotite microgranodiorite to diorite*

agg/Cut : *intrusive rhyolitic ash tuff, agglomerate, and/or breccia*

LOWER PERMIAN

Plg : *granodiorite*

CARBONIFEROUS and/or PERMIAN

CPg_b = Bluegrass Creek* granite : *biotite granite*

CPg : *pink fine-grained moderately porphyritic biotite granite*

CPgd : *biotite-hornblende to hornblende-biotite granodiorite*

CPd: *dark grey fine- to medium-grained porphyritic pyroxene?-hornblende diorite to gabbro*

CPi/Cgm/m/do : *undivided mafic rocks; may be extrusive locally*

CARBONIFEROUS

Cgp : *pink to red abundantly porphyritic biotite microgranite to very fine-grained granite*

Cga : *pink to red aphyric "aplitic" biotite microgranite to very fine-grained granite*

UPPER CARBONIFEROUS

POST-VOLCANIC

Cug_b = Bells Creek* granodiorite : *fine- to medium-grained hornblende-biotite granodiorite to tonalite*

Cug/Cug_x : *undivided and unassigned granites to granodiorites*

Cug_{po} : *quartz-feldspar-phyric microgranite to very fine-grained granite* (in the Mount Coolon area, many occurrences of the same rocks were annotated Cub_{po})

Cug_{mg} : *aphyric to sparsely porphyritic "aplitic" microgranite to very fine-grained granite*

Cug_1: *buff or pale grey to pink medium-grained biotite granite*

Cug_2: *grey to pink fine-grained hornblende-biotite granite*

Cug_3: *grey fine-grained (acicular) hornblende-biotite granite*

Cug_4: *bluish-grey medium-grained hornblende-biotite granite*

Cug_5/Cug_h : *fine- to coarse-grained hornblende granite*

Cur : *white, buff, pale grey, and medium grey sparsely to moderately quartz-feldspar-phyric rhyolite; commonly with variable but pervasive sericitic alteration and, locally, abundant pyrite*

PRE-VOLCANIC

Clg : *undivided granites to granodiorites*

Clg_c : *pink coarse-grained granite*

Clg_{po} : *quartz-feldspar-phyric microgranite to to very fine-grained granite*

Clg_{ra} = Roscow* granite, granite phase : *fine- to medium-grained hornblende-biotite granite*

Clg_r = Roscow* granite, granodiorite phase : *fine- to medium-grained hornblende-biotite granodiorite and quartz monzodiorite*

Clg_p = Percy Douglas* granodiorite : *fine- to medium-grained hornblende-biotite granite to granodiorite*

Clg_n = Nostone Creek* granodiorite : *fine- to medium-grained hornblende-biotite granite to granodiorite and quartz monzodiorite*

Clg_{ms} = Sunbeam* granodiorite /**Clgm** : *fine-grained melanocratic granite to granodiorite*

Clg_{i} = Joe de Little* granite : *fine- to medium-grained hornblende-biotite granite to granodiorite*

Clg_{mgh} = House and Kitchen* granite /**Clg_{mg}** : *aphyric to sparsely porphyritic "aplitic" microgranite to very fine-grained granite / as Clg_{mgh} but geographically separate*

CARBONIFEROUS?

Cgs = Stuart Pocket* granite : *pink coarse-grained biotite granite; invariably intensely altered*(may be Lower Palaeozoic)

LOWER PALAEOZOIC

Ravenswood Granodiorite Complex

ODr : *medium grey to pinkish-grey biotite-hornblende to hornblende-biotite granite(?) to granodiorite*

ODa : *pink to pale grey abundantly miarolitic and locally porphyritic biotite granite*

Stratigraphic (including intrusive) contact

High-angle fault

Anticlinal axial trace

Synclinal axial trace

Where location of contacts, faults, and axial traces is approximate, line is dashed; where "permanently" concealed, dotted; where inferred or doubtful, queried. Where geological boundary is of uncertain nature, preferred option (contact or fault) is queried.

Strike and dip of strata (locally includes eutaxitic foliation of ignimbrites - below)

Vertical strata + Horizontal strata

Generalised dip, commonly from airphoto interpretation

Strike and dip of eutaxitic foliation of ignimbrite

Vertical eutaxitic foliation

Strike and dip of flow banding of lava and intrusive rocks

Vertical flow bands

Generalised strike and dip of contorted flow bands

Strike and dip of tectonic foliation

Dyke, with dip where known (otherwise essentially vertical)

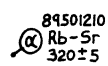
Where location of dykes is approximate, concealed, or inferred or doubtful, symbol is dashed, dotted, and queried respectively.

Trend lines

Joints

Lineament

} Mainly airphoto interpretation

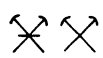


Location of geochronological sample; with reference number, dating method, and age in millions of years

Location of geomagnetic sample area or traverse

Location of (macro-) palaeozoological specimens

Location of palaeobotanical specimens



Abandoned/active mine in bedrock and/or weathering profile

Abandoned prospect

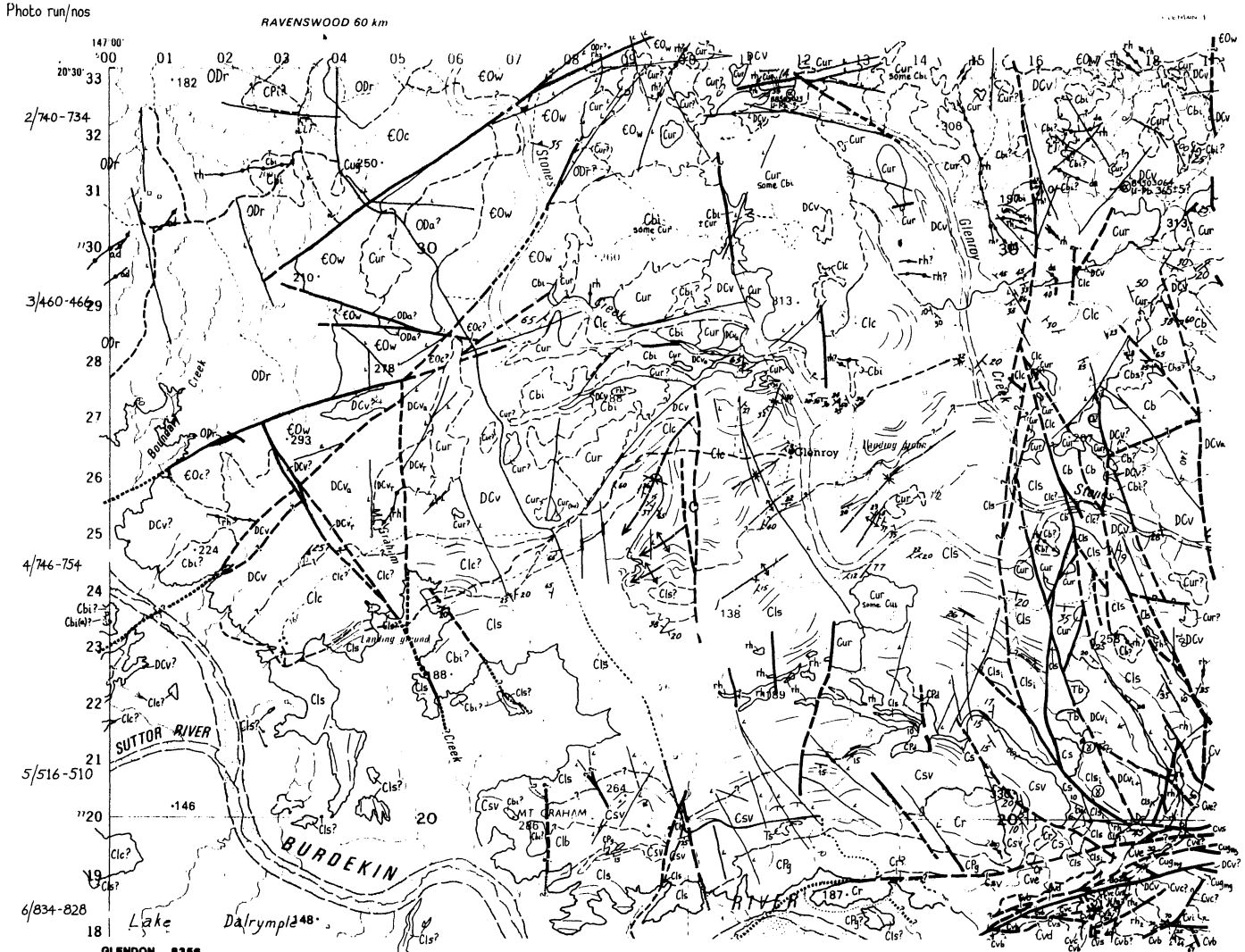
Abandoned alluvial workings

(pa) Position approximate

Au = gold; Ag = silver; Bi = bismuth; Cu = copper

Area of intense alteration

Fig. 2: Key to geological symbols



GLENDON 8356
1:100 000 Sheet area

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Geology: D E Mackenzie, 1988 1989; B S Oversby, 1987 1988 1989.
J. McPhie, 1988. D Wyborn, 1988

Compiled: P Corbett, B.S Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS

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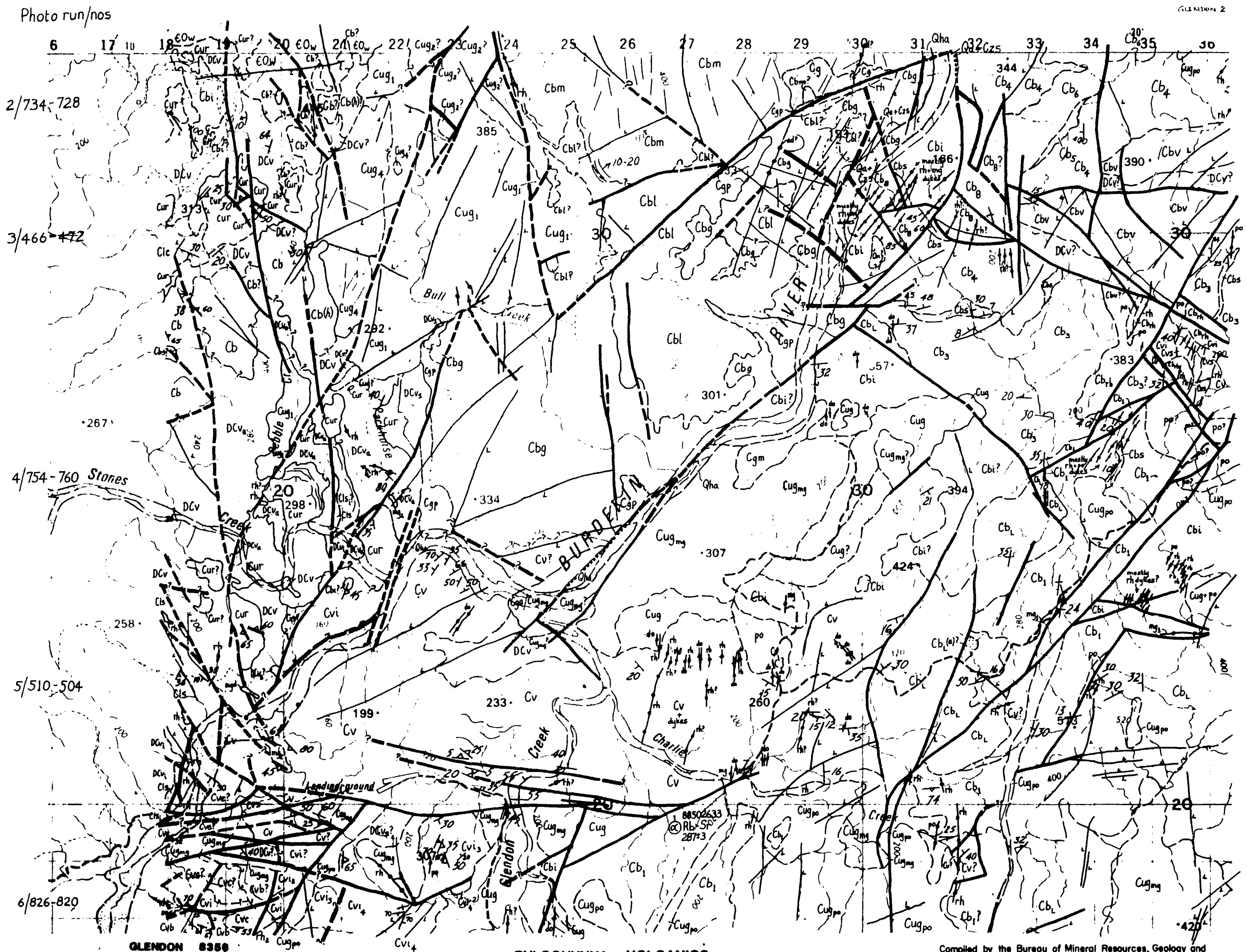

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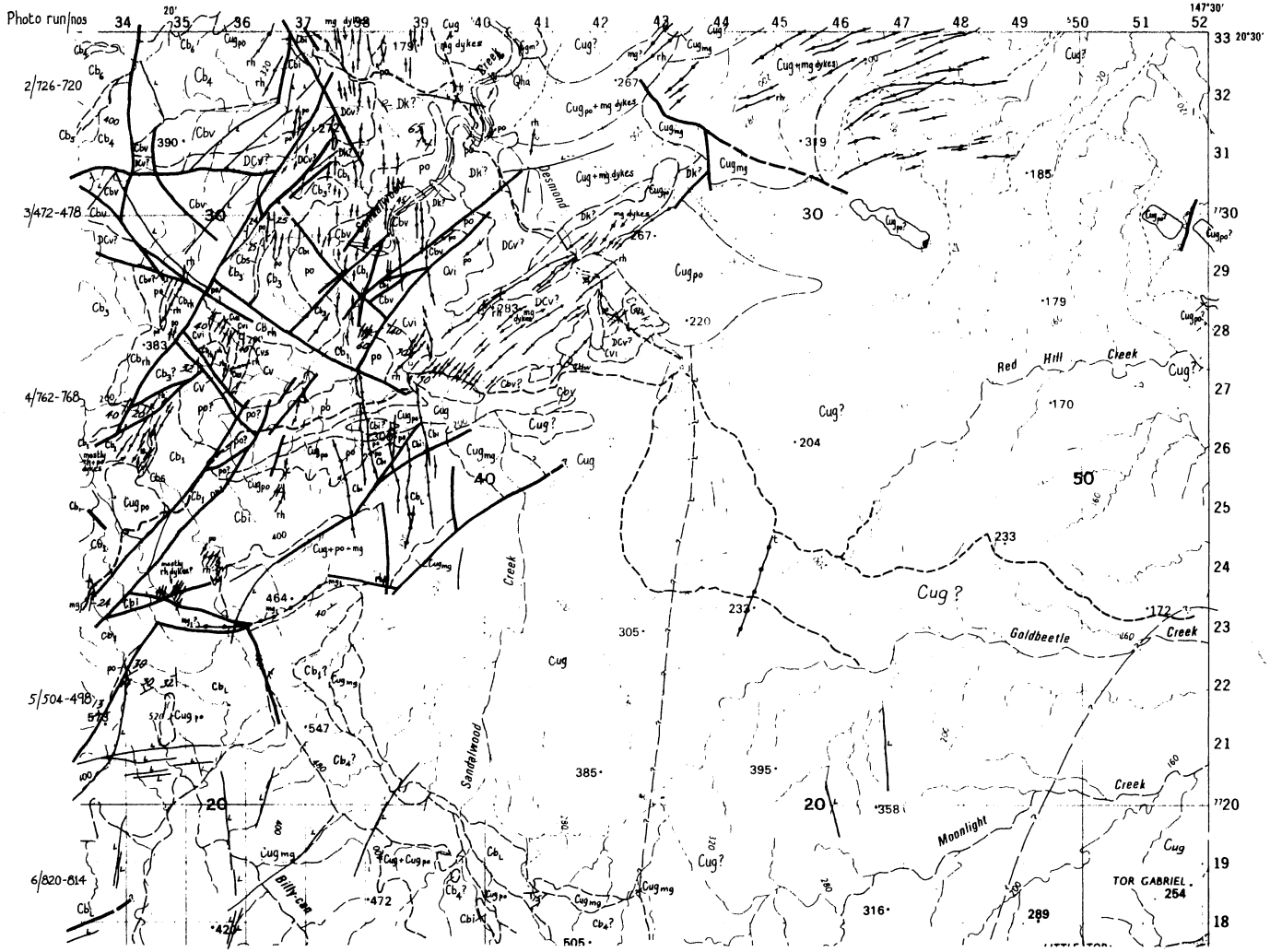
Geology: D.E. Mackenzie, 1988 1989; J McPhie, 1988 1989; B.S. Oversby, 1987 1988 1989 / D Wyborn, 1988
Compiled: P Corbett, B.S. Oversby
Scale 1 : 25 000

BULGONUNNA VOLCANICS

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



BULGONUNNA VOLCANICS

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Geology: J. McPhie, 1985 1987; D. Wyborn, 1986

Compiled: P. Corbett, B.S. Oversby

Scale 1 : 25 000

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.

GLENDON 8356
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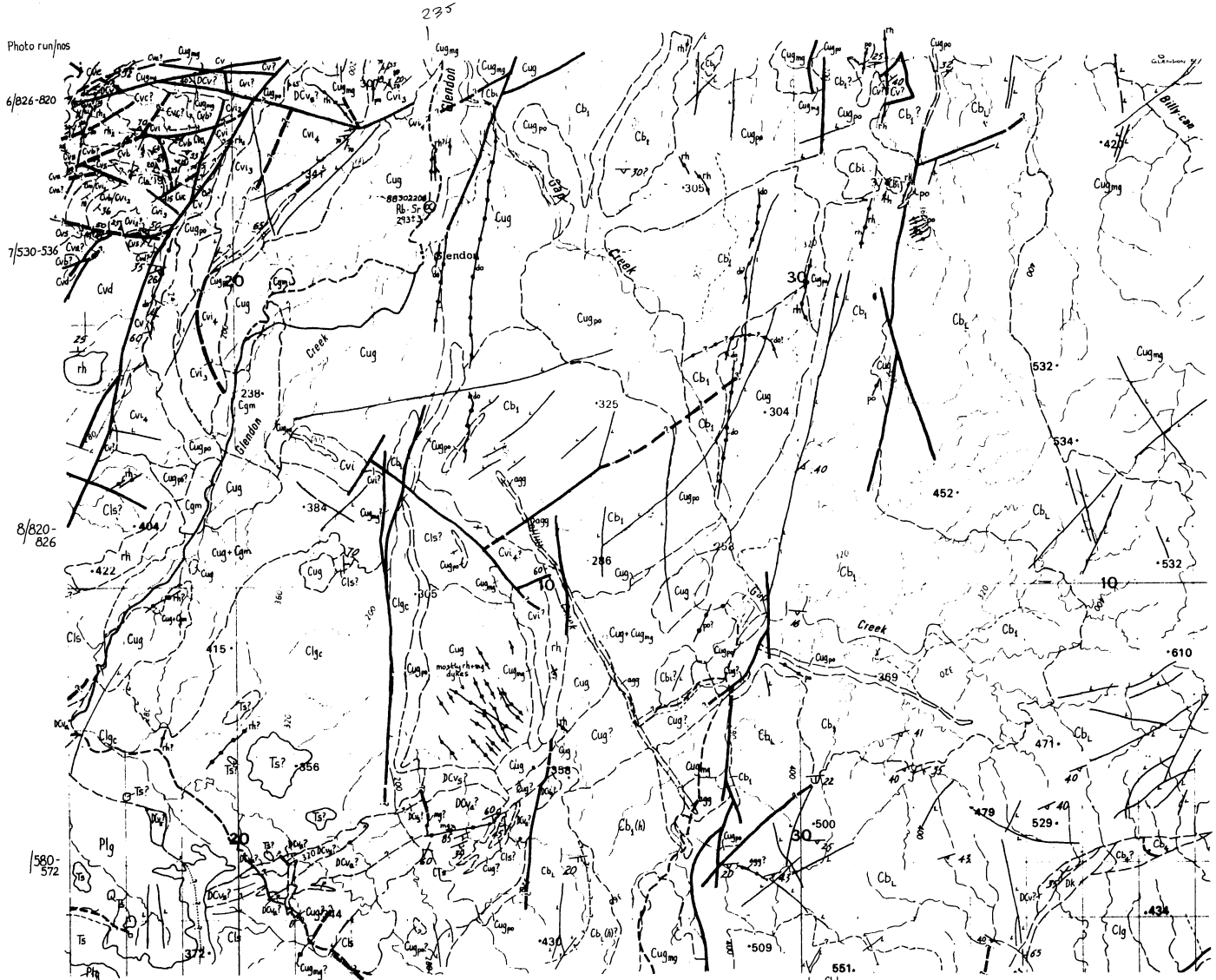
Geology: D E Mackenzie, 1988 1989, B S Oversby, 1987 1988 1989.
J McPhie, 1988, D Wyborn, 1988

Compiled: P Corbett, B S Oversby

Scale 1 : 25 000

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



GLENDON 8356
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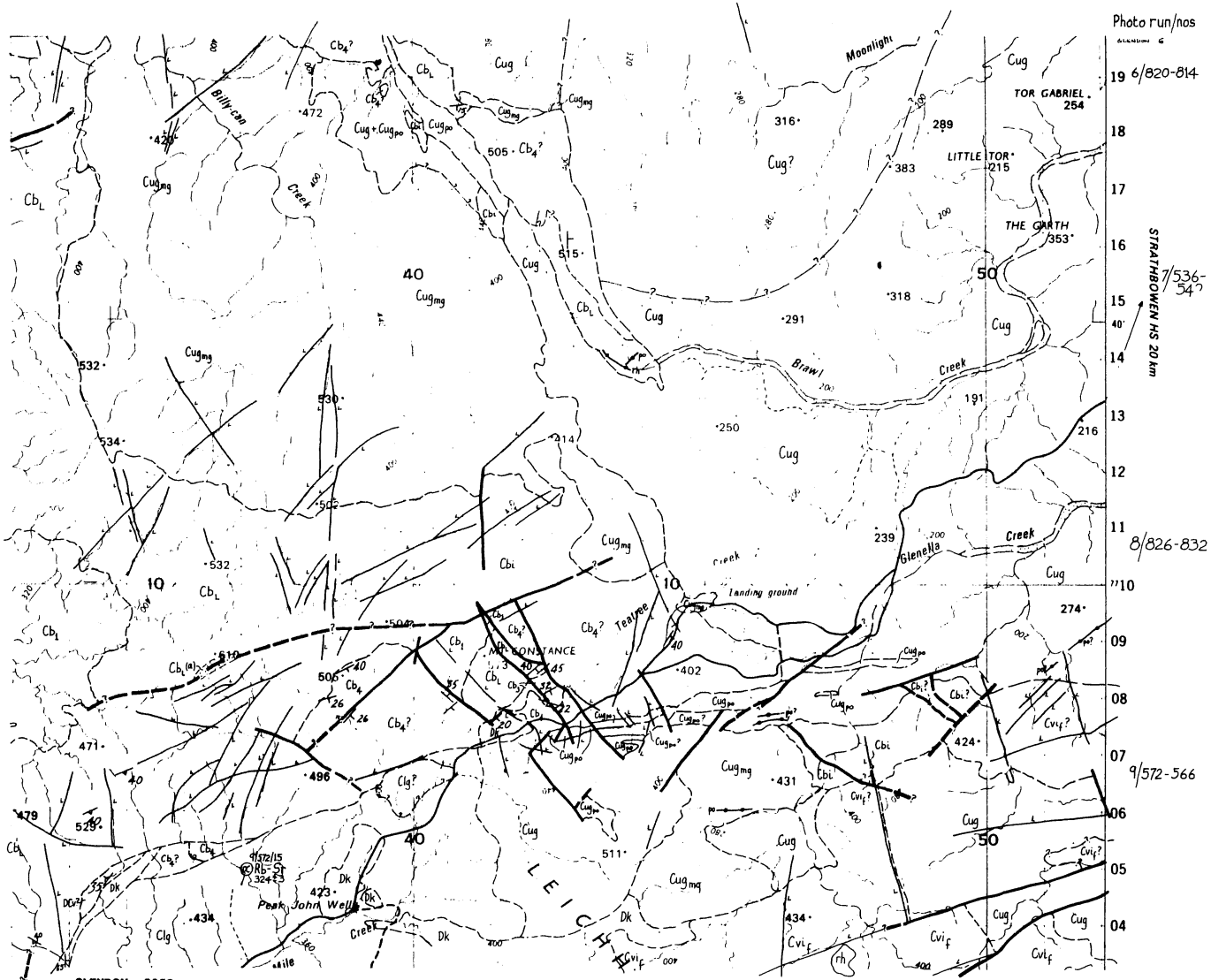
Geology: J McPhie, 1988 1989. B S Oversby, 1987 1989. D.E Mackenzie, 1988. D.Wyborn, 1988

Compiled: P Corbett, B.S Oversby

Scale 1 : 25 000

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



BULGONUNNA VOLCANICS

GLENDON 8356
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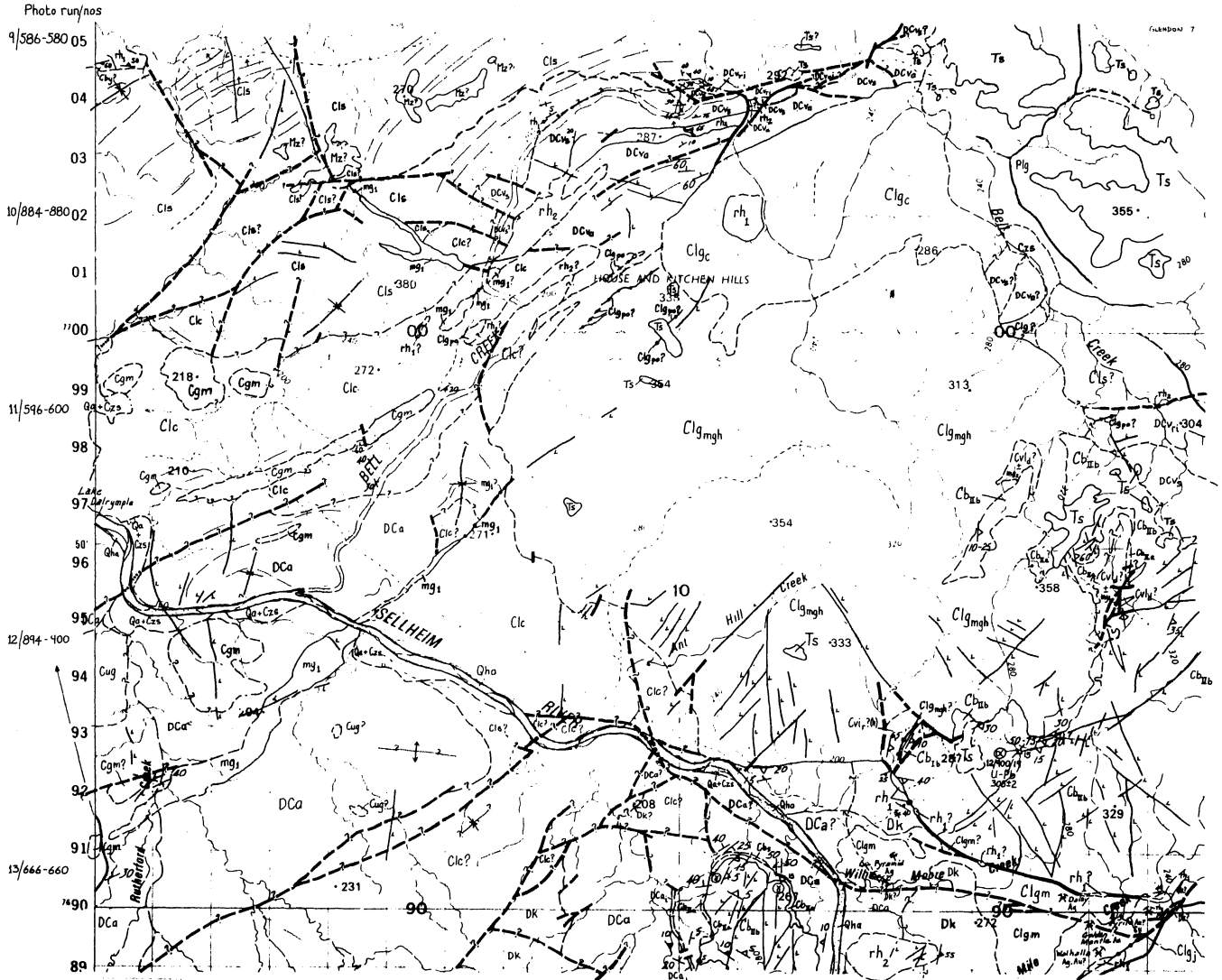
Geology: J. McPhie, 1988 Mod. D Wyborn, 1988.
S.R. Law, 1986
Compiled: P Corbett, B.S Oversby
Scale 1:25 000

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.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13/666-660
HOUSE AND KITCHEN HILLS
KSELLHEIM
BULGONUNNA VOLCANICS
GLENDON 8356
1:100 000 Sheet area
Geology: B.S. Oversby, 1987 1988 1989; D.E. Mackenzie, 1988 1989.
D. Wyborn, 1988
Compiled: P Corbett, I. Chertok, B.S. Oversby
Scale 1:28 000
Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.
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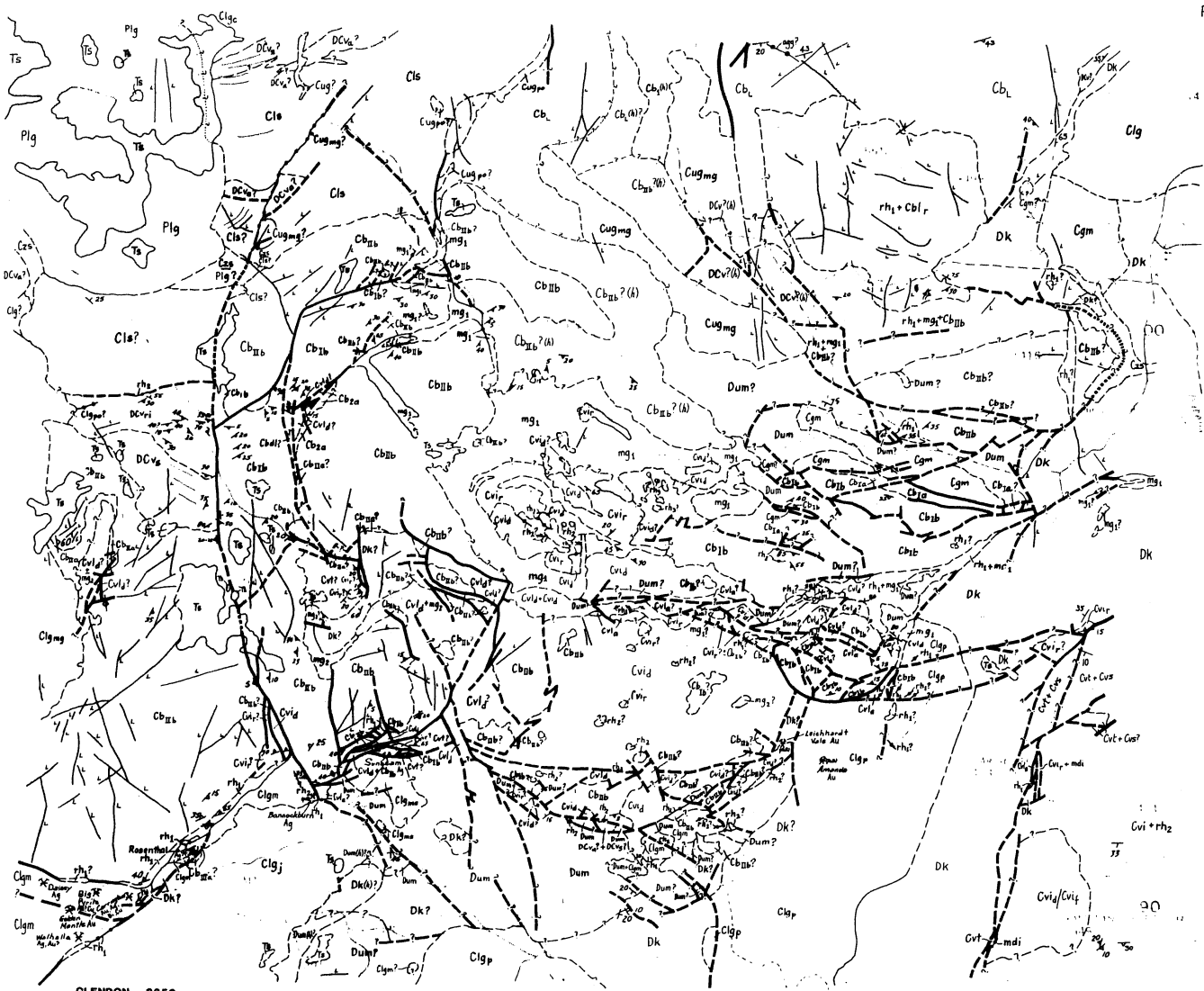

GLENDON 8356
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BULGONUNNA VOLCANICS

Geology: B.S Oversby, 1987 1988 1989. J McPhie, 1988; D Wyborn, 1988. D.E. Mackenzie, 1988; S R. Law, 1988

Compiled: P. Corbett, I Chertok, B.S Oversby

Scale 1 : 25 000

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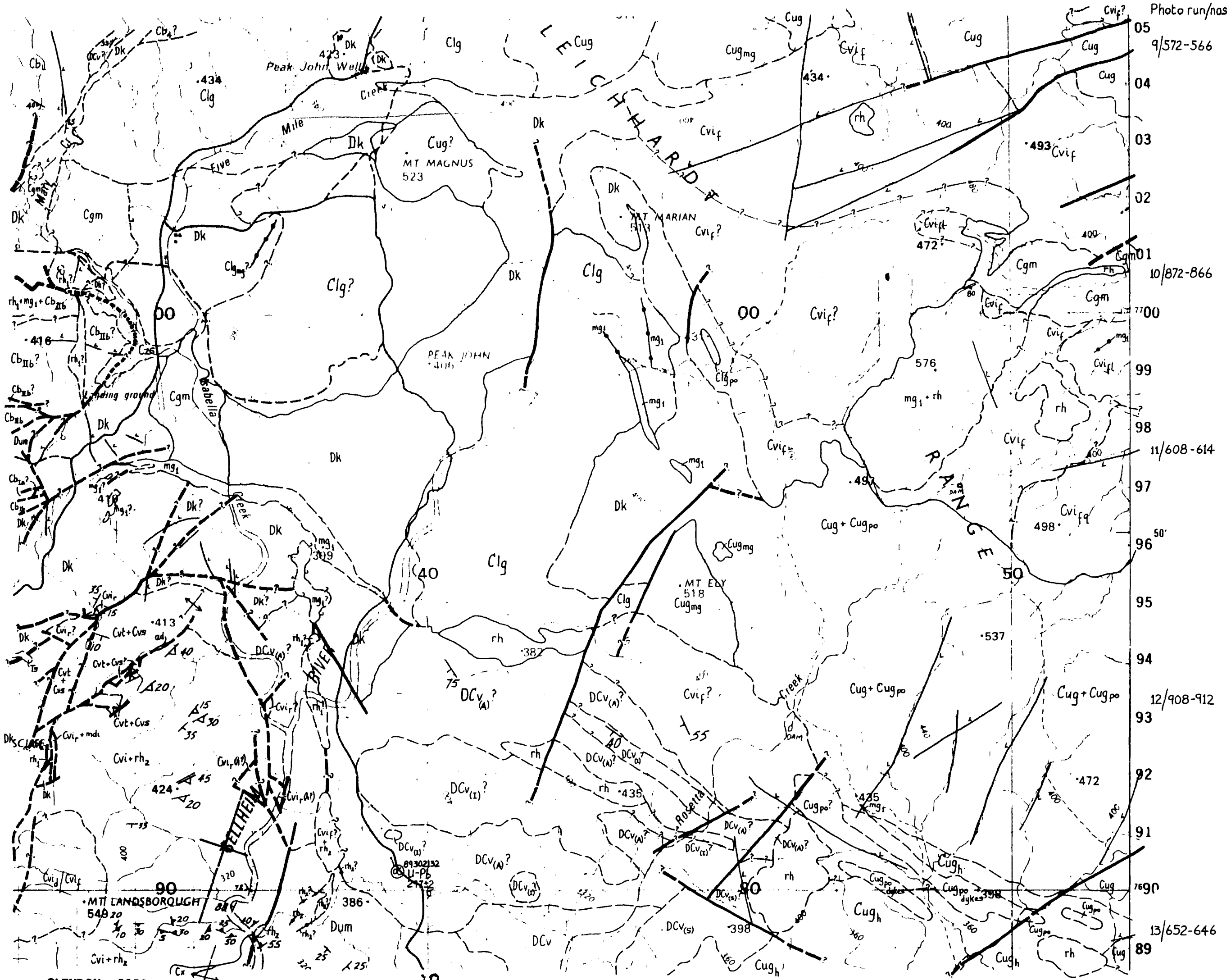

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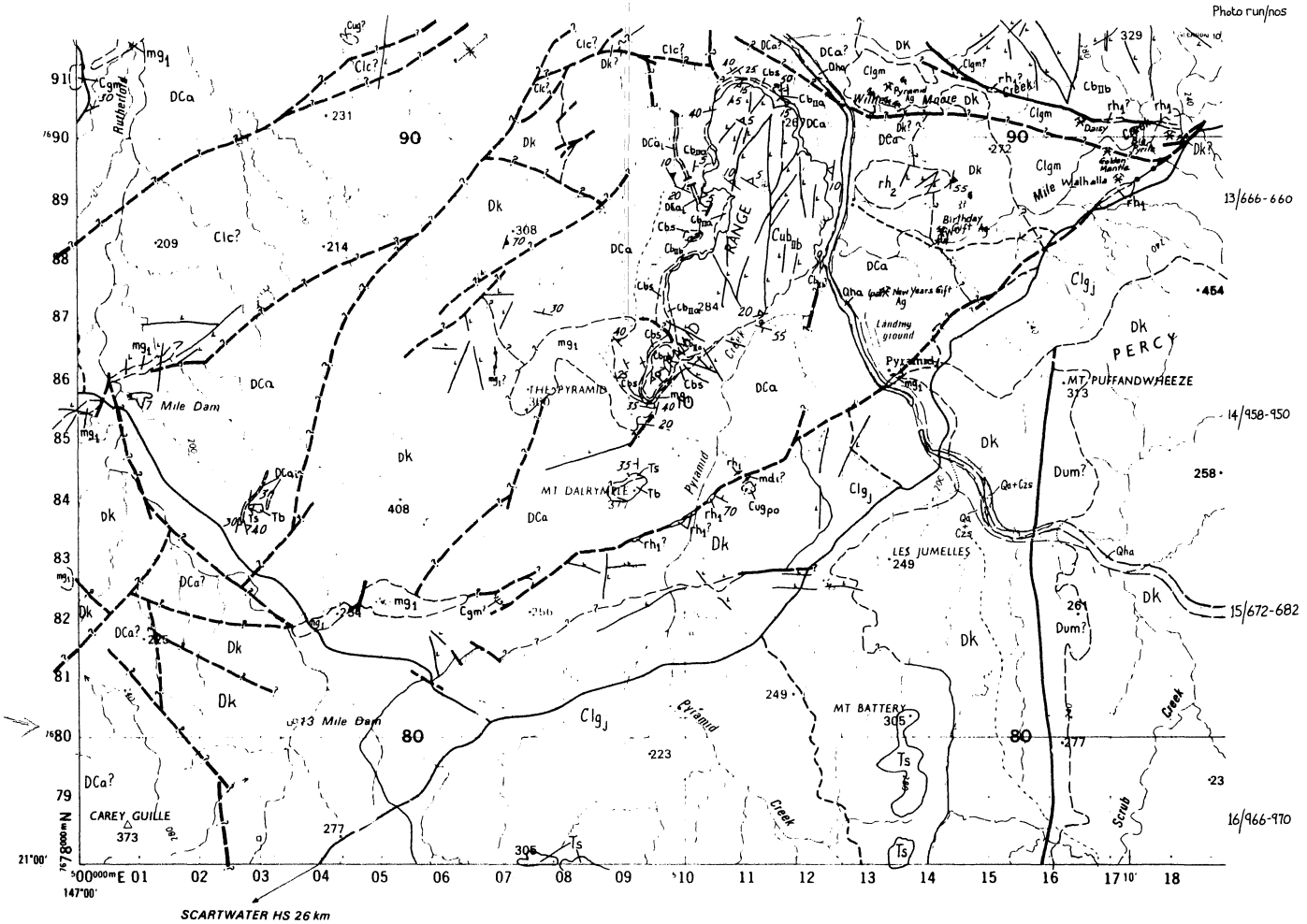
BULGONUNNA VOLCANICS

Geology: S R Law. 1987 1988; D Wyborn. 1988 1989. B S Oversby. 1987 1988 1989.
J. McPhie. 1988

Compiled: P Corbett. B S Oversby

Scale 1:25 000

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources



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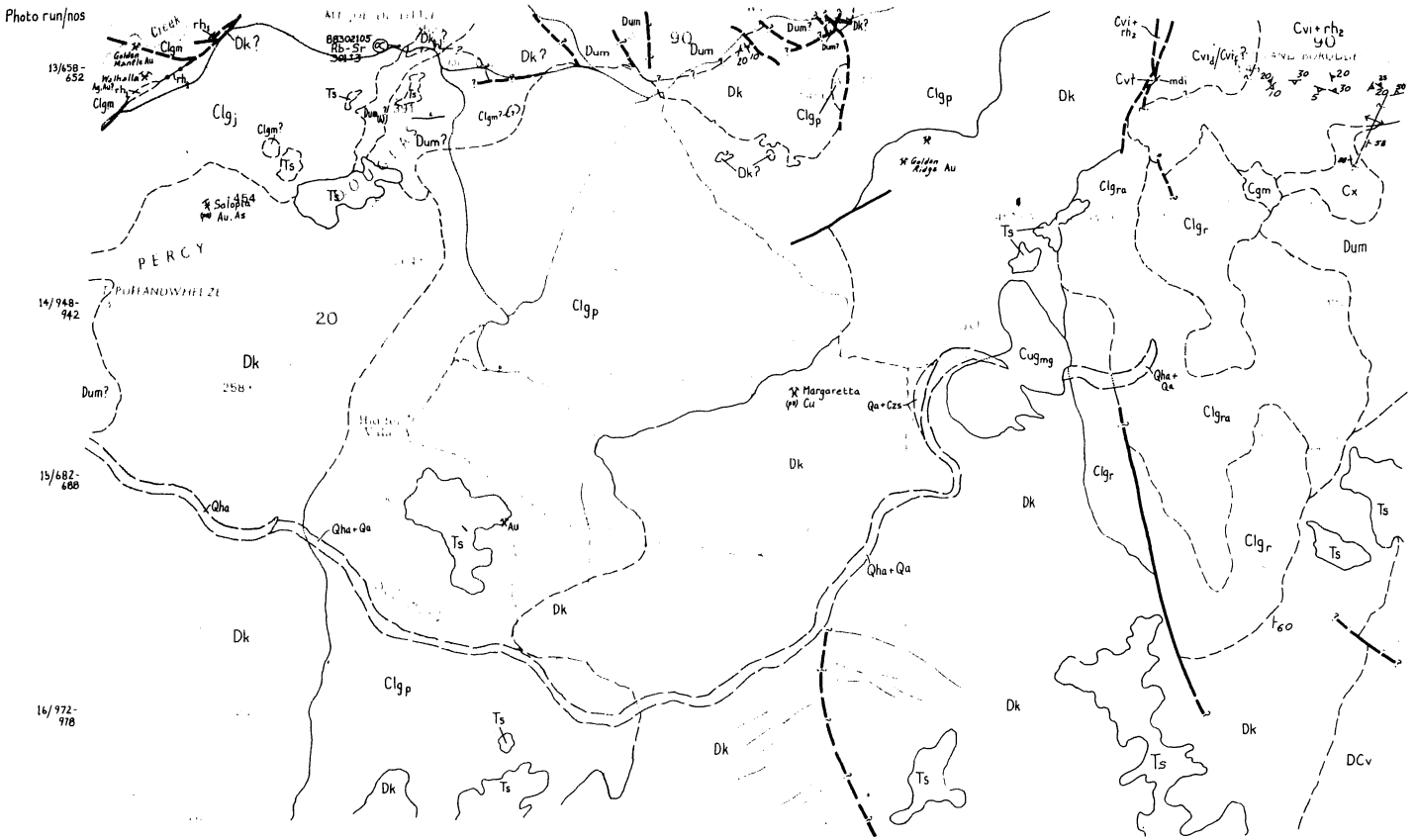
Geology: B.S. Oversby, 1986. D. Wyborn, 1988

Compiled: P. Corbett, B.S. Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



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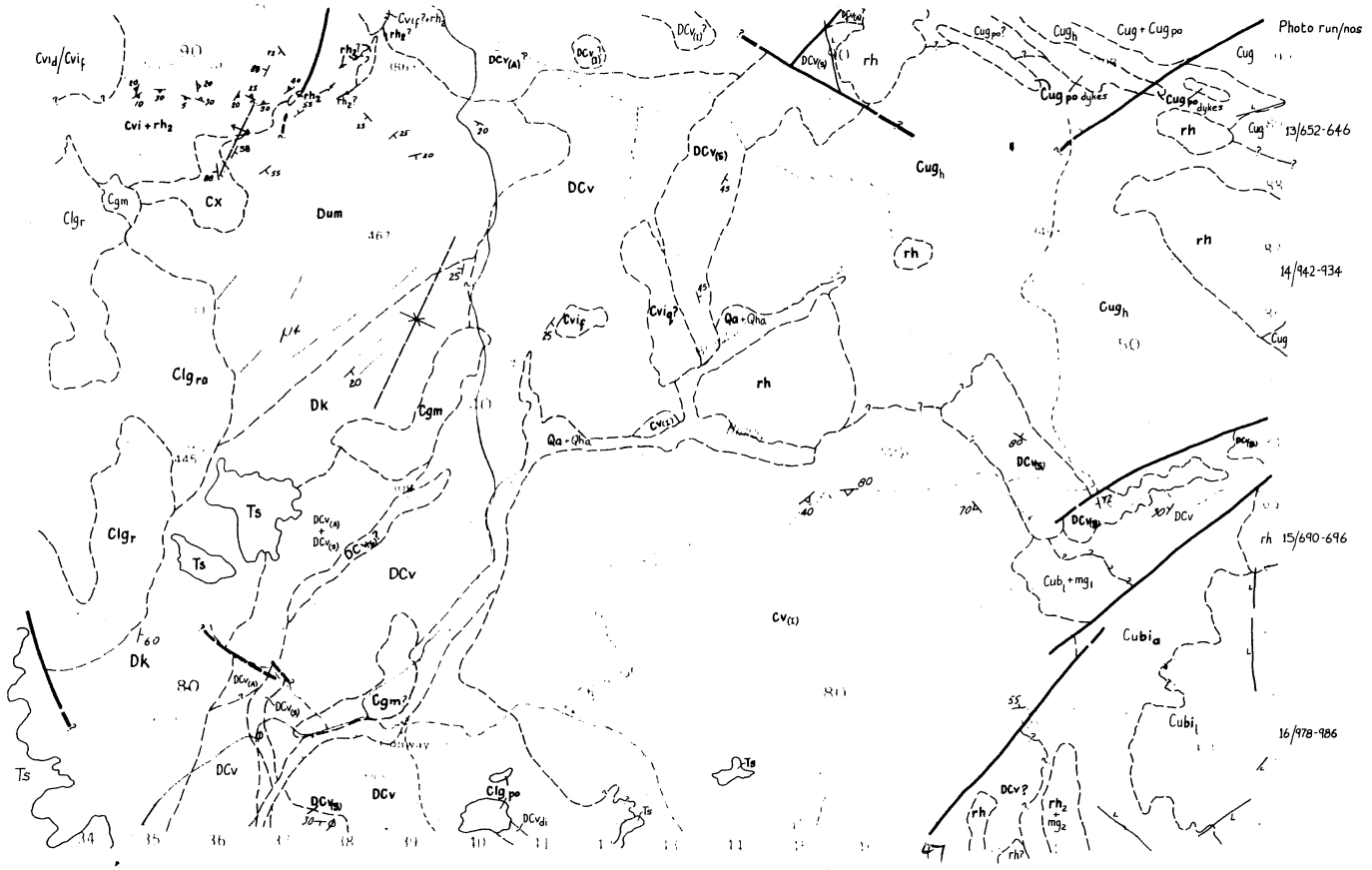
Geology. S R Law, 1987 1988. D Wyborn, 1988. B.S. Oversby. 1987 1988 1989

Compiled: P Corbett, B S Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources



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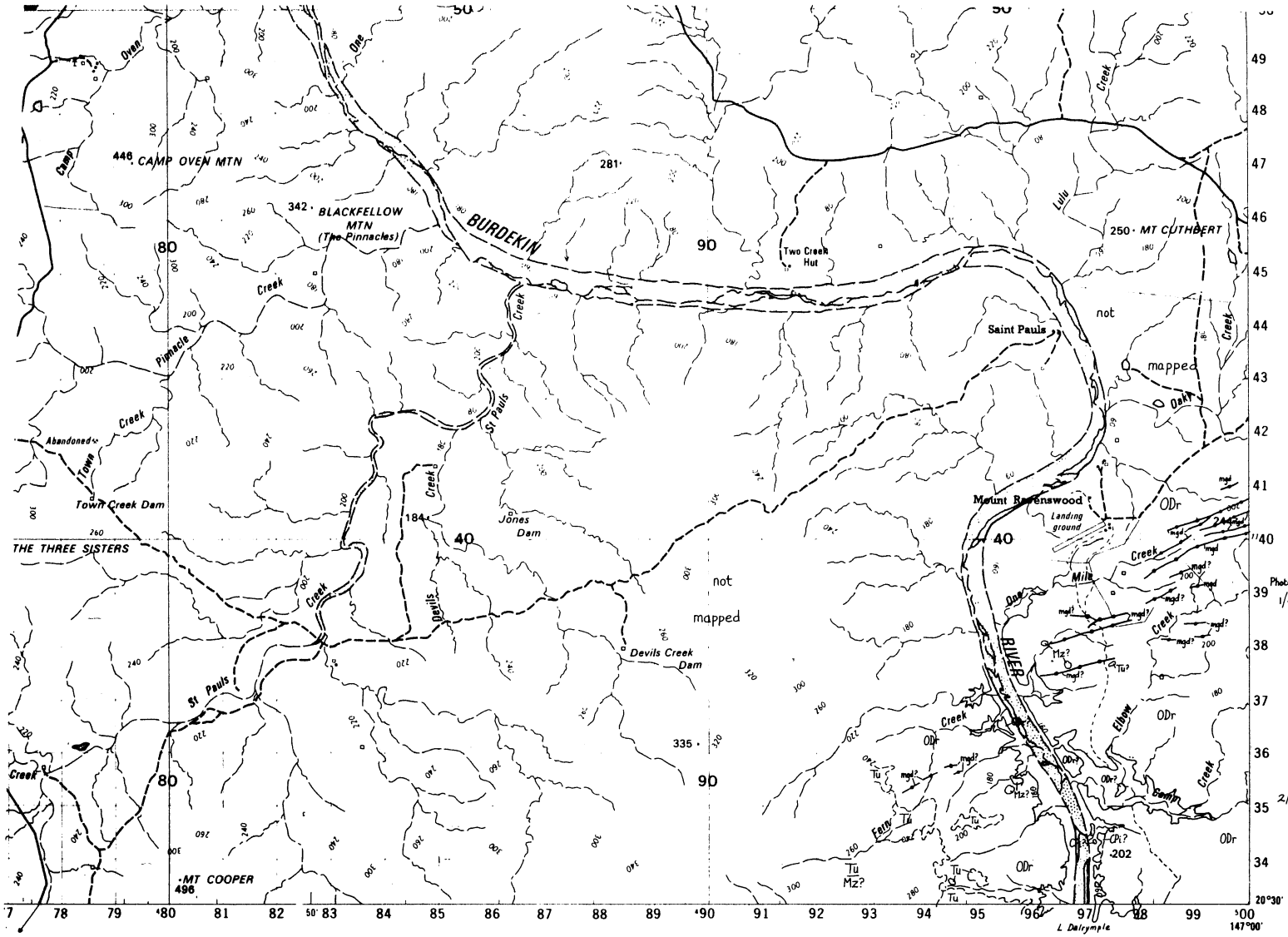
Geology: S.R. Law, 1988 ; D. Wyborn, 1988 1989; B.S. Oversby, 1987 1989

Compiled: P. Corbett, I. Chertok, B.S. Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS



RAVENSWOOD 5267
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Geology D.E. MacKenzie, 1966

Compiled P Corbett, B.S. Oversby

Scale 1:26 090

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not mapped
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not mapped
MT GLENROY
573
423
Stones Creek
Breakfast Creek
Glenroy Creek
Camp Creek
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1/456-448
2/740-734
BULGONUNNA VOLCANICS
STRATHALBYN 8357
1:100 000 Sheet area
Geology: D E Mackenzie, 1986 1989, B S Oversby, 1989
Compiled: P Corbett, B S Oversby
Scale 1:25 000
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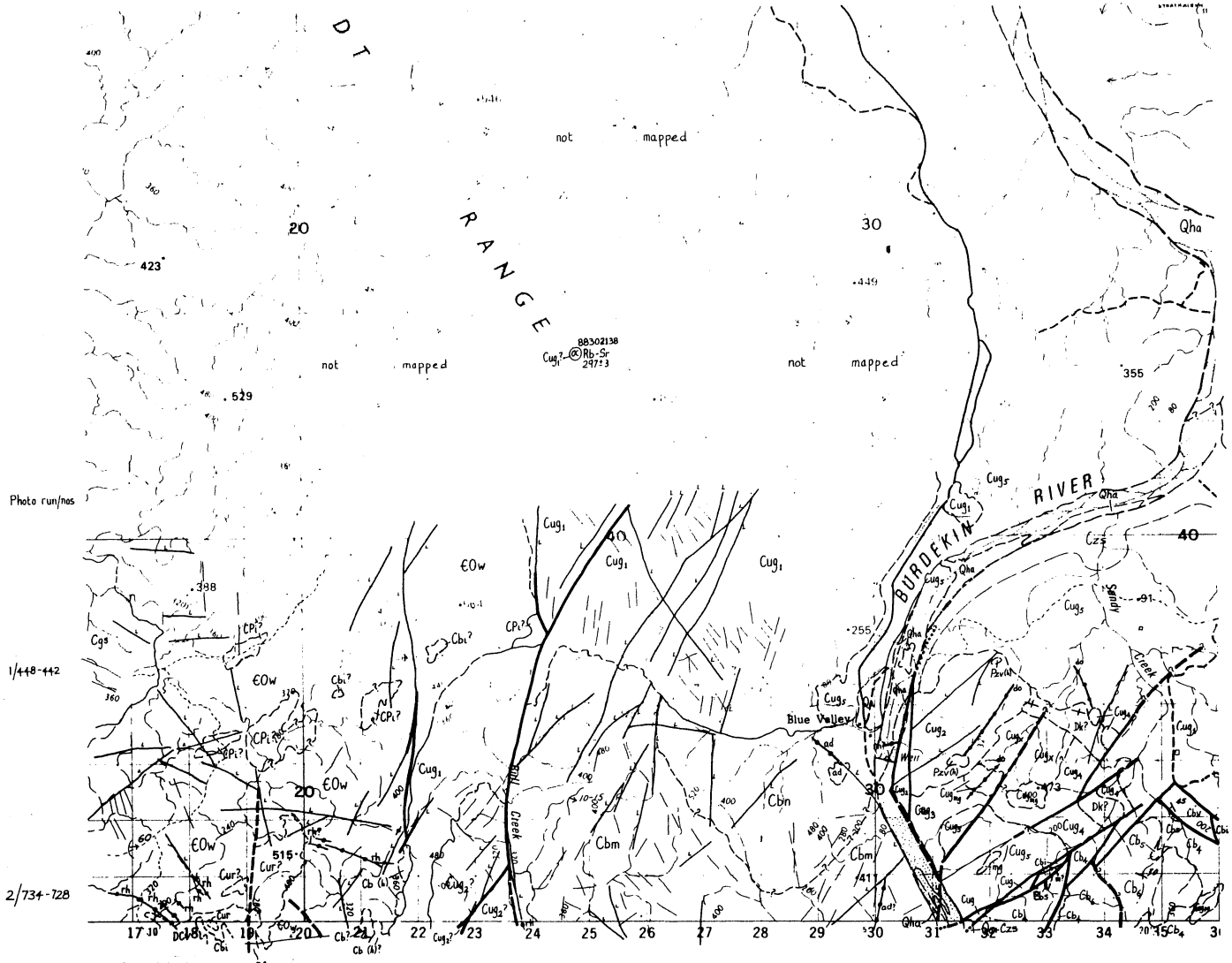

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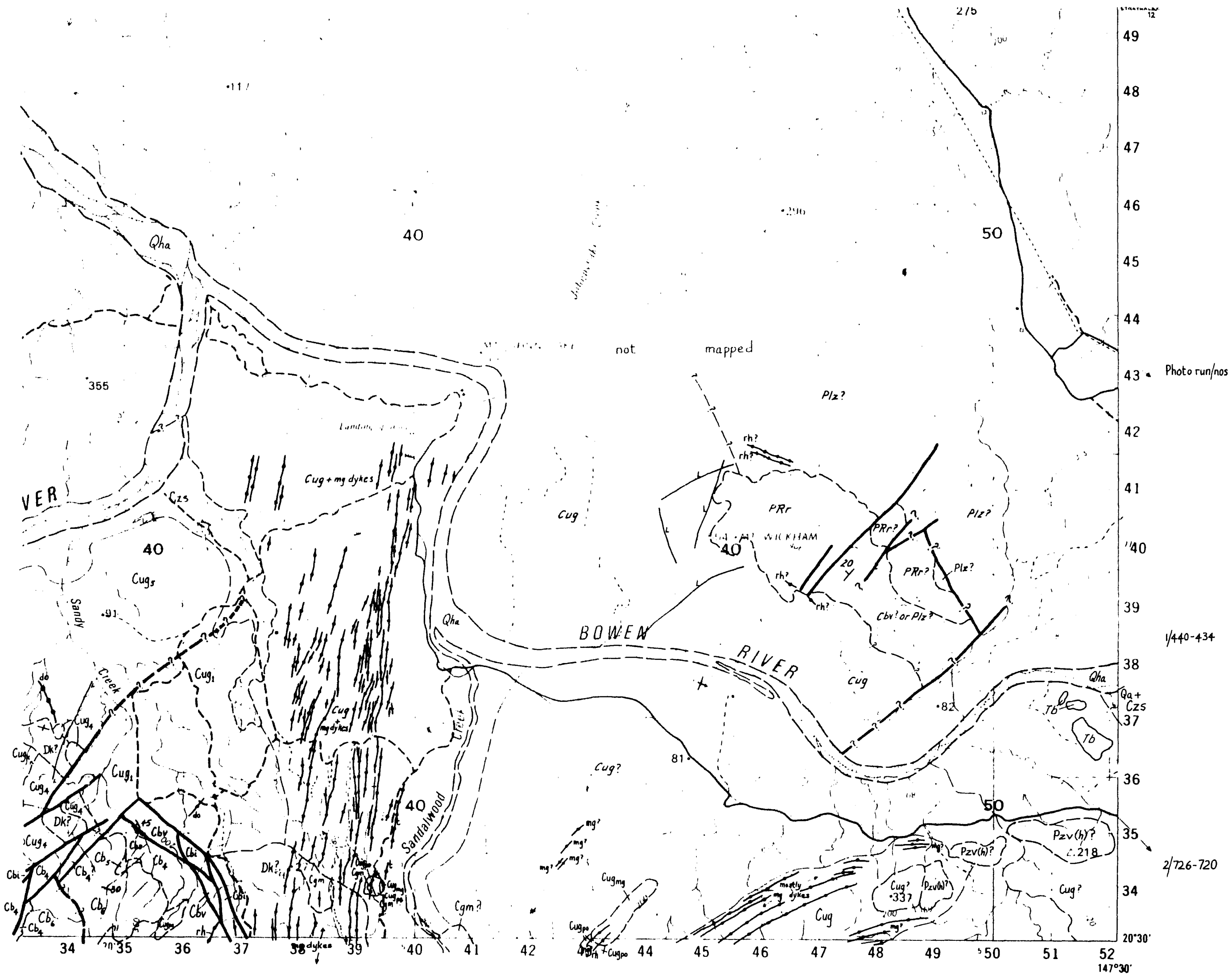

STRATHALBYN 8357

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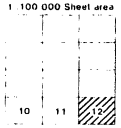

Geology: J. McPhie, 1988 1989; D. Wyborn, 1988

Compiled: P Corbett, B S Oversby

Scale 1 28 090

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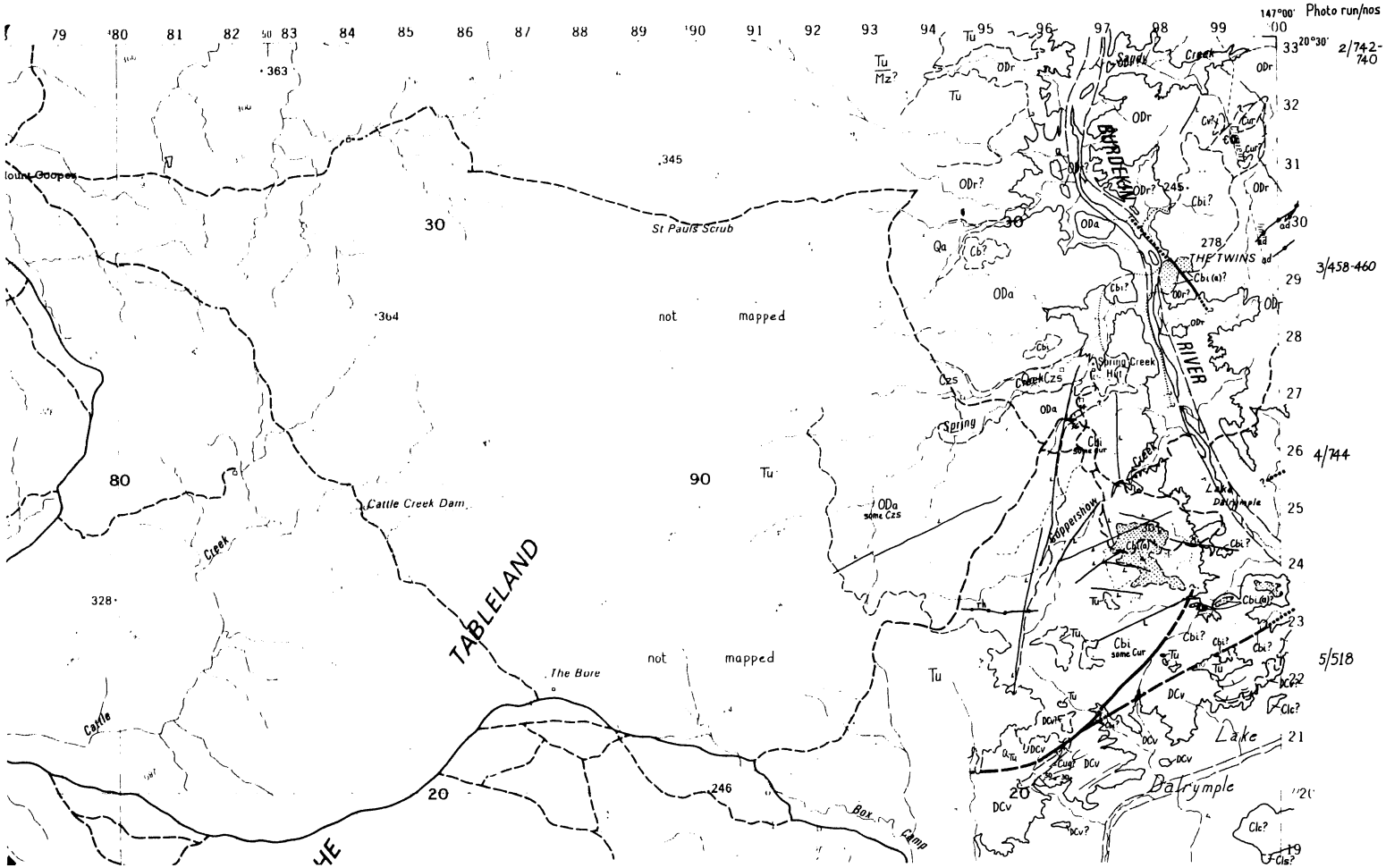

HARVEST HOME 5256

1 : 100 000 Sheet area

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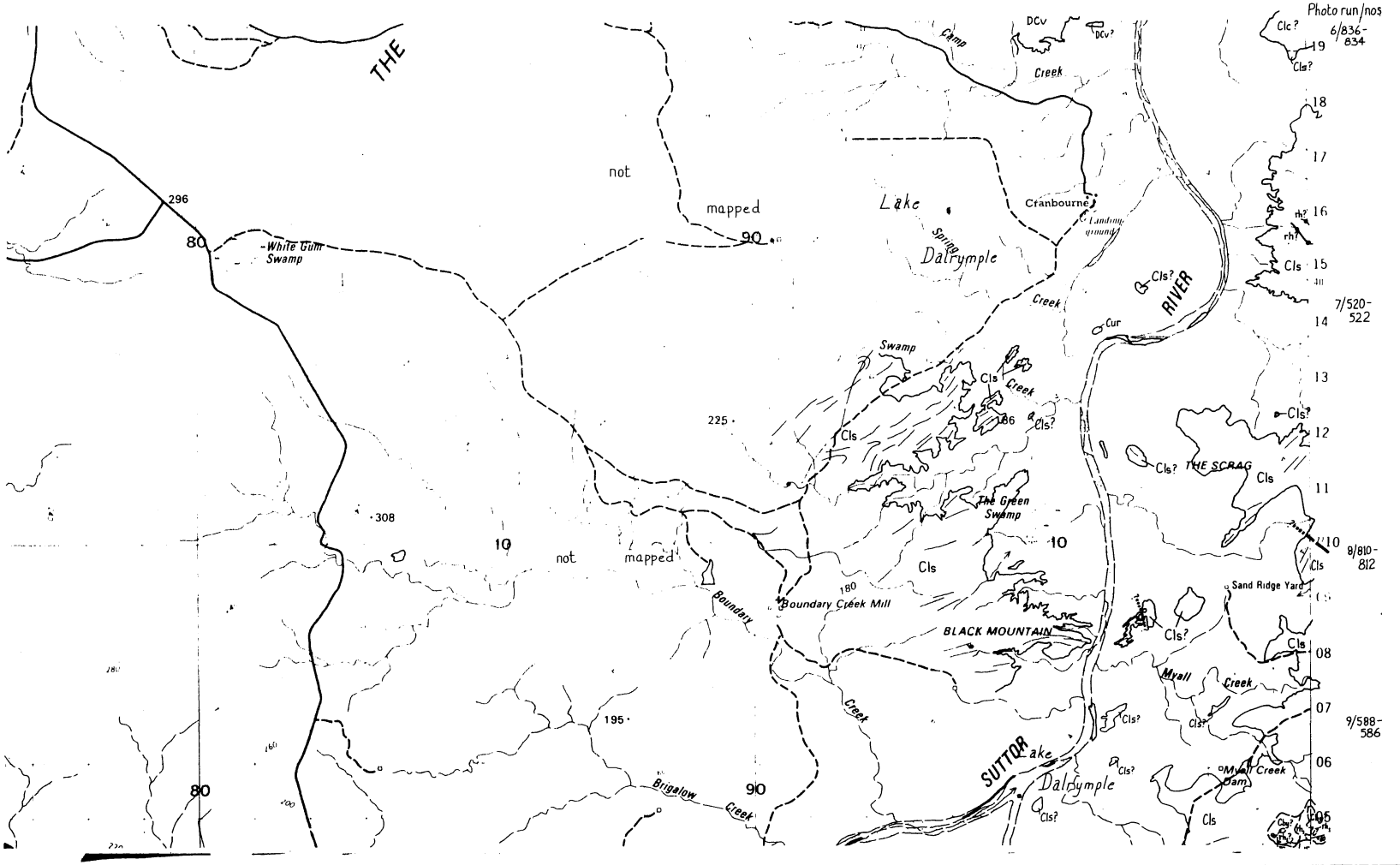
Geology: D E MacKenzie, 1966 1969

Compiled: P Corbett, B S Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS



HARVEST HOME 8256
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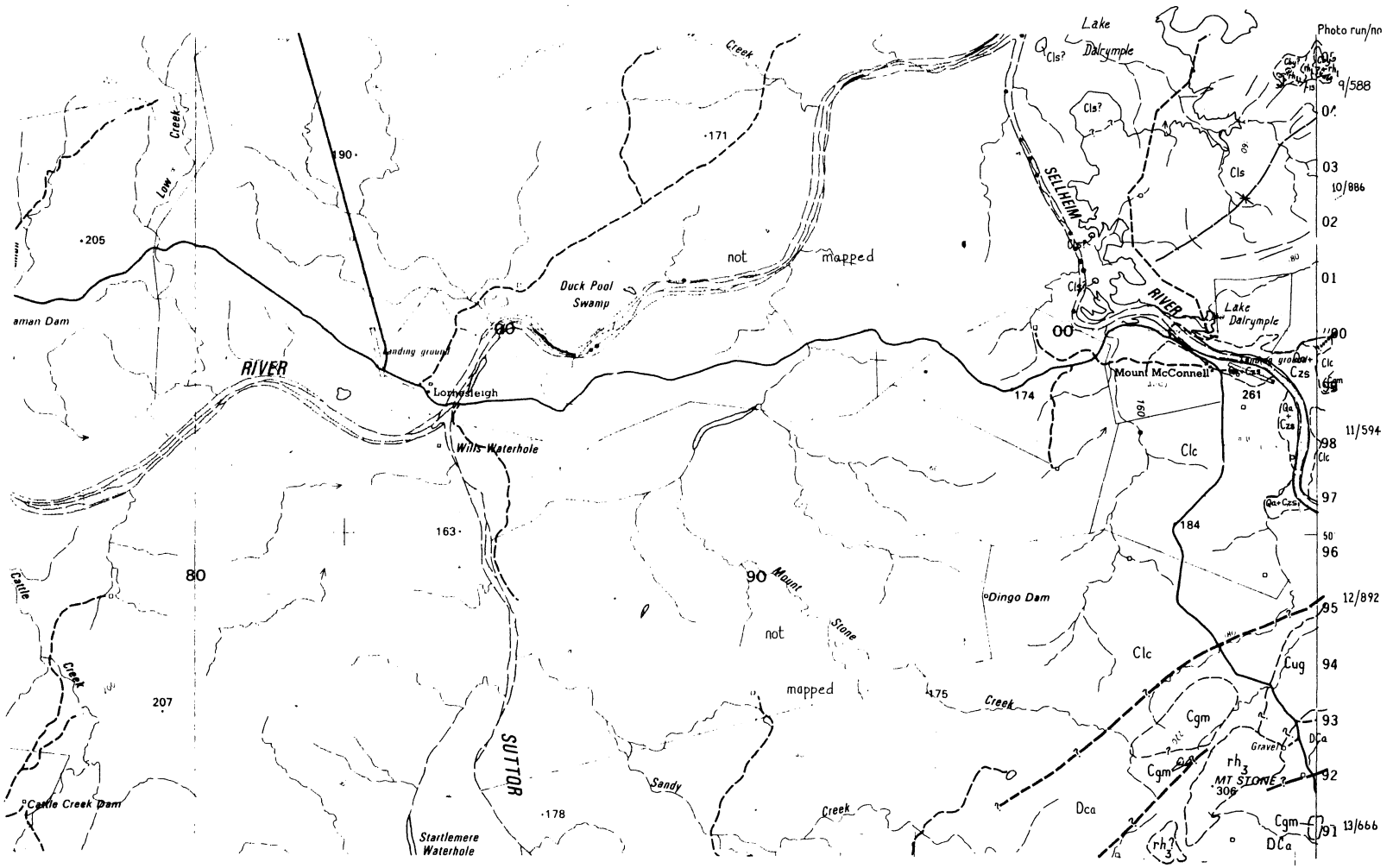
Geology D.E. MacKenzie, 1966 1969; B.S. Oversby, 1969

Compiled P Corbett, B.S. Oversby

Scale 1:26 080

BULGONUNNA VOLCANICS



HARVEST HOME 5256

1:100 000 Sheet area

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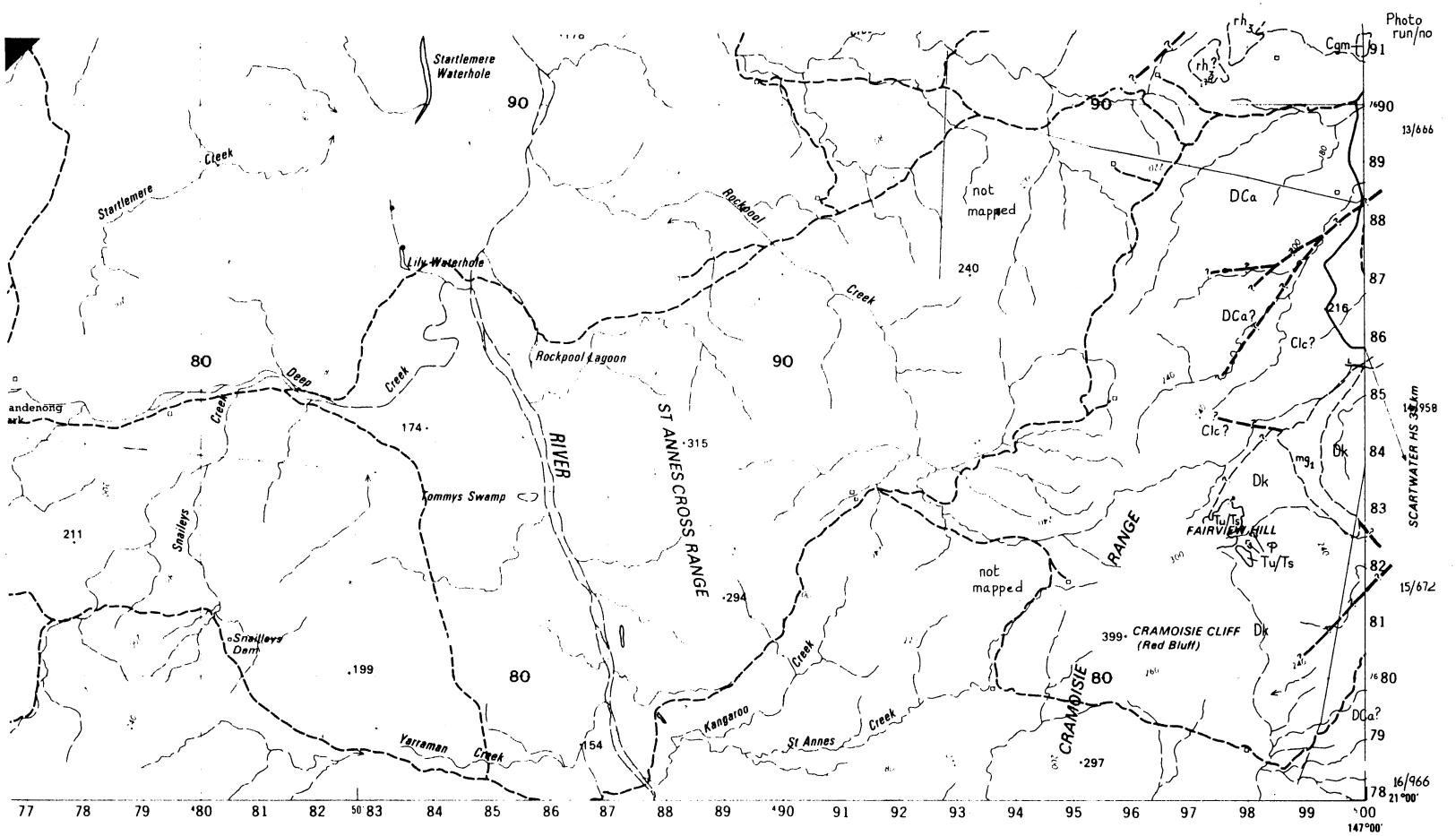
Geology B S Oversby, 1988 1989

Compiled P Corbett, B S Oversby

Scale 1:26 080

BULGONUNNA VOLCANICS



HARVEST HOME 8256

1:100 000 Sheet area

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Geology B S Oversby, 1986

Compiled P Corbett, B S Oversby

Scale 1:26 000

BULGONUNNA VOLCANICS

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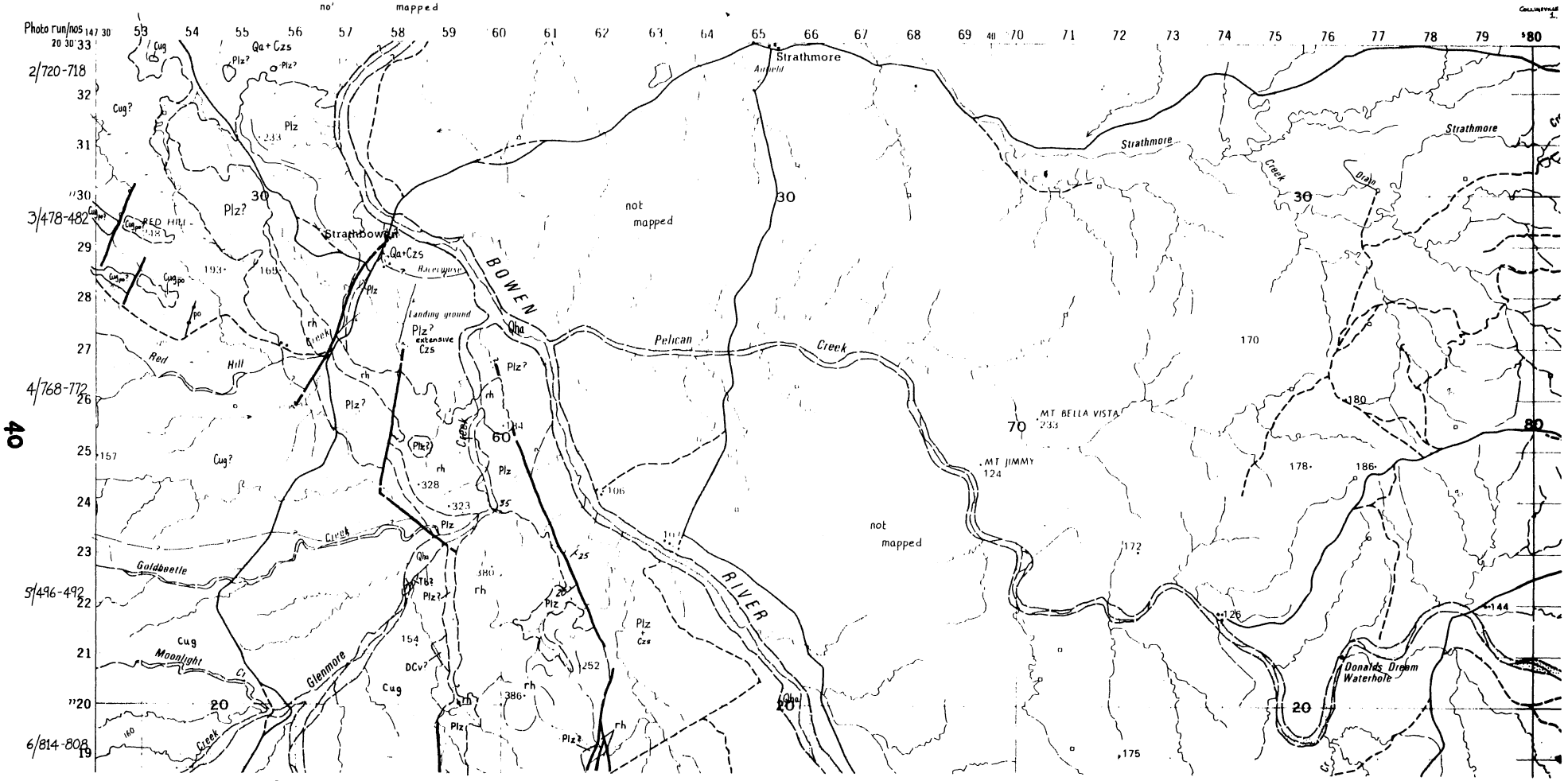

COLLINSVILLE 8456

1:100 000 Sheet area

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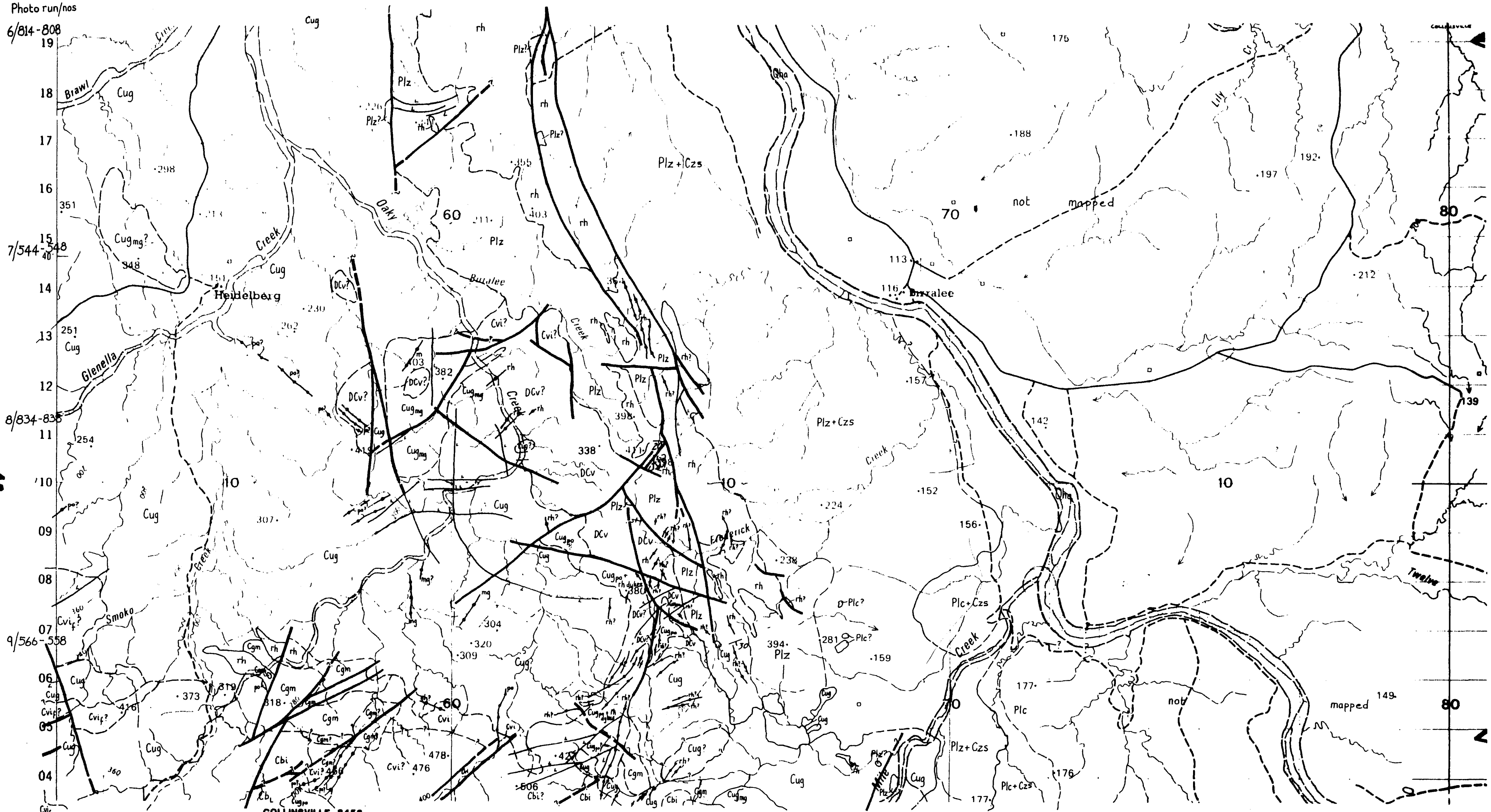
Geology: J. McPhie, 1989

Compiled: P. Corbett, B. S. Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



COLLINSVILLE 8456

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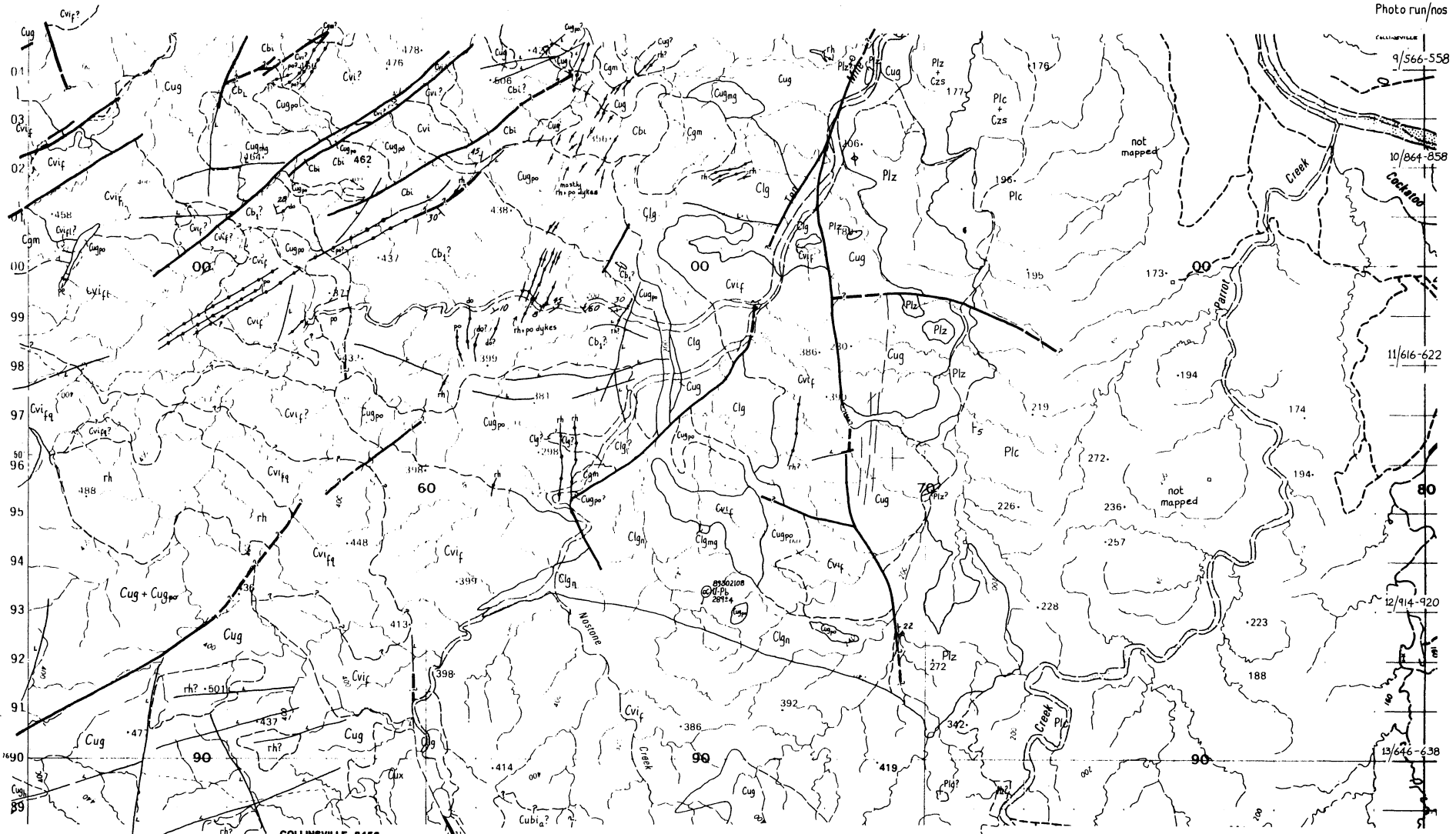
BULGONUNNA VOLCANICS

Geology: J. McPhie, 1989; S.R. Law, 1988; D. Wyborn, 1989

Compiled: P. Corbett, B.S. Oversby

Scale 1 : 28 090

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



COLLINSVILLE 8456
1:100 000 Sheet area

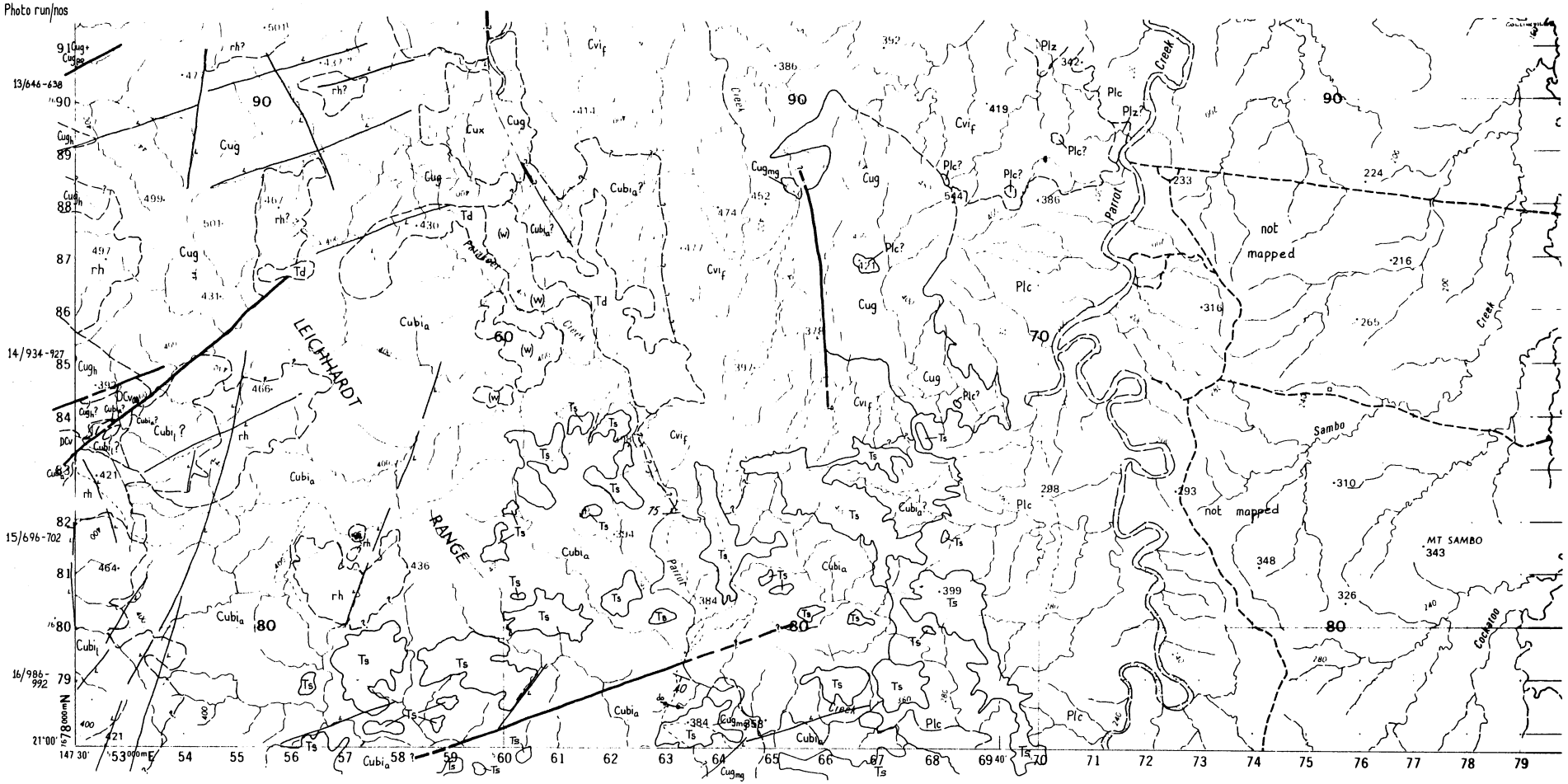
Geology: S.R. Law, 1988; D. Wyborn, 1989; J. McPhie, 1989

Compiled: P. Corbett, B. S. Oversby

Scale 1 : 28 090

BULGONUNNA VOLCANICS

Compiled by the Bureau of Mineral Resources, Geology and Geophysics, in collaboration with the Geological Survey of Queensland, Department of Mines as part of the policy of Government to assist in the exploration and development of mineral resources.



COLLINSVILLE 8456
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Geology: S R Law, 1986; D Wyborn, 1989

Compiled: P. Corbett, B.S Oversby

Scale 1 : 25 000

BULGONUNNA VOLCANICS

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