

## THE MOUNT ISA 1:250 000 SHEET AREA

*Gold* has been worked in one area only - the May Downs deposits, near Mine Creek. Total production from 242 tons was 1003 oz. The Mount Isa ores contain no recoverable gold.

## THE CLONCURRY 1 :250 000 SHEET AREA

The chief sources of gold have been small reef workings in the Soldiers Cap area, south-east of Cloncurry, and copper-gold ores. Reef gold has been mined also in the Bower Bird/Sunday Gully area (in the north-west of the Sheet area); and gold has been won from the ?Upper Proterozoic Quamby Conglomerate, near Mount Quamby. This gold is probably of hydrothermal origin, but may be detrital. Alluvial gold has been won from each of the localities referred to above and also from an area 9 miles west-south-west of Cloncurry.

The total recorded production of gold from the Cloncurry Mineral Field to the end of 1954 is 102,043 ounces. Of this amount over 60,000 ounces was obtained from the ores of the main copper mines outside the Cloncurry Sheet area. Most of the rest was mined from the Cloncurry Sheet area. It includes 3,277 ounces of gold obtained from copper ores (average grade of recovery 0.48 dwt/ton). In the period 1931-1942 3,061 ounces of gold were obtained from 3,021 tons of gold ore, other than copper-gold ore; this represents 90 per cent of the total production from such ore for the whole of the field.

## THE URANDANGI 1:250 000 SHEET AREA

A minor *gold* rush to the headwaters of Jayah Creek occurred when gold was reported 6 miles east of Jayah Bore, but no production appears to have been recorded.

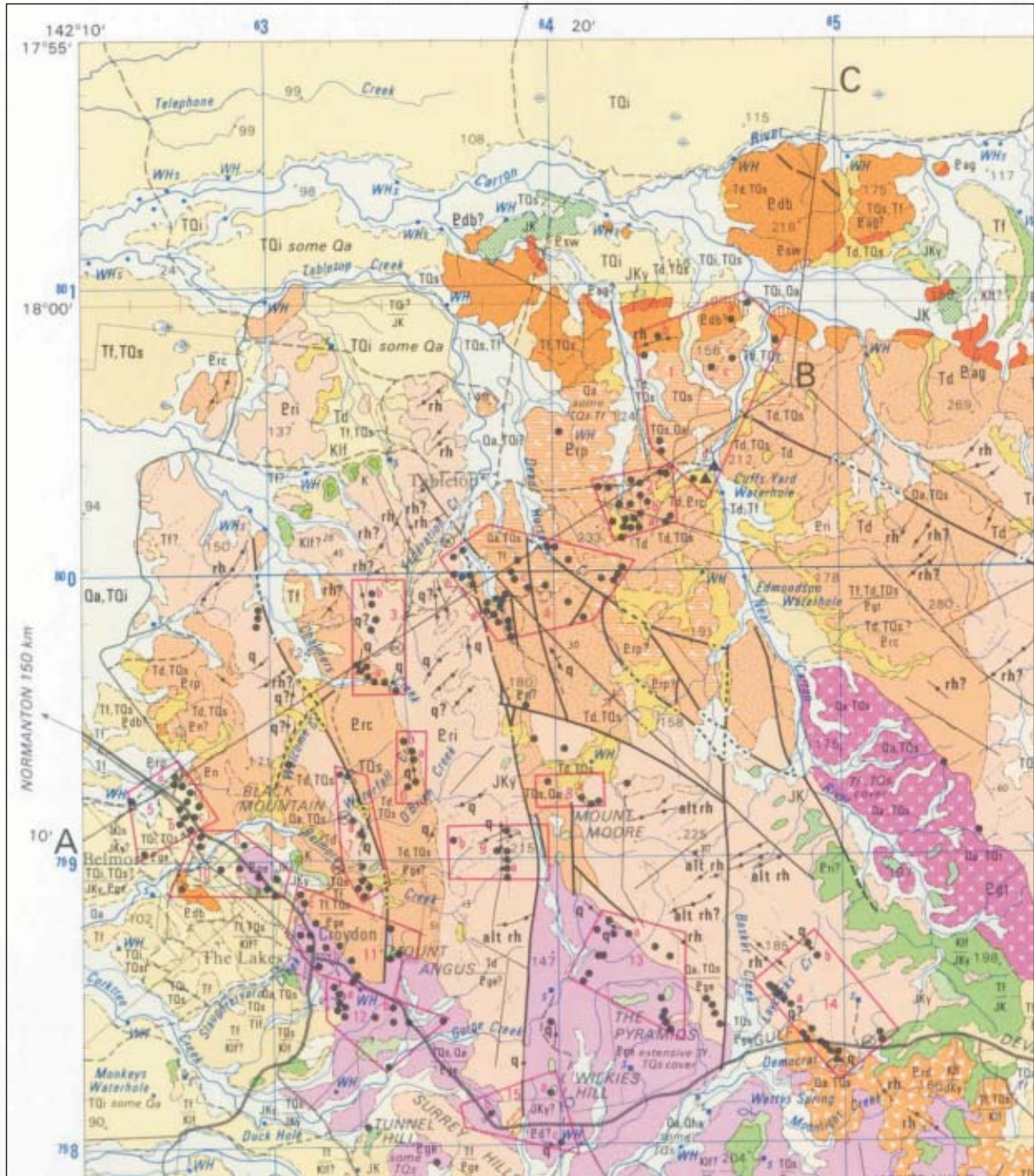
## THE DUCHESS 1:250 000 SHEET AREA

*Gold* has come almost entirely from copper-gold orebodies. The few gold workings have only yielded a few tens of ounces of gold. No gold production, apart from that from the Trekelano copper mine, has been recorded for over twenty years.

## THE CROYDEN 1:250 000 SHEET AREA

The Croydon Gold and Mineral Field was worked principally for gold, mainly between 1885 and 1906. At least 110 mines operated. Individual mines have been discussed by Reid, Clappison and Dickinson. The goldfield was discussed in a review by Edwards on which the next three paragraphs are based.

The lodes in granite are of sheared granite and graphitic granite up to 9m wide, and are traversed by numerous quartz veins and reefs. Ore shoots in the lodes appear to occur: (i) at the intersection of the lodes with belts of graphitic granite; (ii) on the south-west sides of the intersections of the lodes with north-west striking, west-dipping, reverse faults; and (iii) in association with small



**Portion of the 1:250 000 scale geological map "Geology of the Croydun Region", showing old mine workings**

- |                                   |                                 |  |                                   |
|-----------------------------------|---------------------------------|--|-----------------------------------|
| <b>1</b> CARRON RIVER GROUP       | <b>a</b> Golden Gate            | <b>b</b> Content                       | <b>15</b> CROYDON KING GROUP      |
| <b>a</b> Gilded Rose              | <b>b</b> Banner of Freedom      | <b>11</b> QUEEN OF CROYDON             | <b>a</b> Richmond                 |
| <b>b</b> Vanderbilt               | <b>c</b> Nancy Lee              | <b>a</b> Iguana                        | <b>b</b> King of Croydun          |
| <b>c</b> Sarina Gem Reef          | <b>6</b> HOMEWARD BOUND GROUP   | <b>b</b> Lady Mary                     | <b>c</b> Morning Light            |
| <b>d</b> Carron Tin Workings      | <b>a</b> Waterfall              | <b>c</b> La Reine D'Or (Croydon Queen) | <b>16</b> Moonstone               |
| <b>2</b> GOLDEN VALLEY GROUP      | <b>b</b> Homeward Bound         | <b>12</b> HIGHLAND MARY GROUP          | <b>17</b> Croydun Hope            |
| <b>a</b> King of Wallabadah       | <b>7</b> MOUNTAIN MAID GROUP    | <b>a</b> Highland Mary and Caledonia   | <b>18</b> MOUNT CASSITERITE GROUP |
| <b>b</b> Australian Beauty        | <b>a</b> Mountain Maid and Babe | <b>b</b> Harp of Erin                  | <b>a</b> The Queen                |
| <b>3</b> TWELVE MILE GROUP        | <b>8</b> MULLIGAN GROUP         | <b>13</b> BOOMERANG GROUP              | <b>b</b> Mt Cassiterite           |
| <b>a</b> Maybelle                 | <b>a</b> MacArthur              | <b>a</b> Problem                       | <b>19</b> STANHILLS GROUP         |
| <b>b</b> Rising Sun               | <b>9</b> MARK TWAIN GROUP       | <b>14</b> EMPRESS GROUP                | <b>a</b> Comet                    |
| <b>4</b> TABLETOP GROUP           | <b>a</b> Mark Twain             | <b>a</b> C.D. Roe Reef                 | <b>b</b> Brilliant                |
| <b>a</b> Federation and Mt Morgan | <b>b</b> Ironclad               | <b>b</b> Wanderer                      | <b>c</b> Mauretania               |
| <b>b</b> Happy Jack               | <b>10</b> SUNSET GROUP          | <b>c</b> Eureka                        |                                   |
| <b>c</b> Bobby Dazzler            | <b>a</b> True Blue              |  |                                   |
| <b>5</b> GOLDEN GATE GROUP        |                                 |  |                                   |

drag-folds that affect the course of the lode They also appear to develop where reefs on shears intersect one another.

Orebodies in the volcanics ('felsites' ) are simple quartz reefs. Those dipping from 15 to 45°E are up to 45 m thick; vertical reefs do not exceed 1m.

Production from the field between 1886 and 1935 was 23675kg (761 167 fine oz) of gold and 25 008kg ( 804 023 fine oz) of silver, including that derived from the retreatment of tailing by cyanidation. A little more has been won since. Gold lodes in the Esmeralda Granite are richer in silver than those in the Croydon Volcanics, and native silver has been found only in the granite areas. Gold from lodes in the granite averaged about 536 fine. varying from 280 to 885; in the volcanics the average was 737, ranging from 533 to 857. Fine gold grades varied from 169 to 498 g/tonne ( 10 7 to 315 dwt/ton) in lodes in granite, and from 10.9 to 38.9 g/tonne (6.9 to 24.6 dwt/ton) in lodes in the volcanics.

Lodes could not be worked economically below 90m in the volcanics and 150m in the granite. Many had petered out altogether at these depths; others terminated against west-dipping faults. To encourage prospecting the Queensland Department of Mines (1959) drilled 16 holes totalling 2234m between 1936 and 1939; no commercial mineralization was encountered. Geophysical surveys in some reef areas by Rayner & Nye and Richardson & Rayner indicated targets for further exploration.

The goldfield has been virtually unworked since World War II, although leases have been taken out from time to time. A little alluvial gold was won in the early days of the field.