

## TUMBLING DICE

The Tumbling Dice area is approximately 1.5 km. SW of the Moline plant and has been considered prospective since a 1984 aeromagnetic survey located a number of "bullseye" anomalies over a Moline Dam type chert-shale-(greywacke) sequence with quartz-limonite veining and anomalous gold rock chip geochemistry.

Limited costeaning and one RC drillhole in 1986 offered encouragement for further work. Three RC holes tested a circular magnetic anomaly at the north end of the prospect (in an area then referred to as "Cowbell") in 1986. Substantial pyrrhotitic chert/shale intersected in the holes did not contain anomalous gold values.

The target sequence is considered a probable folded repetition of the Moline Dam and Southern Hercules mineralised sequences. The 1989 exploration programme comprised gridding, geological mapping, soil/costean/rock-chip geochemistry, substantial RC drilling and one HQ<sub>3</sub> core hole.

### Gridding

A 2500 metre area was gridded on a 50 x 25 metre basis initially with some selective 25 x 25 metre infill. A total of 36.8 line km. was involved.

### Geological Mapping/Rock Chip Sampling

The gridded area was mapped at 1:1,000 scale and 162 rock chip samples collected. Enclosures 13-17 inclusive are geological fact maps showing rock chip geochemistry while provisional stratigraphic divisions, drill-indicated gold mineralisation and zones of interest delineated by soil, rock chip and costean work are shown on enclosures 18-20. Rock chip assay and lithological data are presented in appendix 1.

### Magnetometer Survey

The main part of the grid was magnetically surveyed. Contoured data is shown on figure 3 and enclosures 21-23 and, with computer manipulated data, shown as part of the magnetic interpretation attached as appendix 7.

The magnetometer interpretation, by Cyprus geophysicist S. Collins, suggests that source for the high intensity magnetic anomaly at the north end of the prospect (in the former "Cowbell" area) is probably at a different stratigraphic level to the sources of the lower intensity anomalies in the central-southern part of the prospect, (the area of most interest for gold mineralisation). The anomaly sources could, however, be in the same unit displaced by faulting.

15 400N

14 400N

13 400N

11 300E



## TUMBLING DICE

GROUND MAGNETICS

NOT TO SCALE

### Soil Geochemistry

The complete grid area was soil sampled on a 50 x 25 metre basis and complete gold-arsenic-silver-copper-lead-zinc results as well as gold, arsenic and zinc contours are shown on enclosures 23-38.

Laboratory result sheets are contained in appendix 6. The data show multiple zones of gold anomalism, with values up to 1300 ppb, as well as arsenic and zinc anomalies which may or may not be coincidental.

### Costeaning

Approximately 3.9 km. of costeaning was dug to further assess extensive zones of soil gold anomalism located by the soil sampling. Costean locations are shown on the geological plans, on the soil geochemical plans included as enclosures 45 and 46 and on drillhole costean location plans included as enclosures 42-44. Geological mapping of the costeans and gold assays are shown on enclosures 1:250 scale 39-41. Costean gold intersections are shown as part of Table 2.

### Drilling

A total of 4754 metres of drilling in 100 RC holes and one shallow HQ<sub>3</sub> core "twin" hole, have partially drill-tested the area. Drilling was generally at 15 metre spacings on grid lines 25 or 50 metres apart.

Drillhole locations are shown on enclosures 42-44, and on the geological plans, while enclosures 47-84 are 1:250 scale drill sections showing complete drillhole location, depth, assay and lithological data as well as interpreted ore zones.

Drillhole collar locations and RL's were ascertained by a surveyor (and are shown on the drillhole collar summary presented as Table 1.) but no down hole survey data was collected. (The mining division subsequently carried out some downhole surveys but the data are not included in this report).

Drill logs are included as part of appendix 3, gold analyses as part of appendix 4 and available additional analyses (arsenic-silver-copper-lead and zinc as well as repeat gold) as part of appendix 5. Drillhole intersections (0.5 g/t cut off) are shown on table 2, while intersections, RL's of the intersection points and gold factor (gold grade x width) contours are shown on the 1:500 scale longitudinal sections presented as enclosures 85-88.

As can be seen from table 2, there are some significant intersections near surface in the northern part of the area drilled and (regrettably) at greater depth further south. The longitudinal sections appear to show the mineralisation plunging fairly shallowly to the south.

TABLE 1.

## TUMBLING DICE

Surpac - DRILL HOLE COLLAR SUMMARY - \CNO database

| HOLEID | NORTHING | EASTING  | R.L.   | DEPTH | DIP    | AZIMUTH |
|--------|----------|----------|--------|-------|--------|---------|
| MRC520 | 13799.60 | 11369.70 | 135.50 | 42.00 | -60.00 | 90.00   |
| MRC521 | 13800.00 | 11335.60 | 133.00 | 48.00 | -63.00 | 90.00   |
| MRC522 | 13999.60 | 11298.80 | 133.90 | 76.00 | -60.00 | 90.00   |
| MRC523 | 14100.60 | 11330.10 | 140.00 | 53.00 | -60.00 | 90.00   |
| MRC524 | 14297.00 | 11295.60 | 145.70 | 60.00 | -60.00 | 90.00   |
| MRC525 | 14450.10 | 11270.20 | 146.00 | 48.00 | -60.00 | 90.00   |
| MRC526 | 14500.00 | 11270.60 | 144.60 | 40.00 | -60.00 | 90.00   |
| MRC527 | 14550.00 | 11245.30 | 137.90 | 66.00 | -60.00 | 90.00   |
| MRC528 | 14596.20 | 11240.10 | 133.80 | 66.00 | -60.00 | 90.00   |
| MRC529 | 14600.00 | 10985.50 | 152.00 | 72.00 | -60.00 | 90.00   |
| MRC530 | 14698.10 | 10980.70 | 160.10 | 90.00 | -60.00 | 90.00   |
| MRC531 | 14999.70 | 11155.80 | 141.00 | 60.00 | -60.00 | 90.00   |
| MRC532 | 15000.00 | 11119.40 | 140.10 | 66.00 | -60.00 | 90.00   |
| MRC533 | 15000.10 | 11006.20 | 135.00 | 60.00 | -60.00 | 90.00   |
| MRC534 | 15449.00 | 10920.30 | 124.30 | 48.00 | -60.00 | 90.00   |
| MRC552 | 13950.90 | 11309.30 | 133.80 | 66.00 | -60.00 | 90.00   |
| MRC553 | 14049.90 | 11320.10 | 139.80 | 93.00 | -60.00 | 90.00   |
| MRC554 | 13701.40 | 11294.00 | 141.60 | 36.00 | -60.00 | 90.00   |
| MRC555 | 13800.00 | 11316.00 | 135.90 | 50.00 | -60.00 | 90.00   |
| MRC556 | 13800.00 | 11345.70 | 132.70 | 18.00 | -60.00 | 90.00   |
| MRC557 | 13998.90 | 11327.60 | 136.70 | 48.00 | -60.00 | 90.00   |
| MRC558 | 13998.90 | 11313.70 | 135.90 | 60.00 | -60.00 | 90.00   |
| MRC559 | 14200.30 | 11290.10 | 141.30 | 54.00 | -60.00 | 90.00   |
| MRC560 | 14250.00 | 11295.00 | 143.00 | 48.00 | -60.00 | 90.00   |
| MRC561 | 14300.00 | 11310.00 | 150.00 | 24.00 | -60.00 | 90.00   |
| MRC562 | 14299.90 | 11282.00 | 144.40 | 54.00 | -60.00 | 90.00   |
| MRC563 | 14350.10 | 11279.90 | 148.40 | 60.00 | -60.00 | 90.00   |
| MRC564 | 14400.00 | 11265.00 | 147.60 | 42.00 | -60.00 | 90.00   |
| MRC565 | 14449.90 | 11282.90 | 146.50 | 18.00 | -60.00 | 90.00   |
| MRC566 | 14500.10 | 11279.90 | 145.20 | 36.00 | -60.00 | 90.00   |
| MRC567 | 14500.20 | 11242.20 | 141.30 | 42.00 | -60.00 | 90.00   |
| MRC568 | 14550.20 | 11260.20 | 139.30 | 18.00 | -60.00 | 90.00   |
| MRC569 | 14599.90 | 11250.10 | 133.60 | 24.00 | -60.00 | 90.00   |
| MRC589 | 13851.90 | 11194.00 | 133.80 | 42.00 | -60.00 | 90.00   |
| MRC590 | 13850.00 | 11323.60 | 130.70 | 72.00 | -60.00 | 90.00   |
| MRC591 | 13897.20 | 11323.70 | 131.40 | 60.00 | -60.00 | 90.00   |
| MRC592 | 13925.70 | 11324.70 | 132.30 | 48.00 | -60.00 | 90.00   |
| MRC593 | 13950.70 | 11321.30 | 134.20 | 48.00 | -60.00 | 90.00   |
| MRC594 | 13974.80 | 11324.70 | 134.70 | 48.00 | -60.00 | 90.00   |
| MRC595 | 14023.60 | 11324.50 | 139.20 | 54.00 | -60.00 | 90.00   |
| MRC596 | 14050.00 | 11332.10 | 140.80 | 42.00 | -60.00 | 90.00   |
| MRC597 | 14099.80 | 11343.20 | 140.40 | 18.00 | -60.00 | 90.00   |
| MRC598 | 14149.80 | 11309.90 | 141.10 | 60.00 | -60.00 | 90.00   |
| MRC599 | 14225.20 | 11295.20 | 142.50 | 66.00 | -60.00 | 90.00   |
| MRC600 | 14250.20 | 11280.20 | 140.10 | 72.00 | -60.00 | 90.00   |
| MRC601 | 14250.40 | 11309.80 | 143.70 | 42.00 | -60.00 | 90.00   |
| MRC602 | 14275.20 | 11294.80 | 142.50 | 48.00 | -60.00 | 90.00   |
| MRC603 | 14299.80 | 11317.50 | 150.50 | 18.00 | -60.00 | 90.00   |
| MRC604 | 14325.10 | 11294.50 | 148.20 | 42.00 | -60.00 | 90.00   |
| MRC605 | 14350.20 | 11297.10 | 149.50 | 36.00 | -60.00 | 90.00   |
| MRC606 | 14475.40 | 11265.10 | 144.60 | 30.00 | -60.00 | 90.00   |
| MRC607 | 14525.00 | 11260.10 | 141.60 | 30.00 | -60.00 | 90.00   |
| MRC631 | 13800.00 | 11351.40 | 133.00 | 24.00 | -60.00 | 90.00   |
| MRC632 | 13849.70 | 11340.20 | 131.20 | 54.00 | -60.00 | 90.00   |
| MRC633 | 14000.20 | 11281.80 | 132.20 | 84.00 | -60.00 | 90.00   |

TABLE 1. CONTINUED

## TUMBLING DICE

Surpac - DRILL HOLE COLLAR SUMMARY - \CNO database

| HOLEID  | NORTHING | EASTING  | R.L.   | DEPTH | DIP    | AZIMUTH |
|---------|----------|----------|--------|-------|--------|---------|
| MRC634  | 14024.90 | 11309.80 | 137.30 | 54.00 | -59.00 | 90.00   |
| MRC635  | 14025.10 | 11340.70 | 142.80 | 42.00 | -60.00 | 90.00   |
| MRC636  | 14049.90 | 11305.90 | 138.30 | 72.00 | -59.00 | 90.00   |
| MRC637  | 14049.90 | 11346.30 | 143.10 | 18.00 | -60.00 | 90.00   |
| MRC638  | 14150.10 | 11294.70 | 141.00 | 54.00 | -60.00 | 90.00   |
| MRC639  | 14149.90 | 11324.90 | 141.30 | 24.00 | -60.00 | 90.00   |
| MRC641  | 14199.80 | 11275.90 | 139.70 | 78.00 | -60.00 | 90.00   |
| MRC642  | 14224.90 | 11309.10 | 144.30 | 60.00 | -59.00 | 90.00   |
| MRC643  | 14224.90 | 11280.10 | 140.70 | 72.00 | -60.00 | 90.00   |
| MRC644  | 14249.80 | 11324.00 | 145.30 | 24.00 | -55.50 | 90.00   |
| MRC645  | 13999.70 | 11357.10 | 140.40 | 24.00 | -60.00 | 90.00   |
| MRC646  | 14274.80 | 11309.50 | 143.90 | 30.00 | -57.00 | 90.00   |
| MRC648  | 14275.00 | 11279.00 | 142.10 | 60.00 | -60.00 | 90.00   |
| MRC649  | 14325.20 | 11309.90 | 149.30 | 30.00 | -60.00 | 90.00   |
| MRC650  | 14325.10 | 11279.70 | 146.90 | 54.00 | -60.00 | 90.00   |
| MRC651  | 14350.20 | 11307.80 | 150.00 | 18.00 | -60.00 | 90.00   |
| MRC652  | 14450.20 | 11253.70 | 144.30 | 48.00 | -60.00 | 90.00   |
| MRC653  | 14475.70 | 11277.80 | 145.90 | 18.00 | -59.50 | 90.00   |
| MRC654  | 14475.00 | 11249.00 | 143.00 | 42.00 | -60.00 | 90.00   |
| MRC655  | 14499.90 | 11225.90 | 139.50 | 54.00 | -58.50 | 90.00   |
| MRC656  | 14524.80 | 11278.80 | 144.50 | 24.00 | -59.00 | 90.00   |
| MRC657  | 14524.70 | 11244.80 | 139.70 | 54.00 | -60.00 | 90.00   |
| MRC658  | 13950.80 | 11294.70 | 131.30 | 72.00 | -60.00 | 90.00   |
| MRC659  | 14000.00 | 11343.00 | 140.00 | 54.00 | -60.00 | 90.00   |
| MRC660  | 14200.00 | 11304.00 | 144.50 | 48.00 | -60.00 | 90.00   |
| MRC663  | 13974.90 | 11292.90 | 134.00 | 78.00 | -59.50 | 90.00   |
| MRC664  | 14273.00 | 11303.00 | 143.00 | 42.00 | -60.00 | 90.00   |
| MRC665  | 14024.90 | 11295.10 | 135.70 | 72.00 | -58.50 | 90.00   |
| MRC666  | 13775.00 | 11351.60 | 132.80 | 24.00 | -60.00 | 90.00   |
| MRC689  | 14125.00 | 11315.20 | 140.20 | 36.00 | -60.00 | 90.00   |
| MRC690  | 14174.70 | 11310.20 | 142.20 | 48.00 | -60.00 | 90.00   |
| MRC691  | 14225.00 | 11319.00 | 144.90 | 36.00 | -60.00 | 90.00   |
| MRC692  | 14250.10 | 11301.90 | 142.40 | 36.00 | -60.00 | 90.00   |
| MRC694  | 14500.10 | 11256.00 | 143.00 | 30.00 | -60.00 | 90.00   |
| MRC695  | 14975.00 | 11130.00 | 142.60 | 48.00 | -60.00 | 90.00   |
| MRC696  | 13875.00 | 11375.00 | 136.00 | 30.00 | -60.00 | 90.00   |
| MRC697  | 13724.90 | 11504.90 | 146.00 | 36.00 | -60.00 | 90.00   |
| MRC698  | 13800.10 | 11383.80 | 137.60 | 30.00 | -60.00 | 90.00   |
| MRC703  | 13875.00 | 11360.00 | 135.00 | 52.00 | -60.00 | 90.00   |
| MRC711  | 13825.00 | 11355.00 | 134.00 | 42.00 | -60.00 | 90.00   |
| MRC713  | 13850.00 | 11367.00 | 134.00 | 36.00 | -60.00 | 90.00   |
| MRC715  | 14024.80 | 11282.00 | 134.50 | 48.00 | -60.00 | 90.00   |
| MRC716  | 14199.80 | 11317.00 | 143.90 | 48.00 | -60.00 | 90.00   |
| MRC717  | 14524.80 | 11230.10 | 138.50 | 48.00 | -60.00 | 90.00   |
| MRC718  | 13850.00 | 11354.00 | 133.00 | 42.00 | -60.00 | 90.00   |
| MRCD647 | 14275.00 | 11303.00 | 143.00 | 40.00 | -60.00 | 90.00   |

Drill Statistics :

Roller = 5.50 m  
 100x RCP = 4714.00 m  
 1x Diamond = 34.50 m

TOTAL = 4754.00 m

NOTE:

Azimuth 90.00 = GRID EAST

TABLE 2.

# TUMBLING DICE - Costean and Drillhole Intersections

Data from database CNO

MAR-90

Reporting grade = 0.500

Tolerances:-

min grade = 0.500

min lowgrade length = 2.000

| HOLE ID  | FROM   | TO     | LENGTH   | AU1<br>GRADE |
|----------|--------|--------|----------|--------------|
| =====    |        |        |          |              |
| COSTEANS |        |        |          |              |
| -----    |        |        |          |              |
| CTN13700 | 82.50  | 85.00  | 2.50m.@  | 1.100        |
| CTN13700 | 90.00  | 92.50  | 2.50m.@  | 0.720        |
| CTN13800 | 207.50 | 210.00 | 2.50m.@  | 4.530        |
| CTN13800 | 242.50 | 245.00 | 2.50m.@  | 1.280        |
| CTN13900 | 80.00  | 85.00  | 5.00m.@  | 0.720        |
| CTN13900 | 105.00 | 112.50 | 7.50m.@  | 0.723        |
| CTN14000 | 177.50 | 180.00 | 2.50m.@  | 0.900        |
| CTN14000 | 222.50 | 225.00 | 2.50m.@  | 0.600        |
| CTN14000 | 235.00 | 237.50 | 2.50m.@  | 0.880        |
| CTN14000 | 245.00 | 247.50 | 2.50m.@  | 0.510        |
| CTN14000 | 267.50 | 270.00 | 2.50m.@  | 0.610        |
| CTN14100 | 182.50 | 185.00 | 2.50m.@  | 16.100       |
| CTN14300 | 315.00 | 327.50 | 12.50m.@ | 1.678        |
| CTN14450 | 40.00  | 45.00  | 5.00m.@  | 1.080        |
| CTN14500 | 57.50  | 60.00  | 2.50m.@  | 1.050        |
| CTN14500 | 160.00 | 165.00 | 5.00m.@  | 2.970        |
| CTN14550 | 5.00   | 10.00  | 5.00m.@  | 0.530        |
| CTN14550 | 20.00  | 25.00  | 5.00m.@  | 0.950        |
| CTN14550 | 40.00  | 45.00  | 5.00m.@  | 1.180        |
| CTN14600 | 5.00   | 10.00  | 5.00m.@  | 1.745        |
| CTN14600 | 95.00  | 100.00 | 5.00m.@  | 1.030        |
| CTN14600 | 255.00 | 270.00 | 15.00m.@ | 0.543        |
| CTN14700 | 100.00 | 105.00 | 5.00m.@  | 0.815        |
| CTN14700 | 235.00 | 240.00 | 5.00m.@  | 0.860        |
| CTN15000 | 177.50 | 180.00 | 2.50m.@  | 4.450        |
| CTN15000 | 187.50 | 190.00 | 2.50m.@  | 2.270        |
| CTN15000 | 285.00 | 290.00 | 5.00m.@  | 6.300        |

TABLE 2. CONTINUED

## RC DRILLING

|        |       |       |          |       |
|--------|-------|-------|----------|-------|
| MRC106 | 18.00 | 21.00 | 3.00m.@  | 2.507 |
| MRC520 | 23.00 | 25.00 | 2.00m.@  | 1.405 |
| MRC521 | 4.00  | 6.00  | 2.00m.@  | 2.220 |
| MRC521 | 16.00 | 18.00 | 2.00m.@  | 1.015 |
| MRC521 | 19.00 | 21.00 | 2.00m.@  | 3.795 |
| MRC522 | 28.00 | 30.00 | 2.00m.@  | 0.855 |
| MRC522 | 31.00 | 35.00 | 4.00m.@  | 1.213 |
| MRC522 | 36.00 | 37.00 | 1.00m.@  | 1.300 |
| MRC522 | 45.00 | 56.00 | 11.00m.@ | 1.757 |
| MRC522 | 59.00 | 62.00 | 3.00m.@  | 0.923 |
| MRC523 | 11.00 | 13.00 | 2.00m.@  | 0.670 |
| MRC524 | 19.00 | 24.00 | 5.00m.@  | 1.718 |
| MRC524 | 25.00 | 30.00 | 5.00m.@  | 5.564 |
| MRC524 | 36.00 | 37.00 | 1.00m.@  | 2.040 |
| MRC525 | 17.00 | 20.00 | 3.00m.@  | 2.137 |
| MRC526 | 11.00 | 14.00 | 3.00m.@  | 5.127 |
| MRC527 | 21.00 | 23.00 | 2.00m.@  | 1.815 |
| MRC528 | 15.00 | 17.00 | 2.00m.@  | 2.060 |
| MRC529 | 24.00 | 26.00 | 2.00m.@  | 0.565 |
| MRC530 | 26.00 | 30.00 | 4.00m.@  | 1.148 |
| MRC533 | 13.00 | 18.00 | 5.00m.@  | 1.184 |
| MRC533 | 26.00 | 27.00 | 1.00m.@  | 3.080 |
| MRC534 | 10.00 | 11.00 | 1.00m.@  | 0.920 |
| MRC552 | 34.00 | 38.00 | 4.00m.@  | 1.960 |
| MRC552 | 40.00 | 44.00 | 4.00m.@  | 1.508 |
| MRC552 | 47.00 | 49.00 | 2.00m.@  | 0.835 |
| MRC552 | 52.00 | 54.00 | 2.00m.@  | 1.085 |
| MRC553 | 17.00 | 22.00 | 5.00m.@  | 1.424 |
| MRC553 | 29.00 | 32.00 | 3.00m.@  | 0.623 |
| MRC553 | 33.00 | 36.00 | 3.00m.@  | 1.327 |
| MRC553 | 38.00 | 40.00 | 2.00m.@  | 0.900 |
| MRC554 | 29.00 | 30.00 | 1.00m.@  | 1.430 |
| MRC555 | 29.00 | 30.00 | 1.00m.@  | 2.790 |
| MRC556 | 1.00  | 2.00  | 1.00m.@  | 0.510 |
| MRC556 | 11.00 | 13.00 | 2.00m.@  | 2.165 |
| MRC557 | 24.00 | 26.00 | 2.00m.@  | 0.610 |
| MRC557 | 32.00 | 33.00 | 1.00m.@  | 2.030 |
| MRC557 | 40.00 | 42.00 | 2.00m.@  | 1.440 |

TABLE 2. CONTINUED

|        |       |       |         |       |
|--------|-------|-------|---------|-------|
| MRC558 | 22.00 | 23.00 | 1.00m.@ | 5.550 |
| MRC558 | 33.00 | 34.00 | 1.00m.@ | 1.460 |
| MRC558 | 36.00 | 44.00 | 8.00m.@ | 2.054 |
| MRC559 | 34.00 | 36.00 | 2.00m.@ | 0.710 |
| MRC560 | 28.00 | 36.00 | 8.00m.@ | 7.434 |
| MRC560 | 46.00 | 47.00 | 1.00m.@ | 1.070 |
| MRC561 | 9.00  | 11.00 | 2.00m.@ | 2.945 |
| MRC561 | 12.00 | 17.00 | 5.00m.@ | 1.768 |
| MRC563 | 35.00 | 37.00 | 2.00m.@ | 0.800 |
| MRC565 | 10.00 | 12.00 | 2.00m.@ | 0.855 |
| MRC567 | 27.00 | 28.00 | 1.00m.@ | 1.190 |
| MRC567 | 30.00 | 32.00 | 2.00m.@ | 3.710 |
| MRC568 | 11.00 | 13.00 | 2.00m.@ | 0.970 |
| MRC569 | 14.00 | 16.00 | 2.00m.@ | 0.970 |
| MRC589 | 14.00 | 15.00 | 1.00m.@ | 1.080 |
| MRC590 | 16.00 | 18.00 | 2.00m.@ | 0.665 |
| MRC590 | 39.00 | 42.00 | 3.00m.@ | 1.597 |
| MRC591 | 24.00 | 25.00 | 1.00m.@ | 4.200 |
| MRC591 | 44.00 | 45.00 | 1.00m.@ | 1.800 |
| MRC592 | 14.00 | 15.00 | 1.00m.@ | 3.570 |
| MRC592 | 42.00 | 43.00 | 1.00m.@ | 4.210 |
| MRC594 | 0.00  | 1.00  | 1.00m.@ | 1.520 |
| MRC595 | 0.00  | 2.00  | 2.00m.@ | 3.630 |
| MRC595 | 6.00  | 9.00  | 3.00m.@ | 1.843 |
| MRC595 | 34.00 | 37.00 | 3.00m.@ | 1.047 |
| MRC596 | 6.00  | 8.00  | 2.00m.@ | 3.640 |
| MRC596 | 16.00 | 18.00 | 2.00m.@ | 0.630 |
| MRC596 | 19.00 | 21.00 | 2.00m.@ | 1.930 |
| MRC598 | 21.00 | 26.00 | 5.00m.@ | 1.960 |
| MRC598 | 27.00 | 29.00 | 2.00m.@ | 0.820 |
| MRC599 | 23.00 | 24.00 | 1.00m.@ | 1.680 |
| MRC599 | 30.00 | 34.00 | 4.00m.@ | 3.568 |
| MRC599 | 37.00 | 40.00 | 3.00m.@ | 2.967 |
| MRC599 | 41.00 | 43.00 | 2.00m.@ | 9.375 |
| MRC599 | 54.00 | 55.00 | 1.00m.@ | 0.610 |
| MRC600 | 41.00 | 43.00 | 2.00m.@ | 2.675 |
| MRC600 | 52.00 | 54.00 | 2.00m.@ | 1.300 |
| MRC601 | 1.00  | 3.00  | 2.00m.@ | 0.950 |
| MRC601 | 4.00  | 7.00  | 3.00m.@ | 1.303 |
| MRC601 | 17.00 | 18.00 | 1.00m.@ | 1.370 |
| MRC601 | 40.00 | 41.00 | 1.00m.@ | 1.430 |

TABLE 2. CONTINUED

|        |       |       |          |        |
|--------|-------|-------|----------|--------|
| MRC602 | 0.00  | 2.00  | 2.00m.@  | 0.630  |
| MRC602 | 22.00 | 33.00 | 11.00m.@ | 4.513  |
| MRC603 | 2.00  | 3.00  | 1.00m.@  | 1.830  |
| MRC603 | 8.00  | 11.00 | 3.00m.@  | 1.667  |
| MRC604 | 25.00 | 30.00 | 5.00m.@  | 3.624  |
| MRC605 | 20.00 | 22.00 | 2.00m.@  | 1.425  |
| MRC606 | 16.00 | 17.00 | 1.00m.@  | 1.740  |
| MRC606 | 18.00 | 20.00 | 2.00m.@  | 0.930  |
| MRC607 | 16.00 | 19.00 | 3.00m.@  | 2.393  |
| MRC631 | 4.00  | 6.00  | 2.00m.@  | 13.475 |
| MRC631 | 10.00 | 11.00 | 1.00m.@  | 1.670  |
| MRC632 | 5.00  | 6.00  | 1.00m.@  | 1.740  |
| MRC632 | 37.00 | 38.00 | 1.00m.@  | 1.380  |
| MRC632 | 46.00 | 48.00 | 2.00m.@  | 24.110 |
| MRC633 | 37.00 | 39.00 | 2.00m.@  | 0.810  |
| MRC633 | 45.00 | 47.00 | 2.00m.@  | 0.580  |
| MRC633 | 48.00 | 52.00 | 4.00m.@  | 0.703  |
| MRC633 | 54.00 | 55.00 | 1.00m.@  | 1.280  |
| MRC633 | 58.00 | 64.00 | 6.00m.@  | 2.660  |
| MRC633 | 67.00 | 69.00 | 2.00m.@  | 2.690  |
| MRC633 | 70.00 | 77.00 | 7.00m.@  | 1.940  |
| MRC633 | 78.00 | 83.00 | 5.00m.@  | 1.824  |
| MRC634 | 0.00  | 1.00  | 1.00m.@  | 2.230  |
| MRC634 | 4.00  | 8.00  | 4.00m.@  | 1.318  |
| MRC634 | 10.00 | 11.00 | 1.00m.@  | 1.430  |
| MRC634 | 18.00 | 25.00 | 7.00m.@  | 2.037  |
| MRC634 | 31.00 | 34.00 | 3.00m.@  | 0.807  |
| MRC634 | 36.00 | 40.00 | 4.00m.@  | 0.895  |
| MRC634 | 45.00 | 46.00 | 1.00m.@  | 1.080  |
| MRC634 | 48.00 | 49.00 | 1.00m.@  | 8.420  |
| MRC634 | 50.00 | 51.00 | 1.00m.@  | 1.060  |
| MRC635 | 13.00 | 15.00 | 2.00m.@  | 1.515  |
| MRC636 | 31.00 | 33.00 | 2.00m.@  | 3.020  |
| MRC636 | 35.00 | 40.00 | 5.00m.@  | 1.184  |
| MRC636 | 48.00 | 64.00 | 16.00m.@ | 1.821  |
| MRC637 | 1.00  | 2.00  | 1.00m.@  | 1.520  |
| MRC638 | 36.00 | 40.00 | 4.00m.@  | 0.915  |
| MRC639 | 3.00  | 7.00  | 4.00m.@  | 1.888  |
| MRC641 | 47.00 | 48.00 | 1.00m.@  | 6.080  |
| MRC641 | 49.00 | 57.00 | 8.00m.@  | 4.338  |
| MRC642 | 0.00  | 5.00  | 5.00m.@  | 1.038  |
| MRC642 | 11.00 | 19.00 | 8.00m.@  | 2.120  |
| MRC642 | 21.00 | 36.00 | 15.00m.@ | 3.400  |
| MRC642 | 48.00 | 49.00 | 1.00m.@  | 1.830  |

TABLE 2. CONTINUED

|        |       |       |          |        |
|--------|-------|-------|----------|--------|
| MRC643 | 11.00 | 13.00 | 2.00m.@  | 1.050  |
| MRC643 | 47.00 | 49.00 | 2.00m.@  | 2.600  |
| MRC645 | 5.00  | 9.00  | 4.00m.@  | 4.125  |
| MRC646 | 9.00  | 19.00 | 10.00m.@ | 4.412  |
| MRC646 | 21.00 | 22.00 | 1.00m.@  | 1.310  |
| MRC648 | 37.00 | 38.00 | 1.00m.@  | 1.350  |
| MRC649 | 19.00 | 20.00 | 1.00m.@  | 1.520  |
| MRC650 | 34.00 | 37.00 | 3.00m.@  | 2.213  |
| MRC652 | 30.00 | 32.00 | 2.00m.@  | 3.800  |
| MRC654 | 25.00 | 26.00 | 1.00m.@  | 2.200  |
| MRC654 | 28.00 | 31.00 | 3.00m.@  | 1.927  |
| MRC655 | 42.00 | 43.00 | 1.00m.@  | 2.770  |
| MRC656 | 2.00  | 7.00  | 5.00m.@  | 3.786  |
| MRC657 | 26.00 | 30.00 | 4.00m.@  | 5.383  |
| MRC658 | 59.00 | 61.00 | 2.00m.@  | 6.920  |
| MRC659 | 2.00  | 5.00  | 3.00m.@  | 0.697  |
| MRC659 | 26.00 | 27.00 | 1.00m.@  | 3.970  |
| MRC660 | 20.00 | 24.00 | 4.00m.@  | 5.368  |
| MRC660 | 30.00 | 31.00 | 1.00m.@  | 1.350  |
| MRC660 | 33.00 | 38.00 | 5.00m.@  | 1.996  |
| MRC663 | 56.00 | 61.00 | 5.00m.@  | 1.554  |
| MRC663 | 65.00 | 67.00 | 2.00m.@  | 0.645  |
| MRC664 | 12.00 | 14.00 | 2.00m.@  | 2.795  |
| MRC664 | 18.00 | 22.00 | 4.00m.@  | 4.355  |
| MRC664 | 26.00 | 28.00 | 2.00m.@  | 1.990  |
| MRC664 | 34.00 | 36.00 | 2.00m.@  | 1.495  |
| MRC665 | 0.00  | 1.00  | 1.00m.@  | 18.950 |
| MRC665 | 7.00  | 11.00 | 4.00m.@  | 3.515  |
| MRC665 | 21.00 | 24.00 | 3.00m.@  | 2.010  |
| MRC665 | 40.00 | 44.00 | 4.00m.@  | 1.305  |
| MRC665 | 45.00 | 47.00 | 2.00m.@  | 0.785  |
| MRC665 | 59.00 | 62.00 | 3.00m.@  | 1.020  |
| MRC666 | 15.00 | 17.00 | 2.00m.@  | 1.480  |
| MRC690 | 6.00  | 9.00  | 3.00m.@  | 2.183  |
| MRC691 | 5.00  | 6.00  | 1.00m.@  | 2.740  |
| MRC691 | 9.00  | 12.00 | 3.00m.@  | 3.160  |
| MRC692 | 13.00 | 15.00 | 2.00m.@  | 1.335  |
| MRC692 | 21.00 | 23.00 | 2.00m.@  | 0.685  |
| MRC694 | 20.00 | 23.00 | 3.00m.@  | 3.317  |
| MRC696 | 13.00 | 17.00 | 4.00m.@  | 1.880  |

TABLE 2. CONTINUED

|        |       |       |         |       |
|--------|-------|-------|---------|-------|
| MRC697 | 11.00 | 12.00 | 1.00m.@ | 1.000 |
| MRC698 | 7.00  | 11.00 | 4.00m.@ | 1.863 |
| MRC698 | 13.00 | 14.00 | 1.00m.@ | 0.990 |
| MRC711 | 21.00 | 22.00 | 1.00m.@ | 1.200 |
| MRC711 | 24.00 | 31.00 | 7.00m.@ | 1.576 |
| MRC715 | 0.00  | 1.00  | 1.00m.@ | 1.300 |
| MRC715 | 21.00 | 22.00 | 1.00m.@ | 1.310 |
| MRC715 | 24.00 | 26.00 | 2.00m.@ | 1.495 |
| MRC715 | 41.00 | 48.00 | 7.00m.@ | 5.629 |
| MRC716 | 3.00  | 5.00  | 2.00m.@ | 0.695 |
| MRC716 | 11.00 | 13.00 | 2.00m.@ | 1.595 |
| MRC717 | 37.00 | 39.00 | 2.00m.@ | 2.775 |
| MRC718 | 27.00 | 28.00 | 1.00m.@ | 1.450 |

#### HQ3 DRILLING

|         |       |       |         |       |
|---------|-------|-------|---------|-------|
| MRCD647 | 10.00 | 12.00 | 2.00m.@ | 0.715 |
| MRCD647 | 18.50 | 23.00 | 4.50m.@ | 2.350 |
| MRCD647 | 24.00 | 25.00 | 1.00m.@ | 1.020 |
| MRCD647 | 33.00 | 34.00 | 1.00m.@ | 1.410 |

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"Twinned" oxide-zone drillholes MRC 664 and MRCD 647 on drill section 14275 North did not show an extremely good correlation: 4 metres at 4.35 in RC versus 4.5 metres at 2.35 in core. Very poor core recovery makes a meaningful assessment difficult, however.

Immediately prior to the year end, the mining division commenced air-trac drill testing (on a close-spaced grade control pattern) of the near surface mineralisation around 14300 North. Results of this evaluation are unknown.

#### Geological Ore Resource

A preliminary in-situ geological ore resource - in the indicated/inferred category - is shown on a section by section basis in table 3. The resource comprises 220,000 tonnes of oxide mineralisation grading 2.66 g/t gold (2.51 g/t if high grades cut to 10 g/t) and 150,000 tonnes of sulphide ore at a grade of 2.59 g/t (2.17 g/t) for a total of 370,000 tonnes grading 2.63 g/t (2.37 g/t). The mineralisation is contained in multiple "lodes".

#### Discussion

As can be seen from the geological/geochemical plans and the drill sections, the Tumbling Dice area contains multiple zones of gold mineralisation which appear to be south plunging, in a generally southerly plunging fold complex. The mineralisation is associated with quartz-pyrite-(limonite) veining in a chert-shale-tuff-greywacke sequence that is variably siliceous, carbonaceous, pyritic and pyrrhotitic. The sequence appears to have a maximum thickness of about 50 metres, to be underlain by carbonaceous shale with distinctly pyritic-pyrrhotitic sections and probably overlain by mixed shale-siltstone-greywacke.

It is tentatively suggested the mineralised sequence is of Gerowie Tuff affiliation, with the (stratigraphically?) lower pyritic-pyrrhotitic carbonaceous shale representing wedges of Koolpin Formation in anticline axial positions (and causing the magnetic anomalies). If Collin's magnetic interpretation is correct, however, these anomalies would have to be sourced by Gerowie Tuff or stratigraphically higher units.

(As indicated under "Magnetometer Survey", Collin's interpretation of the ground magnetic data suggests the pyrrhotitic unit causing the high intensity anomaly at the north end of Tumbling Dice to be at a different stratigraphic level to those in the mineralised area. On a regional basis a pyrrhotitic unit marks the top of the Koolpin Formation and as surface mapping indicates the northern anomaly source to be overlain by a pale siliceous cherty unit of probable Gerowie Tuff affiliation and the anomaly appears to be semi-continuous with Koolpin source anomalies further to the NW it fairly clearly also reflects a Koolpin source).

TABLE 3.

Tumbling Dice

| SECTION<br>(North-<br>ing) | OXIDE  |            |                    |                |                    | SULPHIDE |            |                    |                |                    | TOTAL  |            |                    |                |                    |
|----------------------------|--------|------------|--------------------|----------------|--------------------|----------|------------|--------------------|----------------|--------------------|--------|------------|--------------------|----------------|--------------------|
|                            | Tonnes | Gold Grade |                    | Tonnes x Grade |                    | Tonnes   | Gold Grade |                    | Tonnes x Grade |                    | Tonnes | Gold Grade |                    | Tonnes x Grade |                    |
|                            |        | Uncut      | Cut (to<br>10 g/t) | Uncut          | Cut (to<br>10 g/t) |          | Uncut      | Cut (to<br>10 g/t) | Uncut          | Cut (to<br>10 g/t) |        | Uncut      | Cut (to<br>10 g/t) | Uncut          | Cut (to<br>10 g/t) |
| 13700                      | 4151   | 1.43       |                    | 5936           |                    |          |            |                    |                |                    | 4151   | 1.43       |                    | 5936           | 29351              |
| 13775                      | 4600   | 1.48       |                    | 6808           |                    |          |            |                    |                |                    | 4600   | 1.48       |                    | 6808           |                    |
| 13800                      | 10997  | 3.63       | 2.53               | 39919          | 27822              | 559      | 2.79       |                    | 1558           |                    | 11555  | 3.59       | 2.54               | 41484          | 24555              |
| 13825                      | 5283   | 1.51       |                    | 7977           |                    | 4555     | 1.58       |                    | 7196           |                    | 9838   | 1.54       |                    | 15150          |                    |
| 13850                      | 1150   | 1.60       |                    | 1840           |                    | 7090     | 8.93       | 3.20               | 63312          | 22687              | 8240   | 7.91       | 2.98               | 65177          |                    |
| 13875                      | 3666   | 1.88       |                    | 6891           |                    |          |            |                    |                |                    | 3666   | 1.88       |                    | 6891           |                    |
| 13900                      | 719    | 4.20       |                    | 3019           |                    | 1676     | 2.66       |                    | 4458           |                    | 2395   | 3.12       |                    | 7471           |                    |
| 13925                      | 1114   | 3.57       |                    | 3977           |                    | 1289     | 4.21       |                    | 5427           |                    | 2403   | 3.91       |                    | 9396           |                    |
| 13950                      |        |            |                    |                |                    | 10012    | 2.49       |                    | 24929          |                    | 10012  | 2.49       |                    | 24929          | 120563             |
| 13975                      | 791    | 1.52       |                    | 1202           |                    | 6531     | 1.55       |                    | 10123          |                    | 7322   | 1.55       |                    | 11349          | 89613              |
| 14000                      | 8014   | 3.12       | 3.08               | 25004          | 24683              | 48855    | 1.96       |                    | 95757          |                    | 56870  | 2.13       | 2.12               | 121132         |                    |
| 14025                      | 23791  | 2.01       | 1.90               | 47819          | 45202              | 17316    | 3.14       | 2.57               | 54374          | 44503              | 41107  | 2.48       | 2.18               | 101945         |                    |
| 14050                      | 17627  | 1.67       |                    | 29438          |                    | 28746    | 1.76       |                    | 50593          |                    | 46373  | 1.72       |                    | 79762          |                    |
| 14150                      | 8841   | 1.46       |                    | 12907          |                    | 2621     | 0.91       |                    | 2385           |                    | 11462  | 1.34       |                    | 15359          |                    |
| 14175                      | 3198   | 2.18       |                    | 6973           |                    |          |            |                    |                |                    | 3198   | 2.18       |                    | 6973           | 86844              |
| 14200                      | 15094  | 3.71       |                    | 55998          |                    | 2063     | 2.00       |                    | 4125           |                    | 17156  | 3.51       |                    | 60218          | 29969              |
| 14225                      | 23287  | 2.74       | 2.49               | 63808          | 57986              | 8641     | 4.21       | 3.32               | 36377          | 28687              | 31928  | 3.14       | 2.72               | 100254         |                    |
| 14250                      | 6433   | 3.52       | 2.06               | 22643          | 13252              | 7906     | 2.91       | 2.11               | 23007          | 16682              | 14339  | 3.18       | 2.09               | 45598          |                    |
| 14275                      | 19334  | 3.98       |                    | 76951          |                    | 730      | 1.35       |                    | 986            |                    | 20065  | 3.89       |                    | 78052          |                    |
| 14300                      | 15956  | 2.60       |                    | 41486          |                    |          |            |                    |                |                    | 15956  | 2.60       |                    | 41486          |                    |
| 14325                      | 5642   | 2.90       |                    | 16362          |                    | 2063     | 2.21       |                    | 4558           |                    | 7705   | 2.72       |                    | 20957          |                    |
| 14350                      | 2534   | 1.42       |                    | 3598           |                    |          |            |                    |                |                    | 2534   | 1.42       |                    | 3598           |                    |
| 14450                      | 6253   | 2.93       |                    | 18322          |                    |          |            |                    |                |                    | 6253   | 2.93       |                    | 18322          | 23536              |
| 14475                      | 3055   | 2.46       |                    | 7515           |                    |          |            |                    |                |                    | 3055   | 2.46       |                    | 7515           |                    |
| 14500                      | 5714   | 3.76       | 3.38               | 21485          | 19314              | 1418     | 2.97       |                    | 4211           |                    | 7132   | 3.60       | 3.30               | 25675          |                    |
| 14525                      | 10961  | 3.73       |                    | 40884          |                    | 1117     | 2.77       |                    | 3095           |                    | 12078  | 3.64       |                    | 43964          |                    |
| 14550                      | 5930   | 1.41       |                    | 8361           |                    |          |            |                    |                |                    | 5930   | 1.41       |                    | 8361           |                    |
| 14600                      | 6756   | 1.49       |                    | 10067          |                    |          |            |                    |                |                    | 6756   | 1.49       |                    | 10067          |                    |
| TOTAL                      | 220890 | 2.66       | 2.51               | 587188         | 554769             | 153188   | 2.59       | 2.17               | 396472         | 331962             | 374077 | 2.63       | 2.37               | 983830         | 886994             |

As indicated on the interpretative geology plans, where the eastern of two outcropping Gerowie Tuff? sequences is apparently widest, at around 15000N, there appears to be four separate zones of anomalism/mineralisation, though the western-most appears to be more anomalous in silver than gold, as does the eastern most to a lesser extent. These anomalous zones may represent two (or possibly only one) mineralised horizon(s) that are (is) fold repeated.

The "mineralisation" in this 15000N area appears basically strike and dip parallel though further to the south (around 14200N) there is a suggestion on plan view that the trend of the mineralisation slightly cross-cuts the stratigraphy. Lithological data shown on drill sections are generally suggestive of dip-parallel mineralisation.

In terms of geology, geophysics and mineralisation, Tumbling Dice is probably analogous to Moline Dam. The mineralisation style can probably be described as originally stratabound (and possibly syngenetic, exhalative) but with a strong tectonic overprint ("Homestake, USA" style?.)

Because the area is structurally complex and there are extensive zones of surface soil and rock chip anomalies its possible that, ultimately, significant gold mineralisation will be located in a number of different lodes on the prospect. This mineralisation will not all be close to surface, however.

## SOUTHERN HERCULES

Exploration drilling in 1988 delineated an in-situ, oxide zone geological resource (measured/indicated category) of 360,000 tonnes grading 2.99 g/t gold over a strike length of 600 metres. The central 250 metre strike length has since been mined to a maximum depth of 35 metres (in the School Pit). While not specifically targetted, the sulphide zone mineralisation was partially tested and a resource of 260,000 tonnes grading 3.88 g/t gold outlined.

The mineralisation is essentially contained in two sub-parallel zones dipping at about  $50^{\circ}$ - $60^{\circ}$  to the west with enclosing isoclinally folded (Gerowie Tuff?) chert-shale sequences. The zones were previously tested to average depths of 30 metres (western) and 50 metres (eastern) and the possibility of locating further ore along strike and down-dip from previous intersections in both zones prompted the 1989 drilling programme.