



# GOLDEN CROSS RESOURCES LTD

ABN 65 063 075 178

## QUARTERLY REPORT TO 31 DECEMBER 2000



31 January 2001

### HIGHLIGHTS

- Further positive drill results received from Kempfield silver-barite property, including 50m at 110 g/t silver and 30.8% barite, from 28m down hole, at the BJ Zone. Results of a scoping study by Resources Management Group will be available next Quarter.
- Copper Hill drilling intersected broad widths of low grade copper-gold mineralisation from surface.
- Copper Hill pole dipole induced polarisation survey reveals large undrilled areas of high chargeability coincident with anomalous soil geochemistry.
- Cargo property has a significant tonnage of alluvial gold mineralisation.
- Pasminco farmed-in to the whole of GCR's Wagga Tank precious and base metals property covering 430 sq km (previous farm-in covered 145 sq km).
- Anaconda has taken a two-year option to explore Eurongilly and Wallendbeen, highly prospective for lateritic nickel with cobalt and platinum group elements. GCR will explore the properties for gold, silver, copper, lead and zinc.
- GCR now has six properties subject to farm-out or option to major mining companies.
- Three gold-arsenic soil geochemical anomalies were defined along a 6 km strike length at Yellow Mountain. Follow-up rock chip sampling at Quarry Hill-Mountain View prospect returned results of up to 3.08 g/t gold.

### EXPLORATION RESULTS

#### 1. Kempfield (near Blayney, NSW, 250 sq km, GCR 100%, silver, barite, zinc, lead, and gold)

On 19 December 2000 GCR announced positive drill results from its 100%-owned Kempfield silver-barite project near Blayney, NSW. Kempfield hosts significant silver, barite, lead and zinc resources along a 3 km strike length in Silurian Volcanics (Figure 1).

The 288m programme comprised three reverse circulation percussion (RC) holes, numbered GKF90 to GKF92 inclusive, located within the BJ Zone. All three holes intersected broad widths of mineralisation including narrower widths of high grade silver and barite mineralisation. All holes were at a declination of 55 degrees and an azimuth of 110 degrees. Best results were:

#### Kempfield Silver-Barite Property - Results of Recent Drilling at BJ Zone

Hole No.	East (m)	North (m)	Hole Depth (m)	From (m)	Interval (m)	Silver (g/t)	Lead (%)	Zinc (%)	Barite (%)
GKF90	1960	3218.5	96	20	<b>68</b>	61	0.12	0.42	<b>28.40</b>
Incl.				26	2	<b>169</b>	0.04	0.23	<b>59.80</b>
Incl.				40	8	<b>113</b>	0.03	0.15	<b>28.40</b>
Incl.				76	12	48	0.32	1.15	<b>34.40</b>
GKF91	1983	3149	114	40	<b>59</b>	52	0.16	0.70	<b>27.45</b>
Incl.				42	8	<b>155</b>	0.07	0.32	<b>31.79</b>
Incl.				84	15	69	0.14	0.74	<b>31.93</b>
Incl.				90	2	<b>184</b>	0.19	0.89	<b>45.64</b>
GKF92	1950	3145	78	28	<b>50</b>	<b>110</b>	0.04	0.09	<b>30.80</b>
Incl.				28	<b>24</b>	<b>183</b>	0.05	0.07	<b>33.60</b>
Incl.				30	<b>4</b>	<b>317</b>	0.10	0.02	<b>52.64</b>
Incl.				76	2	<b>158</b>	0.07	0.36	<b>26.61</b>

The drilling resulted in a small increase in the resource and more importantly an increase in confidence in the geological model, with 79% of the resource now in the Measured and Indicated categories.

### Kempfield - BJ Zone Resource

Category	Million tonnes	Silver (g/t)	Barite (%)	Lead (%)	Zinc (%)	Million ounces Silver
Measured	0.56	110	30.8	0.10	0.19	2.0
Indicated	1.37	93	25.7	0.09	0.30	4.1
Inferred	0.52	89	22.1	0.12	0.44	1.5
<b>TOTAL</b>	<b>2.45</b>	<b>96</b>	<b>26.1</b>	<b>0.10</b>	<b>0.30</b>	<b>7.6</b>
Previous	2.39	97	25.3	0.10	0.31	7.45

Resource Management Group Pty Ltd (RMG), a Perth-based consulting group, is conducting a scoping study on Kempfield due to be presented in the March Quarter. With input from RMG, a drilling programme will be designed to provide samples for metallurgical testwork and enhance the resource.

GCR has elected to enter into the right to negotiate process with Native Title claimants in relation to Crown Land covering part of the BJ Zone.

## 2. Copper Hill (near Molong NSW, 75 sq km, 100% GCR, gold, copper, palladium)

Since securing 100% of Copper Hill in July 2000 GCR focussed attention on gold-copper mineralisation lying between Boomerang prospect in the south to Buckleys prospect in the north and covering the known mineralisation at Copper Hill prospect (Figure 2).

A drilling programme consisting of three RC holes for 294m was carried out at Boomerang and Boundary prospects. The holes were aimed at testing extensions of gold-copper mineralisation previously intersected in north-south trending structures. All holes intersected broad widths of mineralisation starting from surface. Results were as follows:

### Copper Hill Project – Best Results from Recent RC Drilling

#### Boomerang and Boundary Prospects

Hole No.	Easting (m)	Northing (m)	Hole Depth (m)	From (m)	Intercept (m)	Gold (g/t)	Copper (%)
GCHR035	674700	6340830	80	Surface	80	0.22	0.26
				2	10	0.32	0.32
				56	8	0.31	0.28
GCHR036	674650	6340850	100	Surface	100	0.19	0.21
				8	12	0.28	0.25
				54	22	0.28	0.37
GCHR037	674925	6341195	94	Surface	50	0.23	0.37
				4	12	0.39	0.56
				40	8	0.39	0.28

The best palladium assays returned from previous drilling by others at the Copper Hill prospect included 32m at 0.65 g/t palladium (including 1m at 1.97 g/t palladium) from 44m in hole CHM-12 and 11m of 0.69 g/t palladium from 66m in hole CH-NSW-89-1. Only 23% of previous drill samples were assayed for palladium. As a result, two batches of pulps from previous samples have been collected to be assayed for palladium. The first batch returned no significant results.

A pole-dipole induced polarisation (IP) survey was carried out over the Boomerang-Copper Hill-Buckleys area (Figure 2) in December to locate possible extensions to porphyry gold-copper mineralisation. The survey revealed two north-south trending zones of higher chargeability on either side of the survey area, connected by two west north-west trending zones (Figure 3). Most

of the drilling has taken place, and most of the known gold-copper mineralisation is located, in the western zone. High chargeability appears to correlate well with the gold-copper mineralisation in this area. Hole CHRC58, which intersected 217m averaging 1.67 g/t gold plus 0.72% copper, is located in an area with chargeabilities in excess of 45 millivolts per volt.

The IP survey was successful in revealing large areas of high chargeability coincident with anomalous soil geochemistry. These areas need to be tested by drilling.

**3. Cargo** (NSW, 470 sq km GCR 100%, subject to 1% NSR to Imperial Mining NL)

Cargo is a large gold-copper porphyry system hosting at its perimeter an inferred resource of 3.7 million tonnes at 1.24 g/t gold for 147,000 ounces of gold. Cargo has potential to host a Ridgeway-style gold-copper deposit (Figure 4).

During the period 1985 to 1988 Billiton Australia held an exploration licence to the west of Cargo. During this period Billiton identified an extensive alluvial gold system in the valley formed by a major fault, on the western side of the Cargo porphyry system. After drilling 183 RAB holes, followed by 8 RC holes and one diamond hole, a resource was estimated (pre-JORC Code), using sectional and polygonal techniques, at 4.82 million tonnes at 0.5 g/t gold or 2.836 million cubic metres at 0.85 g/cubic m, for 77,511 ounces of gold.

GCR also has a significant tonnage of eluvial and alluvial material overlying the Dalcoath-Spur gold prospect and is seeking a party interested in alluvial mining.

**4. Wagga Tank** (near Cobar, NSW, 430 sq km, GCR 100%, gold and base metals. Pasminco (manager) may spend \$2.5M by 31.12.2005 to earn 70%)

GCR and Pasminco renegotiated the joint venture agreement between the two groups to cover a larger area, including GCR's Wagga Tank, Wagga Tank North and Wagga Tank South properties. Under the new arrangement Pasminco may earn 70% of the properties by spending \$2.5M by 31 December 2005. Pasminco must spend \$175,500 on exploration on the properties during 2001.

GCR drilled six RC holes for 752m at Blue Mountain prospect on behalf of Pasminco during the quarter, to test for extensions to lead-zinc mineralisation. Drilling failed to intersect any zones of significant mineralisation.

Soil geochemical sampling and geological mapping was completed over the Boolahbone West multi-element soil anomaly. This lies north east of the Wagga Tank prospect which contains an estimated resource of 1.25 million tonnes of 0.66 g/t gold, 68.8 g/t silver, 0.81% copper, 1.76% lead and 3% zinc. The mapping identified a zone of shearing and quartz veining associated with strong sericitisation of rhyolitic volcanic rocks. A zinc anomaly 600m long and 450m wide occurs to the west of the altered outcrops in an area of deep soil cover and is open-ended to the south.

**5. West Wyalong** (NSW, 230 sq km, GCR 100%, subject to 2.5% net smelter return, gold and copper)

Newcrest may spend \$4 million by 18 June 2002 to earn a 70% interest in the Narragudgil copper-gold project consisting of approximately 75 sq km.

Future work will focus on the poorly tested 2 km-long zone separating the Yiddah North and Narragudgil porphyry mineralised systems.

**6. Yellow Mountain** (north of Condobolin NSW, 290 sq km, 100% GCR subject to 2% NSR to Imperial One Limited, gold, silver and base metals)

Three gold-arsenic soil geochemical anomalies were defined along a 6 km strike length (Figure 5). The largest anomaly, at Mountain View, is 1000m by 500m, with gold values in rock chip samples from this area returning up to 3.08g/t. Follow-up work is planned.

**7. Laverton** (WA, 75 sq km, GCR 100%, gold. Placer/Delta (manager) may complete bankable feasibility study by 6.5.2002 to earn 70%, gold)

RAB drilling west of the 700m-long "Tanekaha" gold anomaly where previous drilling intersected 6m at 17.59 g/t gold returned no significant results. Placer/Delta aim to extend the gold anomaly along strike.

**8. Sunny Corner** (near Lithgow, NSW, 140 sq km, GCR 100%, gold)

Sunny Corner is an old silver and gold mining area that produced approximately 3.5 million ounces of silver and 140,000 ounces of gold. It is reported to have been Australia's richest silver mine until the discovery of Broken Hill. Silver grades were exceptionally high, ranging from 600 g/t to 2,100 g/t. The reported average grade of oxide ore mined was 1,000 g/t silver, 10% copper, 20% zinc, 10% lead and 10 g/t gold. A further 250,000 tons of sulphide ore averaged 800 g/t silver, 2% copper, 14% zinc, 14% lead and 4 g/t gold.

Mineralisation is hosted in sedimentary and volcanic rocks intruded by felsic porphyries. There is good geological evidence to suggest the mineralisation might be the high-level portion of a porphyry system at depth. Apparent extensions, to the north and south of the mineralised zone, will receive priority drilling.

**9. Broken Hill** (NSW, 135 sq km, GCR 100%, platinum group elements, gold and base metals)

WMC completed a multi-faceted exploration programme targeting sulphides rich in nickel and platinum group elements. An Airborne ElectroMagnetic (AEM) survey, consisting of 650 line km at 200m line spacing, was completed over the property together with orientation ground geophysical and follow-up ground surveys at the Mulga Springs and Iron Blow prospects. The AEM identified moderate responses in the vicinity of Yellowstone prospect which will be followed up by ground electromagnetics during the March Quarter.

A 120 kg gossan sample previously collected by GCR from the old dumps at Mulga Springs assayed 19.6 g/t platinum, 50 g/t palladium, and 3 g/t rhodium (collectively worth over A\$4,000/t).

**10. Eurongilly/Wallendbeen** (near Cootamundra, NSW, 360 sq km, GCR 100%, nickel, cobalt, platinum group elements, gold and copper)

On 9 November GCR announced that Anaconda Nickel had taken a two-year option to explore Eurongilly and Wallendbeen, highly prospective for lateritic nickel, cobalt, platinum group elements, gold and copper. GCR will explore the properties for gold, silver, copper, lead and zinc concurrent with Anaconda's exploration for lateritic nickel.

Anaconda is exploring the two properties for lateritic nickel minerals, including nickel, cobalt, platinum group elements and related minerals. GCR retains the rights to other minerals.

In order to exercise the option a minimum of \$180,000 must be spent by Anaconda by 2 November 2002. During this term Anaconda has the right to nominate an area for mining lateritic nickel minerals in its own right. In the event Anaconda commences mining operations, GCR will receive a royalty of 25 cents per tonne of lateritic nickel ore mined.

Eurongilly straddles the Gilmore Suture and contains volcanic, sedimentary and intrusive rocks, including ultramafic rocks prospective for nickel, cobalt and platinum group elements. Eurongilly also holds potential for high-grade gold-bearing vein systems and for porphyry copper-gold deposits. The area exhibits a number of magnetic anomalies coincident with anomalous copper geochemistry outlined by RAB drilling. At the Kurrajong prospect, previous RAB drilling returned 24m at 0.23 g/t gold, and 8m at 1.25% copper and 0.11 g/t gold. Follow-up RC drilling returned 78m at 0.23 g/t gold and 33m at 0.84% copper.

Wallendbeen contains a number of old gold, manganese, copper and chromite workings. Previous drill results from the Fontenoy prospect returned broad zones of copper mineralisation including 24.5m at 0.6% copper and 16.1m at 0.4% copper. Drilling also revealed significant zones of gold mineralisation, including 27m at 0.42 g/t gold and 0.11% copper from surface. Of particular interest is a sequence of serpentinites, mafic volcanic rocks and gabbros, known as the Jindalee Group, with potential to host nickel, cobalt and platinum group elements.

The transaction highlights GCR's objective - to identify and secure geologically ore-permissive property and delineate quality drill targets which warrant major mining company participation in joint venture evaluation, development and production, or which GCR may exploit on its own account. GCR now has six properties subject to farmout or option to major mining companies.

Anaconda plans to commence field work in the next quarter.

**11. Pipeline Ridge/Canbelego** (near Cobar, NSW, 280 sq km, GCR 100%, gold and base metals; 60 sq km near Mt Boppy subject to 5% net profits interest (NPI) to Nosebi Mining and Management Pty Ltd; 60 sq km south of Mt Boppy subject to 5% NPI to Polymetals Pty Ltd; 3 sq km NW of Pipeline prospect subject to 10% free carried interest to Metallic Resources Pty Ltd)

GCR's tenements are located in the highly prospective Canbelego-Mineral Hill volcanic belt, 40 km east of Cobar, NSW. The historic Mt Boppy Mine near Canbelego recovered over 451,000 ounces of gold from ore grading 12 g/t gold.

Detailed geological mapping by GCR delineated an area of silicic alteration and structural complexity similar to the old Mt Boppy Gold Mine. This area lies to the southeast of Mt Boppy and, like Mt Boppy, may host high grade gold mineralisation. A programme of RAB drilling and ground geophysics is planned for this area.

**12. Breadalbane/Cullulla** (near Goulburn, NSW, 210 sq km, GCR 100%, gold and base metals)

The Breadalbane property has potential to host base and precious metals deposits in skarn, porphyry and volcanogenic massive sulphide (VMS) settings.

Skarn-type mineralisation is found at the Breadalbane Iron and Hannan's Flat prospects. Porphyry-style is found in close proximity to the skarns.

Wet Lagoon contains VMS-style mineralisation similar to the Henty deposit on Tasmania. Previous drilling at Wet Lagoon prospect returned 148m at 1.0 g/t gold including 14.6m at 5.1 g/t gold together with 142m at 0.9 g/t including 12m at 4.4 g/t gold in the adjoining section, 60m away.

The Gurrunda barite prospect was drilled in 1970 and was reported to contain, to a depth of 60m, 300,000 tons at 84.7% barite with a specific gravity of 4.3.

Cullulla provides an excellent opportunity for the discovery of significant base metals resources similar to the nearby Woodlawn deposit. It hosts the Greendale prospect, a lead-in-soil anomaly 1,400m long by 400m wide. Trenching revealed zones of highly anomalous lead including 16m at 0.31%, 10m at 0.55% and 48m at 0.11%. RC drilling returned 11m at 0.3% lead, 2.0% zinc, 11 g/t silver and 0.1 g/t gold in hole GD5, and 10m at 7.2% lead, 0.8% zinc and 48 g/t silver in hole GD7.

The mineralisation on the above two properties will be investigated during the March quarter.

**13. Fifield** (near Condobolin, NSW, 45 sq km, GCR 100%, gold, copper, nickel and platinum group elements)

This tenement is surrounded by three ultramafic complexes which have been shown to contain copper, nickel, cobalt and platinum group metals. Initial rock chip sampling on the tenement returned up to 3.9 g/t gold, 1260ppm copper, and 1110 ppm cobalt. There is also potential for platinum group metals. Field work is due to commence next quarter.

**14. Tumblong** (near Tumut, NSW, 365 sq km, GCR 100%, copper and gold)

Tumblong straddles the Gilmore Suture and contain volcanic, sedimentary and intrusive rocks of Ordovician age. The area exhibits a number of magnetic anomalies associated with zones of anomalous geochemistry and contains numerous old workings and prospects. It holds potential for high-grade gold-bearing vein systems and for porphyry copper-gold deposits.

**15. Billilingra** (near Cooma, NSW, 50 sq km, GCR 100%, gold)

Billilingra was reported to contain a broad zone of gold and lead anomalism some 1,500m in length within which a 250m by 40m zone exists where surface rock chip samples collected during a trenching programme averaged 2.7 g/t gold. Follow-up sampling will detail this zone.

## **P DAVID TIMMS, MANAGING DIRECTOR**

*This report was prepared by David Timms, Managing Director and full time employee of Golden Cross Resources Ltd, who is a Fellow of the AIG and AusIMM and has more than five years' experience in the field of activity in which he is reporting.*



## GCR AT A GLANCE

### Directors

Lindsay MacAlister *Chairman*  
 David Timms *Managing Director*  
 Kerry McHugh *Director*  
 Daven Timms *Executive Director & Company Secretary*

### Registered and Principal Office

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 Fax (02) 9482 8488  
 Email [gcr@dot.net.au](mailto:gcr@dot.net.au)  
 Web site [www.reflections.com.au/goldencross](http://www.reflections.com.au/goldencross)

### Number of Shareholders

At 18 January 2001 GCR had 1,020 shareholders.

### Major Shareholders

The share register records the following as major shareholders (greater than 1%) at 18 January 2001:

	%
1. David Timms	16.86
2. Metallic Resources Pty Ltd	7.61
3. Aurcay Holdings Inc.	5.07
4. Cairnglen Investments Pty Ltd	4.84
5. Cyprus Amax Australia	3.80
6. Guardian Trust Australia Ltd	3.52
7. Cleo Holdings Pty Ltd	3.03
8. First Canadian Gold	2.54
9. Michelago Limited	2.54
10. Golden Cross Plan Managers	1.96
11. Hysette Pty Ltd	1.70
12. Invia Custodian Pty Limited	1.15

### This Quarterly was sent by E-mail

If you haven't already done so, write down your e-mail address & fax to (02) 9482 8488

Name .....

Company .....

E-mail address .....

### Shareholder Enquiries

Matters relating to shares held and change of address should be directed to the share registry:

Registries Limited  
 Level 2, 28 Margaret Street  
 Sydney NSW 2000  
 Ph: (02) 9279 0677

### Issued Capital

At 25 January 2001 GCR's issued capital was 70,951,300 ordinary shares, 25 million options exercisable at 20 cents by 31.12.2002, 737,000 employee options exercisable at 30 cents by 22.8.2002, 1,768,000 employee options exercisable at 10 cents by 22.12.2005 and 3.6 million Directors' options exercisable at 20 cents by 31.10.2001.

### ASX Listing Code

The Company's ASX listing code is GCR.

### Cash Flow

<i>Dec 2000 Quarter (Historical)</i>	\$
Balance at 20 October 2000	1,400,000
Exploration expenditure	-270,000
Interest and payments received	30,000
Closing Balance at 31 December	<u>1,160,000</u>

<i>March 2000 Quarter (Forecast)</i>	
Estimated exploration expenditure	-260,000

### Web Site

Please visit GCR's web site featuring the latest on GCR, which you are free to copy:

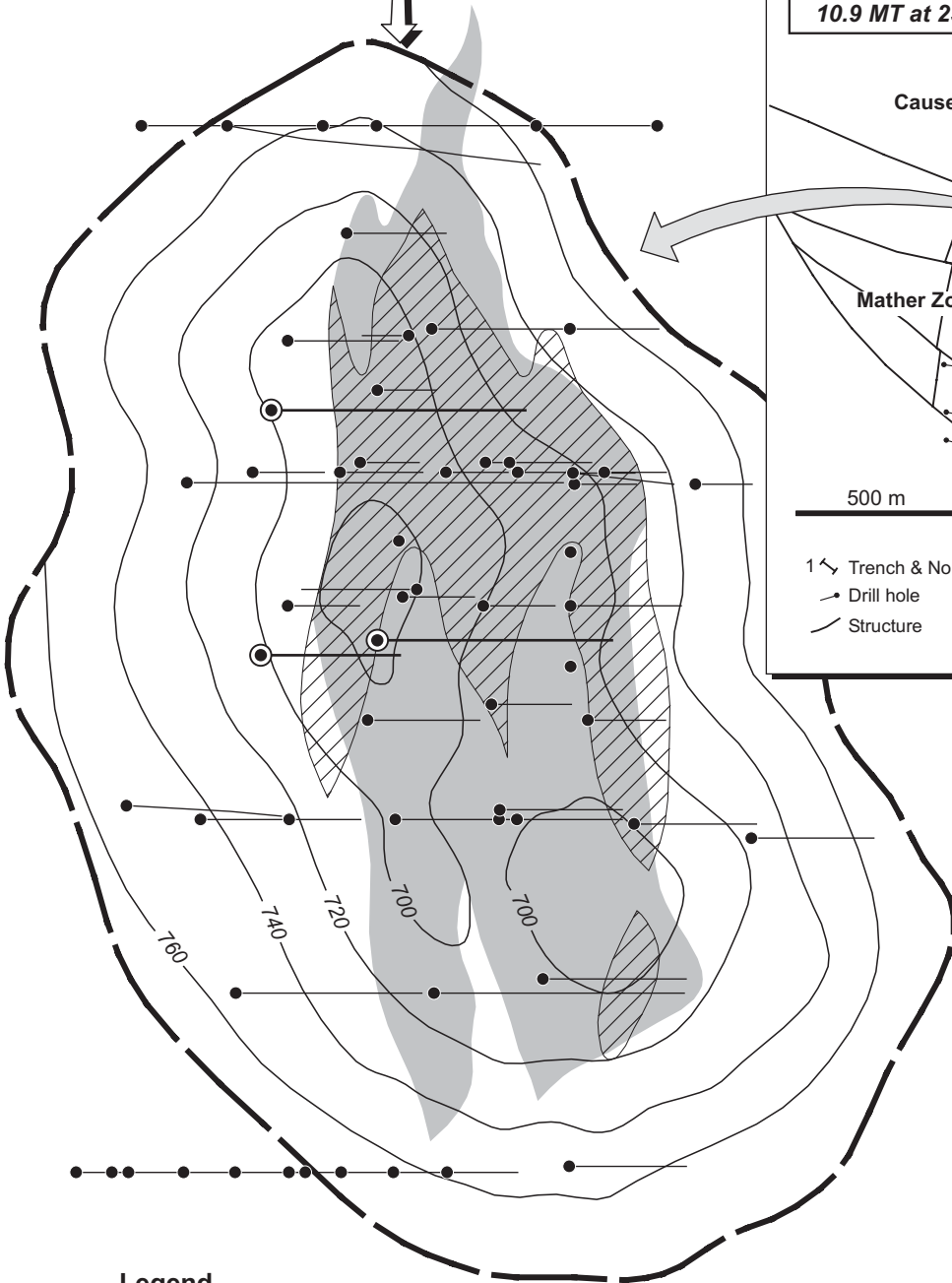
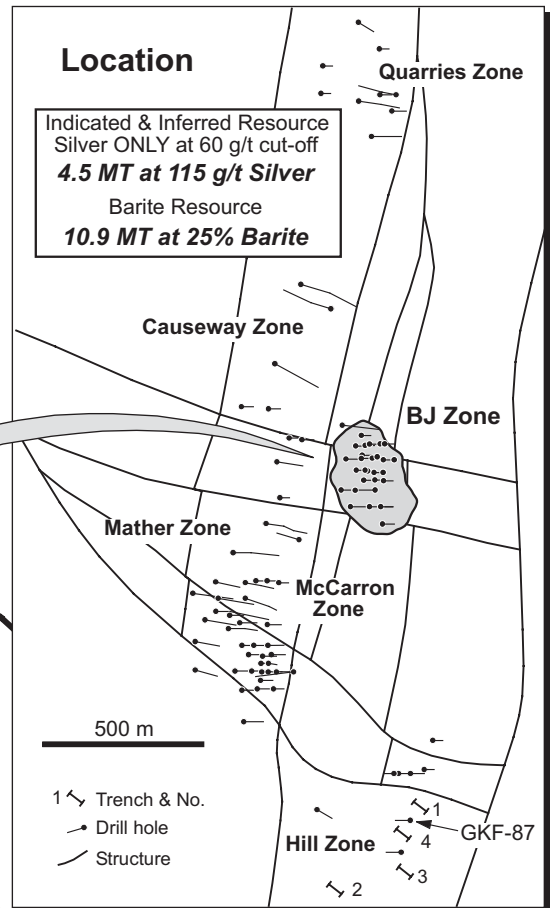
[www.reflections.com.au/goldencross](http://www.reflections.com.au/goldencross)

### General Enquiries

Contact David Timms or Daven Timms at the principal office: ph. (02) 9482 8833



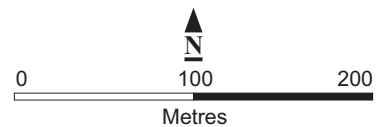
**BJ RESOURCE**  
 2.45 Mt @ 96 g/t Silver, 26% Barite  
 7.6 million ounces Silver,  
 640,000t Barite



**BJ Zone**

- Legend**
- Preliminary Pit margin
  - Preliminary Pit contour (20m interval)
  - Drill hole trace
  - Recent drill holes

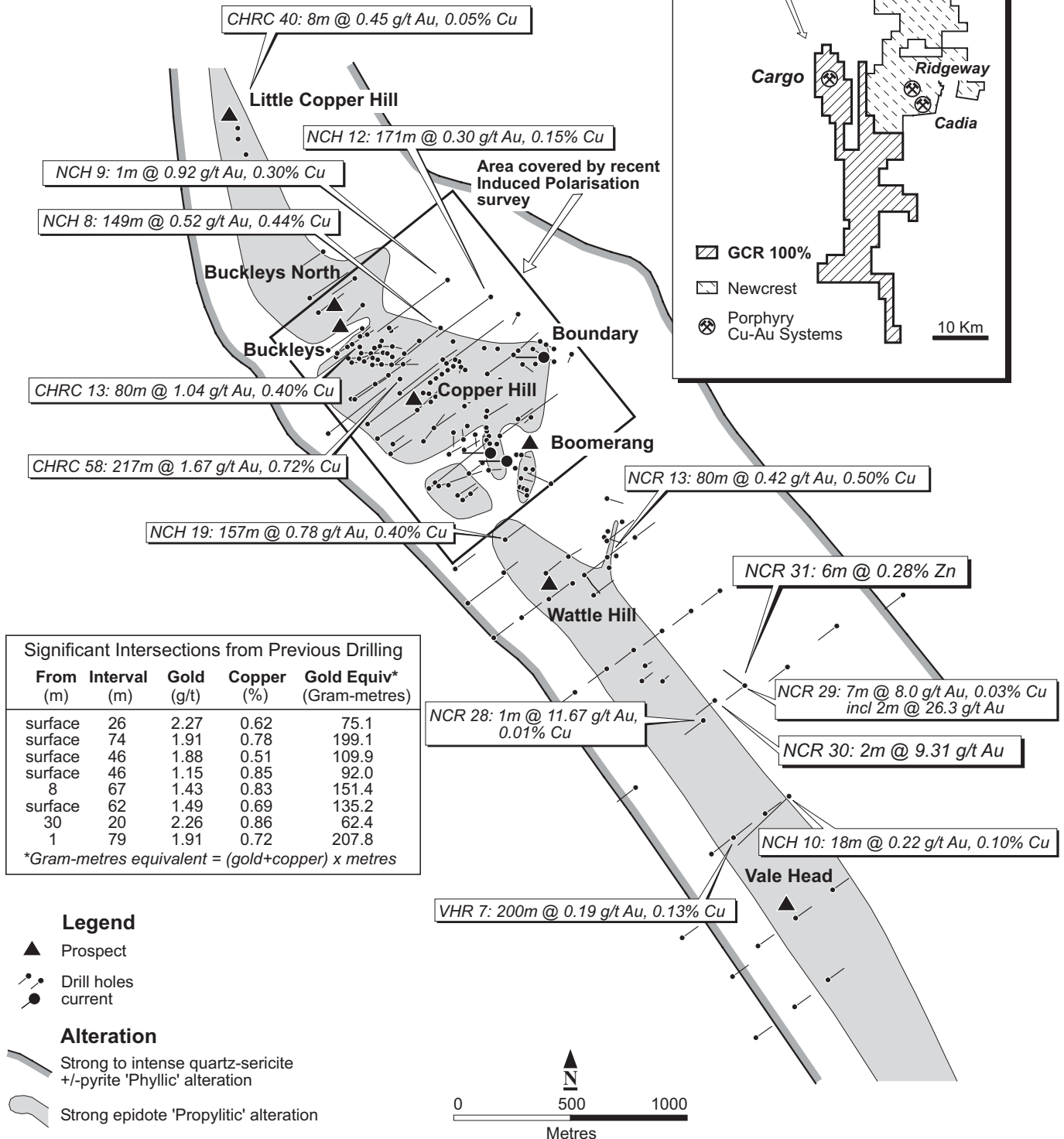
- Grade outline at 745mRL**
- Barium > 10%
  - ▨ Barium > 10% and Silver > 60 g/t



**GOLDEN CROSS RESOURCES LTD**  
**KEMPFIELD PROJECT**  
 Preliminary Pit Outline - BJ Zone



FIGURE 1

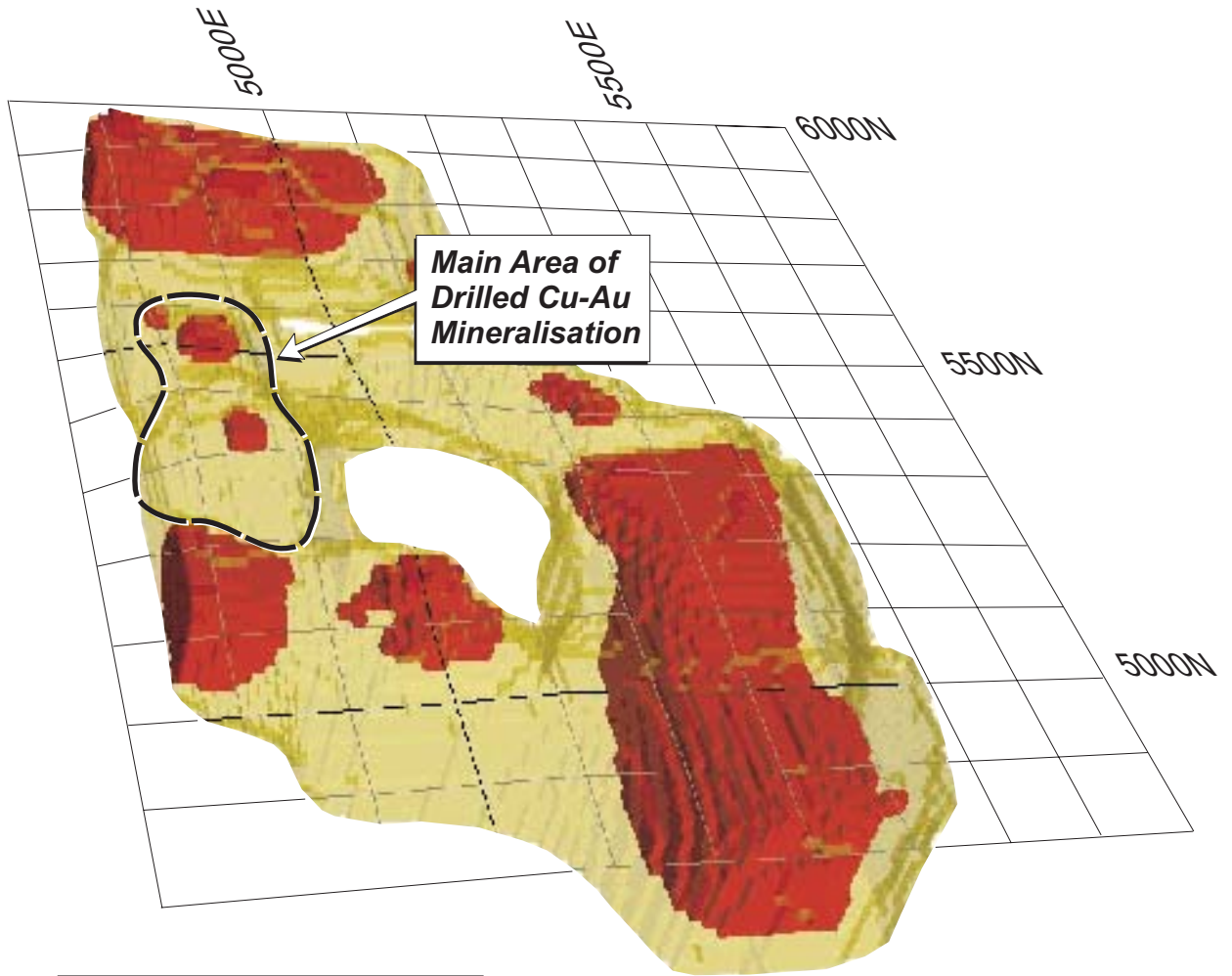


**GOLDEN CROSS RESOURCES LTD**  
**COPPER HILL PROJECT**  
**Geology and Prospect Location**



FIGURE 2



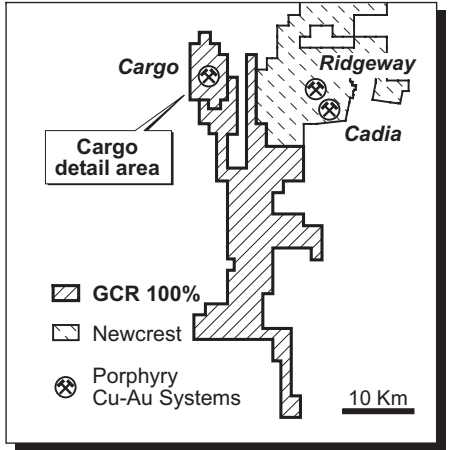
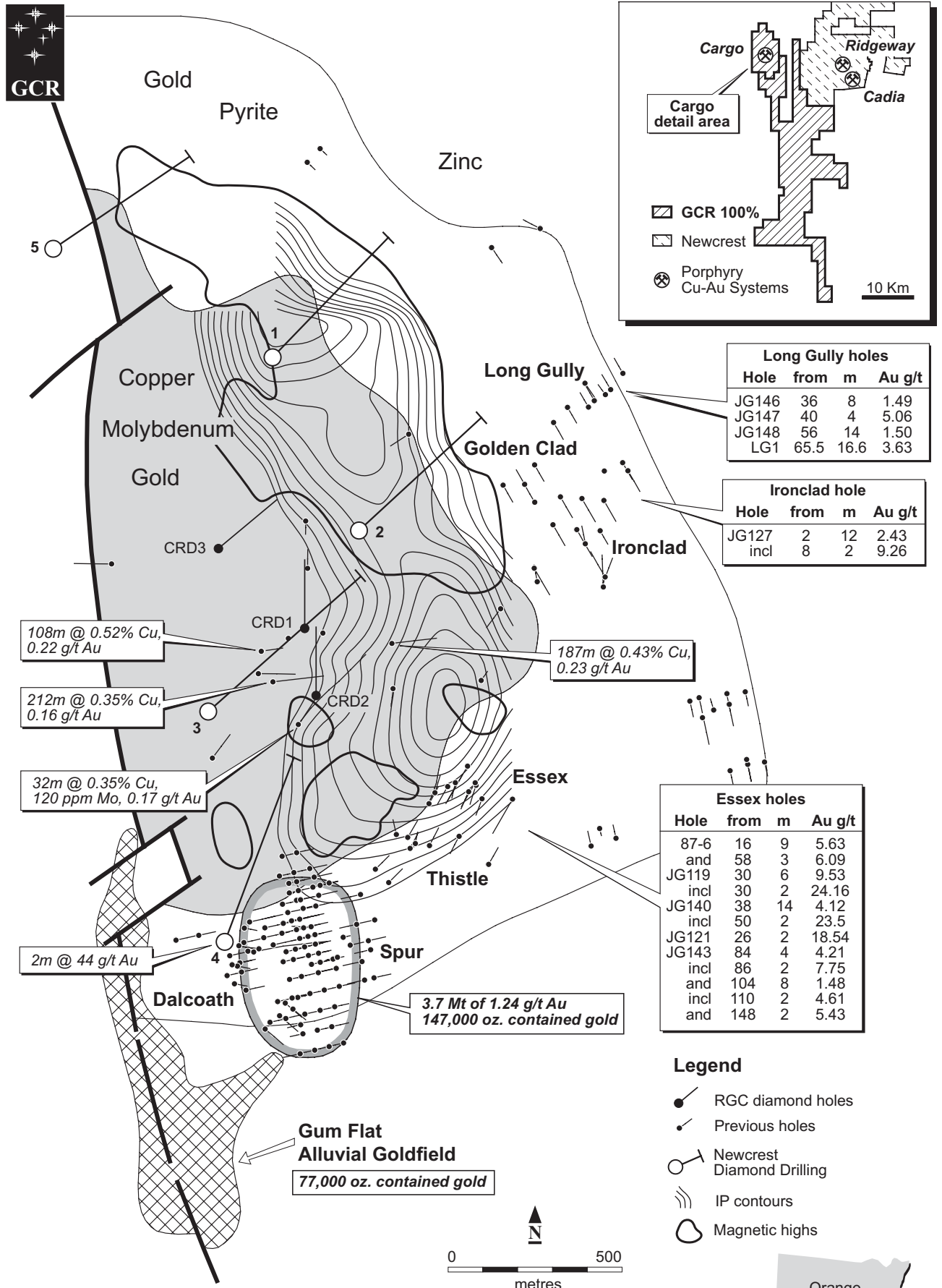


Dark areas correspond to chargeability values greater than 45 mV/V  
Grey areas correspond to chargeability values greater than 25 mV/V

**GOLDEN CROSS RESOURCES LTD**  
**COPPER HILL PROJECT**  
**INDUCED POLARISATION SURVEY RESULTS**  
**3D inversion model of chargeability.**



FIGURE 3



**Long Gully holes**

Hole	from	m	Au g/t
JG146	36	8	1.49
JG147	40	4	5.06
JG148	56	14	1.50
LG1	65.5	16.6	3.63

**Ironclad hole**

Hole	from	m	Au g/t
JG127	2	12	2.43
incl	8	2	9.26

**Essex holes**

Hole	from	m	Au g/t
87-6	16	9	5.63
and 58	3	3	6.09
JG119	30	6	9.53
incl	30	2	24.16
JG140	38	14	4.12
incl	50	2	23.5
JG121	26	2	18.54
JG143	84	4	4.21
incl	86	2	7.75
and 104	8	1.48	
incl 110	2	4.61	
and 148	2	5.43	

108m @ 0.52% Cu,  
0.22 g/t Au

212m @ 0.35% Cu,  
0.16 g/t Au

32m @ 0.35% Cu,  
120 ppm Mo, 0.17 g/t Au

2m @ 44 g/t Au

187m @ 0.43% Cu,  
0.23 g/t Au

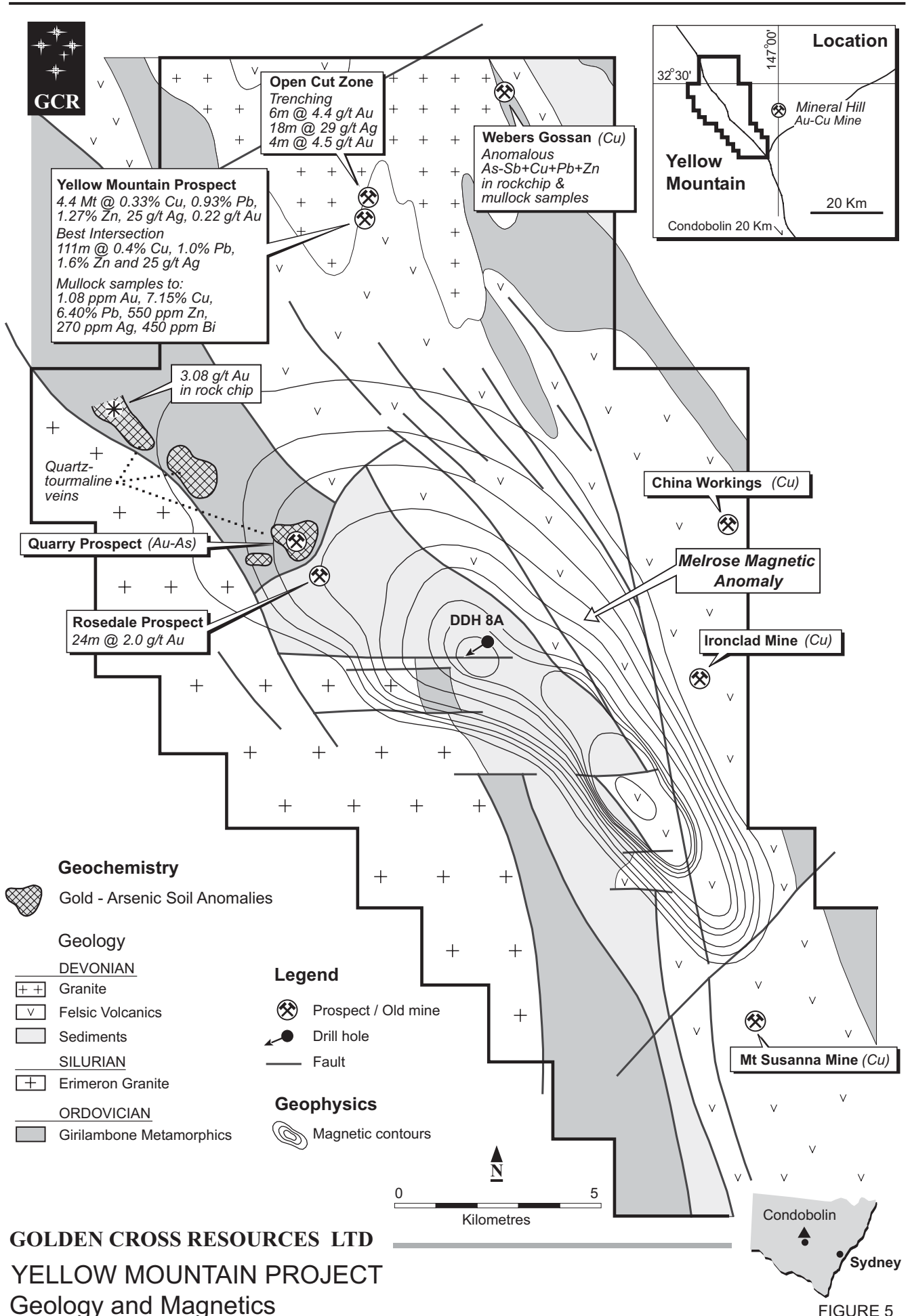
3.7 Mt of 1.24 g/t Au  
147,000 oz. contained gold

Gum Flat  
Alluvial Goldfield  
77,000 oz. contained gold

**GOLDEN CROSS RESOURCES N.L.**  
**CARGO PROJECT**  
 Porphyry Copper-Gold System and Drilling Results



FIGURE 4



**GOLDEN CROSS RESOURCES LTD**  
**YELLOW MOUNTAIN PROJECT**  
**Geology and Magnetics**

**FIGURE 5**