

**BCD Resources NL**  
**EL 29/2008 – Salisbury Hill**  
**Final/Relinquishment Report**

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## SUMMARY

No new field exploration was conducted during the current year. To date 36 reverse circulation percussion holes (3436 metres) have been drilled on the Jarmans, Wings West, Salisbury North, Blue Tier and Eaglehawk Gully prospects, targeting combined magnetic and soil anomalies. Geochemically anomalous gold with apparent structural control was encountered in all prospects but only the Blue Tier and Eaglehawk Gully drilling returned significant sub economic intersections. SHRC24 at Eaglehawk Gully achieved the best result: 10m @ 0.56ppm Au from 80m down hole.

By arrangement with Temco at Bell Bay, a 1060 sample C-horizon soil survey was completed on that part of the Temco mining lease 14M/1994 within the area covered by EL 29/2008. The survey generated prospects requiring follow-up exploration but a satisfactory long term arrangement with Temco is needed.

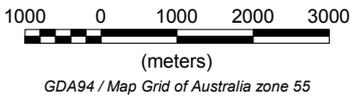
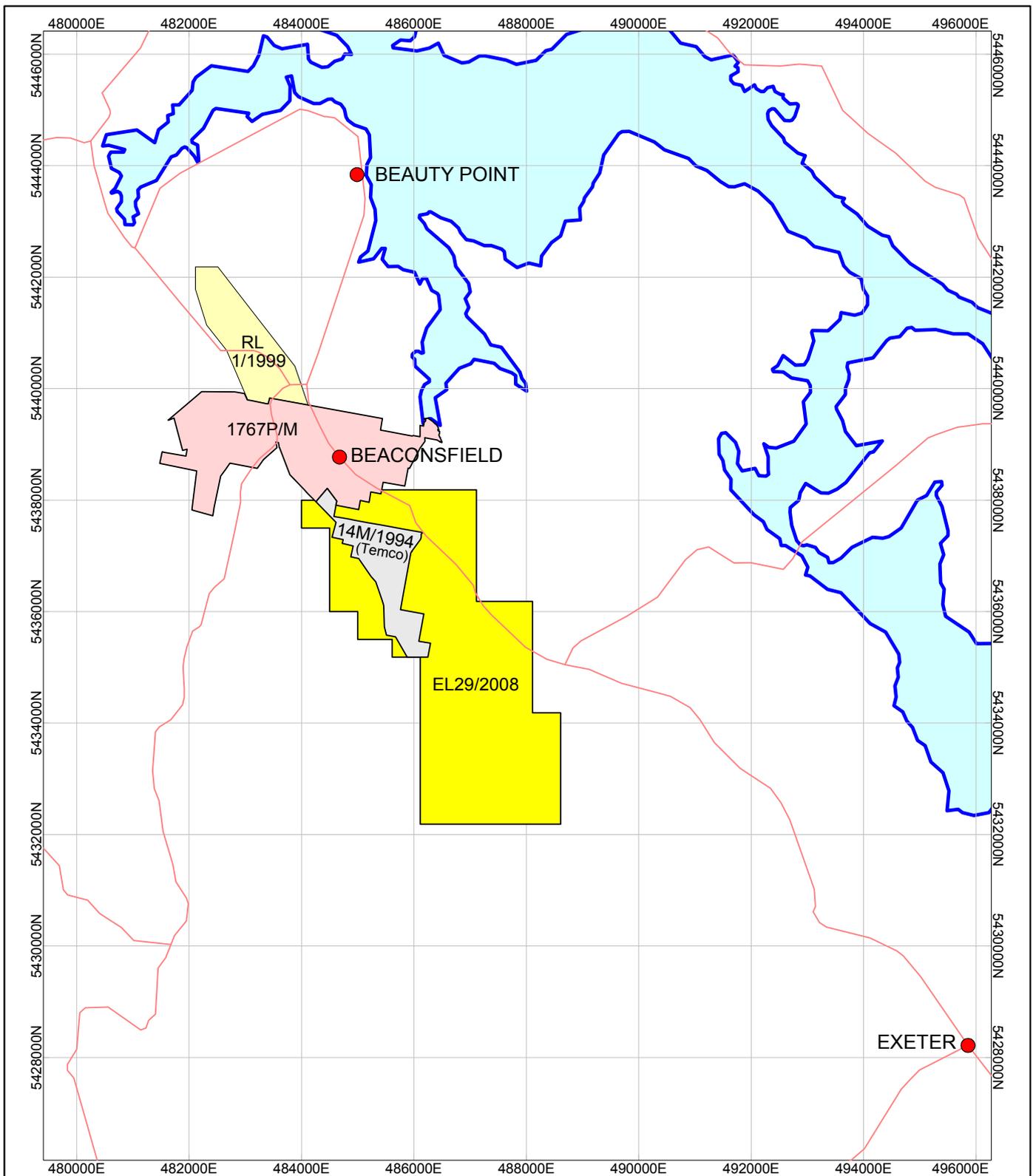
In October 2011 a 7.8 km<sup>2</sup> portion of the EL (approximately 50%) was recommended for voluntary relinquishment but with uncertainty surrounding the future of the Tasmania Mine at Beaconsfield, the partial relinquishment remained pending. Following mine closure in 2012 BCD decided to relinquish the entire EL 29/2008 and this is the final report.

## INTRODUCTION & TENEMENT DETAILS

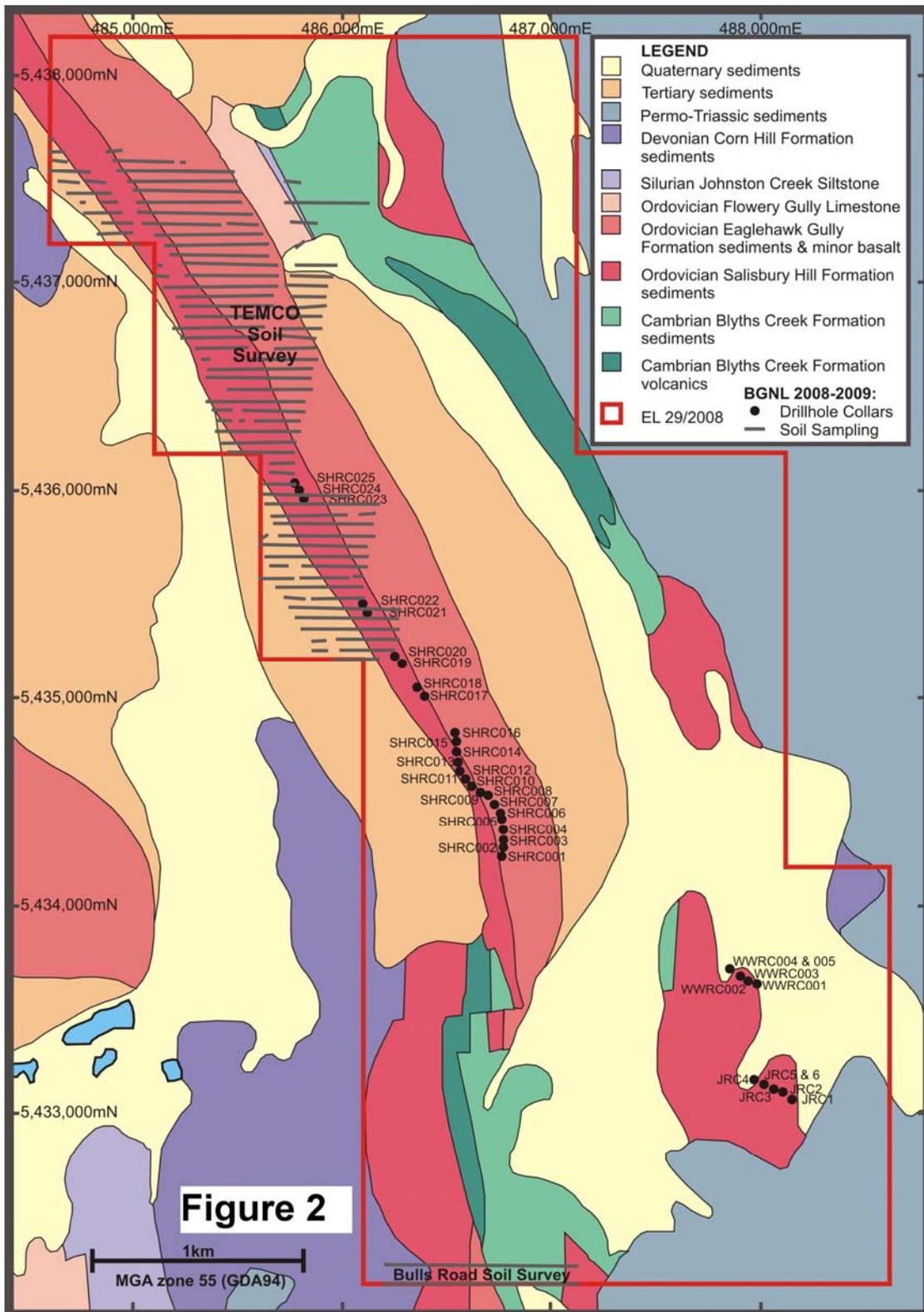
EL 29/2008 is a 15.5 km<sup>2</sup> licence centred approximately 4 km SE of Beaconsfield. The main part of the EL was awarded to Beaconsfield Gold NL (BGNL) as the successful tenderer for Exploration Release Area 714 in September 2008, for a term of 5 years until 30 September 2013 (Figure 1). The ground was formerly held as EL 20/1994, by Allstate Prospecting Pty Ltd on behalf of the Beaconsfield Mine Joint Venture (BMJV), a joint venture between Allstate Explorations NL and Beaconsfield Gold NL. EL 20/1994 expired in October 2007 and the ground was re-released by Mineral Resources Tasmania (MRT) as ERA 714. A 1 km<sup>2</sup> portion of ERA 732, adjoining the western side of EL 29/2008, was acquired as EL 7/2009 by BGNL in June 2009 and consolidated into the current area covered by EL 29/2008 shown on Figure 1, which also shows changes occurring between 2009 and 2011 to RL 1/1999 and EL 27/2000, north of the Beaconsfield mine lease.

In November 2009 the Company name was changed from Beaconsfield Gold NL to BCD Resources NL (BCD).

The northern portion of EL 29/2008 is overlain by the Temco mining lease 14M/1994 (Figure 1), which includes rights to Category 1 commodities. An access agreement between BGNL and Temco resulted in a soil survey being conducted on the Temco ground during the Year 1 exploration program, however at the time of this report no formal arrangement for the transfer of gold rights on 14M/1994 is in place.



<b>BEACONSFIELD GOLD NL</b>	
Figure 1	
EL29/2008	
Tenement Location Map	
Author: KM / PM	Date: Oct 2012



All weather access to most parts of EL 29/2008 is available via 2WD and 4WD roads and tracks connected to the sealed West Tamar Highway and Flowery Gully Road and all services and equipment needed for year round exploration are available in the Beaconsfield district.

This is in the final report for EL 29/2008. It summarises all work done on the EL to date and repeats parts of the 2011 partial relinquishment report. No field work was undertaken in the current year.

## **EXPLORATION AIMS & PHILOSOPHY**

The regional geology within and around the EL is shown on Figure 2. The main targets of exploration interest to BCD are gold mineralised structures hosted within the NNW-SSE trending strike ridge of thrust fault bounded Ordovician sedimentary (and very minor volcanic) rocks within the Salisbury Hill Formation and the Eaglehawk Gully Formation. These rocks are the strike extension of the host stratigraphy in the Tasmania Gold Mine (renamed from the Beaconsfield Gold Mine).

The Tasmania Reef is a Devonian orogenic quartz + carbonate + sulphide + gold reef occupying a transverse dilational shear which strikes northeasterly and dips steeply to the southeast. The reef is located in the Cabbage Tree Hill thrust slice which is bound by the underlying and overlying Cabbage Tree and Cobblestone Creek Thrusts respectively. The reef is only economic where it cuts the siliciclastic strata of the Denison Group. Other mineralized structures parallel the orientation of the Tasmania Reef both in the immediate mine environment (South Reef, Inner South Reef and North Reef) and further afield (North Tasmania and Pease Creek). Thus the principal model for mineralisation being targeted is steeply dipping, discrete reefs filling dilational strike-slip faults paralleling the Tasmania Reef within the Cabbage Tree thrust slice.

However, there are occurrences of gold mineralization in other structural settings in the region. In particular, gold at the Salisbury goldfield in EL 29/2008 occurs in shallowly southwest dipping quartz veins in the immediate hangingwall of a small branch thrust off the main Cabbage Tree Thrust, and in low angle east dipping veins conformable with the Cabbage Tree Thrust. Further, mineralisation in the Moonlight-cum-Wonder workings on the Beaconsfield mine lease appears to occupy the fold hinge of a north-northwest trending syncline, and the carbonaceous pyrite veinlet stockwork style of mineralization encountered at North Pease Creek also appears to be stratiform and controlled by structures in the hangingwall of the Cabbage Tree Thrust.

Experience gained to date exploring in the Beaconsfield district indicates that a combination of high resolution airborne magnetics, soil geochemistry and reverse circulation percussion drilling has been the most effective strategy for generating and testing anomalies sourced from structurally controlled gold mineralization.

## **SUMMARY OF PREVIOUS EXPLORATION**

A comprehensive review of early prospecting and mining activities around Salisbury, Salisbury Hill and Middle Arm Gorge, commencing in the late 1870s, together with an account of modern exploration, is given in MacDonald (2000) and is summarized below, for the modern period pre EL 29/2008.

Modern exploration began in 1980 and four phases of work occurred prior to BMJV activity.

### *1980-1982*

AMAX held EL 39/81 and cut 10.8 km of grid lines, on which they conducted geological mapping, -80# soil sampling a ground magnetics survey and channel sampling within the old adits at Salisbury (Poltock, 1980). They achieved a best channel sample result of 7m @ 4.37 g/t Au, sampled along low angle veining, in the Powerline Adit at Salisbury.

### *1985*

Goldfields Exploration Pty Ltd held EL 17/73 and concentrated on further testing the Salisbury prospect and adjoining Johnson Creek Fault zone (Pease, 1984). They completed regional scale stream sediment and aeromagnetic surveys, extended the AMAX soil grid and drilled four diamond drill holes (S3-6). The results were disappointing, with a best assay interval of 0.63 g/t Au over about one metre in S3.

### *1988*

Independent explorers Harry Stacpoole and John Miedecke jointly entered an agreement with BHP to further explore Salisbury which at that time was held by BHP within their silica mining lease CML 145M/79. Several costeans were developed around the old Salisbury workings and 7 short vertical open hole percussion holes were drilled to a maximum depth of 22 metres (Stacpoole and Miedecke, 1988). The best result was only 11m @ 0.2 g/t Au but later underground mapping showed that the drill holes were too short to intersect one of the vein sets present (MacDonald, 2000).

### *1987-1989*

Beaconsfield Gold Mines Ltd held EL 7/88 and conducted a regional BLEG drainage survey and flew more aeromagnetics over the area (Hicks, 1989). Creeks draining the areas around old workings at Salisbury, Eaglehawk Gully and Middle Arm Gorge returned anomalous values but no further drilling was conducted.

Exploration by BMJV commencing in 1995 and occurred in three phases.

### *1995-2001*

Low intensity prospect generation field work and data compilation was conducted by BMJV during the period when the Beaconsfield gold mine was being constructed and ramped up to full production.

- Mapping and rock chip sampling around old gold diggings, abandoned quarries and major structures, combined with a ground magnetics survey over the southern part of the current EL (Hills, 1997, MacDonald, 1998).

- A 2062 sample C-horizon soil survey with 100 metre line spacing and 50 metre sample spacing (MacDonald, 1999). Part of the survey was located outside the area now held under EL 29/2008 (Hills and MacDonald, 1999).
- Infill soil sampling, mapping and sampling of old underground and surface workings, re-logging drill core from pre BMJV exploration and modeling of structural/stratigraphic controls on mineralisation, particularly around the Salisbury-Johnsons Creek Fault area (MacDonald, 2000).

#### *2002-2004*

- In November 2002 Diamond Ventures NL farmed-in to EL 20/1994 as part of a joint tenement joint venture between Diamond Ventures (the JV operator) and BMJV (Bucknell, 2003). Diamond Ventures conducted an intensive 18 month work program on EL 20/1994 following on from the prospects identified previously by BMJV.
- The BMJV soil survey was extended and infilled to 25 metre sample spacing in places and 16 vertical RC percussion holes (551m) were drilled on the Salisbury prospect. Best results were 1 m down hole @ 4.1 g/t Au from 35m in BRC6 and 2m down hole @ 2.18 g/t Au from 10m in BRC10 (Bucknell, 2003).
- Some of the better soil anomalies were tested with a 12 tonne track mounted hydraulic rotary/percussion blast hole rig, combined with excavator pits to check drill results inconsistent with the soil anomalies. The results down graded the anomalies tested (Bucknell and Morrison, 2003a).
- Two RC percussion and one DDH (242m) tested the Johnsons Creek Fault zone in the south of the current EL. Best result was 2m down hole @ 5.3 g/t Au from 52m in BFRC17 (Bucknell and Morrison, 2003b).
- A follow-up 145m DDH test of the Johnsons Creek structure did not encounter significant mineralization. The stratigraphic interpretation from core implies a rotational dextral displacement of the Ordovician rocks and the Cobblestone Creek Thrust Fault in that area (Morrison, 2004).

The Diamond Ventures JV was terminated in 2004.

#### *2005-2007*

Following a 2004 partial relinquishment and extension of term, BMJV continued prospect and regional scale exploration within the remaining approximately 12 km<sup>2</sup> of the EL.

- Two DDHs tested the structure controlling the topographic discontinuity at Middle Arm Gorge in the north of the EL. B52 and daughter wedges B52a and B52b reached a total depth of 652.5m and intersected reef style structures with minor mineralization. Best results were 0.8m down hole @ 4.4 g/t Au from 587.15m and 4.8m down hole @ 0.2 g/t Au from 587.95m (MacDonald, 2006). The follow-up hole B53 had less drilling problems than B52 and reached a total depth of 522.3m. An unmineralised structure was intersected

between 187.6-190.9m down hole and was interpreted as the primary structure controlling Middle Arm Gorge (MacDonald, 2007).

- A 305 line km helimagnetic/radiometric survey was flown by GPXair, utilizing helicopter and contractor availability following from the 2007 MRT regional airborne geophysics program in NE Tasmania.

## **EL 29/2008 EXPLORATION RESULTS**

### *Airborne Geophysics*

On 9th September 2007, GPX Airborne flew a helicopter aeromagnetic and radiometric survey for BGNL over the area now covered by EL 29/2008. Interpretation of the survey results was reported in 2009 and was a key component of the drill site targeting approach used during that year. Survey parameters and digital data supplied by the contractor are enclosed in the 2011 Annual Report (Morrison, 2011).

The first-northerly, horizontal-derivative of the magnetics, with the addition of sun shading, enhanced several ENE-WSW linear structures that showed potential as exploration targets. Those lineaments, judged to have the highest ranking potential for being sourced by dilational shears, were drill tested as close to the stratigraphic contact between the Salisbury Hill Formation and the Eaglehawk Gully Formations as was logistically and environmentally practical.

### *Drilling*

Thirty six reverse circulation percussion holes were drilled on five prospects for a total of 3436 metres. Three prospects (Salisbury North, Blue Tier and Eaglehawk Gully) are located along the Salisbury Hill ridgeline, in Ordovician Mine Sequence correlate stratigraphy and the remaining two (Jarmans and Wings West) are in the southeast of the EL, hosted in Cambrian Blyths Creek Formation rocks (Figure 2). The drilling occurred in two campaigns, both awarded to Spaulding Drillers from Devonport, Tasmania. The 11 hole campaign at Jarmans and Wings West used a track mounted G&K 850 rig and the 25 hole program on Salisbury Hill used the track mounted SD 800, which is a smaller, lighter and slightly more maneuverable rig. Both rigs were supported by a track mounted compressor/booster compressor vehicle and operated by a three man crew. All holes were drilled with a Premier PR4 hammer and a nominal bit diameter of 120 mm. Samples were split on site through a three tier riffle splitter and combined into two metre composite calico bag samples of approximately 2 kg for assaying at Amdel Adelaide.

Some low tenor (5ppb gold threshold) soil anomalism from earlier surveys exists along the ridge top and on the basis of the lineament and soil anomaly locations three prospects are recognised: Salisbury North, Blue Tier and Eaglehawk Gully. All 25 SHRC series holes were azimuthed to the NNW on the assumption that the targets were SE dipping Tasmania Reef-conformable structures.

Overall the results were disappointing. Geochemically elevated intervals in the 10-100 ppb Au range were encountered on the three prospects at positions consistent with several of the magnetic lineaments being caused by weakly mineralised structures but the 5ppb threshold for anomaly definition is ineffective in

discriminating between structures containing traces of gold and those with significant mineralization. Results improved towards the north of the traverse and the two holes testing the Eaglehawk Gully prospect (SHRC24 and 25) intersected encouraging mineralization, as shown in table below.

Table 1 Best Intersections–Eaglehawk Gully Prospect

SHRC24	10m @ 0.24ppm Au from 20m
SHRC24	6m @ 0.24ppm Au from 38m
SHRC24	10m @ 0.56ppm Au from 80m (including 88-90m @ 1.34)
SHRC25	6m @ 0.21 ppm Au from 40m
SHRC25	6m @ 0.26 ppm Au from 108m

It was not possible on this campaign to extend the traverse further north because of the Temco tenement boundary issue but both the Eaglehawk Gully and Blue Tier prospects require follow-up work.

The Jarmans and Wings West campaign comprised six holes on Jarmans prospect and five on Wings West for a total of 874 metres. Sandstones with common quartz veining were known in the area from previous mapping but it was unclear where in the regional stratigraphy these sandstones belong and similarly, there was uncertainty about whether the prospects were on the Cabbage Tree or Cobblestone Creek Thrust slices. The presence of weak soil and rock chip anomalism around small historic diggings, potentially in the hangingwall of NNE trending structures was the basis of the prospects and the northwesterly azimuth for the drill holes.

The results showed that the sandstones are inter layered with ductile purple and green shales and siltstones, calcareous serpentinites and heavily foliated (schistose in places) serpentinitised mafic rocks. Regionally, this package of rocks best correlates with the Blyths Creek Formation stratigraphy at East Beaconsfield, on the Cobblestone Creek Thrust slice. As was the case at East Beaconsfield, common pyrite, quartz veining, silicification, carbonate and apparent fault zones were encountered in the drilling at Jarmans and Wings West but gold mineralization was almost absent. In most cases the gold values above detection level in the drill samples are of a similar tenor as the overlying soil geochemistry anomalies. Best results were 2m @ 0.26 ppm Au in sandstone in JRC4, and 2m @ 0.13 ppm Au in siltstone in WWRC3. No further work is proposed for these prospects and the assignment of the prospect geology to Cambrian Blyths Creek Formation stratigraphy within the Cobblestone Creek Thrust block further down grades the potential of that part of EL 29/2008 southeast of Salisbury.

#### *Soil Surveys*

Two surveys for a total of 1134 samples were conducted (Figure 2). The main survey consisted of 1060 C-horizon soil samples within the Temco mining lease 14M/1994, under an access agreement with Temco management at Bell Bay. A 74 sample orientation survey was also conducted at Bulls Road in the south of EL 29/2008, to compare C- and A- horizon geochemical patterns on two parallel lines across a previously detected weak and questionable C-horizon gold anomaly. Both surveys were sampled by a two/three person crew from Ron Gregory Prospecting.

The Temco survey samples were collected on east–west lines with GPS controlled nominal line spacing of 50 metres and sample spacing of 25 metres. Samples were taken by a combination of a hand held power auger drilling down to the target horizon (or refusal), then the actual sample was drilled out with a manual soil auger. Samples were screened in the field through a 7mm mesh sieve and approximately 1 kg of undersize product in a calico bag from each site was sent to the laboratory. Weather and ground conditions were sufficiently dry during the survey so that no sample drying was needed prior to consignment dispatch. All samples were assayed at Amdel, Adelaide; by Fire Assay to 1ppb detection for Au, and by mixed acid (HF) digest/ICPOE for Ag (1 ppm L/D), As (3 ppm), Cu and Zn (2 ppm) and Pb, Bi and Sb (5 ppm). Selected batches of samples were also assayed for Fe (100 ppm) and Mn (5 ppm).

The Bulls Road orientation soil survey involved comparing C-horizon and A-horizon samples taken from 38 sites on two parallel east-west lines (Figure 2). Apparent gold anomalism with a suspect distribution of anomalous samples along the two lines had been identified on an earlier survey and required checking, creating a second reason for the survey. The C-horizon samples were taken by auger and all field procedures and assay methods were identical to those used in the Temco survey. The A-horizon samples were taken with a small mattock, by scraping off the leaf litter over a roughly 30 cm x 30 cm square area, then scraping samples enriched in surficial black organic rich material. The scrapings were screened through a 5 mm sieve to produce samples of approximately 0.5 kg, which were also sent to Amdel, Adelaide, and assayed for Au, (1 ppb detection), Ag (0.05 ppm), As, Bi, Cu, Pb, Sb and Zn (detection ranging from 2-5 ppm) by their ARM10 method. This method involved an aqua regia partial digest and an ICPOE finish for 8 elements including gold. The digest reagent is intended to dissolve all sulphides and native metals but not the silicates.

The main conclusion was that the faster sampling rate and cheaper assay program gives the A-horizon method a cost advantage of approximately 50% over the previous power auger C-horizon method and the generation of low level anomalies appears equally reliable with A-horizon data.

## **EXPENDITURE**

Total cumulative expenditure on EL 29/2008 up to 25 October, 2011 was \$751,931.82, comprising the following categories.

**Table 2 Cumulative Expenditure**

<b>Geoscientific Costs</b>	
Geology	\$221,825.78
Geochemistry	\$139,268.48
Geophysics	\$6,000.00
Remote Sensing	
<b>Drilling &amp; Gridding Costs</b>	
Gridding	
Drilling	\$327,600.62
<b>Land Access and Surveying Costs</b>	\$3,965.68
<b>Rehabilitation Costs</b>	\$2,870.00
<b>Feasibility Study Costs</b>	
<b>Other Costs (Consumables and Freight)</b>	\$23,256.87
<b>Administration Costs</b>	\$27,144.39
<b>TOTAL</b>	<b>\$751,931.82</b>

No exploration has been conducted since October 2011.

## **ENVIRONMENTAL& REHABILITATION ACTIVITIES**

All drill holes were completed with capped PVC collar pipes protruding 10-20 cm above ground level. As most of the holes are located on vehicle tracks, this approach was taken to make the collars visible enough to be avoided by drivers intending to avoid them but short enough so that a vehicle can straddle the collar without breaking the pipe. No holes were making ground water at the time of capping. Prior to submitting the EL for relinquishment, all 36 PVC collars were cut off below ground level and completed with subsurface octoplugs and earth fill cappings up to ground level.

Drill pads on private land at Wings West were rehabilitated by excavator and at the landowner's request, some firewood was salvaged from small eucalypts cut up to provide a slash cover on the pads. A steel boom gate was given to the landowner at Jarmans, to reduce the chance of firewood poaching using access developed for drilling that prospect.

At Salisbury Hill all 25 holes were drilled on a 4WD vehicle track open to the public, in State Forest. The track was widened by excavator to the minimum width judged acceptable for effective and safe RC drilling operations and to provide fire fighting vehicle access in the event of a bush fire.

## **CONCLUSIONS & FUTURE PROSPECTIVITY**

The 36 RC holes drilled to date have effectively upgraded the prospectivity of the Blue Tier and Eaglehawk Gully prospects and the northern part of Salisbury Hill in general. The southern part of Salisbury Hill, Jarmans and Wings West prospects are considered to have been downgraded. Interpretation of the 2007 helimagnetics-radiometrics survey and all soil surveys within the EL have generated soil anomalies requiring follow-up field checking and infill soil sampling to firm up drill targets. Most of the soil anomalies are partly or entirely inside the area covered by the Temco mining lease 14M/1994 and therefore more advanced arrangements between the two companies are required prior to this work proceeding.

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