SUMMARY

Exploration Retention Licence (ERL) 130, in the Pine Creek area, NT, is currently being explored by AngloGold Australasia Limited. The centre of the tenement is located 4km north of the Pine Creek township and approximately 4km south east of AngloGold’s Union Reefs Gold Mine and treatment facilities. Anglogold is exploring ERL 130 with a view to upgrading the known geological resource to a reserve status, which can then provide a source of additional feed to the Union Reefs Gold Mine treatment facilities.

This report summarises the work completed within the Esmeralda lease during the reporting period ending 17th November 2000.
CONTENTS

1.0 INTRODUCTION ............................................................................................. 4
2.0 TENEMENT STATUS ...................................................................................... 4
3.0 LOCATION AND ACCESS .............................................................................. 5
4.0 REGIONAL SETTING ...................................................................................... 5
5.0 PREVIOUS WORK .......................................................................................... 5
6.0 TENEMENT GEOLOGY and MINERALISATION............................................. 6
7.0 REGIONAL EXPLORATION YEAR ENDING 16TH NOVEMBER 2000............. 8
8.0 ENVIRONMENTAL ISSUES ............................................................................ 8
9.0 PROPOSED WORK – YEAR ENDING 16TH NOV 2001............................... 9
10.0 EXPENDITURE STATEMENT - Year ending 16th November 2000............... 9
12.0 REFERENCES .............................................................................................. 10

FIGURE LISTING

Figure 1 Esmeralda ERL 130
Tenement Location

Figure 2 Esmeralda ERL 130
Regional Geology

APPENDIX LISTING

Appendix 1 Environmental Register
Appendix 2 Digital Copy of Report
1.0 INTRODUCTION

Exploration Retention Licence (ERL) 130, covering 834 hectares in the Pine Creek area, NT, is currently being explored by AngloGold Australasia Limited. The centre of the tenement is located approximately 4 km north of the Pine Creek township and 4 km south-east of the Union Reefs Gold Mine and treatment facilities. AngloGold is exploring the Esmeralda Deposit with the view to upgrade the existing resource to reserve status so as to provide additional feed for its current operation at Union Reefs. This report details all work carried out in ERL 130 for the year ending 16th November, 2000, the seventh year of the licence tenure and year one of the second renewal phase.

2.0 TENEMENT STATUS

ERL 130 comprises 834 hectares and was granted to Sovereign Gold NL a wholly owned subsidiary of Astron Resources NL and Solomon Pacific Resources NL on the 17th November 1993 for a period of 5 years. Astron Resources having 75% interest in the tenement and Solomon Pacific Resources a 25% interest. Under a joint venture agreement signed between these parties and Acacia Resources, Acacia could earn 70% of the tenement by funding exploration activities.

The tenement formed part of the Esmeralda Joint Venture between Astron, Solomon Pacific and Acacia. The Joint venture was comprised of ERL 130, EL 8457 and MLN’s 51-57 (Caroline Leases).

Acacia Resources purchased Astron Resources share of the joint venture in 1995. The joint venture remained in force between Acacia Resources (75%) and Solomon Pacific (25%), with Acacia Resources earning up to 70% of Solomon Pacific’s interest through exploration expenditure.

Acacia Resources completed a successful takeover of Solomon Pacific Resources on 24th June 1996, assuming Solomon Pacific’s interest in ERL 130. Acacia Resources held 100% of the Esmeralda licence and contained resources.

A renewal application was lodged on 15th May 1998, and granted on 9th September 1998 for the period ending 16th November 2000.

Following a successful takeover in late 1999, AngloGold Australasia Limited assumed Acacia’s commitments including the management and exploration of ERL 130.

A second renewal of tenure was granted on the 22nd Aug 2000 allowing continued exploration by AngloGold for an additional two years ending 16th Nov 2002. A covenant of $260,000 was set by the NTDME for expenditure during the term of the renewal period from 17th November 2000 to 16th November 2002.

Due to reprioritising following the AngloGold takeover the responsibility for continued exploration and resource definition within the areas containing the known geological resources (specifically Zone A and B, see previous reports) was handed over to the mine exploration team at the Union Reefs Gold Mine in early 1999. AngloGold Australasia Darwin managed regional exploration within the Esmeralda lease during 2000 but responsibility for this exploration was also handed over to Union Reefs in
late 2000. The Union Reefs Exploration team will assume total management of ERL130 in 2001, including reporting requirements.

3.0 LOCATION AND ACCESS

The centre of ERL 130 is located approximately 4km north of the township of Pine Creek in the Northern Territory (Figure 1). The licence area can be accessed via the Frances Creek Road, turning north off the Kakadu Highway approximately 3km east of Pine Creek. Further access is gained via a dirt track turning north-west adjacent to the Darwin - Amadeus Basin Gas Pipeline.

4.0 REGIONAL SETTING

ERL 130 is located in the Pine Creek area in the central Pine Creek Geosyncline (Figure 2). The geosyncline contains Early Proterozoic metasedimentary rocks resting on a gneissic and granitic Archaean basement. The metasediments represent a preserved basinal sequence up to 14km thick (Needham et al., 1980). These rocks were tightly folded and metamorphosed to greenschist facies (in some places to amphibolite facies) at about 1890 to 1870 Ma (Ferguson, 1980).

The geosynclinal sequence is intruded by transitional igneous rocks including predeformational dolerite lopoliths and dykes and post deformational granites. Largely undeformed platform cover of Middle and Late Proterozoic, Cambro-Ordovician and Mesozoic strata rest on these with marked unconformity.

ERL 130 lies in the central part of a neck of metasediments, assigned to Burrell Creek and Mt Bonnie Formations (Stuart-Smith, 1987), which separates two lobes of the Cullen Batholith. This metasedimentary neck contains both the Union Reefs (Au) and Pine Creek (Au) ore bodies as well as numerous areas of historic workings.

5.0 PREVIOUS WORK

Cyprus 1991-93
Zones “A” and “B” at Esmeralda were defined by Cyprus Gold in 1991 based on soil anomalies. In 1992 Cyprus Gold drilled 25 RC drill holes into the prospect (ERC0001-ERC0025). This drilling program was completed in two phases: a 16 hole/1110m phase followed by a 9 hole/740m phase. The initial phase was targeted on soil and rock anomalies, the second phase providing selective down dip testing of phase 1 intersections. Based on their drilling data Cyprus reported an “in-situ, undiluted geological resource of 638,000 tonnes grading 1.84 g/t (38,000 oz)” (Miller, 1993).

Zone “A” contained an estimated 325,154 tonnes @ 2.12 g/t, based on six 50m spaced sections, 8300N - 8500N and 8950N. Zone “B” was estimated to contain 313,546 tonnes @ 1.55 g/t based on three sections, 9350N, 9450N & 9500N.

Billiton/Acacia 1994-98
In 1994 Billiton Australia drilled 15 RC holes (EAP0001-0015) into Zone “A” for a total of 938m and a diamond tail of 21 metres on EAP0015 (renamed to EAD0015).
In 1995 Acacia drilled 40 RC holes (ERC0041-0080) into Zone “A” and “B”, for a total of 2573m. In August 1995, a manual resource calculation was completed with the available data. This geological resource estimate gave an inferred resource of 879,000 tonnes @ 2.0g/t Au.

In 1997/1998 a detailed analysis of the Esmerelda resource drilling, including a review of the geological controls on mineralisation and the physical and metallurgical properties of the orezone, was completed. A resource definition was completed using the review, and with the aid of M&RT consultancy, which defined an inferred resource of 1.26Mt @ 1.62g/t Au.

In 1998/1999 Acacia Exploration Darwin completed a channel chip sampling program (thirty samples) over prospective quartz veining and completed a Base of Slope geochemical sampling program (10 samples). Following a review of the dataset continued exploration/resource definition of the known mineralisation was transferred to the Union Reefs Exploration team whilst Acacia Darwin continued the regional exploration within the tenement.

6.0 TENEMENT GEOLOGY and MINERALISATION

Figures to accompany the text below can be found in the 1997/1998 Esmeralda annual report (Internal Reference No. 08.10016).

The Esmeralda prospect contains two linear and roughly parallel zones of mineralisation referred to as Zones “A” & “B” respectively. These zones occur within ERL 130 (Figures 2 & 5) in Mt Bonnie Formation, a marginal marine sequence consisting of interbedded shale, siltstone, greywacke, chert and tuffaceous units. These rocks have been tightly folded about north-west trending axial traces to produce steeply dipping bedding throughout the area. Both zones of mineralisation are associated with antiformal closures.

Structural geologist Simon Hewson (contracted to Acacia by TerraSearch) completed an interpretation of the geology and structure of the Esmeralda resource area, the main aspects of which are summarised below:

Zone A
Zone A, located between 7800-9400GN and 5300-5750GE, is situated on the eastern limb of a regional antiform. Kinked parasitic folds have developed in the southern part of the zone, the geometry of which may have controlled the orientation of subsequent faults that host the mineralised lenses. Greywacke/shale units dip 40° to 90° towards the east, while the mineralisation dips ~60° towards the west, steepening at depth. The orientation of the mineralised lens is thought to be loosely related to the antiform geometry as an “O” type vein style (reverse fault, oblique to the axial plane).

Numerous faults, many of which lie parallel/sub-parallel to bedding are observed within the area. These faults generally dip steeply either towards the E or the W. In some cases these faults comprise major sub-vertical bounding shears with more shallow dipping subsidiary shears forming cross-linking structures. The geometry of these invariably indicates W block-up.

A large “Master Fault”, of at least 600m strike length, is inferred to have cut the main regional antiform along its western limb and/or (depending on location) its hinge.
This fault, which strikes slightly E of N, appears to correspond with mass siliceous veining that is present along the major ridgeline, between Zones A and B.

Formation of the mineralisation is post folding, within an upward shallowing subsidiary and curviplanar fault, with the fault being nucleated from a ‘master’ fault that has overprinted the regional antiform. The sense of movement along the subsidiary fault has been interpreted as reverse ie., W block up.

**Zone B**

Zone B, located between 9100-10000GN and 4900-5100GE, is situated in the hinge of an antiform, along the main ridge. The hinge of this fold lies between 5000 and 5050E, in the northern half of the area but passing south, it appears to lie closer to 4980-5000E. The antiform is asymmetric, has a steeply dipping W limb (long limb), and a sub vertical/overturned E limb (short limb). The mineral stretching lineation L₃ has a sub vertical plunge and bedding and cleavage have an average trend of 305° (true/magnetic). The intersection of bedding with the mineral lineation L₃ exhibits a variable plunge across the fold as follows:

- Around the 9100N line, the lineation plunges moderately to steeply towards the N (all are values from the W limb).
- Between 9200 and 9500N the lineation has a variable plunge, with shallow values (all from western limb), suggesting an overall sub-horizontal fold axis.
- North of 9500N scattered readings indicate that L₃ plunges northwards at shallow to moderate angles.
- Three values gained from the E limb; gave a plunge northwards at variable angles

The main vein phases observed are bedding and foliation parallel types (B and A veins respectively). These generally comprise white grey or dark grey (smoky) quartz, which is variably fractured, and generally lacking sulphide minerals. Thinner semi-gossanous veins are common in fractures in the more massive greywacke beds.

Numerous vertical shears along and adjacent to the Zone B anticlinal hinge suggest that late stage faulting cut the folds and was associated with the development of the mineralised zones. Movement indicators suggest at least a major component of dip-slip (vertical movement). The sigmoidal geometry of bedding between two successive shears suggests an E-block up movement. Fractures and veins which dip at shallow to moderate angles towards the NE, are cut by reverse faults.

**Mineralisation**

Mineralisation in Zone “A”, and to a lesser extent in Zone “B”, occurs in a breccia consisting of quartz-rich (cherty) to quartzo-feldspathic metasediments (+ tourmaline) in a tourmaline-quartz matrix, which has in turn been brecciated and cut by tourmaline + quartz veins. The quartz in these zones occur in association with pyrite + pyrrhotite + arsenopyrite (limonite) and scorodite.

The breccia displays a coarse texture with clasts up to decimeter scale which are intensely veined with quartz sulphide stockwork, and pervasively silicified. Tourmaline is more prevalent in Zone A (closer to the Cullen Granite), and arsenopyrite is more prevalent in Zone B. Limonitic boxworks (after euhedral pyrite or arsenopyrite? Crystals to 4mm in size) are randomly distributed, and accessory disseminated rutile is also present. Free gold has been observed as flakes up to 250µ in diameter.
7.0 REGIONAL EXPLORATION YEAR ENDING 16TH NOVEMBER 2000

No field based regional exploration was completed within ERL130 during the reporting period. Access to the tenement was hampered for a six month period by the onset of an early and extended wet season. Uncertainty caused by the attempted takeover bid by Delta Resources and the subsequent successful takeover by AngloGold in late 1999 caused Acacia to keep exploration expenditure to a minimum. Since the takeover projects are being re-assessed and this process is taking up a large amount of field time and expenditure. As a result, the planned 71 hole RC infill program proposed for this reporting period was not completed. Some review and data compilation was completed by the Union Reefs team during the reporting period.

8.0 ENVIRONMENTAL ISSUES

No field based exploration was completed within the Esmeralda lease during the reporting period. No pads were prepared and no drilling was conducted. An environmental register has been compiled and is included as Appendix 1.
9.0  PROPOSED WORK – YEAR ENDING 16TH NOV 2001

The work proposed for the 1999-2000 reporting period will be completed in the 2000-2001 reporting period:-

- infill RC drilling of the known resource, as well as drilling to extend known mineralisation
- first pass grade control drilling over selected areas of the resource.
- further resource feasibility work to ascertain the viability of mining the current resource, including reference to the possible relocation of the gas pipeline.
- detailed mapping of the area between the areas of known mineralisation.

<table>
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<tr>
<th>Category</th>
<th>Cost</th>
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<tr>
<td>Geology</td>
<td>$4,000</td>
</tr>
<tr>
<td>Field Staff</td>
<td>$5,000</td>
</tr>
<tr>
<td>Office Staff and Support</td>
<td>$6,000</td>
</tr>
<tr>
<td>Vehicles</td>
<td>$1,000</td>
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<td>Gridding</td>
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</tr>
<tr>
<td>Drilling</td>
<td>$65,000</td>
</tr>
<tr>
<td>Assays</td>
<td>$25,000</td>
</tr>
<tr>
<td>Contractor/Other Professionals</td>
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</tr>
<tr>
<td>Grading</td>
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**Total = $110,000**

10.0  EXPENDITURE STATEMENT - Year ending 16th November 2000

The total expenditure for the reporting period within ERL 130 was $7,422. The breakdown of expenditure is given below:

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<tr>
<th>Category</th>
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<tr>
<td>Staffing and Support</td>
<td>$6,454</td>
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<tr>
<td>Administration</td>
<td>$968</td>
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</table>

**Total = $7,422**

Covenant for the term of the renewal covering the period 17th November 1999 – 16th November 2000 is set at $50,000.
12.0 REFERENCES


KHOSROWSHAHI, S. & SHAW, W.; 1998; Resource Estimate for the Esmeralda Deposit, Union Reefs NT, Unpublished report for Acacia Resources prepared by Mining & Resource Technology Pty Ltd.


MILLER, G.; 1993; Final Report - EL6880 Esmeralda, by Cyprus Gold Australia Corporation, Unpublished report for NTDME


SEWELL, D. & VELA, N.; 1998; Esmeralda Project, Geology, Drilling, Quality Control & SG Data to accompany Geological resource Estimate, unpublished report for Acacia Resources Ltd, report No. 08.8969


Appendix 1

Environmental Register
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
LAND STATUS RECORD

Project: Esmeralda

Tenement Name: Esmeralda  Loc. Code: UR21

Tenement No’s: ERL 130  Area: 834Ha

Registered Holder(s): AngloGold Australasia Limited

Date Granted: 17th November 1993  Term: 5 years
2 years ext + 2 yrs ext

Bond/Security: Nil

JV Partners (if any): Nil

Land Classification: (Crown, Private, Lease) Lease

Land Holder/Occupier: Gary Hamilton  Station: Mary River West
(Equest Pty Ltd)

Address: 9 Mall Mall  Phone: (075) 534 7408
CURRUMBIN
QLD

Contacted By: Elaine Wakefield  Date: Early 1995

Pastoral Notes: (Stock, Cultivation, Access, Rainfall)
Open grazing land, currently unstocked

Environmental Notes: (Flora/Fauna, Erosion, Bushfires, Flooding)

Groundwater: (Bores/Wells/Dams, streams, drainage, test data)

Aboriginal Notes: (Sacred Sites, Cultural)
No sites defined (AAPA certificate C98/149 which expires on the 18th December 2000)

Historic Relics: (Mine Workings, Equipment, Homesteads etc.)
None known

Previous Activity: (Mining, Exploration, Forestry, etc.)
Licence area previously explored by United Uranium, Astron Resources, Cyprus Gold Australia and Solomon Pacific Resources.
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER  
PRE-EXISTING ENVIRONMENTAL DISTURBANCE RECORD

<table>
<thead>
<tr>
<th>Tenement Name:</th>
<th>Esmeralda</th>
<th>No(s):</th>
<th>ERL 130</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration Activity Area:</td>
<td>Soil sampling carried out by Eupene Exploration &amp; Cyprus Gold</td>
<td>Costeanning and RC drilling by Cyprus Gold</td>
<td></td>
</tr>
<tr>
<td>Shafts/Pits/Dumps:</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track/Access:</td>
<td>Access track west of Amadeus Basin - Darwin Gas Pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line Clearing:</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costeanning:</td>
<td>9 costeans constructed by Cyprus Gold, rehabilitation attempted. Subsequent subsidence of top soil leaving shallow depressions in ground acting as water courses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drill Sites:</td>
<td>Cyprus Gold constructed 25 RC drill pads and number of access tracks to pads using a bulldozer. Pads poorly rehabilitated, being ripped and seeded with black wattle trees. Pads have subsequently been severely eroded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>Earthworks exist along access track for gas pipeline. Small gravel quarries constructed by roads dept.</td>
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</tr>
<tr>
<td>Location Data:</td>
<td>1:250,000 Pine Creek SD52-08</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>1:100,000 Pine Creek 5270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compiled by:</td>
<td>Neil Martin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>3rd December 1998</td>
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</table>
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
ANGLOGOLD ENVIRONMENTAL IMPACT RECORD

Tenement Name: Esmeralda
No (s): ERL 130

Report Ref No’s: 08.7283, 08.7530, 08.7755, 08.8478, 08.8964, 08.8969, 08.10587

Exploration Activities: Gridding, soil sampling, costeanning, RC and diamond drilling, rock chipping & mapping, base of slope sampling

Grids & Traverses: Resurrection of Astron/Cyprus soils grid using wooden grid pegs at 50m X 50m spacing (1994)

9 line km of gridding marked at 100m x 50m spacing with galvanised iron fence droppers (1995).

30 channel chip samples (1999)
10 base of slope samples (1999)

Costeans / Pits: 9 costeans for 480m constructed (1996)
8 costeans for 514m constructed (1997)

Drilling: 15 RC drill holes totalling 983m & 1 diamond tail (1994)
35 RC drill holes totalling 2243m (1995)
27 RC drill holes & 2 cored diamond holes total 1950m (1996)
50 RC drill holes & 1 re-entry totalling 4,495m (1997)

Drill Pads: Numerous drill pads constructed during the licence tenure
15 drill pads (1994)
39 drill pads (1995)
30 drill pads (1996)
50 drill pads (1997)

Ground Geophysics: 8 kilometres of gradient array induced polarisation surveying (1996)

Access Tracks: Access tracks cover areas of major mineralisation. Tracks upgraded each year prior to commencement of drilling programs

Camps: Nil
Other: Area cleared off main access track to act as Esmeralda Sample Farm, contains approximately 4000m of RC bulk bags

Compiled by: Neil Martin Date: 3rd December 1998

Revised by: Penny Large Date: 30th November 2000
**TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER**  
**ANGLOGOLD REHABILITATION RECORD**

<table>
<thead>
<tr>
<th>Tenement Name:</th>
<th>Esmeralda</th>
</tr>
</thead>
<tbody>
<tr>
<td>No(s):</td>
<td>ERL 130</td>
</tr>
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</table>

**Disturbance:** Rehabilitation: Ongoing  
**Date:** 3\(^{rd}\) December 1997

**Grids & Traverses:** 100m x 50m fence droppers still in field.

**Soil Sampling:** Sample sites repaired immediately after sampling.

**Costeans/Pits:** Costeans fully rehabilitated. Photographic record of pre-disturbance and rehabilitated costean sites (held in Darwin office).

**Drilling:** Drill collars are capped as NTDME requirement. All collars have now been buried as per DOME requirements, outside the main mineralised zones. Most holes within the main mineralised zones have not been permanently capped, as access may still be required for re-entry in further phases of drilling.

**Drill Pads:** Drill pads have not been rehabilitated over main zones of mineralisation, pending future mining of deposit. All RC bulk sample residues have been removed from drill pads and stored at the Esmeralda bag farm. Drill pads not over mineralised zones have been rehabilitated. All drill pads and drill sites have been photographically recorded prior to drill pad construction.

**Ground Geophysics:** All IP station sites have been rehabilitated immediately after survey.

**Access Tracks:** No rehabilitation of access tracks has been undertaken.

**Inspected / Clearance:**

<table>
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<tr>
<th>Compiled by:</th>
<th>Neil Martin</th>
<th>Date:</th>
<th>3(^{rd}) December 1998</th>
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<tr>
<td>Revised by:</td>
<td>Penny Large</td>
<td>Date:</td>
<td>30(^{th}) November 2000</td>
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**Follow-up Inspection Report:**