

## ANNUAL REPORT

### **EXPLORATION LICENCE 10228**

## **BLUEYS PROJECT**

## FOR THE PERIOD 20/7/08 to 19/7/09

YEAR 8

by

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**REFERENCES** 

# Annual Report Blueys Project For the Period 20/7/08 to 19/7/09

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#### **SUMMARY**

The tenement of 53.5 square kilometres in area is located about 100km east-north-east of Alice Springs in the southern part of the Northern Territory.

EL 10228 was granted to Imperial Granite and Minerals Pty Ltd on July 20<sup>th</sup> 2001. The licence was transferred to Tennant Creek Gold (NT) P/L on January 13<sup>th</sup> 2004. The licence was purchased by WDR Base Metals Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on July 20<sup>th</sup> 2007.

The tenement is transected by the Burt Plain-Albarta shear zone on the Arunta Block-Amadeus Basin unconformity. The Arunta Block in this area consists of the Proterozoic Atnarpa Igneous Complex, Cavenagh Metamorphics, and undifferentiated gneisses and granites.

The tenement contains Blueys Prospect, Slate Hole Bore Prospect and Dragon on the Ground prospect and been previously explored for silver, base metals, tungsten-molybdenite, gold and uranium.

Low-level airborne magnetic/radiometric surveys were flown over the Blueys Project by UTS Geophysics between November 2007 and January 2008. A high-resolution helicopter-borne EM survey was completed over the entire Blueys tenement by Geoforce P/L using their SkyTEM system was completed in January 2008.

During June 2008, a two diamond hole drilling programme was completed.

During the current year further rock chip sampling was conducted over the old Blueys prospect and the southern thorium anomalies. Samples were taken of zones of high scintillometer counts over these thorium anomalies. One rock chip sample returned anomalous Zirconium and rare earth element values. Rehabilitation of the drill sites and access tracks from drilling programme was completed late in 2008.

The proposed exploration programme for the next year (year 9) will include geological mapping, gridding, ground radiometrics and rock chip sampling over Thorium anomalies.

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#### **INTRODUCTION**

#### **BACKGROUND**

The Exploration Licence was held by Imperial Granite and Minerals Pty Ltd, and then Tennant Creek Gold Pty Ltd until it was acquired by WDR Base Metals P/L on July 20<sup>th</sup> 2007. The tenement covers ground prospective for base metal and uranium mineralisation.

#### **LOCATION AND ACCESS**

The tenement of 53.5 square kilometres in area is located about 100km east-north-east of Alice Springs in the southern part of the Northern Territory (figure 1).

Access is by the sealed Ross Highway east from Alice Springs towards the Ross River Resort, then by an unsealed road which goes to the Arltunga Historical Reserve turnoff and further on unsealed road towards White Range, Ruby Gap, and the Atnarpa Station turnoff. Access to, and within, the project area is good. The White Range goldfield is just to the northeast of the project area.

#### **CLIMATE**

The climate is semi-arid, sub-tropical with cold winters and hot summers. The average annual rainfall is 300mm with most falls in summer months.

#### **TOPOGRAPHY AND VEGETATION**

The project area is located over the Burt Plain-Albarta lineament, at the eastern end of the Arltunga Nappe Complex.

Steep quartzite ridges form topographic highs, and are separated by broad alluvial valleys and hills.

The hills and ridges are moderately wooded with stunted eucalypts, gidgee, mulga, acacia and spinifex. The alluvial flats contain open woodland with ghost gums and other eucalypts with some acacias.

#### **TENURE**

### MINING/MINERAL RIGHTS

EL 10228 was granted to Imperial Granite and Minerals Pty Ltd on July 20<sup>th</sup> 2001. The licence was transferred to Tennant Creek Gold (NT) P/L on January 13<sup>th</sup> 2004.

The licence was purchased by WDR Base Metals Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on July 20<sup>th</sup> 2007 and officially transferred on March 6<sup>th</sup> 2008.

The licence has been renewed for a further two years from July 2009.

#### LAND TENURE

The majority of the tenement is located within the Perpetual Pastoral Lease of Loves Creek (PPL995), and partly within the Perpetual Pastoral Lease of Ambalindum (PPL1124), Crown Lease Perpetual (CLP497), and the Arltunga Historical Reserve (RES1457).

#### **NATIVE TITLE**

The northern part of the Blueys Project area encroaches on the Arltunga Historical Reserve however the EL is not subject to any Native Title agreement. The licence is subject to land claim under the Aboriginal Land Rights (NT) Act.

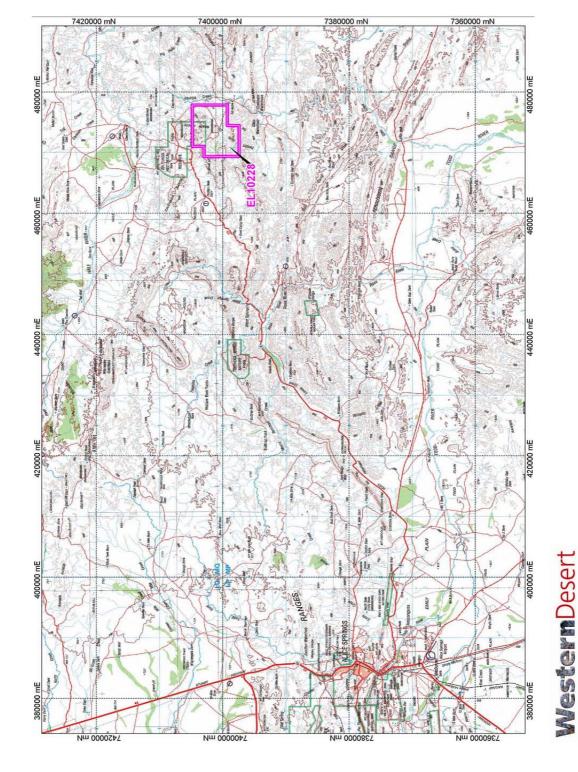
#### **ABORIGINAL SACRED SITES**

There are no known sacred sites within the project area.

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#### **GEOLOGY**

#### **REGIONAL GEOLOGY**

The project area is within the Arltunga—Harts Range 1:100000 Regional Geological Map and is located within the White Range Nappe and over the Burt Plain-Albarta lineament at the eastern end of the Arltunga Nappe Complex. The Arltunga Nappe Complex, formed during the Early Carboniferous Alice Springs Orogeny (300-400Ma), includes rocks of the Arunta Block and Amadeus Basin.

The Late Proterozoic sediments of the Amadeus Basin consisting of the Bitter Springs Formation (Gillen Member) and Heavitree Quartzite, are thrust over and infolded within metamorphic rocks of the Arunta Block. The basement rocks are those of the Arunta Block which consist of igneous, sedimentary and metamorphic rocks of Archaean to Early Proterozoic age intruded by Early Carpentarian Granites. The basal formation of the Amadeus Basin is the Heavitree Quartzite which unconformably overlies the Arunta Block basement over which sedimentation continued in basins with minor disconformity from the Adelaidean into the Late Palaeozoic.

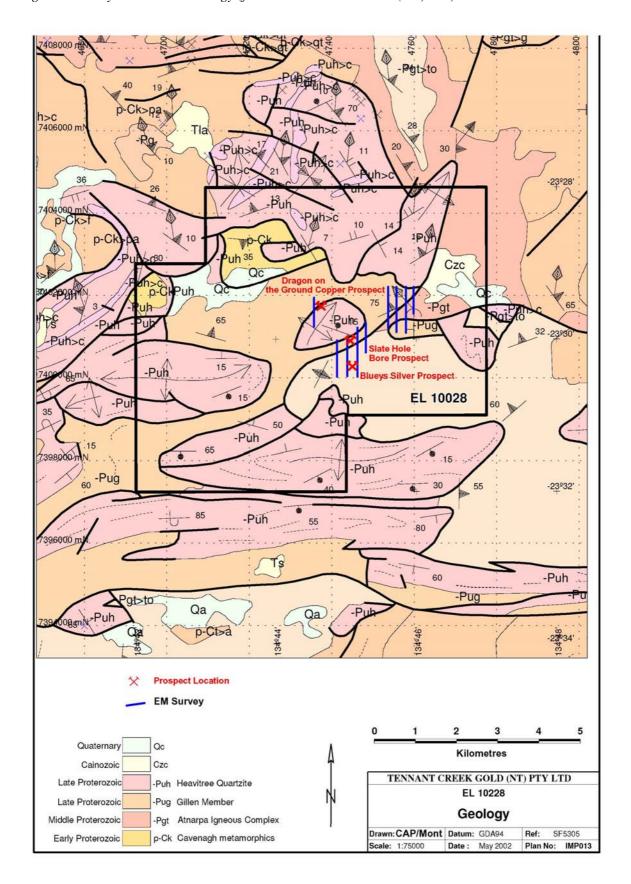
#### **LOCAL GEOLOGY**

The tenement is transected by the Burt Plain-Albarta shear zone on the Arunta Block-Amadeus Basin unconformity. The Arunta Block in this area consists of the Proterozoic Atnarpa Igneous Complex, Cavenagh Metamorphics, and undifferentiated gneisses and granites.

Within the tenement area are exposures of the basement complex, the Adelaidean Heavitree Quartzite, and the dolomites, dolomitic siltstones, evaporates and limestone of the conformably overlying Bitter Springs Formation. The formations with most exposure are those of Heavitree Quartzite and overlying Bitter Springs Formation. Structurally the area is dominated by a series of north-east trending faults (figure 2).

Blueys Prospect was discovered in 1983. The mineralisation at Blueys Prospect comprises secondary Lead, Copper and Silver minerals in association with barite, quartz veining and ?replacement minerals. The rocks hosting the Silver mineralisation are the dolomites and dolomitic siltstones of the Bitter Springs Formation.

Figure 2. Blueys EL 10228 Geology (from Tennant Creek Gold (NT) P/L)



#### **PREVIOUS EXPLORATION**

#### **MINING HISTORY**

The tenement contains Blueys Prospect, Slate Hole Bore Prospect and Dragon on the Ground prospect (shown in figure 2). The Dragon on the Ground prospect is an old Copper working occurring at a contact between the Heavitree Quartzite and the overlying Bitter Springs Formation, this prospect has not been drilled. Based on previous reports, Slate Hole Bore Prospect is approximately 400-500 metres north of Blueys Prospect with Copper-Cobalt +/- precious metals hosted by an Iron rich fault breccia. Slate Hole Bore prospect has not been sampled or drilled.

Blueys Prospect is approximately 500 metres south of a prominent quartzite hill. Discovered in 1983 when malachite veining was noted within dolomite, Blueys Prospect has Copper mineralisation associated with Lead and Silver. Previous exploration has centred on Blueys Prospect with soil sampling revealing an average 29gm/tonne Silver anomaly and with some mixed results after rock chip sampling and an RC drilling programme, confirming the presence of surficial high grade Silver-Copper-Lead, oxidised, supergene mineralisation.

#### **EXPLORATION BY PREVIOUS COMPANIES**

#### Esso Minerals Australia Ltd (1977)

The project area was included within a larger radiometric survey carried out by Esso Minerals Australia Ltd in 1977. This survey identified 3 radiometric anomalies within the project area.

#### Petrocarb Exploration NL (1983-88) - partial JV with Geopeko (1983-84)

EL 3316 was initially explored for Tungsten-Molybdenite mineralisation. The work then concentrated on Blueys Prospect, discovered in 1983. Their initial work consisted of soil sampling, rock chip sampling, and petrology. Soil sampling delineated highly anomalous Silver mineralization, with rock chip sampling returning maximum value of 6.55kg/tonne Silver, 17.99% Copper, 0.8gm/tonne Gold, 27.54% Lead. Within EL 3316 in 1986, a 9 airtrack percussion drill hole programme was completed. The results indicated that the high soil & rock chip values came from a shallow discontinuous zone of surficial enrichment.

#### White Range Gold NL (1989)

In 1989 under EL 4850 Blueys Prospect was picked up by White Range Gold after EL 3316 expired in 1988. The eastern area of EL was included in a low level regional magnetic and radiometric survey that was conducted. This survey included the western half of the current EL 10228 and delineated three Uranium anomalies and a large coincident Uranium/Thorium anomaly south and southwest of Blueys Prospect. A stream sediment sampling programme was completed with the catchment adjacent to Blueys Prospect showing greater anomalism in metals than the Blueys catchment itself.

#### Silver Standard Australia P/L - Imperial Granite & Minerals P/L JV (2001-2002)

Within EL 10228 an 11 hole RC percussion drill programme centred on Blueys Prospect was completed along with rock chip sampling. The best drill intersections, although anomalous were of sub-economic grade.

#### EXPLORATION BY WESTERN DESERT RESOURCES

#### **GEOPHYSICAL SURVEYS**

Low-level airborne magnetic/radiometric surveys were flown over the Blueys Project by UTS Geophysics between November 2007 and January 2008. This was conducted in a north-south direction with 100 metre line spacing at a height of 40 metres. A total of 644 line kilometres of airborne magnetic and radiometric data were acquired.

A high-resolution helicopter-borne EM survey was completed over the entire Blueys tenement by Geoforce P/L using their SkyTEM system. The SkyTEM survey was completed January 2008. Electromagnetic information was recorded on traverses 150 metres apart at a height of 30 metres. A total of 354 line kilometres of airborne EM data were acquired.

#### **EXPLORATION ACTIVITIES**

Exploration activities during the previous reporting period included ground radiometric surveys, rock chip sampling, and a two hole drilling programme.

#### **Rock Chip Sampling**

Several ground traverses were conducted over the Thorium anomalies in the Blueys area. A significant Thorium anomaly in the south of Blueys area was sampled and is associated with an altered granite gneiss close to the unconformity/contact with the Heavitree Quartzite. A collection of rock chip samples were taken during traverses over the main Thorium anomaly. The Thorium anomalies are shown in Figure 3.

#### **Drilling Programme**

Two diamond holes were completed by Titeline Drilling P/L between June 16<sup>th</sup> and June 25<sup>th</sup>, 2008, with a total depth of 410.5 metres drilled. The first hole, BL001, was drilled to a depth of 237 metres and the second hole, BL002, was drilled to a depth of 173.5 metres. A plan of the drill hole locations and access tracks is in Appendix 1.

A wireline probe for gamma radiation, magnetic susceptibility and magnetic induction was conducted down drill hole BL002 by Borehore Wireline on July 15<sup>th</sup>, 2008. A probe was unable to be conducted on BL001 due to collapse within the hole.

#### **EXPLORATION COMPLETED DURING CURRENT YEAR**

#### **EXPLORATION ACTIVITIES**

#### **Rock Chip Sampling**

During August 2008 and April 2009, the tenement was visited to conduct further traverses over several areas within the tenement. A collection of rock chip samples were gathered where high scintillometer values were detected over the southern Thorium anomaly in the tenement (Figure 3 & 4). Rock chip samples were also taken at the old Blueys Prospect. Figure 4 and Appendix 2 show the sample locations.

#### Follow up to Drilling Programme 2008

The old drilling data from the Blueys Prospect and the two diamond holes drilled in the previous year by Western Desert Resources were compiled into a digital database.

#### Rehabilitation of Drill sites

The sites from the drilling programme in June 2008, holes BL001 and BL002, were visited in August 2008 to determine if the sumps had dried out, and to gather GPS co-ordinates of the holes. The drill sites and access tracks leading to them were rehabilitated in late 2008.

#### RESULTS AND EXPENDITURE

#### **Discussion of results**

#### **Exploration Activities - Rock Chip Sampling**

Rock chip sample, WDR5-024, taken on the southern Thorium anomaly which is located about 1km south west of the Blueys prospect, showed significant elevation in Zirconium and rare earth values, as well as Thorium values including: Thorium 0.08%, Cerium 465ppm, Lanthanum 278ppm, and Zirconium 0.52%.

A grab sample of Copper mineralised material, ASR007, taken in the old Blueys Prospect area shows significant Silver and base metal values including: Silver >1500ppm, Zinc 3550ppm, Lead 5940ppm, and Copper 53900ppm.

See Appendix 3 for details of sample locations and results.

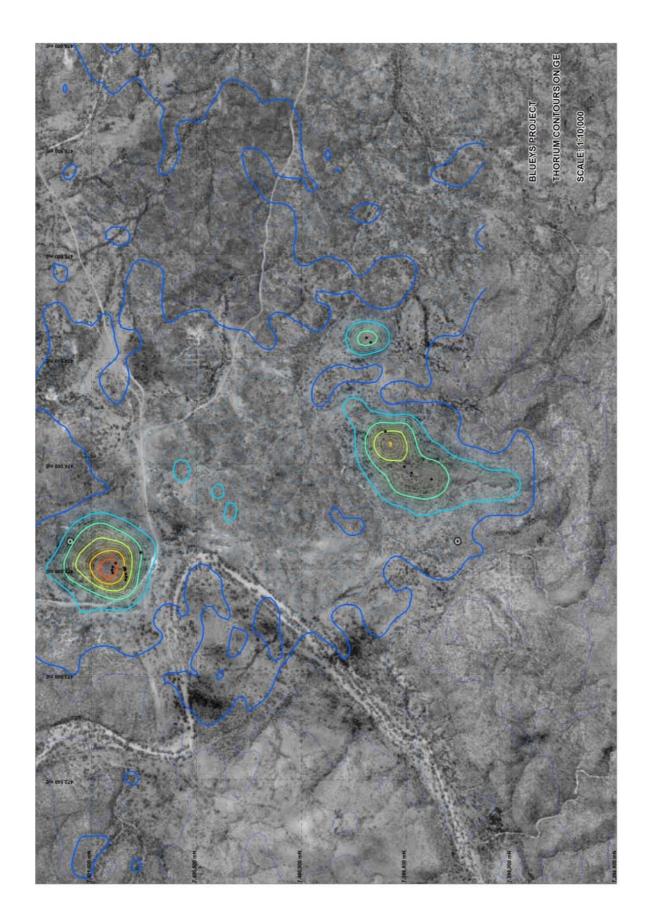


Figure 3. Thorium Contours on Google Earth Image – EL 10228

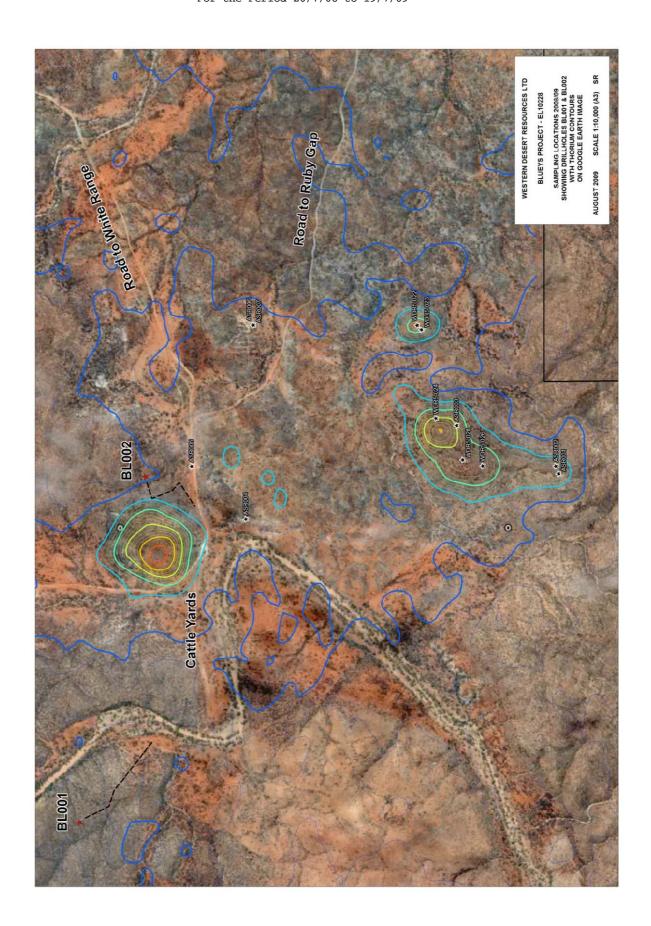


Figure 4. This year's sample locations with Thorium Contours on GE Image – EL 10228

#### **Exploration Activities - Follow Up to Drilling Programme 2008**

Both holes intersected a similar sequence of pyritic, carbonaceous, black shales overlying the Heavitree Quartzite. These rocks are the cause of the conductivity anomalies outlined by the airborne EM survey. The pyritic zones from both holes were sampled. The results from the assaying of core from the drill holes have been included in this report as they were not available before the end of the reporting period for the previous year. These results are located in Appendix 4.

The digital data from the drill holes is included in Appendix 5.

#### **Expenditure**

The expenditure commitment for EL 10228 for year 8 was \$50,000. Actual expenditure was \$49,432 as shown on the accompanying exploration expenditure report.

#### PROPOSALS FOR FUTURE WORK

#### **Proposed work programme for 2010 - Year 9**

The proposed exploration programme for year 9 will include geological mapping, gridding, ground radiometrics and rock chip sampling over Thorium anomalies. A reassessment of the EM survey and drillholes and a reappraisal of the Blueys Project as a whole will also be included.

The proposed expenditure on EL 10228 for year 9 will be \$40,000.

#### REFERENCES

Silver Standard Australia P/L, 2003 Technical Report for the Bluey's Silver Project, EL10228 Arltunga (July 02-July 03) – White Range Mineral Field, Northern Territory

Tennant Creek Gold Ltd, 2006 EL10228 Bluey's Project Annual Technical Report, 20 July

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