



## **APPLICATION OVER HIGH GRADE GOLD ANOMALY - EXTENSION TO KOOLINE NORTH**

### **HIGHLIGHTS**

- **Athena has applied for an exploration licence over the eastern extension of Kooline North. Soil and rock geochemistry by previous explorers indicates that the gold mineralisation extends for at least 12 kilometres within the new application.**
- **High-grade rock chip included assays of 146g/t gold, 121g/t gold with 1300 ppm copper and 103 g/t gold have previously been reported from two trends within the new tenement area.**
- **Peak soil sample assays include:- 2900, 1200, 515, 490 and 470 ppb gold.**

### **Details**

Athena Resources Limited (Athena or the Company) has lodged an application for an exploration licence (ELA08/1954) covering the eastern extension of the Kooline North gold anomaly. The application, which is shown on Figure 1, covers an area of 87 square kilometres.

Athena has reviewed the open file reports on past exploration within the application area, and has obtained a copy of a database of stream sediment, soil, rock chip and drilling geochemistry. The database contains assays for 67 stream sediment, 745 soil and 769 rock chip samples. The best soil and rock chip results shown on Figure 2 and listed Tables 1 and 2. Outstanding results from past exploration include:-

| <u>Soils</u> | <u>Rock chips</u> |
|--------------|-------------------|
| Gold ppb     | Gold g/t          |
| 2900         | 146               |
| 1200         | 121               |
| 515          | 103               |
| 490          | 48                |
| 470          | 32                |
| 273          | 29                |

An initial assessment of the surface geochemistry shows:-

- Two anomalous trends defined by soil and rock chip traverses within the area of ELA08/1954.
- The recently acquired (2007) GSWA aeromagnetic data indicates that these two trends are located on opposite limbs of an east-west trending fold, possibly an anticline which requires field confirmation.

- The stronger northern Collins Bore trend is the eastern extension of Athena's Kooline North prospect and has a strike length of 12 kilometres within the new application.
- This northern trend has three prospects which have returned high-grade gold results in soil and rock chip assays.
- Two of these prospects (True Grit and Dook) have been partially drill tested. Athena is currently assessing this drilling and the results of the assessment will be released in due course.
- The stream sediment samples indicate a number of anomalous drainages that require follow-up sampling to confirm whether the catchments contain outcropping mineralisation.

Athena discovered a highly anomalous gold zone at the Kooline North prospect in mid-late 2008. The results of this work were released in November 2008 with further details included in the Quarterly Report for December 2008. Athena reported that soil geochemical sampling at Kooline North has resulted in the discovery of a new, low order, coincident gold-copper-uranium-zinc-antimony-tungsten anomaly associated with altered lithic sandstone. The Kooline North anomaly, which is over 200 metres wide, is open in both directions as the soil sampling program only tested 2.5 kilometres of the 3 kilometre long outcrop. Alteration at the Kooline North anomaly is typified by silica and pyrite and is similar to the Kooline gold zone where Gradient Array IP was used to map an altered pyritic sandstone unit. The Kooline North trend and eastern extension will also be tested by IP surveys and evaluated for drill testing.

Athena is working actively with the Western Australian Department of Mines and Petroleum (DMP) to get this new application granted.

## Background

Athena Resources Limited listed on the ASX in November 2006. The Company is a junior explorer with a focus on nickel, basemetals and gold. The company is targeting "green-field" Archaean and Proterozoic terranes in Western Australia that display features often associated with large world class mineral deposits. Athena is exploring for magmatic nickel-copper sulphide and platinum group mineralisation at Byro and Ravensthorpe and gold-copper-silver-lead mineralisation at Ashburton. The Company has over 7,000km<sup>2</sup> under granted tenure and in exploration licence applications.

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19 March 2009

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The technical information relating to Athena's exploration projects was compiled by Mr Donald Thomson, an employee of Indigo Exploration Services Pty Ltd. Mr Thomson is a Member of the Australasian Institute of Mining and Metallurgy, and has sufficient relevant experience in the styles of mineralisation and deposit styles under consideration to qualify as a Competent Person as defined in "The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2004 edition)". Mr Thomson consents to this inclusion of the information in this report in the context and format in which it appears.

**Table 1. Soil Samples from Past Exploration (Greater than 100ppb Gold)**

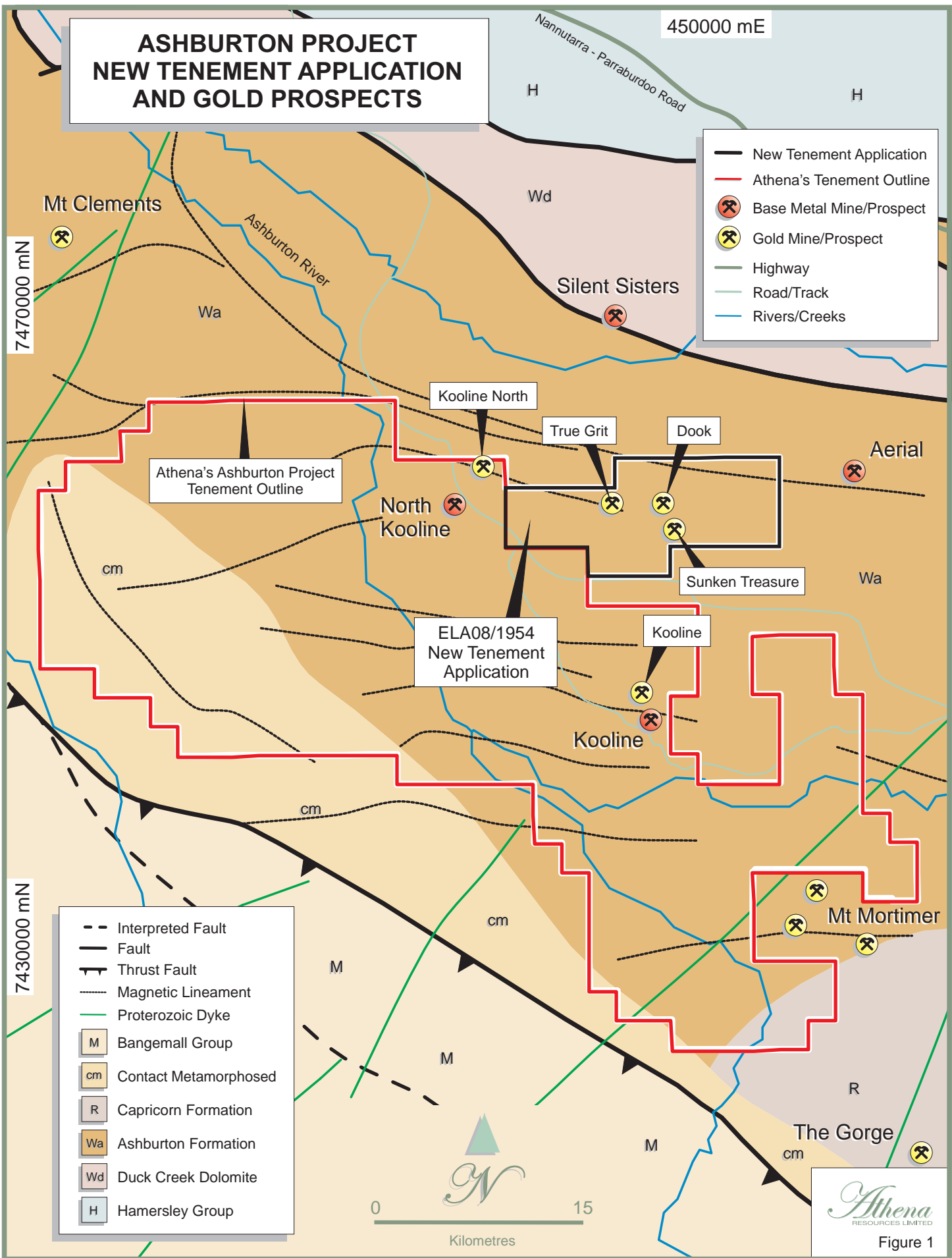
| Sample Number | Gold ppb    | Arsenic ppm | Copper ppm | Sieve Size | Prospect     | East MGA50 | North MGA50 |
|---------------|-------------|-------------|------------|------------|--------------|------------|-------------|
| 120061        | <b>2900</b> |             |            | -2mm       | Collins Bore | 443527     | 7457785     |
| 1074356       | <b>1200</b> | -5          | 46         | -1.6mm     | Collins Bore | 445441     | 7457453     |
| 1074822       | <b>515</b>  | 53          | 19         | bulk       | Collins Bore | 446293     | 7457454     |
| 1074411       | <b>490</b>  | 24          | 47         | -1.6mm     | True Grit    | 442694     | 7457883     |
| 1074888       | <b>470</b>  | 28          | 10         | bulk       | Collins Bore | 449942     | 7456754     |
| 1077480       | <b>273</b>  | 6           | 40         | bulk       | Collins Bore | 445491     | 7457453     |
| 1074413       | 185         | -5          | 34         | -1.6mm     | True Grit    | 442694     | 7457783     |
| 1074335       | 162         | -5          | 27         | -1.6mm     | Dook         | 446841     | 7457303     |
| 1074130       | 143         | 6           | 42         | -1.6mm     | Collins Bore | 443441     | 7457753     |
| 1074090       | 124         |             |            | -1.6mm     | Collins Bore | 445541     | 7457503     |
| 120040        | 120         |             |            | -2mm       | Collins Bore | 443012     | 7457768     |
| 1074412       | 109         | -5          | 36         | -1.6mm     | True Grit    | 442694     | 7457833     |
| 1074061       | 102         | 13          | 40         | -1.6mm     | Collins Bore | 446741     | 7457303     |

**Table 2. Rock Chip Samples from Past Exploration (Greater than 5g/t Gold)**

| Sample Number | Gold g/t   | Copper ppm  | Arsenic ppm | Lead ppm   | Zinc ppm   | Prospect     | East MGA50 | North MGA50 |
|---------------|------------|-------------|-------------|------------|------------|--------------|------------|-------------|
| 1084779       | <b>146</b> | 104         | 7           | 51         | 127        | Dook         | 446932     | 7457307     |
| 1084767       | <b>121</b> | <b>1300</b> | 20          | 64         | 152        | Dook         | 446895     | 7457275     |
| 278779        | <b>103</b> | 51          | -5          | 24         | 20         | True Grit    | 442697     | 7457798     |
| 1084773       | <b>48</b>  | <b>256</b>  | -5          | 61         | 112        | Dook         | 446916     | 7457263     |
| 605012        | <b>32</b>  |             |             |            |            | Collins Bore | 446905     | 7457274     |
| 579999        | <b>29</b>  | 48          | 11          | 10         | 76         | Collins Bore | 442803     | 7457826     |
| 1084025       | 22         | <b>173</b>  | -5          | 23         | 26         | True Grit    | 442666     | 7457809     |
| 579247        | 22         | 130         | 2           | 15         | 14         | Collins Bore | 442803     | 7457826     |
| 1084026       | 22         | 91          | -5          | -5         | 45         | True Grit    | 442704     | 7457797     |
| 634573        | 17         |             |             |            |            | Collins Bore | 442618     | 7457797     |
| 120100        | 14         |             |             |            |            | Collins Bore | 447487     | 7455520     |
| 1084771       | 9          | 24          | -5          | 7          | 20         | Dook         | 446811     | 7457287     |
| 613710        | 9          | <b>344</b>  | 17          | 25         | <b>258</b> | Collins Bore | 442803     | 7457826     |
| 1084768       | 7          | 141         | -5          | 24         | 58         | Dook         | 446871     | 7457279     |
| 634334        | 6          | 30          | 5           | 5          | 40         | Collins Bore | 442687     | 7457794     |
| 1084024       | 6          | <b>180</b>  | -5          | 16         | 76         | True Grit    | 442677     | 7457810     |
| 634779        | 6          | 48          | 11          | 15         | 90         | Collins Bore | 446887     | 7457274     |
| 613765        | 5          | 34          | 110         | <b>375</b> | 8          | Collins Bore | 444518     | 7455109     |
| 120246        | 5          |             |             |            |            | Collins Bore | 447051     | 7457266     |

Note: 31.103g = 1 Troy oz

# ASHBURTON PROJECT NEW TENEMENT APPLICATION AND GOLD PROSPECTS



440000 mE

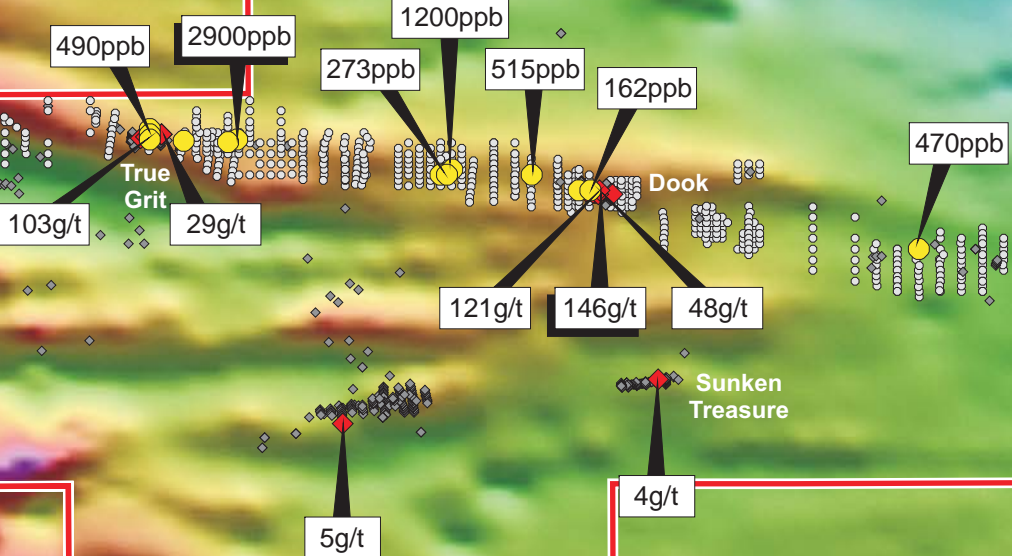
450000 mE



# ASHBURTON PROJECT KOOLINE NORTH HISTORICAL GOLD RESULTS

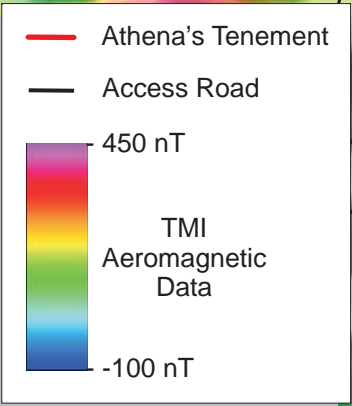
7460000 mN

Athena's  
Kooline North  
Soil Samples



E08/1641

ELA08/1954



- Historic Soil Sample (ppb - Table 1.)
- ◆ Historic Rock Chip (g/t - Table 2.)
- ◊ Historic Soil/Rock Chip Sample Location
- Athena's Recent Soil Sampling



Figure 2