

# **GEOLOGICAL MAPPING OF THE JASMINE – NORTH BERYL – OCHRE HILL AREA, FRANCES CREEK, N.T.**

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June – August, 2011

## **SUMMARY**

### **Summary**

Mapping of the Jasmine – North Beryl – Ochre Hill area was done discontinuously over the June – August period of 2011. The mapping extends north of Jasmine, northeast of Elizabeth Marion and southwest of Ochre Hill. The iron mineralisation occurs as thin brecciated units within the Wildman Formation. The mapping was completed by taking notes while traversing the mapping area, and interpretations were made via aerial photography. The main mapping is at the scale of 1:5,000 and detailed mapping at 1:2,000.

### **Conclusions**

#### **General**

Stratiform-replacement style iron mineralisation occurs across the mapping area. The significant iron deposits are the result of hydrothermal enrichment of structural fluid pathways which are principally found within a breccia unit in the Wildman Formation.

#### **North Beryl**

Mineralisation at Beryl is an extension of the mineralisation from Jasmine. The Beryl trend continues over nearly 2km with outcrops restricted to hills and small rises. Mineralisation of unknown grade and thickness is interpreted as being buried by colluvium and alluvium on possible strike extensions. The mineralisation is associated with a northwest trending syncline and consists of hard hematite that outcrops very prominently.

#### **Rosemary – Jasmine Nose**

This zone of mineralisation resides on the limbs of a northwest plunging anticline joining the Rosemary Extended and Jasmine West prospects. The mineralisation consists of scattered subcrops of friable hematite and goethite.

#### **Jasmine – Ochre Hill Trend**

The iron breccia occupies the eastern limb of a major northwest plunging syncline. Mineralisation is interpreted to sit in a region of structural faulting where dilatational jogs have allowed significant mineralisation to occur. The mineralised breccia consists of a mixture of hematite and goethite that is contaminated with shales and quartz.

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## 1.0 INTRODUCTION

The mapping took place between June and August, 2011.

Mapping followed the 4km long northwest – southeast running trends from Rosemary to Jasmine, through Beryl and on to Ochre Hill (Figure 1). The total area covered is approximately 4km in length and 1.5km at its widest point located along the Ochre Hill Road from Elizabeth Marion to Ochre Hill.

This area is yet to be officially named and is stated in this report as *Jasmine - Beryl - Ochre Hill Trend*, despite including further mapping in the south such as the Rosemary – Jasmine Nose and the Beryl prospect.

The mineralisation occurs as a series of thin, northwest – southeast striking units that are structurally bound within the Wildman Formation. The iron enrichment is a mixture of hematite and goethite with the potential for some manganese mineralisation.

The mapping was done by collecting geological data while walking and/or riding all-terrain vehicles (ATV's) along traverses. This information is represented on drafting paper with areas infilled by interpretation of aerial photography. Mapping is at the scale of 1:5,000 with areas of specific interest remapped in greater detail at 1:2,000. Rock chip samples were collected at most iron rich outcrops.

## 2.0 Geology

### 2.1 Stratigraphy

In the mapping area basement geology is dominated by the Lower Wildman Formation with minor Mundogie Sandstone situated on the eastern margins. In Low lying areas basement is covered by extensive blankets of colluvium and alluvium. The lithology's observed are listed here,

#### *Mundogie Sandstone (Sps/Sqs)*

This unit is quite resistant and forms the prominent northwest - southeast trending ridges. The Mundogie Sandstone underlies the Wildman Formation and is situated on the eastern margins of the mapping area. The unit is found most commonly as a coarse grained feldspathic quartzite, but includes coarse grained diamictites, and clasts of siltstone. Colour ranges from white through brown to red.



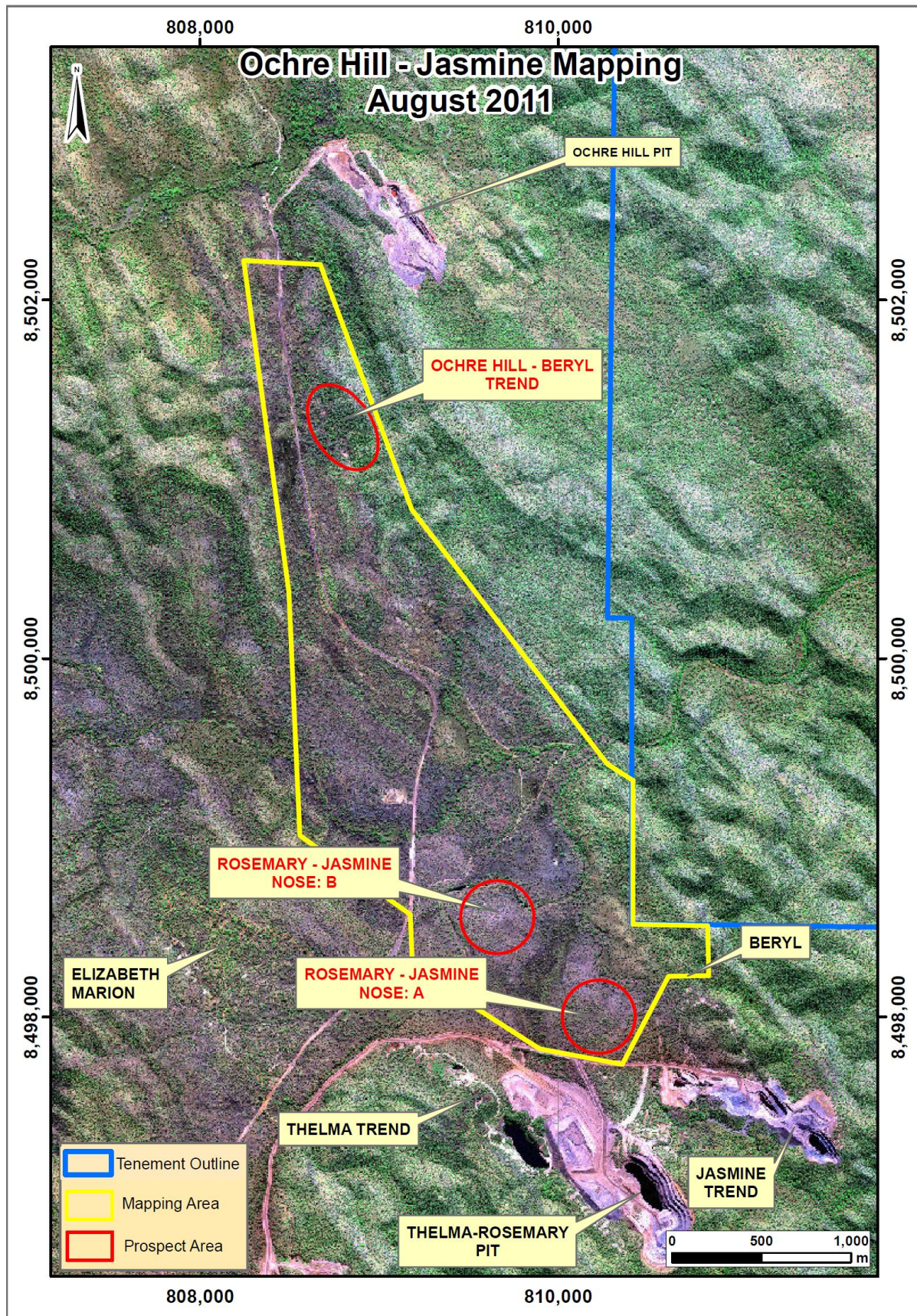


Figure 1: Location of mapped area and prospects.



#### *Lower Wildman Siltstone (Ssh/Sshf/Sshp/Sshc)*

The Wildman Siltstone outcrops poorly except on strike ridges. These outcrops on ridges reveal structural data across the mapping area. This pelitic sequence also contains ironstone, carbonaceous phyllite and siltstone. Colours include greys, blacks, bleached white and red.

#### *Breccia Units (FeX, SshX, SpsX, Sx)*

Breccia units occur as northwest-southeast trending structures consisting of small outcrops and sub-crop. Breccia units range from ferruginous shale/siltstone breccias to hematite-goethite-quartz breccia to high-grade hematite-goethite breccias. Iron grade can range from 25% Fe to in excess of 60%. Phosphorous levels were variable and displayed ranges of 0.02 – 0.60%.

The unit's thickness varies, commonly pinching out to less than a meter and swelling up to 20 metres wide. Colour is usually black or dark brown/red.

#### *Alluvial Cover*

Flood plains, composed of fine clays as well as rubble from other units, blankets low lands covering geological units below it.

## **2.2 Structure**

The source of deformation through the Frances Creek region occurred during the Top End Orogeny (1870 – 1690Ma). There are four major stages to this orogeny, the Nimbuwah 1 and 2 Events, the Cullen Event, and the Shoobridge Event. The first two Nimbuwah Events relate to crustal shortening during the orogeny and are the origin of the mineralised breccia throughout Frances Creek. The Cullen Event saw crustal extension with the intrusion of granites and increased volcanism. This period saw the development of hydrothermal systems that further enriched the mineralisation within the breccia, taking them from a predominantly goethitic mineralisation to hematite rich. The final Shoobridge Event saw the reactivation of faults and retrograde metamorphism that may have further enriched iron grades (*Russell, July 2011*).

Locally there are two major northwest - southeast trending folds, an anticline and a syncline, whose axes plunge to the northwest. There is some fluctuation within the anticline causing its limbs to overturn in sections, leaving both anticline limbs dipping southwest. Some southwest – northeast trending sinistral transform faults are also present throughout the mapping area. Topography is structurally dependent, topographic inversion has occurred with the high ground (usually rich in outcrop) tracing the axis of the syncline.

## **2.3 Geophysics**

There are three areas of geophysical interest within the mapping area (Figure 2). The first is the anticlinal structure joining Rosemary and Jasmine (Figure 3 and 4), the second is the Beryl prospect north of Jasmine (Figure 5), and the third is the dilational jog structures south of Ochre Hill (Figure 6). These features have been cited by *Hawke Geophysics (2010)* as geophysical targets.



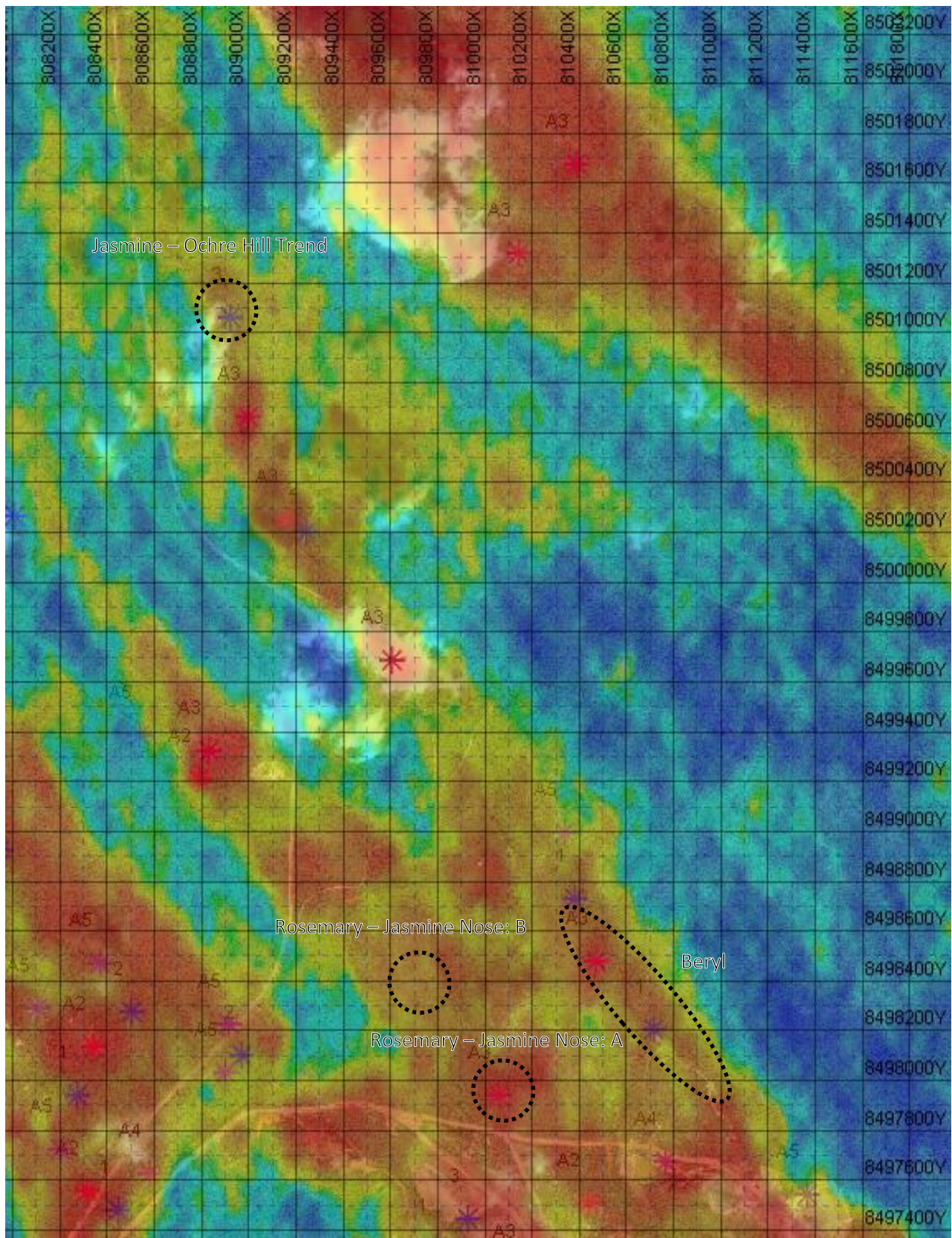


Figure 2: Uranium – channel radiometric image of the mapping area. Areas of interest have been dotted in and labelled.



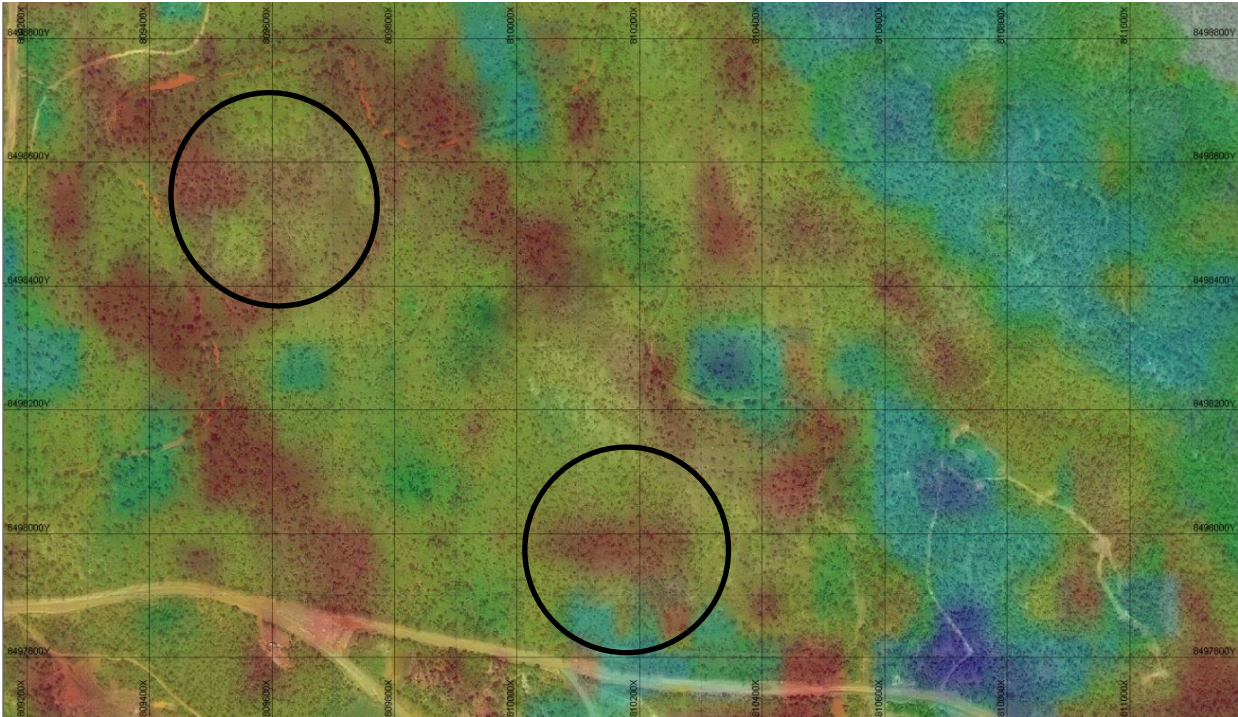


Figure 3: Electromagnetic image of the Rosemary – Jasmine Nose, the reds indicate an EM conductivity high. Circled areas have been mapped at 1:2000.

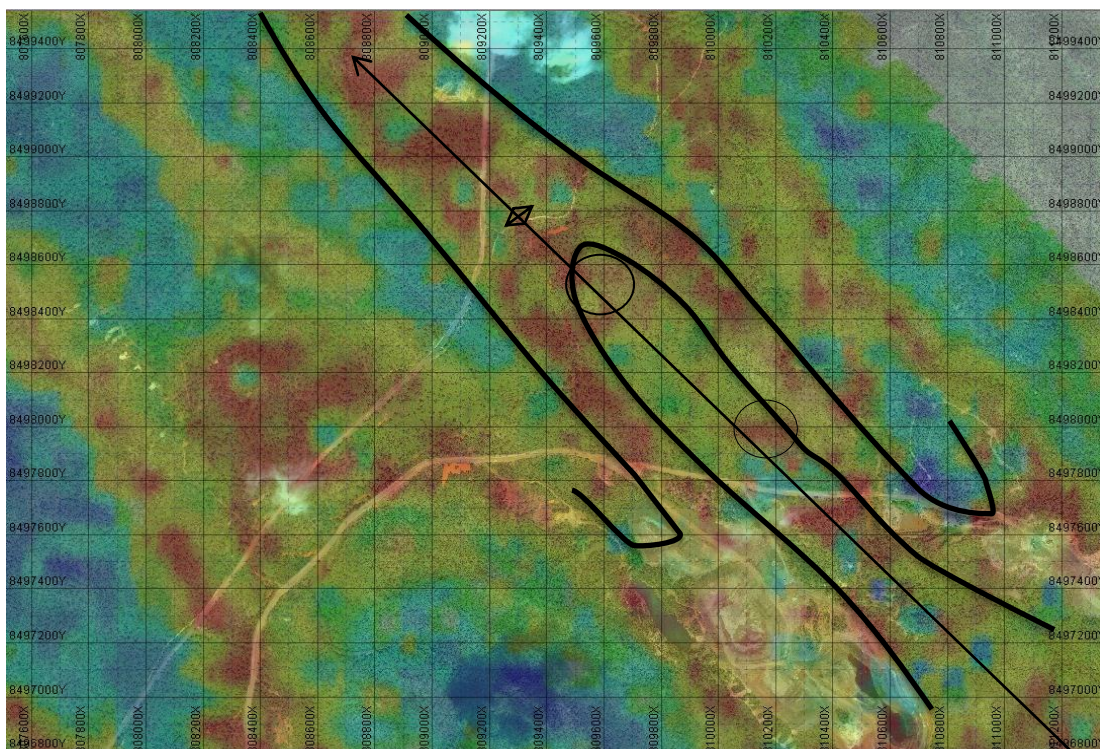


Figure 4: Large image of the electromagnetics of the Rosemary – Jasmine Nose showing possible trends in mineralisation as well as a geological interpretation of the overturned anticline.



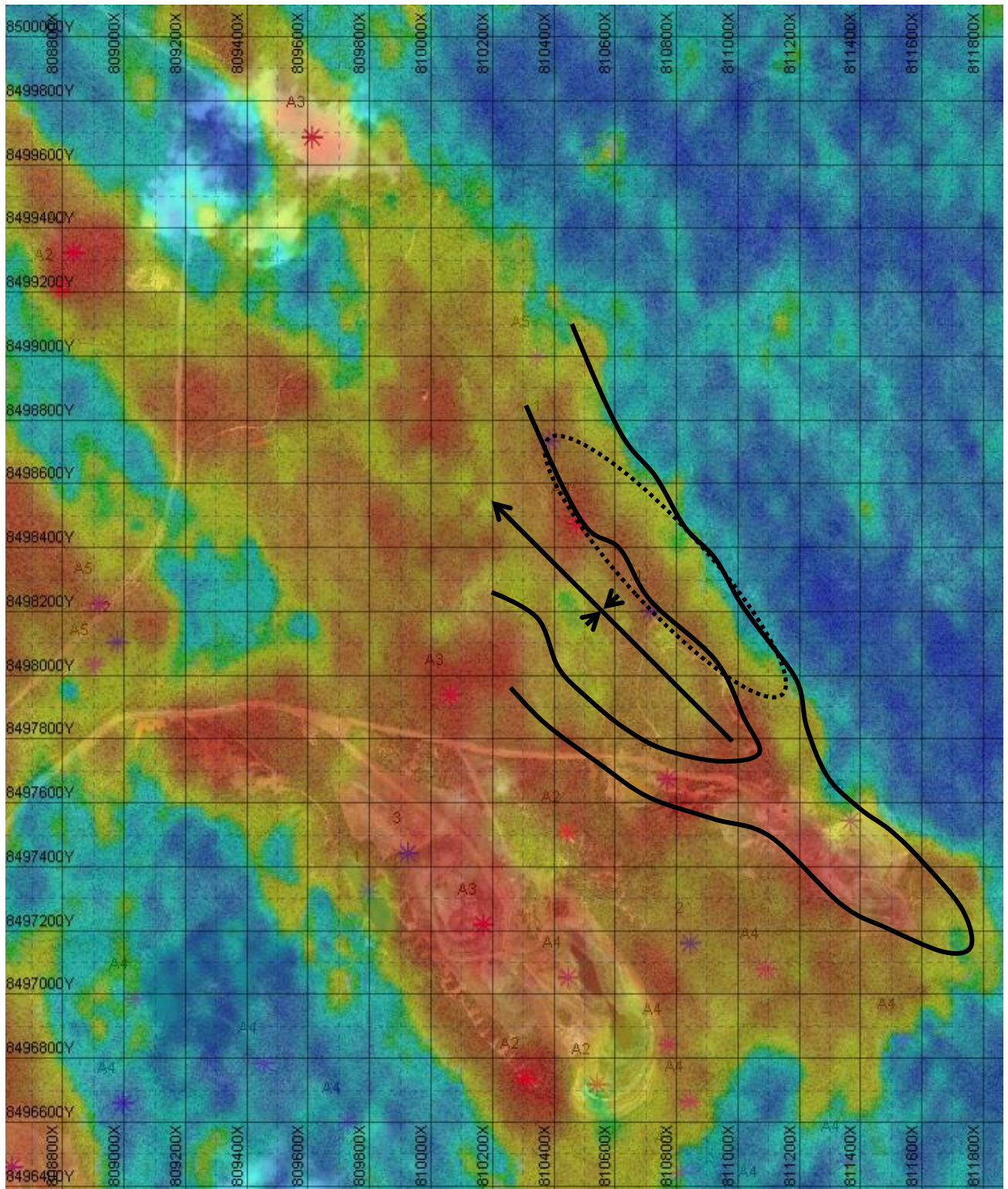


Figure 5: Uranium – channel radiometric image of the Beryl target. Mineralisation is concentrated in the Jasmine syncline, and outcrop is quite significant. Geophysical targets listed by *Hawke Geophysics* are located as blue and red asterisks, area of specific interest is within dotted outline



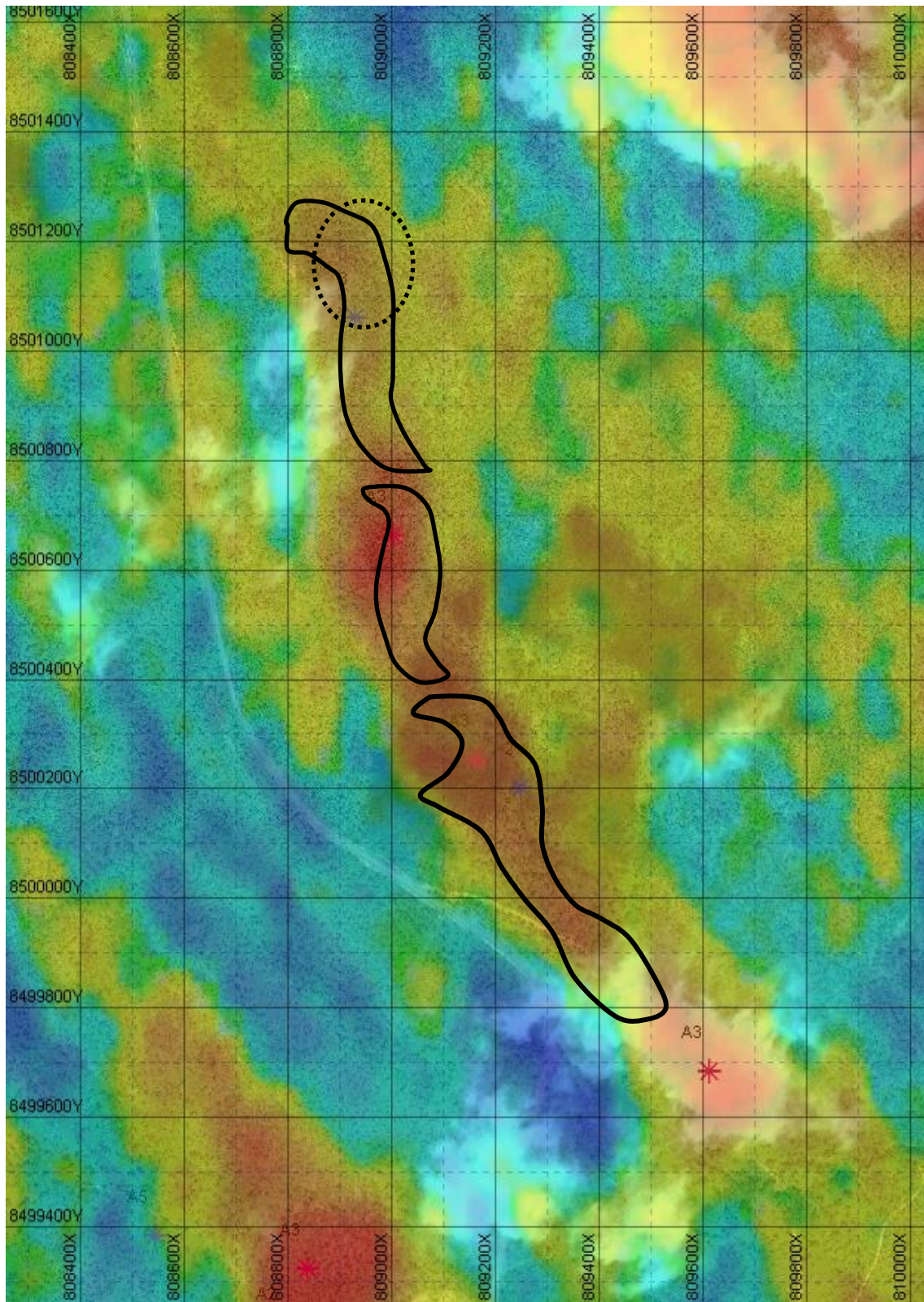


Figure 6: Uranium – channel radiometric image of the Jasmine - Ochre Hill target. Dilation jog-like structures outlined by uranium highs. Mineralisation is likely to concentrate in these structures. Geophysical targets listed by *Hawke Geophysics* are located as blue and red asterisks. Area of specific interest is within dotted outline.



### 3.0 Mineralisation

#### General

Mineralisation in the mapping area occurs in the Wildman Formation. The mineralisation is hosted within shales, dolerite, siltstones and breccia that are structurally controlled and lithologically bound to the Wildman Formation. Ferenczi (2001), states that there is 2 stages of iron enrichment with the first being the result of hydrothermal enrichment through structural pathways and a later stage enrichment by supergene processes. Mineralisation is concentrated in fold hinges, particularly those of synclines, and within structurally controlled regions of higher porosity, *aka* dilational jogs and faults.

#### Jasmine – Ochre Hill Trend

Prospects along the *Jasmine – Ochre Hill Trend* are represented by a series of narrow mineralised brecciated shale units that parallel stratigraphy in a northwest – southeast direction. The mineralisation is dominantly in the form of hematite and goethite with overprinting by near-surface limonite staining. Iron units are generally easily recognisable from surrounding units as they are large, black and knobbly (Photograph 1). Iron outcrops typically range from 1 to 10 metres thickness, and can outcrop along strike for several hundred metres.



Photograph 1: Large outcrop of iron rich breccia, this unit will outcrop aggressively like this for up to 200 metres. Location is within the western most limb of the *Jasmine – Ochre Hill Trend*, 808835/8501252



## **4.0 Mapping Areas**

### **4.1 Southern Zone**

#### *North Beryl*

The Beryl prospect was mapped by Richard Russell in early 2011 and his report shows that the mineralisation here is of good grade typically 55 – 65% Fe. The iron outcrop runs for approximately one kilometre before going under cover and sporadically outcrops for another 1.7 kilometre before reaching the outcrops of the northern geophysical targets. A 200 metre section of this target is outside of TTY exploration and mining leases (Figure 1).

The mineralisation is strong and outcrops very well, striking to the northwest, and its bedding dips to the southwest. It is part of the northeast limb of the Jasmine syncline.

Rock chip samples reveal iron grades between 49.4% and 62.6%. Phosphorous levels are from 0.15% to 0.44%.

Radiometrics show uranium highs across this prospect (Figure 6). The geophysics also confirms that the mineralisation is part of the north east limb of the Jasmine syncline that hosts strong mineralisation at Jasmine.

#### *Rosemary – Jasmine Nose*

The mineralisation between Rosemary and Jasmine runs along a northwest plunging anticline. The limbs of the anticline potentially overturn in sections, dipping to the southwest, however not enough structural data has been recovered to make a clear interpretation.

The mineralisation here is weak and is only found as a friable hematite and goethite breccia sub-crop. The mineralisation is interpreted to continue under cover and outcrops 300 metres to the northwest where it is weakly developed.

The mineralisation at Location A shows moderate phosphorous grades (0.11 – 0.22%) and iron concentrations up to 61.3%. Location B is low-grade (45 – 50% Fe) and very high phosphorous (0.45 – 0.60%).

Uranium – channel radiometrics suggests that the mineralisation is associated with the limbs and fold axis of the northwest trending anticline.

### **4.2 Central Zone**

Little mineralisation is observed in the middle of the mapping area with only small iron breccia outcrops occurring along the Jasmine – Ochre Hill strike.

Interpretation of structural data suggests the continuation of the two major folds with two major transform faults on the west displacing the anticline to the northeast.

This area is generally topographically low and covered in alluvial deposits.

#### **4.3 Northern Zone**

The northern section of the mapping area is the most structurally complex. The main northwest trending syncline is still the most dominant structure, but is offset by sinistral trending transform faults. Parasitic compressional folding is also evident west of the main syncline, with a small anticline and syncline running along strike with it.

Three mineralisation targets are identified in the northern mapping sector. These targets are offset by transform faults. The largest of these outcrops has been mapped in greater detail in the map sheet *Jasmine – Ochre Hill Trend*.

Uranium – channel radiometrics suggest there are three dilational jogs along strike of one another (Figure 5).

### **5.0 Prospect Areas**

#### **5.1 ROSEMARY – JASMINE NOSE**

##### **Introduction**

The mineralisation is found north of and between the Rosemary and Jasmine pits (Figure 1). Location A is easily accessible from the Haul Road. Location B is more difficult to access due to a number of creeks and flood plains that may pose major problems in the wet season.

Location A is dominantly goethitic with moderate phosphorous grades (0.11 – 0.22%). Rockchip samples returned assays up to 61.3% iron. Location B is again dominantly goethite, however rockchip sample indicate mineralisation is low-grade (45 – 50% Fe) and very high phosphorous (0.45 – 0.60%).

Outcrop is non-existent and sub-crop is very poor. Mapping measurements were taken from sub-crop and inferences made from colluvium. Sampling of rock chips was from sub-crop where available and from boulders where no sub-crop existed. Cobble sampling could be from hematite shedding from a river terrace unit (photograph 2).

##### **Geology**

###### **Fe Breccia**

Hosting the mineralisation (hematite and goethite), the Fe breccia is only seen as sub-crop and is very sparsely dispersed (Photograph 3). The ore is both hard and friable.

###### **Fe Breccia Float**

In many instances only iron-rich breccia float is present with minor enriched subcrop. This is used to interpret mineralised zones due to the lack of outcrop in the area.

###### **Shale**

A competent, well laminated and bedded unit that is grey in colour. Some shale units, particularly those close to breccia are very ferruginous. This unit outcrops poorly in this area resulting in limited structural data for the map.



Photograph 2: River terrace with high grade rounded hematite pebbles, quartz pebbles, shale and sandstone clasts, all of which erodes out forming a blanket of debris which covers the area.





Photograph 3: In situ sub-crop of iron rich breccia. Location is within the east limb of the fold hinge, *Jasmine Rosemary Nose: A*, 810099/8497969

#### Shale Colluvium

Colluvial cover composed mainly of broken and weathered pieces of shale on undulating topography. It is interpreted that material hasn't moved far and this cover is underlain by shale bedrock.

#### River Terrace

An alluvial deposit that has nearly completely eroded leaving a single outcrop on the eastern side of the hill at Location A. This unit contains clasts of high grade hematite (well rounded), shales and sandstones set in a fine brown matrix (Photograph 2).

#### Alluvial Cover

Alluvial cover consists of silt, quartz sand, clay and gravel with larger pieces of shale/breccia/sandstone strewn across it. This unit covers many areas of low topography and is dominantly formed in flood plains. It is heavily vegetated.

#### Mineralisation

Hematite and goethite rich iron mineralisation occurs as sub-crop. It is possible that there is a high volume of friable ore, explaining the lack of outcrop in the area. Mineralised sub-crop is patchy at best, but can be estimated to average 5 metres thick along the structure.

High grade hematite boulders litter the ground on the eastern side of mapping area A, the origins of these are most likely from river terraces (see Photograph 2). Samples of this material assayed >67% Fe, however they probably originate from Jasmine and are not representative of the immediate area.

Subcrop and float indicate mineralisation at Location A is dominantly goethitic with moderate phosphorous grades (0.11 – 0.22%). Rockchip samples returned assays up to 61.3% iron. Location B is again dominantly goethite, however rockchip sample indicate mineralisation is low-grade (45 – 50% Fe) and very high phosphorous (0.45 – 0.60%).

#### Structure

The major structure present in the area is a northwest plunging anticline that forms the axis to the mineralisation.

Mineralisation in the south (Location A) forms two limbs with the remnants of a fold closure between them interpreted. The west limb is dipping to the west, and regional geological surveys suggest that the east limb also dips to the west (an over-turned anticline), however there is not enough structural data to prove or disprove this.

Mineralisation extends beneath alluvium to the northwest and may continue a further 400 metres to Location B, where there are low-grade iron breccia outcrops (Photograph 4).



Photograph 4: Panoramic image of the Location “A” mapping area looking north towards Location “B”. Note the lack of outcrop in the foreground. Location is in the middle of the Jasmine Rosemary Nose.

### **Geophysics**

The mineralised area is within a broad electromagnetic conductivity high (Figure 3). EM also suggests that this mineralisation is associated with the limbs of the anticline and that the mineralisation connects Rosemary to Jasmine (Figure 4).

### **Interpretations**

#### **Interpretation 1**

The mineralisation is on both limbs of the anticline forming the nose between Jasmine and Rosemary. This is supported by the electromagnetic survey shown in Figure 3 and 4. The west limb is dipping to the west and the east appears to be dipping to the east, however, regional geological reports suggest the anticline may tilt in sections so both limbs will dip to the east.

#### **Interpretation 2**

It has been alternatively suggested that this iron enrichment has been transported from the Jasmine outcrops and deposited in river terraces. Supporting this model is that most of the high grade colluvium is very well rounded, and some river terrace deposits can be seen on the eastern edge of the hill. Here hematite, quartz, sandstone and shale pebbles



in a fine grained ferruginous matrix have been eroded and may form concentrations of high-grade hematite float.

### **Conclusions & Recommendations**

A region of mineralisation with two stages of deposition. The first stage of mineralisation is associated with the Jasmine anticline and is observed as hematitic and goethitic friable subcrop. The second stage of mineralisation is from the alluvial transportation of high grade haematite that has been deposited as river terraces. These terraces have since nearly completely been eroded leaving concentrated cobbles of the high grade hematite.

Due to the potential for mineralisation being of good grade and for it to continue to the northwest and southeast, drill holes should be drilled across the *Rosemary – Jasmine Nose A* target, and should drill results prove to be positive then continue the drilling north towards *Rosemary – Jasmine Nose B* (Figure 7). Due to a lack of structural data drill azimuths may need to be modified as drilling progresses. It is recommended that a phased drilling programme is completed. Drilling should initially test target “A” and given be conducted given positive results target “B” should be tested. Target “C” is a low priority area and only to be tested if significant mineralisation is intersected in target “B”.

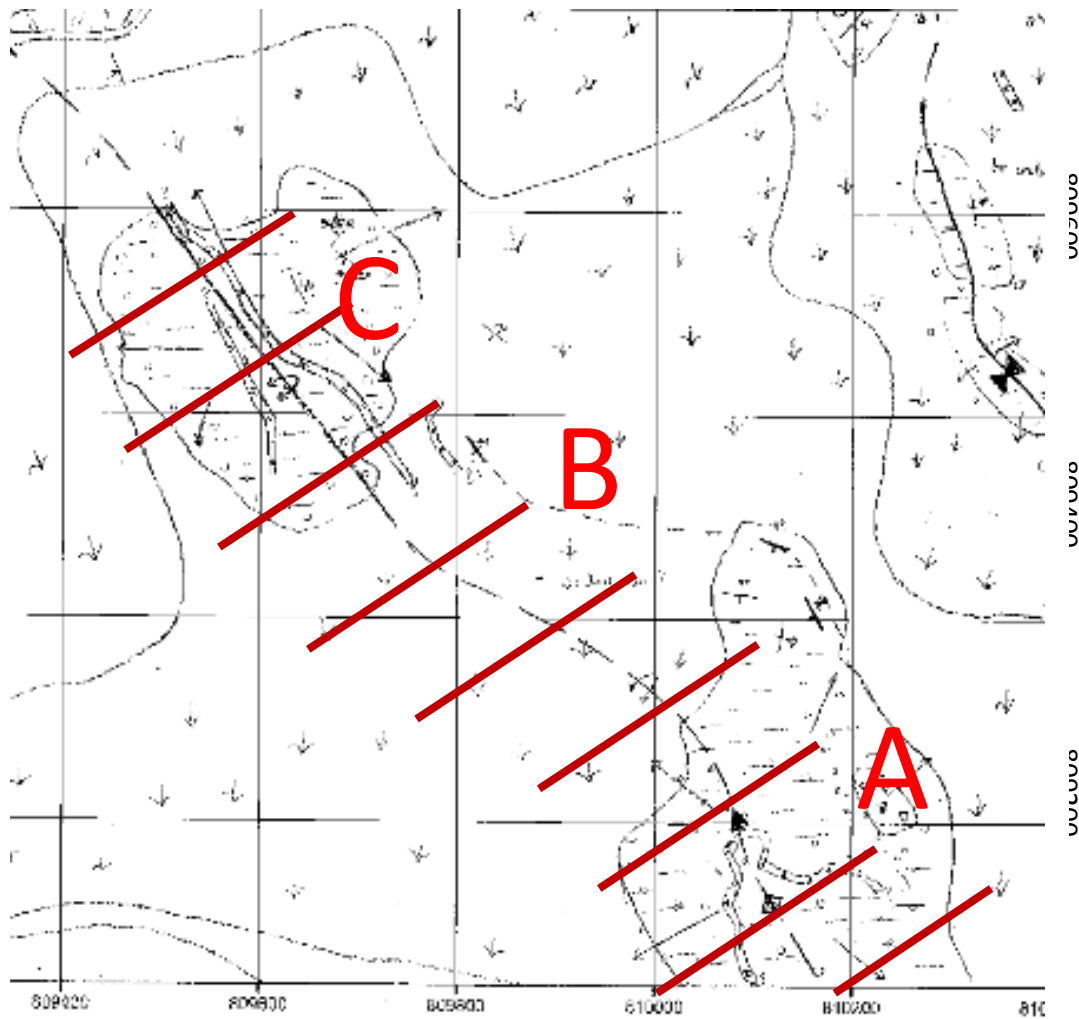


Figure 7: Proposed drilling for Rosemary – Jasmine Nose - Location A and B.

## 5.2 JASMINE – OCHRE HILL TREND

### Introduction

Approximately 1km southwest of Ochre Hill, mineralisation links Ochre Hill to Jasmine. Access is available from the Ochre Hill Road with a direct path to the deposit available across a flood plain. Problems may occur in the wet season.

Outcrop is more common. Measurements were taken from outcrops and inferences were made from sub-crop and colluvium, producing a map with high confidence.

## Geology

### Fe Breccia

Fe breccia hosts the mineralisation (hematite and goethite) and outcrops well for the most parts. The ore is both hard and competent, however it is often contaminated by shale and quartz clasts (Figures 5 and 6).



Photograph 5: An outcrop of iron rich breccia. The shale textures are retained within the zone and dilute the iron concentration. These beds are dipping to the west. Location is within the western most limb of the *Jasmine – Ochre Hill Trend*, 808837/8501246.



Photograph 6: An outcrop of iron breccia situated close to a transform fault resulting in quartz veining within the breccia. Quartz concentration is high and will dilute the iron concentration. Location is within the main zone, 808924/8501151

### Fe Breccia Cover

Fe Breccia float and rubble/subcrop is interpreted as being situated over a zone of iron mineralisation and this has been used to infer the position of mineralisation when there is a lack of sub-crop.

### Shale

A fine grained, competent, well laminated and bedded unit that is grey in colour. Outcrops well and most structural data for the map is collected from this unit.

### Shale Colluvium

Colluvial cover composed mainly of broken and weathered pieces of shale on undulating topography. It is interpreted that material hasn't moved far and this unit is underlain by shale bedrock.

### Alluvial Cover

Alluvial cover consists of silt, quartz sand, clay and gravel with larger pieces of shale/breccia/sandstone strewn across it. This unit covers many areas of low topography and is dominantly formed in flood plains. It is heavily vegetated.

## **Mineralisation**

The iron mineralisation consists of hematite and goethite and is often contaminated by shale and quartz clasts (Figures 5 and 6). The mineralisation is hard, and outcrops very well with five parallel bands of 5 – 10 metres thickness each, with each band interspaced by 10-20 meters of cover and rare shale subcrop.

Over to rock chip sample results, iron levels average at 52.7% (min 38.5%, max 55.6%) and phosphorous levels are high, averaging 0.35% (min 0.17%, max 0.86%)

## **Structure**

Mineralisation occurs on the east limb of the main northwest plunging syncline.

At least one east-west trending sinistral transform fault cross cuts the mineralisation. This occurs south of the main outcrop, possibly offsetting the mineralisation to the south west.

There is localised parasitic folding in the area with a small anticline and syncline to the west of the mineralisation. Mineralisation is lost under cover and possibly continues in the subsurface to the north and south.

## **Geophysics**

This location has been cited as a geophysical target by *Hawke Geophysics* and the radiometric (uranium channel) is high in relation to the surrounding land.



Structures interpreted from the geophysics suggest three sets of dilational jogs *en echelon* to each other, see Figure 6.

### **Interpretation**

Mineralisation is concentrated in a series of dilational jogs running along the eastern limb of the northwest plunging syncline. Five parallel westerly dipping bands of mineralisation are situated within 100 metres of multiple parallel fold closures. Mineralisation extends beneath cover to the north and south and is interpreted as being disrupted by faults making extrapolation along strike difficult. Geophysics suggests two more dilatational jogs to the south along the same trend.

### **Conclusions & Recommendations**

Mineralisation has the potential to continue along strike in three main sections as dilatational jogs. The ore is rich in hematite and goethite but is contaminated by shale/quartz clasts. It is possible that grade and thickness increase as the zones approach the interpreted synclinal fold hinge.

Drilling should initially test targets in the north at *Jasmine – Ochre Hill Trend* mapping area and working south (Figure 8). Drill lines have been planned to test from the axial trace of the syncline and to the footwall of the mineralisation. Hole should be drilled towards the east. Lines are continued in the south despite lack of detailed mapping (1:2000) due to the geophysical continuations.



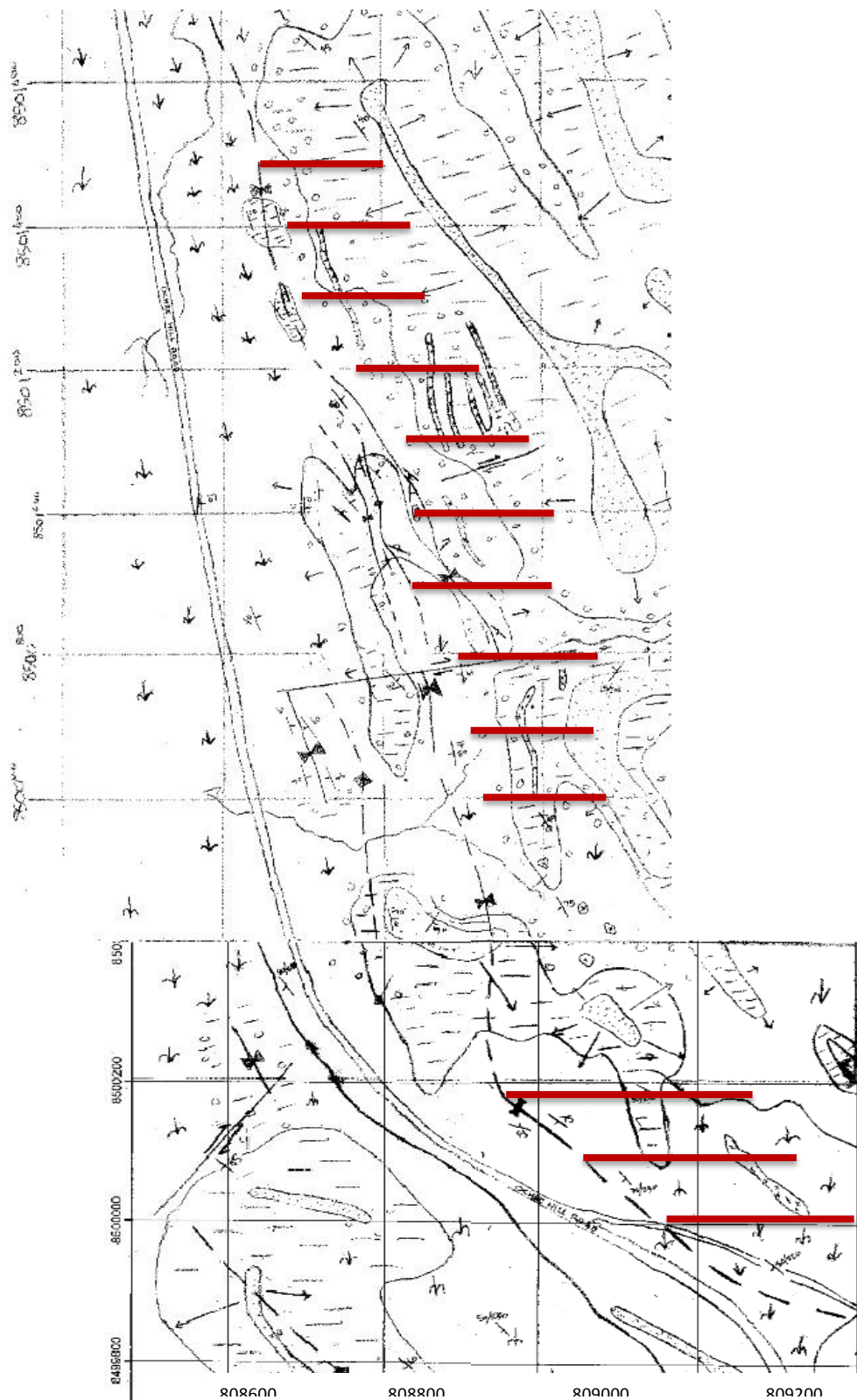


Figure 8: Proposed drilling for Jasmine - Ochre Hill Trend.

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*BMR, Geol and Geophysics, Aust. Gov. Pub. Service, Canberra.*

## **Appendix 1**

### **Rockchip Sample Register**

## Rockchip Results collected from March 2011 to August 2011

SAMPLE_ID	MGA_N	MGA_E	PROSPECT	Lith1	FE_PCT	AL2O3_PCT	SiO2_PCT	P_PCT	MN_PCT	LOI_PCT	Description
TRK117	8497995	810218	Jasmine Beryl Trend	Canga	38.5	11.6	24.4	0.11	0.12	5.73	Low hill in valley to NW of Jas W.
TRK154	8497987	810102	Jasmine Beryl Trend	Fe Sltst breccia	54.1	3.7	8.29	0.16	0.26	8.72	Rosemary North ext. Low grade
TRK155	8498503	809588	Jasmine Beryl Trend	Sltst breccia	48.3	4.22	16.2	0.47	0.05	8.46	Rosemary North a/c culmination? Mn-rich
TRK156	8498489	809593	Jasmine Beryl Trend	Sltst breccia	45.9	4.32	16.6	0.45	0.05	9.13	Rosemary North a/c culmination? Mn-rich
TRK157	8498378	809773	Jasmine Beryl Trend	Sltst breccia	47.0	5.15	15	0.58	0.35	8.89	Rosemary North a/c culmination? Mn-rich
TRK169	8500489	809097	Ochre hill	Fe qtz breccia	57.2	1.65	4.99	0.02	1.52	7.56	
TRK170	8500767	809025	Ochre hill	Haematite and goethite	39.6	4.23	31.6	0.13	0.03	4.31	HOH and GOH with sandstone and quartz
TRK171	8500748	808989	Ochre hill	Haematite and goethite	31.4	1.84	47.3	0.04	0.05	4.1	HOH and GOH with sandstone and quartz
TRK172	8500719	808965	Ochre hill	Fe Breccia	38.0	6.82	25.7	0.01	0.03	8.15	Fe breccia
TRK173	8500663	808990	Ochre hill	Fe Breccia	46.9	2.37	19.1	0.06	0.29	8.39	Fe breccia
TRK174	8498825	809107	Jasmine West	Fe Ssh	42.4	7.42	18.7	0.02	0.02	8.45	Ferruginous Shale with Haematite and Geothite
TRK175	8498877	809086	Jasmine West	Fe Ssh	39.3	3.48	36.4	0.09	0.03	2.34	Ferruginous Shale with Haematite and Geothite
TRK176	8498273	809633	Jasmine West	Fe Breccia	44.7	6.18	18.2	0.48	0.08	7.01	Fe breccia with Haematite and Geothite
TRK177	8498503	809587	Jasmine West	Fe Breccia	49.8	3.2	12.2	0.56	0.05	9.97	Fe breccia with Haematite and Geothite
TRK206	8499000	810212	Ochre Hill - Jasmine	Fe Breccia	49.4	3.91	13.7	0.42	0.05	8.4	Fe breccia with varying visible iron contents
TRK207	8499000	810477	Ochre Hill - Jasmine	Fe Breccia	12.7	14.1	56.5	0.09	<0.01	2.98	Fe breccia with varying visible iron contents
TRK208	8499000	810678	Ochre Hill - Jasmine	Fe Breccia	24.0	9.7	47.4	0.12	0.02	5.31	Fe breccia with varying visible iron contents



SAMPLE_ID	MGA_N	MGA_E	PROSPECT	Lith1	FE_PCT	AL2O3_PCT	SiO2_PCT	P_PCT	MN_PCT	LOI_PCT	Description
TRK209	8499387	810352	Ochre Hill - Jasmine	Fe Breccia	22.9	3.73	56.6	0.20	<0.01	4.04	Fe breccia with varying visible iron contents
TRK241	8497956	810060	Rosemary - Jasmine Nose	FeX	61.3	0.53	2.01	0.22	0.26	8.26	North of Jasmine
TRK242	8498058	810162	Rosemary - Jasmine Nose	FeX	67.7	0.78	1.74	0.05	0.05	0.62	North of Jasmine. Sample taken from river terrace debris/haematite boulders.
TRK243	8498010	810194	Rosemary - Jasmine Nose	FeX	68.2	0.72	1.18	0.01	0.02	0.38	North of Jasmine. Sample taken from river terrace debris/haematite boulders.
TRK326	8497958	810185	Rosemary - Jasmine Nose	Fe Breccia	63	0.91	2.57	0.25	0.62	5.37	On east limb of anticline leading to Jasmine, competent subcrop.
TRK327	8497906	810067	Rosemary - Jasmine Nose	Fe Breccia	49.3	5.23	14.6	0.28	0.17	7.21	On west limb of anticline leading to Rosemary, small competent subcrop in creek.
TRK348	8501401	808735	Jasmine - Ochre Hill	Fe Breccia	55.6	1.63	6.79	0.33	0.16	10.3	breccia outcrop
TRK349	8501323	808750	Jasmine - Ochre Hill	Fe Breccia	55.6	2.12	8.41	0.24	0.71	9.59	breccia outcrop
TRK350	8501244	808859	Jasmine - Ochre Hill	Fe Breccia	55.6	2.2	8.18	0.4	0.95	8.27	breccia outcrop at bottom of hill
TRK351	8501239	808836	Jasmine - Ochre Hill	Fe Breccia	55.6	3.39	10.4	0.32	1.08	7.68	breccia outcrop at bottom of hill
TRK352	8501204	808917	Jasmine - Ochre Hill	Fe Breccia	55.6	3.28	25.8	0.86	3.9	7.66	breccia outcrop ridge, top of hill
TRK353	8501130	808871	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	4.18	20.7	0.2	1	6.07	breccia outcrop, bottom of hill
TRK354	8501158	808886	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	2.73	10.3	0.17	1.32	6.42	large breccia outcrop
TRK355	8501191	808900	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	4.91	11.2	0.2	0.63	6.38	breccia outcrop
TRK356	8501157	808939	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	2.42	13.7	0.26	0.77	8.03	breccia outcrop

SAMPLE_ID	MGA_N	MGA_E	PROSPECT	Lith1	FE_PCT	AL2O3_PCT	SiO2_PCT	P_PCT	MN_PCT	LOI_PCT	Description
TRK357	8501153	808946	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	2.92	8.84	0.22	0.34	7.89	breccia outcrop
TRK358	8501008	808892	Jasmine - Ochre Hill	Fe Ssh Breccia	55.6	1.97	12.8	0.27	0.16	7.88	breccia outcrop