



Internal Report

PROJECT RECONNAISSANCE & AIRBORNE ANOMALY EVALUATION

NGALIA PROJECT

EL24571

NORTHERN TERRITORY

Report No: ROY0202

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Submitted To: I Faris

Accepted: _____

Distribution: Royal Resources Limited
Aldershot Resources Ltd

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EL24571 - PROSPECT EVALUATION		

SUMMARY

The following document contains information pertaining to airborne anomalies which were visited during April 2010 in a reconnaissance expedition to the Ngalia Project, EL24571.

The Ngalia Project is located approximately 365 kilometres west-northwest of Alice Springs on the margin of the Ngalia Basin and the Arunta Block, Northern Territory. The tenement covers 74 blocks (210 km²) and is 100% owned by Aldershot Resources Limited (“Aldershot”). Aldershot has recently signed a Heads of Agreement whereby Royal Resources Limited (“Royal”) has the right to earn 60%. Royal will be operator on EL24571.

Access to the area is by the sealed Stuart Highway for approximately 20 kilometres heading northwest of Alice Springs, then by travelling 265 kilometres northwest along the Tanami Highway and turning west from Yuendumu along the access road for 77km to Vaughan Springs Homestead.

Accommodation was at the Vaughan Springs Homestead which is part of the Mount Doreen Station Perpetual Pastoral Lease supplied by Debbie and Matthew Braitling, the owners of Mount Doreen Station.

Field crew consisted of geologist and field assistant. Prior to entry notice had been received from the Central Lands Council for access onto the land.

Airborne anomalies visited comprised of targets defined by Doug Barrett in his report dated 2007, Phil Hawke in his report dated 2010 and Aldershot Resources Ltd dated 2007. Not all of the anomalies were possible to reach due to remoteness and field equipment at the time of reconnaissance.

Attached are summaries of each airborne anomaly sited and a summary of the northern and southern proposed drill traverse. Please refer to the photos (numbered) with the report. The Nearest Town/Distance is given; the distance represents how far an anomaly is from the town to the turn-off from the main track, it does not include the bush track length, this distance is stated in the Site Access/Infrastructure section. The Main Track referred to is the track between the Vaughan Springs Homestead and the Nyirripi Community.

Grid references refer to the Map Grid of Australia, using the 1994 Datum and are from grid zone 52K.

Anomalies NG_001, NG_002, NG_009, NG_010, NG_011, NG_012, NG_013 were all located in the Southwark Granite Suite, anomalies HWK_002, HWK_003, HWK_004 and NG_017 were located in the Vaughan Springs Quartzite and anomalies ALZ_001, ALZ_003 and NG_016, were located within the Mount Eclipse Sandstone.

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The Southwark Granite Suite displayed two distinct units, noticeable by appearance and also by radioactivity. For this reconnaissance they have been named Unit A and Unit B and display the following characteristics.

SOUTHWARK GRANITE SUITE – Unit A

Type 1 – Silicified granite

- 1-2cm feldspar megacrysts
- Silicified/ferruginised groundmass
- Fine-grained groundmass due to silicification
- Average gamma response 300-320cps



SOUTHWARK GRANITE SUITE – Unit B

Type 1 - Coarse-grained quartz biotite megacrystic granite

- Equant quartz (~50%)
- Biotite-muscovite (~10%)
- Feldspar groundmass (~40%)
- Elevated gamma response averaging 400-450cps



Type 2 - Leucogranite

NG_009_2 – coarse-grained

- Equant quartz (~80%)
- Chlorite (~10%)
- Feldspar groundmass (~10%)
- Average gamma response 300-320cps



Type 3

NG_010_2 – fine-medium grained

- Feldspar groundmass (~40%)
- Amphibole (~20%)
- Quartz (~10%)
- Chlorite (~20%)
- Muscovite (~10%)
- Average gamma response 330-350cps



The Vaughan Springs Quartzite was relatively homogenous in appearance and formed the elevated ridge line trending northeast along the western region of the tenement. This ridgeline was passed through saddles in order to access the Southwark Granite Suite.

Three different facies of the Mount Eclipse Sandstone were interpreted on different characteristics and all contained rounded quartz pebbles, in differing amounts. One conglomerate unit is thought to be the basal conglomerate facies of the Mount Eclipse Formation.

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EL24571 - PROSPECT EVALUATION		

PROJECT – Prospect:	NGALIA PROJECT	Date:	27/04/2010
Nearest Town & Distance:	22km along track from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_001
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 675,314	N: 7,525,567

Site Access/Infrastructure:

Site access is moderate. A 4.1km bush track has been established and passes through a saddle in the Vaughan Springs ridgeline to an outcrop of Southwark Granite.

Heritage, Safety, Environment and Community Considerations:

The best access route was from 7524061N/678197E which is on the track heading towards the bore off the Main Track. This coordinate is the only possible point to push in a bush track as the adjacent areas are within a heritage exclusion zone. There is no leeway here off this point and the bush track for the first 200m. If re-visiting please revisit the heritage clearance map for guidance.

Topography:

The bush track passes through the main prominent ridge of the Vaughan Springs Quartzite. NG_001 is situated on a slight rise in topography formed by mounds of Southwark Granite outcropping in a linear trend parallel to the Vaughan Springs Quartzite.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	

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Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northings:	Easting:	Dip:	Dip Direction:	Type:	Description:
7525111	674972	58	170	Foliation	345cps
7525140	675096	74	098	Cleavage	
7525295	675399	74	219	Cleavage	Southwark Granite - Unit B (Type 1) 640cps - 925cps on surface Assay: K_6.1ppm, U_38.8ppm, Th_136.7ppm NG_001_2 rock chip (assay sample 193601)
7525292	675403	25	192	Foliation	
7525295	675406	40	112	Cleavage	
7525208	675232	45	166	Veining	440cps (310cps bg)

Alteration/Minerals/Veining (type, volume, %, intensity):

Stockwork veining is predominately in Southwark Granite Suite Unit B (Type 1) comprised of quartz, two definite orientations. No alteration is apparent on vein selvages.

Radioactive &/or Mineralised Zones:

Initial Target: NG_001			
Extent of Mineralisation:		Radioactivity (cps): 380cps at NG_001	
Length:		Average:	380-400cps
Width:	Southwark Granite - Unit B (Type 1) cropped out as subdued outcrops averaging roughly 3m by 5m mounds, apparent on the western side of the high point/opposing dip of foliation, of outcrop which was Southwark Granite – Unit A.	Maximum:	420cps-620cps on surface NG_001_1 (assay sample 193600) Southwark Granite – Unit B (Type 1) outcrops and associated highs: 7525141N/675003E = 660cps (adjacent saddle) 7525143N/675021E = 635cps 7525143N/675045E = 500cps (in saddle of outcrop) 7525192N/675170E = 660cps 7525209N/675208E = 600cps 7525337N/675377E = 600cps
Depth (if known):		Minimum:	300cps in Southwark Granite - Unit A (Type 1)
Average Grade(U3O8)		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Southwark Granite Unit B (Type 1) has the greatest footprint compared with the other anomalies.			

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Samples taken (series, number, description):

NG_001_1 (assay sample 193600) Southwark Granite – Unit B (Type 1)

NG_001_2 (assay sample 193601) Southwark Granite – Unit B (Type 1)

Conclusions/Recommendations:

Anomalism is associated with Unit B, however there was no direct link between gamma response and any veining or particular source of anomalism. Therefore NG_001 is not of high priority and it is established that Unit B is the source of airborne anomalism.

Sketch:

Photos taken:

IMG_0862: scenery

IMG_0863: multiple veining

IMG_0864: multiple veining

IMG_0865: veining folded

IMG_0866: Southwark Granite – Unit B

IMG_0867: Southwark Granite – Unit B

IMG_0868: nature's window

IMG_0869: Southwark Granite – Unit A & B

IMG_0870: foliation

IMG_0871: multiple veining

IMG_0872: Mount Davenport in distance

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PROJECT – Prospect:	NGALIA PROJECT	Date:	27/04/2010
Nearest Town & Distance:	22km along track from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_002
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 675,172	N: 7,525,273

Site Access/Infrastructure:

Site access is moderate. A 4.1km bush track has been established and passes through a saddle in the Vaughan Springs ridgeline to an outcrop of Southwark Granite.

Heritage, Safety, Environment and Community Considerations:

The best access route was from 7524061N/678197E which is on the track heading towards the bore off the Main Track. This coordinate is the only possible point to push in a bush track as the adjacent areas are within a heritage exclusion zone. There is no leeway here off this point and the bush track for the first 200m. If re-visiting please revisit the heritage clearance map for guidance.

Topography:

NG_002 is situated on slight downhill slope, adjacent to outcrop on granite float and gruss.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered -gruss on erosion slopes and drainages Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7525174	675150	56	166	Foliation	Moderately developed in outcrop – igneous flow foliation

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Alteration/Minerals/Veining (type, volume, %, intensity):

Colloform veining evident in float around 7525347N/675222E

Radioactive &/or Mineralised Zones:

Initial Target: NG_002			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	300-400cps
Width:	NG_002 in float and gruss material downslope of outcrop	Maximum:	7525248N/675191E 640cps - 740cps on surface Southwark Granite – Unit B (Type 1) Assay: K_4.6ppm, U_24.5ppm, Th_80.3ppm NG_002_1 (assay sample193602) 7525244N/675189E 640cps in gruss, granite float
Depth (if known):		Minimum:	280cps
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Broad erosional gruss material, anomaly due to Thorium response? No particular point anomaly found, appears to be associated with weathered Southwark Granite – Unit B (Type 1).			

Samples taken (series, number, description):

NG_002_1 (assay sample193602) Southwark Granite – Unit B (Type 1)

Conclusions/Recommendations:

Anomaly associated with the Southwark Granite – Unit B (Type 1) weathered gruss, no further work recommended at this stage.

Sketch:

Photos taken:

IMG_0853: colloform veining in float

IMG_0854: veining

IMG_0855: Southwark Granite – Unit A & B

IMG_0856: Southwark Granite – Unit A & B

IMG_0857: Southwark Granite – Unit B

IMG_0858: Southwark Granite – Unit A

IMG_0859: outcrop

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PROJECT – Prospect:	NGALIA PROJECT	Date:	23/04/2010
Nearest Town & Distance:	27km to bush track turn-off from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_009
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 671,088	N: 7,521,348

Site Access/Infrastructure:

Access is difficult. The bush track created to access HWK_004 was followed. The bush track then leads through the saddle of the major ridge of the Vaughan Springs Quartzite. Access point at 671047E, 7520104N. NG_009 is 5.3km along the bush track off the Main Track, and a further 27km to the Vaughan Springs Homestead.

Heritage, Safety, Environment and Community Considerations:

Safety considerations include the time allocated for access to this area due to the remoteness.

Topography:

Once past the Vaughan Springs ridgeline (through the saddle) topography comprises low to moderate mounds of granite outcrops which marks the forefront of the horizon. Drainage lines have developed running off the ridgeline forming a weakly undulating surface.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	
Southwark Granite Suite - Unit B (Type 2)	Equant	White/green (chlorite)	m.g-c.g	300-320cps this unit has the texture and composition of Unit B (Type 1) however the gamma response is noticeably lower. NG 009 2 (reference sample)	

Alteration/Minerals/Veining (type, volume, %, intensity):

7521350N/671090E, 330-380cps quartz vein striking 050 degrees, over zone 10m by 15m;
7521367N/671111E, 400cps vein (photo) striking 088 degrees, NG_009_01 (reference sample)
7521183N/671279E, 450-490cps fractured, hematite zone

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Radioactive &/or Mineralised Zones:

Initial Target: NG_009			
Extent of Mineralisation:		Radioactivity (cps): (at NG_009) 330-380cps (10m by 15m zone)	
Length:		Average:	300cps bg
Width:		Maximum:	7521207N/671226E = 420cps - 500cps on surface Southwark Granite – Unit B (Type 1) NG_009_3 (assay sample 193603) 7521174N/671289E = 500cps - 530cps on surface Southwark Granite – Unit B (Type 1) NG_009_4 (assay sample 193604)
Depth (if known):		Minimum:	300cps bg
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Weathered granite outcrop, no significant anomalism. NG_009 is not directly located on the outcrop but on the scree slope within weathered guss material.			

Samples taken (series, number, description):

Four samples collected; NG_009_1 – 4. Of these, two are for assay NG_009_3 (assay sample 193603) and NG_009_4 (assay sample 193604), both Southwark Granite – Unit B (Type 1)

Conclusions/Recommendations:

NG_009 is believed to be the northern extension of an elevated background gamma radiation anomaly within the Southwark Granite. No further work is required at this point, however continued research into the implications of structures which trend toward the Waite Creek thrust could be further explored, as a good source to possible mineralisation.

Sketch:

Photos taken:

IMG_0784: drainage

IMG_0785: veining at NG_009

IMG_0786: Southwark Granite outcrop

IMG_0787: Southwark Granite outcrop

IMG_0788: at NG_009

IMG_0789: Southwark Granite outcrop

IMG_0790: veining

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PROJECT – Prospect:	NGALIA PROJECT	Date:	23/04/2010
Nearest Town & Distance:	27km to bush track turn-off from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_010
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 670,707	N: 7,520,968

Site Access/Infrastructure:

Access is difficult. The bush track created to access HWK_004 was followed. The bush track then leads through the saddle of the major ridge of the Vaughan Springs Quartzite. Access point at 7520104N/671047E. NG_010 is 5km along the bush track off the Main Track, and a further 27km to the Vaughan Springs Homestead.

Heritage, Safety, Environment and Community Considerations:

Safety considerations include the time allocated for access to this area due to the remoteness.

Topography:

Once past the Vaughan Springs ridgeline (through the saddle) topography comprises low to moderate mounds of granite outcrops which marks the forefront of the horizon. Drainage lines have developed running off the ridgeline forming a weakly undulating surface. Subdued granite outcrop.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	
Southwark Granite Suite - Unit B (Type 3)	Homogenous	Dark green	f.g-m.g	7520969N/670725E float only (not found in outcrop) NG_010_2 (reference sample) - 330-350cps	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:

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7520968	670707	38	265	Veining	380cps
7520927	670688	56	322	Foliation	veining occurring along foliation plane, 320cps

Alteration/Minerals/Veining (type, volume, %, intensity):

Common 3cm quartz veins striking 150 degrees, 300-320cps outside zone, photo of veining at 7520964N/670694E, 7521140N/671184E abundant quartz lag

Radioactive &/or Mineralised Zones:

Initial Target: NG_010			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	320 - 380cps
Width:		Maximum:	7520923N/670678E = 400-450cps on surface Southwark Granite – Unit B (Type 1) NG_010_1 (assay sample 193605) 7521176N/671231E = 520cps
Depth (if known):		Minimum:	320cps
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Weathered granite outcrop, no significant anomalism.			

Samples taken (series, number, description):

NG_010_1 (assay sample 193605) Southwark Granite – Unit B (Type 1) and NG_010_2 (reference sample) Southwark Granite – Unit B (Type 3)

Conclusions/Recommendations:

NG_010 is believed to be the central extension of an elevated background gamma radiation zone within the Southwark Granite. No further work is required at this point, however continued research into the implications of structures which trend toward the Waite Creek thrust could be further explored, as a good source of possible mineralisation.

Sketch:

Photos taken:

IMG_0791 - 0796: scenery

IMG_0799: veining

IMG_0800: veining

IMG_0801: veining

IMG_0802: veining

IMG_0803: veining

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PROJECT – Prospect:	NGALIA PROJECT	Date:	28/04/2010
Nearest Town & Distance:	27km to bush track turn-off from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_011
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 669,880	N: 7,520,423

Site Access/Infrastructure:

Access is difficult. The bush track created to access HWK_004 was followed. The bush track then leads through the saddle of the major ridge of the Vaughan Springs Quartzite. Access point at 7520104N/671047E. NG_011 is 5.2km along the bush track off the Main Track, and a further 27km to the Vaughan Springs Homestead.

Heritage, Safety, Environment and Community Considerations:

Safety considerations include the time allocated for access to this area due to the remoteness.

Topography:

Once past the Vaughan Springs ridgeline (through the saddle) topography comprises low to moderate mounds of granite outcrops which marks the forefront of the horizon. Drainage lines have developed running off the ridgeline forming a weakly undulating surface. Subdued granite outcrop.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7520424	669712	44	152	Jointing	300cps
7520177	669538	8	326	Jointing	280cps moderate (structural) measurement, may be

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					localised slumping
7520446	669881	65	265	Jointing	530cps minor outcrop, Southwark Granite Unit B (Type 1), well jointed
7520481	669828	34	337	Veining	500cps 2cm fx/qtx veining occasional, decrease in cps to 350cps in silicified granite Southwark Granite Unit A
7520497	669783	60	003	Veining	530cps two cross-veins in Southwark Granite Unit B (Type 1) granite
7520497	669783	69	310	Veining	530cps two cross-veins in Southwark Granite Unit B

Alteration/Minerals/Veining (type, volume, %, intensity):

No distinct increase in cps due to veining.

Radioactive &/or Mineralised Zones:

Initial Target: NG_011			
Extent of Mineralisation:		Radioactivity (cps): 430cps at NG_011	
Length:		Average:	450-500cps
Width:		Maximum:	7520500N/669777E = 500cps-550cps on surface Southwark Granite Unit B (Type 1) Assay: K_4.2ppm, U_27.2ppm, Th_10.7ppm 7520423N/669880E = 430cps slightly up rise, outcrop to west, loose granite float and gruss
Depth (if known):		Minimum:	280cps
Average Grade(U3O8)		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Similar environment to NG_009_10_12 and 13.			

Samples taken (series, number, description):

No samples taken.

Sketch:

Photos taken:

IMG_0874: scenery south to Nyirripi

IMG_0875: two cross-veins in Southwark Granite – Unit B

IMG_0876: jointing in Southwark Granite – Unit A

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PROJECT – Prospect:	NGALIA PROJECT	Date:	28/04/2010
Nearest Town & Distance:	27km to bush track turn-off from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_012
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 669,852	N: 7,519,715

Site Access/Infrastructure:

Access is difficult. The bush track created to access HWK_004 was followed. The bush track then leads through the saddle of the major ridge of the Vaughan Springs Quartzite. Access point at 7520104N/671047E. NG_012 is 5.1km along the bush track off the Main Track, and a further 27km to the Vaughan Springs Homestead.

Heritage, Safety, Environment and Community Considerations:

Safety considerations include the time allocated for access to this area due to the remoteness.

Topography:

NG_012 situated along drainage at the base of the Vaughan Springs Quartzite outcrop and adjacent to the western side of the prominent ridge line.

Lithology:

GEOLOGICAL PROVINCE:	NGALIA BASIN			Major Units:	SOUTHWARK GRANITE SUITE - VAUGHAN SPRINGS QUARTZITE (VSQ)
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	
Southwark Granite – Vaughan Springs Quartzite				Contact – visible in float only 7519871N/670138E striking roughly 060 degrees	

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Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting	Dip	Dip Direction:	Type:	Description:
7519767	669862	28	162	Foliation	320cps
7519781	669964	38	238	Jointing	220cps
7519942	670334	22	157	Bedding	230cps_190cps in VSQ check accuracy of structural measurement

Alteration/Minerals/Veining (type, volume, %, intensity):

Quartz veining common in VSQ float at contact zone with Southwark Granite.

Radioactive &/or Mineralised Zones:

Initial Target: NG_012			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	415cps
Width:		Maximum:	7520124N/670199E = 425cps - 480cps on surface, Southwark Granite – Unit B (Type 1), iron staining Assay: K_3.4ppm, U_27.6ppm, Th_24.3ppm NG_012_1 (assay sample 193606) 7519892N/670034E = 400cps - 550cps on surface, Southwark Granite – Unit B (Type 1), Assay K_5.4ppm, U_18.4ppm, Th_40.7ppm
Depth (if known):		Minimum:	350cps
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer

General Description of Zone:

NG_012 was situated alongside a minor drainage channel at the contact between the Southwark Granite and the Vaughan Springs Quartzite. Quartz veining was common in the VSQ at the contact, however the anomaly source was granite gruss material, again not related to veining.

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Samples taken (series, number, description):

NG_012_1 (assay sample 193606) Southwark Granite Suite – Unit B (Type 1) – photo IMG_0908

Conclusions/Recommendations:

Anomaly associated with Southwark Granite Suite – Unit B (Type 1) gross material. No further work recommended.

Sketch:

Photos taken:

IMG_0880: cleared area, approaching NG_012

IMG_0884: Vaughan Springs Quartzite ridge

IMG_0885: Vaughan Springs Quartzite ridge

IMG_0887: Southwark Granite – Unit B zone

IMG_0893: Contact between Southwark Granite and Vaughan Springs Quartzite

IMG_0894: scenery

IMG_0895: scenery

IMG_0896: Contact between Southwark Granite and Vaughan Springs Quartzite

IMG_0897: veining common in Vaughan Springs Quartzite at contact zone

IMG_0898 - 0907: scenery

IMG_0908: Southwark Granite – Unit B, goethite

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EL24571 - PROSPECT EVALUATION		

PROJECT – Prospect:	NGALIA PROJECT	Date:	28/04/2010
Nearest Town & Distance:	27km to bush track turn-off from Vaughan Springs Homestead – Mt Doreen Station	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_013
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 669,424	N: 7,520,027

Site Access/Infrastructure:

Access is difficult. The bush track created to access HWK_004 was followed. The bush track then leads through the saddle of the major ridge of the Vaughan Springs Quartzite. Access point at 671047E, 7520104N. NG_013 is 5.5km along the bush track off the Main Track, and a further 27km to the Vaughan Springs Homestead.

Heritage, Safety, Environment and Community Considerations:

Safety considerations include the time allocated for access to this area due to the remoteness.

Topography:

Once past the Vaughan Springs ridgeline (through the saddle) topography comprises low to moderate mounds of granite outcrops which marks the forefront of the horizon. Drainage lines have developed running off the ridgeline forming a weakly undulating surface. Subdued granite outcrop.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	SOUTHWARK GRANITE SUITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Southwark Granite Suite - Unit A (Type 1)	Silicified Overprinted	Pink/white	f.g-m.g	Average gamma response for Unit A – (Type 1) is 300-320cps background	
Southwark Granite Suite - Unit B (Type 1)	Weathered Megacrystic Equant	Red/orange	m.g-c.g	Distinct difference in gamma response between the two types of granite Average gamma response for Unit B – (Type 1) is 450cps background Unit B (Type 1) is more susceptible to weathering and therefore generally lies in patches of outcrop on the low side of outcropping hills and ridges of Unit A.	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting	Dip	Dip Direction:	Type:	Description:
7519743	669624	26	159	Foliation	210cps

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Radioactive &/or Mineralised Zones:

Initial Target: NG_013			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	7520031N/669404E = 415cps adjacent to NG_013 up rise, small patch of Southwark Granite – Unit B, 320cps-340cps in outcrop, localised slumping, outcrop striking roughly 220 degrees
Width:		Maximum:	7520034N/669378E = 420cps-520cps on surface Assay: K_4.0ppm, U_20.7ppm, Th_13.7ppm
Depth (if known):		Minimum:	7520027N/669424E = 350cps again, anomaly appears to be a slight rise adjacent to outcrop ridge to the west
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone: Eastern side, off granite outcrop again elevated zone in float and gruss material, however no indication of source or primary mineralisation target, possible thorium anomaly.			

Samples taken (series, number, description):

No samples taken.

Sketch:

Photos taken:

IMG_0877: flora

IMG_0879: igneous flow foliation in Southwark Granite

EL24571 - PROSPECT EVALUATION

PROJECT – Prospect:	NGALIA PROJECT	Date:	22/04/2010
Nearest Town & Distance:	14.2km from Nyirripi Community to track turn-off and ~56km to Vaughan Springs – Mt Doreen Station via track	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_016
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 656,070	N: 7,505,774

Site Access/Infrastructure:

Site access was difficult. Travel through Nyirripi and taking the north-west track which then travels north through the western edge of the tenement. Off this track a 3.8km bush track leads out to NG_016. Scrub is thick in places.

Heritage, Safety, Environment and Community Considerations:

The bush track was put in just north ~100m from an exclusion zone. This was the best possible access route, however it is certainly too close to the exclusion zone to allow rigs etc to go through to avoid the risk of driving through the restricted area.

Topography:

Open country, random sand dunes, calcrete plateaus. Well developed spinifex.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	MOUNT ECLIPSE SANDSTONE (calcrete)
LITHOLOGY:					
Type:	Texture:	Colour:	Thickness:	Grainsize:	Description
Calcrete (massive)		White			Zones with elevated cps appear to be more silicified

Radioactive &/or Mineralised Zones:

Initial Target: NG_016			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	160cps bg
Width:	Silicified zones generally 2m by 3m appear to have elevated cps readings	Maximum:	7505774N/656039N = 280cps NG_016_1 (assay sample 193607) silcrete/calcrete sample 7505791N/656058 = 260cps - 430cps on surface NG_016_2 (assay sample 193608) calcrete sample taken from >10cm depth
Depth (if known):		Minimum:	140cps in sands

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Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Area of calcrete plateaus developed surrounded by small <2m sand dunes, sandy terrain, well developed calcrete over area 30m by 100m.			

Samples taken (series, number, description):

Two samples taken (both calcrete samples): NG_016_1 (assay sample 193607) and NG_016_2 (assay sample 193608)

Conclusions/Recommendations:

No distinct zone of anomalism, suspected contrast anomaly between calcrete and surrounding transported sands.

Sketch:

Photos taken:

IMG_0779: sampling

IMG_0780: calcrete rise

IMG_0781: southern scenery

IMG_0782: southern scenery

IMG_0783: southern scenery

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PROJECT – Prospect:	NGALIA PROJECT	Date:	21/04/2010
Nearest Town & Distance:	23.95km from Vaughan Springs – Mt Doreen Station to track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	NG_017
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 673,433	N: 7,519,130

Site Access/Infrastructure:

Relatively good access, ~1.2km bush track into NG_017 off Main track.

Heritage, Safety, Environment and Community Considerations:

Located 1.1km south-west of heritage exclusion zone.

Topography:

Slight rise off Main track, through moderate to dense scrub in places.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	VAUGHAN SPRINGS QUARTZITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Strongly oxidised/ ferruginised quartzite float abundant	Manganese staining along fractures	Dark red, brown	Overprint	Zone of strongly ferruginised float	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7519167	673443	49	333	Bedding	
7519479	673665	56	252	Cleavage	
7519479	673665	28	140	Bedding	

Alteration/Minerals/Veining (type, volume, %, intensity):

Iron-oxide alteration/overprint.

Radioactive &/or Mineralised Zones:

Initial Target: NG_017	
Extent of Mineralisation:	Radioactivity (cps):
Length:	Average: 160-170cps bg

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Width:	Dimensions of ferruginised lag: ~30m by 34m	Maximum:	7519179N/673445E = 193cps ferruginised float
Depth (if known):		Minimum:	160-170cps bg
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer

General Description of Zone:

Zone of strongly goethetised/ferruginised quartzite float with weak anomalism, which explains target. Possibly associated with regional fault trending toward NG_009 and NG_010.

Samples taken (series, number, description):

NG_017 (reference sample)

Conclusions/Recommendations:

Adjacent outcrop appears to be distinctly folded in a horseshoe appearance, and considered a structural target for future consideration.

Sketch:

Photos taken:

IMG_0765: sub-angular float

IMG_0766: scenery

IMG_0767: extent of ferruginised zone

IMG_0768: goethetised laterite

IMG_0769: goethetised laterite

IMG_0770: sedimentary features

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PROJECT – Prospect:	NGALIA PROJECT	Date:	21/04/2010
Nearest Town & Distance:	17.6km from Vaughan Springs – Mt Doreen Station to track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	ALZ_001
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 679,300	N: 7,521,700

Site Access/Infrastructure:

Good access, anomaly is visible and is ~380 metres east of the Main track.

Heritage, Safety, Environment and Community Considerations:

Anomaly is located between two heritage exclusion zones, however well outside the boundaries which lie >600m to the north and to the >600m to the south.

Topography:

Anomaly is located within a north-east trending linear outcrop rise, drainage lines have developed and the outcrop is therefore weakly undulating.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	MOUNT ECLIPSE SANDSTONE
LITHOLOGY: Pebble Conglomerate – sandstone matrix (Basal conglomerate of the Mount Eclipse Formation)?					
Type:	Texture:	Colour:	Grainsize:	Description	
Conglomerate matrix	Sandy	White, grey	m.g	Minor surface oxidation, iron staining	
Conglomerate Pebbles/clasts	v.rounded	White, grey	pebble	30% pebble matrix supported	
Dolomite unit	7521624N	679346E		patch of dolomite, 3 by 4m (photo)	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7521737	679365				tensile fracture in pebble conglomerate (photo)
7521790	679422			200cps	weak fracture zone (photo)
7521879	679479			250 - 270cps	brecciated pebble conglomerate, weak kaolinisation, zone 4m (n_s) by 2m (e_w)

Radioactive &/or Mineralised Zones:

Initial Target: ALZ_001	
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EL24571 - PROSPECT EVALUATION

Extent of Mineralisation:		Radioactivity (cps): 220cps bg in pebble conglomerate	
Length:		Average:	220cps
Width:		Maximum:	7521811N/679447E = 255cps 7521880N/ 679480E = 260cps in v.weakly, kaolinised sandstone conglomerate (adjacent weakly brecciated conglomerate)
Depth (if known):		Minimum:	180cps in sand cover surrounding outcrop
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
The pebble conglomerate appears extensive and forms the weakly elevated outcrop. Certainly appears to have the characteristic of a basal conglomerate, no stratigraphic layering, large, v.rounded pebble clasts which form ~30% of the unit.			

Samples taken (series, number, description):

No samples were taken.

Conclusions/Recommendations:

Anomaly is believed to be a contrast anomaly, coincident with a change in topography, an outcrop of Mount Eclipse Sandstone within Quaternary sands.

Sketch:

Photos taken:

IMG_0751: Dolomite unit

IMG_0752: Pebble conglomerate

IMG_0753: tensile fracture in pebble conglomerate

IMG_0754: Pebble conglomerate

IMG_0755: brecciated pebble conglomerate

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PROJECT – Prospect:	NGALIA PROJECT	Date:	26/04/2010
Nearest Town & Distance:	14.2km from Nyirripi Community to track turn-off and ~56km to Vaughan Springs – Mt Doreen Station via track	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	ALZ_003
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 657,900	N: 7,505,600

Site Access/Infrastructure:

Site access was difficult. Travel through Nyirripi and taking the north-west track which then travels north through the western edge of the tenement. Off this track we put in a 5.9km bush track out (the same track out to NG_16 and to the southern drill line). Scrub is thick in places, punctures.

Heritage, Safety, Environment and Community Considerations:

The bush track was put in just north ~100m from an exclusion zone. This was the best possible access route, however it is certainly too close to the exclusion zone to allow rigs etc to go through to avoid the risk of driving through the restricted area.

Topography:

Open country, random sand dunes, calcrete plateaus. Well developed spinifex, occasional outcropping subdued ridges of Mount Eclipse Sandstone.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	MOUNT ECLIPSE SANDSTONE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Sandstone	Homogenous Foliated in places	Red (Goethite/limonite zones and hematite/ manganese zones) White (kaolinised zones-not silicified) - leached	f.g lenses generally- m.g moderately to well sorted/ some lenses however poorly sorted and c.g	Quartz grains – hematite/kaolin matrix Clast supported Occasional, rounded qtz pebbles rare (these may be introduced?)	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7505733	658175	80	164	Foliation	Small zone of well-developed foliation in leached, f.g sandstone. Rounded qtz float, conglomerate lenses, 180cps

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7505589	657959	78	132	Bedding	moderately laminated, homogenous, iron oxide staining, 170cps
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Radioactive &/or Mineralised Zones:

Initial Target: ALZ_003			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	180cps
Width:		Maximum:	7505583N/657882E = 240cps at ALZ_003_2 (reference sample) kaolinised zone 7505536N/657908E = 225cps at ALZ_003_1 (reference sample) foliated zone
Depth (if known):		Minimum:	170cps
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Highest outcropping ridge in area, although subdued relatively extensive, requires further mapping.			

Samples taken (series, number, description):

ALZ_003_1 and ALZ_003_2 (reference samples)

Conclusions/Recommendations:

Very slight increase in cps around the kaolinised outcrop is interesting however the extent of this was very minimal and is thought to be a minor variation in distribution of the iron oxides.

Sketch:

Photos taken:

IMG_0840: Mount Eclipse, foliation

IMG_0841: Mount Eclipse, strong iron oxide staining

IMG_0842: Mount Eclipse, scenery, outcrop

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EL24571 - PROSPECT EVALUATION		

PROJECT – Prospect:	NGALIA PROJECT	Date:	21/4/2010
Nearest Town & Distance:	17.6km from Vaughan Springs – Mt Doreen Station to the bush track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	HWK_002
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 678,581	N: 7,522,425

Site Access/Infrastructure:

Good access, ~720m west off main track from similar location to ALZ_001 anomaly.

Heritage, Safety, Environment and Community Considerations:

Anomaly is located adjacent to one heritage exclusion zones, however well outside the boundaries which lie >600m to the north.

Topography:

Slight overall rise heading west off Main track.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	VAUGHAN SPRINGS QUARTZITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Quartzite float				Moderate scree/float cover in sands, no outcrop on exact anomaly location.	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7522526	678486	78	055	Bedding	
7522452	678373	43	322	Bedding	
7522438	678218	52	079	Cleavage	
7522430	678320	34	322	Bedding	

Radioactive &/or Mineralised Zones:

Initial Target: HWK_002			
Extent of Mineralisation:		Radioactivity (cps): 215cps bg in scree cover	
Length:		Average:	170bg in Vaughan Springs Quartzite outcrop
Width:		Maximum:	215cps
Depth (if		Minimum:	170cps

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known):			
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone: Slight rise in topography as nearing Vaughan Springs Quartzite outcrop, forming distinct linear ridges. Quartzite appears barren to alteration.			

Samples taken (series, number, description):

No samples were taken.

Conclusions/Recommendations:

No further work considered necessary.

Sketch:

Photos taken:

IMG_0756: At HWK_002, Mount Davenport in distance.

IMG_0757: scenery

IMG_0758: scenery

IMG_0759: scenery

IMG_0760: Vaughan Springs Quartzite outcrop

IMG_0761: Vaughan Springs Quartzite outcrop

IMG_0762: Vaughan Springs Quartzite outcrop

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PROJECT – Prospect:	NGALIA PROJECT	Date:	21/4/2010
Nearest Town & Distance:	19.5km from Vaughan Springs – Mt Doreen Station to bush track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	HWK_003
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 677,253	N: 7,521,327

Site Access/Infrastructure:

Good access, ~420m off Main track

Heritage, Safety, Environment and Community Considerations:

N/A

Topography:

Slight rise increasing to the west adjacent to the outcropping Vaughan Springs Quartzite ridges.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	VAUGHAN SPRINGS QUARTZITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Quartzite float		White/grey		Homogenous quartzite, massive appearance	
Ferruginised lag	sub-rounded to sub-angular	Red/dark red		Iron-stained lag	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7521628	677367	61	322	Bedding	Appears to be well-bedded compared to the more massive quartzite ridges surrounding (photo)

Alteration/Minerals/Veining (type, volume, %, intensity):

Radioactive &/or Mineralised Zones:

Initial Target: HWK_003			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	180cps bg

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Width:		Maximum:	7521457N/677422E = 236cps Appears to be a slight increase in cps in ferruginous float
Depth (if known):		Minimum:	180cps bg
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer

General Description of Zone:

The eastern downslope of the main outcropping Vaughan Springs Quartzite ridges. The quartzite is generally massive however a drainage line occurs at 7521579N/677481E and within this valley the quartzite appears to be well-bedded compared to the outcrop either side of the drainage. This may represent a slight variation in facies of the Vaughan Springs Quartzite?

Samples taken (series, number, description):

No samples were taken.

Conclusions/Recommendations:

Anomaly appears to be associated with the more ferruginised scree/float cover. No further work recommended.

Sketch:

Photos taken:

IMG_0763: Well-bedded Vaughan Springs Quartzite

IMG_0764: more massive outcropping Vaughan Springs Quartzite

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PROJECT – Prospect:	NGALIA PROJECT	Date:	22/04/2010
Nearest Town & Distance:	27km from Vaughan Springs – Mt Doreen Station to the bush track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	HWK_004
Co-ordinate System / Survey (centroid of position)	MGA94_52	E: 670,576	N: 7,518,079

Site Access/Infrastructure:

Access okay, 1.7km off Main track. Bush track re-used to access NG_009-013 and northern drill line.

Heritage, Safety, Environment and Community Considerations:

N/A

Topography:

Very slight rise in overall open ground with tall shrubs.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	VAUGHAN SPRINGS QUARTZITE
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Ferruginised quartzite float (no outcrop)			Sub-angular to sub-rounded	Minor evidence of veining in float	

Radioactive &/or Mineralised Zones:

Initial Target: HWK_004			
Extent of Mineralisation:		Radioactivity (cps):	
Length:		Average:	260-280cps bg
Width:		Maximum:	-
Depth (if known):		Minimum:	200cps in sands outside of zone
Average Grade (U3O8):		Instrument:	GR_135 Spectrometer
General Description of Zone:			
Zone of ferruginised quartzite float, similar to NG_017.			

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<p>EL24571 - PROSPECT EVALUATION</p>		

Samples taken (series, number, description):

No samples were taken.

Conclusions/Recommendations:

No further work recommended, ferruginisation may be associated with fluids mobilised along faults.

Sketch:

Photos taken:

IMG_0771: at HWK_004 location

IMG_0772: at HWK_004 location

IMG_0773: Mt Eclipse outcrop to southwest of HWK_004 – conglomerate lens

IMG_0774: Mt Eclipse outcrop to southwest of HWK_004 – ripple marks

IMG_0775: Mt Eclipse outcrop to southwest of HWK_004

IMG_0776: Mt Eclipse outcrop to southwest of HWK_004 – conglomerate lens

IMG_0777: Mt Eclipse outcrop to southwest of HWK_004

IMG_0778: Mt Eclipse outcrop to southwest of HWK_004 – outcrop

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EL24571 - PROSPECT EVALUATION		

PROJECT – Prospect:	NGALIA PROJECT	Date:	24/04/2010
Nearest Town & Distance:	27km from Vaughan Springs – Mt Doreen Station to track turn-off	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	Northern Drill Line
Co-ordinate System / Survey (centroid of position)	MGA94_52	E:	N:

Site Access/Infrastructure:

Access okay. Bush track travels part into HWK_004 then across to the Mount Eclipse outcrop at 7517454N/670397E.

Heritage, Safety, Environment and Community Considerations:

Possible concern for drilling if rains develop due to open, loamy nature of country.

Topography:

Overall open ground, moderate scrub in parts, but generally good flat country for rig access. Drill line does intersect the Mount Eclipse outcrop which will need to be driven around.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	MOUNT ECLIPSE SANDSTONE (outcrop) / VAUGHAN SPRINGS QUARTZITE (float)
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Sandstone		White (red, surface oxidation)	m.g homogenous, clast supported	1-2cm laminae in certain layers, massive in others, conglomerate layer with very rounded quartz pebbles (photo)	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7517454	670397	12	150	Bedding	160 - 180cps bg Mount Eclipse outcrop MTE_001 (reference sample)

Drillhole location:

Drill hole	Northing:	Easting:	GR_135 cps:	Photo:	Formation:	Description:
P_DH_019	7517952	669844	230	yes	Vaughan Springs Quartzite	other side of drainage, Vaughan Springs lag in drainage channel
P_DH_020	7517916	669879	220	yes		erosion drainage to the west
P_DH_021	7517880	669913	220			adjacent to erosion to southwest
P_DH_022	7517844	669948	215			loamy compacted soils, open

EL24571 - PROSPECT EVALUATION

						topography
P_DH_023	7517808	669982	210			loamy compacted soils, open topography
P_DH_024	7517772	670016	200			compacted sands becoming loamy
P_DH_025	7517736	670051	210	yes		open topography
P_DH_026	7517699	670085	190			open topography
P_DH_027	7517663	670120	180			compacted sands, relatively flat ground, open plain topography
P_DH_028	7517627	670154	180	yes		compacted sands, opening in vegetation, increase in spinifex
P_DH_029	7517591	670188	180			compacted sands, opening in vegetation, increase in spinifex
P_DH_030	7517555	670223	170			compacted sands, scrub
P_DH_031	7517519	670257	190	yes		compacted sands, scrub
P_DH_032	7517483	670292	175			compacted sands
P_DH_033	7517446	670326	175			moderate scrub clearing required
P_DH_034	7517410	670361	170	yes	Mt Eclipse	at outcrop, will need to be moved west
P_DH_035	7517374	670395	190		Mt Eclipse	loamy compacted sands, good flat topography, moderate scrub
P_DH_036	7517338	670430	190		Mt Eclipse	minor sandstone float
P_DH_037	7517302	670464	190			compacted sands, lesser loam content
P_DH_038	7517266	670499	200	yes		compacted sands
P_DH_039	7517229	670533	210			compacted sands
P_DH_040	7517193	670567	210			compacted sands
P_DH_041	7517157	670602	210			compacted sands
P_DH_042	7517121	670636	210			compacted sands
P_DH_043	7517085	670671	190			compacted sands
P_DH_044	7517049	670705	190			sands less compacted
P_DH_045	7517013	670740	180			adjacent track (overgrown in places)
P_DH_046	7516976	670774	190			on track, possibly clear track for access?

Conclusions/Recommendations:

Good access, however track will need to be cleared to avoid punctures. Whether the old track is re-instated, the track is overgrown in places and has been washed out; perhaps a bush track will be the best option. The track will need to go around the Mount Eclipse Sandstone outcrop in the centre of the drill traverse however this will only be a detour of 100m. The last hole on the western end may not be drilled due to the drainage line, however expected to be well within the Vaughan Springs Quartzite by then.

Sketch:

Photos taken:

IMG_0805: Mount Eclipse outcrop

IMG_0806: looking west from P_DH_031

IMG_0807: looking east from P_DH_028

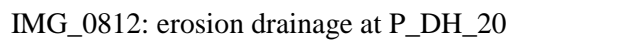
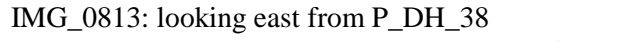
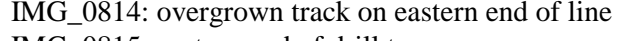
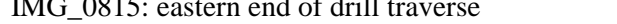
IMG_0808: looking west from P_DH_028

IMG_0809: looking west from P_DH_025

IMG_0810: erosion drainage at P_DH_20

IMG_0811: looking west from P_DH_019

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 IMG_0812: erosion drainage at P_DH_20
 IMG_0813: looking east from P_DH_38
 IMG_0814: overgrown track on eastern end of line
 IMG_0815: eastern end of drill traverse

EL24571 - PROSPECT EVALUATION

PROJECT – Prospect:	NGALIA PROJECT	Date:	26/04/2010
Nearest Town & Distance:	14.2km from Nyirripi Community to track turn-off and ~56km to Vaughan Springs – Mt Doreen Station via track	Initials:	BL
250k Map Sheet:	Mt Doreen SF52-12	Target Number:	Southern Drill Line
Co-ordinate System / Survey (centroid of position)	MGA94_52	E:	N:

Site Access/Infrastructure:

Site access was difficult. Travel through Nyirripi and taking the north-west track which travels north through the western edge of the tenement. Off this main track we put in a bush track out to NG_016 and then to the drill line totalling 5.7km. Scrub is thick in places, punctures, sandy conditions also, dunes will need to be avoided.

Heritage, Safety, Environment and Community Considerations:

The bush track was put in just north ~100m from an exclusion zone. This was the best possible access route, however it is certainly too close to the exclusion zone to allow rigs etc to go through to avoid the risk of driving through the restricted area.

Topography:

Open country, random sand dunes, calcrete plateau's. Well developed spinifex.

Lithology:

GEOLOGICAL PROVINCE:		NGALIA BASIN		Major Units:	MOUNT ECLIPSE SANDSTONE (outcrop)
LITHOLOGY:					
Type:	Texture:	Colour:	Grainsize:	Description	
Sandstone		White/red (red, surface oxidation and matrix oxidation)	m.g homogenous, layers differ between clast and matrix supported	Botryoidal manganese staining and strong oxidation in places of outcrop.	

Structure (faults, folds, controlling mineralisation):

STRUCTURE:					
Northing:	Easting:	Dip:	Dip Direction:	Type:	Description:
7506207	658127	39	325	Bedding	Mount Eclipse (P_DH_009) (reference sample)
7506189	658110	58	320	Bedding	Mount Eclipse (P_DH_009) (reference sample)

Drill hole	Northing:	Easting:	Cps:	Photo:	Formation:	Description:
P_DH_001	7505787	658508	210			cover, increasing in thickness
P_DH_002	7505936	658375	145			cover, increasing in thickness
P_DH_003	7505974	658342	190			at base of dune, however still

EL24571 - PROSPECT EVALUATION

						possible drill location
P_DH_004	7506011	658309	175	yes		no flagging as on dune, photo of Mt E outcrop in distance
P_DH_005	7506048	658276	170			at base of sand dune, track will need to go around dune
P_DH_006	7506086	658243	160			occasional sandstone lag, sand dune in front trending E-NE
P_DH_007	7506160	658176	150			adjacent is zone of v.rounded qtz pebbles, shedded from basal conglomeration?
P_DH_008	7506198	658143	140			will need to move drill hole as on outcrop
P_DH_009	7506235	658110	135	yes	Mt Eclipse	outcrop, c.g lenses, possible conglomerate layer, minor random loose v.rounded pebbles, may need to move drill hole, access will need to go around outcrop
P_DH_009	7506235	658099			Mt Eclipse	outcrop boundary
P_DH_009	7506261	658198	160		Mt Eclipse	manganese staining
P_DH_009	7506290	658159			Mt Eclipse	manganese becoming botryoidal
P_DH_009	7506135	658191		yes	Mt Eclipse	abundant v.rounded quartz lag (basal conglomerate)
P_DH_010	7506384	657978	100	yes		slight dune, minor rise however open, tall spinifex country
P_DH_011	7506533	657845	95			slight dune, minor rise however open, tall spinifex country
P_DH_012	7506683	657713	100			adjacent to dune, sand cover, open spinifex country

Conclusions/Recommendations:

Access is quite lengthy into the drill traverse, however ground is quite flat, and sandy, will be boggy closer to the dune swales. Sand cover here is expected to be >5-10metres however areas of Mount Eclipse outcrop suggest cover may not be as deep as expected.

Sketch:

Photos taken:

IMG_0832: general vegetation

IMG_0833: general vegetation

IMG_0834: random rounded pebble in Mount Eclipse Formation

IMG_0835: grading upwards?

IMG_0836: Mount Eclipse outcrop around P_DH_09

IMG_0837: Proposed drill hole, will need to move off outcrop

IMG_0838: abundant quartz pebble lag

IMG_0839: scenery toward the southwest