

DORAY MINERALS LTD

NUCKULLA HILL GOLD PROJECT

EXPLORATION LICENSES 4302, 4407 and 4473

ANNUAL REPORT FOR PERIOD 25 AUG 2009 TO 24 AUG 2010

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October, 2010

Summary

- Nuckulla Hill Project consists of three Exploration Licences, EL4302, 4407 and 4473.
- Previous work outlined significant gold mineralisation open at depth and along strike.
- Work completed during the reporting period comprised data compilation and review and completion of a detailed aeromagnetic survey.
- Survey data suggests additional structural targets not tested by calcrete sampling or drilling.

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbirinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of three exploration licences covering 640 sq km.

During the reporting period, Doray conducted a compilation and review of all previous data and completed a detailed 100m spaced aeromagnetic survey of the entire project area. The survey highlighted a number of potential structural targets that have not been effectively tested by either calcrete sampling or drilling.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia. The project area covers approximately 60km of the Yarlbirinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

The project consists of three Exploration Licences as follows:

Licence	Area (sq km)	Grant Date	Expiry Date
EL 4302	204	25/8/2009	24/8/2010
EL 4407	81	24/12/2009	23/12/2010
EL 4473	355	27/4/2010	26/4/2011
TOTAL	640		

Access to the area is via station tracks and varies from excellent to poor, especially in the areas dominated with NW-SE trending sand dunes, which can be up to 10m high.

3. Geology

The project is located on the west side of the Mesoproterozoic Gawler Range Volcanics within the Yarlbirinda Shear Zone. The local geology is dominated by Proterozoic "Tunkillia Suite" granitoids deformed by the N-S trending Mesoproterozoic Yarlbirinda Shear Zone, which is thought to be contemporaneous with the Hiltaba granite/Gawler Range Volcanic event. At the southern end, the shear zone is intruded by the Hiltaba-age Koondoolka Batholith.

Outcrop is virtually non-existent throughout the project area and local geology is interpreted from regional and detailed aeromagnetic data along with limited drill data.

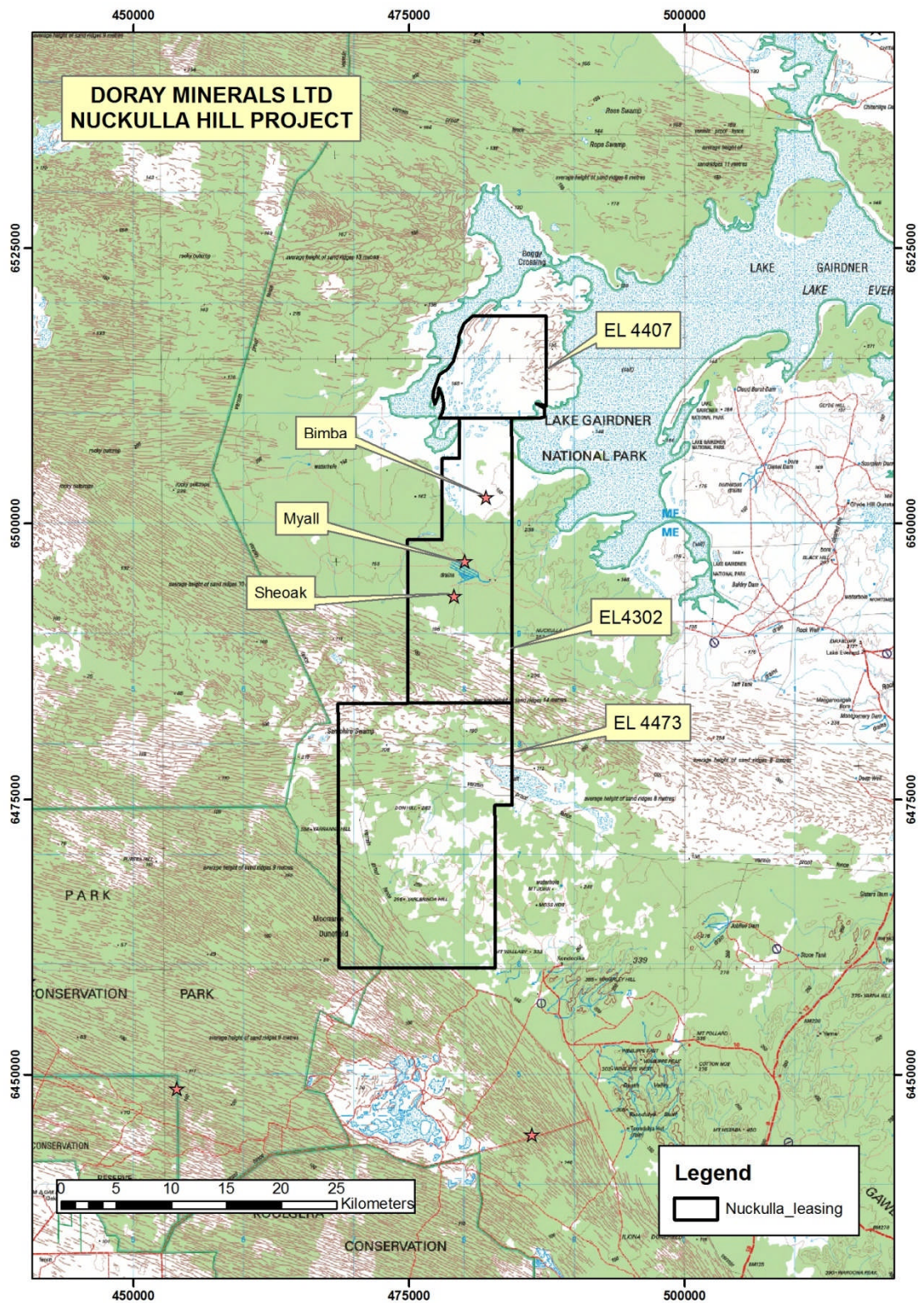


Figure 1. Nuckulla Hill Project Location Map.

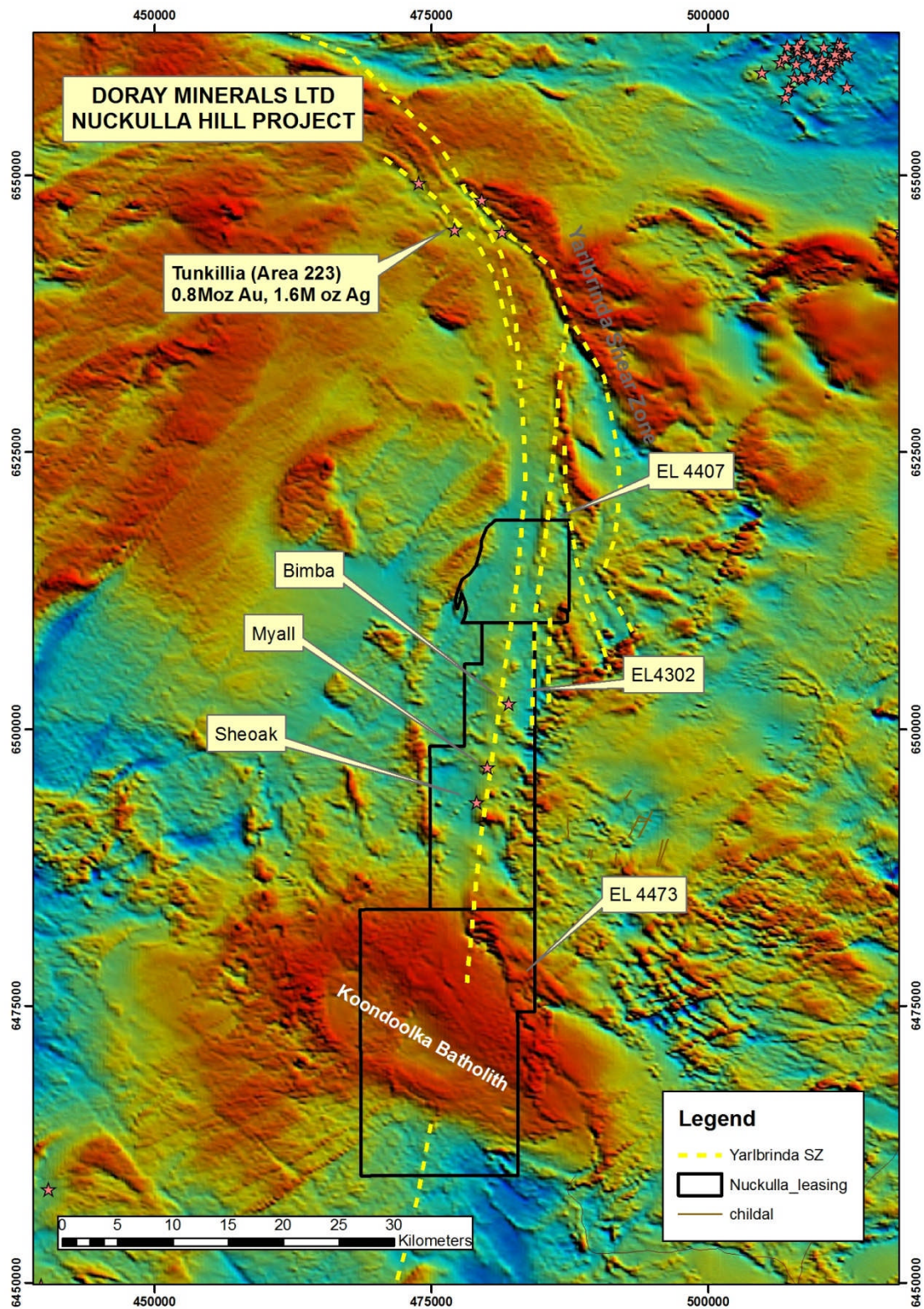


Figure 2. Regional aeromagnetic image of Nuckulla Hill project area showing the Yarlbirinda Shear Zone, the location of the Tunkillia Au-Ag deposit and the Koondoolka Batholith.

4. Previous Exploration

Despite the now obvious prospectivity of the Yarlbirinda Shear Zone, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc).

a. Pre 1995

A good summary is presented in van der Steldt and Parker (1995). Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of SAEI aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment and rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childers outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west (van der Stelt & Parker, 1995).

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m (Parker & van der Steldt, 1996; Parker et al, 1997). At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

c. 1997 – 2008

Minotaur joined the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCAD mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCAD targets with PACE funding.

In 2007, Minotaur drilled one line of aircore holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form of analysis of casuarina and bluebush vegetation. Best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

d. Summary

A summary of all previously reported fieldwork is provided below:

Licence No.	Reporting Period	Activities
EL 2035	1995	• Data compilation • Rock chip and stream sediment sampling • Mapping • Calcrete sampling • Ground magnetic • Limited RAB drilling
	1996	• Calcrete sampling • RAB/Aircore/RC/diamond drilling • Aeromagnetic survey • IP surveys
	1997	• Calcrete sampling • RAB/Aircore/RC drilling • mapping
	1998	• no field work
	1999	• ground magnetic survey
EL 2761	2000	• no field work
	2001	• no field work
	2002	• auger sampling
	2003	• no field work
	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Aircore drilling • Biogeochemical sampling
	2008	• No field work

5. Exploration Activities During the Reporting Period

Exploration activities carried out since the grant of EL 4302 have been confined to the following:

- Compilation of all previous data
- Completion of a 100m-spaced detailed aeromagnetic survey

a. Data Compilation

Doray commissioned a compilation of all previous data collected over the project throughout the last 15 years. Since 1997, when Phelps Dodge withdrew from the JV, the

UTS data - see Government of South Australia Mineral Resources Website

exploration activities have been sporadic and there has been no systematic gold exploration since this time.

It appears that only the most obvious calcrete anomalies had been followed up with drilling and, even in those cases where the drilling intersected significant gold mineralisation, no follow-up was completed.

The aeromagnetic survey flown by Equinox in 1996 only covered the central part of the project area and the regional magnetic data appeared to suggest the presence of other structural targets that would need refinement prior to drill testing. Minotaur's later airborne EM survey was focussed on targeting palaeochannel-hosted uranium and the lines were therefore flown N-S.

b. Detailed Aeromagnetic Survey

Doray contracted UTS to complete a detailed, 100m spaced aeromagnetic survey over the entire project area. The survey was flown at an average sensor height of 40m on lines orientated 090-270°, with tie lines spaced at 1000m. The logistics report for this survey is presented as an attachment along with the raw geophysical data. Radiometric and digital terrain data was also collected as part of the survey.

6. Summary and Recommendations

The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbrinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997 despite the consistent annual increases in the gold (and silver) price.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba remains open at depth and along strike, however only the most obvious calcrete anomalies have been tested and a number of structural targets, including some identified in the recently completed survey, have not been tested either by calcrete sampling or by drilling.

Limited trial biogeochemical sampling has indicated this may be a useful technique in helping to filter structural targets defined from the magnetic data.

In the upcoming year, Doray plans to complete the following:

- Structural interpretation of new aeromagnetic data to define drill targets
- Calcrete/Biogeochemical sampling of structural targets
- Aircore/RC drilling of above targets

7. References

Flint, R. B., 2006. Annual Technical Report, EL 2761 Nuckulla Hill, South Australia. Period Ending 18 October 2005. Minotaur Exploration Ltd.

Flint, R. B., 2007. Annual Technical Report, EL 3460 Nuckulla Hill, South Australia. Period Ending 28 November 2006. Minotaur Exploration Ltd.

Flint, R. B., 2008. Annual Technical Report, EL 3460 Nuckulla Hill, South Australia. Period Ending 28 November 2007. Minotaur Exploration Ltd.

Parker, A. J., and van der Steldt, B. J., 1996. Nuckulla Hill, Exploration Licence 2035, Western Gawler Craton, South Australia. Annual Technical Report 6 Dec 1995 – 5 Dec 1996. Equinox Resources Ltd.

Parker, A. J., Emslie, J. And Knaak, M., 1997. Nuckulla Hill, Exploration Licence 2035, Western Gawler Craton, South Australia. Annual Technical Report 6 Dec 1996 – 5 Dec 1997. Equinox Resources Ltd.

Parker, A. J., 1999. Nuckulla Hill, Exploration Licence 2035, Western Gawler Craton, South Australia. Annual Technical Report 6 Dec 1998 – 5 Dec 1999. Equinox Resources Ltd.

Parker, A. J., 2002. Nuckulla Hill, Exploration Licence 2761, Western Gawler Craton, South Australia. Annual Technical Report 19 Oct 2001 – 18 Oct 2002. Equinox Resources Ltd.

van der Steldt, B. J., and Parker, A. J., 1995. Nuckulla Hill, Exploration Licence 2035, Western Gawler Craton, South Australia. Annual Technical Report 6 Dec 1994 – 5 Dec 1995. Equinox Resources Ltd.

8. Attachments

UTS Aeroquest, Logistics Report for Detailed Airborne Magnetic, Radiometric and Digital Terrain Survey for the Nuckilla Hills Project (*UTS_B167 – Logistics Report.pdf*)

Raw Geophysical Data (*UTS_B16701_Raw Data.zip*)

UTS data - see Government of South Australia Mineral Resources Website



Logistics Report

for a

DETAILED AIRBORNE MAGNETIC, RADIOMETRIC AND DIGITAL TERRAIN SURVEY

for the

NUCKULLA HILLS PROJECT

carried out on behalf of

DORAY MINERALS LTD

(UTS Job # B167)

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A vertical collage of three images on the left side of the page. The top image shows a white UTS AEROQUEST aircraft in flight. The middle image shows a helicopter. The bottom image is a high-resolution aerial photograph of a landscape with a river and roads. The right side of the page features a large, dark blue background with a globe showing Australia and a small white aircraft flying over it.

UTS-AEROQUEST
High Resolution Airborne Surveys

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1 GENERAL SURVEY INFORMATION

UTS Geophysics conducted a low level airborne geophysical survey for the following company:

Doray Minerals Ltd.
Suite 8, 8 Clive Street
West Perth 6005

Acquisition for this survey commenced on the 1st May 2010 and was completed on the 09th May 2010. The base location used for operating the aircraft and performing in-field quality control was Ceduna, South Australia.

2 SURVEY SPECIFICATIONS

The survey was flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia and was contained within zone 53 with a central meridian of 135 degrees. Details of the datum and projection system are provided in Appendix B of this report. Survey boundary coordinates are listed in Appendix C.

The survey data acquisition specifications for each area flown are specified in the following table:

PROJECT NAME	LINE SPACING	LINE DIRECTION	TIE LINE SPACING	TIE LINE DIRECTION	SENSOR HEIGHT	TOTAL LINE KM
Nuckulla Hills Project	100m	090-270	1000m	000-180	40m	7,797
TOTAL						7,797

The specified sensor height for the magnetic samples is as stated in the above table. This sensor height may be varied where topographic relief or laws pertaining to built up areas do not allow this altitude to be maintained, or where the safety of the aircraft and equipment is endangered.

3 AIRCRAFT AND SURVEY EQUIPMENT

The UTS navigation flight control computer, data acquisition system and geophysical sensors were installed into a specialised geophysical survey aircraft.

The list of geophysical and navigation equipment used for the survey is as follows:

General Survey Equipment

- Cessna 206-H fixed wing survey aircraft.
- UTS proprietary flight planning and survey navigation system.
- UTS proprietary high speed digital data acquisition system.
- Novatel, 12 channel precision navigation GPS.
- OMNISTAR real time differential GPS system.
- UTS LCD pilot navigation display and external track guidance display.
- UTS post mission data verification and processing system.
- Bendix/King KRA-405 radar altimeter.

Magnetic Data Acquisition Equipment

- UTS tail stinger magnetometer installation.
- Cesium Vapour total field magnetometer.
- Fluxgate three component vector magnetometer.
- RMS Aeromagnetic Automatic Digital Compensator (AADC II).
- Diurnal monitoring magnetometer (Scintrex Envimag or Geometrics GR-856).

Radiometric Data Acquisition Equipment

- RS-500 advanced digital gamma-ray spectrometer consisting of 8 x 4L NaI(Tl) gamma ray detectors.
- Barometric altimeter (height and pressure measurements).
- Temperature and humidity sensor.

3.1 Survey Aircraft

The aircraft used for this survey was a Cessna 206-H fixed wing survey aircraft, operated by UTS Geophysics, registration VH-UTQ. The specifications are as follows:

Power Plant

- Engine Type Textron Lycoming IO-540-AC1A5
- Brake Horse Power 300 bhp
- Fuel Type JET-A1

Performance

- Cruise speed 142 Kn
- Stall speed 77 Kn
- Range 1,335 km
- Fuel tank capacity 395 litres

3.2 Data Positioning and Flight Navigation

Survey data positioning and flight line navigation was derived using real-time differential GPS (Global Positioning System).

Navigation was performed using a UTS designed and built electronic pilot navigation system providing computer controlled digital navigation instrumentation mounted in the cockpit as well as an externally mounted track guidance system.

GPS derived positions were used to provide both aircraft navigation and survey data location information.

The GPS systems used for the survey were:

- | | |
|---|--|
| • Aircraft GPS Model | Novatel |
| • Sample rate | 0.5 Seconds (2 Hz) |
| • GPS satellite tracking channels | 12 parallel |
| • Typical differentially corrected accuracy | 1-2 metres (horizontal)
3-5 metres (vertical) |

3.3 UTS Data Acquisition System and Digital Recording

All geophysical sensor data and positional information measured during the survey was recorded using a UTS developed, high speed, precision data acquisition system. Survey data was downloaded onto magnetic tape on completion of each survey flight.

Instrument synchronisation times were measured and removed in real-time by the UTS data acquisition system.

3.4 Altitude Readings

Accurate survey heights above the terrain were measured using a King radar altimeter installed in the aircraft. The height of each survey data point was measured by the radar altimeter and stored by the UTS data acquisition system.

- Radar altimeter models Bendix/King KRA-405
- Accuracy 0.3 metres
- Resolution 0.1 metres
- Range 0 - 762 metres
- Sample rate 0.1 Seconds (10Hz)

The digital terrain model is calculated by subtracting the terrain clearance (radar altimeter) from the GPS height (interpolated to 0.1 Hz), and as such the accuracy is constrained by the differentially corrected GPS position.

3.5 UTS Stinger Mounted Magnetometer System

The installation platform used for the acquisition of magnetic data was a tail mounted stinger. This proprietary stinger system was constructed of carbon fibre and designed for maximum rigidity and stability.

Both the total field magnetometer and three component vector magnetometer were located within the tail stinger.



3.6 *Total Field Magnetometer*

Total field magnetic data readings for the survey were made using a Cesium Vapour Magnetometer. This precision sensor has the following specifications:



- Model Cesium Vapour Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.001nT
- Operating Range 15,000nT to 100,000nT

3.7 *Three Component Vector Magnetometer*

Three component vector magnetic data readings for the survey were made using a Fluxgate Magnetometer. This precision sensor has the following specifications:

- Model Fluxgate Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.1nT
- Operating Range -100,000nT to 100,000nT

3.8 *Aircraft Magnetic Compensation*

At the start of the survey, the system was calibrated for reduction of magnetic heading error. The heading and manoeuvre effects of the aircraft on the magnetic data was removed using an RMS Automatic Airborne Digital Compensator (AADC II).

Calibration of the aircraft heading effects were measured by flying a series of pitch, roll and yaw manoeuvres at high altitude while monitoring changes in the three axis magnetometer and the effect on total field readings. A 26 term model of the aircraft magnetic noise covering permanent, induced and eddy current fields was determined. These coefficients were then applied to the data collected during the survey in real-time.

UTS static compensation techniques were also employed to reduce the initial magnetic effects of the aircraft upon the survey data.

3.9 Diurnal Monitoring Magnetometer

A base station magnetometer was located in a low gradient area beyond the region of influence of any man made interference to monitor diurnal variations during the survey.

The specifications for the magnetometer used are as follows:

- Model Scintrex Envimag or Geometrics GR-856
- Resolution 0.1 nT
- Sample interval 5 seconds (0.2 Hz)
- Operating range 20,000nT to 90,000nT
- Temperature -20°C to +50°C



3.10 Barometric Altitude

An Air DB barometric altimeter was installed in the aircraft so as to record and monitor barometric height and pressure. The data was recorded at 0.10 second intervals and is used for the reduction of the radiometric data.

- Model Air DB barometric altimeter
- Accuracy 2 metres
- Height resolution 0.1 metres
- Height range 0 - 3500 metres
- Maximum operating pressure: 1,300 mb
- Pressure resolution: 0.01 mb
- Sample rate 10 Hz

3.11 Temperature and Humidity

Temperature and humidity measurements were made during the survey at a sample rate of 10Hz. Ambient temperature was measured with a resolution of 0.1 degree Celsius and ambient humidity to a resolution of 0.1 percent.

3.12 Radiometric Data Acquisition

The gamma ray spectrometer used for the survey was capable of recording 256 channels and was self stabilising in order to minimise spectral drift. The detectors used contain thallium activated sodium iodide crystals.

Thorium source measurements were made each survey day to monitor system resolution and sensitivity. A calibration line was also flown at the start and end of each survey day to monitor ground moisture levels and system performance.

Spectrometer model	Exploranium GR820
• Detector volume	32 litres
• Sample rate	1 Hz



4 PROJECT MANAGEMENT

Doray Minerals Ltd.

Allan Kelly

UTS Geophysics Perth Office

David Abbott
Cameron Johnston
Todd Shield

5 DATA PROCESSING PROCEDURES

5.1 *Data Pre-processing*

The raw survey data was loaded from the field tapes and the recorded data trimmed to the correct survey boundary extents. Any survey lines subsequently re flown were removed from the dataset.

At the commencement of each acquisition flight, all the instrumentation clocks were synchronized to local time, and the error and latency of each instrument in providing its data measurement calculated. The results of these latency measurements were recorded into a synchronisation file, and the results used to assign GPS positions to the magnetic, radiometric and elevation data.

The synchronized, parallax corrected data was then exported as located ASCII data.

5.2 Magnetic Data Processing

The diurnal base station data was checked for spikes and steps, and suitably filtered prior to the removal of diurnal variations from the aircraft magnetic data.

The filtered diurnal measurements were subtracted from the diurnal base field and the residual corrections applied to the survey data by synchronising the diurnal data time and the aircraft survey time. The average diurnal base station value was added to the survey data.

The X and Y positioning of the data was then checked for spikes before applying the IGRF correction. Any spikes in the positions were manually edited. The updated IGRF 2010 correction was calculated at each data point (taking into account the height above sea level).

This regional magnetic gradient was subtracted from the survey data points.

Tie line levelling was applied to the data by least squares minimisation, using a polynomial fit of order 0, of the differences in magnetic values at the crossover points of the survey traverse and tie line data.

In order to remove any residual long wavelength variations in the tie line levelled data along the traverse lines, polynomial levelling was then applied.

Final micro-levelling techniques were then selectively applied to the tie line levelled data to remove minor residual variations in profile intensity

Located and gridded data were generated from the final processed magnetic data.

5.3 Radiometric Data Processing

Statistical noise reduction of the 256 channel data was performed using the Noise Adjusted Singular Variable Decomposition (NASVD) method described by Hovgaard and Grasty (1997).

Noise-adjusted singular value decomposition is performed, and the number of components to be used is determined by inspection of plots of the spectral components and by a statistical analysis of the contributions of the components. If the spectral shapes show any unusual characteristics, further analysis of the concentrations of the spectral components in the line data is performed in order to identify and eliminate any corrupt spectra. If such spectra were eliminated, the NASVD process is re-performed, in order to obtain spectral components free of any bias from corrupt spectra.

Only the dominant spectral shapes (identified as described above) were used in the spectral reconstruction process. The first 8 NASVD components were used for this process.

Channels 30-250 only are spectrally smoothed, as these contain the regions of interest and are not dominated by the lower end of the Compton continuum. The energy spectrum between the potassium and thorium peaks was recalibrated from the spectrally smoothed 256 channel measurements.

The aircraft background spectrum and the scaled unit cosmic spectrum were then subtracted from the 256 channel data. This 256 channel data was then windowed to the 5 primary channels of total count, potassium, uranium, thorium and low-energy uranium. Dead time corrections were then applied to the data. Radon background removal was performed using the Minty Spectral Ratio method (1992).

The radar altimeter data was corrected to standard temperature and pressure, and height corrected spectral stripping was then applied to the windowed data. Height attenuation corrections based on the STP radar altimeter were then performed to remove any altitude variation effects from the data.

The Uranium and Total Count channels were tie-levelled to remove the effects of residual radon background. The tie-levelling process employed was a least-squares/median filter procedure, which generated a single correction for each line of data. Mis-matches were calculated at each tie-traverse intersection and the median mismatch for each flight line was calculated as the residual levelling error for that line.

5.4 Digital Terrain Model Data Processing

The radar altimeter data was subtracted from the GPS altimeter data leaving digital terrain data.

The digital terrain data thus derived was tie line levelled and gridded. Tie line levelled data was then examined and selectively microlevelled to produce a grid without line dependent artifacts.

For further information concerning the survey flown, please contact the following office:

Head Office Address:

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Fauntleroy Avenue, Perth Airport
REDCLIFFE WA 6104

Tel: +61 8 9479 4232
Fax: +61 8 9479 7361

Postal Address:

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P.O. Box 126
BELMONT WA 6984

Quoting reference number: B167

6 APPENDIX A - LOCATED DATA FORMATS

MAGNETIC LOCATED DATA

FIELD FORMAT DESCRIPTION			UNITS
1	I8	LINE NUMBER	
2	I4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (WGS84)	degrees
8	F12.6	LONGITUDE (WGS84)	degrees
9	F12.2	EASTING (MGA94)	metres
10	F12.2	NORTHING (MGA94)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	F8.1	TERRAIN HEIGHT (WGS84)	metres
14	F10.3	RAW MAGNETIC INTENSITY	nT
15	F10.3	DIURNAL CORRECTED TMI	nT
16	F10.3	DIURNAL AND IGRF CORRECTED TMI	nT
17	F10.3	TIE LINE LEVELLED TMI	nT
18	F10.3	FINAL TOTAL MAGNETIC INTENSITY	nT

RADIOMETRIC LOCATED DATA

FIELD FORMAT DESCRIPTION			UNITS
1	I8	LINE NUMBER	
2	4	FLIGHT/AREA NUMBER	AAFF (Area/Flight)
3	I9	DATE	YYMMDD
4	F10.1	TIME	sec
5	I8	FIDUCIAL NUMBER	
6	I4	UTM ZONE	
7	F12.6	LATITUDE (WGS84)	degrees
8	F12.6	LONGITUDE (WGS84)	degrees
9	F12.2	EASTING (MGA94)	metres
10	F12.2	NORTHING (MGA94)	metres
11	F8.1	RADAR ALTIMETER HEIGHT	metres
12	F8.1	GPS HEIGHT (WGS84)	metres
13	I5	LIVE TIME	milli sec
14	F8.1	PRESSURE	hPa
15	F6.1	TEMPERATURE	Degrees Celcius
16	F6.1	HUMIDITY	percent
17	I6	TOTAL COUNT (RAW)	Counts/sec
18	I6	POTASSIUM (RAW)	Counts/sec
19	I6	URANIUM (RAW)	Counts/sec
20	I6	THORIUM (RAW)	Counts/sec
21	I6	COSMIC (RAW)	Counts/sec
22	F8.1	TOTAL COUNT (CORRECTED)	Counts/sec
23	F8.1	POTASSIUM (CORRECTED)	Counts/sec
24	F8.1	URANIUM (CORRECTED)	Counts/sec
25	F8.1	THORIUM (CORRECTED)	Counts/sec
26	F9.4	DOSE RATE	nGy/hr
27	F9.4	POTASSIUM GRND CONCENTRATION	%
28	F9.4	URANIUM GRND CONCENTRATION	ppm
29	F9.4	THORIUM GRND CONCENTRATION	ppm
30	I4	CRYSTALS	

GRIDDED DATASET FORMATS

Gridding was performed using a bicubic spline algorithm.

The following grid formats have been provided:

- ER-Mapper format

LINE NUMBER FORMATS

Line numbers are identified with a six digit composite line number and have the following format - AALLLLB, where:

A or AA	Survey area number
LLLL	Survey line number 0001-8999 reserved for traverse lines 9001-9999 reserved for tie lines
B	Line attempt number, 0 is attempt 1, 1 is attempt 2 etc..

UTS FILE NAMING FORMATS

Located and gridded data provided by UTS Geophysics uses the following 8 character file naming convention to be compatible with PC DOS based systems.

File names have the following general format - JJJJAABB.EEE, where:

JJJJ	UTS Job number
AA	Area number if the survey is broken into blocks
BB	M Magnetic data R Radiometric data TC Total count data K Potassium counts U Uranium counts Th Thorium counts DT Digital terrain data
EEE	File name extension DAT Located digital data file DFN Located data definition file ERS Ermapper gridded data header file Ermapper data portion has no extension GRD Geosoft gridded data file

7 APPENDIX B - COORDINATE SYSTEM DETAILS

Locations for the survey data are provided in both geographical latitude and longitude and Universal Transverse Mercator metric projection coordinate systems.

WGS84

Coordinate Type
Semi Major Axis
Flattening

World Geodetic System 1984

Geographical
6378137m
1/298.257223563

MGA94

Coordinate type
Geodetic datum
Semi major axis
Flattening

Map Grid of Australia 1994

Universal Transverse Mercator Projection Grid
Geocentric Datum of Australia
6378137m
1/298.257222101

8 APPENDIX C - SURVEY BOUNDARY DETAILS

COORDINATES REPORT

Job ID code: B16701

Client: Doray Minerals Ltd

Project: Nuckulla Hills

Surround	
480000.000	6519300.000
487950.000	6519300.000
487950.000	6509600.000
484900.000	6509600.000
484900.000	6474500.000
483300.000	6474500.000
483300.000	6459500.000
468500.000	6459500.000
468500.000	6484050.000
474800.000	6484050.000
474800.000	6498900.000
477300.000	6498900.000
477200.000	6506150.000
476900.000	6512700.000
480000.000	6519300.000

9 APPENDIX D - PROCESSING PARAMETERS

Magnetic Processing Parameters

IGRF Date: IGRF 2010
Average Declination: 6.19 degrees
Average Inclination: -64.4067 degrees
Average Field strength: 57897.11 nT
Average diurnal: 58160.00 nT

Radiometric Processing Parameters

Height Attenuation Coefficients

Total Count: -0.0074
Potassium: -0.0094
Uranium: -0.0084
Thorium: -0.0074

Cosmic Correction Coefficients

Total Count: 0.9002
Potassium: 0.0476
Uranium: 0.0377
Thorium: 0.0455

Aircraft Background Coefficients

Total Count: 63.049
Potassium: 18.011
Uranium: 1.7672
Thorium: 1.7325

Sensitivity Coefficients

Total Count: 34.7 cps/dose rate
Potassium: 128.7 cps/%k
Uranium: 13.8 cps/ppm
Thorium: 6.6 cps/ppm

Radiometric Stripping Coefficients

Alpha: 0.2309
Beta: 0.4019
Gamma: 0.7252
a: 0.0614

Final Reduction - All data reduced to STP height datum 40m

DORAY MINERALS LTD

NUCKULLA HILL GOLD PROJECT

EXPLORATION LICENSES 4302, 4407 and 4473

ANNUAL REPORT FOR PERIOD 25 AUG 2011 TO 24 AUG 2011

Heath Hellewell

October, 2011

Summary

- Nuckulla Hill Project consists of three Exploration Licences, EL4302, 4407 and 4473.
- Previous work has outlined significant gold mineralisation open at depth and along strike.
- Work completed during the reporting period comprised field reconnaissance visit to the project area and evaluation of targets identified in the aeromagnetic survey completed in 2010.
- This work has identified a number of areas where Doray believes further drilling is justified and Doray proposes to commence the relevant approval process including Aboriginal heritage work to enable drilling to commence in 2012.

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbirinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of three exploration licences covering 640 sq km.

During the reporting period, Doray conducted a compilation and review of all previous data and completed a detailed 100m spaced aeromagnetic survey of the entire project area. The survey highlighted a number of potential structural targets that have not been effectively tested by either calcrete sampling or drilling.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia. The project area covers approximately 60km of the Yarlbirinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

The project consists of three Exploration Licences as follows:

Licence	Area (sq km)	Grant Date	Expiry Date
EL 4302	204	25/8/2009	24/8/2010
EL 4407	81	24/12/2009	23/12/2010
EL 4473	355	27/4/2010	26/4/2011
<u>TOTAL</u>	<u>640</u>		

Access to the area is via station tracks and varies from excellent to poor, especially in the areas dominated with NW-SE trending sand dunes, which can be up to 10m high.

3. Geology

The project is located on the west side of the Mesoproterozoic Gawler Range Volcanics within the Yarlbirinda Shear Zone. The local geology is dominated by Proterozoic "Tunkillia Suite" granitoids deformed by the N-S trending Mesoproterozoic Yarlbirinda Shear Zone, which is thought to be contemporaneous with the Hiltaba granite/Gawler Range Volcanic event. At the southern end, the shear zone is intruded by the Hiltaba-age Koondoolka Batholith.

Outcrop is virtually non-existent throughout the project area and local geology is interpreted from regional and detailed aeromagnetic data along with limited drill data.

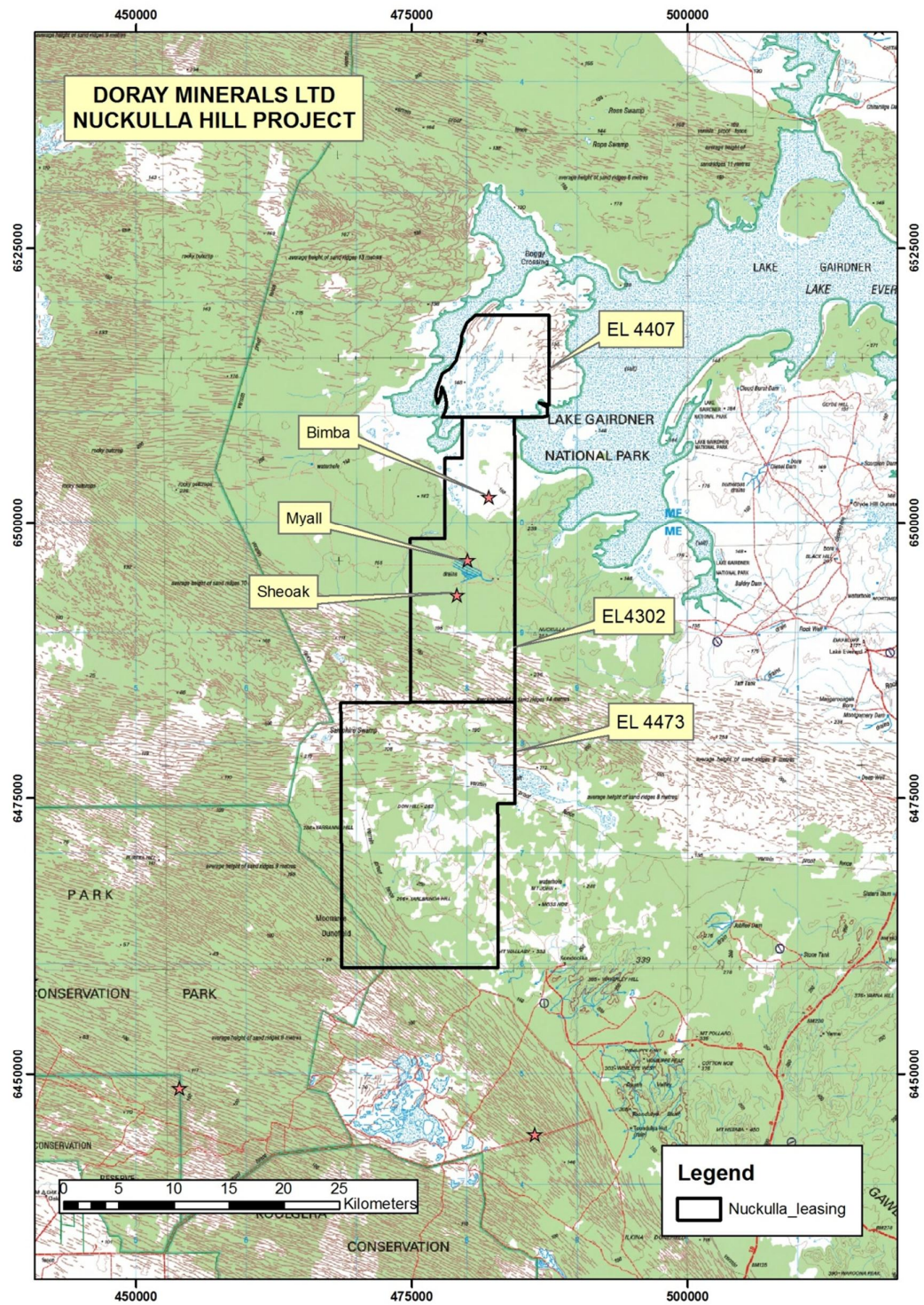


Figure 1. Nuckulla Hill Project Location Map.

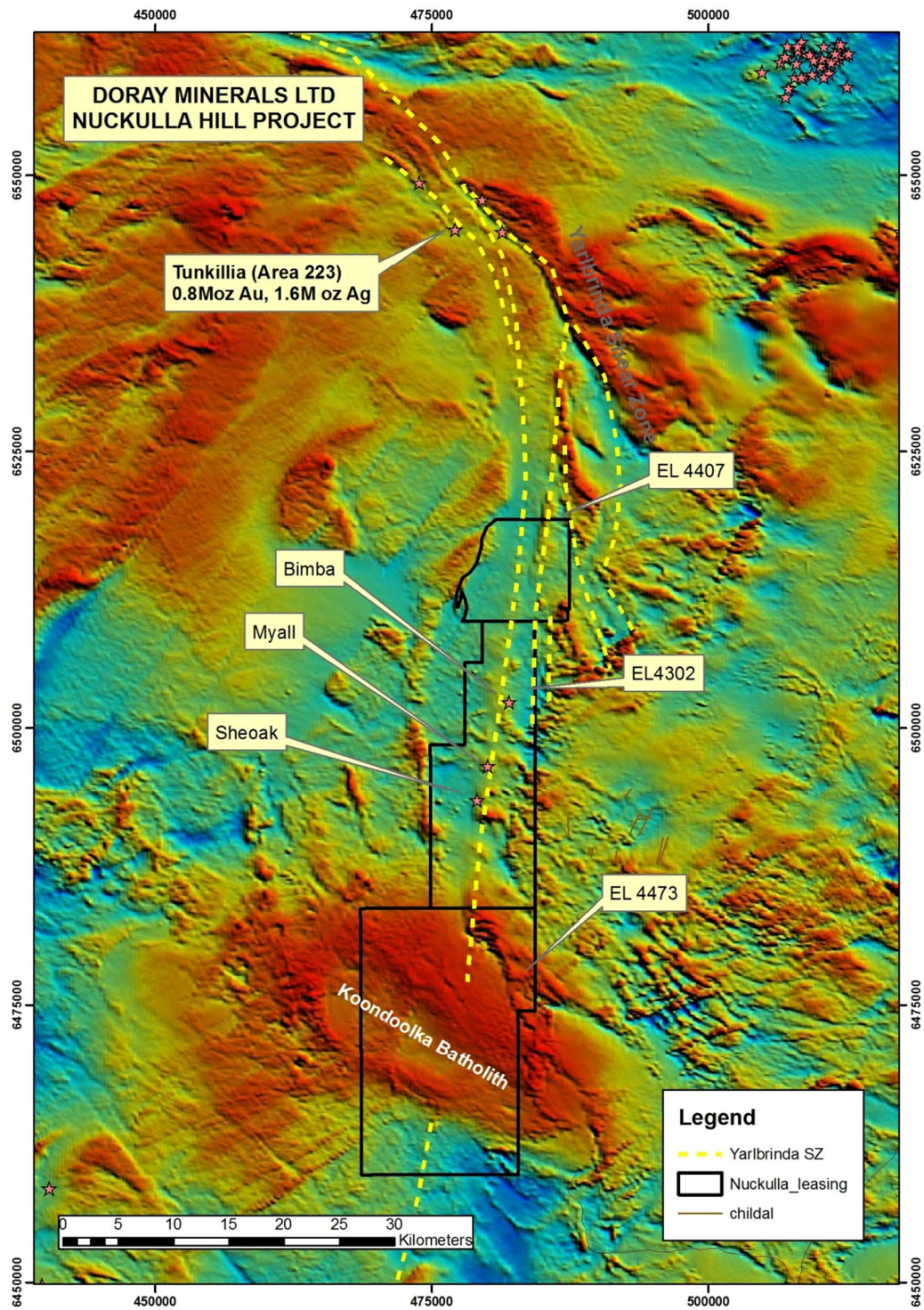


Figure 2. Regional aeromagnetic image of Nuckulla Hill project area showing the Yarlbirnda Shear Zone, the location of the Tunkillia Au-Ag deposit and the Koondoolka Batholith.

4. Previous Exploration

Despite the now obvious prospectivity of the Yarlbinda Shear Zone, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc).

a. Pre 1995

A good summary is presented in van der Steldt and Parker (1995). Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of SAEI aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment and rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childera outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west (van der Stelt & Parker, 1995).

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m (Parker & van der Steldt, 1996; Parker et al, 1997). At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

c. 1997 – 2008

Minotaur farmed into the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCAD mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCAD targets with PACE funding.

In 2007, Minotaur drilled one line of aircore holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form of analysis of casuarina and bluebush vegetation. Best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

d. Summary

A summary of all previously reported fieldwork is provided below:

Licence No.	Reporting Period	Activities
EL 2035	1995	• Data compilation • Rock chip and stream sediment sampling • Mapping • Calcrete sampling • Ground magnetic • Limited RAB drilling
	1996	• Calcrete sampling • RAB/Aircore/RC/diamond drilling • Aeromagnetic survey • IP surveys
	1997	• Calcrete sampling • RAB/Aircore/RC drilling • mapping
	1998	• no field work
	1999	• ground magnetic survey
EL 2761	2000	• no field work
	2001	• no field work
	2002	• auger sampling
	2003	• no field work
	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Aircore drilling • Biogeochemical sampling
	2008	• No field work

5. Exploration Activities During the Reporting Period

Exploration activities carried out since the grant of EL 4302 have been confined to the following:

- Completion of field reconnaissance visit, including initial evaluation of aeromagnetic targets.

a. Field Reconnaissance

During 2011 Doray undertook a reconnaissance field visit to the Nuckulla project area. The aim of the visit was to:

- Examine the regolith characteristics within the project area in order to assess the quality and effectiveness of previous regional geochemical surveys.
- Examine the regolith and topographic features of specific target areas to determine relationships between defined geochemical anomalism and drilled mineralisation.
- Ground truth a number of aeromagnetic targets, including an assessment of the effectiveness of previous exploration over these targets.
- Examine drill chips from previous drilling and outcrop geology as a geological familiarisation exercise.
- Determine general site access requirements and potential logistical challenges for future programs.

The exercise was completed over approximately four days in June 2011.



Figure 3. Field Reconnaissance – Nuckulla Hill Project

6. Summary and Recommendations

The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbrinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997 despite the consistent annual increases in the gold (and silver) price.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba remains open at depth and along strike, however only the most obvious calcrete anomalies have been tested and a number of structural targets, including some identified in the recently completed survey, have not been tested either by calcrete sampling or by drilling.

In the upcoming year, Doray plans to complete the following:

- Obtain aboriginal heritage and other approvals for proposed drill test of priority exploration targets.
- Drill test priority targets.

7. References

Flint, R. B., 2006. Annual Technical Report, EL 2761 Nuckulla Hill, South Australia. Period Ending 18 October 2005. Minotaur Exploration Ltd.

Flint, R. B., 2007. Annual Technical Report, EL 3460 Nuckulla Hill, South Australia. Period Ending 28 November 2006. Minotaur Exploration Ltd.

Flint, R. B., 2008. Annual Technical Report, EL 3460 Nuckulla Hill, South Australia. Period Ending 28 November 2007. Minotaur Exploration Ltd.

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Parker, A. J., Emslie, J. And Knaak, M., 1997. Nuckulla Hill, Exploration Licence 2035, Western Gawler Craton, South Australia. Annual Technical Report 6 Dec 1996 – 5 Dec 1997. Equinox Resources Ltd.

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NUCKULLA HILL GOLD PROJECT
EXPLORATION LICENSES 4302, 4407 and 4473

ANNUAL REPORT FOR PERIOD 25th AUG 2011 TO 24th AUG 2012

Brad Drabsch

November, 2012

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Figure 2: Regional aeromagnetic image of Nuckulla Hill project area showing the Yarlbrinda Shear Zone, the location of the Tunkillia Au-Ag deposit and the Koondoolka Batholith.

Figure 3: Orientation surface sample locations - Vegetation Leaf Litter

Figure 4: Orientation surface sample locations - Maglag

List of Appendices

Appendix 1: Nuckulla_2012_WAS3_ASS2012A.txt

Summary

- Nuckulla Hill Project consists of three Exploration Licences, EL4302, 4407 and 4473.
- Previous work has outlined significant gold mineralisation open at depth and along strike.
- PACE funding awarded to advance the Bimba Prospect
- Work completed during the reporting period comprised the collection of orientation surface geochemical samples including maglag and vegetation litter.
- Gawler Ranges ILUA signed
- Surface geochemistry RC and AC drilling to commence mid – late 2013

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbrinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of three exploration licences covering 640 sq km.

During the reporting period, Doray conducted a compilation and review of all previous data and completed a detailed 100m spaced aeromagnetic survey of the entire project area. The survey highlighted a number of potential structural targets that have not been effectively tested by either calcrete sampling or drilling.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia. The project area covers approximately 60km of the Yarlbrinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

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Table 1: Tenement Summary

Access to the area is via station tracks and varies from excellent to poor, especially in the areas dominated with NW-SE trending sand dunes, which can be up to 10m high.

3. Geology

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Outcrop is virtually non-existent throughout the project area and local geology is interpreted from regional and detailed aeromagnetic data along with limited drill data.

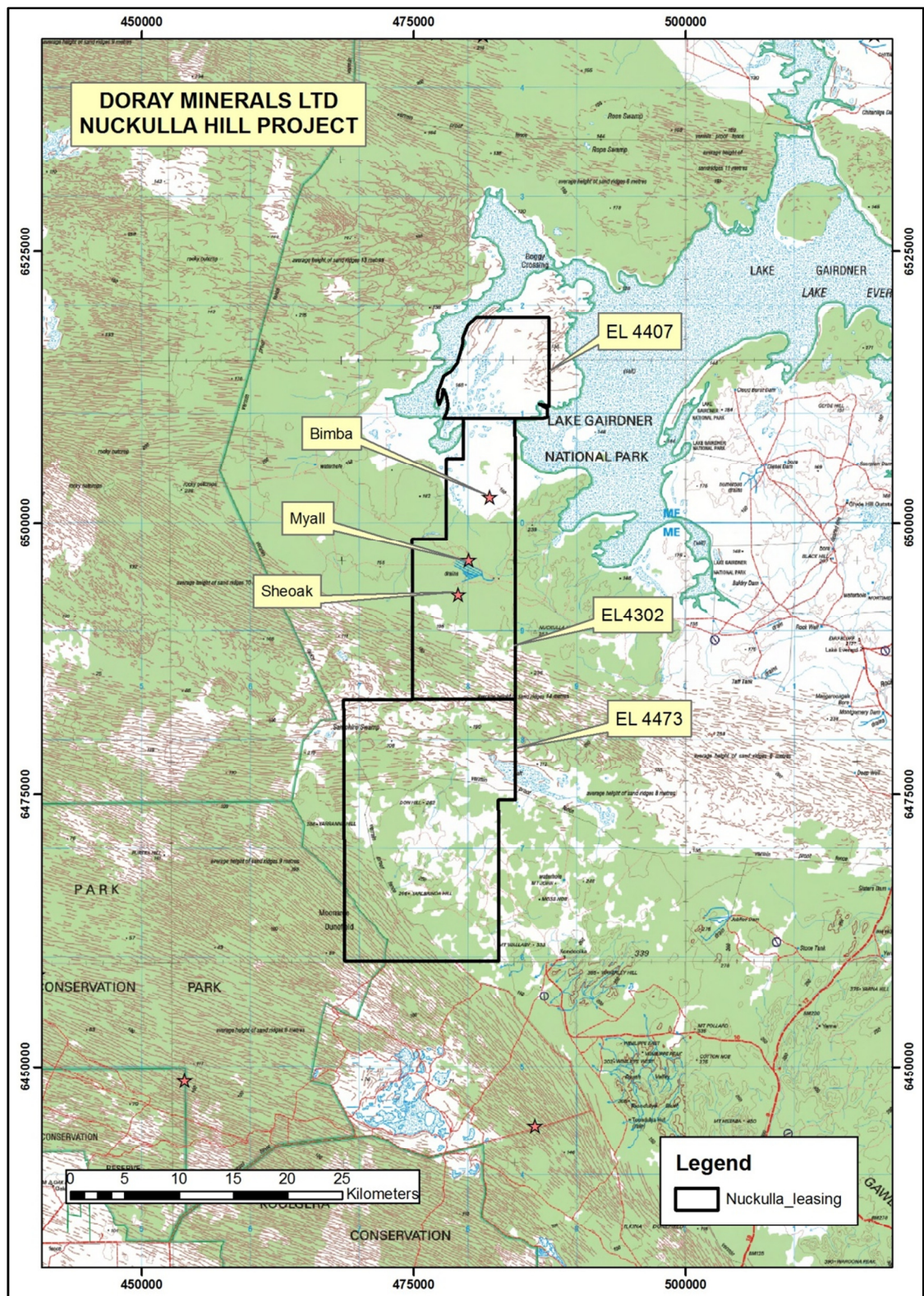


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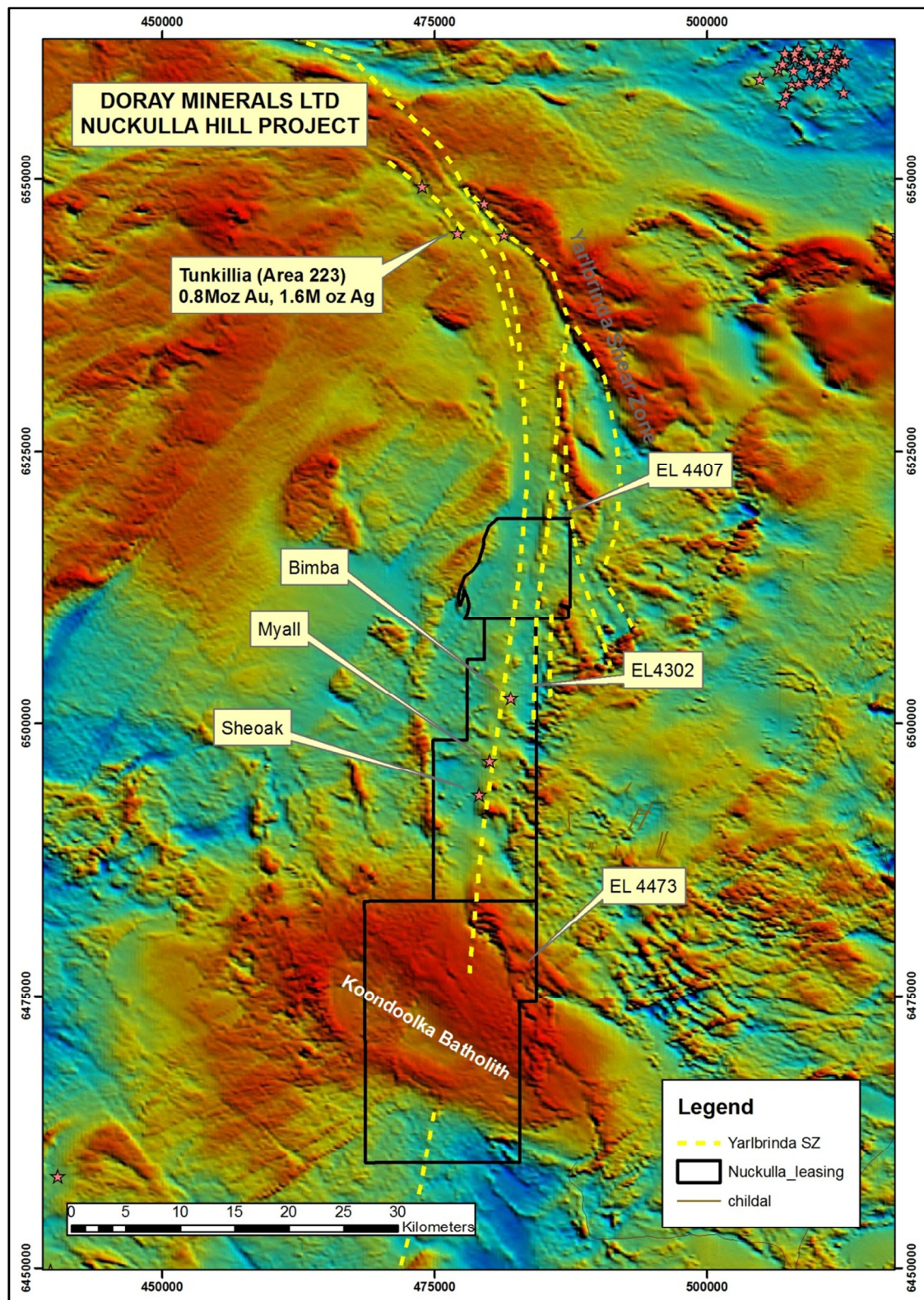


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Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

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Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

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	2006	• Airborne EM (N-S lines)
	2007	• Aircore drilling • Biogeochemical sampling
	2008	• No field work

Table 2: Summary of previous exploration over the Nuckulla Hill Project

5. Exploration Activities During the Reporting Period

a. ILUA signed with Gawler Ranges Native Title Group

Doray has agreed to the terms of the Gawler Ranges ILUA and is now a party to it. An invitation from the Gawler Ranges Aboriginal Corporation to attend one of its Directors meetings was accepted, with two Doray staff making a brief presentation.

b. PACE Discovery Drilling 2012 Funding Awarded

Doray submitted an application for PACE Discovery Drilling 2012 to assist the funding of drilling at, and along strike from, the Bimba Prospect. Doray has been awarded \$70,000.

c. Orientation Soil Sampling

A programme of orientation surface geochemistry has now been completed across the existing prospect areas within EL4302 (Bimba, Myall and Sheoak) along with lines to the north and south of these.

These orientation lines were designed to determine if other surface geochemical media (magnetic lag and vegetation litter) were able to replicate the soil anomalies defined by previous workers using calcrete. Magnetic lag and vegetation litter have been shown in parts of Western Australia with similar regolith regimes, to define anomalism beneath cover (eg Tropicana, Moolart Well).

A total of 155 maglag samples and 112 vegetation litter samples were collected from the three project tenements (figure 3 and 4). The samples have been sent to Genalysis Laboratories in Perth for assay.

The maglag samples were collected using a bank of powerful rare earth magnets set on a rake, this rake setup was simply dragged through the surface of the soil until approximately 5 – 50g of material was collected. The maglag samples were split into two fractions (minus ~ 0.5mm and plus ~ 0.5mm) prior to assay, with both fractions analysed following a concentrated hydrochloric acid digest.

The vegetation samples comprised mostly leaf litter matter that accumulates at the base of the tree. Approximately 100 – 200g of this material was collected. The most common tree sampled was a Casuarina. The vegetation samples will be digested using standard aqua regia with gold determined by mass spectrometry and enhanced graphite AAS methods.

Assays are currently awaited.

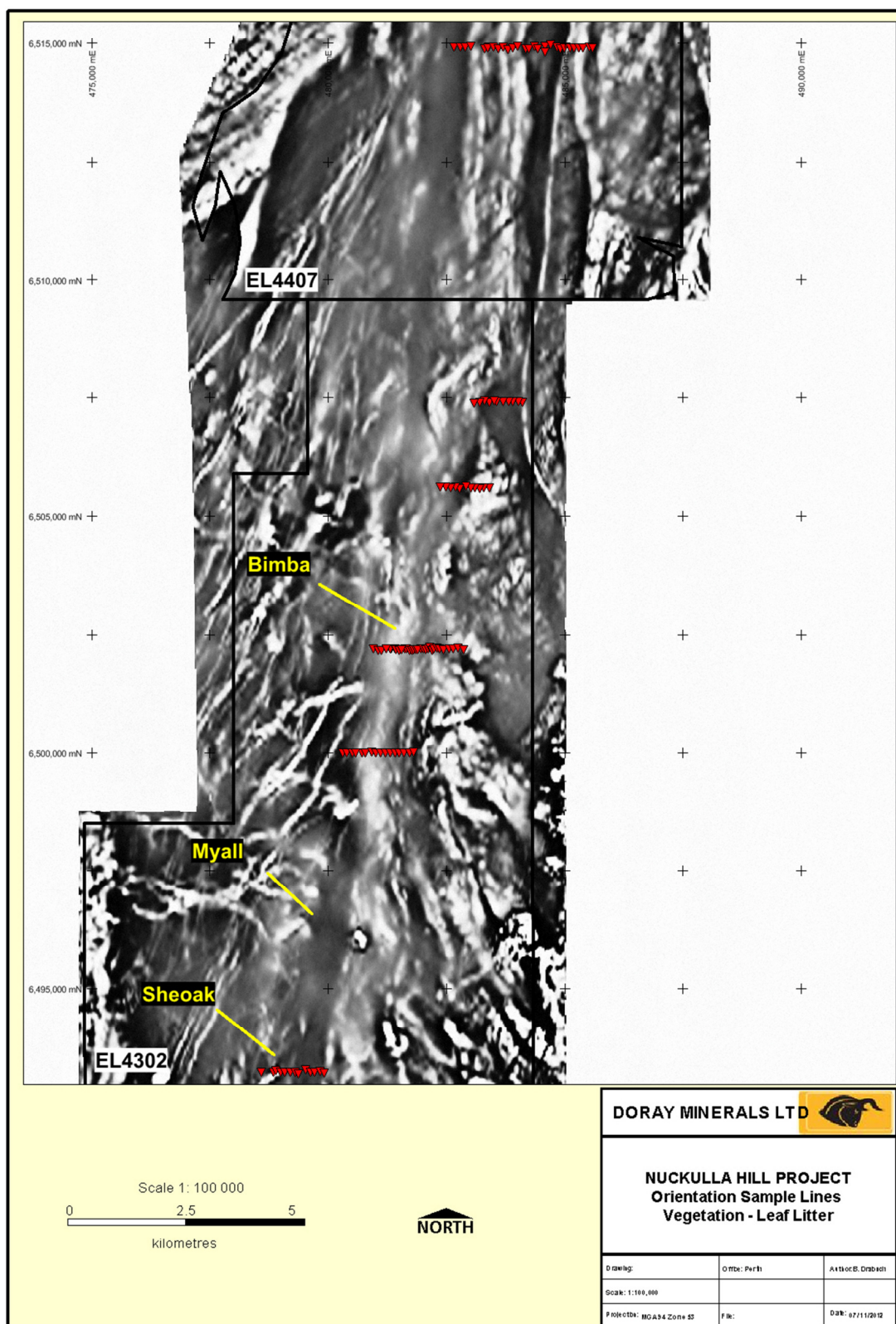


Figure 3: Orientation surface sample locations - Vegetation Leaf Litter

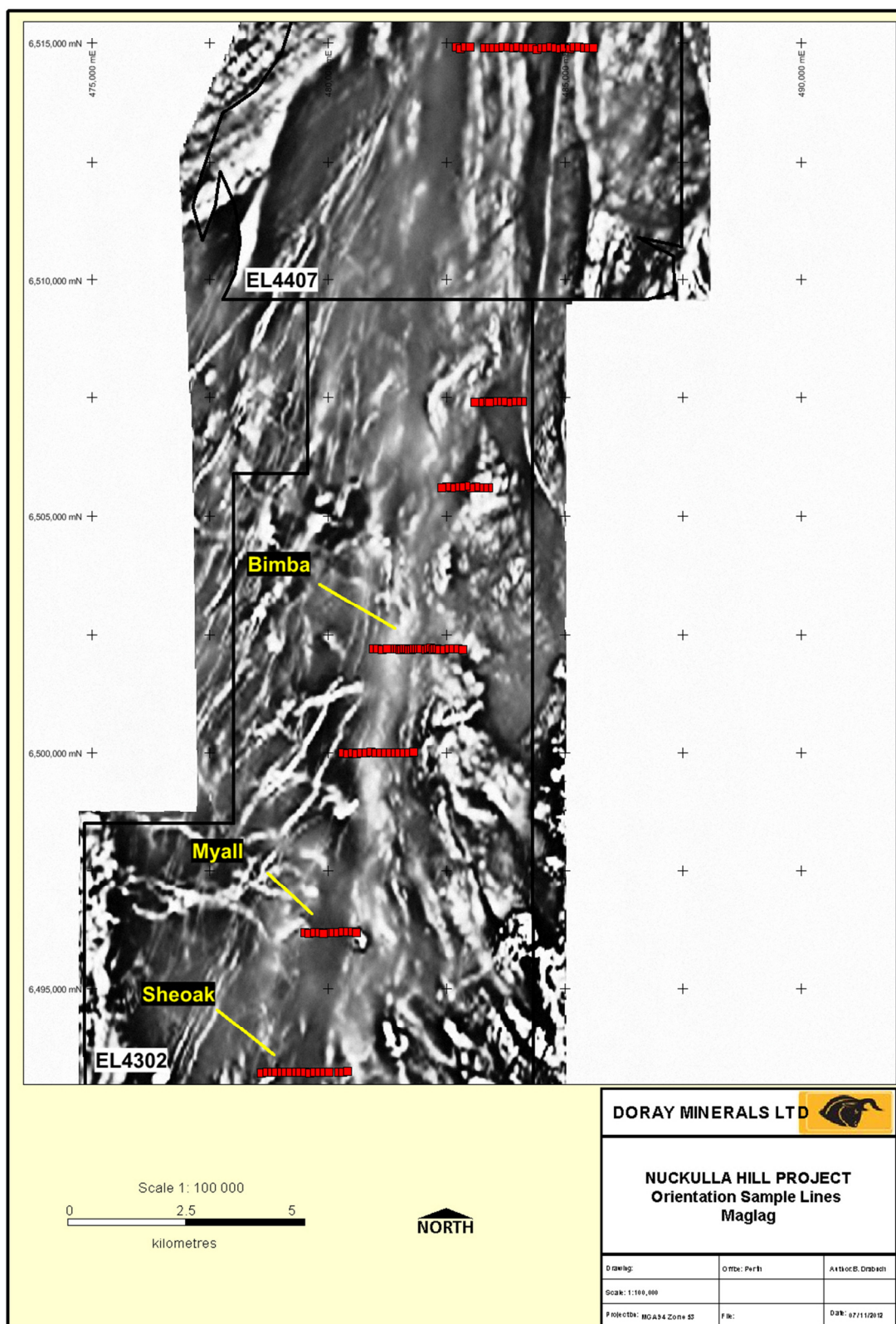


Figure 4: Orientation surface sample locations - Maglag

6. Summary and Recommendations

The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbrinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997 despite the consistent annual increases in the gold (and silver) price.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba remains open at depth and along strike, however only the most obvious calcrete anomalies have been tested and a number of structural targets, including some identified in the recently completed survey, have not been tested either by calcrete sampling or by drilling.

In the upcoming year, Doray plans to complete the following:

- A regional scale surface geochemical sampling programme will be undertaken, predominantly in areas of cover where calcrete sampling has proved ineffective (subject to results from the orientation work).
- RC Drilling at the Bimba Prospect and AC drilling along strike to the north (as per the PACE funding proposal)

7. References

Flint, R. B., 2006. Annual Technical Report, EL 2761 Nuckulla Hill, South Australia. Period Ending 18 October 2005. Minotaur Exploration Ltd.

Flint, R. B., 2007. Annual Technical Report, EL 3460 Nuckulla Hill, South Australia. Period Ending 28 November 2006. Minotaur Exploration Ltd.

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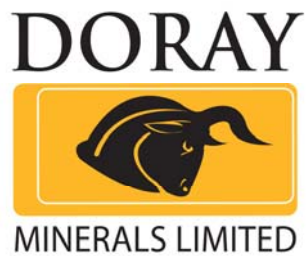
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APPENDIX 1

Nuckulla_2012_WAS3_ASS2012A.txt



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NUCKULLA HILL GOLD PROJECT
EXPLORATION LICENSES 4302, 4407 AND 4473

ANNUAL REPORT FOR PERIOD 25th AUG 2012 TO 24th AUG 2013

Joe Gendall

October, 2013

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Figure 1: Nuckulla Hill Project Location Map.

Figure 2: Regional aeromagnetic image of Nuckulla Hill project area showing the Yarlbrinda Shear Zone, the location of the Tunkillia Au-Ag deposit and the Koondoolka Batholith.

Figure 3: Location Map of Petrology Samples

Figure 4: New Soil Anomalies with Regolith Map and Aeromagnetics

Figure 5: Typical Regolith Profile north of Bimba Prospect (Holes BIAC0022-BIAC0025)

Figure 6: 2013 Bimba Drilling with Fine Fraction Soil Anomalies

Figure 7: Bimba Section 6502260 showing BIRC001 Au Results

Figure 8: Bimba Section 6502160 showing BIRC006 Results

Figure 9: Bimba Section 6502460 showing BIRC003 Results

Figure 10: Section 6502360 West of Bimba showing BIRC004 and BIRC005 Results

List of Appendices

Appendix 1: CITSA TUNKILLIA HILL 2013 .txt

Summary

- Nuckulla Hill Project consists of three Exploration Licences, EL4302, 4407 and 4473.
- Previous work has outlined significant gold mineralisation open at depth and along strike.
- Petrology was conducted on 13 drill chip and outcrop samples to determine project scale geology, deformation events and the nature of mineralisation.
- PACE funded drilling at the Bimba prospect confirmed continuity of the structure, however Au grades were below economic levels.
- Soil sampling has identified two new geochemical anomalies near the Bimba Prospect which require infill sampling.
- Field work completed during the reporting period comprised of 833 -175µm soil samples, 1877m of AC drilling and 1106m of RC drilling.
- Surface sampling throughout the project area is ongoing.

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbirinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of three exploration licences covering 640 sq km.

During the reporting period, Doray Minerals Ltd completed soil sampling (755 -175µm soil samples), AC drilling (1877m) and RC drilling (1106m) focussed around the Bimba prospect located towards the north of EL4302. Also, 13 drill chip and outcrop rock samples were submitted to Mason Geoscience for petrographic analysis.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia. The project area covers approximately 60km of the Yarlbirinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

The project consists of three Exploration Licences as follows:

Licence	Area (sq km)	Grant Date	Expiry Date
EL 4302	204	25/08/2009	24/08/2014
EL 4407	81	24/12/2009	23/12/2013
EL 4473	355	27/04/2010	26/04/2015
<u>TOTAL</u>	<u>640</u>		

Table 1: Tenement Summary

Access to the area is via station tracks and varies from excellent to poor, especially in the areas dominated with NW-SE trending sand dunes, which can be up to 10m high.

The Bimba Prospect is located in the northern half of EL4302 within the Yarlbirinda shear zone (Figure 1, Figure 2).

3. Regional Geology

The project is located on the west side of the Mesoproterozoic Gawler Range Volcanics within the Yarlbirinda Shear Zone. The local geology is dominated by Proterozoic "Tunkillia Suite" granitoids deformed by the N-S trending Mesoproterozoic Yarlbirinda Shear Zone, which is thought to be contemporaneous with the Hiltaba granite/Gawler Range Volcanic event. At the southern end, the shear zone is intruded by the Hiltaba-age Koondoolka Batholith.

Outcrop is virtually non-existent throughout the Bimba prospect area which is covered by roughly 6m of transported colluvium followed by an additional 4 metres of silcrete and fericrete.

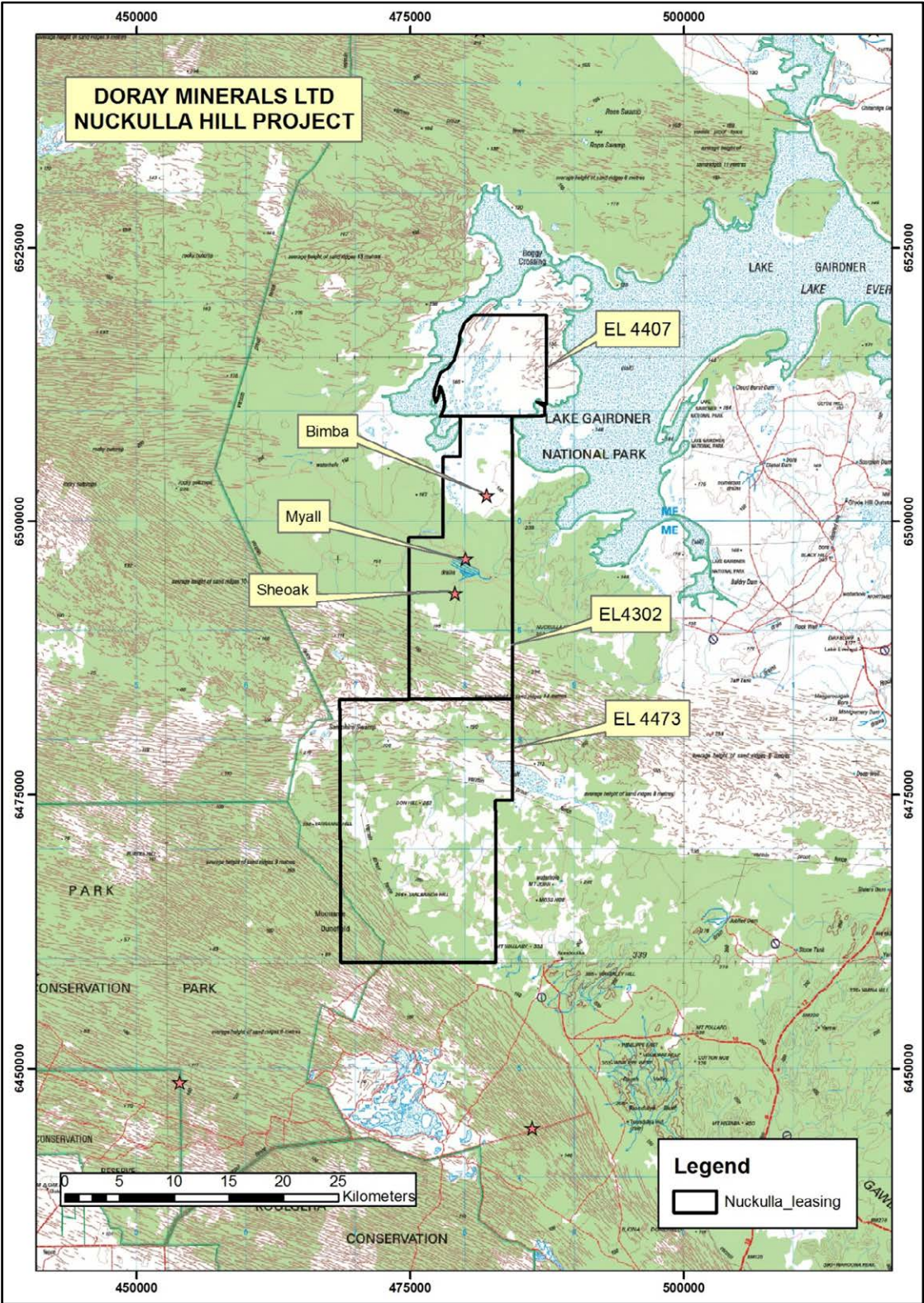


Figure 1: Nuckulla Hill Project Location Map.

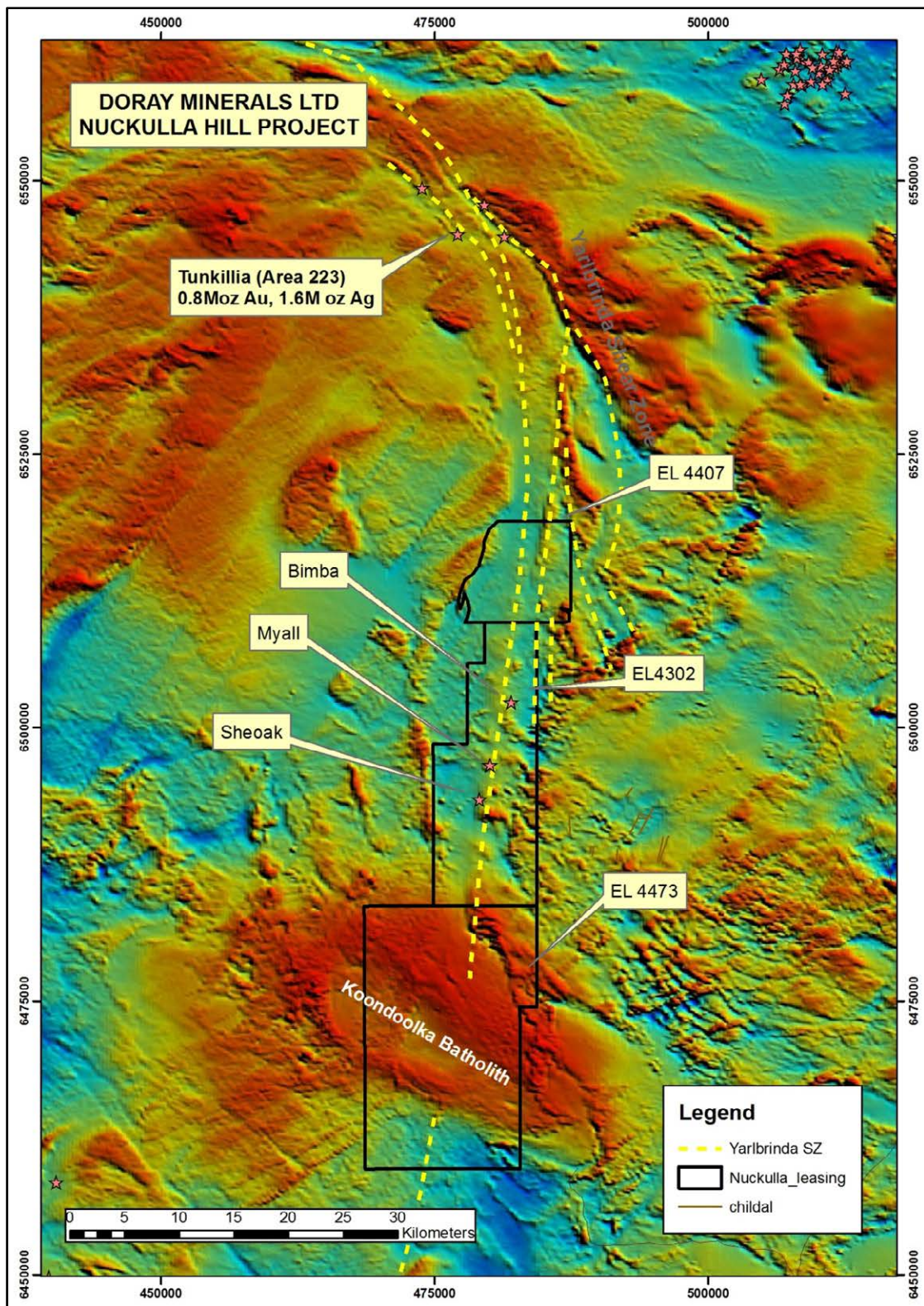


Figure 2: Regional aeromagnetic image of Nuckulla Hill project area showing the Yarlbirnda Shear Zone, the location of the Tunkillia Au-Ag deposit and the Koondoolka Batholith.

4. Previous Exploration

Despite the now obvious prospectivity of the Yarlbirinda Shear Zone, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc). Table 1, below, summarises the previous exploration

a. Pre 1995

A good summary is presented in van der Steldt and Parker (1995). Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of SAEI aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment and rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childers outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west (van der Stelt & Parker, 1995).

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m (Parker & van der Steldt, 1996; Parker et al, 1997). At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

c. 1997 – 2008

Minotaur farmed into the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCAD mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCAD targets with PACE funding.

In 2007, Minotaur drilled one line of aircore holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form

of analysis of casuarina and bluebush vegetation. Best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

Licence No.	Reporting Period	Activities
EL 2035	1995	• Data compilation • Rock chip and stream sediment sampling • Mapping • Calcrete sampling • Ground magnetic • Limited RAB drilling
	1996	• Calcrete sampling • RAB/Aircore/RC/diamond drilling • Aeromagnetic survey • IP surveys
	1997	• Calcrete sampling • RAB/Aircore/RC drilling • mapping
	1998	• no field work
	1999	• ground magnetic survey
EL 2761	2000	• no field work
	2001	• no field work
	2002	• auger sampling
	2003	• no field work
	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Aircore drilling • Biogeochemical sampling
	2008	• No field work

Table 2: Summary of previous exploration over the Nuckulla Hill Project

5. Previous Doray Minerals Exploration Summary

a. August 2009 – August 2010

- **Data compilation and review**

Data compilation and review revealed structural targets that had not been adequately tested by drilling or calcrete sampling.

- **Aeromagnetic Survey**

Doray contracted UTS to complete a detailed, 100m spaced aeromagnetic survey over the entire project area. The survey was flown at an average sensor height of 40m on lines orientated 090-270°, with tie lines spaced at 1000m. Radiometric and digital terrain data was also collected as part of the survey.

b. August 2010 – August 2011

Field Reconnaissance

Over 4 days in June 2011, a field reconnaissance visit was made to the Nuckulla project area. The aim of this visit was to:

- Examine the regolith characteristics within the project area in order to assess the quality and effectiveness of previous regional geochemical surveys.
- Examine the regolith and topographic features of specific target areas to determine relationships between defined geochemical anomalism and drilled mineralisation.
- Ground truth a number of aeromagnetic targets, including an assessment of the effectiveness of previous exploration over these targets.
- Examine drill chips from previous drilling and outcrop geology as a geological familiarisation exercise.
- Determine general site access requirements and potential logistical challenges for future programs.

c. August 2011 – August 2012

- **ILUA signed with Gawler Ranges Native Title Group.**

Doray agreed to the terms of the Gawler Ranges ILUA and is now a party to it. An invitation from the Gawler Ranges Aboriginal Corporation to attend one of its Directors meetings was accepted, with two Doray staff making a brief presentation.

- **PACE Discovery Drilling 2012 Funding Awarded**

Doray submitted an application for PACE Discovery Drilling 2012 to assist the funding of drilling at, and along strike from, the Bimba Prospect. Doray was been awarded \$70,000.

– **Orientation Surface Sampling**

Orientation lines were designed to determine if other surface geochemical media (magnetic lag and vegetation litter) were able to replicate the soil anomalies defined by previous workers using calcrete. Magnetic lag and vegetation litter have been shown in parts of Western Australia with similar regolith regimes, to define anomalies beneath cover (eg Tropicana, Moolart Well). A total of 155 maglag samples and 112 vegetation litter samples were collected from three established prospects (Myall, Bimba and Sheoak).

6. Exploration Activities during the Reporting Period

a. 13 Drill chip and Outcrop Rock Samples Submitted for Petrographic Analysis

A petrology report was completed for 13 outcrop and drill samples by Doug Mason Geoscience. 10 rock samples were taken from the Lakeside Outcrop, 2 drill samples were taken from historic drill hole NH07A05 and 1 drill chip sample was taken from historic RC hole NHRC12 located at the Bimba prospect.

The petrology sample from NHRC12 (Bimba Prospect) intercepted 1.81g/t Au from 86 to 88m. The rock type is described as a thinly zoisite-chlorite-hematite-K-feldspar fractured and hematite-zoisite-chlorite altered, recrystallised granitoid (originally granodioritic composition?). It is understood the sample has evolved through the following stages: Firstly, a medium grained massive granitoid crystallised in a substantial pluton. A broadly granodioritic composition is inferred from feldspar abundances. Secondly, the rock suffered mild to severe ductile deformation, causing partial to severe recrystallisation. In some parts of the rock higher degrees of strain produced ribbon-like foliated recrystallised quartz mosaics elongated along the foliation. The deformation is considered to have occurred as part of a low grade regional metamorphic event (middle greenschist facies P-T). Lastly, the sample suffered brittle fracturing which encouraged infiltration by hydrothermal fluid. Fractures formed at different times and were filled by various assemblages of zoisite + chlorite + hematite + K-feldspar. The host rock suffered pervasive replacement by hematite + minor zoisite + chlorite. The brittle nature of this event indicates P-T conditions of the lower greenschist facies, and likely occurred much later than the earlier ductile metamorphic event.

Drill hole NH07A05 intercepted 3m@0.38g/t from 52m to EOH. From the petrology report the primary rock type is interpreted to be an equigranular granitoid of granodioritic composition. Ductile deformation caused recrystallisation and elongation of primary quartz grains. Brittle fracturing and alteration has also affected the samples at lower P-T conditions. This generated thin fractures sealed by sericite + zoisite + trace rutile + ?pyrite, accompanied by pervasive alteration of the host rock by albite + sericite + zoisite + trace rutile.

Below is a map showing petrology sample locations.

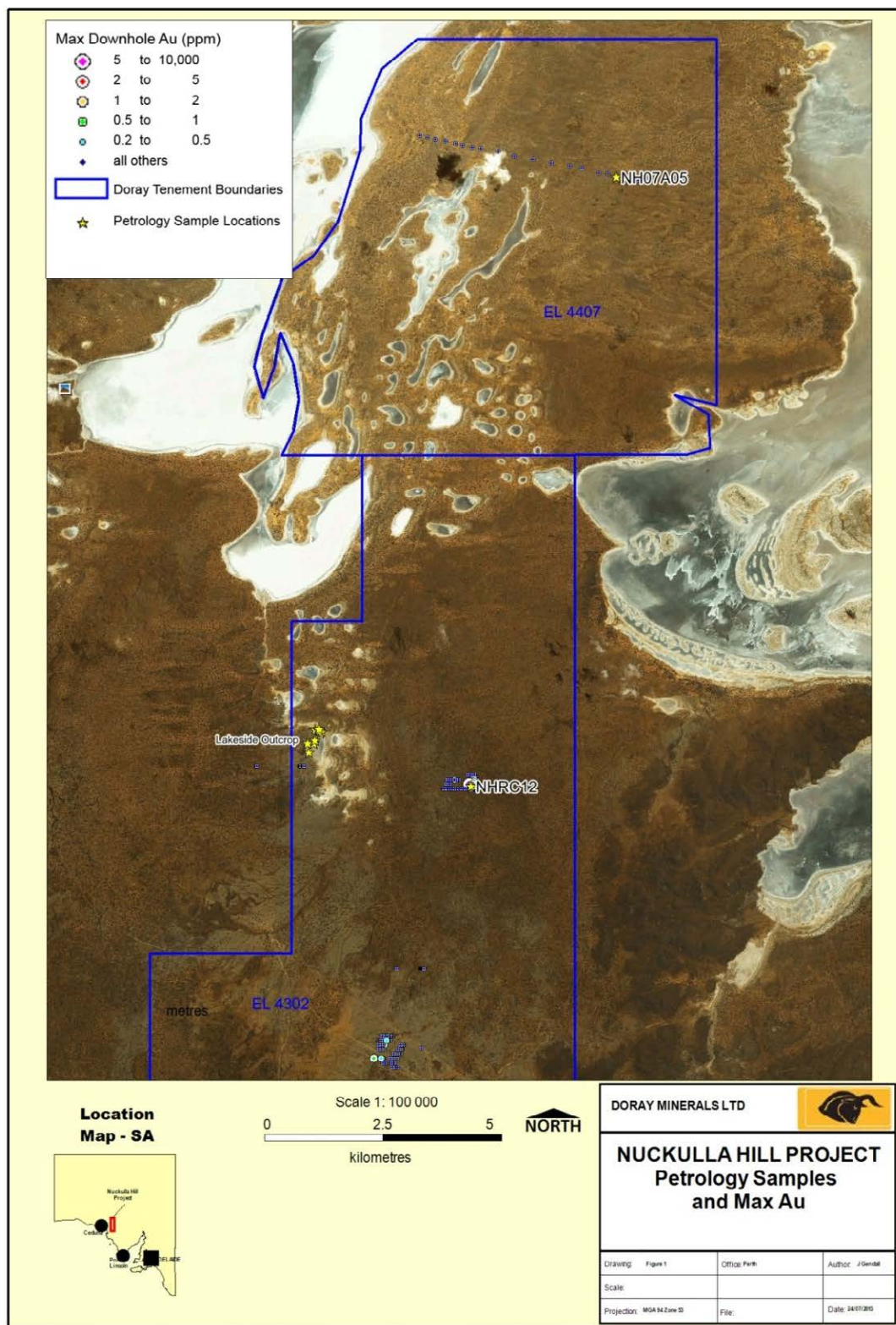


Figure 3: Location Map of Petrology Samples

b. Soil Sampling

A programme of fine fraction soil sampling is currently underway across the northern half of EL4302. To date, 833 -175µm soil samples have been completed. Each sample was sieved through -175µm mesh until 10-50g of material was collected and placed in a paper bag. Samples were assayed uncrushed using a partial leach method (TL8) by Genalysis Adelaide.

Three distinct new geochemical anomalies were revealed proximal to the Bimba prospect (Figure 5). One anomaly peaked at 4ppb which is approximately 10 times background Au, while the other two anomalies peaked at 2.5-2.9ppb which represents approximately 5 times background Au. All three of these Au anomalies had coincidental Ag zones which are displayed in Figure 5 below.

Approximately 480 samples remain in the current programme. Following this, the new geochemical anomalies will be infill sampled on a 200m x 50m pattern totalling 309 samples.

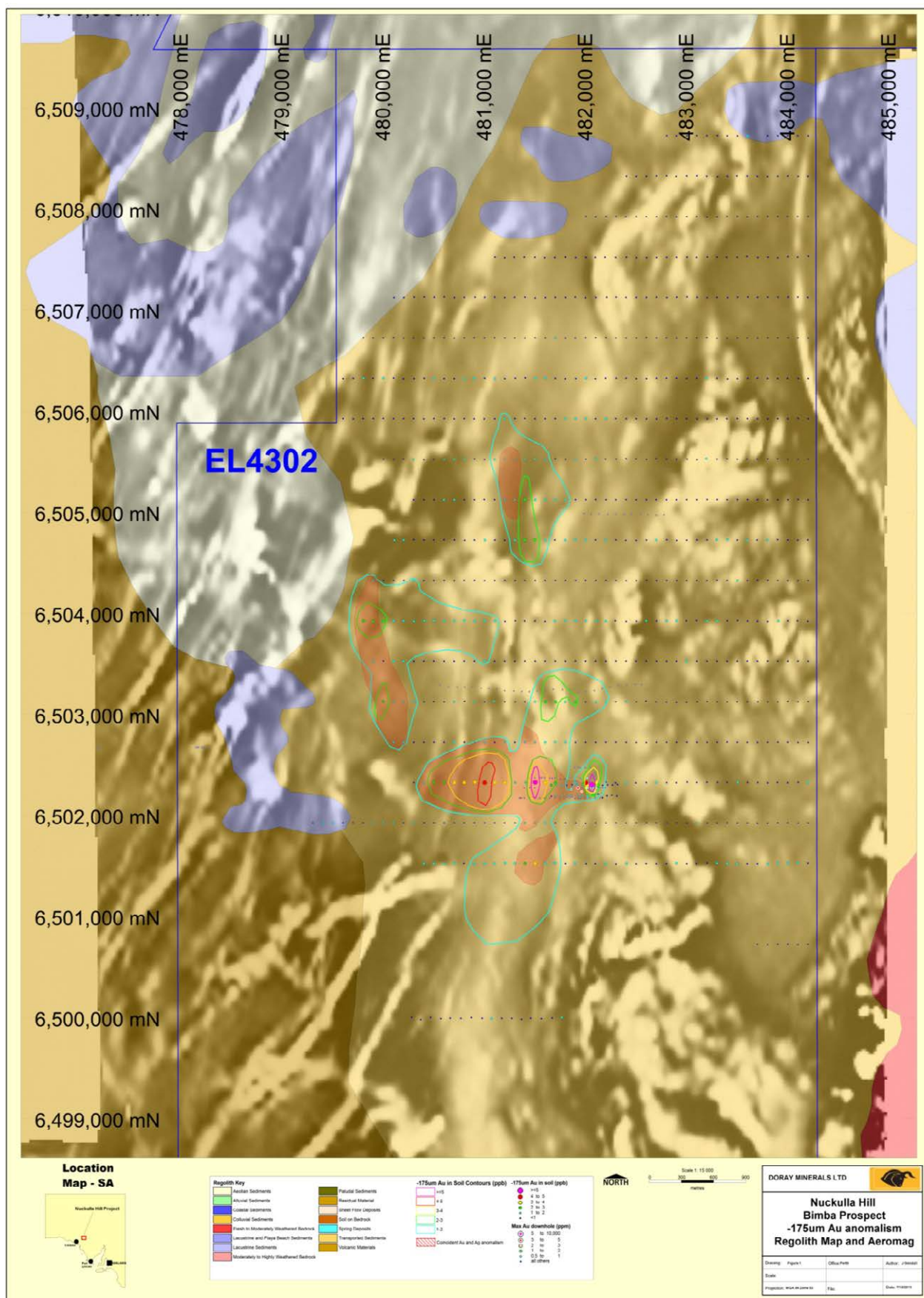


Figure 4: New Soil Anomalies with Regolith Map and Aeromagnetics

c. Bimba AC and RC drilling

Between 26/06/2013 and 9/08/2013 Doray Minerals Ltd completed 5 RC holes and 2 failed collars for 1106m of RC drilling, as well as 42 Air Core holes for 1877m.

Three RC holes were designed to test the down dip and along strike continuity of the Bimba prospect, identified by Equinox Resources in the mid 1990's. One of the best of historic intercepts at the Bimba Prospect is 24m @ 1.0g/t Au (incl. 8m @ 1.8g/t Au) from 122m – 146m. One RC hole tested the down dip continuity from this intercept.

Two RC holes were planned to test a parallel structure to the west of Bimba defined by the 2010 aeromagnetic survey. This structure coincided with high Pb anomalism (up to 1950ppm) in historic AC holes.

Two Air Core style lines were completed by the same RC rig to test a large dilational shear zone north of the Bimba prospect with the potential to host significant Au mineralisation beneath transported cover.

All RC and Air Core holes were drilled grid east and at -60° dip. Weather caused significant delays with 71mm of rain recorded between 12/07 and 14/07, and another 17mm recorded from 18/07 to 19/07. Maintenance issues and ground conditions (swelling clays) also plagued the program which, due to time constraints, had to be cut short resulting in 22 AC holes left not drilled.

Below is a table showing hole type, location, drilling direction and maximum depth.

Hole_ID	Hole_Type	NAT_East	NAT_North	NAT_Azi	Dip	Max_Depth
BIAC0001	AC	482586	6503294	90	-60	28
BIAC0002	AC	482530	6503296	90	-60	34
BIAC0003	AC	483438	6503287	90	-60	44
BIAC0004	AC	482355	6503286	90	-60	42
BIAC0005	AC	482276	6503269	90	-60	47
BIAC0006	AC	482198	6503255	90	-60	43
BIAC0007	AC	482122	6503235	90	-60	35
BIAC0008	AC	482034	6503224	90	-60	41
BIAC0009	AC	481960	6503217	90	-60	44
BIAC0010	AC	481876	6503236	90	-60	60
BIAC0011	AC	481807	6503243	90	-60	39
BIAC0012	AC	481714	6503247	90	-60	44
BIAC0013	AC	481643	6503240	90	-60	47
BIAC0014	AC	481557	6503231	90	-60	41
BIAC0015	AC	481479	6503224	90	-60	35
BIAC0016	AC	481403	6503226	90	-60	37
BIAC0017	AC	481324	6503231	90	-60	30
BIAC0018	AC	481234	6503233	90	-60	36

BIAC0019	AC	481158	6503248	90	-60	34
BIAC0020	AC	481076	6503257	90	-60	37
BIAC0021	AC	481000	6503259	90	-60	31
BIAC0022	AC	480917	6503275	90	-60	42
BIAC0023	AC	480840	6503269	90	-60	45
BIAC0024	AC	480765	6503268	90	-60	48
BIAC0025	AC	480678	6503274	90	-60	48
BIAC0026	AC	480593	6503287	90	-60	40
BIAC0027	AC	482810	6504975	90	-60	36
BIAC0028	AC	482733	6504973	90	-60	41
BIAC0029	AC	482649	6504977	90	-60	36
BIAC0030	AC	482573	6504978	90	-60	46
BIAC0031	AC	482487	6504981	90	-60	66
BIAC0032	AC	482416	6504981	90	-60	58
BIAC0033	AC	482334	6504979	90	-60	63
BIAC0034	AC	482256	6504980	90	-60	60
BIAC0035	AC	482167	6504983	90	-60	66
BIAC0036	AC	482088	6504981	90	-60	63
BIAC0037	AC	482014	6504985	90	-60	42
BIAC0038	AC	481787	6502359	90	-60	46
BIAC0039	AC	481828	6502360	90	-60	54
BIAC0040	AC	481892	6502375	90	-60	50
BIAC0041	AC	481927	6502362	90	-60	45
BIAC0042	AC	481981	6502370	90	-60	53
BIRC001	RC	481892	6502255	90	-60	254
BIRC002	RC	481892	6502183	90	-60	48
BIRC002A	RC	481888	6502180	90	-60	12
BIRC003	RC	481961	6502474	90	-60	264
BIRC004	RC	481702	6502369	90	-60	150
BIRC005	RC	481598	6502374	90	-60	183
BIRC006	RC	481923	6502178	90	-60	195

Down hole, the typical lithological/regolith profile of the Bimba prospect consisted of (Figure 5):

- 0-3m transported gravels and clays with calcrete bands
- 3-6m transported clays- no calcrete bands
- 6-10m silcrete and fericrete
- 10-25/30m highly weathered granitoid
- 30-40m Moderately weathered granitoid
- 50-55m+ fresh granitoid.

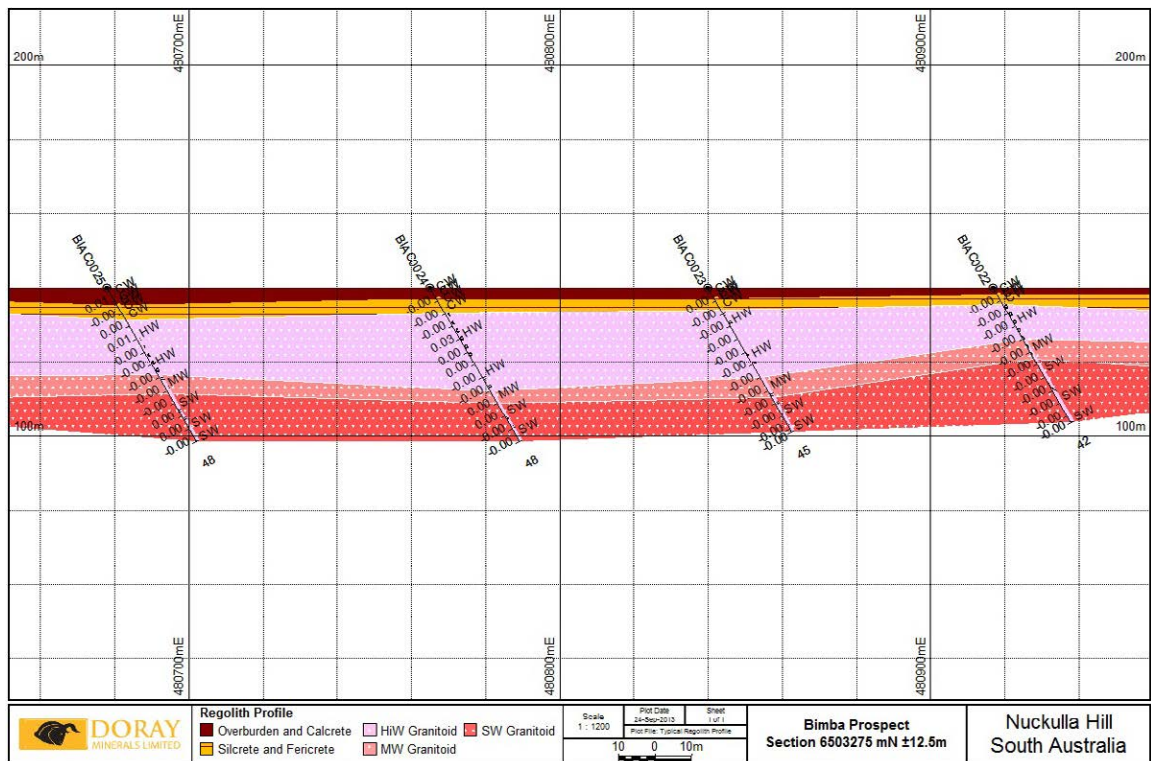


Figure 5: Typical Regolith Profile north of Bimba Prospect (Holes BIAC0022-BIAC0025)

The main granitoid unit, found in most drill holes, was originally of granodiorite to monzogranite composition with variable albite, hematite, magnetite, chlorite, sericite and quartz alteration. Mineralised intercepts are believed to be associated with intense red albite/hematite alteration and sulphide occurrence. Only trace sulphides were detected in any of the holes drilled.

From AC drilling, no significant assays were received; however, due to the program being cut short, two soil anomalies revealed from recent sampling were not tested by the drilling. Below (Figure 6) is a map showing new Doray drill collars with max down hole Au and Au contours from fine fraction soil sampling.

RC drilling of the Bimba prospect confirmed the continuity of a mineralised structure; however Au grades were sub economic with a best intercept in BIRC006 of 28m @ 0.58g/t Au from 144m (including 16m @ 0.72g/t from 156m).

BIRC001 was drilled to 254m and intercepted 1m @ 0.58g/t Au from 39m and 1m @ 1.05g/t Au from 55m (see Figure 7). Both these intercepts represent supergene gold remobilised to weathering horizons. The anticipated Bimba intercept was predicted to be somewhere from 170-230m. Several sheared/mylonitic zones were logged, some with trace Py, but no significant Au mineralisation was intercepted. From the results of this hole it appears that the Bimba structure is not continually mineralised at depth, or dips very steeply from the historic intercept in NHRC13.

BIRC006 extended the strike of the Nuckulla structure a further 50m south with an intercept of 28m @ 0.58g/t Au from 144m (including 16m @ 0.72g/t from 156m). Mineralisation was hosted in an albite-chlorite altered granitoid with occasional sulphide occurrence (See Figure 8).

BIRC003 was drilled 200m north of the northernmost Bimba intercept. This hole was drilled to 264m and intercepted 1m @ 0.14g/t Au from 236m and 2m @ 0.25g/t Au from 238m (see Figure 9). Mineralisation was hosted in albite-chlorite altered granitoid with moderate shear. It is possible this mineralisation represents a continued Bimba structure; however the low grade and narrow intercept do not encourage follow up drilling. At this distance from the known Bimba structure it is quite possible that a mineralised structure was missed, especially considering hole dip dropping far off course and not going through planned target zones.

RC drilling (BIRC004 and BIRC005) of the Pb anomaly with coincident magnetic structure west of Bimba returned best results of 4m @ 0.16g/t Au from 44m and 4m @ 0.16g/t from 76m in hole BIRC004. BIRC004 and BIRC005 confirmed trace amounts of remobilised Au at weathering horizons, as well as anomalous Au in fresh rock. Unfortunately no results were of economic significance.

BIRC002 and BIRC002A were failed holes due to swelling clays. BIRC006 was drilled to cover the target not reached by BIRC002 or BIRC002A.

Below is a table of all Au results from the 2013 drill programme which returned results above 0.1g/t Au.

SampleID	Hole_ID	mFrom	mTo	Au_ppm
D010377	BIAC0039	40	44	0.12
D010378	BIAC0039	44	48	0.132
D010363	BIAC0040	36	40	0.12
D020006	BIRC001	37	38	0.15
D020008	BIRC001	39	40	0.58
D020020	BIRC001	55	56	1.05
D020054	BIRC003	236	237	0.14
D020056	BIRC003	238	239	0.18
D020057	BIRC003	239	240	0.32
D010203	BIRC004	44	48	0.157
D020080	BIRC004	54	55	0.13
D020081	BIRC004	55	56	0.12
D010211	BIRC004	76	80	0.16
D010213	BIRC004	84	88	0.142
D010218	BIRC004	104	108	0.132
D020108	BIRC004	117	118	0.1
D020110	BIRC004	119	120	0.13
D020137	BIRC005	70	71	0.16
D010251	BIRC005	80	84	0.123
D010262	BIRC005	124	128	0.104

D010271	BIRC005	160	164	0.118
D010314	BIRC006	144	148	0.582
D010315	BIRC006	148	152	0.302
D010316	BIRC006	152	156	0.281
D010317	BIRC006	156	160	0.714
D010318	BIRC006	160	164	0.587
D010319	BIRC006	164	168	0.91
D010320	BIRC006	168	172	0.668
D010322	BIRC006	176	180	0.202
D010323	BIRC006	180	184	0.255

Table 3: 2013 results >0.1g/t Au

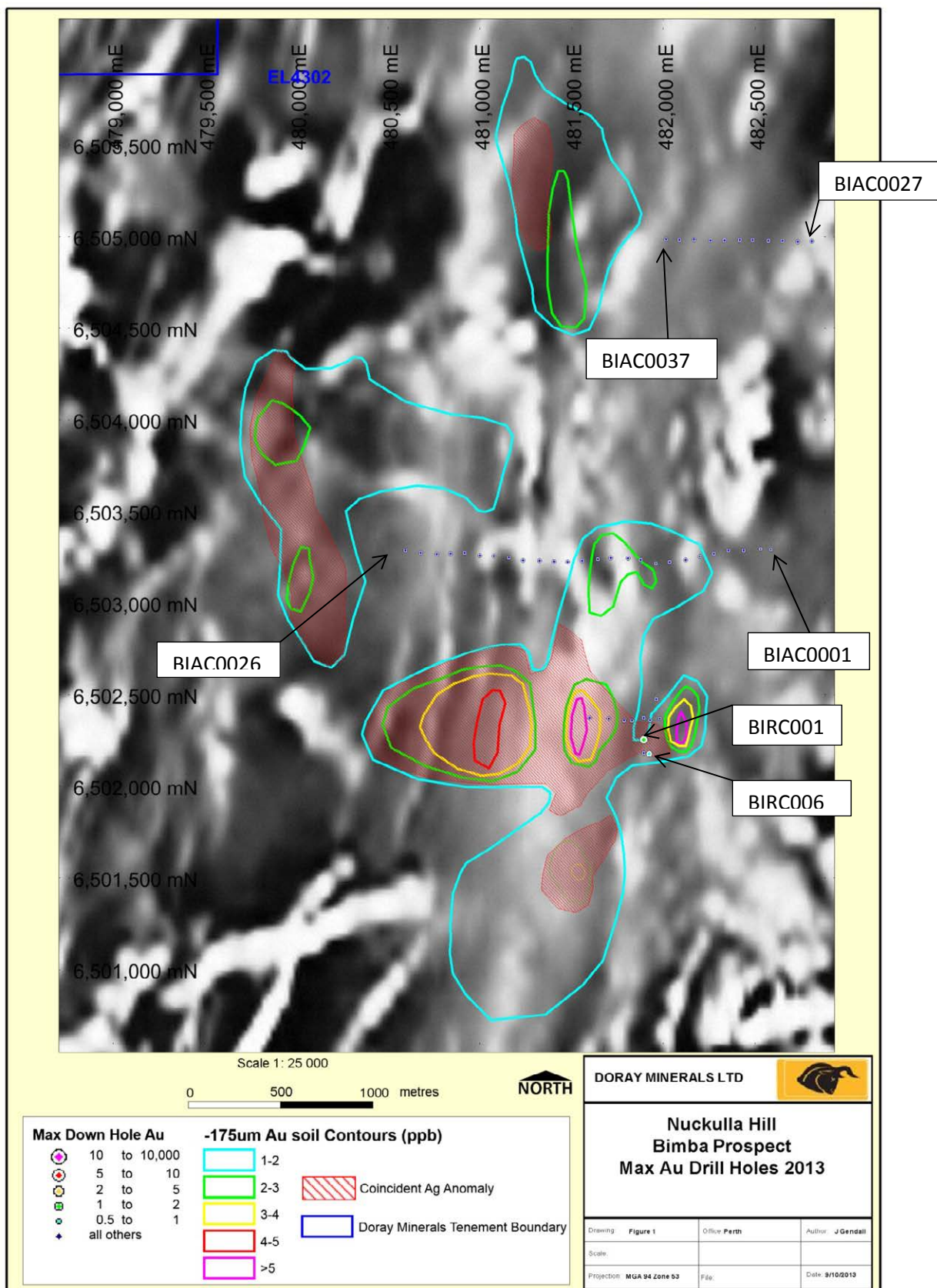


Figure 6: 2013 Bimba Drilling with Fine Fraction Soil Anomalies

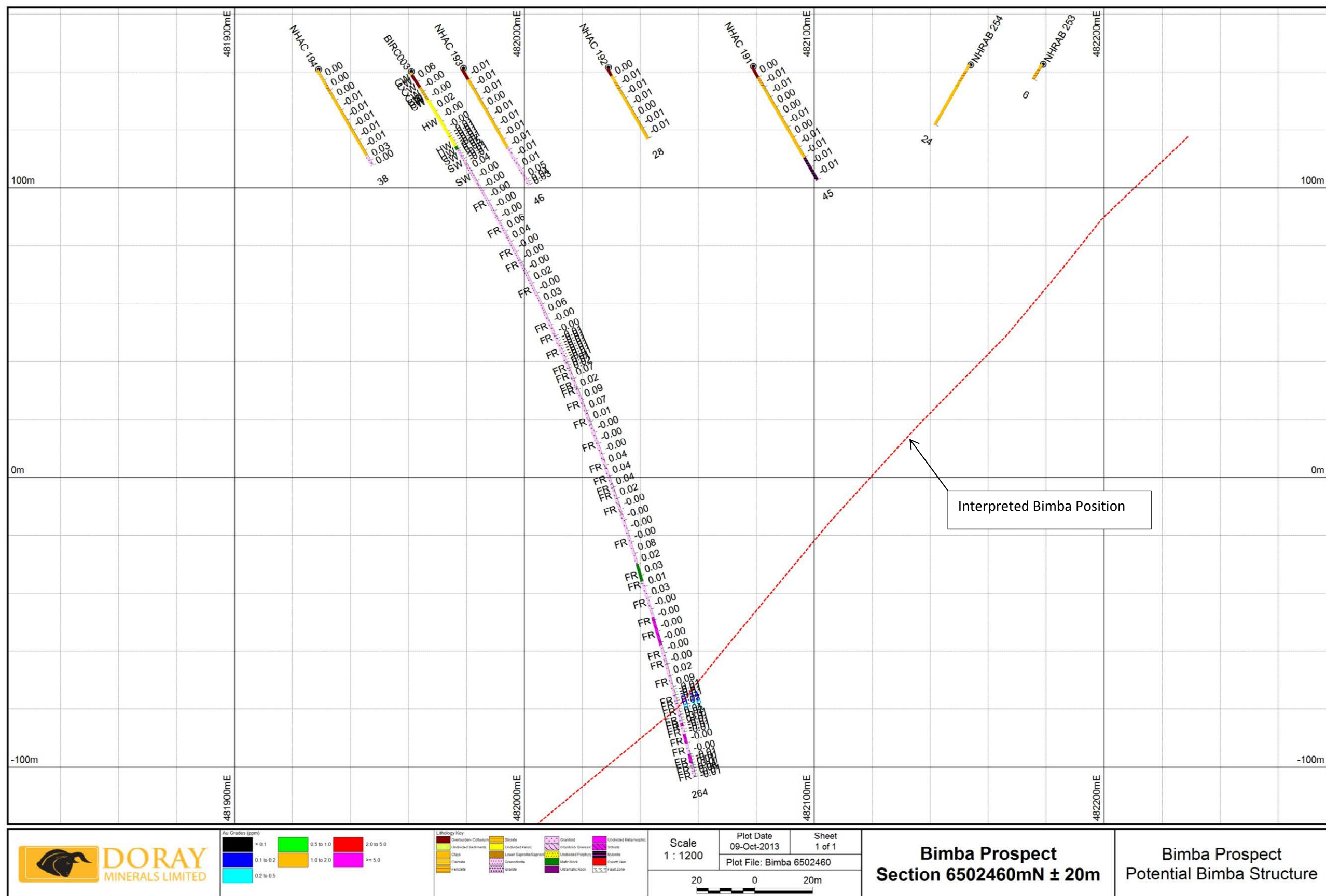


Figure 9: Bimba Section 6502460 showing BIRC003 Results

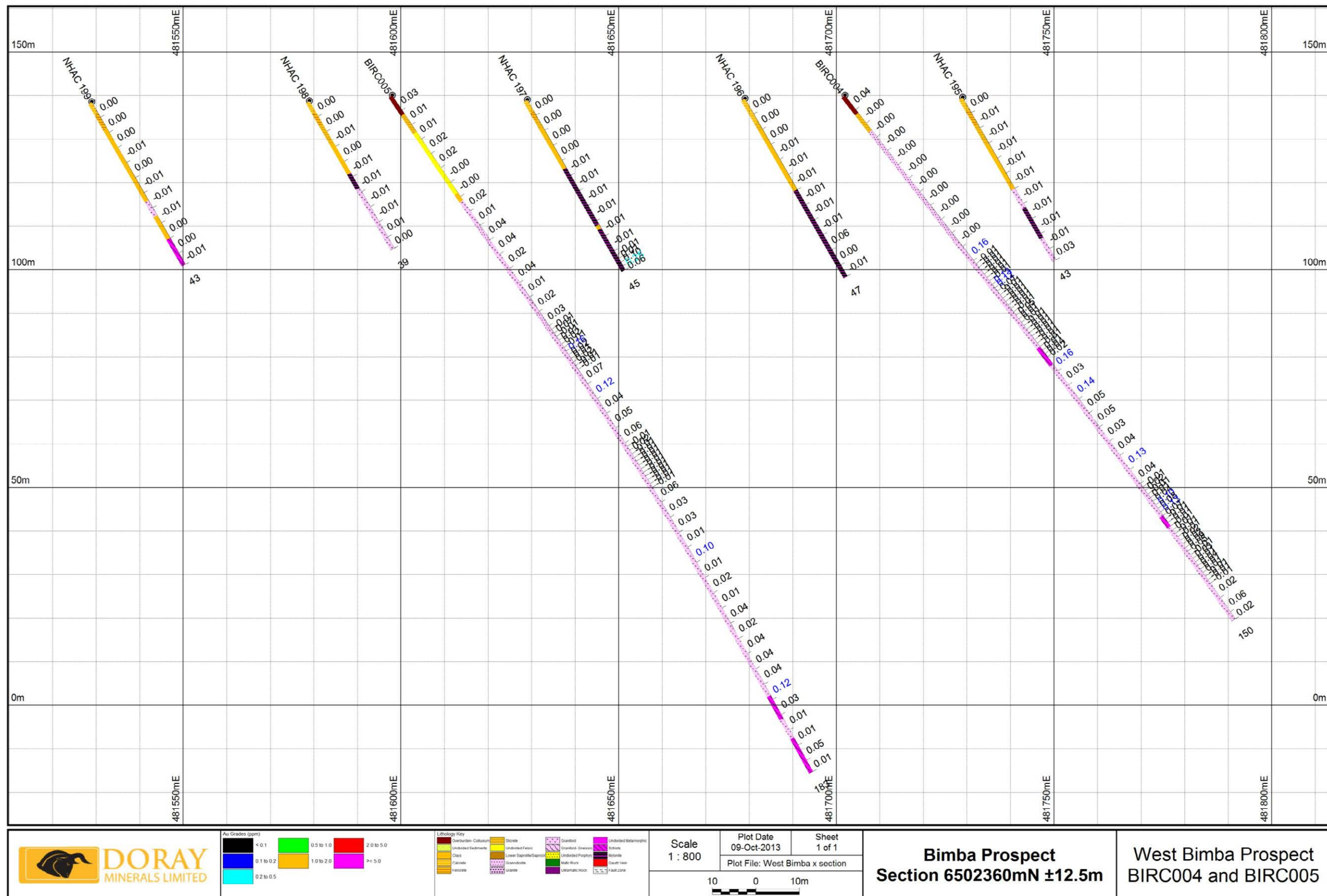


Figure 10: Section 6502360 West of Bimba showing BIRC004 and BIRC005 Results

7. Summary and Recommendations

Despite the low grade results from the Bimba prospect drilling, The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbirinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997 despite the increase in the gold (and silver) price since then. The Nuckulla Hill Au-Ag project remains significantly underexplored.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba was identified as a result of exploring only the most obvious calcrete anomalies. A number of structural targets, including some identified in the 2010 magnetic survey, have not been tested either by surface sampling or drilling.

In the upcoming year, Doray plans to complete the following:

- Completion of surface geochemical sampling programme where calcrete sampling proved ineffective (approximately 480 samples).
- Execute infill surface geochemical sampling on a 200 x 50m for new identified anomalies (from Figure 4).
- A regolith mapping exercise will be undertaken to produce a high resolution map of the project area to assist in targeting areas suitable for surface geochemical sampling.
- An orientation geochemical survey over anomalous Au in calcrete sampling in the south of the project area within dune sands will be completed to try to reproduce results. Further surface sampling may result from the orientation survey.

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APPENDIX 1

NUCKULLA HILL 12_13_WADG3_ASS2013A.txt

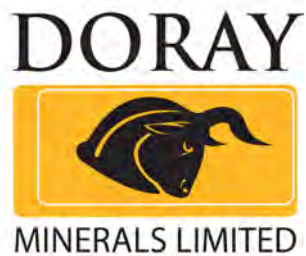
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NUCKULLA HILL 12_13_WASL3_META2013A.txt



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NUCKULLA HILL GOLD PROJECT

EXPLORATION LICENSES 4302, 4407, 4473, 4846, 4847, 5295, 5310

ANNUAL REPORT FOR PERIOD 25th AUG 2013 TO 24th AUG 2014

Joe Gendall

October, 2014

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Summary

- Nuckulla Hill Project consists of seven Exploration Licences (ELs) 4302, 4407, 4473, 4846, 4847, 5295 and 5310.
- Previous work has outlined significant gold mineralisation at multiple prospects.
- Reconnaissance exploration including rock chip, calcrete, soil sampling and regolith mapping has been completed on all seven ELs.
- 2719 fine fraction soil samples taken across the Nuckulla Hill Project has produced previously undiscovered surface Au anomalism.
- Targeting and project rationalisation memorandum completed to enable methodical, priority based exploration of the Nuckulla Hill Project.
- AC Drilling is planned to test new geochemical anomalism on EL4302 before the end of 2014.

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbirinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of seven exploration licences covering 2050km².

During the reporting period, Doray Minerals Ltd completed soil sampling (2733 -175µm soil samples) and reconnaissance exploration activities across the Nuckulla Hill Project. A targeting and rationalisation memorandum was written to enable methodical, priority based exploration across the Project. 4500m of AC drilling is planned to test new anomalism discovered from fine fraction soil sampling.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia (Figure 1). The project area covers approximately 60km of the Yarlbirinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

The project consists of seven Exploration Licences as follows:

Licence	Area (sq. km)	Grant Date	Expiry Date
EL 4302	204	25/08/2009	24/08/2014
EL 4407	81	24/12/2009	23/12/2014
EL 4473	355	27/04/2010	26/04/2015
EL 4846	409	18/04/2012	17/04/2016
EL 4847	93	18/04/2012	17/04/2014
EL 5295	169	27/06/2013	26/06/2015
EL 5310	739	24/07/2013	23/07/2015
TOTAL	2,050		

Table 1: Tenement Summary

Access to the area is via station tracks and varies from excellent to poor. Access is especially difficult in areas dominated with NW-SE trending sand dunes, which can be over 10m high.

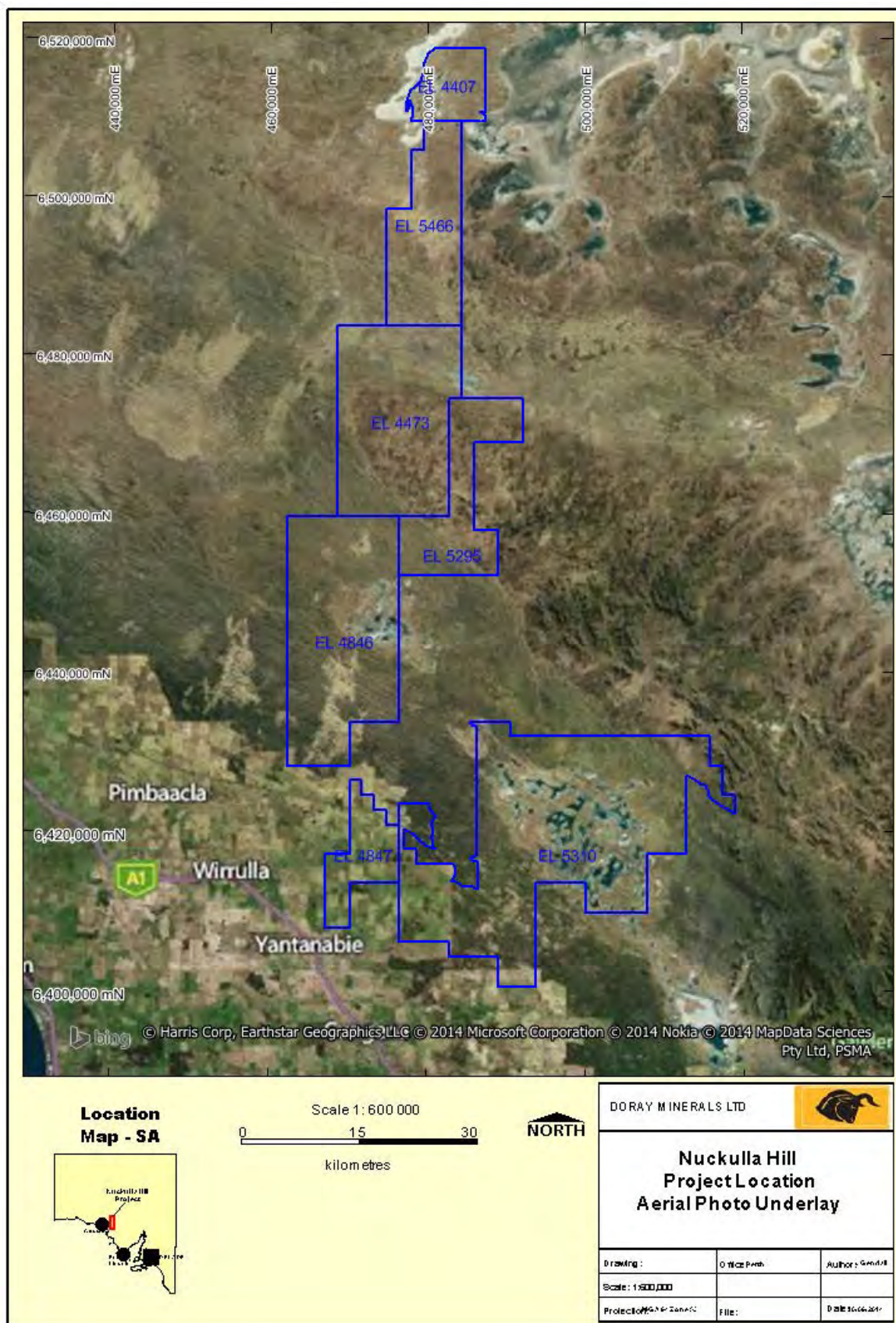


Figure 1: Nuckulla Hill Project Location

3. Regional Geology

The project is located on the western fringe of the Mesoproterozoic Gawler Range Volcanics and includes the YSZ. Local basement geology within the project includes:

- Tunkillia Suite Granitoids (1680Ma) deformed by the N-S trending Mesoproterozoic YSZ, which is thought to be contemporaneous with the Hiltaba granite/GRV event. To the south, the shear zone is intruded by the Hiltaba-age Kondoolka Batholith.
- St Peter/St Francis Suite granitoids (1620Ma) to the west of Tunkillia Suite granitoids. Small amounts of outcrop/subcrop occur in the south of EL4473.
- Hiltaba Suite Granites (1613-1575Ma) which have intruded both Tunkillia Suite granitoids and St Peter/St Francis Suite granitoids in the southern half of the Nuckulla project. Widespread outcropping of this unit occurs on EL4473 and includes the Kondoolka Batholith.
- Gawler Range Volcanics (GRVs) (1597-1589Ma) occur mostly on the eastern edge of the Nuckulla Hill tenement package and outcrop with high topography on the eastern edge on EL4302 and EL5295. The comagmatic GRVs and Hiltaba Suite Granites are thought to be the source for widespread Au-Cu-U mineralisation within the Gawler Craton.

Figure 2 shows basement geology of the Nuckulla Hill Project.

Regolith units vary throughout the project and include Quaternary aeolian sands, Quaternary gypsiferous dunes, Quaternary lacustrine sediments, Pleistocene alluvial/fluvial sediments, outcropping GRVs, outcropping Hiltaba Suite Granites and outcropping St Peter/St Francis Suite granitoids. Figure 3 shows the surface geology of the Nuckulla Hill Project.

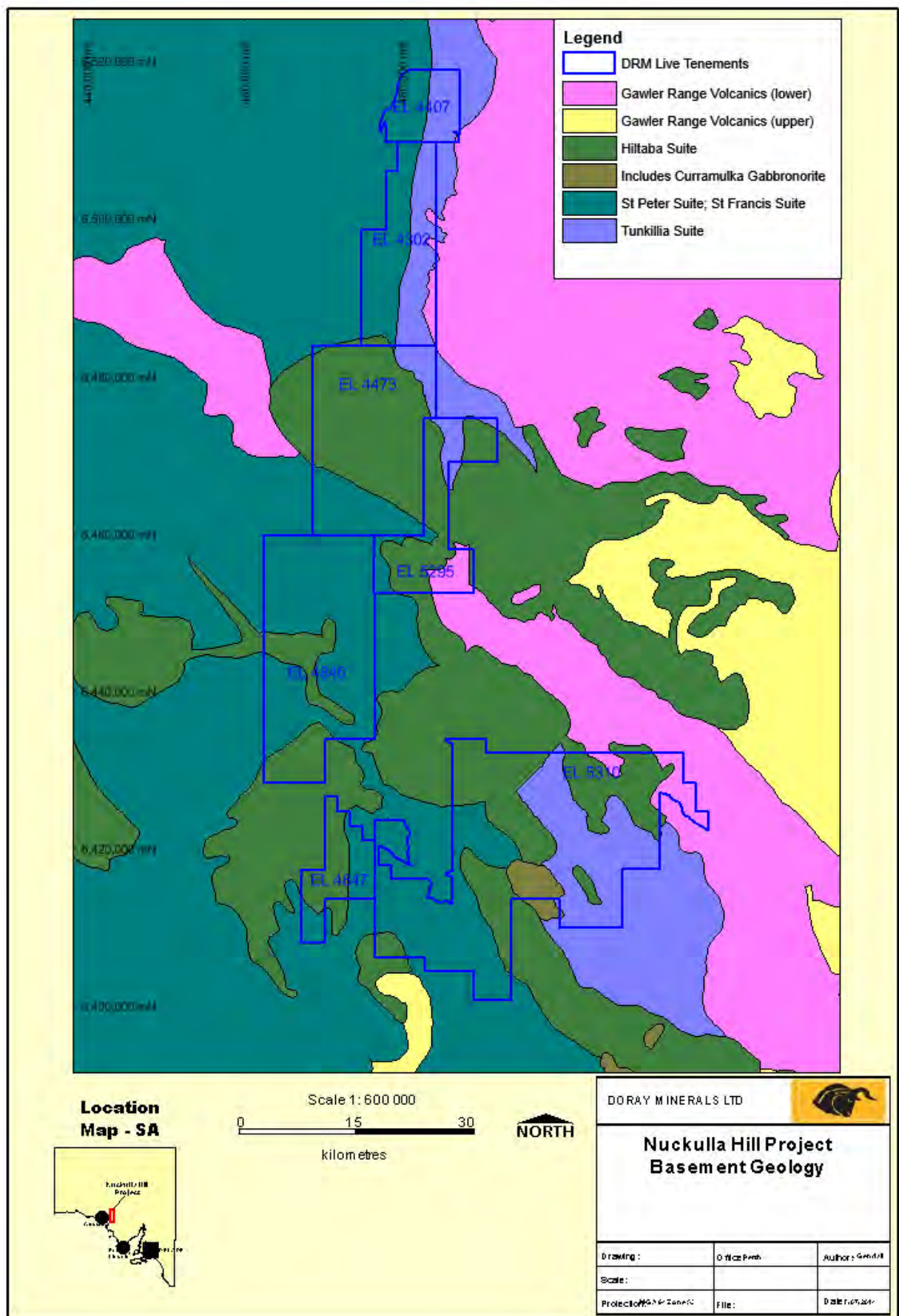


Figure 2: Nuckulla Hill Project Basement Geology

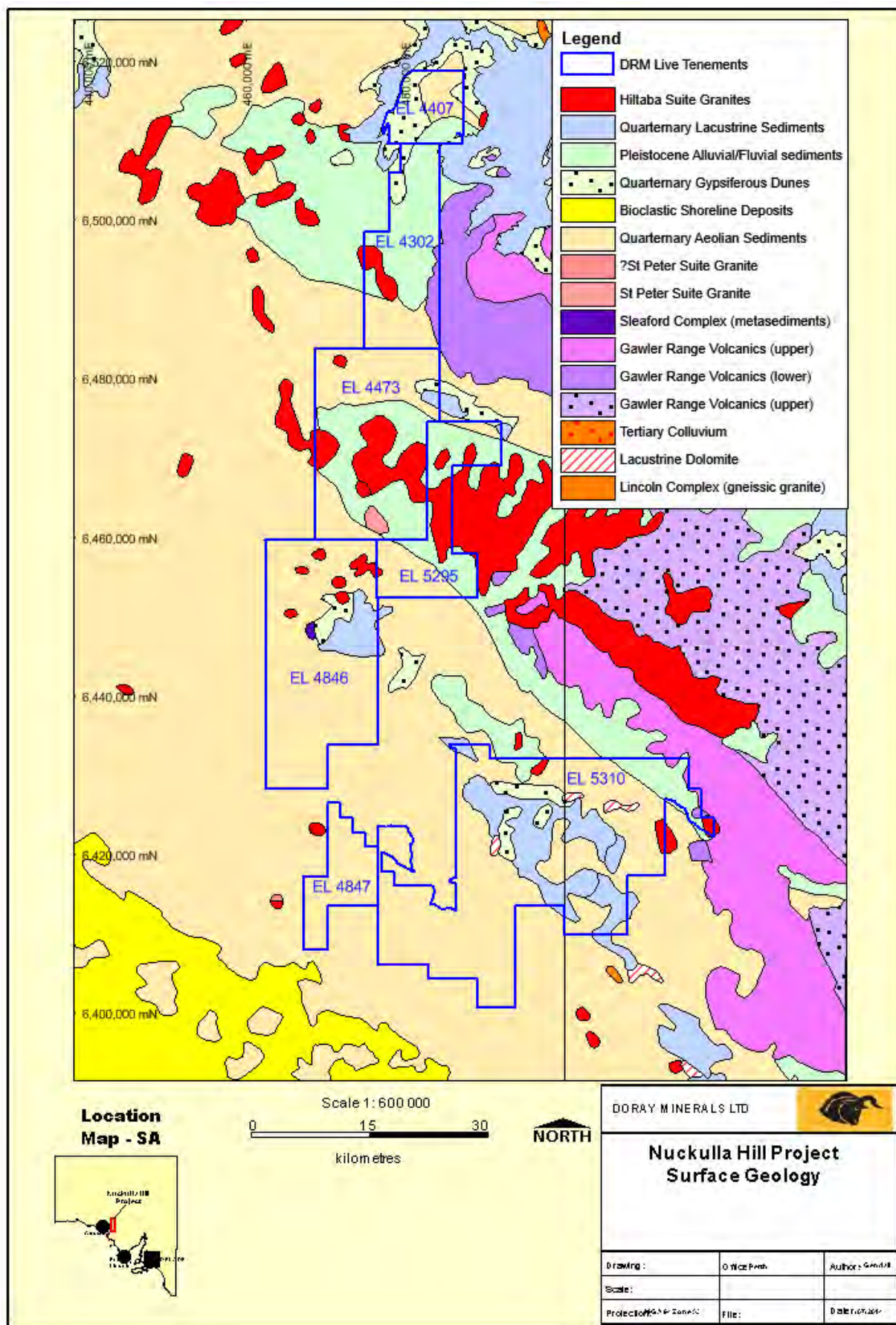


Figure 3: Nuckulla Hill Project Surface Geology

4. Previous Exploration

Despite the now obvious prospectivity of the Yarlbirinda Shear Zone, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc.). Table 2, below, summarises the previous exploration

a. Pre 1995

A good summary is presented in van der Steldt and Parker (1995). Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of SAEI aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment and rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childara outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west (van der Stelt & Parker, 1995).

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m (Parker & van der Steldt, 1996; Parker et al, 1997). At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

c. 1997 – 2008

Minotaur farmed into the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCAD mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCAD targets with PACE funding.

In 2007, Minotaur drilled one line of air core holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form

of analysis of casuarina and bluebush vegetation. Best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

Licence No.	Reporting Period	Activities
EL 2035	1995	• Data compilation • Rock chip and stream sediment sampling • Mapping • Calcrete sampling • Ground magnetic • Limited RAB drilling
	1996	• Calcrete sampling • RAB/Air core/RC/diamond drilling • Aeromagnetic survey • IP surveys
	1997	• Calcrete sampling • RAB/Air core/RC drilling • mapping
	1998	• no field work
	1999	• ground magnetic survey
EL 2761	2000	• no field work
	2001	• no field work
	2002	• auger sampling
	2003	• no field work
	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Air core drilling • Biogeochemical sampling
	2008	• No field work

Table 2: Summary of previous exploration over the Nuckulla Hill Project

5. Previous Doray Minerals Exploration Summary

a. August 2009 – August 2010

- **Data compilation and review**

Data compilation and review revealed structural targets that had not been adequately tested by drilling or calcrete sampling.

- **Aeromagnetic Survey**

Doray contracted UTS to complete a detailed, 100m spaced aeromagnetic survey over the entire project area. The survey was flown at an average sensor height of 40m on lines orientated 090-270°, with tie lines spaced at 1000m. Radiometric and digital terrain data was also collected as part of the survey.

b. August 2010 – August 2011

Field Reconnaissance

Over 4 days in June 2011, a field reconnaissance visit was made to the Nuckulla Hill Project area. The aim of this visit was to:

- Examine the regolith characteristics within the project area in order to assess the quality and effectiveness of previous regional geochemical surveys.
- Examine the regolith and topographic features of specific target areas to determine relationships between defined geochemical anomalism and drilled mineralisation.
- Ground truth a number of aeromagnetic targets, including an assessment of the effectiveness of previous exploration over these targets.
- Examine drill chips from previous drilling and outcrop geology as a geological familiarisation exercise.
- Determine general site access requirements and potential logistical challenges for future programs.

c. August 2011 – August 2012

- **ILUA signed with Gawler Ranges Native Title Group.**

Doray agreed to the terms of the Gawler Ranges ILUA and is now a party to it. An invitation from the Gawler Ranges Aboriginal Corporation to attend one of its Directors meetings was accepted, with two Doray staff making a brief presentation.

- **PACE Discovery Drilling 2012 Funding Awarded**

Doray submitted an application for PACE Discovery Drilling 2012 to assist the funding of drilling at, and along strike from, the Bimba Prospect. Doray was awarded a \$70,000 co-funded drilling grant.

- **Orientation Surface Sampling**

Orientation lines were designed to determine if other surface geochemical media (magnetic lag and vegetation litter) were able to replicate the soil anomalies defined by previous workers using calcrete. Magnetic lag and vegetation litter have been shown in parts of Western Australia with similar regolith regimes, to define anomalism beneath cover (e.g. Tropicana, Moolart Well). A total of 155 maglag samples and 112 vegetation litter samples were collected from three established prospects (Myall, Bimba and Sheoak).

d. August 2012 – August 2013

- **Petrographic Analysis**

A petrology report was completed for 13 outcrop and drill samples by Doug Mason Geoscience. 10 rock samples were taken from the Lakeside Outcrop (EL4302), 2 drill samples were taken from historic drill hole NH07A05 (EL4407) and 1 drill chip sample was taken from historic RC hole NHRC12 located at the Bimba prospect (EL4302). Petrology is discussed in full in the Nuckulla Hill Project 2013 Annual Report.

- **Soil Sampling**

833 fine fraction soil samples were collected and assayed during the reporting period. Each sample was sieved through -175µm mesh until 10-50g of material was collected and placed in a paper bag. Samples were assayed uncrushed using a partial leach method (TL8) by Genalysis Adelaide. All samples were assayed for Au, Ag, As, Cu, Ce, Ni, Pb, U and Zn. This sampling revealed three distinct surface anomalies proximal to the Bimba Prospect.

- **Bimba AC and RC Drilling**

Between 26/06/2013 and 9/08/2013 Doray Minerals Ltd completed 5 RC holes and 2 failed collars for 1106m of RC drilling, as well as 42 Air Core holes for 1877m. Three RC holes were designed to test the down dip and along strike continuity of the Bimba prospect, identified by Equinox Resources in the mid 1990's. Two RC holes were planned to test a parallel structure to the west of Bimba defined by the 2010 aeromagnetic survey. This structure coincided with high Pb anomalism (up to 1950ppm) in historic AC holes. Two Air Core style lines were completed by the same RC rig to test a large dilational shear zone north of the Bimba prospect with the potential to host significant Au mineralisation beneath transported cover.

From AC drilling, no significant assays were received. RC drilling of the Bimba prospect confirmed the continuity of a mineralised structure; however Au grades were sub economic with a best intercept in BIRC006 of 28m @ 0.58g/t Au from 144m (including 16m @ 0.72g/t from 156m).

6. Exploration Activities during the Reporting Period

a. Reconnaissance Exploration

From 11/2/2014 to 24/2/2014 a reconnaissance exploration trip was made to assess regolith conditions, geology and access tracks on tenements in the Nuckulla Hill Project which have seen little fieldwork. Rock chip samples were taken from prospective outcrops and fine fraction soil sampling was completed to follow up on low level anomalism in historic calcrete sampling. EL4473, EL4846, EL4847, EL5295 and EL5310 were all visited as part of the reconnaissance trip.

Regolith Conditions

Regolith conditions varied widely across tenements but were found to agree with SARIG regolith data. Across the Nuckulla Hill Project, surface regolith consisted of: Aeolian sediments (sand dunes), colluvial sediments, lacustrine sediments, residual material and fresh to highly weathered bedrock.

Rock Chip Sampling and Geological Mapping

EL4473 was the only tenement with significant outcrop, so was the only tenement to have rock chip sampling and geological mapping completed across it. All other tenements were found to be covered by 2-10m of colluvium, or 2-20m sand dunes.

A total of 9 rock chip samples were taken from throughout the southern area of EL4473. Also, two samples were taken from the drill spoils of an attempted water bore. There was no indication of the depth the drill spoils were from, however dropping a small rock down the hole, a period of three seconds elapsed before hearing it hit the bottom. This would equate to about 40m total depth. All rock chip locations are shown in Figure 4, and rock chip assays shown in Figure 8. No significant assays were received from rock chip sampling. During sampling, several outcrops of N/S sheared granitoid were discovered. Two distinct set of foliation were observed in some outcrops, one striking at approximately 010 and a second at about 045. This is in agreement with the two orientations of magnetic structures seen in aeromagnetic images in the southern area of EL4473.

Fine Fraction Soil Sampling

During the Nuckulla Hill reconnaissance field trip, 210 -75µm sieved samples were taken across EL4473, EL5295 and EL5310. Rain heavily affected the collection of soil samples, as even slightly damp ground clogged up the -75µm mesh. 5 days were spent completing other reconnaissance work while ground dried out.

Soil samples targeted three separate structures where calcrete sampling had returned low level anomalous (2-3x background) results. Sampling was completed at 100m E/W spacing, with N/S spacing between 200 and 600m.

Throughout the sample areas, calcrete was not well formed enough to create tabular layers as seen at Bimba, Myall and Sheoak prospects. Nodular calcrete spread throughout loamy transported sand was common. Because of this, it was hoped that the partial digestion of - 75µm sieved samples may reveal anomalism not picked up by calcrete sampling. Below is a table showing the distribution of samples to each exploration lease. Results from reconnaissance soil sampling detected very low level anomalism. The highest Au value was 1.3 ppb which represents possibly 3-4x background. Other Au peaks were only around 2x background Au. A map showing soil and rock chip sampling locations is shown in Figure 4. Maps showing soil sampling results are shown in Figures 5, 6 and 7.

Exploration Lease ID	Number of Samples Taken
EL4473	68
EL5295	96
EL5310	46

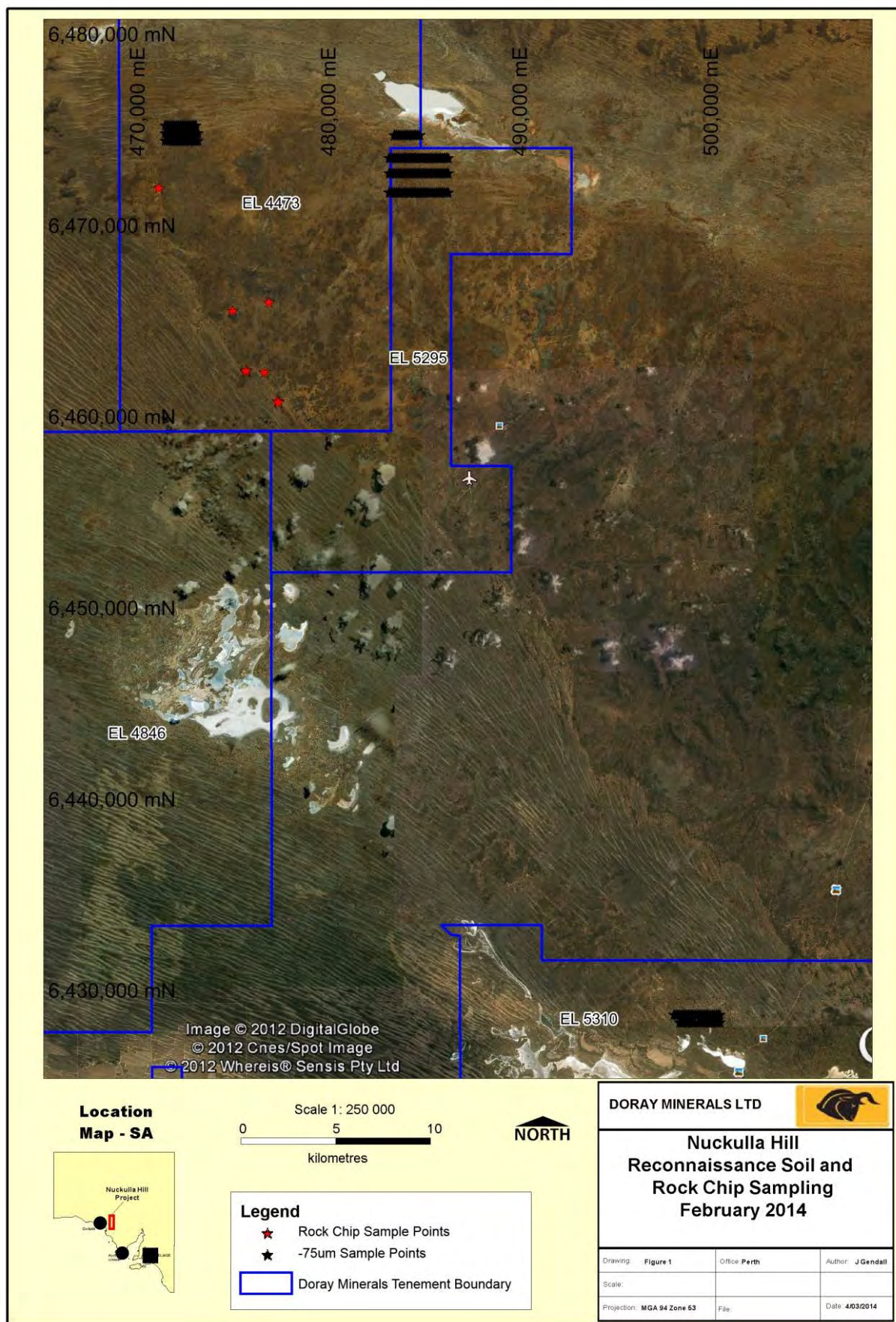


Figure 4: Nuckulla Hill Reconnaissance Sample Locations

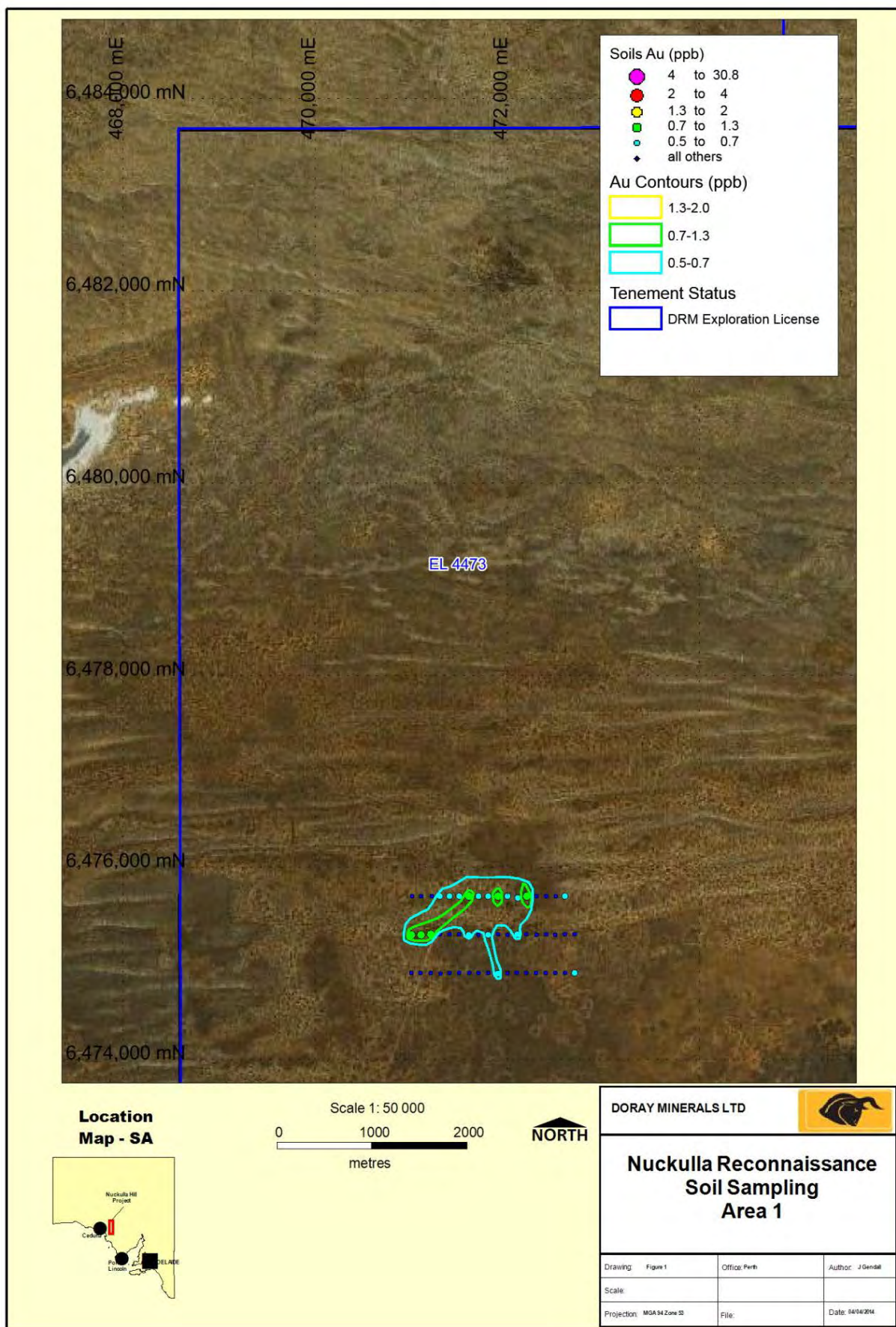


Figure 5: Nuckulla Hill Reconnaissance Soil Sampling EL4473

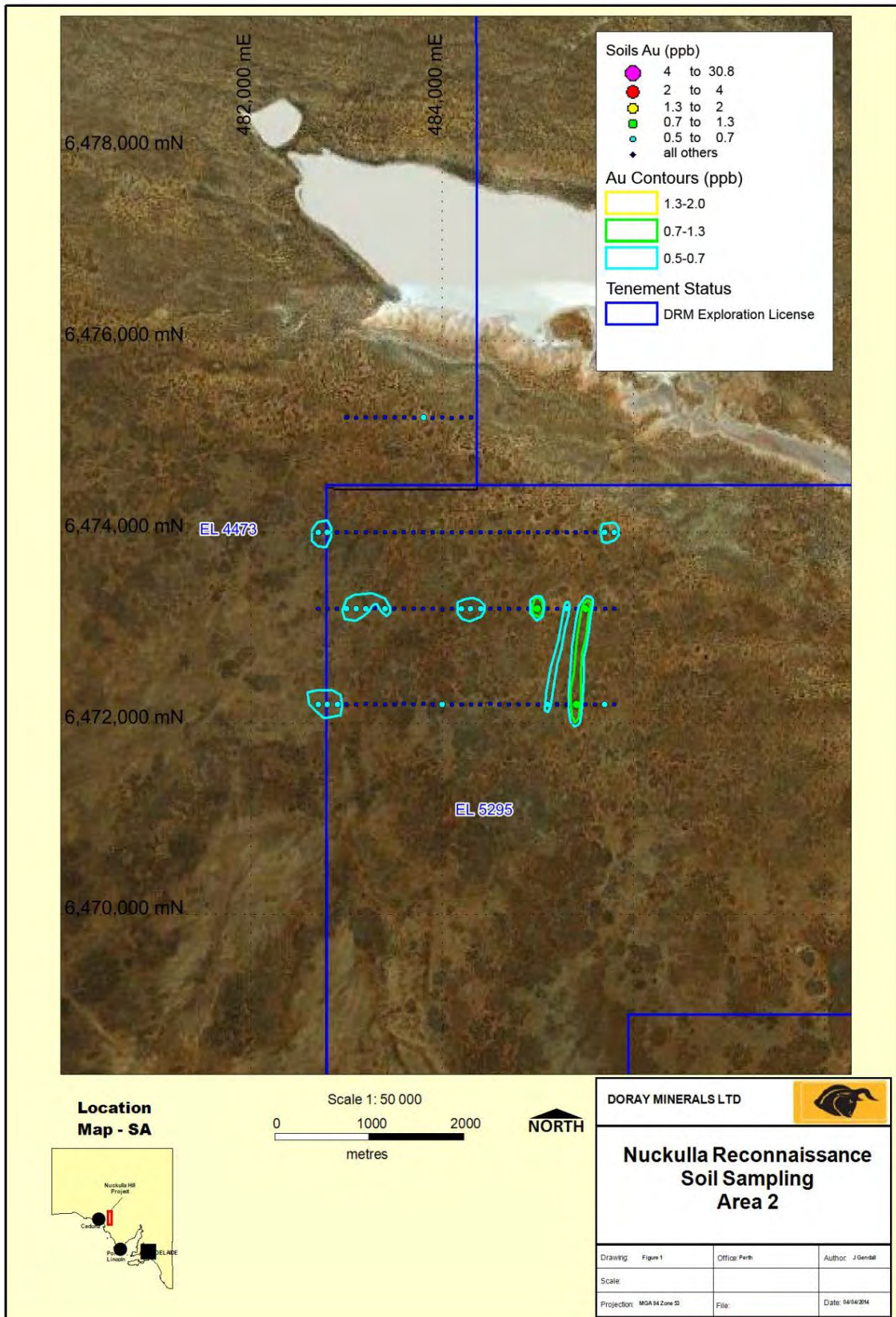


Figure 6: Nuckulla Hill Soil Sampling EL4473/EL5295

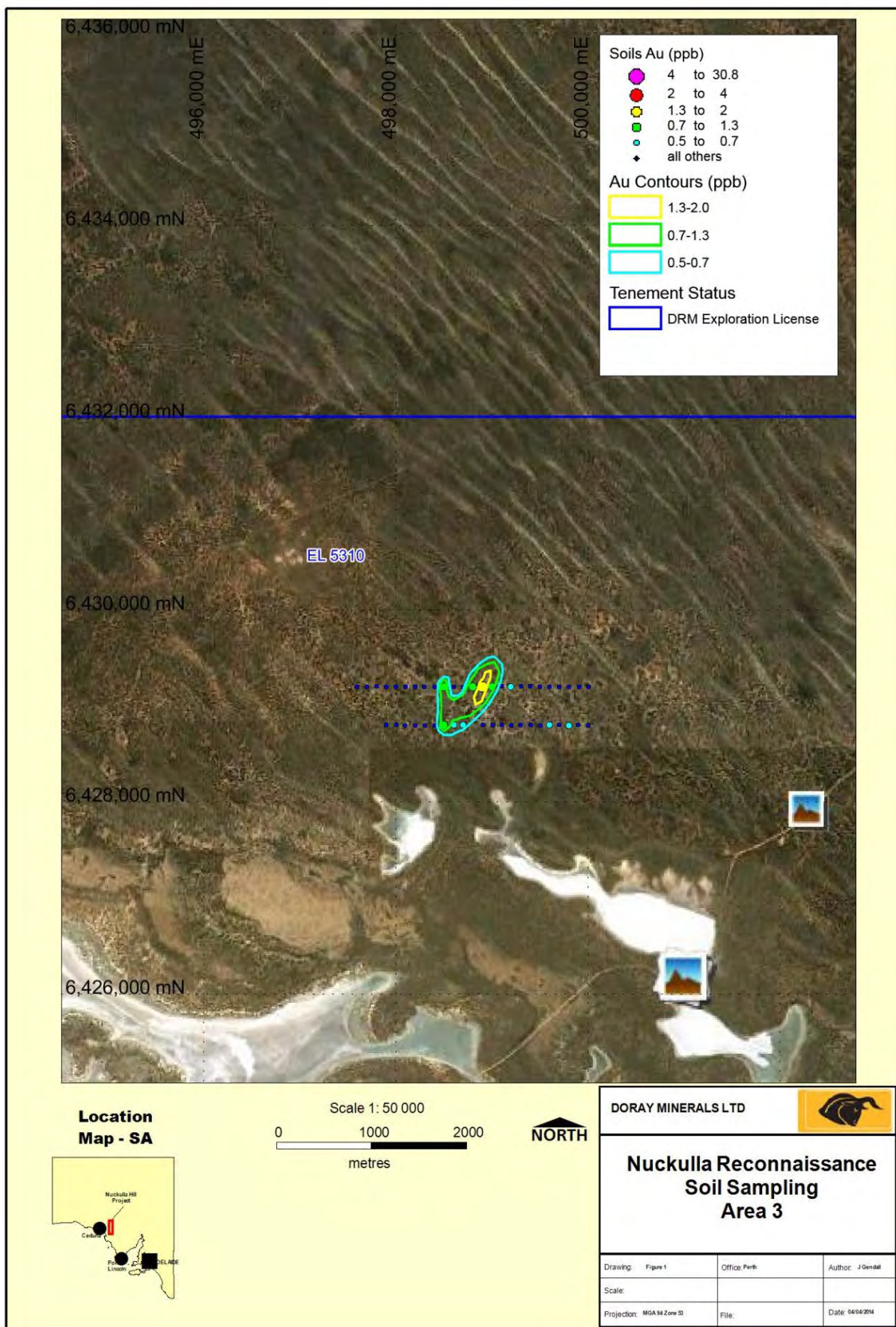


Figure 7: Nuckulla Hill Reconnaissance Soil Sampling EL5310

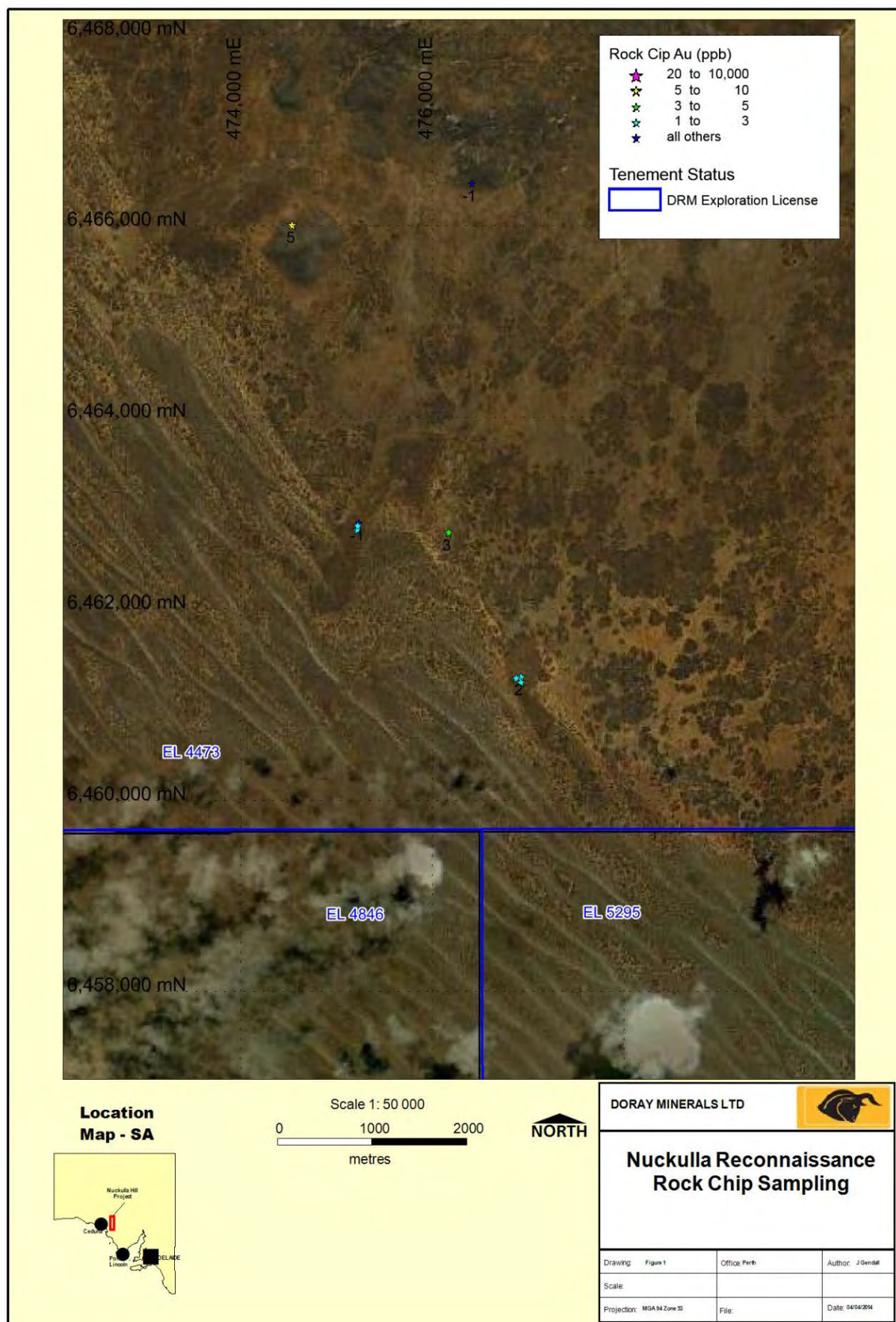


Figure 8: Nuckulla Hill Reconnaissance Rock Chip Sampling

b. Soil Sampling

A total of 2719 fine fraction soil samples were completed across the Nuckulla Hill Project. 210 samples were part of reconnaissance exploration outlined above, 2266 samples were from the EL4302 fine fraction soil sampling program and 243 samples were from the EL5295 fine fraction soil sampling program.

EL4302 Fine Fraction Soil Sampling

During the reporting period, 2266 fine fraction soil samples were taken across EL4302 (Figure 9). First pass and infill sampling has produced two robust Au in soil anomalies to the south and southwest of Childara Outstation, now called the Bluebush and Mulga Prospects (Figure 10).

The Bluebush soil anomaly is located 1km southwest of Childara Outstation and is 1800m x 200m at 4x background Au including 800m x 150m at 8x background Au. Aeromagnetic imaging shows a large flexure/dilational jog at the Bluebush Prospect which has the potential for significant Au mineralisation (Figure 11). Bluebush soil anomalism peaks at 7.89ppb Au which is 12-13x background levels.

The Mulga soil anomaly is located 5km SSW of Childara Outstation and is 400m x 100m north-south at 5-6x background Au including 200m x 100m at 9x background Au. Also, there is potential for anomalism to continue beneath sand dune cover to the south (Figure 12). Mulga soil anomalism peaks at 8.9ppb Au which is 15-16x background levels.

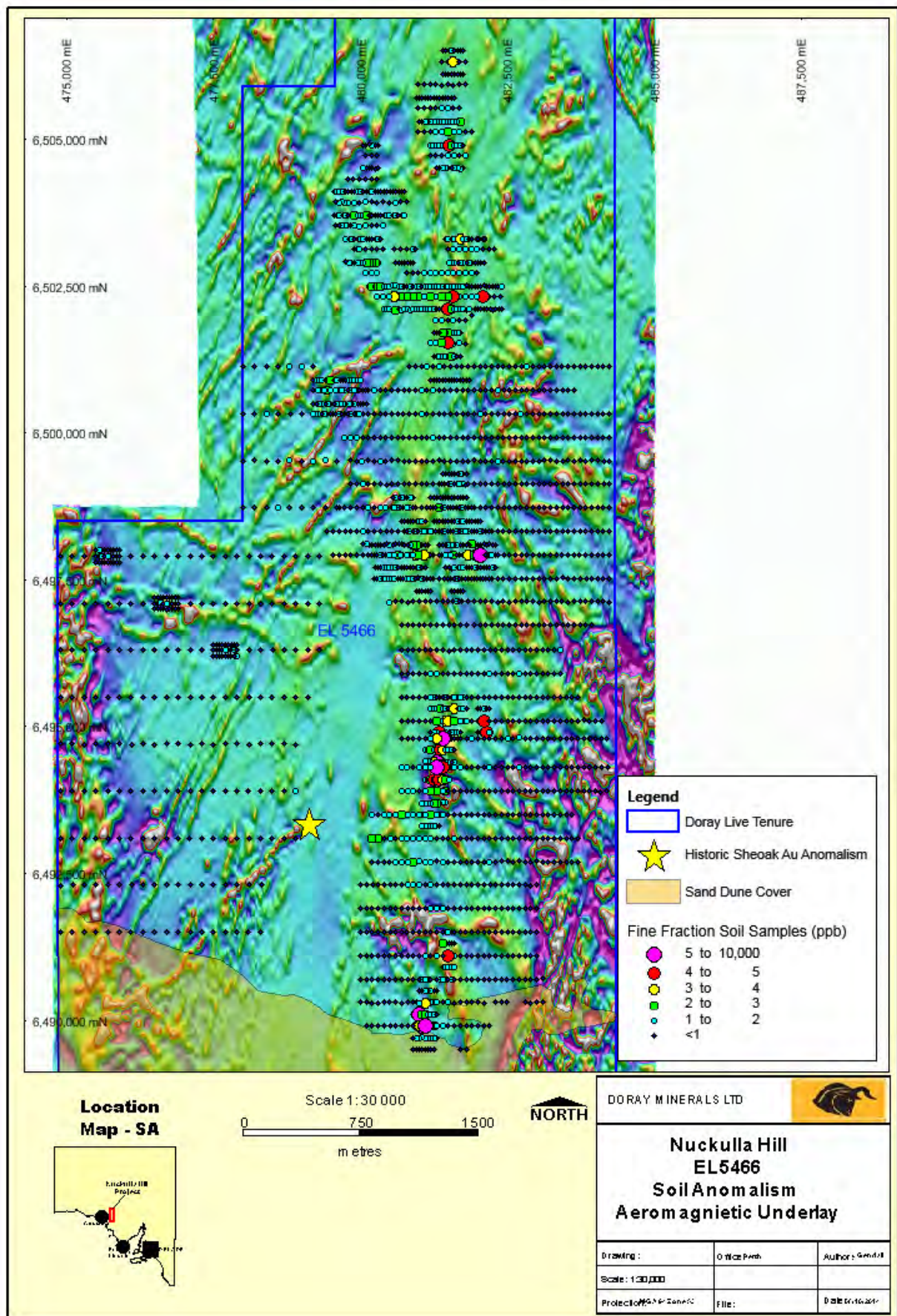


Figure 9: EL5466 Soil Sampling Results to 24/08/2014

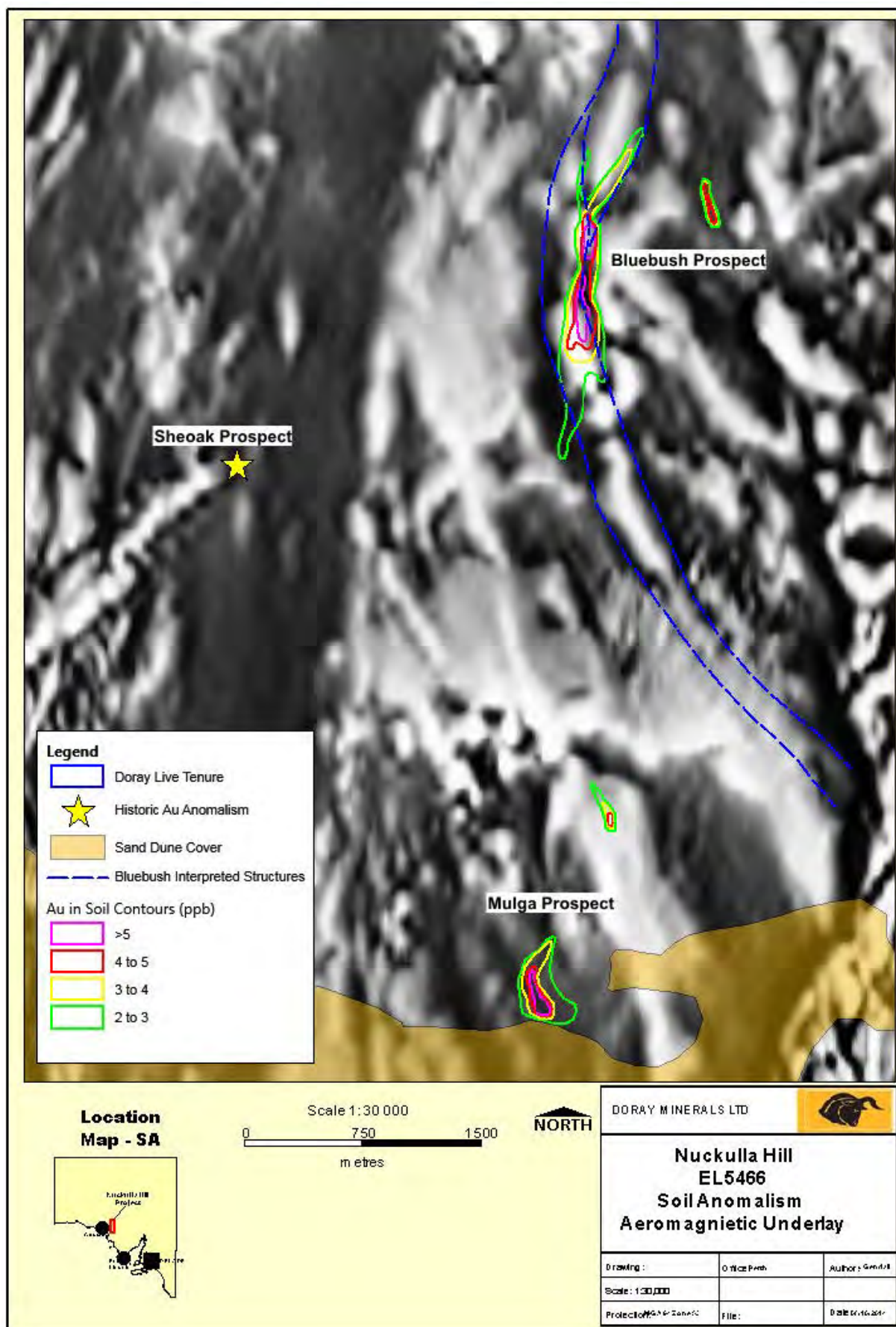


Figure 10: EL5466 Bluebush and Mulga Soil Anomalism

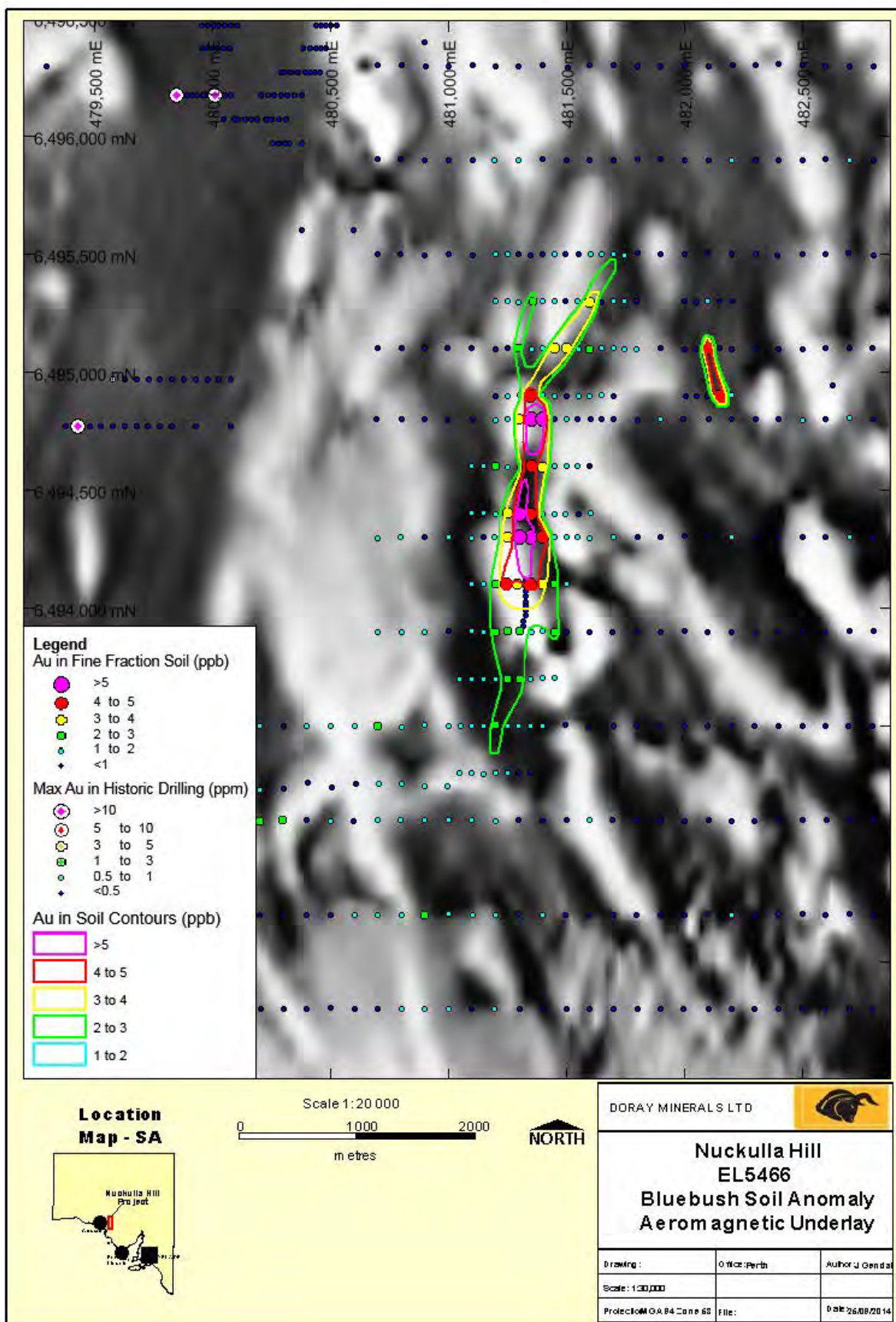


Figure 11: EL5466 Bluebush Soil Anomalism

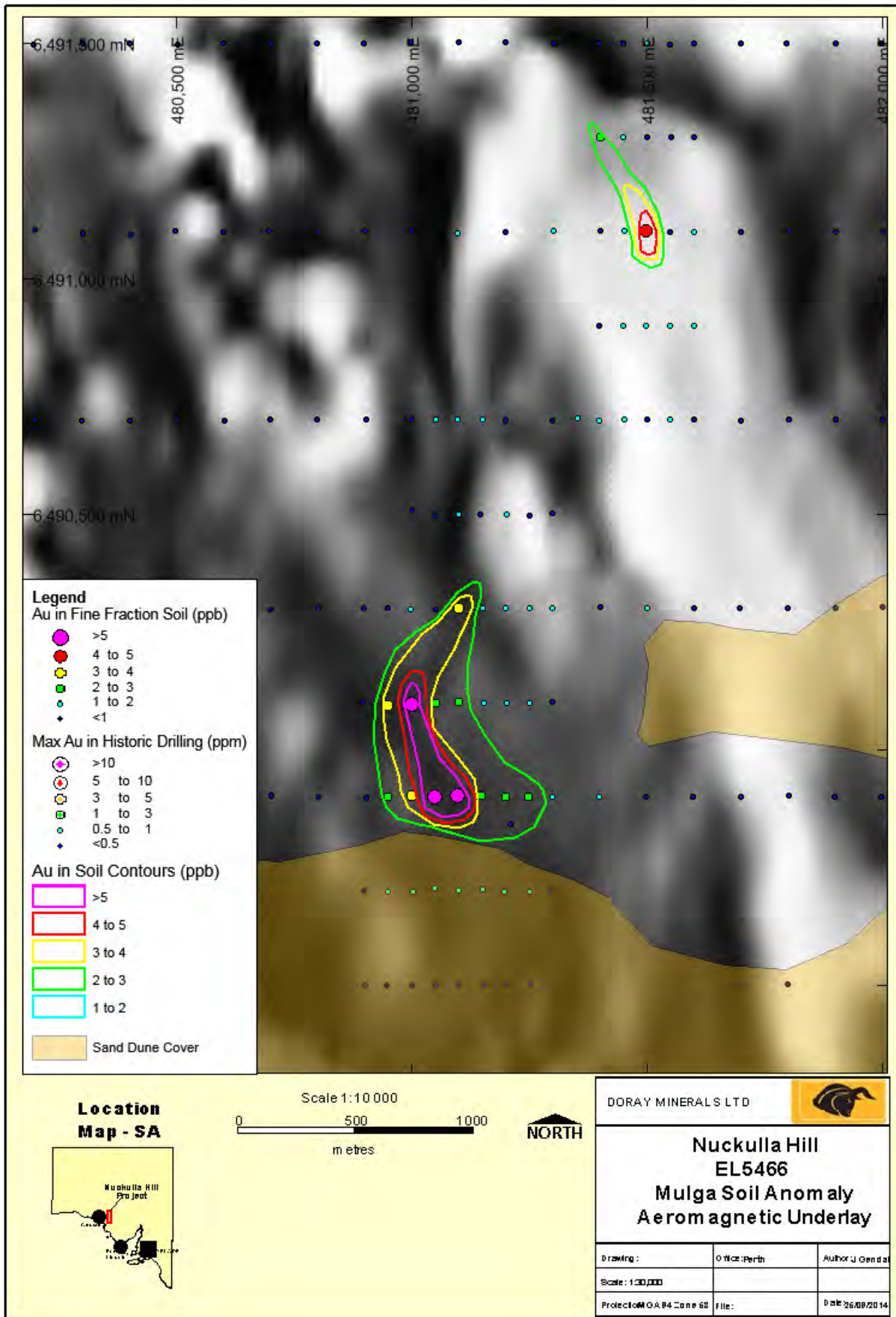


Figure 12: EL5466 Mulga Soil Anomalism

Multi Element Analysis

All fine fraction soil samples completed on EL4302 were analysed for Au, Ag, As, Ce, Cu, Ni, Pb, U and Zn. During August, a brief multi element investigation was completed into these samples. This was completed to determine abundances of any other anomalous elements and/or pathfinder elements to assist in future exploration.

Ag

Ag anomalism in fine fraction soils can be broadly classified as sometimes being coincident with Au (Figure 13). The southernmost Au anomaly peaking at 8.9ppb is coincident with silver up to 78.9ppb. One other low level Au anomaly (peak≈2ppb) had coincident Ag. The best anomalism at EL4302 (located close to Childara O/S) had no real coincident Ag. Ag was also coincident with the large Cu anomaly to the east of Childara O/s.

As

At EL4302, As can be considered to be associated with Au anomalism (Figure 14). Most As anomalism appears to be offset from Au anomalism, and is slightly more widespread. This is to be expected as arsenic is more mobile in the regolith. A large As anomaly is seen the east of the best Au anomaly. It is hard to determine if this is an offset As anomaly or a feature of the drainage system- more investigation is needed here.

Ce

Ce appears to be unrelated to Au anomalism. No significant Ce anomalism was discovered.

Cu

Most Au anomalies bore no correlation with Cu. One exception is the small ≈3ppb Au anomaly to the south which had Cu anomalism of approximately 2X background (Figure 15). A large Cu anomaly peaking at 3.7X background can be found to the NE of Childara O/S. This coincides with some Ag and As anomalism and warrants further investigation. This may be either a) real Cu anomalism b) associated offset anomalism from the best Au anomaly or c) a geochemical feature of drainage in the area.

Ni

There is no real correlation between Au and Ni anomalism. There is also no significant Ni anomalism on EL4302, aside from two samples near the NE corner of the tenement which are also high in Zn. These samples may be a surface expression of some sort of mafic intrusion.

Pb

The assay method used for at genalysis (TL8) does not produce accurate Pb assays. As such this data cannot be relied upon.

U

U appears to be mostly unrelated to Au anomalism. The southernmost Au anomalism may bear some correlation. One decent U anomaly is present on EL4302 peaking at 12x background U. This is located near 1-2ppb Au anomalism.

Zn

Zn appears to be unrelated to Au mineralisation. The only notable Zn anomalism occurs with Ni in the NE corner of EL4302 (possibly a surface expression of a mafic intrusion).

Conclusions

The table below shows how multi element data relates to Au anomalism. Lead has been left out entirely due to the inaccuracies in the analysis method.

Possible Pathfinder Elements to Au	Some Coincidence with Au Anomalism	No Relation to Au Anomalism
Ag, As	Cu, U	Ce, Ni, Zn

Other element anomalism to come out of the analysis was the Ni/Zn anomaly in the NE corner of EL4302, the Cu/Ag/As anomalism east of Childara O/S and the U anomalism SW of Bimba RC drilling.

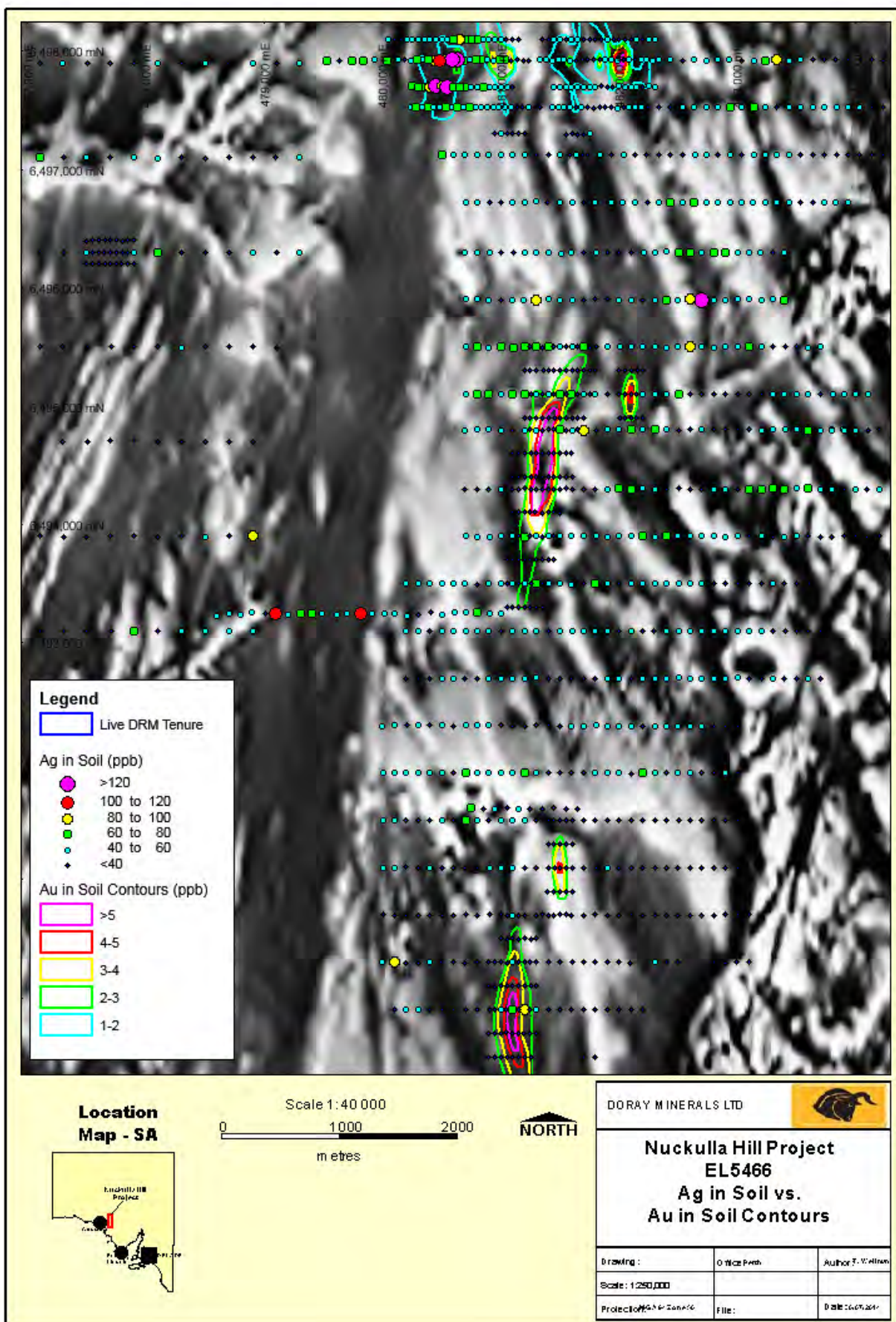


Figure 13: EL5466 Ag in Soil vs. Au Contours

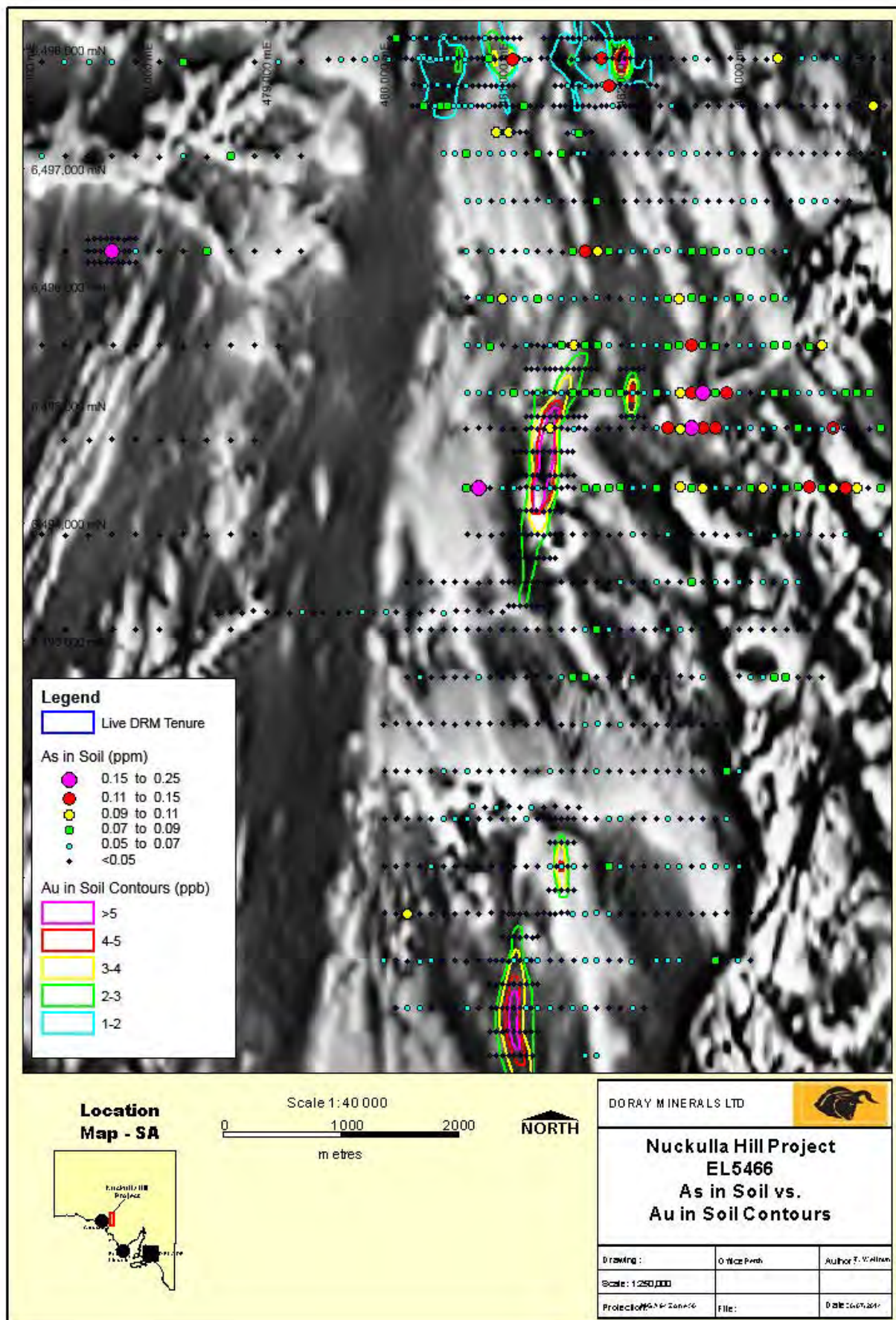


Figure 14: EL5466 As in Soil vs. Au Contours

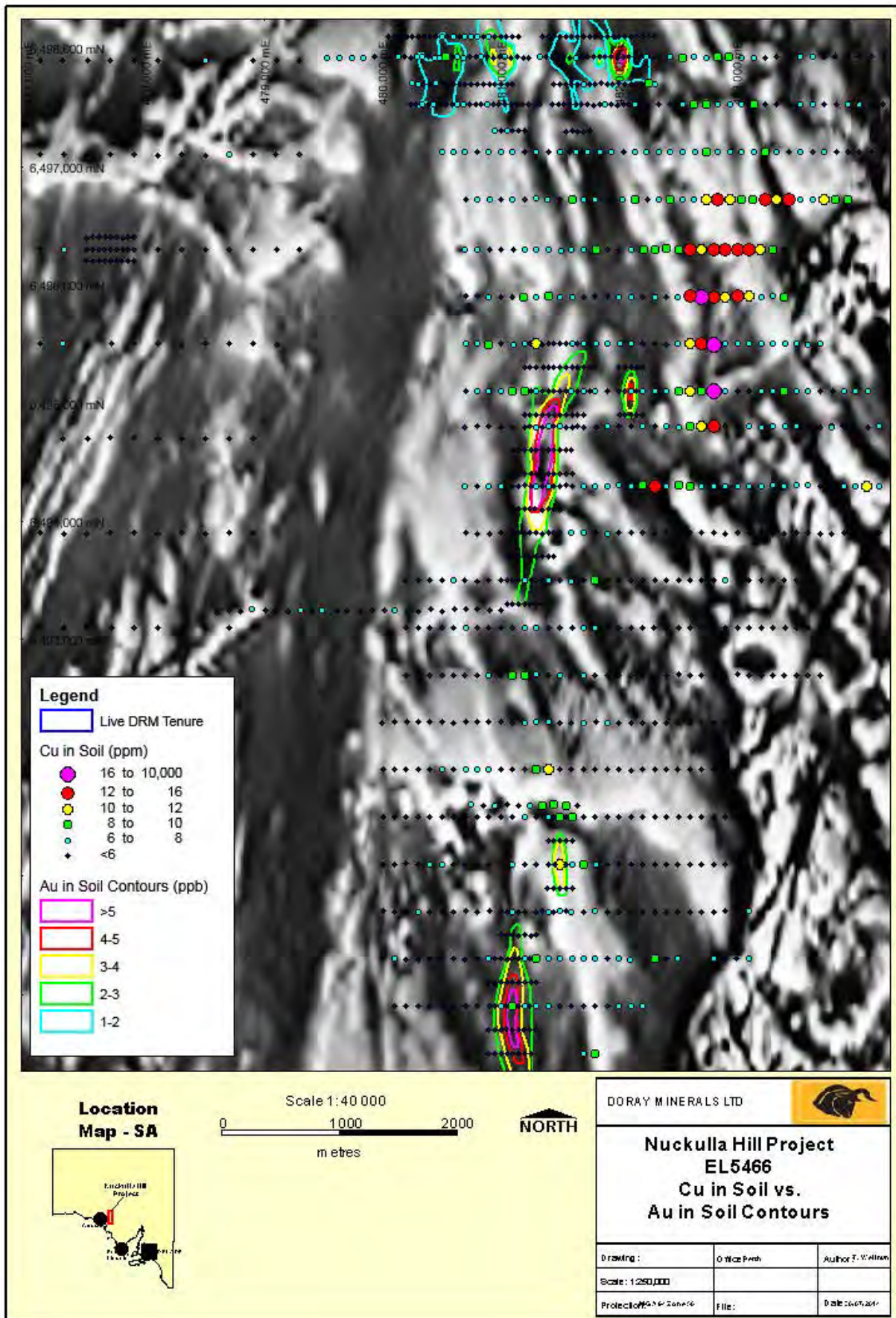


Figure 15: EL5466 Cu in soil vs. Au Contours

EL5295 Fine Fraction Soil Sampling

Fine fraction soil sampling revealed no significant Au or Ag anomalism on EL5295 (Figure 16). Multi element results are outlined below.

- Some low level As anomalism at 2x background, with no continuity
- Coincident Ce (up to 20x background) and U (up to 50x background) anomalism. This is thought to be associated with sandy, fluvial channels seen in aerial photography (Figures 17, 18).
- No significant Cu, Ni, Pb, Zn anomalism

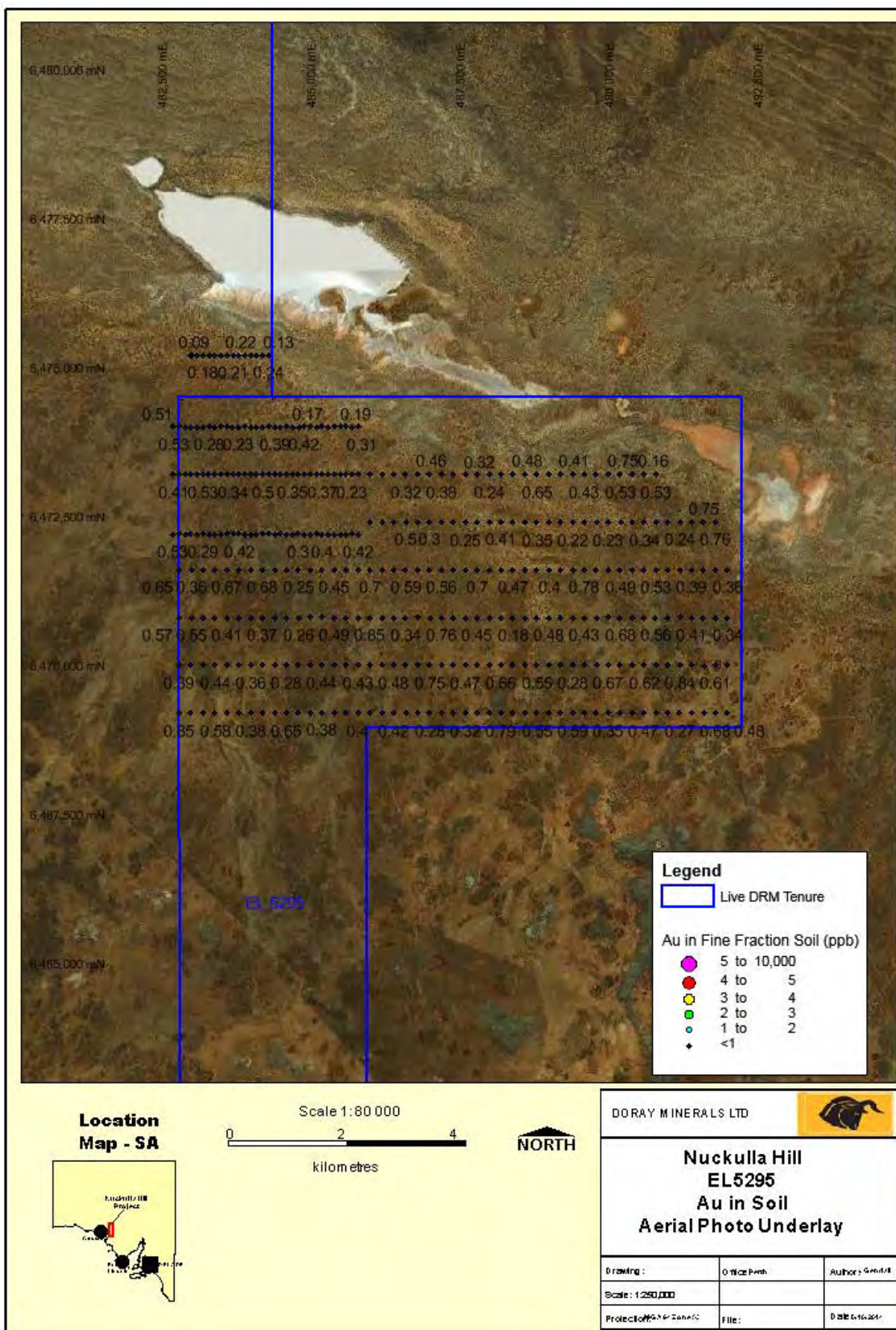


Figure 16: EL5295 Fine Fraction Soil Sampling- Au Results

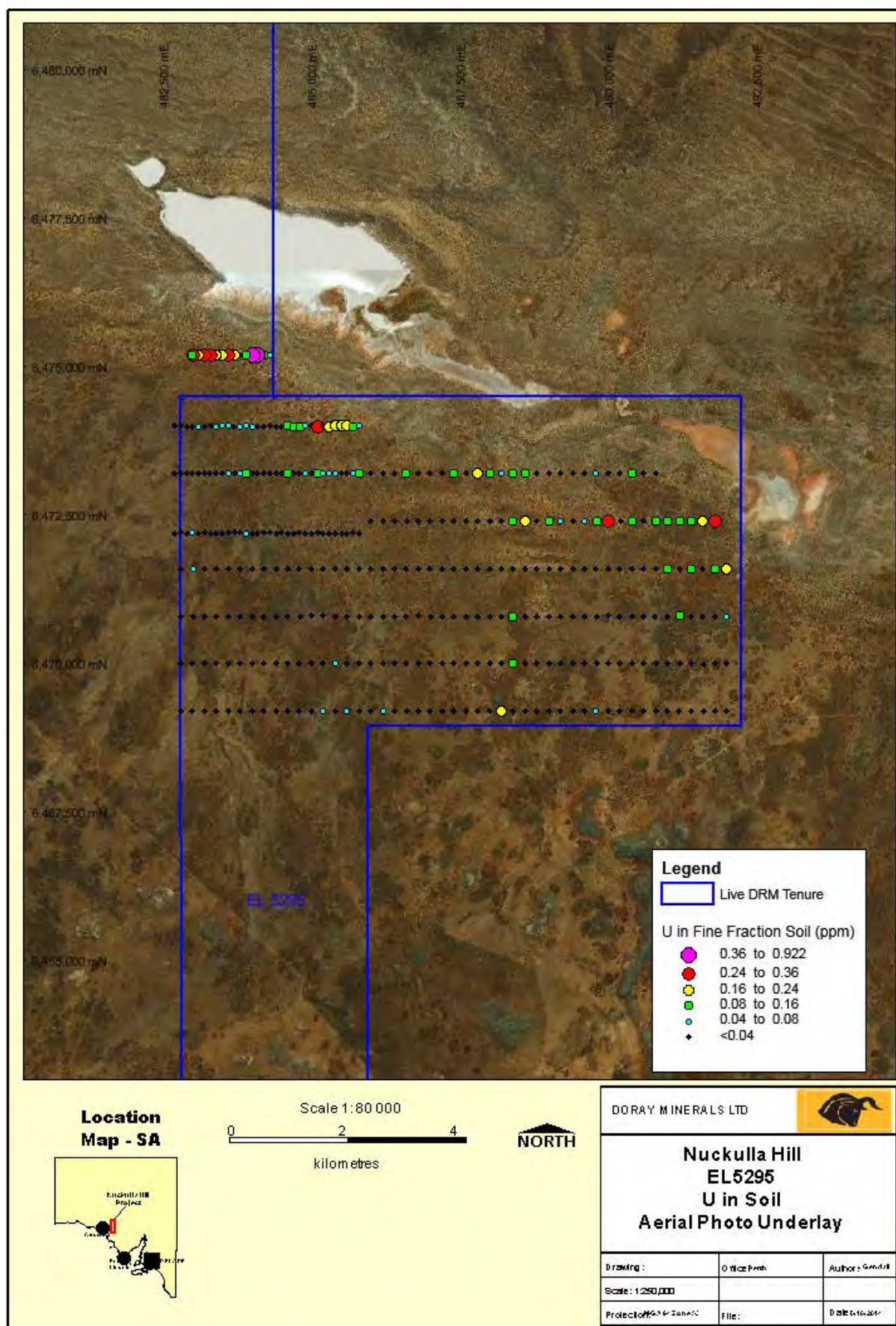


Figure 17: EL5295 Fine Fraction Soil Sampling- U Results

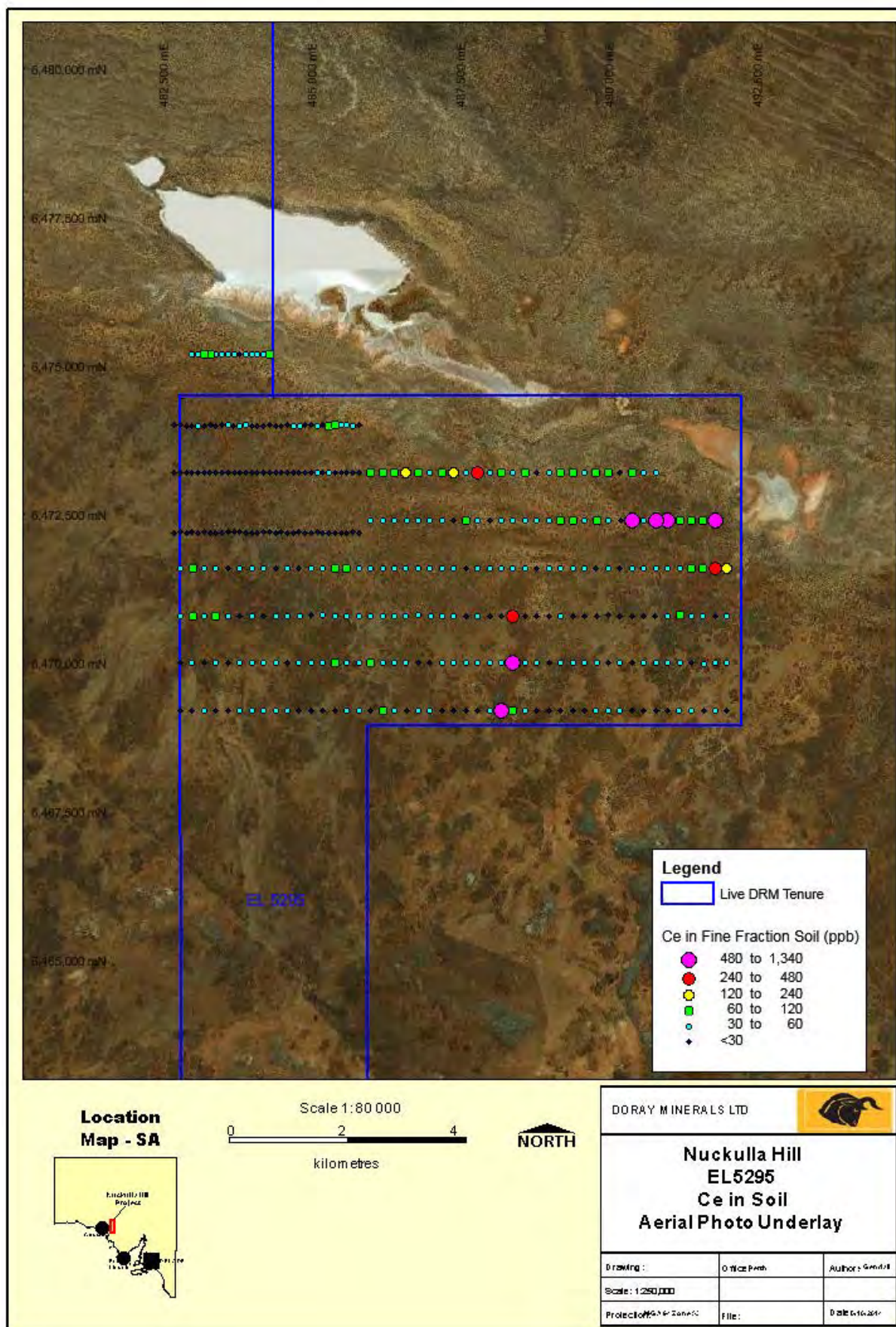


Figure 18: EL5295 Fine Fraction Soil Sampling- Ce Results

c. Targeting and Rationalisation Memorandum

During July, a memorandum summarising all SA targets and tenure was produced in order to rationalise land holding. The recommendations suggested in the memorandum aim to produce quality AC drill targets and reduce land holding of less prospective tenure. The Nuckulla Hill Section of this report can be found in Appendix B.

7. Summary and Recommendations

The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbirinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997. Despite the increase in the gold (and silver) price, the Nuckulla Hill Au-Ag project remains significantly underexplored.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba was identified as a result of exploring only the most obvious calcrete anomalies. A number of structural and geochemical targets, identified in the 2010 magnetic survey and 2012-2014 soil sampling, are yet to be drill tested.

In the upcoming year, Doray plans to complete the following:

- 4500m AC drill program testing the surface anomalism at Bluebush and Mulga Prospects.
- Follow up AC/RC drilling at Bluebush/Mulga dependant on positive AC results.
- Reconnaissance AC drilling of geophysical targets under sand dune cover (EL4846) dependant on gaining all necessary approvals.

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APPENDIX 1

NUK_SASG4_SURF2014A.txt

NUK_Verification_List.txt

APPENDIX 2

Extract from SA Targeting and Project Rationalisation Memorandum

1. Nuckulla Hill

The Nuckulla Hill Au-Ag project, NE of Ceduna, covers over 60km of strike of the mineralised YSZ. It is situated approximately 35km south of the Mungana Gold Mines (72%) and Helix Resources (28%) owned Tunkillia deposit which contains 0.88Moz Au and 2.5Moz Ag (Mungana Gold Mines Ltd. Annual Report 2013). The project consists of 7 exploration licences covering 2050km².

2.1 Geology

The project is located on the western fringe of the Mesoproterozoic Gawler Range Volcanics and includes the YSZ. Local basement geology within the project includes:

- Tunkillia Suite Granitoids (1680Ma) deformed by the N-S trending Mesoproterozoic YSZ, which is thought to be contemporaneous with the Hiltaba granite/GRV event. To the south, the shear zone is intruded by the Hiltaba-age Kondoolka Batholith.
- St Peter/St Francis Suite granitoids (1620Ma) to the west of Tunkillia Suite granitoids. Small amounts of outcrop/subcrop occur in the south of EL4473.
- Hiltaba Suite Granites (1613-1575Ma) which have intruded both Tunkillia Suite granitoids and St Peter/St Francis Suite granitoids in the southern half of the Nuckulla project. Widespread outcropping of this unit occurs on EL4473 and includes the Kondoolka Batholith.
- Gawler Range Volcanics (GRVs) (1597-1589Ma) occur mostly on the eastern edge of the Nuckulla Hill tenement package and outcrop with high topography on the eastern edge on EL4302 and EL5295. The comagmatic GRVs and Hiltaba Suite Granites are thought to be the source for widespread Au-Cu-U mineralisation within the Gawler Craton.

Figure 2 shows basement geology of the Nuckulla Hill Project.

Regolith units vary throughout the project and include Quaternary aeolian sands, Quaternary gypsiferous dunes, Quaternary lacustrine sediments, Pleistocene alluvial/fluvial sediments, outcropping GRVs, outcropping Hiltaba Suite Granites and outcropping St Peter/St Francis Suite granitoids. Figure 3 shows the surface geology of the Nuckulla Hill Project.

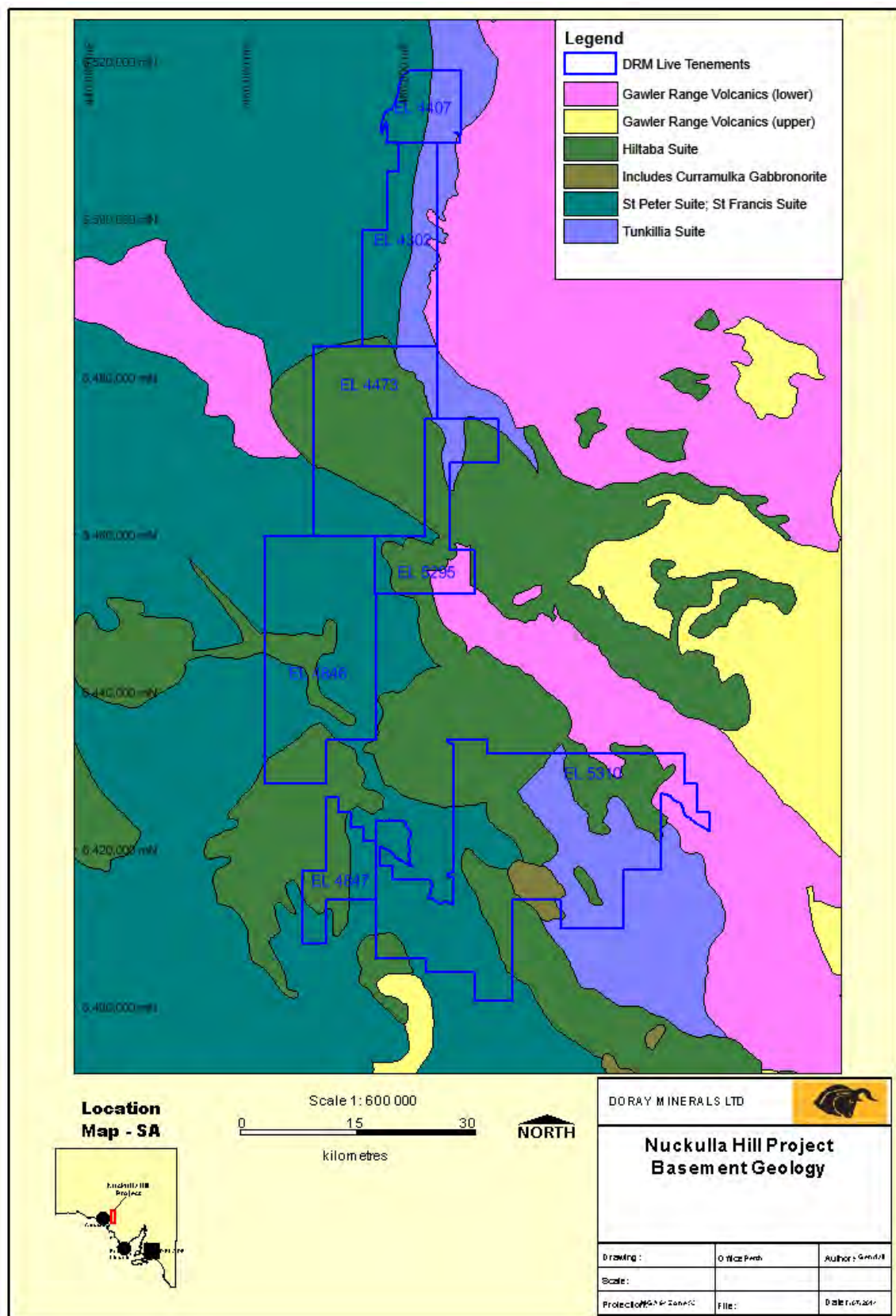


Figure 19: Nuckulla Hill Basement Geology

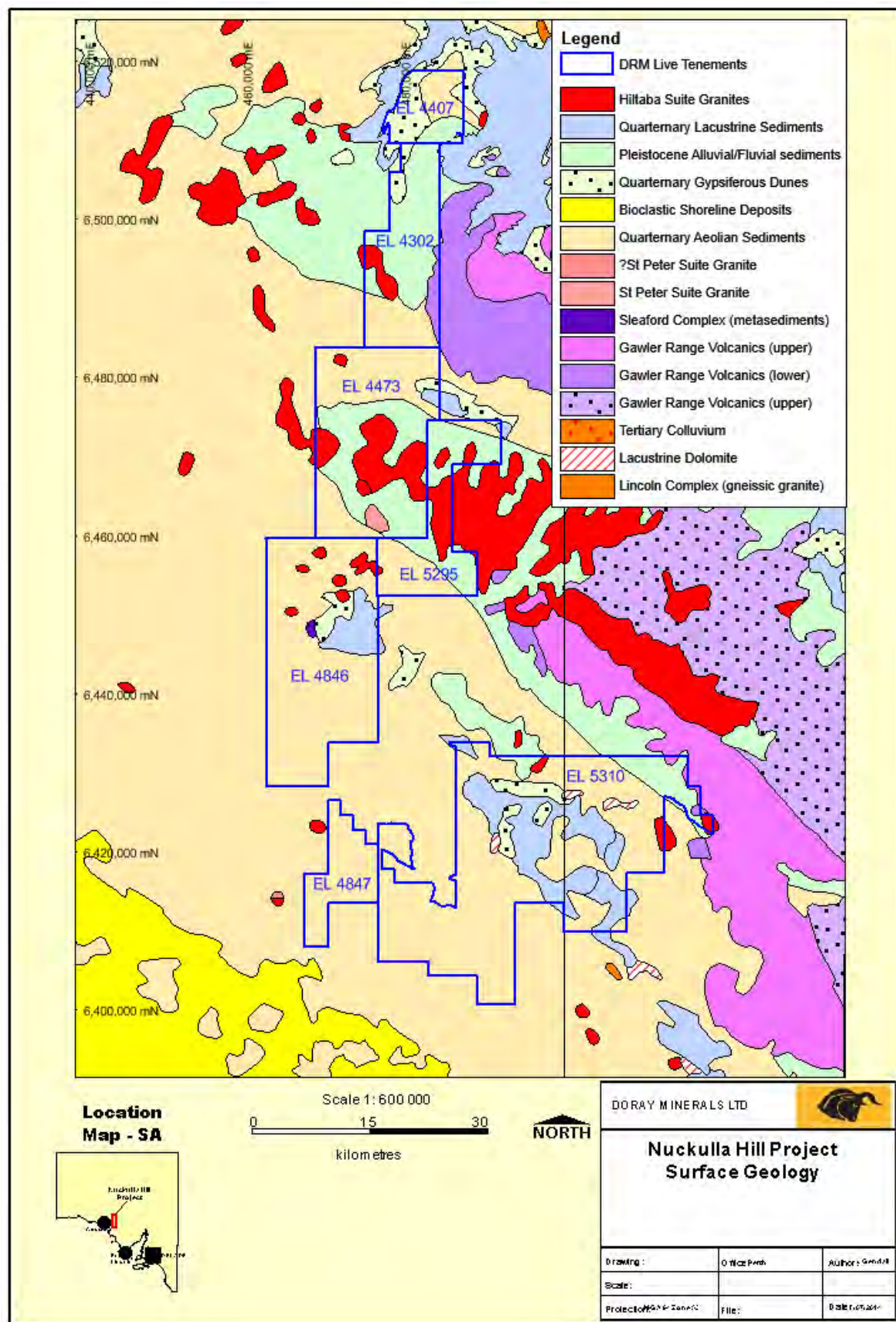


Figure 20: Nuckulla Hill Surface Geology

2.2 Previous Exploration

Despite the now obvious prospectivity of the YSZ, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc.). Most of Equinox's exploration was focussed on what is now EL4302. Table 2 summarises previous exploration.

a. Pre 1995

Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of the South Australian Exploration Initiative (SAEI) aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment, rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childara Outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west.

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m. At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

d. 1997 – 2008

Minotaur farmed into the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCG mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCG targets with PACE funding.

In 2007, Minotaur drilled one line of air core holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form of

analysis of casuarina and bluebush vegetation. The best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH.

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

Licence No.	Reporting Period	Activities
EL 2035	1995	• Data compilation • Rock chip and stream sediment sampling • Mapping • Calcrete sampling • Ground magnetic • Limited RAB drilling
	1996	• Calcrete sampling • RAB/Air core/RC/diamond drilling • Aeromagnetic survey • IP surveys
	1997	• Calcrete sampling • RAB/Air core/RC drilling • mapping
	1998	• no field work
	1999	• ground magnetic survey
EL 2761	2000	• no field work
	2001	• no field work
	2002	• auger sampling
	2003	• no field work
	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Air core drilling • Biogeochemical sampling
	2008	• No field work

Table 3: Summary of previous exploration over the Nuckulla Hill Project

2.3 Previous Doray Minerals Exploration

- *Data compilation and review*

Data compilation and review revealed structural targets that had not been adequately tested by drilling or calcrete sampling.

- *Aeromagnetic Survey*

Doray contracted UTS in 2010 to complete a detailed, 100m spaced aeromagnetic survey over EL4302, EL4407 and EL4473. The survey was flown at an average sensor height of 40m on lines orientated 090-270°, with tie lines spaced at 1000m. Radiometric and digital terrain data was also collected as part of the survey.

- *Petrographic Analysis*

A petrology report was completed for 13 outcrop and drill samples by Doug Mason Geoscience. 10 rock samples were taken from the Lakeside Outcrop, 2 drill samples were taken from historic drill hole NH07A05 and 1 drill chip sample was taken from historic RC hole NHRC12 located at the Bimba prospect.

- *Fine Fraction Soil Sampling*

3320 fine fraction soil samples have been collected from the Nuckulla Project since orientation surface sampling began in 2012.

- *Bimba AC and RC drilling*

Between 26/06/2013 and 9/08/2013 Doray Minerals Ltd completed 5 RC holes and 2 failed collars for 1106m of RC drilling, as well as 42 Air Core holes for 1877m.

Three RC holes were designed to test the down dip and along strike continuity of the Bimba prospect, identified by Equinox Resources in the mid 1990's. One of the best historic intercepts at the Bimba Prospect is 24m @ 1.0g/t Au (incl. 8m @ 1.8g/t Au) from 122m – 146m. One RC hole tested the down dip continuity from this intercept.

Two RC holes were planned to test a parallel structure to the west of Bimba defined by the 2010 aeromagnetic survey. This structure coincided with high Pb anomalism (up to 1950ppm) in historic AC holes.

Two Air Core style lines were completed by the same RC rig to test a large dilational shear zone north of the Bimba prospect with the potential to host significant Au mineralisation beneath transported cover.

RC drilling of the Bimba prospect confirmed the continuity of a mineralised structure; however Au grades were sub economic with a best intercept in BIRC006 of 28m @ 0.58g/t Au from 144m (including 16m @ 0.72g/t from 156m).

From AC drilling, no significant assays were received; however, due to the program being cut short, two soil anomalies revealed from recent sampling were not tested by the drilling.

2.4 Targeting

The Nuckulla Project has a wide range of geochemical, geophysical and drill tested targets. Targeting has been separated by tenement for ease of reading.

EL4407

EL4407 is covered mostly by Aeolian sediments and salt lakes. The tenement has been thoroughly calcrete sampled by both hand tool and auger methods without revealing significant anomalism. However on closer inspection, many of the calcrete assays returned $\text{Ca} < 10\%$ indicating calcrete may have been an ineffective sampling medium.

One line of historic drilling exists on the tenement. NH07A05 intercepted 3m @ 0.38 g/t Au from 52m to EOH (Figure 4). From aeromagnetic imaging, this drill hole is interpreted to be within the YSZ. Petrographic analysis conducted on two rock chip samples from NH07A05 determined the rock type to be very similar to petrology conducted on Bimba prospect RC chips, confirming the assumption that the YSZ contains multiple mineralised zones to the north and south of previously identified and drilled prospects (Myall, Bimba and Sheoak).

Follow up AC drilling of the NH07A05 intercept is recommended. Follow up drilling would consist of two 1km AC lines with drill spacing every 50m resulting in approximately 2000 drill metres.

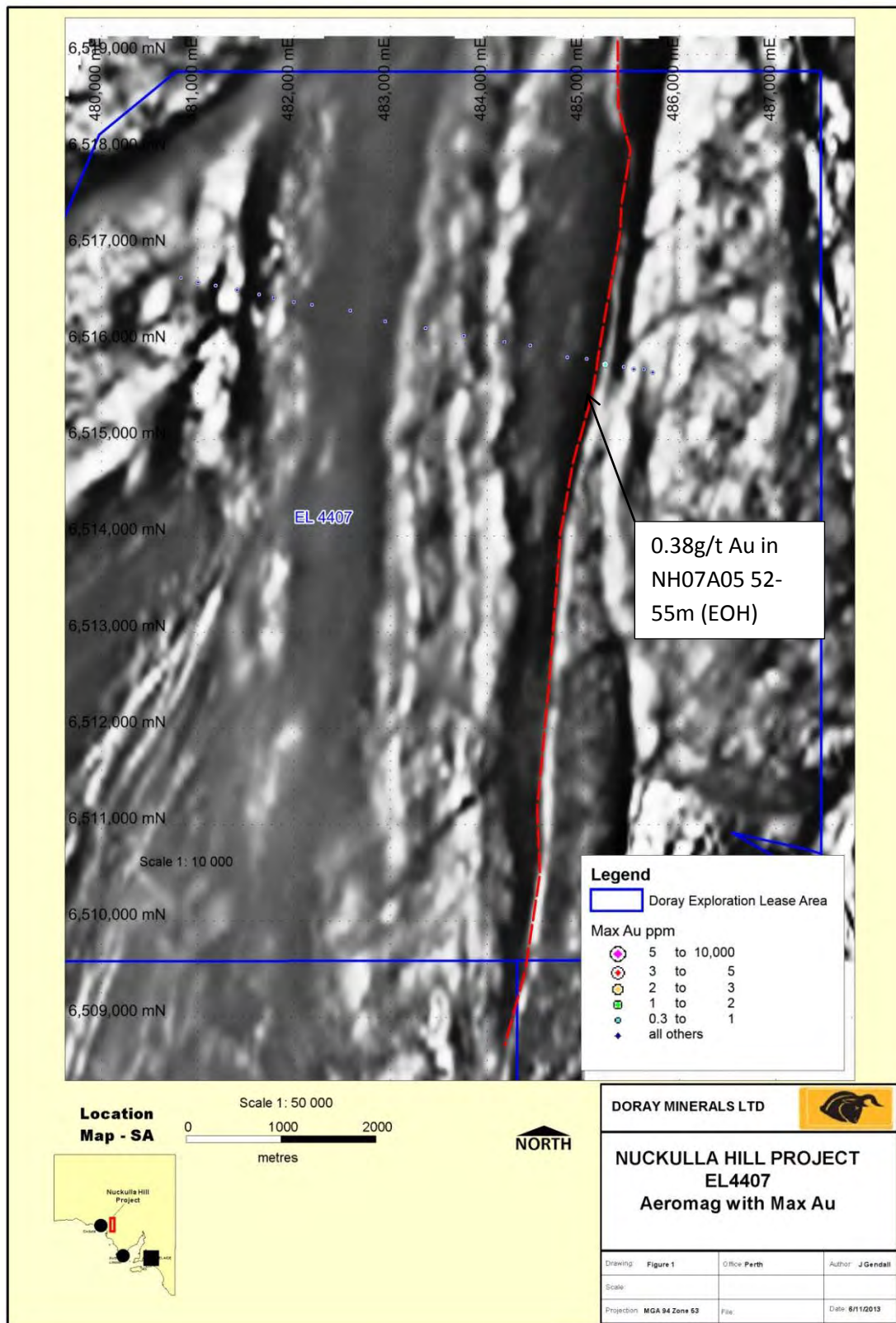


Figure 21: EL4407 Historic Drilling Intercept

EL4302

EL4302 has been the site of most historical exploration by Equinox resources in the mid 1990's. Systematic drill testing of three calcrete anomalies (Bimba, Myall and Sheoak) revealed widespread

Au anomalism associated with the YSZ. Unfortunately down dip drill intersections showed inconsistent and/or diminishing Au grades.

Approximately $\frac{3}{4}$ of EL4302 is covered by colluvium suitable for fine fraction soil sampling. Fine fraction soil sampling was completed by DRM across all amenable areas and assays have now been received. Surface sampling has revealed several new soil anomalies not picked up by historic, wide spaced calcrete sampling. These occur to the east of the demagnetised YSZ. Aeromagnetic imaging completed by DRM in 2010 shows many complex structures to the east of the YSZ capable of containing significant Au. Following the completion of infill sampling, it is proposed that robust geochemical anomalism is tested with AC drilling (Figures 5 and 6).

[EL4473](#)

The surface of EL4473 consists of outcropping Hiltaba Suite Granites, Aeolian dune sands, and colluvial cover. From aeromagnetic imaging it is interpreted that the majority of basement rocks are Hiltaba Suite Granites, with some sheared St Peter/St Francis Suite Granites in the south, and possibly some Tunkillia Suite Granites in the northeast. DRM and historical rock chip sampling of outcropping granites throughout the tenement have returned maximum values of 5ppb Au. Targeted DRM fine fraction soil sampling revealed no significant anomalism.

EL4473 offers little in the way of targets and it is recommended that the western portion of the tenement, which contains a lot of outcropping granite and dune sands, is relinquished or transferred to the ZZ Top project (Figure 7). The eastern side of the tenement should be kept for project continuity.

[EL5295](#)

The surface of EL5295 consists of colluvial cover amenable to fine fraction soil sampling, outcropping granites and GRV's. Basement rocks are interpreted from aeromagnetic imaging to be Hiltaba Suite Granites, GRV's and possibly some Tunkillia Suite Granites (in the north of the tenement). Assays of fine fraction soil sampling completed across the north of EL5295 are due in mid august (Figure 8).

It is recommended the south of the tenement where outcropping GRVs and Hiltaba Suite Granites are pervasive is relinquished (Figure 9). The north of the tenements future is dependant of soil sampling results due mid august.

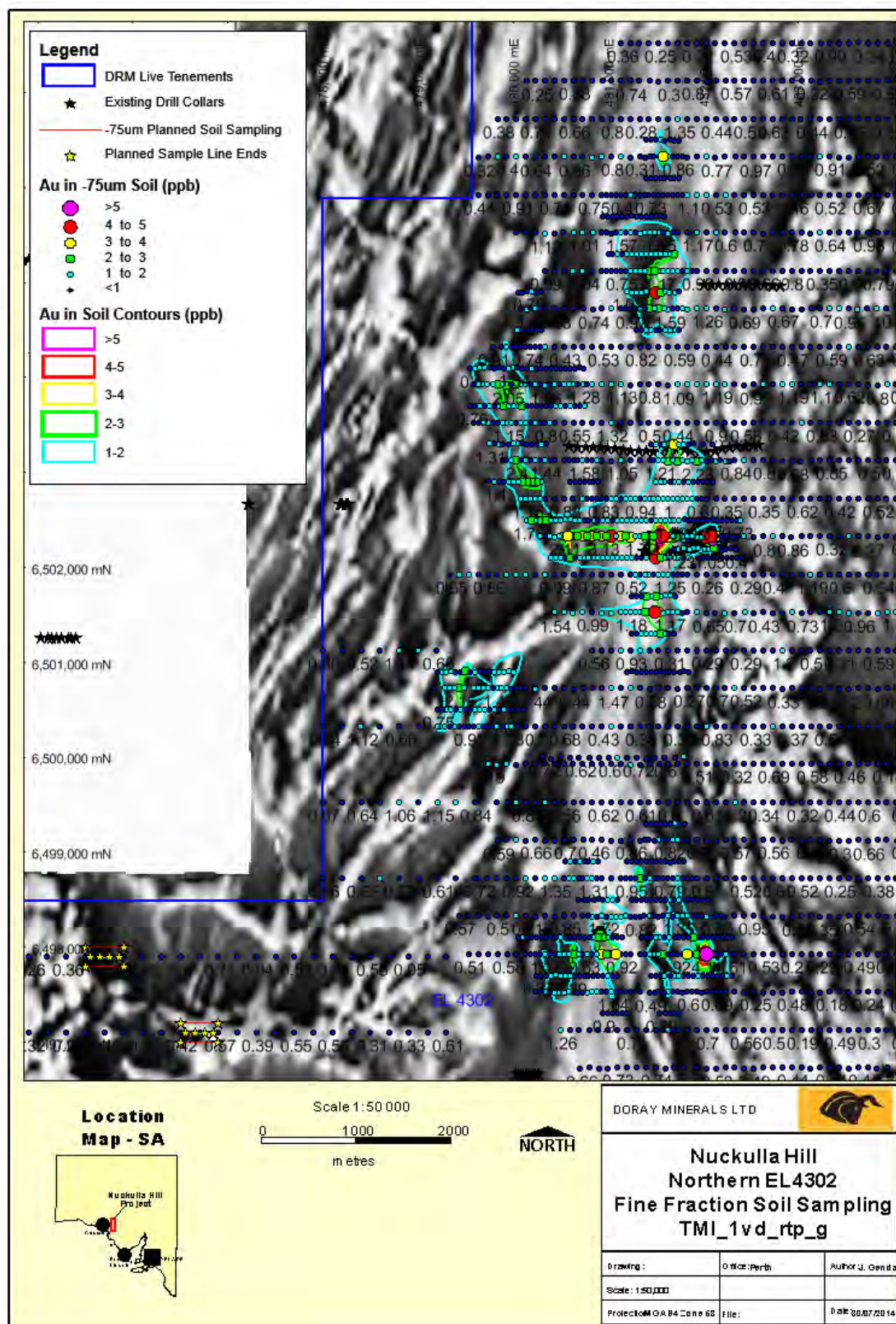


Figure 22: EL4302 Fine Fraction Soil Sampling Results (North)

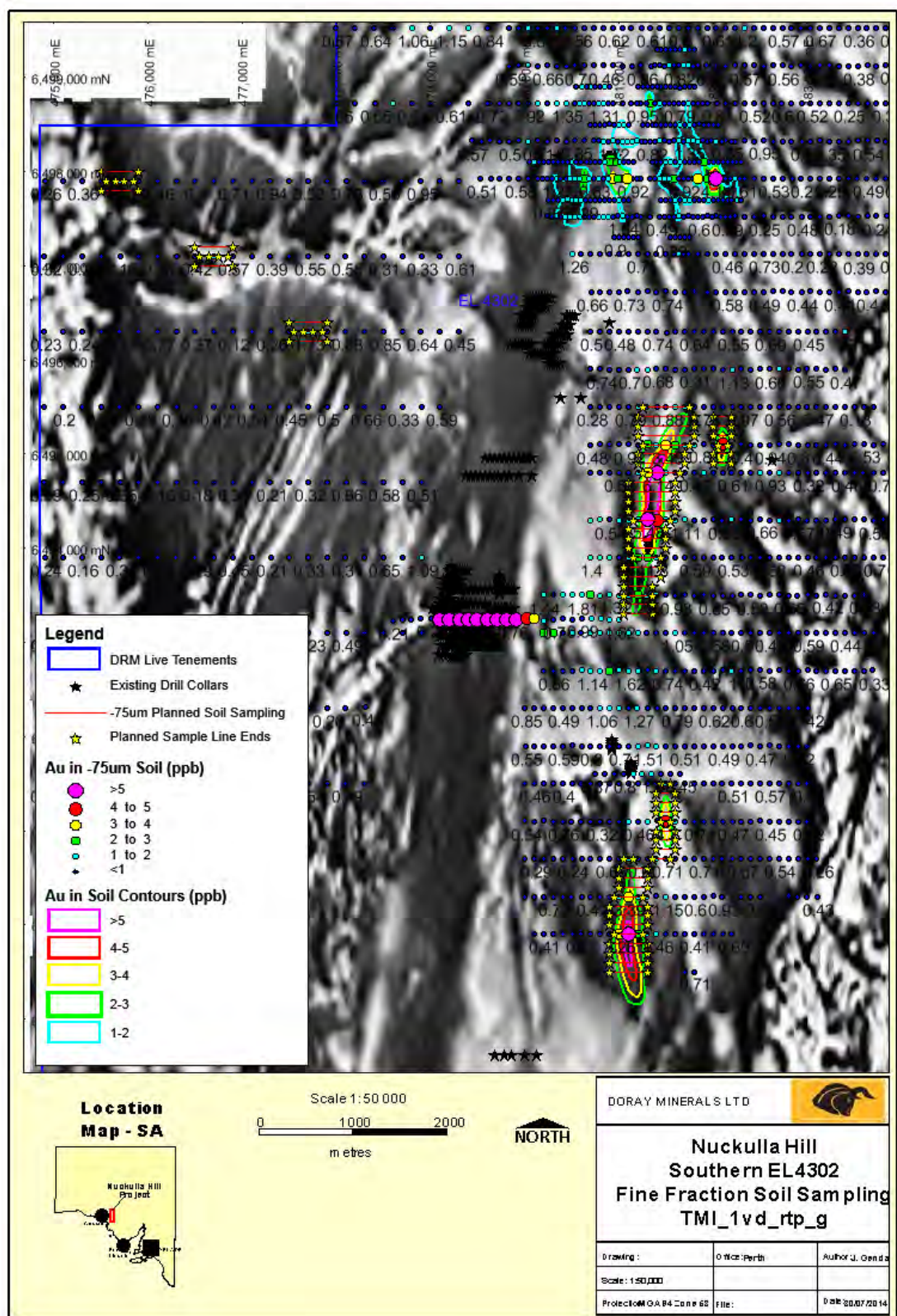


Figure 23: EL4302 Fine Fraction Soil Sampling Results (South)

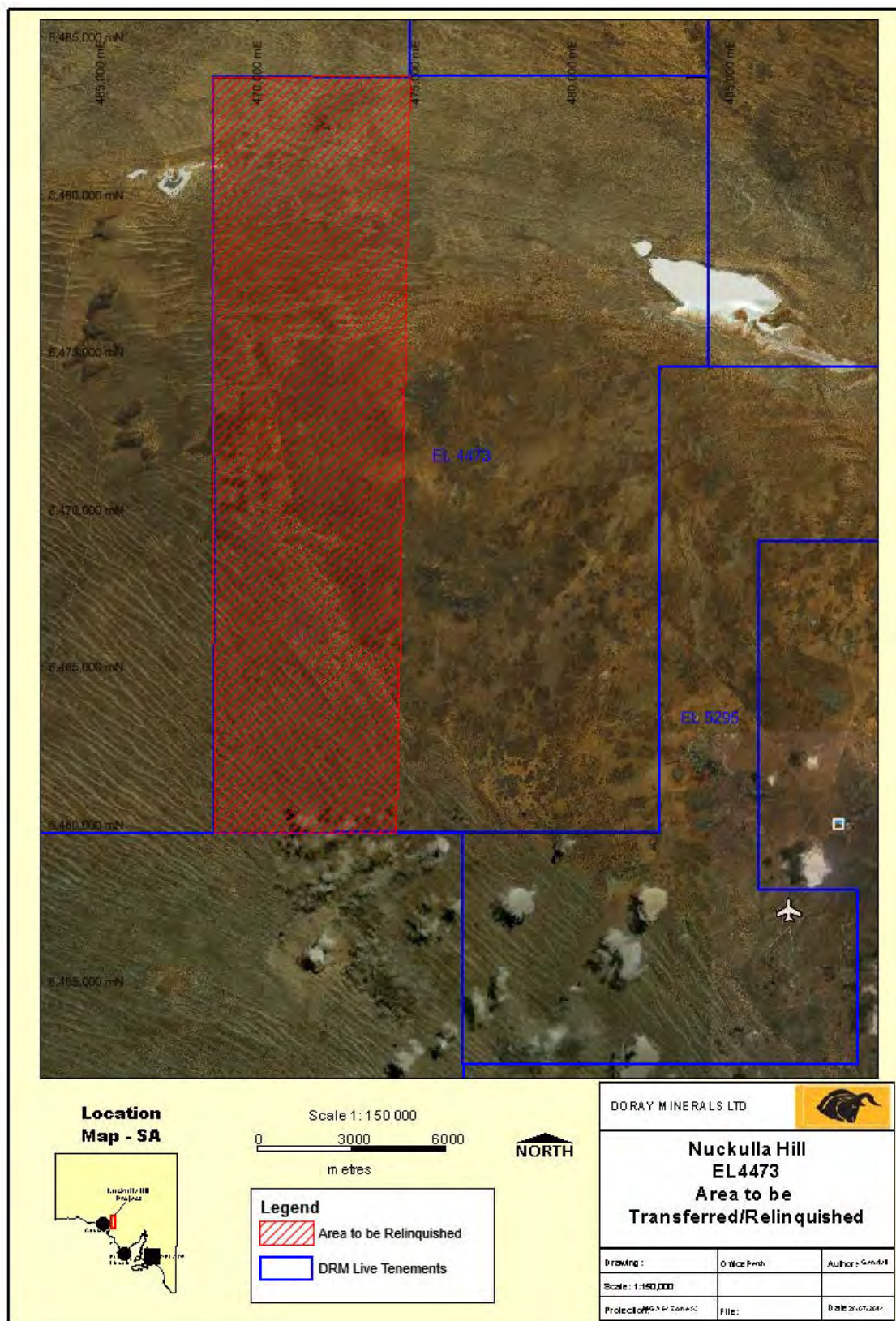


Figure 24: EL4473- Area to be Relinquished

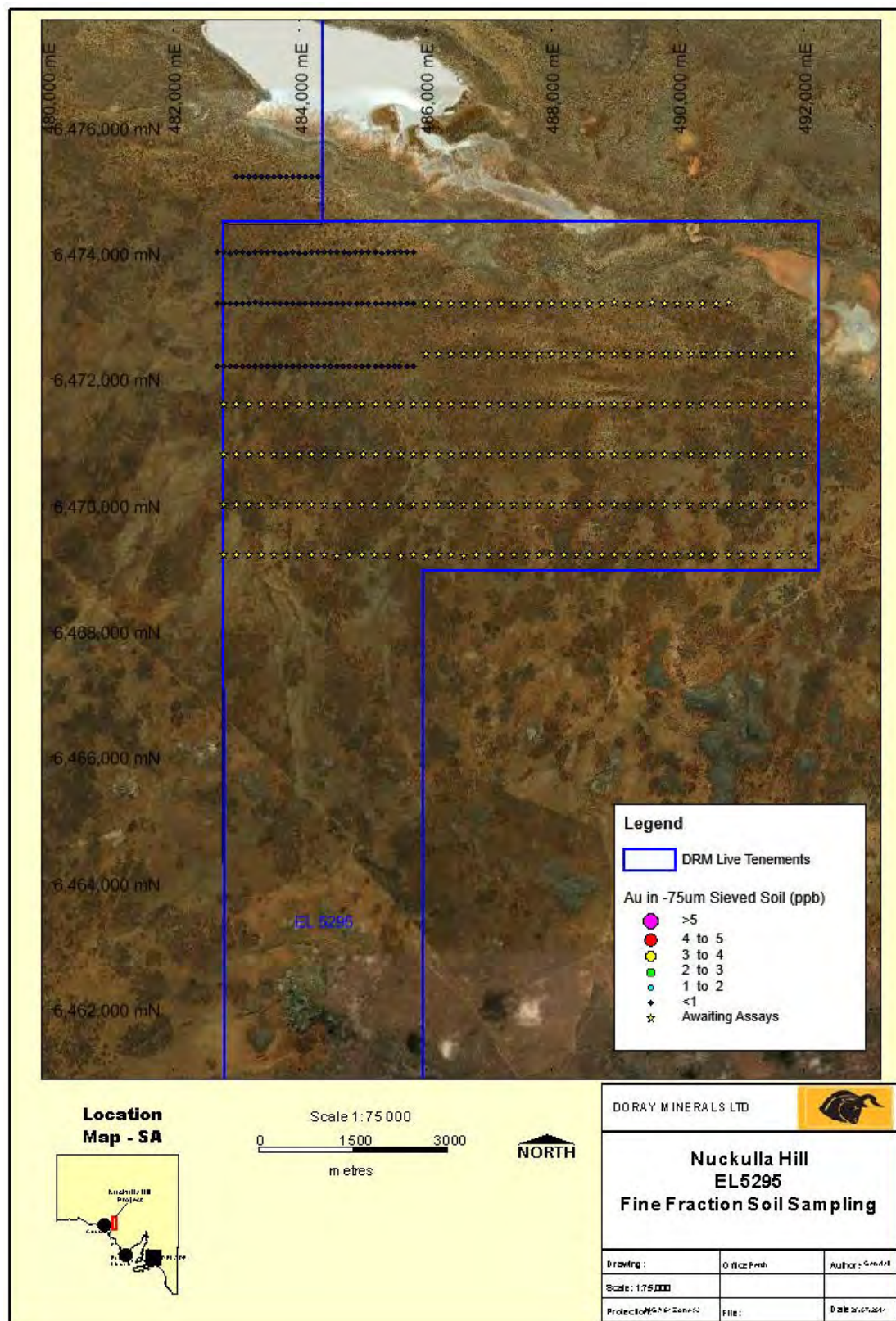


Figure 25: EL5295 Fine Fraction Soil Sampling- Awaiting Assays

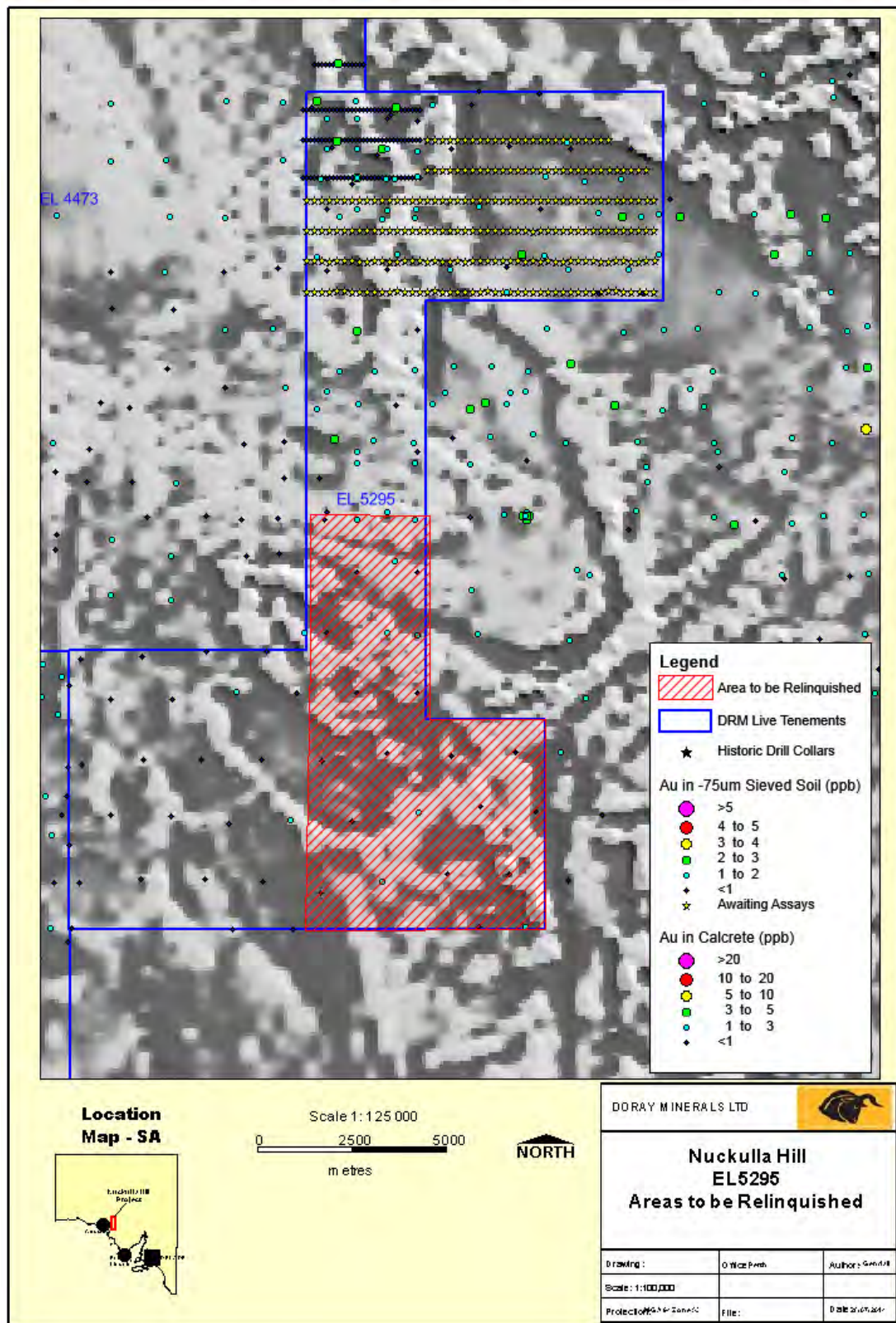


Figure 26: EL5295 Area to be Relinquished

EL4846

EL4846 is covered almost entirely by Aeolian dunes and salt lakes. Basement geology is interpreted to be St Peter/St Francis Suite Granites and Hiltaba Suite Granites. In aeromagnetic imaging, a major

intersection of regional structures can be seen in the south of the tenement. Only one line of RAB drilling has been completed within the vicinity of this junction, with a drill hole spacing of over 2.5km. Due to dune cover, the area remains significantly under explored. Although the junction of these regional structures lies in a conservation area, the area represents a quality geophysical target (Figure 10). EL4846 may be best combined into the ZZ Top project for future drilling.

EL4847

EL4847 is located within agricultural land. Historical exploration consisted of calcrete sampling on approximately a 1x1km grid with any significant Au results infill sampled. No significant Au targets were produced from this exploration (Figure 11). A few structures are visible on regional aeromagnetic imaging and there may be potential for EL4847 to be transferred to ZZ Top Project. If EL4847 is deemed inappropriate for the ZZ Top Project, it is recommended the tenement is relinquished.

EL5310

A large portion of EL5310 is covered by salt lakes and the remainder is mostly covered with sand dunes. Because of this, little exploration has been completed over the tenement area (Figure 12). There are many structures visible in regional aeromagnetic imaging, some of which may be worthy of drill testing. Considering the widespread sand dune and lake sediment cover found across the tenement, EL5310 is more suited for transfer to the ZZ Top Project. Should it be deemed unsuitable for ZZ Top it is recommended that either tenement size is reduced by eliminating salt lake areas or the entire tenement is relinquished.

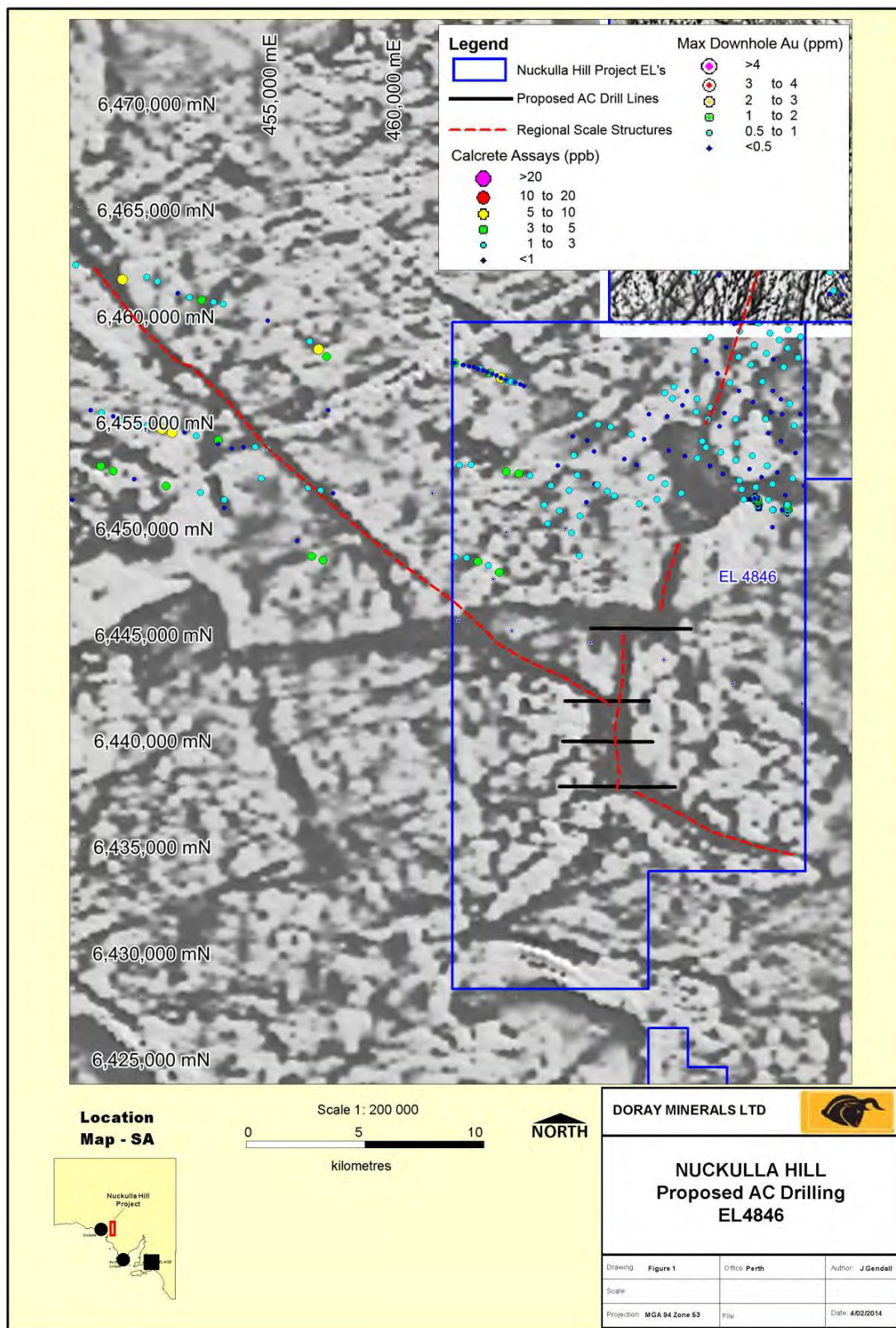


Figure 27: EL4846- Proposed Drilling

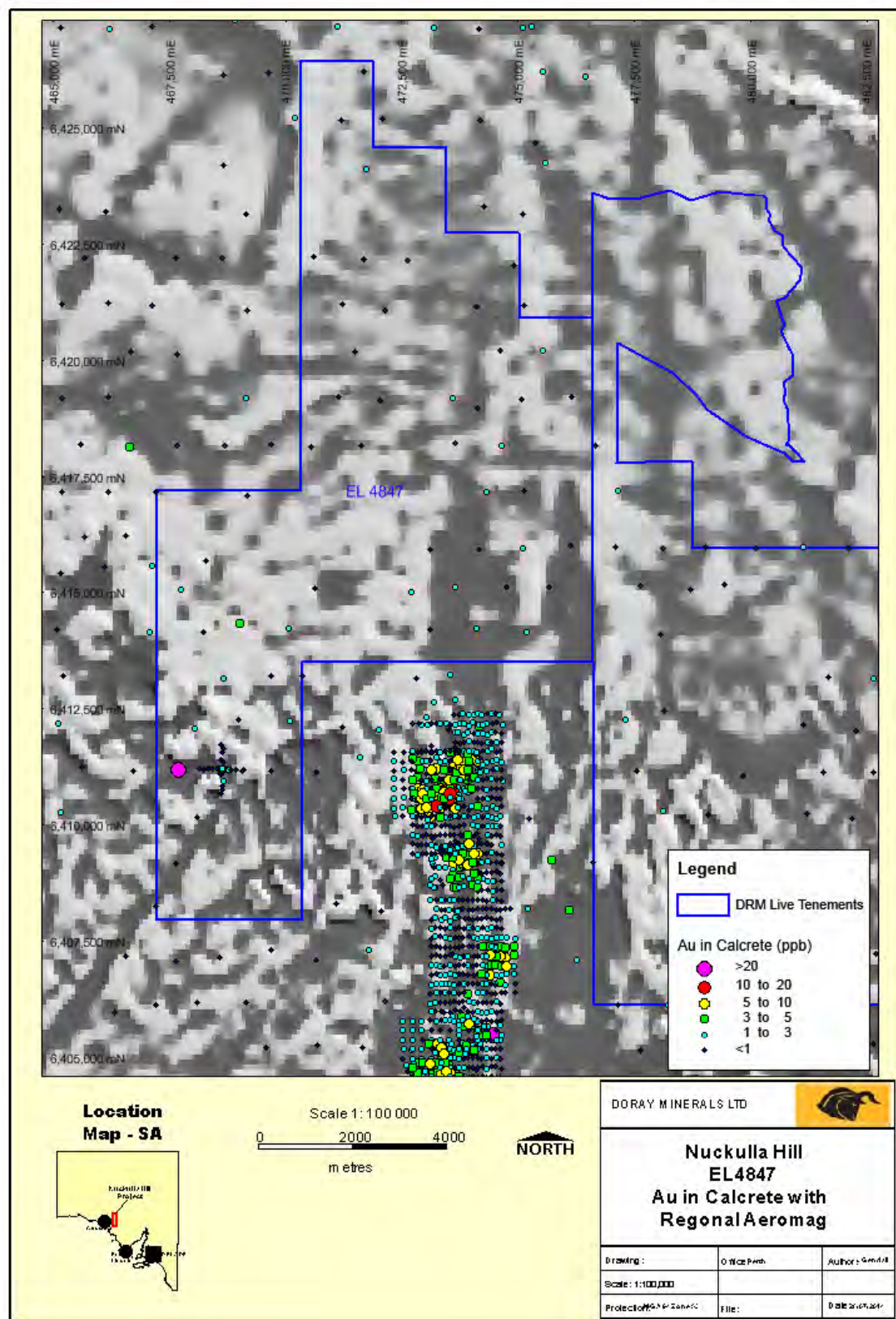


Figure 28: EL4847- Historic Calcrete Sampling

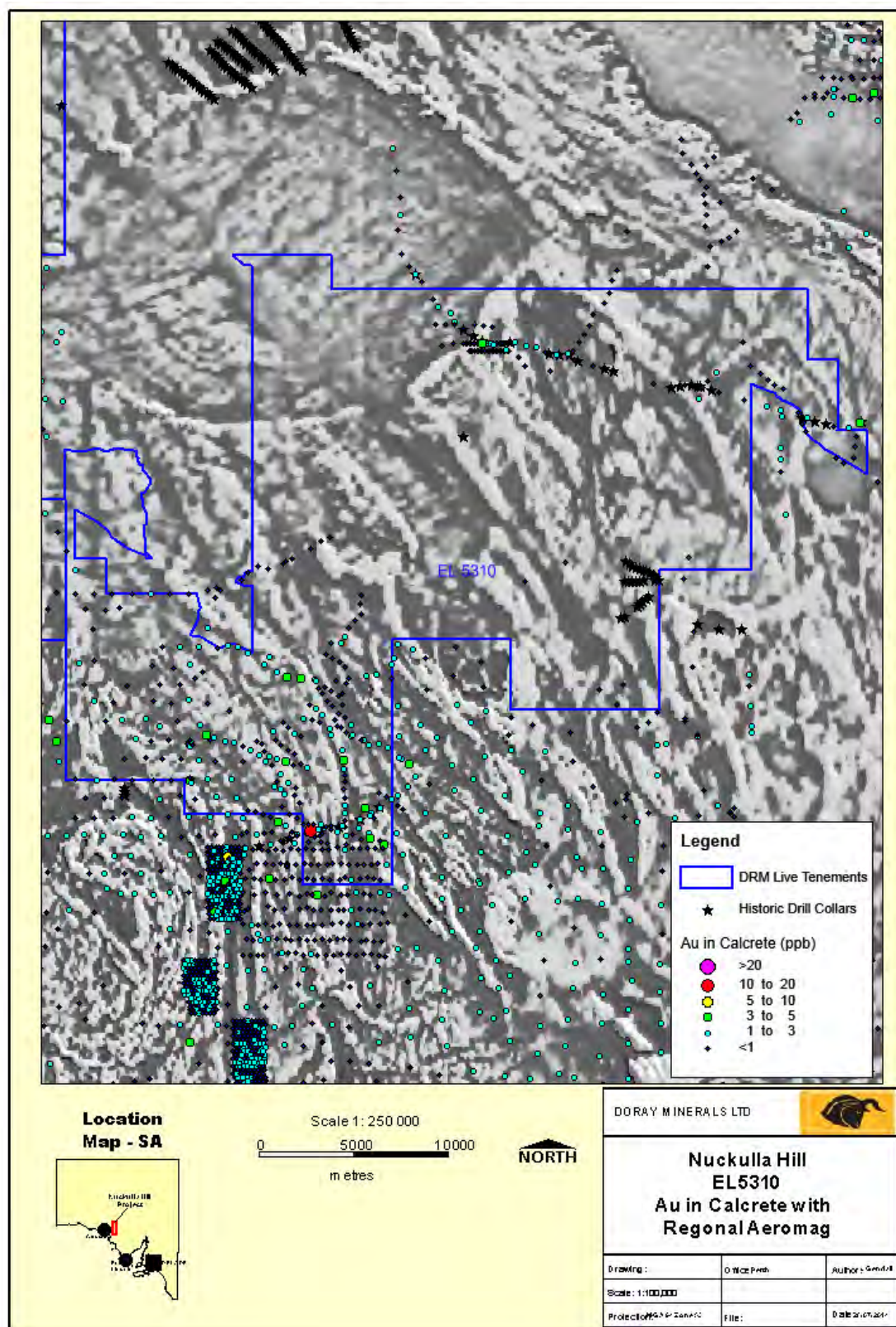


Figure 29: EL5310- Historic Drilling and Calcrete Sampling

Nuckulla Hill Project Summary

The table below summarises the targets, future exploration work and the costs involved in continuing exploration of the Nuckulla Hill Project.

	Robust Targets	Exploration Work	Approximate Costs
EL4407	0.38g/t Au in NH07A05 52-55m (EOH). Potential for significant Au hosted in YSZ.	2 x 1km AC drill lines with 50m spacing for approximately 2000m AC drill metres. Or prepare for tenement reduction/relinquishment.	\$60,000 Drilling \$16,700 Assays \$76,700 Total
EL4302	Coincident fine fraction soil anomalism and structures from aeromagnetic imaging.	- 250 infill soil samples - 2000m follow up AC drilling	\$8,000 Surface assays \$60,000 Drilling \$16,700 Drill assays \$84,700 Total
EL4473	No current targets	Prepare for tenement reduction/relinquishment.	N/A
EL5295	Awaiting soil sampling results of northern area.	Waiting for soil assays then prepare for tenement reduction/relinquishment.	N/A
EL4846	Junction of regional structures seen in aeromagnetic imaging.	- Detailed aeromagnetic survey totalling 4200 line km - 5000m AC drill metres - Transfer to ZZ Top Project?	\$50,000 Amag Survey \$150,000 Drilling \$41,000 Drill assays \$241,000 Total
EL4847	No current targets	Transfer to ZZ Top Project or prepare for relinquishment.	N/A
EL5310	No current targets	Transfer to ZZ Top Project or prepare for reduction (salt lakes)/relinquishment.	N/A
			Total Cost = \$402,400

Table 3: Nuckulla Hill Project Summary and Costs

All work is not within the 2013/2014 budget and some prioritising will have to occur. A discussion about the transfer of tenements to the ZZ Top Project vs. reduction and/or relinquishment is also required.

NUCKULLA HILL GOLD PROJECT

EXPLORATION LICENSES 5466, 5552, 5664, 4846, 4847, 5295, 5310

ANNUAL REPORT FOR PERIOD 25th AUG 2014 TO 24th AUG 2015

**Rebecca Klein
Senior Exploration Geologist
Doray Minerals Ltd
November, 2015**

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Summary

- Nuckulla Hill Project consists of seven Exploration Licences (ELs) 5466, 5552, 5664, 4846, 4847, 5295 and 5310.
- Previous work has outlined significant gold mineralisation at multiple prospects.
- AC drilling on EL5466 was completed to target calcrete/soil sampling Au anomalies previously discovered.
- Rehabilitation of EL5466 after AC drilling

1. Introduction

The Nuckulla Hill Au-Ag project is located approximately 115km NE of Ceduna in South Australia and covers approximately 60km of strike of the mineralised Yarlbrinda Shear Zone, approximately 35km south of Tunkillia (0.8M oz Au, 1.6M oz Ag). The project consists of seven exploration licences covering 2050km².

During the reporting period, Doray Minerals Ltd completed a heritage survey for the reporting periods AC drilling, an AC drilling program totaling 4648m from 93 holes was completed across 7 lines to test the geochemical anomalism at the Bluebush and Mulga Prospects in EL5466 and rehabilitation of these and previously drilled areas in tenement EL5466.

2. Location

The Nuckulla Hill Au-Ag project is located within the Central Gawler Gold Province, 115km NE of Ceduna in South Australia (Figure 1). The project area covers approximately 60km of the Yarlbrinda Shear Zone, approximately 36km south of the Tunkillia gold-silver deposit (10.5Mt @ 2.2g/t Au).

The project consists of seven Exploration Licences as follows:

Licence	Area (sq. km)	Grant Date	Expiry Date
EL 5466	204	25/08/2014	24/08/2016
EL 5552	81	24/12/2014	23/12/2016
EL 5664	233	27/04/2015	26/04/2017
EL 4846	409	18/04/2012	17/04/2016
EL 4847	93	18/04/2012	17/04/2016
EL 5295	47	27/06/2015	26/06/2017
EL 5310	367	24/07/2015	23/07/2017
TOTAL	1,434		

Table 1: Tenement Summary

Access to the area is via station tracks and varies from excellent to poor. Access is especially difficult in areas dominated with NW-SE trending sand dunes, which can be over 10m high.

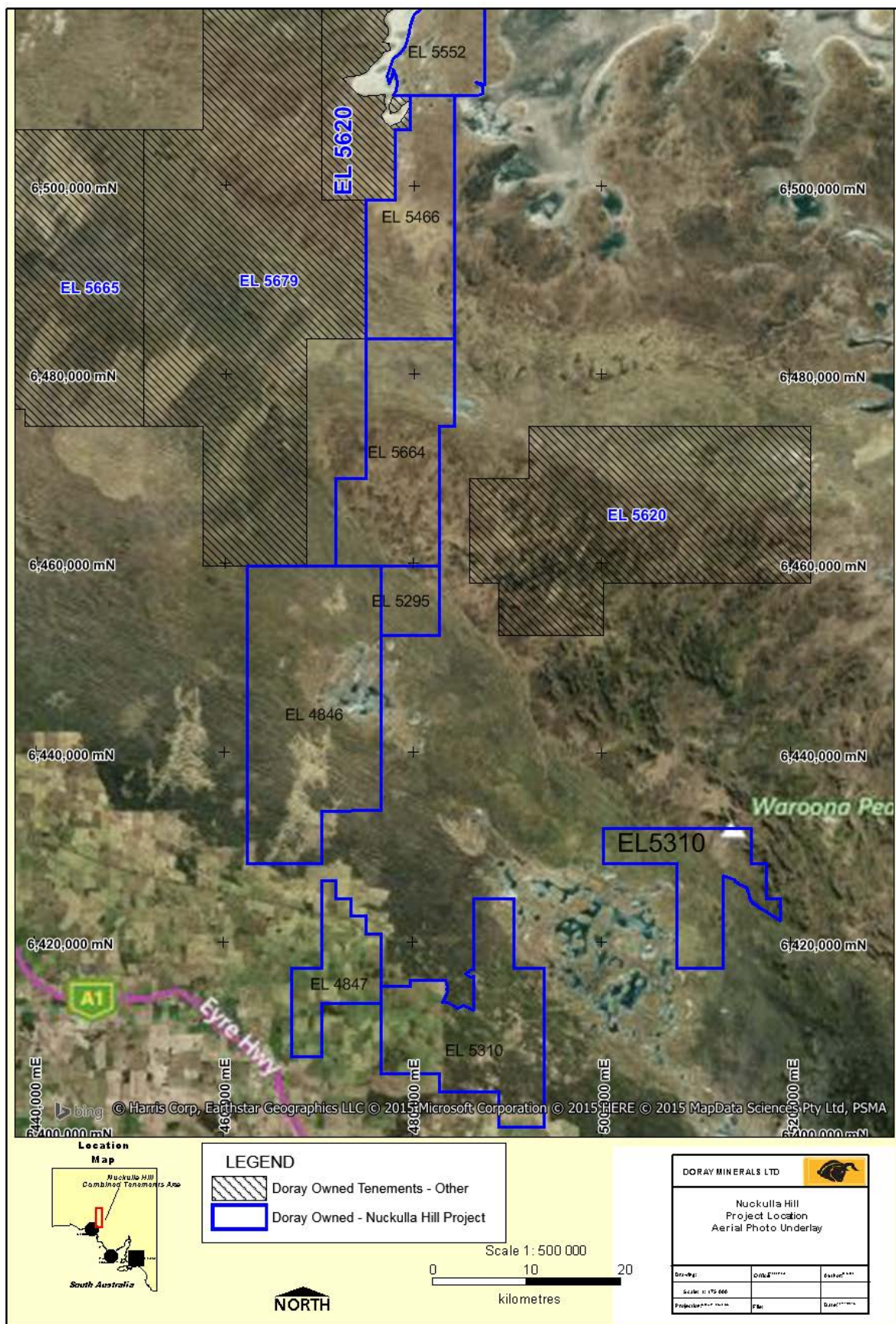


Figure 1: Nuckulla Hill Project Location

3. Regional Geology

The project is located on the western fringe of the Mesoproterozoic Gawler Range Volcanics and includes the YSZ. Local basement geology within the project includes:

- Tunkillia Suite Granitoids (1680Ma) deformed by the N-S trending Mesoproterozoic YSZ, which is thought to be contemporaneous with the Hiltaba granite/GRV event. To the south, the shear zone is intruded by the Hiltaba-age Kondoolka Batholith.
- St Peter/St Francis Suite granitoids (1620Ma) to the west of Tunkillia Suite granitoids. Small amounts of outcrop/subcrop occur in the south of EL4473.
- Hiltaba Suite Granites (1613-1575Ma) which have intruded both Tunkillia Suite granitoids and St Peter/St Francis Suite granitoids in the southern half of the Nuckulla project. Widespread outcropping of this unit occurs on EL4473 and includes the Kondoolka Batholith.
- Gawler Range Volcanics (GRVs) (1597-1589Ma) occur mostly on the eastern edge of the Nuckulla Hill tenement package and outcrop with high topography on the eastern edge on EL4302 and EL5295. The comagmatic GRVs and Hiltaba Suite Granites are thought to be the source for widespread Au-Cu-U mineralisation within the Gawler Craton.

Figure 2 shows basement geology of the Nuckulla Hill Project.

Regolith units vary throughout the project and include Quaternary aeolian sands, Quaternary gypsiferous dunes, Quaternary lacustrine sediments, Pleistocene alluvial/fluvial sediments, outcropping GRVs, outcropping Hiltaba Suite Granites and outcropping St Peter/St Francis Suite granitoids. Figure 3 shows the surface geology of the Nuckulla Hill Project.

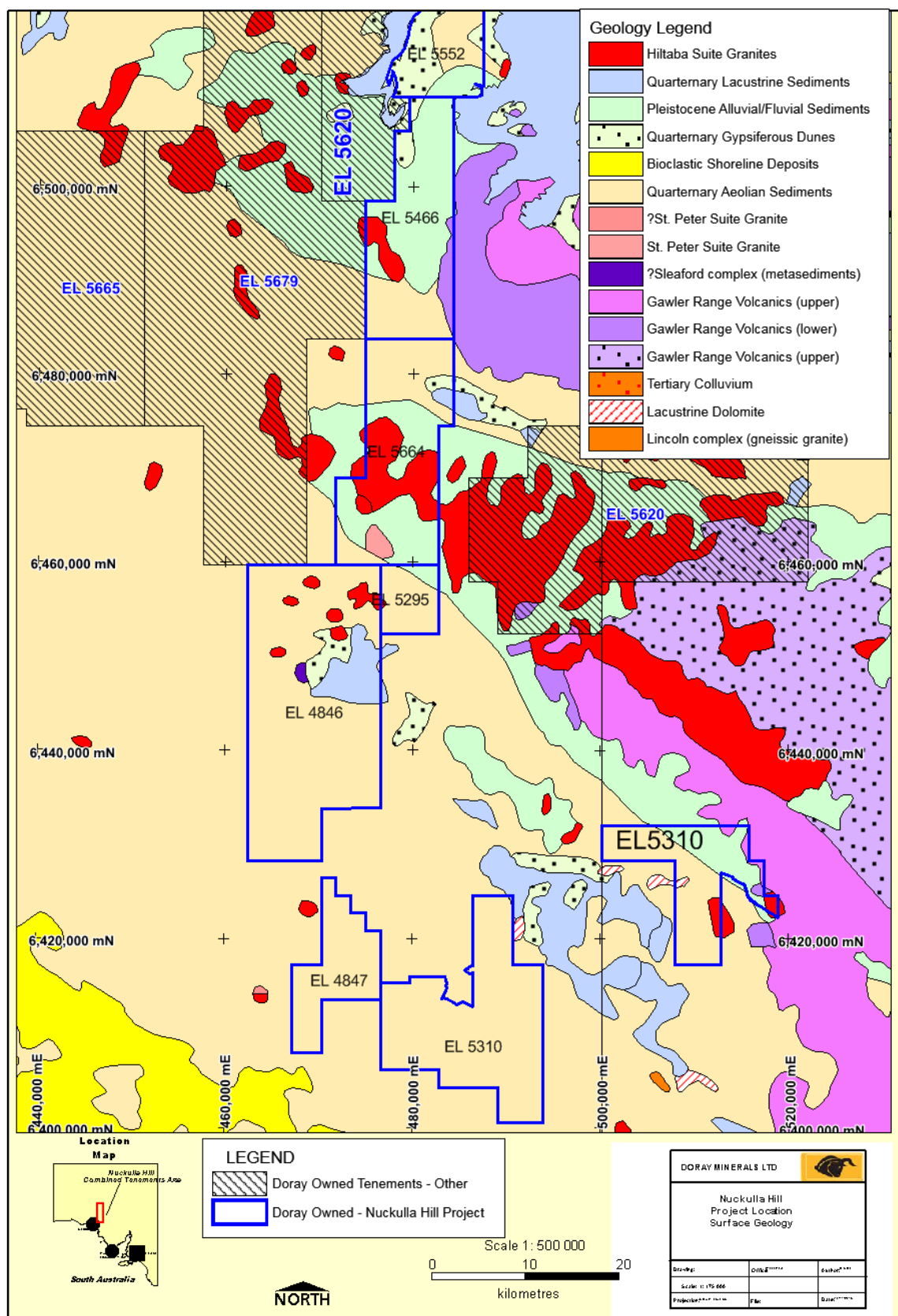


Figure 2: Nuckulla Hill Project Surface Geology

4. Previous Exploration

Despite the now obvious prospectivity of the Yarlbirinda Shear Zone, the Nuckulla Hill project has had a limited exploration history, especially in the last 10 years.

Most previous work at Nuckulla Hill was completed by Equinox during the mid-late 1990's, along with numerous other explorers in the Gawler Craton during which a number of new gold prospects were discovered (Challenger, Tunkillia etc.). Table 2, below, summarises the previous exploration

a. Pre 1995

A good summary is presented in van der Steldt and Parker (1995). Previous exploration had been sporadic and limited, due to the lack of outcrop in the area and the perceived low prospectivity of the Gawler Range Volcanics. Exploration programmes for uranium, base metals and mineral sands were all carried out in the project area prior to 1995.

b. 1995 – 1997

During 1995, detailed interpretation of SAEI aeromagnetic data and review of existing open file information, including drill core, were undertaken by Equinox. Stream sediment and rock chip sampling and reconnaissance geological mapping were completed in the Gawler Ranges east of Childara outstation and regional calcrete sampling including reconnaissance auger sampling was completed to the west (van der Stelt & Parker, 1995).

In November-December 1995, two significant calcrete gold anomalies were identified at Sheoak and Myall. These were immediately drill tested and gold mineralisation was discovered in both areas at a depth of about 40m (Parker & van der Steldt, 1996; Parker et al, 1997). At Sheoak, the best bottom-hole gold intercept was 7m @ 3.1g/t Au including 1m @ 9.61g/t Au (EOH). These results were announced to the Australian Stock Exchange in January 1996.

In July 1996, Equinox flew a detailed 100-200m spaced aeromagnetic survey over the Sheoak and Myall prospect areas. Subsequent work also included an extensive soil sampling programme and follow-up drilling resulting in the highlighting of several other prospects including Bimba and Bimba North.

Phelps Dodge withdrew from the project in 1997. Subsequently, Equinox completed only minimal work, including auger sampling at North Bimba.

c. 1997 – 2008

Minotaur farmed into the project following the discovery of Prominent Hill with a view to focussing on exploration for IOCAD mineralisation associated with gravity highs. As a result, they completed gravity surveys followed by drill testing of IOCAD targets with PACE funding.

In 2007, Minotaur drilled one line of air core holes across the shear zone at the northernmost end of the project area and followed it up with a trial line of biochemical sampling in the form

of analysis of casuarina and bluebush vegetation. Best result was from NH07A05 with 3m @ 0.38g/t from 52-55m EOH

Minotaur withdrew from the project JV in 2008 and the tenements were relinquished by Equinox in late 2008.

Licence No.	Reporting Period	Activities
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	2004	• no field work
EL 3460	2005	• gravity surveys • RC drilling of IOCG targets • petrology
	2006	• Airborne EM (N-S lines)
	2007	• Air core drilling • Biogeochemical sampling
	2008	• No field work

Table 2: Summary of previous exploration over the Nuckulla Hill Project

5. Previous Doray Minerals Exploration Summary

a. August 2009 – August 2010

- **Data compilation and review**

Data compilation and review revealed structural targets that had not been adequately tested by drilling or calcrete sampling.

- **Aeromagnetic Survey**

Doray contracted UTS to complete a detailed, 100m spaced aeromagnetic survey over the entire project area. The survey was flown at an average sensor height of 40m on lines orientated 090-270°, with tie lines spaced at 1000m. Radiometric and digital terrain data was also collected as part of the survey.

b. August 2010 – August 2011

Field Reconnaissance

Over 4 days in June 2011, a field reconnaissance visit was made to the Nuckulla Hill Project area. The aim of this visit was to:

- Examine the regolith characteristics within the project area in order to assess the quality and effectiveness of previous regional geochemical surveys.
- Examine the regolith and topographic features of specific target areas to determine relationships between defined geochemical anomalism and drilled mineralisation.
- Ground truth a number of aeromagnetic targets, including an assessment of the effectiveness of previous exploration over these targets.
- Examine drill chips from previous drilling and outcrop geology as a geological familiarisation exercise.
- Determine general site access requirements and potential logistical challenges for future programs.

c. August 2011 – August 2012

- **ILUA signed with Gawler Ranges Native Title Group.**

Doray agreed to the terms of the Gawler Ranges ILUA and is now a party to it. An invitation from the Gawler Ranges Aboriginal Corporation to attend one of its Directors meetings was accepted, with two Doray staff making a brief presentation.

- **PACE Discovery Drilling 2012 Funding Awarded**

Doray submitted an application for PACE Discovery Drilling 2012 to assist the funding of drilling at, and along strike from, the Bimba Prospect. Doray was awarded a \$70,000 co-funded drilling grant.

- **Orientation Surface Sampling**

Orientation lines were designed to determine if other surface geochemical media (magnetic lag and vegetation litter) were able to replicate the soil anomalies defined by previous workers using calcrete. Magnetic lag and vegetation litter have been shown in parts of Western Australia with similar regolith regimes, to define anomalism beneath cover (e.g. Tropicana, Moolart Well). A total of 155 maglag samples and 112 vegetation litter samples were collected from three established prospects (Myall, Bimba and Sheoak).

d. August 2012 – August 2013

- **Petrographic Analysis**

A petrology report was completed for 13 outcrop and drill samples by Doug Mason Geoscience. 10 rock samples were taken from the Lakeside Outcrop (EL4302), 2 drill samples were taken from historic drill hole NH07A05 (EL4407) and 1 drill chip sample was taken from historic RC hole NHRC12 located at the Bimba prospect (EL4302). Petrology is discussed in full in the Nuckulla Hill Project 2013 Annual Report.

- **Soil Sampling**

833 fine fraction soil samples were collected and assayed during the reporting period. Each sample was sieved through -175µm mesh until 10-50g of material was collected and placed in a paper bag. Samples were assayed uncrushed using a partial leach method (TL8) by Genalysis Adelaide. All samples were assayed for Au, Ag, As, Cu, Ce, Ni, Pb, U and Zn. This sampling revealed three distinct surface anomalies proximal to the Bimba Prospect.

- **Bimba AC and RC Drilling**

Between 26/06/2013 and 9/08/2013 Doray Minerals Ltd completed 5 RC holes and 2 failed collars for 1106m of RC drilling, as well as 42 Air Core holes for 1877m. Three RC holes were designed to test the down dip and along strike continuity of the Bimba prospect, identified by Equinox Resources in the mid 1990's. Two RC holes were planned to test a parallel structure to the west of Bimba defined by the 2010 aeromagnetic survey. This structure coincided with high Pb anomalism (up to 1950ppm) in historic AC holes. Two Air Core style lines were completed by the same RC rig to test a large dilational shear zone north of the Bimba prospect with the potential to host significant Au mineralisation beneath transported cover.

From AC drilling, no significant assays were received. RC drilling of the Bimba prospect confirmed the continuity of a mineralised structure; however Au grades were sub economic with a best intercept in BIRC006 of 28m @ 0.58g/t Au from 144m (including 16m @ 0.72g/t from 156m).

e. August 2013 – August 2014

- Reconnaissance Exploration

From 11/2/2014 to 24/2/2014 a reconnaissance exploration trip was made to assess regolith conditions, geology and access tracks on tenements in the Nuckulla Hill Project which have seen little fieldwork. Rock chip samples were taken from prospective outcrops and fine fraction soil sampling was completed to follow up on low level anomalism in historic calcrete sampling. EL4473, EL4846, EL4847, EL5295 and EL5310 were all visited as part of the reconnaissance trip.

Regolith conditions varied widely across tenements but were found to agree with SARIG regolith data. Across the Nuckulla Hill Project, surface regolith consisted of: Aeolian sediments (sand dunes), colluvial sediments, lacustrine sediments, residual material and fresh to highly weathered bedrock.

EL4473 was the only tenement with significant outcrop, so was the only tenement to have rock chip sampling and geological mapping completed across it. All other tenements were found to be covered by 2-10m of colluvium, or 2-20m sand dunes.

A total of 9 rock chip samples were taken from throughout the southern area of EL4473. Also, two samples were taken from the drill spoils of an attempted water bore. No significant assays were received from rock chip sampling. During sampling, several outcrops of N/S sheared granitoid were discovered. Two distinct set of foliation were observed in some outcrops, one striking at approximately 010 and a second at about 045. This is in agreement with the two orientations of magnetic structures seen in aeromagnetic images in the southern area of EL4473.

- Fine Fraction Soil Sampling

A total of 2719 fine fraction soil samples were completed across the Nuckulla Hill Project. 210 -75µm sieved samples were taken as part of reconnaissance exploration field trip across EL4473 (68 samples), EL5295 (96 samples) and EL5310 (46 samples). 2266 samples were from the EL4302 fine fraction soil sampling program and 243 samples were from the EL5295 fine fraction soil sampling program.

Soil samples taken during the reconnaissance exploration field trip targeted three separate structures where calcrete sampling had returned low level anomalous (2-3x background) results. Sampling was completed at 100m E/W spacing, with N/S spacing between 200 and 600m. Throughout the sample areas, calcrete was not well formed enough to create tabular layers as seen at Bimba, Myall and Sheoak prospects. Nodular calcrete spread throughout loamy transported sand was common. Because of this, it was hoped that the partial digestion of -75µm sieved samples may reveal anomalism not picked up by calcrete sampling Results from reconnaissance soil sampling detected very low level anomalism. The highest Au value was 1.3 ppb which represents possibly 3-4x background. Other Au peaks were only around 2x background Au

2266 fine fraction soil samples were taken across EL4302 during multiple field trips. First pass and infill sampling has produced two robust Au in soil anomalies to the south and southwest of Childara Outstation, now called the Bluebush and Mulga Prospects;

- The Bluebush soil anomaly is located 1km southwest of Childara Outstation and is 1800m x 200m at 4x background Au including 800m x 150m at 8x background Au. Aeromagnetic imaging shows a large flexure/dilational jog at the Bluebush Prospect which has the potential for significant Au mineralisation (Figure 11). Bluebush soil anomalism peaks at 7.89ppb Au which is 12-13x background levels.
- The Mulga soil anomaly is located 5km SSW of Childara Outstation and is 400m x 100m north-south at 5-6x background Au including 200m x 100m at 9x background Au. Also, there is potential for anomalism to continue beneath sand dune cover to the south. Mulga soil anomalism peaks at 8.9ppb Au which is 15-16x background levels.

6. Exploration Activities during the Reporting Period

- Gawler Ranges Native Title Group Heritage Survey

Gawler Ranges Native Title Group took on an Aboriginal Heritage Survey in October 2014 in the proposed AC drilling area on EL5466. The all clear was given through written report.

- PACE Discovery Drilling 2015 Funding Awarded

Doray submitted an application for PACE Discovery Drilling 2015 to assist the funding of drilling at, and along strike from, the Bimba Prospect. Doray was awarded a \$60,000 co-funded drilling grant supplement the Mulga and Bluebush AC drilling program.

- Mulga and Bluebush AC Drilling

A total of 4648m from 93 holes of AC drilling was completed across 7 lines to test the geochemical anomalism at the Bluebush and Mulga Prospects in EL5466 from 24/04/2015 to 04/05/2015. Drilling was designed to 3 test north/south trending structures thought to be the source of surface Au anomalism. Drill lines were oriented east-west with all holes drilled due east at -60° dip. The drill program achieved at least 50% coverage across drill lines i.e. half “top to tail” coverage. AC penetration ranged from 18m to 81m to hit bedrock.

The geochemical anomalies were determined by -175um fine fraction calcrete sampling. Calcrete presents itself just below a thin layer of top soil. Calcrete ranges on average from 5-20m. Below the calcrete consists of mostly unaltered bedrock of granitoid and mafic intrusions. The lack of bedrock data in the area makes it difficult to show a pattern between the overburden and bedrock.

All AC Drilling completed on EL5466 were analysed for Au, Ag, As, Bi, Cu, Pb, Sb, Te and Zn.

- Rehabilitation

During rehabilitation of the most recent drill program, NHAC0300- NHAC0393, previous AC drilling sites, BIA0001-BIAC0042 and RC sites BIRC001-BIRC006 have been rehabilitated to the same standard. All drillholes located within tenement EL5466 will be checked that the required rehabilitation was done according to the South Australia State Departments Information sheet M21: *General Specifications for Construction and Backfilling of Mineral Exploration Drillholes*. In compliance with the PEPR Approval (Program for Environment Protection and Rehabilitation), representative photographs have been taken showing the environmental management practices employed to minimise environmental impacts during the program, and results of rehabilitation undertaken.

Rehabilitation/site clean-up of all unwanted drill samples, where practical, were returned down hole and sample bags disposed of at an appropriate dump site. Alternatively, sample bags have been removed while drill spoils/unwanted drill samples have been buried at least 30cm below the surface and covered with topsoil where returning spoils was not available due to small or closed hole. Sample bags have been disposed of at an appropriate dump site. With either rehabilitation method, it will be ensured that drill sites are restored to a stable condition consistent to prior land use and which facilitates prompt regeneration of native vegetation. This will include using a back blade with toothpick bucket leaving furrows for seed/water collection. Visual impacts of exploration activities will be minimised. Figure 1 will be what our rehabilitation will require.

All AC Drilling completed on EL5466 were analysed for Au, Ag, As, Bi, Cu, Pb,Sb, Te and Zn.

Lease	Date Granted		Last Reported Expenditure	Year Ending
EL4846	18/04/2012	\$0.00	\$2,296.64	17/10/2015
EL4847	18/04/2012		\$2,327.81	17/10/2015
EL5295	27/06/2013		\$9,054.08	26/06/2015
EL5310	24/07/2013		\$10,259.05	23/07/2015
EL5466	25/08/2014		\$220,753.67	24/08/2015
EL5552	24/12/2014	\$160,000.00	\$5,524.46	23/06/2015
EL5664	27/04/2015	\$110,000.00	\$1,265.97	26/10/2015

Table 3: Summary of total expenditure for each tenement

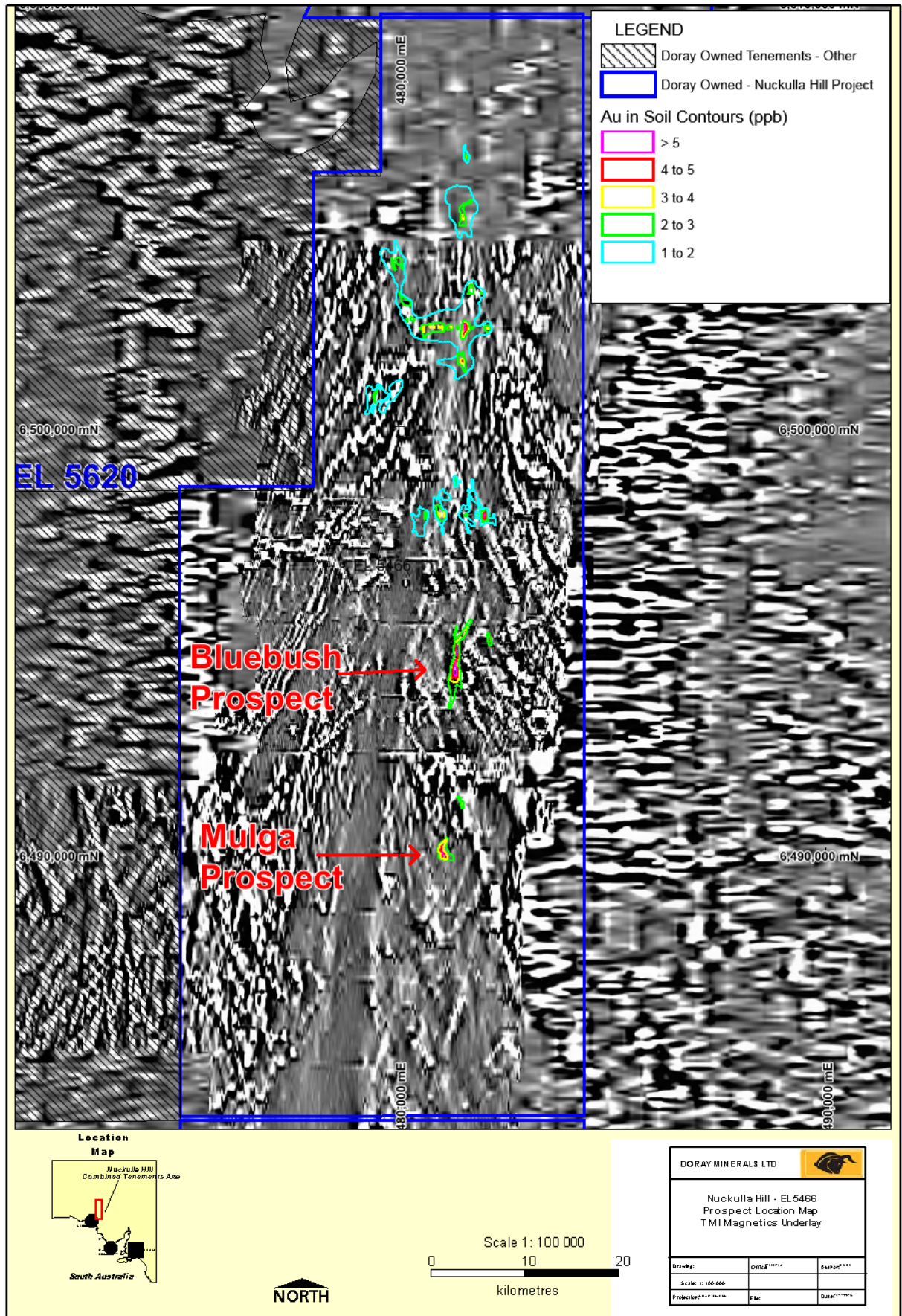


Figure 3: EL5466 Bluebush and Mulga Prospect Location with Soil Anomalism

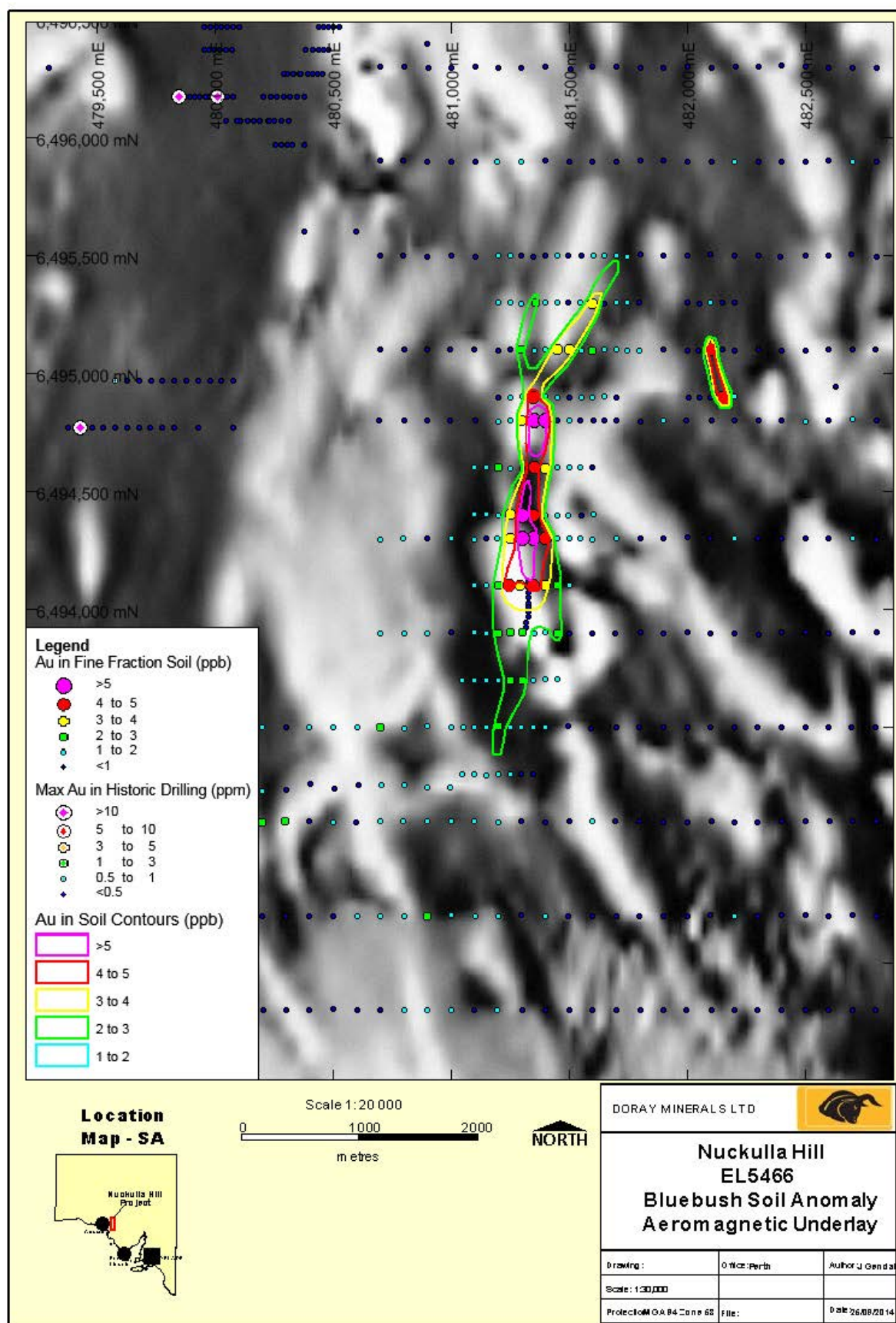


Figure 4: EL5466 Bluebush Soil Anomalism

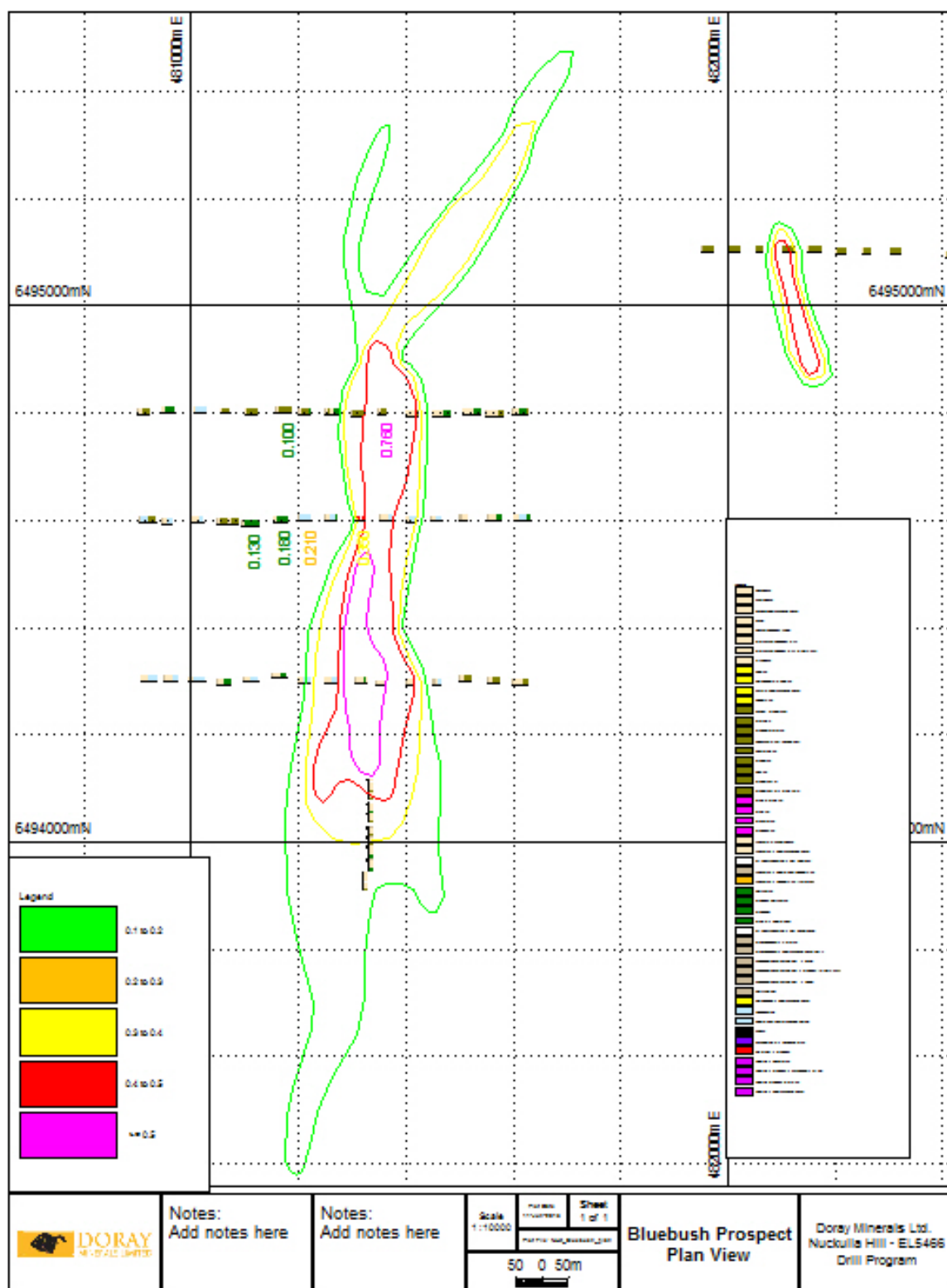


Figure 5: EL5466 Bluebush Soil Anomalism on Plan View of AC Drilling and significant Assay Results

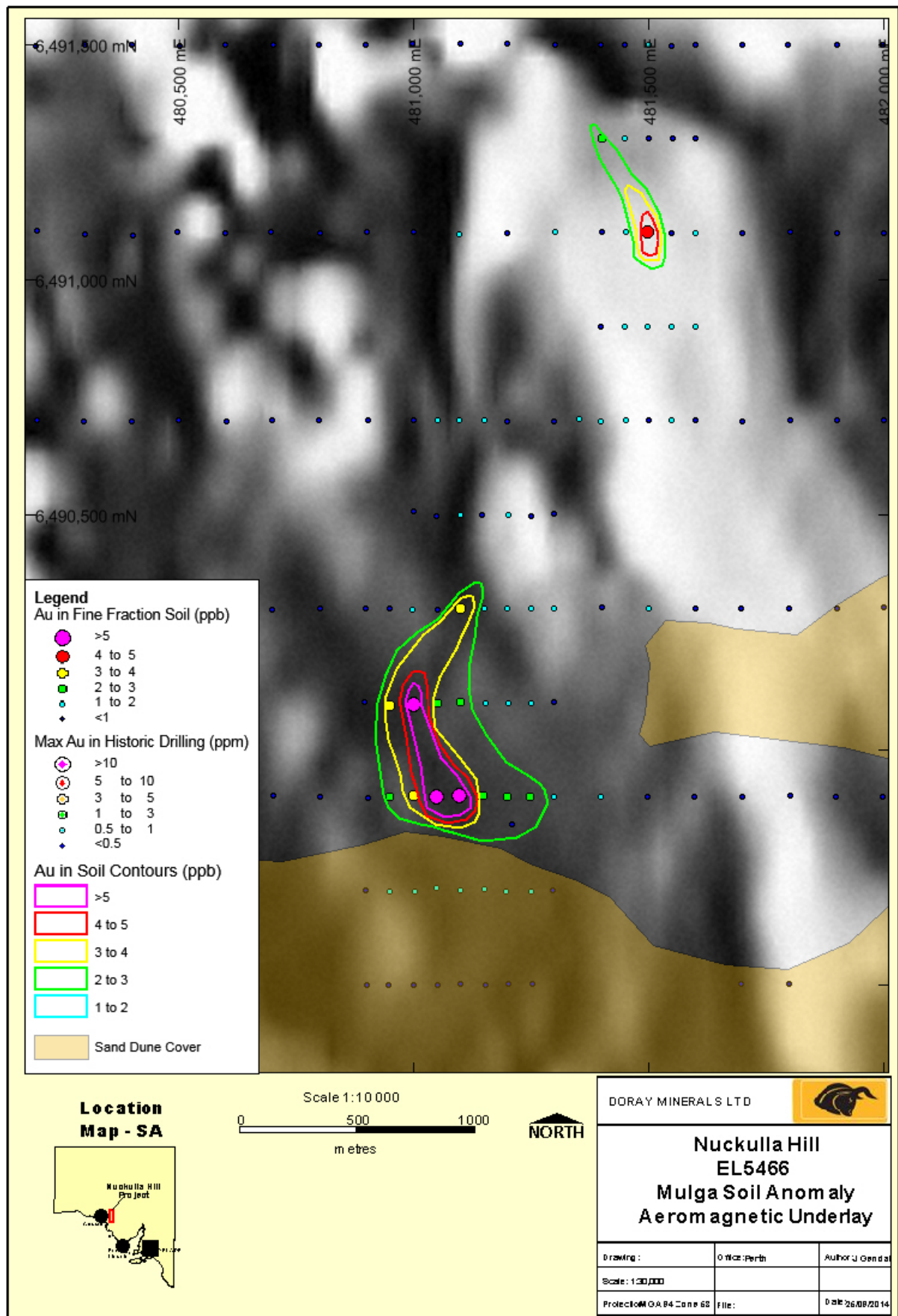


Figure 6: EL5466 Mulga Soil Anomalism

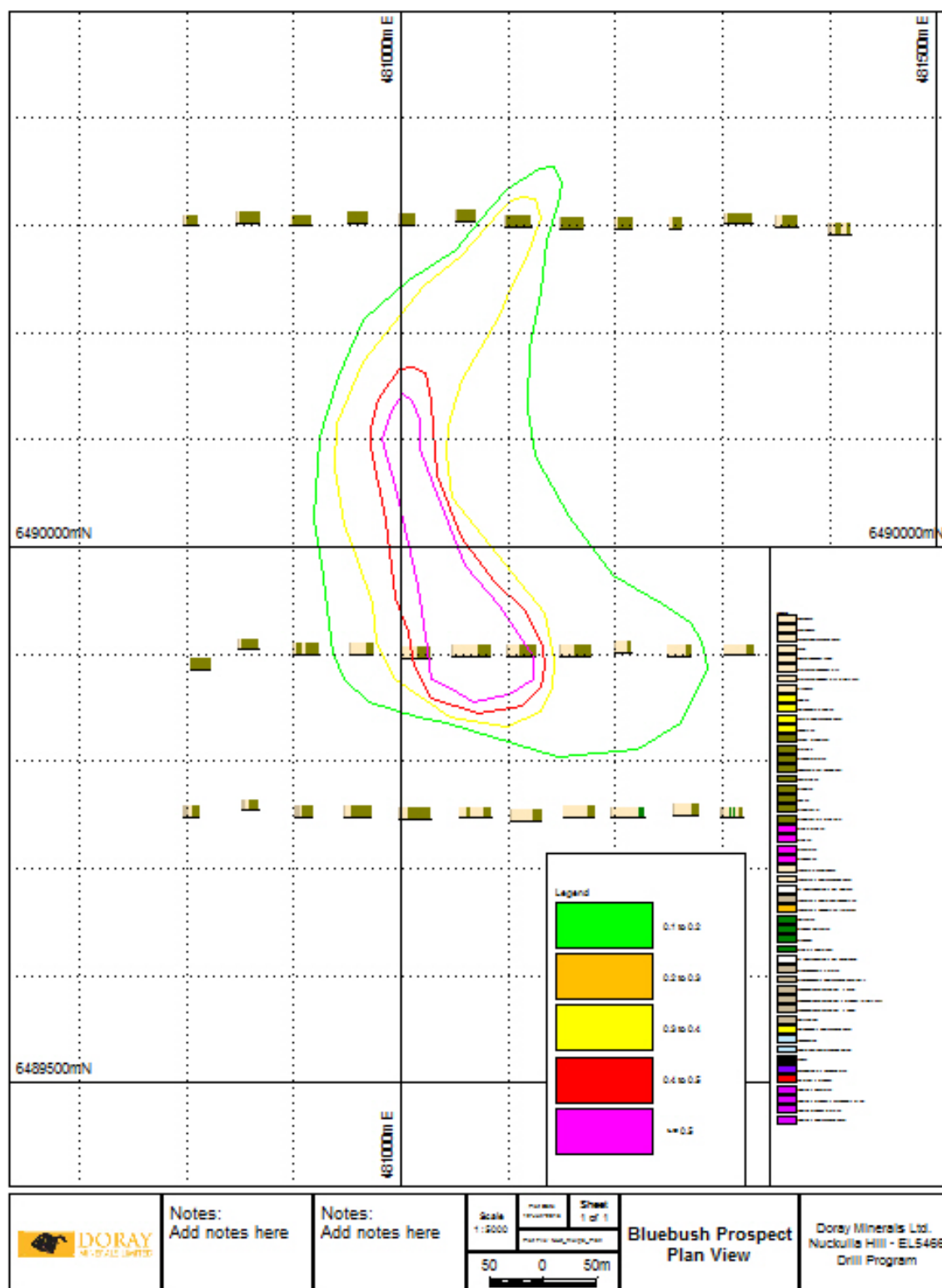


Figure 7: EL5466 Mulga Soil Anomalism on Plan View of AC Drilling and significant Assay Results

7. Summary and Recommendations

The Nuckulla Hill Au-Ag project remains highly prospective, given its location within the Yarlbrinda Shear Zone, along strike from Tunkillia. The exploration history of the project has been sporadic and virtually no systematic gold exploration has been carried out since 1997. Despite the increase in the gold (and silver) price, the Nuckulla Hill Au-Ag project remains significantly underexplored.

Gold mineralisation identified by previous explorers at Sheoak, Myall and Bimba was identified as a result of exploring only the most obvious calcrete anomalies. A number of structural and geochemical targets, identified in the 2010 magnetic survey and 2012-2014 soil sampling identified 2 surface anomalies, Bluebush and Mulga prospects. In 2015 a total of 4648m from 93 holes of AC drilling was completed across 7 lines to test the geochemical anomalism at the Bluebush and Mulga Prospects in EL5466. No significant results were found.

8. References

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APPENDIX 1

Targeting

The Nuckulla Project has a wide range of geochemical, geophysical and drill tested targets. Targeting has been separated by tenement for ease of reading.

EL5552

EL5552 (formerly 4407) is covered mostly by Aeolian sediments and salt lakes. The tenement has been thoroughly calcrete sampled by both hand tool and auger methods without revealing significant anomalism. However on closer inspection, many of the calcrete assays returned Ca < 10% indicating calcrete may have been an ineffective sampling medium.

One line of historic drilling exists on the tenement. NH07A05 intercepted 3m @ 0.38 g/t Au from 52m to EOH (Figure 1). From aeromagnetic imaging, this drill hole is interpreted to be within the YSZ. Petrographic analysis conducted on two rock chip samples from NH07A05 determined the rock type to be very similar to petrology conducted on Bimba prospect RC chips, confirming the assumption that the YSZ contains multiple mineralised zones to the north and south of previously identified and drilled prospects (Myall, Bimba and Sheoak).

Follow up AC drilling of the NH07A05 intercept is recommended. Follow up drilling would consist of two 1km AC lines with drill spacing every 50m resulting in approximately 2000 drill metres.

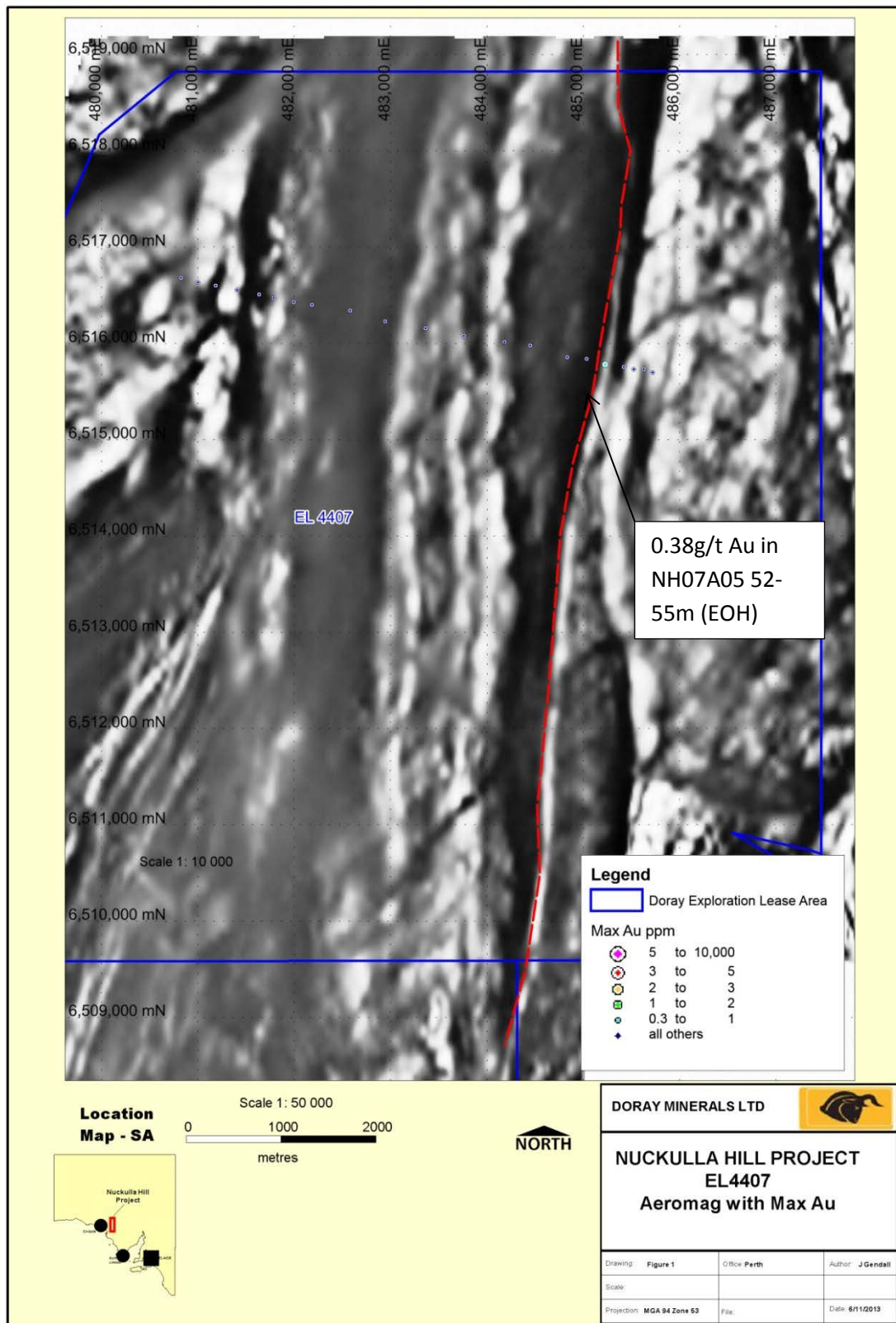


Figure 1: EL5552 (formerly EL4407) Historic Drilling Intercept

EL5466

EL5466 (formerly EL4302) has been the site of most historical exploration by Equinox resources in the mid 1990's. Systematic drill testing of three calcrete anomalies (Bimba, Myall and Sheoak)

revealed widespread Au anomalism associated with the YSZ. Unfortunately down dip drill intersections showed inconsistent and/or diminishing Au grades.

Approximately ¾ of EL5466 is covered by colluvium suitable for fine fraction soil sampling. Fine fraction soil sampling was completed by DRM across all amenable areas and assays have now been received. Surface sampling has revealed several new soil anomalies not picked up by historic, wide spaced calcrete sampling. These occur to the east of the demagnetised YSZ. Aeromagnetic imaging completed by DRM in 2010 shows many complex structures to the east of the YSZ capable of containing significant Au. Following the completion of infill sampling, 2 more anomalies were discovered and drill using Air core method. Au anomalism downhole, unfortunately, showed inconsistent and low Au grades. (Figures 2 through 5).

[EL5664](#)

The surface of EL5664 (formerly EL4473) consists of outcropping Hiltaba Suite Granites, Aeolian dune sands, and colluvial cover. From aeromagnetic imaging it is interpreted that the majority of basement rocks are Hiltaba Suite Granites, with some sheared St Peter/St Francis Suite Granites in the south, and possibly some Tunkillia Suite Granites in the northeast. DRM and historical rock chip sampling of outcropping granites throughout the tenement have returned maximum values of 5ppb Au. Targeted DRM fine fraction soil sampling revealed no significant anomalism.

EL5664 offers little in the way of targets and it is recommended that the western portion of the tenement, which contains a lot of outcropping granite and dune sands, is relinquished or transferred to the ZZ Top project (Figure 6). The eastern side of the tenement should be kept for project continuity.

[EL5295](#)

The surface of EL5295 consists of colluvial cover amenable to fine fraction soil sampling, outcropping granites and GRV's. Basement rocks are interpreted from aeromagnetic imaging to be Hiltaba Suite Granites, GRV's and possibly some Tunkillia Suite Granites (in the north of the tenement). Assays of fine fraction soil sampling completed across the north of EL5295 are due in mid august (Figure 7).

It is recommended the south of the tenement where outcropping GRVs and Hiltaba Suite Granites are pervasive is relinquished (Figure 8). The north of the tenements future is dependant of soil sampling results due mid august.

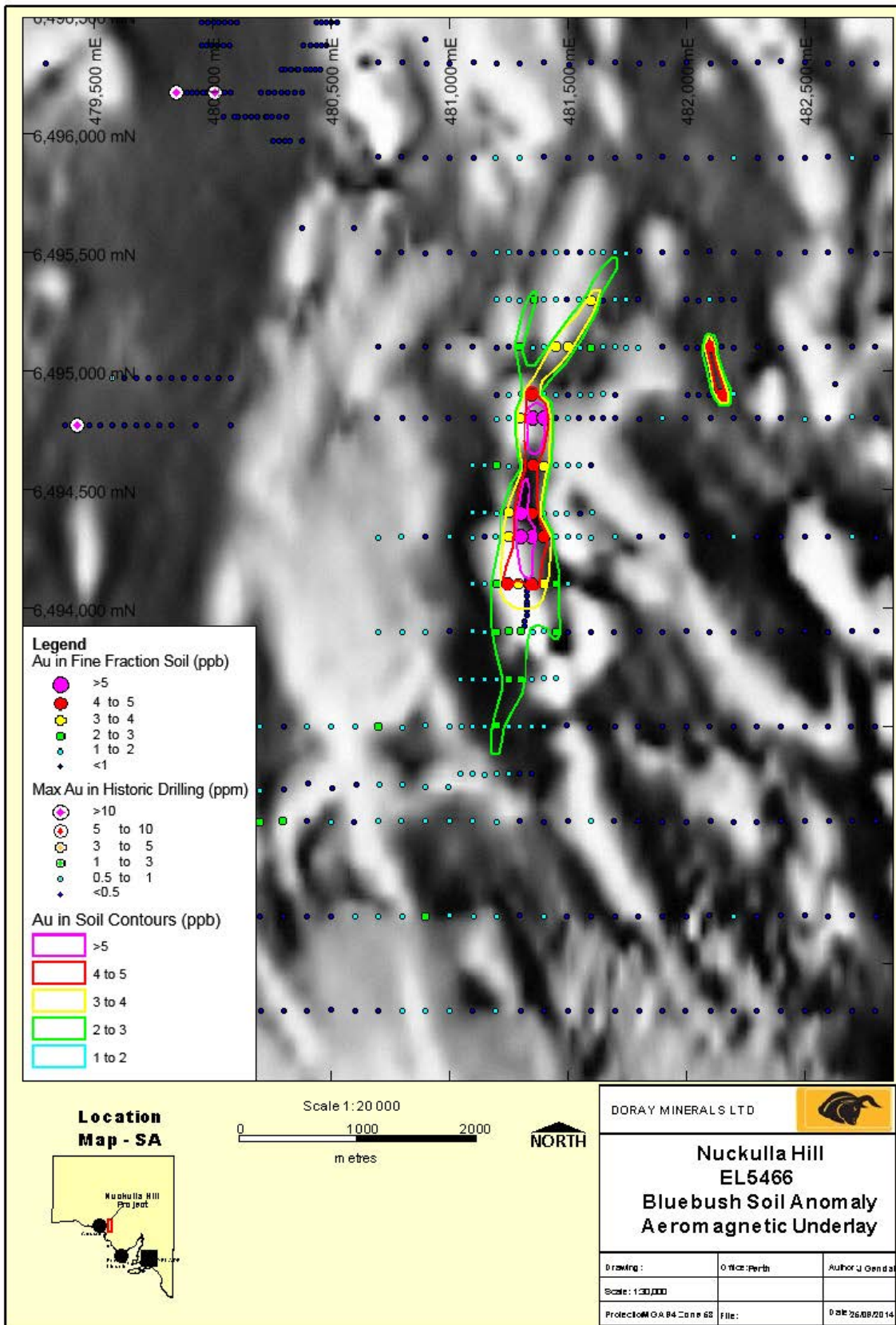


Figure 8: EL5466 Bluebush Soil Anomalism

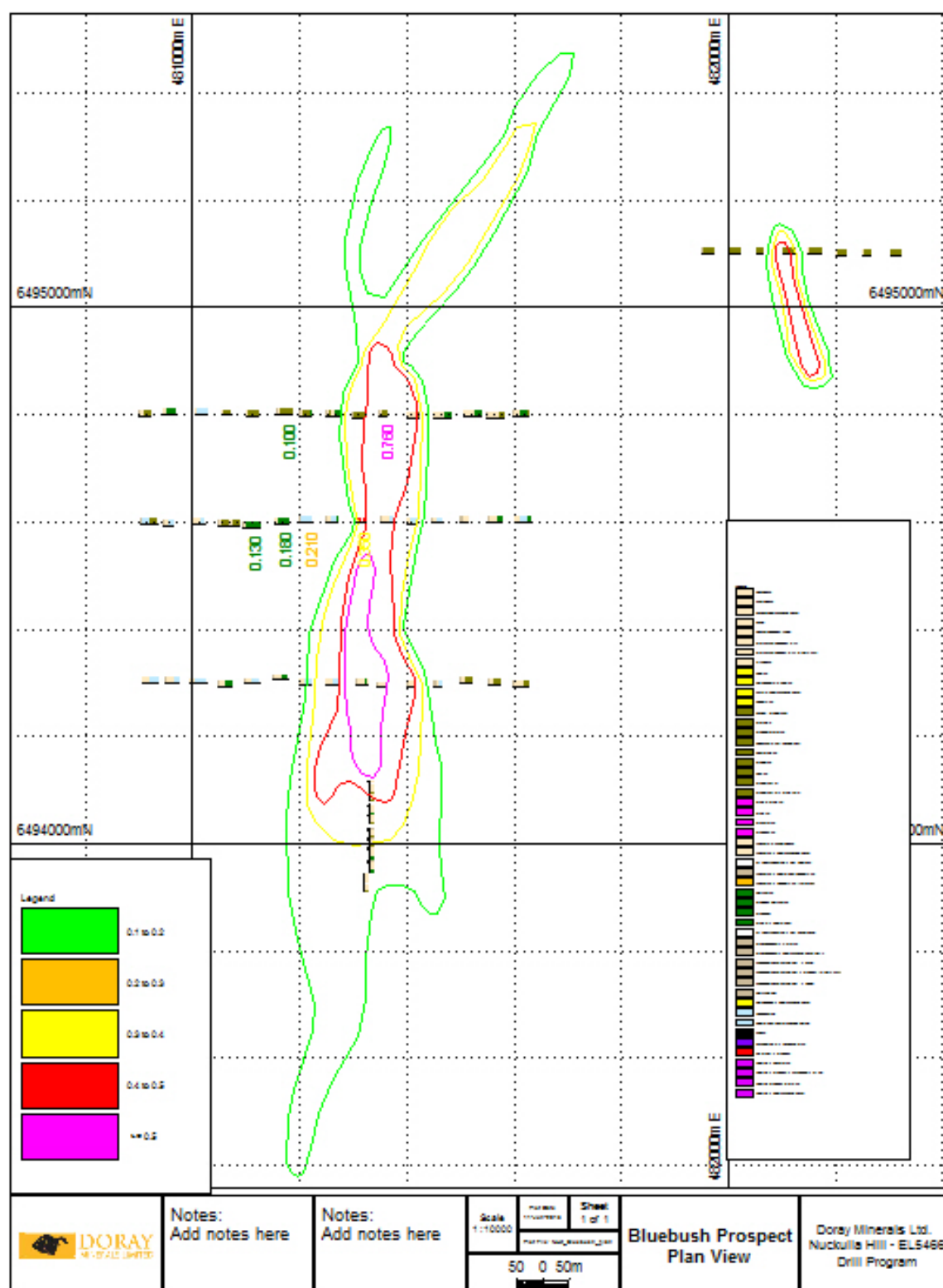


Figure 3: EL5466 Bluebush AC drilling results on a plan view with Soil anomaly contour

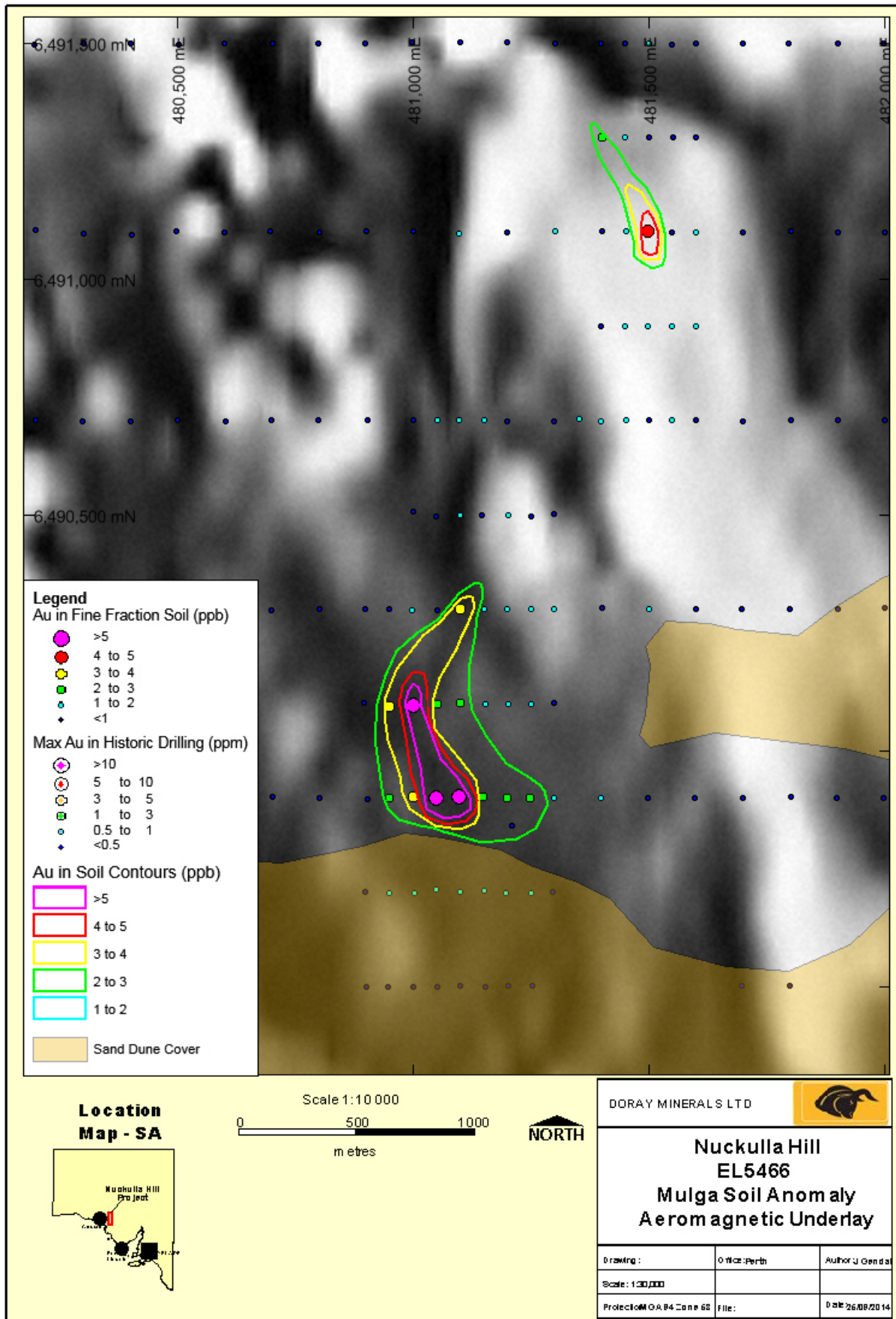


Figure4: EL5466 Mulga Soil Anomalism

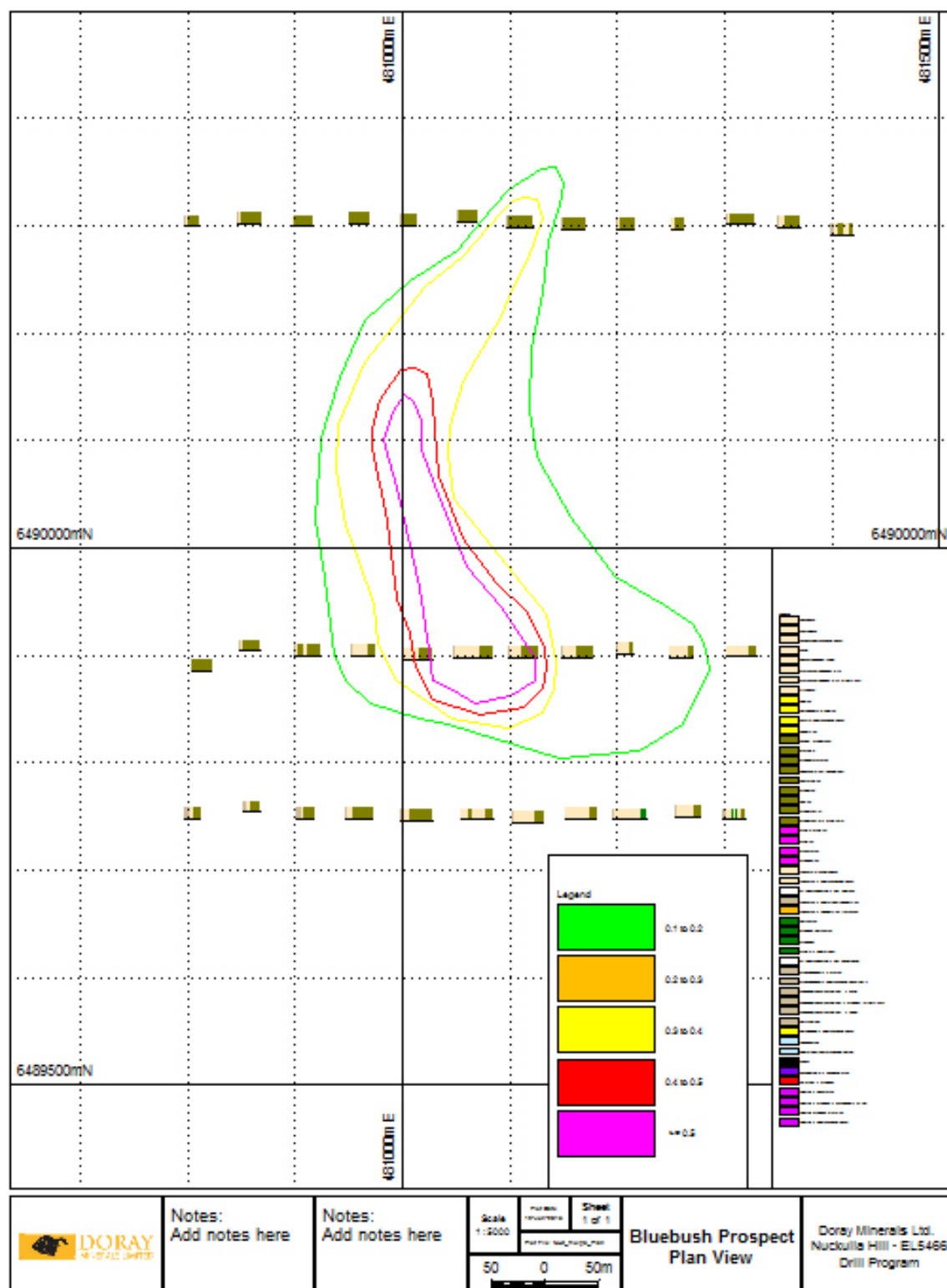


Figure 5: EL5466 Mulga AC drilling results on a plan view with Soil anomaly contour

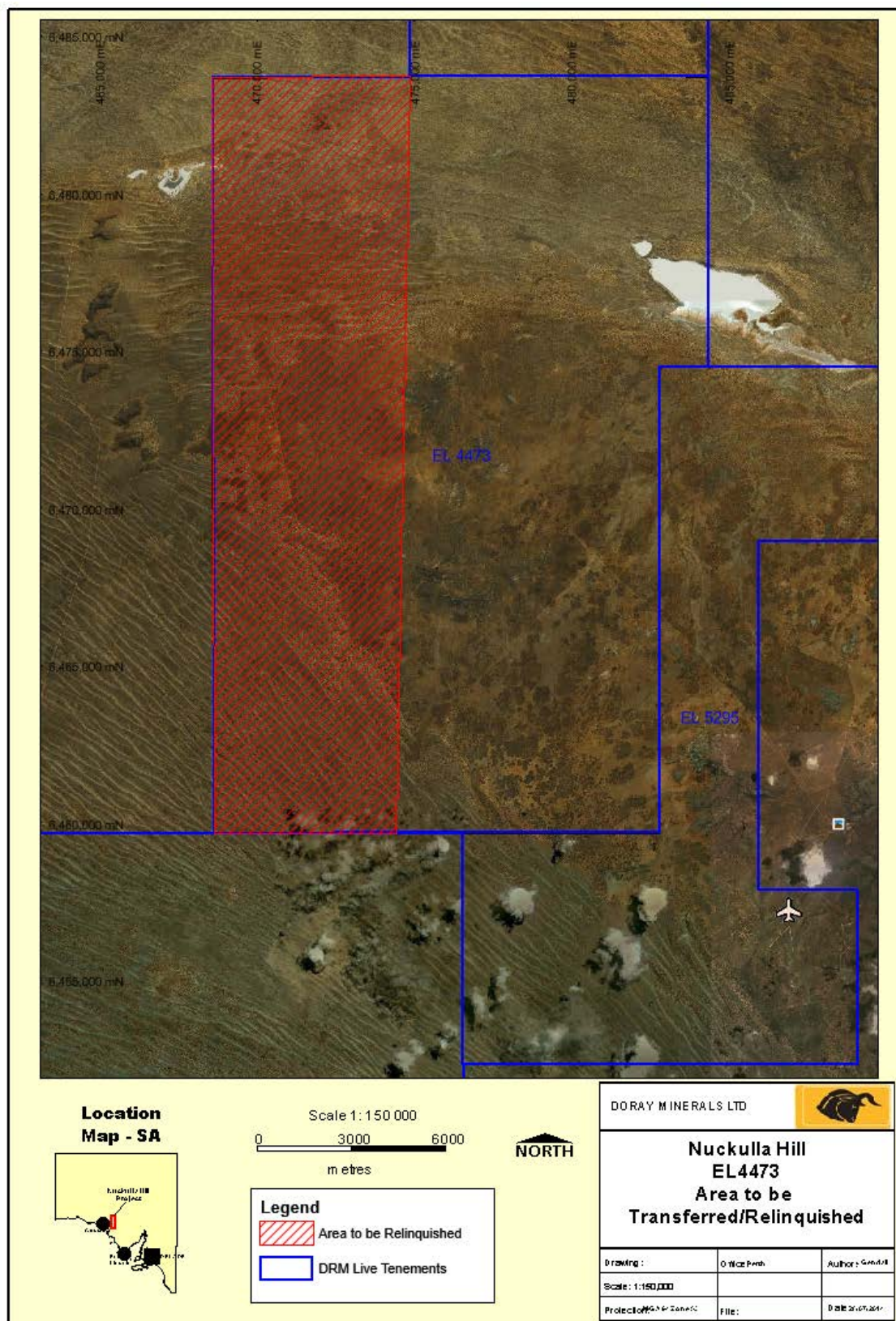


Figure 6: EL5664- Area relinquished

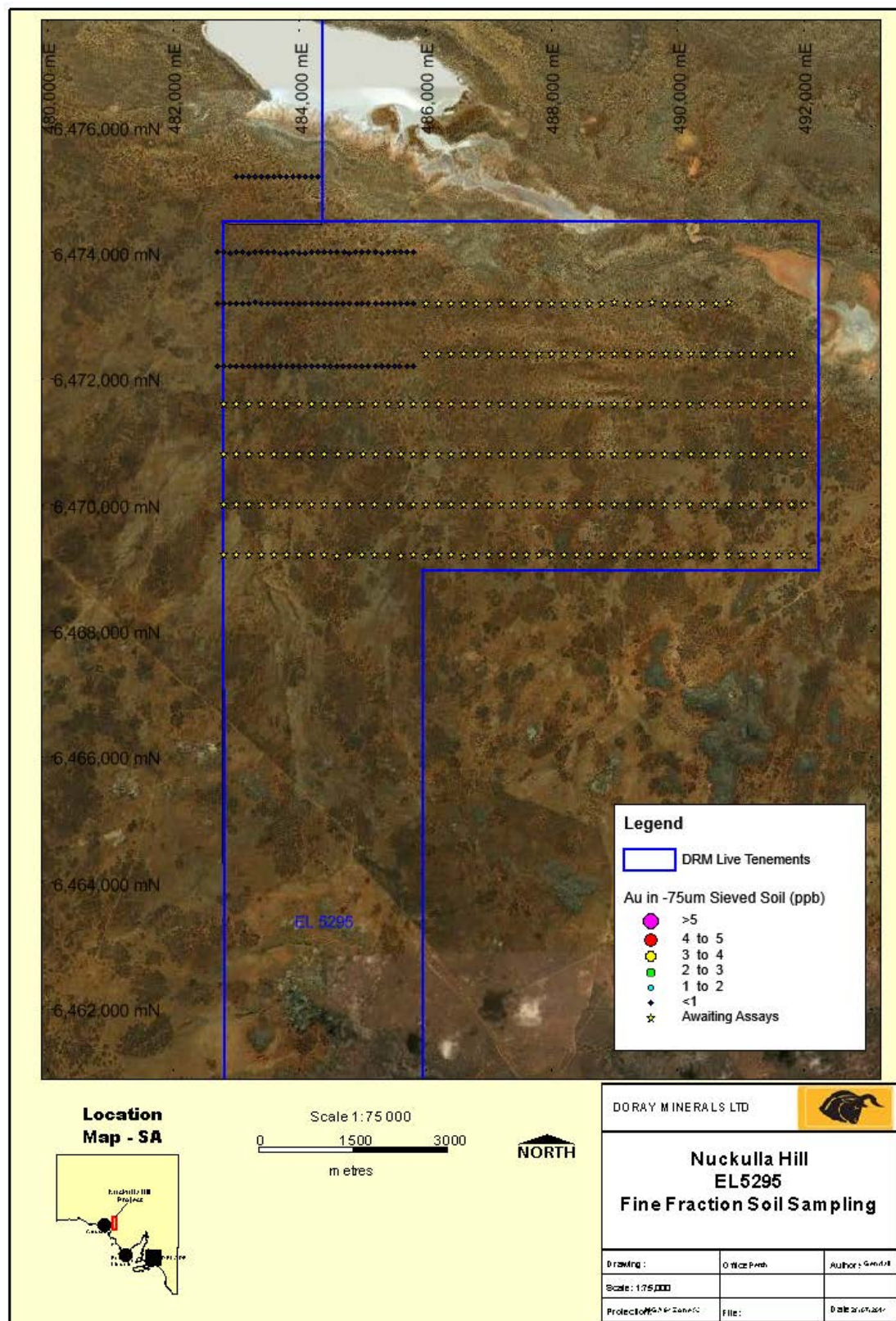


Figure 7: EL5295 Fine Fraction Soil Sampling

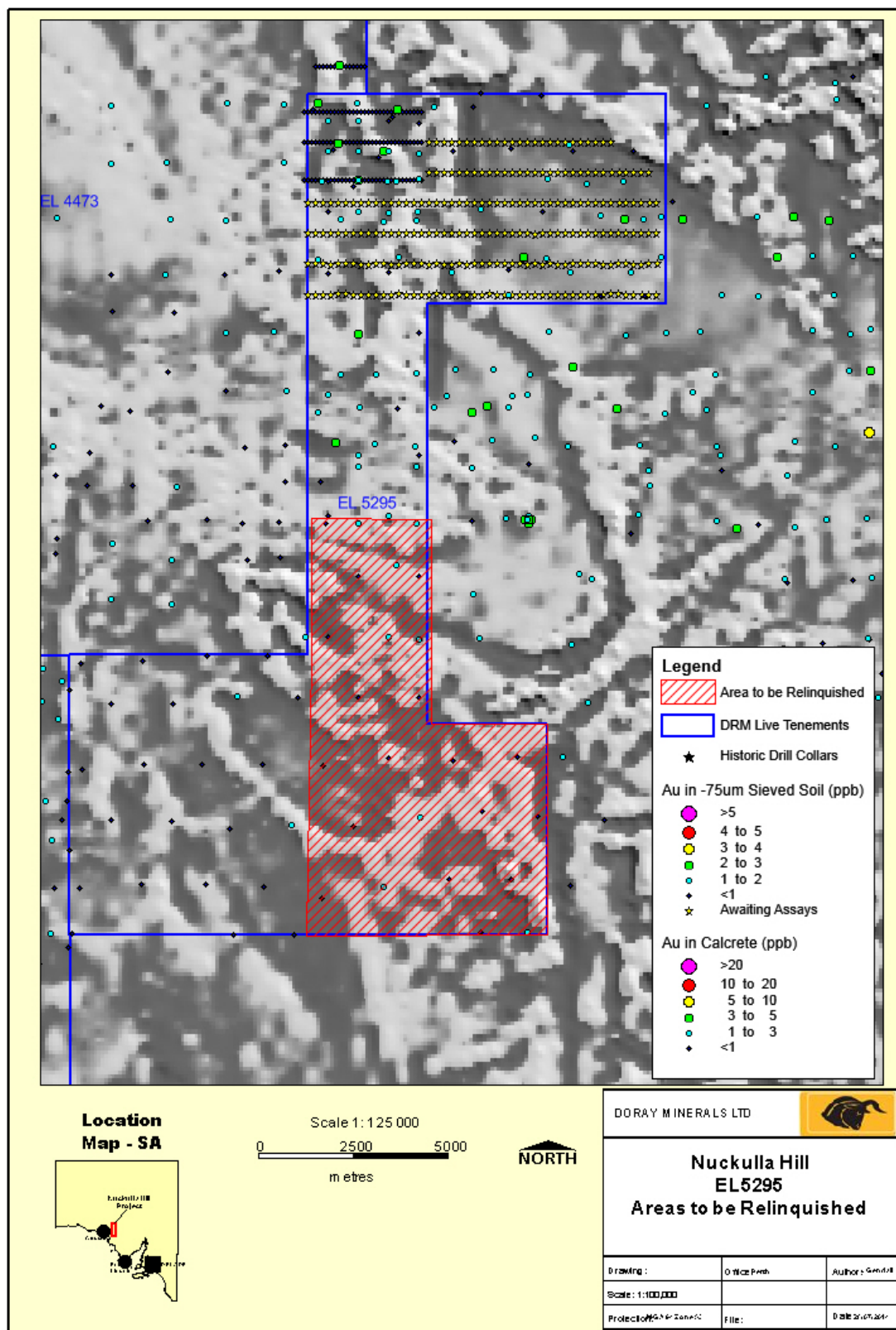


Figure 8: EL5295 Area Relinquished

EL4846

EL4846 is covered almost entirely by Aeolian dunes and salt lakes. Basement geology is interpreted to be St Peter/St Francis Suite Granites and Hiltaba Suite Granites. In aeromagnetic imaging, a major intersection of regional structures can be seen in the south of the tenement. Only one line of RAB drilling has been completed within the vicinity of this junction, with a drill hole spacing of over 2.5km. Due to dune cover, the area remains significantly under explored. Although the junction of these regional structures lies in a conservation area, the area represents a quality geophysical target (Figure 9). EL4846 may be best combined into the ZZ Top project for future drilling.

EL4847

EL4847 is located within agricultural land. Historical exploration consisted of calcrete sampling on approximately a 1x1km grid with any significant Au results infill sampled. No significant Au targets were produced from this exploration (Figure 10). A few structures are visible on regional aeromagnetic imaging and there may be potential for EL4847 to be transferred to ZZ Top Project. If EL4847 is deemed inappropriate for the ZZ Top Project, it is recommended the tenement is relinquished.

EL5310

A large portion of EL5310 is covered by salt lakes and the remainder is mostly covered with sand dunes. Because of this, little exploration has been completed over the tenement area (Figure 11). There are many structures visible in regional aeromagnetic imaging, some of which may be worthy of drill testing. Considering the widespread sand dune and lake sediment cover found across the tenement. Tenement reduction was made to 50% cut in its normal size

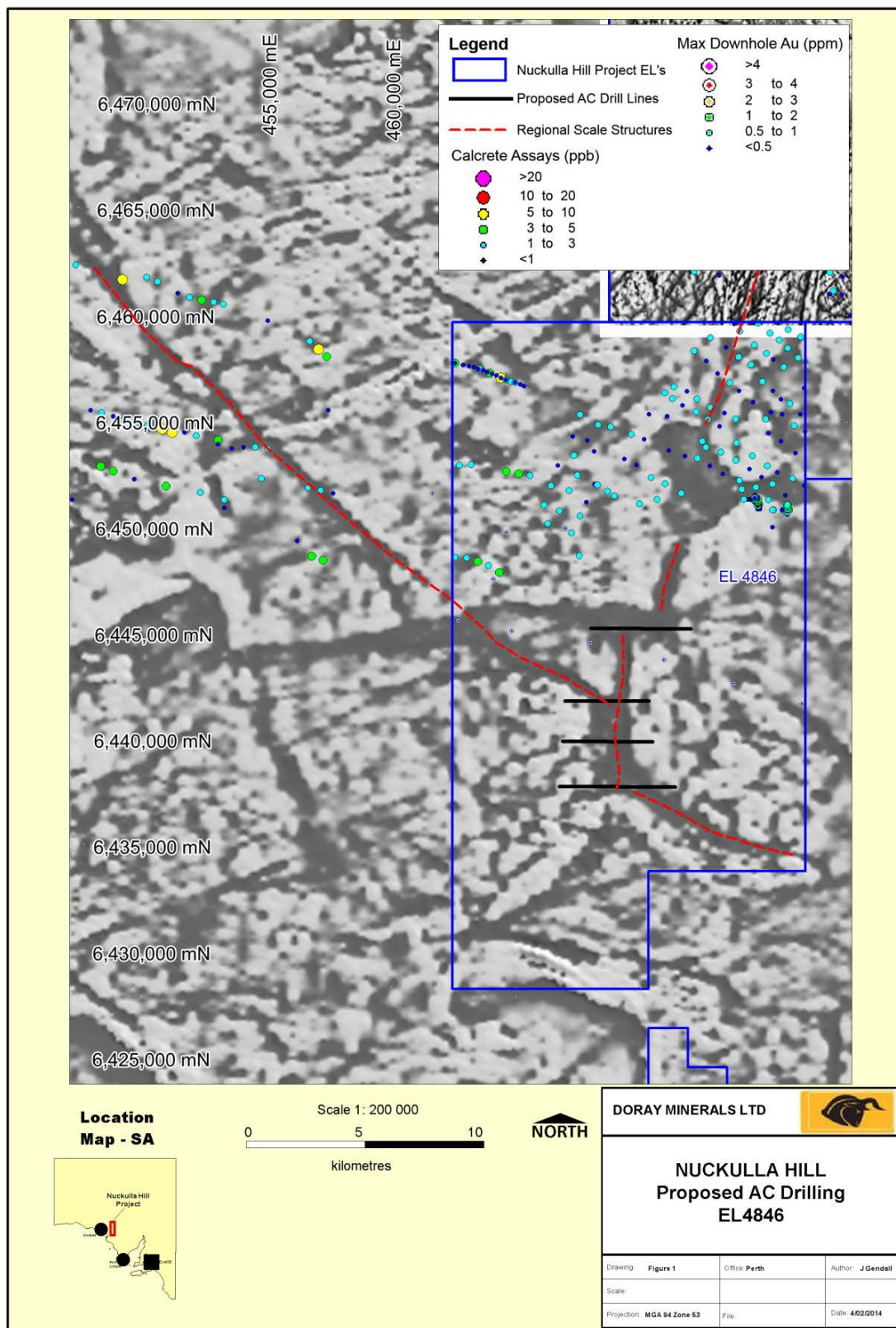


Figure 9: EL4846- Proposed Drilling – 2016/2017

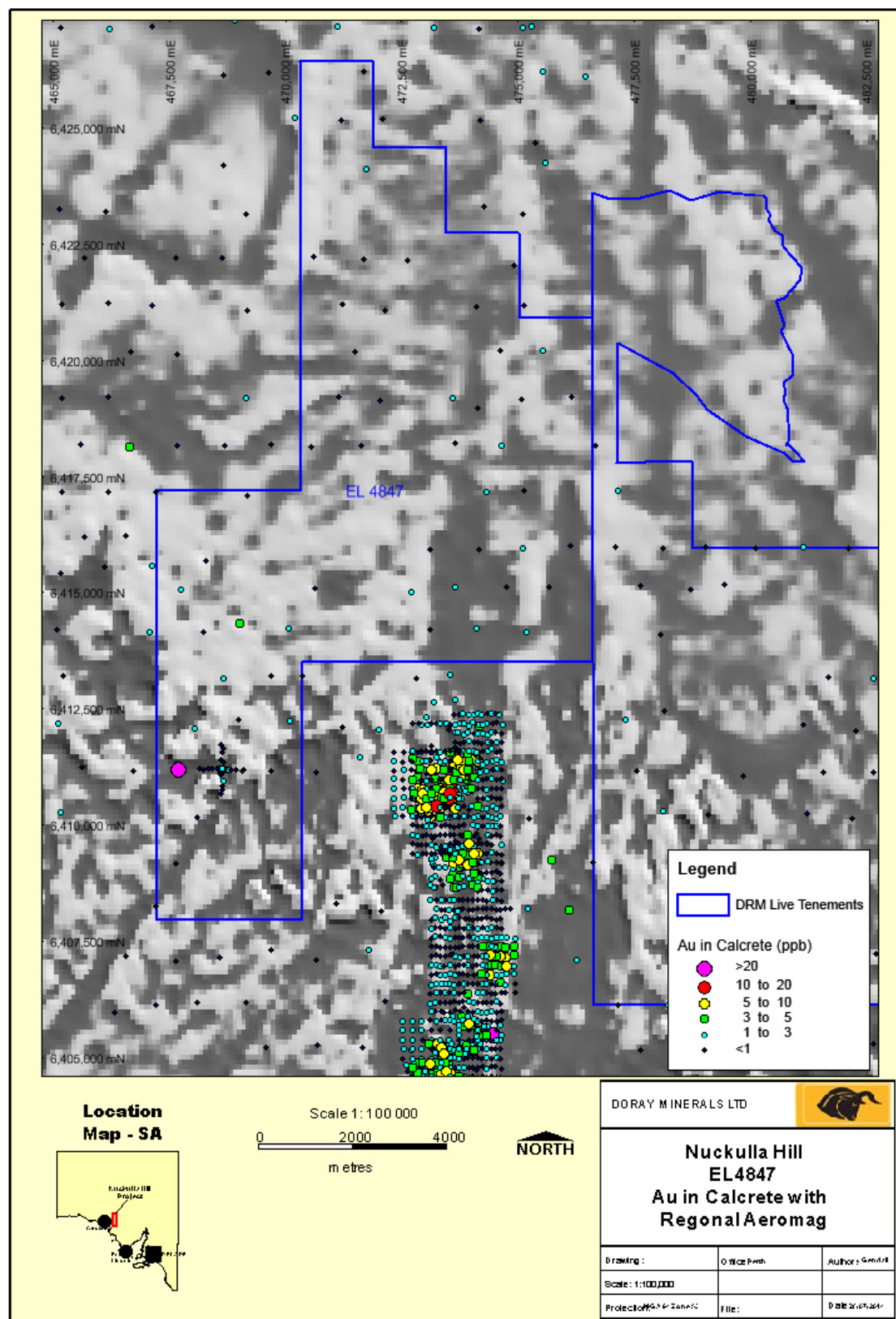


Figure10: EL4847- Historic Calcrete Sampling

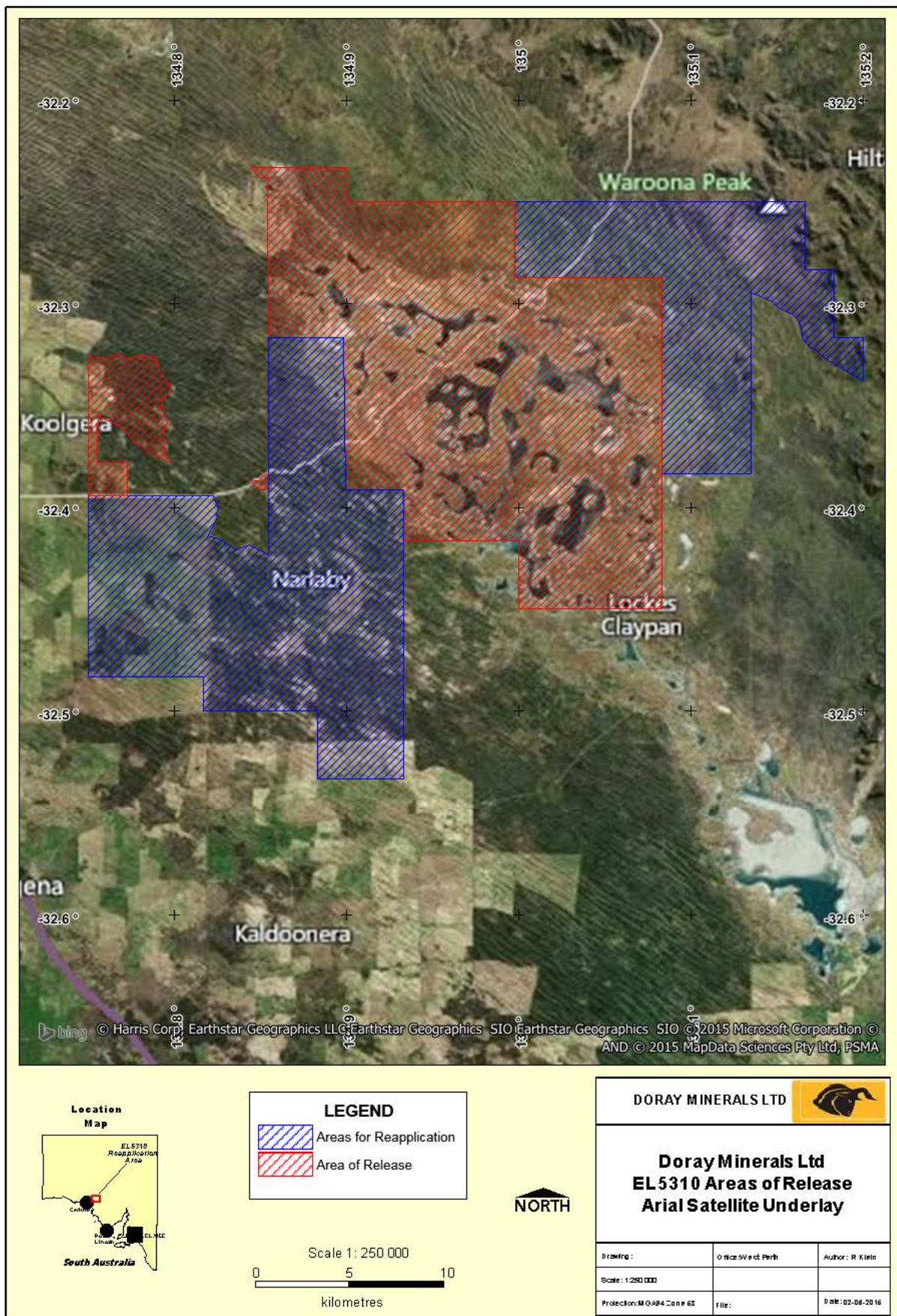


Figure 11: EL5310 - Areas relinquished

Nuckulla Hill Project Summary

The table below summarises the targets, future exploration work and the costs involved in continuing exploration of the Nuckulla Hill Project.

	Robust Targets	Exploration Work	Approximate Costs
EL5552	0.38g/t Au in NH07A05 52-55m (EOH). Potential for significant Au hosted in YSZ.	2 x 1km AC drill lines with 50m spacing for approximately 2000m AC drill metres. Or prepare for tenement reduction/relinquishment.	\$60,000 Drilling \$16,700 Assays \$76,700 Total
EL5466	No current targets	Prepare for tenement reduction/relinquishment.	N/A
EL5644	No current targets	Prepare for tenement reduction/relinquishment.	N/A
EL5295	No current targets	Waiting for soil assays then prepare for tenement reduction/relinquishment.	N/A
EL4846	Junction of regional structures seen in aeromagnetic imaging.	- Detailed aeromagnetic survey totalling 4200 line km - 5000m AC drill metres - Transfer to ZZ Top Project?	\$50,000 Amag Survey \$50,000 Total
EL4847	No current targets	Prepare for tenement reduction/relinquishment..	N/A
EL5310	No current targets	Prepare for reduction (salt lakes)/relinquishment.	N/A
			Total Cost = \$126,700

Table 3: Nuckulla Hill Project Summary and Costs

All work is not within the 2015/2016 budget and some prioritising will have to occur. A discussion about the transfer of tenements or reduction and/or relinquishment if required

Appendix 2

Downhole Drill Data

Appendix 3

Rehabilitation Photographs



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PO Box 8197 Subiaco East WA 6008

T: (08) 9381 5866 F: (08) 9381 5877

7 October 2016

Mineral Tenements
Mineral Resources Division
Dept of State Development
GPO Box 320
ADELAIDE SA 5001

Attention: Nella Petruzzella

Dear Nella

RE: NUCKULLA HILL – 2016 COMBINED ANNUAL TECHNICAL REPORT

On behalf of our client, Doray Minerals Limited, please accept this letter in lieu of the Nuckulla Hill Combined Annual Technical Report for the period ending 24 August 2016 in respect of EL's, 4846, 4847, 5295, 5310, 5457, 5466, 5552, 5620, 5664, 5665 and 5679.

No work was conducted on the licence during the last 12 months.

Should you require any further information in regard to this matter please contact me on the number listed above.

Yours Sincerely

Susan McKay
Senior Mining Title Consultant
(For and on behalf of Doray Minerals Limited)

Enc

sue@mmwc.com.au



FIND IT. MINE IT. CLOSE IT.



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9 October 2017

Mineral Tenements
Mineral Resources Division
Dpt of Premier & Cabinet
GPO Box 320
ADELAIDE SA 5001

Attention: Nella Petruzzella

Dear Nella

RE: NUCKULLA HILL – 2017 COMBINED ANNUAL TECHNICAL REPORT

On behalf of our client, Doray Minerals Limited, please accept this letter in lieu of the Nuckulla Hill Combined Annual Technical Report for the period ending 24 August 2017 in respect of EL's 5295, 5310, 5457, 5466, 5552, 5620, 5664, 5665, 5679, 5954 & 5955.

No work was conducted on the licence during the last 12 months.

Should you require any further information in regard to this matter please contact me on the number listed above.

Yours Sincerely

Susan McKay
Principal Mining Title Consultant
(For and on behalf of Doray Minerals Limited)

Enc

sue@mmwc.com.au

16 October 2017

Mineral Resources Division
Dpt of the Premier & Cabinet
GPO Box 320
ADELAIDE SA 5001

Attention: Nella Petruzzella

Dear Nella

RE: EL's 5295, 5310, 5457, 5466, 5552, 5620, 5664, 5665, 5679, 5954 & 5955 – FINAL TECHNICAL REPORT (NUCKULLA HILL PROJECT)

On 11 October 2017 an application to surrender EL's 5295, 5310, 5457, 5466, 5552, 5620, 5664, 5665, 5679, 5954 & 5955 was lodged with the Department of Premier & Cabinet.

The abovementioned exploration licences formed part of the Nuckulla Hill Combined Reporting Group. We advise that no further work has been undertaken since the lodgement of the last combined technical report and in lieu of a Final Technical Report, Doray Minerals Limited, hereby authorises the release of all jointly reported technical data.

Should you require any further information in regard to this matter please contact me on the number listed above.

Yours Sincerely



Mark Cossom
General Manager – Geology & Exploration