ILUKA RESOURCES LIMITED

Final Relinquishment Report

EL4545

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Executive Summary

The following report details exploration activities conducted, and partial relinquishment of Exploration Licence 4545 held by Iluka Resources Limited (Iluka).

Iluka was granted EL4545 in August 2010. EL4545 is part of the Yellabinna Amalgamated Expenditure Agreement under the heading of Group 2.

The tenement is located on the eastern margin of the Eucla Basin north of the South Australian town of Ceduna.

The total expenditure for the tenement was **$13, 165** for the life of the tenement.

1. Introduction

Under the Amalgamated Expenditure Agreement (AEA) between Iluka Resources Limited (Iluka) and Primary Industries and Resources South Australia (PIRSA) the tenement relinquishment requirements can be applied across the entire group of tenements within the AEA. That is to say, the required percentage of relinquishment can be applied to the total area to the tenement group rather than individual tenements. A total of 379 km^2 of the Group 2 tenements is outlined in this report for relinquishment (Figure 1).

1.1. Location

The tenement identified in *Table 1* is located on the eastern margin of the Eucla Basin north of the South Australian town of Ceduna (*Figure 1*). *Table 1* also identifies the various map sheets that cover this tenement.

Map Sheets	EL4545
Barton	
Fowler	
Childara	✓
Nuyts	
Streaky Bay	
Barton	
Taloreh	
Midgerie	
Poondinga	
Jellabinna	
Tolmer	
Bookabie	
Penong	
Kalanbi	✓
Pureba	✓
Tallacootra	
Thevenard	

Table 1: Map sheets covering EL4545

1.2. Pre-Relinquishment Tenure

- The tenement EL4545 (formerly EL3322) was granted on the 24th of August, 2010. EL4545 is approximately 100km northwest of Penong with a total area of 531km^2. The eastern most extremity of the tenement is within the Yellabinna Regional Reserve.

Tenement	Grant Date	Expiry Date	Initial Area (Km^2)	Final Area (Km^2)
EL4545	24/08/2010	17/07/2013	531	379

Table 2: Summary of tenement EL4545

1.3. Climate

The project area has a desert climate with short cool winters and long hot summers. Temperatures during summer have a mean of around 35ºC. Rainfall is extremely low and variable with an annual mean of 150-200mm. There is no distinct seasonal rainfall pattern, with summer rainfall often due to thunderstorm activity.

1.4. Exploration History

BHP Mid 1980's: BHP explored a large part of the Ooldea range, concentrating on the north-western part of the Ooldea Range. They completed 27 holes on tenement EL2900 mostly drilling to a depth of 18m only. Heavy mineral (HM) accumulations were generally low grade and dominated by trash. BHP concluded that the Ooldea Sandstone was unlikely to host economic deposits.

National Mineral Sands (NMS) – 1989-1994: Several low-grade intersections were found, the best intersection EB0119 (38-40m) intersected 27.5% HM with 51% Zircon, 43% ilmenite and 3% rutile. The ilmenite has a TiO_2 content of 66.2%. Some follow up drilling failed to outline a mineralised body.

North Mining (National Mineral Sands JV) – 1994 to 1999: North and NMS completed 609 holes for approximately 17,000m between them. They discovered the Immarna prospect in northern part of Iluka EL2900. They relinquished the ground due to low HM grade and low rutile content.

Iluka Resources – 2002 to present: Iluka's involvement began with the granting of EL2900 (now EL3742) in March 2002. Drilling was delayed by the lengthy work approval process required to allow exploration to proceed within the Yellabinna Regional Reserve.
The Jacinth and Ambrosia deposits were discovered in September 2004, three weeks after the commencement of exploration drilling by Iluka. Field Activities in late 2004 and the first half of 2005 concentrated on delineating and estimating a resource for the Jacinth and Ambrosia deposits.
Regional Exploration activities undertaken concurrently with the resource delineation drilling have discovered further anomalous HM occurrences including:

The Tripitaka Deposit, approximately 90km SE of Jacinth;
The Dromedary Prospect, approximately 50km ENE of Ceduna;
The Typhoon Prospect, approximately 5km SE of Jacinth;
The Mojave Prospect, approximately 80km east of Jacinth and;
The Gulliver's Prospect, approximately 60km east of Ceduna.

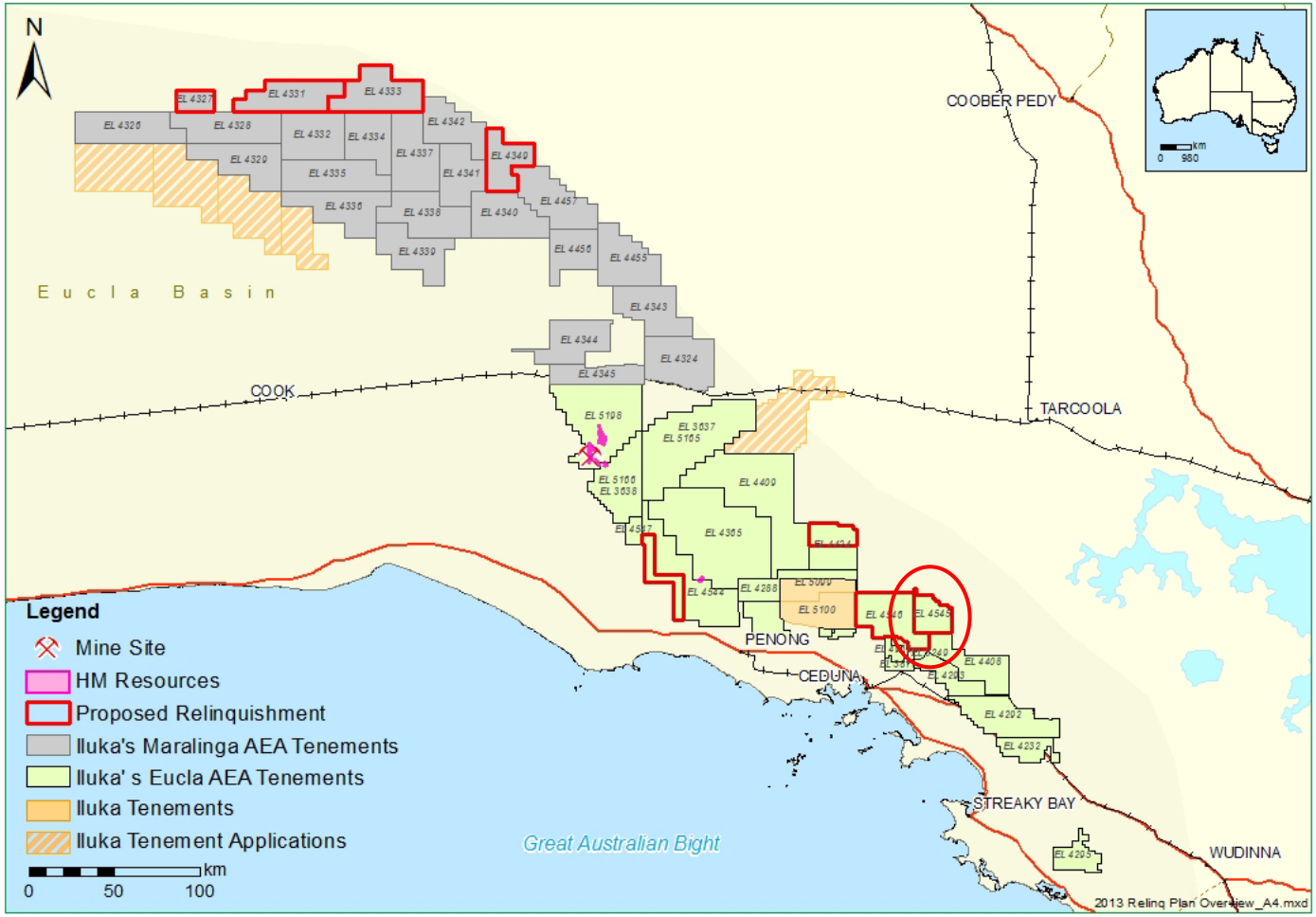


Figure 1: Location of Iluka's Eucla Tenements (light green), the areas for relinquishment within the group 2 tenements are presented as the red outlines within the red circle.

2. Regional Geology

The Eucla basin extends approximately 2,000km from Western Australia to South Australia. The eastern margin of the basin is dominated by the Ooldea, Paling and Barton Ranges (*Figure 2*). The Eucla Basin contains sequences up to 300m thick of Tertiary marine, coastal and palaeochannel sediments.

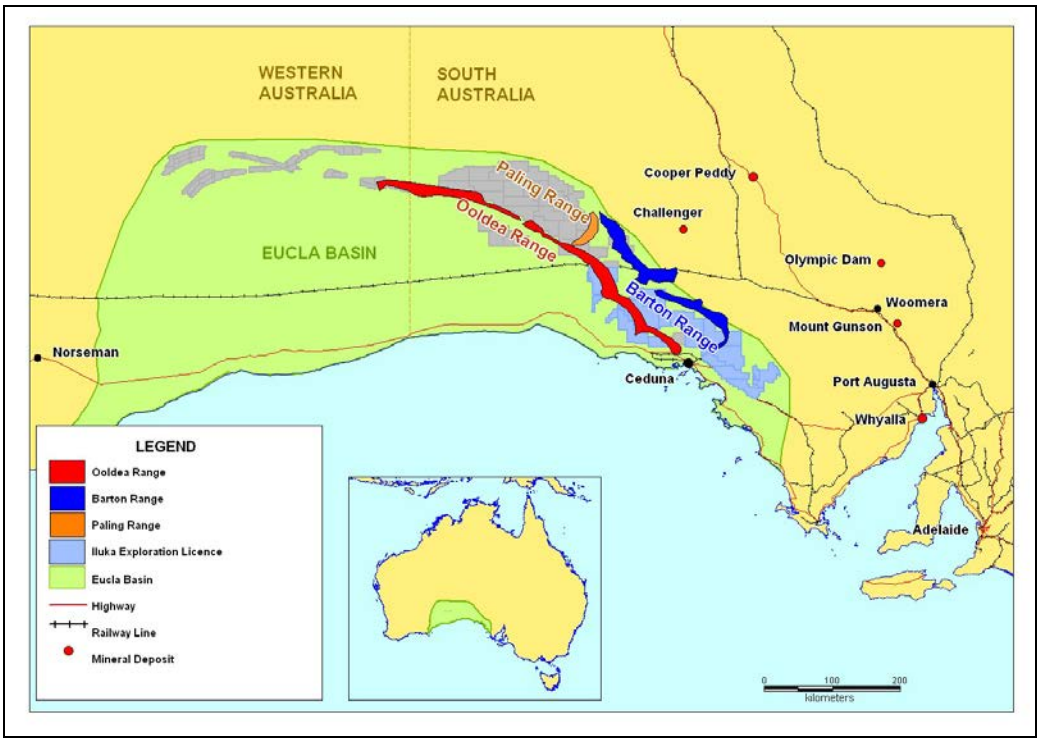


Figure 2: The regional geology of the Eucla Basin.

The eastern Eucla Basin is underlain by Archaean to Middle Proterozoic rocks of the Gawler Craton that include granite, gneiss, and mafic/ultramafic intrusives of the Gawler Range Volcanics. These Gawler Craton rocks, along with the Musgrave Block to the north, are currently held to be the main source of zircon rich mineral sands for this region.

There have been five marine transgressions into the Eucla Basin during the last 50 million years. Currently, four sets of palaeoshorelines are recognised ranging in age from middle Eocene to Pliocene. These shoreline sequences have potential to host heavy mineral deposits. These are summarised below:

The oldest is the poorly defined Wilson Bluff Shoreline, probably dominated by the Hampton sandstone and situated in the central portion of the basin.
The Middle Eocene Tortachilla Transgression contains beach deposits within the Lower Pidinga and Lower Ooldea Formations. The Ooldea Range Shoreline was formed during this time and hosts the Jacinth and Ambrosia Deposits.
The Paling and Barton Ranges are made up of Late Eocene beach or barrier facies sands.
A younger set of Neogene shorelines exist in the south eastern part of the basin formed at a high angle to the Eocene shorelines.

The Ooldea, Barton and Paling Ranges formed initially as spits and barrier islands during the period of maximum transgression at the end of the Eocene. These dunes

contain a core of marine Eocene Hampton Sandstone, which is overlain by Eocene Ooldea Sandstone (possibly of aeolian origin). To the southwest of these major landform features lies the Nullabor Limestone which formed in the Pliocene over much of the central basin. The Nullabor limestone has left a fringe of prospective marine sands around the rim.

Erosion from the last regressive phase has resulted in vast quantities of quartz sand blown inland. This Quaternary sand has blanketed the land surface and covers the area with a series of longitudinal dunes, known geographically as the Great Victoria Desert.

3. Heritage Clearance and Native title

Iluka signed an Access Inspection Agreement with the Far West Coast (FWC) in July 2004 and the Mirning People in May 2005. Iluka subsequently signed a Native Title Exploration Agreement with the Mirning People in November 2005. Both these agreements were superseded by a new Access Inspection Agreement signed in January 2006 with the combined FWC Claimants that was formed by the amalgamation of the Mirning Group and the original FWC Claimants in March 2006.

The Group One tenements are currently covered by the one registered native title claim, being the Far West Coast Native Title claim.

The current exploration clearances have been done on a tenement wide basis for reconnaissance drilling at a minimum traverse spacing of 1km and a hole spacing of 50m. These clearances have identified a set of rules and exclusion areas for Iluka to follow. The rules typically include a 200m buffer (exclusion zone) around all outcrops, soaks, salt lakes and clay pans.

4. Environment and Rehabilitation

Full details of environmental and rehabilitation activities are reported separately in the Environment and Rehabilitation section of: ‘2012_13 Iluka Exploration Annual Compliance Report Multi Tenement’, Unpublished Report.

5. Exploration Licence 4545

5.1. Relinquishment

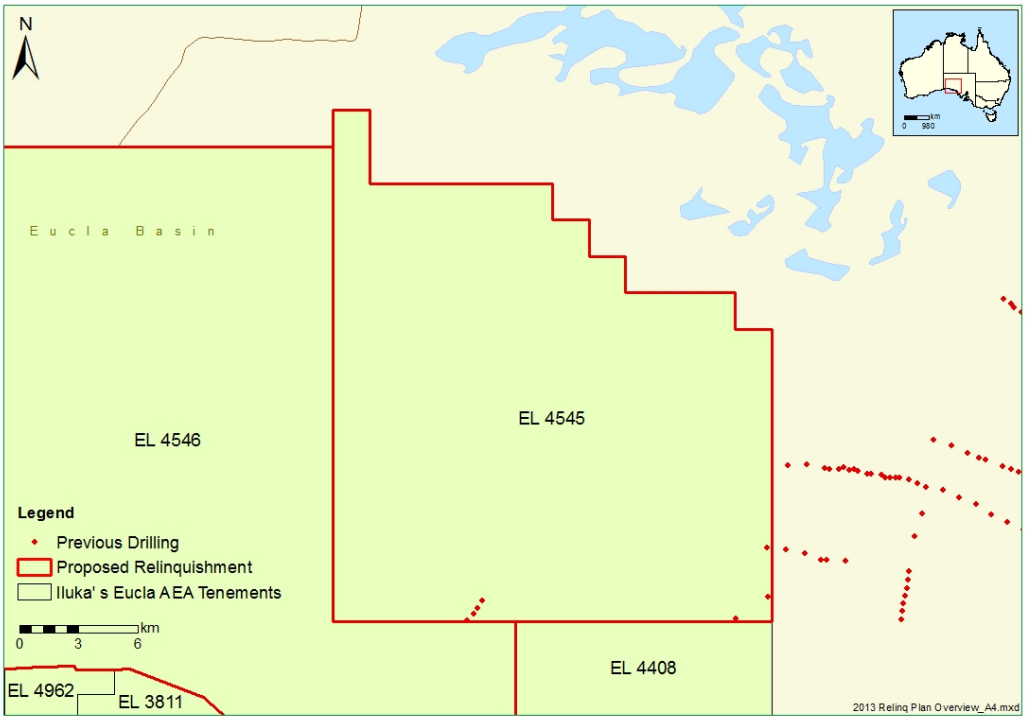


Figure 3: Air-core drilling on the relinquished areas of EL4545.

5.2. Air-Core Drilling

Field activities on EL4545 were part of Iluka's regional exploration for heavy mineral sands. 137m of air-core drilling was completed in 7 drillholes. No significant mineralisation was encountered and there were no samples submitted for heavy mineral assay. These drillholes were completed under the previous tenement name, EL3322. This is reflected in the filenames of the digital data in Appendix 3.

6. Expenditure

The expenditure for the life of the tenement is broken down (*Table 3*) into a number of cost elements. Note that costs shown are only for Iluka's current tenement name (i.e.) EL4545 was formally EL3322 so expenses associated with EL3322 are not included.

Item	EL4545
Travel & Accom-Domestic	$177.20
Domestic Fuels	$493.89
Field Rations & Food	$1,464.89
Freight Costs	$57.07
External Services	$445.83
Contractor	$109.60
Tenement Rent	$11,475.00
Tenement Geological	$2,336.35
Tenement Field Supplies*	$48.09
Tenement Travel	$53.32
Total	$16,661.24

TOTAL EXPENDITURE:	$16,661

Table 3: Summary of expenditure for the life of the tenement

*a negative adjustment of $392.91 was made retrospectively to the February 2011 reporting period.

7. Conclusion

- Whilst EL4545 has received minimal mineral sand exploration, the regions immediately outside the tenement boundary have received adequate mineral sand exploration exposure, as such the tenement is considered to have little to no prospectivity
- Current exploration models indicate that this region has most likely developed from an estuarine setting
- No significant mineralisation was intercepted during drilling
- The drilling in the tenure and surrounding tenure indicates the low prospectivity of the tenements and they are therefore not considered suitable for hosting a mineable deposit.

8. References

Iluka Exploration Geology Group, 2011, Iluka Resources Limited, Eucla Basin Internal Memo, Tom Brosch, Unpublished Report.

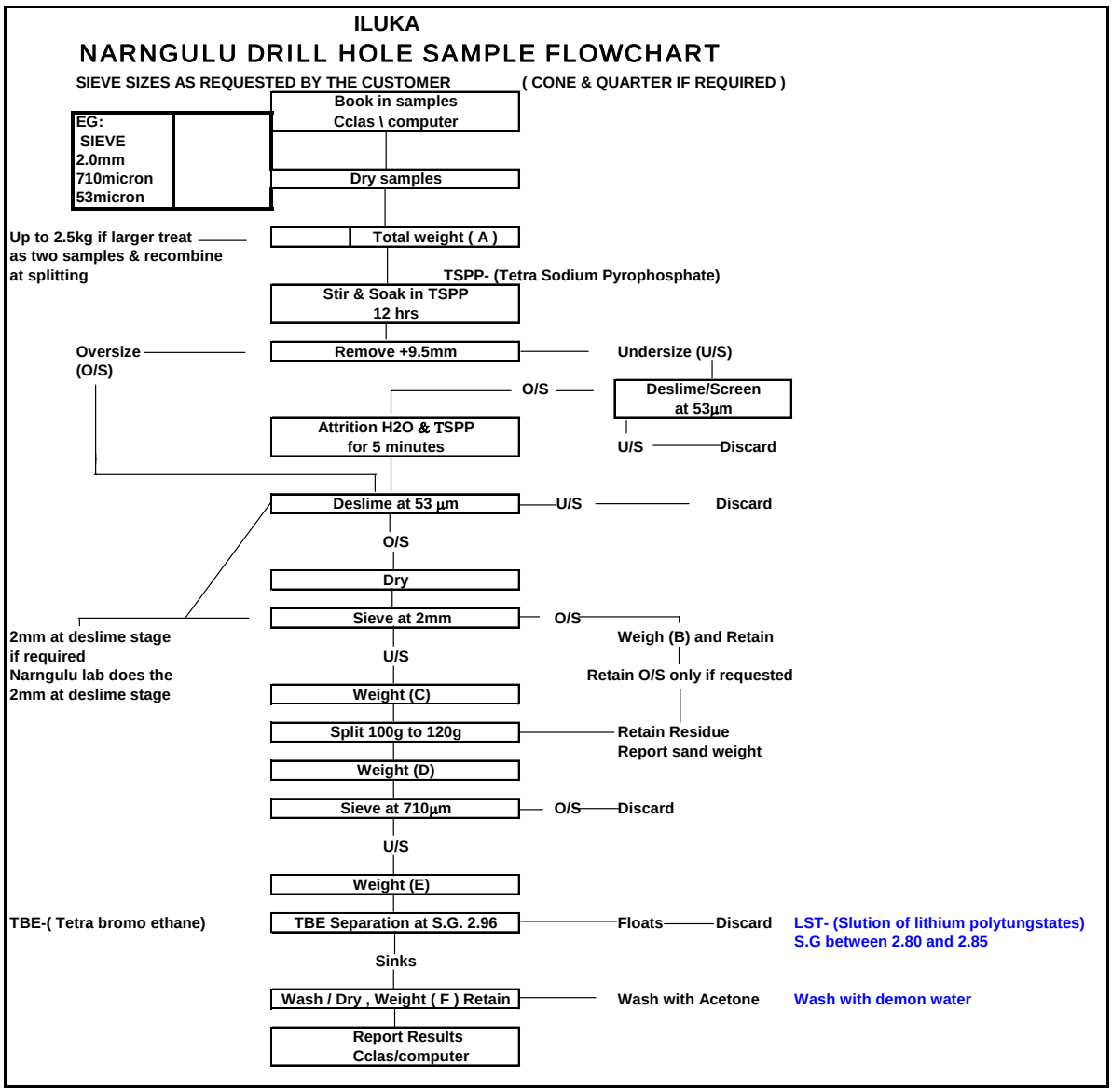
Iluka Exploration Geology Group 2013, Iluka Resources Limited, Eucla Basin Internal Relinquishment Report, Bryan Louden, Unpublished Report TR18125.

9. Appendices

Appendix 1: Lab Assay Flow Sheet
Appendix 2: Logging Codes
Appendix 3: Digital Data

Appendix 1: Lab Assay Flow Sheet

Laboratory Flow Diagram for Heavy Mineral Assays



Appendix 2: Logging Codes

Colour

BK	BLACK
BL	BLUE
BR	BROWN
BB	BROWN-BLACK
BC	BROWN-CREAM
BO	BROWN-ORANGE
BW	BROWN-WHITE
BY	BROWN-YELLOW
BU	BUFF
CR	CREAM
CO	CREAM-ORANGE
RC	CREAM-RED
DBK	DARK BLACK
DBL	DARK BLUE
DBR	DARK BROWN
DBB	DARK BROWN-BLACK
DBC	DARK BROWN-CREAM
DBO	DARK BROWN-ORANGE
DBW	DARK BROWN-WHITE
DBY	DARK BROWN-YELLOW
DBU	DARK BUFF
DCR	DARK CREAM
DCO	DARK CREAM-ORANGE
DRC	DARK CREAM-RED
DGN	DARK GREEN
DNB	DARK GREEN-BROWN
DNY	DARK GREEN-YELLOW
DGR	DARK GREY
DGK	DARK GREY-BLACK
DGB	DARK GREY-BROWN
DGC	DARK GREY-CREAM
DGG	DARK GREY-GREEN
DGO	DARK GREY-ORANGE
DGP	DARK GREY-PINK
DGD	DARK GREY-RED
DGW	DARK GREY-WHITE
DGY	DARK GREY-YELLOW
DMU	DARK MUSTARD
DOR	DARK ORANGE
DOB	DARK ORANGE-BROWN
DOW	DARK ORANGE-WHITE
DOY	DARK ORANGE-YELLOW
DPI	DARK PINK
DPB	DARK PINK BROWN
DPC	DARK PINK-CREAM
DPO	DARK PINK-ORANGE
DPW	DARK PINK-WHITE
DPU	DARK PURPLE
DRE	DARK RED
DRK	DARK RED-BLACK
DRB	DARK RED-BROWN
DRO	DARK RED-ORANGE
DRP	DARK RED-PINK
DRW	DARK RED-WHITE
DRY	DARK RED-YELLOW
DWH	DARK WHITE
DWC	DARK WHITE-CREAM
DYE	DARK YELLOW
DYB	DARK YELLOW-BROWN
DYG	DARK YELLOW-GREEN
DYW	DARK YELLOW-WHITE
GN	GREEN
NB	GREEN-BROWN
NY	GREEN-YELLOW
GR	GREY
GK	GREY-BLACK
GB	GREY-BROWN
GC	GREY-CREAM
GG	GREY-GREEN
GO	GREY-ORANGE
GP	GREY-PINK
GD	GREY-RED
GW	GREY-WHITE
GY	GREY-YELLOW
KH	KHARKI
LBK	LIGHT BLACK
LBL	LIGHT BLUE
LBR	LIGHT BROWN
LBB	LIGHT BROWN-BLACK
LBC	LIGHT BROWN-CREAM
LBO	LIGHT BROWN-ORANGE
LBW	LIGHT BROWN-WHITE
LBY	LIGHT BROWN-YELLOW
LBU	LIGHT BUFF
LCR	LIGHT CREAM
LCO	LIGHT CREAM-ORANGE
LRC	LIGHT CREAM-RED
LGN	LIGHT GREEN
LNB	LIGHT GREEN-BROWN
LNY	LIGHT GREEN-YELLOW
LGR	LIGHT GREY
LGK	LIGHT GREY-BLACK
LGB	LIGHT GREY-BROWN
LGC	LIGHT GREY-CREAM
LGG	LIGHT GREY-GREEN
LGO	LIGHT GREY-ORANGE
LGP	LIGHT GREY-PINK
LGD	LIGHT GREY-RED
LGW	LIGHT GREY-WHITE
LGY	LIGHT GREY-YELLOW
LMU	LIGHT MUSTARD
LOR	LIGHT ORANGE
LOB	LIGHT ORANGE-BROWN
LOW	LIGHT ORANGE-WHITE
LOY	LIGHT ORANGE-YELLOW
LPI	LIGHT PINK
LPB	LIGHT PINK BROWN
LPC	LIGHT PINK-CREAM

Colour (Cont…)

LPO	LIGHT PINK-ORANGE
LPW	LIGHT PINK-WHITE
LPU	LIGHT PURPLE
LRE	LIGHT RED
LRK	LIGHT RED-BLACK
LRB	LIGHT RED-BROWN
LRO	LIGHT RED-ORANGE
LRP	LIGHT RED-PINK
LRW	LIGHT RED-WHITE
LRY	LIGHT RED-YELLOW
LWH	LIGHT WHITE
LWC	LIGHT WHITE-CREAM
LYE	LIGHT YELLOW
LYB	LIGHT YELLOW-BROWN
LYG	LIGHT YELLOW-GREEN
LYW	LIGHT YELLOW-WHITE
MU	MUSTARD
OR	ORANGE
OB	ORANGE-BROWN
OW	ORANGE-WHITE
OY	ORANGE-YELLOW
PI	PINK
PB	PINK BROWN
PC	PINK-CREAM
PO	PINK-ORANGE
PW	PINK-WHITE
PU	PURPLE
RE	RED
RK	RED-BLACK
RB	RED-BROWN
RO	RED-ORANGE
RP	RED-PINK
RW	RED-WHITE
RY	RED-YELLOW
WH	WHITE
WC	WHITE-CREAM
YE	YELLOW
YB	YELLOW-BROWN
YG	YELLOW-GREEN
YO	YELLOW-ORANGE
YR	YELLOW-RED
YW	YELLOW-WHITE

Coarsest Grain Size

CL	CLAY
GR	GRIT
PB	PEBBLE
SI	SILT
VF	VERY FINE
F	FINE
M	MEDIUM
C	COARSE
VC	VERY COARSE

Lithology

BA	BASALT
CA	CALCRETE
CG	CONGLOMERATE
CL	CLAY
CO	COAL
CS	CLAYEY SAND
CT	CLAY STONE
DO	DOLOMITE
GA	GRANITE
GB	GABBRO
GN	GNEISS
GR	GRAVEL
GY	GYPSUM
HM	HEAVEY MINERAL
IC	INDURATED CLAY
IR	IRONSTONE
LA	LATERITE
LC	LOST CORE
LI	LIMESTONE
LIG	LIGNITE
LS	LOMESAND
MU	MUDSTONE
OV	OVER SIZE
PE	PEBBLES
PY	PYRITE
QU	QUARTZ
RK	ROCK UNKNOWN
SA	SAND
SAP	SAPROLITE
SC	SANDY CLAY
SD	SILTY SAND
SDY	SILTY-SANDY-CLAY
SE	SILCRETE
SH	SHALE
SI	SILT
SIS	SILTSTONE
SL	SLIME
SLT	SLATE
SO	SOIL
SS	SANDSTONE
ST	SCHIST
SY	SILTY-CLAY
SYS	SILTY-CLAY-SAND
YS	CLAY-SILT

Heavy Mineral Grain Size

F	FINE
VF	VERY FINE
FM	FINE-MEDIUM
M	MEDIUM
MC	MEDIUM-COARSE
C	COARSE
VC	VERY COARSE

Qualifier

AT	ABUNDANT BLACK TRASH
CB	CARBONACEOUS
CT	COMMON BLACK TRASH
FE	FERRUGINOUS
LA	LATERITIC
MI	MICACEOUS
MO	MOTTLED
MT	MINOR BLACK TRASH
OX	OXIDISED
PY	PYRITIC
WE	WEATHERED
SI	SILICEOUS
CC	CALCAREOUS
CE	CARBONATE
GY	GYPSUM
OR	ORGANIC
ALF	ABUNDANT LATERITIC FINES
CLF	COMMON LATERITIC FINES
MLF	MINOR LATERITIC FINES
BM	BASEMENT
TL	TAILINGS
SL	SLIMES
CV	CAVEN

Induration Type

CA	CALCRETE
CC	CALCAREOUS INDURATION
CG	CONGLOMERATE
CO	COAL
FE	FERRUGINOUS INDURATION
GA	GRANITE
GY	GYPSUM
IC	INDURATED CLAY
IR	IRONSTONE
LA	LATERITE
LA	LATERITIC SILTSTONE
LA	LATERITIC SANDSTONE
LI	LIMESTONE
MU	MUDSTONE
PY	PYRITE
RK	ROCK UNKNOWN
SE	SILCRETE
SI	SILICEOUS INDURATION
SI	SILTSTONE
SS	SANDSTONE

Formation

TFS	TOP OF FORESHORE
TLS	TOP OF LOWERSHORE
TSZ	TOP OF SURFZONE
TLI	TOP OF LIMESTONE
DU	DUNAL
WT	TOP OF WATER TABLE

Washability

IM	IMPOSSIBLE
M	MODERATE
MD	MODERATELY DIFFICULT
ME	MODERATELY EASY
VD	VERY DIFFICULT
VE	VERY EASY

To Be Assayed

Y	YES - HM ASSAY
N	NO - HM ASSAY
M	MULTI ELEMENT
YM	HM & MULTI ELEMENT ASSAY

Water

D	DRY
M	MOIST
W	WET
I	INJECTED

Link

TO	TO
AN	AND (30-60%)
WI	WITH (10-30%)
WM	WITH MINOR (<10%)

Sorting

G	GOOD
M	MODERATE
P	POOR
VG	VERY GOOD
VP	VERY POOR

Sample quality

G	GOOD
M	MODERATE
P	POOR

Appendix 3: Digital Data

EL4545 (Formerly EL3322)

EL3322_200910_F_1_location.txt

EL3322_200910_F_2_lithology.txt

EL3322_200910_F_3_survey.txt

File_Listing.txt