TERRITORY IRON LIMITED

A.C.N. 100 552 118

ANNUAL REPORT EL23824 MILLERS

NORTHERN TERRITORY

For The Period

9th February 2005 – 8th February 2006

By

HM MEES

Pine Creek SD52-08 1:250,000 Sheet
Pine Creek 5270 1:100, 000 Sheet
McKinley River 5271 1:100,00 Sheet

February 2006

CONTENTS

List of Tables and Figures

APPENDICES

Appendix 1: Drill Hole Data
Appendix 2: Analytical Results
Appendix 3: Expenditure Statement
Appendix 4: Prospect Summary Sheets
Appendix 5: Miller's Prospect Gravity Survey
Appendix 6: EL23824 Fe Occurrences
Appendix 7: Cultural Heritage Study
Appendix 8: Digital Data

SUMMARY

This report is submitted by Territory Iron on behalf of Softwood Plantations Pty Ltd, holder of EL 23824, to meet statutory reporting commitments on the tenement for the year ended 8th February 2006.

Current exploration of EL23824 is focussed on both iron and gold mineralisation. Gold exploration is being conducted by Australasia Gold Ltd, while iron exploration is being carried out by Territory Iron.

Work by Territory Iron comprised RC and RAB drilling and associated earthworks, regional and prospect scale mapping and rock chip sampling, gravity surveys, surveying, and resource modelling and estimation at Millers. A total of 33 RAB holes for 996m and 33 RC holes for 992m were drilled during the reporting period. A total of 1239 1m interval drill-hole samples and 73 rock chip samples were assayed.

The drilling by Territory Iron has outlined an inferred resource of 1,029,000t at 52.47% Fe at Millers which is still open at depth, and along strike. More drilling will be carried out to increase this resource next dry season.

Regional prospect mapping identified numerous outcrops of iron mineralisation adjacent to, and accurately located the known mineral occurrences at, Millers, Bowerbird, Boots, Lewis and McFarrars which may be tested by drilling during the next dry season.

Expenditure for the year was $265,349.66**.**

1. INTRODUCTION

This report is submitted by Territory Iron Ltd on behalf of Softwood Plantations Pty Ltd, holder of EL 23824, to meet statutory reporting commitments on the tenement for the year ended 8th February 2006.

Current exploration of EL23824 is focussed on both iron and gold mineralisation. Gold exploration is being conducted by Australasia Gold Ltd, while iron exploration is being carried out by Territory Iron Ltd.

EL 23824 is located about 19km NNW of the old Frances Creek iron ore mining district from which about six million tonnes was produced during the period 1967 to 1974. The mining district lies 23km north of the township of Pine Creek which is located on the Stuart Highway about 220km south of Darwin, Figure 1. Access from Pine Creek is along the sealed Kakadu Highway for 2km and then along the graded Frances Creek Mine road for 23km to the Frances Creek iron ore mine site area.

The 19km road from Frances Creek Mine to Millers is not maintained by either leaseholders or the NT authorities and use of 4WD vehicles is advisable. Vehicular access off this road is usually not possible during the December to March tropical monsoonal wet season.

2. TENURE

2.1 Mineral Rights

EL23824 was granted to Softwood Plantations on 9 February 2004. The current term of the tenement expires on 8 February 2010.

The tenement covers 103.3 km^2 or approximately 31 graticular blocks and is approximately bounded by MGA94 Zone 52 co-ordinates 8504000mN and 8523000mN and 796000mE and 808600mE.

2.2 Land Tenure

The tenement includes parts of the following land tenure:

- Ban Ban Springs Pastoral Lease, owned by Ban Ban Springs Station Pty Ltd (Linda Claris, fax 8978630), c/- level 5,478 Albert St, East Melbourne.

2.3 Agreements

On 22 April 2004 Softwood Plantations Pty Ltd entered into a joint venture agreement with Australasia Gold Ltd. The JV covers EL 23824 and adjacent EL 22301 and provides a structure whereby Australasia may explore for gold and earn a 100% interest in gold deposits discovered and excised into successor tenements.

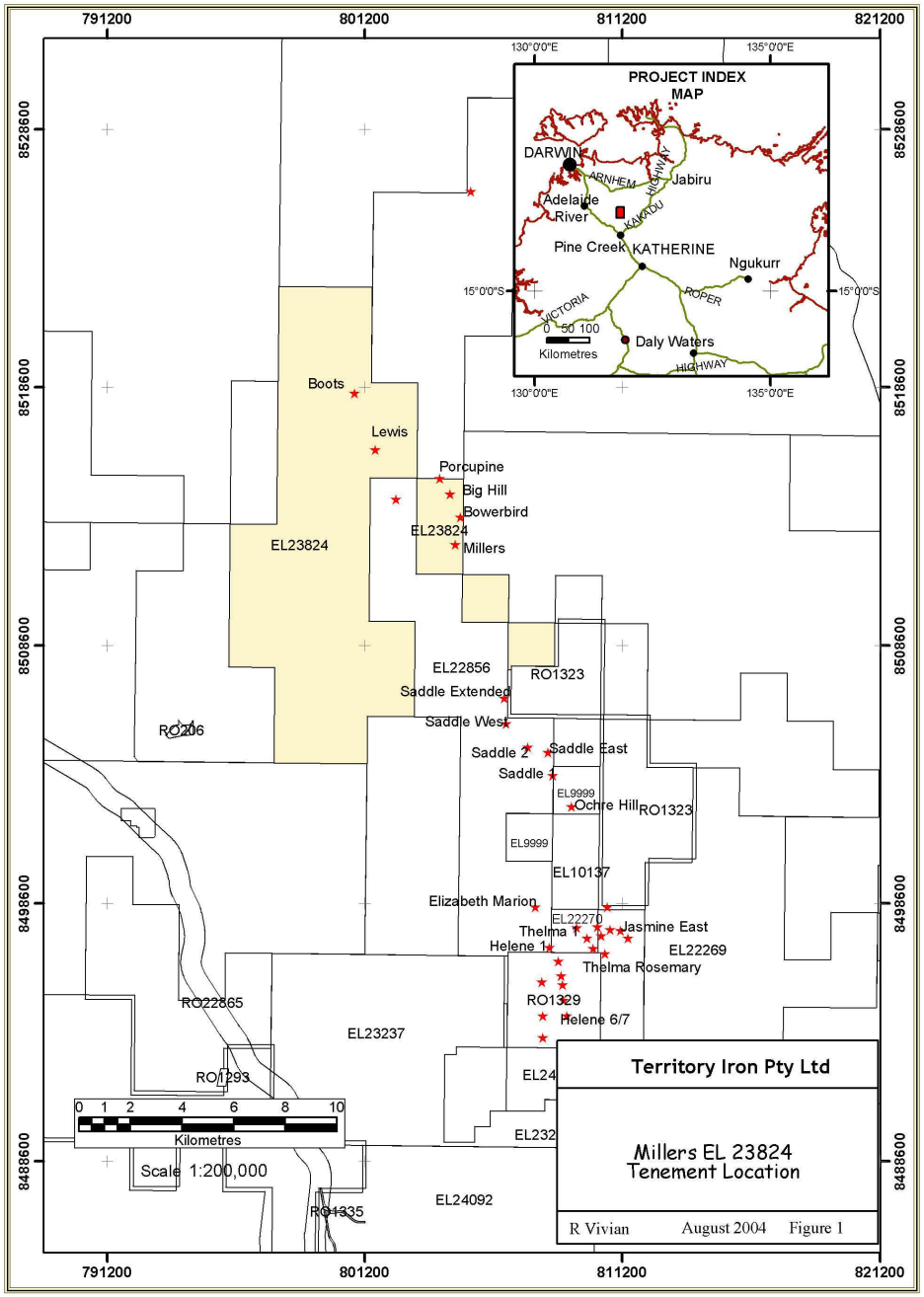

Figure 1 EL23824 Tenement Location & Iron Occurrences

On 30 September 2004 Territory Iron entered into an Agreement with Softwood Plantations Pty Ltd by which Softwood granted Territory Iron the right to explore for iron ore and earn a interest in EL23824 under an unincorporated joint venture with Softwood.

2.4 Aboriginal Sacred Site Clearance & Native Title

A search of the Aboriginal Areas Protection Authority's sacred site digital register carried out prior to the commencement of drilling indicated no Registered or Recorded sites within that portion of the tenement area containing Millers prospect.

A Registered native title claim DC01/21 Ban Ban Springs, lodged on 13 March 2001, covers the tenement area.

3. LOCAL GEOLOGY

Palaeoproterozoic sediments of the Mt Partridge and the overlying South Alligator Groups occur within the tenement area. The Wildman Siltstone of the Mt Partridge Group predominates in the eastern part and rock units of the Koolpin Formation, Gerowie Tuff and Mt Bonnie Formation in the western part of the tenement, Figure 1.

The Wildman Siltstone comprises two informal sequences. The lower sequence consists of carbonaceous phyllite, hematite breccias, siltstone and phyllite, which at depth is reported to be pyritic and carbonaceous. The upper sequence consists of similar rock units, but also contains minor sandstone and rare dolarenite.

The Koolpin Formation consists of carbonaceous pelites, carbonates and iron formation. It is subdivided into three informal members. The Lower Member comprises carbonaceous mudstone, mudstone, siltstone and limestone. The Middle Member is characterised by the first appearance of banded iron formation. The Upper Member comprises thinly laminated carbonaceous shale and mudstone with abundant fine pyrite and pyrrhotite and shows up prominently on aeromagnetic imagery.

The Gerowie Tuff is composed of siltstone, phyllite, tuff and minor chert nodules. The Mount Bonnie Formation comprises two thick greywacke-mudstone units that are separated by 30-60m metres of laminated siltstone, shale, chert and tuff (Goulevitch, 1980).

Numerous conformable sills of pre-orogenic Zamu Dolerite have preferentially intruded the pelitic units of the Gerowie Tuff, Koolpin Formation and the underlying Wildman Siltstone.

These sediments, volcanics and dolerite sills have been moderately to tightly folded about NNW trending axes into a series of synforms-antiforms with vertical dips or steep dips to either side of vertical. On a regional scale, these structures form an anticlinorium with a dominant westerly dip within the tenement area.

Regional lower greenschist grade metamorphism accompanied the folding event during a major deformation period between 1870-1810 Ma.

4. MINERALISATION

Iron mineralisation of two distinct genetic types occurs within EL 23824. Boots, Egg Cup, Mc Farrars and Lewis Prospects occur in Koolpin Formation rocks. In the Koolpin Formation, iron formation of the Middle Member forms near-surface gossanous, haematite-limonite bodies which are reported by Ahmad et al (1993) to give way at depth to ferro-actinolite, Fe-rich chlorite, garnet, siderite, quartz, carbonates and sulphides.

All other iron mineralisation occurs mainly in the lower Wildman Siltstone as haematite or haematite-goethite-manganese mineralisation. Haematite deposits are believed to have formed by low temperature hydrothermal replacement of brecciated Wildman Siltstone. Breccia zones, and hence usually haematite mineralisation are frequently stratiform, with their distribution controlled by D3 folds and associated axial planar faults. Haematite-goethite-manganese deposits possibly have a similar hydrothermal origin but may have undergone extensive weathering related hydration, or may have had a sulphide rich parent rock.

Iron occurrences within EL23824 are shown in Figure 1.

Gold mineralisation is known on a regional scale to occur in: the Wildman Siltstone, the middle and upper Koolpin Formation, the Gerowie Tuff and Mount Bonnie Formation, and in sills of the Zamu Dolerite which intrude the Koolpin Formation and Gerowie Tuff. Gold mineralisation within the Pine Creek Inlier is probably associated with intrusion of the syn-orogenic granites (eg Cullen Batholith). It is certainly feasible that the bulk of the anticline-associated vein-type deposits most likely relates to structural re-activation of regional fold structures during intrusive events.

Possible gold mineralisation styles and targets related to these rocks are according to Goulevitch (1997b): sheeted and stockwork quartz-sulphide veins systems with mineralisation preferentially associated with a strong carbonaceous and/or sulphide in the host sequence (eg Woolwonga, Moline) or with competency contrasts between greywacke and shale (eg Union Reef, Spring Hill); sediment-hosted stratiform mineralisation and quartz-sulphide vein-hosted stratabound mineralisation associated with chert iron formation and carbonaceous mudstone mainly in the Koolpin Formation (eg Mount Porter); stratiform, massive to banded, sulphide-silicate-carbonate mineralisation in the Mount Bonnie Formation (eg Mt Bonnie, Moline).

5. WORK COMPLETED

Exploration activities during the reporting year were undertaken by Territory Iron for iron ore.

5.1 Drill Site Preparation

Drill rig access was established to the various prospect areas by lightly grading previously formed tracks and creating a few short new tracks to individual drill-sites.

Drill pads were constructed by clearing an area of about 5x10m of vegetation with a bulldozer or grader or occasionally on hill slopes by digging and levelling the ground using an excavator.

5.2 RAB Drilling

33 RAB drill holes for a total of 996m were completed at Millers Prospect during the 2005 field season. Drill-hole locations are shown in Figure 2. Drill data are included in Appendix 1 and 2. One hole (40m) was completed at Bower Bird Prospect (BBPC003).

The purpose of the drilling at Millers prospect was to attempt to substantiate the assay results and gross tonnage reported by drilling conducted by past explorers in the mid 1960s to early 1970s and to follow-up on a brief drilling program conducted by Territory Iron during 2004 as reported in EL23824 Annual Report 2004.

The drilling was undertaken by Johannsen Drilling Pty Ltd using an Edson HD 2000 drill rig with a 250 cfm compressor driving a 110mm open hole percussion hammer. Drill cuttings were collected via rig-mounted cyclone at one-metre intervals into green plastic sample bags, numbered with hole number and drill-depth from-to intervals, and stored in sequential order adjacent to each drill hole collar.

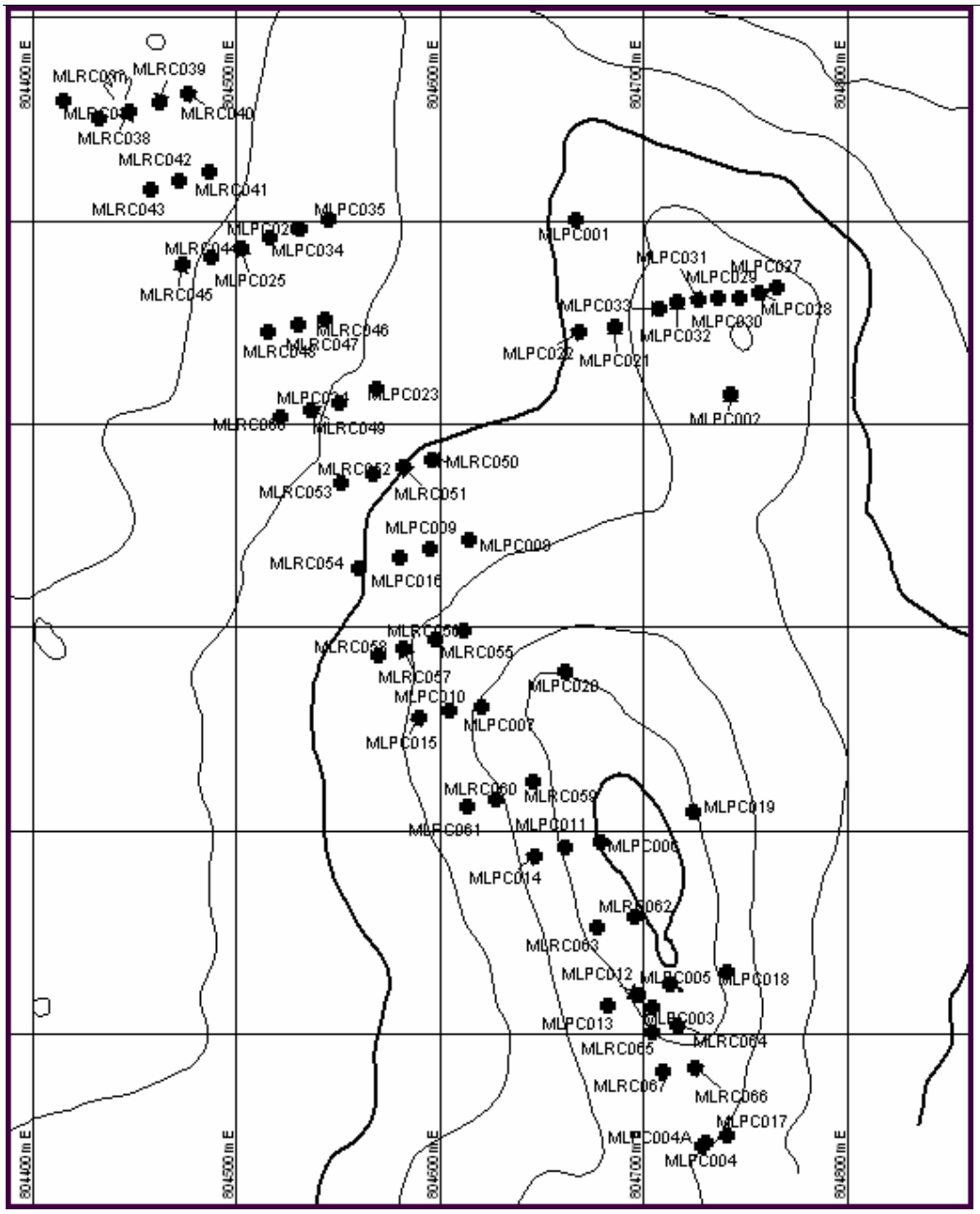

Figure 2 Millers Prospect, Drill-hole Locations

5.3 RC Drilling

33 RC drill holes for a total of 992 m were completed in the 2005 field season at Millers Prospect. Drill-hole locations are shown on Figure 2. Drill data are included in Appendix 1 and Appendix 2.

The purpose of the RC drilling was to confirm and infill the earlier RAB drilling and define an indicated resource over a part of the Millers prospect.

The drilling was undertaken by Johannsen Drilling Pty Ltd using an Edson HD 2000 drill rig with a 600 cfm x 350 psi compressor driving a 130mm reverse circulation percussion

hammer. Drill cuttings were collected via rig-mounted cyclone at one-metre intervals into green plastic sample bags, numbered with hole number and drill-depth from-to intervals, and stored in sequential order adjacent to each drill hole collar.

5.4 Sampling & Analyses

A total of 1206 drill samples were collected and assayed. Samples were assayed for Fe, SiO2, Al2O3, TiO2, CaO, MgO, Mn, K2O, P, S and loss of ignition (LOI). Some 33 samples from MLPC012 were assayed for a wider suite of trace elements in addition to the above.

A representative grab from each of the samples collected from the drilling programs was geologically logged whilst drilling was in progress and a handful of the chips were stored for future reference in a chip tray. Chip trays are currently stored on Arnhem Geological Services premises near Darwin.

Those sample intervals judged to be strongly iron mineralised were passed through a riffle splitter to give a 2-3kg split. This was assigned a unique sample number and submitted to North Australian Laboratories (NAL) in Pine Creek for sample preparation. At regular intervals duplicate samples were split to provide quality control checks on the sampling procedure.

Sample preparation at NAL involved drying the sample, then splitting of 1 kg in a riffle splitter, pulverising of the entire 1kg split in a LM2 or LM5 ring-mill to a nominal 90% passing 100microns. A 70g sample of the resulting pulp was then placed in a kraft bag for dispatch. A nominal 500g split of coarse reject was stored by at NAL. Additional pulp samples are stored at Arnhem Geological Services premises near Darwin.

Following sample preparation the resulting pulp samples were submitted to Ultratrace Laboratories, Perth for analysis. Prior to dispatch standards were inserted into the sample sequence to provide further quality control data. All elements of the standard suite of samples were determined by XRF spectrometry, Loss of ignition was determined gravimetrically. Trace elements were determined using either Inductive Coupled (ICP) Mass Spectrometry or ICP Optical Emission following Aqua Regia or Multiple acid digest.

Full assay results are given in Appendix 2.

5.5 Surveying

All drill-hole collars were surveyed by personnel from Ausurv Pty. Ltd. following establishment of survey control (Table 2). All work was executed using GPS. Primary survey control was established by post processing Static GPS data online with the AUSPOS Processing Service, as provided by Geoscience Australia. All other data collected was by GPS RTK method and is reported on MGA94 datum.

Table 1 Permanent Mark Established at Millers Prospect

Station Name	East	North	RL (m)	Description
Millars1	804734.397	8512598.571	112.496	Steel Picket in Ground with steel picket witness post

5.6 Resource Estimation

The results from this year's drilling were used by Snowden Mining Industry Consultants to prepare a resource statement for the Millers Prospect. Snowden used ordinary block kriging to estimate Fe, SiO2, Al2O3, TiO2, CaO, MgO, Mn, K2O, P, S and loss of ignition (LOI) in a constrained block model reflecting geology interpreted by the geologists supervising the drilling program.

5.7 Regional Prospecting & Structural mapping

Regional prospecting and mapping was carried out over part of EL23824 as part of a wider program over a number of Territory Iron's tenements. Several historical and newly identified prospects were mapped and accurately located by handheld GPS. A plan showing Fe occurrences identified during the program is supplied in Appendix 7. Prospect data sheets providing summary information on the major prospects are supplied in Appendix 4.

Outcrop samples of iron mineralised rocks were collected and submitted to NAL for sample preparation (unlike the drill cutting these were first crushed in a jaw crusher and roll crusher to passing 2mm prior to pulverising) and Ultratrace for analysis for the same suite of elements as the drill-hole samples. A total of 69 rock chip samples were collected within EL23824.

5.8 Ground Geophysics

A gravity survey was carried out over the Millers Prospect area. The survey consisted of 318 stations over 14 lines at 25m x 50m spacing partially in-filled to 25m x 12.5m for a total of 6.65line/km. The survey was carried out by Haines Surveys Pty Ltd. Details of the survey can be found in Appendix 5, Miller's Prospect Gravity Survey.

An orientation gradient array induced polarization (GAIP) survey was carried out over a 1.5km of traverses at the Millers Prospect, using 50m line spacing and 25m station spacing. The survey was cut short because insufficient signal was being detected to collect useable data over the entire planned grid. This was attributed to the presence of highly conductive carbonaceous Wildman Formation sediments.

5.9 Drill-site Rehabilitation

All samples were either removed from the drill-site to a central bag farm or were rehabilitated by ripping the plastic bags and spreading out the drill-cuttings over the drill-pad and using them to backfill the drill-holes. All rubbish, including the ripped sample bags, was taken to the Pine Creek municipal waste disposal facility. All drill-holes were capped and marked with metal stakes identified with an aluminium tag recording the drill-hole number.

5.10 Cultural Heritage Study

The immediate area of the Millers Prospect was assessed as part of a wider Cultural Heritage Survey. Some 1.656km of foot traverses were carried out. No sites of cultural significance were identified. The person responsible for the survey T. Hill (2005) considered Millers Prospect likely to be too remote from water sources to have sites of cultural significance.

6. RESULTS & DISCUSSION

6.1 Drilling Results

RAB and RC drilling successfully delineated an inferred resource at Millers. All drill-holes intersected Fe-Mn mineralisation, although several holes failed to penetrate the full width of the mineralisation due to loss of circulation in cavities and high levels of water inflow. This affected both RAB and RC drilling.

A full tabulation of drill-hole data and assay results are given in Appendix 1 and 2.

The Millers prospect was confirmed as a shallow to moderately steep west-dipping broadly tabular body, or stacked series of bodies of breccia hosted haematite-goethite-manganese mineralisation. The drilling has yet to define the full extent of Fe-Mn mineralisation. The genesis of the mineralisation is not yet fully understood; it may involve later supergene modification of breccia-hosted hydrothermal haematite mineralisation similar in style to that previously mined at Frances Creek.

6.2 Resource Estimate – Millers

A JORC Code compliant Inferred Resource of 1,029,000 tonnes at an average grade of 52.47% Fe, 1.63% Al2O3, 5.57% SiO2, 0.09% P and 6.07% Mn or 63.17% Calcined Fe equivalent (Calcined Fe =Fe%+Mn%+0.6*LOI%)was estimated for the Millers Prospect. An in situ density of 3.25t/m3 was applied to the mineralisation. This value may be reviewed as no density data specific to the Millers mineralisation was available.

The resource has not been closed off at depth or along strike. Mineralisation is known to continue well outside the area of the current resource estimate. RC drilling during the next dry season will focus on increasing the inferred resource.

6.3 Gravity Survey

The orientation gravity survey was carried out over that part of the Millers Prospect area that was subsequently drilled. The survey highlighted the Northern half (Figure 3) of the known deposit as being characterised by a strong linear gravity anomaly, specifically in the area where a thick (20-25m) shallow dipping (~30°) section of the Millers deposit sub-crops under very thin cover in an area of low topographic relief.

There is no clear expression of the southern extension of the deposit which lies on a low hill, is thinner (5-10m), and appears to be much steeper dipping (50-70°) than the Northern half.

A subdued linear gravity anomaly is coincident with intermittent known mineralisation to the east of the main Millers deposit.

The gravity survey successfully defined the major part of the Millers mineralisation and is likely to be a useful tool for defining similar mineralisation in areas of low topographic relief were there is limited exposure.

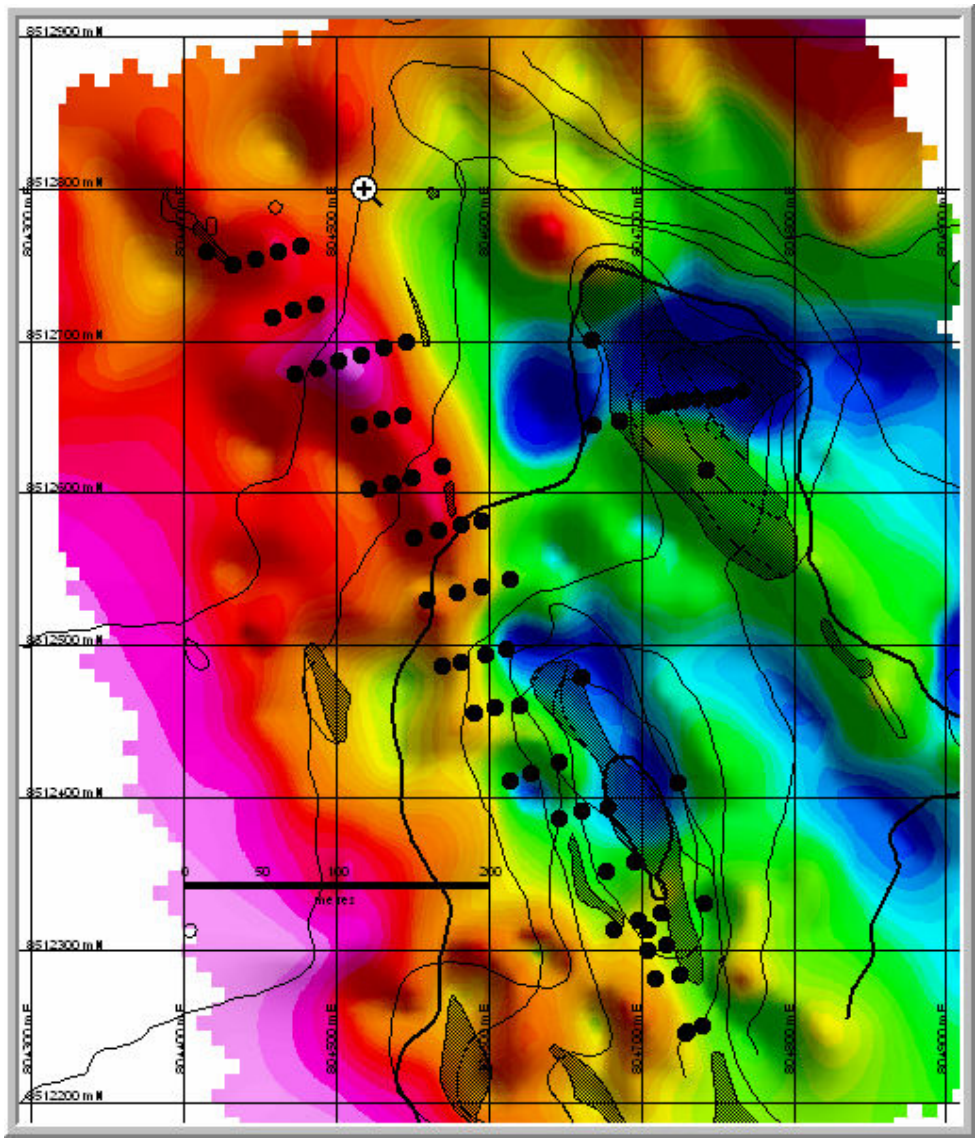

Figure 3 Millers Prospect, Drill-hole Collars, Fe Outcrop and Bouguer Gravity Image with NE shade

6.4 Prospecting Activities

The regional mapping helped define numerous iron mineralised occurrences which will be considered as drill targets next dry season. A prospect map showing all iron occurrences located on EL23824 is presented in Appendix 7.

Rock chip samples returned assays of over 55% Fe at Boots, Lewis, Bowerbird and Millers prospects. Most samples returned relatively high values for phosphorous. Strongly elevated manganese was returned from samples at Millers, Bowerbird North, Lewis and McFarrars prospects. A detailed listing of rock chip samples is presented in table 3 below.

The regional program confirmed that the majority of the iron mineralisation occurs within the lower Wildman Siltstone, with only minor mineralisation in the Koolpin formation. Rockchip sampling confirmed a north trending increase in phosphorous.

Table 2 Rock Chip Sample Data

SAMPLE No	North*	East*	Fe %	P %	Al2O3 %	SiO2 %	CaO %	S %	TiO2 %	Mn %	MgO %	K2O %	LOI %
BB484501	8513573	804924	55.95	0.162	2.18	4.79	0.040	0.013	0.06	1.48	0.30	0.289	9.26
BB484502	8513536	804973	52.77	0.136	3.66	11.58	0.050	0.011	0.13	0.76	0.61	0.651	6.00
BB484503	8513552	805029	50.37	0.450	3.36	11.68	0.100	0.005	0.12	0.09	0.26	0.657	10.16
BB484504	8513404	805053	58.2	0.452	1.61	5.28	0.160	0.005	0.05	0.05	0.17	0.206	7.89
BB484505	8513348	805049	55.7	0.309	2.49	7.01	0.060	0.029	0.09	0.63	0.25	0.455	7.66
BB484506	8513278	805024	58.81	0.300	1.82	6.94	0.080	0.015	0.05	0.13	0.10	0.278	5.10
BB484507	8513246	805050	47.49	0.571	1.75	17.74	0.110	0.008	0.06	0.65	0.17	0.267	8.91
BB484508	8513270	805098	57.12	0.237	1.78	8.49	0.070	0.01	0.06	0.03	0.16	0.371	6.53
BB484509	8513526	804900	56.23	0.160	1.90	6.63	0.070	0.006	0.06	0.47	0.24	0.264	9.08
BB484510	8513580	804953	47.13	0.221	2.14	19.81	0.050	0.035	0.05	0.75	0.18	0.411	7.65
BB484511	8513616	804978	49.13	0.171	3.78	15.31	0.030	0.094	0.12	1.09	0.22	0.611	7.01
BB484512	8513667	804941	50.12	0.245	2.97	13.10	0.070	0.015	0.09	0.10	0.30	0.491	9.60
BB484513	8513640	804878	54.62	0.407	2.13	7.68	0.300	0.004	0.08	0.07	0.24	0.409	9.36
BB484514	8513640	804853	61.25	0.131	1.02	4.70	0.050	0.004	0.02	0.05	0.11	0.099	5.98
BB484515	8513678	804835	54.87	0.183	2.06	7.13	0.050	0.007	0.05	0.65	0.29	0.274	9.74
BB484516	8513732	804876	47.31	0.240	2.47	18.28	0.100	0.007	0.09	0.08	0.32	0.517	9.12
BB484517	8513458	804917	52.13	0.157	2.23	13.31	0.040	0.005	0.07	0.05	0.19	0.417	8.18
BB484518	8513456	804910	54.22	0.181	2.09	9.27	0.050	0.004	0.07	0.15	0.22	0.354	9.29
BB484519	8513466	804960	56.34	0.289	1.82	6.94	0.050	0.009	0.05	0.09	0.18	0.203	8.97
BB484520	8513485	804980	54.6	0.271	2.65	13.59	0.060	0.017	0.05	0.06	0.13	0.243	4.23
BB484521	8513500	804987	57.72	0.399	1.28	5.82	0.030	0.007	0.03	0.09	0.13	0.22	8.60
BB484615	8512688	805316	55.64	0.276	2.03	6.21	0.060	0.02	0.07	0.03	0.18	0.188	10.33
BBN484641	8514508	804478	43.56	0.118	0.65	1.07	0.080	0.144	0.02	19.10	0.13	0.169	7.44
BBN484642	8514549	804520	53.9	0.185	1.07	4.22	0.070	0.067	0.03	4.41	0.14	0.185	9.64
BBN484643	8514430	804551	54.7	0.158	0.75	6.26	0.030	0.04	0.02	4.16	0.24	0.21	7.67
BBN484644	8514367	804584	40.3	0.107	1.55	5.69	0.050	0.013	0.05	16.60	0.42	0.455	9.29
BBN484645	8514346	804590	54.71	0.092	0.28	1.51	0.050	0.111	-0.01	8.29	0.16	0.222	6.26
BBN484646	8514307	804606	43.3	0.072	0.48	17.30	0.030	0.04	0.01	7.56	0.16	0.35	7.64
BBN484647	8514254	804610	47.72	0.091	1.48	3.73	0.040	0.064	0.04	11.10	0.17	0.375	9.17
BBN484648	8514272	804634	40.9	0.125	1.13	5.94	0.040	0.041	0.04	15.70	0.15	0.346	10.50
BBN484649	8514137	804690	47.47	0.166	0.85	8.85	0.080	0.022	0.02	7.72	0.16	0.148	10.15
BBN484650	8514111	804688	55.38	0.160	0.77	3.89	0.040	0.057	0.02	3.67	0.11	0.152	9.50
BBN484651	8514067	804708	51.79	0.287	2.55	10.76	0.060	0.006	0.11	0.19	0.30	0.511	10.06
BBN484652	8514005	804696	54.21	0.207	1.30	8.91	0.070	0.006	0.05	1.09	0.18	0.283	9.13
BBN484653	8513880	804786	55.7	0.319	1.98	7.44	0.080	0.013	0.05	0.33	0.20	0.227	8.21
BBN484654	8514602	804480	46.53	0.140	3.42	7.96	0.140	0.054	0.11	8.60	0.26	0.721	7.57
BBN484655	8514628	804501	57.9	0.210	0.77	3.16	0.060	0.045	0.02	2.11	0.20	0.118	8.45
BT484579	8518011	800894	52.43	0.230	1.96	5.80	0.060	0.027	0.07	4.36	0.32	0.305	9.33
BT484580	8517939	800963	53.05	0.248	2.59	8.23	0.030	0.034	0.08	1.22	0.33	0.613	9.21
EC484592	8515291	801994	51.45	0.462	2.13	8.82	0.030	0.015	0.09	2.30	0.23	0.604	9.46
LW484581	8516622	801446	53.4	0.076	2.92	14.94	0.030	0.018	0.10	0.86	0.15	0.63	2.98
LW484582	8516613	801389	39.2	0.183	2.11	10.45	0.070	0.022	0.07	14.20	0.20	0.537	9.67
LW484583	8516686	801387	53.49	0.538	1.82	6.52	0.060	0.005	0.06	1.49	0.21	0.47	10.18

SAMPLE No	North*	East*	Fe %	P %	Al2O3 %	SiO2 %	CaO %	S %	TiO2 %	Mn %	MgO %	K2O %	LOI %
LW484584	8516858	801371	53.9	0.320	1.64	6.52	0.060	0.028	0.06	2.04	0.20	0.289	9.70
LW484585	8516815	801346	45.94	0.296	2.02	11.45	0.060	0.042	0.07	7.02	0.26	0.597	8.76
LW484586	8516817	801327	51.34	0.240	0.94	4.89	0.050	0.011	0.04	6.20	0.18	0.286	10.24
MC484587	8515069	801227	42.1	0.790	2.79	7.86	0.080	0.008	0.10	11.50	0.22	0.682	9.40
MC484588	8515174	801315	30.49	0.285	1.45	3.88	0.100	0.005	0.07	27.30	0.20	0.581	11.09
MC484589	8515196	801303	38.89	0.425	1.57	9.47	0.070	0.006	0.08	15.60	0.21	0.425	9.04
MC484590	8515361	801318	32.62	0.471	2.34	8.45	0.180	0.006	0.08	20.30	0.34	1.274	10.29
MC484591	8515226	801487	32.92	0.582	1.05	2.68	0.120	0.005	0.03	25.10	0.16	0.565	11.00
MR484593	8512487	804492	58.83	0.167	0.94	3.24	0.040	0.003	0.03	0.26	0.12	0.042	10.02
MR484594	8510511	805194	46.85	0.155	1.46	23.91	0.040	0.042	0.18	0.08	0.09	0.201	6.12
MR484595	8510872	805047	46.4	0.125	2.82	4.30	0.030	0.022	0.09	9.45	0.09	0.503	10.41
MR484596	8510996	804999	50.05	0.145	3.35	8.31	0.040	0.007	0.13	2.76	0.14	0.253	10.89
MR484601	8511460	804828	50.24	0.234	1.46	3.66	0.110	0.004	0.04	7.06	0.28	0.35	11.04
MR484602	8511572	804760	35.47	0.189	3.98	35.15	0.040	0.001	0.14	0.10	0.35	1.189	7.09
MR484603	8511708	804768	58.12	0.428	0.55	3.15	0.110	0.003	0.02	0.18	0.14	0.062	10.90
MR484604	8511827	804777	26.78	0.138	0.89	3.39	0.150	0.007	0.03	32.10	0.26	0.494	9.87
MR484605	8512625	804759	61.47	0.187	0.73	2.83	0.040	0.015	-0.01	0.84	0.09	0.006	6.37
MR484606	8512692	804730	53.18	0.174	0.85	11.87	0.030	0.016	0.02	0.42	0.16	0.043	9.47
MR484607	8512693	804790	45.05	0.129	1.24	2.52	0.050	0.037	0.03	15.20	0.13	0.155	9.11
MR484608	8512456	804654	58.73	0.229	1.29	3.59	0.040	0.034	0.04	0.41	0.13	0.1	8.95
MR484609	8512390	804706	53.96	0.131	0.74	2.15	0.080	0.03	0.02	7.74	0.21	0.143	7.59
MR484610	8512324	804724	58.68	0.249	1.12	2.67	0.070	0.01	0.03	0.48	0.28	0.02	10.08
MR484611	8512221	804590	60.99	0.160	0.40	1.52	0.050	0.011	0.01	2.25	0.17	0.036	6.81
MR484612	8512200	804684	60.91	0.185	0.64	2.11	0.060	0.008	0.01	0.75	0.19	0.032	8.10
MR484613	8512150	804719	57.57	0.240	0.99	3.00	0.060	0.005	0.03	1.60	0.33	0.12	9.97
MR484614	8512143	804765	56.38	0.186	0.72	2.22	0.060	0.008	0.02	4.09	0.34	0.086	9.29

*GDA 94 Zone 52

7. EXPENDITURE

Total expenditure for the reporting year was $265,349.66 and is detailed in the NT Exploration Expenditure Statement attached as Appendix 3 to this report.

8. PROPOSED EXPENDITURE

Proposed expenditure by Territory Iron for the next reporting year is estimated at $200,000 mainly relating to approximately 30 RC resource definition holes to extend the Millers deposit down dip, and 20-40 RAB holes over the Millers-Millers South trend and the Bowerbird trend. Part of the EL may be covered by an aeromagnetic survey.

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APPENDIX – 1 DRILL HOLE DATA

TERRITORY IRON LTD LOGGING CODES

RockCode	(Rk1, Rk2)
BX	breccia
CN	Canga
CA	cavity
CF	Cemented ironstone
CG	conglomerate
CT	chert
CY	clay
DM	dolomite
DO	dolerite
FE	Fe Mineralisation
FIL	Fill
LT	laterite
MN	Mn oxides/carbonates
MS	mudstone
NL	not logged
OCY	clay (overburden)
OGR	gravel (overburden)
OSD	sand (overburden)
PS	pisolites
QV	vein quartz
QZ	quartz / silica
SA	sand
SH	Shale
SS	sandstone
TF	Tuff

Alteration (Alt)	
FER	ferruginous
SIL	siliceous/ silica
CRB	calcareous/carbonate
CHL	chlorite
KAL	kaolinised/clay
LCH	leached

%Chips
0
10
20
30
40
50
60
70
80
90
100

Colour (Col1,Col2)	
RD	red
TA	tan
BE	beige
BK	black
BL	blue
BR	brown
DK	dark
GN	green
GY	grey
KH	khaki
LT	light
OR	orange
PK	pink
PU	purple
WH	white
YBR	yellow brown
YW	yellow
GBR	green brown

Weathering (Weath)		
SW	strongly weathered	
MW	moderately weathered	
WW	weakly weathered	
FR	fresh/ unweathered	

Water	
	default is dry
d	dry
m	moist
w	wet
vw	very wet

Mineral_Intensity (Int1, Int2)		
1	trace	<1%
2	weak	1-25% vol.
3	moderate	25-50%
4	strong	50-80%
5	v. strong	80-100%

Recovery %	
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	

Texture	(Txt1,Txt2)
BND	banded
BED	bedded/bedding
BOT	botryoidy
BRC	brecciated
CAV	cavity
CGN	coarse grained
FGN	fine grained
FRA	fractures/fractured
FRG	fragments
GRT	gritty
LAM	laminated
LIN	lined
MAS	massive
MGN	medium grained
MOT	mottled
MTX	matrix
NOD	nodular
PEB	pebbly
PIS	pisolitic
POW	powdery
SLT	silty
SND	sandy
STD	stained
STR	stringers
VND	vein(s) / veined
VYG	vughs / vuggy
XRY	crystalline

Mineral (Min1, Min2)	
AN	ankerite
CLY	cly
FE	iron
GO	goethite
HM	haematite
KAL	kaolin
LI	limonite
MG	magnetite
MGH	maghemite
MN	manganese
PY	pyrite
SID	siderite
SPC	specular hematite
QTZ	Quartz
MIC	micaceous hematite
SUL	sulphides
GRP	graphite

DRILLHOLE COLLARS

Hole	Drill Type	E(MGA)	N(MGA)	Azimuth Magnetic	Dip	EOH (M)
BBPC003	PC	805001.0	8513524	250	-60	40
MLPC004	PC	804728.4	8512245	70	-60	22
MLPC004A	PC	804730.4	8512246	70	-60	30
MLPC005	PC	804712.6	8512324	70	-60	36
MLPC006	PC	804678.7	8512394	70	-60	33
MLPC007	PC	804620.1	8512461	70	-60	39
MLPC008	PC	804614.2	8512543	70	-60	39
MLPC009	PC	804595	8512538	70	-60	36
MLPC010	PC	804604.4	8512459	70	-60	33
MLPC011	PC	804661.2	8512392	70	-60	45
MLPC012	PC	804697.5	8512319	70	-60	33
MLPC013	PC	804681.9	8512314	70	-60	46
MLPC014	PC	804646.5	8512387	70	-60	47
MLPC015	PC	804589.9	8512456	70	-60	39
MLPC016	PC	804579.7	8512535	70	-60	34
MLPC017	PC	804740.6	8512250	70	-60	21
MLPC018	PC	804740.8	8512331	250	-60	39
MLPC019	PC	804724.3	8512410	250	-60	29
MLPC020	PC	804660.9	8512479	250	-60	39
MLPC021	PC	804685.7	8512648	70	-60	25
MLPC022	PC	804668	8512645	70	-60	24
MLPC023	PC	804569	8512618	70	-60	30
MLPC024	PC	804550.2	8512610	70	-60	24
MLPC025	PC	804502	8512687	70	-60	26
MLPC026	PC	804516.7	8512691	70	-60	27
MLPC027	PC	804765.7	8512667	70	-60	20
MLPC028	PC	804756.4	8512664	70	-60	20
MLPC029	PC	804746.9	8512662	70	-60	20
MLPC030	PC	804736.7	8512662	70	-60	20
MLPC031	PC	804726.6	8512661	70	-60	20
MLPC032	PC	804716.1	8512660	70	-60	20
MLPC033	PC	804707.6	8512657	70	-60	20
MLPC034	PC	804531.1	8512696	70	-60	24
MLPC035	PC	804545.4	8512700	70	-60	36
MLRC036	RC	804414.9	8512759	70	-60	22
MLRC037	RC	804432.7	8512751	70	-60	41
MLRC038	RC	804447.6	8512754	70	-60	22
MLRC039	RC	804461.8	8512758	70	-60	16
MLRC040	RC	804476.5	8512763	70	-60	31
MLRC041	RC	804486.4	8512724	70	-60	13
MLRC042	RC	804472.2	8512720	70	-60	13
MLRC043	RC	804457.9	8512716	70	-60	13
MLRC044	RC	804487.3	8512683	70	-60	27
MLRC045	RC	804473.1	8512678	70	-60	27
MLRC046	RC	804543.8	8512651	70	-60	31
MLRC047	RC	804530.2	8512649	70	-60	35
MLRC048	RC	804515.1	8512645	70	-60	27
MLRC049	RC	804536.2	8512607	70	-60	23
MLRC050	RC	804595.9	8512582	70	-60	19
MLRC051	RC	804582.1	8512579	70	-60	31
MLRC052	RC	804566.6	8512576	70	-60	34
MLRC053	RC	804551.1	8512571	70	-60	31

Hole	Drill Type	E(MGA)	N(MGA)	Azimuth Magnetic	Dip	EOH (M)
MLRC054	RC	804559.6	8512529	70	-60	30
MLRC055	RC	804611.6	8512498	70	-60	37
MLRC056	RC	804597.5	8512494	70	-60	43
MLRC057	RC	804581.4	8512489	70	-60	49
MLRC058	RC	804569.3	8512486	70	-60	34
MLRC059	RC	804646	8512424	70	-60	36
MLRC060	RC	804627	8512416	70	-60	46
MLRC061	RC	804613.4	8512412	70	-60	32
MLRC062	RC	804695.7	8512358	70	-60	34
MLRC063	RC	804676.7	8512352	70	-60	49
MLRC064	RC	804716.5	8512304	70	-60	38
MLRC065	RC	804703.9	8512301	70	-60	45
MLRC066	RC	804724.9	8512283	70	-60	10
MLRC067	RC	804709.5	8512282	70	-60	10
MLRC068	RC	804521.5	8512603	70	-60	43

DRILLHOLE LOGS

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC004	0	1	FE	CY	BR	MAS	GO	3
MLPC004	1	2	FE	CY	BR	MAS	GO	3
MLPC004	2	3	FE	CY	BR	MAS	GO	3
MLPC004	3	4	FE	FE	BR	MAS	GO	3
MLPC004	4	5	FE	FE	BR	MAS	GO	3
MLPC004	5	6	FE	FE	BR	MAS	GO	3
MLPC004	6	7	FE	FE	BR	MAS	GO	3
MLPC004	7	8	FE	FE	BR	MAS	GO	3
MLPC004	8	9	FE	FE	BR	MAS	GO	3
MLPC004	9	10	FE	FE	BR	MAS	GO	3
MLPC004	10	11	FE	FE	BR	MAS	GO	3
MLPC004	11	12	FE	FE	BR	MAS	GO	3
MLPC004	12	13	CY	GO	BR	MAS	GO	2
MLPC004	13	14	CY	GO	BR	MAS	GO	2
MLPC004	14	15	CY	GO	BR	MAS	GO	2
MLPC004	15	16	CY	GO	BR	MAS	GO	2
MLPC004	16	17	CY	GO	BR	MAS	GO	2
MLPC004	17	18	CY	GO	BR	MAS	GO	2
MLPC004	18	19	CY	GO	BR	MAS	GO	2
MLPC004	19	20	CY	GO	BR	MAS	GO	2
MLPC004	20	21	CY	GO	BR	MAS	GO	2
MLPC004	21	22	CY	GO	BR	MAS	GO	2
MLPC004A	0	1	FE	CY	BN	MAS	GO	3
MLPC004A	1	2	FE	CY	BN	MAS	GO	2
MLPC004A	2	3	FE	QT	BN	MAS	GO	2
MLPC004A	3	4	FE	CY	BN	MAS	GO	3
MLPC004A	4	5	FE	CY	BN	MAS	GO	3
MLPC004A	5	6	FE	CY	BN	MAS	GO	2
MLPC004A	6	7	FE	SH	BN	MAS	GO	2
MLPC004A	7	8	SH	GO	BN	MAS	GO	2
MLPC004A	8	9	SH	GO	BN	FG	GO	2
MLPC004A	9	10	SH	GO	BN	FG	GO	1
MLPC004A	10	11	SH	GO	BN	FG	GO	1
MLPC004A	11	12	SH	GO	BN	FG	GO	2
MLPC004A	12	13	SH	GO	BN	FG	GO	1
MLPC004A	13	14	SH	CY	BN	FG	GO	1
MLPC004A	14	15	CY	SH	BN	FG	GO	1
MLPC004A	15	16	CY	SH	BN	FG	GO	1
MLPC004A	16	17	SH	CY	BN	FG	GO	1
MLPC004A	17	18	FE	SH	BN	FG	GO	2

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC004A	18	19	SH	GO	BN	FG	GO	1
MLPC004A	19	20	SH	GO	BN	FG	GO	2
MLPC004A	20	21	SH	GO	BN	FG	GO	2
MLPC004A	21	22	SH	GO	BN	FG	GO	2
MLPC004A	22	23	SH	GO	BN	FG	GO	1
MLPC004A	23	24	SH	GO	BN	FG	GO	1
MLPC004A	24	25	SH	GO	BN	FG	GO	1
MLPC004A	25	26	SH	GO	BN	FG	GO	1
MLPC004A	26	27	SH	GO	BN	FG	GO	1
MLPC004A	27	28	SH	GO	BN	FG	GO	1
MLPC004A	28	29	SH	GO	BN	FG	GO	1
MLPC004A	29	30	SH	GO	BN	FG	GO	1
MLPC005	0	1	QV	GO	WH	MAS	GO	1
MLPC005	1	2	FE	QV	BR	MAS	GO	3
MLPC005	2	3	FE		BR	MAS	GO	2
MLPC005	3	4	FE	CY	BR	MAS	GO	3
MLPC005	4	5	FE	CY	BR	MAS	GO	3
MLPC005	5	6	FE	CY	BR	MAS	GO	3
MLPC005	6	7	FE	FE	BR	MAS	GO	3
MLPC005	7	8	FE	FE	BR	MAS	GO	3
MLPC005	8	9	FE	FE	BR	MAS	GO	3
MLPC005	9	10	FE		BR	MAS	GO	3
MLPC005	10	11	FE		BR	MAS	GO	4
MLPC005	11	12	FE		BR	MAS	GO	4
MLPC005	12	13	FE	SH	BR	MAS	GO	4
MLPC005	13	14	FE		BR	MAS	GO	4
MLPC005	14	15	FE	SH	BR	MAS	GO	2
MLPC005	15	16	FE	CY	BR	MAS	GO	3
MLPC005	16	17	FE	CY	BR	MAS	GO	3
MLPC005	17	18	FE	CY	BR	MAS	GO	2
MLPC005	18	19	FE	CY	BR	MAS	GO	2
MLPC005	19	20	FE	CY	BR	MAS	GO	3
MLPC005	20	21	FE	CY	BR	MAS	GO	2
MLPC005	21	22	FE	CY	BR	MAS	GO	4
MLPC005	22	23	FE	CY	BR	BOT	GO	3
MLPC005	23	24	FE	CY	BR	BOT	GO	3
MLPC005	24	25	FE	CY	BR	BOT	GO	3
MLPC005	25	26	FE		BR	MAS	GO	3
MLPC005	26	27	FE	CY	BR	MAS	GO	3
MLPC005	27	28	CY	GO	BR	MAS	GO	2
MLPC005	28	29	FE	CY	BR	MAS	GO	2
MLPC005	29	30	FE	CY	BR	MAS	GO	2
MLPC005	30	31	CY		PK	MAS	GO	1
MLPC005	31	32	CY		PK	MAS		
MLPC005	32	33	CY		PK	MAS		
MLPC005	33	34	CY		BR	MAS		
MLPC005	34	35	CY		BR	MAS		
MLPC005	35	36	SS	CY	WH	MG		
MLPC006	0	1	QV	GO	WH	MAS	GO	1
MLPC006	1	2	QV	GO	WH	MAS	GO	1
MLPC006	2	3	FE	QV	BR	MAS	GO	1
MLPC006	3	4	FE	QV	BR	MAS	GO	1
MLPC006	4	5	CY	GO	BR	MAS	GO	1
MLPC006	5	6	CY	GO	BR	MAS	GO	1
MLPC006	6	7	QV	GO	WH	MAS		
MLPC006	7	8	QV	GO	WH	MAS	GO	1
MLPC006	8	9	FE	QV	BR	MAS	GO	3
MLPC006	9	10	FE	QV	BR	MAS	GO	3
MLPC006	10	11	FE	QV	BR	MAS	GO	3
MLPC006	11	12	FE	QV	BR	MAS	GO	2
MLPC006	12	13	FE		BR	MAS	GO	3
MLPC006	13	14	FE		BR	MAS	GO	3
MLPC006	14	15	FE		BR	MAS	GO	4
MLPC006	15	16	FE		BR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC006	16	17	FE		BR	MAS	GO	4
MLPC006	17	18	FE		BR	MAS	GO	4
MLPC006	18	19	FE		BR	MAS	GO	4
MLPC006	19	20	FE		BR	MAS	GO	4
MLPC006	20	21	FE		BR	MAS	GO	4
MLPC006	21	22	FE		BR	MAS	GO	4
MLPC006	22	23	FE		BR	MAS	GO	4
MLPC006	23	24	FE	CY	BR	MAS	GO	3
MLPC006	24	25	CY	GO	PK	MAS	GO	1
MLPC006	25	26	CY	SH	PK	MAS		
MLPC006	26	27	CY	SH	PK	MAS	GO	1
MLPC006	27	28	CY	SH	PK	MAS	GO	1
MLPC006	28	29	CY	GO	PK	MAS	GO	1
MLPC006	29	30	CY		PK	MAS		
MLPC006	30	31	SH	CY	GY	MG		
MLPC006	31	32	SH	CY	YW	MG		
MLPC006	32	33	SH	CY	YW	M		
MLPC007	0	1	FE		BK	MAS	GO	3
MLPC007	1	2	FE		BR	MAS	GO	3
MLPC007	2	3	FE	QV	BR	MAS	GO	3
MLPC007	3	4	FE		BR	MAS	GO	4
MLPC007	4	5	FE		BR	MAS	GO	4
MLPC007	5	6	FE	CY	BR	MAS	GO	3
MLPC007	6	7	FE		BR	MAS	GO	4
MLPC007	7	8	FE		BR	MAS	GO	4
MLPC007	8	9	FE		BR	MAS	GO	5
MLPC007	9	10	FE	MN	BR	MAS	GO	5
MLPC007	10	11	FE	MN	BR	MAS	GO	5
MLPC007	11	12	FE	CY	BR	MAS	GO	4
MLPC007	12	13	FE		BK	MAS	GO	5
MLPC007	13	14	FE	CY	BK	MAS	GO	3
MLPC007	14	15	FE	CY	BR	MAS	GO	3
MLPC007	15	16	QV	GO	WH	MAS	GO	1
MLPC007	16	17	QV	SH	WH	MAS	GO	1
MLPC007	17	18	QV	GO	WH	MAS	GO	1
MLPC007	18	19	QV	GO	WH	MAS	GO	1
MLPC007	19	20	CY	GO	OR	MAS	GO	1
MLPC007	20	21	CY	GO	OR	MAS	GO	1
MLPC007	21	22	CY	QV	OR	MAS		
MLPC007	22	23	FE	QV	BR	MAS	GO	3
MLPC007	23	24	FE	QV	BR	MAS	GO	3
MLPC007	24	25	FE		BR	MAS	GO	4
MLPC007	25	26	FE		BR	MAS	GO	4
MLPC007	26	27	FE		BR	MAS	GO	4
MLPC007	27	28	FE		BR	MAS	GO	4
MLPC007	28	29	FE		BR	MAS	GO	4
MLPC007	29	30	FE		BR	MAS	GO	4
MLPC007	30	31	FE		BR	MAS	GO	4
MLPC007	31	32	FE		BR	MAS	GO	4
MLPC007	32	33	FE	LI	BR	MAS	GO	4
MLPC007	33	34	FE		BR	MAS	GO	4
MLPC007	34	35	FE	CY	BR	MAS	GO	2
MLPC007	35	36	FE	CY	BR	MAS	GO	2
MLPC007	36	37	CY		GY	MAS		
MLPC007	37	38	CY		GY	MAS		
MLPC007	38	39	CY		GY	MAS		
MLPC008	0	1	FE		BR	MAS	GO	3
MLPC008	1	2	FE		BK	MAS	GO	4
MLPC008	2	3	FE		BK	MAS	GO	4
MLPC008	3	4	FE		BK	MAS	GO	4
MLPC008	4	5	FE		BK	MAS	GO	4
MLPC008	5	6	FE		BK	MAS	GO	4
MLPC008	6	7	FE		BK	MAS	GO	4
MLPC008	7	8	FE		BK	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC008	8	9	FE	CY	BR	MAS	GO	2
MLPC008	9	10	CY		BR	MAS		
MLPC008	10	11	CY		BR	MAS		
MLPC008	11	12	CY		BR	MAS		
MLPC008	12	13	CY		BR	MAS		
MLPC008	13	14	CY		BR	MAS		
MLPC008	14	15	CY		BR	MAS		
MLPC008	15	16	CY		BR	MAS		
MLPC008	16	17	CY		BR	MAS		
MLPC008	17	18	CY		BR	MAS		
MLPC008	18	19	CY		BR	MAS		
MLPC008	19	20	CY		BR	MAS		
MLPC008	20	21	CY		BR	MAS		
MLPC008	21	22	CY		BR	MAS		
MLPC008	22	23	CY		YW	MAS		
MLPC008	23	24	CY		YW	MAS		
MLPC008	24	25	CY		YW	MAS		
MLPC008	25	26	CY		YW	MAS		
MLPC008	26	27	CY		YW	MAS		
MLPC008	27	28	CY		YW	MAS		
MLPC008	28	29	DO	CY	GN	MG		
MLPC008	29	30	DO	CY	GN	MG		
MLPC008	30	31	DO	CY	GN	MG		
MLPC008	31	32	DO	CY	GN	MG		
MLPC008	32	33	DO	CY	GN	MG		
MLPC008	33	34	DO	CY	GN	MG		
MLPC008	34	35	DO	CY	GN	MG		
MLPC008	35	36	DO	CY	GN	MG		
MLPC008	36	37	DO	CY	GN	MG		
MLPC008	37	38	DO	CY	GN	MG		
MLPC008	38	39	DO	CY	GN	MG		
MLPC009	0	1	FE		BK	MAS	GO	3
MLPC009	1	2	FE		BK	MAS	GO	3
MLPC009	2	3	FE		BK	MAS	GO	3
MLPC009	3	4	FE		BK	MAS	GO	3
MLPC009	4	5	FE		BK	MAS	GO	3
MLPC009	5	6	FE		BK	MAS	GO	3
MLPC009	6	7	FE		BK	MAS	GO	3
MLPC009	7	8	FE		BK	MAS	GO	3
MLPC009	8	9	FE		BK	MAS	GO	3
MLPC009	9	10	FE		BK	MAS	GO	3
MLPC009	10	11	FE		BK	MAS	GO	3
MLPC009	11	12	FE		BK	MAS	GO	3
MLPC009	12	13	FE		BK	MAS	GO	3
MLPC009	13	14	FE		BK	MAS	GO	3
MLPC009	14	15	FE		BK	MAS	GO	3
MLPC009	15	16	FE		BK	MAS	GO	3
MLPC009	16	17	FE		BK	MAS	GO	3
MLPC009	17	18	FE		BK	MAS	GO	3
MLPC009	18	19	FE		BK	MAS	GO	3
MLPC009	19	20	FE		BK	MAS	GO	2
MLPC009	20	21	FE		BK	MAS	GO	3
MLPC009	21	22	FE		BK	MAS	GO	3
MLPC009	22	23	FE		BK	MAS	GO	3
MLPC009	23	24	FE	SH	BK	MAS	GO	3
MLPC009	24	25	FE	SH	BK	MAS	GO	3
MLPC009	25	26	CY	GO	PK	MAS	GO	1
MLPC009	26	27	CY	GO	PK	MAS	GO	1
MLPC009	27	28	CY		BR	MAS		
MLPC009	28	29	CY		BR	MAS		
MLPC009	29	30	CY		BR	MAS		
MLPC009	30	31	CY		BR	MAS		
MLPC009	31	32	CY		BR	MAS		
MLPC009	32	33	CY		BR	MAS		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC009	33	34	CY		BR	MAS		
MLPC009	34	35	CY		BR	MAS		
MLPC009	35	36	CY		BR	MAS		
MLPC010	0	1	SH	QV	GY	FG		
MLPC010	1	2	SH	QV	GY	FG		
MLPC010	2	3	SH	QV	GY	FG		
MLPC010	3	4	SH	QV	GY	FG		
MLPC010	4	5	SH	QV	GY	FG		
MLPC010	5	6	SH	QV	GY	FG		
MLPC010	6	7	SH	QV	GY	FG		
MLPC010	7	8	SH	QV	GY	FG		
MLPC010	8	9	SH	QV	GY	FG		
MLPC010	9	10	SH	QV	GY	FG		
MLPC010	10	11	SH	QV	GY	FG		
MLPC010	11	12	SH	GO	GY	FG		
MLPC010	12	13	FE	CY	BR	MAS		
MLPC010	13	14	FE	CY	BR	MAS		
MLPC010	14	15	FE	CY	BR	MAS		
MLPC010	15	16	FE	CY	BR	MAS		
MLPC010	16	17	FE	CY	BR	MAS		
MLPC010	17	18	FE	CY	BR	MAS		
MLPC010	18	19	FE	CY	BR	MAS		
MLPC010	19	20	CY	GO	PK	MAS		
MLPC010	20	21	CY		GY	GTY		
MLPC010	21	22	CY		GY	GTY		
MLPC010	22	23	CY		GY	GTY		
MLPC010	23	24	CY		GY	GTY		
MLPC010	24	25	CY		GY	GTY		
MLPC010	25	26	CY		GY	GTY		
MLPC010	26	27	CY		GY	GTY		
MLPC010	27	28	CY		GY	GTY		
MLPC010	28	29	CY		GY	GTY		
MLPC010	29	30	CY		GY	GTY		
MLPC010	30	31	CY		GY	GTY		
MLPC010	31	32	CY		GY	GTY		
MLPC010	32	33	CY		GY	GTY		
MLPC011	0	1	CY		PK	GTY		
MLPC011	1	2	CY		PK	GTY		
MLPC011	2	3	CY		PK	GTY		
MLPC011	3	4	CY		PK	GTY		
MLPC011	4	5	CY		PK	GTY		
MLPC011	5	6	CY		PK	GTY		
MLPC011	6	7	CY		PK	GTY		
MLPC011	7	8	CY		PK	GTY		
MLPC011	8	9	CY		PK	GTY		
MLPC011	9	10	CY		PK	GTY		
MLPC011	10	11	CY		PK	GTY		
MLPC011	11	12	CY		PK	GTY		
MLPC011	12	13	CY		PK	GTY		
MLPC011	13	14	CY	DO	PK	GTY		
MLPC011	14	15	CY	DO	PK	GTY		
MLPC011	15	16	DO	GO	GY	GTY		
MLPC011	16	17	DO	GO	GY	GTY		
MLPC011	17	18	DO	GO	GY	GTY		
MLPC011	18	19	DO	GO	GY	GTY		
MLPC011	19	20	DO	GO	GY	GTY		
MLPC011	20	21	DO	QV	GY	GTY		
MLPC011	21	22	CY	QV	RD	MAS		
MLPC011	22	23	CY	QV	RD	MAS		
MLPC011	23	24	CY	QV	RD	MAS		
MLPC011	24	25	CY	QV	GY	MAS		
MLPC011	25	26	FE	QV	BR	MAS	GO	2
MLPC011	26	27	FE		BR	MAS	GO	4
MLPC011	27	28	FE		BR	MAS	GO	3

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC011	28	29	FE		BR	MAS	GO	3
MLPC011	29	30	FE		BR	MAS	GO	3
MLPC011	30	31	FE		BR	MAS	GO	3
MLPC011	31	32	FE		BR	MAS	GO	3
MLPC011	32	33	FE		BR	MAS	GO	3
MLPC011	33	34	FE		BR	MAS	GO	3
MLPC011	34	35	FE		BR	MAS	GO	3
MLPC011	35	36	FE		BR	MAS	GO	3
MLPC011	36	37	FE	CY	BR	MAS	GO	3
MLPC011	37	38	SH	CY	BR	FG		
MLPC011	38	39	CY	SH	GN	MAS		
MLPC011	39	40	DO	CY	GN	MG		
MLPC011	40	41	DO	CY	GN	MG		
MLPC011	41	42	DO	CY	GN	MG		
MLPC011	42	43	DO		GY	MG		
MLPC011	43	44	DO		GY	MG		
MLPC011	44	45	DO		GY	MG		
MLPC012	0	1	FE	QV	BK	MAS	GO	2
MLPC012	1	2	FE	QV	BK	MAS	GO	3
MLPC012	2	3	FE	QV	BK	MAS	GO	3
MLPC012	3	4	FE	QV	BK	MAS	GO	2
MLPC012	4	5	FE	QV	BK	MAS	GO	2
MLPC012	5	6	FE	CY	BK	MAS	GO	1
MLPC012	6	7	FE	CY	BK	MAS	GO	1
MLPC012	7	8	FE	CY	BK	MAS	GO	1
MLPC012	8	9	SH	QV	GY	FG	GO	1
MLPC012	9	10	SH	QV	GY	FG	GO	1
MLPC012	10	11	FE		BR	MAS	GO	3
MLPC012	11	12	FE		BR	MAS	GO	4
MLPC012	12	13	FE		BR	MAS	GO	4
MLPC012	13	14	FE		BR	MAS	GO	4
MLPC012	14	15	FE		BR	MAS	GO	4
MLPC012	15	16	QV	GO	WH	MAS	GO	2
MLPC012	16	17	QV	GO	WH	MAS	GO	2
MLPC012	17	18	FE	QV	BR	MAS	GO	2
MLPC012	18	19	FE	QV	BR	MAS	GO	2
MLPC012	19	20	FE	QV	BR	MAS	GO	3
MLPC012	20	21	FE		BR	MAS	GO	4
MLPC012	21	22	FE		BR	MAS	GO	4
MLPC012	22	23	FE		BR	MAS	GO	4
MLPC012	23	24	FE		BR	MAS	GO	4
MLPC012	24	25	FE		BR	MAS	GO	4
MLPC012	25	26	FE		BR	MAS	GO	4
MLPC012	26	27	FE		BR	MAS	GO	4
MLPC012	27	28	FE		BR	MAS	GO	4
MLPC012	28	29	FE		BR	MAS	GO	4
MLPC012	29	30	FE		BR	MAS	GO	4
MLPC012	30	31	FE		BR	MAS	GO	4
MLPC012	31	32	FE		BR	MAS	GO	4
MLPC012	32	33	FE		BR	MAS	GO	4
MLPC013	0	1	SH	QV	BR	FG	GO	1
MLPC013	1	2	SH	QV	BR	FG	GO	1
MLPC013	2	3	SH	QV	BR	FG	GO	1
MLPC013	3	4	SH		YW	FG		
MLPC013	4	5	SH		YW	FG		
MLPC013	5	6	SH		YW	FG		
MLPC013	6	7	SH	CY	YW	FG	GO	1
MLPC013	7	8	SH	CY	YW	FG	GO	1
MLPC013	8	9	CY	SH	WH	MAS		
MLPC013	9	10	CY	SH	WH	MAS		
MLPC013	10	11	CY	SH	WH	MAS		
MLPC013	11	12	CY	SH	WH	MAS		
MLPC013	12	13	SH	CY	WH	FG	GO	1
MLPC013	13	14	SH	CY	WH	FG	GO	1

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC013	14	15	CY		PU	MAS	GO	1
MLPC013	15	16	CY		PU	MAS	GO	1
MLPC013	16	17	CY		PU	MAS	GO	1
MLPC013	17	18	QV	CY	WH	MAS		
MLPC013	18	19	CY		PU	MAS	GO	1
MLPC013	19	20	CY		PU	MAS	GO	1
MLPC013	20	21	SH		GY	FG		
MLPC013	21	22	SH		GY	FG		
MLPC013	22	23	SH		GY	FG		
MLPC013	23	24	QV	SH	BR	MAS	GO	2
MLPC013	24	25	QV	SH	BR	MAS	GO	2
MLPC013	25	26	QV	SH	BR	MAS	GO	2
MLPC013	26	27	QV	SH	BR	MAS	GO	2
MLPC013	27	28	QV	SH	BR	MAS	GO	2
MLPC013	28	29	QV	SH	BR	MAS	GO	2
MLPC013	29	30	QV	SH	BR	MAS	GO	2
MLPC013	30	31	QV	SH	BR	MAS	GO	2
MLPC013	31	32	QV	SH	BR	MAS	GO	2
MLPC013	32	33	QV	SH	BR	MAS	GO	2
MLPC013	33	34	QV	SH	BR	MAS	GO	2
MLPC013	34	35	QV	SH	BR	MAS	GO	2
MLPC013	35	36	QV	SH	BR	MAS	GO	2
MLPC013	36	37	FE	CY	BR	MAS	GO	4
MLPC013	37	38	FE	CY	BR	MAS	GO	4
MLPC013	38	39	CY		PU	MAS	GO	1
MLPC013	39	40	CY		PU	MAS	GO	1
MLPC013	40	41	CY		PU	MAS	GO	1
MLPC013	41	42	FE	CY	BR	MAS	GO	4
MLPC013	42	43	FE	CY	BR	MAS	GO	4
MLPC013	43	44	FE	CY	BR	MAS	GO	4
MLPC013	44	45	FE	CY	BR	MAS	GO	4
MLPC013	45	46	FE	CY	BR	MAS	GO	4
MLPC014	0	1	SH		GY	FG		
MLPC014	1	2	SH		GY	FG		
MLPC014	2	3	SH		GY	FG		
MLPC014	3	4	SH		GY	FG		
MLPC014	4	5	SH		GY	FG		
MLPC014	5	6	SH		GY	FG		
MLPC014	6	7	SH		GY	FG		
MLPC014	7	8	SH		GY	FG		
MLPC014	8	9	SH		GY	FG		
MLPC014	9	10	SH		GY	FG		
MLPC014	10	11	SH		GY	FG		
MLPC014	11	12	SH	GO	GY	FG	GO	1
MLPC014	12	13	CY		PU	MAS	GO	1
MLPC014	13	14	CY		PU	MAS	GO	1
MLPC014	14	15	CY		PU	MAS	GO	1
MLPC014	15	16	CY		PU	MAS	GO	1
MLPC014	16	17	CY		PU	MAS	GO	1
MLPC014	17	18	CY		PU	MAS	GO	1
MLPC014	18	19	CY		PU	MAS	GO	1
MLPC014	19	20	CY		PU	MAS	GO	1
MLPC014	20	21	CY		PU	MAS	GO	1
MLPC014	21	22	CY		PU	MAS	GO	1
MLPC014	22	23	CY		PU	MAS	GO	1
MLPC014	23	24	CY		PU	MAS	GO	1
MLPC014	24	25	CY		PU	MAS	GO	1
MLPC014	25	26	CY		PU	MAS	GO	1
MLPC014	26	27	CY		PU	MAS	GO	1
MLPC014	27	28	DO		GY	MG	GO	1
MLPC014	28	29	DO		GY	MG	GO	1
MLPC014	29	30	DO		GY	MG	GO	1
MLPC014	30	31	QV	DO	WH	MAS	GO	1
MLPC014	31	32	QV	DO	WH	MAS	GO	1

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC014	32	33	DO	CY	PU	MG	GO	1
MLPC014	33	34	DO	CY	PU	MG	GO	1
MLPC014	34	35	DO	CY	PU	MG	GO	1
MLPC014	35	36	DO	CY	PU	MG	GO	1
MLPC014	36	37	DO	CY	PU	MG	GO	1
MLPC014	37	38	DO	CY	PU	MG	GO	1
MLPC014	38	39	DO	CY	PU	MG	GO	1
MLPC014	39	40	FE	CY	BR	MAS	GO	2
MLPC014	40	41	FE		BR	MAS	GO	4
MLPC014	41	42	FE		BR	MAS	GO	4
MLPC014	42	43	FE		BR	MAS	GO	4
MLPC014	43	44	FE		BR	MAS	GO	4
MLPC014	44	45	FE		BR	MAS	GO	4
MLPC014	45	46	FE		BR	MAS	GO	4
MLPC014	46	47	FE		BR	MAS	GO	4
MLPC015	0	1	SH		GY	FG		
MLPC015	1	2	SH		GY	FG		
MLPC015	2	3	SH		GY	FG		
MLPC015	3	4	SH		GY	FG		
MLPC015	4	5	SH		GY	FG		
MLPC015	5	6	SH		GY	FG		
MLPC015	6	7	SH		GY	FG		
MLPC015	7	8	SH		GY	FG		
MLPC015	8	9	SH		GY	FG		
MLPC015	9	10	SH		GY	FG		
MLPC015	10	11	SH		GY	FG		
MLPC015	11	12	SH		GY	FG		
MLPC015	12	13	SH	QV	GY	FG		
MLPC015	13	14	SH	QV	GY	FG		
MLPC015	14	15	SH	QV	GY	FG		
MLPC015	15	16	SH	QV	GY	FG		
MLPC015	16	17	SH	QV	GY	FG		
MLPC015	17	18	SH	QV	GY	FG		
MLPC015	18	19	SH	QV	GY	FG		
MLPC015	19	20	SH	QV	GY	FG		
MLPC015	20	21	SH	QV	GY	FG		
MLPC015	21	22	SH	GO	BR	FG	GO	1
MLPC015	22	23	SH	GO	BR	FG	GO	1
MLPC015	23	24	SH	GO	BR	FG	GO	1
MLPC015	24	25	SH	GO	BR	FG	GO	1
MLPC015	25	26	FE		BR	MAS	GO	4
MLPC015	26	27	FE		BR	MAS	GO	4
MLPC015	27	28	FE		BR	MAS	GO	4
MLPC015	28	29	FE		BR	MAS	GO	4
MLPC015	29	30	FE		BR	MAS	GO	4
MLPC015	30	31	FE		BR	MAS	GO	4
MLPC015	31	32	FE		BR	MAS	GO	4
MLPC015	32	33	FE		BR	MAS	GO	4
MLPC015	33	34	FE		BR	MAS	GO	4
MLPC015	34	35	FE		BR	MAS	GO	4
MLPC015	35	36	FE		BR	MAS	GO	4
MLPC015	36	37	FE		BR	MAS	GO	3
MLPC015	37	38	DO	GO	BR	MG	GO	2
MLPC015	38	39	DO	GO	BR	MG	GO	2
MLPC016	0	1	SH	GO	BR	FG	GO	2
MLPC016	1	2	SH	GO	BR	FG	GO	2
MLPC016	2	3	SH	GO	BR	FG	GO	2
MLPC016	3	4	FE	FE	BR	MAS	GO	4
MLPC016	4	5	FE	FE	BR	MAS	GO	4
MLPC016	5	6	FE	FE	BR	MAS	GO	4
MLPC016	6	7	FE	FE	BR	MAS	GO	4
MLPC016	7	8	FE	FE	BR	MAS	GO	4
MLPC016	8	9	FE	FE	BR	MAS	GO	4
MLPC016	9	10	FE	FE	BR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC016	10	11	FE	FE	BR	MAS	GO	4
MLPC016	11	12	FE	FE	BR	MAS	GO	4
MLPC016	12	13	FE	FE	BR	MAS	GO	4
MLPC016	13	14	FE	FE	BR	MAS	GO	4
MLPC016	14	15	FE	FE	BR	MAS	GO	4
MLPC016	15	16	FE	FE	BR	MAS	GO	4
MLPC016	16	17	FE	FE	BR	MAS	GO	4
MLPC016	17	18	FE	FE	BR	MAS	GO	4
MLPC016	18	19	FE	FE	BR	MAS	GO	4
MLPC016	19	20	FE	FE	BR	MAS	GO	3
MLPC016	20	21	FE	FE	BR	MAS	GO	3
MLPC016	21	22	FE	FE	BR	MAS	GO	3
MLPC016	22	23	FE	FE	BR	MAS	GO	3
MLPC016	23	24	FE	FE	BR	MAS	GO	3
MLPC016	24	25	FE	FE	BR	MAS	GO	3
MLPC016	25	26	FE	FE	BR	MAS	GO	3
MLPC016	26	27	FE	FE	BR	MAS	GO	3
MLPC016	27	28	FE	FE	BR	MAS	GO	3
MLPC016	28	29	FE	FE	BR	MAS	GO	3
MLPC016	29	30	FE	FE	BR	MAS	GO	3
MLPC016	30	31	FE	FE	BR	MAS	GO	3
MLPC016	31	32	FE	FE	BR	MAS	GO	3
MLPC016	32	33	FE	FE	BR	MAS	GO	3
MLPC016	33	34	FE	FE	BR	MAS	GO	4
MLPC017	0	1	FE		BR	MAS	GO	3
MLPC017	1	2	FE		BR	MAS	GO	3
MLPC017	2	3	FE		BR	MAS	GO	3
MLPC017	3	4	FE		BR	MAS	GO	3
MLPC017	4	5	FE		BR	MAS	GO	3
MLPC017	5	6	FE		BR	MAS	GO	3
MLPC017	6	7	SH	GO	BR	MAS	GO	2
MLPC017	7	8	SH	GO	BR	MAS	GO	2
MLPC017	8	9	SH	GO	BR	MAS	GO	2
MLPC017	9	10	SH	GO	BR	MAS	GO	2
MLPC017	10	11	SH	GO	BR	MAS	GO	2
MLPC017	11	12	SH	GO	BR	MAS	GO	2
MLPC017	12	13	SH	GO	BR	MAS	GO	2
MLPC017	13	14	SH	GO	BR	MAS	GO	2
MLPC017	14	15	SH	GO	BR	MAS	GO	2
MLPC017	15	16	SH	GO	BR	MAS	GO	2
MLPC017	16	17	CY	GO	PK	MAS	GO	1
MLPC017	17	18	CY	GO	PK	MAS	GO	1
MLPC017	18	19	CY		PK	MAS		
MLPC017	19	20	CY		PK	MAS		
MLPC017	20	21	CY		PK	MAS		
MLPC018	0	1	CY	QV	PK	MAS	FE	1
MLPC018	1	2	CY	QV	PK	MAS	FE	1
MLPC018	2	3	CY	QV	PK	MAS	FE	1
MLPC018	3	4	CY	QV	PK	MAS	FE	1
MLPC018	4	5	CY	QV	PK	MAS	FE	1
MLPC018	5	6	CY	QV	PK	MAS	FE	1
MLPC018	6	7	CY	QV	PK	MAS	FE	1
MLPC018	7	8	CY	QV	PK	MAS	FE	1
MLPC018	8	9	CY	QV	PK	MAS	FE	1
MLPC018	9	10	CY	QV	PK	MAS	FE	1
MLPC018	10	11	CY	QV	PK	MAS	FE	1
MLPC018	11	12	CY	QV	PK	MAS	FE	1
MLPC018	12	13	CY	QV	PK	MAS	FE	1
MLPC018	13	14	CY	QV	PK	MAS	FE	1
MLPC018	14	15	CY	QV	PK	MAS	FE	1
MLPC018	15	16	CY	QV	PK	MAS	FE	1
MLPC018	16	17	CY	QV	PK	MAS	FE	1
MLPC018	17	18	CY	QV	PK	MAS	FE	1
MLPC018	18	19	CY	QV	PK	MAS	FE	1

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC018	19	20	CY	QV	PK	MAS	FE	1
MLPC018	20	21	CY	QV	PK	MAS	FE	1
MLPC018	21	22	CY	QV	PK	MAS	FE	1
MLPC018	22	23	CY	QV	PK	MAS	FE	1
MLPC018	23	24	CY	DO	PK	MAS		
MLPC018	24	25	CY	DO	PK	MAS		
MLPC018	25	26	CY	DO	PK	MAS		
MLPC018	26	27	CY	DO	PK	MAS		
MLPC018	27	28	CY	DO	PK	MAS		
MLPC018	28	29	CY	DO	PK	MAS		
MLPC018	29	30	CY	DO	PK	MAS		
MLPC018	30	31	CY	DO	PK	MAS		
MLPC018	31	32	CY	DO	PK	MAS		
MLPC018	32	33	CY	DO	PK	MAS		
MLPC018	33	34	CY	DO	PK	MAS		
MLPC018	34	35	CY	DO	PK	MAS		
MLPC018	35	36	CY	DO	PK	MAS		
MLPC018	36	37	CY	DO	PK	MAS		
MLPC018	37	38	CY	DO	PK	MAS		
MLPC018	38	39	CY	DO	PK	MAS		
MLPC019	0	1	CY		PK	MAS		
MLPC019	1	2	CY		PK	MAS		
MLPC019	2	3	CY		PK	MAS		
MLPC019	3	4	CY		PK	MAS		
MLPC019	4	5	CY		PK	MAS		
MLPC019	5	6	CY		PK	MAS		
MLPC019	6	7	CY		PK	MAS		
MLPC019	7	8	CY		PK	MAS		
MLPC019	8	9	CY		PK	MAS		
MLPC019	9	10	CY	DO	YW	MAS		
MLPC019	10	11	CY	DO	YW	MAS		
MLPC019	11	12	CY	DO	YW	MAS		
MLPC019	12	13	CY	DO	YW	MAS		
MLPC019	13	14	CY	DO	YW	GTY		
MLPC019	14	15	CY	DO	YW	GTY		
MLPC019	15	16	CY	DO	YW	GTY		
MLPC019	16	17	CY	DO	YW	GTY		
MLPC019	17	18	CY	DO	YW	GTY		
MLPC019	18	19	CY	DO	YW	GTY		
MLPC019	19	20	CY	DO	YW	GTY		
MLPC019	20	21	CY	DO	YW	GTY		
MLPC019	21	22	CY	DO	YW	GTY		
MLPC019	22	23	CY	DO	YW	GTY		
MLPC019	23	24	CY	DO	YW	GTY		
MLPC019	24	25	DO	CY	GN	MG		
MLPC019	25	26	DO	CY	GN	MG		
MLPC019	26	27	DO	CY	GN	MG		
MLPC019	27	28	DO	CY	GN	MG		
MLPC019	28	29	DO	CY	GN	MG		
MLPC020	0	1	FIL	FE	BK			
MLPC020	1	2	FIL	FE	DK			
MLPC020	2	3	FIL	FE	GY			
MLPC020	3	4	CY		YBR			
MLPC020	4	5	CY		YBR			
MLPC020	5	6	CY	SH	YBR			
MLPC020	6	7	CY	QV	YBR			
MLPC020	7	8	CY	SH	YBR			
MLPC020	8	9	CY	SH	YBR			
MLPC020	9	10	CY	SH	YBR			
MLPC020	10	11	CY	SH	YBR			
MLPC020	11	12	CY	SH	YBR			
MLPC020	12	13	CY	SH	BR			
MLPC020	13	14	CY	QV	BR			
MLPC020	14	15	CY	SH	YBR			

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC020	15	16	CY	SH	YBR			
MLPC020	16	17	CY	SH	YBR			
MLPC020	17	18	CY	SH	YBR			
MLPC020	18	19	CY	SH	YBR			
MLPC020	19	20	CY	SH	YBR			
MLPC020	20	21	CY	SH	YBR			
MLPC020	21	22	CY	SH	YBR			
MLPC020	22	23	CY	SH	YBR			
MLPC020	23	24	CY	SH	BR			
MLPC020	24	25	CY	SH	BR			
MLPC020	25	26	CY	SH	YBR			
MLPC020	26	27	CY	SH	YBR		li	2
MLPC020	27	28	CY	SH	YBR			
MLPC020	28	29	CY	SH	YBR			
MLPC020	29	30	CY	FE	YBR		li	2
MLPC020	30	31	CY	DO	YBR			
MLPC020	31	32	CY	DO	YBR			
MLPC020	32	33	DO	CY	GN	MAS		
MLPC020	33	34	DO	CY	GN	MAS		
MLPC020	34	35	DO	QV	GN	MAS		
MLPC020	35	36	CY	QV	YBR			
MLPC020	36	37	DO	CY	YBR	MAS		
MLPC020	37	38	DO	SH	GN	MAS		
MLPC020	38	39	SH	DO	GN	bed		
MLPC021	0	1	FIL	FE	BK		GO	3
MLPC021	1	2	FIL	FE	BK		GO	4
MLPC021	2	3	FE		BK	MAS	GO	4
MLPC021	3	4	FE		BK	MAS	GO	4
MLPC021	4	5	FE		BK	MAS	GO	4
MLPC021	5	6	FE		BK	MAS	GO	4
MLPC021	6	7	FE		BK	MAS	GO	4
MLPC021	7	8	FE		BK	MAS	GO	4
MLPC021	8	9	FE		BK	MAS	GO	4
MLPC021	9	10	FE		BK	MAS	GO	4
MLPC021	10	11	FE		BK	MAS	GO	4
MLPC021	11	12	FE		BK	MAS	GO	4
MLPC021	12	13	FE		BK	MAS	GO	4
MLPC021	13	14	FE		BK	MAS	GO	4
MLPC021	14	15	FE		BK	MAS	GO	4
MLPC021	15	16	FE	CY	BK	MAS	GO	3
MLPC021	16	17	FE	CY	BK	MAS	GO	3
MLPC021	17	18	FE	CY	BK	MAS	GO	3
MLPC021	18	19	FE	SH	BK	MAS	GO	3
MLPC021	19	20	FE	CY	BK	MAS	GO	3
MLPC021	20	21	FE	SS	BK	MAS	GO	3
MLPC021	21	22	FE	SS	BR	MAS	GO	3
MLPC021	22	23	FE		BR	MAS	GO	4
MLPC021	23	24	FE		BR	MAS	GO	4
MLPC021	24	25	FE		BK	MAS	GO	4
MLPC022	0	1	FIL	CY	BR			
MLPC022	1	2	CY		BR			
MLPC022	2	3	CY	QV	BR			
MLPC022	3	4	CY	SH	BR			
MLPC022	4	5	CY	SH	BR			
MLPC022	5	6	CY	SH	BR			
MLPC022	6	7	CY	SH	BR			
MLPC022	7	8	QV	FE	BR		GO	2
MLPC022	8	9	QV	FE	BR		GO	2
MLPC022	9	10	QV	CY	BR		GO	1
MLPC022	10	11	CY	SH	BR			
MLPC022	11	12	QV	CY	BR			
MLPC022	12	13	CY	SH	BR			
MLPC022	13	14	CY	SH	BR			
MLPC022	14	15	CY	SH	BR			

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC022	15	16	CY	SH	BR			
MLPC022	16	17	CY	SH	BR			
MLPC022	17	18	CY	SH	BR			
MLPC022	18	19	CY	SH	BR			
MLPC022	19	20	CY	DO	BR	MAS		
MLPC022	20	21	CY	DO	BR	MAS		
MLPC022	21	22	CY	DO	BR	MAS		
MLPC022	22	23	CY	DO	BR	MAS		
MLPC022	23	24	DO	CY	BR	MAS		
MLPC023	2	3	FE		BR	MAS	GO	4
MLPC023	3	4	FE		BR	MAS	GO	4
MLPC023	4	5	FE	QV	BR	MAS	GO	3
MLPC023	5	6	FE	QV	BR	MAS	GO	3
MLPC023	6	7	SH	FE	BR		GO	2
MLPC023	7	8	SH	CY	GY		GO	2
MLPC023	8	9	CY	FE	BR		GO	3
MLPC023	9	10	FE	CY	BR	MAS	GO	3
MLPC023	10	11	FE	SH	BR	MAS	GO	3
MLPC023	11	12	FE	SH	BR	MAS	GO	3
MLPC023	12	13	FE		BR	MAS	GO	4
MLPC023	13	14	FE	SH	BR	MAS	GO	3
MLPC023	14	15	FE	SH	BR	MAS	GO	3
MLPC023	15	16	FE	SH	BR	MAS	GO	3
MLPC023	16	17	FE		BR	MAS	GO	4
MLPC023	17	18	FE		BR	MAS	GO	4
MLPC023	18	19	FE	SH	BR	MAS	GO	3
MLPC023	19	20	FE		BR	MAS	GO	3
MLPC023	20	21	CY	FE	BR	MAS	GO	3
MLPC023	21	22	CY	DO	BR	MAS		
MLPC023	22	23	CY	DO	BR	MAS		
MLPC023	23	24	CY	DO	BR	MAS		
MLPC023	24	25	CY	DO	BR	MAS		
MLPC023	25	26	CY	DO	BR	MAS		
MLPC023	26	27	CY	DO	YBR	MAS		
MLPC023	27	28	CY	DO	GN	MAS		
MLPC023	28	29	DO		GN	MAS		
MLPC023	29	30	DO		GN	MAS		
MLPC024	0	1	SH		YBR	bed		
MLPC024	1	2	SH		YBR	bed		
MLPC024	2	3	SH		YBR	bed		
MLPC024	3	4	SH		YBR	bed		
MLPC024	4	5	SH		YBR	bed		
MLPC024	5	6	SH	FE	YBR	bed		
MLPC024	6	7	SH	FE	YBR	bed		
MLPC024	7	8	FE	SH	BR	MAS	GO	3
MLPC024	8	9	FE		BR	MAS	GO	4
MLPC024	9	10	FE		DK	MAS	GO	4
MLPC024	10	11	FE		DK	MAS	GO	4
MLPC024	11	12	FE		DK	MAS	GO	4
MLPC024	12	13	FE		DK	MAS	GO	4
MLPC024	13	14	FE		DK	MAS	GO	4
MLPC024	14	15	FE	CY	BR	MAS	GO	3
MLPC024	15	16	FE	QV	BR	MAS	GO	3
MLPC024	16	17	FE		DK	MAS	GO	4
MLPC024	17	18	FE	CY	BR	MAS	GO	3
MLPC024	18	19	FE		DK	MAS	GO	4
MLPC024	19	20	FE		DK	MAS	GO	4
MLPC024	20	21	FE		DK	MAS	GO	4
MLPC024	21	22	FE		DK	MAS	GO	4
MLPC024	22	23	FE		DK	MAS	GO	4
MLPC024	23	24	FE		DK	MAS	GO	4
MLPC025	0	1	FIL	FE	BR	MAS	GO	3
MLPC025	1	2	FE		BR	MAS	GO	4
MLPC025	2	3	FE		YBR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC025	3	4	FE		DK	MAS	GO	4
MLPC025	4	5	FE		DK	MAS	GO	4
MLPC025	5	6	FE		DK	MAS	GO	4
MLPC025	6	7	FE		BR	MAS	GO	4
MLPC025	7	8	FE	CY	RD	MAS	GO	3
MLPC025	8	9	CY	FE	RD		GO	2
MLPC025	9	10	FE		YBR	MAS	GO	3
MLPC025	10	11	FE		YBR	MAS	GO	3
MLPC025	11	12	FE		YBR	MAS	GO	3
MLPC025	12	13	FE	CY	BR	MAS	GO	3
MLPC025	13	14	FE	QV	YBR	MAS	GO	3
MLPC025	14	15	FE	QV	BR	MAS	GO	3
MLPC025	15	16	FE	CY	BR	MAS	GO	3
MLPC025	16	17	FE	CY	BR	MAS	GO	3
MLPC025	17	18	FE	CY	BR	MAS	GO	3
MLPC025	18	19	FE	CY	BR	MAS	GO	3
MLPC025	19	20	FE	CY	BR	MAS	GO	3
MLPC025	20	21	FE	CY	BR	MAS	GO	3
MLPC025	21	22	FE	CY	BR	MAS	GO	3
MLPC025	22	23	FE	CY	BR	MAS	GO	3
MLPC025	23	24	QV	FE	WH		GO	2
MLPC025	24	25	QV		WH			
MLPC025	25	26	QV		WH			
MLPC026	0	1	FE	QV	DK	MAS	GO	3
MLPC026	1	2	FE		BR	MAS	GO	3
MLPC026	2	3	FE	CY	BR	MAS	GO	3
MLPC026	3	4	SH	FE	GY	bed	GO	2
MLPC026	4	5	SH	QV	GY	bed		
MLPC026	5	6	SH		GY	bed		
MLPC026	6	7	FE	QV	BR	MAS	GO	3
MLPC026	7	8	CY		GY	MAS		
MLPC026	8	9	CY	QV	GY	MAS		
MLPC026	9	10	CY	QV	GY	MAS	GO	2
MLPC026	10	11	FE	CY	BR	MAS	GO	3
MLPC026	11	12	FE	CY	BR	MAS	GO	3
MLPC026	12	13	CY	FE	RD			
MLPC026	13	14	FE	QV	BR	MAS	GO	2
MLPC026	14	15	QV	CY	WH		GO	2
MLPC026	15	16	QV		WH			
MLPC026	16	17	QV		WH			
MLPC026	17	18	QV	FE	WH		GO	2
MLPC026	18	19	FE	QV	BR	MAS	GO	3
MLPC026	19	20	FE	QV	BR	MAS	GO	3
MLPC026	20	21	FE	QV	BR	MAS	GO	3
MLPC026	21	22	FE		BR	MAS	GO	3
MLPC026	22	23	FE		BR	MAS	GO	3
MLPC026	23	24	FE		BR	MAS	GO	3
MLPC026	24	25	FE		BR	MAS	GO	3
MLPC026	25	26	FE		BR	MAS	GO	3
MLPC026	26	27	FE		BR	MAS	GO	3
MLPC027	0	1	FE	QV	BR	MAS	GO	3
MLPC027	1	2	FE		BR	MAS	GO	3
MLPC027	2	3	FE		BR	MAS	GO	3
MLPC027	3	4	FE	QV	BR	MAS	GO	3
MLPC027	4	5	FE	QV	BR	MAS	GO	3
MLPC027	5	6	FE		BR	MAS	GO	3
MLPC027	6	7	FE		BR	MAS	GO	3
MLPC027	7	8	FE		BR	MAS	GO	3
MLPC027	8	9	FE		BR	MAS	GO	3
MLPC027	9	10	FE		YBR	MAS	GO	3
MLPC027	10	11	FE	QV	YBR	MAS	GO	3
MLPC027	11	12	FE	SS	YBR	MAS	GO	3
MLPC027	12	13	SS		BR	sndy		
MLPC027	13	14	SS		BR	sndy		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC027	14	15	SS		BR	sndy		
MLPC027	15	16	SS		BR	sndy		
MLPC027	16	17	SS		BR	sndy		
MLPC027	17	18	SS		BR	sndy		
MLPC027	18	19	CY	SS	BR			
MLPC027	19	20	CY	SS	BR			
MLPC028	0	1	FE	QV	BR	MAS	GO	3
MLPC028	1	2	FE		BR	MAS	GO	3
MLPC028	2	3	FE		BR	MAS	GO	3
MLPC028	3	4	FE		BR	MAS	GO	3
MLPC028	4	5	FE		BR	MAS	GO	3
MLPC028	5	6	FE		BR	MAS	GO	3
MLPC028	6	7	FE		BR	MAS	GO	3
MLPC028	7	8	FE		BR	MAS	GO	3
MLPC028	8	9	FE		BR	MAS	GO	3
MLPC028	9	10	SS	CY	RD			
MLPC028	10	11	SS	CY	RD			
MLPC028	11	12	SS	CY	RD			
MLPC028	12	13	SS	CY	RD			
MLPC028	13	14	SS	CY	RD			
MLPC028	14	15	SS	CY	RD			
MLPC028	15	16	SS	CY	RD			
MLPC028	16	17	SS	CY	RD			
MLPC028	17	18	SS	CY	RD			
MLPC028	18	19	SS	CY	RD			
MLPC028	19	20	SS	CY	RD			
MLPC029	0	1	FE		YBR	MAS	GO	3
MLPC029	1	2	FE		YBR	MAS	GO	3
MLPC029	2	3	FE		YBR	MAS	GO	3
MLPC029	3	4	FE		BR	MAS	GO	3
MLPC029	4	5	FE		BR	MAS	GO	3
MLPC029	5	6	FE		BR	MAS	GO	3
MLPC029	6	7	FE		BR	MAS	GO	3
MLPC029	7	8	FE		BR	MAS	GO	3
MLPC029	8	9	FE		BR	MAS	GO	3
MLPC029	9	10	FE	CY	BR	MAS	GO	3
MLPC029	10	11	CY	SS	RBR			
MLPC029	11	12	CY	SS	RBR			
MLPC029	12	13	CY	SS	RBR			
MLPC029	13	14	CY	SS	RBR			
MLPC029	14	15	CY	SS	RBR			
MLPC029	15	16	CY	SS	RBR			
MLPC029	16	17	CY	SS	RBR			
MLPC029	17	18	CY	SS	RBR			
MLPC029	18	19	CY	SS	RBR			
MLPC029	19	20	CY	SS	RBR			
MLPC030	0	1	FE		BR	MAS	GO	3
MLPC030	1	2	FE	QV	BR	MAS	GO	3
MLPC030	2	3	FE	CY	YBR	MAS	GO	3
MLPC030	3	4	FE	CY	YBR	MAS	GO	2
MLPC030	4	5	FE	CY	YBR	MAS	GO	3
MLPC030	5	6	FE	CY	YBR	MAS	GO	3
MLPC030	6	7	FE		BR	MAS	GO	3
MLPC030	7	8	FE		BR	MAS	GO	3
MLPC030	8	9	FE		BR	MAS	GO	3
MLPC030	9	10	FE		BR	MAS	GO	3
MLPC030	10	11	FE		BR	MAS	GO	3
MLPC030	11	12	FE	CY	BR	MAS	GO	3
MLPC030	12	13	CY	SS	RD			
MLPC030	13	14	CY	SS	RD			
MLPC030	14	15	CY	SS	RD			
MLPC030	15	16	CY	SS	RD			
MLPC030	16	17	CY	SS	RD			
MLPC030	17	18	CY	SS	RD			

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC030	18	19	CY	SS	RD			
MLPC030	19	20	CY	SS	RD			
MLPC031	0	1	FE		BR	MAS	GO	3
MLPC031	1	2	FE	CY	BR	MAS	GO	3
MLPC031	2	3	FE		BR	MAS	GO	3
MLPC031	3	4	FE	CY	BR	MAS	GO	3
MLPC031	4	5	CY		YBR			
MLPC031	5	6	CY	FE	YBR			
MLPC031	6	7	CY	FE	YBR			
MLPC031	7	8	CY	FE	YBR			
MLPC031	8	9	CY	FE	BR		GO	2
MLPC031	9	10	FE		BR		GO	3
MLPC031	10	11	FE	CY	YBR		GO	3
MLPC031	11	12	FE		BR		GO	3
MLPC031	12	13	FE		BR		GO	3
MLPC031	13	14	FE		BR		GO	3
MLPC031	14	15	FE		BR		GO	3
MLPC031	15	16	CY	DO	RD			
MLPC031	16	17	CY	DO	RD			
MLPC031	17	18	CY	DO	RD			
MLPC031	18	19	CY	DO	RD			
MLPC031	19	20	CY	DO	RD			
MLPC032	0	1	FE		BR	MAS	GO	2
MLPC032	1	2	FE		BR	MAS	GO	2
MLPC032	2	3	FE		BR	MAS	GO	2
MLPC032	3	4	FE	CY	BR	MAS	GO	2
MLPC032	4	5	FE		BR	MAS	GO	2
MLPC032	5	6	FE		BR	MAS	GO	3
MLPC032	6	7	FE		BR	MAS	GO	3
MLPC032	7	8	FE		BR	MAS	GO	3
MLPC032	8	9	FE		BR	MAS	GO	3
MLPC032	9	10	FE		BR	MAS	GO	3
MLPC032	10	11	FE	CY	BR	MAS	GO	2
MLPC032	11	12	FE		BR	MAS	GO	3
MLPC032	12	13	FE	CY	BR	MAS	GO	2
MLPC032	13	14	FE		BR	MAS	GO	2
MLPC032	14	15	FE		BR	MAS	GO	3
MLPC032	15	16	FE		BR	MAS	GO	3
MLPC032	16	17	FE		BR	MAS	GO	3
MLPC032	17	18	FE		BR	MAS	GO	3
MLPC032	18	19	CY	FE	RD		GO	2
MLPC032	19	20	CY	DO	BR			
MLPC033	0	1	QV		WH			
MLPC033	1	2	QV		WH			
MLPC033	2	3	QV		WH			
MLPC033	3	4	QV		WH			
MLPC033	4	5	QV		WH			
MLPC033	5	6	QV		WH			
MLPC033	6	7	QV		WH			
MLPC033	7	8	QV		WH			
MLPC033	8	9	QV		WH			
MLPC033	9	10	QV	CY	YBR			
MLPC033	10	11	FE	QV	BR		GO	3
MLPC033	11	12	FE		BR		GO	3
MLPC033	12	13	FE		BR		GO	3
MLPC033	13	14	FE		BR		GO	3
MLPC033	14	15	FE		BR		GO	3
MLPC033	15	16	FE		BR		GO	3
MLPC033	16	17	FE		BR		GO	3
MLPC033	17	18	FE	QV	BR		GO	3
MLPC033	18	19	FE	QV	BR		GO	3
MLPC033	19	20	FE	CY	BR		GO	3
MLPC034	0	1	FE	QV	BR	MAS	GO	2
MLPC034	1	2	QV	CY	GN			

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLPC034	2	3	QV	CY	GN			
MLPC034	3	4	QV	CY	GN			
MLPC034	4	5	FE	QV	BR		GO	2
MLPC034	5	6	QV	CY	WH			
MLPC034	6	7	QV	CY	WH			
MLPC034	7	8	QV		WH			
MLPC034	8	9	QV	DO	WH			
MLPC034	9	10	QV		WH			
MLPC034	10	11	QV	FE	WH		GO	2
MLPC034	11	12	QV	FE	WH		GO	2
MLPC034	12	13	FE		BR		GO	3
MLPC034	13	14	FE		BR		GO	3
MLPC034	14	15	FE	CY	BR		GO	3
MLPC034	15	16	FE	QV	BR		GO	2
MLPC034	16	17	QV	FE	WH		GO	2
MLPC034	17	18	FE	QV	BR		GO	2
MLPC034	18	19	FE		BR		GO	3
MLPC034	19	20	FE		BR		GO	3
MLPC034	20	21	FE		BR		GO	3
MLPC034	21	22	FE		BR		GO	3
MLPC034	22	23	FE		BR		GO	3
MLPC034	23	24	FE		BR		GO	3
MLPC035	0	1	QV		WH			
MLPC035	1	2	QV		WH			
MLPC035	2	3	QV	FE	WH		GO	2
MLPC035	3	4	FE	QV	BR		GO	3
MLPC035	4	5	FE		BR		GO	3
MLPC035	5	6	FE		BR		GO	3
MLPC035	6	7	FE		BR		GO	3
MLPC035	7	8	FE		BR		GO	3
MLPC035	8	9	FE		BR		GO	3
MLPC035	9	10	FE		BR		GO	3
MLPC035	10	11	FE	QV	YBR		GO	2
MLPC035	11	12	FE	CY	YBR		GO	2
MLPC035	12	13	CY		BR		GO	1
MLPC035	13	14	CY		BR			
MLPC035	14	15	CY		BR			
MLPC035	15	16	FE	CY	YBR		GO	2
MLPC035	16	17	CY	FE	YBR		GO	2
MLPC035	17	18	FE	CY	BR		GO	2
MLPC035	18	19	CY		BR			
MLPC035	19	20	CY		BR			
MLPC035	20	21	CY		BR			
MLPC035	21	22	CY		BR			
MLPC035	22	23	CY		BR			
MLPC035	23	24	CY		BR			
MLPC035	24	25	CY		BR			
MLPC035	25	26	CY		BR			
MLPC035	26	27	CY		BR			
MLPC035	27	28	CY		BR			
MLPC035	28	29	CY		BR			
MLPC035	29	30	CY		BR			
MLPC035	30	31	CY		BR			
MLPC035	31	32	CY		BR			
MLPC035	32	33	CY		BR			
MLPC035	33	34	CY		BR			
MLPC035	34	35	CY		BR			
MLPC035	35	36	CY		BR			
MLRC036	0	1	FE	FE	BR	MAS	GO	4
MLRC036	1	2	FE	MN	BR	MAS	GO	4
MLRC036	2	3	FE	MN	BK	MAS	MN	4
MLRC036	3	4	FE	FE	BR	MAS	GO	4
MLRC036	4	5	FE	FE	YBR	MAS	LI	4
MLRC036	5	6	FE	FE	YBR	MAS	LI	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC036	6	7	FE	CY	BR	MAS	GO	4
MLRC036	7	8	FE	MN	BR	MAS	GO	3
MLRC036	8	9	FE	FE	BR	MAS	GO	3
MLRC036	9	10	FE	FE	YBR	MAS	LI	3
MLRC036	10	11	FE	MN	BR	MAS	GO	4
MLRC036	11	12	FE	FE	BR	MAS	GO	3
MLRC036	12	13	CY	MN	BR	FG	MN	2
MLRC036	13	14	CY	MN	BR	FG	MN	3
MLRC036	14	15	FE	FE	BR	MAS	GO	4
MLRC036	15	16	FE	MN	BR	MAS	GO	4
MLRC036	16	17	SH		GY	FG	GO	1
MLRC036	17	18	SH		GY	FG	HM	1
MLRC036	18	19	SH		GY	FG	HM	1
MLRC036	19	20	SH		BE	FG		
MLRC036	20	21	SH		BE	FG		
MLRC036	21	22	SH		BE	FG		
MLRC037	0	1	FE	FE	BR	MAS	GO	4
MLRC037	1	2	FE	FE	BR	MAS	GO	4
MLRC037	2	3	FE	FE	BR	MAS	GO	4
MLRC037	3	4	FE	FE	BR	MAS	GO	4
MLRC037	4	5	FE	FE	BR	MAS	GO	4
MLRC037	5	6	FE	FE	BR	MAS	GO	4
MLRC037	6	7	FE	FE	BR	MAS	GO	4
MLRC037	7	8	FE	MN	BR	MAS	GO	4
MLRC037	8	9	FE	MN	BK	MAS	MN	4
MLRC037	9	10	FE	MN	BK	MAS	MN	4
MLRC037	10	11	FE	FE	BK	MAS	MN	4
MLRC037	11	12	FE	CY	BR	MAS	GO	4
MLRC037	12	13	CY	MN	BK	MAS	MN	4
MLRC037	13	14	FE	MN	BR	MAS	GO	4
MLRC037	14	15	FE	CY	BR	MAS	GO	4
MLRC037	15	16	FE	FE	BR	MAS	GO	4
MLRC037	16	17	FE	FE	BR	MAS	GO	4
MLRC037	17	18	FE	CY	BR	MAS	GO	3
MLRC037	18	19	FE	CY	BR	MAS	GO	4
MLRC037	19	20	FE	FE	BR	MAS	GO	4
MLRC037	20	21	FE	FE	BR	MAS	GO	4
MLRC037	21	22	FE	FE	BR	MAS	GO	4
MLRC037	22	23	FE	FE	BR	MAS	GO	4
MLRC037	23	24	FE	CY	BR	MAS	GO	3
MLRC037	24	25	FE	CY	BR	MAS	GO	4
MLRC037	25	26	FE	CY	BR	MAS	GO	4
MLRC037	26	27	FE	CY	BR	MAS	GO	4
MLRC037	27	28	FE	CY	BR	MAS	GO	4
MLRC037	28	29	FE	CY	BR	MAS	GO	3
MLRC037	29	30	FE	CY	BR	MAS	GO	4
MLRC037	30	31	FE	CY	BR	MAS	GO	4
MLRC037	31	32	FE	CY	BR	MAS	GO	4
MLRC037	32	33	FE	FE	BR	MAS	GO	4
MLRC037	33	34	FE	FE	BR	MAS	GO	4
MLRC037	34	35	FE	CY	BR	MAS	GO	4
MLRC037	35	36	FE	CY	BR	MAS	GO	4
MLRC037	36	37	FE	CY	YBR	MAS	LI	3
MLRC037	37	38	CY	FE	YBR	FG	LI	4
MLRC037	38	39	FE	GO	YBR	MAS	LI	3
MLRC037	39	40	GO	FE	BR	MAS	GO	4
MLRC037	40	41	GO	FE	BR	MAS	GO	4
MLRC038	0	1	FE	FE	BR	MAS	GO	4
MLRC038	1	2	FE	MN	BR	MAS	GO	4
MLRC038	2	3	FE	MN	BR	MAS	GO	4
MLRC038	3	4	FE	CY	BR	MAS	GO	4
MLRC038	4	5	FE	CY	BR	MAS	GO	4
MLRC038	5	6	FE	CY	BR	MAS	GO	4
MLRC038	6	7	FE	CY	BR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC038	7	8	FE	CY	BR	MAS	GO	4
MLRC038	8	9	CY	FE	RD	FG	GO	4
MLRC038	9	10	CY	FE	RD	FG	GO	4
MLRC038	10	11	CY	FE	RD	FG	GO	4
MLRC038	11	12	FE	CY	BR	MAS	GO	4
MLRC038	12	13	FE	CY	BR	MAS	GO	4
MLRC038	13	14	FE	CY	BR	MAS	GO	4
MLRC038	14	15	CY	FE	RD	FG	GO	3
MLRC038	15	16	CY	FE	RD	FG	GO	3
MLRC038	16	17	CY	FE	RD	FG	GO	3
MLRC038	17	18	SH		GY	FG	GO	1
MLRC038	18	19	SH		GY	FG	GO	1
MLRC038	19	20	SH		GY	FG	GO	1
MLRC038	20	21	SH		GY	FG	GO	1
MLRC038	21	22	SH		GY	FG	GO	1
MLRC039	0	1	CY	GO	RD	FG	GO	2
MLRC039	1	2	CY	GO	RD	FG	GO	3
MLRC039	2	3	CY	GO	RD	FG	GO	3
MLRC039	3	4	GO	CY	BR	MAS	GO	4
MLRC039	4	5	CY	GO	RD	FG	GO	3
MLRC039	5	6	GO	CY	BR	MAS	GO	4
MLRC039	6	7	GO	HM	BR	MAS	GO	3
MLRC039	7	8	GO	HM	BR	MAS	GO	3
MLRC039	8	9	CY	GO	BR	FG	GO	3
MLRC039	9	10	SH	LI	YBR	FG	LI	2
MLRC039	10	11	SH	LI	LTGY	FG	LI	1
MLRC039	11	12	SH	LI	BE	FG	LI	1
MLRC039	12	13	CY	LI	BR	FG	LI	1
MLRC039	13	14	CY	GO	BR	FG	GO	2
MLRC039	14	15	CY	GO	BR	FG	GO	2
MLRC039	15	16	SH	GO	BR	FG	GO	1
MLRC040	0	1	CY	FE	BR	FG	GO	2
MLRC040	1	2	FE	MN	BR	MAS	GO	4
MLRC040	2	3	FE	MN	BR	MAS	GO	4
MLRC040	3	4	FE	CY	BR	MAS	GO	3
MLRC040	4	5	CY	FE	OR	FG	GO	2
MLRC040	5	6	CY	FE	OR	FG	GO	2
MLRC040	6	7	CY	FE	OR	FG	GO	2
MLRC040	7	8	MN	FE	BK	MAS	MN	4
MLRC040	8	9	MN	FE	BK	MAS	MN	3
MLRC040	9	10	FE	MN	BR	MAS	GO	4
MLRC040	10	11	FE	CY	BR	MAS	GO	4
MLRC040	11	12	MN	CY	BK	MAS	MN	4
MLRC040	12	13	MN	FE	BK	MAS	MN	4
MLRC040	13	14	MN	CY	BK	MAS	MN	4
MLRC040	14	15	MN	CY	BK	MAS	MN	4
MLRC040	15	16	MN	CY	BK	MAS	MN	4
MLRC040	16	17	MN	CY	BK	MAS	MN	4
MLRC040	17	18	MN	CY	BK	MAS	MN	4
MLRC040	18	19	MN	FE	BK	MAS	MN	4
MLRC040	19	20	CY	MN	BR	FG	MN	3
MLRC040	20	21	MN	CY	BK	MAS	MN	4
MLRC040	21	22	CY	FE	OR	FG	GO	3
MLRC040	22	23	CY	FE	OR	FG	GO	3
MLRC040	23	24	CY	FE	OR	FG	GO	3
MLRC040	24	25	CY	FE	OR	FG	GO	2
MLRC040	25	26	CY	FE	OR	FG	GO	2
MLRC040	26	27	FE	CY	BR	MAS	GO	3
MLRC040	27	28	CY	FE	OR	FG	GO	2
MLRC040	28	29	CY	FE	OR	FG	GO	3
MLRC040	29	30	SS	FE	BE	FG	GO	3
MLRC040	30	31	SS	FE	BE	FG	GO	3
MLRC041	0	1	CY	FE	BR	FG	GO	3
MLRC041	1	2	FE	MN	BR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC041	2	3	MN	FE	BK	MAS	MN	3
MLRC041	3	4	FE	MN	BR	MAS	GO	4
MLRC041	4	5	FE	MN	BR	MAS	GO	4
MLRC041	5	6	FE	FE	BR	MAS	GO	4
MLRC041	6	7	CY		WH	FG		
MLRC041	7	8	CY		WH	FG		
MLRC041	8	9	CY	SH	WH	FG		
MLRC041	9	10	SH	CY	GY	FG		
MLRC041	10	11	SH	CY	GY	FG		
MLRC041	11	12	SH	CY	GY	FG		
MLRC041	12	13	SH	CY	GY	FG		
MLRC042	0	1	CY	FE	BR	FG	GO	3
MLRC042	1	2	FE	MN	BR	MAS	GO	4
MLRC042	2	3	FE	MN	BR	MAS	GO	4
MLRC042	3	4	CY	FE	OR	FG	GO	3
MLRC042	4	5	FE	HM	BR	MAS	GO	3
MLRC042	5	6	FE	MN	BR	MAS	GO	4
MLRC042	6	7	FE	MN	BR	MAS	GO	4
MLRC042	7	8	FE	CY	BR	MAS	GO	3
MLRC042	8	9	CY	FE	YBR	FG	LI	2
MLRC042	9	10	CY	SH	WH	FG		
MLRC042	10	11	CY	SH	WH	FG		
MLRC042	11	12	CY	SH	YBR	FG		
MLRC042	12	13	SH	CY	GY	FG		
MLRC043	0	1	CY	FE	BR	FG	GO	3
MLRC043	1	2	FE	CY	BR	MAS	GO	4
MLRC043	2	3	FE	MN	BR	MAS	GO	4
MLRC043	3	4	FE	CY	BR	MAS	GO	3
MLRC043	4	5	FE	CY	BR	MAS	GO	3
MLRC043	5	6	FE	HM	BR	MAS	GO	3
MLRC043	6	7	CY	FE	OR	MAS	GO	2
MLRC043	7	8	CY	FE	OR	MAS	GO	2
MLRC043	8	9	CY	FE	BR	MAS	LI	2
MLRC043	9	10	CY		YBR	MAS	MN	1
MLRC043	10	11	CY	FE	BR	FG	GO	2
MLRC043	11	12	CY	SH	WH	FG		
MLRC043	12	13	CY	SH	LTGY	FG		
MLRC044	0	1	FE	MN	BR	MAS	GO	4
MLRC044	1	2	FE	MN	BR	MAS	GO	4
MLRC044	2	3	FE	FE	BR	MAS	GO	3
MLRC044	3	4	FE	FE	BR	MAS	GO	4
MLRC044	4	5	FE	FE	BR	MAS	GO	4
MLRC044	5	6	FE	FE	BR	MAS	GO	4
MLRC044	6	7	FE	MN	BR	MAS	GO	4
MLRC044	7	8	FE	MN	BR	MAS	GO	4
MLRC044	8	9	FE	FE	BR	MAS	GO	4
MLRC044	9	10	FE	FE	BR	MAS	GO	4
MLRC044	10	11	MN	FE	BK	MAS	MN	4
MLRC044	11	12	MN	FE	BK	MAS	MN	4
MLRC044	12	13	MN	FE	BK	MAS	MN	4
MLRC044	13	14	MN	FE	BK	MAS	MN	4
MLRC044	14	15	MN	FE	BK	MAS	MN	4
MLRC044	15	16	MN	FE	BK	MAS	MN	4
MLRC044	16	17	MN	FE	BK	MAS	MN	4
MLRC044	17	18	FE	MN	BR	MAS	GO	4
MLRC044	18	19	FE	MN	BR	MAS	GO	4
MLRC044	19	20	MN	FE	BK	MAS	MN	4
MLRC044	20	21	MN	FE	BK	MAS	MN	4
MLRC044	21	22	MN	FE	BK	MAS	MN	4
MLRC044	22	23	MN	FE	BK	MAS	MN	4
MLRC044	23	24	MN	FE	BK	MAS	MN	4
MLRC044	24	25	MN	FE	BK	MAS	MN	4
MLRC044	25	26	MN	FE	BK	MAS	MN	4
MLRC044	26	27	FE	MN	BR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC045	0	1	FE	FE	BR	MAS	GO	4
MLRC045	1	2	FE	FE	BR	MAS	GO	4
MLRC045	2	3	FE	FE	BR	MAS	GO	4
MLRC045	3	4	FE	FE	BR	MAS	GO	4
MLRC045	4	5	FE	FE	BR	MAS	GO	4
MLRC045	5	6	FE	FE	BR	MAS	GO	4
MLRC045	6	7	CY	FE	OR	FG	GO	3
MLRC045	7	8	CY	FE	OR	FG	GO	2
MLRC045	8	9	CY	FE	OR	FG	GO	2
MLRC045	9	10	CY	FE	OR	FG	GO	2
MLRC045	10	11	CY	FE	OR	FG	GO	2
MLRC045	11	12	CY	FE	OR	FG	GO	2
MLRC045	12	13	CY	FE	OR	FG	GO	2
MLRC045	13	14	CY	FE	OR	FG	GO	2
MLRC045	14	15	CY	FE	WH	FG	GO	2
MLRC045	15	16	CY	FE	OR	FG	GO	2
MLRC045	16	17	CY	FE	OR	FG	GO	2
MLRC045	17	18	FE	FE	BR	MAS	GO	3
MLRC045	18	19	FE	FE	BR	MAS	GO	3
MLRC045	19	20	FE	MN	BR	MAS	GO	4
MLRC045	20	21	MN	FE	BK	MAS	MN	4
MLRC045	21	22	MN	FE	BK	MAS	MN	4
MLRC045	22	23	FE	MN	BR	MAS	GO	4
MLRC045	23	24	FE	MN	BR	MAS	GO	4
MLRC045	24	25	FE	MN	BR	MAS	GO	4
MLRC045	25	26	FE	MN	BR	MAS	GO	4
MLRC045	26	27	FE	FE	BR	MAS	GO	4
MLRC046	0	1	FE	MN	BR	MAS	GO	4
MLRC046	1	2	FE	FE	BR	MAS	GO	4
MLRC046	2	3	FE	MN	BR	MAS	GO	4
MLRC046	3	4	FE	FE	BR	MAS	GO	3
MLRC046	4	5	CY	FE	WH	FG	GO	2
MLRC046	5	6	CY		BE	FG		
MLRC046	6	7	CY		BE	FG		
MLRC046	7	8	CY		BE	FG		
MLRC046	8	9	CY		BE	FG		
MLRC046	9	10	CY		BE	FG		
MLRC046	10	11	CY		BR	FG		
MLRC046	11	12	CY		GY	FG		
MLRC046	12	13	CY		PU	FG		
MLRC046	13	14	CY	FE	YBR	FG	GO	1
MLRC046	14	15	CY	FE	BR	FG	GO	2
MLRC046	15	16	CY	FE	BR	FG	GO	1
MLRC046	16	17	CY	MN	OR	FG	MN	1
MLRC046	17	18	CY		BR	FG		
MLRC046	18	19	CY	QZ	BR	FG		
MLRC046	19	20	CY		YBR	FG		
MLRC046	20	21	CY	FE	BE	FG	GO	3
MLRC046	21	22	FE	CY	BR	MAS	GO	4
MLRC046	22	23	FE	MN	BR	MAS	GO	4
MLRC046	23	24	FE	MN	BR	MAS	GO	4
MLRC046	24	25	FE	FE	BR	MAS	GO	4
MLRC046	25	26	FE	FE	BR	MAS	GO	4
MLRC046	26	27	FE	FE	BR	MAS	GO	4
MLRC046	27	28	FE	FE	BR	MAS	GO	4
MLRC046	28	29	FE	FE	BR	MAS	GO	4
MLRC046	29	30	FE	FE	BR	MAS	GO	4
MLRC046	30	31	CY	FE	WH	MAS	GO	3
MLRC047	0	1	FE	FE	BR	MAS	GO	4
MLRC047	1	2	FE	FE	BR	MAS	GO	4
MLRC047	2	3	FE	FE	BR	MAS	GO	4
MLRC047	3	4	FE	MN	BK	MIC	HM	4
MLRC047	4	5	FE	MN	BK	MIC	HM	4
MLRC047	5	6	FE	MN	BK	MIC	HM	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC047	6	7	FE	FE	BK	MIC	HM	4
MLRC047	7	8	FE	FE	BK	MIC	HM	4
MLRC047	8	9	FE	MN	BR	MAS	GO	3
MLRC047	9	10	FE	MN	BR	MAS	GO	3
MLRC047	10	11	FE	MN	BR	MAS	GO	3
MLRC047	11	12	FE	FE	BR	MAS	GO	4
MLRC047	12	13	FE	FE	BR	MAS	GO	4
MLRC047	13	14	FE	MN	BK	MIC	HM	4
MLRC047	14	15	FE	MN	BK	MIC	HM	4
MLRC047	15	16	FE	FE	BR	MAS	GO	4
MLRC047	16	17	FE	FE	BR	MAS	GO	4
MLRC047	17	18	FE	FE	BR	MAS	GO	4
MLRC047	18	19	FE	FE	BR	MAS	GO	4
MLRC047	19	20	FE	FE	BR	MAS	GO	4
MLRC047	20	21	FE	FE	BR	MAS	GO	4
MLRC047	21	22	FE	FE	BR	MAS	GO	4
MLRC047	22	23	CY	FE	BE	FG	GO	2
MLRC047	23	24	CY	FE	WH	FG	GO	2
MLRC047	24	25	CY	FE	WH	FG	GO	1
MLRC047	25	26	FE	FE	BR	MAS	GO	4
MLRC047	26	27	FE	FE	BR	MAS	GO	4
MLRC047	27	28	FE	FE	BR	MAS	GO	4
MLRC047	28	29	FE	FE	BK	MIC	HM	4
MLRC047	29	30	FE	FE	BR	MAS	GO	4
MLRC047	30	31	FE	FE	BR	MAS	GO	4
MLRC047	31	32	FE	FE	BR	MAS	GO	4
MLRC047	32	33	FE	FE	BR	MAS	GO	4
MLRC047	33	34	FE	FE	BR	MAS	GO	4
MLRC047	34	35	FE	FE	BR	MAS	GO	4
MLRC048	0	1	FE	FE	BR	MAS	GO	4
MLRC048	1	2	FE	FE	BR	MAS	GO	4
MLRC048	2	3	FE	FE	BR	MAS	GO	4
MLRC048	3	4	FE	MN	BR	MAS	GO	4
MLRC048	4	5	FE	MN	BR	MAS	GO	4
MLRC048	5	6	FE	MN	BR	MAS	GO	4
MLRC048	6	7	FE	MN	BR	MAS	GO	4
MLRC048	7	8	FE	MN	BR	MAS	GO	4
MLRC048	8	9	FE	MN	BR	MAS	GO	4
MLRC048	9	10	FE	MN	BR	MAS	GO	4
MLRC048	10	11	FE	MN	BR	MAS	GO	4
MLRC048	11	12	FE	FE	BR	MAS	GO	4
MLRC048	12	13	FE	FE	BR	MAS	GO	4
MLRC048	13	14	FE	FE	BR	MAS	GO	4
MLRC048	14	15	FE	MN	BR	MAS	GO	4
MLRC048	15	16	FE	MN	BR	MAS	GO	4
MLRC048	16	17	FE	FE	BR	MAS	GO	4
MLRC048	17	18	FE	FE	BR	MAS	GO	4
MLRC048	18	19	FE	FE	BR	MAS	GO	4
MLRC048	19	20	FE	MN	BR	MAS	GO	4
MLRC048	20	21	FE	FE	BR	MAS	GO	4
MLRC048	21	22	FE	FE	BR	MAS	GO	4
MLRC048	22	23	FE	FE	BR	MAS	GO	4
MLRC048	23	24	FE	CY	BR	MAS	GO	4
MLRC048	24	25	FE	FE	BR	MAS	GO	4
MLRC048	25	26	FE	FE	BR	MAS	GO	4
MLRC048	26	27	FE	FE	BR	MAS	GO	4
MLRC049	0	1	FE	FE	BR	MAS	GO	4
MLRC049	1	2	CY	FE	OR	FG	GO	2
MLRC049	2	3	CY	FE	BE	FG	GO	2
MLRC049	3	4	CY	FE	BE	FG	GO	1
MLRC049	4	5	CY	SH	BE	FG		
MLRC049	5	6	CY	QV	BR	FG	GO	1
MLRC049	6	7	CY	MN	BE	FG	MN	1
MLRC049	7	8	CY	QV	BE	FG		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC049	8	9	CY	SH	BE	FG		
MLRC049	9	10	CY		PU	FG		
MLRC049	10	11	CY		BE	FG		
MLRC049	11	12	CY		YBR	FG		
MLRC049	12	13	CY		YBR	FG		
MLRC049	13	14	CY		BE	FG		
MLRC049	14	15	CY		WH	FG		
MLRC049	15	16	CY		BE	FG		
MLRC049	16	17	CY		BE	FG	HM	1
MLRC049	17	18	FE	FE	BR	MAS	GO	4
MLRC049	18	19	FE	FE	BR	MAS	GO	4
MLRC049	19	20	FE	FE	BR	MAS	GO	4
MLRC049	20	21	FE	FE	BR	MAS	GO	4
MLRC049	21	22	FE	FE	BR	MAS	GO	4
MLRC049	22	23	FE	MN	BR	MAS	GO	4
MLRC050	0	1	FE	MN	BR	MAS	GO	4
MLRC050	1	2	FE	MN	BR	MAS	GO	4
MLRC050	2	3	MN	FE	BR	MAS	GO	4
MLRC050	3	4	MN	FE	BR	MAS	GO	4
MLRC050	4	5	MN	FE	BR	MAS	GO	4
MLRC050	5	6	MN	FE	BR	MAS	GO	4
MLRC050	6	7	FE	MN	BR	MAS	GO	4
MLRC050	7	8	FE	MN	BR	MAS	GO	4
MLRC050	8	9	FE	MN	BR	MAS	GO	4
MLRC050	9	10	FE	MN	BR	MAS	GO	4
MLRC050	10	11	FE	MN	BR	MAS	GO	4
MLRC050	11	12	CY	MN	BR	FG	MN	2
MLRC050	12	13	CY	FE	BR	FG	GO	2
MLRC050	13	14	CY	FE	BR	FG	GO	2
MLRC050	14	15	CY	FE	OR	FG	GO	2
MLRC050	15	16	CY	FE	OR	FG	GO	2
MLRC050	16	17	CY	FE	OR	FG	GO	2
MLRC050	17	18	CY	FE	BR	FG	GO	2
MLRC050	18	19	CY	FE	BR	FG	GO	2
MLRC051	0	1	FE	FE	BR	MAS	GO	4
MLRC051	1	2	FE	FE	BR	MAS	GO	4
MLRC051	2	3	FE	FE	BR	MAS	GO	4
MLRC051	3	4	FE	FE	BR	MAS	GO	4
MLRC051	4	5	FE	FE	BR	MAS	GO	4
MLRC051	5	6	FE	FE	BR	MAS	GO	4
MLRC051	6	7	FE	FE	BR	MAS	GO	3
MLRC051	7	8	FE	FE	BR	MAS	GO	3
MLRC051	8	9	FE	FE	BR	MAS	GO	4
MLRC051	9	10	FE	FE	BR	MAS	GO	4
MLRC051	10	11	FE	CY	BR	FG	GO	4
MLRC051	11	12	FE	CY	BR	FG	GO	4
MLRC051	12	13	FE	CY	BR	FG	GO	4
MLRC051	13	14	FE	CY	BR	FG	GO	4
MLRC051	14	15	FE	CY	BR	FG	GO	4
MLRC051	15	16	FE	CY	BR	FG	GO	4
MLRC051	16	17	FE	CY	BR	FG	GO	4
MLRC051	17	18	FE	CY	BR	FG	GO	3
MLRC051	18	19	FE	CY	BR	FG	GO	4
MLRC051	19	20	FE	MN	BR	FG	GO	4
MLRC051	20	21	FE	MN	BR	FG	GO	4
MLRC051	21	22	FE	MN	BR	FG	GO	4
MLRC051	22	23	FE	MN	BR	FG	GO	4
MLRC051	23	24	FE	MN	BR	FG	GO	4
MLRC051	24	25	CY	FE	BR	FG	GO	3
MLRC051	25	26	CY	FE	OR	FG	GO	3
MLRC051	26	27	CY	FE	BR	FG	GO	3
MLRC051	27	28	CY	FE	BR	FG	GO	2
MLRC051	28	29	CY	FE	BR	FG	GO	2
MLRC051	29	30	CY	FE	BR	FG	GO	2

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC051	30	31	CY	FE	BR	FG	GO	2
MLRC052	0	1	FE	CY	BR	MAS	GO	4
MLRC052	1	2	FE	FE	BR	MAS	GO	4
MLRC052	2	3	FE	FE	BR	MAS	GO	4
MLRC052	3	4	FE	FE	BR	MAS	GO	4
MLRC052	4	5	FE	FE	BR	MAS	GO	4
MLRC052	5	6	FE	MN	BR	MAS	GO	4
MLRC052	6	7	FE	MN	BR	MAS	GO	4
MLRC052	7	8	FE	MN	BR	MAS	GO	4
MLRC052	8	9	FE	MN	BR	MAS	GO	4
MLRC052	9	10	FE	FE	BR	MAS	GO	4
MLRC052	10	11	FE	FE	BR	MAS	GO	4
MLRC052	11	12	FE	FE	BR	MAS	GO	4
MLRC052	12	13	FE	FE	BR	MAS	GO	4
MLRC052	13	14	FE	MN	BR	FG	GO	4
MLRC052	14	15	FE	MN	BR	FG	GO	4
MLRC052	15	16	FE	FE	PU	FG	HM	4
MLRC052	16	17	FE	FE	BR	FG	GO	4
MLRC052	17	18	FE	CY	BR	FG	GO	3
MLRC052	18	19	MN	FE	BK	FG	MN	4
MLRC052	19	20	FE	MN	BR	FG	GO	4
MLRC052	20	21	FE	MN	BR	FG	GO	4
MLRC052	21	22	FE	MN	BR	FG	GO	4
MLRC052	22	23	FE	MN	BR	FG	GO	4
MLRC052	23	24	FE	MN	BR	FG	GO	4
MLRC052	24	25	FE	MN	BR	FG	GO	4
MLRC052	25	26	FE	MN	BR	FG	GO	4
MLRC052	26	27	FE	FE	BR	MAS	GO	4
MLRC052	27	28	FE	FE	BR	MAS	GO	4
MLRC052	28	29	FE	MN	BR	MAS	GO	4
MLRC052	29	30	FE	MN	BR	MAS	GO	4
MLRC052	30	31	FE	MN	BR	FG	GO	4
MLRC052	31	32	FE	MN	BR	FG	GO	4
MLRC052	32	33	FE	FE	BR	FG	GO	4
MLRC052	33	34	FE	FE	BR	FG	GO	4
MLRC053	0	1	CY	FE	OR	FG	GO	2
MLRC053	1	2	CY	FE	BE	FG	GO	2
MLRC053	2	3	FE	CY	BR	MAS	GO	3
MLRC053	3	4	CY	FE	BE	FG	GO	3
MLRC053	4	5	CY	FE	BE	FG	GO	1
MLRC053	5	6	CY		BE	FG		
MLRC053	6	7	CY		BE	FG		
MLRC053	7	8	CY		LTBR	FG		
MLRC053	8	9	CY		LTBR	FG		
MLRC053	9	10	CY		BE	FG		
MLRC053	10	11	CY		LTGY	FG		
MLRC053	11	12	CY		LTGY	FG		
MLRC053	12	13	CY	FE	BR	FG	GO	2
MLRC053	13	14	FE	CY	BR	MAS	GO	4
MLRC053	14	15	FE	MN	BR	MAS	GO	4
MLRC053	15	16	FE	MN	BR	MAS	GO	4
MLRC053	16	17	FE	FE	BR	MAS	GO	4
MLRC053	17	18	FE	FE	BR	MAS	GO	4
MLRC053	18	19	FE	FE	BR	MAS	GO	4
MLRC053	19	20	FE	FE	BR	MAS	GO	4
MLRC053	20	21	FE	FE	BR	MAS	GO	4
MLRC053	21	22	FE	FE	BR	MAS	GO	4
MLRC053	22	23	FE	MN	BR	MAS	GO	4
MLRC053	23	24	FE	FE	BR	MAS	GO	4
MLRC053	24	25	FE	CY	BR	FG	GO	4
MLRC053	25	26	FE	FE	BR	MAS	GO	4
MLRC053	26	27	FE	FE	BR	MAS	GO	4
MLRC053	27	28	FE	FE	BR	MAS	GO	4
MLRC053	28	29	FE	FE	YBR	MAS	LI	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC053	29	30	FE	FE	YBR	MAS	LI	4
MLRC053	30	31	FE	FE	YBR	MAS	LI	4
MLRC054	0	1	FE	FE	BR	MAS	GO	4
MLRC054	1	2	FE	FE	BR	MAS	GO	4
MLRC054	2	3	SH	FE	PU	FG	GO	4
MLRC054	3	4	CY	FE	TA	FG	GO	2
MLRC054	4	5	CY		LTGY	FG		
MLRC054	5	6	CY		BR	FG		
MLRC054	6	7	FE	CY	BR	MAS	GO	3
MLRC054	7	8	FE	FE	BR	MAS	GO	4
MLRC054	8	9	FE	FE	BR	MAS	GO	4
MLRC054	9	10	FE	FE	BR	MAS	GO	4
MLRC054	10	11	FE	FE	BR	MAS	GO	4
MLRC054	11	12	FE	FE	BR	MAS	GO	4
MLRC054	12	13	FE	FE	BR	MAS	GO	4
MLRC054	13	14	FE	FE	BR	MAS	GO	4
MLRC054	14	15	FE	FE	BR	MAS	GO	4
MLRC054	15	16	FE	FE	BR	MAS	GO	4
MLRC054	16	17	FE	FE	BR	MAS	GO	4
MLRC054	17	18	FE	FE	PU	FG	HM	4
MLRC054	18	19	FE	FE	BR	MAS	GO	4
MLRC054	19	20	FE	FE	BR	MAS	GO	4
MLRC054	20	21	FE	FE	BR	MAS	HM	4
MLRC054	21	22	FE	FE	BR	MAS	HM	4
MLRC054	22	23	FE	FE	BR	MAS	GO	4
MLRC054	23	24	FE	FE	BR	MAS	GO	4
MLRC054	24	25	FE	FE	BR	MAS	GO	4
MLRC054	25	26	FE	FE	BR	MAS	GO	4
MLRC054	26	27	FE	FE	BR	MAS	GO	4
MLRC054	27	28	FE	MN	BR	MAS	GO	4
MLRC054	28	29	FE	CY	BR	MAS	GO	4
MLRC054	29	30	FE	CY	BR	MAS	GO	4
MLRC055	0	1	CY	FE	TA	FG	GO	1
MLRC055	1	2	CY	FE	PK	FG	GO	1
MLRC055	2	3	CY	FE	PK	FG	GO	1
MLRC055	3	4	CY		LTBR	FG		
MLRC055	4	5	CY		TA	FG		
MLRC055	5	6	FE	CY	DKBR	MAS	GO	4
MLRC055	6	7	FE	MN	DKBR	MAS	GO	4
MLRC055	7	8	FE	MN	DKBR	MAS	GO	4
MLRC055	8	9	FE	MN	DKBR	MAS	GO	4
MLRC055	9	10	FE	MN	DKBR	MAS	GO	4
MLRC055	10	11	FE	MN	DKBR	MAS	GO	4
MLRC055	11	12	FE	MN	DKBR	MAS	GO	4
MLRC055	12	13	FE	MN	DKBR	MAS	GO	4
MLRC055	13	14	FE	MN	DKBR	MAS	GO	4
MLRC055	14	15	FE	MN	DKBR	MAS	GO	4
MLRC055	15	16	FE	MN	DKBR	MAS	GO	4
MLRC055	16	17	FE	MN	DKBR	MAS	GO	4
MLRC055	17	18	FE	FE	PU	FG	HM	4
MLRC055	18	19	FE	FE	PU	FG	HM	4
MLRC055	19	20	FE	FE	PU	FG	HM	4
MLRC055	20	21	FE	FE	PU	FG	HM	4
MLRC055	21	22	FE	FE	PU	FG	HM	4
MLRC055	22	23	FE	FE	PU	FG	HM	4
MLRC055	23	24	FE	FE	BL	FG	SPC	4
MLRC055	24	25	FE	FE	PU	FG	HM	4
MLRC055	25	26	FE	FE	PU	FG	HM	4
MLRC055	26	27	FE	FE	PU	FG	HM	4
MLRC055	27	28	FE	FE	DKBR	FG	GO	4
MLRC055	28	29	FE	CY	DKBR	MAS	GO	4
MLRC055	29	30	CY	FE	WH	MAS	GO	3
MLRC055	30	31	CY	FE	BR	FG	GO	3
MLRC055	31	32	CY	FE	BR	FG	GO	3

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC055	32	33	CY	FE	BR	FG	GO	2
MLRC055	33	34	CY	FE	OR	FG	GO	2
MLRC055	34	35	CY	FE	BR	FG	GO	2
MLRC055	35	36	CY	FE	YBR	FG	LI	2
MLRC055	36	37	CY	FE	YBR	FG	LI	2
MLRC056	0	1	CY	FE	OR	FG	GO	2
MLRC056	1	2	CY		BE		GO	1
MLRC056	2	3	CY		WH	FG		
MLRC056	3	4	CY	FE	BE	FG	GO	1
MLRC056	4	5	CY	FE	BE	FG	GO	1
MLRC056	5	6	CY	FE	BE	FG	GO	1
MLRC056	6	7	CY	SH	OR	FG		
MLRC056	7	8	CY		WH	FG		
MLRC056	8	9	CY	SH	PU	FG		
MLRC056	9	10	CY	SH	PU	FG		
MLRC056	10	11	CY	SH	PU	FG		
MLRC056	11	12	CY	SH	PU	FG		
MLRC056	12	13	CY	SH	PU	FG		
MLRC056	13	14	CY	SH	PU	FG		
MLRC056	14	15	CY	SH	PU	FG		
MLRC056	15	16	CY		PK	FG		
MLRC056	16	17	CY		PK	FG		
MLRC056	17	18	CY	SH	PK	FG		
MLRC056	18	19	CY	SH	PK	FG		
MLRC056	19	20	CY	SH	PK	FG		
MLRC056	20	21	CY		LTPK	FG		
MLRC056	21	22	CY		LTPK	FG		
MLRC056	22	23	CY	SH	BE	FG		
MLRC056	23	24	CY	SH	BE	FG		
MLRC056	24	25	CY	SH	BE	FG		
MLRC056	25	26	CY	SH	BE	FG		
MLRC056	26	27	CY	SH	BE	FG		
MLRC056	27	28	CY	SH	BE	FG		
MLRC056	28	29	CY		LTBR	FG		
MLRC056	29	30	CY	GO	BR	FG	GO	1
MLRC056	30	31	CY	GO	OR	FG	GO	2
MLRC056	31	32	FE	FE	BR	MAS	GO	4
MLRC056	32	33	FE	CY	BR	MAS	GO	4
MLRC056	33	34	FE	MN	BR	MAS	GO	4
MLRC056	34	35	FE	MN	DKBR	MAS	GO	4
MLRC056	35	36	FE	MN	DKBR	MAS	GO	4
MLRC056	36	37	FE	MN	DKBR	MAS	GO	4
MLRC056	37	38	FE	MN	DKBR	MAS	GO	4
MLRC056	38	39	FE	FE	DKBR	MAS	GO	4
MLRC056	39	40	FE	FE	DKBR	MAS	GO	4
MLRC056	40	41	FE	FE	DKBR	MAS	GO	4
MLRC056	41	42	FE	FE	DKBR	MAS	GO	4
MLRC056	42	43	FE	FE	DKBR	MAS	GO	4
MLRC057	0	1	CY		LTOR	FG		
MLRC057	1	2	CY	SH	LTOR	FG		
MLRC057	2	3	CY	SH	LTOR	FG		
MLRC057	3	4	SH	CY	LTGY	FG		
MLRC057	4	5	CY	SH	LTGY	FG		
MLRC057	5	6	CY	SH	LTGY	FG	GO	1
MLRC057	6	7	SH	CY	GY	FG		
MLRC057	7	8	SH	CY	GY	FG		
MLRC057	8	9	SH	CY	GY	FG		
MLRC057	9	10	SH	CY	GY	FG		
MLRC057	10	11	SH	CY	GY	FG		
MLRC057	11	12	SH	SH	GY	FG		
MLRC057	12	13	SH	SH	GY	FG		
MLRC057	13	14	SH	SH	GY	FG		
MLRC057	14	15	SH		GY	LAM		
MLRC057	15	16	SH		GY	LAM		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC057	16	17	SH	SH	GY	LAM		
MLRC057	17	18	SH	SH	GY	LAM		
MLRC057	18	19	SH	CY	LTGY	LAM		
MLRC057	19	20	CY	SH	LTGY	FG		
MLRC057	20	21	CY	SH	LTGY	FG		
MLRC057	21	22	CY	SH	LTGY	FG		
MLRC057	22	23	CY		LTGY	FG		
MLRC057	23	24	CY	CY	LTGY	FG		
MLRC057	24	25	CY	CY	LTGY	FG		
MLRC057	25	26	CY	CY	OR	FG		
MLRC057	26	27	CY	CY	OR	FG		
MLRC057	27	28	CY	CY	LTBR	FG		
MLRC057	28	29	CY	CY	LTGY	FG		
MLRC057	29	30	CY	CY	LTGY	FG		
MLRC057	30	31	CY	CY	LTGY	FG		
MLRC057	31	32	CY	SH	LTGY	FG		
MLRC057	32	33	CY	CY	BE	FG		
MLRC057	33	34	CY		LTGY	FG		
MLRC057	34	35	CY		LTGY	FG		
MLRC057	35	36	CY		LTGY	FG		
MLRC057	36	37	CY		LTGY	FG		
MLRC057	37	38	CY		LTGY	FG		
MLRC057	38	39	CY		LTGY	FG		
MLRC057	39	40	CY		LTGY	FG		
MLRC057	40	41	CY	SH	BK	FG	MN	2
MLRC057	41	42	SH	CY	BK	LAM	MN	2
MLRC057	42	43	SH	CY	BK	LAM	MN	2
MLRC057	43	44	SH	CY	BK	LAM	MN	2
MLRC057	44	45	SH	CY	BK	LAM	MN	2
MLRC057	45	46	SH	CY	BK	LAM	MN	2
MLRC057	46	47	SH	CY	BK	LAM	MN	2
MLRC057	47	48	SH	CY	BK	LAM	MN	2
MLRC057	48	49	SH	CY	BK	LAM	MN	2
MLRC058	0	1	CY	FE	OR	FG	GO	3
MLRC058	1	2	CY	CY	OR	FG		
MLRC058	2	3	CY	CY	OR	FG		
MLRC058	3	4	CY	CY	OR	FG		
MLRC058	4	5	CY	FE	TA	FG	GO	3
MLRC058	5	6	CY	SH	TA	FG	GO	1
MLRC058	6	7	CY	SH	TA	FG		
MLRC058	7	8	CY	SH	TA	FG		
MLRC058	8	9	CY	SH	OR	FG		
MLRC058	9	10	SH	CY	LTGY	LAM		
MLRC058	10	11	SH	SH	LTGY	LAM		
MLRC058	11	12	SH	SH	LTGY	LAM		
MLRC058	12	13	SH	SH	LTGY	LAM	GO	1
MLRC058	13	14	CY	CY	LTGY	FG		
MLRC058	14	15	SH	SH	LTGY	LAM		
MLRC058	15	16	SH	SH	LTGY	LAM		
MLRC058	16	17	SH	SH	LTGY	LAM		
MLRC058	17	18	SH	SH	LTGY	LAM		
MLRC058	18	19	SH	SH	LTGY	LAM		
MLRC058	19	20	SH	SH	LTGY	LAM		
MLRC058	20	21	SH	SH	LTGY	LAM	GO	1
MLRC058	21	22	SH	SH	LTGY	LAM		
MLRC058	22	23	SH	SH	LTGY	LAM		
MLRC058	23	24	SH	SH	LTGY	LAM		
MLRC058	24	25	SH	SH	LTGY	LAM		
MLRC058	25	26	SH	SH	LTGY	LAM		
MLRC058	26	27	SH	SH	LTGY	LAM		
MLRC058	27	28	SH	SH	LTGY	LAM		
MLRC058	28	29	SH	CY	GY	LAM		
MLRC058	29	30	CY	SH	BR	FG		
MLRC058	30	31	SH	CY	GY	LAM	GO	2

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC058	31	32	FE	FE	BR	MAS	GO	4
MLRC058	32	33	FE	FE	BR	MAS	GO	3
MLRC058	33	34	FE	FE	DKBR	MAS	GO	4
MLRC059	0	1	SH	CY	PU	LAM	GO	1
MLRC059	1	2	FE	FE	DKBR	MAS	GO	4
MLRC059	2	3	FE	FE	YBR	MAS	LI	4
MLRC059	3	4	FE	FE	DKBR	MAS	GO	4
MLRC059	4	5	FE	FE	DKBR	MAS	GO	4
MLRC059	5	6	FE	FE	DKBR	MAS	GO	4
MLRC059	6	7	FE	FE	DKBR	MAS	GO	4
MLRC059	7	8	FE	FE	DKBR	MAS	GO	4
MLRC059	8	9	FE	FE	DKBR	MAS	GO	4
MLRC059	9	10	CY	QV	OR	FG	GO	2
MLRC059	10	11	CY	CY	OR	FG	GO	1
MLRC059	11	12	CY	CY	OR	FG	GO	1
MLRC059	12	13	CY		BR	FG		
MLRC059	13	14	CY		BR	FG		
MLRC059	14	15	CY		BR	FG		
MLRC059	15	16	CY	CY	BR	FG		
MLRC059	16	17	CY	CY	BR	FG		
MLRC059	17	18	CY	CY	BR	FG	LI	1
MLRC059	18	19	CY	CY	BR	FG		
MLRC059	19	20	CY	CY	OR	FG		
MLRC059	20	21	FE	FE	BR	FG	GO	4
MLRC059	21	22	FE	FE	PU	FG	HM	4
MLRC059	22	23	FE	FE	PU	FG	HM	4
MLRC059	23	24	FE	FE	PU	FG	HM	4
MLRC059	24	25	FE	FE	PU	FG	HM	4
MLRC059	25	26	FE	FE	DKBR	MAS	GO	4
MLRC059	26	27	FE	FE	DKBR	MAS	GO	4
MLRC059	27	28	FE	FE	DKBR	MAS	GO	4
MLRC059	28	29	FE	FE	DKBR	MAS	GO	4
MLRC059	29	30	FE	FE	W	MAS	HM	4
MLRC059	30	31	FE	FE	PU	MAS	HM	4
MLRC059	31	32	FE	FE	PU	MAS	HM	4
MLRC059	32	33	FE	FE	PU	MAS	HM	4
MLRC059	33	34	FE	FE	DKBR	MAS	GO	4
MLRC059	34	35	FE	FE	DKBR	MAS	GO	4
MLRC059	35	36	FE	FE	YBR	MAS	LI	4
MLRC060	0	1	SH	SH	PU	LAM		
MLRC060	1	2	SH	CY	LT GY	LAM		
MLRC060	2	3	SH	CY	LTGY	LAM		
MLRC060	3	4	SH	CY	LTGY	LAM		
MLRC060	4	5	SH	CY	LTGY	LAM		
MLRC060	5	6	SH	CY	LTGY	LAM		
MLRC060	6	7	SH	CY	LTGY	LAM		
MLRC060	7	8	SH	CY	BE	LAM		
MLRC060	8	9	SH	CY	BE	LAM		
MLRC060	9	10	CY	CY	PU	FG		
MLRC060	10	11	CY	CY	PU	FG	GO	2
MLRC060	11	12	FE	FE	DKBR	MAS	GO	4
MLRC060	12	13	FE	FE	DKBR	MAS	GO	4
MLRC060	13	14	FE	FE	DKBR	MAS	GO	4
MLRC060	14	15	FE	FE	DKBR	MAS	GO	4
MLRC060	15	16	FE	FE	DKBR	MAS	GO	4
MLRC060	16	17	FE	FE	DKBR	MAS	GO	4
MLRC060	17	18	FE	FE	DKBR	MAS	GO	4
MLRC060	18	19	CY	FE	BR	FG	GO	2
MLRC060	19	20	CY	FE	BR	FG	GO	2
MLRC060	20	21	CY	FE	BR	FG	GO	2
MLRC060	21	22	CY	FE	YBR	FG	LI	2
MLRC060	22	23	CY	CY	YBR	FG		
MLRC060	23	24	CY	DO	BR	FG		
MLRC060	24	25	CY	DO	BR	FG		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC060	25	26	CY	CY	BR	FG		
MLRC060	26	27	CY	DO	BR	FG		
MLRC060	27	28	DO	CY	LTBR	MG		
MLRC060	28	29	CY	DO	BR	FG		
MLRC060	29	30	CY		BR	FG		
MLRC060	30	31	CY		BR	FG		
MLRC060	31	32	CY		BR	FG		
MLRC060	32	33	CY	QV	BR	FG		
MLRC060	33	34	CY	QV	BR	FG		
MLRC060	34	35	CY	QV	BR	FG	GO	1
MLRC060	35	36	CY	QV	BR	FG	GO	1
MLRC060	36	37	CY		OR	FG		
MLRC060	37	38	CY	FE	BR	FG	GO	3
MLRC060	38	39	FE	FE	DKBR	MAS	GO	4
MLRC060	39	40	FE	FE	DKBR	MAS	GO	4
MLRC060	40	41	FE	FE	DKBR	MAS	GO	4
MLRC060	41	42	FE	FE	RD	MAS	HM	4
MLRC060	42	43	FE	FE	DKBR	MAS	GO	4
MLRC060	43	44	FE	FE	DKBR	MAS	GO	4
MLRC060	44	45	FE	FE	DKBR	MAS	GO	4
MLRC060	45	46	FE	FE	DKBR	MAS	GO	4
MLRC061	0	1	FE	FE	DKBR	MAS	GO	4
MLRC061	1	2	CY	CY	YBR	FG		
MLRC061	2	3	CY		LTBR	FG		
MLRC061	3	4	CY	CY	LTGY	FG		
MLRC061	4	5	CY	CY	OR	FG		
MLRC061	5	6	CY	SH	BE	FG		
MLRC061	6	7	CY	SH	BE	FG		
MLRC061	7	8	CY	SH	YBR	FG		
MLRC061	8	9	CY	SH	YBR	FG		
MLRC061	9	10	CY	SH	YBR	FG		
MLRC061	10	11	CY	SH	YBR	FG		
MLRC061	11	12	CY	SH	BE	FG		
MLRC061	12	13	CY	SH	BE	FG		
MLRC061	13	14	CY	SH	BE	FG		
MLRC061	14	15	CY	SH	BE	FG		
MLRC061	15	16	CY	SH	BE	FG		
MLRC061	16	17	CY	SH	BR	FG		
MLRC061	17	18	CY	SH	BR	FG		
MLRC061	18	19	CY	SH	PU	FG		
MLRC061	19	20	CY		OR	FG		
MLRC061	20	21	CY		OR	FG	GO	1
MLRC061	21	22	CY	SH	OR	FG	GO	1
MLRC061	22	23	CY	SH	OR	FG	GO	1
MLRC061	23	24	FE	FE	DKBR	MAS	GO	4
MLRC061	24	25	FE	FE	DKBR	MAS	GO	4
MLRC061	25	26	FE	FE	DKBR	MAS	GO	4
MLRC061	26	27	FE	FE	DKBR	MAS	GO	4
MLRC061	27	28	CY	FE	BR	FG	GO	2
MLRC061	28	29	CY		OR	FG		
MLRC061	29	30	CY	SH	BR	FG		
MLRC061	30	31	CY	DOL	BR	FG		
MLRC061	31	32	DOL	CY	LTGN	FMG		
MLRC062	0	1	CY		OR	FG		
MLRC062	1	2	CY	CY	OR	FG		
MLRC062	2	3	CY	CY	OR	FG		
MLRC062	3	4	CY	FE	BR	FG		
MLRC062	4	5	CY	CY	BR	FG		
MLRC062	5	6	CY	FE	BR	FG		
MLRC062	6	7	CY	FE	BR	FG		
MLRC062	7	8	FE	SH	DKBR	MAS		
MLRC062	8	9	FE	SH	DKBR	MAS		
MLRC062	9	10	CY	FE	OR	FG		
MLRC062	10	11	CY	FE	OR	FG		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC062	11	12	CY	FE	OR	FG		
MLRC062	12	13	CY	FE	OR	FG		
MLRC062	13	14	FE	FE	YBR	FG		
MLRC062	14	15	FE	FE	YBR	FG		
MLRC062	15	16	FE	FE	DKBR	MAS	GO	4
MLRC062	16	17	FE	FE	DKBR	MAS	GO	4
MLRC062	17	18	FE	FE	DKBR	MAS	GO	4
MLRC062	18	19	FE	FE	DKBR	MAS	GO	4
MLRC062	19	20	FE	FE	DKBR	MAS	GO	4
MLRC062	20	21	FE	FE	DKBR	MAS	GO	4
MLRC062	21	22	FE	FE	YBR	MAS	LI	4
MLRC062	22	23	FE	FE	YBR	MAS	LI	4
MLRC062	23	24	FE	FE	YBR	MAS	LI	4
MLRC062	24	25	FE	FE	YBR	MAS	LI	4
MLRC062	25	26	FE	FE	PU	FG	HM	4
MLRC062	26	27	FE	FE	DKBR	MAS	GO	3
MLRC062	27	28	FE	FE	DKBR	MAS	GO	3
MLRC062	28	29	FE	CY	DKBR	MAS	GO	3
MLRC062	29	30	FE	CY	DKBR	MAS	GO	3
MLRC062	30	31	CY	FE	BR	FG	GO	2
MLRC062	31	32	CY	FE	BR	FG	GO	2
MLRC062	32	33	CY	FE	YBR	FG	GO	2
MLRC062	33	34	CY	FE	YBR	FG	LI	3
MLRC063	0	1	CY		OR	FG	GO	1
MLRC063	1	2	CY		OR	FG	HM	1
MLRC063	2	3	CY		RD	FG	HM	1
MLRC063	3	4	CY		RD	FG	HM	1
MLRC063	4	5	CY		RD	FG	HM	1
MLRC063	5	6	CY		RD	FG	HM	1
MLRC063	6	7	CY	CY	RD	FG	HM	1
MLRC063	7	8	CY	CY	RD	FG		
MLRC063	8	9	CY	CY	RD	FG		
MLRC063	9	10	CY	FE	RD	FG	GO	2
MLRC063	10	11	CY	FE	BR	FG	GO	1
MLRC063	11	12	CY	FE	BR	FG	GO	1
MLRC063	12	13	CY	FE	BR	FG	GO	1
MLRC063	13	14	CY	DOL	BR	FG	GO	1
MLRC063	14	15	CY	FE	BR	FG	GO	1
MLRC063	15	16	CY	FE	BR	FG	GO	1
MLRC063	16	17	CY	FE	BR	FG	GO	1
MLRC063	17	18	CY	FE	BR	FG	GO	1
MLRC063	18	19	CY	FE	BR	FG	GO	1
MLRC063	19	20	CY	FE	LTBR	FG	GO	1
MLRC063	20	21	CY	DOL	LTBR	FG	GO	1
MLRC063	21	22	CY	DOL	LTBR	FG	GO	1
MLRC063	22	23	CY	DOL	LTBR	FG	GO	1
MLRC063	23	24	CY	FE	BR	FG	GO	1
MLRC063	24	25	CY	FE	BR	FG	GO	1
MLRC063	25	26	CY		OR	FG		
MLRC063	26	27	CY	DOL	OR	FG		
MLRC063	27	28	CY	DOL	OR	FG		
MLRC063	28	29	CY	DOL	OR	FG	GO	1
MLRC063	29	30	FE	FE	DKBR	MAS	GO	4
MLRC063	30	31	FE	FE	DKBR	MAS	GO	4
MLRC063	31	32	FE	FE	DKBR	MAS	GO	4
MLRC063	32	33	FE	FE	DKBR	MAS	GO	4
MLRC063	33	34	FE	FE	DKBR	MAS	GO	4
MLRC063	34	35	FE	FE	DKBR	MAS	GO	4
MLRC063	35	36	FE	FE	DKBR	MAS	GO	4
MLRC063	36	37	FE	FE	DKBR	MAS	GO	4
MLRC063	37	38	FE	FE	DKBR	MAS	GO	4
MLRC063	38	39	FE	FE	DKBR	MAS	GO	4
MLRC063	39	40	FE	FE	DKBR	MAS	GO	4
MLRC063	40	41	CY	CY	BR	FG		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC063	41	42	CY	FE	BR	FG	GO	1
MLRC063	42	43	CY	FE	BR	FG	GO	1
MLRC063	43	44	FE	QV	YBR	MAS	LI	2
MLRC063	44	45	CY	FE	BR	FG	GO	2
MLRC063	45	46	CY	FE	BR	FG	GO	3
MLRC063	46	47	CY	FE	BR	FG	GO	4
MLRC063	47	48	CY		BR	FG	GO	1
MLRC063	48	49	CY		BR	FG	GO	1
MLRC064	0	1	FE	MN	DKBR	MAS	GO	4
MLRC064	1	2	FE	MN	DKBR	MAS	GO	4
MLRC064	2	3	FE	MN	DKBR	MAS	GO	4
MLRC064	3	4	FE	FE	DKBR	MAS	GO	4
MLRC064	4	5	FE	FE	DKBR	MAS	GO	4
MLRC064	5	6	FE	FE	DKBR	MAS	GO	4
MLRC064	6	7	FE	FE	DKBR	MAS	GO	4
MLRC064	7	8	FE	FE	DKBR	MAS	GO	4
MLRC064	8	9	FE	FE	DKBR	MAS	GO	4
MLRC064	9	10	FE	FE	DKBR	MAS	GO	4
MLRC064	10	11	FE	FE	DKBR	MAS	GO	4
MLRC064	11	12	FE	FE	DKBR	MAS	GO	4
MLRC064	12	13	FE	FE	DKBR	MAS	GO	4
MLRC064	13	14	FE	FE	DKBR	MAS	GO	4
MLRC064	14	15	FE	FE	DKBR	MAS	GO	4
MLRC064	15	16	FE	FE	DKBR	MAS	GO	4
MLRC064	16	17	FE	FE	DKBR	MAS	GO	4
MLRC064	17	18	FE	FE	DKBR	MAS	GO	4
MLRC064	18	19	FE	FE	DKBR	MAS	GO	4
MLRC064	19	20	FE	FE	DKBR	MAS	GO	4
MLRC064	20	21	FE	FE	DKBR	MAS	GO	4
MLRC064	21	22	FE	FE	DKBR	MAS	GO	4
MLRC064	22	23	FE	FE	DKBR	MAS	GO	4
MLRC064	23	24	FE	FE	DKBR	MAS	GO	4
MLRC064	24	25	FE	FE	DKBR	MAS	GO	4
MLRC064	25	26	FE	FE	DKBR	MAS	GO	4
MLRC064	26	27	FE	FE	PU	MAS	HM	4
MLRC064	27	28	FE	FE	DKBR	MAS	GO	4
MLRC064	28	29	FE	FE	DKBR	MAS	GO	4
MLRC064	29	30	FE	FE	DKBR	MAS	GO	4
MLRC064	30	31	FE	FE	DKBR	MAS	GO	4
MLRC064	31	32	FE	FE	DKBR	MAS	GO	4
MLRC064	32	33	FE	FE	DKBR	MAS	GO	4
MLRC064	33	34	CY	FE	PU	MAS	GO	3
MLRC064	34	35	CY	CY	PU	MAS	GO	2
MLRC064	35	36	CY	FE	OR	MAS	GO	2
MLRC064	36	37	CY	FE	OR	MAS	GO	2
MLRC064	37	38	CY		BR	MAS		
MLRC065	0	1	FE	FE	DKBR	MAS	GO	4
MLRC065	1	2	FE	FE	DKBR	MAS	GO	4
MLRC065	2	3	FE	FE	DKBR	MAS	GO	4
MLRC065	3	4	FE	FE	DKBR	MAS	GO	4
MLRC065	4	5	FE	FE	DKBR	MAS	GO	4
MLRC065	5	6	FE	FE		MAS	GO	4
MLRC065	6	7	FE	FE	DKBR	MAS	GO	4
MLRC065	7	8	FE	FE	DKBR	MAS	GO	4
MLRC065	8	9	FE	FE	DKBR	MAS	GO	4
MLRC065	9	10	FE	FE	DKBR	MAS	GO	4
MLRC065	10	11	FE	FE	DKBR	MAS	GO	4
MLRC065	11	12	FE	FE	YBR	MAS	LI	
MLRC065	12	13	FE	FE	YBR	MAS	LI	4
MLRC065	13	14	FE	FE	YBR	MAS	LI	4
MLRC065	14	15	FE	FE	YBR	MAS	LI	4
MLRC065	15	16	FE	FE	DKBR	MAS	GO	4
MLRC065	16	17	FE	FE	DKBR	MAS	GO	4
MLRC065	17	18	FE	FE	DKBR	MAS	GO	4

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC065	18	19	FE	FE	DKBR	MAS	GO	4
MLRC065	19	20	FE	FE	DKBR	MAS	GO	4
MLRC065	20	21	FE	FE	DKBR	MAS	GO	4
MLRC065	21	22	FE	FE	DKBR	MAS	GO	4
MLRC065	22	23	FE	FE	PU	MAS	HM	4
MLRC065	23	24	FE	FE	PU	MAS	HM	3
MLRC065	24	25	FE	FE	DKBR	MAS	GO	4
MLRC065	25	26	FE	FE	DKBR	MAS	GO	4
MLRC065	26	27	FE	FE	DKBR	MAS	GO	4
MLRC065	27	28	FE	FE	DKBR	MAS	GO	4
MLRC065	28	29	FE	FE	YBR	MAS	LI	4
MLRC065	29	30	FE	FE	DKBR	MAS	GO	4
MLRC065	30	31	FE	FE	DKBR	MAS	GO	4
MLRC065	31	32	FE	FE	DKBR	MAS	GO	4
MLRC065	32	33	FE	FE	YBR	MAS	LI	4
MLRC065	33	34	FE	FE	PU	MAS	HM	4
MLRC065	34	35	FE	FE	PU	MAS	HM	4
MLRC065	35	36	FE	FE	PU	MAS	HM	4
MLRC065	36	37	FE	FE	PU	MAS	HM	4
MLRC065	37	38	FE	CY	PU	MAS	HM	3
MLRC065	38	39	FE	CY	DKBR	MAS	GO	4
MLRC065	39	40	FE	CY	DKBR	MAS	GO	4
MLRC065	40	41	FE	CY	PU	MAS	HM	3
MLRC065	41	42	CY	FE	OR	FG	GO	3
MLRC065	42	43	CY		BR	FG	GO	2
MLRC065	43	44	CY		BR	FG	GO	2
MLRC065	44	45	CY		BR	FG	GO	2
MLRC066	0	1	FE	FE	DKBR	MAS	GO	4
MLRC066	1	2	FE	FE	DKBR	MAS	GO	4
MLRC066	2	3	FE	FE	DKBR	MAS	GO	4
MLRC066	3	4	FE	FE	YBR	MAS	LI	4
MLRC066	4	5	FE	FE	DKBR	MAS	GO	4
MLRC066	5	6	FE	FE	DKBR	MAS	GO	4
MLRC066	6	7	FE	FE	DKBR	MAS	GO	4
MLRC066	7	8	FE	FE	DKBR	MAS	GO	4
MLRC066	8	9	FE	FE	DKBR	MAS	GO	4
MLRC066	9	10	FE	FE	DKBR	MAS	GO	4
MLRC067	0	1	FE	FE	DKBR	MAS	GO	4
MLRC067	1	2	FE	FE	BR	MAS	GO	4
MLRC067	2	3	FE	FE	DKBR	MAS	GO	4
MLRC067	3	4	FE	FE	DKBR	MAS	GO	4
MLRC067	4	5	CY	FE	LTOR	FG	GO	3
MLRC067	5	6	CY	FE	LTOR	FG	GO	3
MLRC067	6	7	FE	FE	DKBR	MAS	GO	4
MLRC067	7	8	FE	FE	DKBR	MAS	GO	4
MLRC067	8	9	FE	FE	DKBR	MAS	GO	4
MLRC067	9	10	FE	FE	DKBR	MAS	GO	4
MLRC068	0	1	FE	FE	DKPU	MAS	HM	4
MLRC068	1	2	FE	FE	DKPU	MAS	HM	4
MLRC068	2	3	CY	FE	YBR	FG	LI	3
MLRC068	3	4	CY	SH	BE	FG	GO	1
MLRC068	4	5	CY	SH	BE	FG	GO	1
MLRC068	5	6	CY	SH	LTOR	FG	GO	1
MLRC068	6	7	CY	CY	LTBR	FG	GO	1
MLRC068	7	8	CY	CY	BR	FG		
MLRC068	8	9	CY	CY	BR	FG		
MLRC068	9	10	CY	SH	LTOR	FG		
MLRC068	10	11	CY	CY	LTOR	FG		
MLRC068	11	12	CY	QV	OR	FG		
MLRC068	12	13	CY	QV	LTBR	FG		
MLRC068	13	14	CY	QV	LTYW	FG		
MLRC068	14	15	CY	CY	LTYW	FG		
MLRC068	15	16	CY	QV	LTYW	FG		
MLRC068	16	17	CY	QV	LTYW	FG		

Hole	From	To	Litho1	Litho2	Colour1	Text1	Min1	Est Fe
MLRC068	17	18	CY	QV	LTYW	FG		
MLRC068	18	19	CY		BR	FG		
MLRC068	19	20	CY	QV	BR	FG		
MLRC068	20	21	CY		BR	FG		
MLRC068	21	22	CY		LTBR	FG		
MLRC068	22	23	CY	QV	LBR	FG		
MLRC068	23	24	CY	QV	DKBR	FG		
MLRC068	24	25	CY		LTGN	FG		
MLRC068	25	26	CY		LTGN	FG		
MLRC068	26	27	CY		LTGN	FG		
MLRC068	27	28	CY		LTGN	FG		
MLRC068	28	29	CY	DOL	LTGN	FG		
MLRC068	29	30	CY	DOL	LTGN	FG		
MLRC068	30	31	CY		LTGY	FG		
MLRC068	31	32	CY	QV	LTBR	FG		
MLRC068	32	33	CY	CY	LBR	FG		
MLRC068	33	34	CY	CY	LTGY	FG		
MLRC068	34	35	CY	CY	PU	FG		
MLRC068	35	36	CY	QV	LTGN	FG		
MLRC068	36	37	FE	FE	DKBR	MAS	GO	4
MLRC068	37	38	FE	FE	DKBR	MAS	GO	4
MLRC068	38	39	FE	FE	DKBR	MAS	GO	4
MLRC068	39	40	FE	FE	DKBR	MAS	GO	4
MLRC068	40	41	FE	FE	DKBR	MAS	GO	4
MLRC068	41	42	FE	FE	DKBR	MAS	GO	4
MLRC068	42	43	FE	FE	DKBR	MAS	GO	4
BBPC003	0	19	SH		BR	LAM		
BBPC003	19	27	FE	SH	DKBR	MAS	GO	4
BBPC003	27	28	SH	FE	GY	MAS	GO	3
BBPC003	28	40	SH		GYBR	LAM		

APPENDIX – 2 ANALYTICAL RESULTS

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC004	0	1	51771	46.1	11.82	4.77	0.18	0.06	0.55	5.23	0.862	0.13	0.004	8
MLPC004	1	2	51772	46.8	15.54	4.96	0.21	0.06	0.54	1.95	0.999	0.12	0.004	7.44
MLPC004	2	3	51773	46.7	14.79	4.71	0.18	0.05	0.55	1.55	0.953	0.15	0.004	9.04
MLPC004	3	4	51774	54.4	6.44	2.46	0.08	0.06	0.48	1.15	0.407	0.18	0.004	10.1
MLPC004	4	5	51775	51.2	8.11	3	0.09	0.06	0.54	2.72	0.454	0.17	0.003	10.12
MLPC004	5	6	51776	48.7	10.78	3.24	0.1	0.06	0.58	2.8	0.496	0.17	0.003	10.32
MLPC004	6	7	51777	50.0	9.61	3.03	0.1	0.06	0.5	2.56	0.597	0.16	0.002	10.31
MLPC004	7	8	51778	50.9	6.71	1.86	0.06	0.04	0.39	5.11	0.322	0.10	0.002	10.27
MLPC004	8	9	51779	47.8	8.57	2.3	0.08	0.06	0.41	6.34	0.469	0.11	0.002	10.44
MLPC004	9	10	51780	50.3	9.47	2.63	0.08	0.06	0.47	2.54	0.517	0.17	0.002	10.49
MLPC004	10	11	51781	50.7	7.83	2.53	0.07	0.06	0.4	4.04	0.475	0.15	0.003	9.57
MLPC004	11	12	51782	47.7	11.59	3.06	0.1	0.06	0.46	3.62	0.689	0.15	0.002	9.97
MLPC004	12	13	51783	26.0	38.16	9.75	0.36	0.04	0.76	2.53	2.82	0.09	0.003	6.85
MLPC004A	0	1	51784	39.4	19.42	8.37	0.37	0.05	0.78	3.12	1.71	0.13	0.003	7.92
MLPC004A	1	2	51785	35.0	28.79	7.03	0.28	0.03	0.83	1.84	1.91	0.09	0.002	7.94
MLPC004A	2	3	51786	41.6	18.58	6.37	0.25	0.05	0.75	2.25	1.64	0.13	0.002	8.9
MLPC004A	3	4	51787	39.7	21.18	5.68	0.2	0.06	0.63	3.35	1.13	0.14	0.002	8.88
MLPC004A	4	5	51788	43.9	16.81	5.27	0.18	0.05	0.6	2.04	0.847	0.15	0.003	9.78
MLPC004A	5	6	51789	45.5	14.54	4.23	0.14	0.05	0.52	2.96	0.78	0.14	0.002	9.81
MLPC004A	6	7	51790	48.4	13.07	4.33	0.16	0.05	0.5	1.05	0.954	0.17	0.003	9.49
MLPC004A	7	8	51791	46.8	9.85	2.23	0.09	0.06	0.38	6.85	0.463	0.10	0.003	9.77
MLPC004A	8	9	51792	48.0	8.77	2.39	0.09	0.06	0.45	5.61	0.399	0.13	0.003	10.1
MLPC004A	9	10	51793	46.9	11.94	3.44	0.11	0.06	0.47	3.9	0.751	0.14	0.003	9.66
MLPC004A	10	11	51794	30.3	33.12	8.35	0.32	0.04	0.71	2.84	2.44	0.11	0.003	7.16
MLPC004A	11	12	51795	45.2	11.86	3.42	0.13	0.06	0.54	5.61	0.755	0.16	0.002	10.11
MLPC005	0	1	51796	21.1	54.72	6.27	0.37	0.05	0.15	1.41	0.278	0.09	0.012	5.6
MLPC005	1	2	51797	36.6	29.52	4.18	0.23	0.07	0.24	3.98	0.208	0.11	0.012	7.06
MLPC005	2	3	51798	49.1	4.65	1.6	0.05	0.08	0.3	10.1	0.207	0.08	0.007	8.2
MLPC005	3	4	51799	45.0	7.34	2.62	0.08	0.07	0.27	10.5	0.21	0.07	0.008	9.05
MLPC005	4	5	51800	49.7	4.69	1.44	0.05	0.06	0.28	8.67	0.178	0.06	0.008	8.83
MLPC005	5	6	51801	48.0	4.84	1.65	0.05	0.06	0.27	10.3	0.173	0.07	0.008	8.96
MLPC005	6	7	51802	51.1	3.82	1.45	0.05	0.08	0.22	8.91	0.117	0.08	0.013	7.72
MLPC005	7	8	51803	47.7	1.7	0.66	0.03	0.09	0.18	14.4	0.133	0.09	0.012	8
MLPC005	8	9	51804	50.4	5.13	2.27	0.06	0.1	0.19	7.16	0.28	0.16	0.047	9.08
MLPC005	9	10	51805	50.6	5.53	2.5	0.07	0.07	0.22	6.64	0.244	0.14	0.042	9.01
MLPC005	10	11	51806	55.3	3.63	1.38	0.04	0.07	0.27	3.96	0.142	0.15	0.02	9.09
MLPC005	11	12	51807	56.0	2.61	0.78	0.03	0.08	0.25	4.53	0.122	0.17	0.019	8.91
MLPC005	12	13	51808	55.5	2.84	0.81	0.03	0.07	0.28	4.37	0.116	0.17	0.016	9.81
MLPC005	13	14	51809	56.7	2.24	0.57	0.02	0.07	0.23	4.62	0.11	0.16	0.021	8.57
MLPC005	14	15	51810	54.6	3.73	0.78	0.03	0.07	0.3	4.05	0.139	0.21	0.011	10.24
MLPC005	15	16	51811	55.5	3.56	0.68	0.03	0.06	0.29	3.85	0.16	0.20	0.015	10.38
MLPC005	16	17	51812	55.0	3.23	0.6	0.03	0.06	0.33	3.74	0.176	0.17	0.006	10.93
MLPC005	17	18	51813	53.6	3.48	0.65	0.03	0.06	0.34	4.91	0.199	0.18	0.007	11.08
MLPC005	18	19	51814	52.3	3.32	0.66	0.03	0.08	0.32	6.21	0.244	0.18	0.01	11.11
MLPC005	19	20	51815	53.0	3.39	0.97	0.04	0.07	0.31	5.58	0.19	0.15	0.018	10.7
MLPC005	20	21	51816	51.5	3.2	0.86	0.03	0.08	0.23	7.47	0.162	0.14	0.026	10.55
MLPC005	21	22	51817	52.8	2.97	0.79	0.03	0.07	0.23	6.43	0.146	0.14	0.03	10.28
MLPC005	22	23	51818	54.3	2.87	0.6	0.02	0.06	0.29	5.03	0.14	0.15	0.02	10.54
MLPC005	23	24	51819	53.6	2.62	0.55	0.03	0.06	0.35	5.77	0.178	0.14	0.014	10.68
MLPC005	24	25	51820	53.2	3	0.76	0.04	0.07	0.37	5.44	0.151	0.15	0.01	11.05
MLPC005	25	26	51821	53.8	3	0.75	0.03	0.06	0.39	5.2	0.123	0.15	0.007	11.09
MLPC005	26	27	51822	51.6	4.36	1.63	0.07	0.08	0.45	5.47	0.142	0.16	0.008	11.06
MLPC005	27	28	51823	53.2	3.75	1.34	0.05	0.07	0.42	4.62	0.099	0.15	0.007	10.97
MLPC005	28	29	51824	51.7	4.81	1.96	0.07	0.07	0.44	5.05	0.101	0.15	0.006	10.77

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC005	29	30	51825	43.9	12.63	4.76	0.23	0.1	0.41	5.15	0.472	0.13	0.004	10.35
MLPC006	7	8	51827	19.6	49.09	11.41	0.7	0.04	0.31	1.59	1.02	0.06	0.003	6.56
MLPC006	8	9	51828	33.3	29.98	7.56	0.42	0.06	0.43	3.04	0.681	0.10	0.006	8.04
MLPC006	9	10	51829	21.1	48.32	9.98	0.66	0.04	0.34	1.61	0.894	0.07	0.004	6.7
MLPC006	10	11	51830	25.3	40.73	10.82	0.64	0.06	0.35	1.95	0.707	0.07	0.006	7.41
MLPC006	11	12	51831	33.5	28.81	7.69	0.46	0.06	0.39	3.85	0.493	0.08	0.007	8.12
MLPC006	12	13	51832	41.0	15.84	4.64	0.26	0.07	0.36	7.42	0.27	0.10	0.008	8.58
MLPC006	13	14	51833	49.5	7.34	2.23	0.12	0.08	0.32	6.87	0.19	0.11	0.009	8.23
MLPC006	14	15	51834	49.6	6.79	1.7	0.1	0.08	0.34	7.3	0.22	0.11	0.01	8.63
MLPC006	15	16	51835	44.7	4.36	1.02	0.06	0.12	0.28	14	0.266	0.10	0.009	9.17
MLPC006	16	17	51836	49.4	4.79	1.24	0.07	0.08	0.33	8.75	0.186	0.12	0.017	9.58
MLPC006	17	18	51837	52.4	4.8	1.31	0.07	0.07	0.28	6.19	0.135	0.14	0.024	9.09
MLPC006	18	19	51838	50.1	3.89	0.86	0.04	0.08	0.25	9.45	0.202	0.11	0.011	8.73
MLPC006	19	20	51839	52.5	3.98	0.86	0.05	0.08	0.25	7.5	0.161	0.11	0.011	8.24
MLPC006	20	21	51840	51.7	4.49	1.02	0.05	0.09	0.29	7.57	0.124	0.12	0.01	8.7
MLPC006	21	22	51841	51.7	5.69	1.46	0.07	0.09	0.4	5.76	0.11	0.14	0.008	9.42
MLPC006	22	23	51842	50.8	8.05	2.35	0.1	0.09	0.42	4.14	0.1	0.15	0.007	9.92
MLPC006	23	24	51843	44.0	16.63	5.56	0.23	0.09	0.44	2.19	0.071	0.15	0.005	9.83
MLPC007	0	1	51844	50.3	6.77	3.3	0.11	0.12	0.34	6.29	0.379	0.08	0.052	7.35
MLPC007	1	2	51845	46.5	13.02	5.09	0.17	0.08	0.27	4.73	0.595	0.08	0.034	6.85
MLPC007	2	3	51846	41.6	20.76	5.11	0.18	0.06	0.28	4.03	0.802	0.08	0.064	6.8
MLPC007	3	4	51847	52.4	7.13	2.37	0.08	0.09	0.25	4.84	0.373	0.07	0.061	7.4
MLPC007	4	5	51848	55.2	3.79	1.28	0.04	0.11	0.25	5.26	0.199	0.07	0.045	7.12
MLPC007	5	6	51849	55.8	4.4	1.66	0.04	0.09	0.28	3.65	0.164	0.09	0.027	7.77
MLPC007	6	7	51850	54.8	5.16	1.72	0.04	0.07	0.41	3.1	0.184	0.10	0.015	9.22
MLPC007	7	8	51851	53.3	4.81	1.86	0.06	0.08	0.35	5.64	0.412	0.07	0.054	7.63
MLPC007	8	9	51852	52.5	6.1	1.73	0.08	0.1	0.32	5.61	0.364	0.07	0.024	7.41
MLPC007	9	10	51853	54.6	3.78	1.01	0.05	0.13	0.38	6.06	0.18	0.10	0.03	7.15
MLPC007	10	11	51854	53.9	4.48	0.93	0.04	0.14	0.35	6.5	0.072	0.10	0.013	7.39
MLPC007	11	12	51855	51.9	7.04	1.94	0.08	0.14	0.33	5.51	0.047	0.11	0.011	7.52
MLPC007	12	13	51856	52.9	6.12	1.8	0.08	0.18	0.31	5.65	0.036	0.12	0.017	6.93
MLPC007	13	14	51857	41.0	20.5	6.11	0.34	0.15	0.27	4.14	0.096	0.09	0.01	7.13
MLPC007	14	15	51858	29.4	34.95	10.17	0.64	0.09	0.3	2.38	0.27	0.07	0.006	7.79
MLPC007	15	16	51859	20.3	47.01	13.09	0.85	0.06	0.34	1.09	0.92	0.05	0.005	6.78
MLPC007	16	17	51860	17.8	57.05	8.5	0.54	0.06	0.31	1.38	0.547	0.04	0.005	5.2
MLPC007	17	18	51861	17.9	51.88	12.38	0.79	0.06	0.42	1.11	0.665	0.04	0.003	6.3
MLPC007	18	19	51862	16.5	52.8	13.24	0.86	0.07	0.6	0.91	0.811	0.04	0.003	6.46
MLPC007	19	20	51863	20.3	47.28	12.09	0.77	0.07	0.58	1.15	0.772	0.06	0.004	7.17
MLPC007	20	21	51864	22.0	43.83	11.26	0.72	0.06	0.43	2.22	0.817	0.07	0.004	7.66
MLPC007	21	22	51865	19.2	47.93	12.44	0.8	0.05	0.4	1.94	0.518	0.06	0.003	7.37
MLPC007	22	23	51866	31.6	33.28	8.02	0.47	0.07	0.31	3.14	0.298	0.06	0.006	7.69
MLPC007	23	24	51867	46.8	12.64	3.41	0.21	0.12	0.28	5.94	0.217	0.06	0.012	7.1
MLPC007	24	25	51868	48.0	12.09	3.02	0.19	0.12	0.31	5.68	0.202	0.06	0.009	6.77
MLPC007	25	26	51869	51.7	6.3	1.83	0.1	0.11	0.22	6.49	0.165	0.06	0.051	7.42
MLPC007	26	27	51870	50.7	7.25	1.64	0.1	0.11	0.26	6.63	0.15	0.07	0.028	8.22
MLPC007	27	28	51871	50.9	6.02	1.24	0.07	0.16	0.29	7.24	0.223	0.06	0.015	8.12
MLPC007	28	29	51872	51.9	5.42	1.15	0.07	0.17	0.27	7.23	0.225	0.07	0.012	7.73
MLPC007	29	30	51873	52.6	4.95	1.06	0.07	0.17	0.23	7.25	0.148	0.06	0.012	7.25
MLPC007	30	31	51874	51.5	5.49	1.21	0.07	0.19	0.28	7.37	0.209	0.06	0.01	8.02
MLPC007	31	32	51875	50.6	6.16	1.23	0.07	0.19	0.27	7.33	0.253	0.08	0.009	8.4
MLPC007	32	33	51876	53.4	4.8	0.99	0.06	0.17	0.24	6.36	0.17	0.07	0.016	7.28
MLPC007	33	34	51877	53.6	5.25	1.06	0.06	0.17	0.31	5.85	0.086	0.08	0.009	7.23
MLPC007	34	35	51878	54.9	6.09	1.18	0.07	0.14	0.29	3.86	0.087	0.09	0.008	7.39
MLPC008	0	1	51879	49.6	9.02	2.83	0.16	0.1	0.35	5.92	0.261	0.14	0.056	7.1
MLPC008	1	2	51880	50.0	6.54	2.13	0.11	0.1	0.38	7.38	0.265	0.15	0.071	7.44
MLPC008	2	3	51881	54.4	2.24	0.66	0.03	0.12	0.37	7.39	0.075	0.11	0.025	6.83
MLPC008	3	4	51882	53.7	1.78	0.38	0.02	0.11	0.4	7.74	0.052	0.09	0.011	7.26
MLPC008	4	5	51883	53.8	2.86	0.89	0.04	0.1	0.56	7.16	0.059	0.09	0.046	7.07
MLPC008	5	6	51884	53.6	2.85	0.93	0.04	0.1	0.57	7.24	0.055	0.09	0.045	7.14
MLPC008	6	7	51885	54.1	2.24	0.72	0.03	0.13	0.45	7.55	0.042	0.08	0.037	7.11
MLPC008	7	8	51886	54.7	2.97	1.38	0.06	0.14	0.33	6.5	0.062	0.11	0.02	6.98
MLPC008	8	9	51887	47.6	10.12	4.41	0.15	0.11	0.23	4.86	0.121	0.17	0.009	8.93
MLPC009	0	1	51888	48.0	10.7	2.78	0.16	0.17	0.49	6.09	0.3	0.07	0.063	7.29

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC009	1	2	51889	53.6	3.59	1.28	0.07	0.09	0.4	6.66	0.125	0.08	0.07	7.49
MLPC009	2	3	51890	60.9	1.43	0.58	0.03	0.08	0.2	3.77	0.051	0.07	0.051	4.84
MLPC009	3	4	51891	57.1	2.3	0.8	0.04	0.1	0.31	5.49	0.034	0.08	0.028	6.31
MLPC009	4	5	51892	56.4	3.31	1.23	0.06	0.08	0.34	4.85	0.048	0.08	0.036	6.79
MLPC009	5	6	51893	56.7	2.15	0.64	0.04	0.1	0.43	6.03	0.042	0.07	0.034	6.77
MLPC009	6	7	51894	57.4	1.21	0.6	0.03	0.12	0.34	6.3	0.022	0.08	0.03	6.13
MLPC009	7	8	51895	57.7	1.18	0.6	0.03	0.11	0.37	5.95	0.014	0.09	0.031	6.42
MLPC009	8	9	51896	60.2	1.14	0.33	0.02	0.1	0.25	4.12	0.012	0.10	0.036	5.62
MLPC009	9	10	51897	55.7	1.13	0.35	0.02	0.14	0.4	7.63	0.047	0.07	0.018	7.03
MLPC009	10	11	51898	54.2	2.45	0.42	0.02	0.13	0.49	7.57	0.023	0.07	0.013	7.73
MLPC009	11	12	51899	53.6	2.82	0.48	0.02	0.14	0.5	7.45	0.026	0.07	0.012	8.06
MLPC009	12	13	51900	54.6	1.4	0.37	0.02	0.15	0.47	8.29	0.032	0.06	0.025	6.99
MLPC009	13	14	51901	53.7	2.06	0.53	0.02	0.13	0.38	8.36	0.041	0.07	0.027	7.53
MLPC009	14	15	51902	53.1	2.11	0.85	0.04	0.12	0.33	8.6	0.095	0.10	0.053	7.35
MLPC009	15	16	51903	51.1	3.52	0.75	0.04	0.13	0.43	9.22	0.092	0.10	0.018	8.49
MLPC009	16	17	51904	52.4	4.09	0.7	0.03	0.11	0.46	7.28	0.127	0.09	0.017	8.65
MLPC009	17	18	51905	53.4	3.58	0.56	0.03	0.1	0.29	7.04	0.156	0.12	0.051	8.14
MLPC009	18	19	51906	52.9	4.72	0.71	0.03	0.12	0.38	6.78	0.144	0.13	0.042	7.85
MLPC009	19	20	51907	51.7	4.2	0.94	0.04	0.12	0.32	7.74	0.162	0.16	0.047	8.05
MLPC009	20	21	51908	50.2	7.19	1.71	0.07	0.13	0.27	6.54	0.185	0.22	0.025	8.3
MLPC009	21	22	51909											
MLPC009	22	23	51910	49.3	4	1.02	0.05	0.17	0.3	10.1	0.104	0.10	0.011	7.58
MLPC009	23	24	51911	48.8	2.35	0.48	0.02	0.19	0.27	12.6	0.206	0.09	0.01	7.85
MLPC009	24	25	51912	44.4	2.41	0.53	0.03	0.27	0.37	14.9	0.393	0.11	0.007	9.1
MLPC009	25	26	51913	47.3	3.18	0.47	0.02	0.17	0.24	12.9	0.159	0.10	0.02	8.67
MLPC010	12	13	51914	38.4	22.51	4.18	0.15	0.06	0.29	7.32	1.17	0.07	0.068	5.86
MLPC010	13	14	51915	45.2	10.09	2.59	0.1	0.09	0.25	10.2	0.765	0.05	0.091	5.8
MLPC010	14	15	51916	37.9	23.46	5.69	0.23	0.08	0.43	5.92	1.29	0.04	0.036	5.45
MLPC010	15	16	51917	51.5	7.86	2.03	0.1	0.08	0.33	4.72	0.565	0.12	0.029	7.61
MLPC010	16	17	51918	52.4	6.29	1.58	0.07	0.09	0.34	5.68	0.398	0.12	0.034	7.23
MLPC010	17	18	51919	53.5	6.33	1.46	0.07	0.1	0.38	4.59	0.313	0.12	0.029	7.65
MLPC010	18	19	51920	48.7	8.19	2.08	0.1	0.11	0.42	6.75	0.32	0.11	0.015	9.01
MLPC010	19	20	51921	19.8	45.12	13.11	0.83	0.09	1.52	1.94	0.356	0.05	0.005	7.69
MLPC011	25	26	51922	29.4	32.36	9.15	0.59	0.08	0.49	3.62	0.455	0.11	0.004	8.6
MLPC011	26	27	51923	46.5	7.62	2.37	0.14	0.13	0.42	9.14	0.3	0.10	0.042	8.61
MLPC011	27	28	51924	48.2	7.57	2.35	0.15	0.12	0.41	6.93	0.274	0.12	0.03	9.2
MLPC011	28	29	51925	49.7	6.81	2.19	0.13	0.11	0.38	6.13	0.229	0.11	0.022	9.31
MLPC011	29	30	51926	49.6	6.35	2.04	0.13	0.13	0.4	6.95	0.248	0.10	0.016	9.22
MLPC011	30	31	51927	50.0	8.5	2.48	0.17	0.12	0.42	4.97	0.215	0.12	0.014	8.94
MLPC011	31	32	51928	48.4	10.04	3.08	0.21	0.14	0.46	5.21	0.241	0.11	0.011	8.25
MLPC011	32	33	51929	52.2	7.6	2.29	0.16	0.14	0.41	4.41	0.169	0.13	0.012	8.03
MLPC011	33	34	51930	48.7	12.21	3.58	0.25	0.11	0.4	2.87	0.155	0.16	0.01	8.95
MLPC011	34	35	51931	50.0	8.38	2.67	0.14	0.14	0.5	4.48	0.127	0.13	0.005	9.18
MLPC011	35	36	51932	44.9	11.38	5.47	0.24	0.19	0.66	5.2	0.077	0.12	0.004	9.23
MLPC011	36	37	51933	37.2	20.55	9.52	0.43	0.26	0.85	4.07	0.134	0.13	0.009	8.72
MLPC012	9	10	51934	20.1	48.09	11.75	0.76	0.03	0.24	1.37	1.01	0.07	0.007	6.87
MLPC012	10	11	51935	35.9	26.91	7.05	0.42	0.05	0.27	3.65	0.525	0.08	0.024	7.7
MLPC012	11	12	51936	50.5	7.07	2.08	0.1	0.05	0.34	5.84	0.155	0.09	0.02	9.33
MLPC012	12	13	51937	51.3	4.49	1.11	0.06	0.05	0.35	7.5	0.116	0.07	0.013	8.98
MLPC012	13	14	51938	50.8	4.55	1.17	0.06	0.05	0.36	7.9	0.109	0.08	0.008	9.44
MLPC012	14	15	51939	49.5	3.9	0.9	0.05	0.06	0.28	9.76	0.084	0.07	0.008	9.22
MLPC012	15	16	51940	22.1	50.99	5.19	0.35	0.06	0.15	3.78	0.333	0.08	0.009	5.57
MLPC012	16	17	51941	15.6	57.81	8.66	0.59	0.05	0.16	2.93	0.695	0.07	0.008	5.16
MLPC012	17	18	51942	21.1	48.02	8.96	0.57	0.05	0.18	3.37	0.599	0.08	0.009	6.29
MLPC012	18	19	51943	34.1	27.12	6.45	0.42	0.06	0.3	5.19	0.361	0.10	0.006	8.7
MLPC012	19	20	51944	42.9	12.39	2.97	0.16	0.08	0.32	8.13	0.376	0.13	0.007	10.03
MLPC012	20	21	51945	47.9	7.12	1.93	0.09	0.08	0.27	8.05	0.299	0.15	0.022	9.68
MLPC012	21	22	51946	49.5	7.23	1.88	0.09	0.07	0.24	6.34	0.28	0.15	0.026	9.6
MLPC012	22	23	51947	49.8	7.13	1.76	0.09	0.07	0.26	5.69	0.268	0.19	0.018	10.11
MLPC012	23	24	51948	51.2	5.89	1.38	0.07	0.07	0.32	5.24	0.205	0.20	0.009	10.48
MLPC012	24	25	51949	52.1	5.74	1.29	0.07	0.06	0.37	4.38	0.179	0.20	0.006	10.78
MLPC012	25	26	51950	52.6	5.3	1.23	0.07	0.06	0.4	4.18	0.159	0.19	0.006	10.7
MLPC012	26	27	51951	53.1	4.76	1.16	0.06	0.08	0.34	4.27	0.131	0.20	0.009	10.47

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC012	27	28	51952	52.4	5.39	1.27	0.08	0.08	0.34	4.63	0.142	0.20	0.009	10.48
MLPC012	28	29	51953	52.4	5.07	1.27	0.07	0.08	0.32	4.72	0.164	0.21	0.013	10.49
MLPC012	29	30	51954	52.1	5.9	1.4	0.07	0.1	0.3	4.43	0.159	0.22	0.014	10.36
MLPC012	30	31	51955	53.1	4.77	1.12	0.06	0.09	0.26	5.2	0.129	0.18	0.033	9.6
MLPC012	31	32	51956	51.9	5.54	1.29	0.07	0.11	0.33	5.51	0.169	0.18	0.027	9.98
MLPC012	32	33	51957	51.6	5.51	1.31	0.07	0.11	0.36	5.61	0.154	0.18	0.02	10.22
MLPC013	30	31	51959	18.6	51.78	9.44	0.61	0.06	0.38	2.87	0.872	0.04	0.006	6
MLPC013	31	32	51960	17.0	52.89	10.97	0.72	0.08	1.07	2.14	0.509	0.03	0.005	6.14
MLPC013	32	33	51961	17.7	54.45	9.28	0.57	0.08	0.8	2.34	0.718	0.03	0.014	5.26
MLPC013	33	34	51962	17.1	53.33	11.87	0.72	0.08	0.85	1.25	0.961	0.03	0.024	5.55
MLPC013	34	35	51963	16.0	55.2	12.35	0.74	0.08	0.82	1.05	0.928	0.03	0.025	5.37
MLPC013	35	36	51964	18.3	49.22	12.74	0.72	0.1	0.82	2.02	1.25	0.04	0.016	6.11
MLPC013	36	37	51965	30.9	29.83	7.46	0.42	0.13	0.65	5.69	0.721	0.08	0.009	8.24
MLPC013	37	38	51966	35.5	23.55	6.06	0.34	0.14	0.73	5.6	0.43	0.13	0.008	8.97
MLPC013	38	39	51967	17.1	45.07	13.75	0.56	0.34	4.45	1.87	0.45	0.08	0.006	8.04
MLPC013	39	40	51968	11.7	53.91	15.41	1.02	0.29	3.65	0.73	0.27	0.05	0.004	6.99
MLPC013	40	41	51969	12.4	52.82	15.2	1	0.32	4.13	0.91	0.437	0.06	0.004	6.99
MLPC013	41	42	51970	14.7	53.21	13.08	0.84	0.25	2.72	1.25	0.568	0.07	0.003	6.58
MLPC013	42	43	51971	27.1	39.23	9.06	0.55	0.16	1.11	2.18	0.54	0.09	0.004	7.13
MLPC013	43	44	51972	31.3	33.3	7.96	0.52	0.17	1.31	2.64	0.423	0.10	0.006	7.27
MLPC013	44	45	51973	41.3	22.45	5.07	0.32	0.13	0.92	1.95	0.336	0.13	0.007	8.22
MLPC013	45	46	51974	45.7	16.92	4.04	0.21	0.11	0.67	2.09	0.344	0.15	0.008	8.68
MLPC014	39	40	51975	11.7	55.78	16.38	1.06	0.1	1.2	0.74	1.12	0.06	0.005	6.56
MLPC014	40	41	51976	17.1	48.9	14.09	0.94	0.14	0.8	1.75	0.94	0.08	0.01	6.69
MLPC014	41	42	51977	33.1	27.02	7.32	0.48	0.18	0.98	6.38	0.614	0.08	0.019	6.63
MLPC014	42	43	51978	32.2	24.82	6.3	0.39	0.15	1.23	9.68	0.662	0.07	0.022	6.27
MLPC014	43	44	51979	38.6	17.95	4.6	0.27	0.18	0.96	9.83	0.57	0.07	0.026	6.18
MLPC014	44	45	51980	42.1	19.34	4.79	0.26	0.15	0.9	4.9	0.632	0.10	0.024	6.37
MLPC014	45	46	51981	47.3	10.34	2.88	0.14	0.17	0.61	7.16	0.431	0.11	0.026	7.11
MLPC014	46	47	51982	47.6	8.67	2.58	0.12	0.19	0.68	7.9	0.323	0.11	0.022	7.71
MLPC015	21	22	51983	19.0	48.48	13.56	0.41	0.05	0.71	0.11	2.65	0.09	0.038	6.27
MLPC015	22	23	51984	42.4	22.97	7.15	0.21	0.05	0.39	0.29	1.27	0.06	0.044	6.35
MLPC015	23	24	51985	42.4	18.63	5.04	0.18	0.08	0.4	3.75	1.19	0.06	0.023	7.95
MLPC015	24	25	51986	36.2	28.78	6.96	0.28	0.05	0.55	1.7	2.04	0.06	0.037	6.67
MLPC015	25	26	51987	47.3	11.71	3.04	0.12	0.18	0.37	5.98	0.896	0.09	0.035	7.11
MLPC015	26	27	51988	46.8	13.25	3.36	0.13	0.18	0.41	5.27	0.89	0.10	0.033	6.95
MLPC015	27	28	51989	51.3	9.07	2.3	0.1	0.22	0.39	4.96	0.512	0.13	0.022	6.53
MLPC015	28	29	51990	53.8	7.01	1.53	0.07	0.18	0.37	4.65	0.371	0.14	0.013	6.67
MLPC015	29	30	51991	55.8	6.5	1.42	0.06	0.13	0.37	2.63	0.256	0.16	0.009	7.23
MLPC015	30	31	51992	54.9	7.3	1.59	0.07	0.14	0.35	2.73	0.267	0.16	0.008	7.48
MLPC015	31	32	51993	49.6	12.47	2.96	0.14	0.17	0.35	3.24	0.477	0.15	0.015	7.42
MLPC015	32	33	51994	51.3	10.63	2.36	0.11	0.15	0.32	2.71	0.426	0.17	0.011	8.26
MLPC015	33	34	51995	51.3	10	2.32	0.1	0.16	0.38	3.56	0.419	0.15	0.009	7.9
MLPC015	34	35	51996	48.6	11.59	2.64	0.14	0.21	0.49	5.17	0.341	0.12	0.009	7.23
MLPC015	35	36	51997	49.1	13.63	3.53	0.16	0.16	0.45	3.11	0.679	0.14	0.012	6.23
MLPC015	36	37	51998	40.8	22.21	5.24	0.29	0.18	1.07	3.57	0.582	0.11	0.011	6.46
MLPC015	37	38	51999	24.8	38.62	11	0.71	0.19	3.53	1.77	0.427	0.07	0.007	7
MLPC015	38	39	52000	23.0	40.24	12.08	0.71	0.19	3.84	1.68	0.455	0.06	0.006	6.97
MLPC016	0	1	52001	8.4	61.51	15.65	0.66	0.02	0.96	0.78	4.25	0.02	0.008	3.63
MLPC016	1	2	52002	8.6	60.64	17.23	0.51	0.03	0.81	0.13	3.06	0.06	0.019	4.76
MLPC016	2	3	52003	4.7	67.83	15.92	0.58	0.03	0.9	0.06	3.36	0.06	0.012	3.92
MLPC016	3	4	52004	38.2	25.09	6.38	0.22	0.05	0.44	2.75	1.34	0.11	0.042	7.3
MLPC016	4	5	52005	47.2	14.67	4.13	0.14	0.05	0.29	2.35	0.872	0.13	0.065	7.99
MLPC016	5	6	52006	53.4	6.81	2.1	0.08	0.06	0.21	4.04	0.44	0.11	0.066	7.7
MLPC016	6	7	52007	53.8	6.38	1.53	0.06	0.06	0.27	4.05	0.385	0.08	0.056	8.22
MLPC016	7	8	52008	51.0	6.37	1.38	0.06	0.07	0.35	6.88	0.405	0.06	0.028	8.66
MLPC016	8	9	52009	41.3	19.97	2.87	0.12	0.07	0.37	6	0.569	0.06	0.024	8.01
MLPC016	9	10	52010	50.1	7.6	1.11	0.05	0.09	0.39	6.95	0.21	0.08	0.018	8.22
MLPC016	10	11	52011	52.4	5.02	0.87	0.04	0.1	0.4	6.95	0.145	0.09	0.017	8.21
MLPC016	11	12	52012	53.1	3.72	0.52	0.03	0.1	0.31	8.13	0.104	0.08	0.021	7.44
MLPC016	12	13	52013	53.3	4.4	0.6	0.03	0.08	0.33	7.06	0.115	0.07	0.032	7.83
MLPC016	13	14	52014	53.5	4.98	0.69	0.03	0.08	0.27	6.35	0.117	0.08	0.061	7.83
MLPC016	14	15	52015	53.2	5.41	0.87	0.04	0.08	0.18	6.11	0.141	0.08	0.122	7.9

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC016	15	16	52016	51.2	6	1.11	0.05	0.1	0.24	7.1	0.102	0.11	0.076	8.41
MLPC016	16	17	52017	52.0	5.42	1	0.04	0.12	0.33	7.43	0.121	0.11	0.053	7.54
MLPC016	17	18	52018	52.5	4.65	0.85	0.04	0.11	0.34	7.53	0.096	0.11	0.028	7.33
MLPC016	18	19	52019	54.3	1.98	0.48	0.03	0.13	0.44	7.74	0.061	0.09	0.021	6.91
MLPC016	19	20	52020	54.4	1.79	0.36	0.02	0.14	0.43	8.21	0.063	0.09	0.017	6.99
MLPC016	20	21	52021	53.6	2.07	0.53	0.03	0.13	0.37	8.6	0.104	0.10	0.018	7.17
MLPC016	21	22	52022	53.3	2.04	0.52	0.03	0.13	0.36	8.44	0.1	0.10	0.018	7.52
MLPC016	22	23	52023	52.9	2.46	0.68	0.03	0.12	0.35	8.36	0.111	0.09	0.024	7.43
MLPC016	23	24	52024	53.3	2.34	0.43	0.02	0.13	0.3	8.36	0.05	0.09	0.017	7.28
MLPC016	24	25	52025	53.9	2.93	0.55	0.03	0.14	0.33	7.33	0.08	0.10	0.015	7.38
MLPC016	25	26	52026	53.4	2.75	0.56	0.03	0.16	0.33	7.9	0.079	0.12	0.027	7.56
MLPC016	26	27	52028	53.0	3.35	0.72	0.04	0.17	0.41	7.39	0.087	0.12	0.023	7.82
MLPC016	27	28	52029	53.8	2.97	0.64	0.03	0.18	0.33	7.72	0.081	0.12	0.019	7.39
MLPC016	28	29	52030	54.4	3.41	0.72	0.03	0.19	0.37	6.76	0.102	0.11	0.02	7.34
MLPC016	29	30	52031	54.2	3.36	0.75	0.04	0.17	0.32	6.59	0.098	0.12	0.033	7.47
MLPC016	30	31	52032	54.6	3.59	0.62	0.02	0.18	0.42	6.04	0.095	0.13	0.012	7.98
MLPC016	31	32	52033	55.6	2.88	0.48	0.02	0.19	0.28	6.37	0.094	0.15	0.01	6.99
MLPC016	32	33	52034	53.3	4.08	0.82	0.04	0.19	0.33	6.98	0.135	0.12	0.017	7.39
MLPC016	33	34	52035	45.2	2.85	0.75	0.03	0.26	0.38	15.8	0.065	0.13	0.008	8.73
MLPC017	0	1	52036	48.9	8.17	4.24	0.16	0.06	0.41	5.21	0.8	0.11	0.003	8.23
MLPC017	1	2	52037	47.2	6.02	2.75	0.09	0.1	0.48	9.91	0.534	0.08	0.005	7.93
MLPC017	2	3	52038	55.3	3.41	0.98	0.03	0.06	0.39	4.36	0.202	0.10	0.003	8.84
MLPC017	3	4	52039	46.6	8.38	2.26	0.06	0.08	0.61	7.57	0.342	0.12	0.003	10.06
MLPC017	4	5	52040	46.4	10.53	1.94	0.05	0.07	0.6	6.54	0.222	0.14	0.002	10.26
MLPC017	5	6	52041	48.6	8.6	3.04	0.1	0.06	0.66	4.54	0.253	0.14	0.004	10.79
MLPC017	6	7	52042	47.7	8.23	1.78	0.06	0.05	0.7	6.58	0.122	0.12	0.003	11.18
MLPC017	7	8	52043	52.3	5.69	2.11	0.06	0.06	0.47	3.34	0.279	0.16	0.003	10.61
MLPC017	8	9	52044	49.4	8.64	1.52	0.04	0.04	0.47	4.93	0.211	0.12	0.004	10.46
MLPC017	9	10	52045	45.8	7.35	3.13	0.1	0.05	0.58	7.98	0.28	0.12	0.004	11.18
MLPC017	10	11	52046	42.4	8.3	3.33	0.1	0.05	0.53	10.8	0.296	0.10	0.004	11.31
MLPC017	11	12	52047	44.5	5.77	2.37	0.07	0.08	0.53	11.8	0.367	0.08	0.003	9.71
MLPC017	12	13	52048	39.1	14.43	3.25	0.11	0.06	0.59	10.2	0.515	0.09	0.005	10.39
MLPC017	13	14	52049	46.1	8.39	2.39	0.08	0.05	0.51	7.74	0.349	0.11	0.004	10.76
MLPC017	14	15	52050	39.3	14.15	6.48	0.24	0.09	0.52	7.25	0.231	0.11	0.005	11.08
MLPC017	15	16	52051	39.5	16.34	6.44	0.24	0.08	0.47	5.92	0.143	0.07	0.006	10.7
MLPC021	0	1	52052	54.1	3.07	1.73	0.07	0.1	0.18	6.87	0.175	0.10	0.133	6.68
MLPC021	1	2	52053	56.1	3.26	1.93	0.08	0.09	0.14	4.53	0.209	0.10	0.104	6.89
MLPC021	2	3	52054	57.8	3.22	1.33	0.06	0.08	0.18	4.34	0.158	0.07	0.071	5.76
MLPC021	3	4	52055	54.9	1.96	1.03	0.04	0.09	0.24	7.7	0.182	0.06	0.09	6.47
MLPC021	4	5	52056	49.9	7.65	3.02	0.12	0.11	0.31	6.75	0.148	0.08	0.055	7.17
MLPC021	5	6	52057	52.9	5.67	2.15	0.09	0.1	0.32	5.74	0.118	0.08	0.068	7.15
MLPC021	6	7	52058	50.4	5.03	1.99	0.09	0.13	0.32	8.21	0.121	0.08	0.054	7.42
MLPC021	7	8	52059	49.3	4.97	2.28	0.09	0.15	0.32	9.6	0.194	0.08	0.027	7.62
MLPC021	8	9	52060	51.8	3.46	1.43	0.05	0.13	0.31	9.06	0.173	0.06	0.057	7.07
MLPC021	9	10	52061	52.3	2.71	1.42	0.06	0.15	0.39	8.91	0.127	0.06	0.056	7.25
MLPC021	10	11	52062	51.0	3.61	1.91	0.06	0.14	0.32	8.98	0.12	0.07	0.061	7.36
MLPC021	11	12	52063	52.6	2.76	1.42	0.06	0.16	0.4	9.06	0.135	0.06	0.058	7.05
MLPC021	12	13	52064	51.4	3.63	1.92	0.07	0.14	0.33	9.06	0.122	0.07	0.062	7.07
MLPC021	13	14	52065	48.1	7.72	2.39	0.09	0.1	0.21	9.14	0.108	0.07	0.109	6.99
MLPC021	14	15	52066	48.3	7.73	2.38	0.09	0.1	0.22	9.22	0.108	0.07	0.109	7
MLPC021	15	16	52067	41.3	15.2	6.32	0.2	0.11	0.23	7.05	0.09	0.11	0.088	8.14
MLPC021	16	17	52068	44.5	11.58	4.56	0.14	0.12	0.29	7.51	0.131	0.09	0.075	8.02
MLPC021	17	18	52069	47.9	6.13	2.11	0.07	0.1	0.2	9.83	0.171	0.08	0.103	7.49
MLPC021	18	19	52070	46.3	10.35	2.43	0.09	0.11	0.25	7.38	0.172	0.13	0.071	8.14
MLPC021	19	20	52071	45.9	11.97	3.63	0.13	0.13	0.31	6.33	0.171	0.08	0.059	7.84
MLPC021	20	21	52072	48.5	7.85	2.66	0.09	0.12	0.36	7.41	0.111	0.07	0.03	8.42
MLPC021	21	22	52073	52.1	5.19	2.05	0.07	0.11	0.3	6.69	0.121	0.07	0.027	8.02
MLPC021	22	23	52074	50.4	3.37	1.22	0.04	0.12	0.31	9.83	0.223	0.06	0.022	8.59
MLPC021	23	24	52075	50.0	2.83	0.9	0.03	0.12	0.27	10.1	0.194	0.07	0.028	8.7
MLPC021	24	25	52076	45.9	5.59	1.71	0.07	0.13	0.26	12	0.361	0.08	0.057	8.09
MLPC023	0	1	52077	46.6	11.76	5.19	0.22	0.07	0.55	4.62	0.301	0.07	0.064	7.51
MLPC023	1	2	52078	55.6	6.43	2.83	0.1	0.04	0.2	2.04	0.265	0.08	0.092	6.56
MLPC023	2	3	52079	54.3	8.06	3.56	0.1	0.04	0.19	0.77	0.294	0.11	0.057	8.06

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC023	3	4	52080	39.8	25.11	6.99	0.24	0.03	0.48	0.26	1.633	0.08	0.026	7.62
MLPC023	4	5	52081	31.7	37.41	7.8	0.27	0.03	0.56	0.13	1.966	0.06	0.033	6.08
MLPC023	5	6	52082	30.8	37.73	8.45	0.29	0.02	0.62	0.1	2.218	0.07	0.03	6.21
MLPC023	6	7	52083	25.3	45.63	8.58	0.32	0.02	0.61	0.6	2.439	0.05	0.034	4.96
MLPC023	7	8	52084	26.2	44.81	8.26	0.31	0.02	0.59	0.49	2.369	0.05	0.041	5
MLPC023	8	9	52085	43.0	23.58	4.44	0.17	0.03	0.37	1	1.266	0.08	0.05	6.65
MLPC023	9	10	52086	49.1	8.44	1.93	0.08	0.07	0.35	6.74	0.497	0.08	0.023	7.76
MLPC023	10	11	52087	51.1	5.79	1.28	0.05	0.09	0.32	7.98	0.324	0.07	0.02	7
MLPC023	11	12	52088	54.1	3.03	0.8	0.04	0.1	0.25	8.21	0.142	0.08	0.026	6.16
MLPC023	12	13	52089	53.1	3.63	1.01	0.04	0.09	0.29	8.29	0.208	0.08	0.027	6.28
MLPC023	13	14	52090	53.6	3.28	0.74	0.03	0.09	0.32	6.88	0.148	0.07	0.022	7.35
MLPC023	14	15	52091	52.5	3.34	0.74	0.03	0.1	0.42	7.48	0.16	0.08	0.011	8.26
MLPC023	15	16	52092	51.8	4.37	1.03	0.05	0.1	0.45	6.71	0.166	0.09	0.006	8.27
MLPC023	16	17	52093	52.6	4.36	0.97	0.04	0.09	0.39	6.1	0.125	0.10	0.01	8.46
MLPC023	17	18	52094	52.2	3.21	0.71	0.03	0.12	0.28	7.82	0.185	0.09	0.012	7.98
MLPC023	18	19	52095	55.0	3.82	0.89	0.03	0.11	0.22	5.1	0.217	0.09	0.011	7.49
MLPC023	19	20	52096	53.7	4.04	0.96	0.04	0.12	0.27	5.99	0.236	0.12	0.008	8.17
MLPC023	20	21	52097	43.3	18.47	4.96	0.24	0.1	0.36	3.31	0.177	0.12	0.008	7.9
MLPC023	21	22	52098	13.1	47.98	19.56	1.2	0.11	2.11	0.68	0.185	0.05	0.003	8.83
MLPC024	6	7	52099	7.4	63.04	16.43	0.58	0.03	1.01	0.05	4.121	0.04	0.007	4.25
MLPC024	7	8	52100	18.5	50.58	12.58	0.44	0.04	0.82	0.13	3.088	0.07	0.015	5.31
MLPC024	8	9	52101	54.0	10.93	3.09	0.11	0.03	0.23	0.43	0.703	0.08	0.116	5.96
MLPC024	9	10	52102	57.1	6.58	1.81	0.07	0.04	0.17	2.35	0.408	0.07	0.082	5.14
MLPC024	10	11	52103	55.9	5.6	1.47	0.05	0.05	0.19	3.63	0.351	0.07	0.05	6.19
MLPC024	11	12	52104	56.8	5.48	1.47	0.06	0.05	0.22	2.73	0.332	0.07	0.056	6.1
MLPC024	12	13	52105	56.6	5.61	1.62	0.06	0.05	0.18	2.56	0.294	0.08	0.068	6.23
MLPC024	13	14	52106	55.8	6.4	2.04	0.06	0.06	0.23	2.62	0.299	0.07	0.046	6.46
MLPC024	14	15	52107	54.9	7.18	2.09	0.07	0.05	0.25	2.75	0.401	0.08	0.065	6.98
MLPC024	15	16	52108	48.1	11.02	2.75	0.11	0.07	0.41	5.46	0.751	0.06	0.081	7.21
MLPC024	16	17	52109	48.9	9.27	2.13	0.09	0.08	0.46	6.03	0.658	0.06	0.067	7.75
MLPC024	17	18	52110	45.7	15.34	3.9	0.15	0.06	0.45	4.17	1.163	0.06	0.079	6.6
MLPC024	18	19	52111	48.7	9.93	2.4	0.09	0.08	0.43	4.82	0.698	0.07	0.034	8.13
MLPC024	19	20	52112	48.6	9.99	2.41	0.09	0.08	0.51	4.86	0.72	0.08	0.023	8.73
MLPC024	20	21	52113	51.3	7.1	1.62	0.06	0.08	0.46	4.58	0.504	0.08	0.015	9.15
MLPC024	21	22	52114	53.3	4.66	0.86	0.04	0.09	0.44	4.69	0.317	0.09	0.013	9.41
MLPC024	22	23	52115	51.7	6.84	1.57	0.06	0.09	0.46	4.81	0.533	0.09	0.018	9
MLPC024	23	24	52116	49.8	8.84	1.99	0.08	0.09	0.44	4.85	0.633	0.08	0.02	8.87
MLPC025	0	1	52117	39.0	21.19	10.34	0.47	0.07	0.18	3.37	0.302	0.07	0.022	6.44
MLPC025	1	2	52118	48.2	11.98	6.26	0.22	0.05	0.2	1.93	0.356	0.10	0.022	8.36
MLPC025	2	3	52119	56.1	4.94	2.07	0.06	0.06	0.16	0.74	0.198	0.17	0.035	9.85
MLPC025	3	4	52120	55.3	5.13	2.3	0.07	0.06	0.18	3.13	0.234	0.11	0.108	7.1
MLPC025	4	5	52121	55.4	4.17	2.12	0.06	0.06	0.22	4.98	0.241	0.08	0.145	6.24
MLPC025	5	6	52122	58.5	3.99	2.1	0.05	0.07	0.21	2.39	0.186	0.07	0.139	5.62
MLPC025	6	7	52123	58.4	3.14	1.78	0.05	0.07	0.25	3.19	0.152	0.06	0.129	5.17
MLPC025	7	8	52124	59.9	3.53	2.04	0.04	0.08	0.18	1.19	0.123	0.07	0.1	4.88
MLPC025	8	9	52125	58.6	4.53	2.58	0.06	0.07	0.2	1.19	0.172	0.07	0.095	5.45
MLPC025	9	10	52126	55.4	7	2.98	0.05	0.04	0.19	0.45	0.24	0.10	0.038	8.46
MLPC025	10	11	52127	44.1	19.06	5.84	0.15	0.04	0.36	0.74	0.962	0.12	0.017	8.3
MLPC025	11	12	52128	54.7	7.48	3.66	0.07	0.05	0.23	0.67	0.405	0.13	0.031	8.32
MLPC025	12	13	52129	55.2	6.51	4.05	0.08	0.05	0.23	1.84	0.365	0.09	0.035	6.17
MLPC025	13	14	52130	43.1	20.06	5.69	0.2	0.03	0.43	0.77	1.327	0.10	0.015	8.25
MLPC025	14	15	52131	46.4	13.68	4.64	0.11	0.06	0.32	2.89	0.7	0.13	0.034	8.62
MLPC025	15	16	52132	56.6	5.41	2.74	0.06	0.06	0.2	2.37	0.311	0.11	0.058	5.95
MLPC025	16	17	52133	54.7	6.12	2.85	0.06	0.1	0.23	3.74	0.315	0.08	0.047	5.72
MLPC025	17	18	52134	48.3	9.47	3.84	0.11	0.09	0.27	6.63	0.553	0.08	0.05	6.05
MLPC025	18	19	52135	53.1	6.04	2.86	0.07	0.07	0.25	5.24	0.347	0.08	0.047	5.91
MLPC025	19	20	52136	51.5	8.31	3.39	0.09	0.06	0.24	4.47	0.309	0.06	0.062	6.28
MLPC025	20	21	52137	54.9	5.43	2.28	0.06	0.07	0.23	4.32	0.266	0.06	0.054	5.73
MLPC025	21	22	52138	54.9	5.1	2.26	0.06	0.07	0.24	4.41	0.265	0.07	0.06	5.9
MLPC025	22	23	52139	54.9	4.97	1.57	0.05	0.06	0.23	3.65	0.23	0.08	0.038	7.43
MLPC025	23	24	52140	31.7	37.67	5.49	0.28	0.06	0.22	2.52	0.877	0.07	0.02	5.68
MLPC026	0	1	52141	36.8	24.11	10.96	0.55	0.08	0.22	2.88	0.415	0.06	0.024	6.28
MLPC026	1	2	52142	36.8	24.08	9.92	0.34	0.05	0.34	3.37	1.042	0.07	0.016	6.23

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC026	2	3	52143	17.0	52.19	12.8	0.55	0.04	0.78	1.31	2.44	0.05	0.011	4.58
MLPC026	17	18	52144	24.7	42.38	6.84	0.36	0.05	0.26	5.05	1.293	0.06	0.029	5.6
MLPC026	18	19	52145	31.0	31.93	6.72	0.38	0.06	0.29	5.44	1.165	0.06	0.035	6.27
MLPC026	19	20	52146	42.3	17.16	3.44	0.19	0.08	0.33	6.32	0.535	0.08	0.022	7.67
MLPC026	20	21	52147	45.0	15.04	3.45	0.2	0.07	0.3	5.09	0.519	0.08	0.019	7.76
MLPC026	21	22	52148	51.7	8.11	1.98	0.09	0.07	0.3	4.3	0.267	0.09	0.031	7.88
MLPC026	22	23	52149	51.9	5.83	1.3	0.06	0.08	0.26	6.11	0.184	0.10	0.036	8.53
MLPC026	23	24	52150	52.5	5.23	1.13	0.05	0.09	0.28	5.48	0.205	0.14	0.024	8.7
MLPC026	24	25	52151	49.5	6.97	1.45	0.06	0.09	0.24	6.92	0.24	0.16	0.03	9.13
MLPC026	25	26	52152	51.9	6.41	1.26	0.06	0.08	0.25	5.03	0.168	0.16	0.025	9.37
MLPC026	26	27	52153	50.7	7.31	1.55	0.07	0.08	0.26	5.37	0.2	0.16	0.026	9.14
MLPC027	0	1	52154	37.7	15.96	5.31	0.24	0.05	0.23	10.4	0.494	0.09	0.013	8.18
MLPC027	1	2	52155	45.0	11.48	4.05	0.16	0.05	0.23	6.81	0.406	0.11	0.019	8.32
MLPC027	2	3	52156	42.9	16.33	5.04	0.22	0.04	0.23	5.07	0.499	0.11	0.018	7.77
MLPC027	3	4	52157	49.4	13.86	4.07	0.15	0.03	0.21	1.17	0.476	0.09	0.042	7.61
MLPC027	4	5	52158	41.3	8.83	2.51	0.08	0.06	0.22	13.5	0.313	0.09	0.02	8.91
MLPC027	5	6	52159	40.7	5.26	1.33	0.05	0.05	0.19	16.9	0.219	0.14	0.016	9.75
MLPC027	6	7	52160	46.1	4.12	0.97	0.03	0.04	0.17	12.1	0.129	0.20	0.014	10.3
MLPC027	7	8	52161	51.7	4.37	1.35	0.04	0.04	0.22	5.97	0.133	0.20	0.011	10.22
MLPC027	8	9	52162	54.0	3.81	1.3	0.04	0.04	0.21	4.32	0.113	0.22	0.009	9.94
MLPC027	9	10	52163	45.9	16.92	2.82	0.1	0.09	0.39	2.63	0.102	0.17	0.01	9.19
MLPC027	10	11	52164	37.7	21.17	3.05	0.11	0.05	0.2	7.82	0.193	0.16	0.007	9
MLPC027	11	12	52165	22.2	41.62	13.04	0.81	0.03	0.15	2.31	0.224	0.10	0.005	8.43
MLPC028	0	1	52166	47.3	16.7	5.06	0.26	0.03	0.22	0.73	0.205	0.08	0.01	8.57
MLPC028	1	2	52167	54.6	8.66	3.72	0.13	0.04	0.16	0.48	0.164	0.08	0.026	7.5
MLPC028	2	3	52168	52.1	7.22	2.89	0.1	0.04	0.18	3.62	0.176	0.09	0.023	8.54
MLPC028	3	4	52169	32.2	23.53	3.85	0.15	0.06	0.26	12.1	0.564	0.07	0.011	7.53
MLPC028	4	5	52170	39.9	10.75	3.3	0.11	0.07	0.19	12.8	0.531	0.08	0.024	8.69
MLPC028	5	6	52171	37.8	10.78	3.13	0.1	0.08	0.26	14.6	0.599	0.08	0.022	8.88
MLPC028	6	7	52172	36.4	13.64	3.35	0.09	0.08	0.33	13.9	0.542	0.07	0.025	9.02
MLPC028	7	8	52173	35.2	17.68	3.75	0.12	0.09	0.39	11.9	0.585	0.07	0.015	8.74
MLPC028	8	9	52174	24.0	22.68	4.06	0.14	0.13	0.36	18.5	0.709	0.11	0.008	9.57
MLPC029	0	1	52175	51.0	9.77	4.69	0.16	0.02	0.21	1.02	0.149	0.12	0.009	9.49
MLPC029	1	2	52176	51.8	8.76	4.46	0.17	0.02	0.19	0.6	0.138	0.13	0.007	10.12
MLPC029	2	3	52177	51.1	9.92	4.47	0.18	0.02	0.21	0.49	0.16	0.12	0.007	10
MLPC029	3	4	52178	48.5	8.06	1.45	0.07	0.03	0.19	6.6	0.096	0.09	0.004	10.13
MLPC029	4	5	52179	38.4	28.33	2.92	0.2	0.02	0.2	2.87	0.251	0.07	0.005	8.06
MLPC029	5	6	52180	39.8	26.27	3.11	0.23	0.02	0.2	2.8	0.279	0.07	0.006	8.1
MLPC029	6	7	52181	35.4	29.81	3.74	0.31	0.03	0.24	4.42	0.486	0.06	0.005	7.41
MLPC029	7	8	52182	33.2	28.23	3.73	0.26	0.05	0.26	8.29	0.46	0.06	0.01	7.13
MLPC029	8	9	52183	29.9	31.87	3.52	0.23	0.05	0.24	9.29	0.438	0.06	0.008	7.16
MLPC029	9	10	52184	27.6	33.83	8.39	0.31	0.06	0.24	5.48	0.543	0.07	0.007	8.09
MLPC030	0	1	52185	49.2	14.71	5.75	0.21	0.03	0.15	1.35	0.289	0.08	0.03	5.43
MLPC030	1	2	52186	40.4	28.89	6.07	0.21	0.02	0.2	0.47	0.476	0.07	0.031	5.09
MLPC030	2	3	52187	31.4	32.48	11.93	0.4	0.03	0.36	0.25	0.87	0.08	0.026	7.85
MLPC030	3	4	52188	15.5	56.58	12.5	0.48	0.04	0.61	0.11	1.625	0.07	0.018	5.69
MLPC030	4	5	52189	35.3	33.06	5.84	0.33	0.05	0.34	0.21	0.465	0.09	0.013	8.03
MLPC030	5	6	52190	32.1	33.46	9.37	0.38	0.05	0.46	0.19	0.519	0.09	0.022	8.69
MLPC030	6	7	52191	41.6	22.52	6.78	0.24	0.03	0.41	0.29	0.508	0.06	0.009	8.48
MLPC030	7	8	52192	53.1	10.06	3.27	0.09	0.03	0.29	0.44	0.201	0.07	0.009	8.43
MLPC030	8	9	52193	50.4	8.45	2.57	0.08	0.04	0.28	4.15	0.19	0.07	0.009	9.13
MLPC030	9	10	52194	43.0	24.05	3.47	0.12	0.03	0.35	1.11	0.232	0.08	0.007	8.22
MLPC030	10	11	52195	37.5	28.89	3.29	0.09	0.04	0.33	3.01	0.114	0.07	0.006	8.16
MLPC030	11	12	52196	29.0	35.68	4.52	0.13	0.06	0.28	6.67	0.279	0.07	0.006	7.31
MLPC031	0	1	52197	44.6	17.57	7.82	0.3	0.02	0.23	0.72	0.395	0.09	0.017	8.03
MLPC031	1	2	52198	45.6	16.25	7.37	0.28	0.02	0.24	0.44	0.45	0.09	0.013	9.07
MLPC031	2	3	52199	49.2	13.51	5.27	0.18	0.02	0.22	0.56	0.34	0.09	0.015	8.31
MLPC031	3	4	52200	30.4	42.67	5.9	0.23	0.02	0.22	0.33	0.424	0.07	0.009	6.36
MLPC031	4	5	52201	31.4	39.38	6.32	0.29	0.02	0.21	0.26	0.39	0.06	0.005	7.45
MLPC031	5	6	52202	47.9	14.99	4.32	0.15	0.02	0.21	0.39	0.15	0.08	0.014	9.98
MLPC031	6	7	52203	43.2	20.86	5.73	0.17	0.02	0.36	0.42	0.162	0.07	0.006	9.84
MLPC031	7	8	52204	48.3	14.07	4.53	0.12	0.02	0.38	0.67	0.114	0.10	0.019	10.04
MLPC031	8	9	52205	45.3	16.03	6.97	0.16	0.02	0.47	0.59	0.241	0.09	0.009	10.11

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLPC031	9	10	52206	46.3	5.73	1.96	0.06	0.09	0.47	10.8	0.144	0.12	0.011	8.8
MLPC031	10	11	52207	38.9	8.28	2.53	0.09	0.12	0.69	15.1	0.246	0.08	0.012	9.23
MLPC031	11	12	52208	40.0	10.79	2.71	0.09	0.11	0.6	11.8	0.298	0.09	0.006	10.38
MLPC031	12	13	52209	31.4	22.06	3.39	0.1	0.08	0.51	12.4	0.522	0.09	0.006	9.77
MLPC031	13	14	52210	34.6	18.16	4.05	0.12	0.09	0.55	11.5	0.497	0.08	0.006	9.84
MLPC031	14	15	52211	41.6	15.22	4	0.11	0.1	0.44	7.56	0.387	0.07	0.011	8.53
MLPC032	0	1	52212	57.2	6.01	2.36	0.08	0.02	0.11	0.39	0.16	0.10	0.045	8.24
MLPC032	1	2	52213	58.0	5.49	1.64	0.06	0.04	0.11	0.41	0.108	0.15	0.037	8.41
MLPC032	2	3	52214	53.2	8.71	3.52	0.1	0.02	0.2	0.39	0.242	0.10	0.015	9.62
MLPC032	3	4	52215	54.9	5.83	2.83	0.07	0.02	0.24	0.43	0.101	0.10	0.005	10.48
MLPC032	4	5	52216	56.4	4.92	2.34	0.06	0.02	0.22	0.42	0.086	0.12	0.007	10.38
MLPC032	5	6	52217	56.7	4.74	2.25	0.05	0.03	0.2	0.41	0.085	0.12	0.005	9.85
MLPC032	6	7	52218	54.5	6.73	2.58	0.08	0.02	0.24	0.41	0.067	0.11	0.003	10.54
MLPC032	7	8	52219	48.7	16.73	2.36	0.1	0.02	0.24	0.5	0.097	0.09	0.004	9.16
MLPC032	8	9	52220	50.6	10.64	4.7	0.14	0.03	0.29	0.88	0.159	0.06	0.007	9.34
MLPC032	9	10	52221	54.4	5.21	1.35	0.04	0.03	0.22	3.07	0.075	0.06	0.007	10.17
MLPC032	10	11	52222	51.1	9.67	3.8	0.1	0.02	0.41	1.09	0.14	0.10	0.006	10.47
MLPC032	11	12	52223	44.4	9.85	2.68	0.09	0.05	0.38	8.29	0.241	0.10	0.006	10.63
MLPC032	12	13	52224	38.0	19.13	2.6	0.08	0.07	0.56	8.6	0.206	0.09	0.006	9.79
MLPC032	13	14	52225	36.7	16.49	3.67	0.14	0.1	0.47	10.5	0.232	0.10	0.005	10.74
MLPC032	14	15	52226	36.9	12.96	2.89	0.1	0.11	0.5	13.2	0.246	0.10	0.005	10.62
MLPC032	15	16	52227	39.1	13.95	3.84	0.13	0.11	0.54	10.2	0.123	0.10	0.007	9.88
MLPC032	16	17	52228	37.0	15.07	3.42	0.13	0.11	0.45	11.9	0.135	0.11	0.006	9.85
MLPC032	17	18	52229	25.6	27.37	4.23	0.16	0.12	0.41	14.5	0.633	0.09	0.004	9.05
MLPC033	10	11	52230	37.7	23.99	5.33	0.18	0.03	0.39	4.26	0.285	0.08	0.006	8.87
MLPC033	11	12	52231	40.0	12.12	2.73	0.09	0.06	0.32	11.5	0.273	0.09	0.006	9.92
MLPC033	12	13	52232	39.4	13.13	2.8	0.1	0.06	0.34	11.5	0.274	0.10	0.006	9.61
MLPC033	13	14	52233	41.0	8.55	1.92	0.07	0.07	0.36	13.6	0.198	0.12	0.007	10.01
MLPC033	14	15	52234	32.4	10.11	1.67	0.07	0.1	0.3	21.4	0.266	0.12	0.006	10.12
MLPC033	15	16	52235	37.1	13.21	3.13	0.13	0.1	0.49	13.1	0.243	0.09	0.005	10.61
MLPC033	16	17	52236	37.8	12.93	2.7	0.11	0.1	0.47	12.7	0.238	0.09	0.005	10.4
MLPC033	17	18	52237	36.1	19.22	3.76	0.15	0.09	0.44	9.6	0.219	0.09	0.004	10.08
MLPC033	18	19	52238	37.2	17.56	2.97	0.12	0.1	0.49	10.2	0.159	0.10	0.004	9.62
MLPC033	19	20	52239	33.5	26.62	2.41	0.09	0.1	0.47	9.06	0.114	0.08	0.005	7.97
MLPC034	11	12	52240	33.2	34.35	7.06	0.44	0.05	0.24	2.75	1.267	0.05	0.069	4.46
MLPC034	12	13	52241	53.8	11.83	2.22	0.14	0.06	0.13	1.65	0.388	0.09	0.105	4.9
MLPC034	13	14	52242	53.8	8.35	1.35	0.08	0.09	0.2	3.95	0.234	0.09	0.068	5.81
MLPC034	14	15	52243	47.1	9.07	1.41	0.08	0.12	0.31	9.06	0.254	0.07	0.056	7.35
MLPC034	15	16	52244	35.8	33.75	2.49	0.16	0.07	0.19	3.35	0.505	0.10	0.028	6.17
MLPC034	16	17	52245	35.2	35.55	3.76	0.23	0.06	0.19	1.98	0.845	0.09	0.028	5.45
MLPC034	17	18	52246	44.6	24.82	2.08	0.1	0.06	0.16	0.97	0.39	0.09	0.032	5.89
MLPC034	18	19	52247	53.9	10.03	2.07	0.1	0.05	0.23	0.94	0.314	0.12	0.03	7.87
MLPC034	19	20	52248	54.0	9.96	2.32	0.11	0.06	0.23	0.81	0.311	0.13	0.025	8.08
MLPC034	20	21	52249	53.3	9.62	2.37	0.11	0.06	0.23	0.88	0.333	0.14	0.02	8.32
MLPC034	21	22	52250	56.4	6.22	1.53	0.06	0.06	0.26	0.89	0.198	0.13	0.02	8.61
MLPC034	22	23	52251	56.2	6.6	1.52	0.06	0.06	0.24	0.94	0.188	0.15	0.02	8.53
MLPC034	23	24	52252	56.1	6.77	1.76	0.08	0.07	0.21	1.19	0.231	0.16	0.018	7.97
MLPC035	3	4	52253	46.9	15.36	3.32	0.18	0.06	0.27	3.73	0.549	0.06	0.033	7.13
MLPC035	4	5	52254	48.2	8.69	2.03	0.1	0.11	0.22	8.13	0.446	0.07	0.044	6.72
MLPC035	5	6	52255	53.8	7.43	1.5	0.08	0.08	0.17	4.75	0.257	0.09	0.086	5.89
MLPC035	6	7	52256	49.6	5.68	1.05	0.06	0.14	0.29	9.99	0.338	0.09	0.067	6.5
MLPC035	7	8	52257	46.1	6.12	1.49	0.07	0.14	0.29	11.4	0.407	0.10	0.062	8.45
MLPC035	8	9	52258	55.4	4.4	0.92	0.04	0.08	0.21	4.4	0.202	0.11	0.053	7.49
MLPC035	9	10	52259	46.0	16.07	3.54	0.16	0.07	0.33	2.76	0.183	0.12	0.017	8.73
MLPC035	10	11	52260	26.4	40.03	9.2	0.46	0.08	1.54	1.67	0.376	0.10	0.008	7.77
MLPC035	11	12	52261	18.7	46.22	12.49	0.76	0.06	3.5	0.91	0.239	0.07	0.005	7.89
MLRC036	0	1	57258	50.9	7.82	3.94	0.1	0.05	0.2	2.52	0.295	0.09	0.022	10.53
MLRC036	1	2	57259	52.8	5.08	2.21	0.06	0.05	0.13	4.38	0.164	0.08	0.04	9.74
MLRC036	2	3	57260	51.6	5.59	2.93	0.06	0.07	0.18	5.7	0.217	0.08	0.043	8.18
MLRC036	3	4	57261	49.5	8.27	3.61	0.11	0.05	0.21	3.92	0.255	0.07	0.017	10.32
MLRC036	4	5	57262	42.7	12.5	7.04	0.14	0.04	0.28	5.1	0.556	0.08	0.019	10.23
MLRC036	5	6	57263	44.7	11.64	6.44	0.12	0.03	0.25	4	0.51	0.08	0.015	10.57
MLRC036	6	7	57264	45.4	13.55	7.06	0.13	0.02	0.21	1.75	0.477	0.08	0.016	10.17

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC036	7	8	57265	46.9	13.07	4.97	0.09	0.04	0.18	2.4	0.27	0.11	0.012	9.59
MLRC036	8	9	57266	50.2	8.43	4.2	0.07	0.04	0.2	3.3	0.244	0.09	0.014	9.61
MLRC036	9	10	57267	51.2	6.03	2.84	0.04	0.03	0.15	5.62	0.204	0.08	0.018	9.02
MLRC036	10	11	57268	45.6	10.14	5.66	0.08	0.03	0.19	4.98	0.391	0.10	0.017	10.45
MLRC036	11	12	57269	50.2	9.26	5.03	0.08	0.02	0.15	1.85	0.37	0.10	0.016	10.14
MLRC036	12	13	57270	46.0	10.7	6.98	0.1	0.03	0.25	4.29	0.494	0.05	0.018	8.84
MLRC036	13	14	57271	49.5	7.96	5.09	0.07	0.04	0.23	4.75	0.341	0.07	0.021	8.34
MLRC036	14	15	57272	54.5	6.65	3	0.05	0.04	0.15	0.64	0.211	0.15	0.013	10.05
MLRC036	15	16	57273	56.6	5.29	2.03	0.03	0.04	0.14	0.13	0.115	0.19	0.008	10.23
MLRC036	16	17	57274	8.6	52.87	22.92	0.37	0.02	0.74	0.03	2.692	0.09	0.013	7.5
MLRC036	17	18	57276	5.9	67.71	14.54	0.54	0.01	1.12	0.04	3.951	0.03	0.011	3.17
MLRC036	18	19	57277	6.1	67.62	14.06	0.6	-0.01	1.02	0.05	4.081	0.02	0.014	2.97
MLRC037	0	1	57278	55.4	6.05	2.25	0.06	0.04	0.21	1.22	0.206	0.09	0.017	9.21
MLRC037	1	2	57279	52.4	6.22	3.21	0.08	0.05	0.21	2.83	0.306	0.11	0.022	9.6
MLRC037	2	3	57280	58.3	4.48	1.84	0.04	0.05	0.15	0.35	0.165	0.11	0.036	7.96
MLRC037	3	4	57281	54.9	7.74	2.73	0.12	0.07	0.18	0.88	0.2	0.10	0.047	8.2
MLRC037	4	5	57282	55.1	6.04	2.33	0.06	0.04	0.18	0.8	0.186	0.13	0.024	9.58
MLRC037	5	6	57283	47.5	13.28	6.55	0.15	0.04	0.2	0.73	0.476	0.18	0.056	9.16
MLRC037	6	7	57284	46.6	13.47	7.54	0.15	0.02	0.27	0.39	0.506	0.10	0.035	9.25
MLRC037	7	8	57285	49.7	10.96	6.01	0.11	0.05	0.27	1.12	0.439	0.09	0.014	8.31
MLRC037	8	9	57286	50.3	10.64	6.02	0.12	0.06	0.22	1.79	0.464	0.07	0.01	6.95
MLRC037	9	10	57287	48.8	9.3	5.75	0.11	0.06	0.26	3.91	0.417	0.09	0.006	7.45
MLRC037	10	11	57288	53.1	7.01	3.01	0.07	0.06	0.18	3.99	0.22	0.09	0.01	6.53
MLRC037	11	12	57289	52.2	8.87	3.85	0.08	0.04	0.19	0.89	0.302	0.12	0.007	9.21
MLRC037	12	13	57290	49.1	9.64	5.98	0.12	0.05	0.25	2.98	0.462	0.08	0.011	8.08
MLRC037	13	14	57291	54.5	5.51	3.07	0.06	0.04	0.17	2.6	0.258	0.11	0.01	8.06
MLRC037	14	15	57292	56.7	4.57	2.18	0.05	0.03	0.18	0.19	0.16	0.16	0.003	10.28
MLRC037	15	16	57293	57.1	4.23	1.99	0.06	0.04	0.16	0.23	0.11	0.19	0.004	10.37
MLRC037	16	17	57294	56.3	4.83	2.21	0.05	0.03	0.16	0.37	0.134	0.17	0.003	10.08
MLRC037	17	18	57295	55.5	6.27	3.05	0.07	0.02	0.15	0.4	0.199	0.13	0.005	9.24
MLRC037	18	19	57296	45.4	13.53	7.4	0.15	0.02	0.26	1.24	0.695	0.12	0.008	10.11
MLRC037	19	20	57297	56.0	4.97	1.84	0.05	0.05	0.2	0.23	0.142	0.18	0.004	10.92
MLRC037	20	21	57298	51.4	10.53	3.27	0.09	0.04	0.19	0.09	0.302	0.17	0.004	10.56
MLRC037	21	22	57299	57.5	4.17	1.39	0.04	0.04	0.17	0.07	0.089	0.16	0.002	10.91
MLRC037	22	23	57301	56.2	4.78	1.8	0.04	0.04	0.17	0.21	0.142	0.18	0.006	10.88
MLRC037	23	24	57302	43.9	15.96	8.98	0.17	0.02	0.22	0.15	0.643	0.09	0.011	9.92
MLRC037	24	25	57303	48.1	11.66	6.05	0.1	0.02	0.18	0.77	0.382	0.09	0.008	10.3
MLRC037	25	26	57304	48.3	11.89	6.07	0.09	0.02	0.18	0.6	0.39	0.08	0.01	10.38
MLRC037	26	27	57305	45.8	11.63	6.67	0.08	0.02	0.16	2.29	0.345	0.06	0.015	11.15
MLRC037	27	28	57306	47.7	10.03	5.67	0.06	0.03	0.16	2.11	0.304	0.05	0.014	11.25
MLRC037	28	29	57307	51.3	7.82	3.35	0.05	0.03	0.16	1.75	0.231	0.05	0.016	11.35
MLRC037	29	30	57308	50.9	8.51	3.68	0.07	0.04	0.17	1.64	0.298	0.10	0.012	10.95
MLRC037	30	31	57309	55.9	5.2	1.62	0.04	0.04	0.21	0.29	0.173	0.17	0.004	11.05
MLRC037	31	32	57310	54.5	6.53	2.39	0.05	0.05	0.2	0.29	0.198	0.19	0.131	10.91
MLRC037	32	33	57311	55.1	5.27	1.92	0.04	0.07	0.2	0.77	0.151	0.20	0.042	10.79
MLRC037	33	34	57312	54.1	7.6	2.57	0.08	0.06	0.23	0.13	0.281	0.15	0.035	10.38
MLRC037	34	35	57313	33.8	30.13	9.95	0.34	0.03	0.54	0.21	2.032	0.09	0.005	7.05
MLRC037	35	36	57314	52.3	7.64	2.55	0.07	0.07	0.24	1.71	0.382	0.19	0.004	10.4
MLRC037	36	37	57315	56.4	5.28	1.58	0.04	0.06	0.21	0.15	0.166	0.18	0.005	10.94
MLRC037	37	38	57316	55.0	5.97	2.42	0.05	0.03	0.17	0.33	0.205	0.12	0.01	11.01
MLRC037	38	39	57317	57.2	4.19	1.05	0.03	0.05	0.17	0.09	0.096	0.18	0.104	11.02
MLRC037	39	40	57318	56.7	4.66	1.06	0.03	0.06	0.2	0.09	0.136	0.18	0.124	11.15
MLRC037	40	41	57319	57.0	4.51	0.97	0.03	0.07	0.18	0.09	0.112	0.21	0.015	11.08
MLRC038	0	1	57320	50.7	10.32	5.57	0.2	0.03	0.21	0.31	0.442	0.09	0.018	9.21
MLRC038	1	2	57321	45.4	15.18	8.38	0.23	0.05	0.27	1.32	0.615	0.06	0.035	7.67
MLRC038	2	3	57322	43.6	12.96	6.96	0.19	0.04	0.25	4.58	0.536	0.09	0.038	9.02
MLRC038	3	4	57323	47.2	13.47	7	0.19	0.03	0.21	0.68	0.518	0.08	0.075	8.45
MLRC038	4	5	57324	36.8	22.17	10.24	0.44	0.04	0.32	2.67	0.928	0.06	0.041	8.16
MLRC038	5	6	57326	36.3	22.85	12.02	0.38	0.04	0.41	1.63	1.316	0.06	0.04	7.78
MLRC038	6	7	57327	53.0	9.42	4.23	0.12	0.03	0.21	0.26	0.447	0.11	0.059	8.3
MLRC038	7	8	57328	49.1	12.42	4.49	0.15	0.04	0.24	0.15	0.499	0.16	0.012	10.14
MLRC038	8	9	57329	37.9	23.5	11.09	0.37	0.03	0.35	0.14	1.308	0.06	0.048	7.85
MLRC038	9	10	57330	45.7	15.96	8.07	0.17	0.03	0.25	0.18	0.713	0.06	0.046	8.14

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC038	10	11	57331	48.4	11.92	7.34	0.14	0.03	0.31	0.45	0.719	0.07	0.02	8.69
MLRC038	11	12	57333	49.9	11.8	6.49	0.14	0.03	0.26	0.22	0.604	0.08	0.023	7.93
MLRC038	12	13	57334	54.4	6.67	2.75	0.06	0.06	0.2	0.16	0.258	0.18	0.01	10.35
MLRC038	13	14	57335	54.5	5.83	2.16	0.04	0.06	0.18	0.74	0.175	0.20	0.007	11.07
MLRC038	14	15	57336	17.5	47.87	15.93	0.48	0.02	0.71	0.06	2.919	0.04	0.006	6.03
MLRC038	15	16	57337	24.3	40.23	14.18	0.42	0.02	0.55	0.04	2.074	0.05	0.008	6.71
MLRC038	16	17	57338	15.0	50.5	18.02	0.45	0.02	0.6	0.02	2.491	0.03	0.007	5.95
MLRC038	17	18	57339	5.7	61	19.67	0.58	-0.01	0.95	-0.01	4.275	0.01	0.003	4.68
MLRC039	3	4	57340	28.4	34.77	12.66	0.78	0.05	0.36	1.49	1.101	0.06	0.007	6.41
MLRC039	4	5	57341	11.3	58.02	15.63	1.09	0.03	0.55	0.28	2.252	0.03	0.006	5.22
MLRC039	5	6	57342	17.4	51.08	14.02	0.79	0.02	0.53	0.13	2.136	0.04	0.01	5.37
MLRC039	6	7	57343	30.9	35.43	10.91	0.41	0.02	0.45	0.24	1.675	0.07	0.016	5.59
MLRC039	7	8	57344	10.8	54.7	18	0.64	-0.01	0.78	0.35	3.135	0.01	0.013	5.93
MLRC039	8	9	57345	28.9	35.36	11.15	0.5	0.03	0.45	0.57	1.706	0.08	0.008	7.43
MLRC039	9	10	57346	3.7	64.9	18.74	0.71	-0.01	1.06	0.02	4.562	0.01	0.005	4.29
MLRC039	10	11	57347	3.5	64.33	18.92	0.71	-0.01	1.07	-0.01	4.648	0.01	0.005	4.39
MLRC039	11	12	57348	3.8	65.28	18.44	0.7	-0.01	0.98	-0.01	4.243	0.01	0.008	4.32
MLRC039	12	13	57349	3.1	62.18	21.65	0.65	-0.01	0.92	0.02	3.446	0.01	0.006	5.97
MLRC040	1	2	57351	26.5	37.72	12.93	0.88	0.06	0.27	2.13	0.795	0.04	0.01	5.5
MLRC040	2	3	57352	25.7	36.96	13.96	0.92	0.05	0.34	2.13	0.989	0.05	0.008	5.87
MLRC040	3	4	57353	20.5	41.61	16.64	1	0.04	0.47	1.56	1.611	0.04	0.008	6.21
MLRC040	4	5	57354	11.0	55.19	17.76	0.95	0.02	0.63	0.45	2.545	0.02	0.007	5.64
MLRC040	5	6	57355	15.2	49.13	17.35	0.89	0.02	0.6	0.98	2.357	0.03	0.008	5.66
MLRC040	6	7	57356	13.0	51	18.41	0.92	0.01	0.65	0.6	2.661	0.02	0.007	5.85
MLRC040	7	8	57357	26.0	27.58	12.13	0.44	0.04	0.42	8.44	1.539	0.04	0.031	7.61
MLRC040	8	9	57358	40.9	15.03	8.69	0.19	0.04	0.29	5.51	1.004	0.04	0.042	7.57
MLRC040	9	10	57359	37.2	20.36	10.9	0.25	0.03	0.36	3.49	1.277	0.03	0.039	7.45
MLRC040	10	11	57360	36.5	19.78	9.66	0.25	0.03	0.4	5.67	1.351	0.05	0.05	7.28
MLRC040	11	12	57361	42.9	12.35	6.06	0.14	0.06	0.31	7.82	0.818	0.05	0.049	6.86
MLRC040	12	13	57362	41.9	14.42	5.97	0.19	0.05	0.36	7.22	1.073	0.05	0.076	6.6
MLRC040	13	14	57363	49.1	8.25	3.37	0.09	0.07	0.27	7.26	0.544	0.05	0.081	5.97
MLRC040	14	15	57364	53.4	4.06	2.51	0.06	0.1	0.19	6.85	0.238	0.04	0.049	5.5
MLRC040	15	16	57365	55.2	3.29	2.15	0.04	0.12	0.18	6.3	0.178	0.04	0.038	5.18
MLRC040	16	17	57366	53.0	3.19	1.93	0.04	0.1	0.18	8.21	0.158	0.05	0.029	5.74
MLRC040	17	18	57367	53.0	3.92	2.67	0.06	0.08	0.14	7.16	0.206	0.04	0.078	5.73
MLRC040	18	19	57368	40.5	3.92	1.9	0.06	0.05	0.13	17	0.185	0.10	0.03	10.73
MLRC040	19	20	57369	38.8	19.72	5.97	0.21	0.03	0.35	6.08	1.328	0.06	0.036	7.23
MLRC040	20	21	57370	50.3	6.11	3.05	0.07	0.08	0.24	7.15	0.327	0.05	0.042	7.09
MLRC040	21	22	57371	28.5	39.25	10.43	0.58	0.03	0.22	0.43	0.618	0.03	0.01	6.6
MLRC040	22	23	57372	19.4	49.98	12.93	0.75	0.03	0.2	0.17	1.105	0.02	0.004	6.24
MLRC040	23	24	57373	22.6	45.96	12.11	0.72	0.03	0.24	0.14	0.642	0.03	0.003	7.02
MLRC041	1	2	57374	35.3	25.39	10.67	0.51	0.07	0.22	3.39	0.503	0.06	0.019	6.29
MLRC041	2	3	57376	33.1	28.32	11.68	0.6	0.05	0.24	2.83	0.597	0.05	0.017	5.94
MLRC041	3	4	57377	35.3	25.64	10.67	0.57	0.05	0.3	3.26	0.866	0.06	0.016	5.63
MLRC041	4	5	57378	39.6	20.48	8.53	0.34	0.05	0.29	3.69	0.766	0.07	0.019	6.59
MLRC041	5	6	57379	47.8	12.81	5.51	0.2	0.05	0.28	1.72	0.684	0.13	0.017	8.42
MLRC041	6	7	57380	6.9	63.02	15.96	0.69	0.01	1.09	0.27	4.243	0.02	0.006	4
MLRC042	1	2	57382	30.5	30.64	13.68	0.75	0.07	0.26	2.33	0.725	0.05	0.014	5.76
MLRC042	2	3	57383	37.2	25.96	8.68	0.34	0.06	0.22	3.01	0.438	0.06	0.014	5.68
MLRC042	3	4	57384	19.8	42.47	17.23	1.05	0.05	0.48	1.21	1.685	0.04	0.008	5.96
MLRC042	4	5	57385	33.0	31.21	10.51	0.48	0.04	0.32	2.22	0.882	0.06	0.011	5.03
MLRC042	5	6	57386	32.3	30.85	10.93	0.45	0.03	0.35	2.33	0.997	0.06	0.011	5.73
MLRC042	6	7	57387	27.8	34.05	13.37	0.5	0.03	0.49	1.86	1.944	0.06	0.012	6.03
MLRC042	7	8	57388	10.4	60.96	13.99	0.53	0.01	0.9	0.39	2.923	0.02	0.006	4.37
MLRC042	8	9	57389	2.9	70.01	15.64	0.68	-0.01	1.2	0.02	4.642	0.01	0.003	3.01
MLRC043	1	2	57390	25.2	38.11	14.1	0.86	0.06	0.28	1.8	0.827	0.04	0.008	6
MLRC043	2	3	57391	25.0	36.8	15.24	0.87	0.06	0.35	1.78	1.09	0.04	0.01	6.05
MLRC043	3	4	57392	16.1	44.98	19.95	1.16	0.05	0.52	0.7	1.923	0.03	0.007	6.7
MLRC043	4	5	57393	38.6	22.36	9.98	0.42	0.04	0.28	3.14	0.784	0.06	0.022	5.61
MLRC043	5	6	57394	32.4	28.54	12.6	0.51	0.04	0.38	2.37	1.217	0.05	0.017	5.9
MLRC043	6	7	57395	15.3	49.81	17.15	0.77	0.02	0.58	0.46	2.409	0.03	0.011	5.8

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC043	7	8	57396	15.3	55.11	13.32	0.54	0.01	0.58	0.45	2.081	0.03	0.007	5.23
MLRC044	0	1	57397	34.4	25.17	11.71	0.56	0.08	0.24	3.38	0.487	0.05	0.015	6.46
MLRC044	1	2	57398	36.6	22.35	12.27	0.51	0.06	0.23	3.04	0.423	0.06	0.014	6.3
MLRC044	2	3	57399	35.4	23.24	12.97	0.62	0.04	0.27	2.43	0.488	0.06	0.016	6.97
MLRC044	3	4	57401	51.1	9.84	4.08	0.18	0.05	0.19	0.54	0.28	0.14	0.005	10.08
MLRC044	4	5	57402	46.8	13.65	4.66	0.16	0.05	0.39	2.71	0.697	0.09	0.051	8.34
MLRC044	5	6	57403	47.0	14.92	5.06	0.16	0.04	0.32	0.56	0.819	0.10	0.016	9.33
MLRC044	6	7	57404	42.1	18.2	6.75	0.19	0.04	0.4	3	1.06	0.06	0.085	7.29
MLRC044	7	8	57405	41.9	20.74	7.02	0.21	0.04	0.36	1.64	1.098	0.11	0.124	6.7
MLRC044	8	9	57406	46.3	16.47	5.71	0.17	0.04	0.32	0.96	0.878	0.10	0.108	7.34
MLRC044	9	10	57407	44.1	19.23	6.79	0.2	0.03	0.35	1.53	1.102	0.06	0.126	5.52
MLRC044	10	11	57408	47.0	13.85	4.89	0.15	0.04	0.26	3.72	0.59	0.07	0.147	6.41
MLRC044	11	12	57409	51.0	8.89	3.44	0.1	0.04	0.21	4.14	0.386	0.10	0.19	6.89
MLRC044	12	13	57410	53.5	7.27	3	0.08	0.04	0.18	2.95	0.386	0.10	0.201	6.44
MLRC044	13	14	57411	57.3	2.93	1.17	0.03	0.06	0.1	3.26	0.114	0.13	0.14	7.64
MLRC044	14	15	57412	56.2	3.31	1.55	0.04	0.05	0.14	3.95	0.155	0.10	0.188	7.08
MLRC044	15	16	57413	54.9	2.95	1.56	0.04	0.05	0.13	6.36	0.157	0.10	0.179	6.04
MLRC044	16	17	57414	55.4	2.74	1.51	0.04	0.04	0.13	6.1	0.153	0.07	0.242	5.69
MLRC044	17	18	57415	57.3	3.28	1.62	0.03	0.06	0.14	2.48	0.176	0.16	0.173	7.5
MLRC044	18	19	57416	55.6	4.03	2.04	0.04	0.07	0.17	3.14	0.202	0.18	0.143	8.04
MLRC044	19	20	57417	55.8	2.61	1.66	0.03	0.05	0.15	6.32	0.172	0.08	0.201	5.39
MLRC044	20	21	57418	57.7	2.26	1.29	0.04	0.05	0.23	4.99	0.17	0.09	0.154	5.2
MLRC044	21	22	57419	58.9	1.54	0.85	0.03	0.07	0.24	5.41	0.124	0.07	0.105	4.54
MLRC044	22	23	57420	57.8	3.33	1.97	0.04	0.07	0.17	3.22	0.206	0.13	0.077	5.86
MLRC044	23	24	57421	60.6	1.56	0.89	0.02	0.07	0.11	3.44	0.113	0.12	0.067	4.45
MLRC044	24	25	57422	60.0	2.31	1.32	0.03	0.06	0.14	3.23	0.153	0.12	0.076	4.9
MLRC044	25	26	57423	59.6	2.09	1.26	0.02	0.07	0.16	4.04	0.159	0.11	0.065	4.69
MLRC044	26	27	57424	52.4	3.33	1.92	0.04	0.09	0.28	8.21	0.304	0.11	0.063	6.56
MLRC045	0	1	57426	39.4	20.6	10.61	0.46	0.04	0.18	3.2	0.279	0.05	0.02	6.16
MLRC045	1	2	57427	39.7	19.73	11.07	0.47	0.04	0.19	3.26	0.306	0.06	0.021	6.3
MLRC045	2	3	57428	40.4	19.01	10.19	0.44	0.05	0.19	3.45	0.302	0.06	0.024	6.32
MLRC045	3	4	57429	26.9	33.48	16.33	1	0.05	0.25	1.79	0.456	0.05	0.016	6.96
MLRC045	4	5	57430	38.3	22.41	11.11	0.47	0.04	0.22	2.63	0.354	0.06	0.022	6.29
MLRC045	5	6	57431	34.3	26.67	12.8	0.54	0.03	0.26	1.97	0.473	0.06	0.016	6.68
MLRC045	6	7	57432	20.4	45.3	15.63	0.62	0.02	0.22	1.02	0.414	0.03	0.009	6.88
MLRC045	7	8	57433	10.4	63.75	14.05	0.67	0.02	0.16	0.21	0.279	0.01	0.005	5.62
MLRC045	8	9	57434	11.4	55	18.99	1.01	0.02	0.3	0.07	0.199	0.01	0.004	7.65
MLRC045	9	10	57435	9.7	55.11	18.97	1.12	0.01	1.97	0.3	0.069	0.01	0.004	8.05
MLRC045	10	11	57436	9.2	54.17	18.82	1.09	0.02	3.61	0.28	0.204	0.01	0.002	8.3
MLRC045	11	12	57437	9.4	53.52	19.31	1.11	0.01	2.61	0.42	0.261	0.01	0.004	8.58
MLRC045	12	13	57438	11.7	53.47	18	1.11	0.02	1.19	0.45	0.211	0.01	0.004	7.78
MLRC045	13	14	57439	11.2	56.24	17.37	1.09	0.02	0.75	0.39	0.195	0.01	0.005	7.35
MLRC045	14	15	57440	4.7	54.29	26.23	1.65	0.01	0.56	0.11	0.095	0.01	0.001	9.97
MLRC045	15	16	57441	10.5	58.33	15	0.9	0.05	3.04	0.17	0.131	0.01	0.004	6.71
MLRC045	16	17	57442	10.8	54.21	20.06	0.79	0.04	0.37	0.12	0.149	0.01	0.003	8.5
MLRC045	17	18	57443	53.8	8.18	3.17	0.09	0.06	0.29	2.87	0.103	0.07	0.074	5.64
MLRC045	18	19	57444	54.1	5.27	2.44	0.06	0.07	0.37	5.02	0.132	0.05	0.058	6.2
MLRC045	19	20	57445	56.2	3.77	2.2	0.05	0.06	0.22	4.24	0.169	0.09	0.138	5.89
MLRC045	20	21	57446	57.7	2.67	1.55	0.03	0.06	0.2	4.42	0.129	0.09	0.133	5.4
MLRC045	21	22	57447	58.8	2.2	1.28	0.02	0.06	0.22	4.53	0.115	0.07	0.057	5.05
MLRC045	22	23	57448	58.4	3.93	2.29	0.04	0.05	0.2	2.18	0.175	0.10	0.048	5.88
MLRC045	23	24	57449	55.7	3.45	2.1	0.05	0.05	0.16	5.28	0.179	0.08	0.104	5.86
MLRC045	24	25	57451	56.0	2.8	1.27	0.03	0.07	0.22	5.62	0.133	0.07	0.065	6.49
MLRC045	25	26	57452	54.5	5.14	2.48	0.07	0.05	0.24	4.08	0.167	0.09	0.06	7.2
MLRC045	26	27	57453	56.4	4.91	2.05	0.04	0.03	0.14	1.81	0.215	0.10	0.071	8.38
MLRC046	0	1	57454	48.5	9.86	5.86	0.18	0.06	0.25	5.08	0.446	0.08	0.034	5.98
MLRC046	1	2	57455	50.8	7.52	4.56	0.14	0.07	0.22	4.46	0.385	0.11	0.037	7.17
MLRC046	2	3	57456	49.9	8.43	4.98	0.14	0.05	0.23	4.56	0.435	0.11	0.037	7.09
MLRC046	3	4	57457	35.3	29.46	6.92	0.26	0.04	0.3	3.47	0.846	0.08	0.03	6.26
MLRC046	4	5	57458	3.6	71.28	15.35	0.55	0.04	0.71	0.28	2.326	0.03	0.005	4.31
MLRC046	20	21	57459	21.4	44.95	10.44	0.44	0.05	0.84	2.73	3.069	0.04	0.013	5.12
MLRC046	21	22	57460	54.4	9.07	1.83	0.08	0.09	0.27	2.79	0.391	0.08	0.07	5.48
MLRC046	22	23	57461	51.1	7.31	1	0.04	0.09	0.4	6.16	0.146	0.10	0.062	8.41

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC046	23	24	57462	50.8	7.75	1.18	0.04	0.13	0.47	6.44	0.144	0.10	0.051	8.01
MLRC046	24	25	57463	52.7	3.98	0.69	0.03	0.11	0.46	7.42	0.119	0.09	0.032	7.99
MLRC046	25	26	57464	51.5	4.06	0.82	0.03	0.16	0.51	8.05	0.2	0.10	0.024	8.47
MLRC046	26	27	57465											
MLRC046	27	28	57466	52.3	4.31	0.8	0.03	0.12	0.43	6.42	0.206	0.11	0.013	9.47
MLRC046	28	29	57467	53.8	5.7	0.95	0.03	0.09	0.26	3.98	0.159	0.15	0.019	9.64
MLRC046	29	30	57468	55.6	6.37	1.05	0.04	0.06	0.28	1.37	0.122	0.15	0.014	9.94
MLRC046	30	31	57470	44.2	14.91	8.17	0.06	0.08	0.27	1.68	0.12	0.13	0.013	9.94
MLRC047	0	1	57471	43.8	15.9	6.46	0.24	0.06	0.27	5.23	0.595	0.07	0.029	5.69
MLRC047	1	2	57472	46.7	12.23	5.95	0.25	0.06	0.23	5.18	0.449	0.07	0.039	5.86
MLRC047	2	3	57473	51.0	6.3	3.12	0.13	0.07	0.32	6.74	0.245	0.09	0.032	6.87
MLRC047	3	4	57474	52.8	5.16	1.84	0.1	0.07	0.25	7.59	0.265	0.07	0.061	5.14
MLRC047	4	5	57476	56.0	1.98	0.35	0.02	0.07	0.1	8.52	0.27	0.08	0.052	4.45
MLRC047	5	6	57477	54.8	3.49	0.68	0.04	0.06	0.14	7.74	0.312	0.08	0.05	5.25
MLRC047	6	7	57478	54.0	3.64	0.51	0.02	0.06	0.25	6.37	0.137	0.13	0.028	8.29
MLRC047	7	8	57479	50.5	3.76	0.75	0.03	0.1	0.3	10.5	0.194	0.11	0.061	7.19
MLRC047	8	9	57480	42.5	21.29	0.97	0.04	0.08	0.34	7.07	0.221	0.08	0.05	5.63
MLRC047	9	10	57481	52.3	5.1	0.91	0.03	0.07	0.37	8.44	0.197	0.07	0.077	5.74
MLRC047	10	11	57482	52.7	5.98	1.35	0.05	0.04	0.19	6.35	0.118	0.07	0.125	6.96
MLRC047	11	12	57483	55.1	4.3	1.02	0.03	0.05	0.19	4.45	0.139	0.09	0.052	7.96
MLRC047	12	13	57484	58.4	1.94	0.5	0.01	0.06	0.16	4.45	0.098	0.06	0.056	6.3
MLRC047	13	14	57485	58.6	2.05	0.67	0.02	0.06	0.17	4.97	0.067	0.06	0.053	5.31
MLRC047	14	15	57486	56.2	1.84	0.53	0.02	0.07	0.19	6.6	0.098	0.05	0.04	6.23
MLRC047	15	16	57487	55.8	2.03	0.76	0.02	0.07	0.2	6.75	0.183	0.08	0.08	6.41
MLRC047	16	17	57488	56.4	2.58	0.86	0.02	0.07	0.31	5.73	0.128	0.06	0.059	6.22
MLRC047	17	18	57489	57.7	2.56	1.14	0.02	0.06	0.17	4.65	0.175	0.05	0.077	5.79
MLRC047	18	19	57490	52.4	2.89	1.11	0.02	0.09	0.22	8.91	0.439	0.06	0.058	6.75
MLRC047	19	20	57491	58.3	1.73	0.74	0.02	0.07	0.16	5.23	0.25	0.08	0.065	5.18
MLRC047	20	21	57492	56.8	1.78	0.76	0.01	0.09	0.2	6.36	0.212	0.08	0.052	5.77
MLRC047	21	22	57493	54.6	3.72	1.28	0.03	0.07	0.25	5.52	0.26	0.08	0.072	7.62
MLRC047	22	23	57494	1.6	70.49	16.85	0.66	0.02	1.14	0.05	5.027	0.02	0.082	3.11
MLRC047	23	24	57495	1.7	74.17	14.76	0.76	0.02	1.11	0.04	4.562	0.02	0.011	2.51
MLRC047	24	25	57496	1.0	77.45	13.11	0.7	-0.01	0.92	0.02	3.993	0.01	0.007	2.31
MLRC047	25	26	57497	28.4	39.1	8.57	0.36	0.03	0.72	0.6	2.601	0.06	0.013	6.64
MLRC047	26	27	57498	50.1	13.84	2.64	0.11	0.04	0.3	0.3	0.782	0.11	0.01	9.46
MLRC047	27	28	57499	41.9	19.49	3.9	0.16	0.08	0.58	3.83	0.78	0.10	0.012	9.2
MLRC047	28	29	57501	47.5	10.83	2.23	0.09	0.15	0.46	6.72	0.193	0.09	0.069	7.63
MLRC047	29	30	57502	49.7	9.84	2.29	0.09	0.12	0.22	6.56	0.375	0.08	0.146	5.7
MLRC047	30	31	57503	51.6	9.5	2.15	0.09	0.09	0.26	5.24	0.415	0.09	0.149	5.34
MLRC047	31	32	57504	33.1	33.19	7.63	0.52	0.08	0.28	2.91	0.92	0.07	0.072	5.34
MLRC047	32	33	57505	48.5	12.56	3.25	0.14	0.12	0.33	4.89	0.376	0.09	0.083	6.24
MLRC047	33	34	57506	49.6	10.17	2.77	0.11	0.12	0.31	4.78	0.281	0.10	0.077	7.47
MLRC047	34	35	57507	53.1	6.31	1.38	0.07	0.13	0.24	5.27	0.195	0.11	0.083	6.98
MLRC048	0	1	57508	46.2	12.09	6.78	0.24	0.06	0.22	5.23	0.372	0.06	0.037	5.9
MLRC048	1	2	57509	46.3	12.47	6.44	0.23	0.06	0.22	5.28	0.365	0.06	0.042	5.76
MLRC048	2	3	57510	45.7	6.66	3.87	0.12	0.07	0.21	9.99	0.36	0.08	0.03	8.25
MLRC048	3	4	57511	46.3	4.61	2.58	0.07	0.08	0.13	12.9	0.193	0.10	0.037	7.2
MLRC048	4	5	57512	50.6	4.85	2.13	0.06	0.08	0.2	8.75	0.218	0.10	0.04	7.18
MLRC048	5	6	57513	46.4	3.75	1.77	0.05	0.08	0.2	13.9	0.216	0.10	0.038	7.26
MLRC048	6	7	57514	48.8	2.07	0.9	0.03	0.11	0.26	13.6	0.268	0.08	0.057	6.46
MLRC048	7	8	57515	49.4	2.99	1.37	0.04	0.13	0.3	12.1	0.272	0.08	0.062	6.43
MLRC048	8	9	57516	52.6	2.54	1.34	0.03	0.12	0.29	9.6	0.235	0.08	0.074	6.06
MLRC048	9	10	57517	53.9	3.06	1.47	0.03	0.1	0.34	7.98	0.194	0.08	0.078	5.8
MLRC048	10	11	57518	52.7	4.23	2.05	0.03	0.07	0.22	6.77	0.173	0.09	0.078	7.41
MLRC048	11	12	57519	53.2	6.32	2.78	0.05	0.03	0.14	5.27	0.17	0.08	0.143	6.16
MLRC048	12	13	57520	49.0	6.68	2.89	0.06	0.06	0.19	9.29	0.326	0.07	0.151	5.98
MLRC048	13	14	57521	49.1	8.3	2.22	0.05	0.05	0.19	8.29	0.286	0.08	0.079	6.19
MLRC048	14	15	57522	43.0	19.7	2.22	0.06	0.06	0.2	7.26	0.342	0.06	0.095	4.96
MLRC048	15	16	57523	51.8	6.3	1.57	0.04	0.06	0.23	7.9	0.168	0.07	0.112	5.6
MLRC048	16	17	57524	53.3	5.41	1.38	0.05	0.04	0.14	6.9	0.159	0.08	0.173	6.01
MLRC048	17	18	57526	51.3	7.29	1.47	0.05	0.04	0.13	7.69	0.107	0.05	0.172	6.06
MLRC048	18	19	57527	52.6	7.77	1.66	0.07	0.04	0.12	6.02	0.1	0.05	0.183	5.53
MLRC048	19	20	57528	52.2	6.86	1.76	0.06	0.04	0.11	6.76	0.133	0.05	0.193	5.63

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC048	20	21	57529	51.9	2.62	0.78	0.02	0.05	0.27	8.13	0.216	0.05	0.037	8.95
MLRC048	21	22	57530	52.2	4.09	0.85	0.02	0.04	0.23	7.32	0.149	0.05	0.071	8.22
MLRC048	22	23	57531	52.6	4.07	1.48	0.04	0.07	0.26	6.93	0.173	0.06	0.057	7.32
MLRC048	23	24	57532	53.8	3.07	1.16	0.03	0.07	0.24	7.44	0.166	0.05	0.095	6.45
MLRC048	24	25	57533	55.5	2.05	0.9	0.02	0.07	0.17	7.65	0.12	0.06	0.081	5.71
MLRC048	25	26	57534	57.9	1.7	0.88	0.02	0.08	0.19	6.29	0.192	0.06	0.075	4.65
MLRC048	26	27	57535	56.0	1.99	0.9	0.02	0.08	0.24	6.6	0.179	0.11	0.069	6.29
MLRC049	0	1	57536	50.0	7.48	4.38	0.12	0.06	0.24	6.34	0.503	0.06	0.05	5.82
MLRC049	1	2	57537	13.2	57.36	12.93	0.65	0.02	0.88	1.07	3.326	0.02	0.014	3.81
MLRC049	16	17	57538	5.7	63.91	17.58	0.55	0.04	0.8	0.2	3.566	0.05	0.013	4.34
MLRC049	17	18	57539	51.8	6.7	1.4	0.05	0.1	0.42	5.3	0.225	0.09	0.02	8.61
MLRC049	18	19	57540	59.6	4.51	1.05	0.03	0.07	0.17	0.95	0.144	0.11	0.046	6.56
MLRC049	19	20	57541	54.8	5.95	1.31	0.05	0.07	0.2	4.3	0.304	0.10	0.091	6.68
MLRC049	20	21	57542	55.1	3.76	0.85	0.03	0.09	0.21	6.4	0.259	0.07	0.113	6.17
MLRC049	21	22	57543	54.8	3.63	0.83	0.03	0.09	0.27	6.49	0.271	0.06	0.098	6.28
MLRC049	22	23	57544	54.1	2.87	0.69	0.02	0.11	0.28	7.3	0.335	0.07	0.077	7.08
MLRC050	0	1	57545	48.5	9.86	2.53	0.14	0.08	0.4	7.9	0.334	0.07	0.07	5.71
MLRC050	1	2	57546	52.8	6.41	1.63	0.08	0.09	0.35	6.85	0.227	0.07	0.063	5.37
MLRC050	2	3	57547	55.0	3.05	0.71	0.03	0.1	0.43	7.39	0.107	0.07	0.05	5.69
MLRC050	3	4	57548	54.0	3.37	0.87	0.04	0.1	0.54	7.65	0.179	0.06	0.061	6.02
MLRC050	4	5	57549	53.4	4.45	0.71	0.03	0.09	0.5	7.6	0.137	0.07	0.039	6.75
MLRC050	5	6	57551	55.0	2.27	0.32	0.01	0.09	0.43	8.05	0.054	0.07	0.036	6.39
MLRC050	6	7	57552	54.0	2.86	0.53	0.02	0.08	0.39	8.21	0.061	0.06	0.024	7
MLRC050	7	8	57553	50.9	5.86	0.93	0.03	0.09	0.36	7.9	0.092	0.10	0.031	8.36
MLRC050	8	9	57554	52.4	4.99	0.95	0.04	0.09	0.29	7.74	0.091	0.08	0.032	6.94
MLRC050	9	10	57555	52.9	3.89	0.7	0.03	0.1	0.34	8.13	0.126	0.07	0.032	6.86
MLRC050	10	11	57556	52.0	5.87	1.75	0.07	0.1	0.36	5.96	0.07	0.11	0.02	7.77
MLRC050	11	12	57557	21.2	41.04	15.85	1.04	0.04	0.36	1.07	0.122	0.06	0.011	8.85
MLRC050	12	13	57558	15.0	44.95	20.67	1.33	0.03	0.54	0.73	0.225	0.04	0.009	9.32
MLRC050	13	14	57560	10.9	50.19	21.41	1.39	0.04	0.94	0.26	0.266	0.03	0.007	9.12
MLRC051	0	1	57561	49.0	13.93	4.53	0.26	0.06	0.55	1.84	0.219	0.08	0.033	7.24
MLRC051	1	2	57562	56.1	7.27	2.29	0.13	0.04	0.28	1.12	0.141	0.10	0.033	7.32
MLRC051	2	3	57586	27.2	45.47	6.74	0.29	0.02	0.51	0.54	1.895	0.05	0.024	4.96
MLRC051	3	4	57587	47.6	19.97	3.46	0.13	0.04	0.34	0.27	0.935	0.07	0.061	5.74
MLRC051	4	5	57563	52.8	11.71	2.51	0.09	0.05	0.26	1.19	0.642	0.09	0.067	6.54
MLRC051	5	6	57564	52.9	2.25	0.51	0.02	0.09	0.2	9.45	0.128	0.07	0.034	6.82
MLRC051	6	7	57565	53.0	1.72	0.35	0.01	0.09	0.23	10.1	0.097	0.07	0.037	6.74
MLRC051	7	8	57566	55.3	2.66	0.45	0.02	0.07	0.2	6.85	0.149	0.09	0.037	7.08
MLRC051	8	9	57567	53.9	2.82	0.6	0.03	0.07	0.19	7.9	0.08	0.07	0.025	7.31
MLRC051	9	10	57568	58.1	2.74	0.45	0.02	0.07	0.23	4.43	0.051	0.08	0.043	6.31
MLRC051	10	11	57569	54.1	2.64	0.38	0.02	0.11	0.79	8.05	0.073	0.05	0.047	6.39
MLRC051	11	12	57570	55.0	2.31	0.3	0.01	0.1	0.58	7.9	0.085	0.07	0.03	6.55
MLRC051	12	13	57571	54.8	2.15	0.24	0.01	0.1	0.78	7.58	0.046	0.06	0.028	6.9
MLRC051	13	14	57572	55.6	1.97	0.32	0.01	0.08	0.65	7.56	0.031	0.06	0.022	6.45
MLRC051	14	15	57573	54.6	2.78	0.57	0.02	0.08	0.38	8.05	0.06	0.07	0.029	6.22
MLRC051	15	16	57574	54.2	2.82	0.45	0.02	0.08	0.46	7.61	0.045	0.08	0.025	7.12
MLRC051	16	17	57576	51.0	4.65	0.82	0.03	0.08	0.73	7.74	0.096	0.09	0.023	9.04
MLRC051	17	18	57577	53.4	4.85	1.16	0.05	0.05	0.33	5.37	0.08	0.13	0.055	8.67
MLRC051	18	19	57578	52.2	4.24	1.23	0.05	0.08	0.66	6.54	0.155	0.11	0.011	8.57
MLRC051	19	20	57579	52.4	4	1.02	0.04	0.08	0.63	6.37	0.157	0.13	0.009	8.98
MLRC051	20	21	57580	53.4	2.89	0.65	0.03	0.1	0.43	7.15	0.097	0.11	0.009	7.96
MLRC051	21	22	57581	53.2	3.36	0.58	0.02	0.09	0.39	6.75	0.071	0.13	0.012	8.63
MLRC051	22	23	57582	52.3	4.38	0.67	0.03	0.14	0.39	6.88	0.04	0.12	0.019	8.16
MLRC051	23	24	57583	51.4	4.79	1.02	0.04	0.16	0.37	7.22	0.127	0.18	0.021	8.55
MLRC051	24	25	57584	38.7	22.71	8.56	0.41	0.14	0.66	1.9	0.039	0.18	0.013	8.34
MLRC051	25	26	57585	13.0	52.15	14.91	1.02	0.19	4.38	0.42	0.151	0.05	0.003	7.83
MLRC052	0	1	57588	18.8	50.22	12.46	0.57	0.02	0.69	0.73	3.058	0.05	0.017	4.53
MLRC052	1	2	57589	38.2	25.62	7.04	0.25	0.03	0.35	2.03	1.16	0.07	0.029	7.06
MLRC052	2	3	57590	44.3	22.62	5.68	0.19	0.01	0.28	0.42	0.886	0.07	0.026	5.63
MLRC052	3	4	57591	43.6	15.17	4.27	0.15	0.04	0.29	6.79	0.818	0.08	0.078	6.43
MLRC052	4	5	57592	55.6	3.83	1.08	0.04	0.04	0.17	4.87	0.235	0.10	0.065	7.01
MLRC052	5	6	57593	53.3	2.58	0.77	0.03	0.06	0.26	8.67	0.261	0.08	0.091	6.43
MLRC052	6	7	57594	55.8	0.96	0.2	-0.01	0.05	0.08	8.75	0.114	0.07	0.056	5.62

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC052	7	8	57595	51.2	1.53	0.24	-0.01	0.06	0.08	11.2	0.156	0.10	0.035	7.96
MLRC052	8	9	57596	51.6	0.95	0.27	0.01	0.08	0.13	12.8	0.147	0.07	0.061	6.13
MLRC052	9	10	57597	54.4	1.31	0.35	0.01	0.08	0.19	9.53	0.105	0.06	0.035	5.77
MLRC052	10	11	57598	54.5	1.63	0.51	0.02	0.08	0.35	8.67	0.187	0.07	0.056	6.02
MLRC052	11	12	57599	54.3	2.32	0.51	0.02	0.08	0.3	7.98	0.214	0.09	0.048	6.76
MLRC052	12	13	57601	53.8	4.38	0.97	0.04	0.05	0.26	5.83	0.261	0.10	0.04	7.92
MLRC052	13	14	57602	53.0	5.14	0.96	0.04	0.06	0.31	6.6	0.293	0.09	0.064	7.03
MLRC052	14	15	57603	54.2	5.03	1.32	0.06	0.06	0.2	6.13	0.437	0.08	0.099	5.71
MLRC052	15	16	57604	53.5	2.55	0.55	0.02	0.09	0.45	8.83	0.256	0.10	0.085	6.2
MLRC052	16	17	57605	40.3	20.04	4.69	0.19	0.08	0.41	6.25	1.009	0.06	0.081	6.16
MLRC052	17	18	57606	21.8	46.81	11.44	0.47	0.04	0.44	1.77	1.91	0.04	0.076	4.24
MLRC052	18	19	57607	52.6	2.5	0.46	0.02	0.12	0.42	9.29	0.199	0.06	0.058	6.63
MLRC052	19	20	57608	52.1	2.07	0.3	0.01	0.11	0.4	10.7	0.206	0.06	0.061	6.51
MLRC052	20	21	57609	55.1	2.55	0.44	0.02	0.09	0.34	7.42	0.131	0.08	0.083	6.2
MLRC052	21	22	57610	52.4	2.51	0.48	0.02	0.09	0.36	10.3	0.173	0.06	0.093	6.17
MLRC052	22	23	57611	53.9	1.78	0.4	0.02	0.12	0.52	9.37	0.165	0.05	0.095	6.04
MLRC052	23	24	57612	54.0	2.66	0.55	0.02	0.12	0.34	8.52	0.128	0.05	0.053	5.82
MLRC052	24	25	57613	53.4	3.13	0.58	0.02	0.13	0.54	8.52	0.128	0.05	0.053	6.08
MLRC052	25	26	57614	53.2	1.78	0.43	0.02	0.14	0.4	9.37	0.046	0.07	0.037	7.27
MLRC052	26	27	57615	52.4	3.62	0.54	0.02	0.11	0.34	7.98	0.053	0.08	0.032	8.26
MLRC052	27	28	57616	53.7	3.55	0.53	0.02	0.14	0.42	7.49	0.041	0.09	0.021	7.53
MLRC052	28	29	57617	52.8	2.7	0.59	0.03	0.16	0.68	9.14	0.091	0.07	0.046	6.76
MLRC052	29	30	57618	53.9	2.82	0.94	0.04	0.14	0.61	7.7	0.088	0.08	0.046	6.42
MLRC052	30	31	57619	54.8	2.16	0.75	0.03	0.18	0.42	7.36	0.078	0.10	0.028	6.76
MLRC052	31	32	57620	55.1	2.81	0.87	0.04	0.17	0.41	6.52	0.099	0.10	0.032	6.6
MLRC052	32	33	57621	53.5	2.26	0.66	0.02	0.19	0.53	8.21	0.179	0.10	0.017	7.36
MLRC052	33	34	57622	54.6	4.31	0.76	0.03	0.12	0.5	4.82	0.125	0.12	0.014	8.04
MLRC053	12	13	57623	4.8	69.3	16.26	0.56	0.04	0.39	0.08	1.287	0.03	0.008	5.25
MLRC053	13	14	57624	41.8	18.11	5.43	0.18	0.08	0.53	5.14	0.302	0.05	0.044	6.96
MLRC053	14	15	57626	54.7	1.91	0.77	0.03	0.08	0.3	8.83	0.143	0.03	0.115	5.33
MLRC053	15	16	57627	55.5	1.95	0.93	0.03	0.07	0.26	8.13	0.169	0.05	0.154	5.18
MLRC053	16	17	57628	51.1	8.24	2.6	0.1	0.08	0.41	5.48	0.256	0.06	0.091	6.69
MLRC053	17	18	57629	54.5	2.68	1.07	0.05	0.06	0.45	6.98	0.197	0.07	0.141	6.46
MLRC053	18	19	57630	56.0	3.58	0.72	0.03	0.07	0.41	4.34	0.158	0.10	0.065	7.79
MLRC053	19	20	57631	56.5	2.87	0.78	0.03	0.09	0.34	5.94	0.172	0.06	0.097	5.61
MLRC053	20	21	57632	56.5	2.04	0.57	0.02	0.08	0.25	6.57	0.132	0.08	0.119	5.73
MLRC053	21	22	57633	58.5	1.84	0.59	0.02	0.06	0.23	4.93	0.112	0.09	0.145	5.63
MLRC053	22	23	57634	57.6	1.72	0.58	0.02	0.07	0.28	5.68	0.115	0.08	0.133	5.69
MLRC053	23	24	57635	60.0	1.77	0.59	0.03	0.08	0.12	3.64	0.068	0.07	0.223	5.06
MLRC053	24	25	57636	58.4	1.65	0.59	0.02	0.08	0.17	5.49	0.099	0.07	0.193	5.09
MLRC053	25	26	57637	58.0	2.09	0.65	0.03	0.1	0.19	5.2	0.138	0.07	0.197	5.42
MLRC053	26	27	57638	58.1	2.58	0.69	0.03	0.09	0.17	4.86	0.171	0.07	0.207	5.52
MLRC053	27	28	57639	54.5	4.36	1.12	0.05	0.07	0.17	5.42	0.361	0.06	0.156	7.03
MLRC053	28	29	57640	52.7	4.83	1.21	0.05	0.06	0.2	5.92	0.363	0.07	0.109	8.55
MLRC053	29	30	57641	51.1	6.66	1.73	0.07	0.08	0.47	5.03	0.532	0.09	0.048	9.71
MLRC053	30	31	57642	51.4	6.65	1.65	0.06	0.1	0.63	4.37	0.535	0.10	0.028	9.78
MLRC054	0	1	57644	46.4	10.51	5.89	0.18	0.07	0.32	5.78	0.619	0.08	0.032	7.02
MLRC054	1	2	57645	42.4	15.65	8.04	0.28	0.06	0.38	4.75	1.085	0.08	0.023	6.42
MLRC054	2	3	57646	12.9	56	15.57	0.7	0.03	0.9	0.12	3.856	0.03	0.014	3.76
MLRC054	6	7	57647	32.7	32.22	8.82	0.3	0.04	0.55	1.91	1.905	0.09	0.041	6.05
MLRC054	7	8	57648	46.7	12.09	3.94	0.11	0.04	0.41	5.86	0.715	0.08	0.096	6.84
MLRC054	8	9	57649	47.4	8.16	2.98	0.09	0.05	0.23	8.29	0.451	0.14	0.159	7.32
MLRC054	9	10	57651	51.8	5.82	1.76	0.04	0.05	0.2	5.28	0.32	0.16	0.032	9.27
MLRC054	10	11	57652	49.8	3.98	1.61	0.06	0.05	0.2	10.9	0.332	0.08	0.066	6.32
MLRC054	11	12	57653	51.0	1.02	0.42	0.02	0.05	0.13	13.5	0.112	0.08	0.043	5.97
MLRC054	12	13	57654	50.4	4.78	1.85	0.08	0.07	0.32	8.83	0.397	0.07	0.068	7.08
MLRC054	13	14	57655	50.4	6.66	2.56	0.09	0.09	0.42	7.44	0.506	0.06	0.066	6.53
MLRC054	14	15	57656	48.2	9.09	2.69	0.1	0.07	0.4	7.38	0.562	0.07	0.083	6.84
MLRC054	15	16	57657	41.9	21.02	5.43	0.2	0.05	0.31	3.67	0.591	0.07	0.082	6.71
MLRC054	16	17	57658	51.3	4.28	1.17	0.04	0.1	0.57	8.67	0.166	0.07	0.039	7.33
MLRC054	17	18	57659	51.6	3.16	0.97	0.04	0.11	0.65	9.29	0.183	0.06	0.022	7.36
MLRC054	18	19	57660	50.2	3.33	0.99	0.04	0.11	0.61	10.1	0.2	0.08	0.022	8.27
MLRC054	19	20	57661	51.4	2.76	0.71	0.03	0.1	0.48	9.53	0.157	0.09	0.021	8.11

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC054	20	21	57662	54.1	1.37	0.36	0.01	0.1	0.31	9.99	0.125	0.07	0.028	5.88
MLRC054	21	22	57663	55.3	1.06	0.4	0.02	0.1	0.44	8.91	0.125	0.08	0.031	5.5
MLRC054	22	23	57664	55.6	1.28	0.49	0.02	0.08	0.15	6.86	0.12	0.11	0.08	7.88
MLRC054	23	24	57665	53.2	2.25	0.52	0.02	0.09	0.36	7.57	0.088	0.10	0.07	8.44
MLRC054	24	25	57666	43.3	2.56	0.68	0.03	0.16	0.42	17.3	0.107	0.09	0.032	8.89
MLRC054	25	26	57667	43.6	3.63	0.58	0.02	0.19	0.42	15.9	0.062	0.11	0.013	9.3
MLRC054	26	27	57668	49.6	4.72	0.65	0.03	0.21	0.49	8.75	0.061	0.12	0.011	9
MLRC054	27	28	57669	50.7	5.67	1.16	0.04	0.2	0.5	6.88	0.077	0.13	0.009	9.28
MLRC054	28	29	57670	47.5	5.64	1.37	0.05	0.16	0.41	10.8	0.218	0.10	0.029	8.29
MLRC054	29	30	57671	49.5	7.81	2.1	0.07	0.11	0.41	6.95	0.415	0.09	0.057	7.33
MLRC055	5	6	57672	20.0	46.81	11.49	0.39	0.06	0.94	2.04	2.342	0.05	0.018	5.65
MLRC055	6	7	57673	49.2	7.95	2.93	0.06	0.09	0.37	7.41	0.315	0.04	0.054	6.78
MLRC055	7	8	57674	50.6	6.1	2.16	0.05	0.1	0.4	8.36	0.289	0.04	0.046	6.02
MLRC055	8	9	57676	54.7	2.12	0.6	0.02	0.1	0.37	7.74	0.091	0.06	0.03	6.85
MLRC055	9	10	57677	53.4	2.43	0.64	0.02	0.11	0.39	7.53	0.087	0.07	0.023	8.37
MLRC055	10	11	57678	52.8	2.53	0.53	0.02	0.14	0.37	8.21	0.089	0.06	0.026	8.28
MLRC055	11	12	57679	52.6	1.77	0.35	0.01	0.12	0.37	9.37	0.108	0.05	0.054	7.75
MLRC055	12	13	57680	53.2	2.65	0.7	0.03	0.14	0.37	8.13	0.148	0.07	0.024	7.96
MLRC055	13	14	57681	53.6	3.02	0.58	0.02	0.14	0.35	7.9	0.078	0.06	0.015	7.02
MLRC055	14	15	57682	56.0	1.46	0.3	-0.01	0.13	0.36	7.45	0.023	0.07	0.017	6.4
MLRC055	15	16	57683	55.3	1.61	0.62	0.02	0.13	0.39	7.7	0.022	0.07	0.021	6.53
MLRC055	16	17	57684	54.5	1.85	0.84	0.02	0.13	0.44	7.82	0.031	0.07	0.02	6.66
MLRC055	17	18	57685	54.0	0.81	0.2	-0.01	0.13	0.33	9.6	0.011	0.08	0.02	6.63
MLRC055	18	19	57686	54.9	1.37	0.25	-0.01	0.14	0.4	8.21	0.02	0.08	0.019	6.57
MLRC055	19	20	57687	53.2	3.32	0.82	0.03	0.14	0.52	7.6	0.024	0.08	0.03	7.22
MLRC055	20	21	57688	53.8	1.9	0.52	0.02	0.17	0.49	8.29	0.017	0.07	0.021	7.15
MLRC055	21	22	57689	53.8	2.04	0.63	0.03	0.13	0.47	8.13	0.031	0.07	0.026	7.05
MLRC055	22	23	57690	49.7	1.81	0.5	0.02	0.14	0.32	12.3	0.032	0.07	0.026	7.25
MLRC055	23	24	57691	49.9	1.15	0.32	0.01	0.17	0.34	13.1	0.024	0.07	0.029	7.15
MLRC055	24	25	57692	52.1	1.61	0.31	-0.01	0.18	0.31	10.8	0.062	0.09	0.013	7.08
MLRC055	25	26	57693	50.5	3.1	0.42	0.02	0.18	0.38	10.8	0.042	0.07	0.011	7.67
MLRC055	26	27	57694	48.9	4	0.77	0.03	0.2	0.41	11.3	0.047	0.09	0.008	7.87
MLRC055	27	28	57695	48.3	6.48	1.54	0.06	0.22	0.44	9.22	0.102	0.09	0.008	8.02
MLRC055	28	29	57696	36.2	18.56	6.82	0.34	0.26	0.53	7.9	0.169	0.09	0.009	9.35
MLRC055	29	30	57697	11.5	43.31	24.16	1.53	0.51	1.34	1.08	0.415	0.06	0.003	10.09
MLRC055	30	31	57698	10.7	47.74	21.44	1.35	0.7	2.63	0.46	0.321	0.07	0.003	9.19
MLRC055	31	32	57699	11.1	47.36	20.62	1.31	0.84	3.3	0.51	0.36	0.07	0.003	9.07
MLRC056	31	32	57702	39.8	19.1	11	0.08	0.12	0.17	0.71	0.108	0.18	0.012	10.42
MLRC056	32	33	57703	37.1	20.85	11.15	0.09	0.16	0.21	1.53	0.166	0.19	0.01	10.68
MLRC056	33	34	57704	48.5	7.12	3.19	0.05	0.14	0.18	6.55	0.142	0.16	0.023	9.57
MLRC056	34	35	57705	53.4	0.91	0.21	-0.01	0.21	0.24	9.99	0.293	0.08	0.021	7.05
MLRC056	35	36	57706	52.6	3.08	1.08	0.03	0.17	0.26	8.13	0.328	0.10	0.023	7.69
MLRC056	36	37	57707	51.6	1.7	0.52	0.02	0.24	0.32	10.6	0.297	0.09	0.028	7.68
MLRC056	37	38	57708	52.9	0.91	0.17	-0.01	0.31	0.29	10.4	0.371	0.08	0.034	7
MLRC056	38	39	57709	54.2	1.11	0.23	0.01	0.26	0.28	8.83	0.25	0.08	0.024	7.06
MLRC056	39	40	57710	51.7	2.15	0.25	-0.01	0.26	0.33	8.75	0.288	0.10	0.013	9.46
MLRC056	40	41	57711	43.6	6.79	1.46	0.05	0.39	0.37	12.1	0.643	0.09	0.017	9.64
MLRC056	41	42	57712	49.2	2.78	0.44	0.02	0.33	0.32	10.7	0.361	0.11	0.017	9.29
MLRC056	42	43	57713	49.1	3.64	0.93	0.03	0.31	0.32	10.3	0.398	0.10	0.018	8.93
MLRC057	38	39	57714	0.9	67.24	20.11	0.79	0.01	1.11	0.02	5.486	0.02	0.009	3.55
MLRC057	39	40	57715	1.0	67.9	19.63	0.77	0.01	1.08	0.02	5.322	0.02	0.01	3.5
MLRC057	40	41	57716	0.6	67.94	18.52	0.73	0.02	1.03	-0.01	5.178	0.02	0.014	5.37
MLRC057	41	42	57717	0.7	63.99	20.78	0.78	0.02	1.14	0.02	5.759	0.02	0.014	5.81
MLRC057	42	43	57718	0.8	66.8	18.72	0.83	0.02	1.09	-0.01	5.576	0.01	0.017	5.34
MLRC057	43	44	57719	0.7	65.88	19.43	0.86	0.02	1.13	-0.01	5.967	0.02	0.017	5.44
MLRC057	44	45	57720	0.9	65.03	19.85	0.72	0.02	1.05	-0.01	5.138	0.02	0.012	6.05
MLRC057	45	46	57721	2.4	62.43	20.05	0.62	0.05	1.07	-0.01	4.573	0.08	0.018	7.15
MLRC057	46	47	57722	3.4	60.83	19.98	0.6	0.06	0.99	-0.01	4.202	0.09	0.023	7.68
MLRC057	47	48	57723	4.2	61.48	19.6	0.65	0.03	1.02	-0.01	4.802	0.02	0.011	5.99

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC057	48	49	57724	3.6	61.96	20.1	0.59	0.03	0.97	-0.01	4.466	0.02	0.009	6.04
MLRC058	29	30	57726	6.7	58.95	20.69	0.59	0.03	0.83	-0.01	3.551	0.02	0.009	5.11
MLRC058	30	31	57727	20.1	46.26	15.49	0.53	0.05	0.76	0.02	2.798	0.08	0.013	4.48
MLRC058	31	32	57728	53.4	9.08	2.52	0.08	0.12	0.28	1.87	0.552	0.14	0.011	7.36
MLRC058	32	33	57729	48.4	5.25	1.81	0.05	0.19	0.21	10.6	0.422	0.08	0.098	7.15
MLRC058	33	34	57730	51.1	6.94	2.31	0.06	0.14	0.22	6.69	0.438	0.09	0.09	6.49
MLRC059	0	1	57731	12.1	52.02	20.12	0.46	0.02	0.66	0.29	2.827	0.04	0.015	6.08
MLRC059	1	2	57732	32.0	26.44	9.03	0.27	0.05	0.54	5.46	1.731	0.07	0.014	7.93
MLRC059	2	3	57733	40.3	23.79	5.69	0.22	0.06	0.44	1.15	1.51	0.15	0.012	8.32
MLRC059	3	4	57734	52.4	3.09	1.03	0.03	0.09	0.28	9.37	0.241	0.06	0.037	6.06
MLRC059	4	5	57735	53.4	3.3	1.03	0.03	0.08	0.33	7.23	0.206	0.08	0.028	7.59
MLRC059	5	6	57736	50.4	5.23	1.49	0.04	0.09	0.45	7.71	0.124	0.11	0.018	9
MLRC059	6	7	57737	48.0	6.92	2.72	0.07	0.08	0.47	7.47	0.216	0.12	0.022	9.39
MLRC059	7	8	57738	51.7	5.28	1.82	0.05	0.05	0.51	4.76	0.155	0.12	0.013	10.58
MLRC059	8	9	57739	42.4	17.73	4.51	0.17	0.05	0.51	3.97	0.371	0.09	0.008	9.59
MLRC059	9	10	57740	23.0	43.15	11.37	0.67	0.04	0.23	2.1	0.289	0.06	0.005	7.51
MLRC059	20	21	57741	48.8	10.19	2.61	0.14	0.05	0.46	4.17	0.079	0.13	0.006	9.94
MLRC059	21	22	57742	41.6	16.29	6.65	0.41	0.05	0.41	3.86	0.347	0.10	0.005	9.77
MLRC059	22	23	57743	54.6	2.35	0.4	0.01	0.09	0.18	8.36	0.25	0.06	0.02	6.06
MLRC059	23	24	57744	55.9	1.64	0.58	0.02	0.11	0.19	7.6	0.188	0.06	0.011	5.69
MLRC059	24	25	57745	56.1	2.35	1.11	0.04	0.11	0.15	6.92	0.157	0.05	0.03	5.38
MLRC059	25	26	57746	52.5	3.61	0.47	0.02	0.09	0.27	8.75	0.168	0.06	0.014	7
MLRC059	26	27	57747	52.3	2.88	0.45	0.02	0.09	0.28	9.91	0.191	0.05	0.013	6.68
MLRC059	27	28	57748	53.3	2.42	0.51	0.02	0.15	0.27	9.45	0.336	0.07	0.019	6
MLRC059	28	29	57749	50.7	4.58	0.67	0.03	0.13	0.47	9.22	0.206	0.06	0.025	7.7
MLRC059	29	30	57751	54.0	1.65	0.33	0.01	0.14	0.29	10.1	0.164	0.07	0.012	5.54
MLRC059	30	31	57752	51.7	2.75	0.37	0.01	0.14	0.2	11.5	0.157	0.05	0.01	5.96
MLRC059	31	32	57753	49.1	3.01	0.53	0.02	0.17	0.3	12.2	0.256	0.06	0.007	7.66
MLRC059	32	33	57754	49.5	3.79	0.76	0.03	0.18	0.31	11.4	0.224	0.06	0.011	7.1
MLRC059	33	34	57755	50.3	2.07	0.29	0.01	0.17	0.25	12.2	0.323	0.06	0.008	7.29
MLRC059	34	35	57756	49.4	2.04	0.2	-0.01	0.18	0.37	11.1	0.39	0.06	0.008	9.98
MLRC059	35	36	57757	51.1	2.21	0.19	0.01	0.15	0.32	8.44	0.383	0.07	0.007	10.83
MLRC060	10	11	57759	21.2	34.52	21.98	0.31	0.11	0.49	0.08	1.198	0.30	0.021	8.45
MLRC060	11	12	57760	51.1	9.18	3.31	0.11	0.07	0.32	1.77	0.756	0.11	0.019	9.73
MLRC060	12	13	57761	57.5	5.8	2.97	0.12	0.04	0.26	1.84	0.855	0.09	0.219	4.12
MLRC060	13	14	57762	55.3	2.17	0.97	0.04	0.07	0.27	7.74	0.328	0.06	0.089	5.51
MLRC060	14	15	57763	54.6	2.13	0.65	0.03	0.08	0.26	8.29	0.31	0.06	0.042	6.04
MLRC060	15	16	57764	52.7	3.04	0.43	0.02	0.08	0.37	7.67	0.269	0.07	0.013	8.68
MLRC060	16	17	57765	53.5	3.03	0.7	0.03	0.1	0.41	6.93	0.109	0.11	0.019	8.32
MLRC060	17	18	57766	46.0	13.48	3.32	0.17	0.13	0.59	5.51	0.127	0.10	0.016	7.49
MLRC060	18	19	57767	23.3	42.16	11.37	0.73	0.07	1.42	1.81	0.535	0.06	0.005	7.22
MLRC060	38	39	57768	54.8	5.47	1.55	0.07	0.19	0.39	4.06	0.089	0.16	0.012	6.96
MLRC060	39	40	57769	57.3	3.01	0.63	0.02	0.16	0.32	4.58	0.061	0.12	0.017	6.75
MLRC060	40	41	57770	54.5	5.25	0.94	0.04	0.17	0.41	4.79	0.108	0.11	0.015	7.3
MLRC060	41	42	57771	58.2	5.28	1.14	0.04	0.15	0.24	2.59	0.084	0.09	0.041	5.25
MLRC060	42	43	57772	55.1	4.12	0.88	0.03	0.18	0.37	5.57	0.154	0.09	0.025	7.01
MLRC060	43	44	57773	53.4	2.94	0.66	0.02	0.23	0.38	7.69	0.126	0.09	0.021	7.47
MLRC060	44	45	57774	51.7	3.13	0.74	0.03	0.24	0.41	9.37	0.106	0.08	0.025	7.18
MLRC060	45	46	57776	50.6	3.15	0.79	0.04	0.24	0.37	10.4	0.131	0.09	0.02	7.49
MLRC061	23	24	57777	44.7	13.39	7.35	0.16	0.08	0.53	3.41	0.935	0.09	0.041	7.86
MLRC061	24	25	57778	51.2	4.59	1.18	0.05	0.11	0.57	7.37	0.232	0.07	0.011	8.77
MLRC061	25	26	57779	53.7	3.95	1.2	0.04	0.19	0.41	6.66	0.128	0.11	0.022	7.1
MLRC061	26	27	57780	20.3	44.76	13.69	0.89	0.11	1.03	1.97	0.204	0.05	0.004	7.19
MLRC061	27	28	57781	18.6	51.54	11.02	0.65	0.1	1.3	1.55	0.388	0.04	0.004	5.92
MLRC061	28	29	57782	13.4	54.31	15.63	1.07	0.11	1.93	0.33	0.467	0.03	0.002	6.71
MLRC062	13	14	57783	47.9	10.52	2.49	0.1	0.06	0.32	4.8	0.149	0.13	0.012	10.02
MLRC062	14	15	57784	50.6	6.47	1.3	0.05	0.05	0.35	5.37	0.144	0.13	0.006	10.68
MLRC062	15	16	57785	52.9	2.54	0.57	0.02	0.06	0.25	7.74	0.164	0.08	0.011	9.19
MLRC062	16	17	57787	51.8	3.5	0.63	0.02	0.05	0.33	7.09	0.183	0.12	0.011	10.21
MLRC062	17	18	57788	50.5	3.7	0.69	0.02	0.06	0.27	8.98	0.169	0.08	0.017	9.47
MLRC062	18	19	57789	52.0	2.58	0.44	0.02	0.07	0.25	8.44	0.166	0.09	0.012	9.39
MLRC062	19	20	57790	53.7	2.77	0.69	0.03	0.06	0.17	6.41	0.082	0.14	0.072	9.48

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC062	20	21	57791	54.6	3.23	0.64	0.03	0.05	0.33	4.46	0.096	0.15	0.028	10.61
MLRC062	21	22	57792	52.7	2.42	0.55	0.02	0.06	0.24	8.13	0.188	0.08	0.011	8.96
MLRC062	22	23	57793	55.7	3.33	0.66	0.03	0.04	0.4	3.19	0.115	0.15	0.014	10.71
MLRC062	23	24	57794	56.5	3.32	0.68	0.03	0.04	0.39	2.02	0.123	0.14	0.008	10.8
MLRC062	24	25	57795	52.0	5.31	2.39	0.06	0.05	0.46	3.88	0.164	0.11	0.01	10.7
MLRC062	25	26	57796	54.1	4.31	1.38	0.05	0.1	0.19	5.56	0.099	0.12	0.061	7.83
MLRC062	26	27	57797	43.8	13.99	4.96	0.26	0.09	0.38	4.7	0.178	0.11	0.008	9.71
MLRC062	27	28	57798	48.4	7.03	1.97	0.07	0.11	0.58	6.53	0.172	0.14	0.007	10.92
MLRC062	28	29	57799	41.7	12.97	5.54	0.24	0.11	0.58	6.16	0.177	0.12	0.005	10.82
MLRC062	29	30	57801	38.7	16.69	5.02	0.2	0.15	0.28	8.05	0.199	0.10	0.059	8.97
MLRC062	30	31	57802	16.8	48.63	14.28	0.88	0.29	2.26	0.68	0.053	0.06	0.005	7.96
MLRC063	28	29	57803	23.8	40.46	11.77	0.82	0.07	2.07	1.93	0.28	0.06	0.022	6.96
MLRC063	29	30	57804	41.5	17.82	5.29	0.36	0.08	0.84	4.49	0.206	0.13	0.029	8.39
MLRC063	30	31	57805	32.5	30	8.51	0.66	0.07	0.43	3.69	0.284	0.11	0.033	7.44
MLRC063	31	32	57806	52.3	5.4	1.23	0.06	0.09	0.4	5.27	0.139	0.17	0.025	9.35
MLRC063	32	33	57807	52.0	6.25	1.54	0.08	0.09	0.39	4.72	0.162	0.18	0.02	9.61
MLRC063	33	34	57808	43.4	15.31	3.64	0.23	0.1	0.5	5.03	0.215	0.15	0.005	9.79
MLRC063	34	35	57809	48.3	7.13	1.81	0.1	0.16	0.48	7.03	0.249	0.17	0.01	9.96
MLRC063	35	36	57810	46.8	5.88	1.36	0.08	0.2	0.5	9.37	0.308	0.17	0.01	10.48
MLRC063	36	37	57811	52.3	4.43	1.05	0.04	0.15	0.38	5.92	0.177	0.16	0.016	9.61
MLRC063	37	38	57812	48.7	3.93	1.07	0.04	0.19	0.42	9.76	0.211	0.15	0.012	9.73
MLRC063	38	39	57813	42.9	10.93	3.23	0.13	0.26	0.55	8.91	0.32	0.14	0.006	9.46
MLRC063	39	40	57814	39.5	18.32	6.87	0.35	0.26	0.95	4.19	0.166	0.13	0.005	9.6
MLRC063	40	41	57815	10.5	50.12	20.12	1.29	0.77	2.66	0.4	0.197	0.06	0.001	8.76
MLRC063	45	46	57816	25.0	38.4	10.78	0.47	0.2	0.8	3.26	0.393	0.09	0.004	7.6
MLRC063	46	47	57817	22.7	40.93	11.46	0.58	0.19	0.74	3.19	0.071	0.10	0.003	8.2
MLRC064	0	1	57818	33.1	6.63	2.84	0.07	0.14	0.41	21.3	0.263	0.16	0.006	11.11
MLRC064	1	2	57819	35.7	3.34	0.92	0.03	0.11	0.38	22.5	0.196	0.17	0.006	11.01
MLRC064	2	3	57820	26.2	2.29	0.77	0.03	0.11	0.36	31.7	0.156	0.15	0.006	11.72
MLRC064	3	4	57821	38.5	2.79	1.22	0.03	0.13	0.32	20.7	0.234	0.16	0.006	10.35
MLRC064	4	5	57822	54.6	2.46	0.89	0.02	0.07	0.44	4.93	0.104	0.16	0.007	9.89
MLRC064	5	6	57823	53.0	3.68	1.48	0.04	0.08	0.44	5.15	0.151	0.16	0.008	10.32
MLRC064	6	7	57824	54.6	3.79	1.25	0.04	0.07	0.37	3.34	0.157	0.20	0.006	10.54
MLRC064	7	8	57826	52.3	4.17	1.75	0.05	0.06	0.29	5.04	0.234	0.20	0.019	10.44
MLRC064	8	9	57827	49.5	4.85	2.27	0.07	0.05	0.3	7.6	0.238	0.11	0.035	9.67
MLRC064	9	10	57828	47.6	3.1	1.29	0.04	0.06	0.18	12.5	0.124	0.12	0.046	8.83
MLRC064	10	11	57829	46.5	4.55	1.72	0.05	0.07	0.24	11.9	0.211	0.11	0.051	8.8
MLRC064	11	12	57830	50.4	4.91	1.76	0.07	0.05	0.43	6.77	0.243	0.13	0.015	10.3
MLRC064	12	13	57831	51.3	4.51	1.64	0.05	0.04	0.46	6.23	0.219	0.12	0.012	10.24
MLRC064	13	14	57832	54.2	2.95	0.73	0.02	0.04	0.43	4.96	0.145	0.14	0.01	10.62
MLRC064	14	15	57833	56.0	2.6	0.58	0.02	0.03	0.45	3.21	0.118	0.15	0.007	10.77
MLRC064	15	16	57834	53.0	2.84	0.79	0.03	0.03	0.43	5.97	0.139	0.15	0.005	10.9
MLRC064	16	17	57835	54.0	2.91	0.71	0.02	0.04	0.42	4.98	0.124	0.15	0.006	11.01
MLRC064	17	18	57836	53.7	2.8	0.86	0.02	0.04	0.45	5.13	0.103	0.14	0.008	11.04
MLRC064	18	19	57837	54.2	3.06	0.98	0.03	0.04	0.44	4.23	0.087	0.13	0.01	11.03
MLRC064	19	20	57838	53.1	3.47	1.21	0.04	0.05	0.38	5.41	0.129	0.13	0.017	10.69
MLRC064	20	21	57839	52.1	4.32	1.81	0.05	0.05	0.21	5.96	0.146	0.13	0.063	9.51
MLRC064	21	22	57841	53.6	4.08	1.64	0.05	0.05	0.22	4.69	0.157	0.14	0.058	9.59
MLRC064	22	23	57842	54.0	3.27	0.95	0.03	0.05	0.29	5.17	0.102	0.16	0.05	10.12
MLRC064	23	24	57843	55.0	3.31	0.91	0.03	0.05	0.27	3.8	0.102	0.17	0.029	10.52
MLRC064	24	25	57844	54.8	3.09	0.65	0.02	0.05	0.28	4.12	0.133	0.17	0.035	10.39
MLRC064	25	26	57845	52.6	4.23	1.09	0.04	0.06	0.16	6.36	0.16	0.16	0.082	9.23
MLRC064	26	27	57846	52.1	4.75	1.3	0.05	0.06	0.21	5.72	0.179	0.18	0.082	9.71
MLRC064	27	28	57847	55.2	2.85	0.71	0.03	0.07	0.2	5.49	0.161	0.15	0.094	8.68
MLRC064	28	29	57848	52.9	2.86	0.69	0.03	0.08	0.26	7	0.205	0.14	0.069	9.47
MLRC064	29	30	57849	48.6	7.11	2.68	0.1	0.09	0.4	5.74	0.197	0.14	0.013	10.92
MLRC064	30	31	57850	56.6	11.45	3.48	0.14	0.03	0.17	0.3	0.692	0.13	0.007	1.91
MLRC064	31	32	57851	48.8	4.67	1.03	0.04	0.09	0.35	8.36	0.191	0.12	0.012	11.07
MLRC064	32	33	57852	45.5	8.95	3.39	0.14	0.11	0.37	7.74	0.418	0.10	0.016	9.9
MLRC064	33	34	57853	24.7	36.53	10.86	0.58	0.16	0.61	4.2	0.269	0.07	0.005	8.5
MLRC064	34	35	57854	11.2	47.56	21.85	1.39	0.27	2.08	0.54	0.095	0.04	0.001	9.43
MLRC065	0	1	57855	48.7	8.69	2.91	0.12	0.06	0.36	5.49	0.475	0.10	0.023	9.26
MLRC065	1	2	57856	44.1	12.89	3.03	0.12	0.06	0.35	7.9	0.63	0.06	0.022	8.5

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC065	2	3	57857	36.8	20.03	5.32	0.22	0.04	0.43	7.74	1.235	0.06	0.031	8.4
MLRC065	3	4	57858	33.7	26.72	6.1	0.24	0.04	0.47	5.84	1.22	0.05	0.015	8.17
MLRC065	4	5	57859	27.7	35.4	6.25	0.25	0.04	0.5	5.83	1.275	0.04	0.009	7.71
MLRC065	5	6	57860	41.4	18.85	4.88	0.17	0.04	0.52	4.13	0.804	0.05	0.012	9.3
MLRC065	6	7	57861	39.7	22.64	4.34	0.17	0.04	0.43	4.34	0.604	0.04	0.01	8.32
MLRC065	7	8	57862	45.8	13.5	3.47	0.13	0.04	0.46	4.64	0.362	0.05	0.013	9.45
MLRC065	8	9	57863	43.5	12.58	3.93	0.13	0.05	0.62	6.47	0.326	0.08	0.013	10.41
MLRC065	9	10	57864	46.7	7	3.09	0.09	0.05	0.74	6.97	0.247	0.09	0.014	11.31
MLRC065	10	11	57865	32.8	31.39	4.34	0.18	0.04	0.6	4.87	0.693	0.05	0.013	8.38
MLRC065	11	12	57866	36.7	28.19	2.86	0.13	0.04	0.55	4.47	0.376	0.06	0.015	8.48
MLRC065	12	13	57867	50.3	7.21	2.52	0.09	0.04	0.67	4.14	0.113	0.08	0.019	10.87
MLRC065	13	14	57868	49.2	7.58	3.06	0.11	0.04	0.57	4.81	0.166	0.09	0.017	10.67
MLRC065	14	15	57869	44.9	9.03	4.79	0.17	0.04	0.64	6.13	0.253	0.08	0.017	11.32
MLRC065	15	16	57870	49.7	6.85	2.95	0.12	0.04	0.65	4.18	0.146	0.08	0.019	11.41
MLRC065	16	17	57871	50.0	5.43	2.16	0.07	0.05	0.52	5.92	0.134	0.12	0.014	11.06
MLRC065	17	18	57872	55.0	3.34	1.13	0.04	0.06	0.45	3.76	0.058	0.16	0.011	10.19
MLRC065	18	19	57873	51.0	3.29	0.9	0.03	0.07	0.37	7.98	0.062	0.15	0.011	9.97
MLRC065	19	20	57874	54.0	4.52	1.3	0.04	0.06	0.42	3.53	0.061	0.15	0.012	10.56
MLRC065	20	21	57876	55.6	4.67	1.42	0.04	0.05	0.49	1.87	0.067	0.18	0.008	10.21
MLRC065	21	22	57877	51.6	5.74	1.62	0.06	0.07	0.37	5.3	0.101	0.18	0.024	9.99
MLRC065	22	23	57878	49.9	6.9	1.8	0.07	0.07	0.29	6.47	0.137	0.19	0.023	9.5
MLRC065	23	24	57879	54.1	3.62	0.81	0.03	0.07	0.47	4.47	0.165	0.15	0.009	10.38
MLRC065	24	25	57880	53.0	3.5	0.64	0.02	0.05	0.44	5.66	0.174	0.14	0.006	10.93
MLRC065	25	26	57881	51.2	4.34	0.97	0.04	0.06	0.41	6.37	0.283	0.13	0.011	10.6
MLRC065	26	27	57882	53.4	3.77	0.95	0.03	0.07	0.4	4.31	0.244	0.17	0.007	11.05
MLRC065	27	28	57883	51.1	3.33	0.8	0.03	0.1	0.38	7.29	0.329	0.18	0.013	10.74
MLRC065	28	29	57884	53.0	3.29	0.68	0.02	0.09	0.4	5.45	0.173	0.19	0.009	10.73
MLRC065	29	30	57885	53.5	3.25	0.71	0.03	0.09	0.41	5.23	0.18	0.17	0.008	10.55
MLRC065	30	31	57886	56.0	3.21	0.66	0.02	0.09	0.39	2.39	0.098	0.26	0.008	10.81
MLRC065	31	32	57887	55.9	2.97	0.68	0.02	0.1	0.4	2.77	0.087	0.26	0.012	10.92
MLRC065	32	33	57888	54.7	2.78	0.76	0.03	0.09	0.36	4.88	0.078	0.20	0.039	9.93
MLRC065	33	34	57889	52.6	3.51	0.98	0.04	0.12	0.31	6.88	0.135	0.19	0.067	9.05
MLRC065	34	35	57890											
MLRC065	35	36	57891	51.6	4.09	1.24	0.05	0.23	0.41	7.45	0.234	0.17	0.023	8.24
MLRC065	36	37	57892	48.1	8.7	2.62	0.1	0.2	0.43	6.89	0.425	0.15	0.017	8.05
MLRC065	37	38	57893	33.9	22.89	7.73	0.31	0.22	0.72	7.19	0.249	0.12	0.008	8.45
MLRC065	38	39	57894	32.2	26.47	8.05	0.34	0.15	1.41	5.06	0.231	0.11	0.005	8.71
MLRC065	39	40	57895	26.2	29.01	15.22	0.63	0.13	0.94	3.59	1.959	0.10	0.005	8.41
MLRC065	40	41	57897	40.4	18.75	6.54	0.26	0.16	0.32	5.12	0.309	0.14	0.075	7.23
MLRC065	41	42	57898	24.5	38.25	10.83	0.63	0.2	0.61	3.86	0.117	0.09	0.042	7.65
MLRC066	0	1	57899	29.0	6.24	2.38	0.13	0.21	0.44	25.2	0.733	0.13	0.007	11.52
MLRC066	1	2	57901	25.2	2.85	1.1	0.06	0.29	0.38	30.7	1.142	0.12	0.006	12.35
MLRC066	2	3	57902	23.2	3.51	1.42	0.08	0.32	0.43	32.2	1.301	0.11	0.01	12.11
MLRC066	3	4	57903	38.9	2.96	1.13	0.06	0.2	0.43	17.9	0.812	0.16	0.006	11.8
MLRC066	4	5	57904	32.2	5.71	1.94	0.11	0.23	0.37	22.3	0.999	0.13	0.008	10.96
MLRC066	5	6	57905	28.0	3.33	0.86	0.04	0.29	0.42	28.1	1.581	0.11	0.007	12.11
MLRC066	6	7	57906	31.8	2.26	0.61	0.03	0.25	0.36	25.7	1.118	0.14	0.005	11.67
MLRC066	7	8	57907	32.6	2.4	0.72	0.03	0.26	0.38	24.7	1.376	0.14	0.006	11.15
MLRC066	8	9	57908	27.0	2.82	0.69	0.03	0.31	0.47	28.7	1.389	0.12	0.005	12.1
MLRC066	9	10	57909	32.6	3.65	0.94	0.04	0.25	0.44	23.2	1.037	0.15	0.007	12.02
MLRC067	0	1	57910	40.3	13.47	5.68	0.23	0.06	0.38	8.67	0.729	0.15	0.006	8.57
MLRC067	1	2	57911	29.8	32.95	10.62	0.37	0.04	0.55	2.13	1.963	0.14	0.004	7.19
MLRC067	2	3	57912	38.7	13.4	7.18	0.19	0.07	0.38	8.13	0.981	0.24	0.007	9.7
MLRC067	3	4	57913	33.5	19.8	8.03	0.28	0.06	0.5	8.44	1.559	0.12	0.008	9.06
MLRC067	4	5	57914	25.3	23.48	6.79	0.23	0.09	0.57	14.8	1.529	0.10	0.007	9.54
MLRC067	5	6	57915	6.7	61.81	15.49	0.55	0.03	0.94	1.32	4.154	0.04	0.003	4.09
MLRC067	6	7	57916	38.7	10.71	5.83	0.22	0.1	0.51	11.3	0.348	0.08	0.006	10.18
MLRC067	7	8	57917	40.0	7.11	2.68	0.11	0.1	0.55	13.9	0.318	0.10	0.007	11.34
MLRC067	8	9	57918	39.7	4.42	1.5	0.06	0.14	0.53	16.2	0.456	0.16	0.007	11.97
MLRC067	9	10	57919	40.6	4.48	1.53	0.06	0.14	0.53	15.3	0.438	0.16	0.006	11.89
MLRC068	0	1	57920	46.8	10.38	5.52	0.17	0.07	0.28	6.81	0.53	0.06	0.037	5.46
MLRC068	1	2	57921	45.8	11.75	6.27	0.21	0.05	0.3	5.69	0.742	0.08	0.033	5.48
MLRC068	2	3	57922	9.4	59.6	16.09	0.61	0.02	1.01	0.13	3.865	0.01	0.01	4.04

HoleID	Fr	To	Sample	Fe %	SiO2 %	Al2O3%	TiO2 %	CaO %	MgO %	Mn %	K2O %	P%	S%	LOI%
MLRC068	36	37	57923	38.8	25.68	5.91	0.22	0.09	0.45	0.19	1.404	0.18	0.02	8.46
MLRC068	37	38	57924	39.3	22.98	5.42	0.17	0.12	0.38	2.01	1.04	0.17	0.021	9.04
MLRC068	38	39	57926	44.2	18.03	4.69	0.12	0.09	0.39	2.11	0.599	0.14	0.034	9.12
MLRC068	39	40	57927	57.4	4.09	0.84	0.02	0.07	0.28	1.11	0.12	0.14	0.031	9.86
MLRC068	40	41	57928	47.9	14.98	2.46	0.08	0.08	0.28	2.18	0.518	0.12	0.026	8.95
MLRC068	41	42	57929	48.2	14.35	2.5	0.09	0.07	0.28	2.91	0.534	0.10	0.054	8.03
MLRC068	42	43	57930	52.4	9.38	1.69	0.06	0.07	0.22	3.58	0.355	0.08	0.11	6.52

APPENDIX –3 EXPENDITURE STATEMENT

NORTHERN TERRITORY EXPLORATION EXPENDITURE FOR MINERAL TENEMENT

Section 1. Tenement type, number and operation name: (One licence only per form even if combined reporting has been approved)	
Type	*EL*
Number	*23824*
Operation Name (optional)	*Millers*

Section 2. Period covered by this return:			
Twelve-month period:		**If Final Report:**	
From	*09-02-2005*	From	
To	*08-02-2006*	To	
Covenant for the reporting period:		$30,000	

Section 3. Give title of accompanying technical report:	
Title of Technical Report	*Annual Report EL 23824 Millers for the Period 9 February 2005 to 8 February 2006*
Author	

Section 4. Locality of operation:	
Geological Province	***Pine Creek Geosyncline***
Geographic Location	***North of old Frances Creek iron ore mine site***

Section 5. Work program for the next twelve months:

Activities proposed (please mark with an "X"):

[x]	Drilling and/or costeaning		
[ ]	Literature review	[x]	Airborne geophysics
[x]	Geological mapping	[x]	Ground geophysics
[ ]	Rock/soil/stream sediment sampling	[ ]	Other:

Estimated Cost: $**200,000**

Section 6. Summary of operations and expenditure:

Please include salaries, wages, consultants fees, field expenses, fuel and transport, administration and overheads under the appropriate headings below. Mark the work done for the appropriate subsections with an "X" or similar, except where indicated. Complete the right-hand columns to indicate the data supplied with the Technical Report.

Do not include the following as expenditure (if relevant, these may be discussed in Section 7):

- Insurance
- Company Prospectus
- Rent & DepartmentFees
- Bond
- Transfer costs
- Title Search
- Legal costs
- Advertising
- Land Access Compensation
- Meetings with Land Councils
- Payments to Traditional Owners
- Fines

Exploration Work type	Work Done (mark with an "X" or provide details)		Expenditure	Data and Format Supplied in the Technical Report	
				Digital	Hard copy
Office Studies					
Literature search					
Database compilation	**x**		3022.92	**x**	**x**
Computer modelling	**x**		181.73		
Reprocessing of data	**x**		1400		
General research	**x**		1670		
Report preparation	**x**		1155.30	**x**	**x**
Other (Admin & Supervision)	**x**		4161.88		
	Subtotal		$11591.83		
Airborne Exploration Surveys (state line kms)					
Aeromagnetics		kms			
Radiometrics		kms			
Electromagnetics		kms			
Gravity		kms			
Digital terrain modelling		kms			
Other (specify)		kms			
	Subtotal		$		
Remote Sensing					
Aerial photography	**x**		86.47		
LANDSAT					
SPOT					
MSS					
Other (specify)					
	Subtotal		$**86.47**		
Ground Exploration Surveys					
Geological Mapping					
Regional	**x**		486.74		
Reconnaissance	**x**		37881.41		**x**
Prospect	**x**		2756.5		
Underground					
Costean					
Ground Geophysics					
Radiometrics					
Magnetics					
Gravity	**X (6.65km)**		8275.04	**x**	**x**
Digital terrain modelling					
Electromagnetics					
SP/AP/EP					
IP					
AMT/CSAMT					
Resistivity					
Complex resistivity					
Seismic reflection					
Seismic refraction					
Well logging					
Geophysical interpretation	**x**		2040		
Petrophysics					
Other (specify)					

Geochemical Surveying and Geochronology ***(state number of samples)***								
Drill (cuttings, core, etc.)	**X (1239 samples)**				26557.34		**x**	**x**
Stream sediment								
Soil								
Rock chip	**X (73 samples)**				1711.11		**x**	**x**
Laterite								
Water								
Biogeochemistry								
Isotope								
Whole rock								
Mineral analysis								
Laboratory analysis (type)								
Petrology	**x**				770.46			
Other (specify)								
Ground Exploration Subtotal					$**80478.60**			
Drilling (state number of holes & metres)								
Diamond		holes		metres				
Reverse circulation (RC)	**33**	holes	**992**	metres	114797.33		**x**	**x**
Rotary air blast (RAB)	**33**	holes	**1036**	metres	53487.09		**x**	**x**
Air-core		holes		metres				
Auger		holes		metres				
Other (specify)		holes		metres				
	Subtotal				$168284.42			
Other Operations								
Costeaning/Trenching								
Bulk sampling								
Mill process testing								
Ore reserve estimation	**x**				8670			**x**
Underground development (describe)								
Mineral processing								
Other (specify)								
	Subtotal				$**8670**			
Access and Rehabilitation								
Track maintenance	**x**				500			
Rehabilitation	**X**				2342.34			
Monitoring								
Other (specify)								
	Subtotal				$**2842.34**			
TOTAL EXPENDITURE					**$265349.66**			

Section 7. Comments on your exploration activities:

I certify that the information contained herein, is a true statement of the operations carried out and the monies expended on the above mentioned tenement during the period specified as required under the *Northern Territory Mining Act* and the Regulations thereunder.

[X] I have attached the Technical Report

1. Name:	Bob Vivian	2. Name:	
Position:	Operations Manager	Position:	
Signature:		Signature:	
Date:	22/02/2006	Date:	

APPENDIX – 4 PROSPECT SUMMARY SHEETS

Mc Farrars

PROJECT:	**Frances Creek NT**	**Date:**	2/12/2005
PROSPECT:	**Mc Farrars**	**Author**	Mike Morawa
GDA E :	801303	**TENEMENT :**	EL23824
GDA N :	8515196	**MAP 1:250K :**	Pine Ceek
GDA ZONE :	52	**MAP 1:100K :**	McKinlay River

Access and

Physiography:
Moderately high gently sloping stand alone hill with managanese occurrence on crest as well as E & NE flank. Moderate slopes falling away into flat surrounding drainage area. Moderately wooded.

Geology:
Ferruginous and manganiferous cherty siltstones.

Host Lithology:
Koolpin Formation

Mineralogy:
Moderate - high manganese. Sintery texture (powdery). Limonite/goethite dominant & minor hematite. Poor-mod breccia clast replacement by limonite. Very minor colloform/reniform textures. Possibly weathering product.

Structure:
Steeply E dipping.

Comments:
Limited size potential

Work Undertaken: **Period:** Sept to Nov 2005
Outcrop mapping, rockchip sampling.

Potential:

Recommendations:
Drill test.

PROSPECT SUMMARY
Egg Cup

PROJECT:	**Frances Creek NT**	**Date:**	2/12/2005
PROSPECT:	**Egg Cup**	**Author**	Mike Morawa
GDA E :	801994	**TENEMENT :**	EL23824
GDA N :	8515291	**MAP 1:250K :**	Pine Ceek
GDA ZONE :	52	**MAP 1:100K :**	McKinlay River

Access and
By foot only. Bet access walk east of McFarrars into steeply incised valley.

Physiography:
Steeply incised terrain. Prospect located on banks of steep gully & o'c as narrow iron stone ridge. Razor back cliff ridge on S side & broader cliff face on N banks. Gully 20+ m deep. Poorly wooded; little ground cover.

Geology:
Weakly deformed hematite replacement breccia. Possibly weathering related. Hosted by siltstones & expressed as narrow (1-2m wide) linear zones. Possible faults/contact related.

Host Lithology:
Koolpin Formation

Mineralogy:
Weakly developed breccia. Weak limonite and goethite replacement. Weathering related.

Structure:
Foliation trends 155/335 with steep westerly dip. Narrow, possible minor fault.

Comments:

Work Undertaken: **Period:** Sept to Nov 2005
Outcrop mapping, rockchip sampling

Potential:

Recommendations:
No further work

PROSPECT SUMMARY
Big Hill

PROJECT:	**Frances Creek NT**	**Date:**	2/12/2005
PROSPECT:	**Big Hill**	**Author**	Mike Morawa
GDA E :	804987	**TENEMENT :**	EL23824
GDA N :	8515035	**MAP 1:250K :**	Pine Ceek
GDA ZONE :	52	**MAP 1:100K :**	McKinlay River

Access and
Turn off right at northern end of Bowerbird. Do not cross Pig Creek.

Physiography:
The iron occurrace forms part of a NNW-SSE striking ridge rising approximately 50m in from the surrounding plane. The hill is only moderately wooded with low shrubs and trees, large iron ore boulders form part of the scree slope.

Geology:
Possibly large antiform. Meter scale antiformal folding south of the main iron occurrence suggests a possible saddle reef scenario controlling part of the mineralisation.

Host Lithology:
Lower Wildman Siltstone

Mineralogy:
Goethite - hematite breccia. Possibly minor secondary hematite enrichment. Poorer samples contain clay within partially replaced clasts. Samples contain minor small vugs with minor limonite/goethite coatings.

Structure:

Comments:
May be

Work Undertaken: **Period:** Sept to Nov 2005
Outcrop mapping, rockchip sampling

Potential:

Recommendations:
Drill test.

PROSPECT SUMMARY
Boots

PROJECT:	**Frances Creek NT**	**Date:**	2/12/2005
PROSPECT:	**Boots**	**Author**	Mike Morawa
GDA E :	800963	**TENEMENT :**	EL23824
GDA N :	8517939	**MAP 1:250K :**	Pine Ceek
GDA ZONE :	52	**MAP 1:100K :**	McKinlay River

Access and
Via motorable dirt track located 500m N of prospect and then by foot traverse.

Physiography:
Located on the western flank and ridgecap of a moderately sloping hill. Outcrops range from sub cropping iron occurrances to a ridge cap. The latter is exposed as a outtress with steep N & E contacts. (expressed as cliff faces). Moderately open woodland.

Geology:
Cherty siltstone horizons, narrow breccia zones. Steeply east dipping laminated. Some boudinaging of chert horizons.

Host Lithology:
Koolpin Formation

Mineralogy:
Goethite - limonite dominant. Minor Manganese. Moderate replacement of clasts by iron, except quartz clasts. Minor laterization.

Structure:

Comments:

Work Undertaken: **Period:** Sept to Nov 2005
Outcrop mapping, rockchip sampling

Potential:

Recommendations:
Drill test.

PROSPECT SUMMARY
Lewis

PROJECT:	**Frances Creek NT**	**Date:**	2/12/2005
PROSPECT:	**Lewis**	**Author**	Mike Morawa
GDA E :	801387	**TENEMENT :**	EL23824
GDA N :	8516686	**MAP 1:250K :**	Pine Ceek
GDA ZONE :	52	**MAP 1:100K :**	McKinlay River

Access and
Walk south of northern access track, crossing major stream and keep major ridge on left (east) side.

Physiography:
South & along strike of Boots. Series of 3 ridges occupying western flank of moderately rising hill. Iron outcrops form ridges 1-2m high & are parallel to regional strike. Terrain flattens out into small level (flood) plain to the west. Relatively open - and tall timbered country.

Geology:
Hosted within Koolpin Formation as weakly brecciated and laterized iron rich siltstones and cherts.

Host Lithology:
Koolpin Formation

Mineralogy:
Narrow (1.5m wide) well developed breccia. High hematite replacement of clasts & matrix; Vuggy & mangananiferous. Some weak-moderate reniform texture development.

Structure:
Mod-steeply E dipping lithologies; railway track geology.

Comments:
No tonnage potential

Work Undertaken: **Period:** Sept to Nov 2005
Outcrop mapping, rockchip sampling

Potential:

Recommendations:
Drill test.

APPENDIX – 5 Miller's Prospect Gravity Survey

APPENDIX – 6 EL23824 Fe Occurrences Map

APPENDIX – 7 Cultural Heritage Study

Frances Creek, Ochre Hill (MLA24727) and Millers deposit proposed Iron Mine

Cultural Heritage Study.

Prepared for
Territory Iron Ltd/ MBS Environmental Pty. Ltd.

October 2005.

Prepared by
Tim Hill (BA Hons. Archaeology)

Tim Hill- Heritage Management and Planning
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Table of Contents

Figures

Tables

Attachments

1.0 Introduction

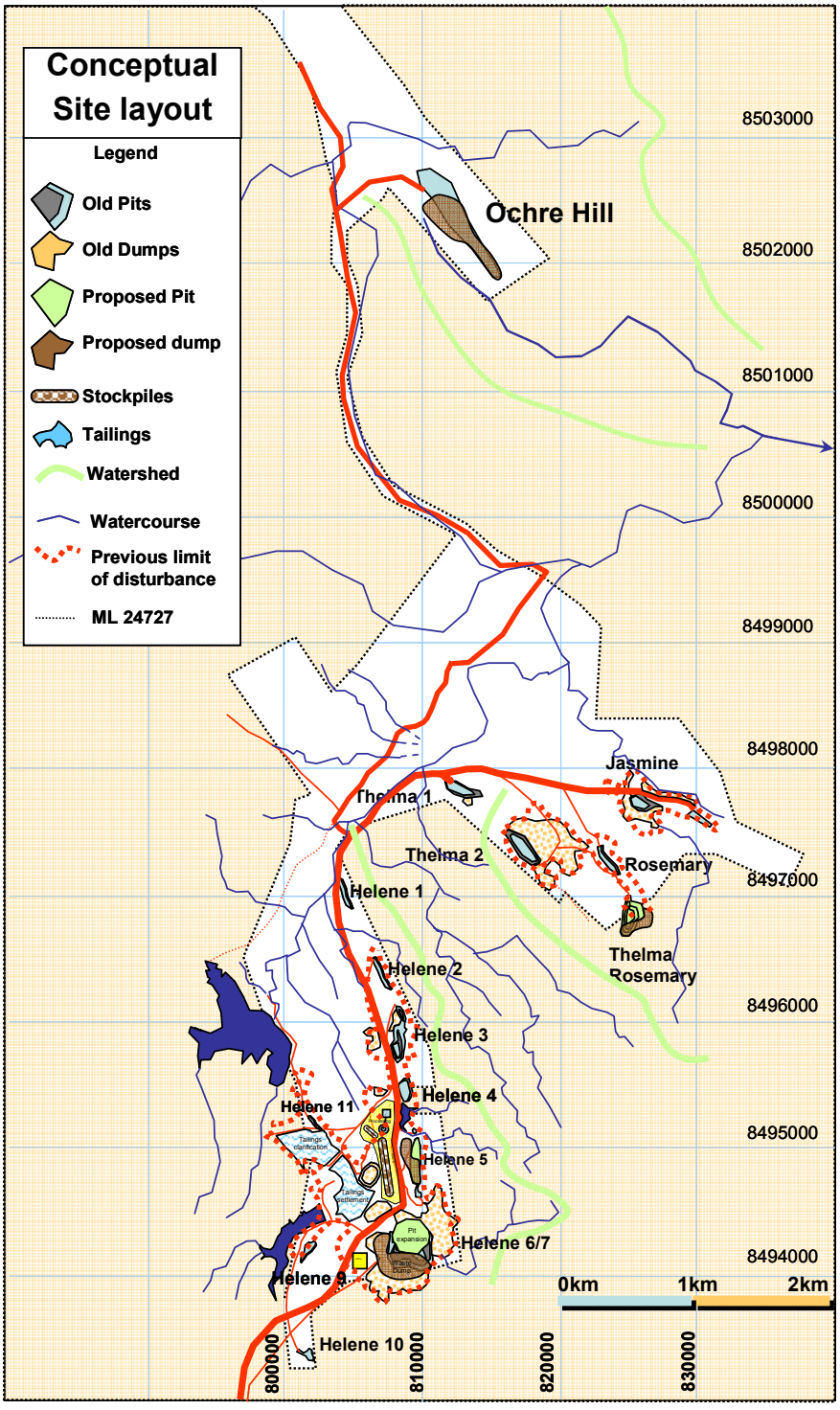
The proposed Frances Creek Iron Mine cultural heritage assessment was commissioned by Territory Iron Ltd./MBS Environmental, 4 Cook Street, WEST PERTH, WA 6005, to undertake historical and Aboriginal sites survey and significance assessment on the Frances Creek, Ochre Hill and Millers deposits, Pine Creek, NT. The report is structured as per the DoE&H Scope of Works and was prepared by Tim Hill- Tim Hill Heritage Management and Planning. Field survey work was undertaken by Tim Hill.

The cultural heritage assessment was undertaken on the Frances Creek, Ochre Hill and Millers iron deposits on Exploration License Areas 24045, 10137, 9999 & 23824 located on Ban Ban Springs and Mary River West Pastoral Stations. The immediate proposed works are to expand the existing mining pits at Frances Creek and Ochre Hill. The Millers deposit was included within the terms of reference for potential future development, as such concept plans for this section have not been developed.

Figure 1. Location of proposed Frances creek mine.

The proposed development involves expanding existing pits at Helene 5, Helene 6/7, Jasmine, Rosemary and Thelma Rosemary and quarrying undeveloped iron deposits at Marion, Ochre Hill and Millers deposits. Ancillary impacts will be tailing dumps, processing/sorting areas and upgrading tracks sufficient for 20 ton trucks.

Figure 2. Concept Plan for Frances Creek and Ochre Hill deposits.



2.0 Physical Environment.

The survey area comprises part of the Mary River and McKinley River catchments and is predominately sedimentary hill country. The area forms part of the Pine Creek Orogen and inferred deposits are mainly located on the 'Lower Proterozoic Wildman Siltstone' within the lower-middle slopes and above quaternary alluvium associated to Frances Creek. 'Gerowie Tuff' is a fine grained silaceous material and is located around the Frances Creek area, mainly to the west, and has excellent knapping qualities.

The highest point in the project area is 257 metres, which occurs on the eastern edge of the MLA24727. The lowest point is around 160 metres in height and is located near the point where the Frances Creek exits the project area. At a broader scale, the Watts Creek floodplain is around 50m.a.s.l. and the highest point is (307m.a.s.l.). The highest areas in the northern area around Millers deposit are 228 and 232m.a.s.l.

The main proposed mining area is located in the secondary arms of Frances Creek, an eastern flowing tributary of the Mary River. The Ochre Hill proposed mining area is located within the same area but on the northern side of Frances Creek and southern catchment of Maude Creek- which flows northeast into the Mary River. The Miller deposit is located in the northern section, in the hills east of the McKinley River wetlands/ blacksoil plain. This section of the plateau has lower relief than the Frances Creek/Ochre Hill deposits and drainage consists of seasonal gullies which flood-out into swamps.

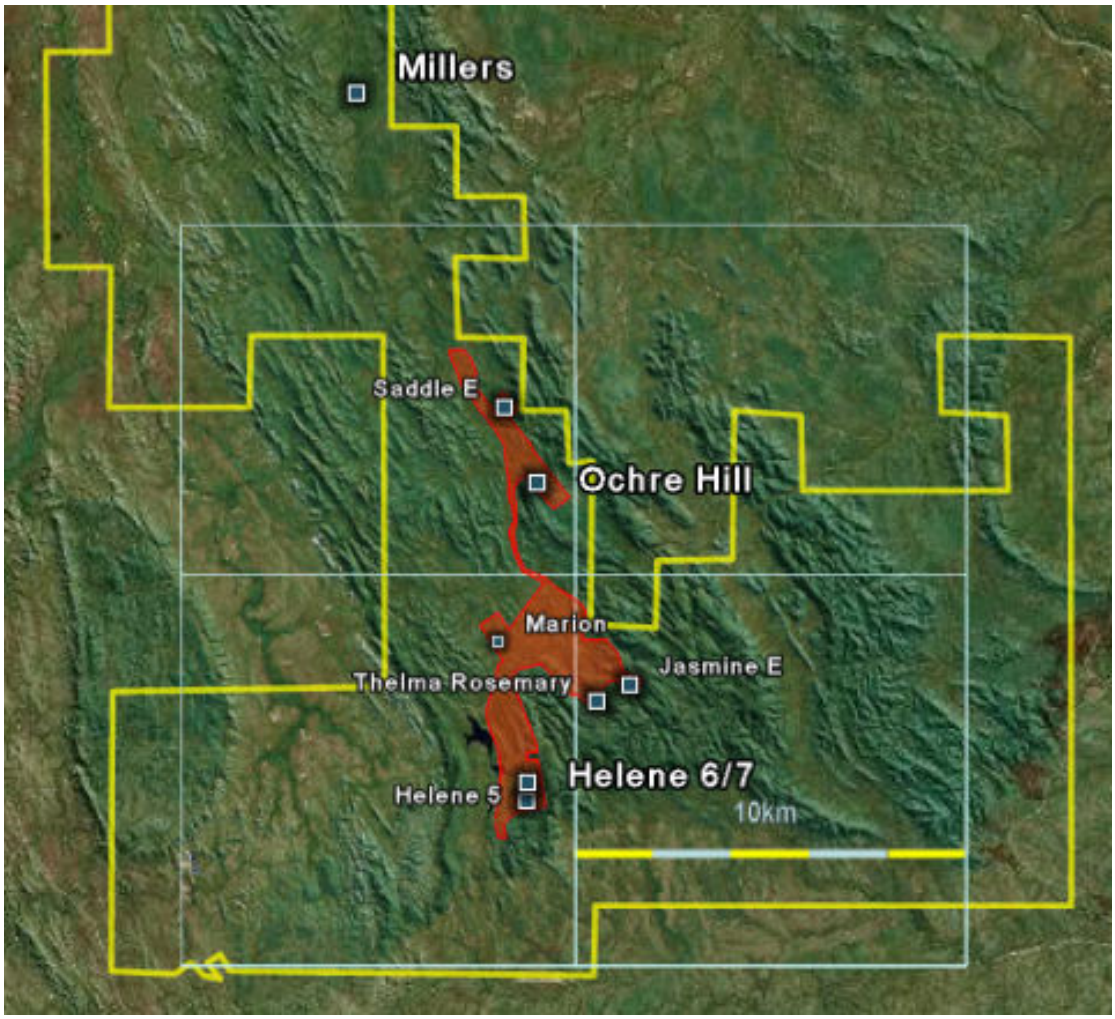
The deposit area is located within open woodland, the lower areas being dominated by *E. tectifica*/*E. latifolia* with an understorey of *Sorghumm spp.* and *Heteropogon Tritecus.* This vegetation structure typically consists of sparse trees with a canopy height of approx. 12m. The upper areas of the study area are typically dominated by *E. tintinnias* with an understory of *Sorghumm spp.* and *Heteropogon Tritecus* (Russel Smith 1995:134-135, 140). A feature of this vegetation is the relatively shallow and gravelly soils.

Typical of the ecology of wetlands across the region, vegetation on the black soil plain of McKinley River/Watts Creek to the west is seasonally variable but is classified as low open-woodland dominated by *Meleleuca viridifolia, E. Polycarpa* and *E.latifolia* with a dense grassy understorey of *Chrysopogon fallax*, *Sorghummspp.* and *Heteropogon Tritecus.*

Ban Ban Springs and Mary River West Pastoral Stations have hade little impact on the environment as the country is marginal grazing land. Impacts typical of pastoralism include the introduction of weed species, increases in rates of erosion /sedimentation and changes to fire regimes, however these impacts have not significantly changed the integrity of the area. Wild horses, buffalo and pig are all present on the mining lease and have had varying impacts on the environment, most markedly around more permanent water sources.

The main Frances Creek deposit landscape is regenerating after the original iron mines which operated between the 1966-1974. Understorey vegetation has re-established and eucalypt species are near maturity, making it difficult to distinguish disturbed and undisturbed areas based on forest structure. The landscape and vegetation structure of the Ochre Hill and Miller deposits are likely to be relatively similar to pre-pastoralism landscapes. A series of fires had gone through parts of the study area in the months preceding the survey.

Figure 3. Satellite photo of proposed development area.



3.0. Cultural Setting

3.1. Non-Aboriginal history.

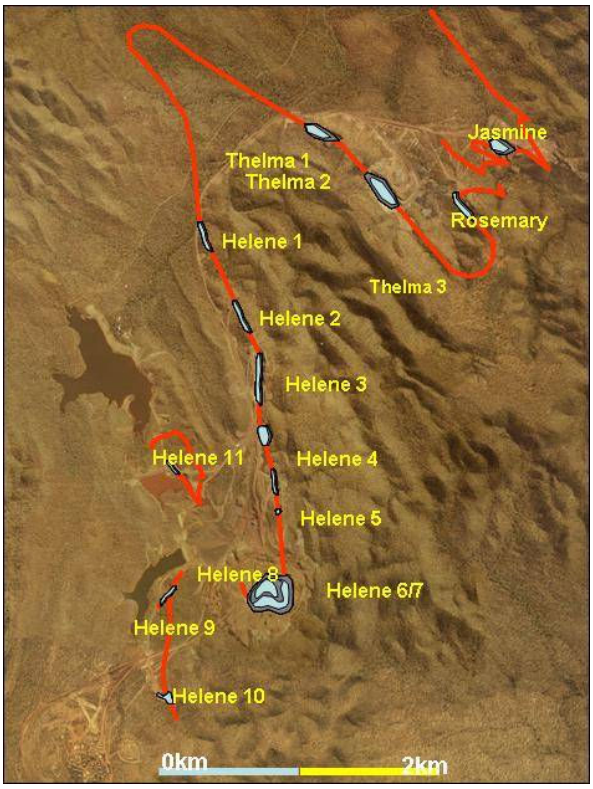
The Frances Creek area was first 'explored' by McKinley in 1866, coming south from the Adelaide River system and then north east across the South Alligator/Jim Jim River to the East Alligator River system (Levitus 1995:66). Attempts to establish pastoral stations in the late 1800's were largely unsuccessful, with the better

pastoral land of the Victoria River Downs proving superior country. The most significant early pastoral station of the region was Goodparla, which was run until the late 1930's by George Cook.

The township of Pine Creek is one of the last remaining mining communities in the Northern Territory and the mining history of the area is integral to the communities identity. The most significant phase of mining was the goldrush in the 1870's which was later bolstered by the construction of the railway line to Pine Creek. As many as 15 mines operated in the 1890's and the population exceeded 3000, many of whom were Chinese labourers working on the railway. Gold was gradually replaced with tin and wolfram in the early 1900's, but it is estimated that during the period 1870-1915 a total of 75 000 ounces were extracted from the area (Flinders Ranges Research 2005).

The Frances Creek mine site is part of a second phase of mining in the region based on Iron and Uranium. The Frances Creek iron mine operated from 1966 until the closure of the Darwin railway in 1974 (Flinders Ranges Research 2005). The mine produced 8mt of iron during the period 1966-1974. Key factors leading to the cessation of operations were tropical cyclone Tracey which led to the closure of the railway and associated infrastructure, an weakening demand from international markets.

Figure 4. existing pits on Frances Creek section



3.2. Aboriginal history.

The Frances Creek area is in the north west part of 'Jawoyn country' which extends south and east to include the southern part of Kakadu NP, Nitmiluk National Park and the Katherine region (Smith 2004:6). Traditional owners from this area identify themselves as 'Munggay', although many have family connections with 'Bining/Mayali' people to the north.. The nearest Aboriginal Community is located at Kybrook Farm and residents identify as Jawoyn, Wagaman, Agicondi, Arigoolia people. The Aboriginal population of Pine Creek area is approximately 130 (Pine Creek Community Council 2002).

> *After work was finished for the dry season, then I walked back to my country. That way I still know who I am. I know country, places, songs.* (Felix Holmes, South Alligator River in Davis 1994:36)

The lower Mary River area is regarded as having a rich Aboriginal cultural heritage, in part due to the nature of the culture itself, traditional population demography and geography, the capacity of traditional owners to maintain their heritage through the European contact period and the nature of the landscape which is condusive to site preservation. Of relevance to the study, Jawoyn had only a minor role in mining around Pine Creek in the 1900's and gained employment on mines in the region in the 1960's and 1970's. The development of large scale uranium mines had a significant social impact across the top end, by environmental impacts affecting traditional

hunting areas, by increasing the availability of alcohol and marginalizing traditional owners in decision making processes (i.e. Lawrence 2000:110).

Across the region Jawoyn hold land through totems, recognised responsibilities for the management of sacred sites and recognised responsibilities for management of land associated with sacred sites (Breeden and Wright 1991:22-27, Smith 2004). Totems are obtained through association of dreaming tracks around places of conception and birth and the areas 'owned' by families.Tthe historical land tenure and land use at Frances Creek (Levitus 1995, Gibson 1999), allowed Jawoyn born up until the 1960's to regularly used the area up to and during the original operation of the mine.

Adjacent Kakadu National Park has a World Heritage listing for its cultural heritage and archaeological values.It is estimated that 15 000 rock art sites exist in the plateau area of nearby Kakadu National Park, 5000 of these have already been recorded (Kakadu Board of Management 1998:96). Four distinct art styles/chronologies are identified in the regional art sequence –Pre-estuarine period (prior to 8000bp); Estuarine period (8000-1500bp); freshwater period (1500bp-200bp) and the most recent Macassan/European contact period (Lawrence 2000:115). Archaeological dating of sequences at Malakununja II and Nauwalabila I indicate that human occupation of the region may extend to 60-50 000 years (Brockwell et.al 1995:24). The majority of art and stratified occupation sites date to within the last 10 000 years (Breeden and Wright 1991:32-33), while more open sites are likely to date to within the period of environmental stability (1500 years to present).

> *They sit down one day only. If him really good place, might sit down two days. Find everything, fish, kangaroo, bush tucker. My father used to kill two kangaroos or three. We used to stay for two days and go on. Other times one day, one day, one day, all the way. Only ceremony time might be stay in one place three or four month. Hunting all over the place, kill kangaroo or bush tucker, yam, or lily, water lily, cheeky yam, any sort of tucker.* (Jimmy Wesan, Barunga Community, in Smith 2004:25)

Unlike the floodplain and riverine environments, the woodland open forests of the upper Mary River catchment have a low diversity of resources- less than 5 taxa of predominately meat and egg species (Brockwell et. A 1995:55-59). Aboriginal land-use models suggest that Aboriginal people from the tropical savannah and wetland regions moved between the wetlands (dry season) and escarpment country (wet season) depending on resource availability (Layton 1992:66, Brockwell et.al 1995:55-59). Areas in the upper-Mary River catchment which are likely to have the higher archaeological potential are those which are not regularly flooded yet provide access to the greater number of habitat types associated with the billabong floodplains- with smaller groups targeting specific resources, such as red ochre and stone quarries, in the surrounding dry country and escarpments (Layton 1992:69,Levitus 1995:87).

> *I got to be buried at South Alligator[River] …Then after one or two years, Take my bones and paint them. Paint them with red ochre first…* (Felix Holmes, South Alligator River in Davis 1994:41)

A scared site has been recorded within the Frances Creek area (approx. e808939 n8945369). A large area associated with the Bula tradition- known as 'sickness country' covers the escarpment country in the south-east section of Kakadu (Kakadu Board of Management 1998:94) and demonstrates the reality of sacred sites to Jawoyn today. This is well outside the Frances Creek area.

3.3. Oral History provided by Bessie Coleman.

During the on-site survey Bessie talked in detail about use of the area by Mungay. The following points are relevant to the study;

- Munggay traditional utilised both the floodplain areas and hills. The main food resource in the hill country were red kangaroo and fish which came up to spawn in the wet seasons.
- Many Munggay were born on cattle stations from the 1940's onwards, Ban Ban Springs, Mt. Wells and Burrundie were important places where Munggay gained pastoral work. This took them into the hill country a lot.
- Bessies great-great grandmother was buried to the east of Pine Creek.
- Bessie can remember travelling through the Frances Creek area in her twenties, coming up in Toyotas to swim in the dam and travel through to the north.
- Bessies mother came from the North Jawoyn area around Frances Creek but her father came from West Arnhem Land. This was common and men and families often walked long distances to be with each other. Munggay usually took shortcuts and waterways such as Frances Creek were used as travelling routes.
- Bessie and her family still actively use their lands and are always taking their children and grandchildren out to maintain their culture.

- The red ochre from iron rich hills were traded as far as Jabiru and Daly Waters. This material was a key part of mortuary ceremonies.
- Bessie can remember working in the administration area of Mt. Todd mine as a young woman, and noted the amount of 'partying' she did at that time.
- The hill country was mainly used in the wet season as Munggay went down to the rivers and floodplains during the dry.
- When living in the hills, people preferred camping along creeks which provided shade and shelter, and on elevated hills near creeks which were windy to cool people off.
- The Millers area was considered not to be a good camping area as it was too far from water, although it contained the largest patch of sand palms Bessie had seen.
- Munggay adopted metal to make spear points to kill introduced animals such as buffalo and pigs.
- The Jawoyn calendar is marked by 6 distinct seasons which guide Munggays use of the land.

4.0 Previous Archaeological Research.

4.1. Data Base Searches.

A search of the Register of the National Estate (RNE) was undertaken on-line and no areas within the Frances Creek area were registered.

A search of the NT Dept. of Environment and Heritage Archaeological Resource Database was undertaken for the Pine Creek 1:250K map sheet and archaeological research undertaken in the Pine Creek area was undertaken. No Aboriginal archaeological or registered historical sites were recorded in the Frances Creek area on the register.

4.2. Archaeological Literature Review

A survey of historical archaeological sites was undertaken on Frances Creek as part of a regional study of mine sites around Pine Creek by Mitchell in 1994 for the National trust of Australia (NT Branch). None of the heritage sites were determined to be of significance and subsequently not nominated for declaration to the NT Heritage Register. The basis for this assessment was primarily the extent to which the buildings had been demolished.

A regional assessment of Aboriginal sites around Pine Creek was undertaken for AAPA by Pearce (1983) and identified site complexes in the mesa country west of Pine Creek.

The nearby Mt. Porter area was surveyed for Aboriginal archaeological sites by Mulvaney (Mulvaney 1993) and more recently by Gunn (Gunn 2005). A complex of sites was located at Mt. Porter, the most relevant for the Frances Creek study being the stone quarry sites on the Gerowie Tuff deposits- the likely source for stone material used at Frances Creek. Within the area covered by 1993 survey 43 sites were located, and a further 6 located during the 2005 survey (Gunn 2005). These sites include rock art, stone quarries, stone artifact scatters, grinding grooves and occupation deposits in rock shelters. Typical stone artefact typologies included bifacial points and blade scrapers on siltstone (Mulvaney 1993). An important feature of the Mt. Porter archaeological sites assemblage is the presence of Granite in the landscape, which is not present on Frances Creek. Granitic areas typically provide shelters and therefore stratified occupation sites, and are of a relatively non-friable nature which preserves rock art and have abrasive qualities (due to silica content) suitable for grinding both stone and plant resources.

Both studies identify a relationship between the location of Aboriginal sites and water resources and elevated ridges/saddles- consistent with the views of Bessie Coleman on selection of camping sites. The Mt Porter complex also identifies springs as a key determinate of site location. Gunn (2005:19) concludes;

> *The archaeological sites around Mt Porter can be seen as a single complex of a number of different site types, all of which are related to the exploitation of the silicified siltstone seam on the ridge area north of Mt Porter (site MP34). As such they provide a record of the overall landuse of the area incorporating specialist quarrying (including leilira blade production), specialist working of the raw material in to particular artifacts (points and straight-edged scrapers), opportunistic use of other stone outcrops (quartz and fine grained siliceous), stone axehead production sites (grinding grooves) and general campsites.* (Gunn 2005:19)

4.3. Aboriginal sites predictive model

The following site distribution is expected;

- Aboriginal archaeological remains will primarily consist of stone artefact scatters- other remain eroding quickly in tropical environments.
- Stone artefact scatters will primarily be located in close proximity to water sources and in close by areas which provided shade and wind.
- Aboriginal sites will not be located on mid slope and gully landforms due to there unsuitability for camping.
- Stone artefact assemblages will not be highly reduced given the diversity of raw materials available in the tuff and siltstone geology. Sites will primarily consist of formed blades, low relative proportions of debitage and cores and low artefact densities.
- Stone artifact scatters will be located in areas associated to use for ceremonial or trade purposes.
- Aboriginal use of the area will date to historical timeframes.
- Archaeological sites will not be located at Millers section due to distance from water.

5.0. Methodology.

5.1. Historical sites

The survey methodology targeted historical material at existing mine areas. Historical objects were located, site location recorded and documented using digital photography. General features/identifiers were recorded and a descriptions of the integrity and context of the object(s) were recorded. Information from the historical objects survey was recorded onto a spreadsheet and entered into a GIS.

5.2. Aboriginal Sites

The aboriginal sites survey was undertaken between the 17th and 21st of October 2005, this included participation by Bessie Coleman and her son-in-law Muhamed on the 20th October to undertake wider surveys

of identified sites and areas which Bessie considered would be likely to be Aboriginal sites. Management considerations were discussed at each site.

Due to the extent of existing disturbance the survey strategy employed was pedestrian transect surveys around areas of the proposed development and in undisturbed areas outside the development to identify site conservation zones on the mining lease. Survey areas identified were Frances Creek Village section, Frances Creek section, Helene section, Marion section, Jasmine West section, Jasmine East section, Ochre Hill section, Millers section. The boundaries of survey units were defined in the field based on landform, access to undisturbed landforms and site access which was greatly restricted in areas where exploration work was taking place in and around pits.

The estimated transect length was calculated by the percentage of each transect not vegetated reduced by the percentage of the transect not disturbed. (i.e. in transect 1 effective visibility through vegetation was 90% and the percentage of transect not disturbed was 95% making the effective transect visibility 85.5 (86)%). The transect area was then reduced by the percentage disturbance to estimate actual transect length (i.e. for transect 1 514m x 0.855 = 440m).

The effective survey coverage was calculated based on the undisturbed portion of each survey area, calculated using GIS as total area of survey unit minus disturbed portion of survey unit. (i.e. for Jasmine west section the survey unit was 938070m2 minus disturbed area of 67236m2 therefore undisturbed survey area was approx. 870834m2). The estimated transect lengths per survey unit were combined and multiplied by 2 (to factor the 2m width of the survey) and then calculated as a percentage of the undisturbed survey area. (i.e. Jasmine West estimated transect length was 4630m / 870834 x 100=0.51%)

The survey aimed to undertake approximately 20km of transects across different landforms. Survey transects were within each landform and were 2 metres wide. At Aboriginal sites transects meandered to cover areas of greater visibility. In the Millers section the survey was restricted to blade scrapes due to the density of ground cover vegetation. Although these scrapes are technically 100% disturbed experience at Marion indicated they do not inhibit site identification- as such disturbance at on these transects was estimated to reduce survey effectiveness by only 20%-providing 80% ground visibility.

Standard archaeological site identification techniques were applied and included modification consisted with known archaeological material and context of the sites/object within the natural and cultural landscape (most notably quartz artefacts). Site boundaries were defined with Bessie Coleman and considered likely landuse, environmental context, proximity to other sites and site management issues.

6.0 Results.

6.1. Historical heritage sites.

Seven historical areas relating to the original Frances Creek mine were relocated and recorded during the survey (Appendix 1). The historical sites were predominately located in the southern Frances Creek section and relate to the old village, on-site offices, mining infrastructure and metal dumps. No objects relating to gold mining in the late 1800's were recorded and apart from the old tracks, no objects or sites associated to the pastoral industry were located during the study.

The most common site type where tips and metal dumps. No complete buildings were recorded and the only remains were concrete pads and building material. During the survey I was informed by the exploration team that the Frances Creek church was still intact- except for the doors which were stolen in 2003. Access to the Village site is now marked as private property.

The Frances Creek railway line is marked by cuttings and formed bridges over floodways. The original rails have been re-used in Pine Creek. Several signs and markers were recorded during the survey.

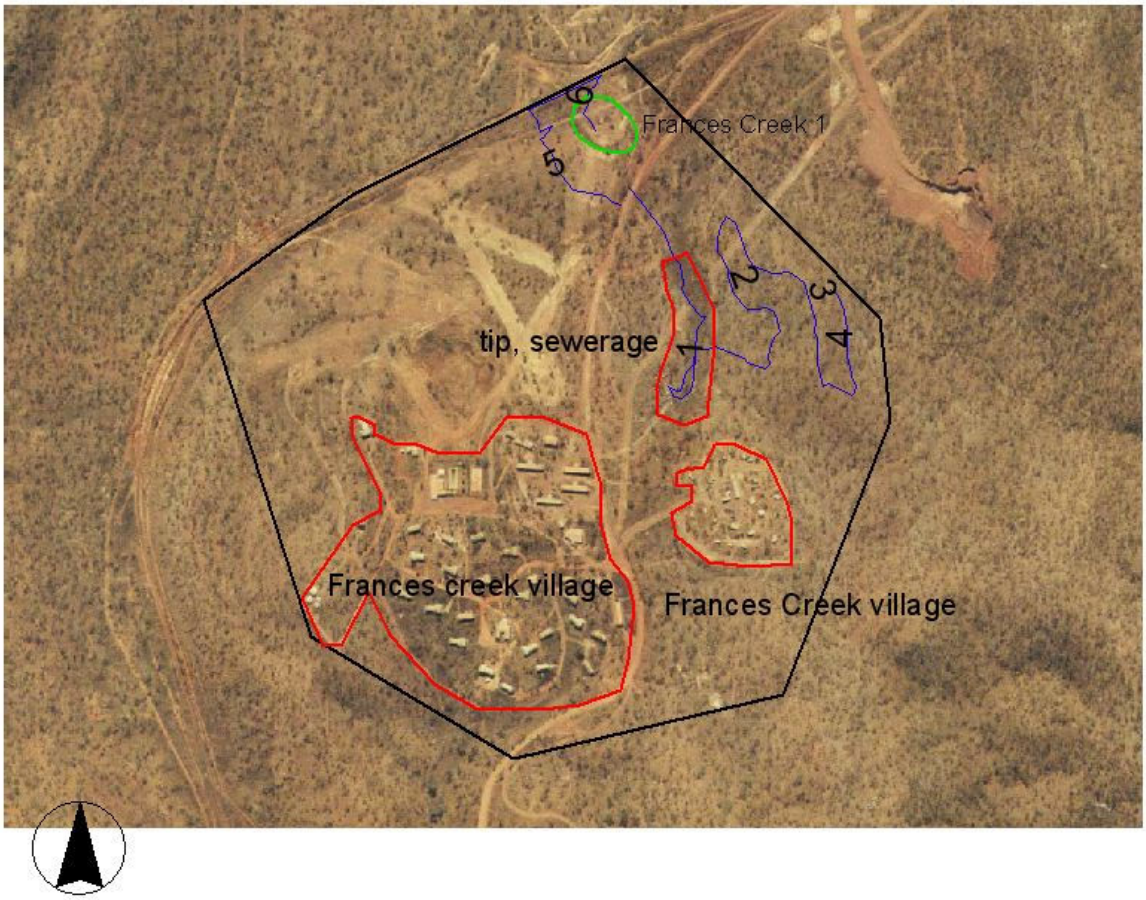
A metal blade was located in Frances Creek 2 Aboriginal site indicating use of the area by Munggay in historical times. This object was recorded as part of the Frances Creek 2 site.

Table 1. Summary of historic heritage sites.

Historic area	Heritage items	Location
Frances Creek Village	Swimming pool, building footings, old tree, bulldozer, public building,	e807460 n8493051

Frances Creek village tip	Car dump, 2x septic/separators and trench, various metal waste.	e807770 n8493215
Mine offices	Building foundations (x2), metal dump, car bodies, corrugated iron tanks.	e808500 n8494280
Helene loading area	Loading ramp, tailings dump, 60 tonne scales, loading buckets	e808430 n8494160
Frances Creek railway line	Line foundations, various signs, rail relocated to Pine Creek.	approx. e807132 n8492654 to e808430 n8494160
Metal dump	44 gallon drums, wire mesh,	e808487 n8495325
Thelma 2 infrastructure.	Iron ladder, building base, excavated trench	e809650 n8467731

Map 6.1. Frances Creek Village survey



Frances creek aboriginal sites.shp
Frances creek historic sites.shp
Survey areas.shp
Frances creek transects.shp

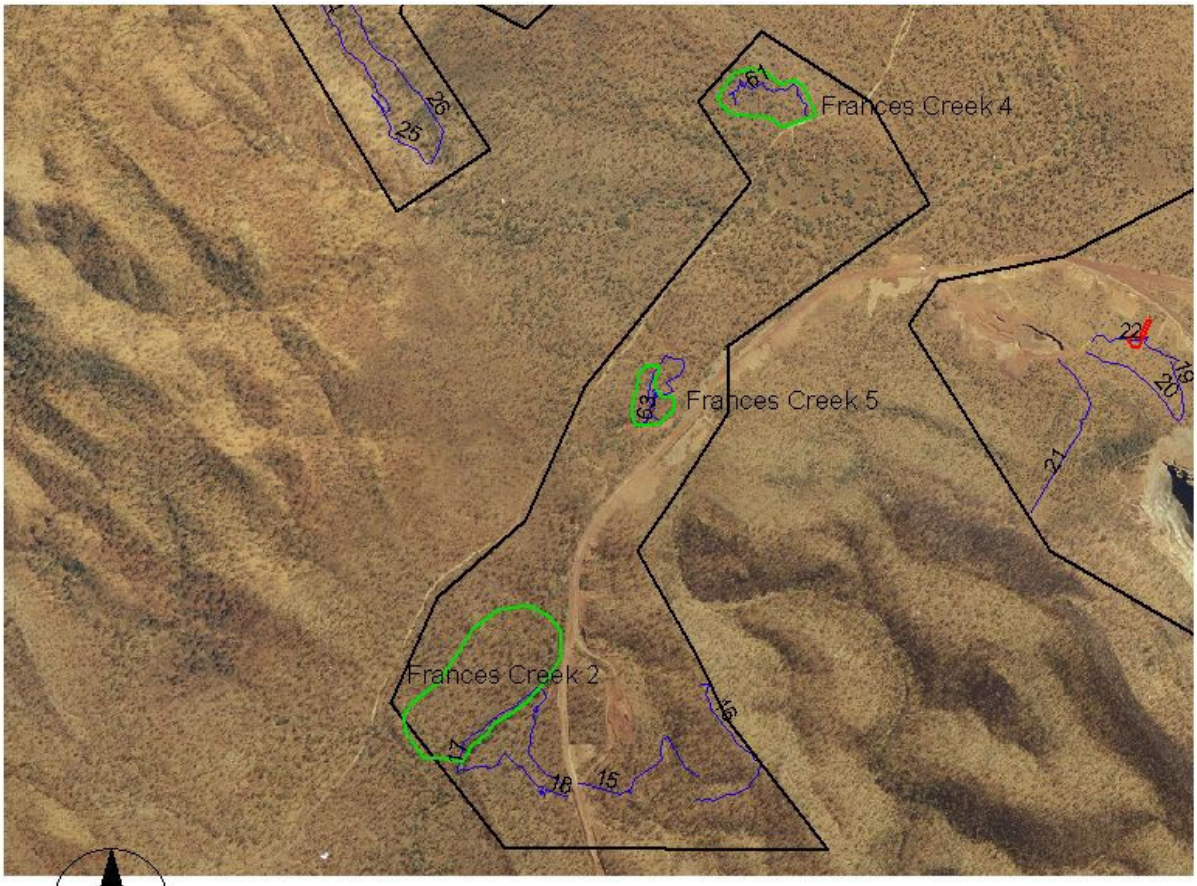
300 0 300 600 Meters

Map 6.2. Helene section survey

Frances creek aboriginal sites.shp
Frances creek historic sites.shp
Survey areas.shp
Frances creek transects.shp

900 0 900 1800 Meters

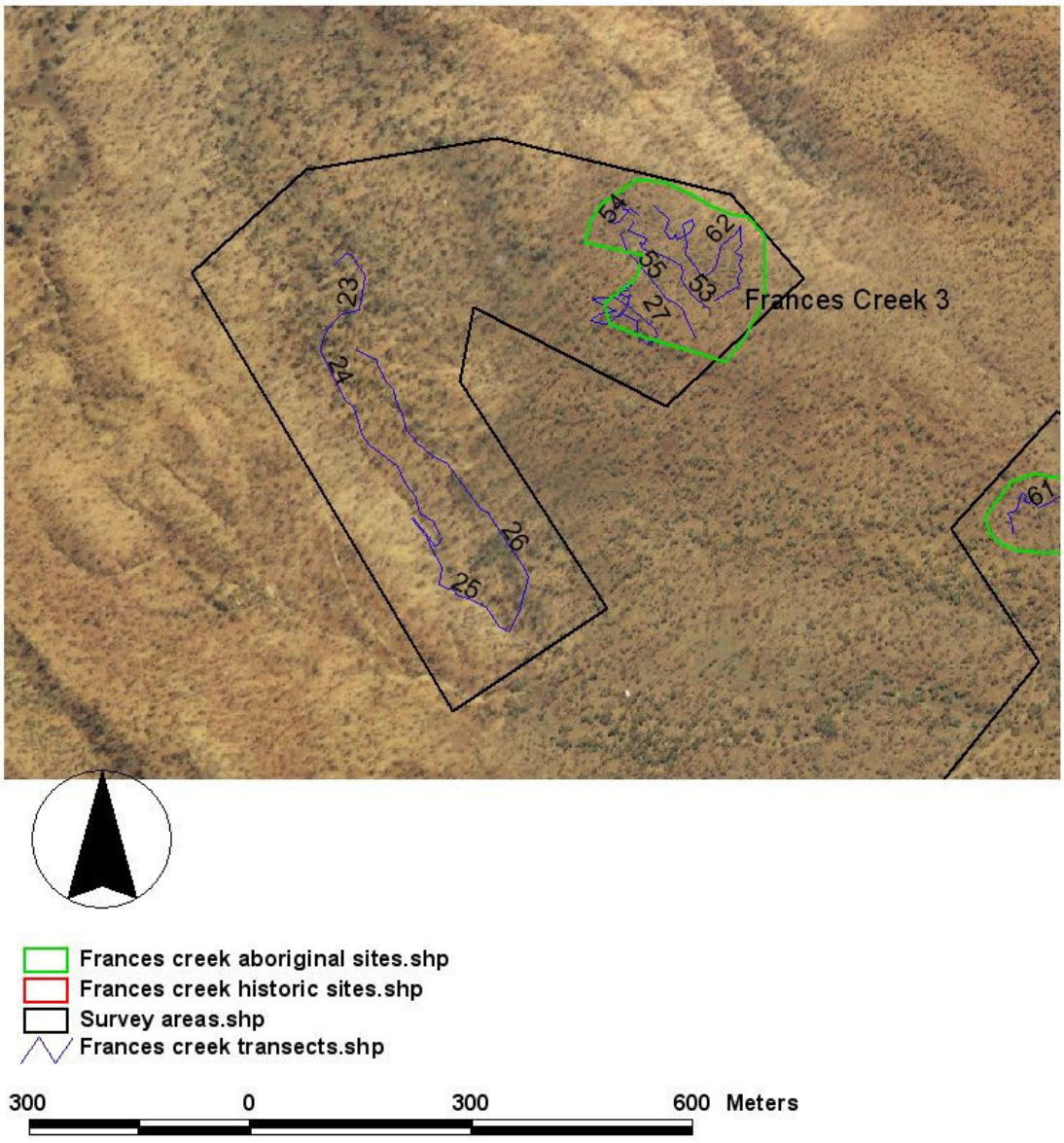
Map 6.3. Frances Creek survey



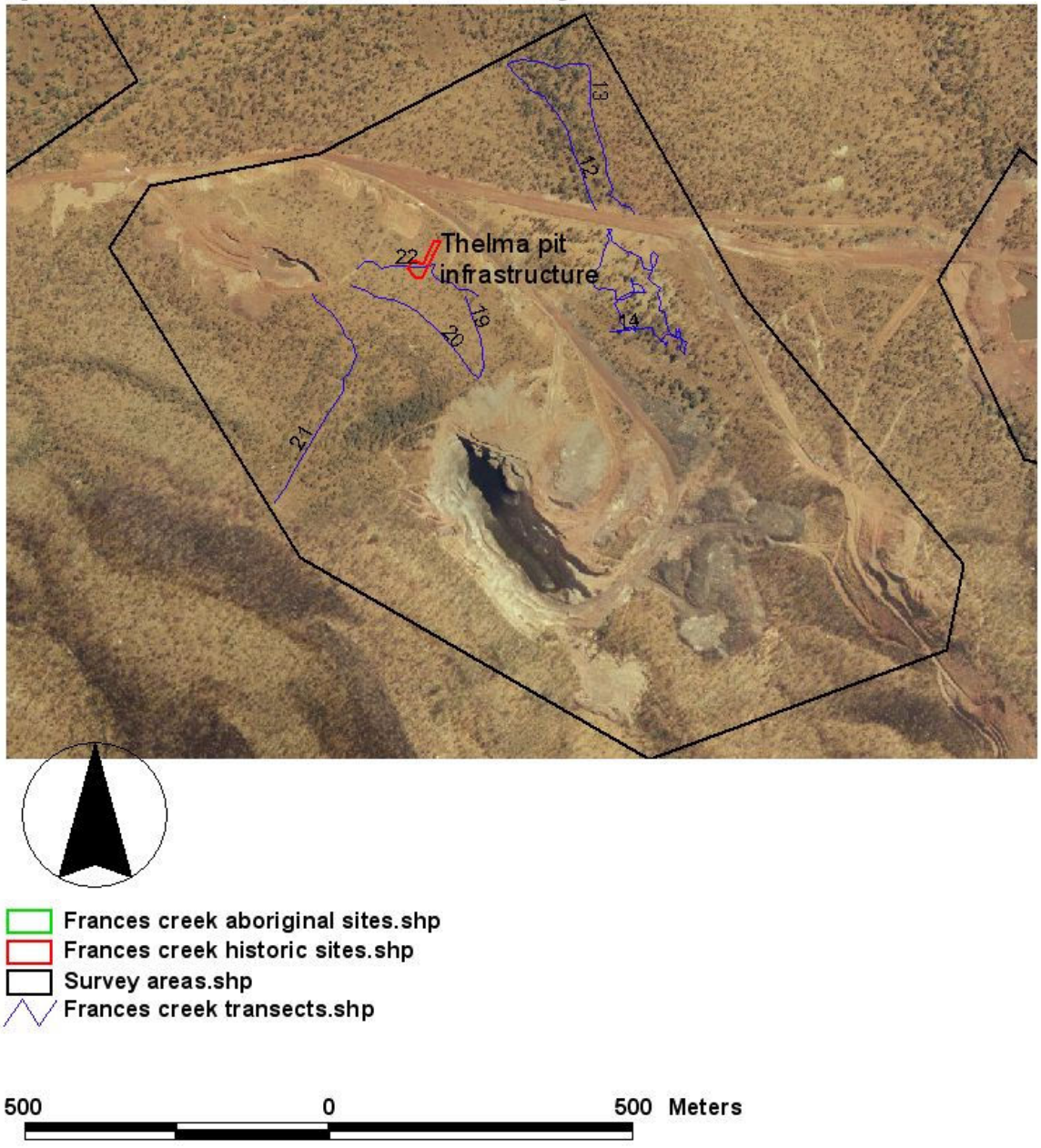
Frances creek aboriginal sites.shp
Frances creek historic sites.shp
Survey areas.shp
Frances creek transects.shp

600 0 600 1200 Meters

Map 6.4. Marion section survey



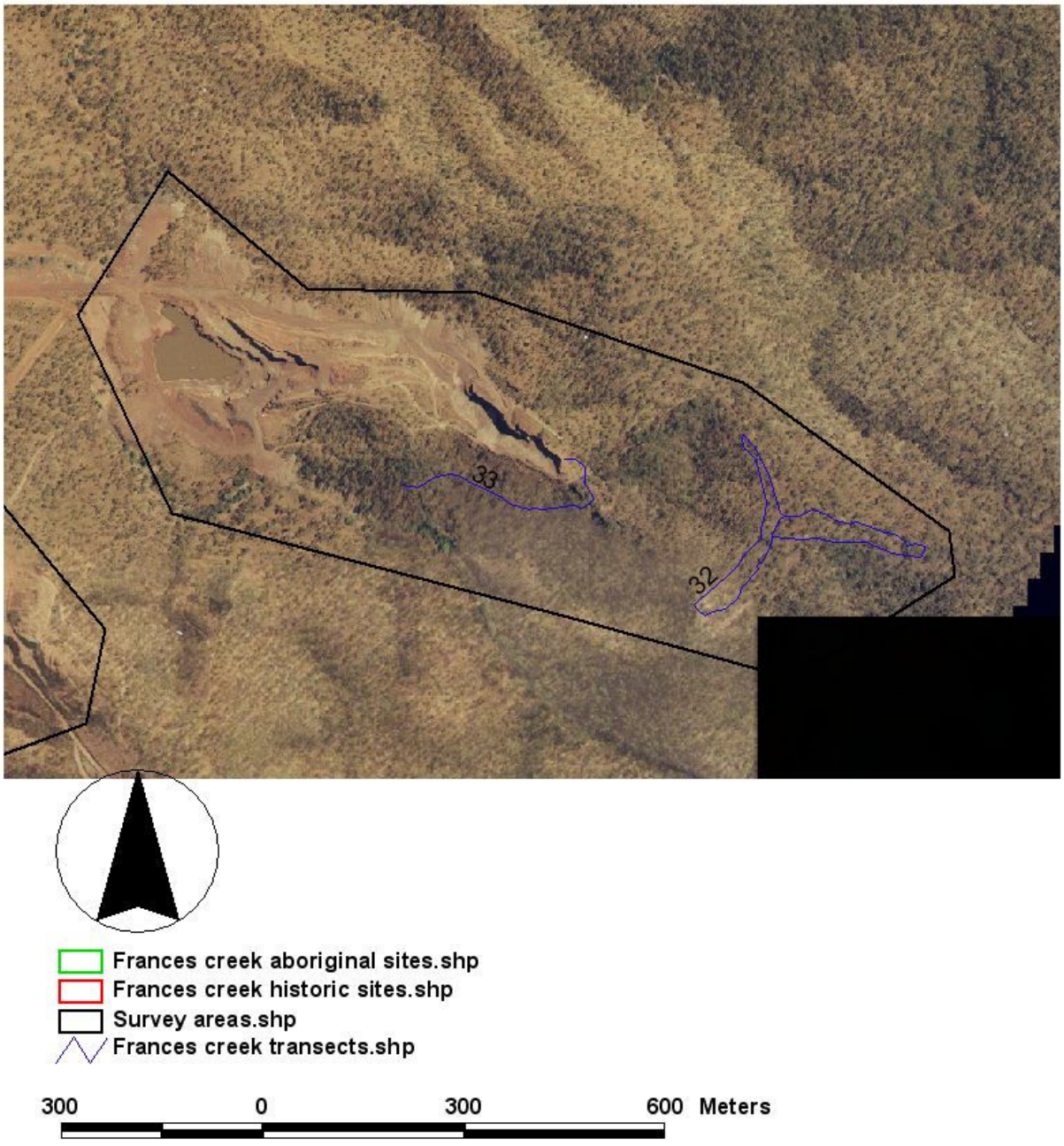
Map 6.5. Jasmine west survey



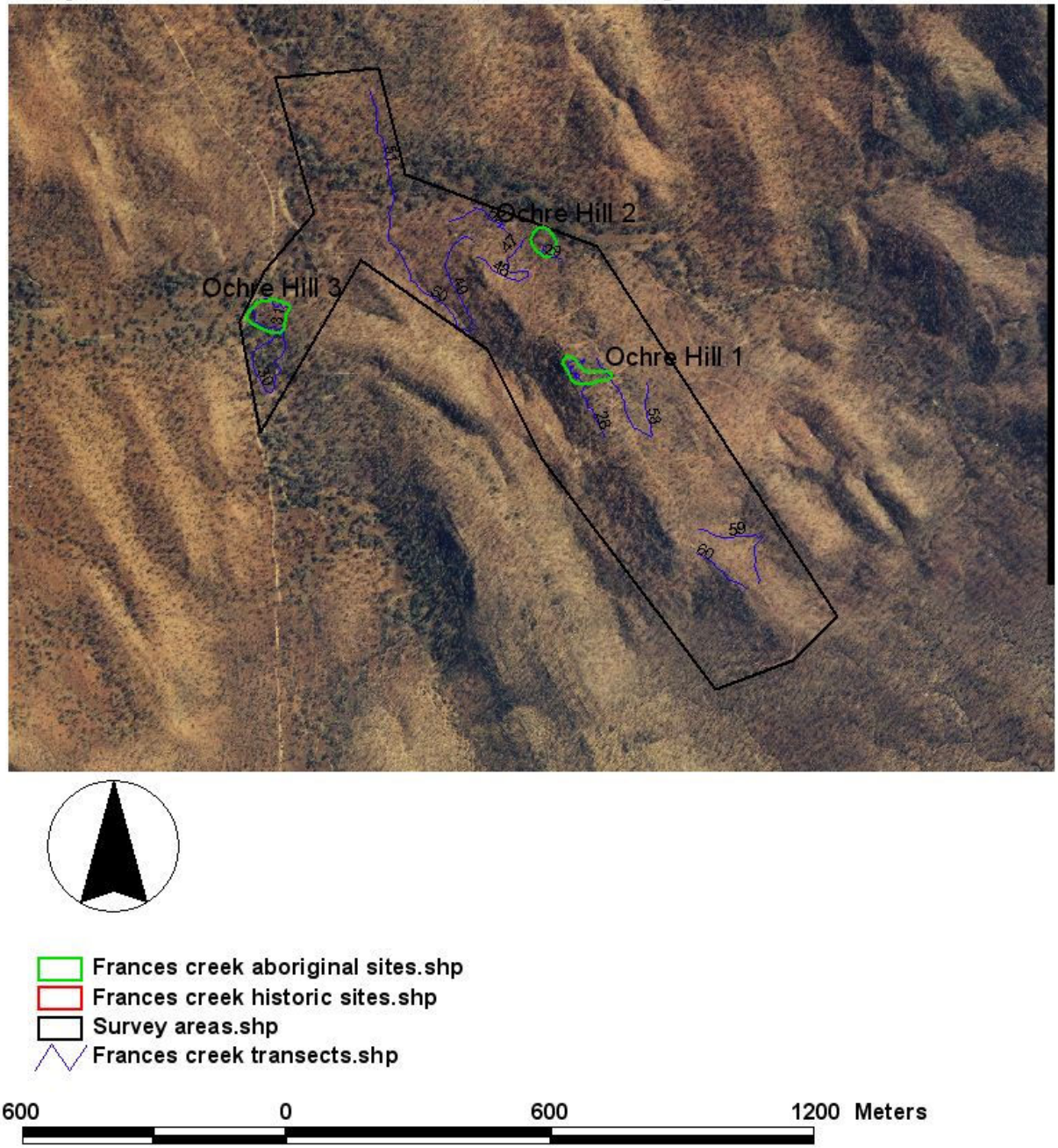
Frances creek aboriginal sites.shp
Frances creek historic sites.shp
Survey areas.shp
Frances creek transects.shp

500 0 500 Meters

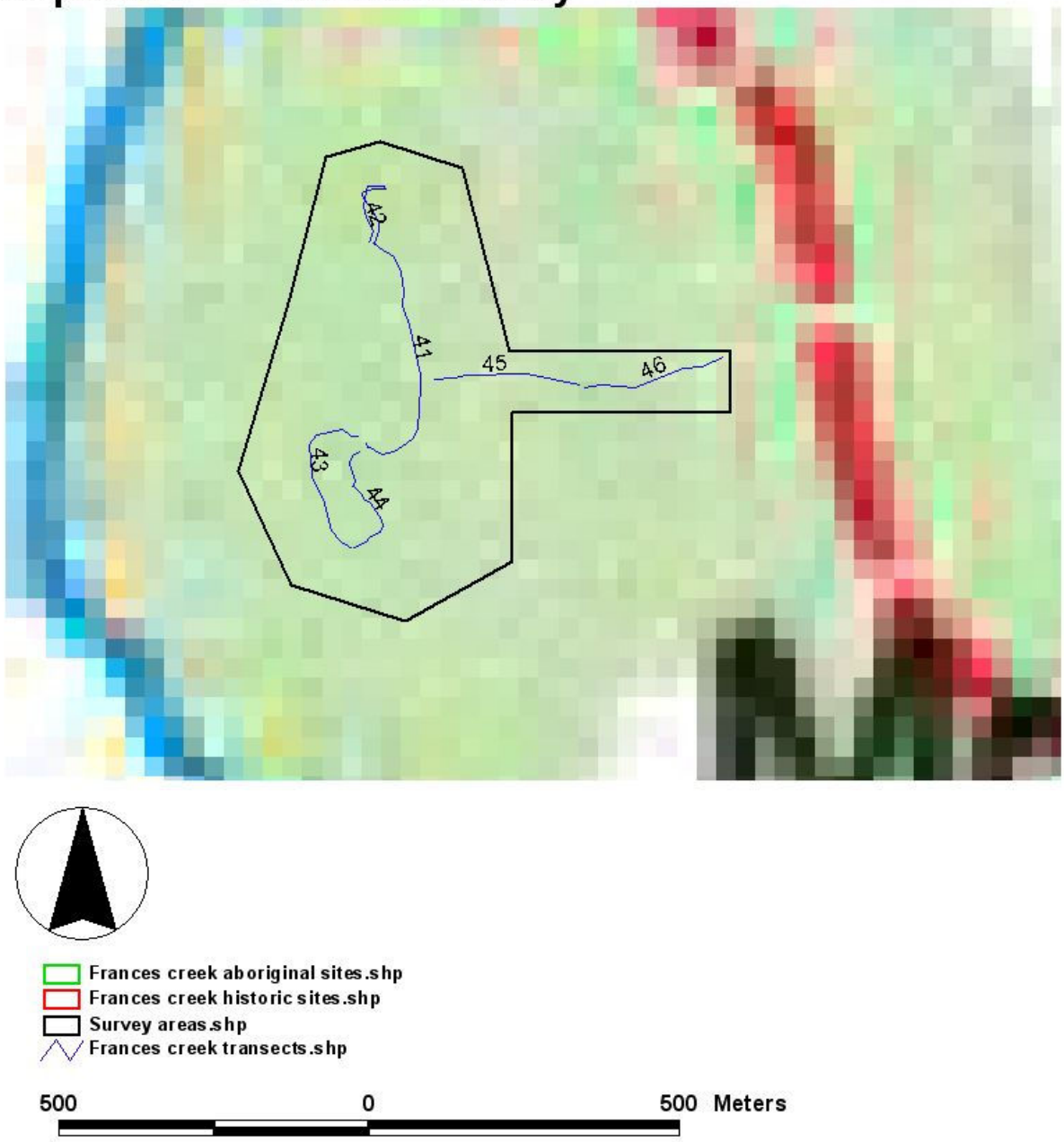
Map 6.6. Jasmine east section survey



Map 6.7. Ochre Hill section survey



Map 6.8. miller section survey



6.2. Aboriginal heritage sites

6.2.1. Survey transect data.

The survey included 63 transects across the following landforms; alluvial plain, creek bank, eroding gully, hilltop, infill gully, lower slope, mid slope and ridgeline. In total 19247m of transects were covered by the survey, the results of which are provided in Table 2.

Table 2. Survey transect data

Survey section	Trans.	Length	Landform	% ground vis	% Un-disturbed	% est visibility	Est. trans. Length	Aboriginal Sites
Frances Creek Village	1	514	lower slope	90	95	86	440	0
Frances Creek Village	2	299	mid slope	90	95	86	255	0
Frances Creek Village	3	354	ridgeline	90	100	90	318	0
Frances Creek Village	4	149	mid slope	90	100	90	134	0
Frances Creek Village	5	340	lower slope	20	90	18	61	0
Frances Creek Village	6	92	lower slope	20	30	6	6	Frances Creek 1
Helene	7	230	lower slope	90	90	81	186	0
Helene	8	206	infill gully	90	80	72	149	0
Helene	9	206	mid slope	90	100	90	185	0
Helene	10	161	ridgeline	90	100	90	145	0
Helene	11	209	lower slope	90	100	90	188	0
Jasmine West	12	449	alluvial plain	100	100	100	449	0
Jasmine West	13	255	lower slope	100	100	100	255	0
Jasmine West	14	1008	alluvial plain	90	100	90	908	0
Frances Creek	15	420	mid slope	80	100	80	336	0
Frances Creek	16	437	hilltop	90	100	90	393	0
Frances Creek	17	590	creek bank	90	100	90	531	Frances Creek 2
Frances Creek	18	348	lower slope	70	100	70	243	0
Jasmine West	19	139	lower slope	80	100	80	111	0
Jasmine West	20	269	mid slope	80	100	80	215	0
Jasmine West	21	412	ridgeline	90	25	23	93	0
Jasmine West	22	244	lower slope	90	90	81	198	0
Marion	23	176	hilltop	60	85	51	90	0
Marion	24	322	mid slope	60	100	60	193	0
Marion	25	287	infill gully	90	100	90	258	0
Marion	26	481	ridgeline	70	90	63	303	0
Marion	27	415	hilltop	60	70	42	174	Frances Creek 3
Ochre Hill	28	318	hilltop	50	50	25	80	Ochre Hill 1
Ochre Hill	29	82	lower slope	70	50	35	29	Ochre Hill 2
Ochre Hill	30	360	lower slope	60	100	60	216	0
Ochre Hill	31	301	alluvial plain	60	80	48	144	Ochre Hill 3
Jasmine East	32	1139	hilltop	80	50	40	456	0
Jasmine East	33	404	mid slope	95	100	95	384	0
Helene	34	172	hilltop	60	90	54	93	0
Helene	35	262	ridgeline	60	100	60	157	0
Helene	36	376	hilltop	60	50	30	113	0
Helene	37	163	mid slope	80	40	32	52	0
Helene	38	96	mid slope	80	90	72	69	0
Helene	39	125	creek bank	60	90	54	68	0
Helene	40	315	creek bank	60	80	48	151	0
Millers	41	433	hilltop	100	80	0	347	0
Millers	42	256	hilltop	100	80	0	205	0
Millers	43	282	mid slope	100	80	0	225	0
Millers	44	215	hilltop	0	100	0	0	0
Millers	45	237	lower slope	100	80	0	190	0
Millers	46	233	alluvial plain	100	80	0	187	0
Ochre Hill	47	101	eroding gully	50	100	50	51	0

Ochre Hill	48	195	mid slope	50	100	50	98	0
Ochre Hill	49	264	lower slope	50	90	45	119	0
Ochre Hill	50	298	eroding gully	50	95	48	142	0
Ochre Hill	51	359	alluvial plain	40	60	24	86	0
Ochre Hill	52	208	creek bank	60	100	60	125	0
Marion	53	198	lower slope	70	100	70	138	Frances Creek 2
Marion	54	108	creek bank	80	100	80	87	Frances Creek 2
Marion	55	179	hilltop	80	100	80	143	Frances Creek 2
Helene	56	234	lower slope	40	100	40	94	0
Helene	57	300	mid slope	40	100	40	120	0
Ochre Hill	58	364	hilltop	60	60	36	131	Ochre Hill 1
Ochre Hill	59	272	mid slope	70	100	70	190	0
Ochre Hill	60	146	hilltop	80	100	80	116	0
Frances Creek	61	325	lower slope	70	100	70	228	Frances Creek 4
Marion	62	438	creek bank	80	100	80	351	Frances Creek 2
Frances Creek	63	474	lower slope	90	100	90	427	Frances Creek 5

6.2.2. Survey effectiveness.

As the survey was undertaken at the end of the dry season ground visibility varied between excellent to good in most transects. Estimated ground visibility by landform units was alluvial plain (75%), creek bank (73%), eroding gully (48%), hilltop (51%), infill gully (82%), lower slope (69%), mid slope (73%) and ridgeline (61%).For each survey unit the effective survey coverage ranged between 0.2 and 1.12% of the each survey area (table 3).

The survey recorded 5 Aboriginal sites within the Frances Creek area, 3 within the Ochre Hill area and none within the Millers Deposit area. Aboriginal artefacts were recorded on 13 of the 63 transects.

Table 3. Effective Survey Coverage.

Section	Area not disturbed (m2)	Area surveyed (m2)	Actual trans. length	Effective coverage	Sites located
Frances Creek Village	390884	3495	2428	0.62	1
Frances Creek	775648	5189	4317	0.55	3
Helene	681770	6111	3540	0.51	0
Jasmine west	870834	5553	4457	0.51	0
Jasmine east	636486	3087	1680	0.26	0
Marion	308281	5207	3474	1.12	1
Millers	289612	3314	2307	0.79	0
Ochre Hill	590680	6539	1527	0.25	3

6.2.3. Summary of site data.

Sites were recorded on the alluvial plain, creek banks and lower slope area, as well as on two of the surveyed hilltops. No sites were located on ridgelines, mid slope or gully landforms. Importantly no sites were located within transects on lower slopes away from water, indicating that access to water may be a more significant factor in determining the archaeological sensitivity of lower slope areas. A total of 11 transect were undertaken on hilltops and only two sites were recorded, both in close proximity to other sites located on creekbanks. Importantly at both Ochre Hill 1 site and Frances Creek 3 other sites were not recorded on nearby hilltop areas away from water.

Site record forms are attached (Attachment 2) and provide an overview of site assemblages. Table 4 provides a summary of landform context, distance to water, estimated site size, artifact densities, raw material diversity and artifact types. In terms of assemblage characteristics (artifacts types, raw material diversity and average density) 7 of the eight sites are similar in nature.

Frances Creek 2 had a knapping area interpreted by Bessie as a single tool production event. This area was located on a nearby low rise and was marked by an apparent movement of angular boulders to make a comfortable work area. The artefact density at this area was approximately 8 per m2 and all artifacts were of the same raw material. Importantly at the end of the dry season water was still in the creek close to the site. Frances Creek 2 was the only site to contain an artifact produced from steel- indicating that the area was used in the historical period. This blade was of similar dimensions to the other stone artifacts and likely served a similar purpose.

The Frances Creek 3 site is unique in that it was the only site with a large and distinct knapping area, contains debitage and cores, has a raw material diversity greater than 5 including material not seen at the other sites, namely a white fine grained silaceous material with inclusions. This site is also unique in that it covers two different landforms, being primarily located on a creek bank but extending onto a nearby hilltop. Another feature of this site is why a similar site was not located along the creek to the west near the main Marion iron ore outcrop (tansects 23-26). A likely explanation is that the main Marion iron ore outcrop has a different soil structure having less gravel and clay and having a relatively lower slope. The area around Frances Creek 3 (to the east) would likely have greater sheet flow during storm and it is likely that waterholes in the creek at Frances Creek 3 would capture and retain relatively more water due to the higher clay content.

The Ochre Hill 1 site is unique being the only site located more than 50 metres from water and is located approximately 100m above the creek line on top of Ochre Hill. The artifact assemblage is similar in nature to the other sites (except Frances Creek 3). It is possible that use of this hilltop is related to quarrying of ochre- or by people looking over the Maude Creek floodplain to spot other groups travelling.

Two of the sites, Ochre Hill 2 and the hilltop portion of Frances Creek 3 had been damaged by exploration works, both contained artifacts eroding out of dirt moved during track/drilling pad construction. The date of exploration works were not identified, however the exploration team indicated that the exploration tracks dated to the original mining period and had been recently re-cut to remove vegetation.

Frances Creek 1, 4 and 5 were basically similar- characteristically having low artifact densities, blades and flakes made from quartz and fine grained silaceous material, were located close to creekbanks and were most likely overnight camping or hunting sites.

Table 4. Aboriginal site summary data.

Name	landform	Distance to water	Estimated size (m2)	Est. max density	Est. ave. density	Est. diversity	Artifact types
Frances Creek 1	Creekbank	10	4900	4	1	3	Flakes, formed blades
Frances Creek 2	Creekbank	2	68300	8	.5	4	Flakes, formed blades, steel blade, Knapping floor.
Frances Creek 3	Creekbank Lower slope Hilltop	2	45700	30	1	6	Flakes, formed blades, debitage, cores. Distinct knapping/reduction area.
Frances Creek 4	Lower slope	50	18200	2	.2	3	Flakes, formed blades
Frances Creek 5	Alluvial plain	10	7900	3	.5	3	Flakes, formed blades
Ochre Hill 1	Hilltop	300	3200	5	.2	4	Flakes, formed blades
Ochre Hill 2	Lower slope	5	2700	2	.2	3	Flakes, formed blades
Ochre Hill 3	Alluvial plain	5	5200	1	.1	3	Flakes, formed blades

6.3. Assessment of Predictive model

The predictive model made the following statements;

1. *Aboriginal archaeological remains will primarily consist of stone artifact scatters- other remains eroding quickly in tropical environments.*
    - All of the eight sites located where stone artifact scatters/open campsites. During the transect surveys no rock shelters of a suitable nature to collect archaeological deposits were located. The only non-stone artifact was the steel blade located at Frances Creek 2.
2. *Stone artifact scatters will primarily be located in close proximity to water sources in areas which provided shade and wind.*
    - Of the eight site located seven were located within 50 metres of a watercourse and five on a creekbank. All of these areas had large eucalypts and sites extended onto nearby lower slopes to catch wind- with the exception of Frances Creek 5 where the lower slope area was covered by large angular boulders which Bessie considered were not good for siting or making artifacts.
    - The exception to the prediction was Ochre Hill 1, located on a large hill a good walk from water.
3. *Stone artifact assemblages will not be highly reduced given the diversity of raw materials available in the tuff and siltstone geology. Site will primarily consist of formed blades, low relative proportions of debitage and cores and low artifact densities.*
    - The sites typically comprised flakes and formed blades between 40-100mm long.
    - Frances Creek 2 and Frances Creek 3 sites contained discrete knapping areas, however the knapping area at Frances Creek 3 was much more complex than at Frances Creek 2 and contained debitage, cores and raw materials not seen in other sites.
    - The majority of raw materials were of a fine grained silaceous nature- typical of the Gerowie Tuff.
    - Estimated maximum artefact densities in all sites except Frances Creek 3 were less than 10. Estimated average artifact densities were less than 1 per m2 for all sites, with average densities at both Frances Creek 1 and Frances Creek 3 estimated at 1per m2, the difference being the relative size of the 2 sites (4900m2 and 45700m2 respectively).
4. *Stone artifact scatters will be located in areas associated to use for ceremonial or trade purposes.*
    - Bessie indicated that the ochre from iron ore deposits was a key part of mortuary rites and traded between Daly Waters to the south and Jabiru to the north. The Ochre Hill area was noted by Bessie as a likely place that Munggay would have sought Ochre from, and it is likely that the name of the hill derives from collection of ochre by Munggay in the historical period. The likely use of the hill for this purpose is the likely explanation for the presence of the Ochre Hill 1 site, which falls outside part 2 of the predictive model.
5. *Aboriginal use of the area will date to historical timeframes.*
    - A single steel blade was located at Frances Creek 2 indicating use of the Frances Creek area in historical times.
6. *Archaeological sites will not be located at Millers section due to distance from water.*
    - No archaeological sites were located at the Millers section.

7.0. Discussion.

7.1.1. Non-Aboriginal heritage.

The following were considered to assess the heritage significance on the Frances Creek non-Aboriginal heritage sites/objects.

- The mine began operation in 1966 and operated for a period of less than 10 years. This period of landuse took place less than 40 years ago.
- The proposed use is consistent with the historical use of the area- except under different ownership and with new technologies.
- Mining is an important part of the Pine Creek communities identity.
- The Pine Creek National Trust Museum preserves and actively manages a representative range of heritage items from the region.
- The main type of mining heritage in the area is associated to gold and as such the Frances Creek iron mine is a unique part of the regions history.
- The closure of the mine was linked to a significant event in the regions history- tropical cyclone Tracey.
- Historical stories and memories to interpret potential heritage items can be documented and preserved, increasing the potential/future values of heritage items.
- Infrastructure can be re-used (such as roads and dams) by the current proposal adding to the potential heritage value of the site.

The Frances Creek railway is the only heritage object with obvious potential heritage value. Rail was a key component of the operation of the mine, and the inability to freight the ore out was the trigger for cessation of mining at Frances Creek. Significantly, the construction of the Alice Springs to Darwin railway has provided impetus for the current operation. The rail track itself has been reused in Pine Creek, however the footprint and associated engineering is obvious within the landscape. Importantly, the integrity of the railway line will likely survive.

7.2.1. Aboriginal heritage.

The following were considered to assess the heritage significance of the Frances Creek mine Aboriginal archaeological sites.

- The tropical savannah region of the top end has an established Aboriginal archaeological assemblage- particularly Aboriginal rock art.
- Chronological data from the tropical savannah region suggests that archaeological sites potentially provide information about to first peopling of Australia and subsequent cultural contact with South-East Asia.
- Aboriginal Native Title claims have not been fully resolved in the region and archaeological sites may be used to support claims.
- Cultural landscapes (inclusive of archaeological sites) are actively managed within Kakadu NP Nitmiluk NP, Mary River NP and Umbrawarra NP. Kakadu National Park has a world heritage listing for its cultural sites (Kakadu Board of Management 199:215).
- The open woodland environment was important to traditional economies and land use during key seasons, allowing year round use of the region by Jawoyn people.
- Aboriginal sites can play an important role for Jawoyn elders to maintain and pass on cultural knowledge.

Of the recorded sites, Frances Creek 3 site has the highest significance by virtue of its size, diversity of raw materials, presence of a large knapping areas and location in the landscape. The site has the capacity to demonstrate to generations of Munggay how Jawoyn people use the land and enlighten archaeological models of landuse and distribution of raw materials from source locations. The Marion section demonstrates that the nature of drainage in addition to proximity to water may be a factor in determining site selection by Munggay,

and therefore provides an opportunity to investigate relationships between site distribution and geomorphology in more detail. A key issue to resolve is the management of the hilltop section, which has been disturbed by exploration works and is potentially in an area identified for mining.

The significance of Ochre Hill complex of sites will largely be determined by the assessment of cultural significance by Aboriginal Areas Protection Authority. If the name of the hill does link to use by Munggay for ochre collection the significance of the sites will provide a tangible link to that use. The Ochre Hill complex has the potential to answer more specific archaeological questions associated to spatial distribution and potentially relationships between artefact distribution and gender.

Frances Creek 2 is potentially of high significance to Munggay as it has a clear link to the historical period. At this site Bessie was the most excited about the prospect of bringing her grandchildren to show them the steel blade. Again, the spatial distribution of artifacts across the site provides an opportunity to investigate archaeological questions about spatial patterning as a small knapping area is located away from the main site.

The remaining sites are all of relatively similar significance, providing a tangible link to past use of the area by Munggay and at a regional level have the potential to contribute to research on spatial distribution of stone resources.

Creekbanks, lower slopes and alluvial areas were identified as the most sensitive archaeological areas. No sites were located on steeper landforms- with the exception of the two sites located on hilltops (Ochre Hill 1 and a section of Frances Creek 3). Access to water also appears to be a significant factor in determining site distribution, with all sites except Ochre Hill 1 being located within 50m of a creek line.

8.0. Summary and Recommendations.

8.1. Statement of significance- non-Aboriginal sites.

The Frances Creek area has a number of locally significant heritage items associated to the original iron mining operation between 1966 and 1974. Many of the objects are in a poor to moderate state of preservation or have been move from there original context, reducing the current and potential heritage value. The Frances Creek railway line was the only heritage feature identified as having potential significance.

By the cessation of the proposed operation (expected 10 years) the history of mining at Frances Creek will extend beyond 50 years. In that time it is likely that other mines will have been opened in the area, potentially affecting the relative significance of the old Frances Creek mine.

8.2. Statement of significance- Aboriginal archaeological sites

The archaeological sites of the Frances Creek area are of low to moderate significance given the extent of existing landscape disturbance in the area and presence of a relatively intact site complex at nearby Mt Porter. The Frances Creek 2, 3 and Ochre Hill site complexes are of moderate significance, the existing landscape

disturbance reducing the capacity of the sites to provide a full picture of Munggay use of country and the capacity of archaeological research to fuller understand the landscape context of the sites.

The archaeological sensitivity of the areas immediately around the proposed mine, mainly in the lower-mid slope and ridgeline land-units, is relatively low. The archaeological sensitivity of the creek and alluvial areas is relatively high.

8.3. Cultural heritage management recommendations.

NOTE: The following recommendations should be considered in conjunction with the any restrictions and instructions provided by the AAPA Authority Certificate.

1. Undertake a heritage assessment of the original Frances Creek rail line at the cessation of the proposed mining operation to assess it significance and potential for declaration under the Heritage Conservation Act (1991).
2. Seek approval from the Department of Environment and Heritage and engage a qualified archaeologist and Jawoyn traditional owners to relocate artefacts from Ochre Hill 1 to a location identified by traditional owners prior to quarrying on the northern section of Ochre Hill.
3. Construct semi-permanent fencing to protect Ochre Hill 2 and Ochre Hill 3 sites during quarrying.
4. Seek approval from the Department of Environment and Heritage and engage a qualified archaeologist and Jawoyn traditional owners to relocate artefacts from the hilltop section of Frances Creek 3 to the creek bank prior to quarrying at this portion of the Marion section. Consideration should be given to developing the north western iron ore body before the area associated to Frances Creek 3.
5. Include Aboriginal sites along Frances Creek when identifying conservation zones within the Environmental Management Plan.
6. Consider applications by appropriate research bodies to undertake additional archaeological research in the area.
7. Relocate waste ochre material to an area accessible for Munggay.
8. Demonstrate diligence with regard to Aboriginal sites in undisturbed archaeologically sensitive areas associated to Frances Creek when developing ancillary infrastructure. This may include targeted pre-clearance archaeological surveys or sites monitoring by officers from DoE&H and the Jawoyn Association.

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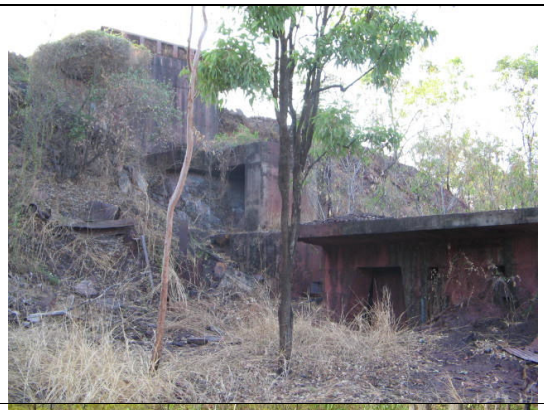
Attachment 1. Historic Heritage sites

View of the old Frances Creek Village. Piles of concrete mark the locations of old buildings.	
Swimming Pool, large shade tree, BBQ and burnt building. The pool is relatively intact, with at least 95% of tiles still present. The tree has survived recent fires and is in good health. The cement in the BBQ is eroding.	
Septic/separator tank. Two three pit separator tanks are located in close proximity and connect with a excavated trench 1.5m deepx0.7m wide and approx. 20m long.	
Car dump-contains 18 vehicle bodies all dating to the late 60's and 70's. All vehicles have been burnt.	

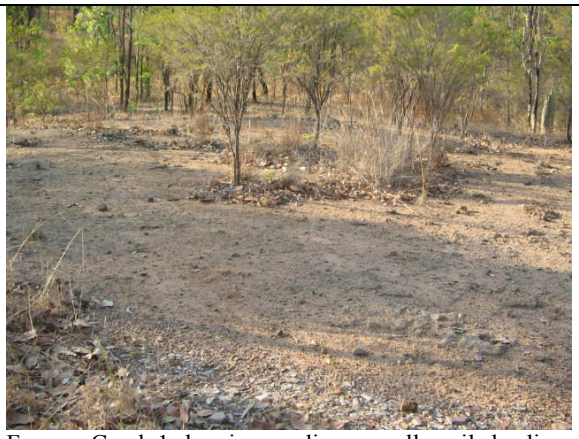
Frances Creek rail line cutting with signpost.	
Sign on Frances Creek railway.	
Metal Dump- Helene pit	
Concrete foundation- Helene pit offices	

Loading equipment-Helene pit	
Avery 60 ton scale	 
Loading area- Helene pit	
Concrete foundation- Thelma 2 pit area	

Attachment 2. Aboriginal Site record forms

Background	Name	Frances Creek 1
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e8087650n8493536
	1:50K map sheet	Union Reef
	Date recorded	17.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	On Frances Creek mine road approx 600m north of the old Frances Creek village- on the western side of the road between the road and old train line.
Context	Vegetation type	Open woodland
	Landscape setting	Creek bank/lower slope
	Substrate	Gravel and coarse sand
	Dominant species	Eucalyptus
	Nearest water	Channel running into Frances Creek-10 metres. A soakage in the creek is located just south of Frances Creek Village.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit
	Dimensions	100m x 60m
	Condition	Some sheet erosion in bottom section- top section disturbed by earthworks associated to railway line. One metal pipe-end was located at the site indicate prior disturbance.
	Artefact density (est.)	1 m2
	Max artefact density	4 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (grey, black), Quartz
	Raw material source	Local quartz- Mt. Porter

Sample of artifacts from Frances Creek 1



Frances Creek 1 showing eroding gravelly soils leading to creekbank

Background	Name	Frances Creek 2
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e808219n8496880
	1:50K map sheet	Union Reef
	Date recorded	18.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	On the main Frances Creek approximately 2.7km past the first main pit (Helene5/6) on the western side of the road. The site is located on the north east bank of the creek at the

		confluence with a chanel coming from the north. The site extends along the bank of the northern chanel back to a low rocky outcrop to the north.
Context	Vegetation type	Open woodland
	Landscape setting	Creek bank/lower slope
	Substrate	Alluvial soil
	Dominant species	Eucalyptus
	Nearest water	Channel running into Frances Creek-2 metres. At the time of recording just before wet season water was visible in the chanel where pigs had been digging.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit
	Dimensions	400m x 200m
	Condition	Undamaged- some sheet erosion
	Artefact density (est.)	0.5 m2
	Max artefact density	8 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (grey, black), Quartz 1 blade made from steel.
	Raw material source	Local quartz- Mt. Porter

Frances Creek 2 showing flat alluvial area and creek in background

Steel blade at Frances Creek 2

Background	Name	Frances Creek 3
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e808247n8498688
	1:50K map sheet	Union Reef
	Date recorded	19.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	Take the track heading across the creek approx. 3.15km past the first main pit (Helene5/6) which links up to the original road. Take the second graded track to north (approx. 850m) and head up the hill approx. 700. The site is located on the top of the hill and on the bank of the creek below the hill (northeast).
Context	Vegetation type	Open woodland
	Landscape setting	Creekbank/hilltop
	Substrate	Small eroding gravels.
	Dominant species	Eucalyptus
	Nearest water	Channel running into Frances Creek-2 metres. The chanel was completely dry at the time of recording.
Site description	Site type	Stone artefact scatter

	Site structure	Surface deposit. One main cluster of artefacts is obvious- artefacts are mainly formed blades and flakes with relatively little debitage.
	Dimensions	250m x 200m
	Condition	Top section damaged by exploration track. Artefacts visible in grader soil dumps and on the graded track.
	Artefact density (est.)	1 m2
	Max artefact density	30 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (light grey, grey, black), Quartz Appeared more diverse than other sites. Raw materials developed patina and white cortex not seen at other Frances Creek sites. One raw material was almost white with grey inclusions.
	Raw material source	Local quartz- Mt. Porter

FC3 site on hilltop-car is parked on the exploration track.

Bessie Coleman at the main artefact scatter

Main artefact scatter showing concentration of artefacts.

Examples of flaked blades and patina on raw material (left flake)

Flaked artefact in graded soil on hilltop section

Flakes n graded soil on hilltop section.

Background	Name	Frances Creek 4
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e808807n8498303
	1:50K map sheet	Union Reef
	Date recorded	20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	Take the track heading across the creek approx. 3.15km past the first main pit (Helene5/6) which links up to the original road. Take the second graded track to north (approx. 850m) and head up the hill approx. 200. The site is most easily identified by a stand of cycads to the east and runs down the slope to the main road.
Context	Vegetation type	Open woodland
	Landscape setting	lowerslope
	Substrate	Small eroding gravels.
	Dominant species	Eucalyptus
	Nearest water	Chanel running into Frances Creek. The site is located near a floodway. The chanel and floodway were completely dry at the time of recording.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit.
	Dimensions	170m x 50m
	Condition	undamaged
	Artefact density (est.)	0.2 m2
	Max artefact density	2 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (grey, black), Quartz.
	Raw material source	Local quartz- Mt. Porter

Muhamed and Bessie at the Frances Creek 4 cycad stand. Artefact located with GPS & notebook

Flaked blade with distinctive patina.

Background	Name	Frances Creek 5
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e808247n8498688
	1:50K map sheet	Union Reef
	Date recorded	19.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	On the main Frances Creek mining road approx. 3.25km past the first main pit (Helene5/6). The site is located on the northern side of the road below the rocky outcrop.
Context	Vegetation type	Open woodland
	Landscape setting	Alluvial plain
	Substrate	Alluvial soil
	Dominant species	Eucalyptus
	Nearest water	Channel running into Frances Creek-approx 10 metres. The chanel was completely dry at the time of recording and likely has been affected by the raised road/train line.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit. One main cluster of artefacts is obvious- artefacts are mainly formed blades and flakes with relatively little debitage.
	Dimensions	130m x 100m
	Condition	Undamaged- one section may have been eroded by changed chanel after the road was built.
	Artefact density (est.)	0.5 m2
	Max artefact density	3 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (light grey, grey, black), Quartz
	Raw material source	Local quartz- Mt. Porter

 Frances Creek 5 site showing rocky outcrop, water chanel and raised road in background.	 Flaked blade typical of Frances Creek artefacts.

Background	Name	Ochre Hill 1
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e809162n802544
	1:50K map sheet	Union Reef
	Date recorded	18.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	From the Ban Ban take the first right approx. 4km after crossing Frances Creek. Take the exploration track up Ochre Hill to top, approx. 1.15km from the turnoff. There are no distinctive features to identify the site.
Context	Vegetation type	Open woodland
	Landscape setting	Hillcrest
	Substrate	Gravel.
	Dominant species	Eucalyptus
	Nearest water	300m running into back into Frances Creek. The site is elevated about 100m.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit. One main cluster of artefacts is obvious- artefacts are mainly flakes and only a few blades. On isolated large flake was recorded to the east of the main scatter on the ridge.
	Dimensions	80m x 60m
	Condition	Top section damaged by exploration track. Artefacts visible in grader soil dumps and on the graded track.
	Artefact density (est.)	0.2 m2
	Max artefact density	5 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (light grey, grey, black), Quartz
	Raw material source	Local quartz- Mt. Porter

 The main Ochre Hill 1 scatter with exploration works visible	 Isolated flake at notebook nearby to the eastern rocky outcrop.

Background	Name	Ochre Hill 2
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	2831
	1:50K map sheet	Union Reef
	Date recorded	18.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	From the Ban Ban take the first right approx. 4km after crossing Frances Creek. Take the exploration track to the bottom of Ochre Hill just after the track intersects up the hill. The site is located on the creek side.
Context	Vegetation type	Open woodland
	Landscape setting	Creekbank
	Substrate	Gravel/soil
	Dominant species	Eucalyptus
	Nearest water	5m running to a floodway which runs back into Frances Creek.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit. A distinctive large pointed blade is located at the site.
	Dimensions	60m x 60m
	Condition	Top section likely damaged by exploration track.
	Artefact density (est.)	0.2 m2
	Max artefact density	2 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (light grey, grey, black), Quartz
	Raw material source	Local quartz- Mt. Porter

Ochre Hill 2 with the bank of exploration track, site and floodway visible.

Ochre Hill 2 blade flake.

Background	Name	Ochre Hill 3
	Property	Ban Ban Springs/Frances Creek MLA
	GPS Location (GDA 94)	e808447n8502704
	1:50K map sheet	Union Reef
	Date recorded	18.10.2005/ 20.10.2005
	Locator	Tim Hill, Bessie Coleman
	Recorder	Tim Hill
	Location description	From the Ban Ban take the first right approx. 4km after crossing Frances Creek. Take the exploration track about 30metres. The site is on the creek bank area to the north.
Context	Vegetation type	Open woodland
	Landscape setting	Creekbank
	Substrate	Gravel/soil
	Dominant species	Eucalyptus
	Nearest water	5m running to a floodway which runs back into Frances Creek.
Site description	Site type	Stone artefact scatter
	Site structure	Surface deposit- low density
	Dimensions	90m x 60m
	Condition	undamaged
	Artefact density (est.)	0.1 m2
	Max artefact density	1 m2
	Predominate type	Flakes/formed blades
	Raw material type	Fine grained silaceous (light grey, grey, black), Quartz
	Raw material source	Local quartz- Mt. Porter

Ochre Hill 3 site showing the flat alluvial creekbank and floodway in the bakground

Flaked blade made of typical grey fine grained silaceous material.

Abstract.

The archaeological survey for the proposed iron mining operations at Frances Creek, Ochre Hill and Millers deposits, Pine Creek NT was undertaken to identify historic heritage and Aboriginal sites and areas of sensitivity, assess the significance of sites and outline management recommendations. The survey was undertaken over a 5 day period, and accompanied by Bessie Coleman and her son-in-law on one day to discuss management options.

The survey located no registered historic sites and eight Aboriginal sites in total. The assessment of significance took into account the capacity of the sites to provide opportunities for traditional owners to pass on cultural values and knowledge and the capacity of the sites to contribute to scientific understanding of the regional archaeology.

The sites are assessed to be of low to moderate significance given the extent of existing landscape disturbance in the area and presence of a relatively intact site complex at nearby Mt Porter. The Frances Creek 2, 3 and Ochre Hill site complex are of moderate significance, while the Frances Creek 1, 4 and 5 sites are determined to be of low significance. The archaeological sensitivity of the areas immediately around the proposed mine, mainly in the lower-mid slope and ridgeline land-units, is relatively low. The archaeological sensitivity of the creek and alluvial areas is relatively high.

Two of the sites, Frances Creek 3 and Ochre Hill 1 have been disturbed by exploration works, however the timing or extent of this disturbance could not be determined within the survey timeframes. These two sites are the only areas within the potential footprint of iron quarrying.

Site management recommendations area;

1. Undertake a heritage assessment of the original Frances Creek rail line at the cessation of the proposed mining operation to assess it significance and potential for declaration under the Heritage Conservation Act (1991).
2. Seek approval from the Department of Environment and Heritage and engage a qualified archaeologist and Jawoyn traditional owners to relocate artefacts from Ochre Hill 1 to a location identified by traditional owners prior to quarrying on the northern section of Ochre Hill.
3. Construct semi-permanent fencing to protect Ochre Hill 2 and Ochre Hill 3 sites during quarrying.
4. Seek approval from the Department of Environment and Heritage and engage a qualified archaeologist and Jawoyn traditional owners to relocate artefacts from the hilltop section of Frances Creek 3 to the creek bank prior to quarrying at this portion of the Marion section. Consideration should be given to developing the north western iron ore body before the area associated to Frances Creek 3.
5. Include Aboriginal sites along Frances Creek when identifying conservation zones within the Environmental Management Plan.
6. Consider applications by appropriate research bodies to undertake additional archaeological research in the area.
7. Relocate waste ochre material to an area accessible for Munggay.
8. Demonstrate diligence with regard to Aboriginal sites in undisturbed archaeologically sensitive areas associated to Frances Creek when developing ancillary infrastructure.
   This may include targeted pre-clearance archaeological surveys or sites monitoring by officers from DoE&H and the Jawoyn Association.