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No. 11,043

EL 3159

PINDA SPRINGS

**ANNUAL AND FINAL REPORTS TO LICENCE
EXPIRY/SURRENDER FOR THE PERIOD
20/1/2004 TO 19/1/2009**

Submitted by
Marathon Resources Ltd
2009

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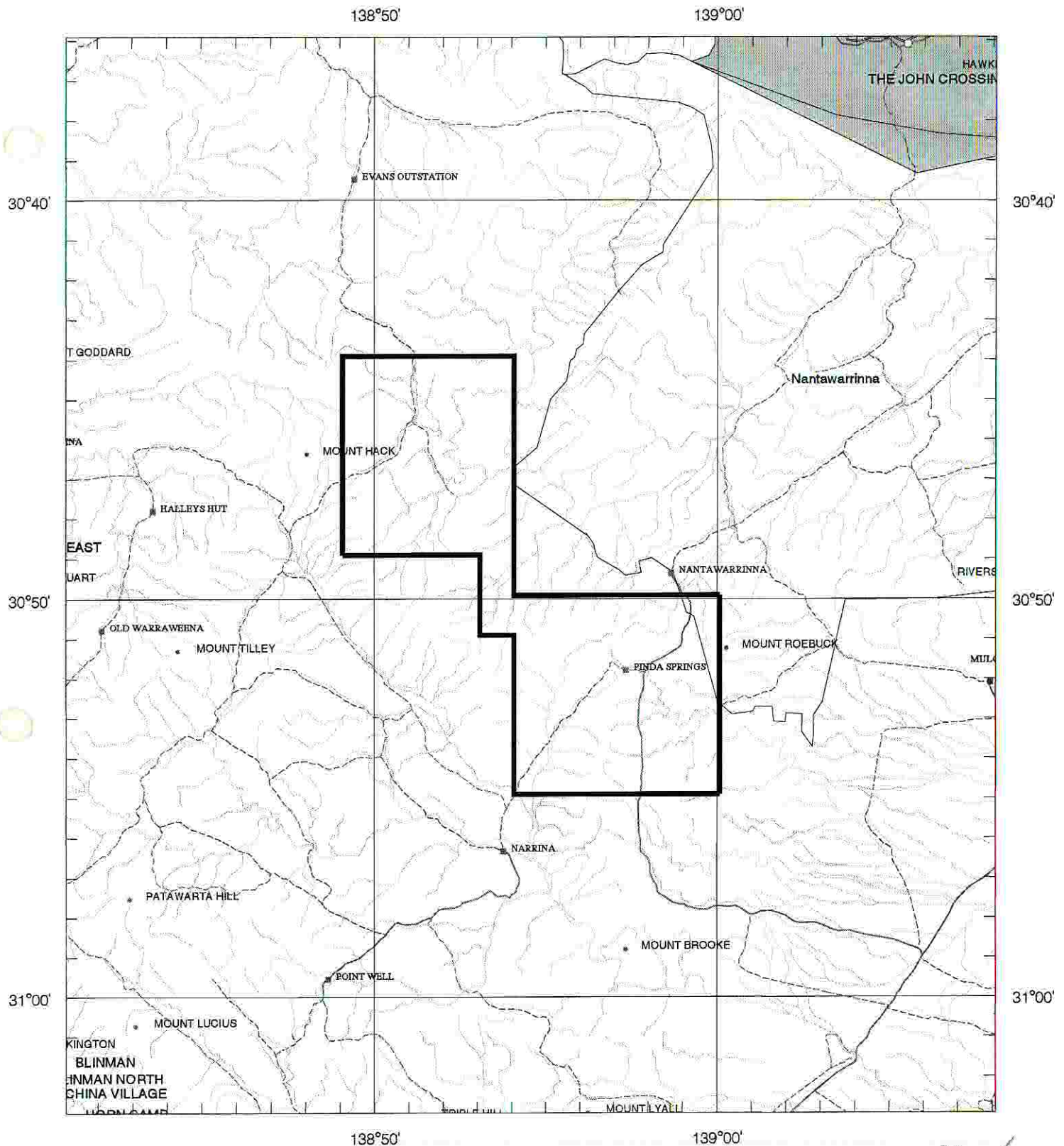
Enquiries: Customer Services Branch
Minerals and Energy Resources
7th Floor
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



Government of South Australia
Primary Industries and Resources SA

SCHEDULE A



APPLICANT : **MODERN EXPLORATION PTY LTD**

FILE REF : **136/03**

TYPE : **MINERAL ONLY**

AREA : **168 km² (approx.)**

1:250000 MAPSHEETS : **COPLEY**

LOCALITY : **PINDA SPRINGS AREA - Approximately 55 km southeast of Copley**

DATE GRANTED : **20-Jan-2004**

DATE EXPIRED : **19-Jan-2005**

EL NO : **3159**

2006



27 August 2005

Records Officer
Mineral Tenements
PIRSA
GPO Box 1671
ADELAIDE SA 5001

Dear Sir/Madam

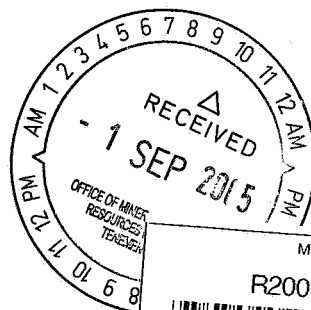
Annual Technical Report – EL 3159 for the year ending 19/1/05

During the first year of tenure no field work was undertaken and new technical data were obtained. No annual technical report will be submitted.

Yours sincerely

A handwritten signature in black ink, appearing to read "Allan Younger", with the word "for" written below it.

Allan Younger
Chief Geologist



Marathon Resources Ltd

ABN 31 107 531 822

10 George Street

Stepney SA 5069

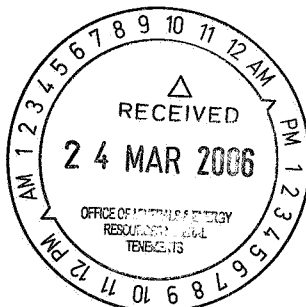
T 08 8366 2500

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admin@marathonresources.com.au

www.marathonresources.com.au

MARATHON



22 March 2006

Records Officer
Mineral Resources
PIRSA
GPO Box 1671
ADELAIDE SA 5001

Dear Sir/Madam

Annual Technical Report – EL 3159 for the year ending 19/1/06

During the second year of tenure no field work was undertaken and new technical data were obtained. No annual technical report will be submitted.

Compilation and interpretation of old data from previous exploration was compiled and will be reported in 2007.

Yours sincerely

Allan Younger
Chief Geologist



EXPLORATION LICENCE 3159 PINDA SPRINGS FOURTH ANNUAL TECHNICAL REPORT

For the period 20-1-2006 to 19-1-2007

1:250,000 mapsheet Copley SH 54-

1:100,000 mapsheets Angepena 6636
Arrowie 6736

Marathon Resources Limited

Adelaide

Oct 2007

Author: A. Younger

PINDA SPRINGS PROJECT

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SUMMARY

The Pinda Springs area is targeted for structurally controlled mineralization emplaced in favorable dilatational zones which may have been generated by structural disruptions prior to or during emplacement of a diapir and relating to a major northeast trending fault zone. Magnetic anomalism in the area suggests the potential for IOCG (Iron Oxide Copper Gold) systems at depth.

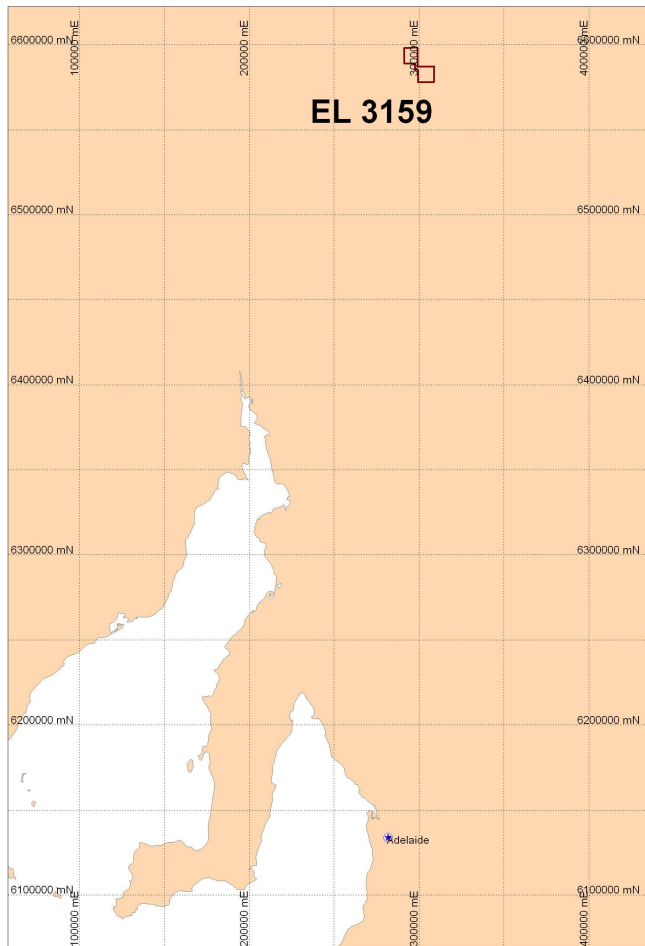


Figure 1. Tenement Location.

1. Tenure

This annual report covers Year 3 in the term of EL 3159 "Pinda Springs", being the second year under ownership by Marathon Resources Limited.

The tenement located approximately 440km north of Adelaide in the Flinders Ranges (Figure 1).

2. Native Title

The Pinda Springs area is covered by a single Native Title claim, registered by the Adnyamathanha claimants. Heritage clearances will be required for any drilling programs.

3. Geology

The Adelaidean sequence in the area contains a major portion of the Upper Burra Group sediments; several of these units are known to host low grade stratabound copper and gold mineralization in other areas.

The strongly folded sequence of units forming the domal structure on the north side of the major fault are usually non-magnetic in character, consequently the strong anomaly underlying the domal structure suggests significant iron oxide content at depth. This is supported by the presence of

abundant float of hematitic nodules within the drainage, probably derived from weathering and erosion of the diapiric breccias along the fault zone.

Large areas of outcrop of diapiric breccia are proximal to the maxima of the magnetic anomaly in the northeast limit of the dome. The lack of anomalism in the stream sediments draining this area suggests there may be secondary source of the anomalism consistent with an IOCG system. The format of the anomaly on the north side of the major northeast crosscutting fault suggests it is partially truncated by the fault at depth.

3. Work Completed

4.1 Geochemistry

Limited exploration data exists within the southeastern area especially in the vicinity of the diapiric breccia. Some minor prospector mining and unrecorded drilling has been completed around the historic Pinda Springs Lead mine.

An orientation stream sediment sampling survey was completed adjacent to the small scale base metal mineralization in the area and subsequently stream sediment sampling geochemical survey was completed (Figure 2).

The orientation sampling indicated strong “polarity” in the geochemistry related to size fraction with the base metal character highlighted within the coarser fractions and gold responses being stronger within the fine fractions. As a result two size fractions were analyzed; -5mm highlight the base metal responses and -180um to highlight the areas of gold response.

The samples were analyzed using a multi-element suite which includes Au, base metals and pathfinder elements.

A grid soil sampling program was then completed to define the source of the stream sediment responses (Figure 2). The soil program was completed using a single size fraction of -2mm.

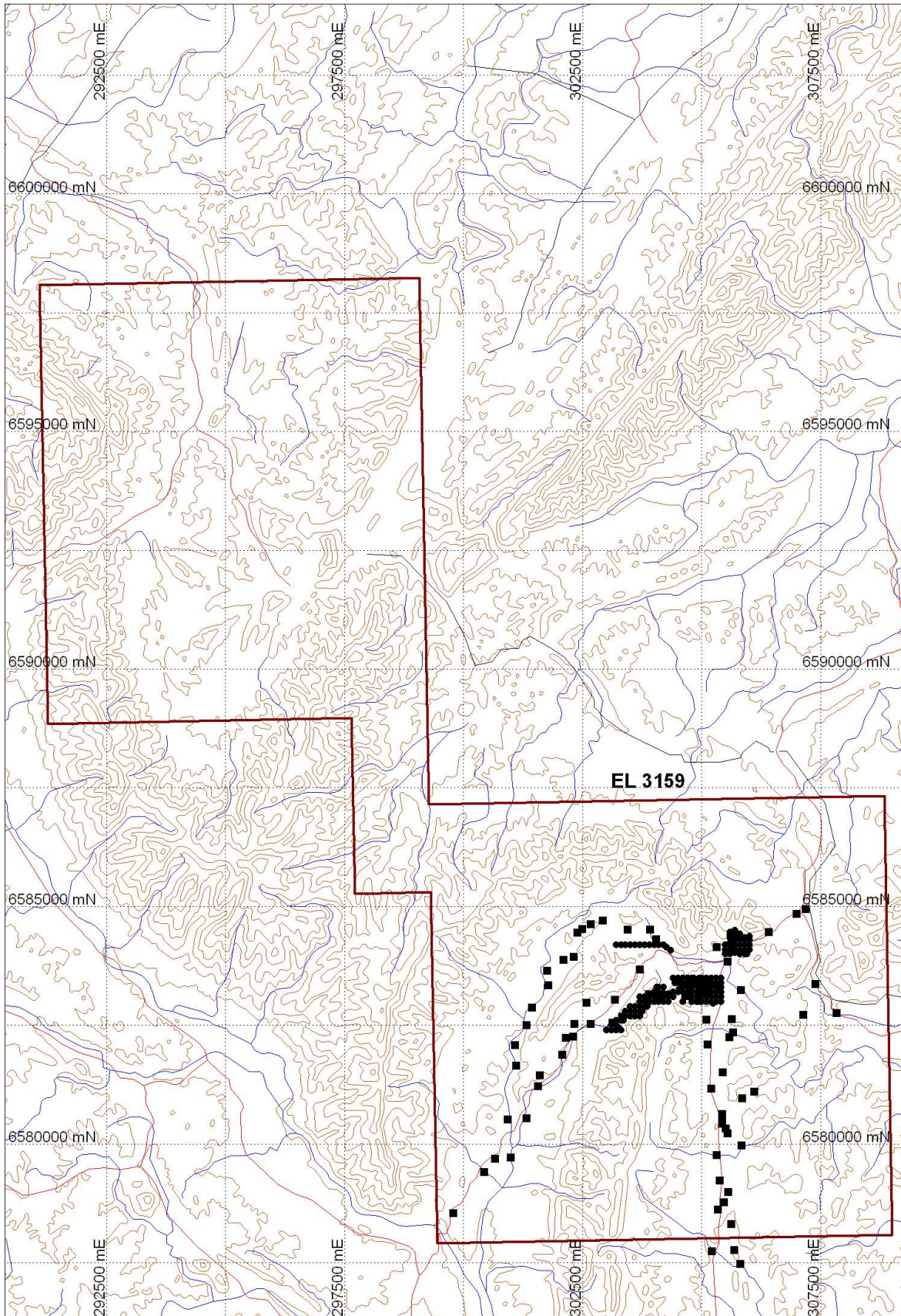


Figure 2. Stream and Soil Sample Locations

4.2 Geophysics

A detailed interpretation of the aeromagnetic data was completed to assist in defining drilling targets. Aeromagnetic data define an anomaly underlying a small domal structure composed of Adelaidean sediments with minimal magnetic character.

5. Proposed Program

Assessment of the aeromagnetic data has defined several anomalies worthy of investigation and two have been selected for drill testing.

Target 1 is the very strong response at depth under the sedimentary sequence;

Target 2 is a shallow response within the diapiric breccia.

Stream sediment sampling indicates response from two sources:

Gold anomalism derived from the fault system.

Base metal response is from both the fault system and the diapiric breccia.

A series of deep reverse circulation exploratory holes are proposed to test the geochemical and possibly related geophysical signatures.

Appendix 1

Report and Images of Magnetic Data

Pinda Springs Area

MEMORANDUM

To:	Mr Allan Younger Chief Geologist Via email: ayounger@marathonresources.com.au	Affiliation:	Marathon Resources Ltd 10 George St Stepney, SA, 5069
From:	Jim Hanneson	Costing:	EL3159 SA
Date:	27 September 2006	Reference:	AMG06/45
Subject:	Magnetic Images and a Magnetic Susceptibility Model for the Pinda Springs Area, South Australia, Marathon Resources EL3159		

1. INTRODUCTION AND SUMMARY

This report presents magnetic images and a magnetic susceptibility model for a 10km by 9km area around Pinda Springs, South Australia. The limits of the study area are from 299000E to 309000E and from 6577900N to 6587300N in MGA zone 54.

In summary, the main magnetic anomalies in the model can be represented by bodies that are long and thin suggesting steeply dipping magnetic strata. At least 5 other bull's eye type anomalies can be simulated by features with steeply plunging more-or-less cylindrical bodies with large depth extent. Aside from regional trends that are simulated by large deep bodies, smaller magnetic features most likely to generate economic interest appear are simulated by bodies mostly in the 100m to 300m depth range with magnetic susceptibilities that suggest magnetite concentrations of less than 10 percent. The coordinates for 4 holes that might test some of these anomalies are given below.

2. DATA

Aeromagnetic data for the Pinda Springs area is a subset of data collected by Geoscience Australia in February 1999 as part of the TEiSA D17 survey. Data points are recorded as geodetic WGS84 coordinates which were converted to MGA easting and northings as though the latitudes and longitudes were AGD94, using the method prescribed on the website <http://www.auslig.gov.au/geodesy/ausgeoid>.

Figure 1.1 is a contoured image of the total magnetic intensity, and Figure 1.2 is a residual image that was obtained by smoothing the original image and forming the difference.

The November 2005 version of the PIRSA state gravity archive was interrogated for points within the study area but only two were found.

3. MODEL

A magnetic susceptibility model was created using the method of Talwani (1961), and its calculated magnetic response is shown in Figure 2. The model response compares favourably

with the data in Figure 1.1, and inasmuch as the simulation is considered acceptable, the model may be said to be *permitted* by the data, but other models could be found that do as well or better.

The polygonal model body tops seen in Figure 2 are shown alone in Figures 3.1 and 3.2. Lines annotated P1 to P23 are the locations of model cross-sections shown in Figures 4.1 to 4.23, which also show profiles of the observed data (solid) and the calculated model response (dotted).

Additional details of the model are given in Table 1, where the right most column gives the apparent percent magnetite estimated from the magnetic susceptibility using empirical data referenced by Grant and West (1965) and Hanneson (2003).

4. DISCUSSION

Significant but very small bodies within a rather large study area make the model in Figures 3.1 and 3.2 difficult to “read”. However the more magnetic bodies are coloured red, and, it is hoped that the model body numbers can be discerned from the two versions of Figure 3 and/or from the annotations on the cross-sections.

The main magnetic anomaly is about 3 kilometres in length but seems to be comprised of at least two parts that are resolved by the residual image in Figure 1.2. In modelling the main response near (302000E, 6582500N), difficulties were encountered until remanence was introduced. Even then, the data seems to require a further complication in that the top of the magnetic source seems to be less magnetic, not remanently polarised, and shifted several tens of metres to the northwest compared to the deeper source. See Figure 3 and 4.9. There may be a simpler model that also simulates the data but I haven't yet found one.

Elsewhere simpler groups of model bodies provide reasonable simulations.

A drill hole at (301740E, 6581840N) would test rocks represented by Body 22 on profile P9, while a hole at (303240E, 6583820N) would probably intersect magnetic rock represented by Body 20 on Profile P13.

The magnetic high near (305800E, 6584400N) is part of a very sharp spike (see Figure 4.17) and if the spike is not caused by surface culture, the source is very shallow (100m or less). There is more to the anomaly than just the spike, and the longer wavelengths are simulated approximately by Body 26 at 400m depth and also by Body 23. A hole at (305830E, 6584210N) would intersect the volume occupied by the shallow Body 35, while a hole at (306040E, 6583960N) might test more magnetic rocks to the south east represented Body 26.

If one or more drill holes are planned, it might be wise to revisit the model at a detailed scale before the drill coordinates are finalised. Nothing is known about its density of the rocks represented by any of these bodies, and gravity surveying, even in modest amounts, could add important information for the economic assessment of the magnetic sources.

REFERENCES

Grant, FS, and West, GF, 1965, Interpretation Theory in Applied Geophysics, McGraw-Hill, Toronto, 584p.

Hanneson, J.E., 2003; On the use of magnetics and gravity to discriminate between gabbro and iron-rich ore-forming systems, Exploration Geophysics, V34, No 1&2, pp110-113.

Talwani, M., 1961, Computation with the help of a digital computer of the magnetic anomalies caused by bodies of arbitrary shape, Geophysics, V26, p203.

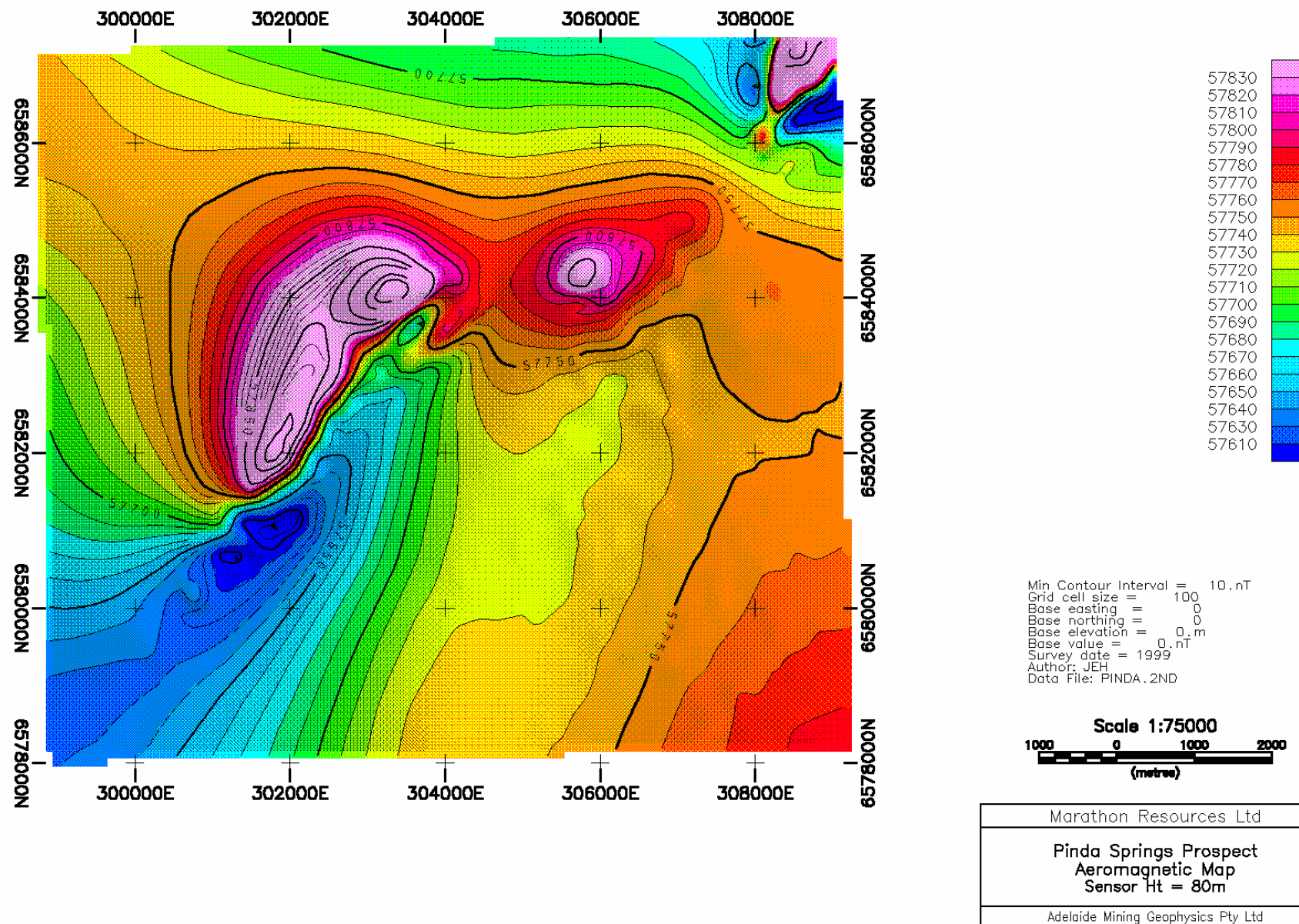


Figure 1.1

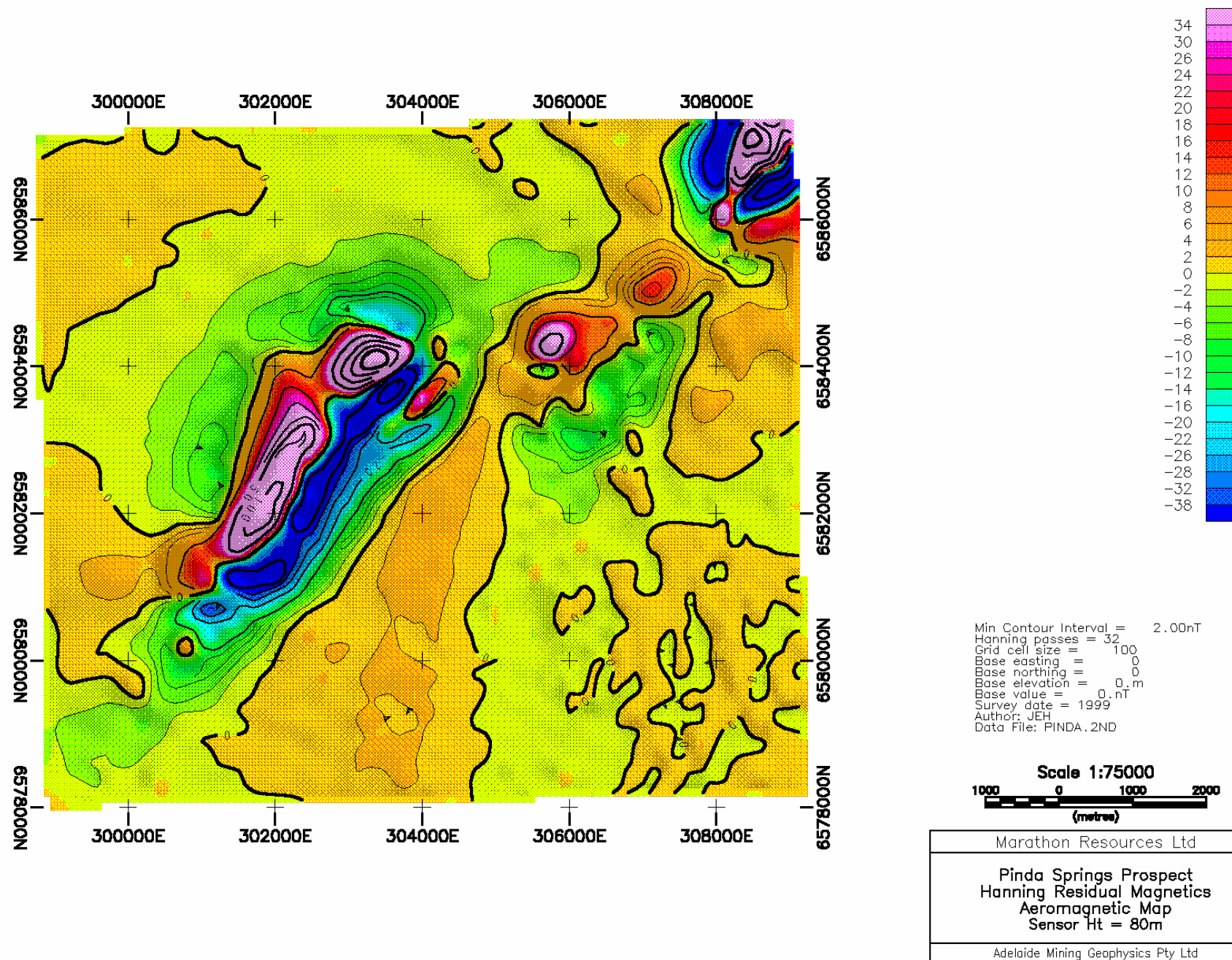


Figure 1.2

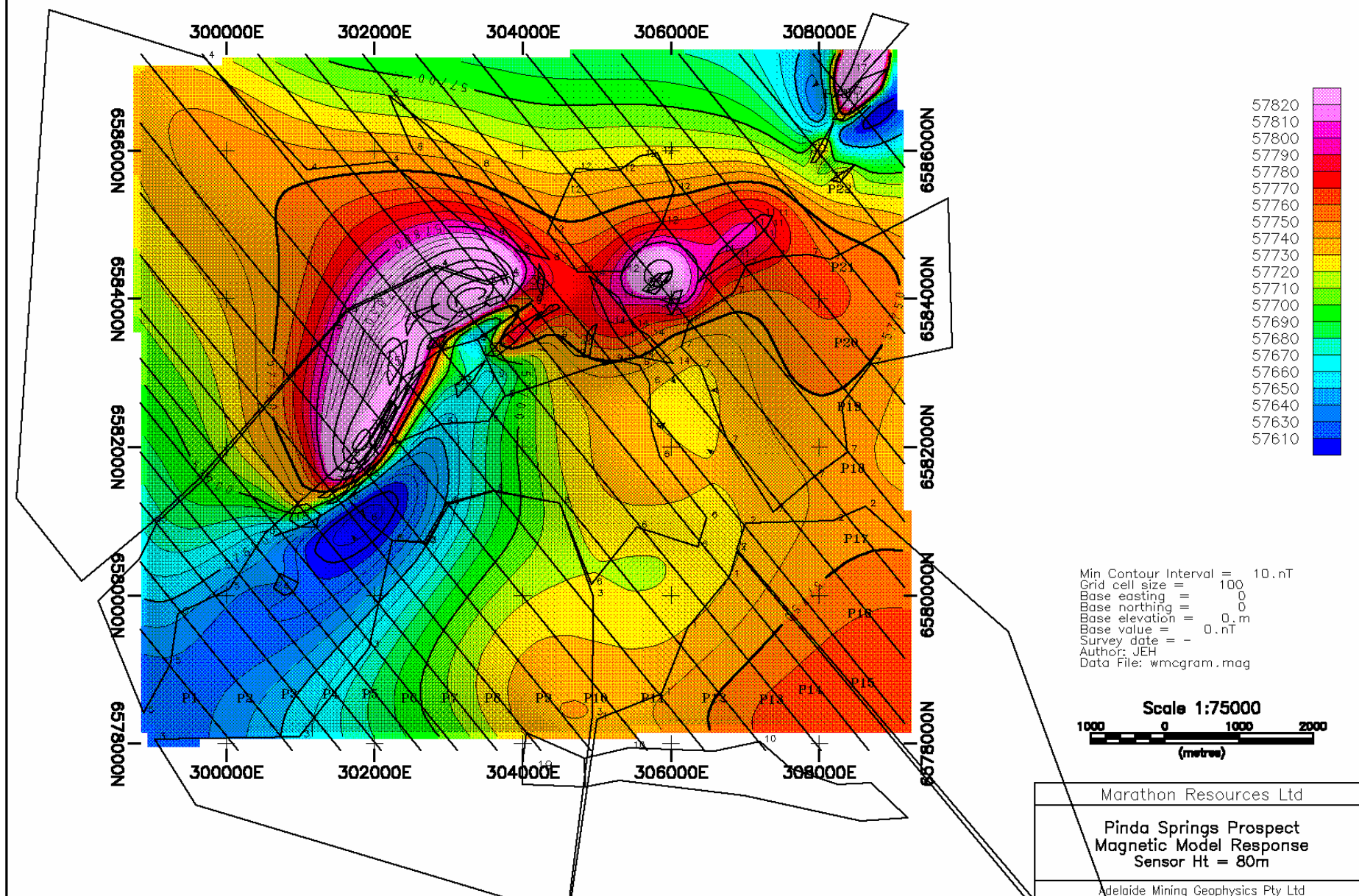


Figure 2

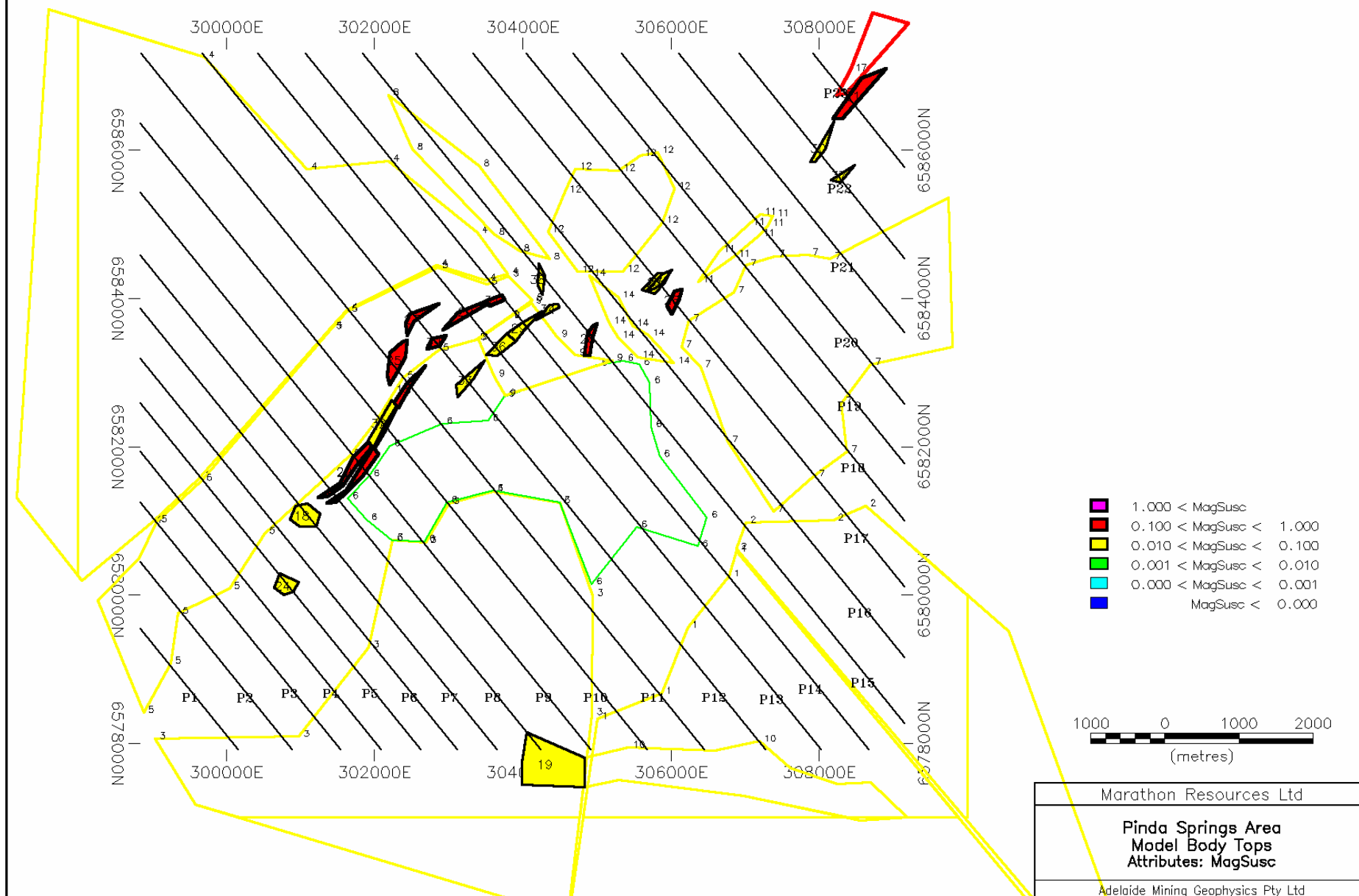


Figure 3.1

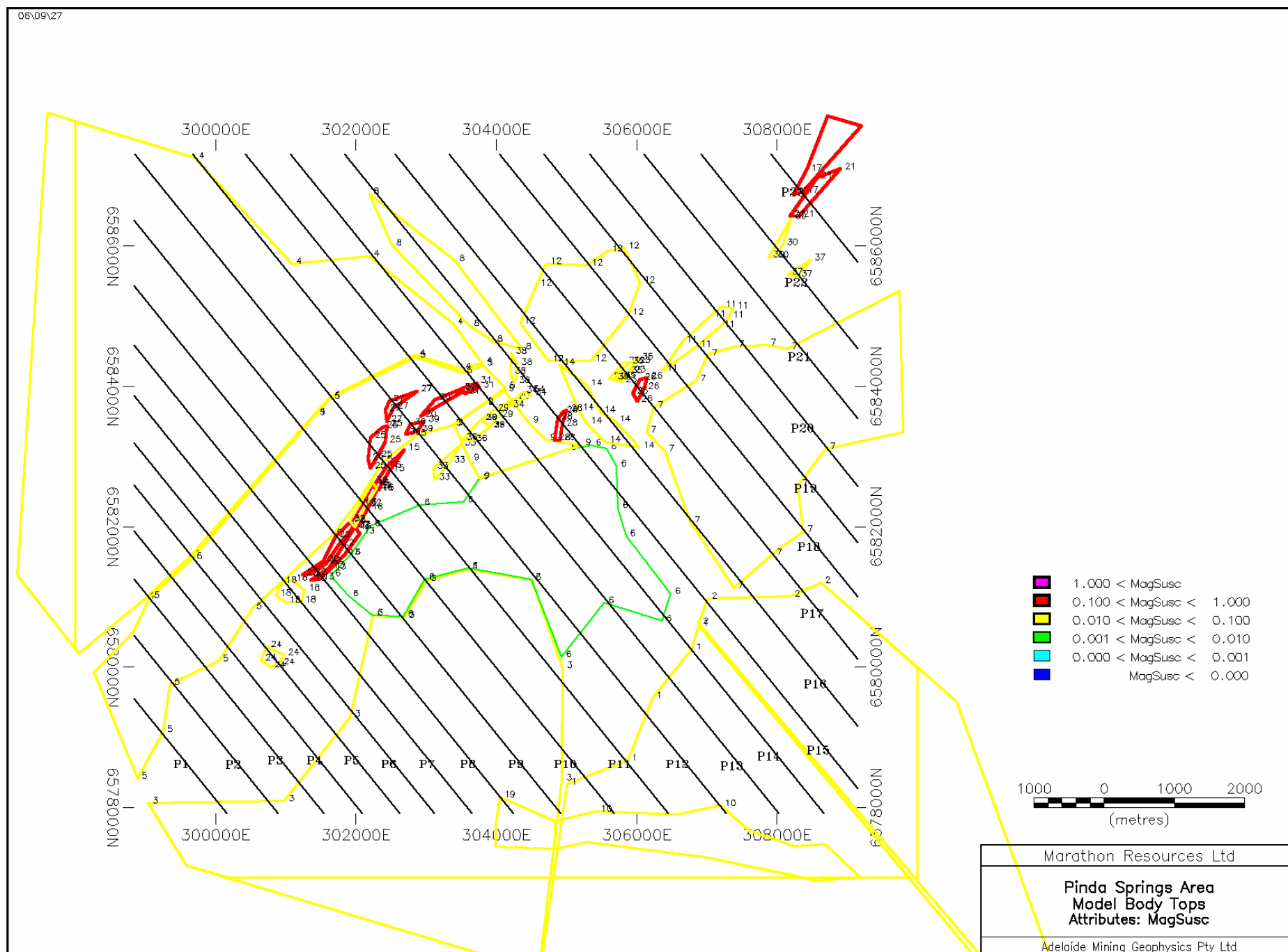
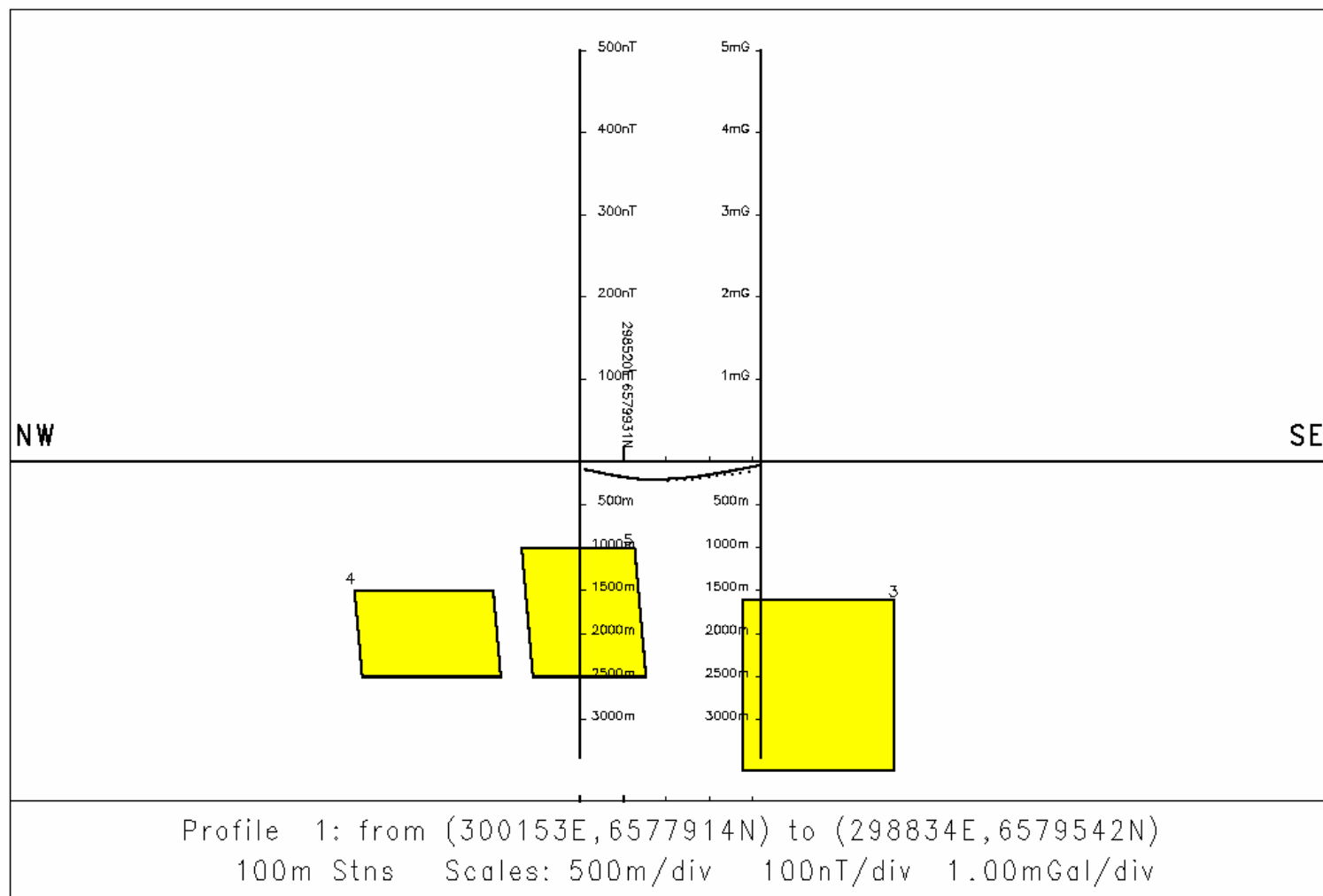


Figure 3.2

Body	Susc(contrast)	Den(contrast)	Depth
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.



MAGNETIC PROFILES:
Solid: data
Dotted: model response

DEPTH SECTION:
Dashed = faults
Dotted/solid = bodies

Profile azimuth: -39.
Mag Data file: PINDA.2ND

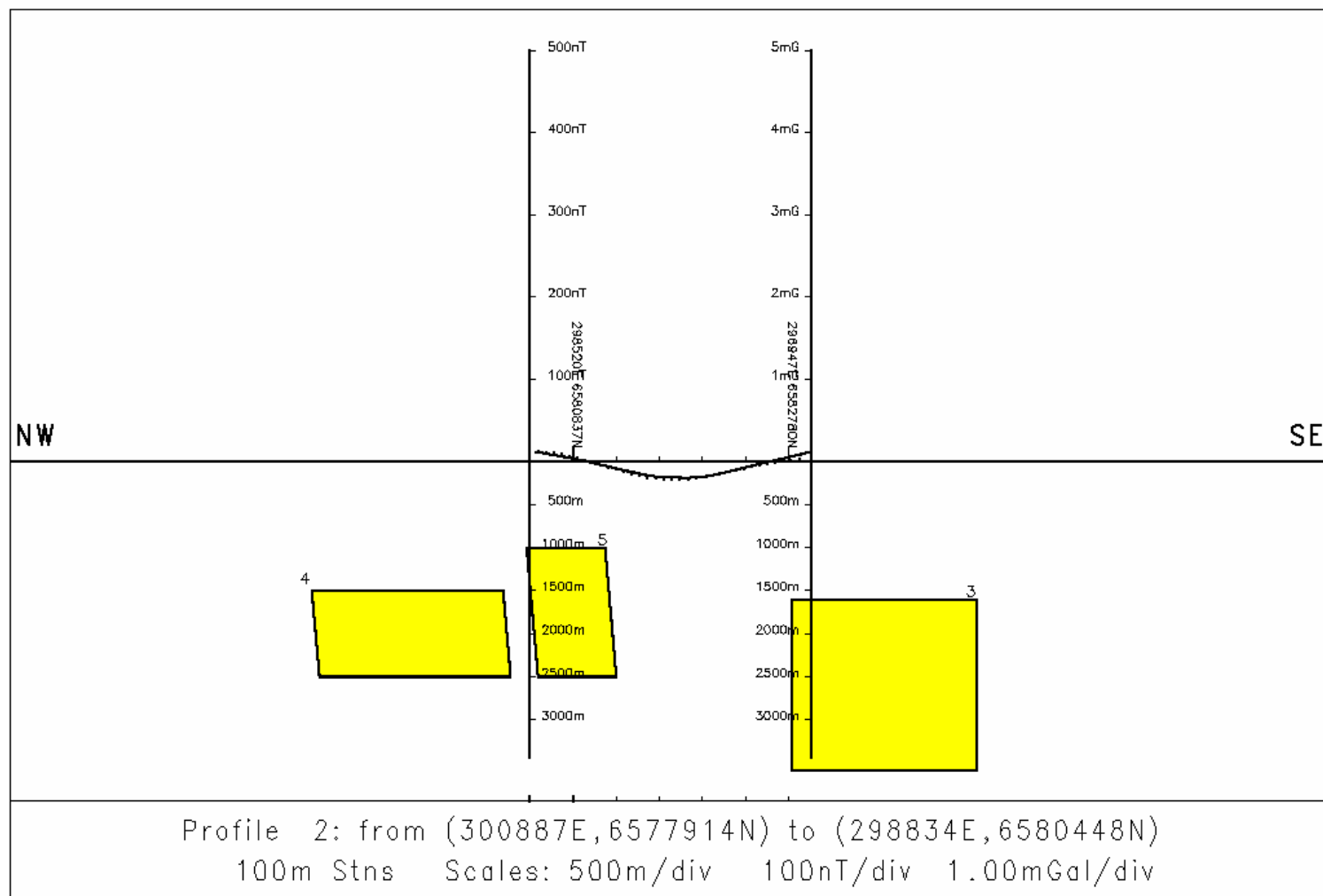
Marathon Resources Ltd

Pinda Springs Area
Magnetic Model
Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.1

Body	Susc(contrast)	Den(contrast)	Depth
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.



MAGNETIC PROFILES:
Solid: data
Dotted: model response

DEPTH SECTION:
Dashed = faults
Dotted/solid = bodies

Profile azimuth: -39.
Mag Data file: PINDA.2ND

1.000 < MagSusc
0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
0.001 < MagSusc < 0.010
0.000 < MagSusc < 0.001
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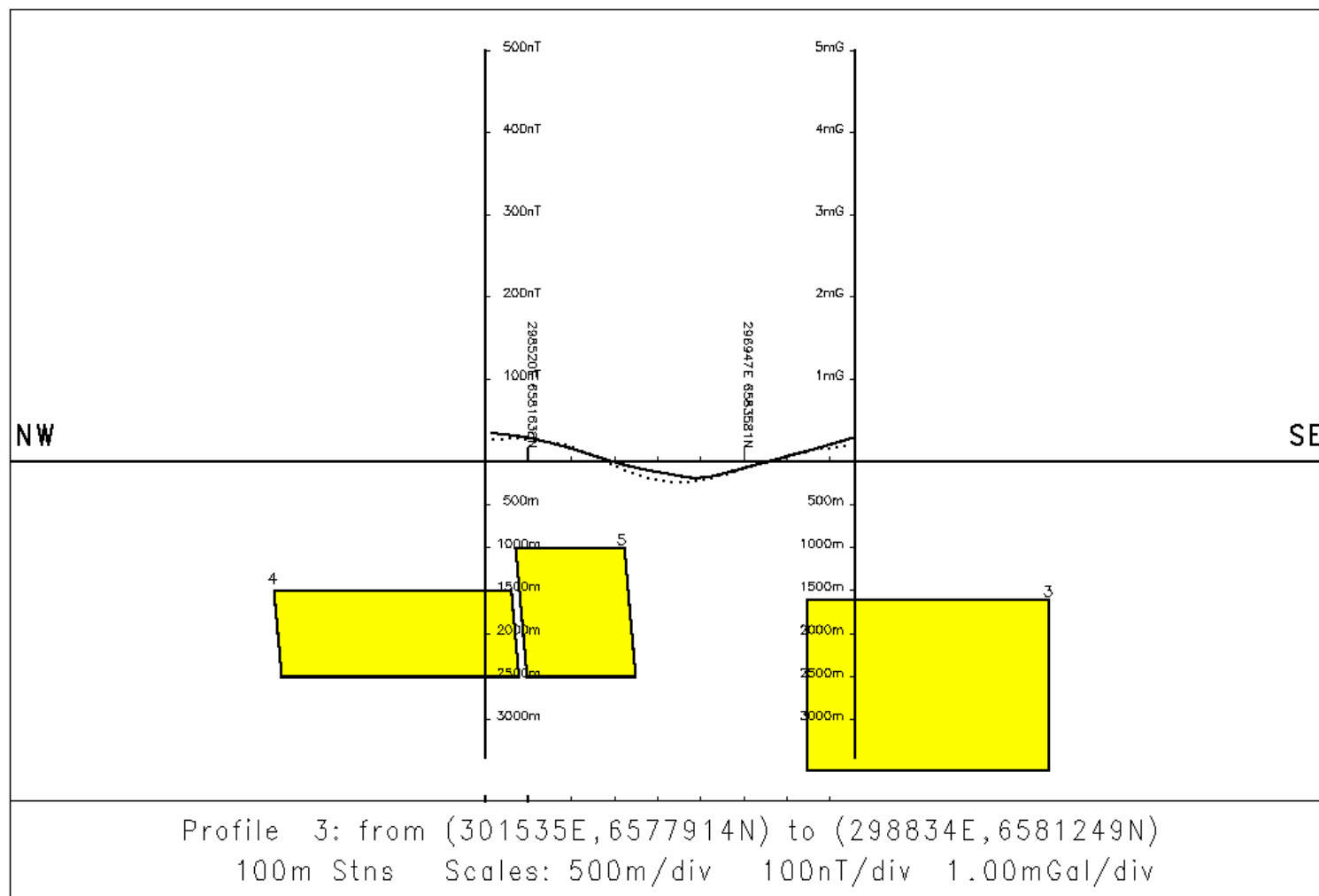
Marathon Resources Ltd

Pinda Springs Area
Magnetic Model
Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.2

Body	Susc(contrast)	Den(contrast)	Depth
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.



MAGNETIC PROFILES:
Solid: data
Dotted: model response

DEPTH SECTION:
Dashed = faults
Dotted/solid = bodies

Profile azimuth: -39.
Mag Data file: PINDA.2ND

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0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
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MagSusc < 0.000

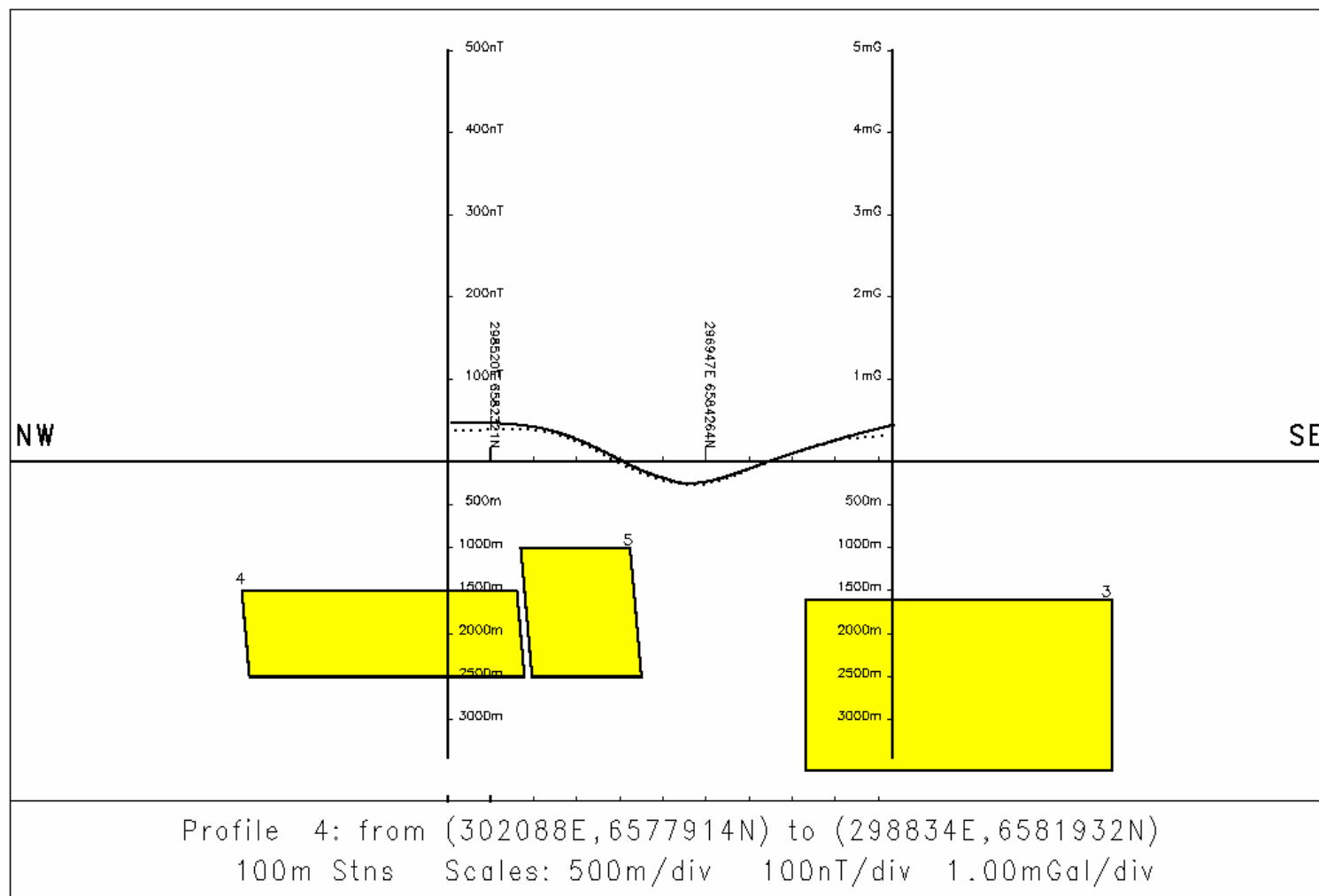
Marathon Resources Ltd

Pinda Springs Area
Magnetic Model
Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.3

Body	Susc(contrast)	Den(contrast)	Depth
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

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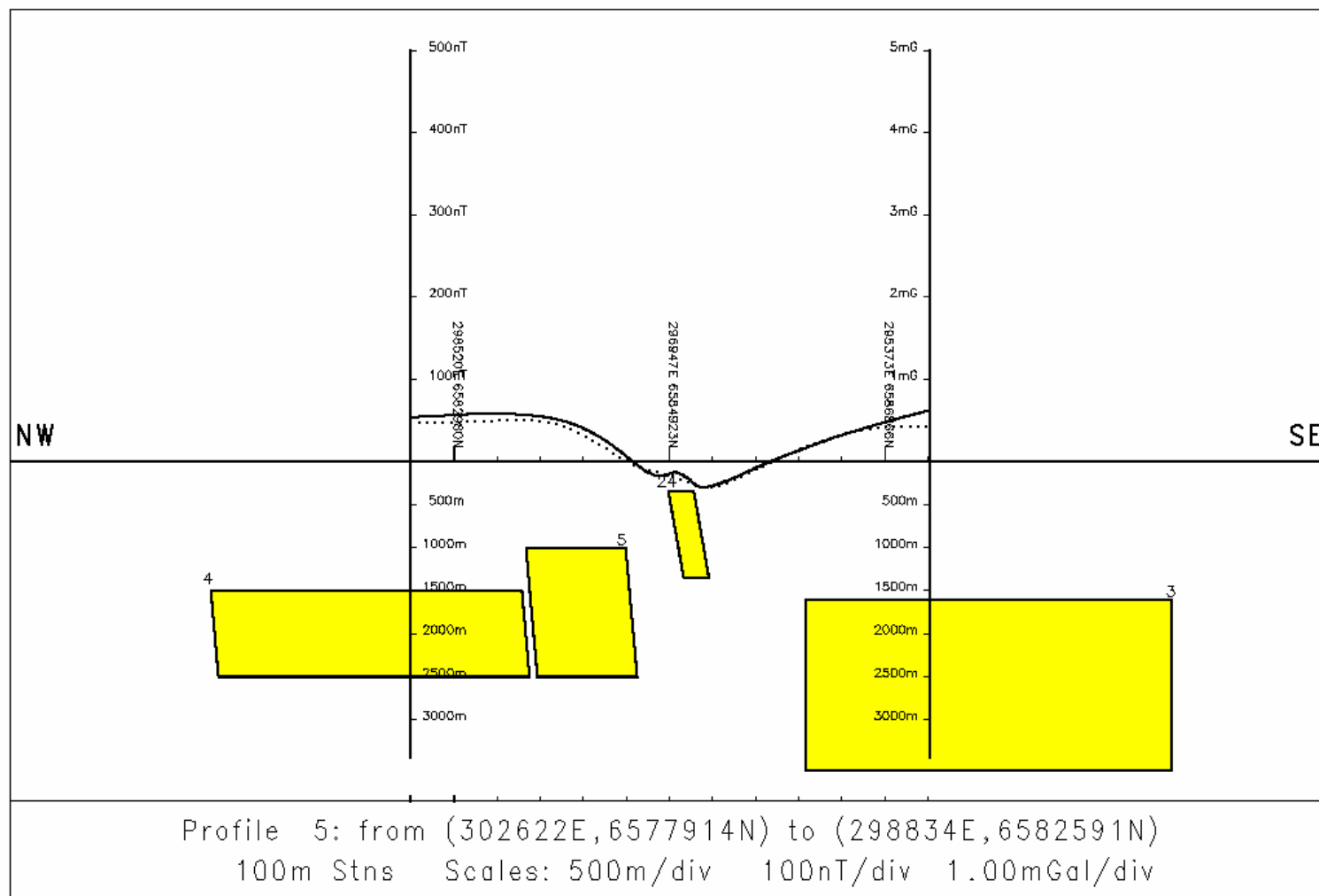
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Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.4

Body	Susc(contrast)	Den(contrast)	Depth
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.
24	0.020(0.020)	2.770(0.100)	350.



MAGNETIC PROFILES:
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 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

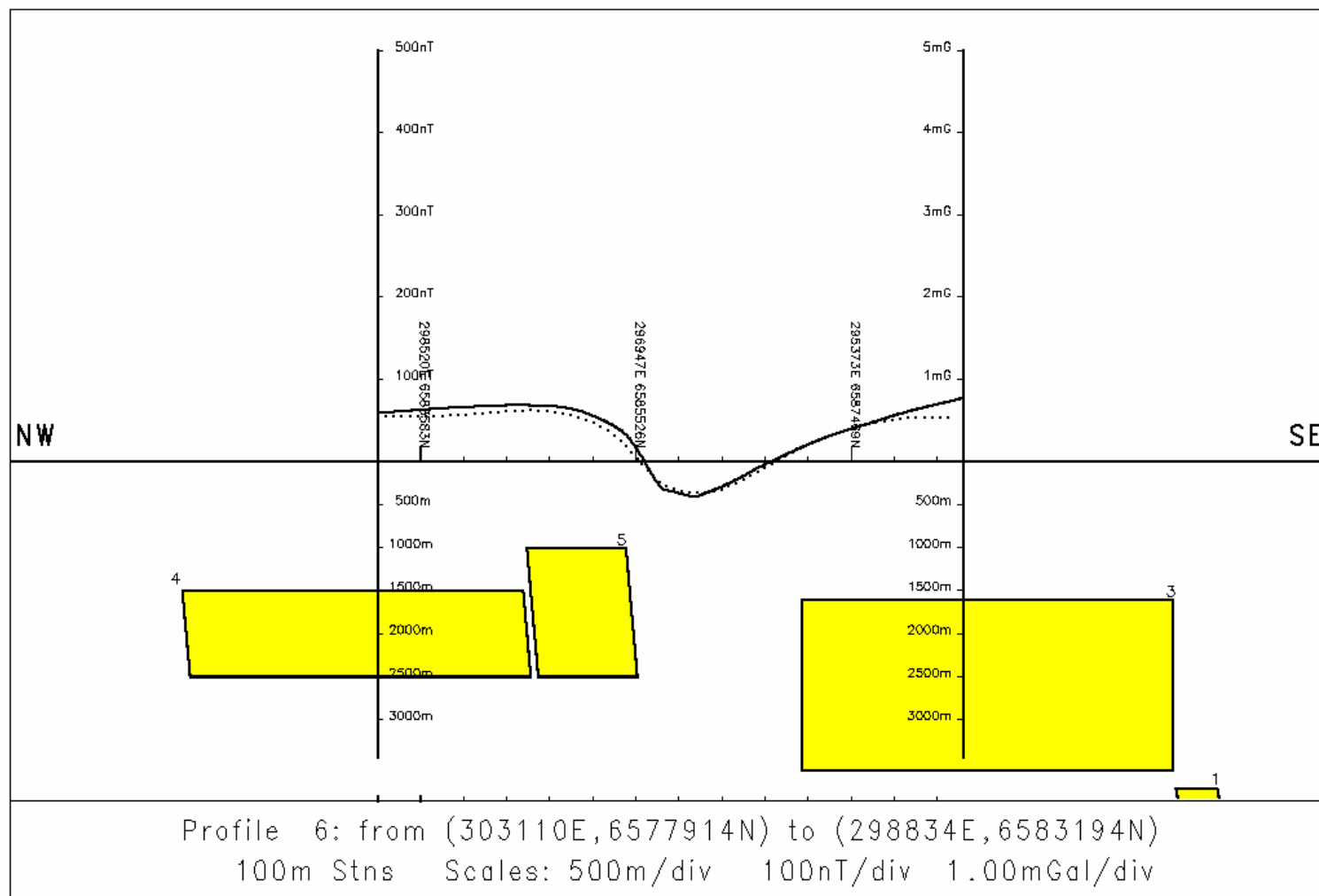
Marathon Resources Ltd

Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.5

Body	Susc(contrast)	Den(contrast)	Depth
1	0.033(0.033)	2.770(0.100)	3800.
3	0.015(0.015)	2.770(0.100)	1600.
4	0.019(0.019)	2.770(0.100)	1500.
5	0.015(0.015)	2.770(0.100)	1000.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

- 1.000 < MagSusc
- 0.100 < MagSusc < 1.000
- 0.010 < MagSusc < 0.100
- 0.001 < MagSusc < 0.010
- 0.000 < MagSusc < 0.001
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Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

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Figure 4.6

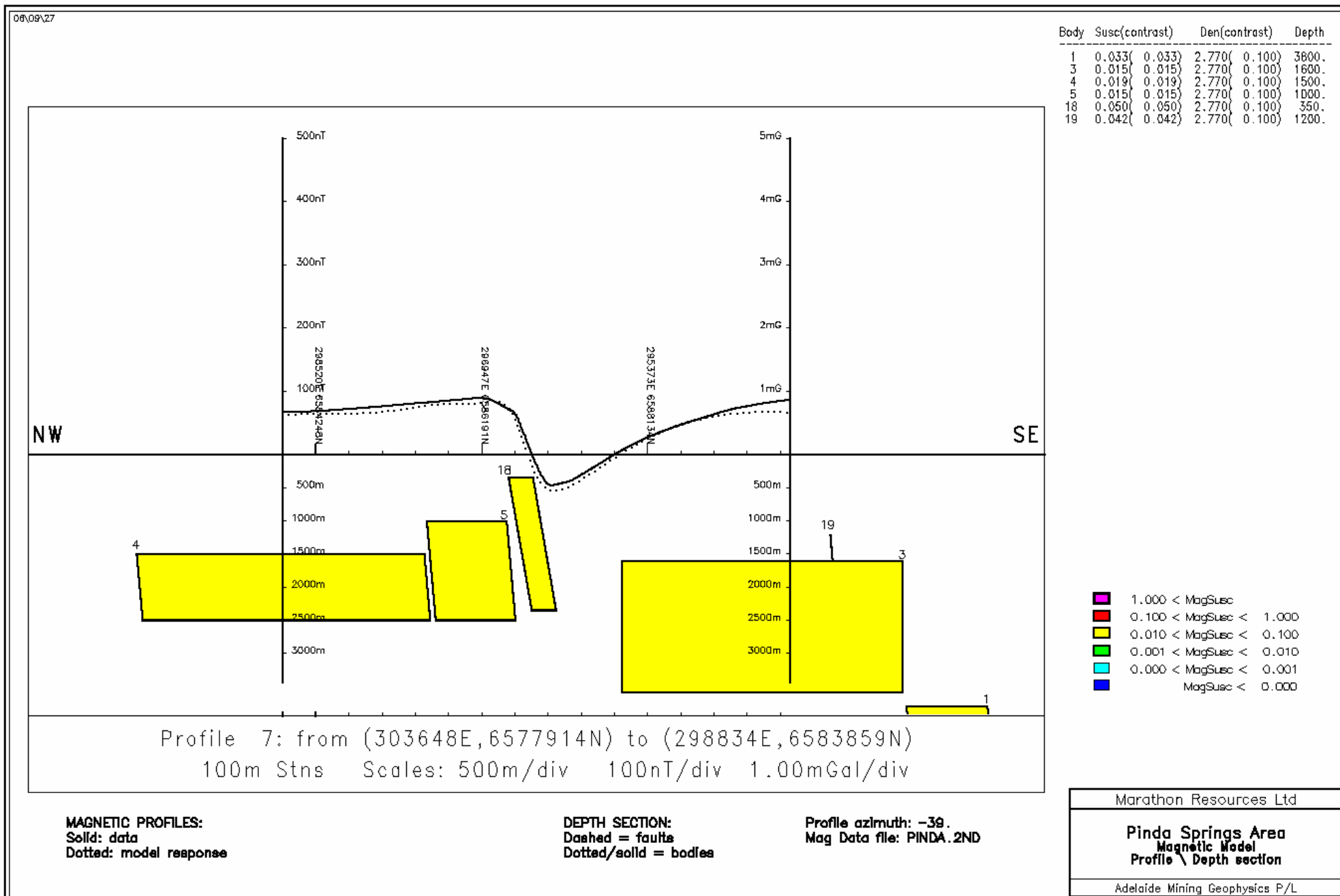


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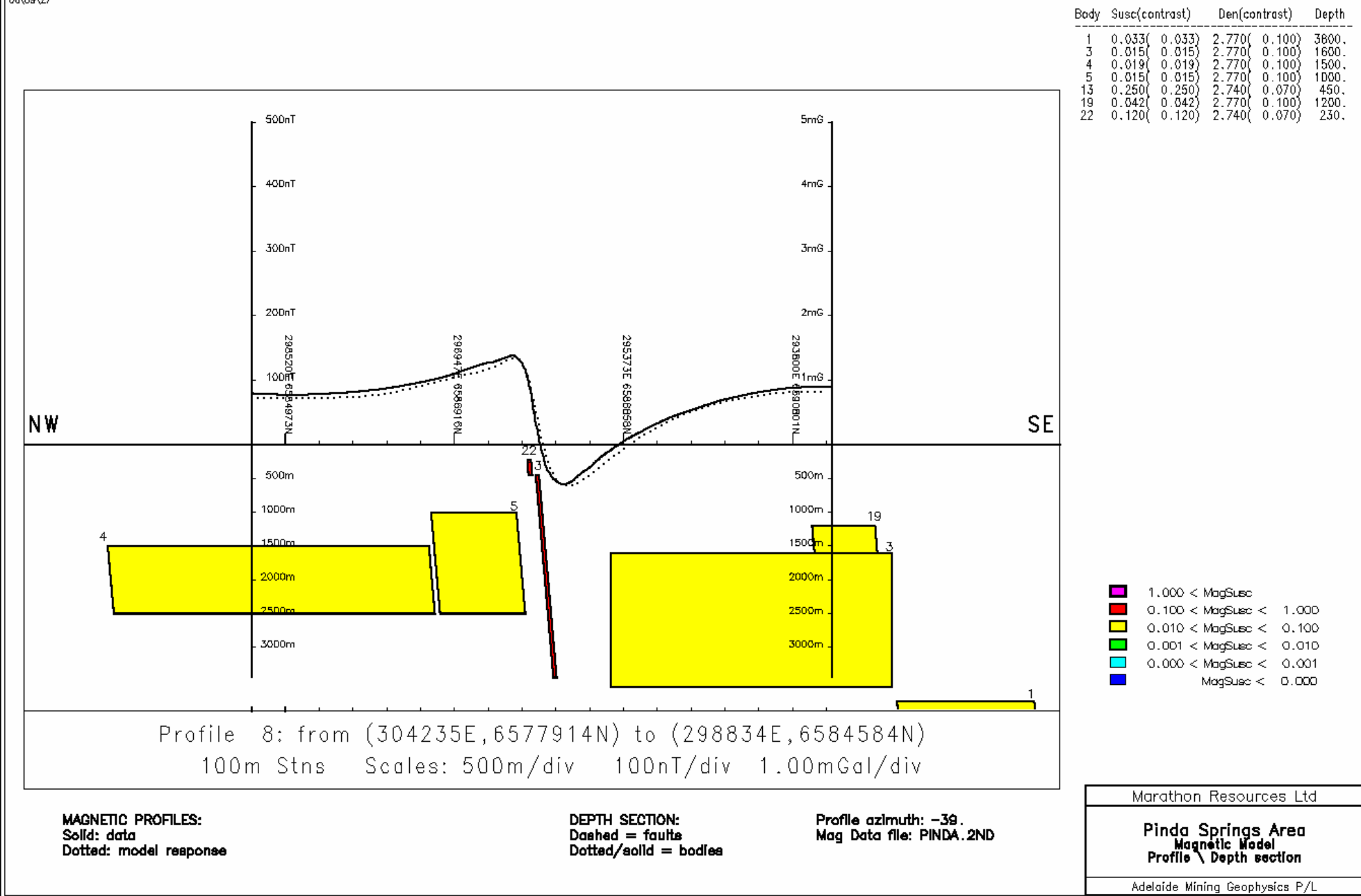


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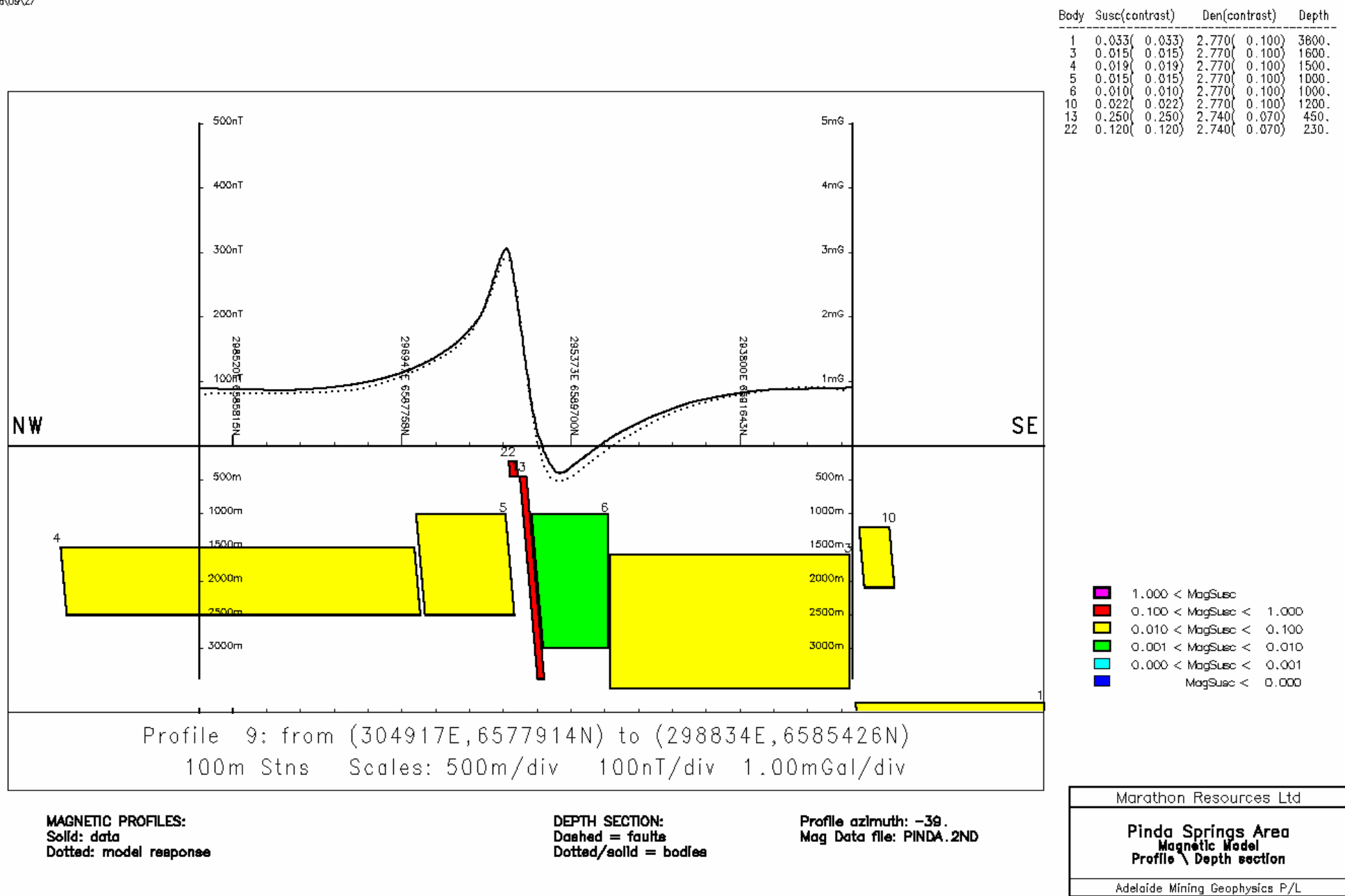


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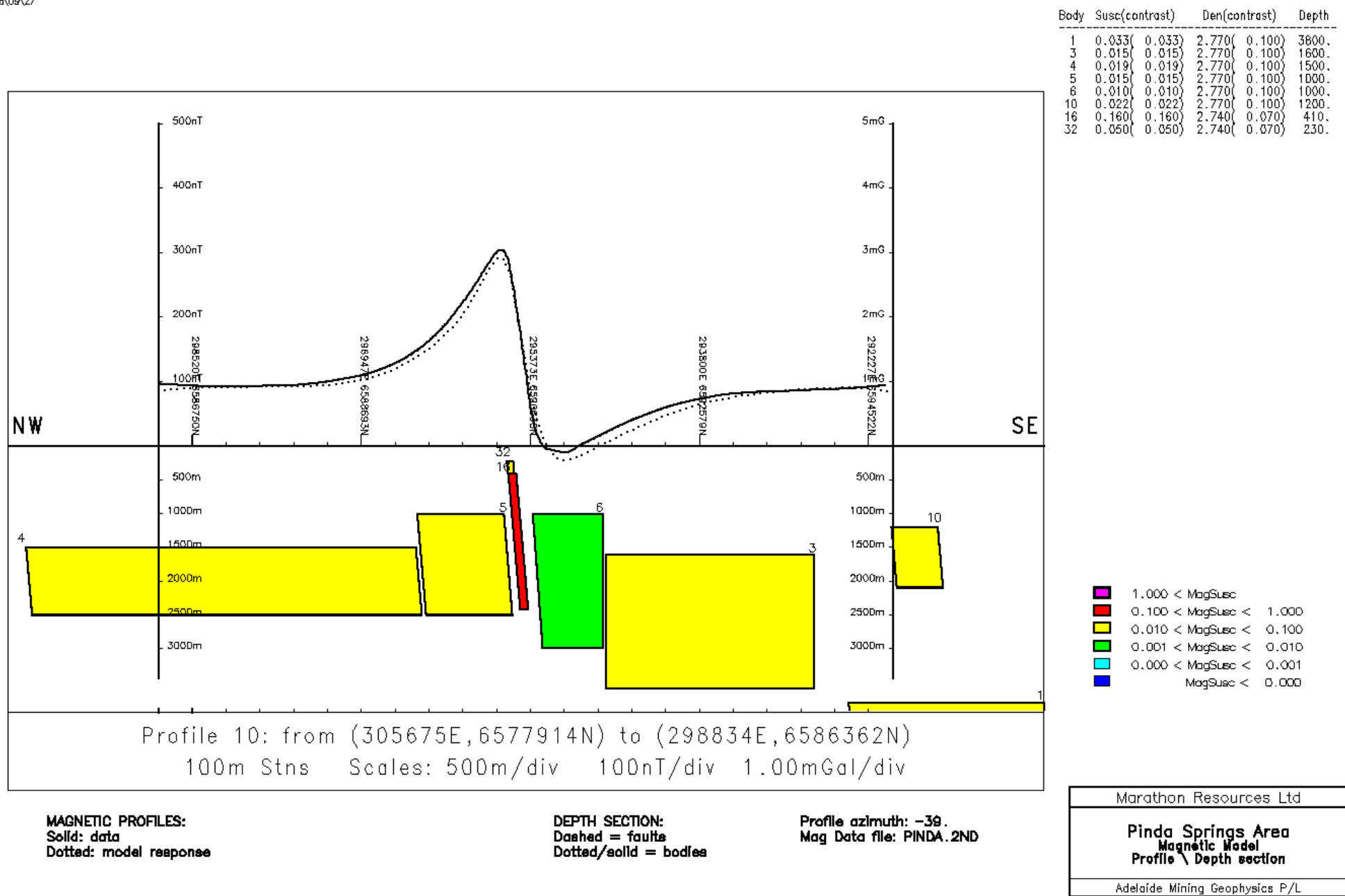


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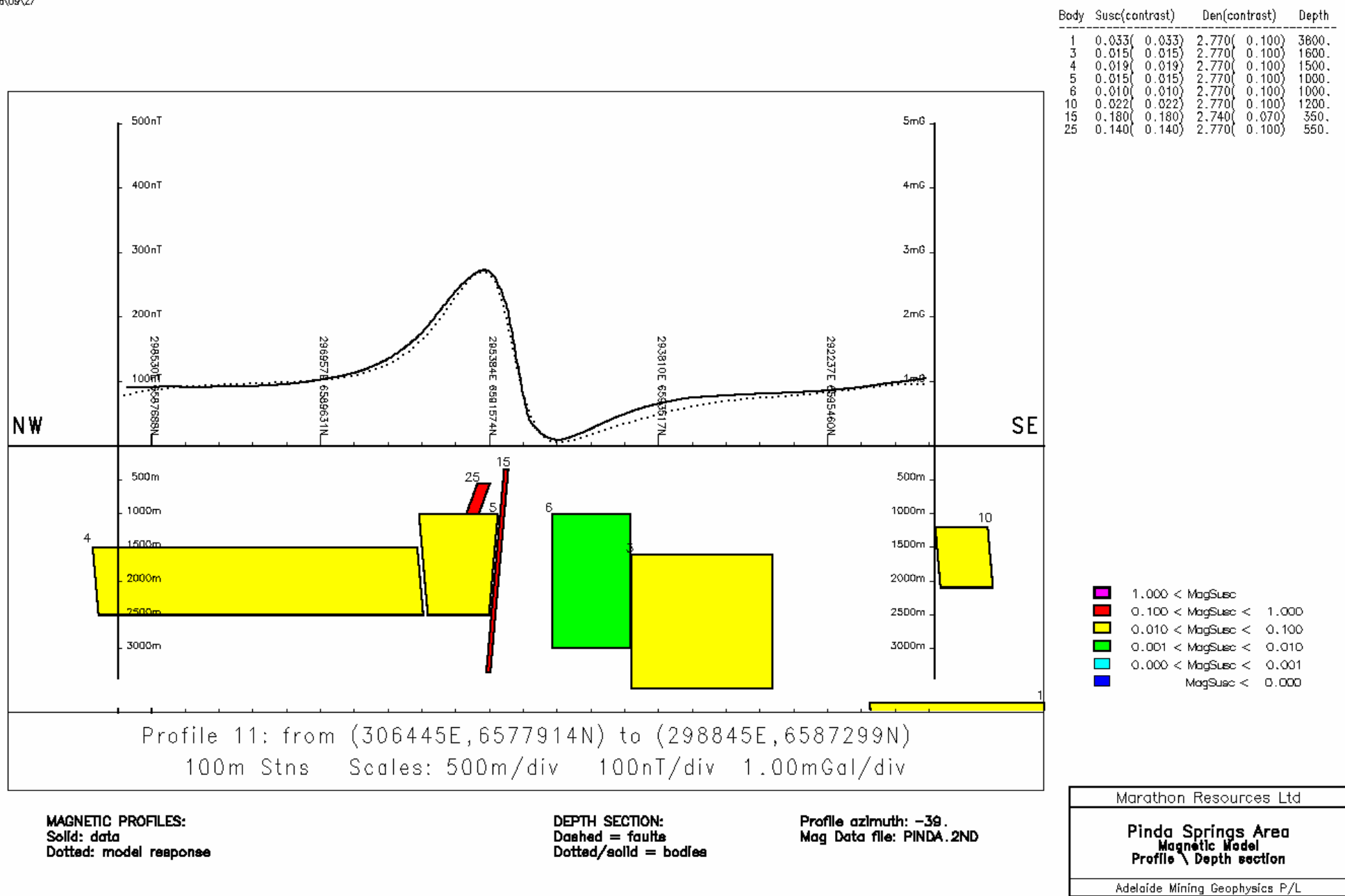


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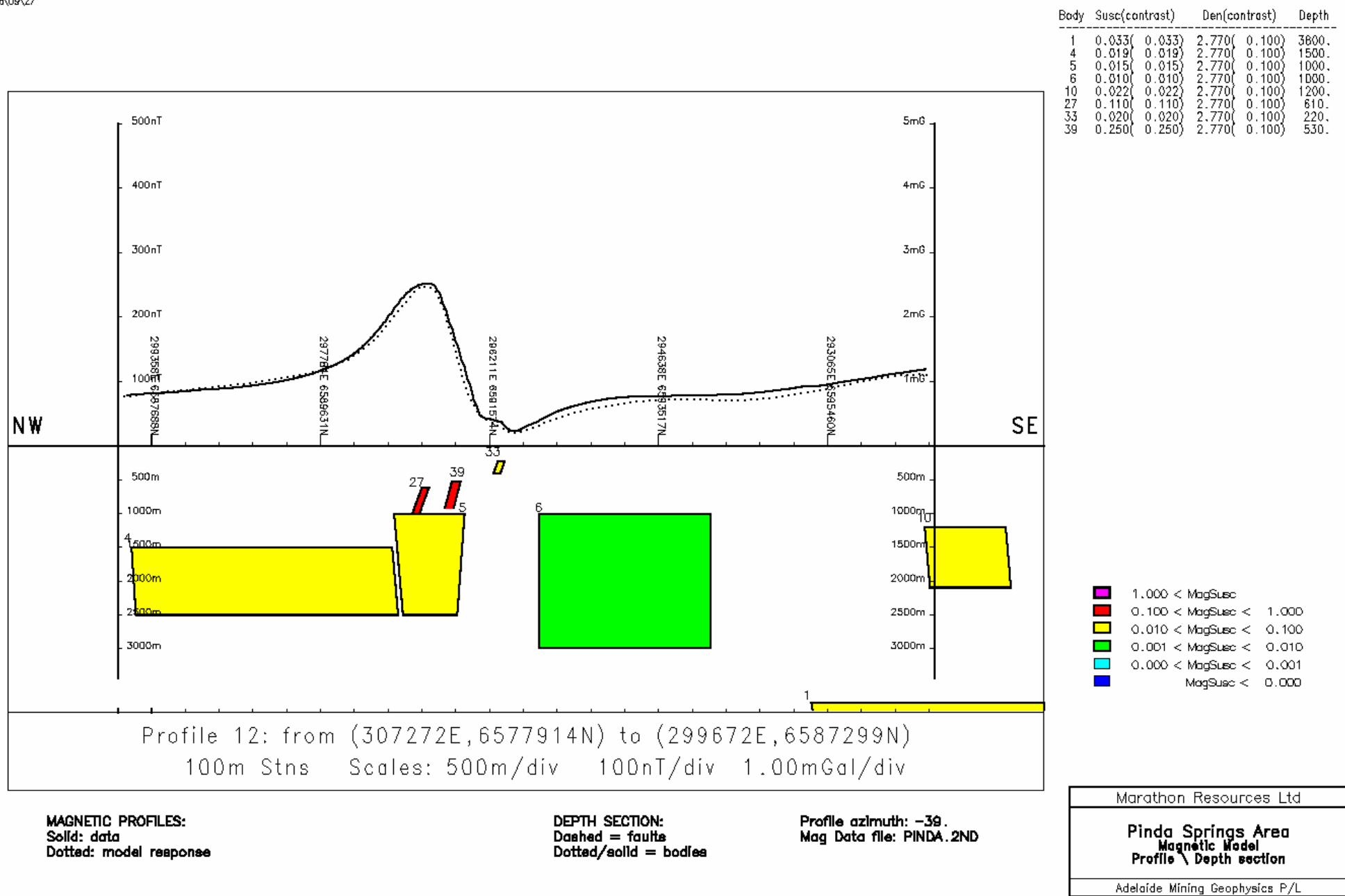


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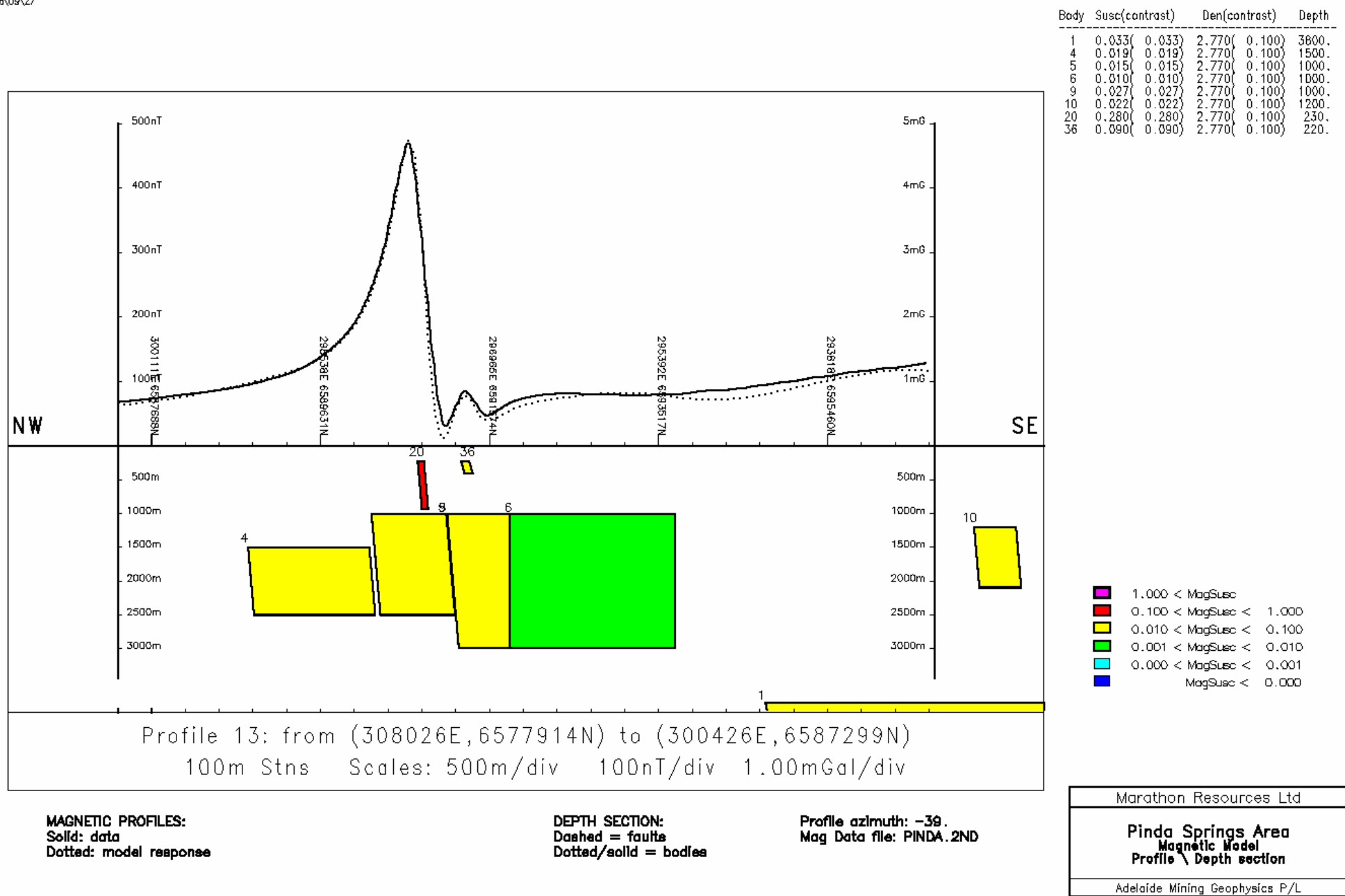


Figure 4.13

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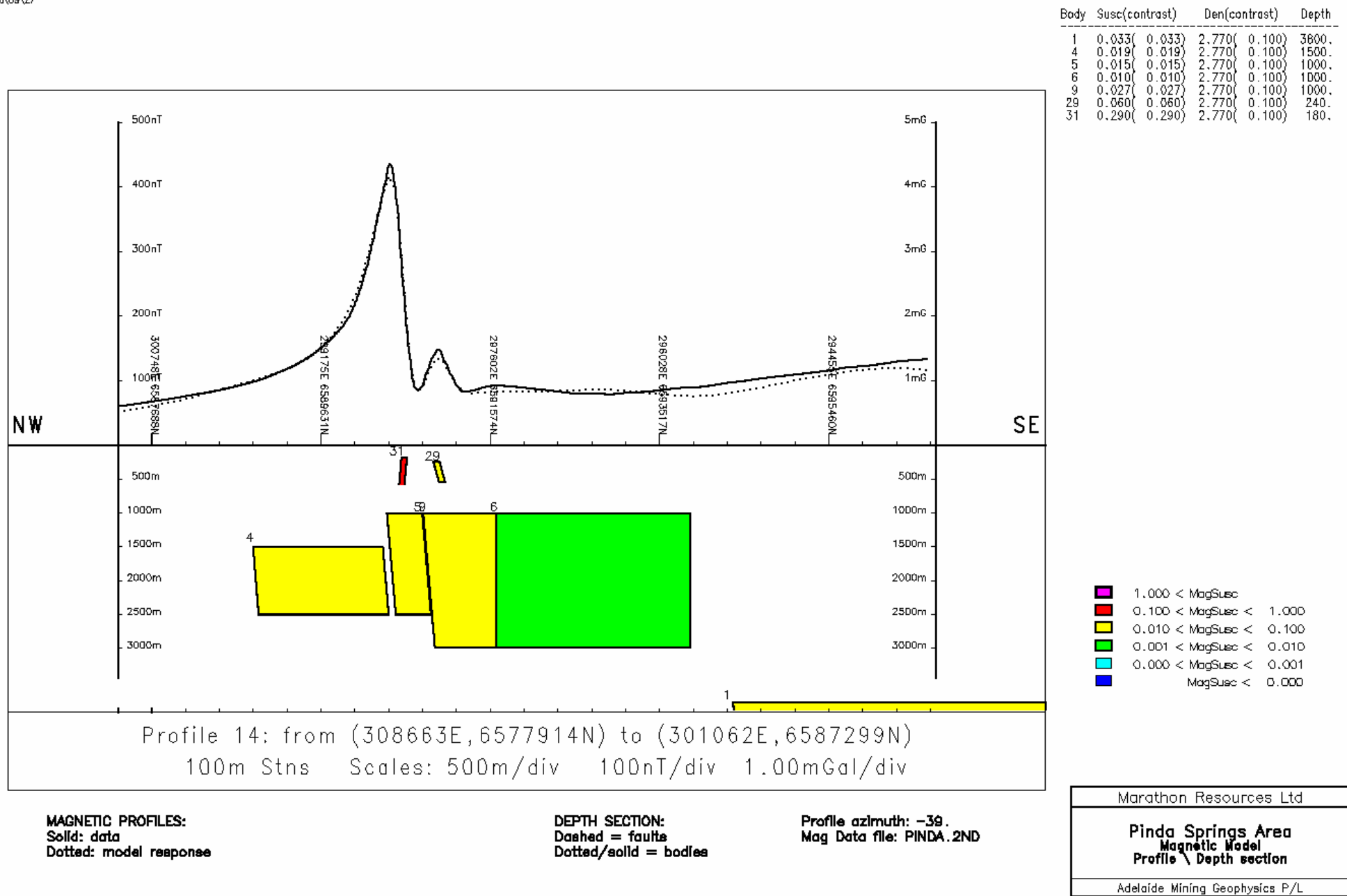
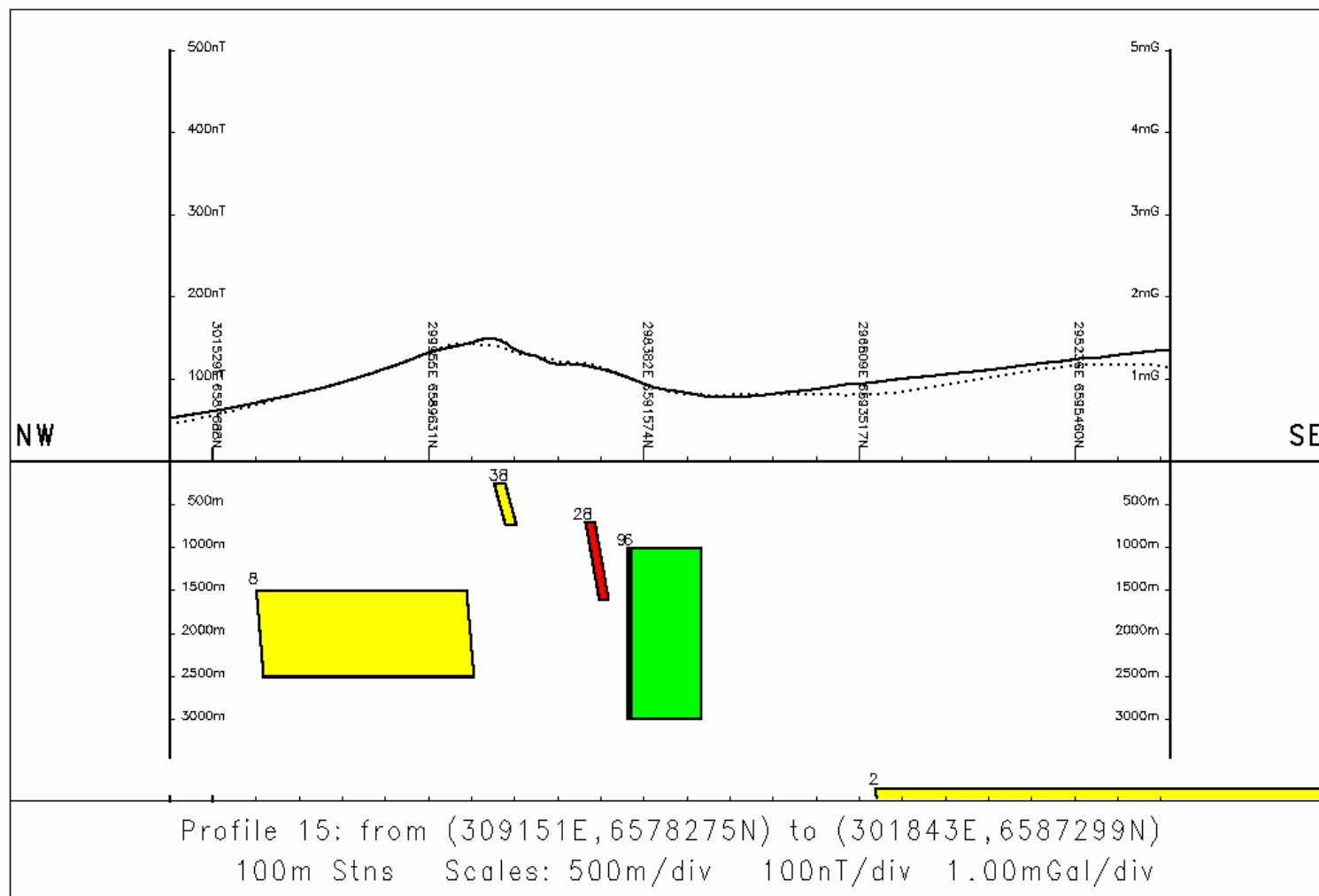


Figure 4.14

06\09\27

Body	Susc(contrast)	Den(contrast)	Depth
2	0.042(0.042)	2.770(0.100)	3600.
6	0.010(0.010)	2.770(0.100)	1000.
8	0.017(0.017)	2.770(0.100)	1500.
9	0.027(0.027)	2.770(0.100)	1000.
28	0.120(0.120)	2.770(0.100)	700.
38	0.030(0.030)	2.770(0.100)	250.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

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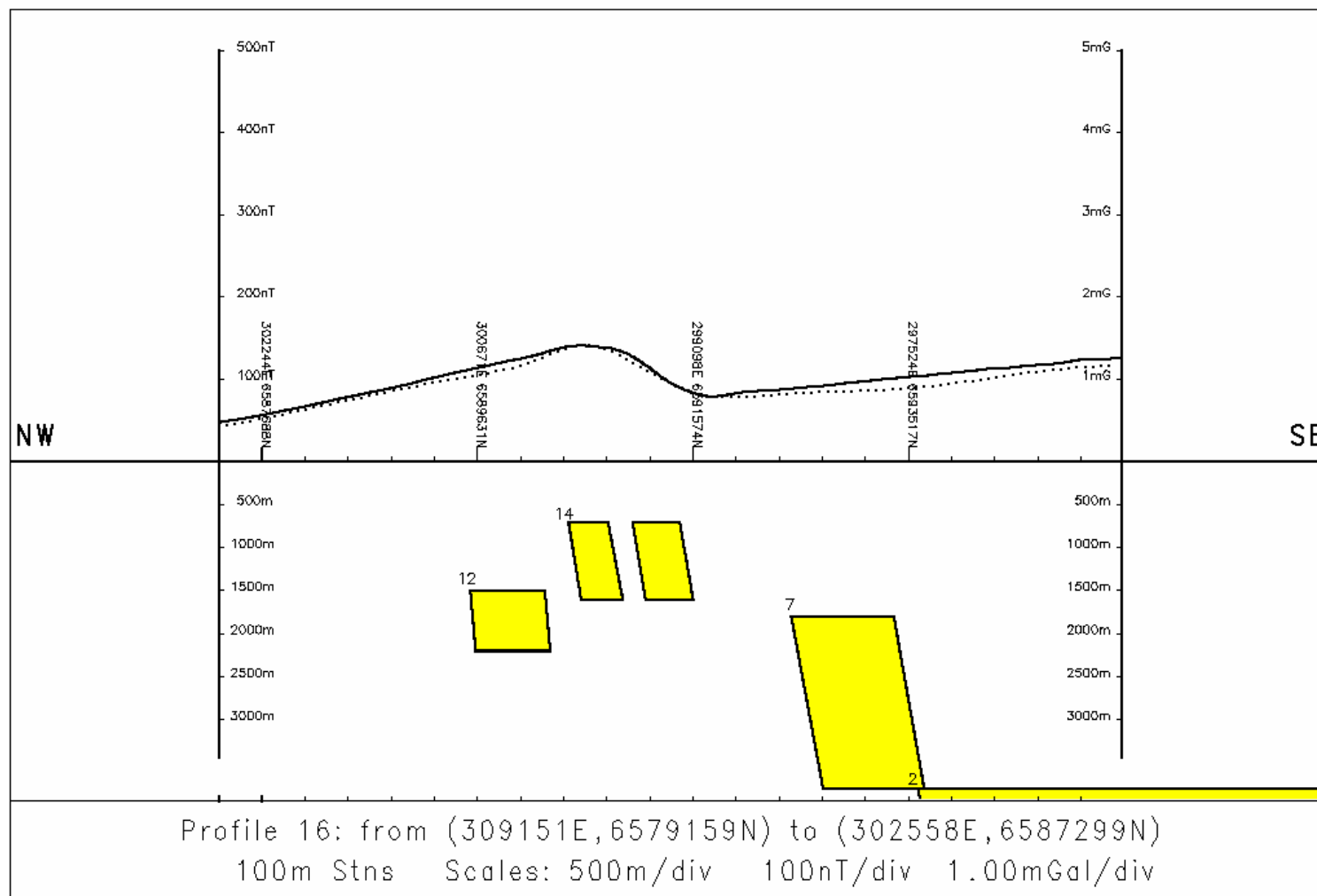
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Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.15

Body	Susc(contrast)	Den(contrast)	Depth
2	0.042(0.042)	2.770(0.100)	3600.
7	0.020(0.020)	2.770(0.100)	1800.
12	0.022(0.022)	2.770(0.100)	1500.
14	0.040(0.040)	2.770(0.100)	700.



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Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

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Figure 4.16

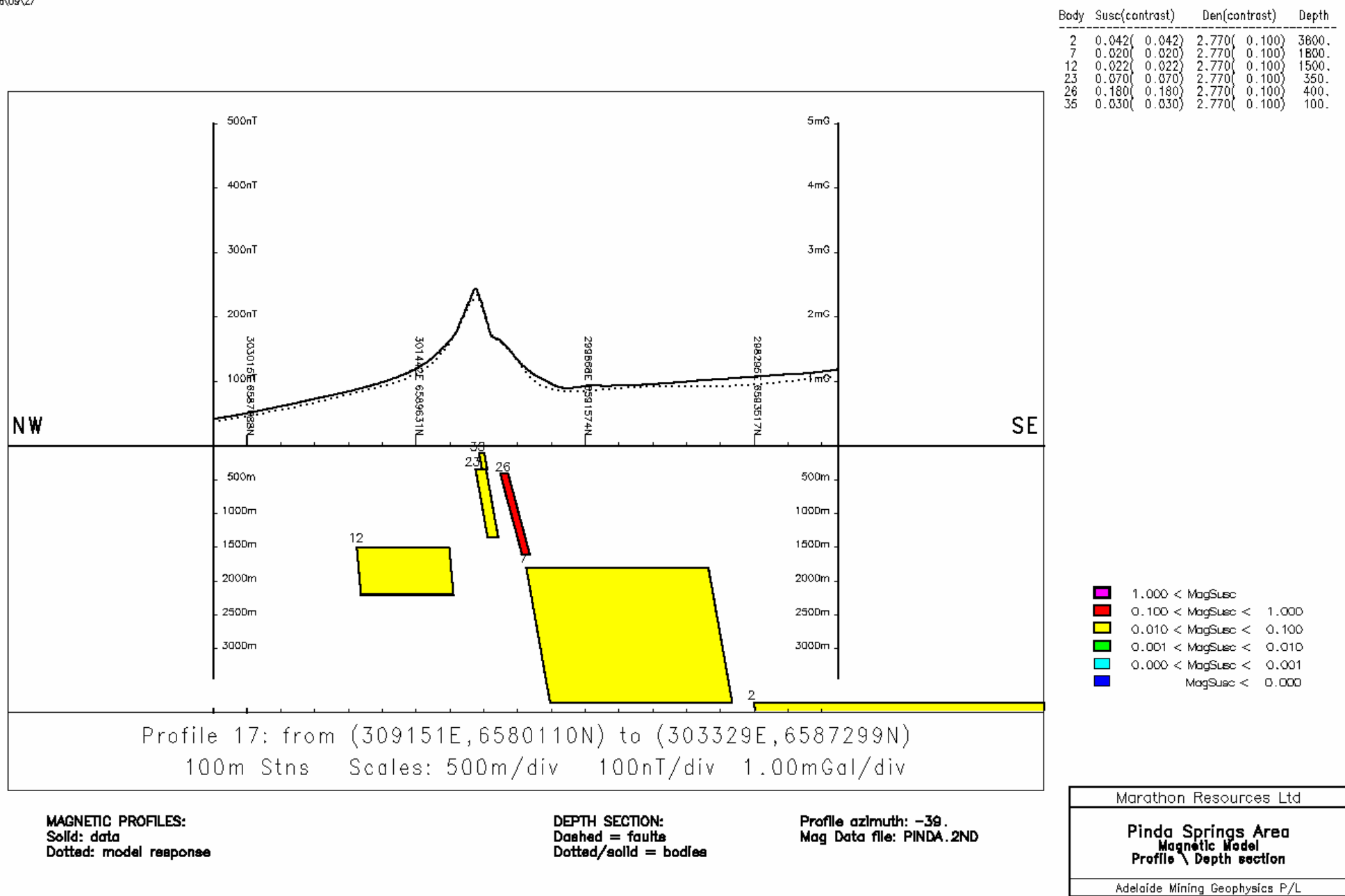
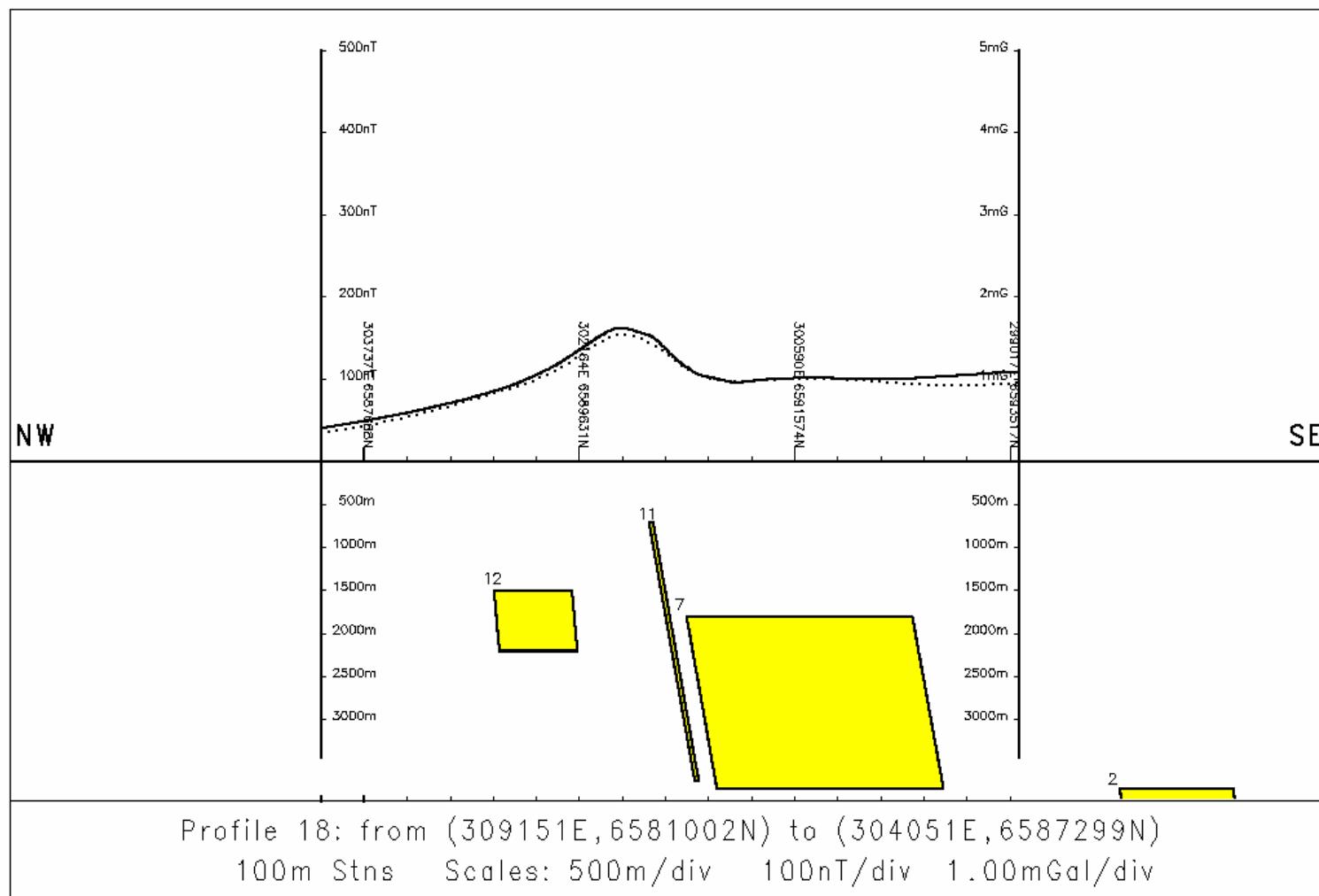


Figure 4.17

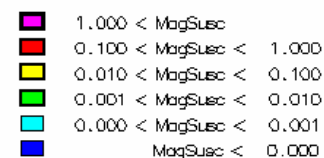
Body	Susc(contrast)	Den(contrast)	Depth
2	0.042(0.042)	2.770(0.100)	3600.
7	0.020(0.020)	2.770(0.100)	1800.
11	0.060(0.060)	2.770(0.100)	700.
12	0.022(0.022)	2.770(0.100)	1500.



MAGNETIC PROFILES:
Solid: data
Dotted: model response

DEPTH SECTION:
Dashed = faults
Dotted/solid = bodies

Profile azimuth: -39.
Mag Data file: PINDA.2ND



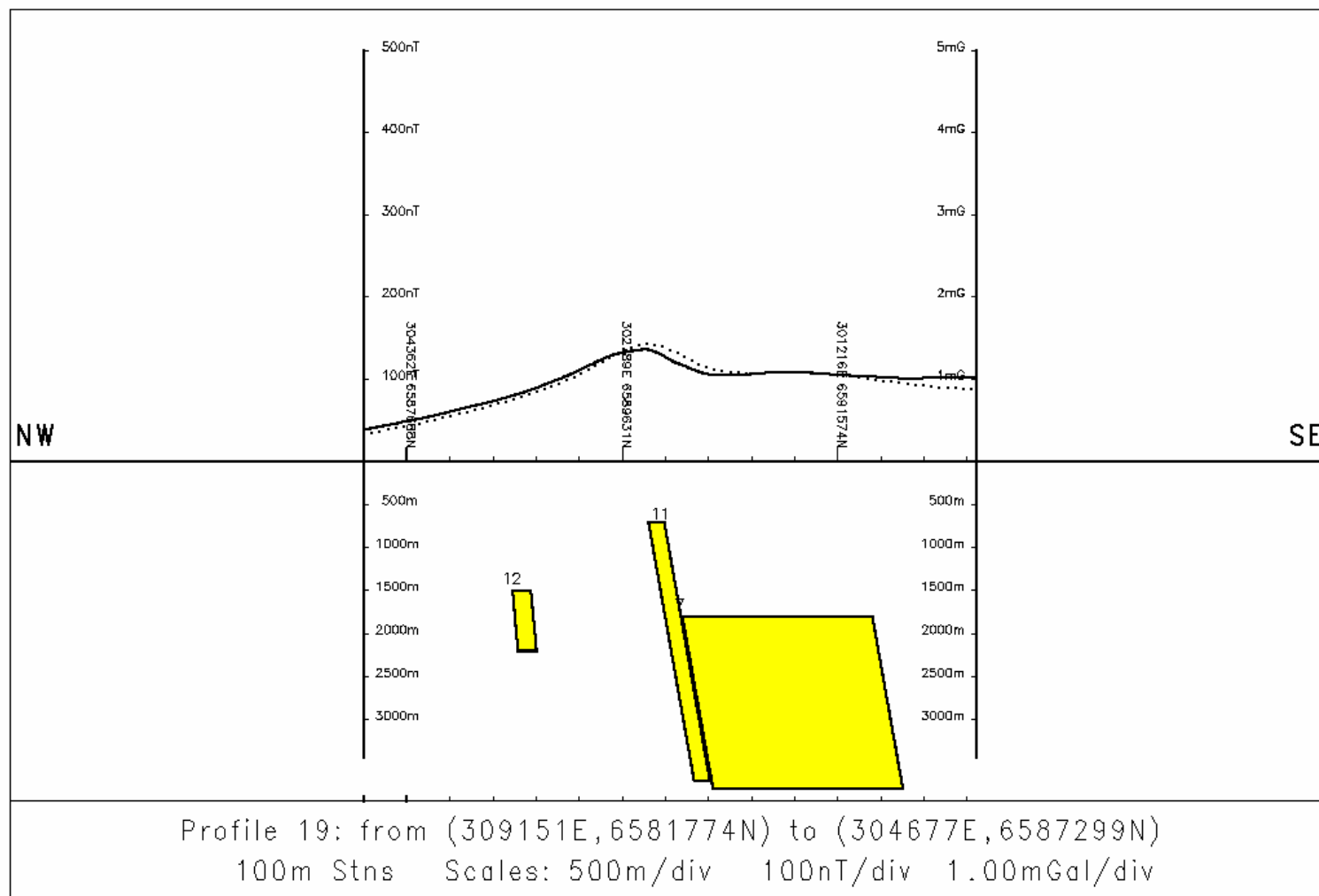
Marathon Resources Ltd

Pinda Springs Area
Magnetic Model
Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.18

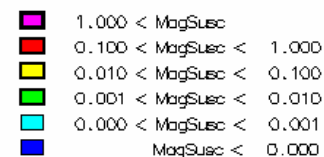
Body	Susc(contrast)	Den(contrast)	Depth
7	0.020(0.020)	2.770(0.100)	1800.
11	0.060(0.060)	2.770(0.100)	700.
12	0.022(0.022)	2.770(0.100)	1500.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND



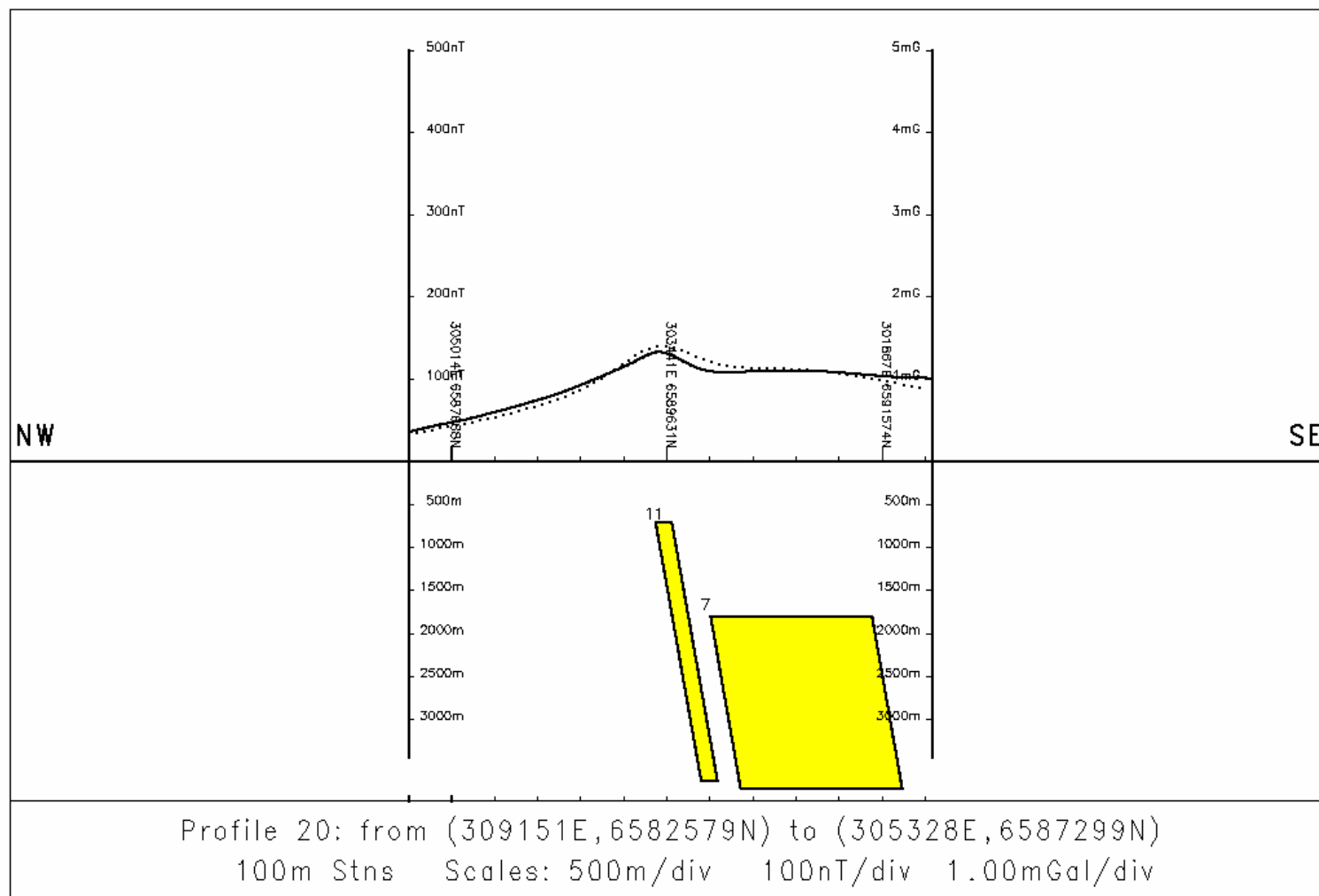
Marathon Resources Ltd

Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.19

Body	Susc(contrast)	Den(contrast)	Depth
7	0.020(0.020)	2.770(0.100)	1800.
11	0.060(0.060)	2.770(0.100)	700.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

1.000 < MagSusc
0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
0.001 < MagSusc < 0.010
0.000 < MagSusc < 0.001
MagSusc < 0.000

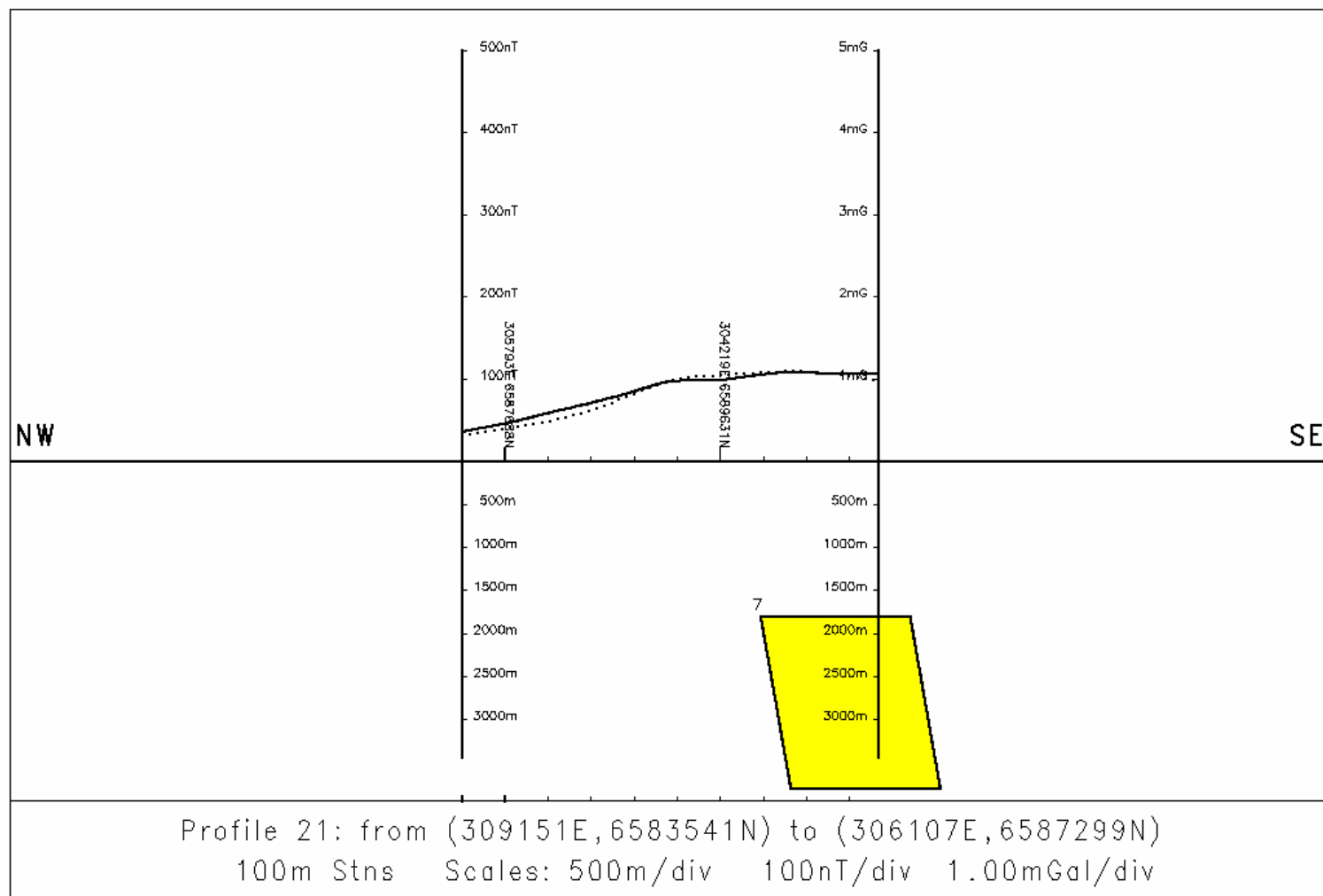
Marathon Resources Ltd

Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.20

Body	Susc(contrast)	Den(contrast)	Depth
7	0.020(0.020)	2.770(0.100)	1800.



1.000 < MagSusc
0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
0.001 < MagSusc < 0.010
0.000 < MagSusc < 0.001
MagSusc < 0.000

MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

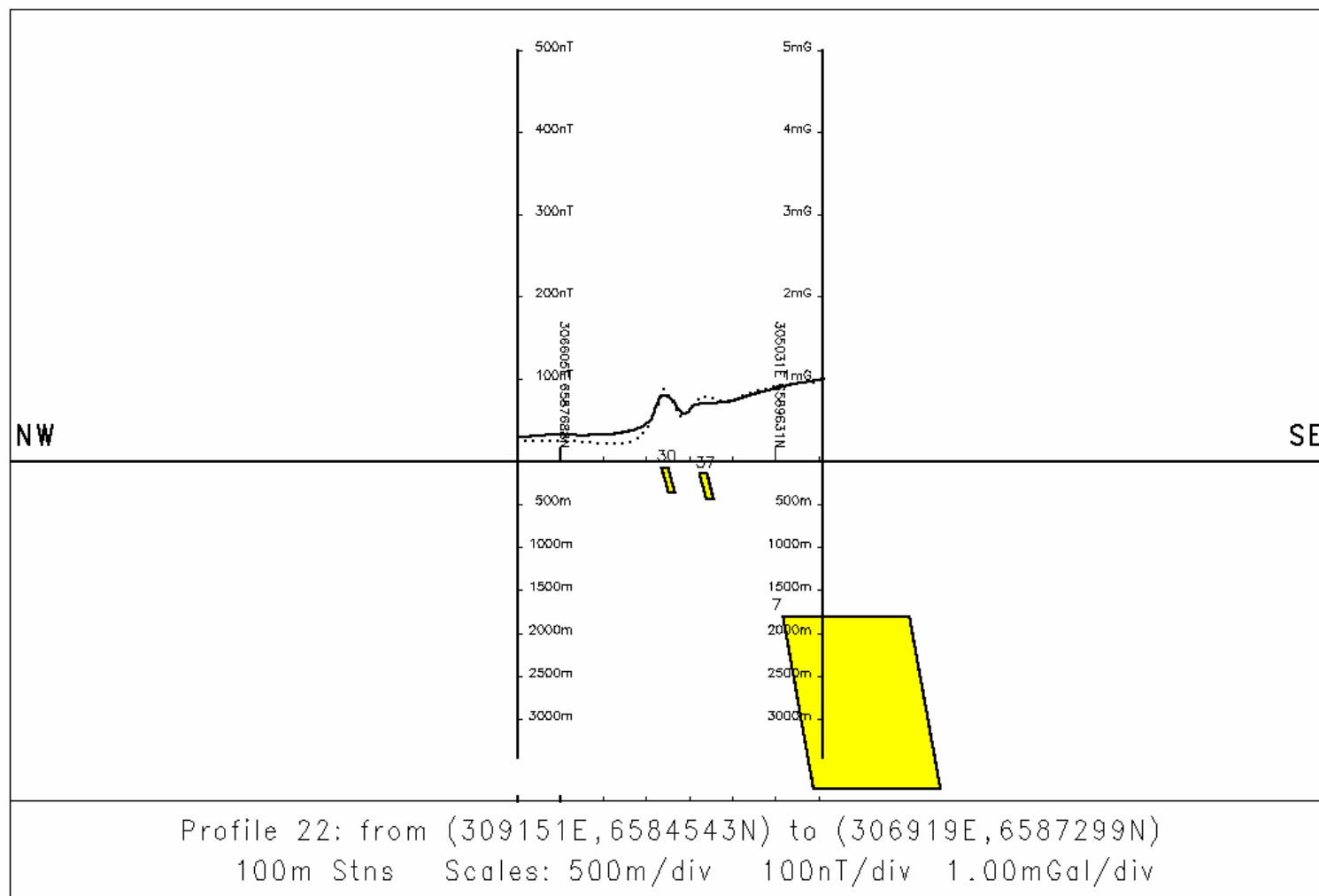
Marathon Resources Ltd

Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.21

Body	Susc(contrast)	Den(contrast)	Depth
7	0.020(0.020)	2.770(0.100)	1800.
30	0.030(0.030)	2.770(0.100)	70.
37	0.030(0.030)	2.770(0.100)	140.



MAGNETIC PROFILES:
Solid: data
Dotted: model response

DEPTH SECTION:
Dashed = faults
Dotted/solid = bodies

Profile azimuth: -39.
Mag Data file: PINDA.2ND

1.000 < MagSusc
0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
0.001 < MagSusc < 0.010
0.000 < MagSusc < 0.001
MagSusc < 0.000

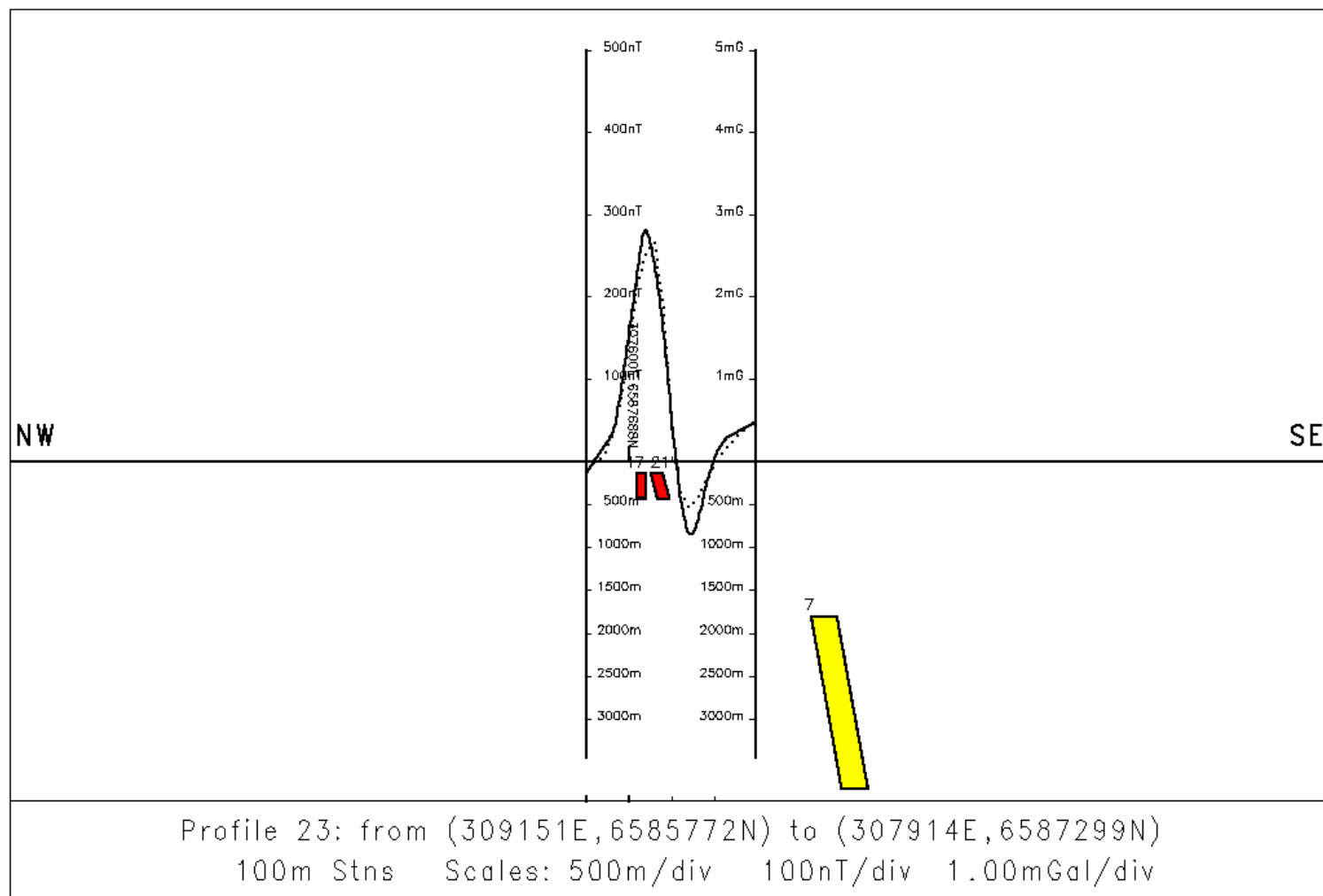
Marathon Resources Ltd

Pinda Springs Area
Magnetic Model
Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.22

Body	Susc(contrast)	Den(contrast)	Depth
7	0.020(0.020)	2.770(0.100)	1800.
17	0.120(0.120)	2.770(0.100)	130.
21	0.140(0.140)	2.770(0.100)	140.



MAGNETIC PROFILES:
 Solid: data
 Dotted: model response

DEPTH SECTION:
 Dashed = faults
 Dotted/solid = bodies

Profile azimuth: -39.
 Mag Data file: PINDA.2ND

1.000 < MagSusc
0.100 < MagSusc < 1.000
0.010 < MagSusc < 0.100
0.001 < MagSusc < 0.010
0.000 < MagSusc < 0.001
MagSusc < 0.000

Marathon Resources Ltd

Pinda Springs Area
 Magnetic Model
 Profile \ Depth section

Adelaide Mining Geophysics P/L

Figure 4.23

Table 1. Magnetic/Gravity Model specification report for use with Plan Map of Body Tops

Title: Pinda Springs Area
 Client: Marathon Resources Ltd
 User: Adelaide Mining Geophysics P/L

Magnetic data file name: PINDA.2ND

Intensity = 57152. Declination = 8.
 Inclination = -63. Magnetometer height: 80.0 m

Hmt+sulf Density = 5.00 Magnetite Density = 5.00
 Magnetite MagSus = 5.00 Power Law Exponent = 1.10
 CountryRock Dens = 2.67 Mafic Rock Density = 3.00

Number of Bodies = 39 Number of Faults = 0
 Number of Profiles = 23 Gauss quad order = 10
 Station Interval = 100 Scale = 100nT/div

Body	No of Verts	Depth	Dip Extnt	Plng Azimuth	Plng	Susc (SI)	Rem Dec	Rem Inc	K- Ratio	Density (gm/cc)	App%Mgt
1	8	3800.	4000.	320.	100.	0.0330	307.	20.	0.00	0.100	1.04
2	6	3800.	4000.	320.	100.	0.0420	307.	20.	0.00	0.100	1.30
3	12	1600.	2000.	320.	90.	0.0150	307.	20.	0.00	0.100	0.51
4	14	1500.	1000.	320.	95.	0.0190	307.	20.	0.00	0.100	0.63
5	21	1000.	1500.	320.	95.	0.0150	307.	20.	0.00	0.100	0.51
(Except: Az= 320., Plg= 85. at 302863.0E, 6583301.0N)											
(Except: Az= 320., Plg= 85. at 302379.5E, 6582927.0N)											
6	22	1000.	2000.	320.	90.	0.0100	307.	20.	0.00	0.100	0.35
(Except: Az= 320., Plg= 95. at 301893.8E, 6581017.0N)											
(Except: Az= 320., Plg= 95. at 301639.3E, 6581303.0N)											
(Except: Az= 320., Plg= 95. at 301925.8E, 6581605.0N)											
(Except: Az= 320., Plg= 95. at 302203.8E, 6582010.0N)											
7	16	1800.	2000.	320.	100.	0.0200	307.	20.	0.00	0.100	0.66
8	6	1500.	1000.	320.	95.	0.0170	307.	20.	0.00	0.100	0.57
9	8	1000.	2000.	320.	90.	0.0270	307.	20.	0.00	0.100	0.87
(Except: Az= 320., Plg= 95. at 303616.6E, 6582953.0N)											
(Except: Az= 320., Plg= 95. at 303394.9E, 6583447.0N)											
(Except: Az= 320., Plg= 95. at 303818.3E, 6583742.0N)											
(Except: Az= 320., Plg= 95. at 304115.0E, 6583938.0N)											
10	12	1200.	900.	320.	95.	0.0220	307.	20.	0.00	0.100	0.72
11	8	700.	3000.	320.	100.	0.0600	307.	20.	0.00	0.100	1.79
12	10	1500.	700.	320.	95.	0.0220	307.	20.	0.00	0.100	0.72
13	7	450.	3000.	320.	95.	0.2500	307.	20.	0.70	0.070	6.57
14	8	700.	900.	320.	100.	0.0400	307.	20.	0.00	0.100	1.24
15	5	350.	3000.	320.	85.	0.1800	307.	20.	0.70	0.070	4.87
16	6	410.	2000.	320.	95.	0.1600	307.	20.	0.70	0.070	4.38
17	5	130.	300.	320.	90.	0.1200	307.	20.	0.00	0.100	3.37
18	6	350.	2000.	320.	100.	0.0500	307.	20.	0.70	0.100	1.52
19	5	1200.	400.	320.	95.	0.0420	307.	20.	0.00	0.100	1.30
20	4	230.	700.	320.	95.	0.2800	307.	20.	0.70	0.100	7.28
21	4	140.	300.	320.	105.	0.1400	307.	20.	0.00	0.100	3.88
22	8	230.	220.	320.	95.	0.1200	307.	20.	0.00	0.070	3.37
23	5	350.	1000.	320.	100.	0.0700	307.	20.	0.70	0.100	2.06
24	5	350.	1000.	320.	100.	0.0200	307.	20.	0.70	0.100	0.66
25	7	550.	450.	320.	70.	0.1400	307.	20.	0.00	0.100	3.88
26	5	400.	1200.	320.	105.	0.1800	307.	20.	0.00	0.100	4.87
27	5	610.	390.	320.	70.	0.1100	307.	20.	0.00	0.100	3.11
28	6	700.	900.	320.	100.	0.1200	307.	20.	0.00	0.100	3.37
29	5	240.	300.	320.	105.	0.0600	307.	20.	0.00	0.100	1.79
30	4	70.	300.	320.	105.	0.0300	307.	20.	0.00	0.100	0.96
31	4	180.	400.	320.	85.	0.2900	307.	20.	0.70	0.100	7.51
32	6	230.	180.	320.	95.	0.0500	307.	20.	0.00	0.070	1.52
33	4	220.	200.	320.	70.	0.0200	307.	20.	0.00	0.100	0.66
34	4	200.	500.	320.	105.	0.0200	307.	20.	0.00	0.100	0.66
35	5	100.	250.	320.	100.	0.0300	307.	20.	0.70	0.100	0.96
36	4	220.	200.	320.	105.	0.0900	307.	20.	0.00	0.100	2.59
37	3	140.	300.	320.	105.	0.0300	307.	20.	0.00	0.100	0.96
38	4	250.	500.	320.	105.	0.0300	307.	20.	0.00	0.100	0.96
39	4	530.	400.	320.	75.	0.2500	307.	20.	0.00	0.100	6.57

Appendix 2

Orientation Stream Sediment Sample Locations

Pinda Springs Area

SAMPLE	Zone		MGA_East	MGA_North
126160		54	305447	6580620
126161		54	305447	6580522
126162		54	305443	6580418
126163		54	305519	6580319
126164		54	305560	6580213

Appendix 3

Stream Sediment Geochemical Locations

Pinda Springs Area

SAMPLE	Zone		MGA_East	MGA_North
126165	54		305386	6583294
126166	54		305838	6583233
126167	54		305106	6582611
126168	54		305641	6582614
126169	54		305600	6582240
126170	54		305677	6582342
126171	54		305133	6582079
126172	54		305451	6581498
126173	54		305212	6581160
126174	54		306113	6581093
126175	54		305856	6579954
126176	54		305327	6579760
126177	54		305390	6579222
126178	54		305565	6578974
126179	54		305487	6578757
126180	54		305351	6578611
126181	54		305629	6578303
126182	54		305227	6577726
126183	54		305695	6577759
126184	54		305831	6577463
126185	54		305552	6583822
126186	54		303706	6583657
126187	54		303187	6583031
126188	54		302591	6582959
126189	54		302337	6582514
126190	54		302681	6582514
126191	54		302309	6582246
126192	54		302161	6582218
126193	54		302080	6581864
126194	54		301608	6581429
126195	54		301572	6581199
126196	54		301336	6580525
126197	54		300995	6579700
126198	54		300671	6579676
126199	54		300438	6579403
126200	54		307150	6582712
127301	54		305867	6580953
127302	54		305323	6584135
127303	54		305647	6584171
127304	54		305786	6584048
127305	54		306420	6584450
127306	54		307013	6584830
127307	54		307199	6584936
127308	54		307400	6583350
127309	54		307849	6582741
127310	54		299791	6578530
127311	54		300940	6580510
127312	54		304060	6584300
127313	54		303927	6584503
127314	54		303456	6584495
127315	54		302500	6584520
127316	54		302407	6584438
127317	54		302320	6583930
127318	54		302106	6583859
127319	54		302684	6584618
127320	54		302935	6584688
127321	54		301771	6583636
127322	54		301796	6583333
127323	54		301451	6582853
127324	54		301336	6582487
127325	54		301091	6582076
127326	54		301122	6581637
182082	54	303145.3		6582537.2
182083	54	303342.1		6582667.7
182084	54	303902.4		6583135.7
182085	54	305081.2		6583174.5
182086	54	305036		6583237
182087	54	305014		6583173.8

Appendix 4

Soil Geochemical Locations

Pinda Springs Area

Sample No	Zone	East	North	Collection Method	Depth in m	Sieve size	Type	Colour	Comments
38601	54	303000	6582400	Spade	0.06	(-)2 mm	S	R	
38602	54	303100	6582400	Spade	0.06	(-)2 mm	S	R	
38603	54	303200	6582400	Spade	0.06	(-)2 mm	S	R	
38604	54	303300	6582400	Spade	0.06	(-)2 mm	S	R	
38605	54	303100	6582500	Spade	0.06	(-)2 mm	S	R	
38606	54	303200	6582500	Spade	0.06	(-)2 mm	S	R	
38607	54	303250	6582450	Spade	0.06	(-)2 mm	S	O	
38609	54	303200	6582600	Spade	0.06	(-)2 mm	S	B	
38610	54	303300	6582600	Spade	0.06	(-)2 mm	S	O	
38611	54	303350	6582600	Spade	0.06	(-)2 mm	S	O	
38613	54	303350	6582700	Spade	0.06	(-)2 mm	S	O	
38614	54	303400	6582700	Spade	0.06	(-)2 mm	S	O-B	
38615	54	303500	6582700	Spade	0.06	(-)2 mm	S	O	
38616	54	303600	6582700	Spade	0.06	(-)2 mm	S	O-B	
38617	54	303700	6582700	Spade	0.06	(-)2 mm	S	B	
38618	54	303400	6582800	Spade	0.06	(-)2 mm	S	B	
38619	54	303500	6582800	Spade	0.06	(-)2 mm	S	O-B	
38620	54	303600	6582800	Spade	0.06	(-)2 mm	S	B	
38621	54	Duplicate of	38658	Spade	0.06	(-)2 mm	S	O-B	
38622	54	Check Sample							
38623	54	303700	6582800	Spade	0.06	(-)2 mm	S	B	
38624	54	303750	6582800	Spade	0.06	(-)2 mm	S	O	
38626	54	303500	6582900	Spade	0.06	(-)2 mm	S	B	
38627	54	303600	6582900	Spade	0.06	(-)2 mm	S	B	
38628	54	303700	6582900	Spade	0.06	(-)2 mm	S	T	
38629	54	303800	6582900	Spade	0.06	(-)2 mm	S	T	
38630	54	303850	6582900	Spade	0.06	(-)2 mm	S	T	
38631	54	303700	6583000	Spade	0.06	(-)2 mm	S	O	
38632	54	303800	6583000	Spade	0.06	(-)2 mm	S	O-P	
38633	54	303900	6583000	Spade	0.06	(-)2 mm	S	T	
38634	54	304000	6583000	Spade	0.06	(-)2 mm	S	O	
38635	54	304100	6583000	Spade	0.06	(-)2 mm	S	B-P	
38636	54	304200	6583000	Spade	0.06	(-)2 mm	S	B-O	
38637	54	304300	6583000	Spade	0.06	(-)2 mm	S	B-O	
38640	54	304600	6583000	Spade	0.06	(-)2 mm	S	O	
38642	54	304800	6583000	Spade	0.06	(-)2 mm	S	G	
38643	54	304900	6583000	Spade	0.06	(-)2 mm	S	G	
38644	54	305000	6583000	Spade	0.06	(-)2 mm	S	G	
38645	54	305100	6583000	Spade	0.06	(-)2 mm	S	T	
38646	54	305200	6583000	Spade	0.06	(-)2 mm	S	T	
38647	54	305300	6583000	Spade	0.06	(-)2 mm	S	O	
38648	54	305400	6583000	Spade	0.06	(-)2 mm	S	B	
38649	54	303700	6583100	Spade	0.06	(-)2 mm	S	O-B	
38650	54	303800	6583100	Spade	0.06	(-)2 mm	S	B	
38651	54	303900	6583100	Spade	0.06	(-)2 mm	S	O	
38652	54	304000	6583100	Spade	0.06	(-)2 mm	S	O	
38653	54	304150	6583100	Spade	0.06	(-)2 mm	S	O	
38654	54	304200	6583100	Spade	0.06	(-)2 mm	S	O	
38655	54	304300	6583100	Spade	0.06	(-)2 mm	S	O	
38656	54	304400	6583100	Spade	0.06	(-)2 mm	S	B	
38658	54	304635	6583100	Spade	0.06	(-)2 mm	S	O-B	
38659	54	304700	6583100	Spade	0.06	(-)2 mm	S	O-B	
38660	54	304800	6583100	Spade	0.06	(-)2 mm	S	G	hill
38661	54	304900	6583100	Spade	0.06	(-)2 mm	S	G	
38662	54	305000	6583100	Spade	0.06	(-)2 mm	S	G	
38663	54	305100	6583100	Spade	0.06	(-)2 mm	S	G	
38664	54	305200	6583100	Spade	0.06	(-)2 mm	S	G	
38665	54	305300	6583100	Spade	0.06	(-)2 mm	S	G	
38666	54	305400	6583100	Spade	0.06	(-)2 mm	S	O	
38667	54	303900	6583150	Spade	0.06	(-)2 mm	S	O	

38668	54	304000	6583200	Spade	0.06	(-2 mm	S	B	
38669	54	304100	6583200	Spade	0.06	(-2 mm	S	B	hill
38670	54	304200	6583180	Spade	0.06	(-2 mm	S	B	hill
38671	54	304300	6583170	Spade	0.06	(-2 mm	S	B	hill
38672	54	304400	6583200	Spade	0.06	(-2 mm	S	B-O	hill
38673	54	304500	6583200	Spade	0.06	(-2 mm	S	G	hill
38674	54	304600	6583200	Spade	0.06	(-2 mm	S	G	hill
38675	54	304700	6583200	Spade	0.06	(-2 mm	S	T	
38676	54	304800	6583200	Spade	0.06	(-2 mm	S	B	
38677	54	304900	6583200	Spade	0.06	(-2 mm	S	G	
38678	54	305000	6583200	Spade	0.06	(-2 mm	S	G	
38679	54	305100	6583200	Spade	0.06	(-2 mm	S	G	
38680	54	305200	6583200	Spade	0.06	(-2 mm	S	B	
38681	54	305300	6583200	Spade	0.06	(-2 mm	S	O	
38682	54	305400	6583200	Spade	0.06	(-2 mm	S	O	
38683	54	Duplicate of	38692	Spade	0.06	(-2 mm	S	T	
38684	54	Check Sample							
38685	54	304060	6583300	Spade	0.06	(-2 mm	S	B	
38686	54	304100	6583300	Spade	0.06	(-2 mm	S	B	
38687	54	304200	6583300	Spade	0.06	(-2 mm	S	T	
38690	54	304560	6583290	Spade	0.06	(-2 mm	S	T	
38691	54	304600	6583300	Spade	0.06	(-2 mm	S	T-G	
38692	54	304700	6583300	Spade	0.06	(-2 mm	S	T	
38693	54	304800	6583300	Spade	0.06	(-2 mm	S	G	
38694	54	304940	6583300	Spade	0.06	(-2 mm	S	G	
38695	54	305000	6583300	Spade	0.06	(-2 mm	S	G	
38696	54	305100	6583300	Spade	0.06	(-2 mm	S	G	
38697	54	305200	6583300	Spade	0.06	(-2 mm	S	G	
38698	54	305300	6583300	Spade	0.06	(-2 mm	S	O	
38699	54	305400	6583300	Spade	0.06	(-2 mm	S	G	
38700	54	304440	6583400	Spade	0.06	(-2 mm	S	B-P	
38701	54	304530	6583400	Spade	0.06	(-2 mm	S	G	
38702	54	304600	6583400	Spade	0.06	(-2 mm	S	O	
38703	54	304700	6583400	Spade	0.06	(-2 mm	S	B	
38704	54	304800	6583400	Spade	0.06	(-2 mm	S	G	hill
38705	54	304900	6583400	Spade	0.06	(-2 mm	S	G	
38706	54	305000	6583400	Spade	0.06	(-2 mm	S	G	
38707	54	305100	6583400	Spade	0.06	(-2 mm	S	G-P	hill
38708	54	305200	6583400	Spade	0.06	(-2 mm	S	G-P	hill
38709	54	305300	6583400	Spade	0.06	(-2 mm	S	O	
38710	54	305400	6583400	Spade	0.06	(-2 mm	S	O	
38711	54	304400	6583500	Spade	0.06	(-2 mm	S	O	
38712	54	304500	6583500	Spade	0.06	(-2 mm	S	O	
38713	54	304600	6583500	Spade	0.06	(-2 mm	S	T	
38714	54	304700	6583500	Spade	0.06	(-2 mm	S	T	
38715	54	304800	6583500	Spade	0.06	(-2 mm	S	B	
38716	54	304950	6583500	Spade	0.06	(-2 mm	S	G	
38717	54	305000	6583500	Spade	0.06	(-2 mm	S	G	
38718	54	305100	6583500	Spade	0.06	(-2 mm	S	G	
38719	54	305200	6583500	Spade	0.06	(-2 mm	S	G-P	
38720	54	305300	6583500	Spade	0.06	(-2 mm	S	B	
38721	54	305400	6583500	Spade	0.06	(-2 mm	S	O	
38723	54	305600	6584460	Spade	0.06	(-2 mm	S	B	
38724	54	305700	6584500	Spade	0.06	(-2 mm	S	B	
38725	54	305800	6584430	Spade	0.06	(-2 mm	S	G-B	hill
38727	54	305600	6584400	Spade	0.06	(-2 mm	S	B-O	
38728	54	305720	6584400	Spade	0.06	(-2 mm	S	B	hill
38729	54	305800	6584350	Spade	0.06	(-2 mm	S	B	hill
38730	54	305900	6584350	Spade	0.06	(-2 mm	S	B	
38731	54	306000	6584370	Spade	0.06	(-2 mm	S	B	
38733	54	305600	6584230	Spade	0.06	(-2 mm	S	B	
38734	54	305700	6584300	Spade	0.06	(-2 mm	S	G	
38735	54	305800	6584300	Spade	0.06	(-2 mm	S	B	

38736	54	305900	6584300	Spade	0.06	(-)2 mm	S	B	
38737	54	306000	6584300	Spade	0.06	(-)2 mm	S	T	
38738	54	305500	6584200	Spade	0.06	(-)2 mm	S	B	
38739	54	305600	6584200	Spade	0.06	(-)2 mm	S	B	
38740	54	305700	6584200	Spade	0.06	(-)2 mm	S	B	
38741	54	305800	6584200	Spade	0.06	(-)2 mm	S	T	
38742	54	305900	6584200	Spade	0.06	(-)2 mm	S	T	
38743	54	306000	6584200	Spade	0.06	(-)2 mm	S	T	
38744	54	305500	6584100	Spade	0.06	(-)2 mm	S	G	
38745	54	Duplicate of	38749	Spade	0.06	(-)2 mm	S	B-O	
38746	54	Check Sample							
38747	54	305600	6584100	Spade	0.06	(-)2 mm	S	G	
38748	54	305700	6584100	Spade	0.06	(-)2 mm	S	G-P	
38749	54	305800	6584100	Spade	0.06	(-)2 mm	S	B-O	
38750	54	305900	6584100	Spade	0.06	(-)2 mm	S	B-O	
38751	54	306000	6584100	Spade	0.06	(-)2 mm	S	B	
38752	54	305500	6584000	Spade	0.06	(-)2 mm	S	O	
38753	54	305600	6584000	Spade	0.06	(-)2 mm	S	B	
38754	54	305700	6584030	Spade	0.06	(-)2 mm	S	O	
38755	54	305800	6584000	Spade	0.06	(-)2 mm	S	B	
38756	54	305900	6584000	Spade	0.06	(-)2 mm	S	B	
38757	54	305950	6584000	Spade	0.06	(-)2 mm	S	B	
38758	54	303200	6584200	Spade	0.06	(-)2 mm	S	B-O	
38759	54	303300	6584200	Spade	0.06	(-)2 mm	S	B-O	
38760	54	303400	6584200	Spade	0.06	(-)2 mm	S	B-O	
38761	54	303500	6584200	Spade	0.06	(-)2 mm	S	B-O	
38762	54	303600	6584200	Spade	0.06	(-)2 mm	S	B	
38763	54	303700	6584200	Spade	0.06	(-)2 mm	S	B	
38764	54	303800	6584200	Spade	0.06	(-)2 mm	S	B	
38765	54	303900	6584200	Spade	0.06	(-)2 mm	S	B	
38766	54	304000	6584200	Spade	0.06	(-)2 mm	S	G	
38767	54	304100	6584200	Spade	0.06	(-)2 mm	S	G	Calcrete on sur
38768	54	304200	6584200	Spade	0.06	(-)2 mm	S	T	
38769	54	304260	6584150	Spade	0.06	(-)2 mm	S	G	
38770	54	304350	6584080	Spade	0.06	(-)2 mm	S	G	hill
38771	54	305243	6582958	Spade	0.06	(-)2 mm	S		extra smpl
38772	54	304978	6583100	Spade	0.06	(-)2 mm	S		extra smpl
38773	54	304940	6583000	Spade	0.06	(-)2 mm	S		extra smpl
38774	54	304846	6583460	Spade	0.06	(-)2 mm	S		extra smpl
38775	54	304830	6583500	Spade	0.06	(-)2 mm	S		extra smpl
38776	54	305110	6583440	Spade	0.06	(-)2 mm	S		extra smpl
38777	54	303850	6582950	Spade	0.06	(-)2 mm	S		extra smpl
38778	54	304530	6583270	Spade	0.06	(-)2 mm	S		extra smpl
38779	54	304570	6583370	Spade	0.06	(-)2 mm	S		extra smpl
38780	54	305600	6584340	Spade	0.06	(-)2 mm	S		extra smpl
38781	54	305266	658380	Spade	0.06	(-)2 mm	S		extra smpl



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Finalized Date: 5-DEC-2006

Account: MARATH

CERTIFICATE PH06112067

Project: 3159

P.O. No.:

This report is for 176 Soil samples submitted to our lab in Perth, WA, Australia on 9-NOV-2006.

The following have access to data associated with this certificate:

ALLAN YOUNGER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
PUL-24	Pulv Sample - Split/Discard
PUL-QC	Pulverizing QC Test
LEV-01	Waste Disposal Levy

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-TL43	Trace Level Au - 25g AR	ICP-MS
ME-MS61	47 element four acid ICP-MS	

To: **MARATHON RESOURCES LTD**
ATTN: ALLAN YOUNGER
10 GEORGE STREET
STEPNEY SA 5069

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.

Signature:

Wayne Abbott, Operations Manager, Western Australia



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	Au-TL43	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
38 601		0.002	0.10	5.49	7.0	340	1.72	0.34	0.37	0.09	67.30	9.8	49	4.46	43.5	3.07
38 602		0.003	0.14	5.10	4.0	230	1.18	0.20	0.25	0.09	53.40	10.7	42	4.42	18.0	2.58
38 603		0.002	0.18	5.55	8.5	440	2.42	0.98	0.92	0.08	70.10	11.8	56	4.69	71.7	3.34
38 604		0.006	0.06	8.25	6.0	300	3.27	0.26	0.27	0.21	123.00	15.1	70	5.59	28.7	4.80
38 605		0.002	0.11	5.02	7.8	240	1.18	0.29	0.27	0.08	54.40	9.8	52	4.17	30.0	2.86
38 606		0.002	0.09	6.34	3.8	310	1.70	0.19	1.45	0.11	56.30	9.3	69	4.93	21.8	2.77
38 607		0.001	0.16	4.18	2.7	130	1.01	0.14	0.12	0.06	39.10	3.9	49	3.76	14.3	1.69
38 609		0.002	0.06	7.05	2.7	450	2.19	0.23	0.23	0.09	76.20	13.0	70	6.00	20.8	3.49
38 610		0.002	0.11	4.89	5.3	290	1.54	0.28	0.24	0.10	59.40	11.3	73	4.48	19.4	2.49
38 611		0.001	0.13	4.86	3.8	180	1.15	0.20	0.21	0.10	47.30	8.0	39	4.09	22.7	2.14
38 613		0.002	0.09	6.49	3.5	360	2.00	0.18	0.45	0.13	77.80	16.3	89	5.07	15.7	3.25
38 614		0.002	0.16	6.02	4.6	230	1.35	0.23	0.39	0.08	48.10	10.0	49	4.78	19.0	2.94
38 615		0.004	0.12	6.33	6.7	270	1.44	0.36	0.50	0.08	50.80	9.0	48	4.89	22.6	2.90
38 616		0.001	0.11	4.17	2.1	230	0.84	0.11	0.15	0.05	48.80	3.9	28	3.07	8.6	1.44
38 617		0.002	0.07	5.47	2.8	500	1.94	0.16	0.18	0.06	84.00	5.5	60	5.77	8.9	2.72
38 618		0.002	0.08	6.99	3.2	360	2.14	0.16	4.59	0.11	80.10	10.7	63	5.81	12.2	3.11
38 619		0.002	0.12	4.98	4.2	260	1.25	0.25	0.21	0.07	63.60	10.6	45	4.40	16.5	2.65
38 620		0.001	0.10	5.33	3.1	360	1.35	0.29	0.20	0.06	74.70	5.9	62	4.42	17.2	2.43
38 621		0.003	0.05	8.37	6.3	420	2.68	0.21	0.52	0.08	86.40	17.5	80	7.04	15.6	4.60
38 622		0.011	0.17	3.91	17	710	0.98	0.19	14.80	0.08	46.90	10.8	28	4.61	20.6	2.12
38 623		0.006	0.12	6.85	5.0	280	1.88	0.35	0.33	0.07	62.10	9.8	54	5.43	36.6	3.07
38 624		0.002	0.12	3.77	2.0	170	0.91	0.22	0.11	0.04	60.50	3.4	36	3.35	12.2	1.38
38 626		0.004	0.11	6.26	5.3	330	1.98	0.21	0.57	0.11	63.50	11.5	62	5.49	15.3	3.63
38 627		0.004	0.04	8.13	4.9	420	2.81	0.39	0.87	0.07	87.90	14.7	72	6.32	10.2	3.39
38 628		0.002	0.09	6.65	2.9	350	1.96	0.17	6.64	0.08	74.10	12.6	56	5.49	12.1	3.47
38 629		0.002	0.07	4.41	2.9	180	1.39	0.20	0.13	0.06	76.20	6.2	40	3.79	30.9	2.27
38 630		0.001	0.04	5.71	2.7	360	1.89	0.09	0.13	0.04	97.70	4.3	58	4.78	33.2	2.51
38 631		0.003	0.10	7.82	7.2	360	2.32	0.26	0.43	0.09	78.20	17.7	69	6.44	23.4	4.15
38 632		0.002	0.13	3.85	3.6	230	2.59	0.83	0.16	0.10	84.30	12.1	49	4.05	38.6	2.48
38 633		0.001	0.09	4.08	2.2	190	1.41	0.16	0.14	0.06	62.60	6.8	40	4.66	18.3	1.98
38 634		0.001	0.10	5.28	3.9	190	1.28	0.37	0.20	0.06	59.40	6.9	46	4.35	18.7	2.50
38 635		0.002	0.10	3.99	2.3	230	1.02	0.19	0.15	0.05	62.60	4.5	43	3.63	7.4	2.76
38 636		0.001	0.08	4.50	9.1	350	1.25	1.22	0.17	0.04	85.00	8.7	48	3.51	66.1	2.23
38 637		0.001	0.13	5.40	6.0	440	3.15	0.48	0.16	0.10	80.40	22.3	44	4.57	154.5	2.69
38 640		0.003	0.03	8.21	7.3	440	3.12	0.48	0.24	0.08	85.40	27.7	72	7.40	12.5	4.88
38 642		0.002	0.13	5.89	2.6	280	1.94	0.20	7.64	0.10	72.90	8.7	52	4.99	26.5	3.42
38 643		0.002	0.18	6.91	4.1	420	2.44	0.40	6.09	0.10	75.40	16.7	60	8.25	27.8	3.76
38 644		0.002	0.21	6.36	<5	390	2.35	0.21	11.60	0.09	72.20	17.1	52	7.25	111.0	3.47
38 645		0.001	0.15	6.50	5.5	470	2.29	0.52	8.09	0.17	81.50	15.7	51	8.71	7.8	3.52
38 646		0.001	0.22	7.67	3.4	680	2.85	0.71	0.32	0.11	97.00	17.7	68	9.43	53.7	4.39

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
38 601		15.25	0.23	4.0	0.090	1.29	32.8	20.3	0.43	331	1.35	0.17	8.6	19.0	530
38 602		13.45	0.24	3.1	0.052	1.17	26.2	18.0	0.35	473	0.77	0.18	6.6	20.0	310
38 603		15.65	0.24	3.5	0.112	1.80	35.0	21.7	0.59	418	1.37	0.14	9.1	22.1	780
38 604		26.90	0.32	3.9	0.066	3.34	63.0	26.5	0.68	547	0.89	0.15	9.5	41.9	440
38 605		13.30	0.22	3.2	0.045	1.37	27.3	15.9	0.42	395	1.38	0.22	6.3	25.6	310
38 606		16.85	0.21	3.8	0.062	2.27	28.3	15.1	0.54	635	1.48	0.45	7.8	20.4	550
38 607		10.95	0.20	2.7	0.062	1.07	20.4	11.9	0.27	132	1.23	0.08	5.4	11.6	220
38 609		20.10	0.25	3.7	0.068	2.67	37.3	18.6	0.56	771	0.87	0.52	11.0	32.8	400
38 610		14.05	0.23	3.3	0.058	1.71	29.8	14.5	0.42	530	2.37	0.13	7.7	22.2	300
38 611		12.55	0.22	3.3	0.058	1.00	24.0	16.1	0.26	268	0.96	0.09	5.8	14.8	310
38 613		18.40	0.26	3.7	0.070	2.49	38.1	17.5	0.55	886	1.20	0.27	10.2	37.2	410
38 614		15.60	0.24	3.0	0.064	1.24	24.5	23.9	0.51	516	1.34	0.11	6.4	20.7	340
38 615		16.00	0.22	3.5	0.075	1.14	27.1	21.2	0.52	390	0.73	0.07	6.1	19.1	300
38 616		9.90	0.20	3.1	0.055	0.95	25.4	11.1	0.24	148	0.93	0.06	5.0	9.4	230
38 617		14.95	0.24	3.8	0.049	2.00	42.8	12.2	0.42	167	1.62	0.10	8.9	15.6	390
38 618		19.20	0.18	3.8	0.067	2.66	40.1	15.8	0.78	882	0.79	0.26	11.0	30.0	740
38 619		12.85	0.24	3.3	0.054	1.24	30.8	17.8	0.33	492	1.38	0.13	7.3	17.5	340
38 620		13.20	0.24	3.8	0.052	1.67	37.2	12.1	0.38	278	1.77	0.08	7.8	13.6	310
38 621		23.80	0.29	4.1	0.090	2.36	41.9	26.4	0.74	835	1.24	0.21	12.0	37.9	400
38 622		10.50	<0.05	1.9	0.040	1.01	23.5	17.8	1.20	230	0.74	0.31	5.8	18.6	230
38 623		18.45	0.26	3.6	0.090	1.73	31.4	21.6	0.57	329	1.20	0.11	7.6	20.4	340
38 624		10.50	0.23	3.3	0.048	1.02	30.8	11.8	0.22	109	0.81	0.05	5.1	8.3	230
38 626		18.05	0.26	3.5	0.068	1.92	30.8	20.8	0.50	757	1.28	0.28	9.5	30.1	520
38 627		24.20	0.26	4.3	0.092	3.16	44.1	20.5	0.64	711	1.15	0.12	12.2	31.7	380
38 628		18.85	0.15	3.6	0.069	2.63	36.6	13.2	0.57	1055	0.60	0.18	10.4	27.2	560
38 629		12.20	0.23	3.7	0.070	1.53	38.5	10.8	0.31	324	0.87	0.06	6.9	14.1	270
38 630		16.40	0.27	4.3	0.072	2.44	49.8	10.4	0.43	179	1.14	0.06	9.4	18.9	340
38 631		22.10	0.29	3.8	0.075	2.25	39.0	27.8	0.64	563	1.16	0.23	11.1	36.3	410
38 632		11.15	0.26	3.5	0.115	1.50	39.7	10.5	0.35	493	1.52	0.06	6.4	17.4	390
38 633		11.20	0.24	3.7	0.053	1.64	31.1	10.8	0.32	371	1.11	0.10	6.4	12.2	230
38 634		13.85	0.25	3.7	0.058	1.34	29.2	15.5	0.33	242	0.93	0.11	7.1	14.2	310
38 635		11.25	0.26	3.8	0.051	1.37	31.8	9.1	0.31	125	1.17	0.07	7.8	8.5	260
38 636		12.00	0.26	4.9	0.079	1.28	41.6	13.1	0.31	252	1.60	0.08	8.4	13.9	340
38 637		14.35	0.26	3.8	0.109	1.77	38.1	20.7	0.39	1575	1.20	0.10	8.0	33.1	340
38 640		24.30	0.30	4.5	0.128	2.97	42.9	24.2	0.61	1630	1.91	0.15	12.4	42.6	640
38 642		16.75	0.08	3.7	0.066	2.28	36.6	15.4	0.84	979	0.92	0.19	9.4	25.4	570
38 643		20.60	0.11	3.0	0.073	2.24	38.0	38.4	1.71	608	0.54	0.55	12.4	31.1	530
38 644		19.15	<0.05	2.6	0.067	2.07	36.5	37.8	1.95	482	0.38	0.48	10.9	30.8	410
38 645		18.90	0.08	3.2	0.066	2.31	39.4	28.9	1.34	668	0.64	0.67	11.8	30.5	510
38 646		22.60	0.26	3.8	0.080	2.71	46.6	40.4	1.47	1100	0.57	0.57	13.9	40.5	370

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1
38 601		70.9	<0.002	0.02	0.91	11.1	1	2.1	94.1	0.83	<0.05	12.0	0.342	0.34	2.3
38 602		63.8	<0.002	0.02	0.55	9.2	1	1.9	58.4	0.58	<0.05	9.4	0.300	0.31	1.3
38 603		87.2	<0.002	0.04	1.34	11.1	1	2.6	139.0	0.82	<0.05	13.5	0.324	0.34	2.4
38 604		172.5	<0.002	0.02	0.86	20.4	2	3.8	49.6	0.80	0.07	17.9	0.380	0.40	2.9
38 605		70.0	<0.002	0.02	0.78	9.2	1	1.9	44.8	0.56	<0.05	9.9	0.278	0.29	1.6
38 606		108.5	<0.002	0.04	0.86	11.6	1	2.6	63.8	0.68	<0.05	12.0	0.325	0.36	1.9
38 607		54.4	<0.002	0.01	0.52	6.3	1	1.5	31.1	0.46	<0.05	7.8	0.221	0.21	1.3
38 609		151.0	<0.002	0.01	1.18	13.8	1	3.4	46.2	0.94	<0.05	12.8	0.418	0.52	2.3
38 610		87.3	<0.002	0.01	0.94	9.6	1	2.3	34.6	0.66	<0.05	10.1	0.291	0.39	1.7
38 611		55.6	<0.002	0.02	0.49	8.4	1	1.7	51.9	0.51	<0.05	8.6	0.264	0.28	1.8
38 613		118.0	0.002	0.05	0.94	14.1	1	3.4	52.0	0.92	<0.05	12.4	0.394	0.42	2.0
38 614		66.6	<0.002	0.02	0.53	10.4	1	1.9	67.9	0.54	<0.05	8.9	0.312	0.36	1.2
38 615		63.6	<0.002	0.03	0.60	10.6	1	2.0	76.3	0.54	<0.05	9.4	0.297	0.35	1.3
38 616		47.2	<0.002	0.01	0.41	5.5	1	1.3	39.4	0.43	<0.05	7.6	0.199	0.18	1.2
38 617		91.8	0.002	0.01	0.78	9.6	1	2.0	52.0	0.78	<0.05	14.0	0.325	0.33	1.9
38 618		120.0	<0.002	0.04	1.13	13.6	2	3.4	94.8	0.93	<0.05	12.9	0.414	0.45	2.0
38 619		67.7	<0.002	0.02	0.56	8.8	1	1.9	51.8	0.62	<0.05	10.2	0.316	0.32	1.5
38 620		75.9	<0.002	0.02	0.54	8.6	1	2.1	44.6	0.70	<0.05	12.6	0.314	0.34	2.0
38 621		129.5	0.002	0.02	1.44	17.1	2	3.7	66.1	1.00	<0.05	13.9	0.472	0.57	2.5
38 622		52.0	<0.002	0.06	0.68	7.3	1	1.5	401.0	0.51	0.08	7.3	0.244	0.27	1.3
38 623		88.2	<0.002	0.02	0.76	12.5	1	2.4	70.3	0.66	<0.05	11.6	0.340	0.37	1.7
38 624		48.6	<0.002	0.01	0.80	6.4	1	1.5	42.4	0.43	<0.05	8.7	0.204	0.17	1.4
38 626		95.2	<0.002	0.04	1.05	12.9	2	2.8	62.9	0.81	<0.05	10.8	0.388	0.45	2.0
38 627		151.5	0.002	0.02	1.25	17.4	2	4.4	40.7	1.04	<0.05	15.0	0.447	0.51	2.4
38 628		120.5	<0.002	0.02	1.28	13.0	1	3.6	49.4	0.89	<0.05	12.4	0.397	0.39	1.7
38 629		70.7	<0.002	0.01	0.74	8.0	1	1.8	40.7	0.59	<0.05	11.6	0.260	0.26	1.8
38 630		114.0	<0.002	0.01	0.93	10.2	1	2.3	61.4	0.82	<0.05	15.7	0.341	0.36	2.1
38 631		124.5	<0.002	0.02	1.09	15.6	1	3.3	66.9	0.93	<0.05	13.1	0.449	0.53	2.1
38 632		66.7	<0.002	0.01	0.81	7.3	1	1.6	49.4	0.54	<0.05	11.9	0.231	0.35	2.2
38 633		77.4	<0.002	0.01	0.74	6.5	1	1.8	31.1	0.59	<0.05	11.0	0.251	0.34	1.5
38 634		72.2	<0.002	0.02	0.74	9.2	1	2.1	48.5	0.64	<0.05	10.8	0.299	0.33	1.7
38 635		59.9	<0.002	0.11	0.82	7.7	1	2.1	50.9	0.71	<0.05	12.5	0.289	0.22	2.2
38 636		60.1	<0.002	0.05	1.21	9.3	1	2.0	78.2	0.79	<0.05	14.3	0.321	0.31	2.4
38 637		86.8	<0.002	0.01	0.81	9.4	1	2.1	48.2	0.72	<0.05	13.5	0.316	0.50	2.1
38 640		169.0	0.002	0.02	1.69	17.8	2	3.8	53.0	1.05	0.05	15.0	0.468	0.66	2.9
38 642		111.5	<0.002	0.02	1.02	13.1	1	3.2	86.8	0.78	<0.05	12.8	0.355	0.39	2.1
38 643		118.0	0.002	0.03	0.91	14.2	1	3.6	104.0	0.99	<0.05	13.8	0.394	0.63	2.7
38 644		117.0	0.002	0.02	0.82	13.3	1	3.4	191.0	0.88	<0.05	13.5	0.344	0.57	3.1
38 645		130.5	<0.002	0.02	1.41	13.2	1	3.6	92.9	0.99	<0.05	15.4	0.373	0.68	2.2
38 646		161.0	<0.002	0.01	1.48	15.9	1	4.2	49.1	1.14	0.05	17.8	0.449	0.80	2.6

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	PUL-QC Pass75um % 0.01	WEI-21 Recvd Wt. kg 0.02
38 601		1.6	20.6	42	120.0		0.23
38 602		1.8	15.5	36	91.0		0.32
38 603		1.6	21.5	40	102.5		0.26
38 604		6.0	23.9	79	123.0		0.31
38 605		2.5	13.7	35	94.8		0.33
38 606		1.7	16.7	45	116.5		0.21
38 607		1.1	10.9	24	80.1		0.29
38 609		1.8	19.8	37	117.0		0.33
38 610		1.5	14.5	47	96.6		0.31
38 611		2.9	14.4	33	95.5		0.25
38 613		1.9	21.0	49	113.5		0.28
38 614		1.1	16.3	50	89.8		0.24
38 615		1.0	17.5	40	101.5		0.26
38 616		0.8	9.7	22	92.1		0.29
38 617		1.8	18.2	24	113.5		0.31
38 618		2.1	22.6	38	122.0		0.36
38 619		1.3	15.7	32	100.5		0.39
38 620		1.6	15.5	26	112.0		0.25
38 621		2.0	26.3	47	134.0		0.09
38 622		1.8	13.9	35	60.6		0.28
38 623		2.5	19.7	45	110.5		0.30
38 624		1.0	10.7	17	99.1		0.36
38 626		1.7	20.9	46	109.0		0.29
38 627		2.3	24.4	36	134.5		0.25
38 628		2.1	23.1	37	115.5		0.30
38 629		2.2	13.5	24	113.5		0.40
38 630		1.5	15.5	32	130.5		0.39
38 631		1.8	23.2	51	119.5		0.27
38 632		1.2	19.4	49	103.5		0.39
38 633		1.2	13.1	20	106.5		0.43
38 634		1.8	18.0	32	111.0		0.35
38 635		2.0	12.8	18	118.5		0.28
38 636		1.5	20.2	22	148.0		0.33
38 637		1.6	26.3	32	106.5		0.38
38 640		2.2	32.3	42	144.5		0.30
38 642		1.9	21.8	37	131.5		0.33
38 643		1.9	22.3	63	104.0		0.19
38 644		1.8	18.1	49	89.4		0.23
38 645		2.4	19.8	49	108.0		0.34
38 646		2.9	22.7	63	126.0		0.34

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	Au-TL43	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
38 647		0.001	0.13	8.51	4.7	530	2.98	0.36	0.23	0.07	88.30	16.8	70	12.15	11.4	4.91
38 648		0.001	0.18	8.02	19.5	440	2.71	1.09	0.20	0.10	82.00	17.0	67	10.55	74.1	4.67
38 649		0.001	0.18	6.71	5.0	380	2.15	0.27	0.48	0.09	79.50	16.0	69	6.49	19.6	3.77
38 650		0.001	0.10	6.92	5.0	410	2.82	0.17	0.23	0.07	63.40	14.0	74	6.36	16.9	4.24
38 651		0.001	0.18	5.61	4.5	270	1.80	0.26	0.28	0.06	64.10	10.0	61	5.31	23.6	2.89
38 652		0.001	0.17	5.37	5.0	270	1.95	0.57	0.26	0.24	66.30	14.3	42	4.74	28.5	2.93
38 653		<0.001	0.18	3.79	2.7	150	0.92	0.14	0.14	0.05	53.20	4.2	40	3.55	17.2	1.46
38 654		0.001	0.13	5.49	11.5	430	3.31	1.31	0.18	0.06	100.00	40.6	45	4.50	134.0	2.41
38 655		0.001	0.16	5.20	7.3	330	2.71	1.13	0.15	0.06	70.00	18.0	43	5.01	114.0	2.30
38 656		0.001	0.18	6.05	7.1	570	2.46	0.55	1.36	0.08	99.80	25.9	59	6.57	58.8	3.27
38 658		0.001	0.13	8.05	7.8	410	2.87	0.24	0.41	0.07	86.00	19.3	73	6.98	19.0	4.48
38 659		0.001	0.12	8.32	5.6	440	2.80	0.19	0.36	0.07	191.50	14.9	75	7.29	17.6	4.62
38 660		0.002	0.21	6.38	<5	390	2.00	0.32	10.50	0.09	73.90	17.1	52	7.51	26.2	3.33
38 661		0.001	0.17	8.13	4.9	480	2.46	0.30	9.30	0.06	81.80	16.9	76	7.91	27.6	4.32
38 662		0.001	0.19	6.25	3.9	470	2.11	0.52	9.02	0.13	73.80	15.2	52	7.41	39.2	3.31
38 663		0.001	0.16	6.41	5.4	440	2.33	0.46	9.55	0.11	85.00	15.7	50	7.48	7.7	3.38
38 664		0.001	0.17	6.90	4.8	1170	2.49	0.83	5.03	0.15	91.60	16.9	57	8.71	53.4	3.77
38 665		0.001	0.17	7.68	3.9	510	2.70	0.34	0.25	0.08	87.10	14.3	68	10.95	12.2	4.47
38 666		0.001	0.15	7.56	11.9	420	2.75	0.26	0.29	0.10	77.50	17.6	64	9.84	138.0	4.21
38 667		0.001	0.12	7.79	7.0	400	2.71	0.22	0.44	0.08	81.90	17.8	75	6.74	16.2	4.44
38 668		0.001	0.10	7.41	4.8	460	2.56	0.39	0.30	0.07	93.00	17.4	65	7.08	28.9	4.55
38 669		0.001	0.13	5.34	3.4	190	1.39	0.11	0.23	0.05	77.40	6.2	44	3.95	20.2	1.90
38 670		<0.001	0.11	4.93	2.6	380	1.21	0.08	0.12	0.04	77.40	3.7	40	3.51	7.9	1.63
38 671		<0.001	0.17	6.19	7.7	360	2.10	0.31	0.20	0.04	97.50	15.0	53	5.14	51.9	3.11
38 672		0.001	0.29	6.84	27.2	570	3.42	0.75	0.16	0.05	94.70	47.2	58	5.66	182.0	2.72
38 673		0.001	0.24	5.32	12.0	620	2.54	0.49	1.48	0.06	78.40	20.5	48	5.40	74.9	2.77
38 674		0.001	0.18	5.43	7	420	1.75	0.28	10.35	0.07	79.40	14.4	50	5.56	24.2	2.87
38 675		0.001	0.22	6.18	5.4	410	2.00	0.36	5.32	0.09	87.50	15.9	51	6.50	27.9	3.24
38 676		0.001	0.21	6.01	5.2	430	2.73	0.39	0.67	0.06	52.90	18.1	75	7.18	31.7	4.10
38 677		0.001	0.21	6.35	3.6	400	2.22	0.30	9.09	0.07	76.10	14.5	57	7.40	30.7	3.41
38 678		0.001	0.14	6.42	3.9	460	2.26	0.47	5.78	0.10	79.50	16.4	57	7.11	27.7	3.51
38 679		0.001	0.12	6.79	5.3	450	2.25	0.57	6.68	0.10	82.90	17.2	56	7.55	23.5	3.66
38 680		0.002	0.11	8.26	8.4	540	3.02	0.87	0.46	0.09	90.00	19.9	69	9.49	84.0	4.58
38 681		0.001	0.07	7.78	4.2	480	2.88	0.39	0.25	0.08	84.20	16.1	70	11.75	14.2	4.48
38 682		0.001	0.17	7.82	25.5	430	2.98	0.68	0.21	0.13	80.90	14.7	68	10.95	55.8	4.82
38 683		0.002	0.19	5.12	4.7	340	2.20	1.16	8.53	0.08	73.10	14.5	52	6.40	95.4	2.32
38 684		0.005	0.16	3.64	17	630	0.94	0.19	14.10	0.08	46.50	10.4	27	4.68	20.1	1.97
38 685		0.002	0.07	5.91	6.7	440	2.53	0.42	0.52	0.09	58.70	23.8	66	6.50	32.5	4.11
38 686		0.001	0.10	7.19	6.3	440	2.29	0.37	0.48	0.14	88.90	22.4	66	7.46	30.3	4.43
38 687		0.001	0.09	7.06	4.3	410	2.34	0.39	0.38	0.10	105.00	20.0	68	6.67	22.7	4.09

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
38 647		23.70	0.26	4.2	0.086	2.45	46.1	48.5	1.10	991	0.63	0.48	13.7	37.3	470
38 648		22.60	0.25	4.0	0.084	2.57	42.8	50.0	1.17	642	0.81	0.52	14.2	39.0	420
38 649		18.60	0.24	3.6	0.068	2.16	38.1	24.4	0.68	605	1.08	0.31	11.2	29.4	510
38 650		22.40	0.25	4.3	0.085	2.50	29.8	24.7	0.56	824	1.28	0.30	12.8	38.0	460
38 651		15.60	0.22	3.6	0.065	1.90	31.3	17.9	0.52	490	1.69	0.11	8.7	22.4	300
38 652		13.85	0.21	3.5	0.069	1.54	31.5	18.4	0.40	970	0.81	0.17	7.8	22.8	570
38 653		9.24	0.18	3.5	0.055	1.05	25.6	10.9	0.25	146	1.40	0.07	5.9	10.2	200
38 654		14.95	0.22	4.7	0.103	1.86	49.6	18.1	0.44	1050	0.92	0.10	10.4	27.5	380
38 655		13.30	0.20	3.6	0.117	1.82	32.5	19.1	0.39	941	0.89	0.11	7.3	25.8	250
38 656		16.35	0.21	3.5	0.094	2.37	48.0	25.4	0.76	1445	0.95	0.12	9.9	29.8	570
38 658		23.10	0.24	4.2	0.087	2.30	41.0	27.9	0.71	850	1.25	0.21	12.5	37.3	400
38 659		23.40	0.31	4.5	0.084	2.62	82.5	26.2	0.67	869	1.72	0.28	12.8	43.7	520
38 660		17.60	<0.05	2.8	0.064	2.03	37.1	31.4	1.35	531	0.54	0.43	10.7	25.6	540
38 661		20.80	0.07	3.1	0.075	2.84	41.3	36.1	2.00	647	0.52	0.65	12.4	31.7	580
38 662		18.15	<0.05	2.8	0.067	2.00	36.7	31.6	1.44	733	0.57	0.55	10.8	30.1	440
38 663		18.80	0.06	3.0	0.068	2.33	41.4	29.0	1.31	574	0.54	0.58	11.9	31.2	350
38 664		19.90	0.13	3.4	0.068	2.52	44.4	34.5	1.36	1400	0.74	0.57	12.7	36.3	690
38 665		21.90	0.26	4.1	0.078	2.57	44.3	42.3	1.13	714	0.49	0.58	13.5	34.7	450
38 666		21.80	0.22	3.9	0.081	2.33	39.4	55.7	1.13	881	0.82	0.46	13.1	36.2	500
38 667		22.30	0.22	4.3	0.086	2.23	38.6	28.8	0.70	821	1.20	0.21	11.8	37.5	400
38 668		21.90	0.24	4.4	0.088	2.41	45.2	31.8	0.87	1080	0.97	0.48	13.0	32.9	410
38 669		13.05	0.19	4.0	0.060	1.51	36.6	14.9	0.36	212	1.21	0.07	7.2	12.6	290
38 670		12.15	0.19	4.2	0.044	1.39	37.5	10.2	0.28	137	1.65	0.05	6.9	8.7	330
38 671		17.35	0.25	4.0	0.084	2.14	45.4	14.3	0.42	479	0.69	0.06	10.2	15.4	330
38 672		19.45	0.24	4.4	0.088	2.29	46.4	20.2	0.45	1225	1.04	0.05	10.5	27.8	340
38 673		14.55	0.19	3.4	0.120	2.12	37.9	22.6	0.92	1335	0.87	0.08	9.0	23.4	420
38 674		15.35	<0.05	3.0	0.054	1.79	38.5	28.2	1.32	651	0.49	0.35	10.0	21.2	660
38 675		17.75	0.14	3.3	0.068	2.09	42.0	29.8	1.22	648	0.48	0.42	11.2	25.3	480
38 676		21.80	0.29	3.4	0.079	2.43	23.2	40.8	1.33	544	0.76	0.38	13.2	32.4	400
38 677		18.95	0.07	2.8	0.066	2.18	38.4	34.5	1.56	531	0.44	0.45	11.3	27.4	500
38 678		19.05	0.18	3.1	0.073	2.20	38.9	32.3	1.47	691	0.52	0.54	11.9	30.1	490
38 679		19.95	0.17	3.1	0.077	2.26	39.9	31.9	1.40	678	0.62	0.50	12.0	31.4	420
38 680		25.30	0.33	3.8	0.097	2.36	43.2	46.8	1.13	970	0.70	0.37	13.3	41.0	460
38 681		23.20	0.31	4.1	0.089	2.49	43.1	45.4	1.14	707	0.51	0.51	13.8	37.5	420
38 682		24.10	0.31	4.1	0.107	2.68	42.0	51.6	1.09	543	0.89	0.44	14.2	42.6	460
38 683		14.80	0.13	2.7	0.119	2.17	35.1	22.8	3.09	698	0.49	0.10	8.7	21.6	680
38 684		10.00	<0.05	1.9	0.044	0.96	22.8	18.4	1.15	194	0.66	0.29	5.9	18.7	210
38 685		21.90	0.30	4.1	0.097	2.36	26.5	28.0	0.80	1015	0.92	0.47	13.0	35.9	450
38 686		21.20	0.31	4.1	0.089	2.20	42.3	28.7	0.80	1150	1.12	0.45	11.9	33.0	410
38 687		20.00	0.33	4.0	0.085	2.30	49.6	26.3	0.77	759	0.88	0.41	12.4	34.3	500

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1
38 647		159.0	<0.002	0.01	1.13	17.1	1	3.9	59.0	1.10	0.06	16.8	0.490	0.78	2.6
38 648		150.5	<0.002	0.01	1.34	17.1	2	4.2	52.0	1.15	<0.05	16.9	0.495	0.83	2.7
38 649		118.5	<0.002	0.04	1.11	14.1	2	3.2	59.6	0.91	<0.05	12.8	0.418	0.58	2.2
38 650		116.5	0.002	0.02	1.48	15.1	2	4.0	48.2	1.01	<0.05	11.0	0.473	0.60	2.7
38 651		103.0	<0.002	0.02	0.85	10.7	1	2.7	35.3	0.70	<0.05	11.3	0.339	0.45	1.9
38 652		78.9	<0.002	0.03	0.79	9.9	1	2.1	66.3	0.64	<0.05	11.4	0.315	0.38	1.8
38 653		52.5	<0.002	0.02	0.54	6.7	1	1.5	32.7	0.49	<0.05	8.8	0.227	0.24	1.6
38 654		89.0	<0.002	0.01	1.48	10.6	2	2.4	51.2	0.87	<0.05	17.1	0.372	0.56	2.9
38 655		88.8	<0.002	0.01	0.90	8.8	1	2.0	40.0	0.60	<0.05	12.0	0.285	0.49	1.9
38 656		120.0	<0.002	0.02	1.01	11.5	1	2.7	85.5	0.80	<0.05	16.1	0.351	0.57	3.2
38 658		128.5	<0.002	0.02	1.58	17.3	2	3.7	65.6	1.00	0.05	13.9	0.462	0.61	2.6
38 659		140.5	0.002	0.03	1.57	17.6	2	4.0	58.6	0.99	<0.05	15.0	0.469	0.60	2.8
38 660		110.5	<0.002	0.03	0.86	12.7	1	3.1	206.0	0.86	<0.05	13.2	0.370	0.56	2.6
38 661		135.0	<0.002	0.03	0.99	14.5	1	3.7	178.0	0.98	<0.05	14.8	0.444	0.64	2.7
38 662		113.0	<0.002	0.03	1.19	12.7	1	3.2	126.5	0.86	<0.05	12.9	0.351	0.57	2.6
38 663		131.0	<0.002	0.02	1.45	12.9	1	3.7	84.5	1.00	0.05	15.6	0.366	0.67	2.1
38 664		142.0	0.002	0.03	2.35	14.1	1	3.8	61.0	1.07	0.06	16.6	0.396	0.69	2.4
38 665		157.5	<0.002	0.01	1.20	15.6	1	3.8	54.8	1.08	<0.05	16.5	0.472	0.75	2.4
38 666		132.0	0.002	0.02	0.88	16.0	1	4.0	53.8	1.07	<0.05	15.5	0.455	0.70	2.4
38 667		121.5	<0.002	0.02	1.53	16.9	2	3.6	66.6	0.94	<0.05	13.4	0.458	0.60	2.6
38 668		134.0	0.002	0.01	1.16	16.5	2	3.8	53.2	1.06	<0.05	14.8	0.462	0.68	2.5
38 669		72.7	<0.002	0.02	0.70	8.9	1	2.2	37.7	0.59	<0.05	12.0	0.282	0.40	1.7
38 670		72.8	<0.002	0.03	0.70	8.1	1	2.1	43.9	0.60	<0.05	12.5	0.240	0.32	2.0
38 671		107.5	<0.002	0.02	1.11	12.1	2	3.0	55.5	0.87	<0.05	15.7	0.357	0.58	3.4
38 672		115.0	0.002	0.01	1.65	12.9	2	3.2	41.1	0.89	<0.05	16.9	0.351	0.62	3.9
38 673		98.6	<0.002	0.02	1.24	10.3	2	2.5	74.2	0.72	<0.05	14.0	0.311	0.50	2.7
38 674		96.4	<0.002	0.04	0.66	11.1	2	2.7	299.0	0.80	<0.05	13.7	0.327	0.44	2.7
38 675		111.5	<0.002	0.02	0.94	12.4	1	3.2	156.0	0.89	<0.05	14.4	0.387	0.55	2.5
38 676		80.1	<0.002	0.02	0.93	12.4	1	4.0	72.8	1.06	<0.05	10.1	0.442	0.73	2.5
38 677		124.0	<0.002	0.03	0.83	13.1	1	3.4	164.5	0.92	<0.05	13.6	0.365	0.61	2.6
38 678		123.5	0.002	0.02	1.10	13.5	1	3.5	107.5	1.02	<0.05	14.2	0.388	0.52	2.5
38 679		128.0	<0.002	0.02	1.23	14.0	1	3.6	94.0	1.05	<0.05	15.3	0.383	0.58	2.3
38 680		139.0	<0.002	0.03	1.26	18.4	2	4.1	73.0	1.15	0.06	17.2	0.465	0.67	2.3
38 681		160.5	<0.002	0.01	1.11	16.9	1	4.1	55.0	1.20	0.05	16.7	0.456	0.70	2.4
38 682		159.5	0.002	0.01	2.80	18.3	1	4.4	50.2	1.26	<0.05	17.7	0.492	0.81	2.6
38 683		111.5	<0.002	0.03	0.91	10.7	1	2.6	254.0	0.78	<0.05	12.9	0.289	0.40	1.9
38 684		52.3	<0.002	0.06	0.67	7.4	1	1.7	384.0	0.52	0.08	7.5	0.232	0.25	1.2
38 685		114.0	<0.002	0.02	1.15	12.7	1	3.9	44.5	1.12	<0.05	9.8	0.441	0.66	2.2
38 686		140.5	0.002	0.02	1.08	16.1	2	3.6	62.7	1.02	0.05	14.5	0.430	0.62	2.3
38 687		134.0	<0.002	0.02	1.07	15.5	2	3.5	59.0	1.08	<0.05	15.3	0.441	0.55	2.2

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	PUL-QC Pass75um % 0.01	WEI-21 Recvd Wt. kg 0.02
38 647		2.6	28.8	61	144.0		0.40
38 648		3.5	23.6	82	139.5		0.41
38 649		1.7	20.1	44	126.5		0.31
38 650		2.1	23.9	38	157.5		0.28
38 651		1.6	16.9	27	126.0		0.29
38 652		1.3	18.2	59	119.5		0.39
38 653		1.2	11.0	17	119.5		0.34
38 654		1.7	29.3	27	162.5		0.40
38 655		1.3	20.7	27	122.0		0.36
38 656		1.6	26.0	35	117.0		0.26
38 658		1.8	26.3	42	149.0		0.20
38 659		2.1	31.3	38	159.0		0.23
38 660		1.6	23.3	52	97.6		0.24
38 661		1.9	22.3	57	107.5		0.25
38 662		1.9	22.6	42	95.8		0.23
38 663		2.4	19.0	41	105.0		0.25
38 664		2.6	23.7	53	118.5		0.23
38 665		2.4	23.3	70	138.5		0.35
38 666		2.5	22.6	70	133.0		0.35
38 667		1.8	25.6	44	150.0		0.26
38 668		2.2	24.0	38	150.5		0.44
38 669		1.2	22.0	22	145.5		0.29
38 670		1.3	10.9	12	143.5		0.32
38 671		1.7	20.4	16	134.5		0.30
38 672		1.9	68.0	17	149.0		0.35
38 673		1.5	25.1	28	113.0		0.47
38 674		1.5	22.0	40	101.0		0.28
38 675		1.7	24.8	48	113.0		0.33
38 676		2.0	17.3	54	113.0		0.29
38 677		1.7	20.9	43	96.8		0.26
38 678		2.0	21.0	42	95.0		0.30
38 679		2.1	22.4	46	97.2		0.27
38 680		2.4	27.7	56	122.0		0.33
38 681		2.4	25.0	62	128.5		0.41
38 682		2.9	23.6	106	129.0		0.36
38 683		1.5	17.5	26	81.0		0.38
38 684		1.1	14.1	31	59.5		0.34
38 685		2.1	17.1	37	132.0		0.31
38 686		1.9	25.4	50	132.5		0.28
38 687		2.0	24.1	44	131.0		0.33

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	Au-TL43	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
38 690		0.001	0.14	3.73	8.6	310	1.15	0.33	0.15	0.06	86.30	7.9	49	3.38	30.6	2.06
38 691		0.001	0.13	4.50	11.0	440	2.61	0.30	0.14	0.13	105.50	33.8	45	3.88	68.0	2.86
38 692		0.001	0.16	5.27	4.8	350	2.21	1.45	7.16	0.06	74.30	14.9	52	6.19	96.9	2.39
38 693		0.001	0.15	5.48	<5	360	1.66	0.32	10.15	0.08	74.40	14.1	56	5.63	30.8	2.81
38 694		0.001	0.16	6.69	3.4	400	2.24	0.35	7.57	0.07	79.10	17.2	59	7.63	28.7	3.64
38 695		0.001	0.15	5.87	5	310	1.92	0.30	13.30	0.05	70.90	14.5	49	6.19	41.3	3.31
38 696		0.001	0.14	6.67	4.2	430	2.19	0.42	5.69	0.14	82.60	15.1	58	7.58	14.3	3.61
38 697		0.001	0.13	7.92	6.1	960	2.79	0.61	2.45	0.13	94.20	18.1	62	9.90	38.3	4.43
38 698		0.001	0.11	7.32	4.3	540	2.42	0.46	0.24	0.06	89.60	15.5	65	8.05	19.5	4.17
38 699		0.001	0.16	5.40	5.4	370	1.76	0.40	4.84	0.09	74.00	13.7	55	5.94	26.2	2.92
38 700		0.001	0.06	7.23	4.5	440	2.15	0.35	0.13	0.06	108.50	8.8	72	5.21	23.5	4.47
38 701		0.001	0.11	6.79	6.7	220	1.84	0.38	0.26	0.04	83.70	4.1	47	4.59	26.0	2.33
38 702		0.001	0.13	6.85	13.1	320	1.86	0.39	0.40	0.05	84.00	6.6	56	4.88	35.2	3.25
38 703		0.001	0.22	5.16	5.7	400	1.79	0.72	7.81	0.13	87.30	17.0	43	5.96	33.3	3.36
38 704		0.001	0.15	5.52	7.0	430	2.59	0.77	1.42	0.13	66.80	17.7	56	6.02	38.6	3.69
38 705		0.001	0.16	6.72	4.1	440	2.27	0.36	7.48	0.06	81.00	15.6	57	7.48	25.5	3.50
38 706		0.001	0.14	6.44	<5	370	2.09	0.23	10.65	0.07	73.10	16.2	51	6.70	39.0	3.54
38 707		0.001	0.12	6.34	4.8	400	2.22	0.39	9.40	0.11	80.20	15.3	48	7.15	7.0	3.49
38 708		0.001	0.10	6.62	3.4	430	2.32	0.24	4.21	0.04	86.80	16.9	59	7.84	7.4	3.75
38 709		0.002	0.08	7.60	3.5	470	2.56	0.31	0.22	0.07	82.80	14.7	68	9.88	8.8	4.35
38 710		0.003	0.13	7.76	11.9	430	2.64	0.47	0.25	0.09	82.20	16.4	66	9.90	38.3	4.43
38 711		0.001	0.13	6.39	7.4	400	2.52	0.27	0.17	0.08	52.10	16.9	70	8.00	27.5	4.09
38 712		0.001	0.13	5.28	4.3	190	1.21	0.14	0.18	0.08	70.40	7.8	38	4.21	20.3	1.98
38 713		0.001	0.17	4.45	13.5	220	1.44	1.30	0.12	0.06	92.60	5.2	45	3.66	49.1	2.63
38 714		0.001	0.16	3.84	2.5	370	1.06	0.16	9.28	0.08	60.30	7.0	34	4.81	22.8	1.63
38 715		0.002	0.14	4.07	2.6	350	1.36	0.19	7.10	0.10	59.20	7.4	38	3.91	44.5	1.92
38 716		0.003	0.10	6.55	2.7	410	2.78	0.31	7.06	0.07	80.60	17.7	56	5.41	19.9	3.74
38 717		0.003	0.12	5.81	8	370	2.34	0.33	12.95	0.05	64.30	17.8	50	4.84	17.5	3.06
38 718		0.002	0.07	5.90	5.1	290	2.28	0.25	7.81	0.06	83.40	15.1	52	5.79	27.9	2.51
38 719		0.002	0.08	6.70	2.7	440	2.90	0.23	7.41	0.06	83.70	13.5	52	7.44	35.0	3.86
38 720		0.001	0.02	7.05	4.3	440	3.13	0.21	0.38	0.06	82.80	16.4	67	7.19	19.1	4.00
38 721		0.002	0.06	7.16	10.9	420	3.05	0.47	0.22	0.09	75.40	13.4	63	8.36	52.7	4.31
38 723		0.001	0.10	4.33	1.4	230	1.31	0.10	0.45	0.06	50.00	4.7	43	2.50	7.0	1.85
38 724		0.005	0.11	3.74	2.0	200	1.25	0.09	0.22	0.06	35.70	5.1	39	3.19	6.0	1.52
38 725		0.001	0.11	4.14	2.5	220	1.18	0.13	0.20	0.06	54.20	7.1	42	3.00	9.1	2.01
38 727		0.001	0.08	5.67	3.3	340	1.63	0.18	0.40	0.11	66.10	7.0	55	5.52	14.4	2.89
38 728		0.001	0.06	4.81	2.4	350	1.49	0.16	0.37	0.07	60.70	6.1	52	3.99	10.4	2.27
38 729		0.001	0.04	5.07	2.1	350	2.84	0.11	0.16	0.05	71.40	9.5	46	3.37	11.0	2.51
38 730		0.001	0.05	5.55	6.1	720	1.89	0.84	0.23	0.04	70.40	6.7	52	4.96	16.9	2.56
38 731		0.001	0.09	3.62	2.4	190	0.94	0.11	0.26	0.06	46.00	5.5	58	2.35	8.4	1.79

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
38 690		10.95	0.28	4.1	0.049	1.24	40.0	10.8	0.28	423	2.01	0.08	7.4	12.6	340
38 691		12.65	0.30	4.5	0.085	1.52	48.8	18.9	0.35	1430	0.90	0.08	8.4	32.6	490
38 692		14.30	0.14	2.7	0.122	2.28	35.5	19.4	2.84	907	0.66	0.11	8.9	19.3	810
38 693		15.50	0.09	2.9	0.060	1.86	36.2	22.1	1.14	563	1.02	0.31	9.4	23.0	560
38 694		19.55	0.18	3.0	0.074	2.30	39.2	31.1	1.57	609	0.47	0.56	11.8	31.3	490
38 695		16.90	0.08	2.3	0.062	1.99	35.4	26.4	1.67	615	0.30	0.54	9.8	28.8	400
38 696		18.85	0.21	3.2	0.071	2.39	39.6	26.5	1.38	786	0.89	0.50	11.5	33.5	580
38 697		21.60	0.28	3.6	0.080	2.74	45.0	35.6	1.43	1355	0.55	0.58	13.2	40.5	530
38 698		20.70	0.30	3.5	0.084	2.63	42.9	31.9	1.21	940	0.57	0.45	12.5	36.0	320
38 699		15.05	0.18	3.0	0.061	1.93	35.5	23.4	0.99	671	1.26	0.29	9.2	23.9	500
38 700		21.40	0.32	4.1	0.084	2.90	52.7	13.1	0.57	221	0.56	0.07	12.0	18.3	330
38 701		18.45	0.26	4.2	0.068	2.02	39.5	14.9	0.51	147	0.93	0.06	8.3	13.5	330
38 702		18.85	0.27	3.9	0.067	1.63	41.1	19.1	0.54	258	1.33	0.06	7.7	16.9	340
38 703		14.05	0.15	3.2	0.088	1.91	37.9	21.5	0.86	1325	0.98	0.20	9.0	22.4	770
38 704		16.70	0.26	3.1	0.092	2.26	29.4	26.9	0.98	1335	1.14	0.29	9.8	26.9	800
38 705		19.55	0.16	3.0	0.096	2.52	40.1	30.0	1.85	771	0.78	0.28	11.7	30.2	630
38 706		18.00	0.10	2.6	0.074	2.29	36.2	29.0	1.74	668	0.47	0.49	10.8	30.3	400
38 707		18.30	0.13	3.1	0.069	2.36	39.0	25.1	1.23	535	0.68	0.50	11.2	31.0	390
38 708		19.35	0.22	3.4	0.065	2.36	42.5	37.2	2.67	523	0.48	0.78	12.2	35.9	420
38 709		20.70	0.29	3.9	0.070	2.54	41.7	38.6	1.16	689	0.62	0.56	12.8	33.8	440
38 710		21.80	0.31	3.9	0.087	2.40	43.4	46.3	0.96	655	0.89	0.44	13.0	36.3	520
38 711		20.90	0.35	3.4	0.098	2.71	22.7	36.2	0.96	753	0.82	0.33	12.8	34.5	330
38 712		13.20	0.26	3.6	0.044	1.51	31.3	15.6	0.31	322	1.01	0.09	5.7	14.9	230
38 713		12.60	0.27	4.1	0.057	1.60	44.3	11.6	0.36	219	1.42	0.11	8.2	10.5	360
38 714		9.70	0.07	2.5	0.030	1.77	27.8	13.8	1.95	645	0.84	0.11	5.5	11.8	500
38 715		10.40	<0.05	2.8	0.037	1.95	26.9	17.6	1.91	800	0.71	0.16	5.3	10.6	640
38 716		19.20	<0.05	3.4	0.069	2.38	39.4	37.2	1.84	548	0.60	0.65	10.7	27.1	770
38 717		16.70	<0.05	2.5	0.058	2.01	32.1	33.9	1.63	474	0.57	0.38	8.5	22.6	470
38 718		17.45	<0.05	3.0	0.140	2.69	39.1	25.6	2.79	1115	0.61	0.15	9.3	16.9	650
38 719		19.75	<0.05	3.3	0.094	2.92	40.7	35.6	2.29	1095	0.59	0.25	10.7	33.3	780
38 720		21.60	0.11	3.9	0.110	3.04	39.9	40.2	1.52	976	0.60	0.28	11.2	29.8	460
38 721		21.50	0.10	3.9	0.084	2.50	39.1	50.6	1.12	529	0.64	0.44	11.4	34.7	460
38 723		11.00	<0.05	3.2	0.039	1.37	24.8	15.2	0.33	323	1.47	0.11	4.9	12.6	450
38 724		9.69	<0.05	2.9	0.031	1.13	18.8	12.6	0.26	204	1.78	0.09	3.6	11.2	230
38 725		10.85	<0.05	3.2	0.037	1.20	27.4	14.9	0.26	226	1.06	0.14	5.4	12.4	280
38 727		16.30	0.06	4.1	0.058	1.77	33.2	19.4	0.48	344	1.74	0.21	7.6	16.7	490
38 728		13.00	0.06	3.5	0.044	1.49	30.1	17.2	0.34	303	1.91	0.15	6.3	14.5	530
38 729		13.70	0.07	4.5	0.056	1.86	34.7	13.7	0.36	195	0.85	0.11	7.2	17.3	330
38 730		15.60	0.06	4.2	0.052	1.87	35.7	13.8	0.45	224	1.45	0.08	7.4	16.7	300
38 731		9.85	<0.05	3.0	0.035	0.96	23.2	13.3	0.29	216	2.93	0.13	4.7	10.6	270

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1
38 690		63.7	<0.002	0.01	0.81	7.4	1	1.9	41.8	0.69	<0.05	13.8	0.259	0.30	2.7
38 691		76.2	<0.002	0.02	0.85	8.8	1	2.1	70.8	0.77	<0.05	16.8	0.311	0.43	3.4
38 692		111.5	<0.002	0.03	0.85	10.4	1	2.6	215.0	0.78	<0.05	13.4	0.302	0.38	2.0
38 693		98.3	<0.002	0.03	0.68	10.8	1	2.7	174.5	0.81	<0.05	12.8	0.322	0.40	2.2
38 694		128.0	0.002	0.03	0.90	13.9	1	3.5	137.0	1.04	<0.05	14.8	0.390	0.54	2.5
38 695		114.0	<0.002	0.02	0.86	11.9	1	3.1	198.0	0.86	<0.05	13.4	0.316	0.46	2.9
38 696		134.0	<0.002	0.02	1.11	13.4	1	3.5	89.2	1.02	<0.05	15.5	0.389	0.55	2.1
38 697		146.5	<0.002	0.02	1.40	15.9	1	3.9	59.9	1.16	0.05	17.5	0.456	0.66	2.1
38 698		149.5	<0.002	0.01	1.26	14.2	1	3.8	45.1	1.09	0.06	16.5	0.433	0.60	2.2
38 699		100.0	<0.002	0.02	0.81	10.5	1	2.7	96.4	0.81	<0.05	13.2	0.326	0.44	2.0
38 700		143.5	<0.002	0.01	1.43	14.6	1	3.8	41.7	1.08	<0.05	18.9	0.390	0.47	3.2
38 701		100.5	0.002	0.02	0.70	11.6	1	2.9	62.1	0.77	<0.05	15.0	0.306	0.34	2.1
38 702		87.4	<0.002	0.02	0.94	12.6	1	2.8	81.9	0.70	<0.05	14.5	0.315	0.52	2.4
38 703		91.9	0.003	0.04	0.92	10.0	1	2.3	109.5	0.85	0.05	13.9	0.326	0.41	2.3
38 704		79.5	0.002	0.06	0.95	10.3	1	2.7	79.4	0.84	<0.05	11.1	0.377	0.49	1.8
38 705		137.5	0.002	0.02	0.78	13.5	1	3.6	177.5	1.02	<0.05	14.7	0.381	0.55	2.5
38 706		126.0	<0.002	0.02	0.94	12.4	1	3.4	180.0	0.95	<0.05	13.5	0.355	0.49	2.6
38 707		132.0	<0.002	0.02	1.44	13.1	1	3.6	75.3	1.01	<0.05	15.7	0.363	0.54	1.9
38 708		132.0	0.002	0.01	1.10	13.6	2	3.5	107.5	1.09	<0.05	15.5	0.401	0.54	2.1
38 709		151.5	<0.002	0.01	0.99	14.9	1	3.7	51.0	1.13	0.05	16.2	0.461	0.61	2.3
38 710		151.0	0.002	0.01	1.18	15.9	1	3.8	59.7	1.13	<0.05	16.6	0.467	0.68	2.4
38 711		112.5	<0.002	0.01	1.01	12.4	1	3.8	41.8	1.08	0.05	10.6	0.456	0.63	2.1
38 712		74.6	<0.002	0.01	0.63	9.7	1	1.8	42.0	0.50	<0.05	10.4	0.246	0.47	1.7
38 713		73.8	<0.002	0.02	1.09	8.9	1	2.3	53.2	0.73	<0.05	15.8	0.302	0.30	3.1
38 714		77.9	0.002	0.03	0.43	6.3	1	1.4	137.0	0.49	<0.05	10.1	0.206	0.32	1.3
38 715		77.4	<0.002	0.04	0.47	6.6	1	1.6	126.5	0.52	<0.05	9.4	0.226	0.34	1.4
38 716		113.0	<0.002	0.02	0.78	13.1	1	3.6	140.5	0.99	<0.05	13.4	0.394	0.47	2.6
38 717		98.9	<0.002	0.02	0.79	11.2	1	3.3	349.0	0.77	<0.05	11.6	0.306	0.37	2.7
38 718		125.0	<0.002	0.03	0.96	11.6	1	3.5	157.5	0.88	<0.05	13.1	0.338	0.47	2.0
38 719		151.0	<0.002	0.02	1.23	13.2	1	3.8	92.1	1.02	0.05	14.6	0.381	0.59	2.2
38 720		150.5	<0.002	0.01	1.08	14.1	1	3.8	44.5	1.00	<0.05	14.5	0.438	0.59	2.2
38 721		138.5	<0.002	0.01	0.78	15.3	1	4.0	47.5	1.06	<0.05	15.3	0.454	0.60	2.3
38 723		67.8	<0.002	0.03	0.52	6.6	1	1.7	54.3	0.47	<0.05	8.5	0.210	0.23	1.5
38 724		56.5	<0.002	0.01	0.47	5.4	1	1.3	41.9	0.32	<0.05	6.0	0.164	0.25	1.1
38 725		60.7	<0.002	0.02	0.52	7.0	1	1.6	49.2	0.49	<0.05	8.2	0.251	0.27	1.5
38 727		92.9	<0.002	0.03	0.82	9.8	1	2.6	80.6	0.70	<0.05	11.3	0.332	0.36	2.1
38 728		73.7	<0.002	0.02	0.62	8.2	1	2.0	68.9	0.56	<0.05	9.9	0.279	0.27	1.8
38 729		89.1	<0.002	0.01	0.80	8.6	1	2.3	46.7	0.71	<0.05	12.0	0.304	0.28	2.8
38 730		93.7	<0.002	0.02	2.01	8.9	1	2.6	43.2	0.70	<0.05	11.8	0.294	0.28	2.6
38 731		47.8	<0.002	0.02	0.49	6.5	1	1.4	42.0	0.43	<0.05	6.9	0.216	0.22	1.3

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	PUL-QC Pass75um % 0.01	WEI-21 Recvd Wt. kg 0.02
38 690		1.5	15.5	18	126.5		0.35
38 691		1.5	27.0	32	134.0		0.33
38 692		1.4	18.0	27	84.8		0.28
38 693		1.4	19.9	34	93.5		0.22
38 694		1.9	22.3	39	92.4		0.27
38 695		1.8	18.2	29	74.0		0.34
38 696		2.2	21.2	40	99.1		0.27
38 697		2.6	26.5	61	116.5		0.29
38 698		2.4	20.6	46	110.5		0.44
38 699		1.6	19.2	39	95.1	88.8	0.25
38 700		2.1	19.2	20	123.5	94.1	0.28
38 701		1.5	14.9	26	128.0	82.0	0.29
38 702		1.4	17.7	32	121.0		0.32
38 703		1.5	24.8	49	100.5		0.30
38 704		1.6	19.8	54	99.8		0.29
38 705		1.8	21.8	34	93.5		0.28
38 706		1.9	19.3	31	82.4		0.25
38 707		2.3	20.2	31	94.7		0.26
38 708		2.3	21.2	40	109.0		0.44
38 709		2.3	22.3	58	122.0		0.38
38 710		2.4	24.7	68	126.0		0.09
38 711		2.2	16.0	44	113.0		0.06
38 712		1.0	21.9	24	110.5		0.16
38 713		1.5	16.2	20	130.0		0.15
38 714		0.9	17.3	28	78.8		0.10
38 715		1.0	16.7	35	82.8		0.15
38 716		1.8	21.0	35	97.3		0.29
38 717		1.5	16.9	25	80.1		0.33
38 718		1.8	18.2	30	95.9		0.27
38 719		2.3	18.8	33	103.5		0.32
38 720		2.1	20.0	38	122.0		0.38
38 721		2.3	21.1	63	122.5		0.45
38 723		0.9	10.1	26	93.4		0.35
38 724		0.7	9.2	21	87.0		0.39
38 725		1.0	12.4	26	95.7		0.35
38 727		1.4	17.4	38	124.5		0.29
38 728		1.2	13.8	31	110.0		0.35
38 729		1.4	19.2	21	133.0		0.39
38 730		1.5	15.8	19	132.5		0.39
38 731		1.0	11.8	27	88.4		0.29

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	Au-TL43	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
38 733		0.001	0.03	4.87	1.4	280	2.98	0.09	0.20	0.04	66.50	7.6	43	4.13	5.2	2.10
38 734		0.001	0.09	4.04	1.2	310	1.57	0.11	0.15	0.04	57.00	6.3	50	3.33	5.1	1.93
38 735		0.001	0.02	4.28	1.7	180	1.23	0.11	0.19	0.06	58.50	4.7	51	4.55	9.2	1.77
38 736		0.004	0.13	6.41	61.3	490	2.73	0.56	0.34	0.18	52.70	25.9	63	4.61	90.1	4.20
38 737		0.003	0.10	5.88	3.4	730	1.73	0.22	3.19	0.07	73.30	14.1	46	3.45	69.3	2.95
38 738		0.001	0.04	7.13	2.3	540	3.43	0.24	0.31	0.04	85.20	15.0	69	6.94	14.2	3.80
38 739		0.001	0.03	6.20	2.2	370	3.41	0.12	0.19	0.04	85.70	8.4	51	5.43	3.6	3.04
38 740		<0.001	0.07	3.86	1.4	220	1.52	0.10	0.23	0.05	58.10	5.6	40	3.04	13.0	1.85
38 741		0.002	0.06	5.24	3.4	420	1.47	0.43	7.69	0.07	53.50	12.8	52	3.52	35.9	2.72
38 742		0.005	0.14	6.67	3.7	470	2.09	0.39	5.37	0.06	87.80	20.3	58	4.79	23.8	3.72
38 743		0.006	0.08	6.65	8.5	330	2.99	1.12	0.27	0.04	58.90	35.1	71	5.46	53.5	4.75
38 744		0.002	0.12	4.68	5.5	1730	1.75	0.44	8.83	0.05	51.20	79.6	47	3.12	73.7	5.75
38 745		0.007	0.12	8.91	8.0	420	3.40	0.66	0.30	0.04	79.50	35.9	76	7.24	19.0	5.39
38 746		0.005	0.14	3.79	17	620	1.15	0.19	13.80	0.07	43.40	11.2	29	3.15	20.2	2.06
38 747		0.002	0.15	5.82	<5	260	2.16	0.14	10.55	0.07	63.10	30.4	54	5.55	46.6	3.60
38 748		0.001	0.09	6.41	3.8	390	2.68	0.13	7.90	0.07	72.10	18.3	53	5.63	13.2	3.49
38 749		0.005	0.10	7.86	8.5	410	3.19	0.70	0.30	0.07	74.10	36.2	73	6.54	18.0	5.01
38 750		0.003	0.03	7.68	6.6	380	2.77	0.65	0.35	0.07	79.20	24.6	76	5.55	16.7	5.24
38 751		0.002	0.06	7.75	6.7	420	2.98	0.60	0.26	0.05	90.80	29.0	73	6.25	33.2	5.44
38 752		0.001	0.10	5.23	3.8	280	1.53	0.20	0.32	0.10	61.70	12.2	44	3.56	18.1	2.77
38 753		0.002	0.04	6.62	5.2	440	2.59	0.44	0.27	0.07	86.20	21.1	73	6.02	49.6	4.19
38 754		0.005	0.06	8.59	5.9	420	3.41	0.45	0.30	0.07	85.90	29.7	74	7.68	19.7	5.19
38 755		0.003	0.02	8.09	5.9	430	3.02	0.50	0.22	0.06	93.30	31.3	75	7.14	43.8	5.34
38 756		0.003	0.04	7.89	6.0	410	3.21	0.57	0.23	0.07	88.30	29.5	77	7.20	36.2	5.49
38 757		0.002	<0.01	7.58	5.6	410	2.98	0.65	0.18	0.08	103.00	25.5	73	6.82	49.7	5.26
38 758		0.002	0.04	6.80	9.2	420	2.80	0.97	0.24	0.08	77.00	26.8	72	5.21	29.8	5.03
38 759		0.002	0.04	7.44	11.9	400	3.03	1.11	0.19	0.07	101.50	24.6	76	6.08	21.1	5.45
38 760		0.002	0.05	8.08	7.5	420	2.84	1.03	0.26	0.07	93.30	25.4	77	6.78	24.8	5.47
38 761		0.002	0.01	7.85	5.0	410	2.91	0.62	0.27	0.10	99.40	22.3	77	7.21	15.5	5.23
38 762		0.002	0.01	8.23	5.5	400	2.94	0.40	0.24	0.07	95.90	15.3	79	6.75	13.0	5.13
38 763		0.001	0.02	7.37	14.1	350	2.48	0.46	0.19	0.08	86.90	19.8	72	5.79	22.8	5.00
38 764		0.002	0.03	7.82	14.2	340	2.89	0.40	0.27	0.12	97.50	19.3	71	8.21	168.5	4.08
38 765		0.002	0.08	7.00	3.9	330	2.45	0.37	0.66	0.14	107.00	18.3	71	4.92	110.5	4.74
38 766		0.005	0.14	6.77	4.0	220	2.47	0.48	3.23	0.14	102.00	23.9	66	3.70	99.6	4.99
38 767		0.004	0.13	6.11	<5	140	0.84	0.12	11.45	0.31	73.80	5.9	44	1.47	28.9	1.80
38 768		0.002	0.15	6.15	2.5	220	1.45	0.17	5.65	0.17	79.80	6.1	49	2.84	13.0	2.17
38 769		0.001	0.16	5.74	2.9	180	1.71	0.42	4.94	0.24	76.80	9.7	53	3.05	38.8	2.91
38 770		0.003	0.20	6.07	10.5	290	2.52	0.76	4.53	0.68	85.90	16.1	50	3.87	25.6	3.52
38 771		0.001	0.03	7.55	5.3	760	3.13	0.65	1.10	0.15	99.20	20.0	74	8.43	12.8	4.53
38 772		0.002	0.13	6.92	5.2	480	2.62	0.46	3.53	0.09	83.40	18.5	65	6.96	32.6	3.97

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm 0.05	ppm 0.05	ppm 0.1	ppm 0.005	% 0.01	ppm 0.5	ppm 0.2	% 0.01	ppm 5	ppm 0.05	% 0.01	ppm 0.1	ppm 0.2	ppm 10
38 733		13.25	0.06	4.4	0.040	1.80	33.4	12.3	0.40	193	0.87	0.25	6.7	14.0	250
38 734		11.15	0.05	2.9	0.036	1.77	28.3	9.2	0.33	207	1.66	0.04	5.4	13.7	250
38 735		11.65	0.05	4.3	0.036	1.42	31.0	13.2	0.36	238	2.34	0.14	6.1	11.2	290
38 736		20.00	0.08	4.1	0.072	1.99	25.3	28.8	0.69	362	1.48	0.33	8.2	37.7	320
38 737		18.95	<0.05	3.3	0.048	1.95	35.7	19.6	0.72	533	1.80	1.48	7.5	21.7	350
38 738		21.30	0.10	3.9	0.064	3.11	42.2	15.3	0.64	262	1.36	0.39	10.2	24.1	300
38 739		18.15	0.09	4.3	0.054	2.67	41.8	11.1	0.55	207	0.64	0.43	9.4	19.1	240
38 740		11.10	0.05	3.5	0.034	1.51	29.1	12.3	0.30	269	1.34	0.15	5.6	12.8	220
38 741		14.35	<0.05	4.1	0.078	2.72	25.8	17.8	0.49	984	1.43	0.24	7.9	15.1	480
38 742		19.70	<0.05	3.8	0.064	1.90	42.5	19.4	1.00	678	1.69	1.55	8.9	27.1	420
38 743		24.70	0.14	5.2	0.102	2.47	26.2	35.3	0.54	709	0.91	0.40	10.9	31.0	310
38 744		13.35	<0.05	2.5	0.127	1.94	26.4	15.6	2.58	1540	1.87	0.17	4.4	32.5	700
38 745		27.30	0.13	5.2	0.182	2.75	36.8	39.7	0.67	1295	1.13	0.34	11.1	35.1	430
38 746		10.15	<0.05	1.9	0.037	1.02	21.4	22.3	1.26	201	0.80	0.34	5.2	17.2	220
38 747		16.75	<0.05	2.5	0.206	2.64	31.0	15.6	2.46	2970	0.94	0.16	6.6	17.9	670
38 748		18.80	<0.05	3.3	0.163	2.95	35.8	17.7	0.72	1380	0.59	0.13	7.1	23.2	790
38 749		26.30	0.11	5.3	0.169	2.76	33.5	34.8	0.62	1235	1.01	0.34	11.6	34.6	400
38 750		24.50	0.12	5.4	0.124	2.45	35.9	37.7	0.72	765	1.02	0.50	11.7	32.8	380
38 751		24.00	0.14	5.4	0.112	2.66	41.6	37.9	0.74	745	0.79	0.48	13.5	31.3	410
38 752		14.15	0.06	3.3	0.051	1.42	28.6	24.5	0.49	835	1.02	0.28	7.1	21.7	270
38 753		20.50	0.12	4.6	0.104	2.62	41.1	24.3	0.64	938	1.81	0.39	9.9	29.9	420
38 754		25.90	0.15	5.1	0.155	3.12	41.3	38.5	0.78	1280	0.88	0.19	11.1	38.1	470
38 755		24.30	0.16	5.3	0.128	2.78	44.3	35.8	0.81	1040	0.90	0.46	12.2	37.2	420
38 756		24.30	0.14	5.2	0.098	2.71	41.0	41.2	0.83	590	0.90	0.48	13.0	37.2	440
38 757		23.70	0.16	5.7	0.103	2.67	47.3	34.3	0.75	704	0.76	0.54	13.9	34.3	450
38 758		22.80	0.14	5.1	0.086	2.50	34.6	25.2	0.56	871	0.84	0.39	12.5	36.7	460
38 759		23.10	0.17	5.2	0.078	2.69	46.8	22.0	0.64	573	0.93	0.37	11.4	37.6	390
38 760		24.50	0.17	5.3	0.100	2.93	43.9	22.3	0.63	1000	0.84	0.38	11.3	41.6	490
38 761		24.60	0.16	5.4	0.097	2.91	47.6	21.2	0.67	1115	0.70	0.48	11.7	42.3	480
38 762		25.00	0.15	5.4	0.116	2.91	46.6	19.8	0.55	915	0.93	0.43	10.9	39.2	490
38 763		22.40	0.15	4.9	0.084	2.54	41.0	28.7	0.78	402	0.65	0.65	11.0	37.7	410
38 764		23.70	0.15	5.3	0.091	2.66	47.5	25.2	0.79	350	0.60	0.60	11.4	45.3	450
38 765		20.90	0.15	4.9	0.096	2.80	51.2	22.1	1.10	968	1.20	0.48	8.1	37.9	640
38 766		19.95	0.08	3.6	0.064	2.97	50.9	33.0	2.37	554	1.33	0.17	7.8	39.6	510
38 767		17.55	<0.05	2.9	0.039	0.77	35.4	8.4	1.61	542	0.57	3.25	6.7	16.3	550
38 768		16.60	<0.05	3.4	0.054	1.37	39.4	13.9	1.68	671	1.43	1.95	7.3	17.0	500
38 769		16.10	<0.05	3.2	0.055	1.94	39.3	20.8	2.78	576	1.05	0.69	6.3	23.4	660
38 770		16.90	<0.05	3.8	0.064	2.31	42.4	18.3	0.66	257	0.63	0.20	7.6	29.4	620
38 771		22.90	0.12	4.0	0.076	2.92	46.6	43.2	1.62	1340	1.12	0.71	12.7	41.9	540
38 772		19.85	0.05	3.3	0.068	2.48	40.6	38.4	1.59	679	0.65	0.58	11.0	32.0	410

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1
38 733		90.1	<0.002	0.02	0.68	7.7	1	2.3	34.7	0.65	<0.05	12.0	0.269	0.26	1.9
38 734		79.4	<0.002	0.01	0.63	6.3	1	1.8	32.0	0.49	<0.05	8.9	0.208	0.25	1.5
38 735		73.2	<0.002	0.01	0.77	6.1	1	2.0	39.1	0.56	<0.05	10.5	0.247	0.25	2.1
38 736		89.2	<0.002	0.02	13.40	13.1	1	3.0	42.9	0.76	<0.05	10.6	0.385	0.42	2.4
38 737		74.3	0.002	0.04	0.84	11.3	1	2.2	85.2	0.70	<0.05	11.8	0.234	0.31	2.3
38 738		146.5	<0.002	0.02	0.97	13.1	1	3.6	48.1	0.96	<0.05	16.2	0.400	0.44	2.4
38 739		126.5	<0.002	0.01	0.98	10.7	1	3.3	32.7	0.92	<0.05	15.7	0.359	0.37	2.3
38 740		73.6	<0.002	0.01	0.63	6.2	1	1.9	34.0	0.52	<0.05	10.0	0.230	0.22	1.7
38 741		109.0	<0.002	0.04	0.78	9.9	1	2.2	64.8	0.71	<0.05	9.3	0.423	0.36	1.7
38 742		98.7	<0.002	0.02	0.97	15.0	1	3.0	78.8	0.84	0.05	13.3	0.415	0.33	2.4
38 743		118.5	<0.002	0.01	1.43	16.5	2	4.3	44.9	1.07	<0.05	11.3	0.520	0.69	2.9
38 744		88.0	<0.002	0.07	0.77	9.0	2	2.1	249.0	0.39	<0.05	9.0	0.188	0.27	2.2
38 745		156.5	<0.002	0.02	1.53	20.4	2	4.4	54.4	1.04	<0.05	16.8	0.544	0.59	3.0
38 746		48.7	<0.002	0.06	0.64	7.3	1	1.6	411.0	0.48	0.05	6.6	0.238	0.26	1.2
38 747		138.5	<0.002	0.03	0.82	11.5	2	2.8	206.0	0.60	<0.05	11.3	0.259	0.42	2.2
38 748		144.0	<0.002	0.02	0.93	12.9	2	3.0	78.7	0.66	<0.05	12.7	0.296	0.45	1.9
38 749		151.5	<0.002	0.02	1.57	19.0	2	4.3	49.1	1.15	<0.05	15.2	0.559	0.64	3.0
38 750		138.5	<0.002	0.02	1.35	18.7	2	4.0	58.8	1.09	<0.05	16.7	0.575	0.59	3.0
38 751		157.0	<0.002	0.01	1.51	18.8	2	4.5	50.6	1.26	<0.05	17.6	0.645	0.62	3.2
38 752		71.0	<0.002	0.02	0.61	9.9	1	2.1	66.8	0.65	<0.05	9.7	0.345	0.34	1.5
38 753		152.5	0.003	0.01	1.18	16.9	2	3.4	41.2	0.90	<0.05	15.9	0.452	0.56	2.7
38 754		188.0	0.002	0.02	1.49	22.4	2	4.2	54.7	1.04	0.05	18.2	0.517	0.70	3.0
38 755		172.5	0.002	0.01	1.31	21.4	2	4.3	50.6	1.15	<0.05	18.9	0.582	0.67	3.3
38 756		157.0	0.002	0.01	1.56	21.0	2	4.4	50.7	1.20	<0.05	17.7	0.615	0.65	3.3
38 757		169.0	0.002	0.01	1.44	20.5	2	4.3	49.4	1.26	<0.05	19.9	0.685	0.65	3.5
38 758		140.0	0.002	0.02	1.66	17.9	2	4.0	51.1	1.08	0.06	14.1	0.570	0.61	2.8
38 759		165.0	0.002	0.01	2.37	19.3	2	4.0	41.1	0.99	0.08	18.3	0.612	0.61	2.9
38 760		174.5	0.002	0.01	1.58	20.6	2	4.0	50.2	1.01	<0.05	18.3	0.556	0.69	3.0
38 761		175.0	0.002	0.02	1.60	20.8	2	4.1	53.8	1.07	0.05	19.0	0.574	0.71	2.9
38 762		177.0	0.002	0.01	1.63	22.0	2	4.1	50.1	0.98	<0.05	18.3	0.538	0.67	2.9
38 763		152.0	0.002	0.01	1.18	19.2	2	3.8	45.6	1.03	<0.05	15.3	0.531	0.58	2.7
38 764		164.5	0.002	0.01	1.45	20.9	2	4.1	44.8	1.04	<0.05	16.9	0.549	0.57	2.9
38 765		133.0	0.002	0.02	1.14	17.9	2	3.3	40.8	0.72	<0.05	16.2	0.409	0.41	2.8
38 766		130.5	0.003	0.02	0.85	17.1	2	2.9	117.0	0.67	0.08	14.6	0.314	0.32	3.2
38 767		30.7	0.002	0.03	0.82	13.3	1	1.3	154.5	0.60	<0.05	11.2	0.217	0.15	2.7
38 768		61.8	0.002	0.03	1.02	12.3	1	1.9	125.0	0.67	<0.05	12.0	0.273	0.27	2.3
38 769		88.7	0.002	0.06	0.79	12.5	1	2.1	137.0	0.58	0.11	12.0	0.243	0.27	2.3
38 770		110.0	0.002	0.03	0.76	12.5	2	2.6	165.5	0.72	<0.05	15.0	0.326	0.40	2.2
38 771		158.0	0.002	0.01	1.40	16.8	2	4.2	51.3	1.18	0.05	19.5	0.444	0.80	2.6
38 772		129.0	0.002	0.02	0.89	14.9	2	3.3	84.1	0.97	<0.05	14.5	0.427	0.65	2.6

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	PUL-QC Pass75um % 0.01	WEI-21 Recvd Wt. kg 0.02
38 733		1.2	13.9	17	133.0		0.37
38 734		1.0	10.6	14	88.4		0.48
38 735		1.2	11.5	24	143.0		0.34
38 736		1.6	15.7	246	127.0		0.34
38 737		1.1	16.7	26	102.0		0.35
38 738		1.9	18.5	20	125.5		0.33
38 739		1.9	16.4	17	132.5		0.38
38 740		1.2	11.7	19	108.5		0.49
38 741		1.2	19.4	26	131.0		0.34
38 742		1.5	16.5	24	121.0		0.35
38 743		1.9	18.3	27	162.5		0.33
38 744		1.2	13.4	23	81.0		0.34
38 745		2.5	26.1	28	173.5		0.28
38 746		1.1	12.3	33	62.0		0.26
38 747		1.2	17.5	26	78.0		0.28
38 748		1.3	18.4	29	101.5		0.34
38 749		2.2	23.3	27	171.0		0.28
38 750		2.1	22.7	34	174.5		0.33
38 751		2.4	24.6	33	177.0		0.31
38 752		1.2	17.7	43	103.5		0.30
38 753		1.9	21.8	30	140.0		0.33
38 754		2.1	26.5	31	155.5		0.33
38 755		2.3	27.0	32	165.5		0.30
38 756		2.4	25.0	35	165.0		0.32
38 757		4.1	25.3	36	180.0		0.38
38 758		2.2	22.3	31	167.0		0.38
38 759		2.4	24.4	31	170.0		0.39
38 760		2.1	25.2	32	168.5		0.32
38 761		2.1	23.5	33	170.5		0.34
38 762		2.2	27.3	27	176.5		0.34
38 763		2.0	21.7	29	150.5		0.34
38 764		2.1	24.1	46	164.5		0.30
38 765		1.8	23.1	33	152.0		0.32
38 766		2.0	15.4	37	112.0		0.31
38 767		2.3	14.0	60	88.1		0.26
38 768		2.3	16.3	41	98.1		0.32
38 769		1.9	14.3	49	95.0		0.32
38 770		1.5	20.8	219	114.0		0.32
38 771		4.1	23.2	62	122.5		0.24
38 772		2.1	21.0	53	99.1		0.29

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Finalized Date: 5-DEC-2006

Account: MARATH

Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	Au-TL43	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
38 773		0.002	0.10	7.31	5.2	530	2.84	11.65	7.27	0.10	83.80	22.4	69	6.99	37.9
38 774		0.001	0.10	6.53	4.5	450	2.78	0.64	5.73	0.08	98.30	19.7	57	6.65	47.4
38 775		0.002	0.11	6.04	4.2	390	2.28	0.40	7.90	0.08	88.80	17.0	51	5.21	18.1
38 776		0.002	0.08	6.33	2.9	410	2.59	0.34	7.53	0.14	80.20	12.4	48	7.20	7.0
38 777		0.002	0.12	4.69	6.3	180	1.45	0.25	9.70	0.11	54.40	11.4	37	3.89	21.0
38 778		0.001	0.18	5.33	18.2	940	1.73	0.38	0.17	0.09	108.50	15.7	54	2.73	53.9
38 779		0.002	0.13	7.50	31.1	550	2.40	0.69	2.86	0.06	59.40	5.4	60	3.14	58.7
38 780		0.001	0.06	5.86	2.0	390	2.55	0.19	0.18	0.06	79.10	10.2	55	6.73	4.7
38 781		0.001	0.08	6.85	4.1	760	3.01	0.61	0.39	0.12	72.30	18.5	71	8.76	38.8
38 786		0.001	0.28	0.60	10.9	230	2.99	2.52	9.45	0.17	27.70	14.9	44	0.66	245.0
38 787		0.001	0.19	4.43	8.0	190	1.80	0.04	0.27	0.11	18.45	12.7	146	0.85	20.7
38 788		0.002	0.12	5.23	2.0	830	1.75	0.35	4.17	0.05	82.50	18.6	60	2.66	743.0
38 789		0.002	0.14	4.16	2.4	570	1.53	0.35	5.85	0.06	68.30	19.0	53	2.57	228.0
38 790		0.001	0.11	3.33	2.0	600	0.60	1.13	7.12	0.04	33.90	9.3	61	1.50	8.6
38 791		0.001	0.27	0.83	<5	80	0.38	0.04	32.20	0.05	22.40	1.9	7	0.72	6.9
38 792		0.001	0.29	1.11	<5	60	0.77	0.18	10.95	0.83	26.60	14.5	36	1.16	9.0

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5
38 773		21.70	<0.05	3.1	0.074	2.77	40.3	44.1	2.05	956	0.56	0.57	11.8	36.4	490	12.7
38 774		18.70	<0.05	3.7	0.089	2.83	47.1	33.1	2.33	1010	0.77	0.22	10.7	25.5	730	10.7
38 775		16.75	<0.05	3.3	0.063	2.40	41.9	29.2	1.71	739	0.55	0.32	9.5	23.6	670	11.6
38 776		18.35	<0.05	3.0	0.078	2.77	38.7	28.0	3.74	705	0.42	0.40	10.4	30.0	700	6.3
38 777		11.80	<0.05	3.3	0.098	1.26	26.3	14.5	1.71	2300	0.98	0.46	5.5	18.7	530	10.2
38 778		14.55	0.13	5.0	0.067	1.58	50.4	14.0	0.35	1095	1.15	0.08	8.1	16.6	380	18.7
38 779		22.90	<0.05	4.3	0.070	2.39	26.1	14.4	0.58	150	1.51	0.10	9.0	14.7	490	21.7
38 780		15.85	0.10	4.4	0.050	2.86	39.6	13.5	0.58	244	1.17	0.13	9.1	20.3	310	11.0
38 781		21.50	0.12	3.9	0.076	2.65	32.5	46.5	1.45	1460	0.61	0.60	11.7	40.2	470	13.5
38 786		1.96	<0.05	0.3	0.297	0.28	10.0	6.2	2.59	3310	5.91	0.02	0.7	19.5	610	11.2
38 787		15.50	0.06	2.4	0.049	2.33	9.3	13.9	0.33	397	4.38	0.07	3.4	43.9	600	1.9
38 788		14.70	0.06	3.3	0.077	2.27	41.0	12.0	2.18	3100	1.98	0.36	6.3	29.6	1120	3.1
38 789		11.70	<0.05	2.9	0.077	1.69	33.6	9.4	2.34	2980	2.36	0.42	5.5	25.8	950	3.5
38 790		7.35	<0.05	2.7	0.079	3.51	16.4	6.4	0.32	1085	4.16	0.14	4.8	12.6	390	7.1
38 791		1.94	<0.05	0.3	0.036	0.44	12.2	5.8	0.49	301	0.29	0.12	1.2	<0.2	140	5.8
38 792		3.73	<0.05	0.5	0.225	0.47	11.5	12.8	3.85	6960	2.06	<0.01	1.6	29.6	90	20.5

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1
38 773		134.5	0.002	0.02	1.01	15.7	1	3.9	108.0	1.05	0.05	14.2	0.424	0.70	3.1
38 774		133.5	0.003	0.02	0.93	13.7	1	3.1	113.5	0.94	<0.05	15.8	0.396	0.53	2.6
38 775		113.5	0.002	0.03	0.72	12.6	1	2.8	129.5	0.87	<0.05	14.6	0.356	0.45	2.4
38 776		146.0	0.002	0.01	1.22	13.4	1	3.5	220.0	0.94	<0.05	14.9	0.354	0.59	2.4
38 777		64.0	0.002	0.03	0.52	9.2	2	1.7	115.5	0.50	<0.05	9.4	0.264	0.29	1.9
38 778		81.8	0.002	0.03	1.12	10.3	2	2.4	73.1	0.78	<0.05	17.1	0.322	0.60	4.6
38 779		76.3	0.002	0.05	1.89	14.0	2	3.6	143.5	0.85	<0.05	12.6	0.344	0.55	3.5
38 780		138.0	0.003	0.01	0.75	10.4	1	2.7	38.1	0.86	<0.05	14.7	0.353	0.44	2.5
38 781		120.0	0.002	0.02	1.48	15.0	1	3.8	48.2	1.06	0.05	13.9	0.440	0.75	2.4
38 786		12.3	0.002	0.02	0.43	2.4	1	0.3	69.2	0.06	<0.05	3.4	0.025	0.10	1.6
38 787		105.0	0.002	0.01	0.36	14.0	1	2.1	10.4	0.26	<0.05	8.7	0.125	0.20	2.4
38 788		94.1	0.002	0.02	1.81	11.8	1	2.2	101.0	0.54	<0.05	14.5	0.224	0.32	4.0
38 789		72.9	0.002	0.02	0.70	10.4	1	1.9	136.5	0.48	<0.05	12.0	0.186	0.29	4.0
38 790		115.0	0.002	0.01	0.36	4.6	1	1.3	63.8	0.40	<0.05	4.5	0.275	0.31	1.2
38 791		17.4	0.002	0.01	0.15	2.3	1	0.4	714.0	0.10	<0.05	1.9	0.036	0.07	0.7
38 792		27.6	<0.002	0.02	0.22	16.4	2	0.7	462.0	0.16	<0.05	3.1	0.056	0.15	0.8

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Finalized Date: 5-DEC-2006

Account: MARATH

Project: 3159

CERTIFICATE OF ANALYSIS PH06112067

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	PUL-QC Pass75um % 0.01	WEI-21 Recvd Wt. kg 0.02
38 773		2.3	23.4	65	93.3		0.22
38 774		2.0	23.2	33	115.0		0.28
38 775		1.7	23.2	36	99.9		0.32
38 776		2.4	17.6	26	92.2		0.29
38 777		1.0	18.5	37	98.4		0.32
38 778		1.7	24.9	18	146.5		0.28
38 779		1.9	14.4	31	128.5		0.25
38 780		1.8	16.4	20	131.5		0.35
38 781		2.6	19.9	61	114.5		0.32
38 786		0.5	11.6	29	11.0		0.94
38 787		1.2	12.3	11	69.9		1.25
38 788		1.7	20.2	10	100.5		0.65
38 789		1.4	19.2	10	87.3		0.95
38 790		0.9	12.5	5	85.9		0.41
38 791		0.3	14.8	5	11.2		0.76
38 792		0.7	25.7	434	16.4		0.80

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Page: 1
Finalized Date: 18-JUL-2006
Account: MARATH

CERTIFICATE PH06061250

Project: PINDA SPRING

P.O. No.:

This report is for 14 Sediment samples submitted to our lab in Perth, WA, Australia on 4-JUL-2006.

The following have access to data associated with this certificate:

ALLAN YOUNGER

To: **MARATHON RESOURCES LTD**
ATTN: ALLAN YOUNGER
10 GEORGE STREET
STEPNEY SA 5069

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: REE's may not be totally soluble in MS61 method.

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy
PUL-21	Pulverize entire sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-TL43	Trace Level Au - 25g AR	ICP-MS
ME-MS61	47 element four acid ICP-MS	

Signature:

Wayne Abbott, Operations Manager, Western Australia



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Total # Pages: 2 (A - D)

Finalized Date: 18-JUL-2006

Account: MARATH

Project: PINDA SPRING

CERTIFICATE OF ANALYSIS PH06061250

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-TL43 Au ppm 0.001	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
182082 -5mm		1.42	0.001	0.06	7.10	4.7	440	2.04	0.27	1.14	0.08	66.40	9.7	57	3.26	19.8
182082 -180um		1.42	0.266	0.54	3.94	3.0	240	1.18	0.34	0.53	0.28	46.10	6.4	27	2.48	18.0
182083 -5mm		1.01	0.005	0.10	8.25	12.2	500	2.78	0.46	0.72	0.18	81.30	15.6	74	4.95	26.7
182083 -180um		1.02	0.049	0.15	4.98	3.5	320	1.38	0.24	0.42	0.14	60.20	7.3	34	2.88	18.3
182084 -5mm		1.53	0.002	0.14	8.62	26.8	550	3.32	0.58	1.14	0.42	88.70	25.4	76	6.62	54.6
182084 -180um		1.56	0.009	0.17	6.38	17.9	370	1.86	0.36	1.01	0.44	74.80	18.4	48	3.87	49.9
182085 -5mm		1.07	0.001	0.07	6.87	3.7	540	2.93	0.72	6.01	0.09	86.50	18.6	59	6.40	14.3
182085 -180um		1.07	0.004	0.07	6.44	2.4	510	2.41	0.44	5.42	0.11	67.00	13.3	50	6.37	17.2
182086 -5mm		1.23	0.001	0.08	6.06	7.3	520	2.58	0.68	4.13	0.08	77.90	30.0	60	4.33	49.5
182086 -180um		1.23	0.002	0.08	5.11	2.6	350	1.84	0.29	3.01	0.07	72.10	11.0	41	3.33	27.5
182087 -5mm		1.23	0.001	0.08	7.57	5.1	530	3.18	0.74	5.21	0.09	87.80	21.5	81	6.60	37.5
182087 -180um		1.23	0.002	0.07	7.99	2.2	490	2.31	0.31	5.87	0.09	64.70	14.1	64	5.74	44.4
182088 -5mm		1.24	0.001	0.25	10.80	46.8	660	3.26	0.83	0.20	1.29	93.70	21.2	100	5.29	69.6
182088 -180um		1.26	0.004	0.23	7.72	29.6	430	2.15	0.56	0.43	1.55	72.20	28.3	61	4.33	59.2

Comments: REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06061250

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
182082 -5mm		3.54	15.85	0.11	3.8	0.060	2.54	33.1	16.2	0.73	645	0.53	0.50	7.9	20.8	420
182082 -180um		2.01	9.75	0.09	3.1	0.052	1.25	22.9	12.2	0.34	337	0.46	0.15	5.6	12.0	280
182083 -5mm		4.37	20.50	0.14	4.8	0.081	3.04	40.0	26.5	0.91	612	0.76	0.40	10.9	33.0	430
182083 -180um		2.44	11.10	0.10	3.3	0.050	1.50	29.4	14.1	0.40	402	0.46	0.16	6.2	14.0	350
182084 -5mm		5.09	23.00	0.15	4.9	0.099	3.04	43.5	41.7	1.03	898	1.20	0.42	12.4	42.5	460
182084 -180um		4.27	14.10	0.13	3.7	0.066	1.80	36.4	24.8	0.66	945	0.98	0.33	7.5	27.6	530
182085 -5mm		3.94	20.00	<0.05	3.5	0.074	2.52	41.0	43.4	1.60	805	0.43	0.55	12.2	34.3	460
182085 -180um		3.46	16.20	<0.05	3.2	0.063	2.10	33.5	32.7	1.28	695	0.40	0.62	9.7	24.6	480
182086 -5mm		4.21	16.10	0.05	3.4	0.072	2.34	37.7	30.4	1.36	1470	0.65	0.30	8.8	32.0	570
182086 -180um		2.53	13.20	0.05	3.6	0.054	1.72	34.4	21.2	0.84	598	0.39	0.27	6.9	17.0	480
182087 -5mm		4.62	23.80	0.06	3.7	0.086	2.95	43.0	47.8	1.95	774	0.52	0.54	12.7	37.3	550
182087 -180um		4.21	18.10	<0.05	3.2	0.068	2.49	32.5	35.5	1.62	743	0.44	0.58	9.5	28.6	710
182088 -5mm		6.96	26.20	0.18	5.3	0.106	2.86	46.4	38.5	1.00	614	1.80	0.46	11.4	44.9	710
182088 -180um		4.73	18.10	0.16	4.5	0.077	2.01	34.7	32.3	0.62	726	1.53	0.37	9.0	34.8	710

Comments: REE's may not be totally soluble in MS61 method.



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Account: MARATH

Project: PINDA SPRING

CERTIFICATE OF ANALYSIS PH06061250

Sample Description	Method Analyte Units LOR	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1
182082 -5mm		14.0	109.5	0.002	0.01	0.98	1	2.8	40.7	0.65	<0.05	12.4	0.340	0.38	2.2	108
182082 -180um		142.5	67.5	0.002	0.03	1.08	1	2.0	43.8	0.47	<0.05	8.7	0.213	0.26	1.5	47
182083 -5mm		27.1	158.0	0.002	0.01	1.52	2	4.0	31.1	0.92	<0.05	14.6	0.424	0.64	2.7	143
182083 -180um		44.2	72.9	<0.002	0.03	0.69	1	2.1	43.2	0.53	<0.05	10.3	0.257	0.32	1.6	59
182084 -5mm		56.3	173.5	0.002	0.01	2.42	2	4.4	40.3	1.01	0.06	15.3	0.481	0.75	3.0	156
182084 -180um		53.7	88.9	0.002	0.03	1.66	2	2.5	57.0	0.66	<0.05	12.2	0.356	0.41	2.1	92
182085 -5mm		9.1	154.5	0.002	0.01	1.23	2	4.1	81.8	1.03	0.06	18.2	0.348	0.65	2.9	97
182085 -180um		12.6	116.0	<0.002	0.03	0.91	2	3.1	92.7	0.81	<0.05	13.8	0.339	0.50	2.2	81
182086 -5mm		12.0	122.0	0.002	0.01	0.98	2	3.0	109.5	0.77	<0.05	14.4	0.325	0.55	3.1	94
182086 -180um		12.1	82.0	0.002	0.02	0.59	2	2.1	115.5	0.57	<0.05	13.1	0.282	0.35	2.2	62
182087 -5mm		13.1	153.0	0.002	0.01	1.06	2	4.3	111.5	1.04	<0.05	17.8	0.444	0.63	3.5	122
182087 -180um		12.1	111.0	0.002	0.04	0.73	2	3.0	142.0	0.77	<0.05	13.4	0.410	0.46	2.5	96
182088 -5mm		276.0	182.5	<0.002	0.02	3.61	2	4.6	51.0	0.97	<0.05	18.4	0.576	0.79	3.6	199
182088 -180um		186.0	113.0	0.002	0.03	2.14	2	3.4	79.5	0.77	<0.05	13.6	0.422	0.58	2.7	109

Comments: REE's may not be totally soluble in MS61 method.



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Total # Pages: 2 (A - D)

Finalized Date: 18-JUL-2006

Account: MARATH

Project: PINDA SPRING

CERTIFICATE OF ANALYSIS PH06061250

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
182082 -5mm		1.3	16.2	57	131.0
182082 -180um		0.9	12.2	100	104.5
182083 -5mm		1.9	20.2	118	155.0
182083 -180um		1.0	13.2	63	105.5
182084 -5mm		2.3	24.5	240	171.0
182084 -180um		1.2	19.0	190	126.5
182085 -5mm		2.4	21.9	47	112.5
182085 -180um		1.8	17.8	49	101.0
182086 -5mm		1.5	19.8	46	102.5
182086 -180um		1.1	17.9	35	113.5
182087 -5mm		2.2	23.6	75	119.0
182087 -180um		1.5	20.0	68	107.5
182088 -5mm		1.9	24.6	1130	193.5
182088 -180um		1.5	22.5	614	140.5

Comments: REE's may not be totally soluble in MS61 method.



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Page: 1
Finalized Date: 25-MAY-2006
Account: MARATH

CERTIFICATE PH06040409

Project: PINDA ORIENTATION

P.O. No.: 3159/1

This report is for 25 Sediment samples submitted to our lab in Perth, WA, Australia on 10-MAY-2006.

The following have access to data associated with this certificate:

ALLAN YOUNGER

To: **MARATHON RESOURCES LTD**
ATTN: ALLAN YOUNGER
10 GEORGE STREET
STEPNEY SA 5069

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: REE's may not be totally soluble in MS61 method.

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-21	Pulverize entire sample
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-TL43	Trace Level Au - 25g AR	ICP-MS
ME-MS61	47 element four acid ICP-MS	

Signature:

Wayne Abbott, Operations Manager, Western Australia



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Total # Pages: 2 (A - D)

Finalized Date: 25-MAY-2006

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CERTIFICATE OF ANALYSIS PH06040409

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-TL43 Au ppm 0.001	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
126160 - 5mm		0.72	0.001	0.02	7.61	8.2	460	3.07	0.46	0.12	0.20	84.80	18.2	68	11.00	26.1
126160 - 2mm		0.74	0.001	<0.01	7.85	9.3	460	3.15	0.47	0.12	0.25	89.00	17.3	68	12.10	27.8
126160 - 1mm		0.70	0.001	0.03	7.96	8.7	450	3.18	0.44	0.12	0.24	89.70	16.6	71	12.20	25.7
126160 - 650um		0.82	0.001	<0.01	7.84	8.2	430	2.97	0.43	0.13	0.14	75.80	13.8	69	10.70	25.1
126160 - 106um		0.72	0.007	0.27	7.44	11.6	400	2.48	0.48	0.28	0.36	73.00	18.8	82	8.25	45.1
126161 - 5mm		0.64	0.001	0.04	7.95	15.1	450	3.12	0.55	0.14	0.38	86.00	18.5	68	11.80	28.4
126161 - 2mm		0.66	0.001	0.03	8.18	15.2	460	3.31	0.54	0.14	0.41	88.20	17.5	72	12.50	28.4
126161 - 1mm		0.76	0.001	0.05	8.20	13.6	460	3.06	0.50	0.14	0.31	89.80	15.9	73	11.65	26.9
126161 - 650um		0.68	0.001	0.04	7.62	13.3	420	2.88	0.52	0.14	0.34	80.80	14.7	70	11.10	28.4
126161 - 106um		0.72	0.011	0.22	7.80	12.8	390	2.49	0.57	0.36	0.33	69.80	18.5	84	8.02	44.9
126162 - 5mm		0.70	0.001	0.02	8.24	14.2	490	3.17	0.50	0.12	0.42	87.30	16.9	74	11.45	30.3
126162 - 2mm		0.64	0.001	0.04	7.64	16.0	450	3.14	0.51	0.11	0.51	81.40	16.9	68	11.65	30.8
126162 - 1mm		0.64	0.001	0.03	7.81	16.5	460	3.16	0.59	0.12	0.54	88.30	16.4	68	12.25	32.4
126162 - 650um		0.62	0.001	0.11	7.47	16.0	460	2.85	0.59	0.13	0.45	82.20	16.2	67	11.25	31.0
126162 - 106um		0.66	0.008	0.24	7.18	14.3	410	2.41	0.64	0.27	0.52	80.00	19.0	119	8.83	49.5
126163 - 5mm		0.80	0.001	<0.01	7.86	13.4	470	3.21	0.52	0.11	0.39	87.30	17.2	67	12.00	32.2
126163 - 2mm		0.92	0.001	0.04	7.52	12.0	460	2.99	0.46	0.11	0.36	82.20	16.4	68	11.25	26.7
126163 - 1mm		0.94	0.001	0.04	8.17	12.3	480	3.11	0.46	0.12	0.34	90.20	16.2	74	11.95	27.2
126163 - 650um		0.94	0.001	0.04	8.45	12.4	490	3.05	0.48	0.13	0.36	89.60	17.0	76	11.65	28.4
126163 - 106um		0.92	0.003	0.15	7.63	10.4	440	2.33	0.62	0.30	0.35	79.00	18.1	136	8.58	50.7
126164 - 5mm		0.70	0.001	0.02	8.70	12.1	540	3.10	0.45	0.12	0.30	94.20	17.8	76	11.65	27.5
126164 - 2mm		0.70	0.001	0.02	8.44	12.7	520	3.07	0.50	0.12	0.34	96.80	17.9	78	11.95	28.4
126164 - 1mm		0.76	0.001	0.02	9.68	13.5	580	3.32	0.56	0.14	0.33	106.00	19.5	82	12.70	33.4
126164 - 650um		0.72	0.001	0.02	7.62	12.6	460	2.96	0.52	0.12	0.31	86.90	16.7	66	11.45	29.0
126164 - 106um		0.72	0.005	0.15	7.36	10.4	420	2.31	0.53	0.41	0.33	77.60	18.3	205	7.94	62.4

Comments: REE's may not be totally soluble in MS61 method.



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Project: PINDA ORIENTATION

CERTIFICATE OF ANALYSIS PH06040409

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
		%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
126160 - 5mm		5.58	23.60	0.59	4.3	0.091	2.87	44.3	49.1	0.99	660	0.64	0.47	12.8	64.3
126160 - 2mm		5.69	25.90	0.69	4.6	0.099	2.91	46.8	51.3	0.98	654	0.70	0.43	13.7	50.8
126160 - 1mm		5.66	25.90	1.27	4.7	0.092	2.97	47.5	50.8	0.98	613	0.68	0.41	13.6	45.0
126160 - 650um		5.41	22.50	0.73	3.8	0.084	2.81	40.5	47.8	0.92	584	0.64	0.38	11.9	41.4
126160 - 106um		4.47	21.60	0.83	3.7	0.081	2.14	38.9	49.8	0.77	903	1.77	0.37	11.0	39.6
126161 - 5mm		5.68	25.20	1.24	4.7	0.096	3.07	44.8	53.4	1.07	702	0.70	0.43	13.4	46.4
126161 - 2mm		5.73	26.00	0.92	4.7	0.101	3.11	48.6	54.1	1.09	672	0.71	0.40	13.8	46.3
126161 - 1mm		5.73	25.20	1.25	4.5	0.097	3.09	47.4	54.6	1.09	651	0.71	0.39	13.0	45.2
126161 - 650um		5.21	23.70	1.71	4.1	0.093	2.86	43.6	50.2	1.00	579	0.67	0.35	12.4	43.4
126161 - 106um		4.53	23.60	0.29	3.9	0.088	2.16	37.1	56.1	0.85	803	1.47	0.33	10.8	42.6
126162 - 5mm		5.66	24.40	0.34	4.2	0.090	3.20	47.9	55.1	1.27	815	0.78	0.49	12.9	47.7
126162 - 2mm		5.38	24.20	0.70	4.3	0.094	2.99	43.0	53.5	1.15	801	0.76	0.42	13.0	47.9
126162 - 1mm		5.53	25.00	0.34	4.4	0.097	2.97	47.2	60.0	1.13	843	0.85	0.40	13.6	47.9
126162 - 650um		5.47	22.60	0.95	4.2	0.086	2.88	44.6	50.7	1.07	833	0.94	0.37	12.2	45.7
126162 - 106um		4.30	20.50	0.35	4.5	0.085	2.27	42.6	46.1	0.82	943	3.19	0.39	11.6	44.9
126163 - 5mm		5.45	26.40	0.91	4.5	0.099	3.01	45.0	60.9	1.14	745	0.74	0.46	14.2	47.3
126163 - 2mm		5.28	23.20	0.88	4.4	0.089	2.94	42.0	49.7	1.07	761	0.65	0.41	12.4	43.7
126163 - 1mm		5.57	24.60	0.25	4.2	0.091	3.04	47.3	54.0	1.12	805	0.69	0.42	13.0	43.9
126163 - 650um		5.73	24.00	0.26	4.5	0.092	3.06	46.0	51.1	1.13	847	0.72	0.42	12.9	44.8
126163 - 106um		4.52	21.50	0.27	4.4	0.082	2.32	42.3	49.4	0.88	907	2.97	0.44	11.5	41.6
126164 - 5mm		6.15	24.90	0.38	4.7	0.094	3.31	48.8	51.8	1.21	818	0.68	0.48	13.5	45.9
126164 - 2mm		5.98	25.60	0.42	4.8	0.095	3.25	50.5	51.1	1.16	809	0.70	0.45	13.8	45.9
126164 - 1mm		6.76	28.40	0.37	5.2	0.105	3.51	55.5	53.5	1.28	938	0.78	0.50	14.5	50.3
126164 - 650um		5.48	24.10	0.31	4.5	0.091	2.81	44.7	51.8	1.00	770	0.74	0.39	13.2	43.3
126164 - 106um		4.76	20.70	0.24	4.1	0.082	2.16	41.8	48.2	0.87	911	7.01	0.47	11.4	46.2

Comments: REE's may not be totally soluble in MS61 method.



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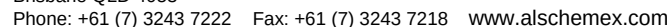
Account: MARATH

Project: PINDA ORIENTATION

CERTIFICATE OF ANALYSIS PH06040409

Sample Description	Method Analyte Units LOR	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1
126160 - 5mm		45.6	191.5	0.002	0.01	0.69	2	4.5	37.3	1.30	<0.05	19.3	0.505	1.00	2.5	134
126160 - 2mm		52.0	201.0	0.002	0.01	0.80	2	4.9	39.2	1.37	<0.05	21.2	0.519	1.06	2.7	140
126160 - 1mm		48.1	197.0	<0.002	0.01	0.85	2	4.8	39.6	1.30	<0.05	20.4	0.530	1.00	2.7	136
126160 - 650um		43.7	168.0	0.002	0.01	0.81	2	4.2	37.0	1.10	<0.05	18.6	0.522	0.84	2.5	134
126160 - 106um		287.0	131.0	0.002	0.02	1.79	2	5.2	64.1	1.04	0.05	16.4	0.473	0.66	2.4	103
126161 - 5mm		326.0	195.0	<0.002	0.01	1.05	2	4.8	38.6	1.36	<0.05	20.9	0.510	1.11	2.8	136
126161 - 2mm		277.0	205.0	<0.002	0.01	1.16	2	4.9	39.6	1.35	0.05	21.0	0.520	1.12	2.7	142
126161 - 1mm		299.0	191.0	<0.002	0.01	1.12	2	4.7	39.5	1.26	<0.05	21.6	0.519	1.04	2.7	142
126161 - 650um		287.0	179.5	<0.002	0.01	1.09	2	4.5	39.3	1.22	<0.05	20.7	0.485	0.99	2.6	124
126161 - 106um		626.0	125.0	<0.002	0.02	1.05	2	7.0	70.9	1.26	<0.05	16.9	0.483	0.72	2.5	110
126162 - 5mm		107.5	188.0	<0.002	0.01	1.27	2	4.9	38.2	1.19	<0.05	20.0	0.496	0.97	2.6	134
126162 - 2mm		126.0	183.5	0.002	0.01	1.35	2	4.9	37.8	1.27	<0.05	19.5	0.469	1.04	2.6	128
126162 - 1mm		147.0	186.5	0.002	0.01	1.47	2	5.1	39.4	1.29	0.05	22.6	0.469	1.08	3.0	128
126162 - 650um		178.5	177.5	<0.002	0.01	1.48	2	5.0	38.2	1.20	<0.05	19.3	0.475	0.97	2.6	124
126162 - 106um		654.0	138.0	0.002	0.02	1.38	2	12.8	63.6	1.31	0.05	18.4	0.475	0.75	2.5	104
126163 - 5mm		90.9	188.0	0.002	0.01	1.09	2	5.0	38.6	1.33	<0.05	22.4	0.493	1.06	3.0	130
126163 - 2mm		89.2	173.0	<0.002	<0.01	1.10	2	4.6	34.9	1.20	<0.05	18.8	0.487	0.96	2.6	127
126163 - 1mm		105.5	186.5	0.002	0.01	1.11	2	4.8	37.1	1.18	<0.05	20.4	0.513	0.93	2.7	134
126163 - 650um		122.0	186.0	0.002	0.01	1.17	2	4.8	38.9	1.23	<0.05	19.6	0.537	0.99	2.7	140
126163 - 106um		392.0	138.0	0.002	0.02	1.06	2	6.1	63.6	1.16	<0.05	19.1	0.488	0.73	2.6	110
126164 - 5mm		82.1	198.0	0.002	0.01	1.02	2	4.9	38.1	1.28	<0.05	20.8	0.565	1.02	2.8	146
126164 - 2mm		94.1	198.0	0.002	0.01	1.23	2	4.9	38.3	1.34	<0.05	22.2	0.566	1.10	2.9	147
126164 - 1mm		111.0	219.0	0.002	0.01	1.17	2	5.4	43.9	1.44	0.05	24.8	0.616	1.12	3.2	159
126164 - 650um		113.0	177.5	0.002	0.01	1.14	2	4.8	37.9	1.30	<0.05	21.9	0.519	1.01	2.9	132
126164 - 106um		451.0	127.0	0.003	0.03	1.28	2	9.8	71.3	1.49	<0.05	17.5	0.492	0.65	2.6	112

Comments: REE's may not be totally soluble in MS61 method.



Account: MARATH

Project: PINDA ORIENTATION

CERTIFICATE OF ANALYSIS PH06040409

Comments: REE's may not be totally soluble in MS61 method.



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Finalized Date: 13-JUN-2006

Account: MARATH

CERTIFICATE PH06047091

Project: PINDA

P.O. No.: 3159/2

This report is for 127 Soil samples submitted to our lab in Perth, WA, Australia on 30-MAY-2006.

The following have access to data associated with this certificate:

ALLAN YOUNGER

To: **MARATHON RESOURCES LTD**
ATTN: ALLAN YOUNGER
10 GEORGE STREET
STEPNEY SA 5069

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy
PUL-21	Pulverize entire sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS61	47 element four acid ICP-MS
Au-TL43	Trace Level Au - 25g AR ICP-MS

Signature:

Wayne Abbott, Operations Manager, Western Australia



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Total # Pages: 5 (A - D)

Finalized Date: 13-JUN-2006

Account: MARATH

Project: PINDA

CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
126165 -5mm		1.51	0.07	6.38	6.4	520	2.35	0.63	4.69	0.05	90.50	21.4	60	6.32	31.5	4.07
126165 -180um		1.60	6.04	4.83	8.3	360	1.52	1.54	3.15	0.09	74.80	12.0	44	4.20	57.0	2.67
126166 -5mm		0.94	0.12	6.51	12.1	440	2.29	0.61	1.46	0.18	88.60	17.4	59	5.75	33.5	4.21
126166 -180um		1.08	0.24	6.09	9.9	370	1.92	0.52	1.65	0.21	114.00	16.7	50	4.87	68.1	3.62
126167 -5mm		0.95	0.08	5.73	5.7	470	2.14	0.73	4.51	0.03	84.90	19.6	55	5.30	43.8	3.62
126167 -180um		0.98	0.08	4.86	5.0	360	1.48	0.44	2.63	0.07	67.20	10.2	37	4.06	37.6	2.66
126168 -5mm		1.26	0.06	8.30	9.4	460	2.94	0.57	0.18	<0.02	100.50	24.7	77	10.55	32.9	5.73
126168 -180um		1.32	0.11	6.17	6.9	340	2.00	0.38	0.30	0.04	78.60	20.5	53	6.85	38.8	4.10
126169 -5mm		1.23	0.06	7.52	12.8	530	2.91	0.58	1.68	0.10	98.00	20.2	70	10.55	27.5	5.05
126169 -180um		1.29	0.19	6.15	10.6	430	2.02	0.44	3.13	0.27	84.00	15.7	65	7.13	40.9	3.66
126170 -5mm		1.05	0.06	7.07	12.6	530	2.70	0.64	1.90	0.03	93.10	19.6	66	8.78	30.1	4.83
126170 -180um		1.17	0.11	5.29	7.0	400	1.76	0.38	2.46	0.03	74.90	11.8	50	5.04	39.5	2.97
126171 -5mm		1.46	0.05	7.30	6.7	550	2.61	0.55	4.80	0.04	96.40	21.5	67	7.98	16.4	4.47
126171 -180um		1.45	0.07	5.11	5.3	420	1.60	0.45	4.77	0.07	69.60	13.6	45	5.42	24.0	3.02
126172 -5mm		1.88	0.05	6.46	9.8	510	2.34	0.52	2.00	0.09	86.10	18.7	58	8.69	25.1	4.35
126172 -180um		2.11	0.07	4.60	5.1	370	1.52	0.36	1.72	0.07	64.70	11.3	37	5.17	22.1	2.78
126173 -5mm		1.36	0.06	7.16	9.3	570	2.79	0.63	2.85	0.12	97.30	20.0	68	9.27	32.1	4.57
126173 -180um		1.39	0.06	3.88	4.8	340	1.28	0.35	1.51	0.05	63.80	8.5	32	3.83	18.8	2.42
126174 -5mm		1.59	0.08	8.30	8.3	600	2.90	0.52	0.17	0.03	105.00	25.2	76	12.25	31.9	5.87
126174 -180um		1.79	0.09	5.88	6.2	380	1.82	0.35	0.22	0.12	92.80	19.2	51	7.44	29.6	4.15
126175 -5mm		1.23	0.06	7.30	8.5	540	2.84	0.54	1.94	0.20	94.80	18.8	69	9.62	28.6	4.86
126175 -180um		1.26	0.07	5.30	5.2	370	1.71	0.53	1.62	0.15	71.50	10.8	44	5.88	34.0	3.15
126176 -5mm		1.44	0.05	7.21	6.8	570	2.63	0.57	3.07	0.06	97.80	19.7	68	8.88	33.2	4.54
126176 -180um		1.57	0.07	4.59	5.1	410	1.58	0.39	1.90	0.12	67.70	10.2	38	4.71	25.4	2.73
126177 -5mm		1.80	0.06	7.73	10.8	530	2.86	0.60	0.62	0.19	92.40	17.2	69	12.45	31.4	4.94
126177 -180um		1.73	0.11	5.64	7.2	380	1.80	0.47	0.67	0.15	70.50	12.6	46	8.23	26.0	3.24
126178 -5mm		1.36	0.06	7.90	12.8	570	3.01	0.60	0.78	0.25	103.50	20.2	72	11.85	30.1	5.42
126178 -180um		1.40	0.10	5.87	7.2	410	1.98	0.44	1.29	0.19	79.10	13.0	48	8.13	26.0	3.36
126179 -5mm		1.63	0.08	7.38	11.9	540	2.92	0.56	0.73	0.27	97.70	19.8	67	11.20	30.0	5.19
126179 -180um		1.99	0.11	5.97	7.5	400	1.91	0.41	1.07	0.20	74.00	12.8	49	7.67	26.4	3.51
126180 -5mm		1.50	0.07	7.23	10.5	560	2.84	0.63	2.64	0.12	95.40	20.1	69	9.32	24.0	4.60
126180 -180um		1.58	0.08	5.28	6.8	430	1.80	0.57	2.23	0.13	70.70	13.0	47	6.42	24.6	3.16
126181 -5mm		1.93	0.09	7.85	10.6	590	3.02	0.55	1.15	0.19	98.00	20.0	70	10.65	28.0	5.33
126181 -180um		2.06	0.10	5.82	6.8	420	1.82	0.41	1.22	0.15	74.40	12.8	46	6.69	24.6	3.43
126182 -5mm		1.26	0.02	6.86	7.4	540	2.77	0.55	3.06	0.11	88.70	19.0	68	8.27	24.7	4.43
126182 -180um		1.39	0.04	4.91	3.9	410	1.77	0.36	2.09	0.14	66.60	11.8	43	4.77	22.5	2.88
126183 -5mm		1.54	0.02	7.65	11.3	560	3.29	0.58	0.75	0.21	94.30	19.8	70	10.35	27.2	5.42
126183 -180um		1.71	0.05	5.55	6.2	390	2.06	0.35	0.88	0.14	63.10	12.4	45	6.40	22.4	3.32
126184 -5mm		1.13	<0.01	7.35	8.9	560	3.07	0.53	1.62	0.18	91.30	19.3	67	9.56	27.3	5.08
126184 -180um		1.29	0.04	4.67	5.0	350	1.68	0.33	1.32	0.12	64.80	10.5	41	4.99	21.1	2.90

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Finalized Date: 13-JUN-2006

Account: MARATH

Project: PINDA

CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
126165 -5mm		22.50	0.36	3.7	0.080	2.56	44.1	30.3	1.58	922	0.46	0.44	12.0	40.4	460
126165 -180um		14.90	0.23	3.7	0.059	1.81	36.3	19.2	0.94	583	0.55	0.49	8.3	35.9	3970.0
126166 -5mm		22.00	0.28	4.1	0.081	2.78	43.7	25.5	1.15	696	0.60	0.39	10.8	37.3	410
126166 -180um		18.80	0.34	3.8	0.078	2.02	56.7	26.1	0.98	687	1.79	0.35	8.4	37.9	590
126167 -5mm		18.80	0.30	3.4	0.073	2.33	41.5	29.4	1.27	1060	0.43	0.35	10.2	33.1	480
126167 -180um		14.45	0.24	3.6	0.062	1.63	31.5	19.7	0.76	621	0.39	0.30	7.8	22.8	470
126168 -5mm		29.00	0.75	5.5	0.114	3.28	47.3	37.9	0.96	841	0.49	0.45	15.6	44.3	400
126168 -180um		19.50	0.30	4.8	0.077	2.08	37.7	34.2	0.67	719	0.60	0.41	11.2	32.3	480
126169 -5mm		26.40	1.49	4.5	0.093	3.03	48.2	45.0	1.55	791	0.50	0.55	13.8	47.7	430
126169 -180um		19.45	0.71	4.1	0.073	2.15	40.4	33.7	1.16	634	0.72	0.63	10.9	44.7	540
126170 -5mm		23.70	0.85	4.2	0.085	2.85	45.8	42.0	1.48	921	0.49	0.48	13.0	45.7	490
126170 -180um		15.85	0.30	3.6	0.061	1.82	36.3	24.3	0.84	644	0.61	0.36	8.5	49.9	540
126171 -5mm		24.60	0.52	3.8	0.080	2.84	46.2	40.8	1.83	824	0.42	0.61	13.6	43.0	530
126171 -180um		16.05	0.26	3.5	0.055	1.85	33.8	24.6	1.05	588	0.60	0.53	8.8	39.1	500
126172 -5mm		22.20	1.01	3.8	0.070	2.57	42.0	36.2	1.32	849	0.49	0.47	11.5	40.9	430
126172 -180um		13.95	0.29	3.5	0.045	1.67	31.6	22.3	0.73	488	0.42	0.36	7.8	24.6	370
126173 -5mm		24.00	0.32	4.0	0.076	2.81	46.8	41.2	1.61	942	0.54	0.58	13.2	44.4	500
126173 -180um		11.55	0.21	3.5	0.036	1.43	30.2	17.5	0.58	442	0.40	0.27	6.9	20.7	330
126174 -5mm		27.70	0.43	5.8	0.091	3.06	48.1	41.7	1.00	951	0.59	0.58	15.6	43.8	380
126174 -180um		18.20	0.26	4.9	0.063	1.97	43.2	34.0	0.67	694	0.63	0.49	11.4	33.4	370
126175 -5mm		23.90	0.31	4.2	0.077	2.89	47.1	43.7	1.50	757	0.47	0.56	13.2	44.8	520
126175 -180um		15.70	0.25	3.6	0.054	1.82	34.7	26.5	0.82	529	0.57	0.39	8.6	27.3	420
126176 -5mm		24.20	0.32	4.1	0.078	2.84	47.2	42.6	1.67	863	0.66	0.60	13.5	43.8	510
126176 -180um		14.10	0.23	3.5	0.047	1.66	31.9	22.1	0.76	558	0.46	0.38	8.1	26.0	360
126177 -5mm		25.60	0.33	4.7	0.088	3.05	46.2	48.9	1.40	828	0.62	0.52	14.0	46.9	450
126177 -180um		17.15	0.26	3.8	0.059	2.03	35.9	32.6	0.73	556	0.55	0.39	9.3	29.9	360
126178 -5mm		26.60	0.37	4.7	0.087	3.12	51.1	48.3	1.49	929	0.66	0.58	14.3	51.0	520
126178 -180um		18.50	0.28	3.8	0.064	2.03	38.9	33.5	0.86	565	0.53	0.44	9.9	31.7	390
126179 -5mm		25.40	0.55	4.7	0.089	2.94	48.5	46.5	1.34	884	0.63	0.52	13.8	48.7	480
126179 -180um		18.05	0.27	4.0	0.061	2.07	36.7	33.9	0.84	583	0.54	0.44	9.8	31.2	380
126180 -5mm		24.70	0.37	4.1	0.082	2.90	45.8	44.9	1.72	833	0.47	0.60	13.4	45.3	470
126180 -180um		16.35	0.25	3.4	0.057	1.94	34.2	30.1	0.93	663	0.50	0.46	9.2	28.2	380
126181 -5mm		25.70	0.32	4.4	0.084	3.07	49.1	48.5	1.57	846	0.54	0.58	13.8	49.0	520
126181 -180um		17.30	0.25	3.8	0.059	2.02	36.5	30.8	0.86	599	0.49	0.46	9.6	29.4	380
126182 -5mm		21.80	0.32	3.9	0.067	2.73	43.2	42.6	1.53	819	0.39	0.49	11.6	39.8	480
126182 -180um		14.45	0.27	3.3	0.046	1.74	32.4	23.4	0.80	551	0.57	0.35	7.9	25.4	390
126183 -5mm		24.70	0.35	4.4	0.078	2.99	46.9	47.0	1.45	742	0.51	0.53	12.8	46.5	510
126183 -180um		16.00	0.25	3.5	0.050	1.94	31.5	33.0	0.79	529	0.45	0.40	8.6	26.4	360
126184 -5mm		23.70	0.32	4.1	0.076	2.94	45.1	45.8	1.46	817	0.47	0.47	12.6	43.6	490
126184 -180um		13.70	0.23	3.4	0.045	1.74	31.4	25.1	0.68	460	0.41	0.31	7.6	24.2	340

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.1	0.002	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
126165 -5mm		156.5	<0.002	0.01	16.60	2	3.6	94.4	1.08	0.05	17.8	0.376	0.68	2.9	100
126165 -180um		97.5	0.002	0.06	533.00	2	10.5	111.0	0.71	<0.05	13.6	0.316	0.44	2.1	65
126166 -5mm		159.0	0.002	0.01	6.05	2	3.4	50.6	0.93	<0.05	17.2	0.397	0.66	2.6	110
126166 -180um		110.5	0.003	0.09	162.50	2	5.0	86.1	0.74	0.05	16.6	0.342	0.49	2.3	84
126167 -5mm		123.0	0.002	0.02	8.58	2	2.9	103.0	0.88	<0.05	16.2	0.342	0.65	2.7	89
126167 -180um		85.3	0.002	0.03	77.80	2	2.9	112.0	0.68	<0.05	12.6	0.303	0.47	2.0	63
126168 -5mm		214.0	0.002	<0.01	5.74	2	4.8	39.3	1.36	<0.05	21.5	0.633	0.94	3.5	158
126168 -180um		124.5	0.002	0.02	34.00	2	3.4	65.3	0.95	<0.05	16.7	0.509	0.56	2.6	97
126169 -5mm		188.0	<0.002	<0.01	2.45	2	4.3	65.4	1.22	<0.05	21.1	0.472	0.92	2.9	126
126169 -180um		127.0	<0.002	0.04	51.20	2	5.2	118.5	0.94	<0.05	16.3	0.408	0.59	2.5	86
126170 -5mm		174.0	<0.002	0.01	2.02	2	3.9	68.6	1.11	<0.05	20.1	0.437	0.87	2.8	118
126170 -180um		96.1	0.002	0.05	99.00	2	10.1	112.5	0.75	<0.05	14.0	0.330	0.53	2.2	71
126171 -5mm		171.5	<0.002	0.01	2.28	2	4.1	101.0	1.15	<0.05	19.7	0.432	0.77	3.0	111
126171 -180um		102.0	<0.002	0.03	32.80	2	2.8	148.0	0.77	<0.05	13.3	0.325	0.47	2.1	68
126172 -5mm		156.0	<0.002	0.01	1.79	2	3.6	65.7	1.01	<0.05	18.4	0.391	0.81	2.6	106
126172 -180um		88.4	<0.002	0.02	12.90	2	2.1	76.6	0.69	<0.05	13.3	0.305	0.47	1.9	66
126173 -5mm		167.5	0.002	0.01	1.80	2	3.9	80.4	1.14	0.05	19.9	0.434	0.86	2.9	114
126173 -180um		73.0	0.002	0.01	9.90	2	1.7	71.6	0.62	<0.05	12.5	0.264	0.42	1.8	55
126174 -5mm		201.0	0.002	<0.01	1.86	3	4.5	50.6	1.32	0.05	22.0	0.675	1.12	3.5	162
126174 -180um		116.5	0.002	0.01	9.84	2	2.8	58.1	0.99	<0.05	17.5	0.549	0.65	2.6	103
126175 -5mm		173.0	0.002	<0.01	1.47	2	3.9	73.5	1.12	<0.05	19.7	0.458	0.87	2.8	116
126175 -180um		98.9	0.002	0.02	19.15	2	2.6	80.2	0.77	<0.05	13.9	0.342	0.55	2.1	73
126176 -5mm		168.0	0.002	0.01	1.44	2	4.0	88.8	1.16	<0.05	20.6	0.430	0.87	3.0	112
126176 -180um		88.7	<0.002	0.02	11.50	2	2.4	80.4	0.72	<0.05	13.4	0.300	0.47	2.0	65
126177 -5mm		189.5	0.002	<0.01	2.62	3	4.3	50.0	1.23	<0.05	21.1	0.485	1.06	2.9	120
126177 -180um		116.0	<0.002	0.01	7.96	2	2.6	65.7	0.81	<0.05	15.3	0.380	0.63	2.1	80
126178 -5mm		193.5	<0.002	<0.01	1.96	2	4.4	55.3	1.23	<0.05	22.2	0.494	1.04	3.0	128
126178 -180um		121.5	<0.002	0.01	6.78	2	2.9	74.9	0.87	<0.05	15.9	0.382	0.67	2.2	83
126179 -5mm		184.5	<0.002	<0.01	1.53	2	4.2	52.8	1.22	<0.05	21.5	0.490	1.04	2.9	126
126179 -180um		116.0	<0.002	0.01	4.69	2	2.8	72.0	0.88	<0.05	16.0	0.410	0.64	2.2	87
126180 -5mm		164.5	<0.002	<0.01	1.37	2	4.2	76.7	1.17	<0.05	20.0	0.438	0.90	3.0	115
126180 -180um		106.0	<0.002	0.01	3.31	2	2.6	84.1	0.79	<0.05	14.6	0.346	0.55	2.1	76
126181 -5mm		193.5	0.002	<0.01	1.57	2	4.2	58.4	1.20	<0.05	21.5	0.493	1.00	2.9	126
126181 -180um		110.0	0.002	0.01	8.23	2	2.6	74.3	0.84	<0.05	15.4	0.395	0.60	2.1	82
126182 -5mm		153.5	0.002	0.01	1.48	2	3.5	90.7	1.07	<0.05	18.2	0.410	0.78	2.8	109
126182 -180um		90.1	<0.002	0.02	7.98	2	2.4	91.3	0.74	<0.05	15.7	0.312	0.49	2.2	67
126183 -5mm		180.0	<0.002	<0.01	1.47	3	3.9	50.7	1.19	0.05	20.0	0.497	0.94	2.8	128
126183 -180um		104.0	0.002	0.01	4.18	2	2.3	61.6	0.78	<0.05	13.8	0.377	0.56	1.9	80
126184 -5mm		174.0	0.002	<0.01	1.12	3	3.9	68.1	1.15	<0.05	19.6	0.469	0.93	2.8	120
126184 -180um		90.8	0.002	0.01	5.06	2	2.3	65.6	0.73	<0.05	12.9	0.320	0.50	1.9	68

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	Au-TL43
		Y	Zn	Zr	Au
		ppm	ppm	ppm	ppm
		0.1	2	0.5	0.001
126165 -5mm		24.1	48	122.0	0.013
126165 -180um		20.2	50	122.0	0.337
126166 -5mm		20.9	100	134.0	0.008
126166 -180um		22.2	99	125.5	0.144
126167 -5mm		22.2	49	110.5	0.008
126167 -180um		20.0	42	116.0	0.061
126168 -5mm		29.3	55	182.5	0.004
126168 -180um		24.5	54	157.5	0.028
126169 -5mm		24.3	114	146.5	0.002
126169 -180um		22.3	85	131.5	0.038
126170 -5mm		24.3	71	137.0	0.001
126170 -180um		21.0	57	115.0	0.101
126171 -5mm		23.3	73	125.0	0.001
126171 -180um		19.8	50	112.5	0.031
126172 -5mm		21.1	105	122.5	0.007
126172 -180um		16.9	56	110.0	0.001
126173 -5mm		22.7	119	131.0	0.010
126173 -180um		15.2	43	108.0	0.001
126174 -5mm		28.6	147	192.5	0.008
126174 -180um		22.5	97	157.0	0.001
126175 -5mm		22.9	116	136.0	0.028
126175 -180um		18.0	72	112.5	0.001
126176 -5mm		22.9	100	131.5	0.010
126176 -180um		17.0	54	112.0	0.002
126177 -5mm		24.2	130	151.5	0.008
126177 -180um		18.7	80	121.5	0.001
126178 -5mm		25.3	134	151.5	0.001
126178 -180um		19.8	82	121.5	0.008
126179 -5mm		24.7	126	148.0	0.001
126179 -180um		19.6	81	124.5	0.007
126180 -5mm		21.8	113	130.5	0.002
126180 -180um		18.0	69	111.0	0.003
126181 -5mm		24.1	124	143.0	<0.001
126181 -180um		19.4	76	121.0	0.005
126182 -5mm		21.4	98	124.5	0.001
126182 -180um		17.6	56	103.0	0.006
126183 -5mm		23.6	124	141.0	0.001
126183 -180um		17.2	74	110.0	0.005
126184 -5mm		22.8	114	134.5	<0.001
126184 -180um		16.2	61	106.5	0.005

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
Sample Description															
126185 -5mm	1.95	0.06	6.18	11.4	420	2.54	0.56	1.78	0.25	88.90	16.4	55	4.66	34.4	3.99
126185 -180um	2.21	0.08	5.17	7.9	330	1.80	0.38	1.49	0.28	95.70	14.4	39	3.70	38.1	3.18
126186 -5mm	1.59	0.20	8.04	41.9	440	2.94	1.32	0.20	0.70	87.80	23.3	80	8.04	93.8	5.49
126186 -180um	1.78	0.33	6.47	40.8	350	2.01	0.84	0.38	1.04	79.10	30.3	57	5.70	119.0	4.82
126187 -5mm	1.30	0.22	7.91	43.8	510	3.02	0.87	0.14	1.28	92.70	20.6	78	5.75	59.5	4.63
126187 -180um	1.41	0.26	6.69	36.9	380	2.14	0.62	0.29	1.71	72.40	29.1	57	4.69	60.3	4.41
126188 -5mm	1.26	0.04	7.78	4.9	440	2.84	0.80	0.17	0.10	94.30	27.5	79	5.04	18.1	5.25
126188 -180um	1.32	0.04	6.67	5.4	360	2.20	0.52	0.31	0.14	77.50	22.2	60	4.89	24.1	4.06
126189 -5mm	1.91	0.03	7.59	5.2	460	2.75	0.84	0.09	0.06	93.30	43.0	76	4.89	22.1	5.65
126189 -180um	2.05	0.07	6.25	9.3	360	2.25	0.60	0.19	0.26	79.60	30.9	68	4.34	26.7	5.20
126190 -5mm	0.75	0.11	5.72	8.9	310	1.80	0.31	0.23	1.26	65.10	11.5	47	4.06	26.2	3.20
126190 -180um	0.68	0.12	5.73	9.1	310	1.74	0.30	0.26	1.38	63.30	11.4	44	4.18	27.5	3.17
126191 -5mm	1.03	0.07	6.76	16.2	420	2.71	0.66	0.25	0.27	77.30	17.8	61	4.88	34.7	4.35
126191 -180um	1.11	0.05	4.07	5.2	250	1.24	0.24	0.24	0.21	52.80	9.0	30	2.67	17.3	2.26
126192 -5mm	1.48	0.04	7.57	7.7	460	3.43	1.05	0.10	0.05	96.30	29.8	74	6.88	23.2	5.66
126192 -180um	1.45	0.04	6.31	6.7	330	2.65	0.71	0.18	0.10	84.10	18.0	61	4.86	23.7	4.10
126193 -5mm	1.85	0.05	6.81	10.6	380	2.56	0.65	0.12	0.32	80.40	14.3	63	4.55	25.1	4.03
126193 -180um	2.11	0.04	4.53	5.1	240	1.52	0.32	0.18	0.46	59.90	11.4	36	2.89	21.5	2.67
126194 -5mm	1.71	0.03	7.70	6.2	490	3.17	1.11	0.16	0.06	97.50	19.8	74	6.74	40.9	5.24
126194 -180um	2.02	0.04	6.23	6.3	350	2.34	0.69	0.27	0.08	76.70	21.2	59	5.02	45.1	4.78
126195 -5mm	0.78	0.06	5.91	9.5	360	2.52	0.62	0.25	0.17	73.50	16.3	55	4.21	28.8	4.10
126195 -180um	0.95	0.07	4.69	6.1	280	1.68	0.34	0.29	0.24	55.90	13.4	40	3.24	23.1	2.98
126196 -5mm	1.30	0.06	2.41	2.8	170	0.92	0.14	0.10	0.19	31.50	6.1	19	1.53	13.4	1.86
126196 -180um	1.46	0.06	3.86	3.6	260	1.18	0.20	0.15	0.24	52.00	8.0	28	2.55	17.5	2.19
126197 -5mm	1.12	0.05	5.99	10.1	400	2.62	0.74	0.48	0.10	81.00	20.6	54	4.24	30.7	4.28
126197 -180um	1.19	0.03	4.58	6.4	300	1.74	0.42	0.71	0.15	60.30	12.2	40	3.25	26.8	2.98
126198 -5mm	1.59	0.03	5.21	8	430	2.01	0.56	10.55	0.09	74.90	19.7	41	3.75	22.2	3.62
126198 -180um	1.66	0.05	5.29	6.2	450	1.91	0.36	7.09	0.13	75.30	19.4	42	4.11	25.3	3.67
126199 -5mm	1.57	0.05	4.99	6.2	400	1.92	0.35	1.59	0.02	75.60	11.4	40	3.52	16.1	3.24
126199 -180um	1.41	0.06	4.09	4.5	330	1.49	0.27	1.47	0.04	63.70	9.4	31	3.04	16.6	2.30
126200 -5mm	1.71	0.08	7.72	21.5	840	2.76	0.66	0.30	0.09	83.60	24.4	74	7.52	57.9	5.56
126200 -180um	2.02	0.07	5.27	10.4	1060	1.80	0.39	0.78	0.09	68.40	17.6	47	5.15	38.1	3.39
127301 -5mm	1.83	0.03	8.64	8.9	620	3.33	0.57	0.14	0.04	106.50	22.8	80	12.60	27.8	6.11
127301 -180um	2.04	0.07	6.13	7.6	400	2.09	0.39	0.17	0.07	97.80	18.8	56	7.79	30.4	4.41
127302 -5mm	1.81	0.03	3.82	2.5	200	1.06	0.12	0.09	0.06	56.10	4.3	27	2.42	9.1	1.92
127302 -180um	1.82	0.03	3.73	3.0	240	1.04	0.15	0.13	0.06	48.70	5.2	27	2.65	12.6	1.92
127303 -5mm	1.34	<0.01	7.00	10.6	420	2.58	0.51	0.66	0.04	89.40	18.1	56	4.84	41.0	4.23
127303 -180um	1.71	0.04	4.77	6.8	360	1.90	0.31	0.56	0.02	65.70	16.6	36	4.13	28.6	3.07
127304 -5mm	1.44	0.08	8.00	6.4	440	3.17	0.56	0.10	0.03	108.00	23.0	77	8.47	31.3	5.04
127304 -180um	1.55	0.08	6.39	5.9	340	2.31	0.40	0.21	0.05	87.40	22.7	59	6.23	37.1	4.39

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
126185 -5mm		20.10	0.30	4.0	0.076	2.68	43.7	26.4	1.13	705	0.59	0.36	9.5	32.8	410
126185 -180um		15.10	0.29	3.7	0.058	1.96	47.5	20.6	0.81	598	0.52	0.39	7.1	24.5	480
126186 -5mm		26.00	0.44	5.2	0.118	2.84	43.3	42.6	0.90	632	1.20	0.33	12.2	45.8	560
126186 -180um		18.25	0.36	4.2	0.086	1.89	39.2	37.8	0.68	903	1.38	0.33	8.6	44.4	760
126187 -5mm		25.80	0.43	5.3	0.089	2.81	45.8	39.8	0.77	470	1.60	0.32	12.4	41.7	540
126187 -180um		19.30	0.29	4.6	0.075	1.95	35.1	33.4	0.58	643	1.54	0.34	9.0	38.2	660
126188 -5mm		25.60	0.47	5.8	0.094	3.00	45.2	19.6	0.60	1105	0.58	0.44	11.8	39.7	500
126188 -180um		19.45	0.30	5.1	0.070	2.07	38.7	25.9	0.59	766	0.68	0.39	9.8	30.1	600
126189 -5mm		25.00	0.43	5.7	0.100	3.16	43.8	19.8	0.62	1525	0.61	0.42	10.7	45.3	370
126189 -180um		19.50	0.33	5.0	0.083	2.18	38.1	23.0	0.52	991	0.86	0.38	9.1	39.8	470
126190 -5mm		16.50	0.24	4.0	0.057	1.82	32.4	23.9	0.57	438	0.64	0.29	7.7	23.8	450
126190 -180um		15.80	0.25	3.9	0.054	1.63	31.3	25.9	0.54	432	0.70	0.31	7.4	22.8	490
126191 -5mm		21.20	0.31	4.5	0.076	2.71	37.7	26.2	0.74	604	0.73	0.43	10.0	35.7	390
126191 -180um		11.05	0.22	3.3	0.040	1.37	25.9	15.4	0.39	301	0.54	0.24	5.1	16.2	280
126192 -5mm		24.20	0.34	5.4	0.106	3.01	44.7	21.1	0.73	912	0.64	0.43	12.4	43.2	450
126192 -180um		19.40	0.31	4.7	0.089	2.21	40.2	21.2	0.53	469	1.34	0.28	10.6	35.7	450
126193 -5mm		21.20	0.30	4.4	0.075	2.67	39.5	21.5	0.62	509	0.68	0.49	8.9	33.1	360
126193 -180um		13.15	0.24	3.6	0.044	1.50	29.5	18.0	0.39	402	0.59	0.35	6.3	21.2	340
126194 -5mm		25.70	0.37	5.9	0.100	2.93	46.1	19.0	0.85	307	0.48	0.71	14.2	39.4	280
126194 -180um		18.70	0.33	4.9	0.073	1.88	36.9	22.1	0.62	357	0.66	0.46	10.1	31.0	420
126195 -5mm		19.25	0.34	4.2	0.071	2.32	35.9	21.1	0.64	656	0.56	0.45	8.8	32.7	370
126195 -180um		13.05	0.26	4.0	0.053	1.48	27.4	19.0	0.46	526	0.50	0.29	6.4	21.9	360
126196 -5mm		6.93	0.17	2.1	0.025	0.62	14.9	14.5	0.18	686	0.36	0.07	3.3	13.8	270
126196 -180um		10.50	0.22	3.3	0.038	1.08	24.7	20.3	0.30	780	0.48	0.20	5.2	19.4	370
126197 -5mm		18.75	0.28	4.2	0.073	2.53	40.0	20.3	0.65	660	0.45	0.35	8.6	32.2	360
126197 -180um		13.65	0.24	3.6	0.053	1.68	29.5	18.8	0.48	535	0.50	0.22	6.8	24.3	350
126198 -5mm		17.25	0.31	2.9	0.068	2.34	38.1	24.7	1.22	848	0.50	0.38	8.2	28.4	430
126198 -180um		17.15	0.25	3.3	0.067	2.31	36.6	22.1	1.28	894	0.73	0.54	8.7	31.5	490
126199 -5mm		13.85	0.18	3.1	0.041	2.20	36.5	17.2	0.63	450	0.35	0.14	6.8	18.2	330
126199 -180um		10.90	0.22	3.3	0.033	1.62	31.3	16.9	0.53	356	0.41	0.19	5.7	15.4	340
126200 -5mm		22.70	0.32	4.6	0.103	2.97	40.9	33.9	0.89	1160	1.46	0.38	9.9	42.1	550
126200 -180um		14.75	0.20	3.6	0.067	2.08	32.5	21.0	0.68	864	0.87	0.29	8.0	26.8	430
127301 -5mm		25.80	0.76	5.1	0.093	3.27	49.9	41.3	1.02	824	0.53	0.45	13.8	35.5	310
127301 -180um		17.65	0.26	4.7	0.064	2.04	45.4	36.8	0.68	662	0.80	0.45	11.2	29.4	350
127302 -5mm		9.51	0.14	3.3	0.035	1.55	27.1	9.6	0.28	192	0.30	0.15	4.9	10.8	210
127302 -180um		9.11	0.14	3.6	0.034	1.32	23.9	14.2	0.29	235	0.36	0.26	5.6	11.9	280
127303 -5mm		20.30	0.25	4.1	0.069	3.29	42.6	8.3	0.72	461	0.41	0.35	8.3	22.0	300
127303 -180um		13.40	0.27	3.9	0.060	1.92	32.5	12.8	0.55	507	0.43	0.25	6.5	18.2	300
127304 -5mm		26.50	0.32	5.3	0.122	3.09	50.6	36.0	0.87	725	0.94	0.47	12.6	36.8	330
127304 -180um		17.85	0.38	4.4	0.102	2.08	42.2	35.4	0.67	698	0.78	0.42	9.7	26.9	410

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.1	0.002	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
126185 -5mm		135.5	<0.002	0.01	1.98	2	3.1	45.7	0.88	<0.05	16.3	0.367	0.57	2.5	106
126185 -180um		92.6	0.002	0.02	2.07	2	2.1	64.3	0.66	<0.05	14.7	0.308	0.41	2.1	73
126186 -5mm		179.5	<0.002	0.01	3.36	3	4.0	40.1	1.14	<0.05	17.3	0.568	0.98	2.9	144
126186 -180um		110.5	<0.002	0.03	3.48	2	2.4	72.6	0.78	<0.05	13.6	0.429	0.63	2.3	97
126187 -5mm		164.0	<0.002	0.01	3.43	3	4.2	51.5	1.15	<0.05	18.3	0.566	0.86	3.3	150
126187 -180um		105.5	<0.002	0.03	4.73	3	3.0	81.0	0.85	<0.05	14.3	0.457	0.63	2.5	104
126188 -5mm		172.5	<0.002	0.01	1.49	3	4.1	49.1	1.10	<0.05	19.4	0.562	0.63	3.2	146
126188 -180um		113.0	<0.002	0.02	2.69	2	3.0	83.0	1.04	<0.05	16.3	0.494	0.48	2.6	100
126189 -5mm		176.0	<0.002	<0.01	1.16	2	4.1	32.0	1.04	<0.05	18.7	0.538	0.62	3.1	150
126189 -180um		121.5	<0.002	0.02	3.52	2	4.1	58.6	0.85	<0.05	16.6	0.462	0.47	2.6	112
126190 -5mm		91.9	<0.002	0.02	1.33	2	2.2	55.9	0.72	<0.05	12.1	0.358	0.41	1.8	86
126190 -180um		82.2	<0.002	0.02	1.82	2	1.9	66.8	0.68	<0.05	12.1	0.362	0.39	1.7	79
126191 -5mm		145.5	0.002	<0.01	1.77	2	3.5	30.9	0.92	<0.05	14.8	0.453	0.63	2.6	133
126191 -180um		65.0	0.002	0.01	1.19	2	1.5	42.8	0.51	<0.05	9.6	0.249	0.28	1.4	57
126192 -5mm		179.0	0.002	<0.01	1.52	3	4.0	34.8	1.15	<0.05	19.3	0.634	0.79	3.0	152
126192 -180um		130.5	<0.002	0.01	2.13	2	3.0	52.9	1.01	<0.05	16.8	0.544	0.55	2.5	110
126193 -5mm		145.0	<0.002	<0.01	1.36	2	3.3	28.2	0.84	<0.05	15.1	0.419	0.55	2.5	134
126193 -180um		74.5	<0.002	0.01	1.37	2	2.0	43.4	0.62	<0.05	11.3	0.297	0.31	1.7	69
126194 -5mm		175.5	<0.002	<0.01	1.05	3	4.5	35.7	1.34	<0.05	20.8	0.675	0.68	3.2	156
126194 -180um		109.5	<0.002	0.01	1.18	2	3.1	56.5	0.94	<0.05	16.2	0.518	0.45	2.4	108
126195 -5mm		129.5	<0.002	<0.01	1.33	2	3.0	31.6	0.82	<0.05	14.2	0.407	0.54	2.4	118
126195 -180um		75.0	<0.002	0.02	1.53	2	1.9	55.8	0.63	<0.05	11.2	0.320	0.35	1.9	71
126196 -5mm		32.5	<0.002	0.01	0.55	2	0.7	36.5	0.31	<0.05	5.9	0.149	0.26	1.1	36
126196 -180um		54.6	<0.002	0.01	0.86	2	1.3	59.8	0.50	<0.05	9.5	0.252	0.34	1.5	51
126197 -5mm		133.0	<0.002	<0.01	1.22	2	3.0	37.5	0.82	<0.05	15.7	0.374	0.58	2.5	105
126197 -180um		86.0	<0.002	0.02	3.10	2	2.4	59.2	0.65	<0.05	12.2	0.293	0.45	1.9	68
126198 -5mm		117.5	<0.002	0.02	0.88	2	2.7	203.0	0.73	0.05	14.3	0.279	0.46	2.7	92
126198 -180um		114.5	<0.002	0.02	4.95	2	3.0	175.5	0.77	<0.05	14.2	0.301	0.45	2.8	84
126199 -5mm		107.0	0.002	0.01	0.73	2	2.0	63.3	0.64	<0.05	14.8	0.254	0.49	2.3	71
126199 -180um		77.2	<0.002	0.01	1.67	2	2.2	78.9	0.54	<0.05	12.6	0.231	0.37	1.9	48
126200 -5mm		182.5	0.002	0.01	3.42	2	3.7	40.5	0.93	<0.05	16.9	0.458	1.06	3.2	146
126200 -180um		118.0	0.002	0.02	4.06	2	2.7	55.7	0.73	<0.05	12.9	0.365	0.71	2.3	89
127301 -5mm		205.0	0.002	<0.01	0.65	2	4.3	37.4	1.26	0.05	21.9	0.633	1.16	3.2	159
127301 -180um		125.5	<0.002	0.01	2.55	2	2.8	50.2	1.03	<0.05	19.0	0.540	0.73	2.6	100
127302 -5mm		76.2	<0.002	<0.01	0.81	2	1.3	32.3	0.47	<0.05	10.8	0.219	0.25	1.6	42
127302 -180um		65.1	<0.002	0.01	1.20	2	1.2	47.0	0.51	<0.05	10.3	0.270	0.28	1.6	44
127303 -5mm		161.5	<0.002	<0.01	1.15	2	3.1	31.6	0.79	<0.05	18.5	0.341	0.47	2.8	105
127303 -180um		100.0	<0.002	0.01	1.37	2	2.2	43.9	0.62	<0.05	13.2	0.280	0.35	2.0	65
127304 -5mm		198.5	0.002	<0.01	1.32	2	4.4	30.7	1.17	<0.05	22.6	0.549	0.79	3.4	146
127304 -180um		129.0	<0.002	0.01	2.69	2	2.8	52.0	1.22	<0.05	18.6	0.467	0.54	2.6	100

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	Au-TL43
	Analyte	Y	Zn	Zr	Au
	Units	ppm	ppm	ppm	ppm
	LOR	0.1	2	0.5	0.001
126185 -5mm		18.9	122	124.5	<0.001
126185 -180um		18.2	93	118.0	0.001
126186 -5mm		23.7	280	166.5	<0.001
126186 -180um		22.0	329	139.0	0.002
126187 -5mm		23.4	934	170.0	0.001
126187 -180um		22.8	641	146.0	0.003
126188 -5mm		23.5	27	189.5	<0.001
126188 -180um		23.0	53	165.5	0.002
126189 -5mm		22.2	18	182.0	<0.001
126189 -180um		21.3	53	168.5	0.006
126190 -5mm		18.5	328	128.0	0.001
126190 -180um		18.8	344	123.0	0.001
126191 -5mm		18.6	152	147.0	<0.001
126191 -180um		12.0	60	101.5	<0.001
126192 -5mm		22.9	22	175.0	<0.001
126192 -180um		21.6	37	148.0	0.001
126193 -5mm		17.8	91	139.5	<0.001
126193 -180um		14.2	68	110.5	<0.001
126194 -5mm		24.1	21	191.5	0.001
126194 -180um		20.9	33	157.5	0.001
126195 -5mm		17.6	76	135.0	<0.001
126195 -180um		16.4	63	124.0	0.001
126196 -5mm		12.0	38	64.6	<0.001
126196 -180um		16.4	51	102.0	<0.001
126197 -5mm		17.8	51	129.5	<0.001
126197 -180um		16.0	40	111.5	<0.001
126198 -5mm		18.8	42	94.8	<0.001
126198 -180um		18.4	40	108.5	0.002
126199 -5mm		16.5	32	98.6	<0.001
126199 -180um		17.6	33	106.5	<0.001
126200 -5mm		24.9	82	156.5	0.001
126200 -180um		17.9	54	121.0	0.002
127301 -5mm		27.2	130	172.0	0.001
127301 -180um		22.6	93	156.0	0.003
127302 -5mm		10.6	20	99.0	0.001
127302 -180um		13.0	30	116.5	0.001
127303 -5mm		18.6	10	132.5	0.001
127303 -180um		15.2	22	123.5	0.002
127304 -5mm		26.7	27	171.5	0.001
127304 -180um		22.2	34	150.5	0.002

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
Sample Description															
127305 -5mm	2.19	0.03	7.76	4.1	470	2.67	0.59	0.44	<0.02	91.10	16.8	72	6.48	17.0	4.80
127305 -180um	1.73	0.06	6.13	4.6	440	2.08	0.36	0.46	0.04	84.60	15.4	50	5.25	23.7	3.76
127306 -5mm	0.85	0.05	8.06	8.9	400	2.74	0.64	0.17	0.03	92.20	16.2	80	7.01	46.5	5.29
127306 -180um	0.90	0.07	5.50	4.7	310	1.76	0.37	0.23	0.08	63.60	14.4	48	4.44	38.0	3.39
127307 -5mm	1.75	0.05	7.81	5.5	390	2.71	0.53	0.46	0.04	87.30	14.5	74	6.42	27.6	5.07
127307 -180um	1.74	0.08	5.99	5.4	330	1.96	0.34	0.75	0.07	65.20	14.2	50	4.69	32.4	3.62
127308 -5mm	1.40	0.07	8.91	28.4	640	3.44	0.83	0.14	0.11	99.80	26.8	81	10.55	74.0	5.50
127308 -180um	1.62	0.16	6.44	13.0	470	2.26	0.49	0.26	0.08	76.10	31.8	52	7.13	68.0	3.90
127309 -5mm	1.24	0.09	8.07	20.8	740	2.94	0.62	0.26	0.07	88.30	19.6	78	8.01	57.9	5.44
127309 -180um	1.35	0.10	5.25	9.0	830	1.78	0.35	0.54	0.08	59.00	18.0	45	4.73	38.5	3.07
127310 -5mm	1.84	0.06	4.86	3.8	310	1.86	0.24	1.16	<0.02	70.70	6.8	36	3.44	13.9	2.65
127310 -180um	1.93	0.07	4.65	3.8	310	1.58	0.25	0.89	0.03	67.00	7.3	31	3.90	18.8	2.26
127311 -5mm	1.25	0.03	4.39	5.1	310	1.66	0.43	0.83	0.02	68.20	11.8	37	3.26	19.6	2.78
127311 -180um	1.22	0.04	3.92	4.3	280	1.42	0.38	0.68	0.03	61.40	11.1	31	2.81	17.7	2.41
127312 -5mm	1.04	0.07	7.12	8.5	340	2.39	0.68	1.13	0.06	93.10	15.2	66	4.64	36.9	4.39
127312 -180um	1.25	0.07	4.76	6.8	280	1.60	0.42	1.11	0.06	131.50	12.0	39	3.29	34.2	3.39
127313 -5mm	1.24	0.07	5.19	4.6	310	1.77	0.41	1.66	0.02	79.60	8.4	36	2.54	14.1	2.95
127313 -180um	1.22	0.07	4.55	4.5	280	1.48	0.35	0.98	0.06	76.30	8.1	33	2.86	16.3	2.84
127314 -5mm	1.80	0.07	6.63	6.0	270	2.94	1.53	0.31	<0.02	112.50	16.5	57	2.52	60.0	6.85
127314 -180um	1.69	0.05	4.71	4.3	200	1.78	0.63	0.31	<0.02	116.00	13.2	38	2.28	45.1	4.88
127315 -5mm	1.72	0.05	8.23	16.4	490	3.02	0.65	0.22	0.02	96.10	20.9	75	7.60	35.8	5.11
127315 -180um	1.72	0.07	5.78	20.3	350	2.31	0.69	0.25	0.03	70.80	23.0	52	5.15	47.6	4.14
127316 -5mm	1.45	0.04	8.04	10.0	520	3.14	1.02	0.53	0.10	98.00	23.9	73	6.06	30.4	5.68
127316 -180um	1.43	0.02	6.03	7.3	420	2.19	0.63	0.40	0.08	78.90	16.5	54	4.50	27.1	4.26
127317 -5mm	1.24	0.03	8.21	10.2	430	3.00	1.42	0.16	0.05	94.00	21.9	73	5.93	38.2	5.17
127317 -180um	1.41	0.05	6.86	8.7	370	2.35	1.00	0.26	0.09	87.80	22.8	61	4.78	37.8	4.45
127318 -5mm	1.36	0.04	8.56	15.4	550	3.49	1.46	0.11	0.08	101.50	49.7	80	6.18	67.9	7.17
127318 -180um	1.43	0.05	6.81	10.8	380	2.30	0.88	0.21	0.09	82.30	26.9	58	4.65	46.2	4.63
127319 -5mm	1.37	0.02	8.09	5.0	520	2.83	0.40	0.68	0.06	93.90	18.6	74	6.32	21.5	5.10
127319 -180um	1.31	0.02	6.09	5.1	410	2.05	0.38	0.87	0.11	70.40	16.8	52	4.55	30.2	4.21
127320 -5mm	1.50	0.02	7.83	7.6	460	2.94	0.91	0.31	0.07	99.00	22.9	75	4.25	32.1	6.58
127320 -180um	1.68	0.04	5.92	7.2	320	2.19	0.56	0.65	0.08	114.00	21.5	56	3.53	35.2	6.22
127321 -5mm	1.64	<0.01	7.74	8.1	590	3.01	0.37	0.13	0.09	91.30	26.2	76	7.88	9.3	5.01
127321 -180um	1.75	0.03	6.47	8.0	490	2.14	0.49	0.26	0.09	67.80	20.7	50	5.18	16.6	4.01
127322 -5mm	1.01	<0.01	8.23	8.7	500	3.39	0.57	0.11	0.06	89.70	34.9	69	6.11	39.5	6.15
127322 -180um	1.00	0.05	6.46	6.6	370	2.20	0.42	0.22	0.09	73.80	32.5	50	4.50	34.6	4.11
127323 -5mm	1.17	0.04	7.96	13.4	530	3.34	1.16	0.07	0.08	99.00	149.0	71	2.97	99.6	6.62
127323 -180um	1.41	0.04	6.82	11.0	390	2.52	0.86	0.17	0.13	88.90	64.4	56	3.46	58.4	4.87
127324 -5mm	1.21	0.02	8.03	15.5	810	4.27	0.70	0.09	0.12	93.70	144.5	69	3.92	201.0	6.73
127324 -180um	1.32	0.04	6.84	7.8	370	2.70	0.50	0.21	0.08	79.70	54.6	56	3.75	79.5	4.26

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOR	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
127305 -5mm		22.40	0.37	4.9	0.102	3.23	43.3	20.8	0.82	540	0.45	0.49	9.1	29.2	320
127305 -180um		17.20	0.23	4.3	0.078	2.11	40.5	23.5	0.64	516	0.53	0.45	8.2	23.0	380
127306 -5mm		24.60	0.32	4.8	0.108	3.12	44.0	33.6	1.00	357	0.68	0.55	9.8	34.6	400
127306 -180um		14.85	0.18	3.8	0.069	1.90	30.5	24.7	0.58	380	0.59	0.38	7.4	22.0	370
127307 -5mm		22.40	0.26	4.7	0.097	3.11	42.8	25.7	0.94	356	0.49	0.59	9.0	31.0	390
127307 -180um		15.40	0.19	3.6	0.069	2.01	31.8	27.9	0.70	435	0.58	0.38	7.2	22.1	460
127308 -5mm		25.00	0.28	5.2	0.102	3.45	47.3	47.9	1.09	854	1.78	0.23	13.0	40.1	550
127308 -180um		16.95	0.23	4.1	0.073	2.13	36.6	39.5	0.67	924	1.47	0.28	9.1	30.4	550
127309 -5mm		22.70	0.28	4.7	0.098	3.08	43.4	39.1	0.94	757	1.21	0.43	10.6	37.0	570
127309 -180um		13.65	0.18	3.4	0.063	1.94	28.1	24.3	0.58	904	0.96	0.30	7.5	25.2	420
127310 -5mm		12.35	0.19	3.3	0.040	2.26	34.3	12.1	0.74	363	0.44	0.07	5.7	13.5	280
127310 -180um		11.90	0.20	3.5	0.042	1.84	32.0	17.5	0.63	336	0.39	0.17	5.8	14.0	380
127311 -5mm		12.85	0.20	3.3	0.054	1.80	32.7	16.9	0.50	472	0.32	0.15	7.0	17.2	340
127311 -180um		11.05	0.18	3.2	0.047	1.50	29.6	15.8	0.45	387	0.39	0.18	6.0	15.4	330
127312 -5mm		20.80	0.27	4.4	0.085	2.81	44.7	24.2	1.21	484	0.51	0.46	8.7	29.7	350
127312 -180um		13.60	0.25	3.8	0.058	1.76	64.5	20.2	0.93	501	0.69	0.29	5.8	20.7	480
127313 -5mm		14.25	0.39	3.3	0.040	2.00	38.5	29.3	2.67	705	0.42	0.12	6.0	19.2	350
127313 -180um		11.45	0.40	3.2	0.042	1.53	36.8	22.8	1.37	657	0.45	0.19	5.1	16.6	530
127314 -5mm		19.75	0.35	3.3	0.202	2.68	55.6	28.9	1.86	1200	0.76	0.05	5.8	33.4	460
127314 -180um		13.50	0.32	3.2	0.107	1.48	56.5	27.7	1.48	712	0.61	0.12	5.0	23.6	550
127315 -5mm		23.60	0.26	4.4	0.096	3.28	47.7	33.9	0.94	876	0.49	0.22	11.8	36.7	300
127315 -180um		17.10	0.21	3.8	0.078	2.10	33.3	28.9	0.57	848	0.69	0.19	8.9	31.0	370
127316 -5mm		24.00	0.16	5.2	0.104	3.04	46.8	25.7	1.02	1215	0.54	0.41	13.3	44.7	590
127316 -180um		16.95	0.12	4.3	0.078	2.13	37.0	20.9	0.80	923	0.53	0.41	10.3	32.6	430
127317 -5mm		24.30	0.16	5.3	0.103	3.14	45.5	25.2	0.79	806	0.52	0.22	12.9	37.9	390
127317 -180um		19.35	0.15	5.0	0.089	2.32	41.6	24.2	0.63	722	0.60	0.26	11.1	34.9	470
127318 -5mm		26.20	0.24	5.4	0.144	3.39	48.8	28.2	0.60	2550	0.70	0.19	11.7	54.0	550
127318 -180um		18.65	0.14	4.8	0.092	2.32	39.3	23.7	0.50	992	0.64	0.23	10.2	34.6	480
127319 -5mm		23.10	0.16	4.7	0.084	3.06	44.0	30.4	1.10	1060	0.37	0.29	11.2	43.3	320
127319 -180um		16.35	0.12	4.3	0.062	2.08	32.6	24.4	0.68	963	0.55	0.26	9.0	32.7	360
127320 -5mm		23.90	0.18	5.0	0.138	3.10	47.7	20.7	1.16	1190	0.65	0.33	9.6	44.5	420
127320 -180um		17.60	0.27	4.4	0.120	2.07	54.9	19.4	0.94	1590	0.77	0.30	7.1	39.8	650
127321 -5mm		22.90	0.89	4.9	0.106	2.98	43.9	41.4	1.06	1350	0.62	0.34	12.4	48.2	310
127321 -180um		16.45	0.11	4.4	0.071	1.97	32.4	33.9	0.64	1520	0.85	0.32	8.7	36.6	490
127322 -5mm		23.90	0.19	4.6	0.106	3.38	44.7	33.9	0.71	1585	0.71	0.14	10.3	53.0	480
127322 -180um		17.15	0.15	4.2	0.072	2.17	35.1	28.8	0.52	1190	0.66	0.24	8.0	40.1	510
127323 -5mm		22.90	0.25	4.6	0.142	3.37	47.2	27.7	0.44	4100	0.98	0.06	6.2	57.4	750
127323 -180um		19.20	0.19	4.6	0.106	2.37	42.3	24.1	0.45	1790	0.84	0.18	6.8	37.7	650
127324 -5mm		24.30	0.20	4.7	0.146	3.40	45.7	41.4	0.49	5460	1.17	0.07	7.4	95.4	710
127324 -180um		18.60	0.15	4.2	0.096	2.49	38.3	24.2	0.47	1645	0.75	0.20	7.0	44.0	540

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Finalized Date: 13-JUN-2006

Account: MARATH

Project: PINDA

CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.1	0.002	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
127305 -5mm		184.0	0.002	<0.01	1.46	2	3.6	31.7	0.85	<0.05	18.4	0.474	0.64	2.8	138
127305 -180um		121.5	0.002	0.02	1.86	2	2.7	58.8	0.75	<0.05	16.9	0.393	0.47	2.3	91
127306 -5mm		194.5	<0.002	<0.01	2.26	2	4.0	30.5	0.94	<0.05	18.4	0.480	0.75	2.9	152
127306 -180um		107.0	<0.002	0.01	2.18	2	2.3	48.8	0.68	<0.05	12.7	0.371	0.45	2.0	84
127307 -5mm		188.0	0.002	<0.01	1.70	2	3.6	31.2	0.86	<0.05	17.3	0.470	0.69	2.7	142
127307 -180um		105.5	0.002	0.02	1.71	2	2.2	63.2	0.67	<0.05	13.0	0.368	0.44	2.1	85
127308 -5mm		207.0	0.002	<0.01	3.70	3	4.3	30.4	1.17	<0.05	19.1	0.606	1.26	4.0	187
127308 -180um		123.0	0.002	0.02	2.49	2	2.7	58.7	0.81	<0.05	14.6	0.441	0.72	2.6	104
127309 -5mm		185.0	0.002	<0.01	3.11	2	3.8	38.3	0.97	<0.05	17.3	0.502	1.04	3.3	153
127309 -180um		106.5	0.002	0.02	2.47	2	2.3	54.7	0.69	<0.05	11.4	0.356	0.61	2.1	80
127310 -5mm		103.0	0.002	0.01	1.22	1	1.8	51.0	0.54	<0.05	13.5	0.230	0.39	2.0	59
127310 -180um		88.7	<0.002	0.02	0.83	2	1.6	66.3	0.54	<0.05	12.9	0.248	0.39	1.6	52
127311 -5mm		92.9	<0.002	0.01	0.85	2	1.9	48.8	0.65	<0.05	13.3	0.276	0.44	1.9	62
127311 -180um		76.7	<0.002	0.01	0.86	2	1.6	53.8	0.56	<0.05	11.9	0.248	0.39	1.7	54
127312 -5mm		155.5	<0.002	<0.01	1.11	2	3.3	32.8	0.83	<0.05	17.1	0.410	0.56	2.7	126
127312 -180um		87.3	0.002	0.01	1.18	2	1.8	53.6	0.56	<0.05	16.7	0.268	0.39	2.1	69
127313 -5mm		87.4	<0.002	0.02	0.69	2	1.9	41.9	0.57	<0.05	14.3	0.222	0.41	2.2	73
127313 -180um		70.2	<0.002	0.02	0.87	2	1.3	55.4	0.49	<0.05	13.1	0.235	0.36	1.9	57
127314 -5mm		128.5	0.002	0.01	1.10	2	2.5	33.7	0.53	0.05	17.7	0.201	0.42	3.6	102
127314 -180um		68.6	0.002	0.01	0.89	2	1.5	45.6	0.45	0.05	15.2	0.213	0.28	2.5	71
127315 -5mm		200.0	0.002	<0.01	1.39	2	4.0	29.1	1.10	<0.05	20.4	0.469	0.85	2.4	127
127315 -180um		119.0	0.002	0.01	1.55	2	2.7	47.9	0.83	<0.05	15.0	0.401	0.56	2.0	92
127316 -5mm		184.0	<0.002	<0.01	1.70	2	4.2	46.8	1.67	0.05	18.8	0.531	0.82	2.6	138
127316 -180um		125.5	<0.002	0.01	1.62	2	2.8	52.3	1.21	0.05	15.3	0.446	0.59	2.1	94
127317 -5mm		187.0	<0.002	<0.01	1.52	2	4.3	37.1	1.41	<0.05	18.8	0.551	0.83	2.7	137
127317 -180um		138.0	<0.002	0.01	2.89	2	3.1	59.0	1.17	<0.05	17.1	0.509	0.61	2.5	106
127318 -5mm		203.0	<0.002	<0.01	1.82	2	4.4	47.3	1.22	0.05	20.8	0.489	1.02	3.2	156
127318 -180um		133.0	<0.002	0.01	1.58	2	2.9	62.5	1.04	<0.05	15.9	0.483	0.63	2.4	108
127319 -5mm		179.0	<0.002	<0.01	1.37	2	4.1	28.0	1.13	<0.05	18.0	0.429	0.79	2.4	126
127319 -180um		115.0	0.002	0.01	1.26	2	2.6	48.7	0.94	<0.05	14.6	0.393	0.55	2.0	87
127320 -5mm		166.5	0.002	<0.01	1.47	2	4.1	34.1	0.98	0.06	18.0	0.429	0.63	3.2	142
127320 -180um		109.5	<0.002	0.01	5.24	2	2.7	56.5	0.73	0.05	16.4	0.323	0.48	2.8	99
127321 -5mm		190.5	<0.002	<0.01	2.08	2	4.0	32.6	1.22	<0.05	17.8	0.438	0.93	2.5	100
127321 -180um		104.5	<0.002	0.02	1.96	2	2.3	63.8	0.85	<0.05	13.2	0.391	0.54	2.0	81
127322 -5mm		195.0	<0.002	<0.01	1.78	2	4.1	34.9	1.05	<0.05	20.1	0.420	0.89	2.8	123
127322 -180um		113.5	<0.002	0.02	1.23	2	2.5	65.3	0.79	<0.05	14.4	0.378	0.55	2.2	84
127323 -5mm		177.5	<0.002	<0.01	2.85	2	3.7	39.7	0.67	0.05	18.4	0.289	1.30	4.0	124
127323 -180um		126.5	<0.002	0.02	2.77	2	2.8	60.6	0.67	0.05	15.4	0.315	0.75	3.2	99
127324 -5mm		192.5	<0.002	0.01	3.01	2	4.3	37.2	0.76	0.05	19.8	0.337	1.42	5.0	130
127324 -180um		134.0	<0.002	0.02	2.50	2	2.9	55.0	0.71	0.05	15.6	0.349	0.73	3.2	101

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	Au-TL43
		Y	Zn	Zr	Au
		ppm	ppm	ppm	ppm
		0.1	2	0.5	0.001
127305 -5mm		20.3	20	166.5	0.001
127305 -180um		20.0	30	143.0	0.002
127306 -5mm		23.9	31	165.0	0.001
127306 -180um		17.5	31	120.5	0.003
127307 -5mm		21.4	24	155.5	0.001
127307 -180um		19.6	39	119.0	0.001
127308 -5mm		27.7	77	180.5	0.001
127308 -180um		23.7	62	136.5	0.002
127309 -5mm		25.0	84	159.5	0.001
127309 -180um		17.1	48	112.5	0.002
127310 -5mm		14.6	17	101.5	0.001
127310 -180um		16.3	31	114.5	0.001
127311 -5mm		15.6	27	103.5	0.001
127311 -180um		14.8	28	101.5	0.001
127312 -5mm		19.4	29	143.5	0.001
127312 -180um		16.6	35	118.5	0.001
127313 -5mm		14.2	27	101.5	<0.001
127313 -180um		15.2	37	100.0	0.001
127314 -5mm		18.0	16	108.0	0.002
127314 -180um		15.5	25	106.0	0.003
127315 -5mm		18.8	25	142.5	0.001
127315 -180um		16.8	32	122.0	0.001
127316 -5mm		25.4	27	148.0	<0.001
127316 -180um		20.8	32	124.0	0.001
127317 -5mm		23.7	20	154.5	0.001
127317 -180um		23.1	34	145.5	0.002
127318 -5mm		27.3	22	166.0	0.001
127318 -180um		22.9	33	139.0	0.001
127319 -5mm		20.2	28	135.0	0.001
127319 -180um		19.4	33	124.0	0.001
127320 -5mm		24.0	17	149.0	0.001
127320 -180um		22.7	29	132.5	0.006
127321 -5mm		19.4	41	141.5	0.001
127321 -180um		22.6	53	128.5	<0.001
127322 -5mm		23.6	24	135.5	0.001
127322 -180um		21.3	40	118.5	0.002
127323 -5mm		30.8	19	134.5	0.001
127323 -180um		26.1	38	135.0	0.004
127324 -5mm		39.6	22	139.0	0.004
127324 -180um		30.6	33	121.5	0.002

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
127325 -5mm		1.79	0.02	7.81	11.6	380	3.49	1.17	0.09	0.04	94.30	33.8	69	5.08	73.7	4.94
127325 -180um		1.77	0.04	6.47	9.8	300	2.79	0.81	0.17	0.05	88.80	23.4	57	4.42	67.3	4.11
127326 -5mm		1.78	0.04	8.78	10.2	410	3.53	1.07	0.11	0.07	102.00	21.1	82	6.30	47.0	5.51
127326 -180um		1.80	0.03	6.36	8.4	300	2.44	0.71	0.19	0.06	82.50	19.2	57	4.53	51.7	4.50
127327 ROCK		1.25	0.02	3.60	3.5	310	2.07	0.26	0.02	0.09	40.40	30.3	52	2.27	26.1	3.19
127328 -5mm		0.19	<0.01	7.85	3.1	660	6.14	0.19	0.19	0.15	255.00	9.6	28	3.91	20.7	2.29
127328 -180um		0.21	0.02	8.36	5.2	520	7.55	0.30	0.33	0.26	>500	15.8	59	5.70	36.4	3.95

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
127325 -5mm		24.30	0.18	5.3	0.117	3.23	44.7	19.8	0.63	937	0.58	0.27	12.2	41.9	410
127325 -180um		20.30	0.18	5.2	0.094	2.35	42.5	19.0	0.52	499	0.57	0.27	11.4	34.2	420
127326 -5mm		26.70	0.23	6.1	0.107	3.33	47.6	17.8	0.89	445	0.52	0.57	16.7	41.6	330
127326 -180um		18.55	0.17	5.2	0.078	2.02	38.9	19.8	0.59	395	0.66	0.39	12.0	32.4	410
127327 ROCK		10.95	0.06	1.4	0.030	1.45	19.0	20.7	0.70	780	0.33	0.13	4.8	50.1	280
127328 -5mm		27.80	0.27	5.8	0.043	4.29	153.0	10.4	0.44	288	7.80	2.05	17.6	17.9	340
127328 -180um		32.10	0.61	9.4	0.063	3.21	308.0	13.9	0.72	522	12.95	1.82	17.8	34.4	660

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS PH06047091

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.1	0.002	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
127325 -5mm		175.5	<0.002	<0.01	1.96	2	4.5	32.0	1.18	<0.05	19.2	0.550	0.75	3.1	138
127325 -180um		137.0	<0.002	0.01	2.56	2	3.6	48.9	1.10	<0.05	18.0	0.525	0.57	2.8	106
127326 -5mm		191.5	<0.002	<0.01	1.28	2	5.1	35.0	1.55	<0.05	21.0	0.736	0.68	3.3	172
127326 -180um		118.5	<0.002	0.01	2.31	2	3.2	50.8	1.14	<0.05	16.8	0.553	0.46	2.6	107
127327 ROCK		78.2	<0.002	<0.01	0.49	2	1.5	19.1	0.49	<0.05	7.1	0.170	0.35	1.4	44
127328 -5mm		256.0	0.002	0.01	1.42	3	5.8	74.1	2.09	<0.05	61.9	0.190	0.98	41.3	43
127328 -180um		263.0	0.003	0.03	4.85	5	7.3	72.3	1.83	<0.05	136.5	0.267	0.96	62.9	76

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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Sample Description	Method Analyte Units LOR	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Au-TL43 Au ppm 0.001
127325 -5mm		28.0	19	154.5	0.001
127325 -180um		26.0	28	146.5	0.002
127326 -5mm		29.8	19	181.0	0.001
127326 -180um		24.9	29	149.0	0.003
127327 ROCK		10.8	104	40.0	0.002
127328 -5mm		49.7	57	157.5	0.002
127328 -180um		81.2	98	259.0	0.008

Comments: Interference: Ca>10% on ICP-MS As,ICP-AES results shown. REE's may not be totally soluble in MS61 method.

4 June 2008

Records Officer
Mineral Tenements
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ADELAIDE SA 5001

Dear Sir/Madam

EL 3159 Pinda Springs Annual Technical Report 2008

During the period of tenure from 20 January 2007 to 19 January 2008 no field work was undertaken. As no new technical data were acquired a formal Annual Technical Report will not be submitted.

Please contact me if you require additional information.

Yours sincerely



Teena Coppin
Tenement Manager



MERFF

R2008/00251





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Final Annual Technical Report

For the period 20th January 2008 to 19th January 2009

BIBLIOGRAPHIC DATA SHEET

Project Name	Pinda Springs
Combined Reporting Number	N/A
Tenement Numbers	EL 3159
Tenement Operator	Marathon Resources Limited
Tenement Holder	Marathon Resources Limited
Report Type	Annual
Report Title	EL 3159 Annual Technical Report for the period 20 th January 2008 to 19 th January 2009
Report Period	20 th January 2008 to 19 th January 2009
Author	B. H. Newell
Date of Report	February 2009
1:250,000 map sheet	SH54-09 Copley
1:100,000 map sheet	6636 Angepena / 6736 Arrowie
Target Commodity	Lead, Zinc, Gold
Keywords	Adelaidean, assay, diapir, gold, lead, stream sediment sampling, zinc,

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1. SUMMARY

The Pinda Springs area was targeted for structurally controlled mineralization emplaced in favorable dilatational zones which may have been generated by structural disruptions prior to or during emplacement of a diapir and relating to a major northeast trending fault zone.

A total of 249 -2mm stream sediment samples were collected and assayed.(Figure 1). The maximum values for As (59ppm), Pb (393ppm), Zn (309ppm, Ag (0.22ppm) and Cd (1.29ppm) all occur within sample 210226; the maximum Cu response of 297ppm occurs within sample 210329 and the maximum Au response of 67ppb occurs within sample 210322.

The anomalous responses from the sampling are prominent but are generally single point values. This suggests the sources of the anomalism are unlikely to be large and so no further work will be undertaken.

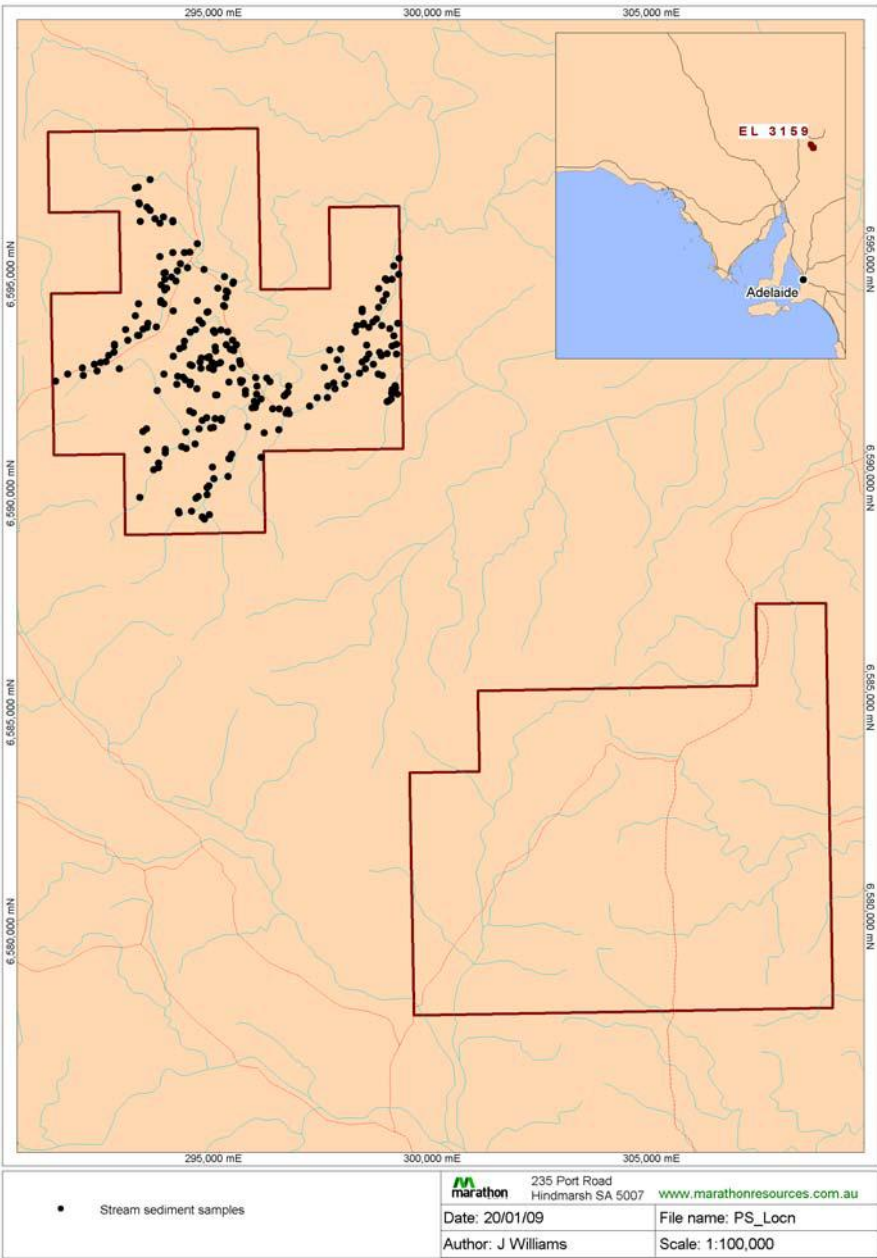


Figure 1 Exploration Index map

2. INTRODUCTION

This Annual Report covers Year 5 in the term of EL 3159 "Pinda Springs", and is the fourth year under ownership by Marathon Resources Limited.

The tenement is located approximately 440km north of Adelaide in the Flinders Ranges (Figure 2).

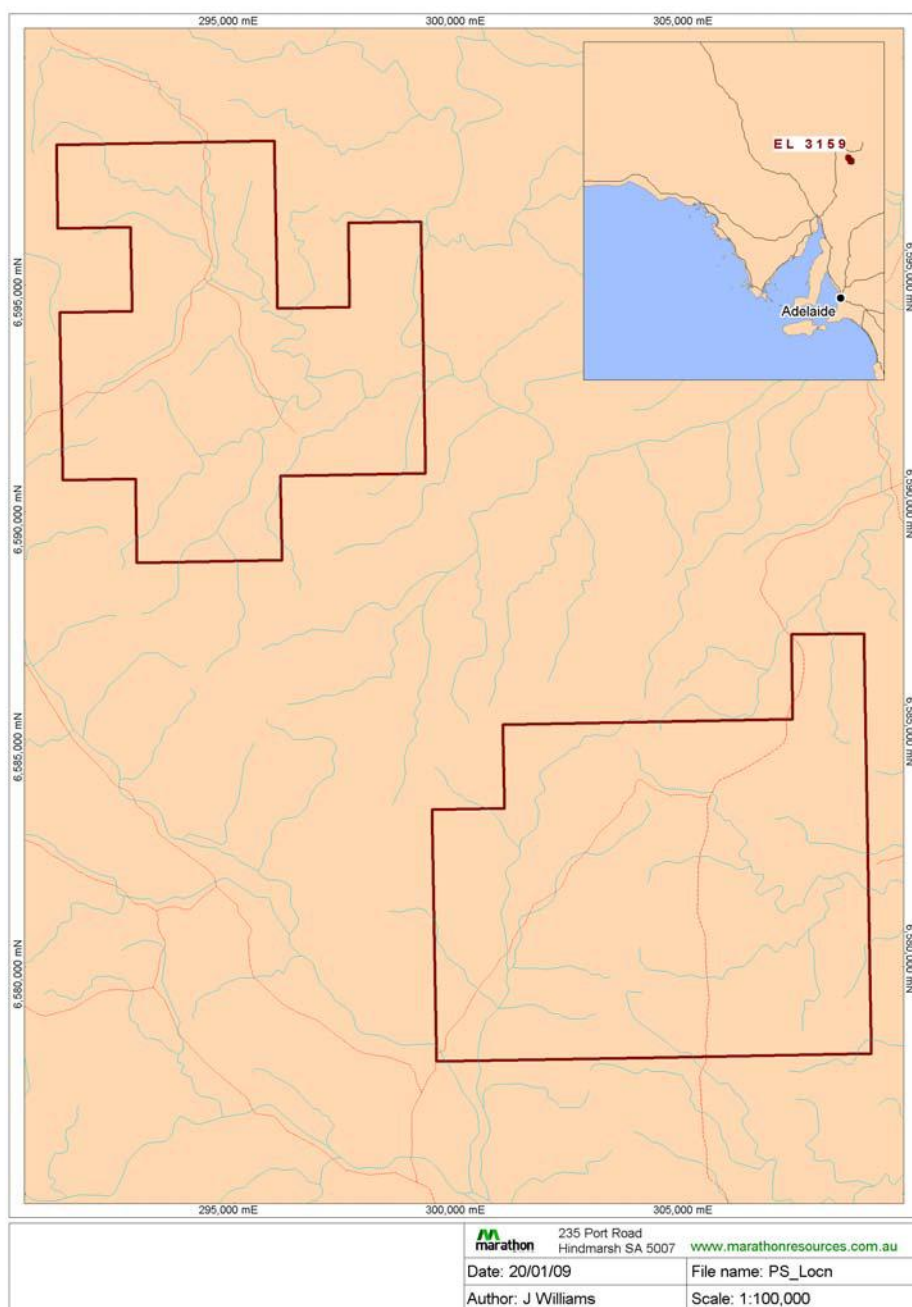


Figure 2. Tenement Location.

3. LEGAL

EL 3159, of approximately 168 km², was granted to Modern Exploration Pty Ltd (Modern) for one year on 20th January 2004. A Joint venture agreement between Modern and Marathon Resources Limited (Marathon) was signed and PIRSA consent given on 7th October 2004. Having met the conditions of the Joint Venture, Marathon lodged an Instrument of Transfer with PIRSA on 7th June 2005 for 100% ownership of EL 3159. Consent to the transfer given on 24th January 2006.

A renewal of term over a reduced area of 124 km², was granted on 23rd January 2008 for a period of 12 months.

4. NATIVE TITLE

The Pinda Springs area is covered by a single Native Title claim, registered by the Adnyamathanha claimants. Heritage clearances will be required for any drilling programs.

5. GEOLOGY

The Adelaidean sequence in the area contains a major portion of the Upper Burra Group sediments; several of these units are known to host low grade stratabound copper, lead and zinc with gold mineralization in other areas. (Figure 3).

A strongly folded sequence of units form a domal structure on the north side of the major fault in the southern part of the tenement. This sequence is usually non-magnetic in character, consequently the strong magnetic anomaly underlying the domal structure suggests significant iron oxide content at depth. This is supported by the presence of abundant float of hematitic nodules within the drainage, probably derived from weathering and erosion of the diapiric breccias along the fault zone.

5. GEOLOGY (con't)

Large areas of outcrop of diapiric breccias in the north of the tenement are proximal to the maxima of the magnetic anomaly in the northeast limit of the dome. The format of the anomaly on the north side of the major northeast crosscutting fault suggests it is partially truncated by the fault at depth.

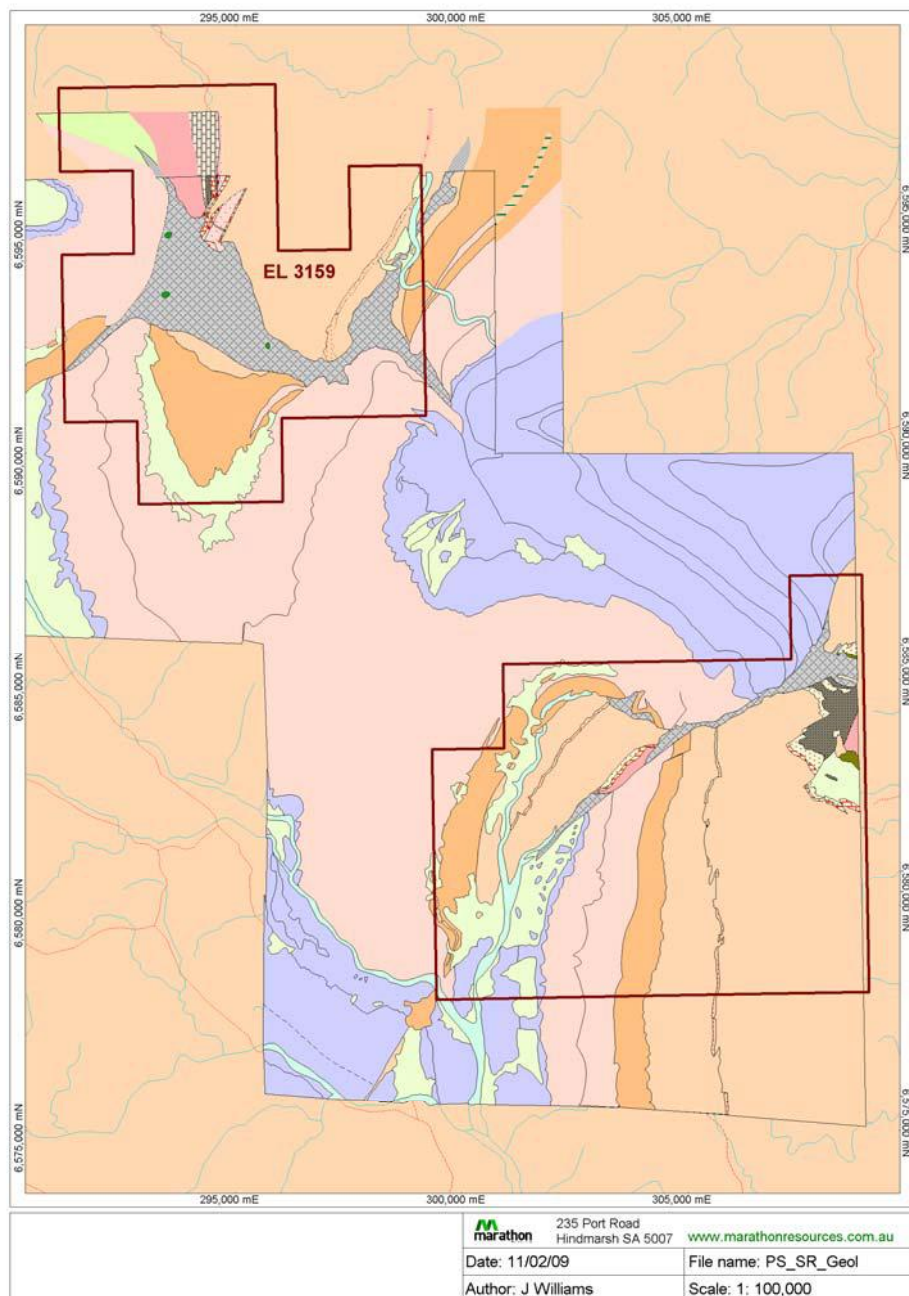


Figure 3. Geology Plan.

6. Exploration Activities

6.1 Stream sediment sampling

Stream sediment sampling on the northern portion of EL3159 was completed. The sampling was designed to be a definitive test of the potential of this portion of the tenement. The work focussed on the diapiric breccia as the emplacement of this unit was interpreted to be along structures and the diapiric action was thought likely to have created dilatation zones during emplacement.

A total of 249 samples (-2mm) were collected over an area of approximately 72km² (Figure 4). Equating to approximately one sample per 0.3km², these samples were collected along and around the diapiric breccia and excluded most of the Adelaidean quartzite ridges. Sample locations and geochemical results are included as Appendix 1.

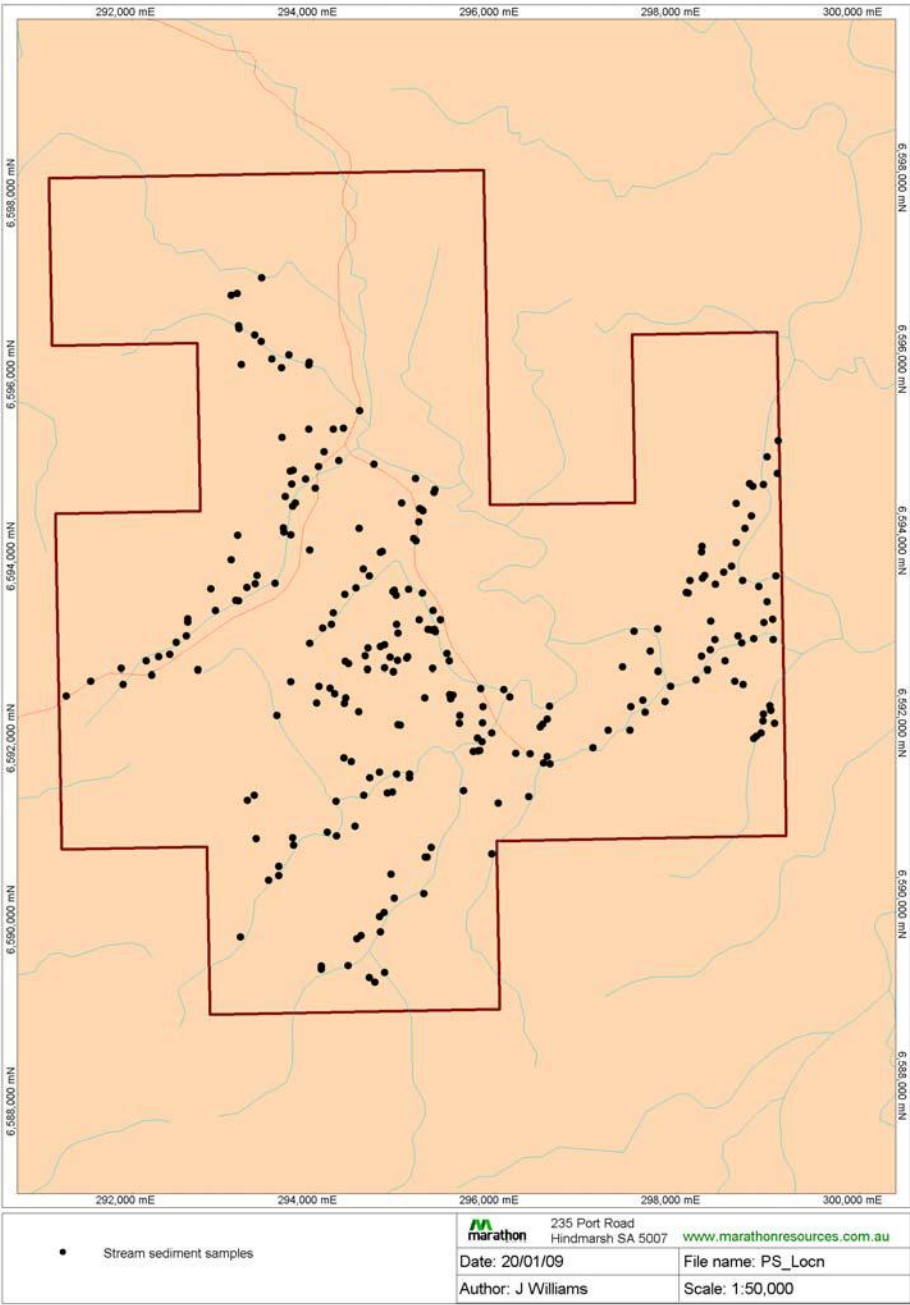


Figure 4. Stream sediment sample location plan

6.1 Stream sediment sampling (con't)

The anomalous responses from the sampling are prominent but are generally single point values. This suggests the sources of this anomalism are unlikely to be large and so no further work is planned.

A report by our consultant geochemist is included as Appendix 2

7. KEYWORDS

Adelaidean, assay, diapir, gold, lead, stream sediment sampling, zinc,

8. EXPENDITURE

Salaries / Wages	11,207
Accommodation / Meals	3,618
Assays	8,060
Vehicles	1,560
Field supplies	61
Equipment hire	500
Contractors - geology	563
Consultant - tenement	465
Travel	11
Communication	153
Administration Overheads	3,930
Total	30,128
Project Total	141,793

APPENDIX 1

Stream sediment sample location and geochemical results



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Finalized Date: 12-MAY-2008
Account: MARATH

CERTIFICATE AD08047762

Project: 3159/2

P.O. No.:

This report is for 249 Sediment samples submitted to our lab in Adelaide, SA, Australia on 16-APR-2008.

The following have access to data associated with this certificate:

JANET BROOKS

B NEWELL

PHUNG NGUYEN

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy
PUL-23	Pulv Sample - Split/Retain

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-TL43	Trace Level Au - 25g AR	ICP-MS
ME-MS41	51 anal. aqua regia ICPMS	

To: MARATHON RESOURCES LTD
ATTN: JANET BROOKS
235 PORT ROAD
HINDMARSH SA 5007

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Wayne Abbott, Operations Manager, Western Australia



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-TL43 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
210150		0.57	0.008	0.02	3.67	8.1	<0.2	10	240	2.04	0.48	5.48	0.07	86.1	21.8	50
210151		0.53	0.006	0.03	3.53	14.1	<0.2	10	270	2.11	0.5	6.82	0.12	88.1	25.9	52
210152		0.34	0.005	0.03	3.9	7.7	<0.2	20	1030	2.06	0.59	1.66	0.08	77.9	28.2	52
210153		0.70	0.005	0.06	2.89	4.8	<0.2	10	340	1.69	0.35	3.82	0.06	60.2	18.5	39
210154		0.77	0.004	0.04	2.75	5.7	<0.2	10	550	1.64	0.38	3.68	0.06	62.4	22.2	40
210155		0.56	0.003	0.06	2.69	5.1	<0.2	10	370	1.75	0.36	3.82	0.09	55.3	20.6	36
210156		1.18	0.004	0.06	1.84	3.3	<0.2	<10	230	1.27	0.42	5.72	0.04	54.6	23.1	23
210157		0.90	0.004	0.06	1.98	3.8	<0.2	<10	160	1.42	0.4	5.5	0.05	56.6	21.7	26
210158		0.92	0.004	0.07	3	12.1	<0.2	<10	320	1.8	0.47	4.06	0.07	52.5	48.8	43
210159		1.08	0.007	0.1	2.49	4.3	<0.2	<10	1210	1.67	0.42	4.66	0.05	46.8	41.8	33
210160		0.77	0.002	0.07	2.8	3.9	<0.2	<10	240	1.56	0.32	2.67	0.06	64.6	22.5	42
210161		1.06	<0.001	0.03	2.14	4.9	<0.2	<10	270	1.59	0.54	0.3	0.05	72.8	20.3	37
210162		1.43	0.002	0.03	2.66	3.9	<0.2	10	830	1.39	0.3	3.49	0.04	49.3	15.9	34
210163		0.74	0.001	0.03	3.24	7.8	<0.2	10	470	1.87	0.42	2.32	0.04	68.3	28.1	45
210164		1.31	<0.001	0.02	3.12	4.3	<0.2	<10	110	1.8	0.35	0.41	0.04	70.4	18.1	44
210165		1.07	<0.001	0.03	2.31	6.3	<0.2	<10	300	1.69	0.66	0.33	0.04	70.1	26.2	38
210166		0.66	<0.001	0.02	2.42	4.7	<0.2	10	220	1.71	0.54	0.34	0.04	75.1	20	40
210167		0.86	0.001	0.04	2.55	5.6	<0.2	10	140	1.12	0.31	0.81	0.07	58.2	14	28
210168		0.83	0.001	0.04	3.01	6.6	<0.2	10	210	1.75	0.36	0.34	0.08	66.5	18	37
210169		1.19	0.001	0.01	3.04	4.4	<0.2	<10	390	1.67	0.42	1.12	0.03	66.3	21.6	44
210170		1.25	0.001	0.02	3.6	3	<0.2	10	180	1.96	0.23	1.83	0.03	60.5	15.1	45
210171		0.91	0.001	0.02	2.76	9.5	<0.2	10	140	1.59	0.54	0.88	0.06	72.4	18.4	39
210172		0.43	0.001	0.03	3.26	9.7	<0.2	10	280	1.6	0.69	4.71	0.1	79.7	25	44
210173		0.86	0.001	0.03	2.97	10	<0.2	10	200	1.65	0.49	5.21	0.08	85.8	23	42
210174		0.76	0.001	0.04	1.87	5.2	<0.2	10	210	1.04	0.26	2.6	0.09	52	12.8	24
210175		0.72	<0.001	0.02	2.43	4.3	<0.2	10	230	1.51	0.47	6.85	0.08	80.4	21.2	33
210176		0.67	<0.001	0.02	2.76	11.1	<0.2	<10	220	1.61	0.55	5.18	0.07	80	23.7	42
210177		0.93	0.001	0.04	2.68	14.3	<0.2	10	210	1.6	0.42	5.45	0.18	77.8	21.6	41
210178		0.97	<0.001	0.01	2.39	5.4	<0.2	10	280	1.77	0.32	0.77	0.03	69.2	15.4	38
210179		1.43	<0.001	0.01	2.49	5.3	<0.2	10	260	1.73	0.3	0.88	0.03	73	15.4	36
210180		1.31	<0.001	0.02	2.19	2.9	<0.2	10	190	1.55	0.24	1.31	0.04	66.9	13.3	32
210181		0.86	<0.001	0.03	1.97	2.9	<0.2	10	130	1.16	0.18	1.44	0.04	45.8	8.6	28
210182		1.60	0.001	0.04	2.46	3.8	<0.2	<10	150	1.52	0.28	3.98	0.04	65.2	17.3	35
210183		1.04	<0.001	0.01	1.39	1.4	<0.2	<10	110	0.88	0.15	0.15	0.03	54.5	6.3	19
210184		1.04	<0.001	0.01	1.25	1.2	<0.2	10	100	0.84	0.15	0.14	0.03	60	6.2	22
210185		1.27	0.001	0.01	2.97	5.7	<0.2	10	280	1.82	0.29	0.43	0.03	80.7	20	44
210186		1.01	0.001	0.01	2.18	7.5	<0.2	10	750	1.96	0.57	4.78	0.19	75.8	21.9	36
210187		1.41	0.001	0.01	2.46	5	<0.2	10	290	1.76	0.34	3.01	0.06	72.9	18.4	39
210188		0.80	<0.001	0.03	2.27	11.9	<0.2	10	530	1.38	0.94	6.4	0.23	77.7	36.4	34
210189		0.91	<0.001	0.03	2.37	18.4	<0.2	10	750	1.6	1.64	3.5	0.17	84.6	69.6	36



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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210150		3.24	25.8	3.89	13.2	0.1	0.41	0.03	0.046	0.94	37.2	46.2	1.67	914	0.57
210151		2.69	28.6	3.97	12.9	0.1	0.37	0.04	0.046	0.84	38.6	50.1	1.56	1100	1.13
210152		4.07	33.7	4.14	13.2	0.1	0.48	0.04	0.049	1.14	34.7	38.9	1.39	1050	0.77
210153		1.55	46.6	3.61	10.95	0.08	0.44	0.03	0.044	0.45	27.8	48.6	3.15	669	1.26
210154		1.56	44.6	3.74	11.3	0.09	0.6	0.02	0.042	0.41	28.6	49.2	3.1	667	1.94
210155		1.24	73.9	3.74	10.5	0.08	0.5	0.04	0.05	0.43	24.6	56.5	3.3	750	1.19
210156		0.57	30.3	3.11	6.92	0.07	0.42	0.02	0.042	0.22	24.8	27.6	3.17	952	1.51
210157		0.6	31.9	3.27	7.79	0.07	0.46	0.02	0.043	0.23	25.7	33.2	3.27	940	1.74
210158		1.67	54.1	4.68	11.6	0.1	0.3	0.03	0.033	0.29	24.2	48	2.67	596	3.11
210159		0.87	64.5	4.59	8.93	0.08	0.2	0.03	0.041	0.27	21.2	38.4	3.13	775	1.53
210160		1.56	35.9	3.79	11.35	0.09	0.4	0.02	0.036	0.38	29.1	43.2	2.29	714	1.23
210161		3.11	35.2	4.81	7.65	0.08	0.63	0.02	0.03	0.61	31.6	26.4	0.79	862	0.53
210162		2.73	47.1	3.27	9.65	0.08	0.37	0.02	0.054	0.34	22.4	42.6	3.17	599	0.66
210163		2.57	35.6	4.23	13.45	0.1	0.43	0.05	0.043	0.38	30.9	52.4	2.9	640	0.93
210164		1.57	27.7	4.07	12.95	0.1	0.44	0.03	0.033	0.35	32.1	47.2	3.01	531	0.42
210165		2.69	36.6	5.06	7.96	0.09	0.51	0.02	0.03	0.57	30.5	28.4	0.89	894	0.73
210166		3.45	35.7	5.15	8.35	0.09	0.79	0.01	0.03	0.74	33.5	26.6	0.76	815	0.63
210167		1.58	24.1	3.2	7.68	0.07	0.26	0.04	0.03	0.48	25.8	19.7	0.72	543	0.42
210168		3.3	26.9	4.58	10	0.09	0.28	0.03	0.043	0.57	28.6	28.7	0.99	738	0.63
210169		1.49	21	3.61	12.55	0.15	0.35	0.09	0.03	0.2	29.9	50.7	4.19	549	0.64
210170		2.19	17.5	3.35	13.5	0.15	0.13	0.22	0.039	0.25	26.9	55.6	4.53	515	0.44
210171		2.59	28.7	4.62	9.64	0.09	0.34	0.03	0.031	0.51	34.1	32.2	1.82	573	0.56
210172		2.8	30.9	4.13	11	0.08	0.24	0.03	0.037	0.59	35.4	34.7	1.64	901	0.77
210173		1.69	27	3.98	10.55	0.09	0.16	0.02	0.036	0.43	37	39.9	1.57	916	0.67
210174		1.42	23.3	2.77	5.96	0.07	0.17	0.03	0.031	0.37	23.1	16.3	0.75	631	0.62
210175		1.69	22	3.29	7.95	0.08	0.2	0.02	0.032	0.45	36	32.5	1.51	1200	0.55
210176		2.04	27.4	4.28	10.1	0.09	0.31	0.02	0.035	0.49	34.8	39.4	1.52	1010	0.62
210177		2.3	29	3.76	9.67	0.09	0.16	0.02	0.037	0.44	33.7	41.7	1.41	927	0.77
210178		3.18	21.4	3.29	9.97	0.09	0.41	0.02	0.038	0.42	30.5	67.4	2.79	552	0.71
210179		2.23	28.3	3.33	10.25	0.09	0.37	0.01	0.043	0.3	33	68.9	2.93	589	0.47
210180		1.65	40.5	2.79	8.55	0.08	0.35	0.01	0.032	0.35	29.8	43.5	2.11	626	0.8
210181		1.57	22.8	2.29	7.25	0.07	0.21	0.01	0.029	0.34	20.9	29.2	1.55	400	1.6
210182		1.62	48.6	3.16	9.09	0.08	0.21	0.03	0.039	0.3	29.4	46.5	2.88	848	0.95
210183		1.87	7.3	1.91	4.12	0.06	0.23	0.01	0.02	0.4	25.2	6.3	0.23	260	0.4
210184		1.97	5.7	1.9	3.83	0.06	0.25	0.02	0.02	0.41	28.1	5	0.24	259	1.22
210185		1.24	57	3.8	12.95	0.14	0.48	0.01	0.042	0.24	36.6	83.6	3.79	542	0.79
210186		2.1	51.3	3.36	10.2	0.11	0.32	0.02	0.039	0.29	34.8	56.9	2.77	706	0.57
210187		1.42	48.9	3.29	11.5	0.11	0.47	0.01	0.04	0.25	33.1	65.4	3.82	1020	1.08
210188		1.42	49.2	3.75	8.23	0.09	0.3	0.03	0.031	0.39	33.5	37.6	1.26	1010	0.73
210189		2.19	40.4	4.4	8.54	0.1	0.3	0.02	0.036	0.46	36.7	31.4	1.1	1400	0.64



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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41 Nb ppm 0.05	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2
210150		0.17	35	510	16.8	61	<0.001	0.01	0.43	9.5	0.7	1.7	151.5	0.01	0.02	11.4
210151		0.2	36.1	630	19.6	53.5	<0.001	0.02	0.61	9.3	0.8	1.6	127.5	0.01	0.02	11.2
210152		0.43	38.7	920	13.7	75.3	0.001	0.03	0.62	10.2	0.7	1.9	60.9	0.01	0.04	11.2
210153		0.18	33.8	470	9.9	31.1	0.001	0.02	0.22	8.6	0.7	0.8	60.7	<0.01	0.04	9.2
210154		0.09	37.4	360	9.4	31.2	0.001	0.02	0.24	9.3	0.7	0.8	43.9	<0.01	0.05	9.7
210155		0.11	34.2	520	12.1	29.8	0.001	0.02	0.29	7.3	0.8	0.8	54.6	<0.01	0.05	9.1
210156		0.08	29.7	420	9.9	14.2	0.001	0.02	0.19	9.4	0.8	0.5	53.6	<0.01	0.05	8.2
210157		0.08	30.8	420	10.1	15.3	0.001	0.01	0.2	9.9	0.7	0.5	54.6	<0.01	0.05	8.3
210158		0.12	45	410	15	21.7	<0.001	0.02	0.22	8.1	0.8	0.6	36	<0.01	0.07	8.6
210159		0.12	40.5	440	11.9	19	0.001	0.04	0.23	9.4	1.3	0.8	45.6	<0.01	0.06	7.9
210160		0.14	36.6	360	10	30.5	<0.001	0.02	0.19	8.7	0.6	0.8	25.6	<0.01	0.04	9.7
210161		0.09	35.6	390	16.1	40	<0.001	0.02	0.25	5.8	0.6	0.8	32	<0.01	0.02	12.4
210162		0.11	27.3	340	7.1	24.5	<0.001	0.27	0.17	7.6	0.5	0.6	113.5	<0.01	0.04	8.2
210163		0.11	37.9	400	10.7	28.5	<0.001	0.03	0.34	8.9	0.7	0.9	50	<0.01	0.05	9.7
210164		0.09	36.1	430	9.5	21.7	<0.001	0.01	0.23	7.4	0.5	0.6	19	<0.01	0.03	10.5
210165		0.14	39.7	400	17.8	37.3	<0.001	0.02	0.29	5.8	0.6	0.8	38.8	<0.01	0.04	11.4
210166		0.08	37.8	360	16.8	47.8	<0.001	0.01	0.28	6.2	0.6	0.9	39.6	<0.01	0.03	12.9
210167		0.29	24	430	15.4	26.8	<0.001	0.03	0.27	5.9	0.7	0.8	52.9	<0.01	0.04	7.9
210168		0.22	32.1	480	20.1	37.6	<0.001	0.04	0.29	8.3	0.6	0.9	43.1	<0.01	0.03	9.2
210169		0.09	37	290	5.1	12.5	<0.001	0.02	0.17	7.7	0.7	0.8	33.7	<0.01	0.08	9.9
210170		0.15	31.7	370	5	16.3	<0.001	0.01	0.14	9.2	0.6	0.8	44.7	<0.01	0.05	8.5
210171		0.1	38.9	520	18.2	32.1	<0.001	0.01	0.48	6.2	0.6	0.6	33.8	<0.01	0.04	11.7
210172		0.18	37.8	550	22.9	35.3	<0.001	0.02	0.44	7.2	0.7	0.9	134.5	<0.01	0.03	10.8
210173		0.12	36	580	17.1	26.1	<0.001	0.02	0.42	7	0.7	0.8	124	<0.01	0.02	9.9
210174		0.3	20.8	480	12.9	22.7	<0.001	0.03	0.44	5.1	0.7	0.6	68.4	<0.01	0.02	6.7
210175		0.15	28.3	760	19.2	25.5	<0.001	0.02	0.29	5.9	0.7	0.7	126.5	<0.01	0.02	10.4
210176		0.1	37.4	440	16	30.2	<0.001	0.01	0.72	6.3	0.7	0.8	115.5	<0.01	0.03	10.3
210177		0.15	32.8	560	35	26.4	<0.001	0.02	0.61	6.4	0.7	0.7	159.5	<0.01	0.02	9.7
210178		0.25	25.6	230	5.6	27.7	<0.001	0.01	0.2	5.8	0.4	1	18.3	<0.01	0.03	10.9
210179		0.26	26	290	5.5	20.8	<0.001	0.01	0.21	5.9	0.4	0.8	18.9	<0.01	0.03	10.8
210180		0.17	27.4	300	5.9	22.4	<0.001	0.01	0.2	5.4	0.5	0.7	19.7	<0.01	0.04	9
210181		0.23	17.4	280	6.3	20.2	<0.001	0.01	0.19	4.7	0.5	0.7	30	<0.01	0.03	6.2
210182		0.19	28.8	390	9.4	19.2	<0.001	0.02	0.19	6.4	0.6	0.6	41.5	<0.01	0.04	7.3
210183		0.28	11.5	200	4.9	24.2	<0.001	0.01	0.21	3.1	0.4	0.6	14.2	<0.01	0.01	8.2
210184		0.29	11	180	4.4	24.4	<0.001	0.01	0.22	2.8	0.4	0.6	13.1	<0.01	0.01	8.7
210185		0.15	33.9	320	4.4	16.3	<0.001	0.01	0.2	6.5	0.4	0.8	11.8	<0.01	0.03	11.9
210186		0.22	30.1	580	20.2	20.1	0.001	0.03	0.31	7.6	0.6	0.9	71.8	<0.01	0.05	10.4
210187		0.12	31.1	410	9.2	16.9	<0.001	0.02	0.17	7.8	0.6	0.8	46.5	<0.01	0.05	9.7
210188		0.15	38.5	510	30.1	24	<0.001	0.03	0.54	5.9	0.7	0.7	69.7	<0.01	0.04	10.5
210189		0.17	49.7	730	25.2	29.1	<0.001	0.02	0.69	6.9	1	0.8	40.2	0.01	0.08	11.4

***** See Appendix Page for comments regarding this certificate *****



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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210150		0.018	0.32	1.14	65	0.14	15.05	83	16.7	
210151		0.014	0.29	1.37	64	0.12	16.6	103	15.4	
210152		0.029	0.34	1.19	75	0.41	13.4	64	19.4	
210153		0.018	0.21	1.35	59	0.14	10.2	36	16	
210154		0.017	0.21	1.45	60	0.09	9.91	31	20.4	98.0
210155		0.019	0.18	1.58	56	0.14	11.4	38	18.3	
210156		0.009	0.15	1.45	40	0.09	11.45	14	17.9	
210157		0.01	0.14	1.41	45	0.08	11.35	16	19.1	
210158		0.017	0.23	1.16	66	0.08	9.59	36	12.6	
210159		0.017	0.16	1.49	56	0.21	11.65	19	10.5	
210160		0.023	0.22	1.28	63	0.1	9.42	25	15	
210161		0.02	0.31	1.32	54	0.06	11.2	61	23.8	
210162		0.013	0.36	1.03	53	0.06	7.02	19	13.7	
210163		0.015	0.35	0.95	78	0.06	9.13	26	16.4	
210164		0.014	0.13	0.87	75	0.07	8.49	34	15.7	
210165		0.02	0.24	1.3	58	0.07	11.9	63	20.1	
210166		0.023	0.32	1.37	59	0.06	12.05	68	26.4	
210167		0.013	0.16	0.73	47	0.05	11.95	51	9	
210168		0.014	0.28	0.82	62	0.07	11.3	52	10.8	
210169		0.016	0.08	0.99	85	0.09	6.42	14	12	
210170		0.016	0.08	0.95	80	0.08	7.81	20	4.3	
210171		0.011	0.19	0.94	59	0.09	10.85	75	13.6	
210172		0.013	0.21	1.04	59	0.07	14.7	81	10.3	
210173		0.009	0.18	0.98	55	0.07	15.3	85	6.1	
210174		0.012	0.19	0.89	37	0.16	11.4	44	6.2	
210175		0.009	0.16	0.97	37	0.06	16.6	71	8.6	
210176		0.012	0.24	0.9	64	0.09	13.3	82	13.4	
210177		0.009	0.21	0.97	47	0.1	14.8	106	6.7	
210178		0.025	0.13	1.39	58	0.29	7.27	21	15	
210179		0.021	0.1	1.25	58	0.23	7.06	23	13.6	
210180		0.013	0.13	1.08	43	0.13	8.47	15	14.1	
210181		0.012	0.14	0.75	39	0.08	7.11	16	8.2	
210182		0.012	0.15	1	51	0.08	9.83	16	9.3	
210183		0.012	0.12	0.81	25	0.17	6.3	9	9.8	
210184		0.013	0.14	0.84	24	0.09	6.22	7	10.4	
210185		0.022	0.07	1.4	69	0.25	6.14	20	15.2	
210186		0.018	0.11	1.26	59	0.18	11.8	124	13.8	
210187		0.017	0.11	1.32	61	0.11	9.49	80	17	
210188		0.011	0.15	1.06	51	0.13	13.85	114	14.2	
210189		0.016	0.18	1.06	57	0.17	14.5	88	14.2	



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Account: MARATH

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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-TL43 Au ppm 0.001	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.2	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1
210190		0.87	0.007	0.02	3.05	12.7	<0.2	<10	760	2.18	0.65	1.67	0.05	55.5	30.1	41
210191		1.70	0.001	0.02	2.96	8.7	<0.2	<10	1460	2.15	0.45	1.86	0.06	51.4	23.7	39
210192		0.94	0.001	0.04	2.73	3.5	<0.2	10	890	1.75	0.34	1.79	0.04	52.5	21.9	34
210193		0.88	<0.001	0.05	2.29	6	<0.2	10	470	1.25	0.39	1.11	0.04	58.6	16.4	29
210194		1.03	0.001	0.02	2.23	5.5	<0.2	10	780	1.68	0.36	3.82	0.05	57.2	18.1	33
210195		1.28	<0.001	0.02	2.86	2.4	<0.2	10	190	1.89	0.22	2.5	0.03	72.4	17	41
210196		0.93	<0.001	0.02	2.03	2.4	<0.2	10	170	1.44	0.25	0.57	0.05	83.2	15.3	33
210197		1.08	<0.001	0.03	1.47	2	<0.2	10	150	1.14	0.17	1.2	0.04	57.4	8.6	22
210198		1.29	<0.001	0.01	1.32	1.6	<0.2	10	610	1.12	0.22	0.57	0.05	74.4	9.8	19
210199		1.02	<0.001	0.05	2.07	17.5	<0.2	<10	360	1.38	0.51	3.72	0.15	59.9	23.9	30
210200		0.90	<0.001	0.03	2.37	10.5	<0.2	10	270	1.59	0.34	0.67	0.05	69.8	16.7	36
210201		0.77	<0.001	0.04	2.43	10	<0.2	10	260	1.58	0.33	0.45	0.07	63.5	17.6	36
210202		1.21	<0.001	0.06	2.27	17.6	<0.2	<10	200	1.25	0.29	0.33	0.06	54.2	14.9	34
210203		0.92	0.001	0.03	2.55	6.5	<0.2	10	230	1.65	0.47	4.4	0.07	64.1	15.8	38
210204		1.56	<0.001	0.01	1.31	1.4	<0.2	10	80	1.02	0.14	0.37	0.05	58.1	6.4	17
210205		1.11	0.001	0.04	1.87	5.8	<0.2	10	180	0.84	0.39	3.1	0.04	39.2	13	20
210206		1.29	<0.001	0.03	1.85	5.8	<0.2	10	210	0.96	0.34	1.66	0.07	52	18.3	21
210207		1.07	<0.001	0.02	1.39	1.7	<0.2	10	100	1.28	0.18	0.32	0.04	70.4	9.2	20
210208		1.25	<0.001	0.03	0.96	5.4	<0.2	10	260	1.03	0.3	0.54	0.03	64.2	11.2	11
210209		1.87	<0.001	0.03	1.48	2.8	<0.2	<10	220	1.05	0.24	2.15	0.06	60.8	12.6	20
210210		0.71	<0.001	0.04	1.43	6.2	<0.2	10	510	1.48	0.23	1.22	0.59	50	27.4	21
210211		0.87	0.001	0.02	2.14	2.2	<0.2	<10	150	1.38	0.23	2.56	0.07	67.4	16.5	30
210212		0.91	0.001	0.04	2.08	6.9	<0.2	<10	390	1.31	0.44	5.38	0.05	58	22.8	29
210213		0.82	<0.001	0.04	1.18	4.8	<0.2	<10	560	1.45	0.18	0.9	0.74	41.2	33.3	19
210214		1.86	<0.001	0.04	1.83	5.5	<0.2	<10	210	0.88	0.25	0.65	0.1	60.6	12.1	23
210215		0.94	0.001	0.03	1.91	6.8	<0.2	<10	330	1.23	0.44	5.89	0.06	55.1	21.6	26
210216		1.12	<0.001	0.03	1.87	6.7	<0.2	<10	810	1.2	0.43	8.35	0.08	56	26.1	26
210217		1.44	0.001	0.03	1.8	38.5	<0.2	10	1570	1.96	0.48	6.75	0.07	59.2	37.6	25
210218		1.01	0.001	0.03	2.17	6	<0.2	<10	230	1.13	0.43	10.2	0.08	62.4	19.5	29
210219		0.97	<0.001	0.02	2.28	3.7	<0.2	<10	280	1.15	0.5	8.91	0.07	69.5	21.2	29
210220		1.20	0.002	0.03	1.83	6	<0.2	10	300	1.12	0.4	10.1	0.06	55	22.2	24
210221		1.34	0.002	0.09	1.58	44.2	<0.2	10	770	1.67	1.67	1.99	0.24	67.9	54.8	18
210222		1.12	0.002	0.1	1.85	38.5	<0.2	10	670	1.61	1.45	2.07	0.22	67.3	43.6	22
210223		1.09	0.001	0.11	1.45	16.2	<0.2	10	320	1.15	0.56	4.1	0.34	70.6	21.3	15
210224		1.43	0.001	0.04	1.1	8.2	<0.2	10	390	1.2	0.72	4.88	0.12	71.1	28.4	12
210225		0.77	0.001	0.06	1.63	16.4	<0.2	10	630	1.39	1.48	4.03	0.23	76.2	34.7	16
210226		1.29	0.001	0.22	1.26	59.3	<0.2	10	220	1.19	0.88	3.53	1.29	75.4	23.2	10
210227		1.37	0.001	0.06	1.34	17.6	<0.2	10	550	1.23	0.66	2.75	0.11	74	26	14
210228		1.08	<0.001	0.05	2.21	6.8	<0.2	10	390	1.34	0.72	4.63	0.1	71.5	29.9	23
210229		0.89	0.001	0.04	2.74	7.9	<0.2	10	320	1.31	0.47	4.01	0.08	63.4	26.7	31



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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210190		0.89	65.3	4.46	14.85	0.16	0.43	0.02	0.055	0.18	24.4	92.1	4.42	681	1.38
210191		0.99	56.7	4.19	14.55	0.16	0.33	0.02	0.059	0.15	22.5	93.2	4.49	690	1.13
210192		0.89	47.9	3.65	10.6	0.1	0.39	0.01	0.042	0.3	23.3	59.6	3.11	721	1.09
210193		1.32	38.8	3.22	7.94	0.09	0.41	0.01	0.033	0.4	25.8	23.2	1.08	470	0.98
210194		1.44	46.1	3.01	10.4	0.11	0.38	0.01	0.044	0.23	26	66.4	3.9	825	0.88
210195		1.39	22.7	3.13	12.4	0.12	0.37	0.01	0.035	0.23	33.7	69.2	4.54	607	0.69
210196		1.69	33.9	3.06	7.66	0.1	0.5	0.01	0.027	0.41	38.8	25.4	1.45	638	0.81
210197		1.8	19.2	2.15	5.31	0.08	0.23	0.02	0.027	0.36	27.5	14.8	1.03	435	0.47
210198		1.79	60.1	2.26	4.49	0.08	0.38	0.01	0.028	0.42	36	8.5	0.6	329	0.31
210199		1.14	145	3.8	8.78	0.1	0.42	0.01	0.057	0.29	27.6	35.1	2.21	769	1.27
210200		1.54	48.4	3.8	10.15	0.1	0.49	0.02	0.046	0.32	31.2	44.7	2.24	729	0.78
210201		1.6	45.8	3.76	9.79	0.11	0.28	0.03	0.048	0.34	28.1	42	1.72	885	0.92
210202		1.67	40.2	3.4	8.71	0.09	0.25	0.03	0.04	0.33	24.9	27.8	0.98	617	1.23
210203		1.06	37.6	3.46	10.65	0.12	0.3	0.02	0.046	0.27	30.8	52.7	3.34	647	1.02
210204		1.87	6.6	1.95	4.2	0.07	0.16	0.02	0.02	0.32	27.3	9	0.67	272	0.3
210205		1.37	72.5	3.24	5.58	0.07	0.11	0.1	0.094	0.4	17.6	17.7	1.61	882	1.12
210206		1.35	50.7	4.28	6.14	0.09	0.19	0.11	0.108	0.35	22.1	19.2	1.31	1440	0.99
210207		2.31	11	2.29	4.38	0.08	0.24	0.02	0.023	0.43	33.6	7.2	0.41	280	0.36
210208		1.01	18.2	3.4	3.36	0.08	0.38	0.06	0.116	0.45	28.9	4.1	0.37	1770	1.19
210209		2.31	13.7	2.56	5.21	0.08	0.15	0.03	0.032	0.32	27.4	15.9	1.09	870	0.45
210210		1.28	24.2	3.03	4.98	0.07	0.23	0.02	0.026	0.34	22.8	10.2	0.49	2400	0.61
210211		1.67	26.6	2.94	7.19	0.09	0.38	0.02	0.032	0.37	31.1	36.2	2.49	912	1.27
210212		1.22	54.1	3.34	7.34	0.09	0.24	0.01	0.037	0.34	26.6	34.6	1.91	1210	0.73
210213		0.99	25	2.84	4.01	0.07	0.28	0.02	0.017	0.3	18.7	8.9	0.35	2510	0.66
210214		1.2	14.4	2.52	5.47	0.08	0.14	0.02	0.03	0.35	25.5	12.5	0.46	1360	1.2
210215		1.36	18.9	3.35	6.58	0.09	0.16	0.02	0.036	0.35	24.4	29.4	1.45	1310	0.68
210216		1.01	23.5	3.05	6.46	0.07	0.13	0.02	0.031	0.32	25.1	27.3	1.22	2450	0.68
210217		0.88	26.6	5.17	6.86	0.09	0.23	0.04	0.076	0.3	26.8	28.8	1.72	4100	0.98
210218		1	21.9	3.14	7	0.08	0.15	0.01	0.027	0.35	29	30.2	1.13	989	0.45
210219		1.02	21.2	3.39	6.98	0.08	0.27	0.01	0.025	0.4	31.7	29.9	1.19	1190	0.43
210220		0.76	17.3	2.62	6.19	0.06	0.11	0.02	0.036	0.29	24.7	27.3	1.35	1810	0.73
210221		0.69	54	6.2	5.59	0.1	0.34	0.03	0.072	0.33	31	20.6	1.07	4800	1.45
210222		0.77	47.8	5.87	6	0.09	0.36	0.03	0.069	0.38	30.6	22.4	1.23	4290	1.25
210223		0.83	31.6	3.07	3.87	0.07	0.17	0.04	0.038	0.38	32.5	11	1.24	935	0.9
210224		0.72	24.6	3.39	3.07	0.07	0.23	0.02	0.042	0.32	32.8	9.7	1.46	1400	1.04
210225		0.96	50.5	4.34	4.59	0.08	0.34	0.04	0.045	0.47	35.2	14.6	1.01	1750	1.37
210226		0.88	64.7	3.8	3.16	0.07	0.2	0.05	0.044	0.34	34.7	6.7	0.91	1280	1.24
210227		0.81	22.7	4.25	3.84	0.07	0.25	0.02	0.069	0.37	32.4	10.6	0.64	3850	0.66
210228		1.39	23.1	3.29	5.86	0.07	0.26	0.01	0.04	0.64	31.6	20.4	1.26	1430	0.84
210229		1.42	23.5	3.3	7.56	0.07	0.23	0.02	0.041	0.65	27.8	29.2	1.24	2100	1.33



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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
210190		0.1	41.4	550	12.1	11.2	0.001	0.03	0.34	6.5	1	0.9	30.3	<0.01	0.08	7.9
210191		0.1	36	440	10.5	9.8	0.001	0.05	0.25	6.2	0.9	0.9	31.9	<0.01	0.07	7.5
210192		0.11	32.5	300	9.7	18.8	0.001	0.03	0.23	5.8	0.7	0.7	42.6	<0.01	0.04	8.3
210193		0.15	24.1	240	8.2	26.2	<0.001	0.02	0.37	5.6	0.6	0.8	32.6	<0.01	0.03	7.8
210194		0.16	27.4	410	9.2	16	<0.001	0.04	0.18	7.6	0.7	0.8	80.6	<0.01	0.05	8.1
210195		0.15	31	420	4.5	14.9	<0.001	0.02	0.13	7.2	0.6	0.8	29.4	<0.01	0.04	9.1
210196		0.12	27.1	230	7.1	27.2	<0.001	<0.01	0.24	5.6	0.4	0.7	11.5	0.01	0.02	11.5
210197		0.31	15	280	6.1	24.8	<0.001	0.01	0.18	4.4	0.5	0.6	25.7	<0.01	0.02	8.1
210198		0.12	14.7	170	8.4	28.6	<0.001	0.02	0.24	3.3	0.4	0.6	21.8	<0.01	0.01	11.3
210199		0.09	30.2	410	17.4	18.3	<0.001	0.04	0.49	6.8	0.8	0.5	45.9	<0.01	0.04	8.3
210200		0.1	27.4	320	12.7	21.9	<0.001	0.01	0.29	7.3	0.6	0.6	20.4	<0.01	0.03	9.2
210201		0.25	25.8	410	13.5	22.5	<0.001	0.02	0.28	7.7	0.6	0.7	22.1	<0.01	0.03	8
210202		0.23	22.3	480	14.4	21.8	<0.001	0.03	0.28	7.2	0.6	0.7	27.2	<0.01	0.02	7.3
210203		0.14	29.2	410	10.5	15.6	<0.001	0.03	0.39	8.4	0.8	0.6	57.8	<0.01	0.05	9.2
210204		0.23	11.3	220	5.4	20.3	<0.001	0.01	0.23	3.2	0.4	0.5	18.2	<0.01	0.01	8.5
210205		0.16	17.6	310	7.3	21.1	<0.001	0.03	0.31	5.7	0.7	0.6	114	<0.01	0.04	5.4
210206		0.14	20.5	390	8.3	19.4	<0.001	0.03	0.29	6.3	0.7	0.5	56.8	<0.01	0.03	7.1
210207		0.27	14.6	230	4.8	28.3	<0.001	0.01	0.52	3.4	0.4	0.6	19.9	<0.01	0.01	10.3
210208		0.05	16.7	340	4.9	23.4	<0.001	0.01	0.25	4.8	0.6	0.3	22.1	<0.01	0.04	9.9
210209		0.17	17.9	410	8.3	22.8	<0.001	0.02	0.27	4.4	0.5	0.5	55.7	<0.01	0.03	8.4
210210		0.16	33.3	710	27.2	20.6	<0.001	0.02	0.55	4.4	0.6	0.7	64.2	<0.01	0.03	7.4
210211		0.11	28.6	470	10.4	24.3	<0.001	0.01	0.25	5.9	0.5	0.6	42	<0.01	0.03	9.2
210212		0.12	30.2	710	9	20.9	<0.001	0.03	0.44	5.9	0.7	0.5	151.5	<0.01	0.04	8.1
210213		0.17	37.1	740	28.9	16	<0.001	0.01	0.42	3.5	0.4	0.5	36.1	<0.01	0.02	6.6
210214		0.13	15.7	1430	15.9	19.3	<0.001	0.02	0.42	5	0.6	0.6	39.6	<0.01	0.02	7.1
210215		0.14	29	940	8.7	22.4	<0.001	0.02	0.43	5.5	0.8	0.5	195.5	<0.01	0.06	7.2
210216		0.1	26.3	760	15.4	18.3	<0.001	0.03	0.74	4.8	0.7	0.4	267	<0.01	0.02	7.7
210217		0.09	40	1060	14.6	15.4	0.001	0.05	1.05	8.3	0.9	0.4	286	<0.01	0.08	8.4
210218		0.15	27.7	460	11.7	20.2	<0.001	0.03	0.62	4.7	0.8	0.5	243	0.01	0.03	7.9
210219		0.09	31.7	380	10	23.8	<0.001	0.01	0.53	4.5	0.7	0.5	112	0.01	0.03	9.1
210220		0.13	24.2	600	12	17.4	<0.001	0.03	0.57	4.5	1	0.4	397	0.01	0.03	7.6
210221		0.08	46.3	670	90.5	17.9	0.001	0.03	2.37	6.9	1.9	0.4	68.8	0.01	0.11	11.6
210222		0.08	42.5	680	73.5	20.1	0.001	0.03	2.09	7	1.6	0.5	66.6	0.01	0.09	11.4
210223		0.24	23.5	770	41.3	20.8	<0.001	0.04	0.75	5.5	0.9	0.5	106	0.01	0.04	10.8
210224		0.15	24.6	890	13.5	16.9	<0.001	0.03	0.67	6	1	0.4	131	0.01	0.04	11.8
210225		0.1	33.9	920	132.5	26.2	<0.001	0.03	1.15	6.5	1.1	0.6	91.9	0.01	0.05	13.2
210226		0.08	35.1	780	393	17.9	<0.001	0.02	1.95	6	1	0.4	83.9	<0.01	0.03	11.5
210227		0.11	25.3	670	17.3	20	<0.001	0.02	1.22	6.2	0.8	0.4	74.9	0.01	0.03	12.2
210228		0.17	27	710	13.8	36.7	<0.001	0.03	0.67	6.4	0.9	0.8	119	0.01	0.03	11.9
210229		0.19	27.9	520	11.7	39.3	0.001	0.02	0.56	6.3	0.8	0.9	67	<0.01	0.03	9.4

***** See Appendix Page for comments regarding this certificate *****



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Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210190		0.014	0.14	1.14	85	0.11	9.34	36	16.8	
210191		0.015	0.13	1.11	75	0.11	8.19	39	13	
210192		0.015	0.16	1.4	52	0.11	8.33	20	15.7	
210193		0.015	0.16	0.98	51	0.08	7.63	16	15.7	
210194		0.016	0.13	1.41	56	0.11	9.11	63	14.6	98.0
210195		0.018	0.08	1.58	61	0.12	7.74	16	13.1	
210196		0.016	0.14	1.35	42	0.09	8.92	11	19.4	
210197		0.014	0.15	0.9	31	0.09	6.88	16	10.1	
210198		0.012	0.15	1.19	24	0.12	7	15	15.5	
210199		0.01	0.17	1.13	51	0.06	8.2	48	18.5	
210200		0.011	0.45	0.97	61	0.07	7.65	35	18.7	
210201		0.011	0.82	1.08	55	0.15	8.65	40	10.8	
210202		0.01	0.67	0.71	53	0.05	8.73	33	8.8	
210203		0.012	0.12	1.38	61	0.11	8.28	31	11.8	
210204		0.009	0.1	0.83	24	0.13	6.35	13	7.3	
210205		0.009	0.13	0.68	38	0.06	6.64	19	4.9	
210206		0.009	0.13	0.76	43	0.06	7.59	24	9.2	
210207		0.013	0.18	1.18	25	0.15	7.69	9	10.9	
210208		0.006	0.09	1.05	26	<0.05	6.3	6	16.3	
210209		0.012	0.16	0.98	34	0.09	8.19	28	7.9	
210210		0.012	1.53	1.48	29	0.24	12.2	149	11.2	
210211		0.012	0.16	1.51	35	0.12	9.41	49	16.2	
210212		0.009	0.18	1.31	37	0.09	11.65	32	12.3	
210213		0.012	1.3	1.52	27	0.29	10.25	135	12	
210214		0.008	0.25	0.59	32	0.05	10.85	53	5.3	
210215		0.009	0.18	1.18	35	0.09	13.3	41	8.7	
210216		0.006	0.29	1.14	32	0.1	15.1	59	7.2	
210217		0.006	0.27	1.49	46	0.08	15.4	37	12	
210218		0.01	0.14	0.98	42	0.07	17.65	67	7.5	
210219		0.01	0.17	1.04	40	0.08	16.05	73	13.2	
210220		0.007	0.19	1.29	35	0.06	15.05	56	5.2	
210221		0.006	0.7	1.87	51	0.12	12.3	84	17.4	
210222		0.007	0.6	1.73	51	0.12	11.75	83	18	
210223		0.009	0.15	1.56	27	0.07	12.85	97	8.3	
210224		0.007	0.17	1.95	22	0.08	14.45	50	11.5	
210225		0.007	0.23	2.05	30	0.1	13.95	98	18.8	
210226		<0.005	0.3	1.37	19	0.05	10.75	309	11.8	
210227		0.008	0.43	1.75	28	0.11	12.45	50	12.3	
210228		0.01	0.29	1.96	32	0.11	13.3	61	13.7	
210229		0.013	0.32	1.28	40	0.07	12.35	65	10.8	



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-TL43 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
210230		1.10	<0.001	0.03	2.15	6	<0.2	10	190	1.15	0.38	2.51	0.05	59.2	13.6	27
210231		1.04	<0.001	0.04	2.54	3.4	<0.2	10	240	1.25	0.42	5.84	0.07	74.3	24.2	26
210232		0.77	0.001	0.03	2.26	12	<0.2	10	220	1.21	0.58	11.7	0.1	55.1	27	27
210233		0.67	0.001	0.05	2.46	8.2	<0.2	10	170	1.17	0.35	8.52	0.11	50.2	17.5	24
210234		1.09	0.001	0.05	2.02	9	<0.2	10	210	1.13	0.54	14.7	0.12	48.4	31.2	22
210235		1.32	<0.001	0.06	1.81	12.7	<0.2	10	200	1.18	0.73	6.46	0.08	74.9	22.8	17
210236		0.97	<0.001	0.07	1.47	17.2	<0.2	10	200	1.37	0.83	4.5	0.09	87.3	21.9	15
210237		1.07	0.001	0.09	1.67	19.8	<0.2	10	220	1.27	0.76	4.58	0.09	79.2	20.5	15
210238		1.15	0.001	0.09	1.37	16.1	<0.2	10	220	1.39	0.86	4.81	0.1	79	21.5	14
210239		0.87	<0.001	0.03	1.7	5.3	<0.2	10	180	1.02	0.34	8.08	0.08	55.4	15.8	22
210240		1.07	0.001	0.04	1.96	14.4	<0.2	10	350	1.37	0.58	5.41	0.11	65.1	24.8	24
210241		0.90	0.001	0.03	2.2	6	<0.2	10	260	1.11	0.44	12.4	0.1	55.6	22.1	25
210242		1.35	<0.001	0.02	2.53	2.5	<0.2	<10	240	1.29	0.5	9.28	0.07	75.2	24	33
210243		1.36	<0.001	0.04	2.46	3.5	<0.2	10	160	1.13	0.3	1.35	0.06	62.2	14.2	29
210244		1.14	<0.001	0.02	1.69	2	<0.2	10	120	1.03	0.29	0.42	0.03	66.3	10.5	28
210245		0.61	<0.001	0.05	2.96	5.3	<0.2	10	170	1.23	0.22	0.76	0.13	58.9	11.7	49
210246		0.85	0.001	0.03	2.65	8.4	<0.2	<10	140	1.36	0.38	0.16	0.06	90.3	13.2	39
210247		0.87	0.001	0.05	1.98	3.8	<0.2	10	190	1.08	0.3	7.33	0.08	49.3	14.9	19
210248		1.20	<0.001	0.03	1.8	3.5	<0.2	<10	160	0.97	0.27	0.44	0.06	55.8	13	31
210249		1.59	<0.001	0.04	1.69	3.5	<0.2	<10	140	0.82	0.24	0.64	0.05	55.5	10.5	23
210250		1.67	0.001	0.03	2.08	3.3	<0.2	10	140	0.96	0.29	1.26	0.05	57.6	12.7	26
210251		1.03	<0.001	0.02	2.39	3.4	<0.2	10	180	1.19	0.29	0.23	0.05	62.7	12.2	39
210252		1.63	<0.001	0.02	1.68	2.7	<0.2	<10	150	1.1	0.29	0.1	0.02	70.7	10.4	25
210253		1.78	<0.001	0.03	2.09	3.7	<0.2	<10	180	0.93	0.18	0.76	0.12	42.3	10.6	23
210254		1.15	<0.001	0.03	2.01	4.2	<0.2	10	140	0.98	0.22	0.26	0.08	53.6	10.2	32
210255		1.07	0.001	0.03	1.9	4.3	<0.2	<10	170	1.18	0.24	0.5	0.09	59.5	11.7	27
210256		1.63	0.001	0.02	1.31	2.7	<0.2	<10	240	0.95	0.22	1.33	0.08	56.5	12.9	22
210257		1.41	0.001	0.03	1.32	2.9	<0.2	<10	190	0.98	0.26	0.46	0.06	56.2	12.7	27
210258		1.42	0.001	0.02	1.44	1.8	<0.2	<10	150	0.98	0.22	0.12	0.05	58.5	8.2	23
210259		1.30	0.001	0.03	2.59	2.2	<0.2	<10	210	1.13	0.39	6.57	0.07	67.3	20.3	33
210260		1.08	<0.001	0.03	2.84	6.9	<0.2	<10	230	1.38	0.41	0.47	0.06	102.5	17.5	44
210261		1.82	<0.001	0.03	2.23	6.5	<0.2	<10	240	1.3	0.36	0.27	0.16	83.9	24.6	34
210262		1.05	0.001	0.02	2.52	2	<0.2	<10	280	1.11	0.6	9.07	0.08	65.4	25.9	33
210263		0.98	0.001	0.03	2.79	2.5	<0.2	<10	270	1.15	0.51	6.47	0.07	61	23.3	33
210264		1.50	<0.001	0.03	2.39	2.6	<0.2	<10	270	1.04	0.4	4.81	0.08	56.6	19.6	29
210265		2.11	<0.001	0.01	0.51	1.6	<0.2	<10	70	0.38	0.09	0.21	0.06	24.2	3.9	9
210266		0.94	0.001	0.03	2.38	1.8	<0.2	<10	220	0.9	0.3	8.81	0.09	50.6	15.8	31
210267		1.14	<0.001	0.02	2.54	1.5	<0.2	<10	200	1.12	0.37	7.4	0.06	73	18.9	38
210268		1.06	<0.001	0.02	2.41	7	<0.2	<10	220	1.07	0.41	11.6	0.07	61.1	19.1	33
210269		0.98	<0.001	0.02	2.56	2.5	<0.2	<10	230	1.16	0.56	9.37	0.07	62.8	24.8	34

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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210230		1.6	16.1	3.07	6.16	0.07	0.37	0.01	0.029	0.68	27.4	12.2	0.58	795	0.58
210231		1.3	19.6	3.31	6.62	0.08	0.34	0.01	0.034	0.74	33.7	21.3	0.89	1040	0.5
210232		1.17	23.3	3.13	6.31	0.07	0.25	0.01	0.031	0.6	25.7	21.5	1.24	956	1.27
210233		1.14	20.7	2.9	6.62	0.06	0.17	0.02	0.034	0.57	23.4	19.4	1.27	731	0.58
210234		0.83	33.3	2.83	5.75	0.06	0.16	0.02	0.036	0.42	22.2	22.2	1.28	934	0.42
210235		1.06	21.6	3.59	4.8	0.07	0.23	0.01	0.035	0.44	34.5	14.3	0.82	995	1.44
210236		0.97	24.5	4.05	4.1	0.08	0.37	0.01	0.043	0.56	40	5.9	0.89	907	1.59
210237		1.06	23.7	3.64	4.34	0.08	0.24	0.02	0.038	0.56	36.2	7.7	1.32	808	1.49
210238		0.89	23.3	3.7	3.67	0.07	0.21	0.01	0.042	0.46	36.5	6.3	1.01	895	1.73
210239		0.95	17.8	2.62	5.12	0.06	0.18	0.01	0.026	0.41	25.5	15.9	0.84	728	0.52
210240		1.16	25.1	3.73	6.26	0.07	0.28	0.01	0.038	0.56	30.2	16.8	0.9	1620	0.99
210241		1.04	16.5	2.57	6.32	0.06	0.14	0.01	0.028	0.49	25.4	22	1.15	721	0.35
210242		1.08	17.8	3.06	7.78	0.08	0.31	0.01	0.025	0.46	33.2	28.8	1.43	998	0.47
210243		1.41	19	3.15	6.89	0.06	0.23	0.02	0.03	0.49	28.1	15.9	0.62	805	0.7
210244		1.96	13.3	2.74	5.01	0.06	0.3	0.01	0.021	0.5	30.3	8.1	0.29	433	0.71
210245		1.34	23.8	3.28	8.09	0.07	0.25	0.04	0.035	0.46	25.2	12.6	0.42	986	6.62
210246		2.25	17.4	4.07	7.88	0.08	0.45	0.01	0.029	0.67	38	17	0.56	779	0.83
210247		0.88	19.4	2.7	5.19	0.06	0.13	0.02	0.035	0.42	22.8	12.8	0.93	738	0.58
210248		1.05	17.6	2.91	5.11	0.06	0.25	0.01	0.022	0.38	24.8	10.5	0.36	822	2.96
210249		1.12	15.6	2.68	4.95	0.06	0.2	0.01	0.026	0.36	24.7	9.5	0.34	731	0.59
210250		1.27	16	2.83	5.76	0.06	0.21	0.01	0.026	0.43	25.9	12.8	0.54	695	0.59
210251		1.59	17.4	2.98	6.7	0.06	0.44	0.01	0.025	0.6	28.2	9.7	0.33	767	2.74
210252		1.74	17.3	2.65	4.97	0.06	0.41	<0.01	0.018	0.45	32.3	6.6	0.23	358	0.59
210253		1.13	13.2	2.21	5.65	0.05	0.2	0.01	0.022	0.34	18.2	9.2	0.28	740	0.49
210254		1.23	14.9	2.53	5.64	0.05	0.41	0.01	0.022	0.43	23.9	8.9	0.23	620	2.77
210255		1.39	15.4	2.93	5.53	0.08	0.35	0.03	0.023	0.45	27.5	10.6	0.3	665	0.54
210256		1.08	13	2.34	3.83	0.07	0.32	0.02	0.017	0.38	26	7.6	0.25	772	0.51
210257		0.98	14.8	2.44	3.95	0.08	0.38	0.01	0.016	0.37	26.3	6.2	0.18	731	2.29
210258		1.34	12.3	2.65	4.09	0.08	0.33	0.01	0.017	0.39	28.2	5.9	0.21	316	0.44
210259		1.02	18.1	3.23	7.27	0.09	0.24	0.02	0.025	0.42	31	24.4	1.34	923	0.33
210260		2.24	20.9	4.54	8.51	0.13	0.45	0.02	0.029	0.71	44.2	23.1	1	1280	1.06
210261		2.43	19.6	4.14	6.7	0.12	0.33	0.02	0.027	0.43	37.1	20.4	0.38	1440	0.71
210262		0.91	18.9	3.19	7.49	0.09	0.23	0.02	0.024	0.41	30.6	25.6	1.38	1140	0.34
210263		0.89	23.1	3.22	7.61	0.09	0.17	0.03	0.028	0.41	27.8	25.6	1.37	1040	0.52
210264		0.84	19.6	2.96	6.44	0.08	0.16	0.02	0.026	0.37	26.1	20.1	0.98	964	0.34
210265		0.35	6.3	1.16	2.02	<0.05	0.18	0.01	0.009	0.08	11.2	2.4	0.08	250	0.14
210266		0.7	18	2.83	6.49	0.07	0.12	0.02	0.025	0.38	23.9	22.1	1.34	776	0.83
210267		1.02	15.5	3.42	7.62	0.1	0.24	0.02	0.025	0.44	33.8	27	1.45	785	0.39
210268		0.82	15.1	3.14	7.15	0.09	0.16	0.02	0.024	0.4	28.6	25.3	1.3	909	0.28
210269		0.8	18.8	3.25	7.67	0.09	0.19	0.02	0.025	0.38	29.7	26.1	1.41	950	0.55

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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
210230		0.2	20.1	360	15.4	39	<0.001	0.02	0.53	5	0.6	0.9	78.4	<0.01	0.02	9.8
210231		0.12	29.4	430	11.3	44.2	<0.001	0.04	0.49	6.2	0.8	0.9	171.5	0.01	0.02	11.5
210232		0.18	26	580	28	37.5	0.001	0.03	0.69	5.7	1.1	0.8	513	0.01	0.03	8.7
210233		0.32	21.4	600	21.6	33	<0.001	0.05	0.47	6.2	1	0.8	521	<0.01	0.03	6.6
210234		0.18	23.5	680	32.4	25.8	0.001	0.11	0.57	5.4	1.1	0.6	573	0.01	0.04	8.1
210235		0.12	27.3	670	20.8	26.4	<0.001	0.02	0.78	5.9	0.9	0.6	92.9	<0.01	0.03	11.1
210236		0.13	25.9	1000	48.2	29.3	<0.001	0.02	0.94	7	0.8	0.6	144	0.01	0.03	14.5
210237		0.14	25.5	850	29.5	29.5	<0.001	0.03	0.88	6.7	0.9	0.6	160	<0.01	0.03	12.6
210238		0.13	24.9	900	72.1	24.6	<0.001	0.03	0.82	6.6	0.9	0.5	179	<0.01	0.03	12.1
210239		0.24	19.9	550	19.1	24.6	<0.001	0.03	0.4	4.6	0.8	0.6	319	<0.01	0.03	8.3
210240		0.17	27.8	570	19.2	31.8	<0.001	0.03	0.92	6	0.8	0.9	173.5	<0.01	0.04	9
210241		0.22	22.8	710	15.3	29.4	<0.001	0.04	0.32	5.3	1.1	0.7	554	0.01	0.03	8.7
210242		0.13	29.6	520	28.7	29.1	<0.001	0.03	0.42	5	0.9	0.6	237	0.01	0.03	11.4
210243		0.35	22.8	410	17.3	31.4	<0.001	0.03	0.39	5.4	0.6	0.9	47.7	<0.01	0.02	8.4
210244		0.46	18.1	260	8.8	32.6	<0.001	0.02	0.25	3.6	0.4	0.9	29.3	<0.01	0.01	10
210245		0.44	23	560	11.7	26.2	0.001	0.05	0.37	6.4	0.8	1.4	67.6	<0.01	0.03	6.3
210246		0.12	26.1	380	39.3	44.1	<0.001	0.02	0.62	5.3	0.6	0.8	24.2	<0.01	0.02	12.3
210247		0.26	19.1	620	10.6	23.4	<0.001	0.04	0.3	6	0.9	0.6	406	<0.01	0.02	6.7
210248		0.21	19.6	360	13.1	22.8	<0.001	0.02	0.4	4.1	0.5	0.8	26.3	<0.01	0.02	7.7
210249		0.3	17.8	320	11.6	22.7	<0.001	0.02	0.58	4.1	0.5	0.7	32.7	<0.01	0.02	7.5
210250		0.27	19.6	370	15.7	26	<0.001	0.02	0.37	4.5	0.5	0.7	42.6	<0.01	0.02	8.3
210251		0.14	20.6	260	11.4	37.1	<0.001	0.02	0.32	4.8	0.5	1.1	23.5	<0.01	0.02	9.6
210252		0.22	16.9	270	9.6	32	<0.001	0.03	0.37	3.3	0.4	0.8	26.7	<0.01	0.01	11.1
210253		0.17	16.9	640	9.4	21.8	<0.001	0.02	0.33	4.3	0.5	0.7	37.6	<0.01	0.02	5.6
210254		0.18	19.5	280	19	28.1	<0.001	0.02	0.31	4.1	0.5	0.8	27.9	<0.01	0.01	7.5
210255		0.12	18.1	350	17.9	30.6	<0.001	0.02	0.36	4.2	0.4	0.8	27.7	<0.01	0.01	8.8
210256		0.08	18.5	250	9.4	24	<0.001	0.02	0.48	3.1	0.3	0.6	28.1	<0.01	0.01	8.1
210257		0.06	16.9	250	9.8	24.9	<0.001	0.02	0.36	3.1	0.3	0.7	21.6	<0.01	0.01	8.7
210258		0.28	14	230	6.7	26.5	<0.001	0.02	0.5	3	0.3	0.7	21.2	<0.01	0.01	8.8
210259		0.11	24.6	500	24.7	26.7	<0.001	0.03	0.29	4.7	0.6	0.6	123	<0.01	0.02	10
210260		<0.05	28.3	760	60.1	51	<0.001	0.02	0.6	5.5	0.5	0.7	22.5	<0.01	0.01	15
210261		0.06	40	1160	48.4	49.5	<0.001	0.02	0.67	4.7	0.6	0.6	64.6	<0.01	0.02	13.1
210262		0.12	25.2	580	21.4	26.2	<0.001	0.03	0.36	4.5	0.6	0.6	176.5	<0.01	0.02	10.1
210263		0.14	24.1	600	21.4	25.1	<0.001	0.03	0.28	5	0.6	0.6	139	<0.01	0.03	8.8
210264		0.17	21.9	590	19.3	22.3	<0.001	0.03	0.28	4.6	0.5	0.6	88.9	<0.01	0.03	7.9
210265		<0.05	6.4	130	4.7	6	<0.001	0.01	0.21	1.8	0.2	0.3	16.4	<0.01	0.01	3.5
210266		0.23	19.3	700	12.6	21	<0.001	0.05	0.23	4.3	0.7	0.5	253	<0.01	0.02	7.1
210267		0.15	28.5	560	12	30.5	<0.001	0.03	0.29	4.4	0.6	0.6	139.5	<0.01	0.01	11.2
210268		0.17	23.3	620	12.9	24.4	0.001	0.04	0.33	4.5	0.7	0.5	354	<0.01	0.02	9.3
210269		0.12	26	590	19.3	24.5	<0.001	0.03	0.32	4.8	0.7	0.6	152	<0.01	0.02	9.9

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Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210230		0.015	0.33	1.22	38	0.13	9.56	36	15.5	
210231		0.012	0.25	1.11	36	0.13	12.75	53	15.3	
210232		0.012	0.21	1.39	42	0.08	17.9	50	12	
210233		0.011	0.2	1.09	36	0.11	15.45	52	6.3	
210234		0.01	0.15	1.48	38	0.1	19.4	58	8.2	99.0
210235		0.006	0.18	1.19	34	0.05	14.45	48	11.4	
210236		0.006	0.18	1.74	30	0.32	15.2	36	18.6	
210237		0.006	0.21	1.66	31	0.1	13.3	37	12.5	
210238		<0.005	0.15	1.5	24	0.05	15.4	39	11.3	
210239		0.009	0.19	1.21	30	0.11	13.3	46	8.9	
210240		0.01	0.53	1.38	42	0.14	12.65	50	13.5	
210241		0.012	0.15	1.42	37	0.11	16.7	56	6.9	
210242		0.012	0.17	1.21	40	0.06	16	74	15.2	
210243		0.013	0.26	0.87	37	0.09	10.8	48	10.4	
210244		0.016	0.2	1.35	30	0.22	8.12	22	12.2	
210245		0.014	0.32	1.25	47	0.07	15.75	59	9.1	
210246		0.01	0.46	0.92	48	0.11	11.15	62	16.8	
210247		0.008	0.17	1.1	28	0.11	13.05	45	4.7	
210248		0.012	0.34	0.94	32	0.07	8.98	41	10.7	
210249		0.012	0.22	0.82	31	0.1	8.7	35	8.2	
210250		0.012	0.23	0.82	33	0.12	8.73	43	9.4	
210251		0.017	0.35	1.39	40	0.09	10.4	29	16.6	
210252		0.012	0.15	1.13	30	0.12	7.29	22	16.9	
210253		0.012	0.37	0.75	34	0.08	9.02	40	8.5	
210254		0.013	0.44	1.26	32	0.07	11	38	15.4	
210255		0.016	0.44	1.22	37	0.08	10.9	38	14.1	
210256		0.015	0.54	1.13	27	0.11	11.65	28	12.7	
210257		0.012	0.27	1	28	0.05	8.12	25	14.7	
210258		0.018	0.21	1.19	29	0.09	8.64	24	13.2	
210259		0.013	0.16	0.98	42	0.05	13.7	69	11.6	
210260		0.013	0.38	1.01	48	<0.05	11.85	86	20.1	
210261		0.011	0.42	1.71	39	0.05	12	105	14.2	
210262		0.013	0.15	1.15	40	0.06	16.5	69	12	
210263		0.014	0.15	0.91	42	0.05	14.35	68	8.7	
210264		0.012	0.18	0.93	37	0.05	13.55	61	7.7	
210265		0.008	0.09	0.48	16	<0.05	3.93	21	6.3	
210266		0.012	0.12	0.95	37	0.05	13.75	65	5.1	
210267		0.014	0.16	1.16	45	0.05	14.15	79	12	
210268		0.013	0.13	1.22	41	0.06	16.3	72	8.1	
210269		0.012	0.14	1.09	42	0.05	16.5	72	10.4	



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Finalized Date: 12-MAY-2008

Account: MARATH

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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-TL43 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
210270		0.82	0.001	0.03	2.52	2.4	<0.2	<10	170	1.22	0.42	6.98	0.08	59.1	20.6	34
210271		1.00	<0.001	0.03	2.25	2.8	<0.2	<10	230	1.06	0.31	5.77	0.06	60.9	18.9	31
210272		1.74	<0.001	0.04	1.22	3.2	<0.2	<10	330	0.93	0.11	0.81	0.82	33.1	28.1	24
210273		1.43	0.001	0.04	2.47	3.9	<0.2	<10	2190	1.17	0.21	0.98	0.03	61.7	11.3	36
210274		1.85	<0.001	0.02	2.09	5.2	<0.2	<10	360	0.93	0.21	2.57	0.03	58.2	11.2	32
210275		1.64	0.001	0.03	2.12	3.1	<0.2	<10	230	1.09	0.31	0.75	0.04	72.3	14.9	37
210276		1.73	0.001	0.03	1.88	3.8	<0.2	<10	190	0.75	0.21	3.38	0.02	46.9	14	29
210277		1.41	0.001	0.07	4.16	6.8	<0.2	<10	470	1.51	0.64	1.73	0.05	67.3	15.5	44
210278		1.09	0.001	0.06	2.5	6.9	<0.2	<10	1460	1.16	0.35	2.93	0.06	50.5	15.3	40
210279		1.76	0.001	0.03	1.67	4.2	<0.2	<10	210	0.73	0.23	3.4	0.03	44.9	15	27
210280		1.46	0.001	0.03	2.37	6.3	<0.2	<10	250	0.83	0.38	1.98	0.04	45.2	22.2	29
210281		1.74	0.001	0.03	2.08	5.9	<0.2	<10	210	0.95	0.39	1.74	0.03	53.6	13.9	33
210282		1.01	0.001	0.02	2.52	5.3	<0.2	<10	180	1.29	0.36	1.09	0.03	63.9	15	38
210283		1.53	0.001	0.04	2.03	5.6	<0.2	<10	240	0.73	0.44	0.91	0.04	50.1	12.5	19
210284		1.75	<0.001	0.02	2.44	3.4	<0.2	<10	130	1.05	0.23	0.64	0.03	60.5	13.6	41
210285		1.20	0.001	0.02	2.67	5.2	<0.2	<10	150	1.07	0.23	3.9	0.04	53.2	15.1	39
210286		1.70	0.002	0.04	2.13	6	<0.2	<10	240	0.6	0.47	1.61	0.03	60.2	23.3	18
210287		1.35	0.004	0.06	2.55	5.2	<0.2	<10	230	0.62	0.51	1.28	0.04	53.2	17.7	23
210288		1.79	0.001	0.04	1.81	6.5	<0.2	<10	400	0.57	0.5	3.74	0.04	43.8	21.2	18
210289		1.30	0.001	0.03	2.72	10.3	<0.2	<10	370	1.2	0.94	1.91	0.03	62.2	35.3	35
210290		1.35	0.001	0.04	1.63	6.1	<0.2	<10	470	0.72	0.33	3.72	0.03	43.1	12.9	20
210291		1.92	0.001	0.04	1.81	4.1	<0.2	<10	240	0.77	0.21	2.89	0.02	46.3	18.1	24
210292		1.55	0.002	0.02	1.25	3.3	<0.2	<10	300	0.48	0.43	4.55	0.03	42.8	16.9	13
210293		1.31	0.001	0.03	1.81	4.1	<0.2	10	700	0.9	0.28	4.3	0.03	42.1	14.8	24
210294		1.29	0.002	0.03	1.84	4.3	<0.2	<10	400	0.7	0.36	2.64	0.04	46.5	16.9	16
210295		1.40	0.001	0.02	1.17	2.8	<0.2	<10	310	0.56	0.31	7.02	0.04	30	12.4	12
210296		1.43	0.001	0.02	1.03	2.9	<0.2	<10	1370	0.61	0.3	5.55	0.03	33.5	15.2	13
210297		1.52	0.001	0.02	1.04	2.7	<0.2	<10	220	0.56	0.17	5.01	0.03	35.1	9.2	13
210298		1.37	0.001	0.05	1.57	17.8	<0.2	<10	200	0.84	0.14	1.45	0.03	47.9	14.6	20
210299		1.48	0.001	0.03	2.12	10.7	<0.2	<10	240	1.12	0.32	2.76	0.02	58.3	14	27
210300		1.22	0.001	0.02	2.01	4.4	<0.2	<10	250	0.9	0.1	4.74	0.02	44.6	6.5	17
210301		0.39	0.001	0.03	2.91	3.5	<0.2	10	160	1.27	0.38	3.07	0.05	56.5	17.1	36
210302		0.46	0.001	0.03	2.69	4.5	<0.2	10	180	1.26	0.38	4.19	0.05	57.9	16	41
210303		0.72	<0.001	0.03	2.28	5.8	<0.2	<10	200	1.26	0.39	4.15	0.06	54	16.8	29
210304		0.85	0.001	0.04	1.78	6	<0.2	10	480	1.08	0.35	1.36	0.05	48.4	16.6	24
210305		0.47	<0.001	0.02	1.87	2.4	<0.2	10	120	0.74	0.13	0.16	0.01	40.8	6.3	47
210306		0.88	<0.001	0.01	1.37	2.2	<0.2	<10	110	0.59	0.12	0.12	0.01	39.7	5.2	21
210307		1.24	<0.001	0.02	1.59	3.5	<0.2	<10	130	0.63	0.16	0.16	0.06	32.7	8	20
210308		0.63	<0.001	0.03	2.09	6.8	<0.2	10	320	1.16	0.42	2.37	0.09	52	17.1	36
210309		0.79	<0.001	0.05	1.6	15.8	<0.2	<10	270	1.15	0.34	0.2	0.07	51.3	11.6	30



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CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210270		1.17	19.6	3.14	7.85	0.09	0.16	0.02	0.029	0.46	28.3	26.8	1.87	873	0.41
210271		1.24	17.3	2.85	6.61	0.08	0.13	0.02	0.028	0.51	28.1	21.8	1.4	1040	0.57
210272		0.52	21	1.98	3.51	0.06	0.32	0.02	0.015	0.21	14.7	6.8	0.13	1270	2.93
210273		1.68	10.1	3.79	8.04	0.12	0.38	0.01	0.049	0.42	29.3	26.4	1.76	649	0.68
210274		1.13	16.4	3.06	7.13	0.11	0.36	0.01	0.027	0.32	27.4	25.4	2.04	1250	0.57
210275		1.47	34.7	4.08	6.37	0.11	0.5	0.01	0.051	0.53	33.4	15.4	1.1	1110	1.3
210276		1.07	33.3	3.69	5.81	0.09	0.45	0.01	0.04	0.41	22.3	14.2	1.82	712	0.76
210277		1.26	24.2	4.24	11.9	0.14	0.42	0.02	0.033	0.37	31.6	50.9	4.57	655	0.93
210278		1.56	30.3	3.57	8.51	0.1	0.2	0.02	0.037	0.34	24.1	33	2.6	964	3.25
210279		0.93	33.6	3.84	5.27	0.09	0.37	0.01	0.041	0.3	21.1	13.7	1.79	768	0.79
210280		1.42	33.6	4.99	7.19	0.12	0.35	0.02	0.046	0.29	20.2	15.6	1.16	976	0.84
210281		0.86	23.6	3.83	6.64	0.1	0.33	0.01	0.038	0.26	24.5	26.2	1.85	1200	2.32
210282		0.92	38.1	3.55	7.98	0.11	0.39	0.01	0.036	0.44	29.9	42.9	2.53	1140	1.16
210283		1.36	10.1	4.32	5.65	0.1	0.28	0.01	0.048	0.2	22.5	8.9	0.77	1300	0.79
210284		0.77	16	3.45	6.87	0.11	0.33	0.01	0.032	0.37	28	35.9	2.36	853	1.9
210285		1.06	23	3.76	7.9	0.1	0.23	0.01	0.029	0.35	24.9	30.8	2.08	713	0.67
210286		1.2	9.1	4.81	5.44	0.12	0.28	0.01	0.042	0.21	27.8	6.1	0.51	1180	1.16
210287		1.38	9	4.44	6.38	0.11	0.27	0.02	0.047	0.26	24.1	7.8	0.49	1130	2.08
210288		0.97	9.3	6.05	5.23	0.1	0.19	0.01	0.073	0.13	20.1	4.6	0.75	2280	1.19
210289		1	42.1	5.56	8.13	0.12	0.32	0.01	0.042	0.33	28.6	33.9	2.19	1230	1.47
210290		0.99	6.7	3.73	5.25	0.06	0.41	0.02	0.06	0.28	19.4	7.4	0.82	1360	2.36
210291		0.99	36	3.27	6.19	0.07	0.34	0.01	0.04	0.29	20.4	15.3	1.66	729	0.73
210292		0.63	5.8	4.13	3.93	0.06	0.37	0.01	0.062	0.15	19.5	5.2	0.79	1620	1.32
210293		1.02	8.5	3.99	5.72	0.06	0.39	0.02	0.072	0.35	18.4	12.9	1.37	1770	2.7
210294		0.9	8.9	4.28	5.13	0.07	0.2	0.01	0.054	0.23	19.9	7.2	0.55	1460	0.98
210295		0.55	5.6	4.61	3.32	0.06	0.2	0.02	0.078	0.17	12.9	4.6	0.96	2210	1.3
210296		0.66	6.6	4.5	2.91	0.06	0.15	0.02	0.114	0.23	13.9	3.8	1.48	2720	2.31
210297		0.59	5.1	3.56	2.99	0.05	0.15	0.04	0.079	0.21	15.2	4.1	1.98	1900	0.86
210298		0.98	37.8	3.84	5.11	0.06	0.3	0.03	0.039	0.27	20.6	15.4	0.77	694	0.57
210299		0.87	14.1	3.62	7.98	0.07	0.4	0.01	0.068	0.2	24.9	21.1	2.19	1240	2.13
210300		0.92	5.9	3.62	6.7	0.06	0.18	0.02	0.096	0.23	19.1	11.9	1.1	1190	0.87
210301		1.34	19.3	3.43	8.41	0.07	0.23	0.02	0.031	0.52	25.6	24.9	1.06	725	0.73
210302		1.48	17.7	3.49	8.12	0.07	0.24	0.02	0.031	0.52	25.5	23	0.97	757	2.73
210303		1.18	21.6	3.38	6.94	0.07	0.17	0.02	0.03	0.42	24.3	22.1	0.87	865	0.55
210304		0.95	21.1	3.76	5.6	0.07	0.13	0.04	0.073	0.4	22	16.9	0.56	1930	1
210305		1.5	9.8	2.59	4.95	0.05	0.3	0.01	0.022	0.52	18.4	5.2	0.18	241	6.82
210306		1.2	7.9	2.1	3.87	0.05	0.23	0.01	0.02	0.36	17.8	4.4	0.15	195	0.59
210307		1.24	16.1	2.37	4.56	0.05	0.14	0.02	0.025	0.31	14.3	8.1	0.26	554	0.68
210308		1.1	19.7	3.91	6.31	0.07	0.16	0.04	0.045	0.44	23.6	18.7	0.68	1650	3.47
210309		1.37	20.3	3.27	5.77	0.07	0.16	0.03	0.06	0.38	22.3	11	0.44	1240	1.21



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		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
210270		0.23	22.8	650	16.9	31.3	<0.001	0.03	0.36	5.4	0.7	0.7	119	<0.01	0.01	8.6
210271		0.18	20.2	1000	12	31.1	<0.001	0.03	0.36	5.1	0.6	0.7	168	<0.01	0.01	8.4
210272		0.07	36.5	920	16.5	12.9	<0.001	0.02	0.29	3.1	0.4	0.5	39	<0.01	0.01	5
210273		0.09	28.1	330	7.4	28.1	0.001	0.07	0.63	7.1	0.5	0.6	47.3	<0.01	0.03	10.3
210274		0.06	23.1	610	6.4	20.4	<0.001	0.02	0.45	5	0.4	0.5	32.4	<0.01	0.03	7.9
210275		<0.05	25.7	280	8	33.4	0.001	0.01	0.48	5.7	0.4	0.6	15.3	<0.01	0.03	11
210276		0.08	23.2	370	4.8	23.4	<0.001	0.02	0.6	7.5	0.5	0.5	34.7	<0.01	0.03	6.8
210277		0.09	25.1	380	20.8	22.3	0.001	0.03	0.44	6.8	0.5	0.7	23	<0.01	0.04	10.3
210278		0.18	23.1	390	14.3	22.7	0.001	0.06	0.41	5.9	0.6	0.7	43.5	<0.01	0.03	7.7
210279		0.09	23.6	380	5.1	18	<0.001	0.02	0.62	7.6	0.5	0.4	35	0.01	0.03	6.7
210280		0.18	32.4	330	6.6	21.4	<0.001	0.02	0.69	8.4	0.7	0.6	25.1	<0.01	0.03	6.6
210281		0.06	29.5	300	5.6	16.4	<0.001	0.02	0.6	5.7	0.5	0.5	20	<0.01	0.04	7.1
210282		0.06	29.8	350	4.1	25.9	<0.001	0.01	0.56	5.3	0.6	0.6	20.4	<0.01	0.03	7.8
210283		0.05	27.8	330	6.7	14.1	<0.001	0.03	0.6	6.9	0.5	0.3	15.1	<0.01	0.04	7.1
210284		0.08	26.2	280	4.3	20.7	<0.001	0.03	0.53	4.9	0.3	0.6	14	<0.01	0.03	7.2
210285		0.15	26.1	350	6.5	21.6	<0.001	0.03	0.43	6	0.6	0.7	29.9	<0.01	0.03	7
210286		0.07	26.5	320	8.2	14.3	<0.001	0.02	0.52	6.9	0.6	0.3	19.2	<0.01	0.04	8
210287		0.06	26.4	270	9.4	18.4	0.001	0.02	0.43	7.7	0.5	0.5	20.2	<0.01	0.06	7.7
210288		0.05	37.2	360	6.6	7.9	0.001	0.03	0.57	9.5	0.7	0.2	30.9	<0.01	0.04	8.3
210289		0.09	42.8	330	7.4	22.3	<0.001	0.02	0.89	7.1	2.2	0.6	21	<0.01	0.08	7.8
210290		0.05	29.2	320	4.9	15.8	0.001	0.02	0.36	9.1	0.7	0.4	43.1	<0.01	0.05	6.9
210291		0.16	27.1	320	5.9	18.2	<0.001	0.02	0.46	8.1	0.6	0.5	44.7	<0.01	0.03	6
210292		<0.05	32.1	460	4.1	8.2	<0.001	0.02	0.29	9.6	0.7	0.2	45.2	<0.01	0.05	6.5
210293		0.06	30.8	320	4.5	17.5	0.001	0.03	0.35	9.2	0.8	0.4	62.4	<0.01	0.04	6.4
210294		0.1	28.9	280	7	13.8	<0.001	0.02	0.25	7.9	0.8	0.4	34.1	<0.01	0.05	6.3
210295		0.07	30.2	390	4.6	8.8	0.001	0.03	0.18	8.6	0.9	0.2	70.5	<0.01	0.05	5.3
210296		0.06	28	320	4.2	10.5	0.001	0.05	0.2	7.8	1	0.3	86.6	<0.01	0.04	5
210297		0.08	21.9	390	3.7	9.7	<0.001	0.02	0.21	9.6	0.7	0.3	73	<0.01	0.04	5.2
210298		0.08	27.2	300	8.6	16.8	<0.001	0.02	0.59	8.9	0.6	0.4	27.4	<0.01	0.03	6.7
210299		<0.05	31.3	350	5	11.2	0.001	0.02	0.83	7.2	0.8	0.4	50.1	<0.01	0.06	8.1
210300		0.06	27.5	260	3	12.6	<0.001	0.02	0.29	7.8	0.6	0.4	56.7	<0.01	0.03	6.5
210301		0.28	26.9	440	8.6	33.4	<0.001	0.03	0.54	5.7	0.8	0.9	77.2	<0.01	0.02	7.9
210302		0.22	25.2	410	8.9	34.3	<0.001	0.02	0.73	5.4	0.8	1	122	<0.01	0.02	8.5
210303		0.24	25.6	490	8.8	26.5	<0.001	0.02	1.17	5	0.7	0.7	123	<0.01	0.03	7.8
210304		0.2	25.4	510	7	22	<0.001	0.03	0.73	5.4	0.7	0.6	75.9	<0.01	0.03	6.7
210305		0.4	14.6	160	5.5	28.8	0.001	0.01	0.58	3.2	0.4	1.2	21.4	<0.01	0.02	6
210306		0.43	10.9	140	5	20.9	<0.001	0.01	0.52	2.7	0.4	0.7	19.1	<0.01	0.01	5.7
210307		0.23	14.2	280	6.3	22.6	<0.001	0.01	0.55	3.9	0.4	0.6	20	<0.01	0.02	4.6
210308		0.21	27.3	530	8.2	27	0.001	0.02	0.87	5.4	0.8	0.8	79.3	<0.01	0.02	7.8
210309		0.26	22.6	460	9.8	22.6	<0.001	0.02	1.42	5.9	0.6	0.7	36.1	<0.01	0.03	6.3



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Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210270		0.014	0.16	1.01	42	0.09	15.8	75	8.1	
210271		0.012	0.22	1.08	37	0.16	12.65	65	6.6	
210272		0.012	1.14	1.22	23	0.08	11.25	127	11.8	
210273		0.017	0.13	1.21	64	0.14	7.18	32	18.2	
210274		0.013	0.14	0.92	57	0.45	6.66	23	14	96.0
210275		0.02	0.18	1.01	64	0.07	6.81	39	21.7	
210276		0.044	0.12	0.8	82	0.09	8.32	20	18.8	
210277		0.016	0.13	0.82	75	0.09	6.99	34	16.5	
210278		0.016	0.16	0.85	56	0.07	7.4	34	9.3	
210279		0.044	0.11	0.77	83	0.08	7.86	20	15.6	
210280		0.128	0.15	0.85	106	0.07	8.65	24	14	
210281		0.01	0.14	1	53	0.09	6.04	25	14	
210282		0.014	0.15	1.18	54	0.16	6.26	33	15.5	
210283		0.008	0.15	0.95	46	0.07	5.7	19	12.2	
210284		0.016	0.12	0.97	57	0.12	5.3	32	12.1	
210285		0.016	0.15	0.92	75	0.11	7.25	36	10.5	
210286		0.039	0.16	0.73	59	0.06	5.98	18	12.3	
210287		0.025	0.18	0.66	55	<0.05	6.31	21	11.8	
210288		0.023	0.14	1.72	57	0.05	6.06	16	10.1	
210289		0.026	0.17	1.22	80	0.14	7.71	28	14.3	
210290		0.005	0.11	1.15	44	<0.05	6.17	11	18.1	
210291		0.029	0.11	0.69	71	0.06	7.82	20	14.3	
210292		<0.005	0.09	1.1	36	0.07	5.71	10	16.3	
210293		0.006	0.11	1.17	47	<0.05	6.74	14	17.4	
210294		0.008	0.11	0.8	43	<0.05	6.81	22	9.6	
210295		<0.005	0.08	1.05	30	0.06	5.67	18	10.3	
210296		<0.005	0.09	0.97	30	<0.05	6.91	13	7.6	
210297		<0.005	0.08	1	32	0.05	6.31	11	7.9	
210298		0.008	0.12	0.63	68	0.08	7.15	17	14.3	
210299		0.005	0.26	1.25	47	0.05	5.92	16	16.5	
210300		<0.005	0.14	0.83	41	0.05	5.34	14	8.3	
210301		0.013	0.19	0.76	41	0.25	11.6	51	9.3	
210302		0.012	0.22	0.87	41	0.08	11.2	48	10.7	
210303		0.01	0.21	0.92	36	0.14	11.55	50	7.7	
210304		0.007	0.28	1.11	32	0.2	9.47	30	6	
210305		0.014	0.12	0.91	29	0.15	6.13	10	11.3	
210306		0.012	0.1	0.82	25	0.2	5.31	9	9.3	
210307		0.016	0.16	0.5	36	0.13	6.16	27	6.1	
210308		0.01	0.34	1.1	36	0.12	10.75	44	7.5	
210309		0.018	0.71	1.02	47	0.18	7.55	35	7	



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-TL43 Au ppm 0.001	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.2	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1
210310		1.19	<0.001	0.02	1.82	2.3	<0.2	<10	150	1.32	0.26	0.11	0.03	76.8	11.2	29
210311		0.51	<0.001	0.04	2.94	7.4	<0.2	<10	310	1.36	0.4	1.32	0.03	61.7	16.9	51
210312		1.16	0.007	0.05	1.65	16.6	<0.2	<10	320	0.94	0.33	3.12	0.06	39.1	17.2	37
210313		0.94	0.012	0.04	1.65	14.8	<0.2	<10	280	0.92	0.19	3.23	0.06	40.4	16.6	35
210314		1.40	0.001	0.03	2.25	6.7	<0.2	<10	810	0.68	0.16	0.8	0.07	26.8	27.6	25
210315		0.95	0.009	0.05	2.32	9.9	<0.2	<10	200	1.74	0.18	0.2	0.08	43.4	14.4	23
210316		0.78	0.008	0.04	1.87	10	<0.2	<10	360	1.07	0.37	0.89	0.05	51	18	28
210317		0.54	0.010	0.03	2.28	6.4	<0.2	<10	270	1.11	0.43	2.72	0.04	59.2	18	38
210318		0.61	<0.001	0.03	1.25	5.4	<0.2	<10	230	0.74	0.14	0.1	0.03	29	8.4	19
210319		1.34	<0.001	0.02	0.94	2.5	<0.2	<10	120	0.53	0.11	0.07	0.02	25	5.1	14
210320		1.21	<0.001	0.03	1.45	8.2	<0.2	10	1140	0.7	0.22	0.36	0.04	47.3	14.1	33
210321		1.22	0.012	0.04	1.68	12.5	<0.2	10	170	0.84	0.34	0.21	0.08	37.3	13	19
210322		0.75	0.067	0.04	2.79	6.8	<0.2	10	2730	1.12	0.26	0.82	0.03	47.4	22.9	40
210323		1.23	0.007	0.04	1.21	2.8	<0.2	10	520	0.47	0.18	4.09	0.03	45.1	57.8	36
210324		1.20	<0.001	0.04	1.25	3	<0.2	10	450	0.44	0.18	4.73	0.03	46.7	48.4	25
210325		0.92	0.002	0.02	2.39	6.3	<0.2	10	360	0.67	0.16	1.1	0.02	30.8	41.2	38
210326		0.87	0.015	0.02	1.55	7.6	<0.2	10	480	0.86	0.19	1.12	0.03	38.9	30.2	37
210327		0.82	0.011	0.03	1.39	6.5	<0.2	10	180	1.18	0.15	0.32	0.03	30.5	8.8	21
210328		1.19	0.010	0.03	1.45	4.9	<0.2	10	290	0.72	0.21	1.57	0.02	40	21.9	26
210329		1.38	0.003	0.02	2.11	6.7	<0.2	<10	100	0.83	0.1	1.09	0.02	32.3	33.4	40
210330		1.24	<0.001	0.02	2.07	3.7	<0.2	10	110	0.77	0.1	1.5	0.02	29.7	21.8	25
210331		1.32	0.004	0.02	1.58	3.3	<0.2	<10	100	0.6	0.12	0.31	0.03	25.7	64.3	25
210332		1.12	0.009	0.04	1.77	8.3	<0.2	10	610	0.86	0.34	0.52	0.04	37.5	24.3	41
210333		1.03	0.008	0.05	1.99	31.9	<0.2	10	350	1.14	1.1	0.54	0.06	65.5	62	26
210334		1.01	0.012	0.04	1.78	8.4	<0.2	10	220	1.02	0.31	0.26	0.12	49.2	21.5	24
210335		1.50	<0.001	0.02	1.65	4.1	<0.2	10	130	0.7	0.17	0.24	0.02	27.9	22.5	33
210336		0.82	0.002	0.09	1.92	5.1	<0.2	10	170	0.82	0.29	0.66	0.05	36.8	18.3	33
210337		0.67	0.002	0.04	1.91	5.3	<0.2	10	300	0.84	0.22	1.25	0.03	42	21.6	27
210338		0.90	0.014	0.03	1.43	6	<0.2	10	320	0.77	0.21	0.37	0.02	35.2	21.1	28
210339		1.27	0.009	0.03	1.62	5.5	<0.2	10	230	0.8	0.22	0.69	0.04	37.2	19.6	26
210340		1.28	0.010	0.03	1.6	6.1	<0.2	10	230	0.73	0.3	0.86	0.03	35.1	17.6	26
210341		1.19	0.002	0.03	2.27	5.8	<0.2	10	1530	1.14	0.36	1.53	0.05	42.5	28.5	38
210342		0.87	0.001	0.04	1.54	13.1	<0.2	10	280	1.01	0.68	0.45	0.04	64.1	22.7	21
210343		1.14	0.001	0.04	1.68	21.3	<0.2	10	430	0.99	0.86	0.71	0.05	60.2	32.9	22
210344		1.00	0.011	0.02	1.43	13	<0.2	10	920	0.85	0.51	0.99	0.04	47.2	15.2	29
210345		1.06	0.011	0.02	1.46	10	<0.2	10	3440	0.74	0.38	0.91	0.04	39.7	15.9	23
210346		0.98	0.003	0.04	2.88	55	<0.2	10	220	0.98	3.24	1.18	0.05	58.6	48.5	39
210347		0.97	<0.001	0.02	1.25	6.6	<0.2	10	1890	0.71	0.29	0.92	0.04	37.3	13.2	25
210348		1.05	<0.001	0.02	1.09	3.1	<0.2	10	4290	0.66	0.14	0.8	0.03	34.9	9.1	18
210349		1.17	0.010	0.03	1.54	15.2	<0.2	10	3580	0.83	0.57	0.88	0.05	44.7	26.4	24



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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210310		3.08	12.6	3.09	5.58	0.09	0.49	0.01	0.031	0.61	36.5	7.4	0.25	328	0.45
210311		2.4	19.2	4.15	9.17	0.1	0.55	0.03	0.051	1.02	29.8	21.6	0.66	1530	4.34
210312		1.92	23.5	3.85	6.29	0.09	0.29	0.04	0.034	0.42	18.8	14.7	2.14	2000	0.88
210313		2.12	23	3.55	6.4	0.09	0.28	0.03	0.033	0.42	19.6	15.1	2.21	1830	0.82
210314		1.99	58.6	5.55	7.68	0.11	0.39	0.01	0.066	0.34	11.2	12.7	0.79	2030	1.09
210315		2.9	31.1	2.65	6.38	0.07	0.32	0.07	0.052	0.43	19.4	11.2	0.31	938	0.55
210316		1.46	25.3	4.28	6.15	0.09	0.4	0.03	0.046	0.53	24.6	15.1	0.62	1850	0.86
210317		1.34	20.1	3.96	7.54	0.09	0.34	0.02	0.041	0.53	28.6	22.2	0.85	1430	2.39
210318		0.9	14.4	2.46	3.6	0.05	0.23	0.02	0.024	0.37	13.4	4.4	0.11	723	0.71
210319		0.74	8.3	1.61	2.6	<0.05	0.21	0.01	0.017	0.28	11.5	3.2	0.08	361	0.49
210320		1.76	14.5	4.18	6.09	0.07	0.32	0.04	0.086	0.28	19.7	9.6	0.51	1590	1.88
210321		2.65	37.9	2.6	5.22	0.07	0.33	0.05	0.051	0.39	16.2	9.2	0.26	925	0.82
210322		2.48	44.3	5.11	10.1	0.1	0.55	0.03	0.085	0.65	21.4	25.1	1.35	1655	0.85
210323		0.67	25.9	4.23	4.93	0.08	0.4	0.03	0.04	0.22	21	10.4	1.88	685	3.08
210324		0.63	16.7	3.37	4.61	0.07	0.31	0.03	0.037	0.26	22.2	9.4	1.43	641	0.92
210325		2.51	43.2	9.21	9.15	0.13	0.37	0.03	0.042	0.3	12	19	1.45	647	0.51
210326		2.35	78	5.43	7.28	0.08	0.38	0.03	0.053	0.34	17.2	16	1.21	968	1.97
210327		1.49	26.8	2.79	4.26	0.06	0.21	0.07	0.041	0.42	13.7	5.6	0.21	311	0.71
210328		1.58	38.3	3.98	5.91	0.07	0.4	0.02	0.049	0.31	17.8	13.3	1.11	775	0.69
210329		2.58	297	8.03	10.95	0.14	0.71	0.02	0.068	0.44	12.2	18.1	1.05	507	1.19
210330		3.49	69.2	4.16	7.67	0.08	0.43	0.03	0.037	0.27	10.7	15.6	0.93	563	0.36
210331		2.43	38.1	6.46	6.57	0.08	0.35	0.02	0.026	0.3	10.3	12.4	0.69	437	0.52
210332		1.35	95.7	4.81	6.66	0.07	0.42	0.02	0.062	0.34	16.9	23.9	1.18	1050	1.74
210333		1	52.8	6.51	6.8	0.1	0.46	0.02	0.079	0.34	28	14.5	0.52	1540	1.32
210334		2.9	92.6	4.41	7.35	0.07	0.42	0.03	0.053	0.47	21.2	15.6	0.66	1265	0.83
210335		2.24	69.5	4.62	6.38	0.07	0.35	0.01	0.038	0.34	11.2	14	0.72	469	1.34
210336		1.54	74.3	4.01	6.94	0.07	0.33	0.02	0.043	0.39	15.9	19.2	0.84	681	0.61
210337		1.83	47.3	3.95	7.28	0.07	0.4	0.02	0.057	0.41	19	15.2	0.95	793	0.73
210338		1.29	33.9	3.71	5.29	0.07	0.33	0.02	0.04	0.34	16.1	10.8	0.5	705	2.39
210339		2.1	76.3	4.17	6.83	0.07	0.37	0.02	0.047	0.32	16.1	22.6	1.03	683	0.62
210340		1.51	61.6	3.56	6.36	0.07	0.35	0.01	0.046	0.33	16.1	16.6	0.89	634	0.61
210341		2.17	125.5	4.96	8.75	0.09	0.32	0.03	0.057	0.28	18.9	33.9	1.81	1155	1.76
210342		0.77	34.5	3.88	5.51	0.08	0.53	0.02	0.068	0.41	28.5	11.3	0.4	1230	0.81
210343		0.86	41	4.68	5.7	0.08	0.42	0.03	0.076	0.38	26.3	12.2	0.43	1485	1.01
210344		0.8	28.4	3.02	5.15	0.07	0.42	0.02	0.04	0.36	21.5	13.4	0.69	1060	2.76
210345		0.81	20.4	3.48	4.6	0.06	0.32	0.01	0.036	0.33	17.7	11.5	0.78	1705	0.77
210346		0.94	47.6	5.55	7.71	0.09	0.33	0.01	0.042	0.36	24	21.3	0.96	983	1.43
210347		0.73	16.6	2.86	4.08	0.06	0.29	0.02	0.038	0.37	17	9	0.66	1725	2.48
210348		0.74	9.7	3.39	3.66	0.06	0.19	0.02	0.038	0.32	15.9	8.3	0.55	2960	0.67
210349		0.89	28.9	4.28	5.36	0.07	0.38	0.02	0.042	0.34	19.6	13.5	0.84	2590	1.04



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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01
210310		0.33	17.6	230	5.8	43.5	<0.001	0.02	0.61	4.4	0.4	0.9	27.7	<0.01	0.03
210311		0.19	27.8	460	8	63.3	<0.001	0.03	1.12	7	0.6	1.3	49.8	<0.01	0.02
210312		0.18	28	380	6.3	32.3	<0.001	0.02	0.92	8.2	0.7	0.6	49.2	<0.01	0.04
210313		0.15	27.6	380	5.6	33.4	<0.001	0.02	0.74	8.5	0.7	0.6	50	<0.01	0.03
210314		0.16	30.4	360	8.4	33.5	<0.001	0.02	1.42	11.8	0.6	0.6	29.4	<0.01	0.02
210315		0.19	18.4	270	10	45.7	<0.001	0.02	0.6	6.2	0.5	0.8	30.7	<0.01	0.08
210316		0.13	26	420	8	34.2	<0.001	0.02	1.35	5.9	0.6	0.6	34.8	<0.01	0.02
210317		0.15	29.2	530	8.9	35.7	<0.001	0.03	0.8	5.9	0.6	0.7	77.3	<0.01	0.02
210318		0.37	13.5	180	5.8	21.8	<0.001	0.02	0.9	3.1	0.4	0.6	17.7	<0.01	0.02
210319		0.22	8.5	140	4.6	16	<0.001	0.02	0.47	2.1	0.2	0.5	13.7	<0.01	0.01
210320		0.1	27.8	350	8.1	22.8	0.001	0.02	1.44	8.3	0.6	0.9	28.9	<0.01	0.02
210321		0.3	19.8	220	19	33	<0.001	0.02	0.44	5.4	0.6	0.8	31.7	<0.01	0.02
210322		0.15	32.1	330	8.7	41.9	0.001	0.07	1.6	9.6	0.7	1.3	84.1	0.01	0.02
210323		0.14	62.1	240	8.4	13.7	0.001	0.02	0.63	9.5	1.1	0.6	45.4	<0.01	0.03
210324		0.18	49.4	260	7.6	15	0.001	0.02	0.42	7.8	1	0.5	46.6	<0.01	0.03
210325		0.17	41.2	230	6.2	30.5	0.001	0.01	1.07	14.2	0.6	1	22.4	0.01	0.01
210326		0.17	27.2	370	8.9	38.5	0.001	0.02	1.12	8.4	1	0.9	30.1	<0.01	0.03
210327		0.63	15.7	280	12.3	25.7	0.001	0.02	0.56	4.2	0.6	0.8	35.7	<0.01	0.01
210328		0.1	28.3	280	7.6	24.5	0.001	0.01	1.04	7.6	0.6	0.6	27.2	<0.01	0.02
210329		0.3	29	870	7.1	41.8	0.001	0.01	0.82	13.8	1.1	1.2	22.6	0.01	0.01
210330		0.27	23.7	220	9	24.4	0.001	0.01	1.77	7.9	0.7	1.1	36.7	<0.01	0.02
210331		0.14	26.3	290	7.2	35.3	<0.001	0.01	1.01	7.1	0.6	0.8	16.9	<0.01	0.03
210332		0.08	35.7	330	7.2	23	0.001	0.02	1.12	7.1	0.6	0.6	27.7	<0.01	0.04
210333		0.08	53.2	350	27.1	19.7	0.001	0.01	2.13	6.7	1.6	0.7	23.3	<0.01	0.09
210334		0.11	27.2	360	14.2	49.1	0.001	0.01	0.88	8.7	0.8	0.9	25.4	<0.01	0.03
210335		0.12	24.6	250	7.1	30.8	<0.001	<0.01	1.04	7.1	0.5	0.8	18.3	<0.01	0.01
210336		0.19	27.5	290	8.7	30.5	<0.001	0.01	0.61	7.8	0.6	0.8	25.3	<0.01	0.02
210337		0.17	28.2	310	8.3	31.4	<0.001	0.01	0.9	8.4	0.7	0.8	29.7	<0.01	0.02
210338		0.24	23	250	7.4	24	0.001	0.01	0.96	5.7	0.6	0.8	20.1	<0.01	0.01
210339		0.11	27.6	350	8.1	29.8	<0.001	0.01	0.91	7.8	0.6	0.7	22.5	<0.01	0.02
210340		0.12	24.8	290	7.3	25.5	<0.001	0.01	0.69	7.3	0.5	0.6	26.5	<0.01	0.02
210341		0.12	34.8	360	8.1	24	0.001	0.04	0.96	9.7	0.9	0.7	51.1	<0.01	0.04
210342		0.06	27.7	280	12.1	21.2	0.001	0.01	1.08	5.2	0.7	0.6	16.3	<0.01	0.05
210343		0.07	34.1	340	14.7	20.6	<0.001	0.01	1.45	5.8	1	0.6	22	<0.01	0.07
210344		0.07	24.3	260	9.5	20.9	0.001	0.02	1.06	4.4	0.6	0.7	31.3	<0.01	0.03
210345		0.09	23.2	290	9.2	17.3	0.001	0.08	0.76	3.9	0.6	0.6	51.9	<0.01	0.02
210346		0.07	58.1	310	26.3	20.1	<0.001	0.01	3.37	5.4	3.2	0.7	25.9	<0.01	0.07
210347		0.08	18.1	280	5.3	17.9	0.001	0.04	0.52	4.2	0.5	0.6	47.5	<0.01	0.02
210348		0.17	14.6	260	5.7	16.2	0.001	0.09	0.32	3.9	0.4	0.7	73.3	<0.01	0.02
210349		0.09	32.5	300	13	19.8	0.001	0.08	1.05	4.4	1	0.7	71.3	<0.01	0.04

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Finalized Date: 12-MAY-2008

Account: MARATH

Project: 3159/2

CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210310		0.02	0.22	1.72	37	0.25	9.09	15	15.3	
210311		0.02	0.52	1.26	51	0.16	10.5	38	19	
210312		0.034	0.39	0.75	73	0.13	10.2	24	11.2	
210313		0.033	0.35	0.7	69	0.13	10.35	23	10.7	
210314		0.123	0.31	0.44	175	0.07	10.75	43	11.8	97.0
210315		0.011	0.28	0.68	47	0.06	12.2	33	10.1	
210316		0.035	0.52	1.14	63	0.2	9.59	35	14.4	
210317		0.015	0.32	1.04	43	0.09	11.75	52	13.9	
210318		0.016	0.22	1.16	31	0.28	7.07	12	8.1	
210319		0.009	0.12	0.79	18	0.15	4.23	9	6.9	
210320		0.016	0.45	0.64	88	0.08	9.06	20	14.8	
210321		0.011	0.29	0.59	34	0.06	9.66	25	13.7	
210322		0.083	0.43	0.96	117	0.13	10.7	26	22.9	
210323		0.043	0.08	0.6	97	0.07	9.64	3	18.7	
210324		0.024	0.08	0.6	68	0.1	9.68	2	15.7	
210325		0.126	0.29	0.36	292	0.11	10.1	11	14.9	
210326		0.061	0.34	0.76	150	0.12	9.53	16	17.3	
210327		0.01	0.14	1.67	29	0.21	9.14	12	9.3	
210328		0.043	0.21	0.67	92	0.09	8.74	19	17.1	
210329		0.275	0.16	0.36	292	0.06	15.15	20	27.7	
210330		0.134	0.14	0.44	126	<0.05	10.55	27	17.8	
210331		0.083	0.12	0.35	206	0.05	6.52	18	15.5	
210332		0.041	0.16	0.91	105	0.07	7.18	19	18.6	
210333		0.01	0.24	1.39	66	0.07	12.35	22	22.9	
210334		0.037	0.17	0.99	111	0.08	9.37	30	19.1	
210335		0.059	0.13	0.56	135	0.06	6.97	18	14.5	
210336		0.027	0.13	0.69	92	0.08	7.79	24	15.2	
210337		0.052	0.24	0.75	91	0.1	9.88	17	18.2	
210338		0.047	0.26	0.75	78	0.07	8.01	19	15.2	
210339		0.042	0.17	0.67	101	0.07	8.57	22	16.3	
210340		0.035	0.17	0.61	82	0.07	8.83	18	15.4	
210341		0.033	0.15	0.82	128	0.07	8.09	30	15.4	
210342		0.007	0.18	1.12	41	0.09	9.06	7	24.9	
210343		0.007	0.2	1.11	47	0.08	10.6	10	22.1	
210344		0.007	0.17	0.89	40	0.09	8.58	7	21.9	
210345		0.009	0.17	0.75	46	0.17	7.24	10	16.4	
210346		0.008	0.17	0.69	88	0.05	13.1	37	15.8	
210347		0.007	0.18	0.8	36	0.09	6.62	9	15.4	
210348		0.012	0.21	0.86	44	0.23	6.13	7	10.4	
210349		0.011	0.23	0.97	59	0.18	8.13	14	19.5	



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Account: MARATH

Project: 3159/2

CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-TL43 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
210350		1.13	0.012	0.04	1.18	6.7	<0.2	10	2690	0.75	0.33	4.42	0.07	37.1	21.5	19
210351		0.95	0.013	0.02	1.27	3.4	<0.2	10	1490	0.74	0.24	1.69	0.07	43.1	9.6	18
210352		1.27	0.001	0.03	1.33	2.6	<0.2	10	740	0.71	0.19	0.54	0.04	33.4	8.8	20
210353		1.10	0.001	0.03	1.07	3.2	<0.2	10	2130	0.72	0.15	0.96	0.12	34.7	8.3	25
210354		0.87	0.017	0.03	1.45	38.3	<0.2	10	2600	1.29	0.73	1.17	0.05	49.9	18.6	18
210355		0.99	0.001	0.03	1.57	10.6	<0.2	10	300	0.91	0.4	1.47	0.03	51.9	14.8	17
210356		0.90	0.001	0.02	1.26	5.5	<0.2	10	490	0.87	0.28	1.18	0.03	43.1	10.2	23
210357		1.01	0.007	0.03	1.76	14.7	<0.2	<10	240	0.96	0.43	0.51	0.05	50	18.1	28
210358		1.10	0.012	0.03	1.9	8.7	<0.2	10	310	1.08	0.47	0.46	0.03	44.9	15.5	25
210359		1.35	0.010	0.03	1.5	5.5	<0.2	10	210	0.75	0.2	1.28	0.03	36.1	12.2	23
210360		0.94	0.001	0.04	2.3	7.3	<0.2	10	210	1.19	0.44	0.42	0.04	56.5	17	31
210361		1.19	0.001	0.04	2.05	9.3	<0.2	<10	250	1.19	0.51	0.52	0.04	58.6	16.8	28
210362		1.15	0.001	0.04	1.61	6.1	<0.2	10	810	0.98	0.4	1.03	0.02	50.3	13.3	27
210363		1.16	0.011	0.04	2.01	8.4	<0.2	<10	390	1.25	0.54	0.5	0.04	53.1	20	27
210364		1.07	0.016	0.03	2.65	6.6	<0.2	<10	290	1.42	0.52	0.28	0.04	60.5	19.3	36
210365		1.05	0.002	0.04	3.09	7.5	<0.2	10	210	1.67	0.42	0.5	0.04	59.1	22.2	39
210366		1.25	0.001	0.02	2.97	3.9	<0.2	10	120	1.45	0.32	1.03	0.02	49.2	15.9	35
210367		0.94	0.002	0.02	3.08	2.9	<0.2	10	200	1.44	0.29	1.43	0.02	54.1	18.1	39
210368		1.21	0.001	0.05	1.04	3.3	<0.2	<10	670	0.48	0.25	5.02	0.02	37.5	52.5	24
210369		1.14	0.017	0.07	1.23	8.1	<0.2	<10	3240	0.63	0.28	4.1	0.03	37.8	145.5	33
210370		1.05	0.017	0.04	1.24	4	<0.2	<10	810	0.56	0.19	4.57	0.01	40.4	42.6	27
210371		0.90	0.002	0.03	1.34	4.3	<0.2	<10	290	0.58	0.21	3.88	0.02	38.2	24.3	29
210372		1.13	0.002	0.03	1.59	3	<0.2	<10	340	0.64	0.27	2.62	0.02	39.3	23.3	34
210373		1.11	0.002	0.04	1.49	2.9	<0.2	10	310	0.64	0.34	3.61	0.05	46	24.9	27
210374		0.79	0.003	0.07	1.47	4.5	<0.2	10	770	0.66	0.45	3.98	0.04	50.7	42.1	23
210375		1.23	0.003	0.05	1.56	2.6	<0.2	<10	260	0.75	0.36	1.52	0.04	49.4	27.9	22
210376		1.02	0.001	0.04	1.8	3.2	<0.2	<10	210	0.56	0.26	4.48	0.04	34.7	26.4	31
210377		1.02	0.002	0.04	1.39	7.3	<0.2	<10	610	0.62	0.27	3.8	0.04	37.7	37	32
210378		0.93	0.001	0.04	1.28	4.2	<0.2	<10	360	0.47	0.2	5.46	0.03	42.3	25.9	21
210379		1.33	0.002	0.03	1.38	13.8	<0.2	<10	810	0.8	0.42	2.89	0.03	47.9	23.3	22
210380		1.04	0.001	0.02	2.21	2.5	<0.2	<10	170	1.35	0.39	0.38	0.02	76.9	20.5	36
210381		1.51	0.001	0.04	2.13	11.4	<0.2	<10	220	1.1	0.5	1.93	0.03	69.3	19.5	25
210382		1.08	0.001	0.02	2.04	9.6	<0.2	<10	270	0.86	0.31	3.04	0.03	51.7	14.3	22
210383		1.71	0.001	0.02	1.04	2.5	<0.2	10	1150	0.52	0.11	3.96	0.03	36.4	7.9	12
210384		1.65	0.002	0.03	1.2	9.2	<0.2	<10	460	0.7	0.27	2.92	0.02	44.3	16.1	19
210385		1.07	0.001	0.04	1.52	7.8	<0.2	<10	240	0.67	0.3	3.36	0.03	36.4	25.7	30
210386		1.24	0.001	0.05	1.41	10	<0.2	<10	220	0.69	0.39	2.94	0.04	38.1	22.1	30
210387		1.10	0.002	0.07	1.88	7.2	<0.2	10	190	0.7	0.22	3	0.04	39.8	24.1	28
210388		1.40	0.001	0.09	1.42	19.1	<0.2	10	470	0.93	0.75	2.09	0.06	49.4	21.6	23
210389		1.27	0.002	0.11	1.4	22.6	<0.2	<10	300	1.05	0.84	1.23	0.06	45	19.9	26

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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
210350		0.78	19.7	3.45	4.03	0.06	0.13	0.04	0.055	0.3	16.3	9.8	2.13	2640	2.3
210351		0.71	9	3.18	4.45	0.07	0.3	0.02	0.059	0.36	20.1	9.3	1.1	992	0.75
210352		0.8	10.6	2.44	4.5	0.05	0.24	0.02	0.03	0.33	15.6	10.5	0.72	615	0.58
210353		0.71	6.8	3.03	3.27	0.05	0.18	0.03	0.04	0.35	16.1	4.8	0.51	1170	2.71
210354		1.28	50.7	4.6	4.78	0.08	0.42	0.02	0.051	0.37	22.9	10.2	0.79	1415	1.29
210355		1.66	16.4	3.19	5.15	0.09	0.56	0.01	0.044	0.35	24.1	9.6	0.67	514	1.06
210356		0.97	21.4	2.86	4.04	0.08	0.41	0.02	0.038	0.36	20.1	9.2	0.76	689	2.73
210357		1.23	24.7	3.59	5.72	0.1	0.52	0.01	0.037	0.36	24	17.5	0.87	793	0.96
210358		0.88	24.9	3.26	6.2	0.09	0.37	0.01	0.04	0.33	21.1	17.3	1.09	658	1.02
210359		1.2	16.1	2.66	4.65	0.08	0.28	0.02	0.027	0.34	17.5	11.4	0.54	627	1.6
210360		1.12	33.6	4.17	7.69	0.11	0.42	0.02	0.047	0.42	27.3	20.5	1.11	755	0.91
210361		0.77	31.3	3.84	7.07	0.11	0.46	0.02	0.056	0.36	27.5	19	1.27	979	1.07
210362		0.52	20.7	4.15	5.44	0.1	0.33	0.03	0.069	0.31	22.9	14.1	1.13	1430	1.93
210363		0.65	32.4	4.36	7.13	0.12	0.32	0.03	0.064	0.29	24.8	21	1.52	1410	0.99
210364		1.11	37.6	4.73	9.11	0.13	0.53	0.02	0.041	0.45	28.5	26.2	1.64	824	0.89
210365		0.73	39.8	4.29	10.6	0.13	0.44	0.02	0.052	0.27	27.9	38.3	3.23	1080	1.63
210366		0.73	25.6	3.34	10.35	0.13	0.4	0.02	0.039	0.24	22.9	36.3	3.12	622	0.5
210367		0.73	19.6	3.53	10.35	0.11	0.41	0.05	0.039	0.26	24.2	35.1	3.1	573	0.55
210368		0.77	30.2	2.98	4.06	0.08	0.33	0.01	0.038	0.17	17.4	11.7	2.68	789	2.94
210369		1.09	79.2	8.15	5.73	0.15	0.55	0.02	0.044	0.18	17.8	13.5	2.43	784	2.5
210370		0.91	66.5	4.19	5.49	0.11	0.56	0.01	0.042	0.18	18.7	15	2.6	700	1.4
210371		0.77	57.2	3.89	5.64	0.09	0.48	0.01	0.046	0.2	17.7	14.9	1.97	672	2.12
210372		0.71	37.2	3.69	5.7	0.09	0.43	<0.01	0.035	0.25	18.1	18	1.74	555	0.67
210373		0.66	27	3.84	5.24	0.09	0.38	0.01	0.042	0.26	21.4	14.8	1.67	773	0.85
210374		0.59	21.9	4.31	4.96	0.09	0.34	0.01	0.046	0.3	24.2	9.6	1.48	852	2.71
210375		0.85	25.3	4.27	5.91	0.1	0.32	0.01	0.038	0.27	22.7	19.2	1.16	724	0.73
210376		0.95	36.5	4.27	5.92	0.1	0.3	0.01	0.049	0.2	15	17.6	2.07	783	0.75
210377		0.78	65.6	6.03	6.04	0.1	0.51	0.01	0.056	0.2	17.3	14.5	1.76	863	1.96
210378		0.54	12.8	3.05	4.55	0.09	0.25	0.01	0.049	0.15	20.5	12.4	2.48	754	1.03
210379		0.92	30.5	5.22	5.62	0.1	0.52	0.01	0.049	0.2	22.2	12.3	1.55	1000	1.12
210380		1.6	35.4	4.32	8.39	0.14	0.75	0.02	0.031	0.42	36	23.4	1.68	642	0.81
210381		0.98	16.1	3.69	8.44	0.12	0.36	0.02	0.066	0.19	31.6	21.5	2.36	1245	1.14
210382		1.1	16.2	4.8	7.77	0.1	0.37	0.02	0.071	0.2	22.9	14.3	1.3	1485	1.43
210383		0.45	3.6	4.1	3.37	0.08	0.3	0.02	0.071	0.16	16.8	4.1	1.06	1725	2.23
210384		0.79	23.4	3.87	5.09	0.1	0.41	0.02	0.047	0.15	20.6	11.4	1.5	930	0.85
210385		0.84	70.6	5.55	6.47	0.1	0.55	0.01	0.064	0.24	16.5	15.3	1.68	916	0.78
210386		0.78	66.3	5.16	6.09	0.1	0.53	0.01	0.074	0.22	17.3	14.4	1.47	1055	1.76
210387		1.13	76.9	4.17	6.63	0.1	0.21	0.02	0.044	0.25	18.1	13.7	1.14	687	0.74
210388		0.85	39.2	4.77	5.3	0.1	0.38	0.02	0.111	0.3	21.8	11.2	1.06	1800	1.07
210389		0.74	29.2	4.18	5.35	0.09	0.32	0.02	0.088	0.29	20.1	11.9	0.94	1965	2.22



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Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
210350		0.16	20.7	930	12.3	15.6	0.001	0.07	0.42	5.3	0.9	0.6	132.5	<0.01	0.04	5.6
210351		0.17	16.7	420	6.6	18.8	0.001	0.04	0.58	5	0.5	0.6	53	<0.01	0.03	7.1
210352		0.25	15.8	260	6.5	17.9	0.001	0.02	0.37	4.4	0.5	0.6	29.9	<0.01	0.02	6
210353		0.2	14.6	530	8.3	18	0.001	0.05	0.98	4.8	0.5	0.7	52.8	<0.01	0.02	5.7
210354		0.11	35.6	300	10.3	23.8	0.001	0.07	3.65	5.1	1.1	0.7	64	<0.01	0.05	7.9
210355		0.07	20.5	220	5.2	24.6	<0.001	0.02	0.64	5.1	0.7	0.7	25.3	<0.01	0.06	8.5
210356		0.09	16.7	250	6.6	21.4	0.001	0.02	0.95	4.3	0.5	0.6	39	<0.01	0.02	7.4
210357		0.08	30.4	330	11.6	23.5	<0.001	0.01	1.11	4.2	0.6	0.5	19.9	<0.01	0.03	7.5
210358		0.08	25.6	350	9.5	20.5	<0.001	0.01	0.81	4.6	0.5	0.5	28.1	<0.01	0.03	7
210359		0.08	18.7	250	7.3	22.2	<0.001	0.01	0.44	3.9	0.4	0.6	47.7	<0.01	0.03	5.9
210360		0.09	31.9	390	12.7	25.5	<0.001	0.01	0.66	5.5	0.5	0.6	28.6	<0.01	0.03	8.3
210361		0.06	30.8	370	12.3	20.2	<0.001	0.01	0.83	5.6	0.5	0.6	27.7	<0.01	0.03	8.7
210362		0.1	25.7	260	7.5	16	<0.001	0.02	0.86	6	0.5	0.6	32.3	<0.01	0.05	7.6
210363		0.11	32.5	340	10.3	16.3	<0.001	0.01	0.95	5.9	0.6	0.6	24.9	<0.01	0.04	7.7
210364		0.08	37.2	430	13.4	28.2	<0.001	0.01	0.54	5.7	0.5	0.6	23.9	<0.01	0.03	9
210365		0.07	37.9	390	12.4	16.6	<0.001	0.02	0.61	6.3	0.6	0.6	28	<0.01	0.04	8.5
210366		0.11	27.5	310	7.4	14.5	<0.001	0.01	0.21	6.4	0.5	0.6	37.3	<0.01	0.04	7.7
210367		0.08	30.8	260	6.7	16.1	<0.001	0.02	0.2	6.9	0.5	0.6	40.5	<0.01	0.03	7.7
210368		0.11	32.6	320	7.2	13.9	0.001	0.03	0.4	10.5	1.3	0.4	68.8	<0.01	0.05	6
210369		0.2	66.3	470	11.3	14.3	0.001	0.09	1.15	10.5	4.2	0.6	67.8	<0.01	0.12	5
210370		0.15	31.3	450	6.7	14.8	0.001	0.03	0.72	11.5	1.4	0.5	57.4	<0.01	0.06	5.5
210371		0.15	29.4	380	6.6	13.7	<0.001	0.02	0.62	9.5	0.8	0.6	47.6	<0.01	0.03	5.3
210372		0.07	34.4	240	8.1	16	<0.001	0.02	0.39	7.3	0.6	0.5	34.5	<0.01	0.03	5.9
210373		0.11	31.2	280	8.6	15.3	<0.001	0.02	0.48	8.9	0.6	0.4	40.7	<0.01	0.03	6.6
210374		0.11	35.5	300	11.4	16.9	0.001	0.03	0.41	9	1	0.6	52.8	<0.01	0.05	7.5
210375		0.13	33.2	340	8.1	16.1	<0.001	0.01	0.57	8.2	0.6	0.5	28	<0.01	0.03	6.6
210376		0.13	36.1	280	8.4	14.7	<0.001	0.02	0.58	10.5	0.7	0.4	55	<0.01	0.03	5
210377		0.19	47.2	420	7.8	13.4	0.001	0.02	0.86	10.9	0.9	0.6	46.5	<0.01	0.03	4.8
210378		0.13	32.9	340	5.8	9.2	<0.001	0.02	0.26	8.9	0.8	0.3	65.9	<0.01	0.04	6.8
210379		0.08	33.6	310	7.9	13	0.001	0.03	0.96	8.1	1	0.5	43.2	<0.01	0.07	7.1
210380		0.05	33.6	320	7.8	28.4	<0.001	0.01	0.38	5.2	0.4	0.7	22.5	<0.01	0.02	10.8
210381		0.07	32.9	380	8	12.8	<0.001	0.02	0.72	7.3	0.8	0.4	45.1	<0.01	0.05	8.9
210382		0.06	38.5	260	6.5	13.2	0.001	0.01	0.55	7.6	0.7	0.4	32.4	<0.01	0.05	7.4
210383		0.05	26.2	710	4.8	8.5	0.001	0.03	0.18	7.1	0.6	0.3	65.9	<0.01	0.03	6.6
210384		0.07	27.4	280	5.9	10.3	<0.001	0.02	0.71	7.6	0.7	0.4	39.4	<0.01	0.04	6.7
210385		0.16	37.8	460	8	14.2	<0.001	0.01	0.94	10.9	0.7	0.5	41.1	<0.01	0.03	4.8
210386		0.12	34.1	520	9.1	13.8	0.001	0.01	1.01	10.1	0.7	0.5	40.6	<0.01	0.03	5
210387		0.37	29.7	430	8.5	16.4	<0.001	0.02	0.61	11.2	0.7	0.6	36.2	<0.01	0.04	5.2
210388		0.08	34.2	580	13.5	16.1	0.001	0.02	1.64	7.6	0.9	0.5	50.1	<0.01	0.04	6.3
210389		0.09	34	740	13.7	14.8	0.001	0.01	1.57	6.5	0.8	0.5	44.9	<0.01	0.04	6.4



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Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210350		0.008	0.14	0.94	44	0.12	9.14	17	8.4	
210351		0.009	0.14	0.85	33	0.14	7.67	7	15.8	
210352		0.009	0.12	0.7	29	0.11	6.23	8	11.6	
210353		0.011	0.17	0.83	33	0.13	7.91	16	9.9	
210354		0.007	0.5	0.82	44	0.2	9.88	10	22.4	98.0
210355		0.005	0.17	0.64	37	0.1	8.21	4	20.7	
210356		0.007	0.21	0.71	28	0.08	7.14	8	16.9	
210357		0.008	0.22	0.73	46	0.09	9	37	20.3	
210358		0.009	0.2	0.83	43	0.08	7.74	14	15.1	
210359		0.011	0.19	0.55	37	0.05	8.07	20	11.1	
210360		0.01	0.22	0.96	50	0.06	8.9	32	16.9	
210361		0.008	0.24	1.11	49	0.08	7.99	17	17.6	
210362		0.013	0.21	1.14	51	0.13	6.96	7	13.4	
210363		0.011	0.29	1.23	55	0.09	7.77	11	13.8	
210364		0.011	0.21	0.94	58	0.06	9.07	42	19.8	
210365		0.009	0.2	1.01	66	0.06	7.8	24	16.9	
210366		0.013	0.08	0.71	62	0.05	7.24	12	14.1	
210367		0.013	0.09	0.89	64	0.07	7.41	27	14.6	
210368		0.017	0.08	0.63	64	0.05	11.7	5	15.2	
210369		0.144	0.1	0.73	252	0.09	12.35	15	21.3	
210370		0.088	0.08	0.65	129	0.08	11.9	20	20.9	
210371		0.067	0.09	0.61	112	0.05	10.05	16	18	
210372		0.023	0.07	0.64	76	0.07	7.45	10	15.6	
210373		0.02	0.08	0.65	77	0.07	9.15	14	16.6	
210374		0.011	0.08	0.83	65	0.07	9.85	6	15.8	
210375		0.01	0.08	0.58	87	0.05	8.91	21	13.9	
210376		0.031	0.08	0.5	95	0.06	9.35	21	13	
210377		0.115	0.11	0.6	193	0.07	11.05	18	19.3	
210378		0.009	0.05	0.74	49	0.06	8.82	4	12.1	
210379		0.024	0.17	1.07	100	0.08	7.96	5	20.9	
210380		0.02	0.18	0.93	62	0.05	8.01	22	25.6	
210381		0.006	0.24	1.21	50	0.06	7.87	8	15.5	
210382		0.005	0.18	0.99	57	0.05	6.84	16	15.7	
210383		<0.005	0.07	0.99	32	<0.05	5.77	9	14	
210384		0.014	0.14	0.86	69	0.06	6.92	5	16.6	
210385		0.106	0.14	0.61	173	0.06	10.65	19	19.8	
210386		0.071	0.17	0.67	142	0.05	9.88	20	18.7	
210387		0.035	0.11	0.46	112	0.05	10.6	20	9.2	
210388		0.017	0.38	0.95	74	0.09	9.22	24	15.7	
210389		0.008	0.51	0.97	51	0.08	8.88	21	13.3	



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-TL43 Au ppm	ME-MS41 Ag ppm	ME-MS41 Al %	ME-MS41 As ppm	ME-MS41 Au ppm	ME-MS41 B ppm	ME-MS41 Ba ppm	ME-MS41 Be ppm	ME-MS41 Bi ppm	ME-MS41 Ca %	ME-MS41 Cd ppm	ME-MS41 Ce ppm	ME-MS41 Co ppm	ME-MS41 Cr ppm
		0.02	0.001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
210390		1.26	0.001	0.05	1.83	7.3	<0.2	<10	3030	0.86	0.37	4.9	0.04	42.8	16.5	24
210391		1.51	0.001	0.04	1.79	4.3	<0.2	<10	330	0.77	0.27	2.8	0.03	52.5	13.6	22
210392		1.90	0.001	0.03	1.84	14	<0.2	<10	320	1.1	0.35	2.45	0.04	63.9	16	26
210393		1.04	<0.001	0.02	1.8	4.4	<0.2	<10	3370	0.88	0.1	0.93	0.04	60.7	9	19
210394		1.43	0.004	0.02	1.33	5.1	<0.2	<10	150	0.62	0.16	1.12	0.02	60	9.7	17
210395		1.61	0.001	0.05	1.16	9.4	<0.2	<10	800	0.76	0.29	3.04	0.03	47.8	41.3	34
210396		1.68	0.001	0.04	1.31	16	<0.2	<10	880	0.87	0.42	3.01	0.03	49.3	26.8	23
210397		1.67	0.001	0.03	1.59	4.6	<0.2	<10	250	0.83	0.26	3.32	0.03	46.2	28.3	28
210398		0.92	<0.001	0.02	1.66	2.9	<0.2	<10	170	1.32	0.45	0.21	0.03	82.2	24.2	29



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Sample Description	Method Analyte Units LOR	ME-MS41 Cs ppm 0.05	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01
210390		0.98	19.9	4.06	5.72	0.07	0.19	0.02	0.08	0.26	17	9.4	0.84	961	0.73	0.06
210391		0.99	17.6	3.68	5.58	0.08	0.2	0.01	0.055	0.26	22.1	8.2	0.93	914	0.68	0.02
210392		0.92	19.4	4.08	7.38	0.1	0.41	0.01	0.067	0.18	28	17.6	1.84	1500	1.99	0.02
210393		1.09	7.4	3.71	6.09	0.09	0.32	0.02	0.051	0.29	26.2	7.5	0.52	956	0.76	0.07
210394		0.89	7.1	2.22	4.64	0.08	0.35	0.02	0.026	0.24	26.7	6.1	0.7	764	0.75	0.04
210395		0.82	60	7	5.37	0.11	0.42	0.01	0.045	0.16	21.1	9.4	1.93	863	2.36	0.05
210396		0.8	32.9	5.43	5.42	0.1	0.42	0.03	0.049	0.16	22.2	11	1.55	1060	1.27	0.04
210397		0.86	53	4.17	6.41	0.09	0.49	<0.01	0.041	0.25	20.2	16.9	2.05	673	0.84	0.04
210398		1.56	37.3	4.48	5.18	0.12	0.5	0.03	0.026	0.47	36.3	8.9	0.54	1240	1.04	0.01



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		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
210390		0.13	26.7	320	7.8	17.2	0.001	0.09	0.48	7.8	0.9	0.5	107.5	<0.01	0.05	4.9
210391		0.1	25.4	280	6.1	17.3	0.001	0.01	0.35	6.8	0.6	0.5	39	<0.01	0.04	6
210392		0.05	32.4	380	6.7	11.4	0.001	0.01	1.15	7.3	0.9	0.4	52.2	<0.01	0.06	8.3
210393		0.15	26.5	280	5	18.6	0.001	0.09	0.36	7.4	0.7	0.5	29.4	<0.01	0.03	9
210394		0.06	19.2	220	4.4	16.8	<0.001	<0.01	0.44	6.3	0.5	0.4	20.1	<0.01	0.03	6.6
210395		0.16	38	340	9.1	10.5	0.001	0.02	1.25	11.1	1.3	0.7	41.6	<0.01	0.04	5.7
210396		0.07	37	330	7.9	10.4	0.001	0.03	0.99	8.2	1.2	0.4	45.4	<0.01	0.08	7
210397		0.09	33.3	390	6.6	16.8	0.001	0.01	0.6	9	0.9	0.5	40.1	<0.01	0.04	6
210398		0.05	30.1	370	6.9	30.2	0.001	0.01	0.57	4.5	0.5	0.6	27.1	<0.01	0.02	11.2
																</



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Plus Appendix Pages

Finalized Date: 12-MAY-2008

Account: MARATH

Project: 3159/2

CERTIFICATE OF ANALYSIS AD08047762

Sample Description	Method Analyte Units LOR	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
210390		0.013	0.13	0.62	69	0.06	7.83	24	9.4	
210391		0.013	0.1	0.65	55	0.07	6.86	17	9.8	
210392		0.009	0.33	1.16	54	0.07	6.67	20	17.5	
210393		0.006	0.16	0.87	47	0.07	6.23	19	15.1	
210394		0.006	0.12	0.69	37	0.07	5.39	10	14.3	95.0
210395		0.076	0.13	0.75	207	0.09	8.81	17	18.3	
210396		0.024	0.16	1.01	99	0.08	7.42	17	18.5	
210397		0.067	0.1	0.66	111	0.1	9.87	21	18.9	
210398		0.019	0.19	1.09	48	0.07	7.63	21	22.1	

***** See Appendix Page for comments regarding this certificate *****



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Project: 3159/2

CERTIFICATE OF ANALYSIS AD08047762

Method	CERTIFICATE COMMENTS
ME-MS41 ME-MS41	Interference: Ca>10% on ICP-MS As,ICP-AES results shown. Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).

J1000	Sample ID	MGA_E	MGA_N	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
J1001			metres	metres	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	
J1002					Au-TL43	ME-MS41	ME-MS41	ME-MS41ME-MS41ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41		
J1003	LDR				0.001	0.01	0.01		0.1	10	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5
D	210150	291287	6592463	0.008		0.02	3.67		8.1 <0.2		10	240	2.04	0.48	5.48	0.07	86.1	21.8	50	3.24	25.8	3.89	13.2	0.1	0.41	0.03	0.046	0.94	37.2	46.2	1.67	914
D	210151	291554	6592591	0.006		0.03	3.53		14.1 <0.2		10	270	2.11	0.5	6.82	0.12	88.1	25.9	52	2.69	28.6	3.97	12.9	0.1	0.37	0.04	0.046	0.84	38.6	50.1	1.56	1100
D	210152	291868	6592699	0.005		0.03	3.9		7.7 <0.2		20	1030	2.06	0.59	1.66	0.08	77.9	28.2	52	4.07	33.7	4.14	13.2	0.1	0.48	0.04	0.049	1.14	34.7	38.9	1.39	1050
D	210153	292243	6592637	0.005		0.06	2.89		4.8 <0.2		10	340	1.69	0.35	3.82	0.06	60.2	18.5	39	1.55	46.6	3.61	10.95	0.08	0.44	0.03	0.044	0.45	27.8	48.6	3.15	669
D	210154	292057	6592456	0.004		0.04	2.75		5.7 <0.2		10	550	1.64	0.38	3.68	0.06	62.4	22.2	40	1.56	44.6	3.74	11.3	0.09	0.6	0.02	0.042	0.41	28.6	49.2	3.1	667
D	210155	292135	6592765	0.003		0.06	2.69		5.1 <0.2		10	370	1.75	0.36	3.82	0.09	55.3	20.6	36	1.24	73.9	3.74	10.5	0.08	0.5	0.04	0.05	0.43	24.6	56.5	3.3	750
D	210156	292305	6592831	0.004		0.06	1.84		3.3 <0.2	<10		230	1.27	0.42	5.72	0.04	54.6	23.1	23	0.57	30.3	3.11	6.92	0.07	0.42	0.02	0.042	0.22	24.8	27.6	3.17	952
D	210157	291780	6592471	0.004		0.06	1.98		3.8 <0.2	<10		160	1.42	0.4	5.5	0.05	56.6	21.7	26	0.6	31.9	3.27	7.79	0.07	0.46	0.02	0.043	0.23	25.7	33.2	3.27	940
D	210158	292359	6592916	0.004		0.07	3		12.1 <0.2	<10		320	1.8	0.47	4.06	0.07	52.5	48.8	43	1.67	54.1	4.68	11.6	0.1	0.3	0.03	0.033	0.29	24.2	48	2.67	596
D	210159	292438	6592984	0.007		0.1	2.49		4.3 <0.2	<10		1210	1.67	0.42	4.66	0.05	46.8	41.8	33	0.87	64.5	4.59	8.93	0.08	0.2	0.03	0.041	0.27	21.2	38.4	3.13	775
D	210160	292601	6593154	0.002		0.07	2.8		3.9 <0.2	<10		240	1.56	0.32	2.67	0.06	64.6	22.5	42	1.56	35.9	3.79	11.35	0.09	0.4	0.02	0.036	0.38	29.1	43.2	2.29	714
D	210161	292726	6593193	<0.001		0.03	2.14		4.9 <0.2	<10		270	1.59	0.54	0.3	0.05	72.8	20.3	37	3.11	35.2	4.81	7.65	0.08	0.63	0.02	0.03	0.61	31.6	26.4	0.79	862
D	210162	292703	6593214	0.002		0.03	2.66		3.9 <0.2		10	830	1.39	0.3	3.49	0.04	49.3	15.9	34	2.73	47.1	3.27	9.65	0.08	0.37	0.02	0.054	0.34	22.4	42.6	3.17	599
D	210163	292887	6593526	0.001		0.03	3.24		7.8 <0.2		10	470	1.87	0.42	2.32	0.04	68.3	28.1	45	2.57	35.6	4.23	13.45	0.1	0.43	0.05	0.043	0.38	30.9	52.4	2.9	640
D	210164	293067	6593855	<0.001		0.02	3.12		4.3 <0.2	<10		110	1.8	0.35	0.41	0.04	70.4	18.1	44	1.57	27.7	4.07	12.95	0.1	0.44	0.03	0.033	0.35	32.1	47.2	3.01	531
D	210165	293185	6594145	<0.001		0.03	2.31		6.3 <0.2	<10		300	1.69	0.66	0.33	0.04	70.1	26.2	38	2.69	36.6	5.06	7.96	0.09	0.51	0.02	0.03	0.57	30.5	28.4	0.89	894
D	210166	293392	6593669	<0.001		0.02	2.42		4.7 <0.2		10	220	1.71	0.54	0.34	0.04	75.1	20	40	3.45	35.7	5.15	8.35	0.09	0.79	0.01	0.03	0.74	33.5	26.6	0.76	815
D	210167	293347	6593642	0.001		0.04	2.55		5.6 <0.2		10	140	1.12	0.31	0.81	0.07	58.2	14	28	1.58	24.1	3.2	7.68	0.07	0.26	0.04	0.03	0.48	25.8	19.7	0.72	543
D	210168	293363	6593597	0.001		0.04	3.01		6.6 <0.2		10	210	1.75	0.36	0.34	0.08	66.5	18	37	3.3	26.9	4.58	10	0.09	0.28	0.03	0.043	0.57	28.6	28.7	0.99	738
D	210169	293175	6593413	0.001		0.01	3.04		4.4 <0.2	<10		390	1.67	0.42	1.12	0.03	66.3	21.6	44	1.49	21	3.61	12.55	0.15	0.35	0.09	0.03	0.2	29.9	50.7	4.19	549
D	210170	293144	6593439	0.001		0.02	3.6		3 <0.2		10	180	1.96	0.23	1.83	0.03	60.5	15.1	45	2.19	17.5	3.35	13.5	0.15	0.13	0.22	0.039	0.25	26.9	55.6	4.53	515
D	210171	292897	6593293	0.001		0.02	2.76		9.5 <0.2		10	140	1.59	0.54	0.88	0.06	72.4	18.4	39	2.59	28.7	4.62	9.64	0.09	0.34	0.03	0.031	0.51	34.1	32.2	1.82	573
D	210172	293545	6593655	0.001		0.03	3.26		9.7 <0.2		10	280	1.6	0.69	4.71	0.1	79.7	25	44	2.8	30.9	4.13	11	0.08	0.24	0.03	0.037	0.59	35.4	34.7	1.64	901
D	210173	293729	6594071	0.001		0.03	2.97		10 <0.2		10	200	1.65	0.49	5.21	0.08	85.8	23	42	1.69	27	3.98	10.55	0.09	0.16	0.02	0.036	0.43	37	39.9	1.57	916
D	210174	293613	6594178	0.001		0.04	1.87		5.2 <0.2		10	210	1.04	0.26	2.6	0.09	52	12.8	24	1.42	23.3	2.77	5.96	0.07	0.17	0.03	0.031	0.37	23.1	16.3	0.75	631
D	210175	293605	6594236	<0.001		0.02	2.43		4.3 <0.2		10	230	1.51	0.47	6.85	0.08	80.4	21.2	33	1.69	22	3.29	7.95	0.08	0.2	0.02	0.032	0.45	36	32.5	1.51	1200
D	210176	293723	6594437	<0.001		0.02	2.76		11.1 <0.2	<10		220	1.61	0.55	5.18	0.07	80	23.7	42	2.04	27.4	4.28	10.1	0.09	0.31	0.02	0.035	0.49	34.8	39.4	1.52	1010
D	210177	293787	6594483	0.001		0.04	2.68		14.3 <0.2		10	210	1.6	0.42	5.45	0.18	77.8	21.6	41	2.3	29	3.76	9.67	0.09	0.16	0.02	0.037	0.44	33.7	41.7	1.41	927
D	210178	293996	6593891	<0.001		0.01	2.39		5.4 <0.2		10	280	1.77	0.32	0.77	0.03	69.2	15.4	38	3.18	21.4	3.29	9.97	0.09	0.41	0.02	0.038	0.42	30.5	67.4	2.79	552
D	210179	293763	6594578	<0.001		0.01	2.49		5.3 <0.2		10	260	1.73	0.3	0.88	0.03	73	15.4	36	2.23	28.3	3.33	10.25	0.09	0.37	0.01	0.043	0.3	33	68.9	2.93	589
D	210180	293688	6594491	<0.001		0.02	2.19		2.9 <0.2		10	190	1.55	0.24	1.31	0.04	66.9	13.3	32	1.65	40.5	2.79	8.55	0.08	0.35	0.01	0.032	0.35	29.8	43.5	2.11	626
D	210181	293734	6594828	<0.001		0.03	1.97		2.9 <0.2		10	130	1.16	0.18	1.44	0.04	45.8	8.6	28	1.57	22.8	2.29	7.25	0.07	0.21	0.01	0.029	0.34	20.9	29.2	1.55	400
D	210182	293754	6594870	0.001		0.04	2.46		3.8 <0.2	<10		150	1.52	0.28	3.98	0.04	65.2	17.3	35	1.62	48.6	3.16	9.09	0.08	0.21	0.03	0.039	0.3	29.4	46.5	2.88	848
D	210183	293945	6594801	<0.001		0.01	1.39		1.4 <0.2	<10		110	0.88	0.15	0.15	0.03	54.5	6.3	19	1.87	7.3	1.91	4.12	0.06	0.23	0.01	0.02	0.4	25.2	6.3	0.23	260
D	210184	293908	6594822	<0.001		0.01	1.25		1.2 <0.2		10	100	0.84	0.15	0.14	0.03	60	6.2	22	1.97	5.7	1.9	3.83	0.06	0.25	0.02	0.02	0.41	28.1	5	0.24	259
D	210185	294154	6595043	0.001		0.01	2.97		5.7 <0.2		10	280	1.82	0.29	0.43	0.03	80.7	20	44	1.24	57	3.8	12.95	0.14	0.48	0.01	0.042	0.24	36.6	83.6	3.79	542
D	210186	293614	6595259	0.001		0.01	2.18		7.5 <0.2		10	750	1.96	0.57	4.78	0.19	75.8	21.9	36	2.1	51.3	3.36	10.2	0.11	0.32	0.02	0.039	0.29	34.8	56.9	2.77	706
D	210187	293638	6595016	0.001		0.01	2.46		5 <0.2		10	290	1.76	0.34	3.01	0.06	72.9	18.4	39	1.42	48.9	3.29	11.5	0.11	0.47	0.01	0.04	0.25	33.1	65.4	3.82	1020
D	210188	293891	6595147	<0.001		0.03	2.27		11.9 <0.2		10	530	1.38	0.94	6.4	0.23	77.7	36.4	34	1.42	49.2	3.75	8.23	0.09	0.3	0.03	0.031	0.39	33.5	37.6	1.26	1010
D	210189	294305	6595346	<0.001		0.03	2.37		18.4 <0.2		10	750																				

J1000	Sample ID	MGA_E	MGA_N	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
D	210234	294903	6593121	0.001	0.05	2.02		9 <0.2			10	210	1.13	0.54	14.7	0.12	48.4	31.2	22	0.83	33.3	2.83	5.75	0.06	0.16	0.02	0.036	0.42	22.2	1.28	934
D	210235	294359	6592784	<0.001	0.06	1.81		12.7 <0.2			10	200	1.18	0.73	6.46	0.08	74.9	22.8	17	1.06	21.6	3.59	4.8	0.07	0.23	0.01	0.035	0.44	34.5	14.3	995
D	210236	294373	6592808	<0.001	0.07	1.47		17.2 <0.2			10	200	1.37	0.83	4.5	0.09	87.3	21.9	15	0.97	24.5	4.05	4.1	0.08	0.37	0.01	0.043	0.56	40	5.9	907
D	210237	294589	6592767	0.001	0.09	1.67		19.8 <0.2			10	220	1.27	0.76	4.58	0.09	79.2	20.5	15	1.06	23.7	3.64	4.34	0.08	0.24	0.02	0.038	0.56	36.2	7.7	808
D	210238	294576	6592804	0.001	0.09	1.37		16.1 <0.2			10	220	1.39	0.86	4.81	0.1	79	21.5	14	0.89	23.3	3.7	3.67	0.07	0.21	0.01	0.042	0.46	36.5	6.3	895
D	210239	294613	6592864	<0.001	0.03	1.7		5.3 <0.2			10	180	1.02	0.34	8.08	0.08	55.4	15.8	22	0.95	17.8	2.62	5.12	0.06	0.18	0.01	0.026	0.41	25.5	15.9	728
D	210240	295297	6593171	0.001	0.04	1.96		14.4 <0.2			10	350	1.37	0.58	5.41	0.11	65.1	24.8	24	1.16	25.1	3.73	6.26	0.07	0.28	0.01	0.038	0.56	30.2	16.8	1620
D	210241	295247	6593094	0.001	0.03	2.2		6 <0.2			10	260	1.11	0.44	12.4	0.1	55.6	22.1	25	1.04	16.5	2.57	6.32	0.06	0.14	0.01	0.028	0.49	25.4	22	721
D	210242	295348	6593305	<0.001	0.02	2.53		2.5 <0.2	<10			240	1.29	0.5	9.28	0.07	75.2	24	33	1.08	17.8	3.06	7.78	0.08	0.31	0.01	0.025	0.46	33.2	28.8	998
D	210243	295394	6593255	<0.001	0.04	2.46		3.5 <0.2			10	160	1.13	0.3	1.35	0.06	62.2	14.2	29	1.41	19	3.15	6.89	0.06	0.23	0.02	0.03	0.49	28.1	15.9	805
D	210244	295301	6593284	<0.001	0.02	1.69		2 <0.2			10	120	1.03	0.29	0.42	0.03	66.3	10.5	28	1.96	13.3	2.74	5.01	0.06	0.3	0.01	0.021	0.5	30.3	8.1	433
D	210245	295369	6593022	<0.001	0.05	2.96		5.3 <0.2			10	170	1.23	0.22	0.76	0.13	58.9	11.7	49	1.34	23.8	3.28	8.09	0.07	0.25	0.04	0.035	0.46	25.2	12.6	986
D	210246	294791	6592676	0.001	0.03	2.65		8.4 <0.2	<10			140	1.36	0.38	0.16	0.06	90.3	13.2	39	2.25	17.4	4.07	7.88	0.08	0.45	0.01	0.029	0.67	38	17	779
D	210247	294849	6592661	0.001	0.05	1.98		3.8 <0.2			10	190	1.08	0.3	7.33	0.08	49.3	14.9	19	0.88	19.4	2.7	5.19	0.06	0.13	0.02	0.035	0.42	22.8	12.8	738
D	210248	294849	6592833	<0.001	0.03	1.8		3.5 <0.2	<10			160	0.97	0.27	0.44	0.06	55.8	13	31	1.05	17.6	2.91	5.11	0.06	0.25	0.01	0.022	0.38	24.8	10.5	822
D	210249	294932	6592798	<0.001	0.04	1.69		3.5 <0.2	<10			140	0.82	0.24	0.64	0.05	55.5	10.5	23	1.12	15.6	2.68	4.95	0.06	0.2	0.01	0.026	0.36	24.7	9.5	731
D	210250	295050	6592736	0.001	0.03	2.08		3.3 <0.2			10	140	0.96	0.29	1.26	0.05	57.6	12.7	26	1.27	16	2.83	5.76	0.06	0.21	0.01	0.026	0.43	25.9	12.8	695
D	210251	295034	6592781	<0.001	0.02	2.39		3.4 <0.2			10	180	1.19	0.29	0.23	0.05	62.7	12.2	39	1.59	17.4	2.98	6.7	0.06	0.44	0.01	0.025	0.6	28.2	9.7	767
D	210252	295311	6592703	<0.001	0.02	1.68		2.7 <0.2	<10			150	1.1	0.29	0.1	0.02	70.7	10.4	25	1.74	17.3	2.65	4.97	0.06	0.41 <0.01		0.018	0.45	32.3	6.6	358
D	210253	295468	6592765	<0.001	0.03	2.09		3.7 <0.2	<10			180	0.93	0.18	0.76	0.12	42.3	10.6	23	1.13	13.2	2.21	5.65	0.05	0.2	0.01	0.022	0.34	18.2	9.2	740
D	210254	295493	6592790	<0.001	0.03	2.01		4.2 <0.2			10	140	0.98	0.22	0.26	0.08	53.6	10.2	32	1.23	14.9	2.53	5.64	0.05	0.41	0.01	0.022	0.43	23.9	8.9	620
D	210255	295222	6592368	0.001	0.03	1.9		4.3 <0.2	<10			170	1.18	0.24	0.5	0.09	59.5	11.7	27	1.39	15.4	2.93	5.53	0.08	0.35	0.03	0.023	0.45	27.5	10.6	665
D	210256	295516	6592341	0.001	0.02	1.31		2.7 <0.2	<10			240	0.95	0.22	1.33	0.08	56.5	12.9	22	1.08	13	2.34	3.83	0.07	0.32	0.02	0.017	0.38	26	7.6	772
D	210257	295845	6592457	0.001	0.03	1.32		2.9 <0.2	<10			190	0.98	0.26	0.46	0.06	56.2	12.7	27	0.98	14.8	2.44	3.95	0.08	0.38	0.01	0.016	0.37	26.3	6.2	731
D	210258	296100	6592452	0.001	0.02	1.44		1.8 <0.2	<10			150	0.98	0.22	0.12	0.05	58.5	8.2	23	1.34	12.3	2.65	4.09	0.08	0.33	0.01	0.017	0.39	28.2	5.9	316
D	210259	295613	6592130	0.001	0.03	2.59		2.2 <0.2	<10			210	1.13	0.39	6.57	0.07	67.3	20.3	33	1.02	18.1	3.23	7.27	0.09	0.24	0.02	0.025	0.42	31	24.4	923
D	210260	295615	6592101	<0.001	0.03	2.84		6.9 <0.2	<10			230	1.38	0.41	0.47	0.06	102.5	17.5	44	2.24	20.9	4.54	8.51	0.13	0.45	0.02	0.029	0.71	44.2	23.1	1280
D	210261	295808	6591970	<0.001	0.03	2.23		6.5 <0.2	<10			240	1.3	0.36	0.27	0.16	83.9	24.6	34	2.43	19.6	4.14	6.7	0.12	0.33	0.02	0.027	0.43	37.1	20.4	1440
D	210262	295864	6592082	0.001	0.02	2.52		2 <0.2	<10			280	1.11	0.6	9.07	0.08	65.4	25.9	33	0.91	18.9	3.19	7.49	0.09	0.23	0.02	0.024	0.41	30.6	25.6	138
D	210263	295549	6592361	0.001	0.03	2.79		2.5 <0.2	<10			270	1.15	0.51	6.47	0.07	61	23.3	33	0.89	23.1	3.22	7.61	0.09	0.17	0.03	0.028	0.41	27.8	25.6	1040
D	210264	295504	6592397	<0.001	0.03	2.39		2.6 <0.2	<10			270	1.04	0.4	4.81	0.08	56.6	19.6	29	0.84	19.6	2.96	6.44	0.08	0.16	0.02	0.026	0.37	26.1	20.1	964
D	210265	295876	6592289	<0.001	0.01	0.51		1.6 <0.2	<10			70	0.38	0.09	0.21	0.06	24.2	3.9	9	0.35	6.3	1.16	2.02 <0.05		0.18	0.01	0.009	0.08	11.2	2.4	250
D	210266	296162	6592345	0.001	0.03	2.38		1.8 <0.2	<10			220	0.9	0.3	8.81	0.09	50.6	15.8	31	0.7	18	2.83	6.49	0.07	0.12	0.02	0.025	0.38	23.9	22.1	776
D	210267	296104	6592229	<0.001	0.02	2.54		1.5 <0.2	<10			200	1.12	0.37	7.4	0.06	73	18.9	38	1.02	15.5	3.42	7.62	0.1	0.24	0.02	0.025	0.44	33.8	27	785
D	210268	295926	6591898	<0.001	0.02	2.41		7 <0.2	<10			220	1.07	0.41	11.6	0.07	61.1	19.1	33	0.82	15.1	3.14	7.15	0.09	0.16	0.02	0.024	0.4	28.6	25.3	909
D	210269	295870	6591854	<0.001	0.02	2.56		2.5 <0.2	<10			230	1.16	0.56	9.37	0.07	62.8	24.8	34	0.8	18.8	3.25	7.67	0.09	0.19	0.02	0.025	0.38	29.7	26.1	950
D	210270	295781	6591771	0.001	0.03	2.52		2.4 <0.2	<10			170	1.22	0.42	6.98	0.08	59.1	20.6	34	1.17	19.6	3.14	7.85	0.09	0.16	0.02	0.029	0.46	28.3	26.8	873
D	210271	295791	6591755	<0.001	0.03	2.25		2.8 <0.2	<10			230	1.06	0.31	5.77	0.06	60.9	18.9	31	1.24	17.3	2.85	6.61	0.08	0.13	0.02	0.028	0.51	28.1	21.8	1040
D	210272	295822	6591778	<0.001	0.04	1.22		3.2 <0.2	<10			330	0.93	0.11	0.81	0.82	33.1	28.1	24	0.52	21	1.98	3.51	0.06	0.32	0.02	0.015	0.21	14.7	6.8	1270
D	210273	294193	6592399	0.001	0.04	2.47		3.9 <0.2	<10			2190	1.17	0.21	0.98	0.03	61.7	11.3	36	1.68	10.1	3.79	8.04	0.12	0.38	0.01	0.049	0.42	29.3	26.4	649
D	210274	294241	6592293	<0.001	0.02	2.09		5.2 <0.2	<10			360	0.93	0.21	2.57	0.03	58.2	11.2	32	1.13	16.4	3.06	7.13	0.11	0.36	0.01	0.027	0.32	27.4	25.4	1250
D	210275	294322	6592270	0.001	0.03	2.12		3.1 <0.2	<10			230	1.09	0.31	0.75	0.04	72.3	14.9	37	1.47	34.7	4.08	6.37	0.11	0.5	0.01	0.051	0.53	33.4	15.4	1110
D	210276	294054	6592301	0.001	0.03	1.88		3.8 <0.2	<10			190	0.75	0.21	3.38	0.02	46.9	14	29	1.07	33.3	3.69	5.81	0.09	0.45	0.01	0.04	0.41	22.3	14.2	712
D	210277	294504	6592173	0.001	0.07																										

J1000	Sample ID	MGA_E	MGA_N	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
D	210322	296407	6591283	0.067	0.04	0.04	2.79	6.8 <0.2			10	2730	1.12	0.26	0.82	0.03	47.4	22.9	40	2.48	44.3	5.11	10.1	0.1	0.55	0.03	0.085	0.65	21.4	25.1	1.35	1655
D	210323	295483	6591231	0.007	0.04	0.04	1.21	2.8 <0.2			10	520	0.47	0.18	4.09	0.03	45.1	57.8	36	0.67	25.9	4.23	4.93	0.08	0.4	0.03	0.04	0.22	21	10.4	1.88	685
D	210324	295652	6591531	<0.001	0.04		1.25	3 <0.2			10	450	0.44	0.18	4.73	0.03	46.7	48.4	25	0.63	16.7	3.37	4.61	0.07	0.31	0.03	0.037	0.26	22.2	9.4	1.43	641
D	210325	296511	6592151	0.002	0.02	0.02	2.39	6.3 <0.2			10	360	0.67	0.16	1.1	0.02	30.8	41.2	38	2.51	43.2	9.21	9.15	0.13	0.37	0.03	0.042	0.3	12	19	1.45	647
D	210326	296541	6592112	0.015	0.02		1.55	7.6 <0.2			10	480	0.86	0.19	1.12	0.03	38.9	30.2	37	2.35	78	5.43	7.28	0.08	0.38	0.03	0.053	0.34	17.2	16	1.21	968
D	210327	296580	6592146	0.011	0.03		1.39	6.5 <0.2			10	180	1.18	0.15	0.32	0.03	30.5	8.8	21	1.49	26.8	2.79	4.26	0.06	0.21	0.07	0.041	0.42	13.7	5.6	0.21	311
D	210328	296233	6591739	0.01	0.03		1.45	4.9 <0.2			10	290	0.72	0.21	1.57	0.02	40	21.9	26	1.58	38.3	3.98	5.91	0.07	0.4	0.02	0.049	0.31	17.8	13.3	1.11	775
D	210329	296372	6591734	0.003	0.02		2.11	6.7 <0.2	<10			100	0.83	0.1	1.09	0.02	32.3	33.4	40	2.58	297	8.03	10.95	0.14	0.71	0.02	0.068	0.44	12.2	18.1	1.05	507
D	210330	296624	6591630	<0.001	0.02		2.07	3.7 <0.2		10		110	0.77	0.1	1.5	0.02	29.7	21.8	25	3.49	69.2	4.16	7.67	0.08	0.43	0.03	0.037	0.27	10.7	15.6	0.93	563
D	210331	296554	6591626	0.004	0.02		1.78	3.3 <0.2	<10			100	0.6	0.12	0.31	0.03	25.7	64.3	25	2.43	38.1	6.46	6.57	0.08	0.35	0.02	0.026	0.3	10.3	12.4	0.69	437
D	210332	296619	6591730	0.009	0.04		1.77	8.3 <0.2		10		610	0.86	0.34	0.52	0.04	37.5	24.3	41	1.35	95.7	4.81	6.66	0.07	0.42	0.02	0.062	0.34	16.9	23.9	1.18	1050
D	210333	297057	6591752	0.008	0.05		1.99	31.9 <0.2		10		350	1.14	1.1	0.54	0.06	65.5	62	26	1	52.8	6.51	6.8	0.1	0.46	0.02	0.079	0.34	28	14.5	0.52	1540
D	210334	297486	6591995	0.012	0.04		1.78	8.4 <0.2		10		220	1.02	0.31	0.26	0.12	49.2	21.5	24	2.9	92.6	4.41	7.35	0.07	0.42	0.03	0.053	0.47	21.2	15.6	0.66	1265
D	210335	297699	6592185	<0.001	0.02		1.65	4.1 <0.2		10		130	0.7	0.17	0.24	0.02	27.9	22.5	33	2.24	69.5	4.62	6.38	0.07	0.35	0.01	0.038	0.34	11.2	14	0.72	469
D	210336	297525	6592268	0.002	0.09		1.92	5.1 <0.2		10		170	0.82	0.29	0.66	0.05	36.8	18.3	33	1.54	74.3	4.01	6.94	0.07	0.33	0.02	0.043	0.39	15.9	19.2	0.84	681
D	210337	297248	6592055	0.002	0.04		1.91	5.3 <0.2		10		300	0.84	0.22	1.25	0.03	42	21.6	27	1.83	47.3	3.95	7.28	0.07	0.4	0.02	0.057	0.41	19	15.2	0.95	793
D	210338	294876	6591288	0.014	0.03		1.43	6 <0.2		10		320	0.77	0.21	0.37	0.02	35.2	21.1	28	1.29	33.9	3.71	5.29	0.07	0.33	0.02	0.04	0.34	16.1	10.8	0.5	705
D	210339	294820	6591240	0.009	0.03		1.62	5.5 <0.2		10		230	0.8	0.22	0.69	0.04	37.2	19.6	26	2.1	76.3	4.17	6.83	0.07	0.37	0.02	0.047	0.32	16.1	22.6	1.03	683
D	210340	297863	6592359	0.01	0.03		1.6	6.1 <0.2		10		230	0.73	0.3	0.86	0.03	35.1	17.6	26	1.51	61.6	3.56	6.36	0.07	0.35	0.01	0.046	0.33	16.1	16.6	0.89	634
D	210341	297950	6592480	0.002	0.03		2.27	5.8 <0.2		10		1530	1.14	0.36	1.53	0.05	42.5	28.5	38	2.17	125.5	4.96	8.75	0.09	0.32	0.03	0.057	0.28	18.9	33.9	1.81	1155
D	210342	298245	6592554	0.001	0.04		1.54	13.1 <0.2		10		280	1.01	0.68	0.45	0.04	64.1	22.7	21	0.77	34.5	3.88	5.51	0.08	0.53	0.02	0.068	0.41	28.5	11.3	0.4	1230
D	210343	297651	6592354	0.001	0.04		1.68	21.3 <0.2		10		430	0.99	0.86	0.71	0.05	60.2	32.9	22	0.86	41	4.68	5.7	0.08	0.42	0.03	0.076	0.38	26.3	12.2	0.43	1485
D	210344	297725	6592862	0.011	0.02		1.43	13 <0.2		10		920	0.85	0.51	0.99	0.04	47.2	15.2	29	0.8	28.4	3.02	5.15	0.07	0.42	0.02	0.04	0.36	21.5	13.4	0.69	1060
D	210345	297413	6592693	0.011	0.02		1.46	10 <0.2		10		3440	0.74	0.38	0.91	0.04	39.7	15.9	23	0.81	20.4	3.48	4.6	0.06	0.32	0.01	0.036	0.33	17.7	11.5	0.78	1705
D	210346	297794	6592658	0.003	0.04		2.88	55 <0.2		10		220	0.98	3.24	1.18	0.05	58.6	48.5	39	0.94	47.6	5.55	7.71	0.09	0.33	0.01	0.042	0.36	24	21.3	0.96	983
D	210347	297547	6593079	<0.001	0.02		1.25	6.6 <0.2		10		1890	0.71	0.29	0.92	0.04	37.3	13.2	25	0.73	16.6	2.86	4.08	0.06	0.29	0.02	0.038	0.37	17	9	0.66	1725
D	210348	297794	6593126	<0.001	0.02		1.09	3.1 <0.2		10		4290	0.66	0.14	0.8	0.03	34.9	9.1	18	0.74	9.7	3.39	3.66	0.06	0.19	0.02	0.038	0.32	15.9	8.3	0.55	2960
D	210349	298362	6592671	0.01	0.03		1.54	15.2 <0.2		10		3580	0.83	0.57	0.88	0.05	44.7	26.4	24	0.89	28.9	4.28	5.36	0.07	0.38	0.02	0.042	0.34	19.6	13.5	0.84	2590
D	210350	298293	6592818	0.012	0.04		1.18	6.7 <0.2		10		2690	0.75	0.33	4.42	0.07	37.1	21.5	19	0.78	19.7	3.45	4.03	0.06	0.13	0.04	0.055	0.3	16.3	9.8	2.13	2640
D	210351	298392	6592936	0.013	0.02		1.27	3.4 <0.2		10		1490	0.74	0.24	1.69	0.07	43.1	9.6	18	0.71	9	3.18	4.45	0.07	0.3	0.02	0.059	0.36	20.1	9.3	1.1	992
D	210352	298475	6592996	0.001	0.03		1.33	2.6 <0.2		10		740	0.71	0.19	0.54	0.04	33.4	8.8	20	0.8	10.6	2.44	4.5	0.05	0.24	0.02	0.03	0.33	15.6	10.5	0.72	615
D	210353	298557	6592753	0.001	0.03		1.07	3.2 <0.2		10		2130	0.72	0.15	0.96	0.12	34.7	8.3	25	0.71	6.8	3.03	3.27	0.05	0.18	0.03	0.04	0.35	16.1	4.8	0.51	1170
D	210354	298741	6592530	0.017	0.03		1.45	38.3 <0.2		10		2600	1.29	0.73	1.17	0.05	49.9	18.6	18	1.28	50.7	4.6	4.78	0.08	0.42	0.02	0.051	0.37	22.9	10.2	0.79	1415
D	210355	298659	6592550	0.001	0.03		1.57	10.6 <0.2		10		300	0.91	0.4	1.47	0.03	51.9	14.8	17	1.66	16.4	3.19	5.15	0.09	0.56	0.01	0.044	0.35	24.1	9.6	0.67	514
D	210356	298884	6591845	0.001	0.02		1.26	5.5 <0.2		10		490	0.87	0.28	1.18	0.03	43.1	10.2	23	0.97	21.4	2.86	4.04	0.08	0.41	0.02	0.038	0.36	20.1	9.2	0.76	689
D	210357	298852	6591919	0.007	0.03		1.76	14.7 <0.2	<10			240	0.96	0.43	0.51	0.05	50	18.1	28	1.23	24.7	3.59	5.72	0.1	0.52	0.01	0.037	0.36	24	17.5	0.87	793
D	210358	298967	6591977	0.012	0.03		1.9	8.7 <0.2		10		310	1.08	0.47	0.46	0.03	44.9	15.5	25	0.88	24.9	3.26	6.2	0.09	0.37	0.01	0.04	0.33	21.1	17.3	1.09	658
D	210359	298943	6592105	0.01	0.03		1.5	5.5 <0.2		10		210	0.75	0.2	1.28	0.03	36.1	12.2	23	1.2	16.1	2.66	4.65	0.08	0.28	0.02	0.027	0.34	17.5	11.4	0.54	627
D	210360	298965	6592179	0.001	0.04		2.3	7.3 <0.2		10		210	1.19	0.44	0.42	0.04	56.5	17	31	1.12	33.6	4.17	7.69	0.11	0.42	0.02	0.047	0.42	27.3	20.5	1.11	755
D	210361	299099	6592077	0.001	0.04		2.05	9.3 <0.2	<10			250	1.19	0.51	0.52	0.04	58.6	16.8	28	0.77	31.3	3.84	7.07	0.11	0.46	0.02	0.056	0.36	27.5	19	1.27	979
D	210362	299034	6592209	0.001	0.04		1.61	6.1 <0.2		10		810	0.98	0.4	1.03	0.02	50.3	13.3	27	0.52	20.7	4.15	5.44	0.1	0.33	0.03	0.069	0.31	22.9	14.1	1.13	1430
D	210363	299062	6592255	0.011	0.04		2.01	8.4 <0.2	<10			390	1.25	0.54	0.5	0.04	53.1	20	27	0.65	32.4	4.36	7.13	0.12	0.32	0.03	0.064	0.29	24.8	21	1.52	1410
D	210364	298403	65																													

Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	PUL-QC	
ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	
ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	
0.05	0.01	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.05	0.05	0.2	0.2	0.01	0.01	0.2	0.005	0.02	0.05	1		0.05	0.05	2
																							0.5	0.01	
0.57	0.02	0.17	35	510	16.8	61	<0.001	0.01	0.43	9.5	0.7	1.7	151.5	0.01	0.02	11.4	0.018	0.32	1.14	65		0.14	15.05	83	16.7
1.13	0.03	0.2	36.1	630	19.6	53.5	<0.001	0.02	0.61	9.3	0.8	1.6	127.5	0.01	0.02	11.2	0.014	0.29	1.37	64		0.12	16.6	103	15.4
0.77	0.04	0.43	38.7	920	13.7	75.3	0.001	0.03	0.62	10.2	0.7	1.9	60.9	0.01	0.04	11.2	0.029	0.34	1.19	75		0.41	13.4	64	19.4
1.26	0.03	0.18	33.8	470	9.9	31.1	0.001	0.02	0.22	8.6	0.7	0.8	60.7	<0.01	0.04	9.2	0.018	0.21	1.35	59		0.14	10.2	36	16
1.94	0.03	0.09	37.4	360	9.4	31.2	0.001	0.02	0.24	9.3	0.7	0.8	43.9	<0.01	0.05	9.7	0.017	0.21	1.45	60		0.09	9.91	31	20.4
1.19	0.02	0.11	34.2	520	12.1	29.8	0.001	0.02	0.29	7.3	0.8	0.8	54.6	<0.01	0.05	9.1	0.019	0.18	1.58	56		0.14	11.4	38	18.3
1.51	0.03	0.08	29.7	420	9.9	14.2	0.001	0.02	0.19	9.4	0.8	0.5	53.6	<0.01	0.05	8.2	0.009	0.15	1.45	40		0.09	11.45	14	17.9
1.74	0.02	0.08	30.8	420	10.1	15.3	0.001	0.01	0.2	9.9	0.7	0.5	54.6	<0.01	0.05	8.3	0.01	0.14	1.41	45		0.08	11.35	16	19.1
3.11	0.02	0.12	45	410	15	21.7	<0.001	0.02	0.22	8.1	0.8	0.6	36	<0.01	0.07	8.6	0.017	0.23	1.16	66		0.08	9.59	36	12.6
1.53	0.03	0.12	40.5	440	11.9	19	0.001	0.04	0.23	9.4	1.3	0.8	45.6	<0.01	0.06	7.9	0.017	0.16	1.49	56		0.21	11.65	19	10.5
1.23	0.02	0.14	36.6	360	10	30.5	<0.001	0.02	0.19	8.7	0.6	0.8	25.6	<0.01	0.04	9.7	0.023	0.22	1.28	63		0.1	9.42	25	15
0.53	0.01	0.09	35.6	390	16.1	40	<0.001	0.02	0.25	5.8	0.6	0.8	32	<0.01	0.02	12.4	0.02	0.31	1.32	54		0.06	11.2	61	23.8
0.66	0.05	0.11	27.3	340	7.1	24.5	<0.001	0.27	0.17	7.6	0.5	0.6	113.5	<0.01	0.04	8.2	0.013	0.36	1.03	53		0.06	7.02	19	13.7
0.93	0.02	0.11	37.9	400	10.7	28.5	<0.001	0.03	0.34	8.9	0.7	0.9	50	<0.01	0.05	9.7	0.015	0.35	0.95	78		0.06	9.13	26	16.4
0.42	0.01	0.09	36.1	430	9.5	21.7	<0.001	0.01	0.23	7.4	0.5	0.6	19	<0.01	0.03	10.5	0.014	0.13	0.87	75		0.07	8.49	34	15.7
0.73	0.02	0.14	39.7	400	17.8	37.3	<0.001	0.02	0.29	5.8	0.6	0.8	38.8	<0.01	0.04	11.4	0.02	0.24	1.3	58		0.07	11.9	63	20.1
0.63	0.01	0.08	37.8	360	16.8	47.8	<0.001	0.01	0.28	6.2	0.6	0.9	39.6	0.01	0.03	12.9	0.023	0.32	1.37	59		0.06	12.05	68	26.4
0.42	0.03	0.29	24	430	15.4	26.8	<0.001	0.03	0.27	5.9	0.7	0.8	52.9	<0.01	0.04	7.9	0.013	0.16	0.73	47		0.05	11.95	51	9
0.63	0.01	0.22	32.1	480	20.1	37.6	<0.001	0.04	0.29	8.3	0.6	0.9	43.1	<0.01	0.03	9.2	0.014	0.28	0.82	62		0.07	11.3	52	10.8
0.64	0.02	0.09	37	290	5.1	12.5	<0.001	0.02	0.17	7.7	0.7	0.8	33.7	<0.01	0.08	9.9	0.016	0.08	0.99	85		0.09	6.42	14	12
0.44	0.01	0.15	31.7	370	5	16.3	<0.001	0.01	0.14	9.2	0.6	0.8	44.7	<0.01	0.05	8.5	0.016	0.08	0.95	80		0.08	7.81	20	4.3
0.56	0.01	0.1	38.9	520	18.2	32.1	<0.001	0.01	0.48	6.2	0.6	0.6	33.8	<0.01	0.04	11.7	0.011	0.19	0.94	59		0.09	10.85	75	13.6
0.77	0.02	0.18	37.8	550	22.9	35.3	<0.001	0.02	0.44	7.2	0.7	0.9	134.5	<0.01	0.03	10.8	0.013	0.21	1.04	59		0.07	14.7	81	10.3
0.67	0.01	0.12	36	580	17.1	26.1	<0.001	0.02	0.42	7	0.7	0.8	124	<0.01	0.02	9.9	0.009	0.18	0.98	55		0.07	15.3	85	6.1
0.62	0.01	0.3	20.8	480	12.9	22.7	<0.001	0.03	0.44	5.1	0.7	0.6	68.4	<0.01	0.02	6.7	0.012	0.19	0.89	37		0.16	11.4	44	6.2
0.55	0.02	0.15	28.3	760	19.2	25.5	<0.001	0.02	0.29	5.9	0.7	0.7	126.5	<0.01	0.02	10.4	0.009	0.16	0.97	37		0.06	16.6	71	8.6
0.62	0.02	0.1	37.4	440	16	30.2	<0.001	0.01	0.72	6.3	0.7	0.8	115.5	<0.01	0.03	10.3	0.012	0.24	0.9	64		0.09	13.3	82	13.4
0.77	0.01	0.15	32.8	560	35	26.4	<0.001	0.02	0.61	6.4	0.7	0.7	159.5	<0.01	0.02	9.7	0.009	0.21	0.97	47		0.1	14.8	106	6.7
0.71	0.01	0.25	25.6	230	5.6	27.7	<0.001	0.01	0.2	5.8	0.4	1	18.3	<0.01	0.03	10.9	0.025	0.13	1.39	58		0.29	7.27	21	15
0.47	0.01	0.26	26	290	5.5	20.8	<0.001	0.01	0.21	5.9	0.4	0.8	18.9	<0.01	0.03	10.8	0.021	0.1	1.25	58		0.23	7.06	23	13.6
0.8	0.01	0.17	27.4	300	5.9	22.4	<0.001	0.01	0.2	5.4	0.5	0.7	19.7	<0.01	0.04	9	0.013	0.13	1.08	43		0.13	8.47	15	14.1
1.6	0.01	0.23	17.4	280	6.3	20.2	<0.001	0.01	0.19	4.7	0.5	0.7	30	<0.01	0.03	6.2	0.012	0.14	0.75	39		0.08	7.11	16	8.2
0.95	0.01	0.19	28.8	390	9.4	19.2	<0.001	0.02	0.19	6.4	0.6	0.6	41.5	<0.01	0.04	7.3	0.012	0.15	1	51		0.08	9.83	16	9.3
0.4	0.01	0.28	11.5	200	4.9	24.2	<0.001	0.01	0.21	3.1	0.4	0.6	14.2	<0.01	0.01	8.2	0.012	0.12	0.81	25		0.17	6.3	9	9.8
1.22	0.01	0.29	11	180	4.4	24.4	<0.001	0.01	0.22	2.8	0.4	0.6	13.1	<0.01	0.01	8.7	0.013	0.14	0.84	24		0.09	6.22	7	10.4
0.79	0.01	0.15	33.9	320	4.4	16.3	<0.001	0.01	0.2	6.5	0.4	0.8	11.8	<0.01	0.03	11.9	0.022	0.07	1.4	69		0.25	6.14	20	15.2
0.57	0.02	0.22	30.1	580	20.2	20.1	0.001	0.03	0.31	7.6	0.6	0.9	71.8	<0.01	0.05	10.4	0.018	0.11	1.26	59		0.18	11.8	124	13.8
1.08	0.01	0.12	31.1	410	9.2	16.9	<0.001	0.02	0.17	7.8	0.6	0.8	46.5	<0.01	0.05	9.7	0.017	0.11	1.32	61		0.11	9.49	80	17
0.73	0.02	0.15	38.5	510	30.1	24	<0.001	0.03	0.54	5.9	0.7	0.7	69.7	<0.01	0.04	10.5	0.011	0.15	1.06	51		0.13	13.85	114	14.2
0.64	0.02	0.17	49.7	730	25.2	29.1	<0.001	0.02	0.69	6.9	1	0.8	40.2	0.01	0.08	11.4	0.016	0.18	1.06	57		0.17	14.5	88	14.2
1.38	0.02	0.1	41.4	550	12.1	11.2	0.001	0.03	0.34	6.5	1	0.9	30.3	<0.01	0.08	7.9	0.014	0.14	1.14	85		0.11	9.34	36	16.8
1.13	0.03	0.1	36	440	10.5	9.8	0.001	0.05	0.25	6.2	0.9	0.9	31.9	<0.01	0.07	7.5	0.015	0.13	1.11	75		0.11	8.19	39	13
1.09	0.03	0.11	32.5	300	9.7	18.8	0.001	0.03	0.23	5.8	0.7	0.7	42.6	<0.01	0.04	8.3	0.015	0.16	1.4	52		0.11	8.33	20	15.7
0.98	0.02	0.15	24.1	240	8.2	26.2	<0.001	0.02	0.37	5.6	0.6	0.8	32.6	<0.01	0.03	7.8	0.015	0.16	0.98	51		0.08	7.63	16	15.7
0.88	0.03	0.16	27.4	410	9.2	16	<0.001	0.04	0.18	7.6	0.7	0.8	80.6	<0.01	0.05	8.1	0.016	0.13	1.41	56		0.11	9.11	63	14.6
0.69	0.01	0.15	31	420	4.5	14.9	<0.001	0.02	0.13	7.2	0.6	0.8	29.4	<0.01	0.04	9.1	0.018	0.08	1.58	61		0.12	7.74	16	13.1
0.81	0.01	0.12	27.1	230	7.1	27.2	<0.001	<0.01	0.24	5.6	0.4	0.7	11.5	0.01	0.02	11.5	0.016	0.14	1.35	42		0.09	8.92	11	19.4
0.47	0.01	0.31	15	280	6.1	24.8	<0.001	0.01	0.18	4.4	0.5	0.6	25.7	<0.01	0.02	8.1	0.014	0.15	0.9	31		0.09	6.88	16	10.1
0.31	0.01	0.12	14.7	170	8.4	28.6	<0.001	0.02	0.24	3.3	0.4	0.6	21.8	<0.01	0.01	11.3	0.012	0.15	1.19	24		0.12	7	15	15.5
1.27	0.02	0.09	30.2	410	17.4	18.3	<0.001	0.04	0.49	6.8	0.8	0.5	45.9	<0.01	0.04	8.3	0.01	0.17	1.13	51		0.06	8.2	48	18.5
0.78	0.01	0.1	27.4	320	12.7	21.9	<0.001	0.01																	

Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	PUL-QC	
0.42	0.02	0.18	23.5	680	32.4	25.8	0.001	0.11	0.57	5.4	1.1	0.6	573	0.01	0.04	8.1	0.01	0.15	1.48	38	0.1	19.4	58	8.2	99
1.44	0.01	0.12	27.3	670	20.8	26.4	<0.001	0.02	0.78	5.9	0.9	0.6	92.9	<0.01	0.03	11.1	0.006	0.18	1.19	34	0.05	14.45	48	11.4	
1.59	0.03	0.13	25.9	1000	48.2	29.3	<0.001	0.02	0.94	7	0.8	0.6	144	0.01	0.03	14.5	0.006	0.18	1.74	30	0.32	15.2	36	18.6	
1.49	0.02	0.14	25.5	850	29.5	29.5	<0.001	0.03	0.88	6.7	0.9	0.6	160	<0.01	0.03	12.6	0.006	0.21	1.66	31	0.1	13.3	37	12.5	
1.73	0.01	0.13	24.9	900	72.1	24.6	<0.001	0.03	0.82	6.6	0.9	0.5	179	<0.01	0.03	12.1	<0.005	0.15	1.5	24	0.05	15.4	39	11.3	
0.52	0.01	0.24	19.9	550	19.1	24.6	<0.001	0.03	0.4	4.6	0.8	0.6	319	<0.01	0.03	8.3	0.009	0.19	1.21	30	0.11	13.3	46	8.9	
0.99	0.01	0.17	27.8	570	19.2	31.8	<0.001	0.03	0.92	6	0.8	0.9	173.5	<0.01	0.04	9	0.01	0.53	1.38	42	0.14	12.65	50	13.5	
0.35	0.02	0.22	22.8	710	15.3	29.4	<0.001	0.04	0.32	5.3	1.1	0.7	554	0.01	0.03	8.7	0.012	0.15	1.42	37	0.11	16.7	56	6.9	
0.47	0.01	0.13	29.6	520	28.7	29.1	<0.001	0.03	0.42	5	0.9	0.6	237	0.01	0.03	11.4	0.012	0.17	1.21	40	0.06	16	74	15.2	
0.7	<0.01	0.35	22.8	410	17.3	31.4	<0.001	0.03	0.39	5.4	0.6	0.9	47.7	<0.01	0.02	8.4	0.013	0.26	0.87	37	0.09	10.8	48	10.4	
0.71	<0.01	0.46	18.1	260	8.8	32.6	<0.001	0.02	0.25	3.6	0.4	0.9	29.3	<0.01	0.01	10	0.016	0.2	1.35	30	0.22	8.12	22	12.2	
6.62	0.01	0.44	23	560	11.7	26.2	0.001	0.05	0.37	6.4	0.8	1.4	67.6	<0.01	0.03	6.3	0.014	0.32	1.25	47	0.07	15.75	59	9.1	
0.83	<0.01	0.12	26.1	380	39.3	44.1	<0.001	0.02	0.62	5.3	0.6	0.8	24.2	<0.01	0.02	12.3	0.01	0.46	0.92	48	0.11	11.15	62	16.8	
0.58	0.01	0.26	19.1	620	10.6	23.4	<0.001	0.04	0.3	6	0.9	0.6	406	<0.01	0.02	6.7	0.008	0.17	1.1	28	0.11	13.05	45	4.7	
2.96	<0.01	0.21	19.6	360	13.1	22.8	<0.001	0.02	0.4	4.1	0.5	0.8	26.3	<0.01	0.02	7.7	0.012	0.34	0.94	32	0.07	8.98	41	10.7	
0.59	<0.01	0.3	17.8	320	11.6	22.7	<0.001	0.02	0.58	4.1	0.5	0.7	32.7	<0.01	0.02	7.5	0.012	0.22	0.82	31	0.1	8.7	35	8.2	
0.59	<0.01	0.27	19.6	370	15.7	26	<0.001	0.02	0.37	4.5	0.5	0.7	42.6	<0.01	0.02	8.3	0.012	0.23	0.82	33	0.12	8.73	43	9.4	
2.74	0.01	0.14	20.6	260	11.4	37.1	<0.001	0.02	0.32	4.8	0.5	1.1	23.5	<0.01	0.02	9.6	0.017	0.35	1.39	40	0.09	10.4	29	16.6	
0.59	<0.01	0.22	16.9	270	9.6	32	<0.001	0.03	0.37	3.3	0.4	0.8	26.7	<0.01	0.01	11.1	0.012	0.15	1.13	30	0.12	7.29	22	16.9	
0.49	<0.01	0.17	16.9	640	9.4	21.8	<0.001	0.02	0.33	4.3	0.5	0.7	37.6	<0.01	0.02	5.6	0.012	0.37	0.75	34	0.08	9.02	40	8.5	
2.77	<0.01	0.18	19.5	280	19	28.1	<0.001	0.02	0.31	4.1	0.5	0.8	27.9	<0.01	0.01	7.5	0.013	0.44	1.26	32	0.07	11	38	15.4	
0.54	0.01	0.12	18.1	350	17.9	30.6	<0.001	0.02	0.36	4.2	0.4	0.8	27.7	<0.01	0.01	8.8	0.016	0.44	1.22	37	0.08	10.9	38	14.1	
0.51	0.01	0.08	18.5	250	9.4	24	<0.001	0.02	0.48	3.1	0.3	0.6	28.1	<0.01	0.01	8.1	0.015	0.54	1.13	27	0.11	11.65	28	12.7	
2.29	0.01	0.06	16.9	250	9.8	24.9	<0.001	0.02	0.36	3.1	0.3	0.7	21.6	<0.01	0.01	8.7	0.012	0.27	1	28	0.05	8.12	25	14.7	
0.44	0.01	0.28	14	230	6.7	26.5	<0.001	0.02	0.5	3	0.3	0.7	21.2	<0.01	0.01	8.8	0.018	0.21	1.19	29	0.09	8.64	24	13.2	
0.33	0.02	0.11	24.6	500	24.7	26.7	<0.001	0.03	0.29	4.7	0.6	0.6	123	<0.01	0.02	10	0.013	0.16	0.98	42	0.05	13.7	69	11.6	
1.06	0.01	<0.05	28.3	760	60.1	51	<0.001	0.02	0.6	5.5	0.5	0.7	22.5	<0.01	0.01	15	0.013	0.38	1.01	48	<0.05	11.85	86	20.1	
0.71	0.01	0.06	40	1160	48.4	49.5	<0.001	0.02	0.67	4.7	0.6	0.6	64.6	<0.01	0.02	13.1	0.011	0.42	1.71	39	0.05	12	105	14.2	
0.34	0.02	0.12	25.2	580	21.4	26.2	<0.001	0.03	0.36	4.5	0.6	0.6	176.5	<0.01	0.02	10.1	0.013	0.15	1.15	40	0.06	16.5	69	12	
0.52	0.02	0.14	24.1	600	21.4	25.1	<0.001	0.03	0.28	5	0.6	0.6	139	<0.01	0.03	8.8	0.014	0.15	0.91	42	0.05	14.35	68	8.7	
0.34	0.02	0.17	21.9	590	19.3	22.3	<0.001	0.03	0.28	4.6	0.5	0.6	88.9	<0.01	0.03	7.9	0.012	0.18	0.93	37	0.05	13.55	61	7.7	
0.14	<0.01	<0.05	6.4	130	4.7	6	<0.001	0.01	0.21	1.8	0.2	0.3	16.4	<0.01	0.01	3.5	0.008	0.09	0.48	16	<0.05	3.93	21	6.3	
0.83	0.03	0.23	19.3	700	12.6	21	<0.001	0.05	0.23	4.3	0.7	0.5	253	<0.01	0.02	7.1	0.012	0.12	0.95	37	0.05	13.75	65	5.1	
0.39	0.02	0.15	28.5	560	12	30.5	<0.001	0.03	0.29	4.4	0.6	0.6	139.5	<0.01	0.01	11.2	0.014	0.16	1.16	45	0.05	14.15	79	12	
0.28	0.03	0.17	23.3	620	12.9	24.4	0.001	0.04	0.33	4.5	0.7	0.5	354	<0.01	0.02	9.3	0.013	0.13	1.22	41	0.06	16.3	72	8.1	
0.55	0.02	0.12	26	590	19.3	24.5	<0.001	0.03	0.32	4.8	0.7	0.6	152	<0.01	0.02	9.9	0.012	0.14	1.09	42	0.05	16.5	72	10.4	
0.41	0.02	0.23	22.8	650	16.9	31.3	<0.001	0.03	0.36	5.4	0.7	0.7	119	<0.01	0.01	8.6	0.014	0.16	1.01	42	0.09	15.8	75	8.1	
0.57	0.02	0.18	20.2	1000	12	31.1	<0.001	0.03	0.36	5.1	0.6	0.7	168	<0.01	0.01	8.4	0.012	0.22	1.08	37	0.16	12.65	65	6.6	
2.93	0.02	0.07	36.5	920	16.5	12.9	<0.001	0.02	0.29	3.1	0.4	0.5	39	<0.01	0.01	5	0.012	1.14	1.22	23	0.08	11.25	127	11.8	
0.68	0.05	0.09	28.1	330	7.4	28.1	0.001	0.07	0.63	7.1	0.5	0.6	47.3	<0.01	0.03	10.3	0.017	0.13	1.21	64	0.14	7.18	32	18.2	
0.57	0.02	0.06	23.1	610	6.4	20.4	<0.001	0.02	0.45	5	0.4	0.5	32.4	<0.01	0.03	7.9	0.013	0.14	0.92	57	0.45	6.66	23	14	
1.3	0.02	<0.05	25.7	280	8	33.4	0.001	0.01	0.48	5.7	0.4	0.6	15.3	<0.01	0.03	11	0.02	0.18	1.01	64	0.07	6.81	39	21.7	
0.76	0.05	0.08	23.2	370	4.8	23.4	<0.001	0.02	0.6	7.5	0.5	0.5	34.7	<0.01	0.03	6.8	0.044	0.12	0.8	82	0.09	8.32	20	18.8	
0.93	0.03	0.09	25.1	380	20.8	22.3	0.001	0.03	0.44	6.8	0.5	0.7	23	<0.01	0.04	10.3	0.016	0.13	0.82	75	0.09	6.99	34	16.5	
3.25	0.04	0.18	23.1	390	14.3	22.7	0.001	0.06	0.41	5.9	0.6	0.7	43.5	<0.01	0.03	7.7	0.016	0.16	0.85	56	0.07	7.4	34	9.3	
0.79	0.04	0.09	23.6	380	5.1	18	<0.001	0.02	0.62	7.6	0.5	0.4	35	0.01	0.03	6.7	0.044	0.11	0.77	83	0.08	7.86	20	15.6	
0.84	0.04	0.18	32.4	330	6.6	21.4	<0.001	0.02	0.69	8.4	0.7	0.6	25.1	<0.01	0.03	6.6	0.128	0.15	0.85	106	0.07	8.65	24	14	
2.32	0.02	0.06	29.5	300	5.6	16.4	<0.001	0.02	0.6	5.7	0.5	0.5	20	<0.01	0.04	7.1	0.01	0.14	1	53	0.09	6.04	25	14	
1.16	0.01	0.06	29.8	350	4.1	25.9	<0.001	0.01	0.56	5.3	0.6	0.6	20.4	<0.01	0.03	7.8	0.014	0.15	1.18	54	0.16	6.26	33	15.5	
0.79	0.04	0.05	27.8	330	6.7	14.1	<0.001	0.03	0.6	6.9	0.5	0.3	15.1	<0.01	0.04	7.1	0.008	0.15	0.95	46	0.07	5.7	19	12.2	
1.9	0.02	0.08	26.2	280	4.3	20.7	<0.001	0.03	0.53	4.9	0.3	0.6	14	<0.01	0.03	7.2	0.016	0.12	0.97	57	0.12	5.3	32	12.1	
0.67	0.02	0.15	26.1	350	6.5	21.6	<0.001	0.03	0.43	6	0.6	0.7	29.9	<0.01	0.03	7	0.016	0.15	0.92	75	0.11	7.25	36	10.5	
1.16	0.05	0.07	26.5	320	8.2	14.3	<0.001	0.02	0.52	6.9	0.6	0.3	19.2	<0.01	0.04	8	0.039	0.16	0.73	59	0.06	5.98	18	12.3	
2.08	0.04	0.06	26.4	270	9.4	18.4	0.001	0.02	0.43	7.7	0.5	0.5	20.2	<0.01											

Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	PUL-QC
0.85	0.08	0.15	32.1	330	8.7	41.9	0.001	0.07	1.6	9.6	0.7	1.3	84.1	0.01	0.02	6.8	0.083	0.43	0.96	117	0.13	10.7	26	22.9
3.08	0.06	0.14	62.1	240	8.4	13.7	0.001	0.02	0.63	9.5	1.1	0.6	45.4	<0.01	0.03	5.5	0.043	0.08	0.6	97	0.07	9.64	3	18.7
0.92	0.05	0.18	49.4	260	7.6	15	0.001	0.02	0.42	7.8	1	0.5	46.6	<0.01	0.03	5.9	0.024	0.08	0.6	68	0.1	9.68	2	15.7
0.51	0.05	0.17	41.2	230	6.2	30.5	0.001	0.01	1.07	14.2	0.6	1	22.4	0.01	0.01	3.5	0.126	0.29	0.36	292	0.11	10.1	11	14.9
1.97	0.03	0.17	27.2	370	8.9	38.5	0.001	0.02	1.12	8.4	1	0.9	30.1	<0.01	0.03	5.2	0.061	0.34	0.76	150	0.12	9.53	16	17.3
0.71	0.01	0.63	15.7	280	12.3	25.7	0.001	0.02	0.56	4.2	0.6	0.8	35.7	<0.01	0.01	5.4	0.01	0.14	1.67	29	0.21	9.14	12	9.3
0.69	0.03	0.1	28.3	280	7.6	24.5	0.001	0.01	1.04	7.6	0.6	0.6	27.2	<0.01	0.02	5.4	0.043	0.21	0.67	92	0.09	8.74	19	17.1
1.19	0.05	0.3	29	870	7.1	41.8	0.001	0.01	0.82	13.8	1.1	1.2	22.6	0.01	0.01	2.9	0.275	0.16	0.36	292	0.06	15.15	20	27.7
0.36	0.03	0.27	23.7	220	9	24.4	0.001	0.01	1.77	7.9	0.7	1.1	36.7	<0.01	0.02	3.3	0.134	0.14	0.44	126	<0.05	10.55	27	17.8
0.52	0.04	0.14	26.3	290	7.2	35.3	<0.001	0.01	1.01	7.1	0.6	0.8	16.9	<0.01	0.03	3.3	0.083	0.12	0.35	206	0.05	6.52	18	15.5
1.74	0.03	0.08	35.7	330	7.2	23	0.001	0.02	1.12	7.1	0.6	0.6	27.7	<0.01	0.04	5.2	0.041	0.16	0.91	105	0.07	7.18	19	18.6
1.32	0.02	0.08	53.2	350	27.1	19.7	0.001	0.01	2.13	6.7	1.6	0.7	23.3	<0.01	0.09	7.9	0.01	0.24	1.39	66	0.07	12.35	22	22.9
0.83	0.02	0.11	27.2	360	14.2	49.1	0.001	0.01	0.88	8.7	0.8	0.9	25.4	<0.01	0.03	6.8	0.037	0.17	0.99	111	0.08	9.37	30	19.1
1.34	0.01	0.12	24.6	250	7.1	30.8	<0.001	<0.01	1.04	7.1	0.5	0.8	18.3	<0.01	0.01	4.2	0.059	0.13	0.56	135	0.06	6.97	18	14.5
0.61	0.02	0.19	27.5	290	8.7	30.5	<0.001	0.01	0.61	7.8	0.6	0.8	25.3	<0.01	0.02	5.1	0.027	0.13	0.69	92	0.08	7.79	24	15.2
0.73	0.03	0.17	28.2	310	8.3	31.4	<0.001	0.01	0.9	8.4	0.7	0.8	29.7	<0.01	0.02	5.9	0.052	0.24	0.75	91	0.1	9.88	17	18.2
2.39	0.02	0.24	23	250	7.4	24	0.001	0.01	0.96	5.7	0.6	0.8	20.1	<0.01	0.01	5.7	0.047	0.26	0.75	78	0.07	8.01	19	15.2
0.62	0.02	0.11	27.6	350	8.1	29.8	<0.001	0.01	0.91	7.8	0.6	0.7	22.5	<0.01	0.02	5.2	0.042	0.17	0.67	101	0.07	8.57	22	16.3
0.61	0.02	0.12	24.8	290	7.3	25.5	<0.001	0.01	0.69	7.3	0.5	0.6	26.5	<0.01	0.02	5	0.035	0.17	0.61	82	0.07	8.83	18	15.4
1.76	0.04	0.12	34.8	360	8.1	24	0.001	0.04	0.96	9.7	0.9	0.7	51.1	<0.01	0.04	5.6	0.033	0.15	0.82	128	0.07	8.09	30	15.4
0.81	0.01	0.06	27.7	280	12.1	21.2	0.001	0.01	1.08	5.2	0.7	0.6	16.3	<0.01	0.05	7.8	0.007	0.18	1.12	41	0.09	9.06	7	24.9
1.01	0.02	0.07	34.1	340	14.7	20.6	<0.001	0.01	1.45	5.8	1	0.6	22	<0.01	0.07	7.6	0.007	0.2	1.11	47	0.08	10.6	10	22.1
2.76	0.02	0.07	24.3	260	9.5	20.9	0.001	0.02	1.06	4.4	0.6	0.7	31.3	<0.01	0.03	6.9	0.007	0.17	0.89	40	0.09	8.58	7	21.9
0.77	0.06	0.09	23.2	290	9.2	17.3	0.001	0.08	0.76	3.9	0.6	0.6	51.9	<0.01	0.02	6.1	0.009	0.17	0.75	46	0.17	7.24	10	16.4
1.43	0.01	0.07	58.1	310	26.3	20.1	<0.001	0.01	3.37	5.4	3.2	0.7	25.9	<0.01	0.07	6.7	0.008	0.17	0.69	88	0.05	13.1	37	15.8
2.48	0.04	0.08	18.1	280	5.3	17.9	0.001	0.04	0.52	4.2	0.5	0.6	47.5	<0.01	0.02	5.9	0.007	0.18	0.8	36	0.09	6.62	9	15.4
0.67	0.07	0.17	14.6	260	5.7	16.2	0.001	0.09	0.32	3.9	0.4	0.7	73.3	<0.01	0.02	5.5	0.012	0.21	0.86	44	0.23	6.13	7	10.4
1.04	0.06	0.09	32.5	300	13	19.8	0.001	0.08	1.05	4.4	1	0.7	71.3	<0.01	0.04	6.5	0.011	0.23	0.97	59	0.18	8.13	14	19.5
2.3	0.05	0.16	20.7	930	12.3	15.6	0.001	0.07	0.42	5.3	0.9	0.6	132.5	<0.01	0.04	5.6	0.008	0.14	0.94	44	0.12	9.14	17	8.4
0.75	0.03	0.17	16.7	420	6.6	18.8	0.001	0.04	0.58	5	0.5	0.6	53	<0.01	0.03	7.1	0.009	0.14	0.85	33	0.14	7.67	7	15.8
0.58	0.02	0.25	15.8	260	6.5	17.9	0.001	0.02	0.37	4.4	0.5	0.6	29.9	<0.01	0.02	6	0.009	0.12	0.7	29	0.11	6.23	8	11.6
2.71	0.04	0.2	14.6	530	8.3	18	0.001	0.05	0.98	4.8	0.5	0.7	52.8	<0.01	0.02	5.7	0.011	0.17	0.83	33	0.13	7.91	16	9.9
1.29	0.05	0.11	35.6	300	10.3	23.8	0.001	0.07	3.65	5.1	1.1	0.7	64	<0.01	0.05	7.9	0.007	0.5	0.82	44	0.2	9.88	10	22.4
1.06	0.02	0.07	20.5	220	5.2	24.6	<0.001	0.02	0.64	5.1	0.7	0.7	25.3	<0.01	0.06	8.5	0.005	0.17	0.64	37	0.1	8.21	4	20.7
2.73	0.01	0.09	16.7	250	6.6	21.4	0.001	0.02	0.95	4.3	0.5	0.6	39	<0.01	0.02	7.4	0.007	0.21	0.71	28	0.08	7.14	8	16.9
0.96	0.01	0.08	30.4	330	11.6	23.5	<0.001	0.01	1.11	4.2	0.6	0.5	19.9	<0.01	0.03	7.5	0.008	0.22	0.73	46	0.09	9	37	20.3
1.02	0.01	0.08	25.6	350	9.5	20.5	<0.001	0.01	0.81	4.6	0.5	0.5	28.1	<0.01	0.03	7	0.009	0.2	0.83	43	0.08	7.74	14	15.1
1.6	0.01	0.08	18.7	250	7.3	22.2	<0.001	0.01	0.44	3.9	0.4	0.6	47.7	<0.01	0.03	5.9	0.011	0.19	0.55	37	0.05	8.07	20	11.1
0.91	0.01	0.09	31.9	390	12.7	25.5	<0.001	0.01	0.66	5.5	0.5	0.6	28.6	<0.01	0.03	8.3	0.01	0.22	0.96	50	0.06	8.9	32	16.9
1.07	0.01	0.06	30.8	370	12.3	20.2	<0.001	0.01	0.83	5.6	0.5	0.6	27.7	<0.01	0.03	8.7	0.008	0.24	1.11	49	0.08	7.99	17	17.6
1.93	0.02	0.1	25.7	260	7.5	16	<0.001	0.02	0.86	6	0.5	0.6	32.3	<0.01	0.05	7.6	0.013	0.21	1.14	51	0.13	6.96	7	13.4
0.99	0.01	0.11	32.5	340	10.3	16.3	<0.001	0.01	0.95	5.9	0.6	0.6	24.9	<0.01	0.04	7.7	0.011	0.29	1.23	55	0.09	7.77	11	13.8
0.89	0.01	0.08	37.2	430	13.4	28.2	<0.001	0.01	0.54	5.7	0.5	0.6	23.9	<0.01	0.03	9	0.011	0.21	0.94	58	0.06	9.07	42	19.8
1.63	0.01	0.07	37.9	390	12.4	16.6	<0.001	0.02	0.61	6.3	0.6	0.6	28	<0.01	0.04	8.5	0.009	0.2	1.01	66	0.06	7.8	24	16.9
0.5	0.01	0.11	27.5	310	7.4	14.5	<0.001	0.01	0.21	6.4	0.5	0.6	37.3	<0.01	0.04	7.7	0.013	0.08	0.71	62	0.05	7.24	12	14.1
0.55	0.01	0.08	30.8	260	6.7	16.1	<0.001	0.02	0.2	6.9	0.5	0.6	40.5	<0.01	0.03	7.7	0.013	0.09	0.89	64	0.07	7.41	27	14.6
2.94	0.04	0.11	32.6	320	7.2	13.9	0.001	0.03	0.4	10.5	1.3	0.4	68.8	<0.01	0.05	6	0.017	0.08	0.63	64	0.05	11.7	5	15.2
2.5	0.09	0.2	66.3	470	11.3	14.3	0.001	0.09	1.15	10.5	4.2	0.6	67.8	<0.01	0.12	5	0.144	0.1	0.73	252	0.09	12.35	15	21.3
1.4	0.05	0.15	31.3	450	6.7	14.8	0.001	0.03	0.72	11.5	1.4	0.5	57.4	<0.01	0.06	5.5	0.088	0.08	0.65	129	0.08	11.9	20	20.9
2.12	0.04	0.15	29.4	380	6.6	13.7	<0.001	0.02	0.62	9.5	0.8	0.6	47.6	<0.01	0.03	5.3	0.067	0.09	0.61	112	0.05	10.05	16	18
0.67	0.03	0.07	34.4	240	8.1	16	<0.001	0.02	0.39	7.3	0.6	0.5	34.5	<0.01	0.03	5.9	0.023	0.07	0.64	76	0.07	7.45	10	15.6
0.85	0.03	0.11	31.2	280	8.6	15.3	<0.001	0.02	0.48	8.9	0.6	0.4	40.7	<0.01	0.03	6.6	0.02	0.08	0.65	77	0.07	9.15	14	16.6
2.71	0.03	0.11	35.5	300	11.4	16.9	0.001	0.03	0.41	9	1	0.6	52.8	<0.01	0.05	7.5	0.011	0.08	0.83	65	0.07	9.85	6	15.8
0.73	0.02	0.13	33.2	340	8.1	16.1	<0.001	0.01	0.57	8.2	0.6	0.5	28	<0.01	0.03	6.6	0.01	0.08	0.58	87	0.05	8.91	21	13.9
0.75	0.03	0.13	36.1	280	8.4	14.7	<0.001	0.02	0.58	10.5	0.7	0.4	55	<0.01	0.03	5	0.031	0.08	0.5	95	0.06			

APPENDIX 2

Stream sediment geochemical summary

by

Allan Younger

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Summary Report – Pinda Springs Calcrete Sampling

Introduction

Preliminary stream sediment sampling on the northern portion of the Pinda Springs EL3159 has been completed (Figure 1). This program was planned to be a definitive effort to evaluate the potential of these section of the tenement.

A total of 249 samples (-2mm) were spread over an area of 72km², approximating 1 sample/0.3km², these samples were focussed along and around the diapiric breccia and excluded most of the Adelaidean quartzite ridges.

Regional

The southern sector of the Pinda Springs E3159 was been stream sediment sampled during 2006; this work identified Au anomalism in association with the diapiric breccia. Base metal anomalism was identified in separate areas possibly indicating repetitions of the minor galena mineralization of the Pinda Springs Lead mine. This is brittle fracture fill and of no economic interest.

The northern sector of the tenement has had slightly more exploration activity with several investigations into the Christmas Gift “goldfield” or mine area located approximately 1km north of the tenements northern boundary.

The work focussed on the diapiric breccia as the emplacement of this unit was interpreted to be along structures and the diapiric action was thought likely to have created dilatation zones during emplacement.

Results

The maximum values for As (59ppm), Pb (393ppm), Zn (309ppm), Ag (0.22ppm) and Cd (1.29ppm) all occur within sample 210226; the maximum Cu response of 297ppm occurs within sample 210329 and the maximum Au response of 67ppb occurs within sample 210322.

The anomalous Pb and Zn responses occur along the periphery of the diapiric breccia (Figures 2 & 3) consistent the concept of mineralization being emplaced in dilatational zones created by the emplacement. The anomalous Cu and Au responses occur within the diapiric breccia (Figures 4 & 5).

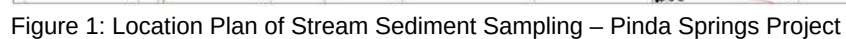


Figure 1: Location Plan of Stream Sediment Sampling – Pinda Springs Project

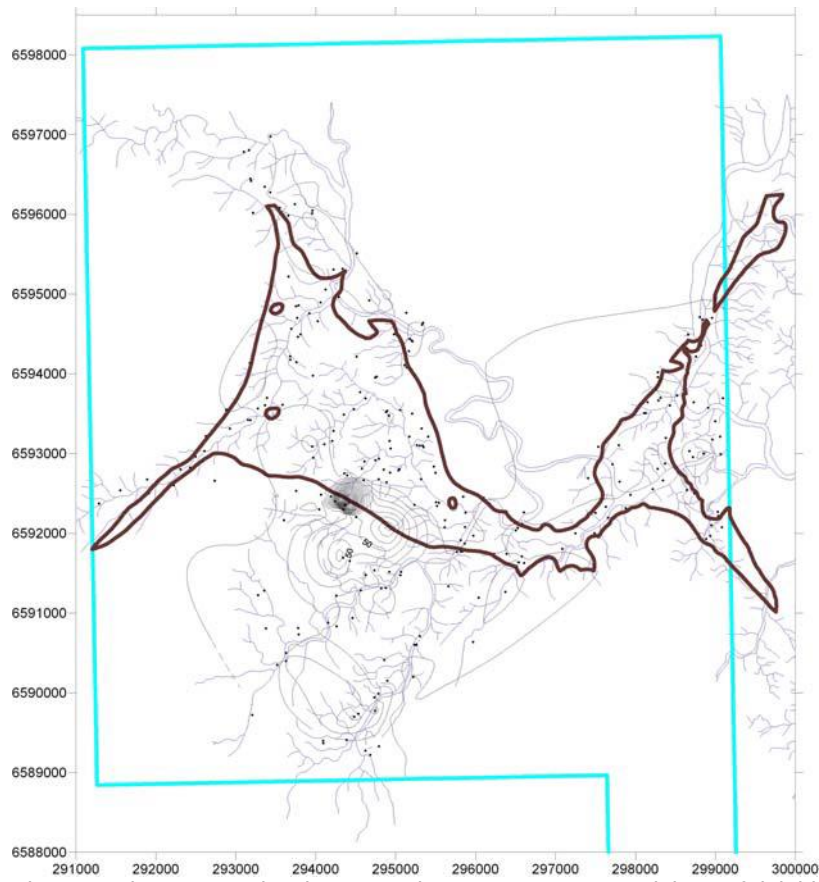


Figure 2: Pb contours showing anomalous responses on periphery of daipiric breccia.

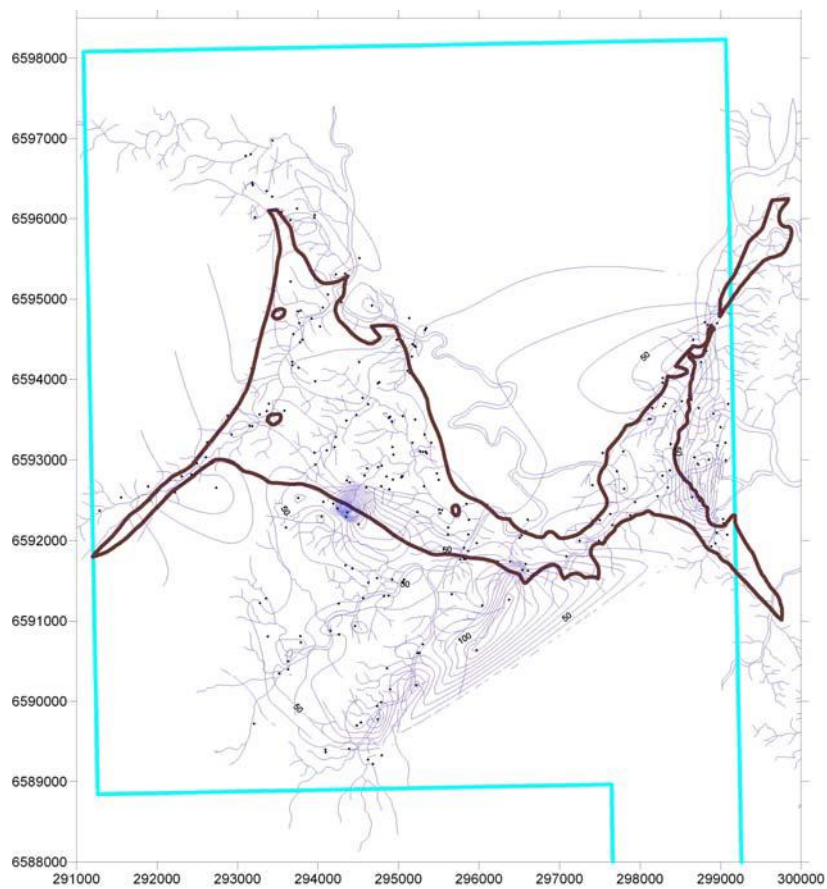


Figure 3: Zn contours showing anomalous responses on periphery of daipiric breccia.

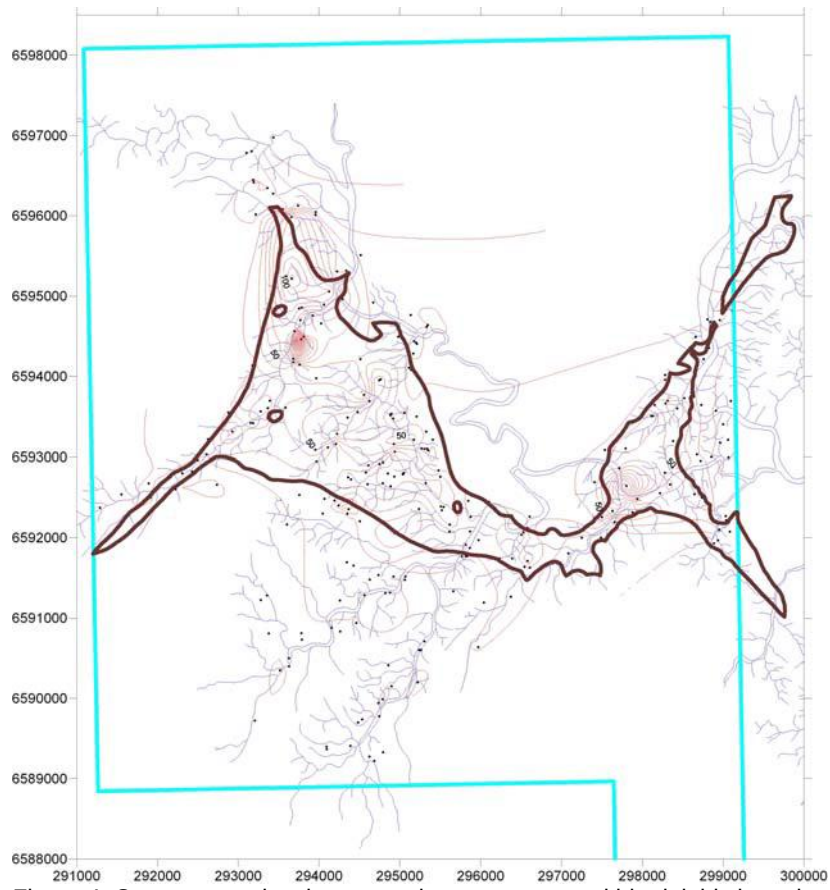


Figure 4: Cu contours showing anomalous responses within daipiric breccia.

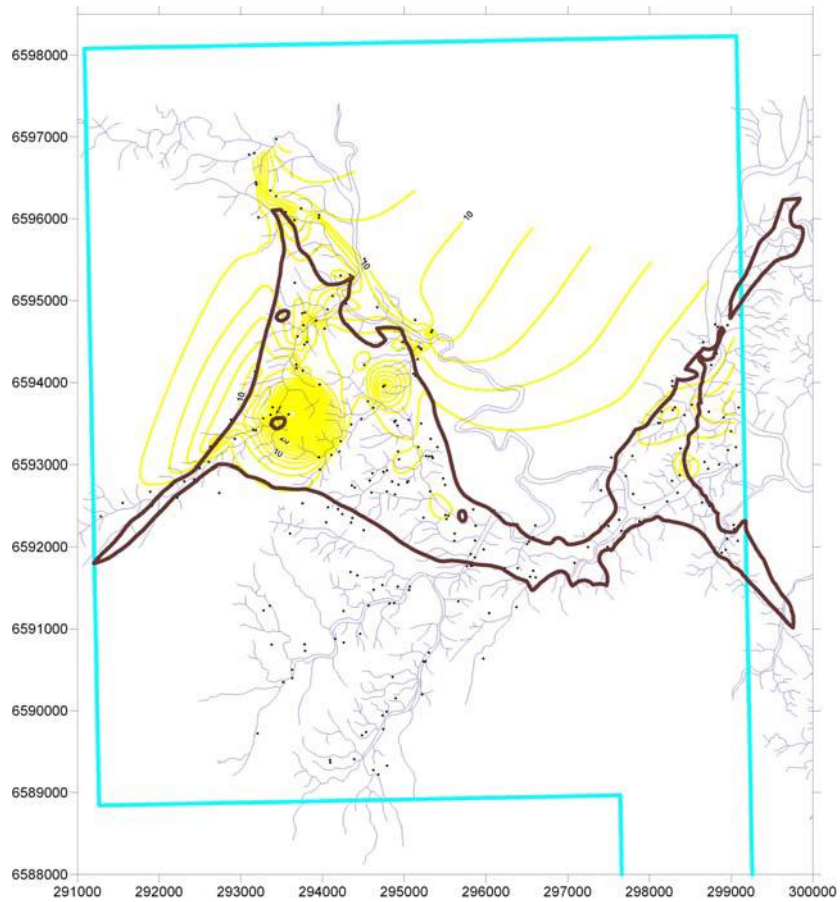


Figure 5: Au contours showing anomalous responses within daipiric breccia.

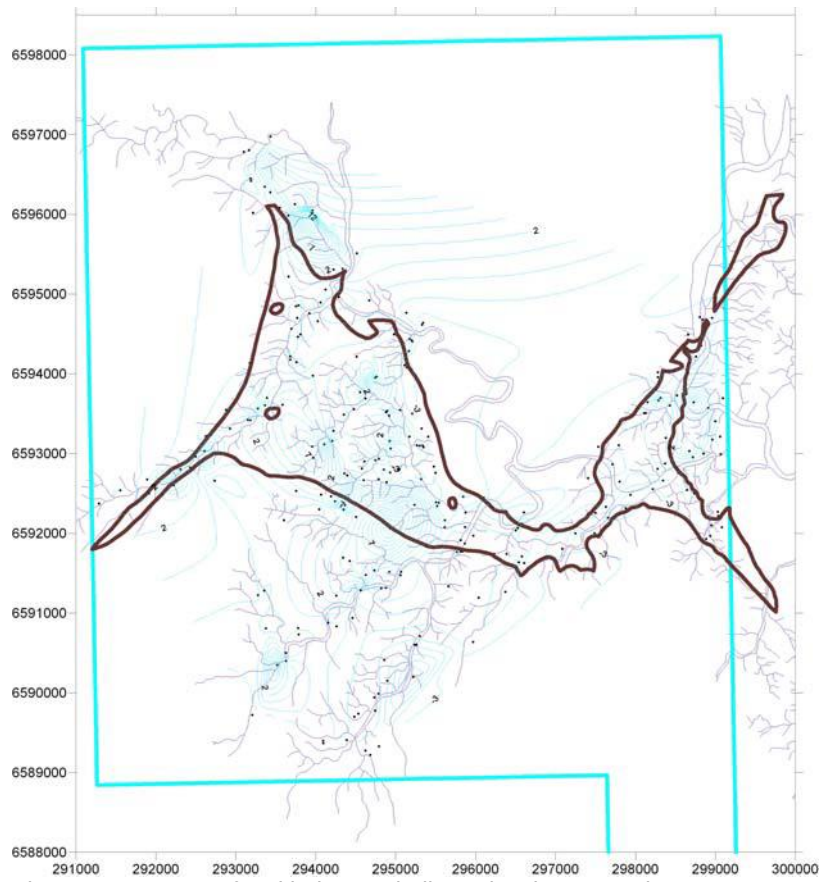


Figure 6: Contours of multi-element indices showing anomalous responses within daipiric breccia.

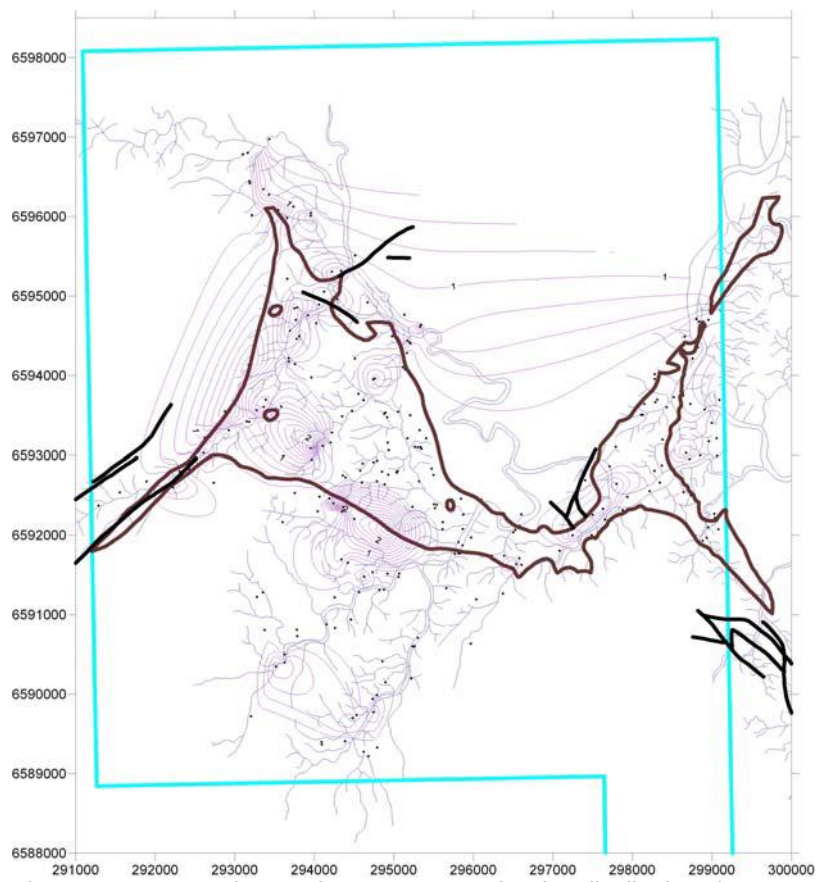


Figure 7: Contours of anomalous responses showing distribution along margins and within daipiric breccia.

Attempting to define any major trends by using additive multi-element indices appears to be ineffectual (Figure 6), presumably because all anomalous responses are derived from sulphide associated mineralization. A very weak preference for the margins of the diapiric breccia could be interpreted.

Because of the multi-element responses shown (e.g.: As, Pb, Zn, Ag, and Cd in 210226) a secondary multi-element summary plot showing the distribution of anomalous responses shown by each sample is presented in Figure 7. This clearly shows the presence of multiple mineralization sites both within and along the margins of the diapiric breccia. The significant faults known and inferred to occur within and peripheral to the diapiric breccia are shown in Figure 7 and the Au and Cu responses in the north western portion of the sampling appear to have a relationship to these structures.

Proposed Work

The areas of significant anomalism around samples 210226, 210329, 210322 should be inspected by a geologist and some detailed validation sampling undertaken.

The anomalous responses from the sampling are prominent but are generally single point values; this would suggest the sources of this anomalism are unlikely to be large; but final judgements should only be made after field inspection.

A handwritten signature in black ink, appearing to read 'Allan Younger', with a stylized flourish at the end.

Allan Younger
Consulting Geologist