**Meteoric Resources NL**
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METEORIC RESOURCES

# Annual Report
# MLC57 & MLC217–224
# Barkly Project, Tennant Creek
# Northern Territory

## Reporting period
## 1 January 2014 to 31 December 2014

**Project holder:** Meteoric Resources NL (70%), Santexco Pty Ltd (30%)

**Project operator:** Meteoric Resources NL

**Target commodity:** Gold

**Standard NT mapsheets:** Tennant Creek (SE 53-14), Tennant Creek (5758), Grosse River (5858)

**Author:** D Reddy, Meteoric Resources NL, PO Box 963, West Perth, WA 6005

**Report date:** 24 February 2015

**Distribution:**

Department of Mines and Energy, Northern Territory

Santexco Pty Ltd, c/- Emmerson Resources Pty Ltd, PO Box 1573, West Perth, WA 6872, Australia

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## TABLES

# Annual Report, MLC51 & MLC217–224, Barkly Project, Tennant Creek, Northern Territory
# Reporting period 1 January 2014 to 31 December 2014

## Tenement details

Meteoric Resources NL's Perseverance project near Tennant Creek in the Northern Territory comprises nine Mining Leases totalling 145Ha covering the Perseverance and Perseverance Extended copper–gold prospects. The tenements are subject to a joint venture agreement with Santexco Pty Ltd (31.57%), which is a subsidiary of Emmerson Resources Pty Ltd.

The tenements are within Meteoric's EL28260 (Barkly project), which contains the Bluebird prospect, held in joint venture with Blaze International.

The target commodity is gold.

Figure 1 shows the regional location and Figure 2 shows the tenement details. Details of these MLCs are shown on Table 1.


**Figure 1. Location of the Barkly Cu–Au Project**

**Table 1. Details of MLC57 & MLC217–224**

| Mining Lease (Central) | Grant Date | Expiry Date | Current Area (hectares) |
|---|---|---|---|
| MLC57 | 19-Oct-66 | 31-Dec-15 | 17 |
| MLC217 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC218 | 10-Oct-75 | 30-Dec-15 | 16 |
| MLC219 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC220 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC221 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC222 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC223 | 10-Oct-75 | 31-Dec-15 | 16 |
| MLC224 | 10-Oct-75 | 31-Dec-15 | 16 |

# Previous exploration

No ‘on ground’ activities have been undertaken since grant.

Meteoric has been unable to conduct exploration of any kind within the Mining Leases 57 and 217–224 because of an Exclusion Zone encompassing unusual outcropping rocks deemed to be a fairly sensitive registered sacred site.

The only work carried out was an office-based assessment of previous historical activity.

No field work has been carried out on the tenement since the late 1980s (when anomalous gold zones were defined from drilling by others) due to the Exclusion zone in place. The area continues to have significant exploration potential.

Meteoric has been communicating with the CLC (Central Land Council) to meet with the traditional landowners in order to pursue meaningful negotiations giving some security for future significant exploration leading to possible mining.

Meteoric has recently conducted exploration activities including drilling on EL28620 around the nine MLs.

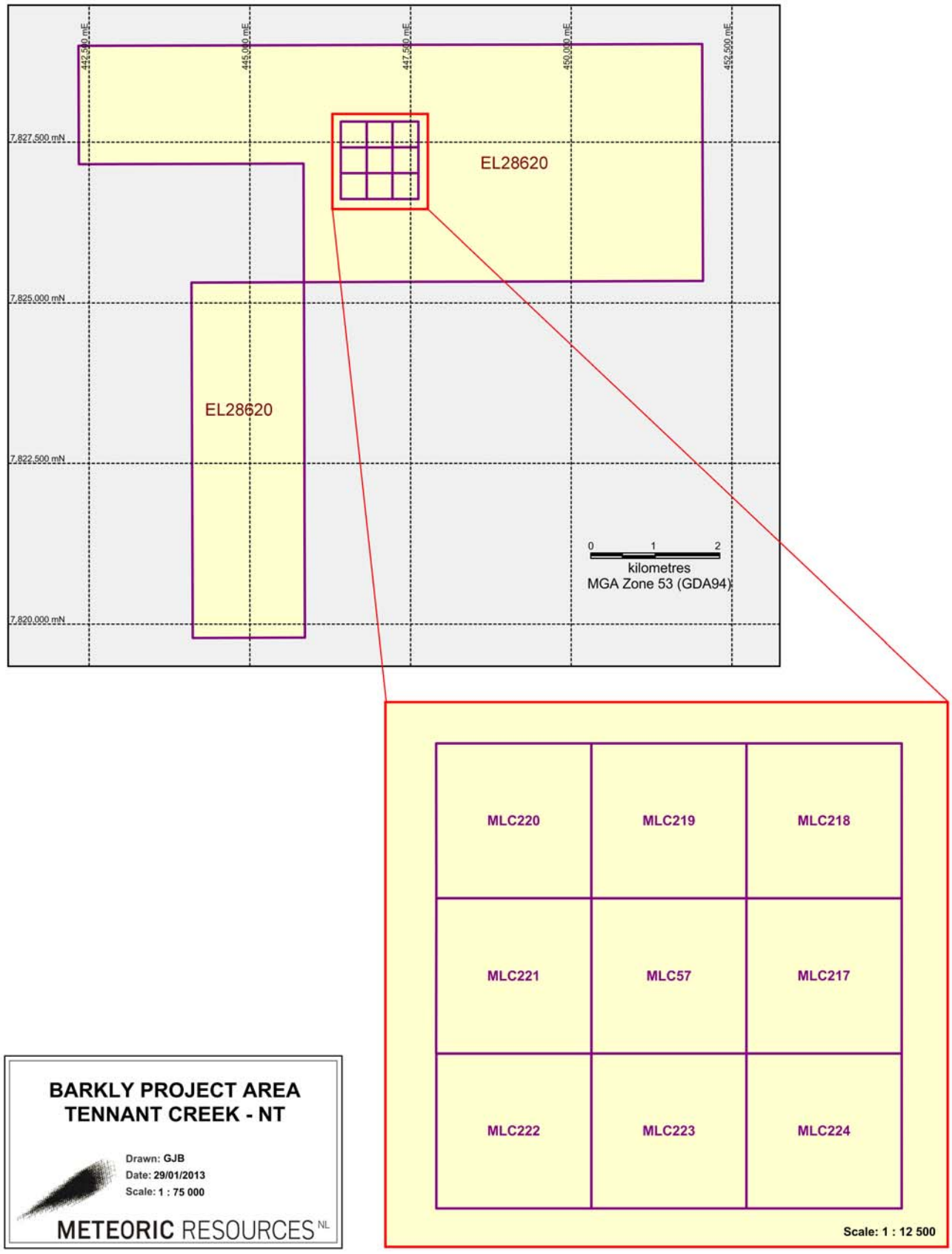


**Figure 2. Perseverance MLC57, 217–224 Tenement location details**

# 2014 exploration

The nine tenements cover the Perseverance and Perseverance Extended copper–gold prospects. The Perseverance target is 1.4km along strike from Meteoric's Bluebird deposit where historical drilling results include 3m at 50.0g/t Au from 42m and 3m at 43.2g/t Au from 72m.

The tenements are centred on several outcropping ironstone lenses associated with a pronounced aeromagnetic anomaly coincident with a series of discrete gravity anomalies situated adjacent to the Bluebird gravity ridge (Figure 3).

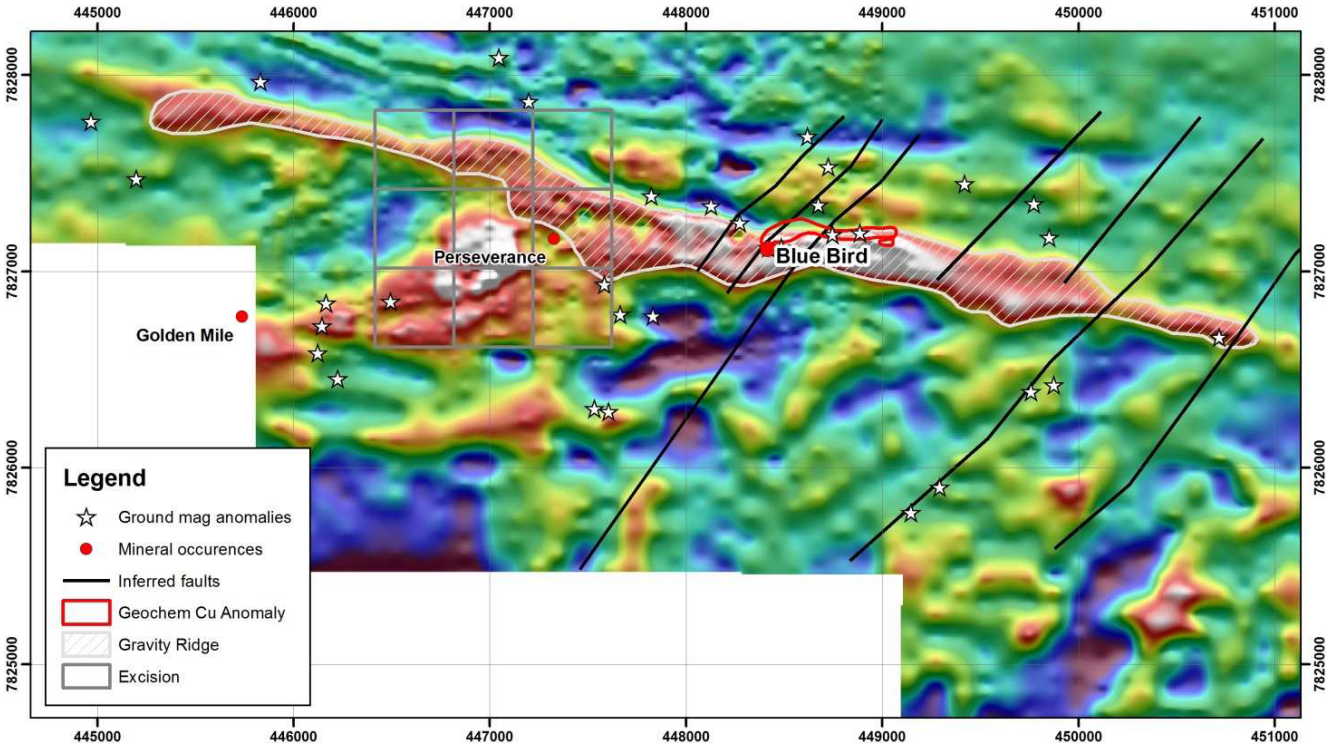


**Figure 3. Residual ground gravity image of the Barkly Project showing remnant magnetic anomalies in white stars, structural interpretation in black lines and Bluebird copper geochemical anomaly in a red polygon. Note the "gravity ridge" running from WNW to ESE through the centre of the image (from MEI and MEICA ASX Release 8 September 2014**

During the 2014 reporting year Meteoric Resources carried out reviews of historical exploration data including:

- digitising of geological maps (refer Figure 4 Perseverance geology).
- digitising of previous RC and RAB drilling (refer Figures 5 to 9 Perseverance drillhole locations and downhole sections).
- tabulation of previous drilling results (refer Table 2 Perseverance drilling summary).
- imaging of magnetic and gravity data (refer Figure 10 Perseverance gravity and TMI).

A total of 41 RC holes and 3 diamond drillholes are recorded to have been drilled at Perseverance and Perseverance Extended between 1969 and 1997; however, much of this drilling was of less than 100m in depth and carried out prior to development of modern geophysical modelling techniques.

No exploration has been carried out on the tenements since 1997.

Historical drilling by Normandy Poseidon Ltd in 1987 intersected significant gold mineralization including (Figures 5 to 7):

- PERC001: 3m at 43.2g/t Au from 72m,
- PERC006: 4m at 4.7g/t Au from 14m,
- PERC009: 3m at 3.3g/t Au from 77m,
- PERC015: 3m at 50.0g/t Au from 42m.

Copper and bismuth assays are not recorded from these holes.

In October 2014 Meteoric applied for an Authority Certificate from the Aboriginal Areas Protection Authority to carry out geophysical surveys (ground-based gravity, EM and magnetic surveys) and drilling on the tenement, excluding a 150m$^2$ restricted works area centred on an aboriginal site. This certificate was approved in December 2014.

# Future work

Meteoric is proposing to carry out a detailed ground magnetic survey on the tenements (excluding the small restricted works area) and model both the new magnetic data and existing gravity data in order to assess the extent and potential of the Perseverance mineralised ironstone system.

Reverse circulation drilling is proposed to test the mineralised system after reviewing the modelled geophysical data. The holes proposed are shown in Figure 5.

446,500 mE
447,000 mE
447,500 mE
448,000 mE
7,827,500 mN
7,827,000 mN
7,826,500 mN
MLC220
MLC219
MLC218
MLC221
MLC57
MLC217
MLC222
MLC223
MLC224
sediment sub o/c & ironstone rubble
laminated hematitic siltstone
laminated hematitic siltstone
PERC-03A
PERC-03B
laminated hematitic siltstone
PERC-02
PERC-02A
PERC-024
PERC-023
DDH-???
sumerOut laterited o/c of siltstone & greywacke
hematite-shale
hematite-shale
Qz greywacke
Qz greywacke
Qz greywacke
altered hematite shale
altered hematite shale
leached siltstone
PERC-027
laminated siltstone
DDH-deg
DDH-3
PERC-005
PERC-007
Si, Fe, siltstone
medium grained Qz greywacke & siltstone
greywacke & siltstone
greywacke
greywacke
PERC-004
PERC-003
jasperoid sediment
some possible suicide boxworks & minor qz
coarse grained Qz greywacke
PERC-001
minor qz \\ ///
minor qz \\ ///
many low o/c's of Fe siltstone
PERC-006
PERC-019
PERC-010
PERC-015
PERC-020
PERC-012
PERC-013
PERC-021
PERC-014
PERC-016
PERC-018
PERC-009
coarse grained greywacke
laminated siltstone
siltstone & greywacke
numerous low o/c's of greywacke & siltstone
siltstone & greywacke
Fe, leached & possibly grailicly altered shales, siltstone & greywacke
greywacke sub-subc
numerous shales & greywacke ? siltstone o/cps
low o/c's of greywacke & siltstone
laminated hematitic siltstone 'hematite-shale'
greywacke & siltstone
mainly greywacke
massive/\\\ minor qz
laminated jasperoid sediment
laminated hematitic siltstone
laminated jasperoid sediment
argillaceous laminated siltstone
sandstone
GLRB-004
abundant small ??? cl ironbanded greywacke & siltstone
GLRB-003
laminated hematitic siltstone
GLRB-005
GLRB-006
GLRB-007
GLRB-002
GLRB-001
PERC-029
laminated hematitic shale ???
Fe-Si altered siltstone
PERC-036
siltstone
area of small o/c's of laminated hematite shales, jasperoid & minor shale
PERC-031
Fe-Si altered siltstones & greywacke
Fe-Si altered siltstones & greywacke
PERC-034
PERC-033
\\ Hematite
\\\ Magnetite
J Jasper
Q Quartz
\\ Limit of sub outcrop
\\ Limit of scree
Ironstone
Hematite shale
0
0.1
0.2
kilometres
PERSEVERANCE LEASES
MLC57,C217-C224
GEOLOGY
Drawn: TD
Date: 17/10/2014
Scale: 1:2,500
Workspace: PER002 Geology 2500
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Figure 4. MLC57, 217–224 Perseverance geology

446,500 mE
447,000 mE
447,500 mE
448,000 mE
7,827,500 mN
7,827,000 mN

Proposed drillhole
Existing drillhole
Proposed access track
Existing access track
Lease boundary

MLC220
MLC219
MLC218
MLC221
MLC57
MLC217
MLC222
MLC223
MLC224

PERC-03A
PERC-03B
PERC-02A
PERC-02B
PERC-024
PERC-023
DDH-???
PERC-037
DDH-1
AAPA Site 5758-94
PERC-005
PERC-007
PERC-029
PERC-030
PERC-036
PERC-032
PERC-031
PERC-034
PERC-033

SLRB-003
SLRB-004
PERC-002
PERC-001
PERC-006
PERC-019
PERC-020
PERC-004
PERC-010
PERC-012
PERC-027
PERC-013
PERC-003
PERC-022
PERC-021
PERC-008
PERC-026
PERC-014
PERC-011
PERC-015
PERC-018
PERC-016
PERC-009
PERC-017
SLRB-005
SLRB-006
SLRB-007
SLRB-002
SLRB-001

0 0.25 0.5
kilometres

**PERSEVERANCE LEASES**
**MLC57, MLC217-224**
**PROPOSED DRILLING**

Drawn: TD
Date: 17/10/2014
Scale: 1:5,000
Workspace: PER001 Maps1-3

**Map 3**

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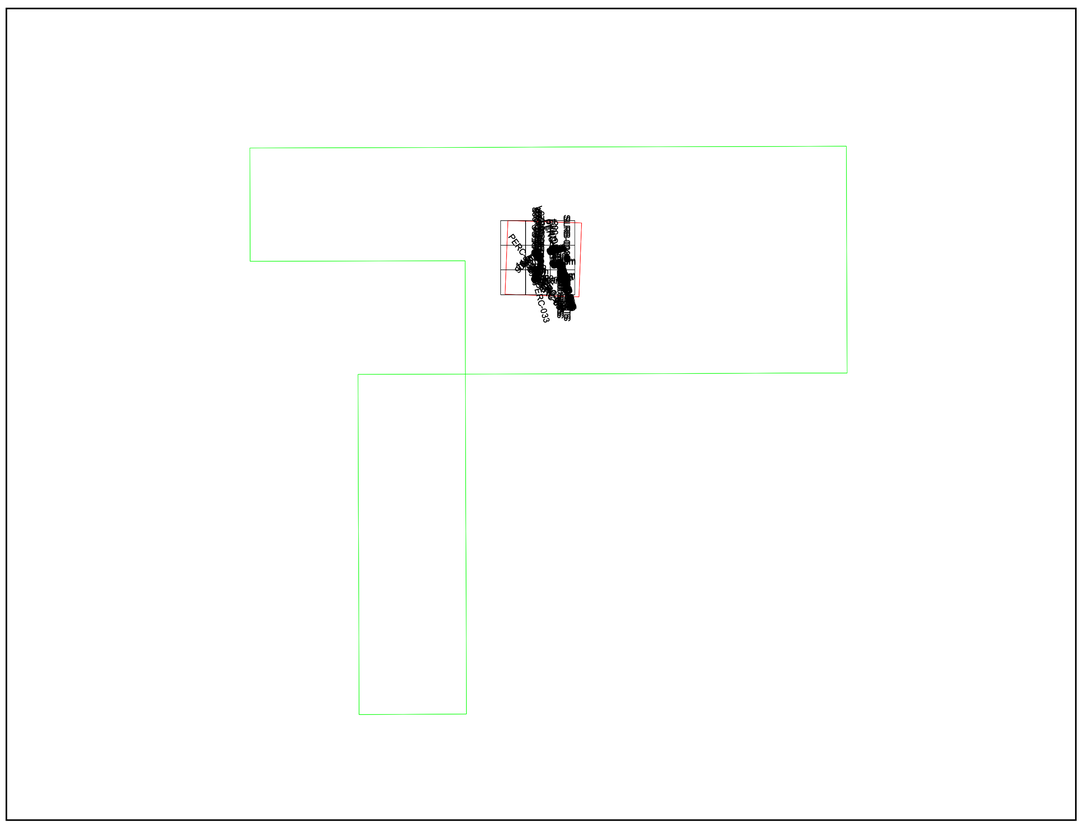
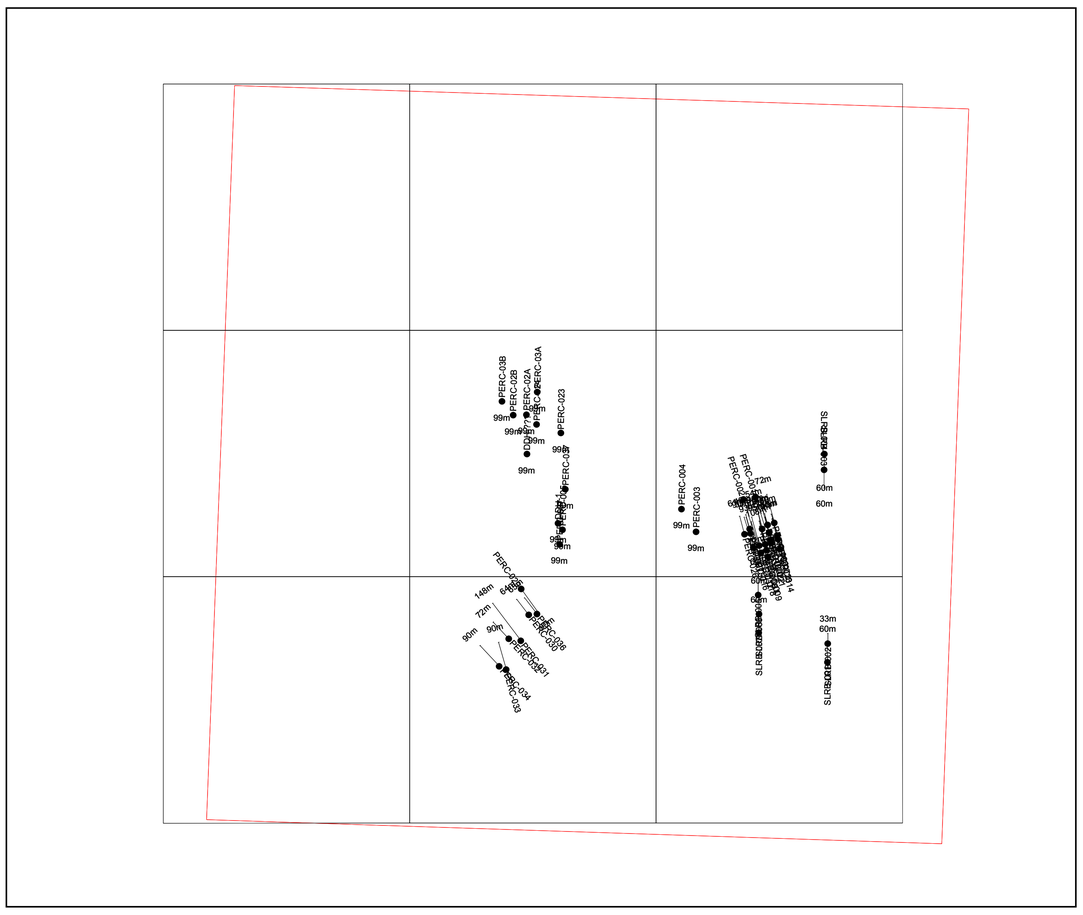
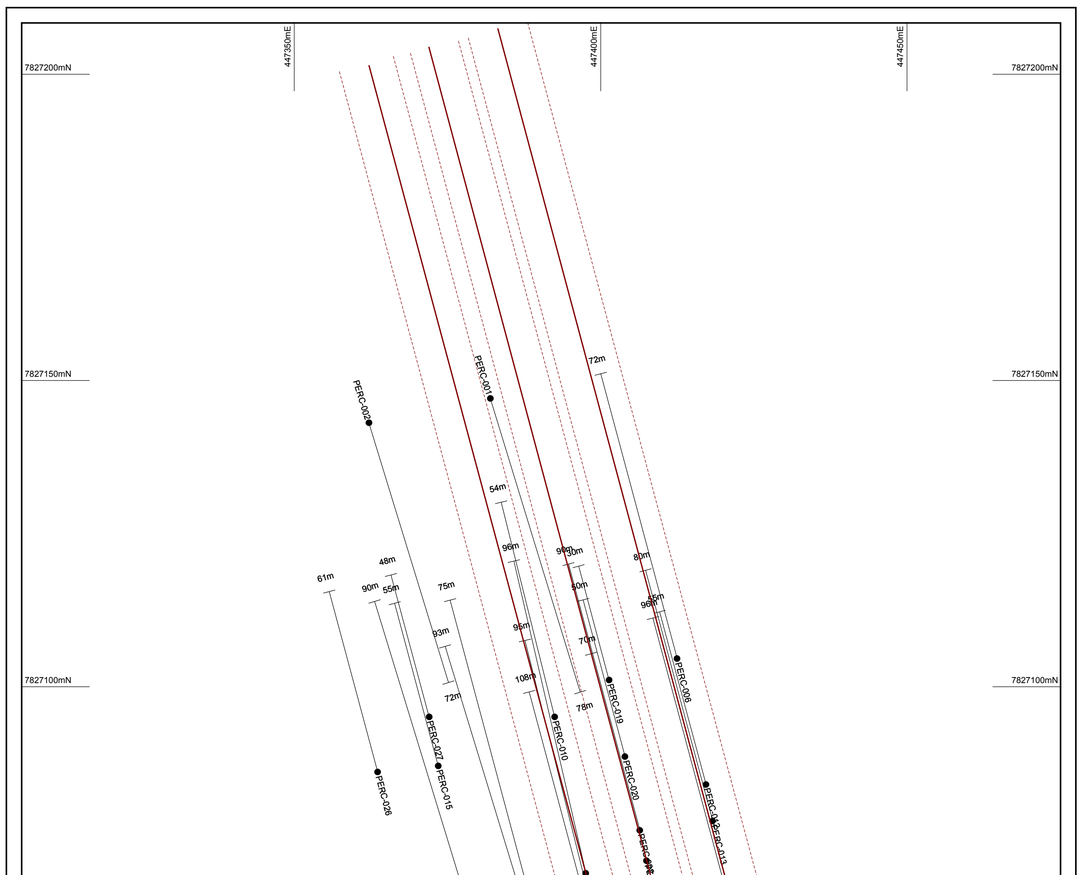
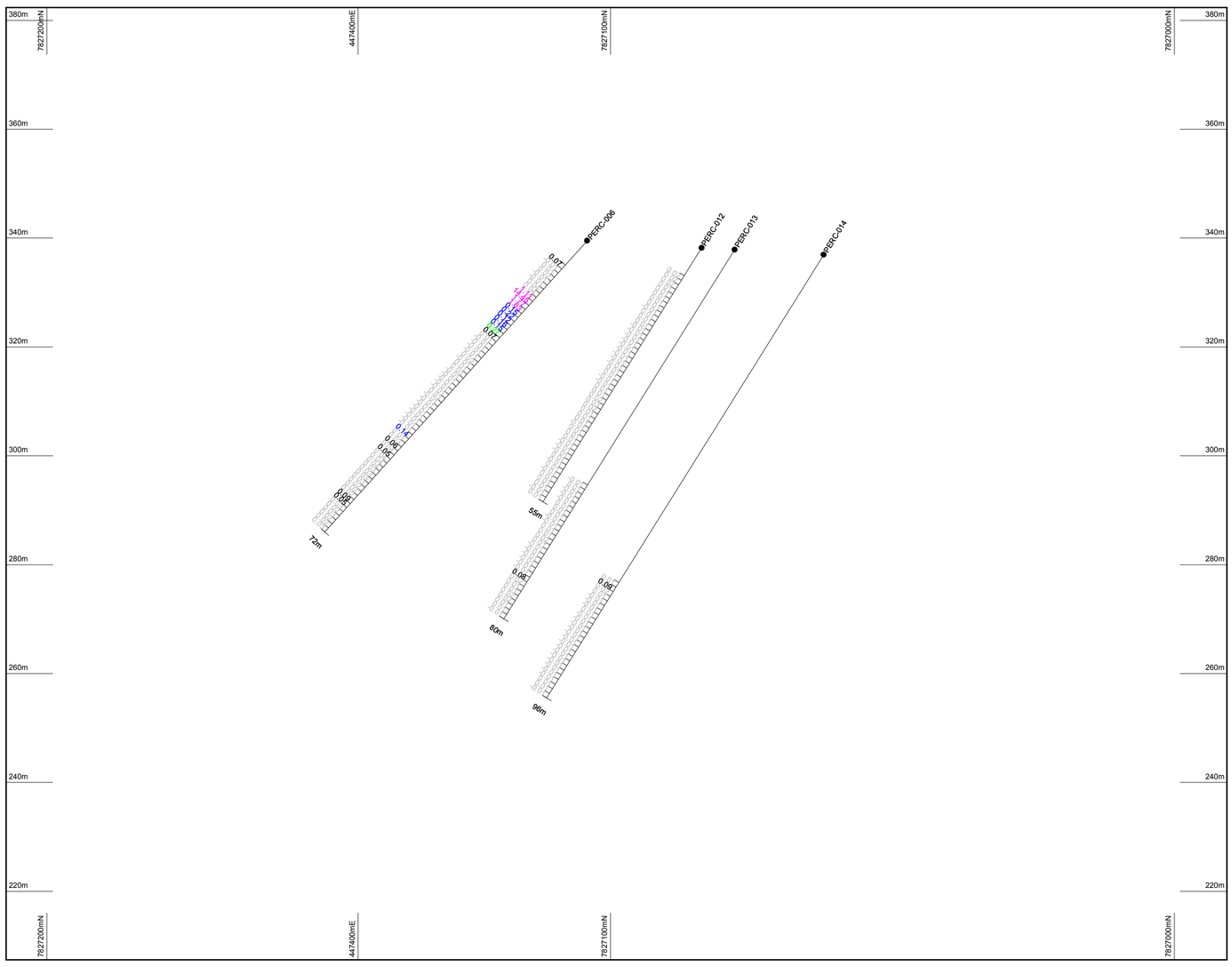
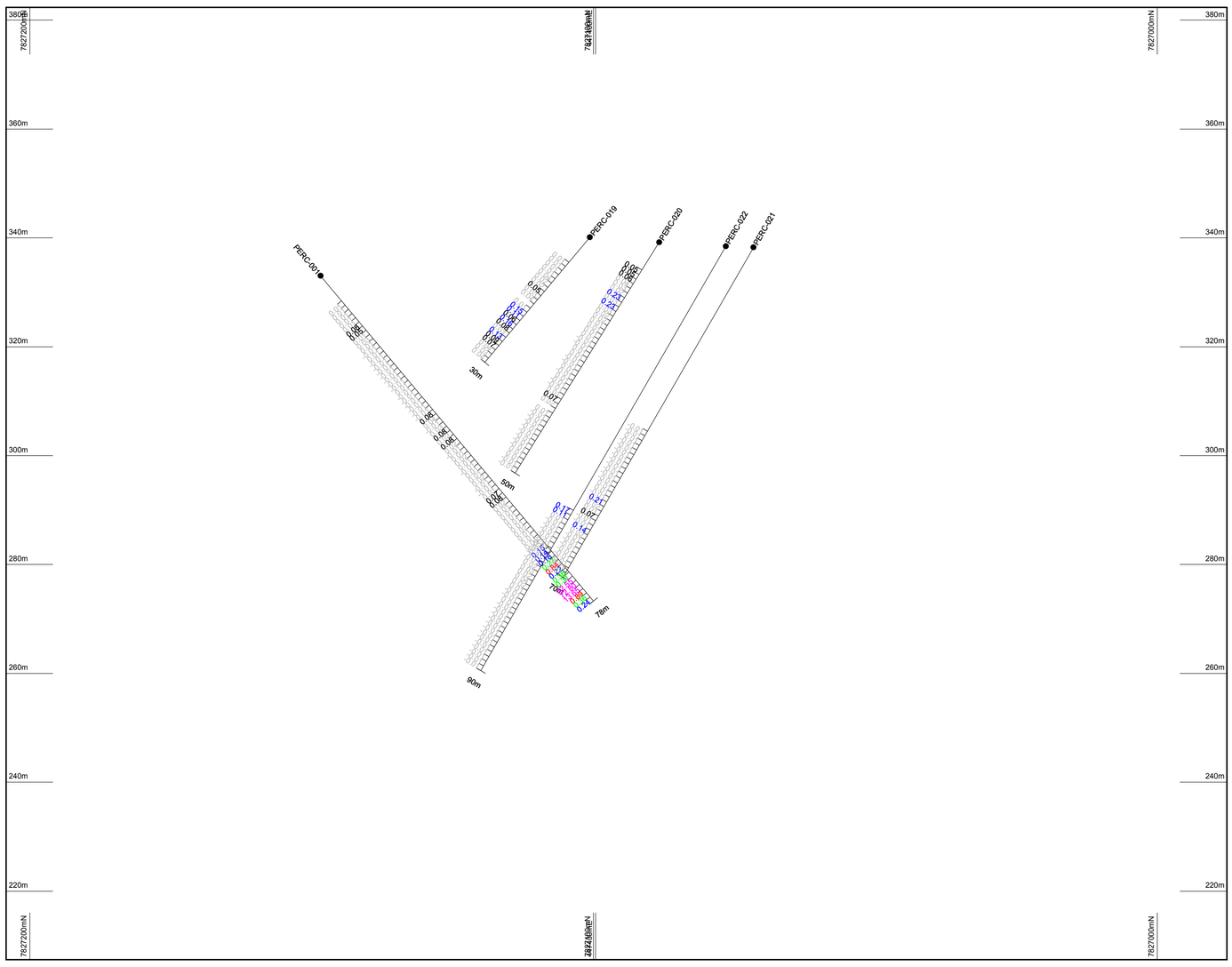
Figure 5. MLC57, 217–224 Perseverance Historical and proposed drillholes

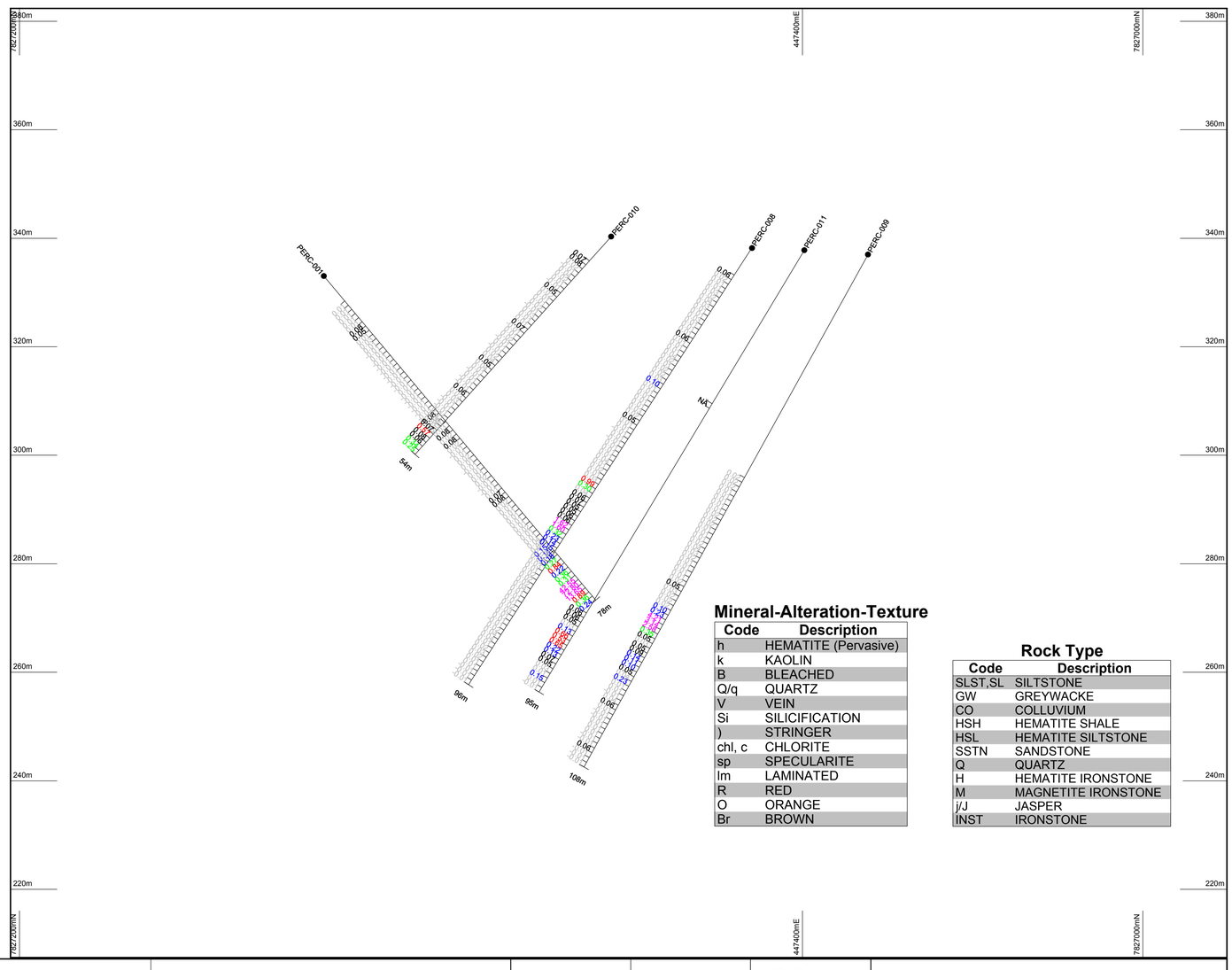









**Mineral-Alteration-Texture**

| Code | Description |
|---|---|
| h | HEMATITE (Pervasive) |
| k | KAOLIN |
| B | BLEACHED |
| Q/q | QUARTZ |
| V | VEIN |
| Si | SILICIFICATION |
| ) | STRINGER |
| chl, c | CHLORITE |
| sp | SPECULARITE |
| lm | LAMINATED |
| R | RED |
| O | ORANGE |
| Br | BROWN |

**Rock Type**

| Code | Description |
|---|---|
| SLST,SL | SILTSTONE |
| GW | GREYWACKE |
| CO | COLLUVIUM |
| HSH | HEMATITE SHALE |
| HSL | HEMATITE SILTSTONE |
| SSTN | SANDSTONE |
| Q | QUARTZ |
| H | HEMATITE IRONSTONE |
| M | MAGNETITE IRONSTONE |
| j/J | JASPER |
| INST | IRONSTONE |

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Figure 6. MLC57, 217–224 Perseverance Stacked Sections Bi-Cu-Au-Litho
RC drillholes PERC1,6,8-14,19-22

| Bi-ppm | Cu-ppm | Au-ppm |
|---|---|---|
| < 10 | < 25 | < 0.05 |
| 10 to 20 | 25 to 50 | 0.05 to 0.10 |
| 20 to 30 | 50 to 75 | 0.10 to 0.25 |
| 30 to 40 | 75 to 100 | 0.25 to 0.50 |
| 40 to 50 | 100 to 200 | 0.50 to 1.00 |
| >= 50 | >= 200 | >= 1.00 |

Scale 1 : 500

Plot Date 19-Aug-2014

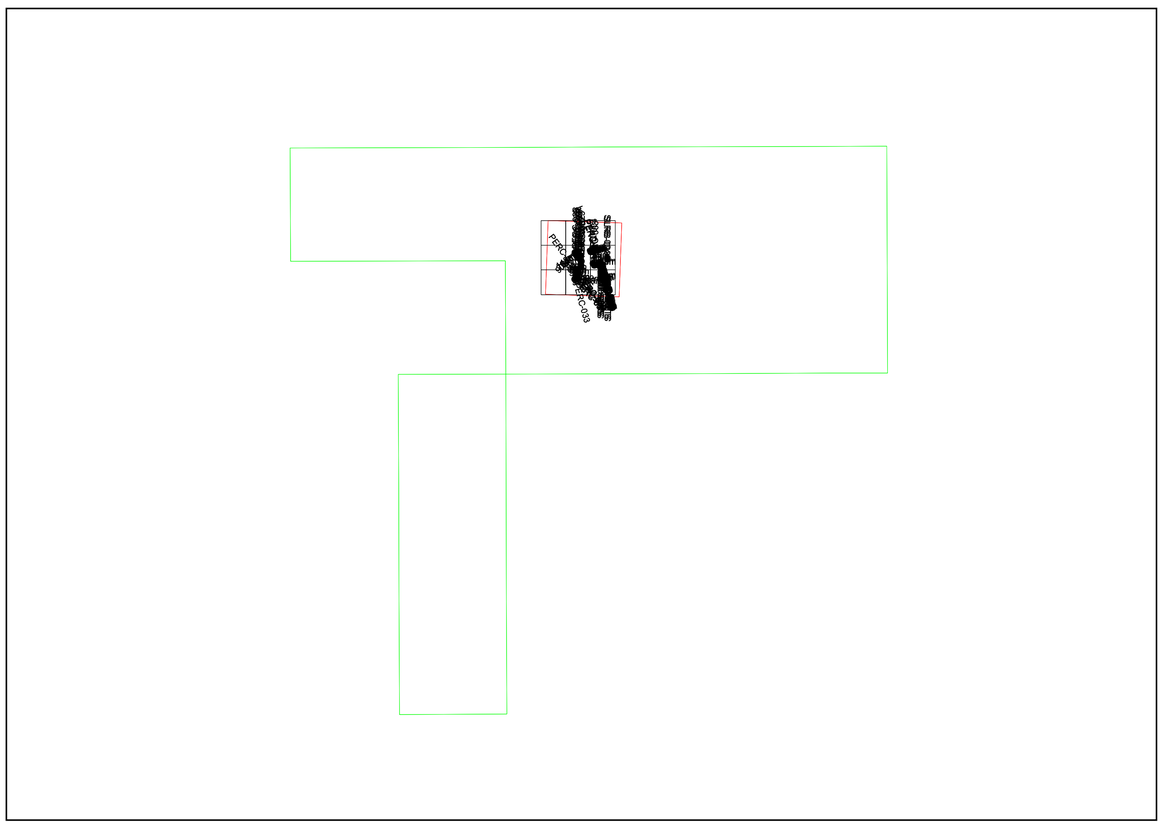
GDA94 MGAz53

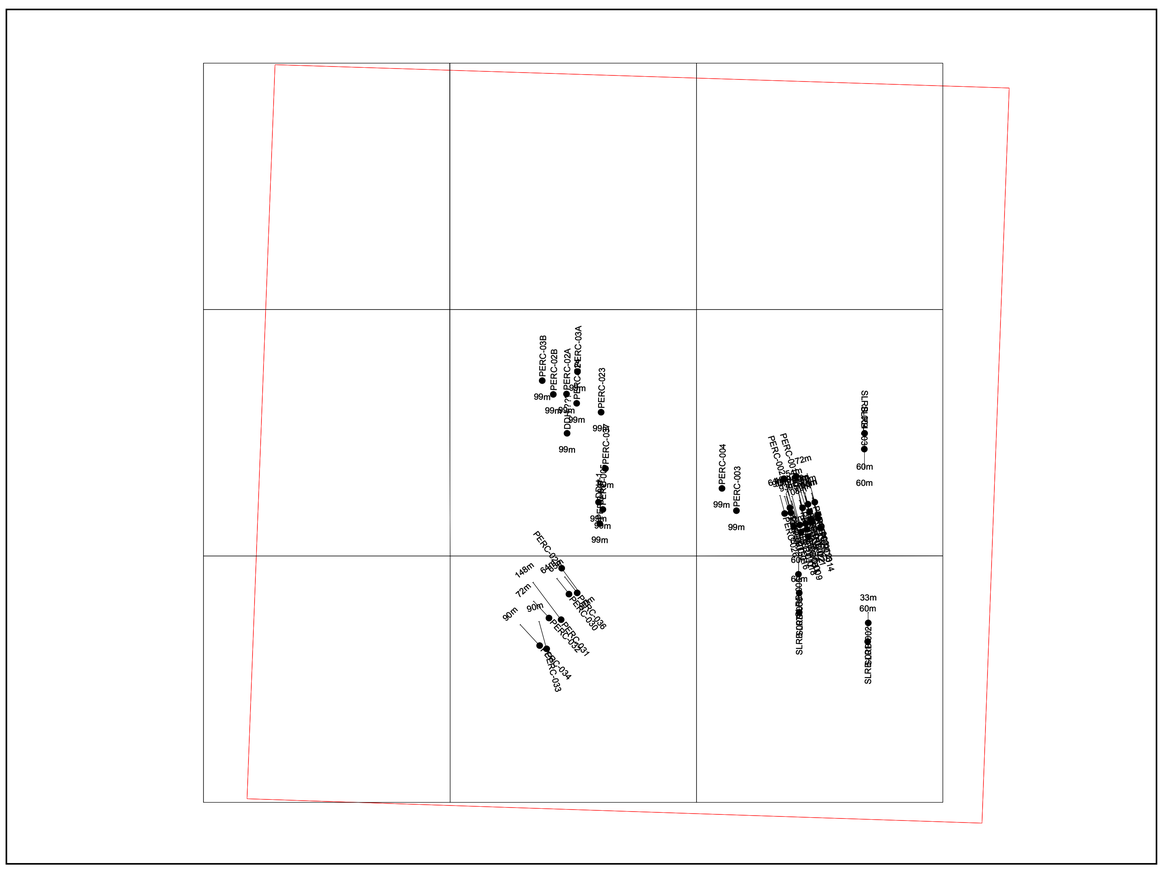
Plot File: Plan Trace MGA

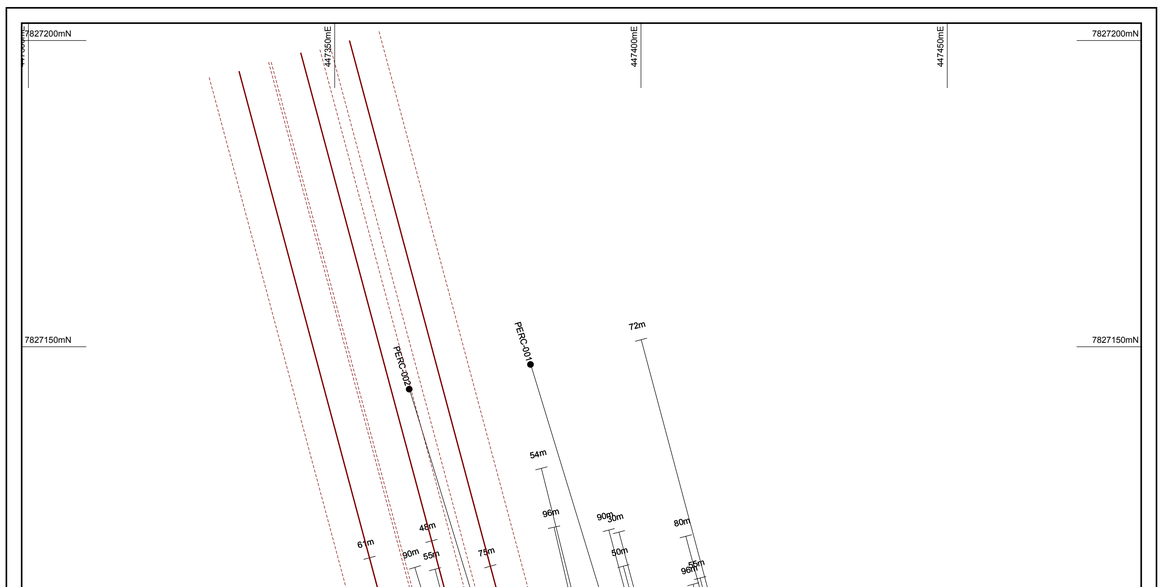
20 0 20m

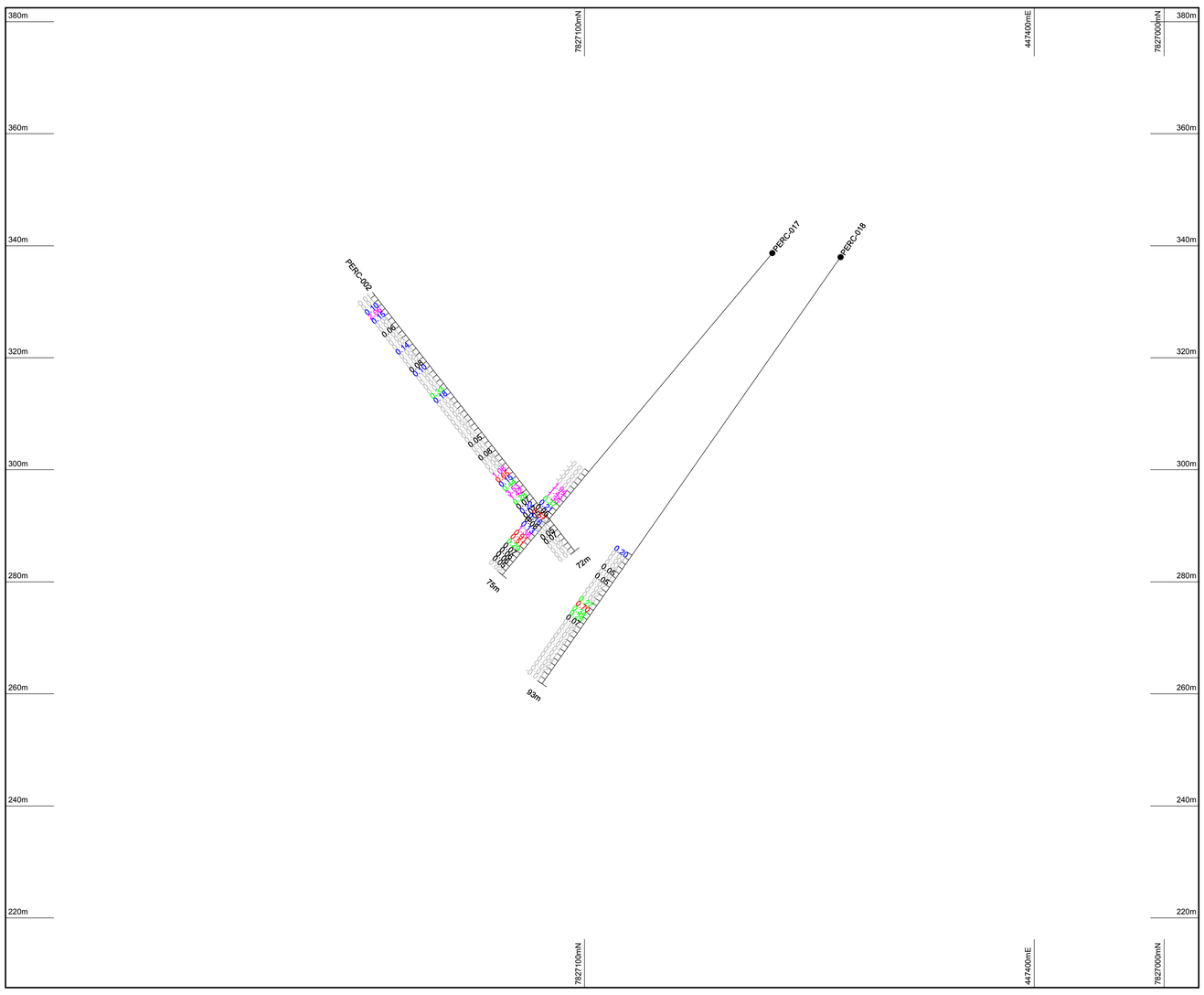
**METEORIC RESOURCES NL**

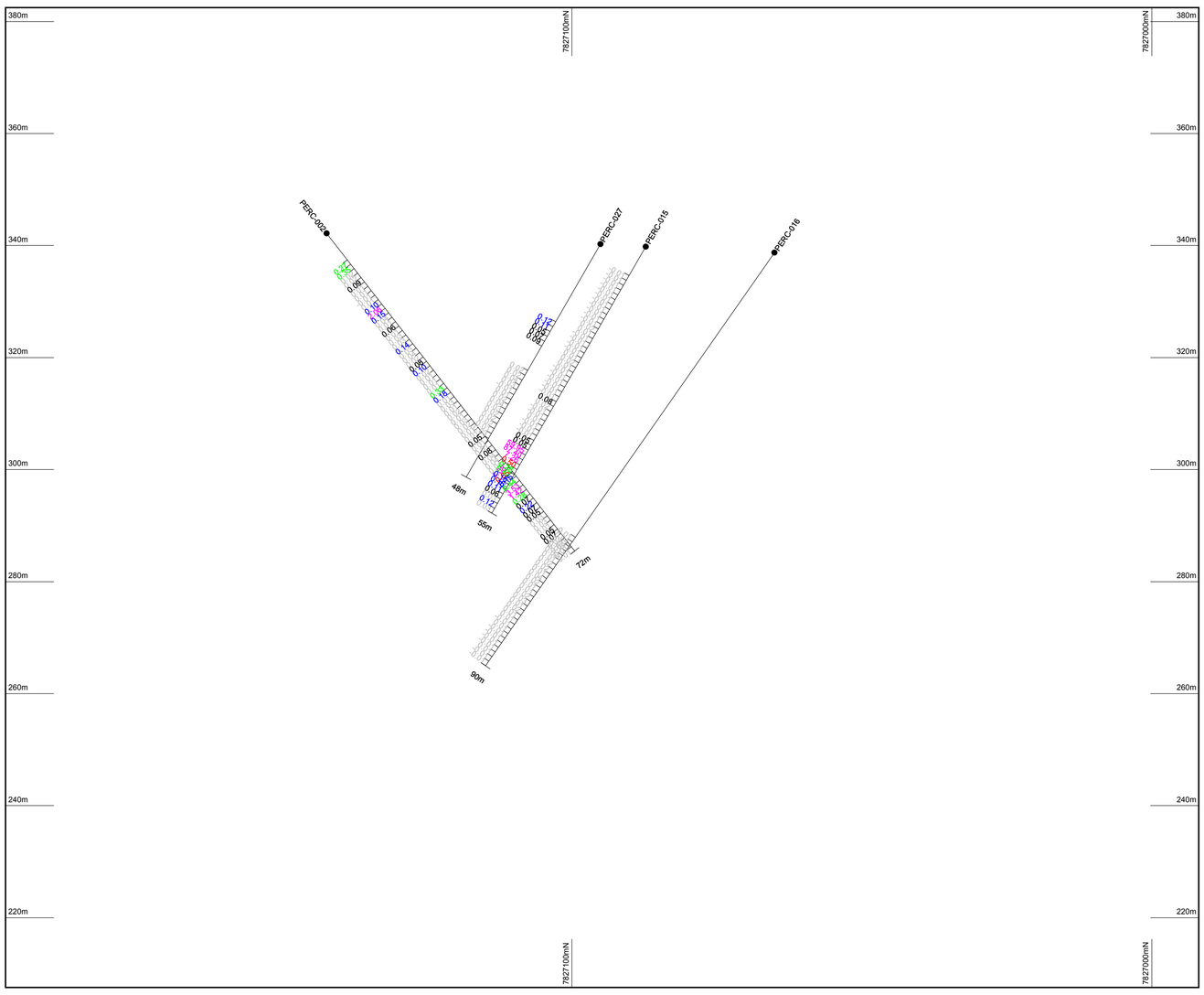
# PERSEVERANCE STACKED SECTIONS Bi,Cu,Au-ppm | Litho





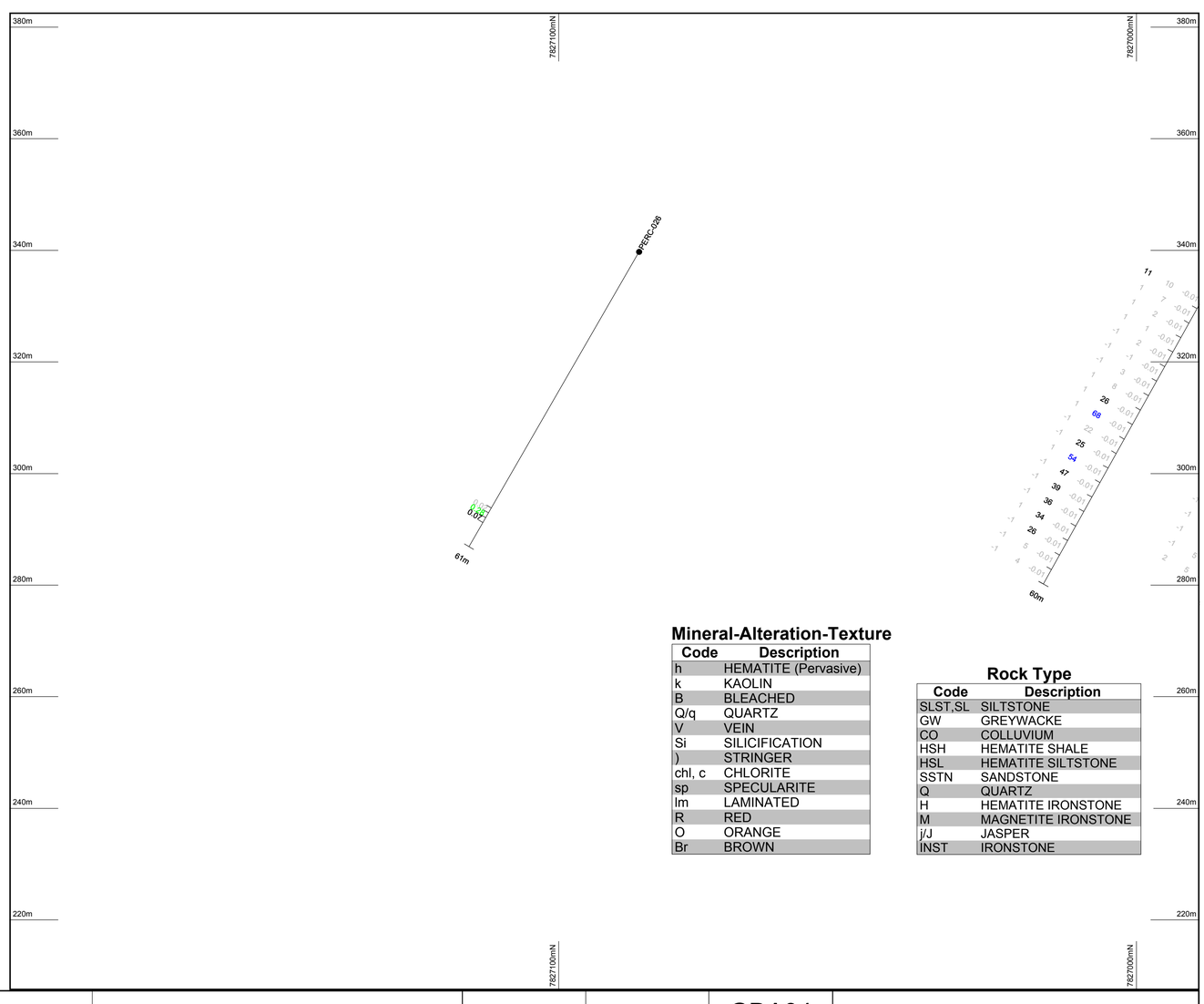











**Mineral-Alteration-Texture**

| Code | Description |
|---|---|
| h | HEMATITE (Pervasive) |
| k | KAOLIN |
| B | BLEACHED |
| Q/q | QUARTZ |
| V | VEIN |
| Si | SILICIFICATION |
| ) | STRINGER |
| chl, c | CHLORITE |
| sp | SPECULARITE |
| lm | LAMINATED |
| R | RED |
| O | ORANGE |
| Br | BROWN |

**Rock Type**

| Code | Description |
|---|---|
| SLST,SL | SILTSTONE |
| GW | GREYWACKE |
| CO | COLLUVIUM |
| HSH | HEMATITE SHALE |
| HSL | HEMATITE SILTSTONE |
| SSTN | SANDSTONE |
| Q | QUARTZ |
| H | HEMATITE IRONSTONE |
| M | MAGNETITE IRONSTONE |
| j/J | JASPER |
| INST | IRONSTONE |

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Figure 7. MLC57, 217–224 Perseverance Stacked Sections Bi-Cu-Au-Litho
RC drillholes PERC2,15-18,26,27

| Bi-ppm | Cu-ppm | Au-ppm |
|---|---|---|
| < 10 | < 25 | < 0.05 |
| 10 to 20 | 25 to 50 | 0.05 to 0.10 |
| 20 to 30 | 50 to 75 | 0.10 to 0.25 |
| 30 to 40 | 75 to 100 | 0.25 to 0.50 |
| 40 to 50 | 100 to 200 | 0.50 to 1.00 |
| >= 50 | >= 200 | >= 1.00 |

Scale 1 : 500

Plot Date 19-Aug-2014

GDA94 MGAz53

Plot File: Plan Trace MGA

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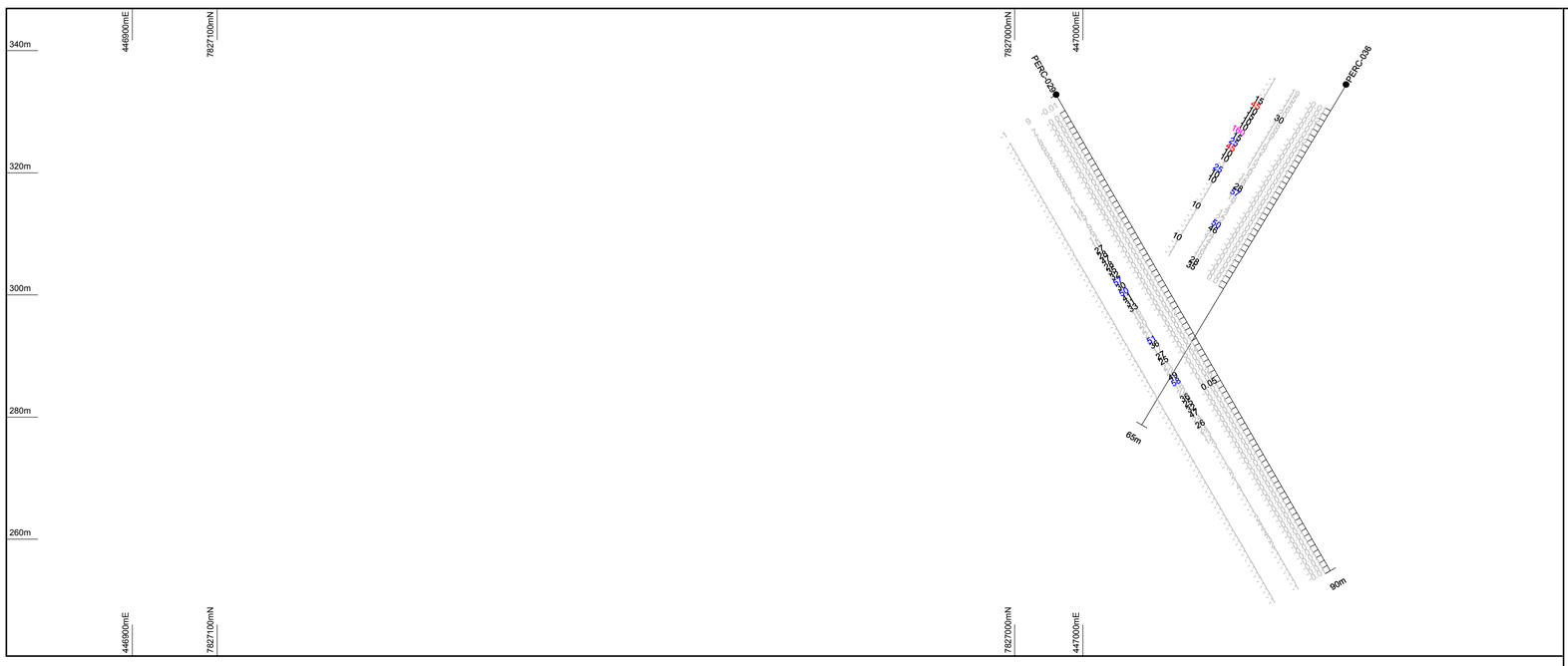
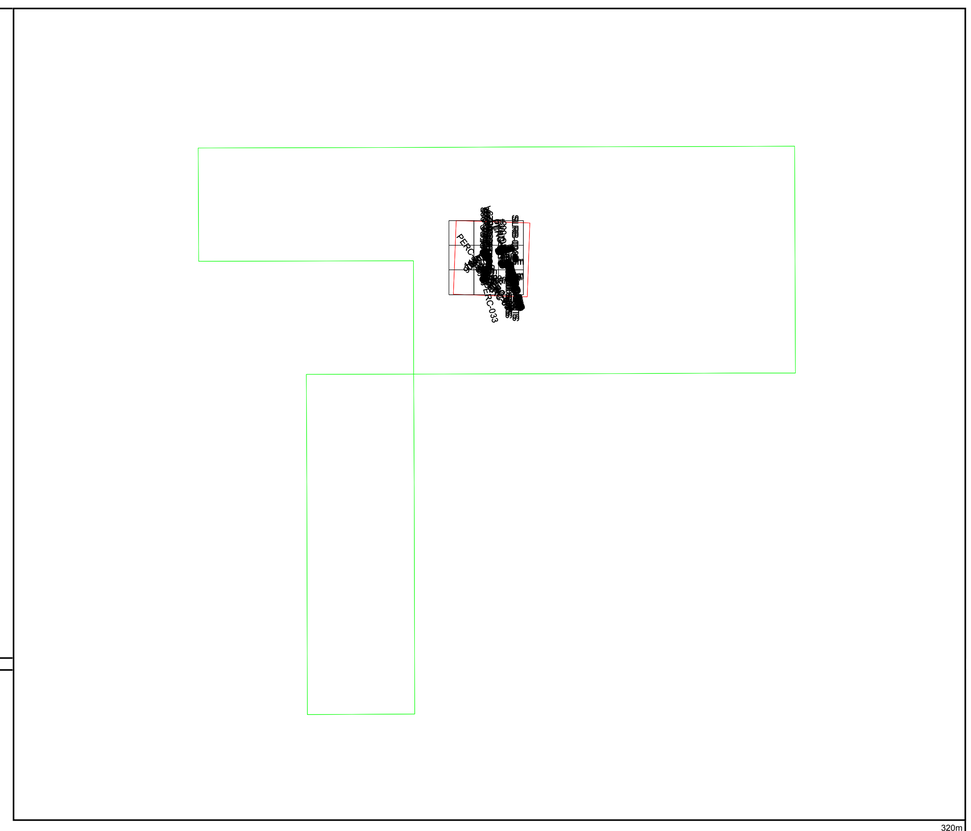
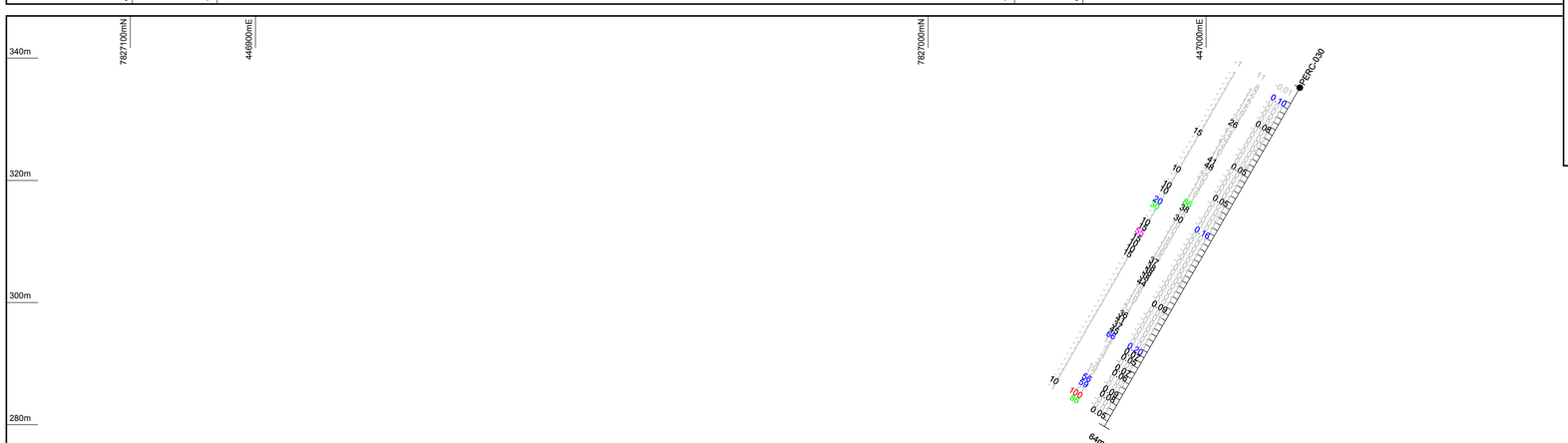
**METEORIC RESOURCES NL**

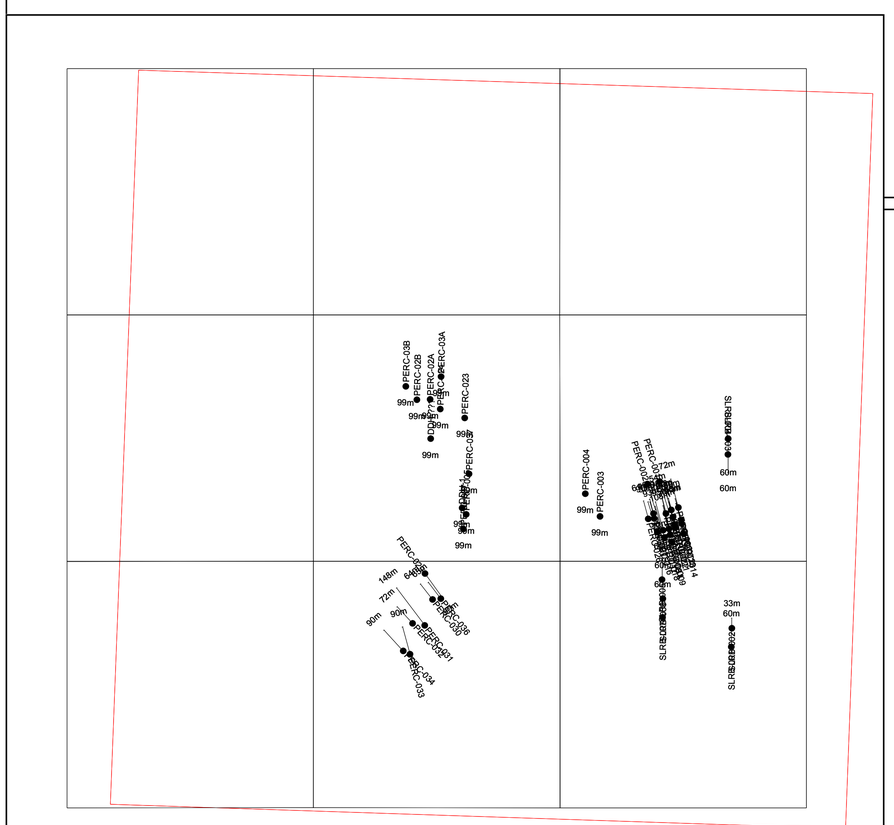
# PERSEVERANCE STACKED SECTIONS Bi,Cu,Au-ppm | Litho

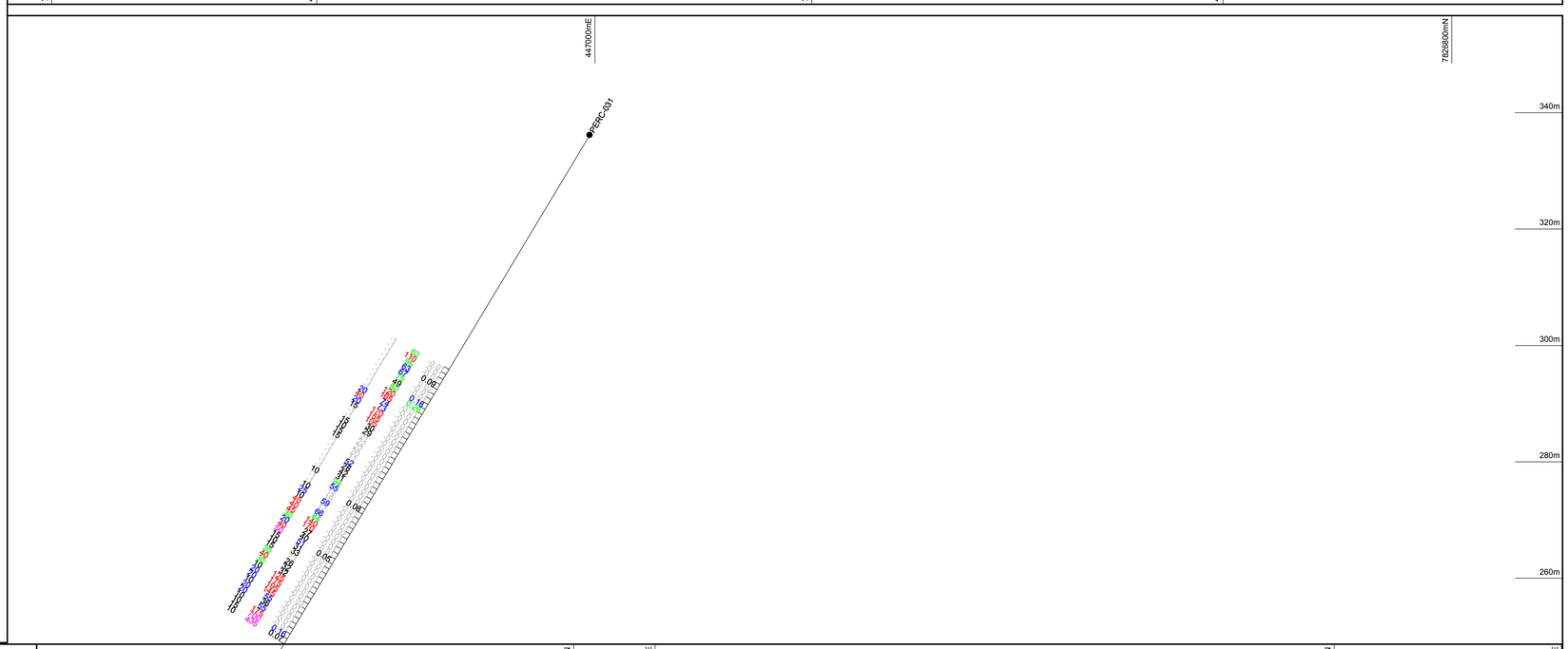


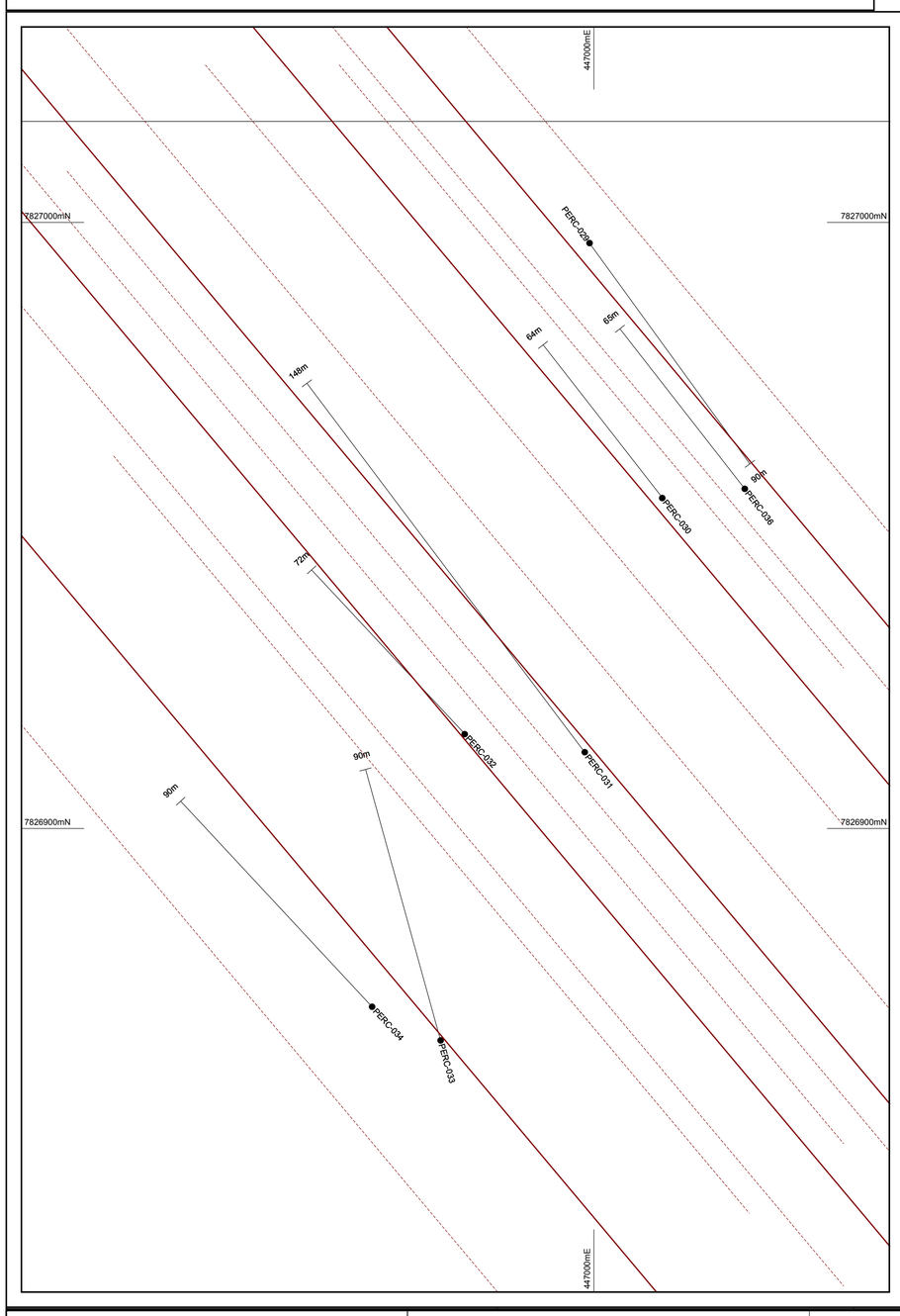



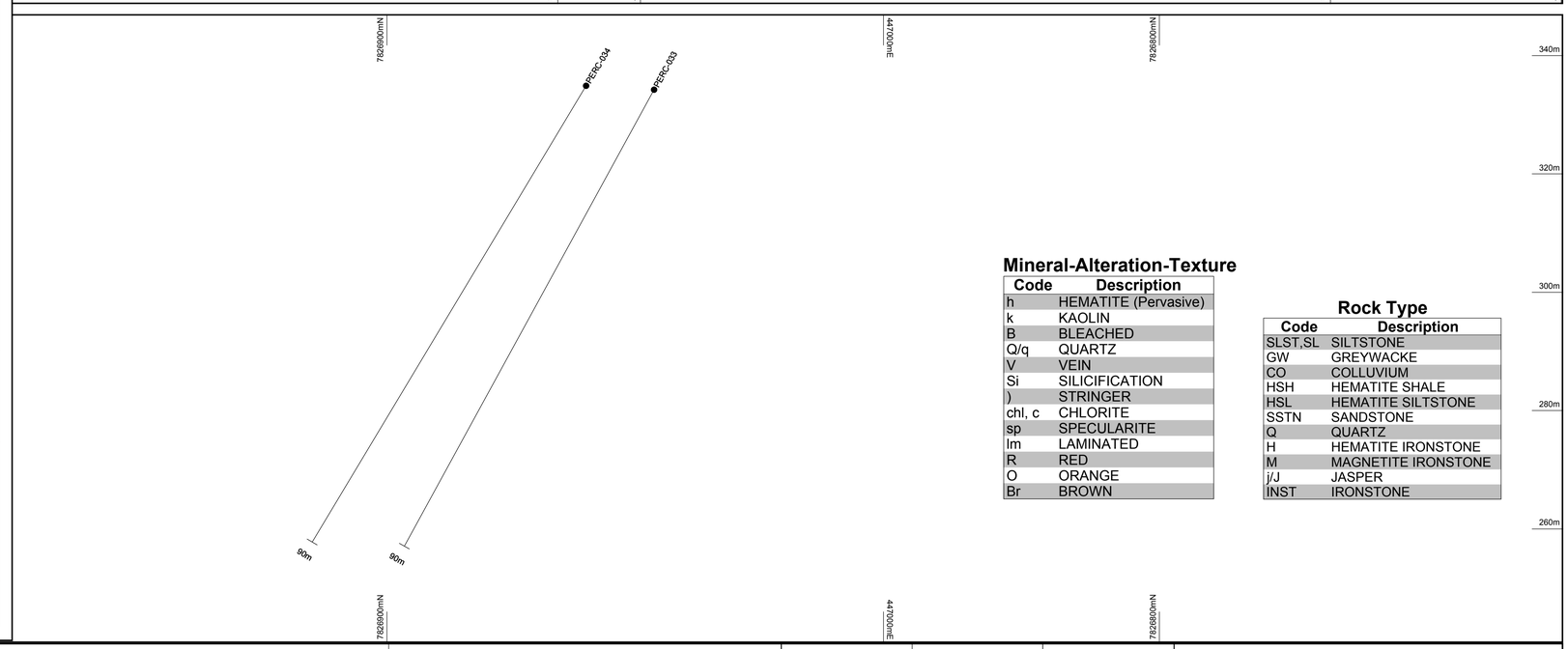









**Mineral-Alteration-Texture**

| Code | Description |
|---|---|
| h | HEMATITE (Pervasive) |
| k | KAOLIN |
| B | BLEACHED |
| Q/q | QUARTZ |
| V | VEIN |
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| ) | STRINGER |
| chl, c | CHLORITE |
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| lm | LAMINATED |
| R | RED |
| O | ORANGE |
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**Rock Type**

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|---|---|
| SLST,SL | SILTSTONE |
| GW | GREYWACKE |
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| HSH | HEMATITE SHALE |
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| SSTN | SANDSTONE |
| Q | QUARTZ |
| H | HEMATITE IRONSTONE |
| M | MAGNETITE IRONSTONE |
| j/J | JASPER |
| INST | IRONSTONE |

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Figure 8. MLC57, 217–224 Perseverance Stacked Sections Bi-Cu-Au-Litho
RC drillholes PERC29-34,36

| Bi-ppm | Cu-ppm | Au-ppm |
|---|---|---|
| < 10 | < 25 | < 0.05 |
| 10 to 20 | 25 to 50 | 0.05 to 0.10 |
| 20 to 30 | 50 to 75 | 0.10 to 0.25 |
| 30 to 40 | 75 to 100 | 0.25 to 0.50 |
| 40 to 50 | 100 to 200 | 0.50 to 1.00 |
| >= 50 | >= 200 | >= 1.00 |

Scale 1 : 0

Plot Date 19-Aug-2014

GDA94 MGAz53

Plot File: xsSW03

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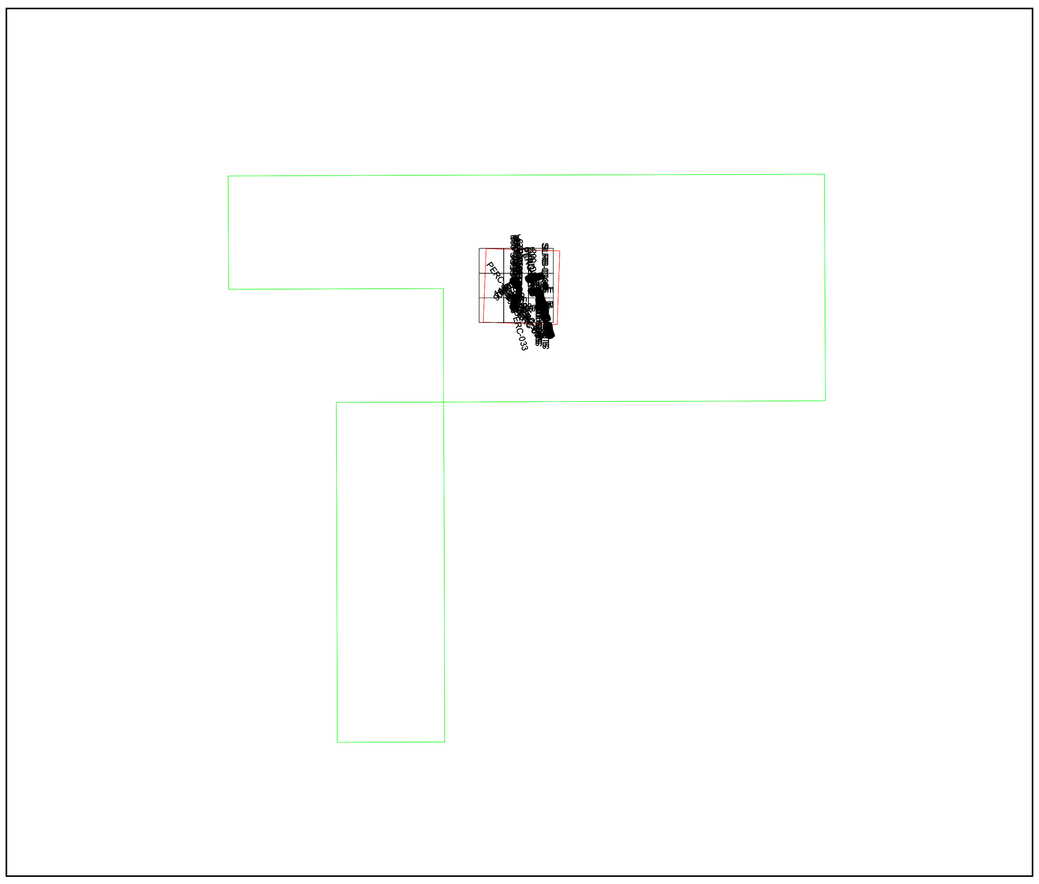
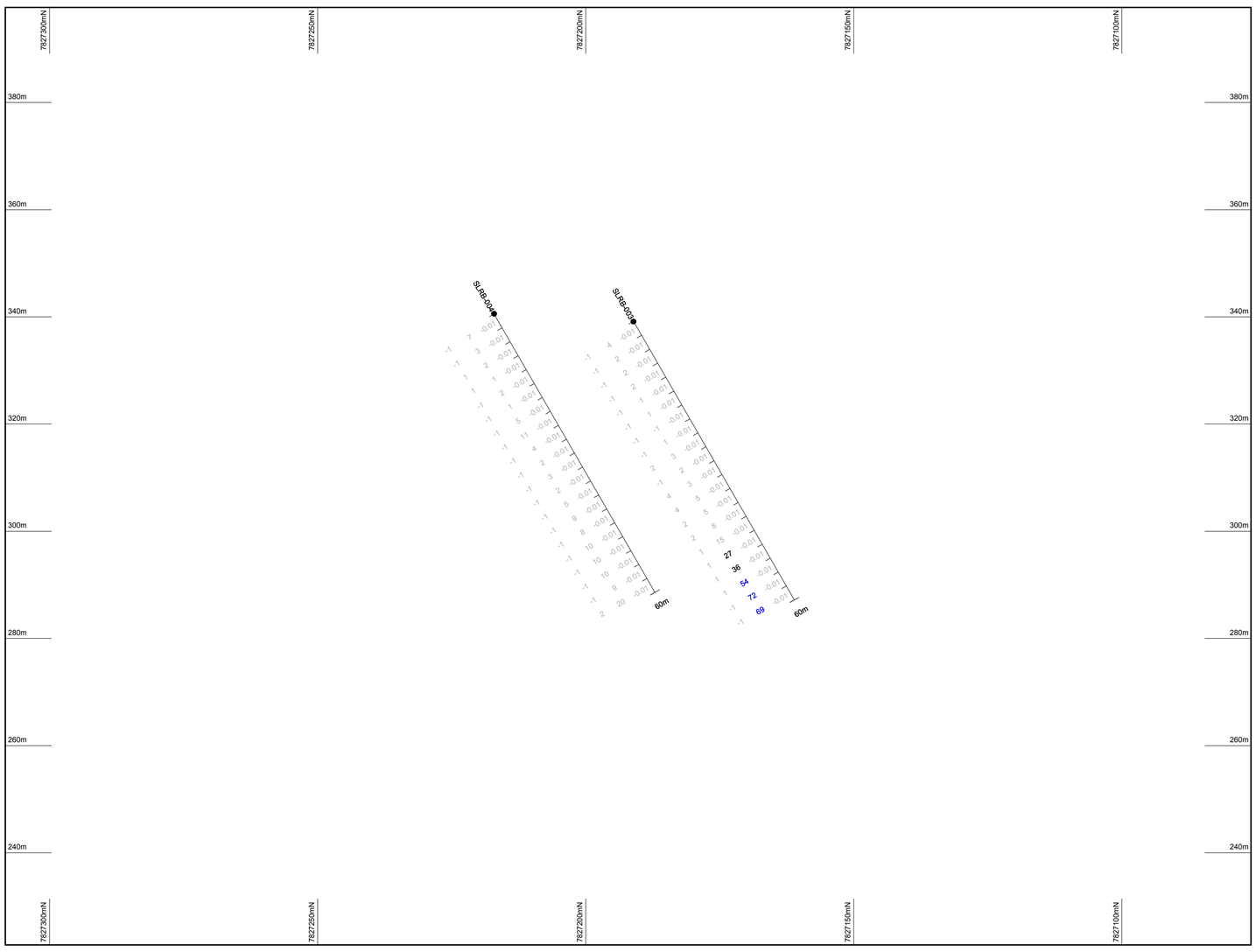
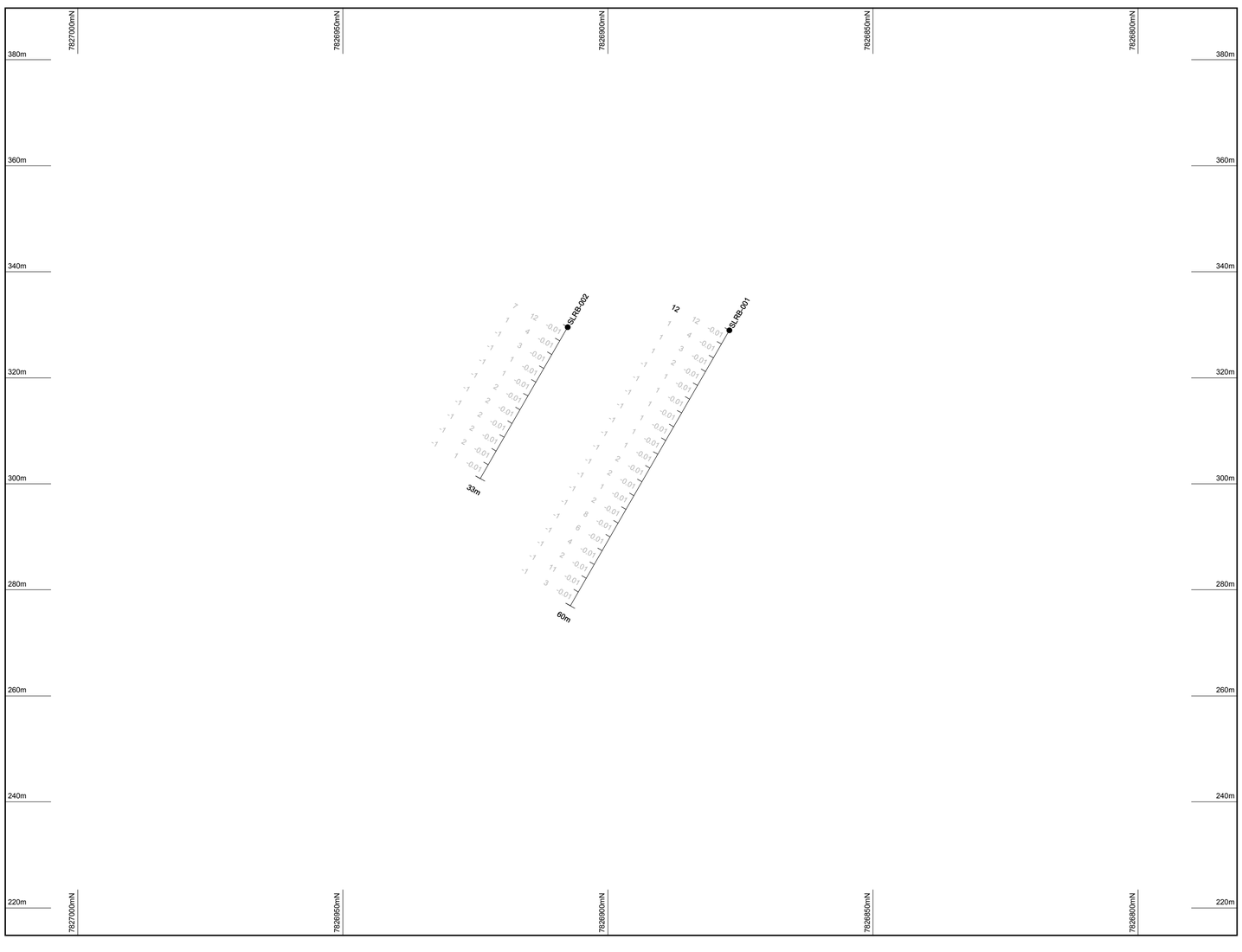
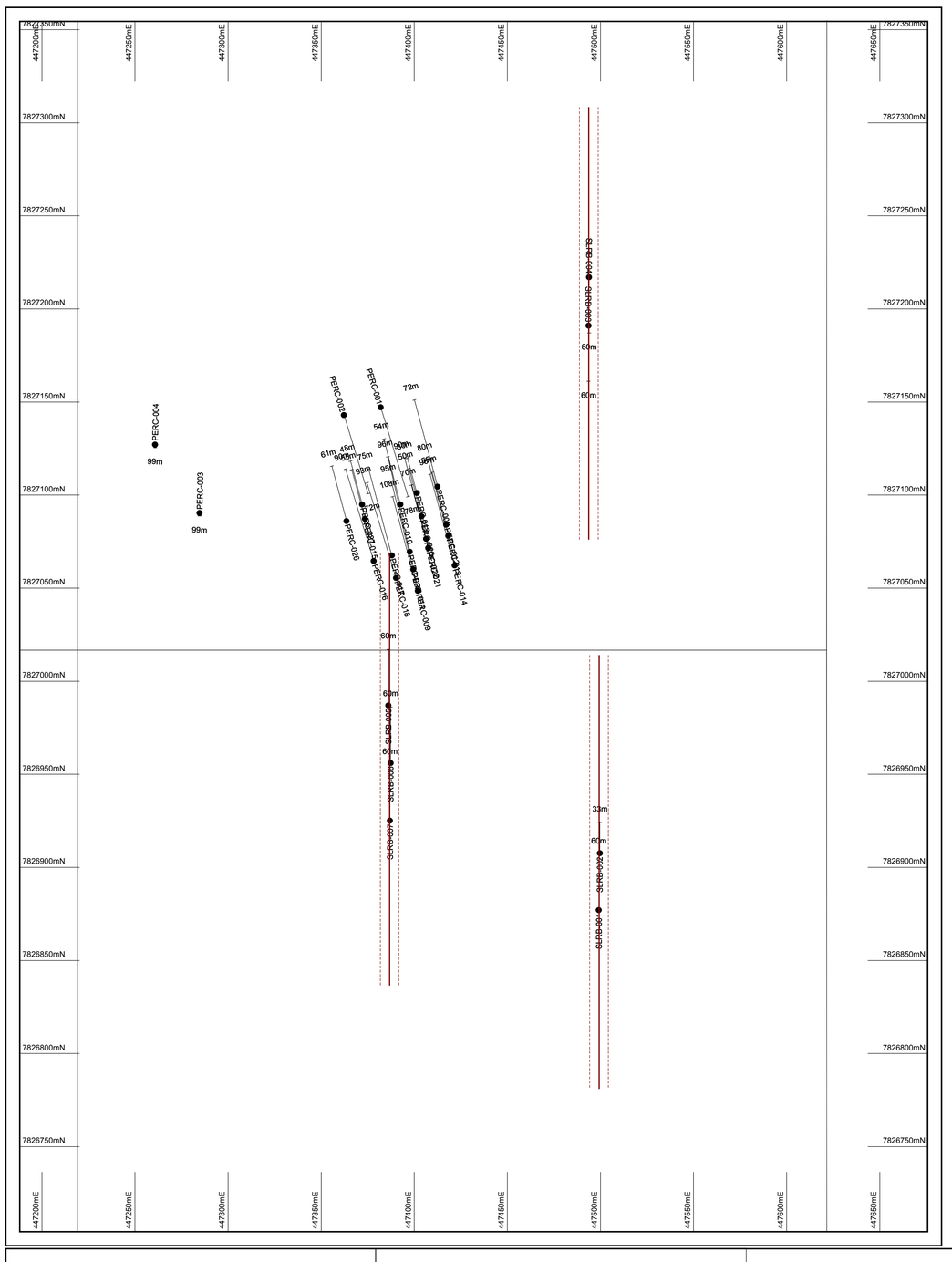
**METEORIC RESOURCES NL**

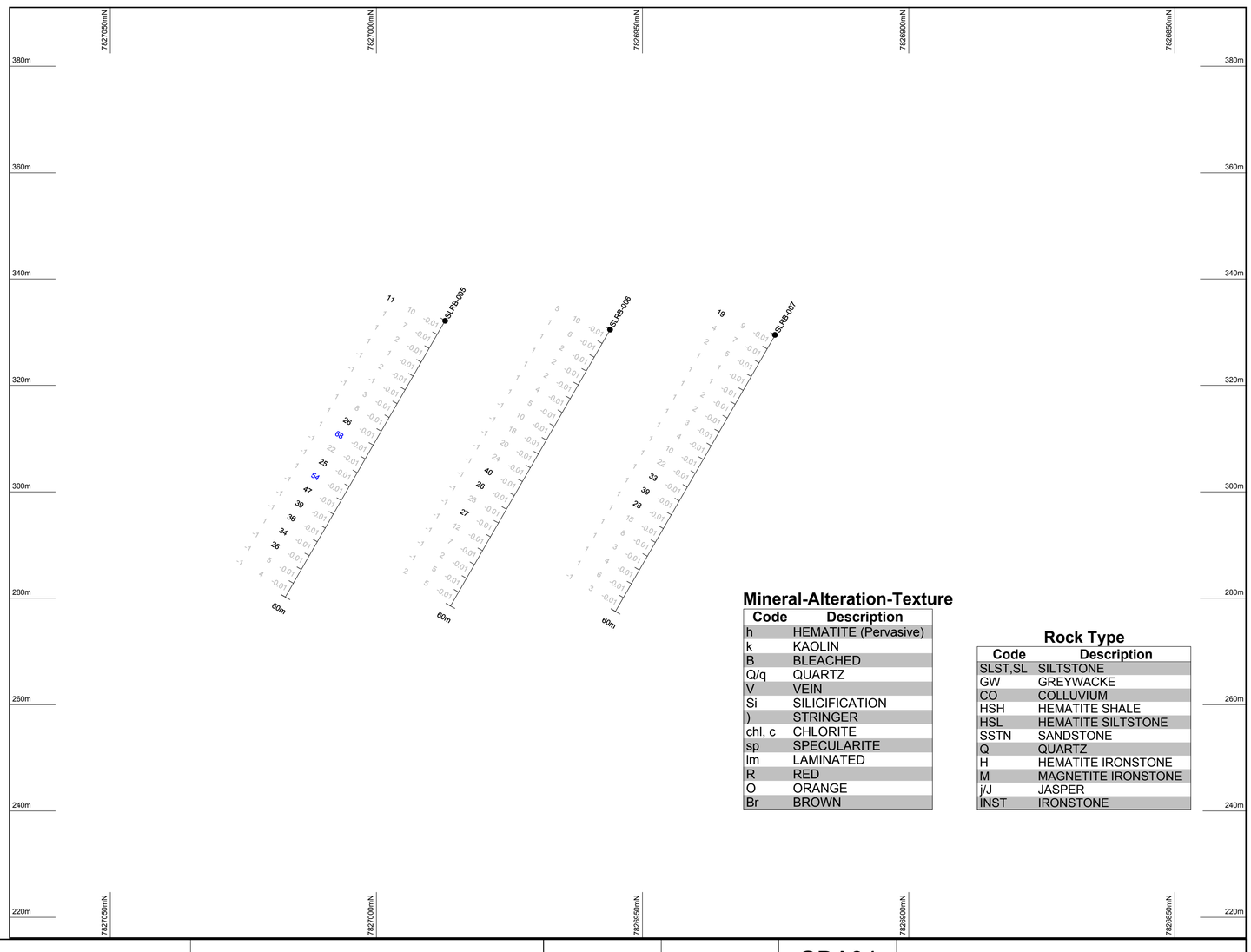
# PERSEVERANCE STACKED SECTIONS Bi,Cu,Au-ppm | Litho




**Mineral-Alteration-Texture**

| Code | Description |
|---|---|
| h | HEMATITE (Pervasive) |
| k | KAOLIN |
| B | BLEACHED |
| Q/q | QUARTZ |
| V | VEIN |
| Si | SILICIFICATION |
| ) | STRINGER |
| chl, c | CHLORITE |
| sp | SPECULARITE |
| lm | LAMINATED |
| R | RED |
| O | ORANGE |
| Br | BROWN |

**Rock Type**

| Code | Description |
|---|---|
| SLST,SL | SILTSTONE |
| GW | GREYWACKE |
| CO | COLLUVIUM |
| HSH | HEMATITE SHALE |
| HSL | HEMATITE SILTSTONE |
| SSTN | SANDSTONE |
| Q | QUARTZ |
| H | HEMATITE IRONSTONE |
| M | MAGNETITE IRONSTONE |
| j/J | JASPER |
| INST | IRONSTONE |

METEORIC RESOURCES

Figure 9. MLC57, 217–224 Perseverance Stacked Sections Bi-Cu-Au-Litho RAB drillholes SLRB1-7

| Bi-ppm | Cu-ppm | Au-ppm |
|---|---|---|
| < 10 | < 25 | < 0.05 |
| 10 to 20 | 25 to 50 | 0.05 to 0.10 |
| 20 to 30 | 50 to 75 | 0.10 to 0.25 |
| 30 to 40 | 75 to 100 | 0.25 to 0.50 |
| 40 to 50 | 100 to 200 | 0.50 to 1.00 |
| >= 50 | >= 200 | >= 1.00 |

Scale 1 : 500

Plot Date 19-Aug-2014

GDA94 MGAz53

Plot File: xsRAB03

20 0 20m

**METEORIC RESOURCES NL**

# PERSEVERANCE STACKED SECTIONS Bi,Cu,Au-ppm | Litho

## Table 2. Perseverance historical drilling summary

| Hole No | From | To | Interval | Au | Cu | Bi | Target | Year | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | m | m | m | g/t | % | ppm | | | |
| DDH-1 | 49.7 | 50.9 | 1.2 | 1.2 | | | PE2 | 1969 | Hematite-quartz-jasper 36.3 - 47.1m. |
| | 88.4 | 89.6 | 1.2 | | 0.2 | | | | Hematite-magnetite-chlorite ironstone 47.1 - 91.4m. |
| SHDH 86 | 15.2 | 16.7 | **1.5** | **3.7** | | | PE2 | 1975 | Ironstone 14-56m. |
| | 18.3 | 21.3 | **3** | **3.1** | | | | | |
| | 54.9 | 56.4 | 1.5 | 2.3 | | | | | |
| | 62.5 | 64 | **1.5** | **8.2** | | | | | |
| SHDH 88 | | | | nsi | a | a | PE2 | 1975 | Ironstone 65.5 - 79.2m EOH, caved-in. |
| DDH 558 | | | | nsi | | | PE2 | 1975 | No Ironstone. Fault+/- quartz-hematite-jasper stringers. |
| PERC 001 | 72 | 75 | **3** | **43.2** | na | na | PM | 1987 | |
| PERC 002 | 16 | 17 | 1 | 2.1 | na | na | PM | 1987 | |
| | 52 | 53 | 1 | 1.0 | na | na | | | |
| | 56 | 58 | 2 | 2.6 | na | na | | | |
| PERC 003 | | | | nsi | | | PMW | 1987 | |
| PERC 004 | | | | nsi | | | PMW | 1987 | |
| PERC 005 | 23 | 26 | 3 | 1.5 | | | PE2 | 1987 | |
| PERC 006 | 14 | 18 | **4** | **4.7** | na | na | PM | 1987 | |
| PERC 007 | | | | nsi | | | PE2 | 1987 | |
| PERC 008 | 52 | 53 | 1 | 1.0 | na | na | PM | 1987 | |
| | 61 | 63 | 2 | 1.6 | na | na | | | |
| PERC 009 | 77 | 80 | **3** | **3.3** | na | na | PM | 1987 | |
| PERC 010 | 49 | 54 | 5 | 0.3 | na | na | PM | 1987 | EOH |
| PERC 011 | 83 | 86 | 3 | 0.6 | na | na | PM | 1987 | 6-78m not assayed. |
| PERC 012 | | | | nsi | na | na | PM | 1987 | |
| PERC 013 | | | | nsi | na | na | PM | 1987 | 7-51m not assayed. |
| PERC 014 | | | | nsi | na | na | PM | 1987 | 6-71m not assayed. |
| PERC 015 | 42 | 45 | **3** | **50.0** | na | na | PM | 1987 | |
| PERC 016 | | | | nsi | na | na | PM | 1987 | 6-62m not assayed. |
| PERC 017 | 56 | 59 | 3 | 1.5 | na | na | PM | 1987 | 6-51m not assayed. |
| | 62 | 70 | 8 | 0.5 | na | na | PM | | |
| PERC 018 | 77 | 80 | 3 | 0.4 | na | na | PM | 1987 | |
| PERC 019 | | | | nsi | na | na | PM | 1987 | |
| PERC 020 | 12 | 13 | 1 | 0.2 | na | na | PM | 1987 | |
| | 14 | 15 | 1 | 0.2 | na | na | PM | | |
| PERC 021 | 54 | 55 | 1 | 0.2 | na | na | PM | 1987 | 6-40m not assayed. |
| PERC 022 | 56 | 58 | 2 | 0.13 | na | na | PM | 1987 | |
| PERC 023 | | | | nsi | | | PE1 | 1987 | |
| PERC 024 | 179 | 185 | 6 | nsi | 0.16 | | PE1 | 1987 | |
| PERC 025 | | | | nsi | | | PE1 | 1987 | |
| PERC 026 | 54 | 55 | 1 | 0.28 | na | na | PM | 1987 | 7-53m, 56-61m not assayed. |
| PERC 027 | 16 | 18 | 2 | 0.11 | na | na | PM | 1987 | |
| PERC 028 | | | | nsi | | | PE1 | 1987 | Just missed magnetic target.Strong chlorite alteration. |
| PERC 029 | | | | nsi | | | PES | 1988 | |
| PERC 030 | 28 | 29 | 1 | 0.16 | nsi | 30 | PES | 1988 | Ironstone 10-39m. |
| | 50 | 51 | 1 | 0.2 | nsi | nsi | PES | | |
| PERC 031 | 54 | 56 | 2 | 0.22 | 0.01 | nsi | PES | 1988 | Hematite-quartz-jasper-chlorite 12-40m. |
| | 100 | 101 | 1 | 0.26 | 0.07 | nsi | PES | | |
| PERC 032 | 60 | 62 | 2 | 0.11 | | 25 | PES | 1988 | Hematite-quartz-jasper-chlorite 12-40m. |
| PERC 033 | | | | na | na | na | PES | 1988 | No ironstone |
| PERC 034 | | | | na | | | PES | 1988 | No ironstone |
| PERC 035 | 177 | 195 | 18 | | 0.17 | | | 1988 | |
| PERC 036 | | | | nsi | | | PES | 1988 | Hematite-quartz 10-29m. |
| PERC 037 | 90 | 108 | 18 | | 0.27 | | PE2 | 1988 | Ironstone 70 true width. |
| PERC 038 | | | | nsi | | | PE1 | 1988 | No ironstone. |
| SLRB 001-7 | | | | nsi | | | | 1992 | |
| GRRC 001 | | | | nsi | | | | 1997 | No ironstone. |
| GRRC 002 | 126 | 129 | 3 | nsi | 0.16 | | PE2 | 1997 | |

NOTES:

a:anomalous; nsi: no significant intersection; na: not assayed; EOH: end of hole

PM: Perseverance Mine; PMW: Perseverance Mine West; PES: Perseverance Extended South;

PE1: Perseverance Extended No 1 Pod; PE2: Perseverance Extended No 2 Pod

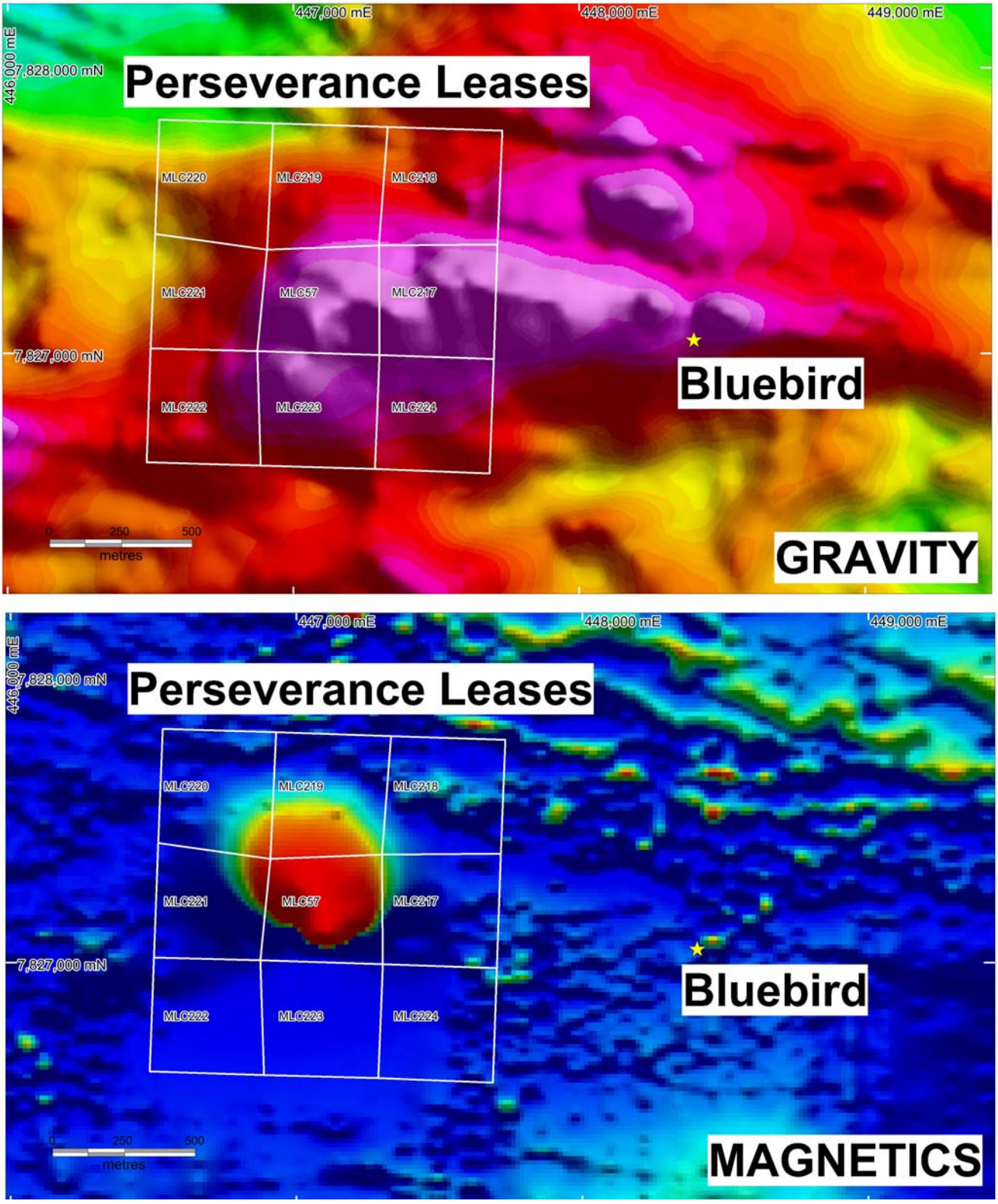



**Figure 10. Perseverance gravity and magnetic images**