



HAVILAH RESOURCES LIMITED

ABN 39 077 435 520

PACE DISCOVERY DRILLING

DPY9-44

DRILLING REPORT

BENAGERIE DOME

**EL5873 BENAGERIE
ML6346 - PORTIA**

Havilah Resources Limited

June 2017

SUMMARY

This report details the PACE collaborative drilling program completed by Havilah Resources Limited between February and June 2017 on EL5873 Benagerie and ML6346 (Portia Gold Mine).

The PACE grant was awarded to drill test copper-gold and gold targets highlighted by a review of Pasminco-Werrie Gold, MMG and Havilah data focused around the Benagerie Dome which is highly mineralised and has been shown by previous exploration to be very prospective for new copper-gold and gold discoveries.

The targets are in three specific deposit types as summarised below:

1. IOCG copper-gold mineralisation at the Bassanio Prospect which lies in the core of the Benagerie Dome, and is evidenced by strong coincident magnetic and gravity anomalies, and >40% iron in previous Pasminco-Werrie Gold drill samples.
2. Skarn copper-gold mineralisation at the Croziers Prospect marked by a linear aeromagnetic anomaly that is located on the eastern margin of a circular granite body. The granite does not outcrop, but is identified by coincident circular aeromagnetic and gravity lows characteristic of granite bodies in the region.

The Pasminco-Werrie Gold joint venture carried out aircore drilling over this aeromagnetic feature in 1996, which returned strongly anomalous copper (1,000-3,000 ppm) at shallow depths in many holes plus strongly anomalous bismuth (up to 2,300 ppm in drill hole BNGAC078) and associated tungsten (e.g. 50m of 1239 ppm tungsten in BNGAC078).

3. High grade gold lodes at the Shylock and Portia (East Portia and South Portia) Prospects which include some of the highest gold grades ever drilled in South Australia (e.g. 23 m @ 79.4 g/t in Pasminco drill hole BEN0677).

There has been extensive shallow aircore (AC) drilling at Shylock, East Portia and South Portia in the past by both the Pasminco-Werrie gold joint venture and by Havilah. Although some exceedingly high grade gold drill intersections have been obtained, the precise nature of the bedrock mineralisation remains unknown as it has not been systematically targeted.

A total of one Diamond drill hole for 324.7m to test the Bassanio Prospect, 17 Reverse Circulation (RC) drill holes for 1,462m to test the Croziers Prospect, 18 AC drill holes for 1,950m to test the Shylock Prospect, 6 AC drill holes for 722m to test the East Portia Prospect and 12 AC drill holes for 1,360m to test the South Portia Prospect were completed.

At the Bassanio Prospect diamond drill hole BADD009 tested a combined gravity and magnetic geophysical target and intersected a zone of extensive brecciation, wall rock alteration and magnetite veining with comparatively little visual sulphide mineralisation,

excepting for pyrite and some occasional molybdenite. Magnetic susceptibility and specific gravity measurements on the drillcore show a coincident zone of more magnetic and denser rocks that are believed to explain the observed geophysical anomalies.

From an exploration perspective, the extensive fracturing and brecciation of the rocks and the clear evidence of intense iron-rich alteration (evidenced by the extensive development of fine magnetite) are highly ranked indicators of favourable alteration and ground preparation for a major mineralising system in the vicinity, by analogy with major IOCG deposits. The indicators are considered to be positive enough to warrant follow up diamond drilling, as the target zone is sufficiently large that a sizeable breccia-hosted copper deposit could easily be missed by a single drill hole.

At the Croziers Prospect the drilling has been successful in extending the deeper copper mineralisation intersected in MMG diamond core hole BNG13DD001 closer to the surface and extending the skarn mineralised sequence 500m to the north and south. Anomalous $\text{Cu} \pm \text{Au} \pm \text{Fe} \pm \text{W} \pm \text{La} \pm \text{As}$ is associated with the skarn alteration.

Further drilling is recommended along with magnetic modelling to better define anomalies of interest.

At the Shylock Prospect drilling has tested the interpreted structural corridor thought to host high grade basement gold mineralisation. Several anomalous gold results were received with the best coinciding with the base of cover "Light Grey Clay" position in SHAC034 (1m @ 27.2 ppm Au). Sample washing of any intervals with gold results greater than 0.20ppm Au is recommended to test for any coarse gold.

At the East Portia Prospect drilling has also tested the anomalous gold-bismuth zone. Gold results were locally weakly to moderately anomalous. Local anomalous copper results coincided with the base of oxidation. Sample washing of any intervals with gold results greater than 0.20ppm Au is recommended to test for any coarse gold.

At the South Portia Prospect the drilling completed to date has not fully tested the prospect. Occurrences of the "Light Grey Clay" (LGC) with visible gold have been identified and further drilling is required to define the extents of this. Sample washing of all LGC intervals along with any anomalous gold intervals is also recommended. Some intervals of weakly anomalous gold are also associated with elevated Bi and As, which may be useful locally as pathfinder elements.

KEY WORDS

Aircore Drilling
Bassanio Prospect
Base Metals
Benagerie
Bimba Formation
Chalcopyrite
Copper
Croziars Prospect
Curnamona Sheet SH54-14
Curnamona Group
Curnamona Craton
Curnamona Province
Diamond Drilling
East Portia Prospect
Gold
Magnetite
Malachite
Molybdenum
Olary Domain
South Portia Prospect
Proterozoic
Pyrrhotite
Pyrite
Reverse Circulation Drilling
Shylock Prospect
Strathearn Group
Willyama Supergroup

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1. INTRODUCTION

Havilah Resources Limited (Havilah) successfully applied for PACE Discovery Drilling 2016 grant DPY9-44 for the Benagerie Dome.

The PACE grant was awarded to drill test copper-gold and gold targets highlighted by a review of Pasminco-Werrie Gold, MMG and Havilah data that focused around the Benagerie Dome which is highly mineralised and has been shown by previous exploration to be very prospective for new copper-gold and gold discoveries.

The drilling program occurred between February and June 2017 on the Croziers, Shylock, Bassanio, East Portia and South Portia Prospects which are located on EL5873 Benagerie and ML6346 (Portia Gold Mine).

1.1 LOCATION AND ACCESS

The Benagerie Dome PACE drilling program was located on EL5873 (Benagerie) and ML6346 (Portia Gold Mine) which are located approximately 400km northeast of Adelaide, in South Australia (Figure 1), and approximately 100km west of Broken Hill in New South Wales. The tenement is located on the Curnamona 1:250,000 scale map sheets and Benagerie and Kalabity 1:100,000 scale map sheets.

Access to the tenement and prospects is via the Barrier Highway and a network of station tracks.



Figure 1: EL5873 (Benagerie) & ML6346 (Portia Gold Mine) - Regional Location Plan

1.2 PREVIOUS EXPLORATION

A considerable amount of exploration has been conducted over the tenement block during the last three to four decades. Briefly, the exploration history can be divided into the early uranium phase carried out in the late 1960's and early 1970's and the later base-metal phase mostly carried on from the mid-1980's onwards.

Major exploration programmes were carried out at Benagerie and these were successful in discovering significant gold mineralisation. The downturn in metal prices and decline in exploration during the late 1990's and early 2000's saw exploration stall. Havilah's exploration work has largely taken up where the earlier explorers left off.

2. REGIONAL GEOLOGY

The prospects are located within the Olary Domain (OLD) of the Proterozoic Curnamona Province, in north eastern South Australia. Most of the Province is obscured by younger sedimentary cover but in the Olary Domain it is exposed in the Willyama Inliers of the Olary district. The area is located on the plains to the north of the Inliers, where the Proterozoic basement is covered by 30 to 100m of Tertiary clays and sands with a thin blanket of recent alluvial and aeolian sediments. In places, Neoproterozoic (Adelaidean) or Cambrian siltstones and shales unconformably overlie the basement beneath the Tertiary cover. Basement outcrops in the region are almost entirely confined to the Mooloolooloo Hills and some small outcrops near Kalkaroo homestead.

The geology of the area under cover is poorly known but some reasonably detailed interpretations have been produced, using drill hole information, along with aeromagnetic and gravity data, to extrapolate from or correlate with the known geology of the outcropping parts of the Olary and Broken Hill Domains (Leyh, 1997, 1998a,b, PIRSA, 2003).

The Olary Domain is largely composed of low to high grade, regionally metamorphosed and deformed, late Palaeoproterozoic sedimentary, volcanic and intrusive rocks of the Willyama Supergroup, which have been intruded by early Mesoproterozoic granitoids, scattered mafic sills and dykes, as well as dykes of Neoproterozoic age. The Willyama Supergroup has a complex deformational, metamorphic, intrusive and hydrothermal alteration history. The following summary is largely taken from Robertson et. al. (2003) and Conor (2003), to which the reader should refer for details and sources.

2.1 STRATIGRAPHY

The Willyama Supergroup in the Olary Domain is divided into the Curnamona and Strathearn Groups. The Curnamona Group is correlated with the Thackaringa Group and the Strathearn Group is correlated with the Broken Hill, Sundown and Paragon Groups of the Broken Hill Domain (BHD). In the project area, the basement is interpreted to consist of rocks of the Curnamona and Strathearn Groups, which have been metamorphosed, folded and faulted by several phases of deformation, intruded by granitoids, variably altered and mineralised.

2.1.1 Curnamona Group

The Curnamona Group (~1.71 Ga), is subdivided into the Wiperaminga and Ethiudna subgroups, is generally albite and magnetite altered and is equivalent to the Thackaringa Group of the BHD. The **Wiperaminga Subgroup** is dominated by interlayered albitised psammite and schistose psammopelitic metasediments with interlayered quartz-eye-bearing volcanics or volcanoclastics, minor baritic iron formations and locally magnetite (-barite) rich quartzite bands towards the top. The overlying **Ethiudna Subgroup** is a lithologically variable unit characterised by calcsilicate and albite-bearing rocks (calc-albitite) interlayered with pelite, psammopelite, felsic volcanics and volcanoclastics. The calcsilicate and albite-bearing rocks are typically fine grained, finely layered, show sedimentary structures and are locally manganese rich.

2.1.2 Strathearn Group

The psammopelitic to pelitic Strathearn Group overlies the Curnamona Group and consists of the Bimba and Plumbago Formations and the Saltbush and Mount Howden Subgroups. The rocks are locally graphitic and the group in general is reduced. The Strathearn Group is considered to be equivalent to the Broken Hill, Sundown and Paragon Groups of the BHD, although the Broken Hill Group appears to be either absent or thin in the OLD.

Overlying the Ethiudna Subgroup and at the base of the Strathearn Group, the **Bimba Formation** is a generally thin (50m or less) unit containing variable amounts of calcsilicate, marble, psammite and albitite, and is often markedly sulphide rich. Sulphides are both stratiform and in stratabound veins of pyrite, pyrrhotite and lesser chalcocopyrite, sphalerite, arsenopyrite, cobaltite and galena, making the unit a prime exploration target. The Bimba Formation and overlying pelites usually have a low magnetic signature reflecting a reducing environment, in contrast to the oxidised, magnetite-bearing rocks of the underlying Curnamona Group. The magnetic contrast at this regional redox boundary has been used as a regional stratigraphic marker for exploration in covered areas, although the position of the boundary may vary as a result of local variations in rock type and the position of diachronous overprinting albite-magnetite alteration fronts. The Bimba Formation is correlated with the Ettlewood Calcsilicate member of the Broken Hill Group in the BHD. The **Plumbago Formation** (1.69 Ga) overlies the Bimba Formation, is recognised in both Domains and consists of a thin, well-bedded, commonly graphitic, grey metasilstone to fine-grained metasandstone, interpreted to be a volcanoclastic sheet. The **Saltbush Subgroup** comprises schistose, psammopelitic metasediments within the lower part of the Strathearn Group and equates to the Sundown Group of the BHD. The Bimba and Plumbago formations may be part of it but this is currently uncertain. Above the Plumbago Formation, the subgroup is characteristically graphitic. The dominantly pelitic rocks of the Saltbush Subgroup are commonly tourmaline bearing, and manganese concentrations and iron formations occur near the base. The overlying **Mount Howden Subgroup** (~1.65 Ga) is also graphitic near the base and is made up of psammopelitic metasediments with lesser psammite and pelite. It is partly equivalent to the Paragon Group of the BHD.

2.1.3 Palaeoproterozoic and Mesoproterozoic Igneous Rocks

The igneous rocks of the OD comprise the Palaeoproterozoic Basso, Lady Louise and Poodla Hill Suites and the Mesoproterozoic Bimbowrie Suite. The Palaeoproterozoic suites are generally highly metamorphosed and deformed. The Basso Suite comprises felsic volcanics and granitic intrusives (~1.71 Ga) of A type affinity within the Curnamona Group, variously described as biotite gneiss, adamellite gneiss and metavolcanics. Deformed and metamorphosed mafic (amphibolite) sills and dykes intrude the Curnamona Group and Basso Suite throughout the OLD, some are assigned to the Lady Louise Suite (~1.69 Ga). The Poodla Hill Suite comprises variably Na and K altered, magnetite bearing relatively mafic intrusive granitoids of granodiorite and monzogranite composition with I-type affinities.

Bimbowrie Suite granites (commonly known as the 'regional granitoids') are widespread across the OLD, with the most common lithologies being biotite–muscovite monzogranite and more restricted biotite and hornblende bearing quartz monzodiorite to biotite granodiorite and sodic granitoids. The suite is dominated by granites with an S-type character although some geochemistry is I-type. The rocks are foliated to massive and intrude all the Willyama Supergroup but are most common in the Wipera Group. Ages range from ~1.62 to ~1.58 Ga, suggesting an extended period of emplacement, possibly coeval with the later stages of the Olarian Orogeny. The suite is broadly coeval with the Mundi Mundi granitoids in the BHD, undeformed felsic volcanics of the northern Benagerie Ridge (1.58 Ga), and with the I-A type Hiltaba Suite granitoids (host to Olympic Dam Cu-Au-U deposit) and Gawler Range Volcanics of the Gawler Craton.

2.2 DEFORMATION

Deformation of the Willyama Supergroup was intense and complex and aspects of the deformational history, particularly in relation to timing, are still poorly understood. At least three deformational phases (OD1-3) have been ascribed to the Olarian Orogeny. Significant folding and shearing in the basement also occurred in the Delamerian. The intensity of deformation decreases northwards towards the more stable nucleus of the craton. The oldest generally recognised deformational fabric is a regional bedding parallel schistosity, which is folded and crenulated by at least two subsequent events, the relative intensity and importance of which vary across the inliers, and their identification and interpretation remain controversial. The later folds vary considerably in orientation but the dominant northeasterly grain results largely from the third deformation. At least two phases of deformation are recognised in the Delamerian Orogeny (~500 Ma), which affected the Adelaidean sequence and nearby basement, accompanied by greenschist-facies (biotite grade) metamorphism. Some reactivation of Olarian shear zones in the basement took place during these deformations.

2.3 METAMORPHISM

Metamorphic grade varies considerably across the Domain from greenschist facies in the Benagerie Ridge area (including the project area) in the north to high-temperature granulite-facies in the Mingary region to the south east.

2.4 ALTERATION

Regional and local-scale alteration is characteristic of rocks in the OLD. The Curnamona Group and its contained igneous rocks have been subjected to variably intense, oxidised Na–Fe alteration. Albitic alteration particularly affects psammitic units but locally psammopelitic and pelitic units are also affected. A few areas, however, have largely escaped intense alteration. The Curnamona Group is commonly albite and magnetite altered, the mineral assemblages being indicative of oxidising conditions. The mineralogy of the Ethiudna Subgroup is considered to be at least partly attributable to evaporitic chemical sedimentation and diagenetic interaction with evaporite-derived brines. Regional and localised styles of alteration include:

- Na–(Fe)-oxidised alteration: albitisation with minor magnetite, haematite and pyrite.
- Na–Fe alteration: albite, magnetite.
- Na–Ca–Fe alteration: albite, clinopyroxene, actinolite, quartz, magnetite, haematite; includes stratabound calcsilicate breccia formation.
- Fe alteration: magnetite, haematite, pyrite (chalcopyrite).
- Ca–Fe–(Mn) alteration: garnet, epidote, quartz (piemontite).
- K–Fe alteration: biotite, K-feldspar, magnetite, haematite, carbonate, chlorite, actinolite, quartz, and chalcopyrite.
- Na alteration: late stage albite.
- Chloritisation and sericitisation.
- Hydrothermal brecciation related to alteration.

Regional and local scale hydrothermal alteration in the Curnamona Province is consistent with that observed in Cu–Au–Fe-oxide systems globally

2.5 MINERALISATION

Known mineral occurrences, dominated by Cu, Au, U, Pb and Zn are widespread. Exploration in the region in recent years has focused on models for stratiform–stratabound Zn–Pb and epigenetic Cu–Au deposits. Discoveries of significant Cu–Au–(Mo) mineralisation at the **Kalkaroo prospect**, Au–Cu–(Mo) mineralisation at the **Portia prospect**, both under Tertiary–Recent cover, and Au–(Cu) mineralisation at **White Dam**, as well as stratabound Zn–(Pb) mineralisation at **Hunters Dam** and several other prospects, have increased exploration interest in the region.

In the OLD, a strong stratigraphic control on base metal mineralisation is evident with the Bimba formation and calcsilicate and albitic lithologies of the Ethiudna Subgroup hosting numerous copper, lead and zinc occurrences and prospects, with gold also present in some localities. The association of sulphide mineralisation with the regionally extensive redox interface at the base of the Bimba formation has been widely recognised. Stratiform and stratabound mineralisation in the Bimba formation, Ethiudna Subgroup and, to a lesser extent, Wiperaminga Subgroup has been distinguished from later, discordant, vein-type mineralisation showing no stratigraphic control. Episodic mineralisation of both types has occurred over a wide time span (~1700 to ~500–450 Ma).

In the Benagerie Ridge area, a number of copper, gold (+/-molybdenum), zinc and lead prospects, with a variety of styles, have been discovered associated with a large magnetic feature termed the Benagerie Ridge Magnetic Complex, which occupies the core of a regional anticline. The mineralisation occurs in a zone around this core, beneath 70–80 m of Cainozoic cover sediments. Host rocks are a sequence of extensively albitised pelite, pelite and carbonate rocks with metaevaporitic minerals, and minor felsic tuff (1702±6 Ma) overlain by carbonaceous pelite. The mineralised sequence is proximal to the regional interface between the oxidised Curnamona Group rocks and the more reduced rocks of the overlying Bimba formation (?) and Strathearn Group. The exact relationship to the outcropping OLD stratigraphy has yet to be determined.

At the Portia prospect, high-grade gold occurs in veins in basement rocks and as secondary mineralisation at the top of weathered basement and the base of Tertiary sediments.

3. NATIVE TITLE

Havilah Resources Limited has a Work Area Clearance Agreement (for Minerals Exploration) signed on the 03 June 2013 with Angelina Stuart, Geraldine Anderson, Beverly Patterson, Stewart Patterson, Vincent Coulthard and Mark McKenzie for and on behalf of the Adnyamathanha People. The agreement pertains to SAD6001/1998 (SC1999/001), Adnyamathanha No. 1.

Prior to drilling a work area clearance survey was conducted. The survey was attended by Adnyamathanha Cultural Advisors Geraldine Anderson, Mark McKenzie (jnr), Dennis Austin, Grant Coulthard, Sean Lovegrove and Rachael Anderson, Greg Carver as Adnyamathanha Traditional Lands Association's nominated anthropologist and Chris Giles and Andy Price representing Havilah.

The survey cleared all drill targets with a number of minor changes made to the drilling program to accommodate areas of interest located by the Adnyamathanha Cultural Advisors.

The contents of the Work Area Clearance Inspection report are confidential and are not to be disclosed or copied without the authority of the Adnyamathanha Traditional Lands Association Aboriginal Corporation and Greg Carver. The report is therefore not included as an appendix to this report.

4. BENAGERIE DOME - EL5873 (BENAGERIE) & ML6346

The Benagerie Dome is a broad anticlinal structure located within the Benagerie Ridge, which is a tectonic horst of greenschist facies, Palaeoproterozoic metasediments of the Willyama Supergroup (ca 1720-1640 Ma) and unconformably overlying Mesoproterozoic felsic volcanics and associated intrusives (ca 1595-1580 Ma) of the Curnamona Craton (Conor & Priess, 2008).

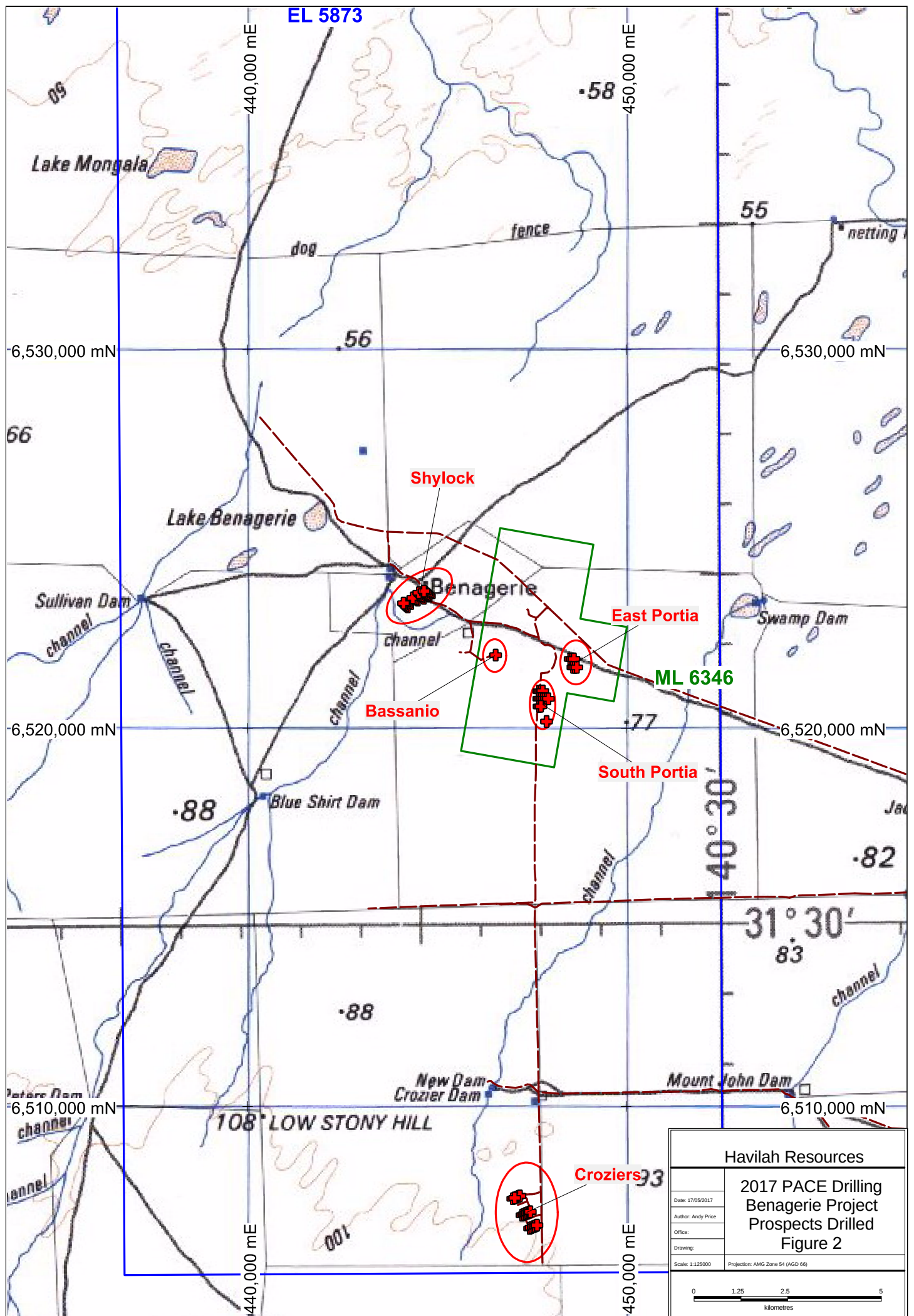
Havilah has identified five prospects of the three distinctive mineralisation styles, all located on the Benagerie Dome (**Figure 2**). They include the Bassanio Prospect, an IOCG copper gold target, Croziers Prospect a skarn copper gold target and the Shylock, East Portia and South Portia Prospects, all high grade gold targets.

The Benagerie Dome has been formed by the interference of an orthogonal set of open folds with well-developed axial planar schistosity and cross cutting brittle-fracture faults (**Figure 3**). The greenschist facies metasediments and absence of any obvious D1 layer parallel schistosity, points to a much shallower depth of burial than elsewhere in the Curnamona Craton.

On many geological reconstructions, the Curnamona Craton is shown juxtaposed to the Gawler Craton and the Mt Isa-Cloncurry Block, which are of similar age and geological history. Accordingly, similar types of mineral deposits, especially IOCG style and skarn style copper-gold deposits would be expected to occur.

Havilah tested these prospects with the 2016 PACE Discovery Drilling Grant (DPY9-44) for the Benagerie Dome.

A total of one Diamond drill hole for 324.7m to test the Bassanio Prospect, 17 Reverse Circulation (RC) drill holes for 1,462m to test the Croziers Prospect, 18 AC drill holes for 1,950m to test the Shylock Prospect, 6 AC drill holes for 722m to test the East Portia Prospect and 12AC drill holes for 1,360m to test the South Portia Prospect were completed. Drill hole statistics are summarised in **Table 1** and available in **Appendix 1**.



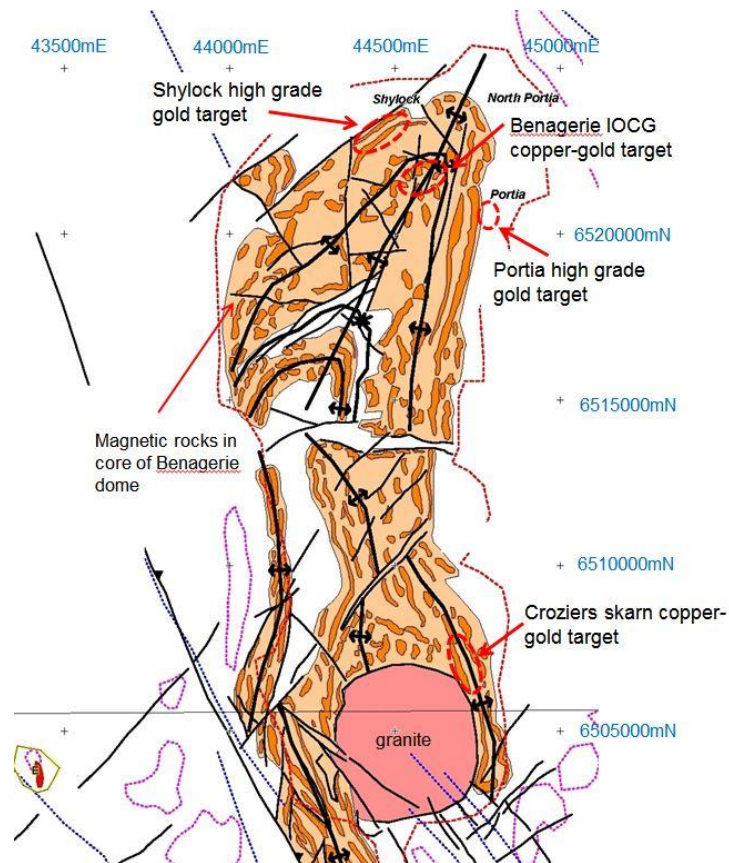


Figure 3: Benagerie Dome - Regional Geology and Prospects

Hole_ID	AMG_E	AMG_N	AHD_RL	Az_AMG	Dip	TD (m)	Date
Bassanio Prospect							
BADD009	446553.19	6521952.28	73.47	300.0	-60	324.7	20170502
Hole BADD009 completed for 324.7m							
Croziers Prospect							
CRRC001	447252.87	6507150.47	96.46	249	-60	112	20170216
CRRC002	447298.87	6507170.03	96.45	249	-60	100	20170217
CRRC003	447345.39	6507189.73	95.96	249	-60	100	20170218
CRRC004	447390.79	6507208.57	96.03	251	-60	112	20170220
CRRC005	447437.68	6507227.86	95.90	247	-60	106	20170221
CRRC006	447467.57	6507240.35	96.12	249	-60	94	20170227
CRRC007	447453.85	6506802.47	98.63	251	-60	82	20170228
CRRC008	447495.83	6506820.00	98.60	250	-60	100	20170301
CRRC009	447545.29	6506840.01	97.78	248	-60	90	20170302
CRRC010	447590.81	6506859.70	97.48	248	-60	112	20170316
CRRC011	447637.39	6506879.80	97.46	248	-60	22	20170319
CRRC012	447643.83	6506882.84	97.50	248	-60	124	20170322
CRRC013	447102.28	6507623.63	95.63	250	-60	70	20170323
CRRC014	447148.61	6507641.35	95.46	250	-60	64	20170323
CRRC015	447195.12	6507659.49	95.55	250	-60	70	20170324
CRRC016	447008.94	6507586.77	95.81	250	-60	46	20170325
CRRC017	447055.24	6507605.08	95.63	250	-60	58	20170326
Holes CRRC001-017 = 17 RC holes for 1462m							

Hole_ID	AMG_E	AMG_N	AHD_RL	Az_AMG	Dip	TD (m)	Date
Shylock Prospect							
SHAC020	444230.01	6523224.61	64.89	135.0	-60	120	20170406
SHAC021	444191.77	6523259.08	65.18	135.0	-60	108	20170407
SHAC022	444156.61	6523292.32	65.18	135.0	-60	102	20170407
SHAC023	444119.64	6523325.91	64.73	135.0	-60	100	20170408
SHAC024	444492.93	6523403.94	64.99	114.0	-60	120	20170408
SHAC025	444455.33	6523429.76	64.60	115.0	-60	120	20170409
SHAC026	444410.40	6523449.04	64.71	115.0	-60	94	20170409
SHAC027	444362.34	6523465.90	64.63	115.0	-60	120	20170410
SHAC028	444653.26	6523452.34	66.15	142.0	-60	95	20170411
SHAC029	444618.07	6523487.96	65.69	142.0	-60	91	20170411
SHAC030	444587.83	6523527.23	65.80	142.0	-60	120	20170412
SHAC031	444555.33	6523566.38	64.87	142.0	-60	120	20170412
SHAC032	444521.92	6523604.15	65.32	142.0	-60	96	20170413
SHAC033	444802.83	6523510.85	65.57	135.0	-60	108	20170414
SHAC034	444769.31	6523542.28	65.16	135.0	-60	102	20170414
SHAC035	444733.43	6523576.95	65.97	135.0	-60	119	20170415
SHAC036	444697.27	6523611.58	66.19	135.0	-60	95	20170415
SHAC037	444661.47	6523646.35	65.51	135.0	-60	120	20170416
Holes SHAC020-037 = 18 AC holes for 1950m							
East Portia Prospect							
EPAC001	448520.42	6521851.45	67.08	270	-60	114	20170429
EPAC002	448569.64	6521851.63	67.02	270	-60	119	20170429
EPAC003	448621.03	6521851.36	67.07	270	-60	105	20170430
EPAC004	448595.00	6521628.36	68.09	270	-60	120	20170501
EPAC005	448645.44	6521627.46	67.61	270	-60	132	20170501
EPAC006	448696.27	6521627.46	66.99	270	-60	132	20170501
Holes EPAC001-006 = 6 AC holes for 722m							
South Portia Prospect							
SPAC001	447694.60	6521001.01	71.07	270	-60	130	20170503
SPAC002	447745.24	6521001.69	71.20	270	-60	103	20170504
SPAC003	447794.48	6521002.00	71.12	270	-60	105	20170504
SPAC004	447698.53	6520800.59	70.89	270	-60	123	20170505
SPAC005	447745.44	6520800.68	70.48	270	-60	99.0	20170505
SPAC006	447795.99	6520800.44	70.00	270	-60	102	20170506
SPAC007	447845.93	6520799.82	69.77	270	-60	123	20170506
SPAC008	447896.20	6520799.39	69.25	270	-60	132	20170507
SPAC009	447945.96	6520798.73	69.09	270	-60	132	20170508
SPAC010	447701.20	6520596.72	69.55	270	-60	114	20170509
SPAC011	447751.20	6520599.27	69.54	270	-60	86	20170509
SPAC012	447897.74	6520197.95	71.37	270	-60	111	20170510
Holes SPAC001-012 = 12 AC holes for 1360m							

Table 1: Drill Hole Summary (Coordinates in AGD66_54)

4.1 BASSANIO PROSPECT

The Bassanio Prospect, is an IOCG copper-gold target which lies in the core of the Benagerie Dome, and is evidenced by strong coincident magnetic and gravity anomalies, and >40% iron in previous Pasminco-Werrie Gold drill samples. A prominent ENE-WSW trending lineament, which may control copper-gold mineralisation at North Portia, bounds the anomaly on its southern side.

This target was previously traversed by a line of aircore holes drilled by the Pasminco-Werrie Gold joint venture in 1996, all of which stopped due to bit refusal at the top of the hard ironstone material. Assays of the ironstone returned frequent anomalous copper, gold and molybdenum, but records show that the potential significance of the iron-rich body was not recognised at the time.

Pasminco collected detailed gravity data over most of the northern portion of the Benagerie dome, which Havilah contoured and noticed that the highest gravity anomaly also coincided with the most intense aeromagnetic anomaly based on BHEI data and subsequent more detailed Havilah aeromagnetic survey data.

Havilah attempted to drill the ironstone in 2005, but it was not intersected due to depth limitation capabilities of Havilah's RC drilling rig.

Havilah has drilled one diamond drill hole (BADD009) into a target in the core of the anomaly, with the aim of intersecting an ironstone body (**Figure 4 and Figure 5**).

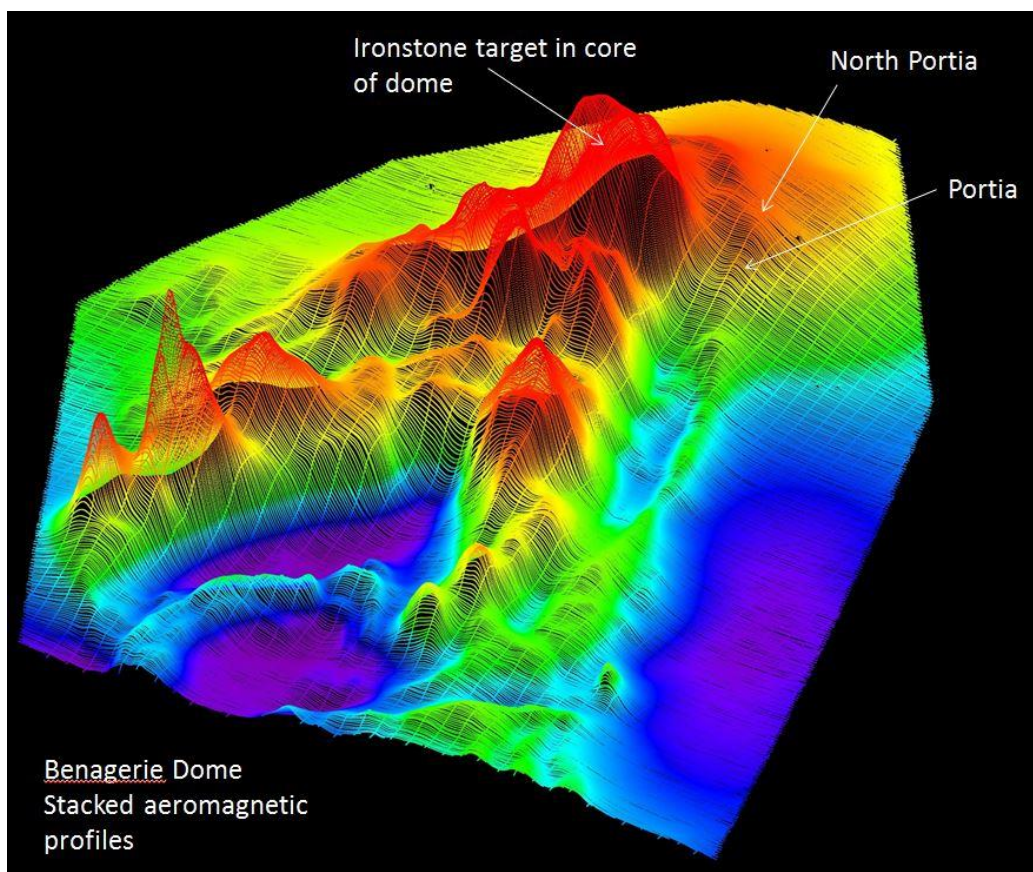


Figure 4: Benagerie Dome Aeromagnetics

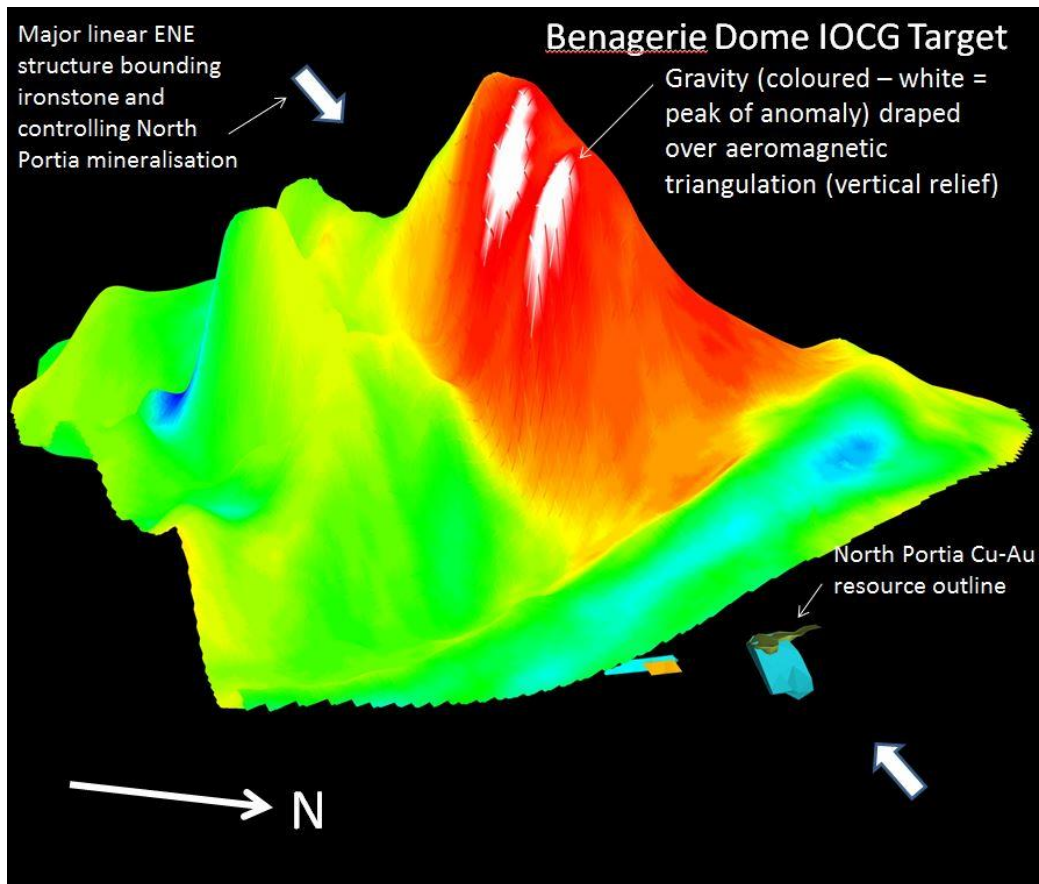


Figure 5: Benagerie Dome IOCG Target (Gravity & Magnetics)

4.1.1 Bassanio Prospect Drilling and Results

The Bassanio magnetic anomaly was modelled using sophisticated inversion techniques, which resolved the source into three main bodies. A single 324.7 metre diamond drill hole was drilled into the shallower easternmost combined gravity and magnetic target. The hole was drilled by drilling contractor Coughlan Drilling Pty Ltd using a UDR1200 multi-purpose drill rig. The drill hole location is shown on **Plan 1** and drill hole details are listed in **Table 1**.

A zone of extensive brecciation, wall rock alteration and magnetite veining was intersected with comparatively little visual sulphide mineralisation, except for pyrite and some occasional molybdenite. Magnetic susceptibility and specific gravity measurements on the drillcore show a coincident zone of more magnetic and denser rocks that are believed to explain the observed geophysical anomalies (**Plates 1 to 2 and Appendix 2**).



Plate 1: Extensive brecciation, wall rock alteration, magnetite veining and patchy pyrite



Plate 2: Magnetite veining infill of fracture system in altered metasediments

Drill hole BADD009 geological summary is as follows:

Precollar to 107.5m:

0 - 60m: Tertiary cover sequence.

60 - 90m: Saprolite.

90 - 106m: Saprock ex magnetic albitite.

106 - 107.5m: Fresh magnetic albitite.

The cored section of the hole intersected four broad lithological domains as follows:

107.5 - 169.1m

Mid pink red rock and magnetite altered, very fine grained albitite, vaguely thinly bedded to laminated, with possible scattered relict carbonate beds/bands. Generally weakly calcareous. Variable crackle stockworks to fine breccias with magnetite-pyrite-(biotite/amphibole tremolite-carbonate-chlorite) infill and associated fine disseminated magnetite alteration. Veining often in and orthogonal to bedding. Weak chlorite selvages in places.

169.1 – 224.3m

Brick red brown to pinky purple intensely red rock and weak to moderately magnetite altered very cherty albitite. Vaguely thinly bedded to laminated. Generally very weakly calcareous. Different base lithology to above. Variably crackled to strongly brecciated with magnetite-pyrite-(biotite/amphibole tremolite-carbonate-chlorite) infill and associated weak-moderate very fine disseminated magnetite alteration. Veining often in and orthogonal to bedding. Weak chlorite selvages in places.

224.3 - 301.4m

Pink to brick red very weakly to strongly hematite stained, very calcareous silty to cherty albitite, with possible thick silty-sandy carbonate beds. Thinly bedded to laminated, with some possible cross bedding. Much of the carbonate is actually alteration. Non to very weakly magnetite altered. Transition back to red brown cherty lithology from approximately 276.1m. Strongly crackled with late carbonate +-quartz infill. Bounded at base by fault/breccia 296.7 - 301.4m.

301.4 - 324.7m EOH

Red brown strongly red rock altered, very cherty, weak +-moderately magnetic albitite. Strongly crackled-brecciated with biotite/amphibole?-carbonate-magnetite-pyrite-chlorite infill +-alteration. Upper faulted contact. Ends in breccia. Weak late cream-white carbonate veining.

The upper part of the hole to 224.3m is much more magnetic as a result of the more intense magnetite veining and associated alteration, as shown by the magnetic susceptibility results (**Plan 2**). In this zone are intensely albitised, 'red rock' altered (haematite stained), strongly crackled and brecciated, magnetite-pyrite veined and altered (iron metasomatised), very fine grained (pelitic) sediments. Moderately to strongly crackled (fractured) intervals with magnetite-pyrite infill (veining) surround narrower intervals of fine to medium hydrothermal breccia (some milled) with magnetite-pyrite infill, which are interpreted as the probable main fluid conduits. Veining in the crackled intervals is commonly parallel to and to a lesser extent orthogonal to bedding, indicating the opening of bedding planes in the process. There is associated magnetite-pyrite replacement of what were probably thin to thick carbonate beds and bands (<15cm), with some associated weak biotite/amphibole-chlorite alteration. The

whole rock mass is generally moderately pervasively magnetite altered, in the form of abundant very fine grains in the albitite. Evidence of the alteration process can be seen as halos (selvedges) fingering out into the albitite surrounding fine magnetite veins. The disseminated magnetite is considered to be mostly, if not solely secondary in origin, the result of alteration and not primary, as commonly seen in the 'footwall' rocks of the region. The width of the magnetic zone may be wider than interpreted, as some magnetic albitite was intersected in the saprolite/saprock in the precollar.

Mineralisation

Visual observations and Niton XRF results suggest that there is only very scattered trace chalcopyrite and molybdenite associated with the magnetite-pyrite veining. Accordingly, none of the core has been cut for assay, although minor targeted sampling to determine trace and rare earth element associations is recommended.

Veining & alteration

Magnetite-pyrite veining (V1) and associated alteration dominates in the upper magnetic unit, giving way to mainly relatively weak potassic carbonate-biotite/amphibole-magnetite-chlorite-pyrite veining (V2) and alteration for the remainder of the hole, commonly with associated weak dark green chloritised selvages. Abundant late carbonate-quartz veining (V3) dominates in the highly calcareous/carbonate unit.

Brecciation and veining intensifies in the lower unit, with carbonate-biotite/amphibole-magnetite-pyrite-chlorite infill, the hole ending in quite good hydrothermal breccia. The associated magnetite alteration also increases in the lower unit but not to the extent that occurs in the upper unit.

A common feature throughout is the occurrence of magnetic salmon pink albite-magnetite (possibly k-feldspar-magnetite) alteration around fine fractures & veinlets, overprinting a purple-grey to grey precursor. This and the veining and alteration in general has many similarities with those at Kalkaroo, where commonly seen around the breccia zone and the pre-existing textures are all but obliterated.

Stratigraphy

Although intensely altered, the base original lithologies appear to have been dominated by a thinly bedded to laminated pelite (siltstone-shale), with common scattered carbonate beds and bands. More shale like lithologies have given rise to 'cherty' albitites. Although very difficult to tell, it does not look like the typical footwall rock that occurs beneath the 'Prospective Sequence' (e.g. more silty-sandy psammopelitic, scapolite spotted, flaser bedded, magnetite spotted red rock altered albitite). It has more in common with what we know of the 'Hangingwall' pelites.

Structure

Narrow fault zones, in the form of fine milled breccias and clay-chlorite pug, occur at or near the upper and lower contacts of the highly calcareous unit. The amount of offset and orientation are not known. Some quite thick and coarse late carbonate+quartz filled veins and breccias occur in the calcareous unit and may essentially be faults.

The core was well oriented and a significant number of structural measurements were taken and plotted (Appendix 3). Given the degree of fracturing and brecciation, bedding orientations (B) remained very consistent, particularly in the upper half to three quarters

of the hole, with a mean orientation of $40^{\circ} \rightarrow 203^{\circ}$. Although consistent, this orientation is difficult to reconcile with the magnetic interpretation and may be the result of deformation near the fault/breccia zone. A more west to northerly dip would have been expected, to fit with the model that the hole is located on the western limb of a refolded fold, as shown in **Figures 6 and 7**. Attempts at interpreting facing directions from suspected cross bedding provided conflicting or inconsistent results, including some suggesting that bedding is overturned in places.

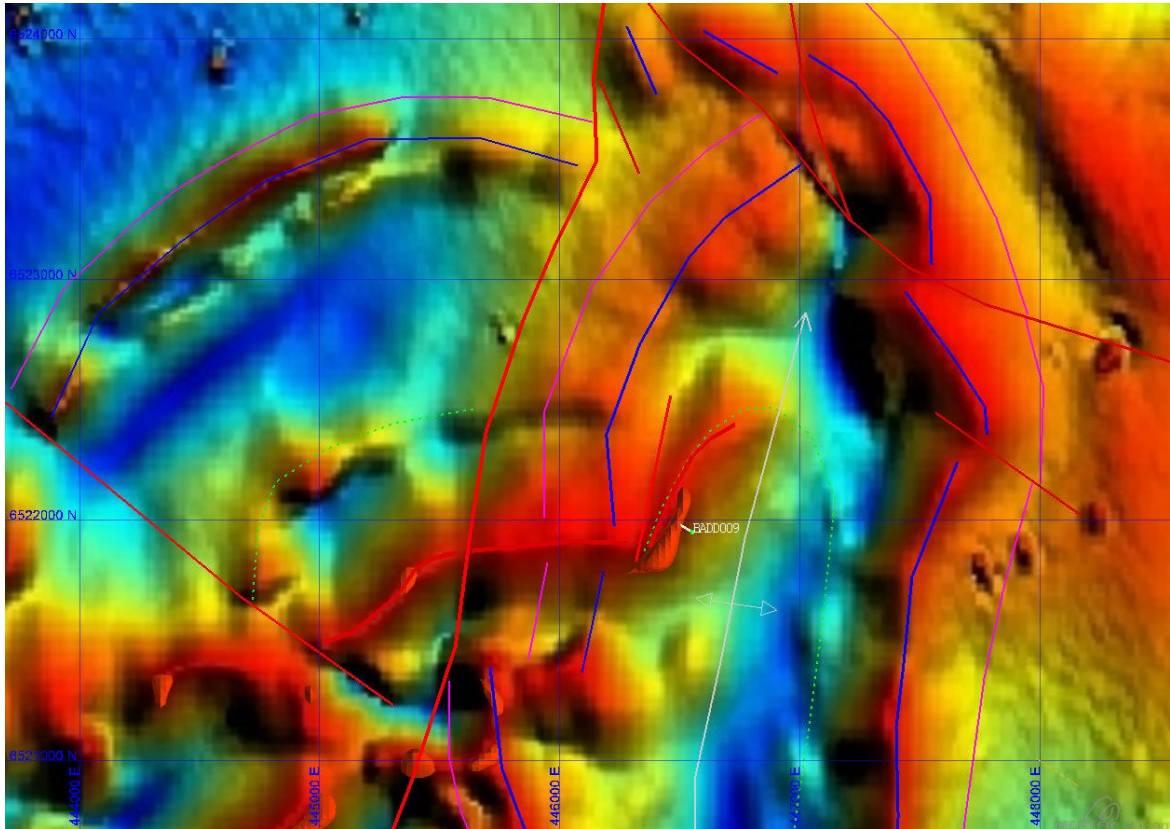


Figure 6: Regional Aeromagnetic Plan, Structural Interpretation and BADD009

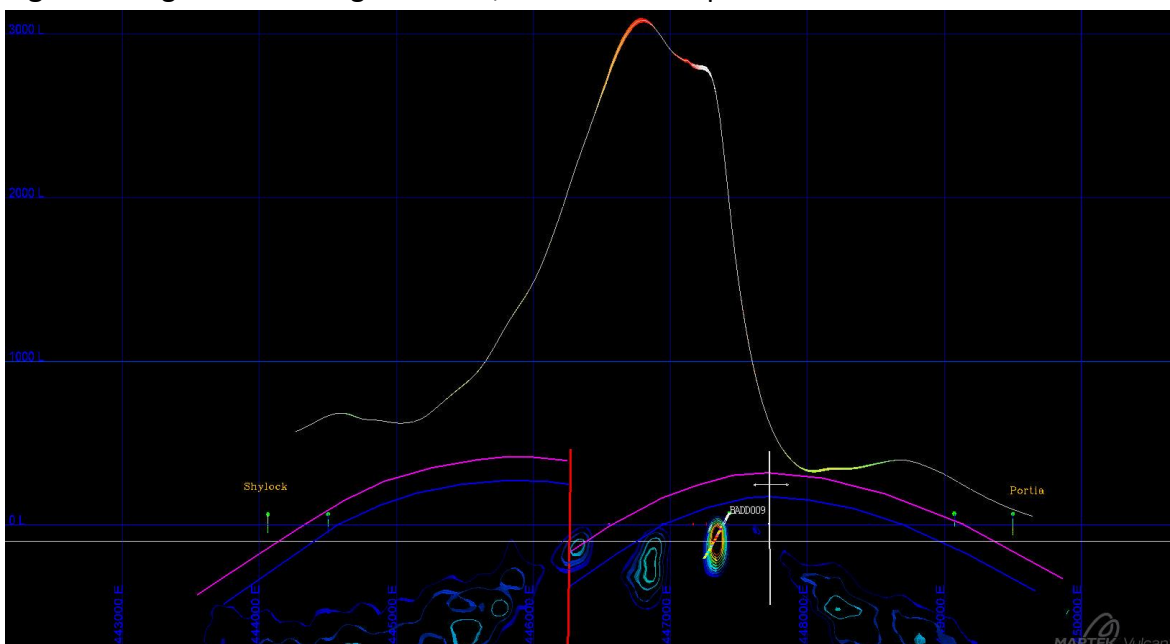


Figure 7: Regional Aeromagnetic Cross Section, Structural Interpretation and BADD009

A small number of breccia (BX) and fault (FT) orientations were measured but were insufficient and too scattered for any firm conclusions to be reached.

The three vein types (V1, V2 & V3) were measured and plotted. Type V1 veins (magnetite-pyrite) occur in two populations. One has an orientation of about $40^{\circ} \rightarrow 202^{\circ}$, which is consistent with the observation that V1 veins commonly occur in or parallel to bedding. The other has an average orientation of about $75^{\circ} \rightarrow 065^{\circ}$, which is roughly orthogonal and also supports observations of a common conjugate set, orthogonal to bedding.

Type V2 veins (carbonate-biotite/amphibole-magnetite-chlorite-pyrite), although less abundant, have a similar orientation to the V1 veins, supporting a transitional relationship between them.

Type V3 veins have one population with an orientation of about $20^{\circ} \rightarrow 134^{\circ}$ and another with a spread from 40° SSW through to 40° E.

Geophysics

As shown by the magnetic susceptibility results, the subvertical magnetic anomaly and modelled body are explained very well by the observed zone of brecciation, magnetite veining and alteration in the upper part of the hole. The fluids have probably come up subvertical breccias or structures. Veining and alteration has emanated from these up and down dip along bedding.

The observed higher density of the magnetic package also explains the gravity anomaly, although it is a relatively broad feature and topographic effects and the relatively shallow weathering profile may also play a part.

4.1.2 Bassanio Prospect Discussion

From an exploration perspective, the extensive fracturing and brecciation of the rocks and the strong iron-rich veining and alteration (metasomatism) are highly ranked indicators of favourable alteration and ground preparation for a major mineralising system in the vicinity, by analogy with major IOCG deposits like Olympic Dam and Ernest Henry.

Although this hole is devoid of any significant mineralisation, the intensity of alteration of the host rocks, the presence of favourable reactive iron and carbonate rich rocks and the degree of fracturing, brecciation, magnetite veining and alteration, along with the potassic veining, is considered very encouraging, as these features are commonly associated with and are precursors to IOCG style Cu-Au mineralisation, in the right structural setting. In this particular case, the later and often cooler Cu-Au bearing structures or phases are absent but it should only be a case of finding the right structural position, for fluids such as those that have given rise to the Nth Portia Cu-Au Deposit, to produce a significant breccia hosted IOCG Cu-Au deposit.

The core of the dome is a structurally favourable location, where fracturing and brecciation is enhanced in the hinge zone. There are also major structures passing through and intersecting in this region. The interpretation also suggests the possibility of

the 'Prospective Sequence' occurring just to the west of the current hole. This would be a very favourable host.

The indicators are considered to be positive enough to warrant potential follow up diamond drilling of the other modelled targets, as they are sufficiently large that a sizeable breccia-hosted copper deposit could easily be missed by a single drill hole.

4.2 CROZIERS PROSPECT

The Croziers Prospect is a skarn copper-gold target marked by a linear aeromagnetic anomaly that is located on the eastern margin of a circular granite body (**Figure 8**). The granite does not outcrop, but is identified by coincident circular aeromagnetic and gravity lows characteristic of granite bodies in the region.

The Pasminco-Werrie Gold joint venture carried out aircore drilling over this aeromagnetic feature in 1996, which returned strongly anomalous copper (1,000-3,000 ppm) at shallow depths in many holes plus strongly anomalous bismuth (up to 2,300 ppm in drill hole BNGAC078) and associated tungsten (eg 50m of 1239 ppm tungsten in BNGAC078).

MMG carried out further AC drilling in 2013 and generally repeated the anomalous copper (and gold) discovered by Pasminco. A subsequent deeper MMG diamond drill hole (BNG13DD001) discovered skarn style mineralisation, with a best intersection of 12m of 0.46% copper from 213.5 metres depth. The chalcopyrite-dominant copper mineralisation is hosted by massive magnetite and green calc-silicate minerals.

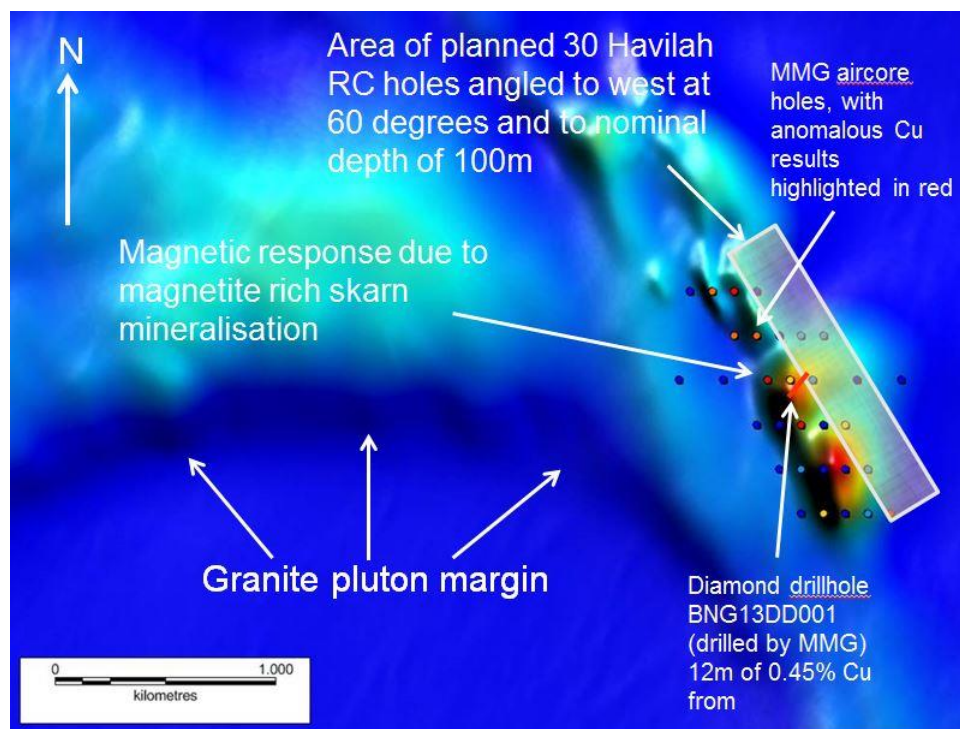


Figure 8: Croziers Prospect - Planned Drill Holes

There is at least 1 km of untested strike of this aeromagnetic anomaly that is likely to be reflecting continuity of the magnetite rich skarn mineralisation.

4.2.1 Croziers Prospect Drilling and Results

Havilah has drilled 17 Reverse Circulation (RC) drill holes for 1,462m to test this prospect as part of its PACE grant. Drilling was completed on three drill traverses as shown on **Plan 3** and drill hole details are listed in **Table 1**. The central drill line was drilled first to tie in to the MMG diamond hole BNG13DD001. Holes were spaced at 50m intervals along the drill lines and were drilled at -60° to the WSW in order to cross cut the interpreted stratigraphy at right angles.

Drilling intersected a ~50m thick, locally skarn altered and variably mineralised sequence of pelites, albitites and probable carbonate bearing metasediments dipping shallowly to the east. The skarn alteration assemblage includes magnetite, actinolite, a range of calc silicate minerals and local fluorite with replacement mostly along bedding within interpreted carbonate bearing/chemically reactive intervals. The sequence is weathered to variable depths ranging from over 90m in the south to 30m in the north. Fresh lithologies are generally fine grained and very hard, partly due to contact metamorphism (hornfels) from the nearby granite to the west. The base of oxidation generally follows the base of weathering. Sulphide minerals include chalcocite (mainly at base of oxidation (supergene), pyrite commonly after pyrrhotite, pyrrhotite and chalcopyrite. Minor malachite was observed in the oxide zone. Magnetite generally only occurs below the base of weathering and oxidation.

Interpreted drill sections are included as **Plans 4 to 6**.

Intersections of interest are included in **Table 2**:

Hole	From	To	Intersection	Comments
CRRC001	41	57	16m @ 0.20 ppm Au	Mod weath, scapolite bearing pelite
CRRC001	66	77	10m @ 0.24 ppm Au	Weak weath, scapolite bearing pelite
CRRC001	81	82	1m @ 0.12 ppm Au+ 23 ppm Ag + 0.27% Cu	Weak weath, calc silicate bearing/altered pelite
CRRC003	69	74	5m @ 0.89% Cu	Calc-sil+biotite altered, base Ox, minor Cc, elevated Fe+Mg
CRRC004	75	85	10m @ 0.70% Cu	Mag-skarn, mnr Cpy+Cc, elev Fe+La+Mg, local Au to 0.32 ppm and Ag to 3.6ppm.
CRRC004	88	96	8m @ 0.46% Cu	Weaker mag-skarn rock, mnr Cpy, elev Fe
CRRC005	82	98	16m @ 0.44% Cu	Banded mag-skarn, elev Fe+La, mnr Cpy+Cc.
CRRC013	10	18	8m @ 0.42% Cu+1150 ppm W	Sap after calc silicate skarn. Elev Fe+Ca+As
CRRC014	26	48	22m @ 740 ppm W	Partly weath+fresh calc silicate skarn,

				local fluorite Elev Fe+Ca+As, overlap with Au below
CRR014	36	51	15m @ 0.28 ppm Au incl 1m @ 1.56 ppm Au	Partly weath+fresh calc silicate skarn, local fluorite, Elev Ca+Bi, overlap with W above
CRR015	51	70	19m @ 734 ppm W	Calc silicate skarn, local fluorite, elev Ca+Fe+Bi

Table 2: Croziers Prospect anomalous results

4.2.2 Croziers Prospect Discussion

Drilling to date has been successful in extending the deeper copper mineralisation intersected in MMG diamond core hole BNG13DD001 closer to the surface and extending the skarn mineralised sequence 500m to the north and south. Anomalous Cu±Au±Fe±W±La±As is associated with the skarn alteration.

Further drilling is recommended along with magnetic modelling to better define anomalies of interest.

4.3 SHYLOCK PROSPECT

The Shylock Prospect is a high grade gold target which includes some of the highest gold grades ever drilled in South Australia (23 m @ 79.4 g/t in Pasminco drill hole BEN0677)(**Figure 9**).

Extensive shallow AC drilling in the past by both the Pasminco-Werrie gold joint venture and by Havilah has obtained some exceedingly high grade gold drill intersections however the precise nature of the bedrock mineralisation remains unknown as it has not been systematically targeted.

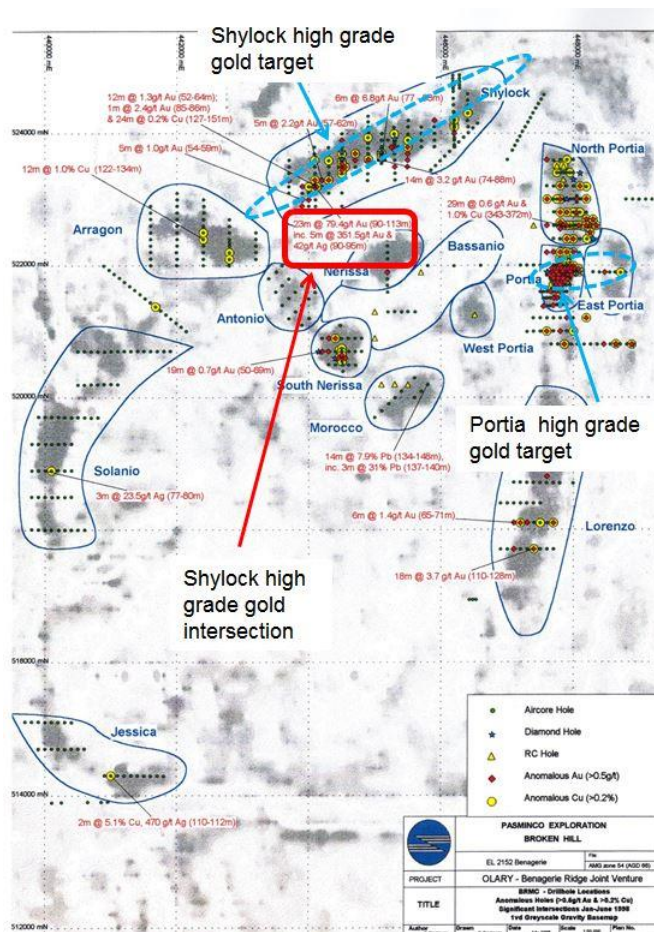


Figure 9: Shylock Prospect - High Grade Gold Intersections

Havilah's detailed work at Portia has shown that high grade bedrock gold mineralisation is normally associated with less dense graphitic pelites (hence a gravity low) and anomalous levels of bismuth (plus frequently associated arsenic and lead). At a prospect scale it is suspected that bedding parallel shears within the graphitic pelite unit may control the location of the gold.

Study of previous drilling results at Shylock has identified a 1.3 kilometre long, bismuth-gold anomalous zone that passes through the known high grade gold mineralisation (**Figure 10**). This zone is considered to be highly prospective for bonanza gold.

Havilah has drilled this prospect with Aircore drilling.

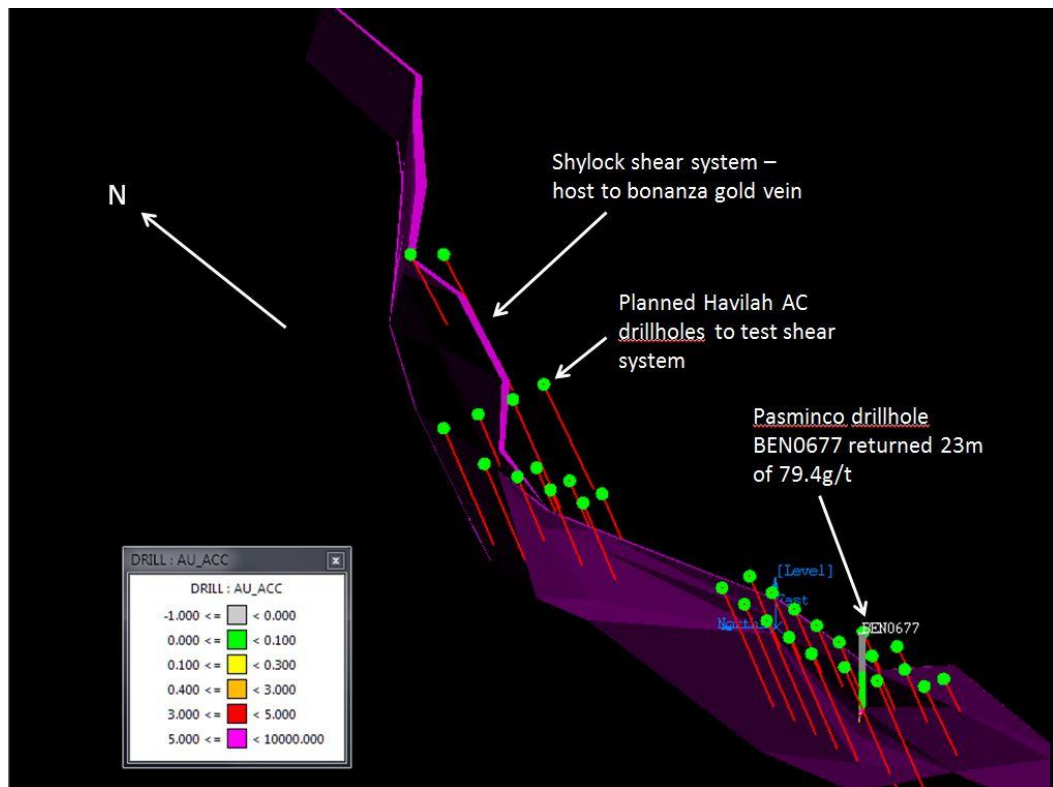


Figure 10: Shylock Prospect - Gold Shear Zone (Plan View)

4.3.1 Shylock Prospect Drilling and Results

Havilah has drilled 18 Aircore (AC) drill holes for 1,950m to test this prospect as part of its PACE grant. Drilling was completed on four drill traverses as shown on **Plan 7** and drill hole details are listed in **Table 1**. Holes were spaced at 50m intervals along the drill lines and were drilled at -60° to the SE in order to cross cut the interpreted stratigraphy at right angles.

Drilling intersected a deeply weathered and oxidised sequence of basement lithologies under approximately 70m of Tertiary cover including Namba clays and sands and Eyre Formation clays. There was local development of “Light Grey Clay” at the base of the cover sequence. Basement lithologies were mostly difficult to identify due to the deep weathering but the some of the expected sequence of Host Sequence albitites was logged along with magnetite bearing albitites from the Footwall sequence. No quartz veined zones or other structural zones of significance were identified which may highlight “bonanza” gold zones.

Interpreted drill sections are included as **Plans 8 to 11**.

Intersections of interest are included in **Table 3**:

Hole	From	To	Intersection	Comments
SHAC020	88	89	1m @ 1.28 ppm Au	saprolite
SHAC023	67	70	3m @ 0.76 ppm Au	saprolite
SHAC023	92	93	1m @ 1.21 ppm Au	Saprolite + weathered Albitite
SHAC025	79	81	2m @ 1.90 ppm Au	Base cover/top saprolite = LGC position – no sand
SHAC026	78	83	5m @ 0.66 ppm Au	saprolite
SHAC030	80	83	3m @ 0.47 ppm Au	Saprolite under base of cover
SHAC031	79	83	4m @ 0.59 ppm Au	LGC – clay + silt + sand, trace native Cu, minor heavy minerals
SHAC032	83	84	1m @ 0.61 ppm Au	saprolite
SHAC034	67	68	1m @ 27.2 ppm Au	Base cover/top sap = LGC position – no sand.
SHAC034	71	74	3m @ 0.37 ppm Au	Saprolite after Albitite
SHAC036	79	84	5m @ 0.40 ppm Au	Ferruginous saprolite, Feox after Py?

Table 3: Shylock Prospect anomalous results

4.3.2 Shylock Prospect Discussion

Drilling has tested the interpreted structural corridor thought to host high grade basement gold mineralisation. Several anomalous gold results were received with the best coinciding with the base of cover “Light Grey Clay” position in SHAC034 (1m @ 27.2 ppm Au). Sample washing of any intervals with gold results greater than 0.20ppm Au is recommended to test for any coarse gold.

4.4 EAST PORTIA PROSPECT

The East Portia Prospect is a high grade gold target which has been extensively shallow aircore drilled in the past by both the Pasminco-Werrie gold joint venture and by Havilah (**Figure 11**).

Although some exceedingly high grade gold drill intersections have been obtained, the precise nature of the bedrock mineralisation remains unknown as it has not been systematically targeted.

At the East Portia Prospect a multi-hole bismuth-gold anomaly has been identified in previous Pasminco-Werrie Gold joint venture drill holes within the hangingwall pelite sequence (**Figure 11**). The East Portia geochemical anomaly is topographically higher than the Portia base of Tertiary gold mineralisation and could represent a possible source for it.

Havilah has drilled this prospect with Aircore drilling.

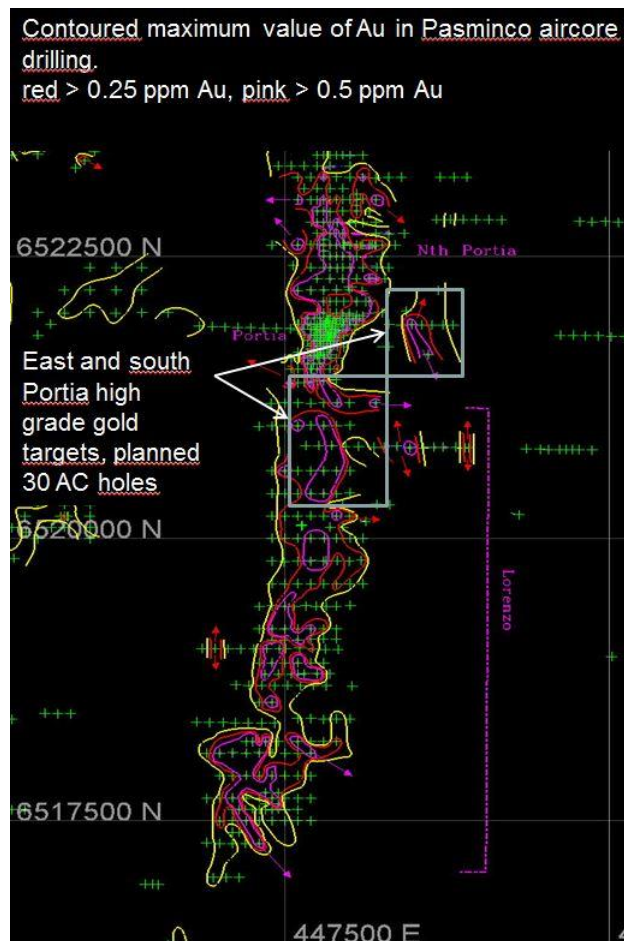


Figure 11: East Portia Prospect - High Grade Gold Target

4.4.1 East Portia Prospect Drilling and Results

Six AC holes for 722m were drilled on two east-west traverses to test for anomalous Au-Bi from previous Pasminco AC drilling as shown on **Plan 12** and drill hole details are listed in **Table 1**. Holes were spaced at 50m intervals and were drilled at -60° to the west. Drilling intersected variably weathered pelites and “albitites” under 50-65m of Namba and Eyre Formation cover. The “albitites” may reflect locally albite (± calc silicate) alteration of pelites along a structure in this location within the interpreted Hanging Pelite sequence. Scattered, weakly to moderately anomalous gold results were returned with a maximum 1m @ 1.87 ppm returned. Bismuth results were generally subdued with one small zone of ~100-200 ppm non-coincident with gold anomalism. Chalcocite was observed in some holes at the base of oxidation with corresponding elevated copper results (maximum 1m @ 0.85% Cu). Local anomalous silver was intersected in one hole.

Interpreted drill sections are included as **Plans 13 to 14**.

Intersections of interest are included in **Table 4**:

Hole	From	To	Intersection	Comments
EPAC001	86	87	1m @ 0.51 ppm Au	Saprolite after pelite
EPAC002	116	119	3m @ 0.56% Cu	Minor Cc in partly weathered albitite with weak red rock and chlorite alteration
EPAC003	83	84	1m @ 0.63 ppm Au	Saprolite after pelite
EPAC004	76	77	1m @ 1.87 ppm Au	Moderately ferruginous saprolite
EPAC005	78	82	4m @ 0.30 ppm Au	Weakly ferruginous saprolite
EPAC005	90	93	3m @ 25.8 ppm Ag	Saprolite after pelite
EPAC005	103	104	1m @ 0.72 ppm Au	Ferruginous saprolite
EPAC006	68	72	4m @ 173 ppm Bi	Saprolite after pelite, minor FeOx vein
EPAC006	115	117	2m @ 0.51% Cu	Pyritic saprolite + minor Cc

Table 4: East Portia Prospect anomalous results

4.4.2 East Portia Prospect Discussion

Drilling has tested the anomalous gold-bismuth zone at East Portia. Gold results were locally weakly to moderately anomalous. Local anomalous copper results coincided with the base of oxidation. Sample washing of any intervals with gold results greater than 0.20ppm Au is recommended to test for any coarse gold.

4.5 SOUTH PORTIA PROSPECT

South Portia Prospect is also a high grade gold target which has been extensively shallow aircore drilled in the past by both the Pasminco-Werrie gold joint venture and by Havilah (**Figure 11**).

Although some exceedingly high grade gold drill intersections have been obtained, the precise nature of the bedrock mineralisation remains unknown as it has not been systematically targeted.

At the South Portia Prospect a gold and multi-element anomaly has been identified in previous Pasminco-Werrie Gold joint venture drill holes within the Hangingwall pelite sequence.

Havilah has drilled this prospect with Aircore drilling.

4.5.1 South Portia Prospect Drilling and Results

Twelve AC holes for 1,360m were drilled on 4 drill sections to test for anomalous gold from previous Pasminco AC drilling as shown on **Plan 15** and drill hole details are listed in **Table 1**. Holes were mostly spaced at 50m intervals on E-W sections and were drilled at - 60° to the west. Drilling intersected a variably weathered sequence of pelites and albitites under ~70m of Namba and Eyre Formation cover. There is local development of

the base of cover “Light Grey Clay” with trace gold, native copper and chalcocite panned from some intervals. Local chalcocite occurrences were also observed from the base of oxidation in pyritic saprolite. Some low-level gold results are also associated with elevated As and Bi results.

Interpreted drill sections are included as **Plans 16 to 19**.

Intersections of interest are included in **Table 5**:

Hole	From	To	Intersection	Comments
SPAC002	81	83	2m @ 1.46 ppm Au	Lower Eyre/LGC
SPAC002	85	94	9m @ 0.33 ppm Au	Saprolite after Pelite, Local elev As
SPAC004	80	81	1m @ 2.28 ppm Au	LGC
SPAC004	90	94	4m @ 0.25 ppm Au	Partly weathered/oxidised Albitite, Local elev As to 1780 ppm and Bi to 101 ppm
SPAC006	80	81	1m @ 0.28 ppm Au+ 3.1 ppm Ag	LGC
SPAC006	91	93	2m @ 0.31 ppm Au	Partly weathered Pelite
SPAC007	76	77	1m @ 1.27% Cu	Eyre Fm clay+ minor native Cu
SPAC007	79	80	1m @ 0.48 ppm Au	Oxidised saprolite
SPAC007	116	119	3m @ 0.44 ppm Au	Saprolite after Pelite
SPAC008	69	71	2m @ 2220 ppm As + 0.36% Cu	Saprolite + minor Cc
SPAC008	71	78	7m @ 0.19 ppm Au	Oxidised saprolite
SPAC008	100	101	1m @ 0.51 ppm Au	Oxidised saprolite
SPAC008	115	117	2m @ 0.45 ppm Au	Saprolite after Pelite
SPAC008	121	125	4m @ 0.54% Cu	Pyritic saprolite and minor Cc
SPAC008	124	130	6m @ 0.15 ppm Au	Pyritic saprolite and trace Cc
SPAC009	75	78	3m @ 0.37 ppm Au	Saprolite/pallid zone
SPAC010	93	96	3m @ 0.34 ppm Au	Partly weathered scapolitic Albitite
SPAC011	79	80	1m @ 0.28 ppm Au	Partly weathered Pelite

Table 5: South Portia Prospect anomalous results

4.5.2 South Portia Prospect Discussion

At the South Portia Prospect the drilling completed to date has not fully tested the prospect. Occurrences of the “Light Grey Clay” with visible gold have been identified and further drilling is required to define the extents of this. Sample washing of all LGC intervals along with any anomalous gold intervals is also recommended. Some intervals of weakly anomalous gold are also associated with elevated Bi and As, which may be useful locally as pathfinder elements.

5. SAMPLING PROCEDURE

The sampling procedure for the prospects varied based on the drilling method used to test the targets. All samples were analysed using the same techniques for gold and multi elements by ALS Laboratories as listed in **Table 6**.

Elements	Method Description	Method Code
Au(0.01ppm)	50g fire assay, AA finish, DL 0.01ppm	Au-AA26
Ag(0.5ppm), Al(0.01%), As(5ppm), Ba(10ppm), Be(0.5ppm), Bi(2ppm), Ca(0.01%), Cd(0.5ppm), Co(1ppm), Cr(1ppm), Cu(1ppm), Fe(0.01%), Ga(10ppm), K(0.01%), La(10ppm), Mg(0.01%), Mn(5ppm), Mo(1ppm), Na(0.01%), Nb(5ppm), Ni(1ppm), P(10ppm), Pb(2ppm), S(0.01%), Sb(5ppm), Sc(1ppm), Se(10ppm), Sr(1ppm), Ta(10ppm), Te(10ppm), Th(20ppm), Ti(0.01%), Tl(10ppm), U(10ppm), V(1ppm), W(10ppm), Zn(2ppm)	33 element, 4 acid digest, ICP-AES finish, DL variable.	ME-ICP61

Table 6: ALS Laboratories Analytical Suite

5.1 BASSANIO DIAMOND DRILLING

Samples of basement derived material from the mud precollar were sampled on 2m intervals from 60m to 107.5m where the precollar ended. All samples were analysed for gold and a multi element suite by ALS Laboratories as listed in **Table 6**.

5.2 CROZIERS REVERSE CIRCULATION DRILLING

1m samples were collected via an onboard riffle splitter from the surface. QC/QA samples in the form of standards, duplicates and blanks were inserted every 25 samples. All samples were analysed for gold and a multi element suite by ALS Laboratories as listed in **Table 6**.

5.3 SHYLOCK, EAST PORTIA & SOUTH PORTIA AIRCORE DRILLING

1m samples were collected via an onboard riffle splitter or by a sample scoop (wet/damp samples). Samples were generally collected from the base of the Tertiary Namba Formation so that all Eyre Formation and basement derived material was samples. QC/QA samples in the form of standards, duplicates and blanks were inserted every 25 samples. All samples were analysed for gold and a multi element suite by ALS Laboratories as listed in **Table 6**.

6. REHABILITATION

Rehabilitation of the drill holes has yet to be fully completed. Planned rehabilitation activities are summarised below:

Bassanio diamond drill site

No rehabilitation activities have been completed to date. Planned rehabilitation activities will include the following:

- Drill sumps (2) to be backfilled and surfaced with stockpiled top soil.
- PVC collar to be cut off below surface and hole plugged.
- Drill site to be scarified/back bladed as required to remove any ruts and compacted or disturbed areas. Re spread any available dead vegetation. Remove any rubbish from site.
- Access tracks to be back bladed/scarified to remove any ruts/compacted areas.

Croziars RC drill sites

RC drill sumps have been backfilled. Further planned rehabilitation activities will include the following:

- RC sample bags to be emptied into sample pits and bags removed from site.
- Hole collars to be securely capped and left for the time being pending further work.
- Drill lines to be scarified/back bladed.
- Remove any rubbish from sites.
- Access tracks to be left for the time being pending further work.

Shylock, East and South Portia AC drill sites

No rehabilitation activities have been completed to date. Planned rehabilitation activities will include the following:

- Cover sequence sample piles to be buried in sample pit.
- AC samples bags to be emptied into sample pit and bags removed from site.
- Hole collars to be securely capped and left for the time being pending further work.
- Remove any rubbish from sites
- Drill lines to be scarified/back bladed.
- Access tracks to be left for the time being pending further work.

Havilah rehabilitation is fully documented in Havilah's annual combined rehabilitation report for its Curnamona projects.

7. EXPENDITURE

A detailed table of expenditure and copies of related invoices have been supplied to DPC separately.

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PLANS

Plan 1: Bassanio Prospect - Drill Hole Location Plan

Plan 2: Bassanio Prospect – Cross Section

Plan 3: Croziers Prospect - Drill Hole Location Plan

Plan 4: Croziers Prospect - South Section – Looking NNW – (Au-Cu-Mag Sus)

Plan 5: Croziers Prospect - Central Section – Looking NNW – (Au-Cu-Mag Sus)

Plan 6: Croziers Prospect - North Section – Looking NNW – (Au-Cu-Mag Sus)

Plan 7: Shylock Prospect - Drill Hole Location Plan

Plan 8: Shylock Prospect – West 01 Section – Looking NE – (Au ppm)

Plan 9: Shylock Prospect – West 02 Section – Looking NE – (Au ppm)

Plan 10: Shylock Prospect – West 03 Section – Looking NE – (Au ppm)

Plan 11: Shylock Prospect – West 04 Section – Looking NE – (Au ppm)

Plan 12: East Portia Prospect - Drill Hole Location Plan

Plan 13: East Portia Prospect – Section 6521625N

Plan 14: East Portia Prospect – Section 6521850N

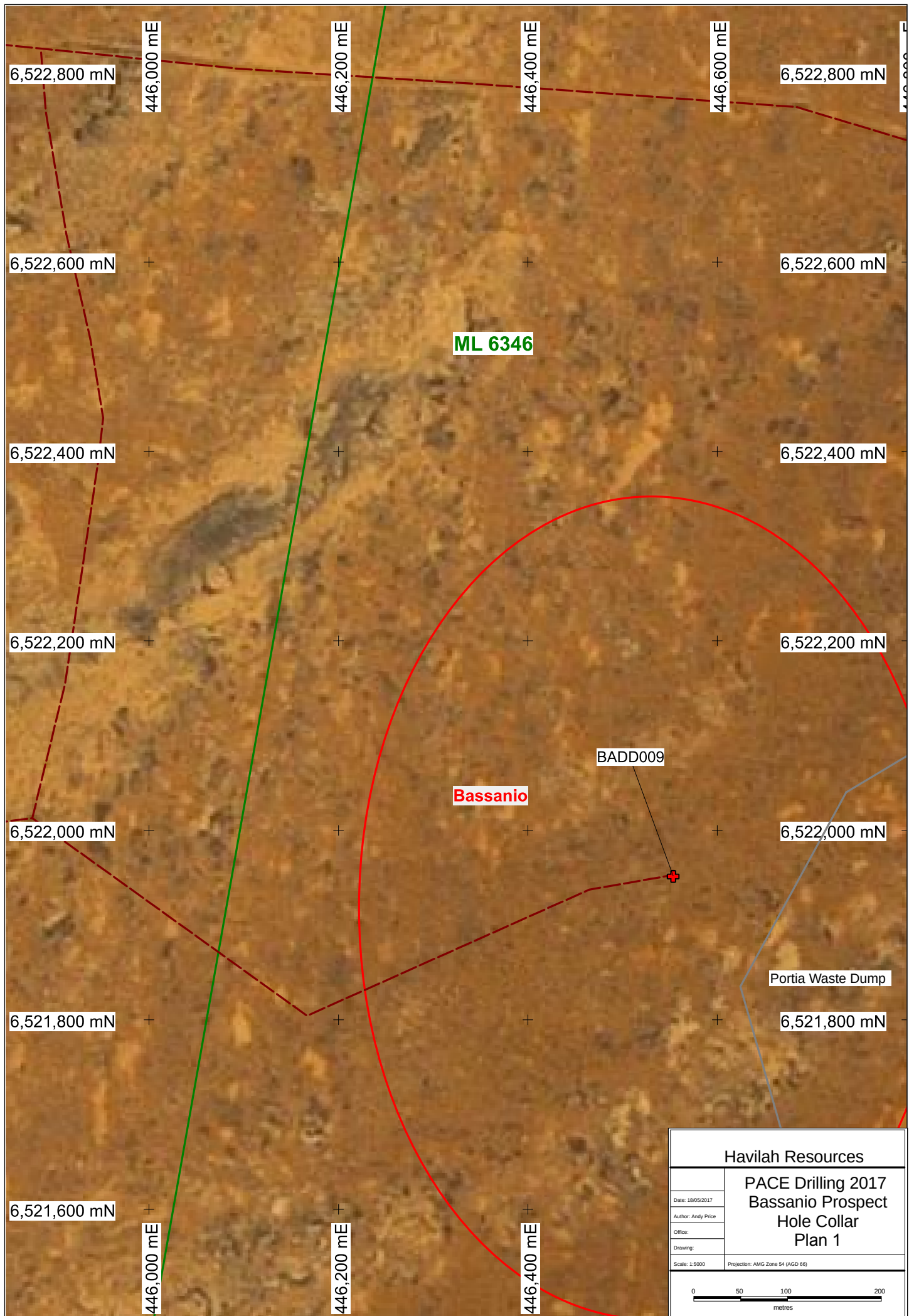
Plan 15: South Portia Prospect - Drill Hole Location Plan

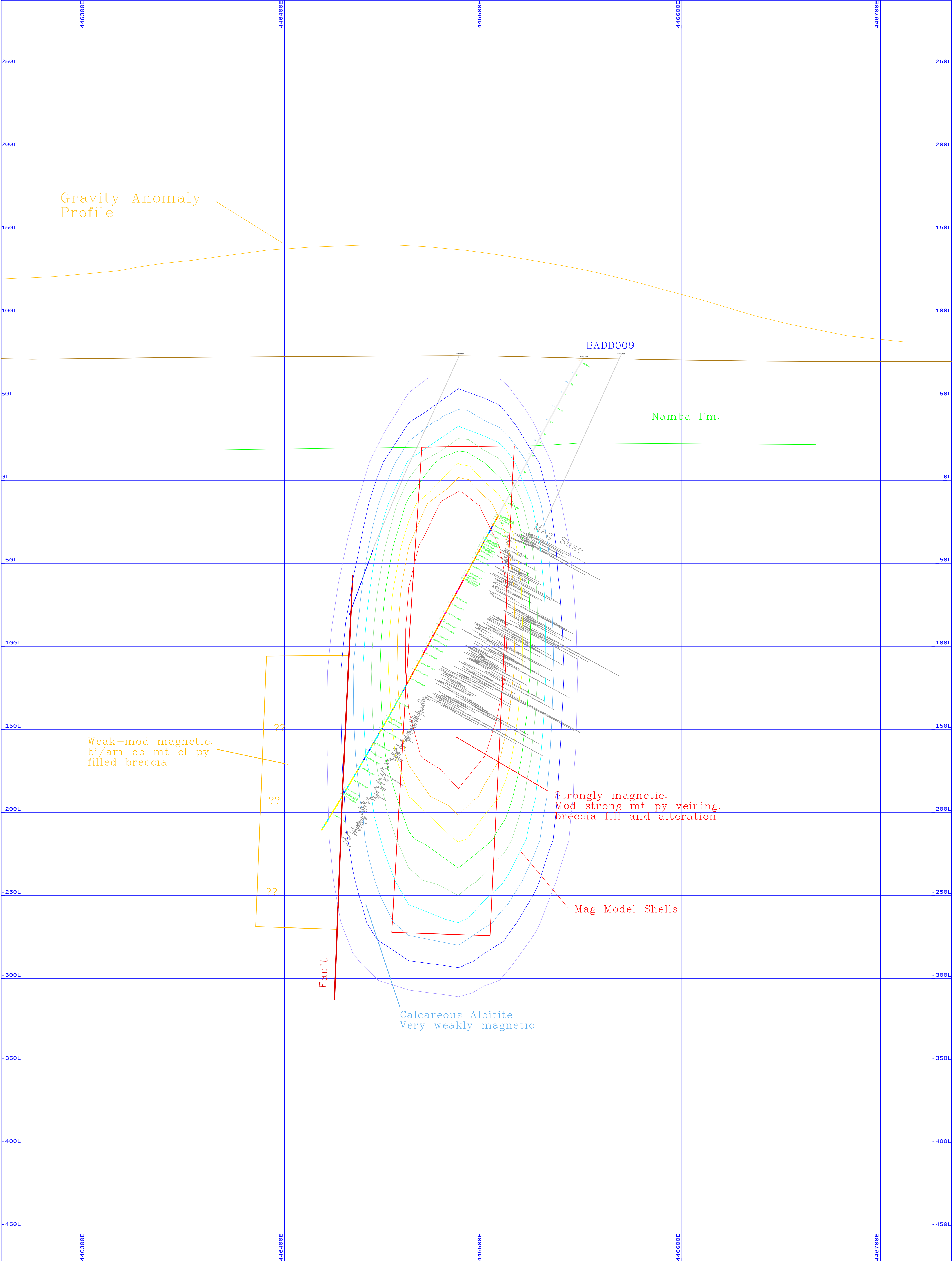
Plan 16: South Portia Prospect – Section 6520200N

Plan 17: South Portia Prospect – Section 6520600N

Plan 18: South Portia Prospect – Section 6520800N

Plan 19: South Portia Prospect – Section 6521000N



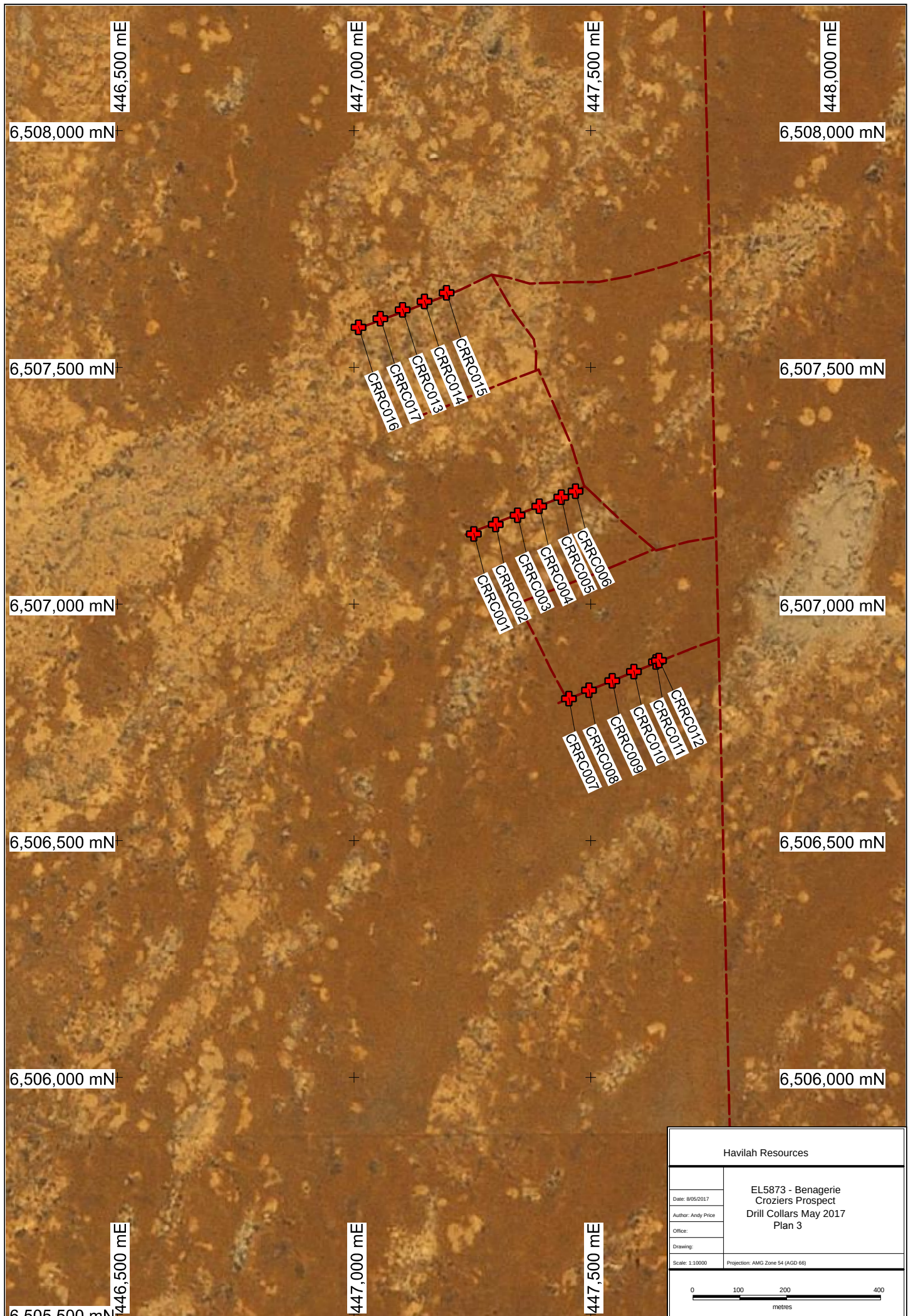


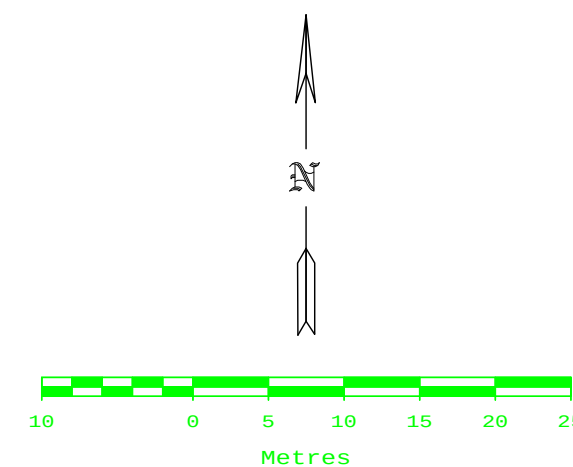
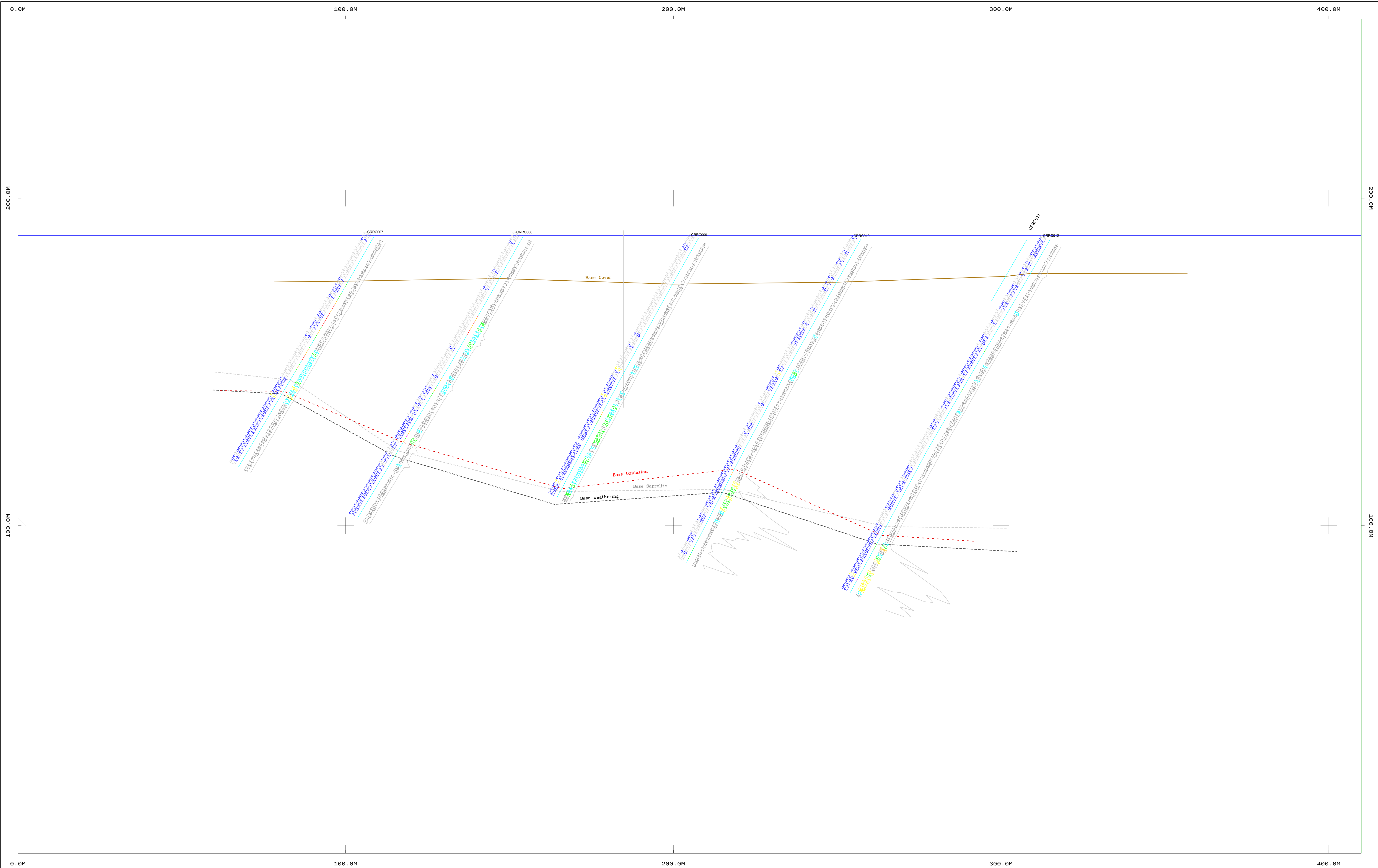
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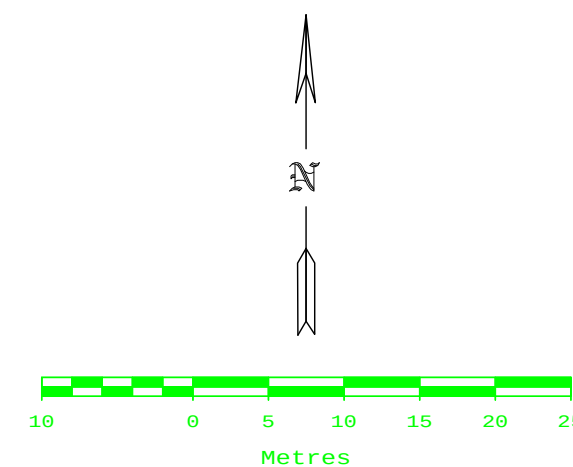
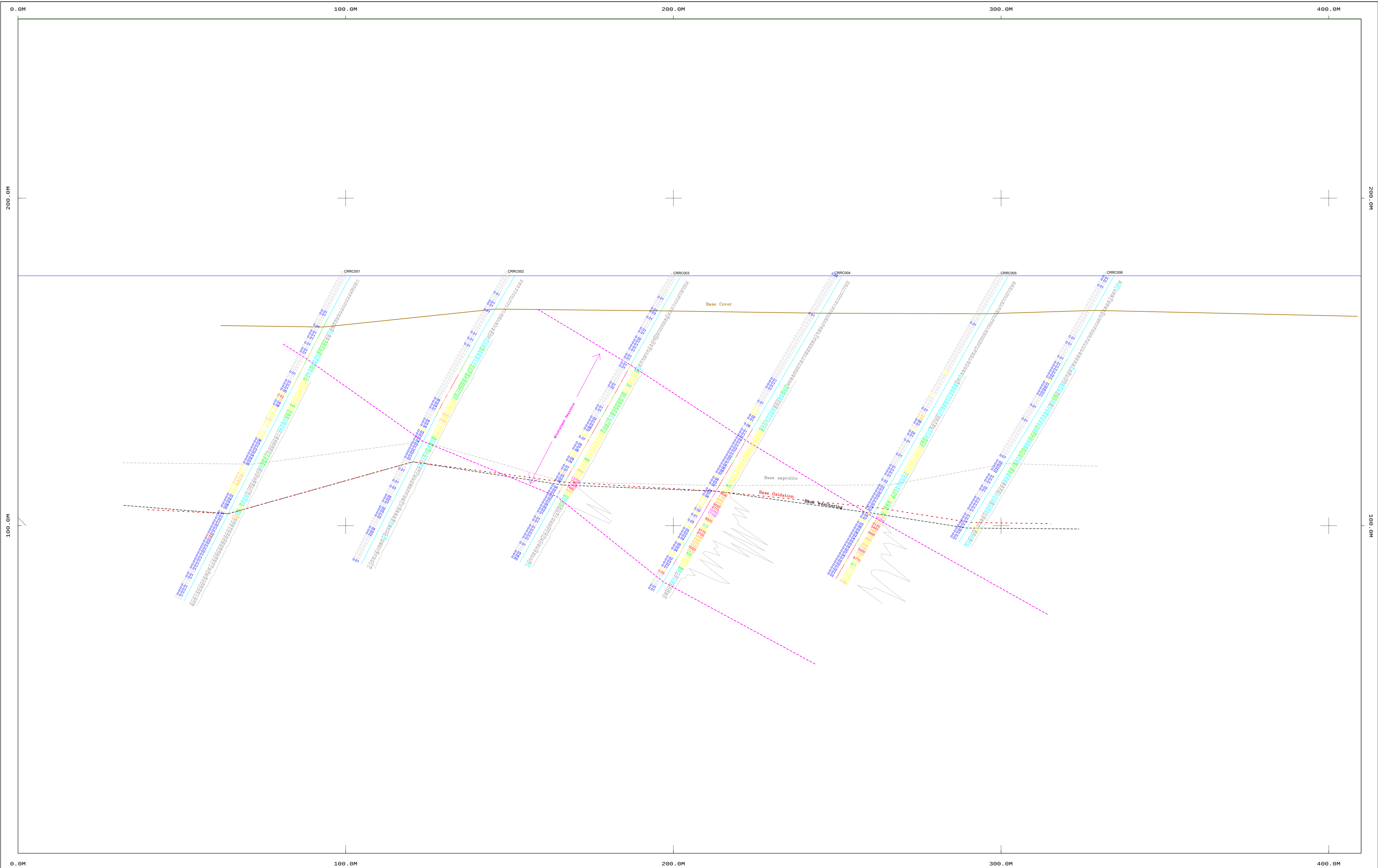
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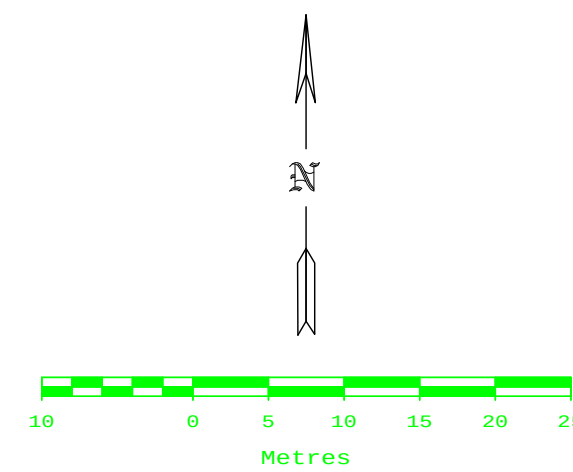
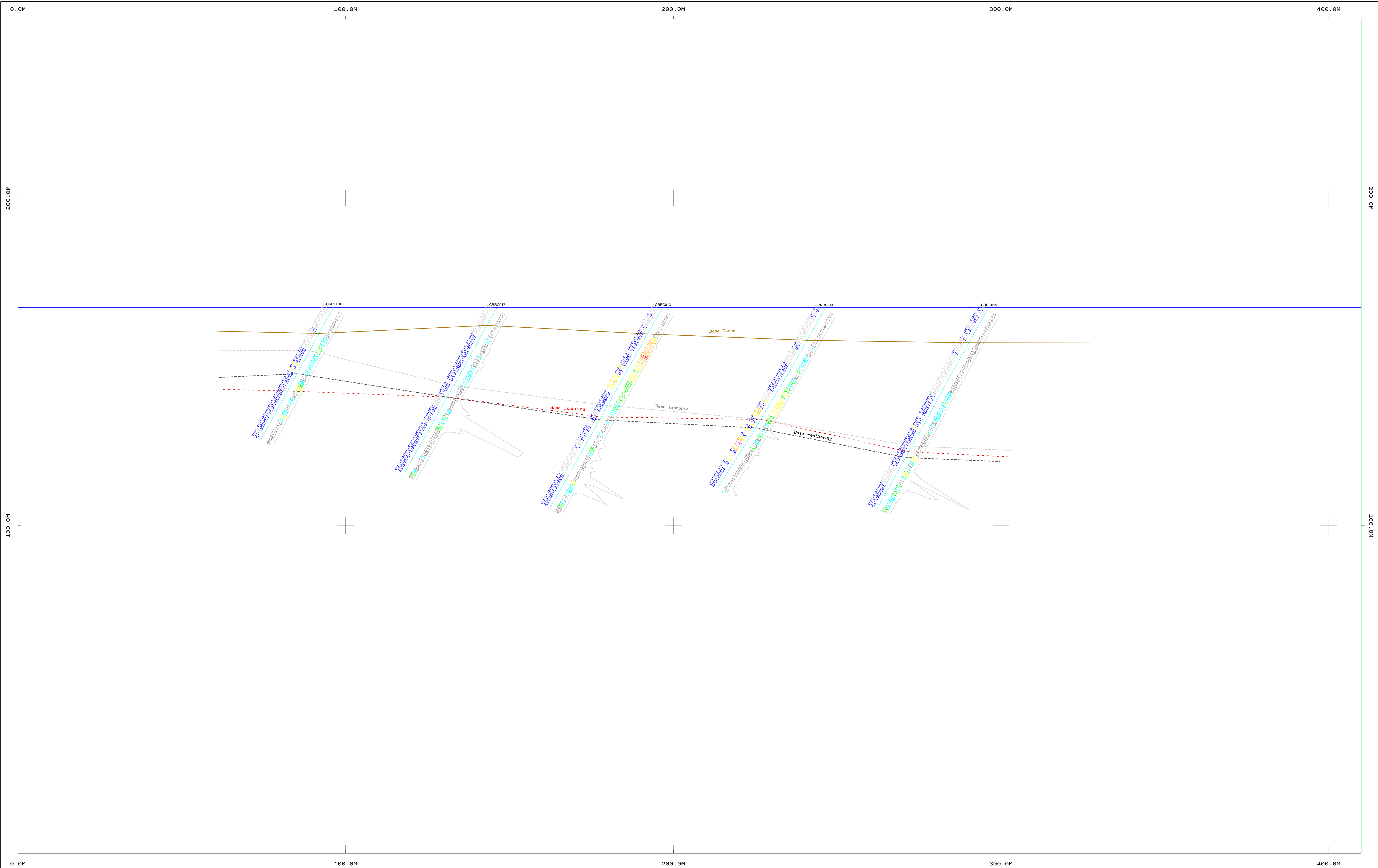
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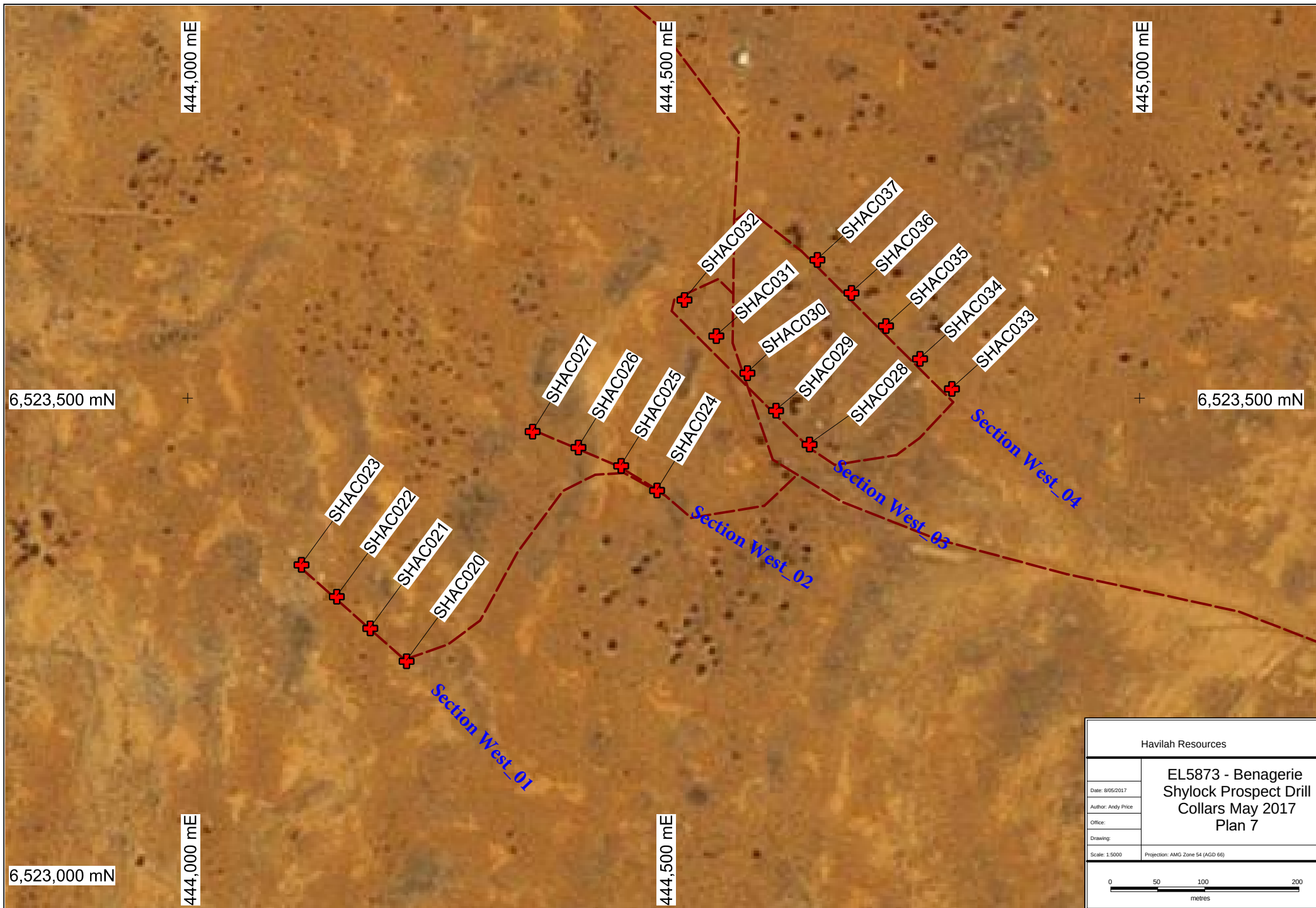


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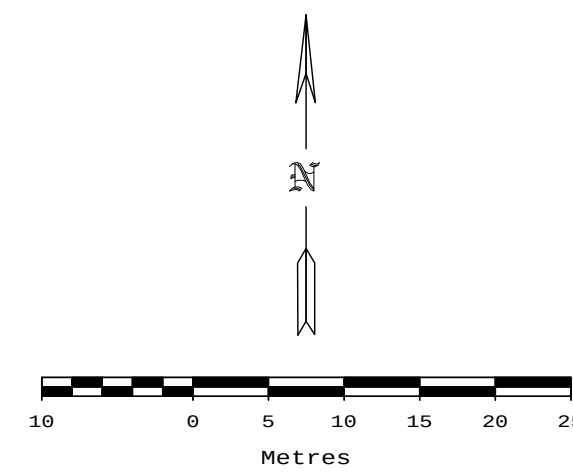
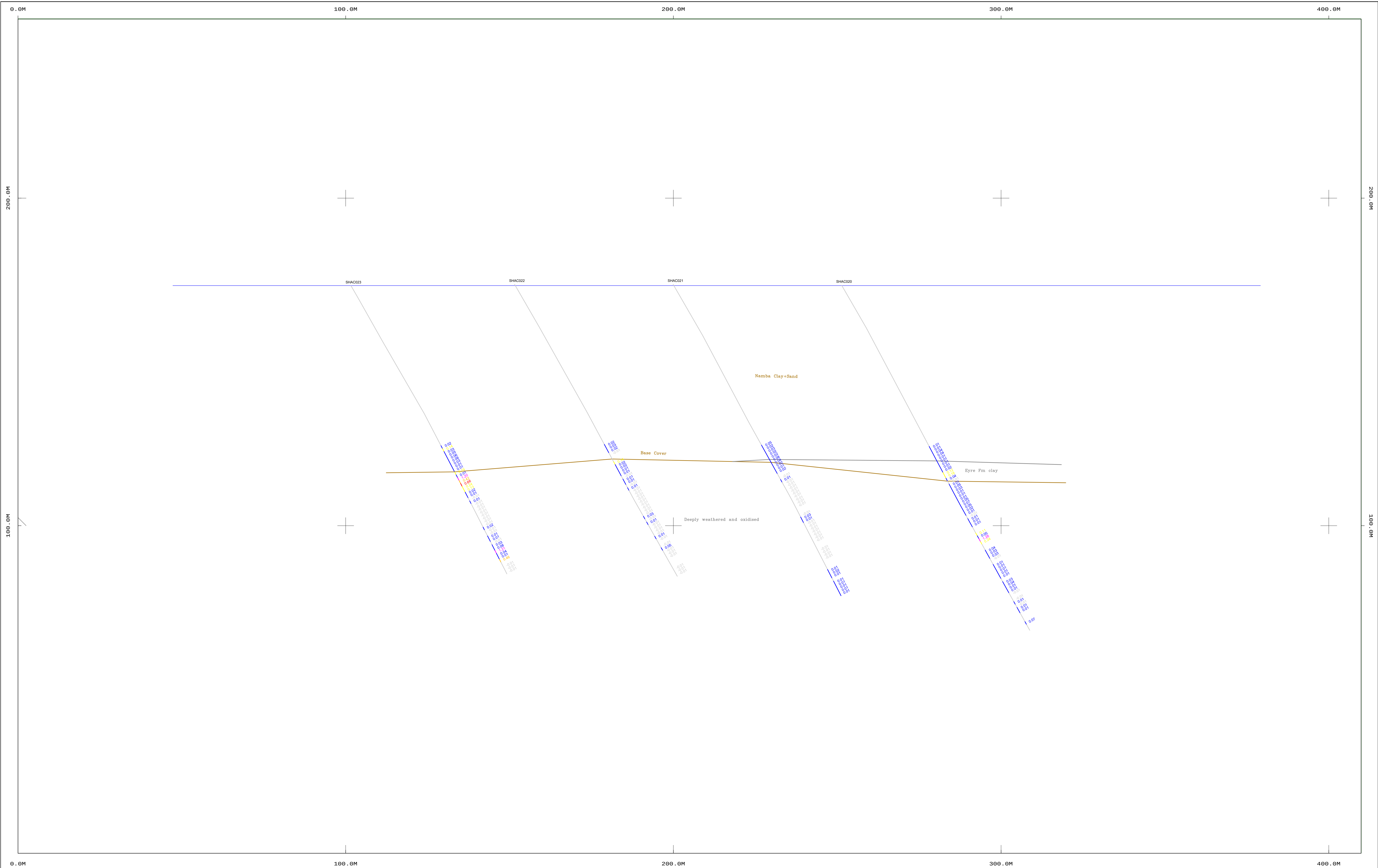
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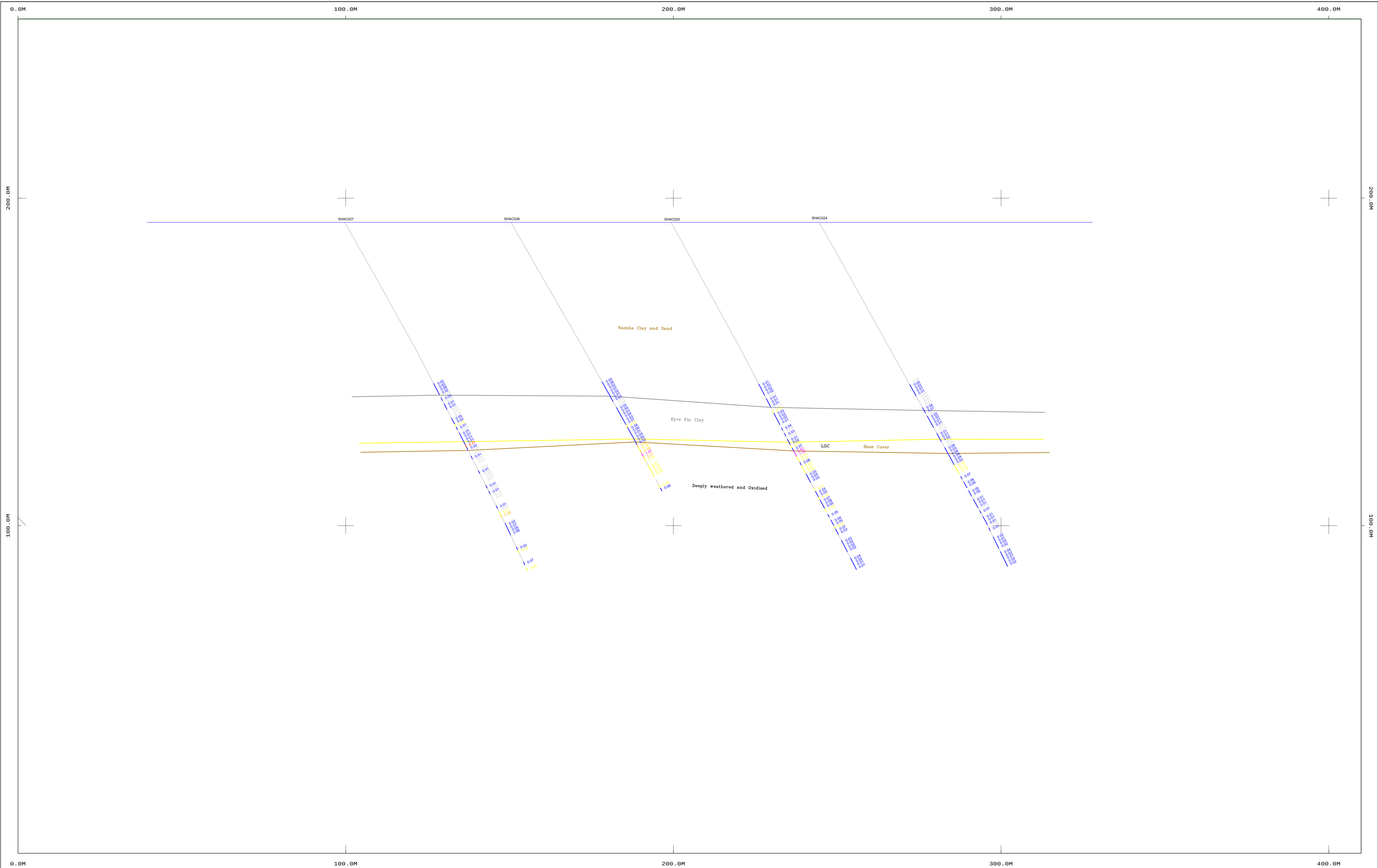
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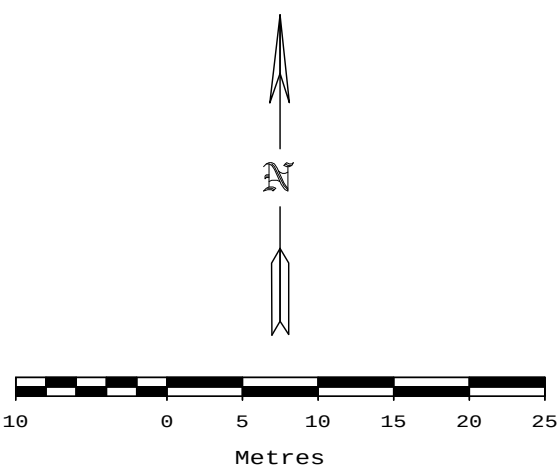
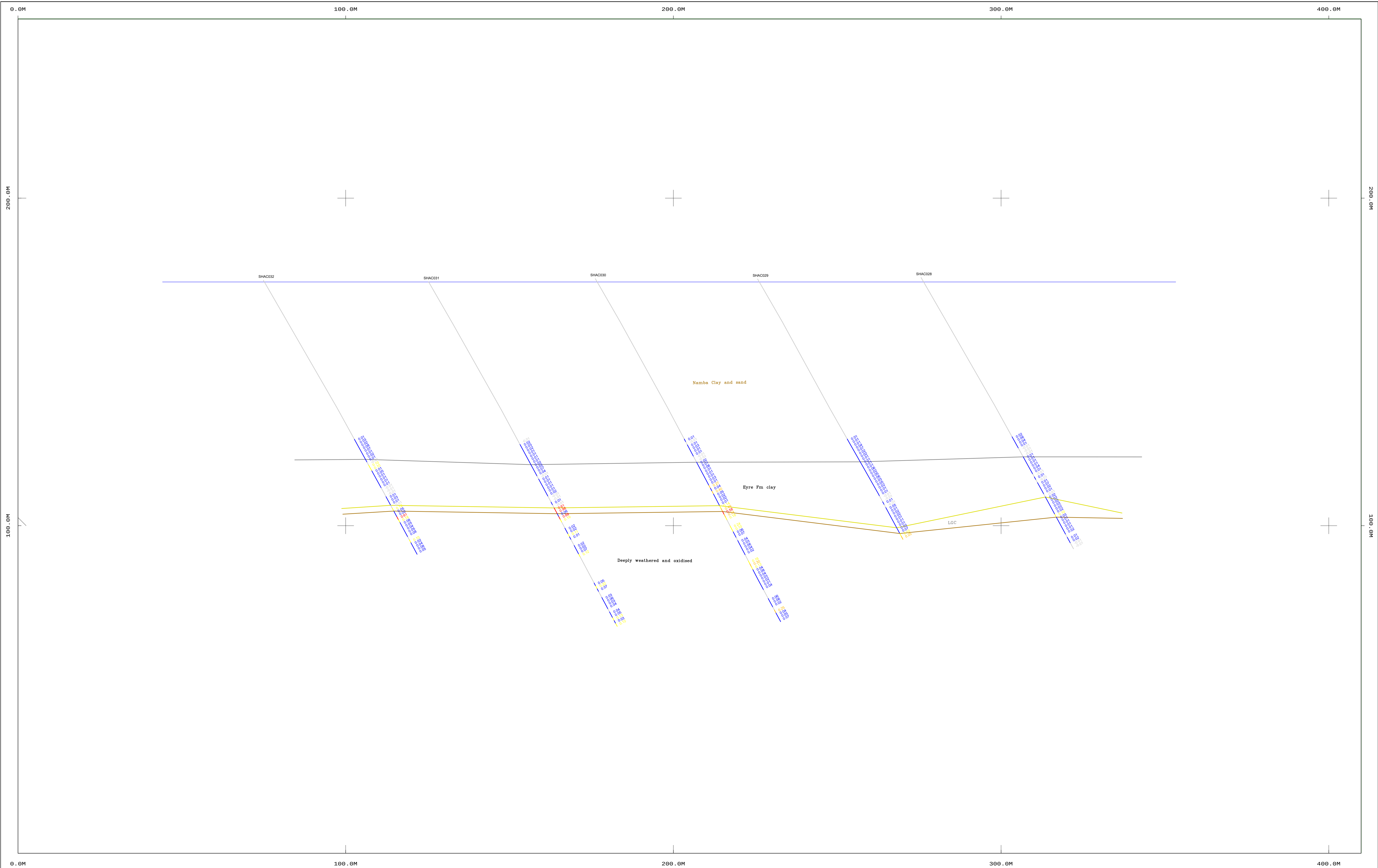
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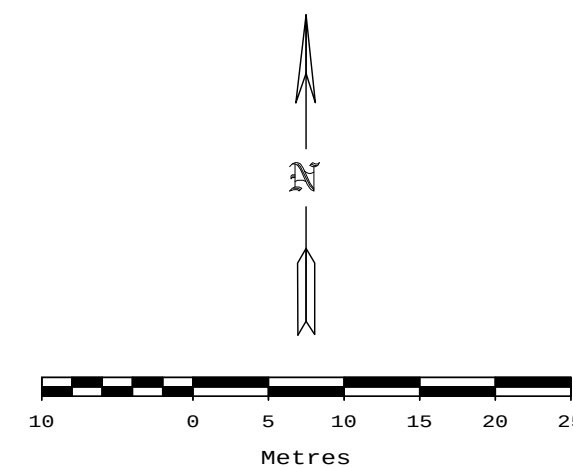
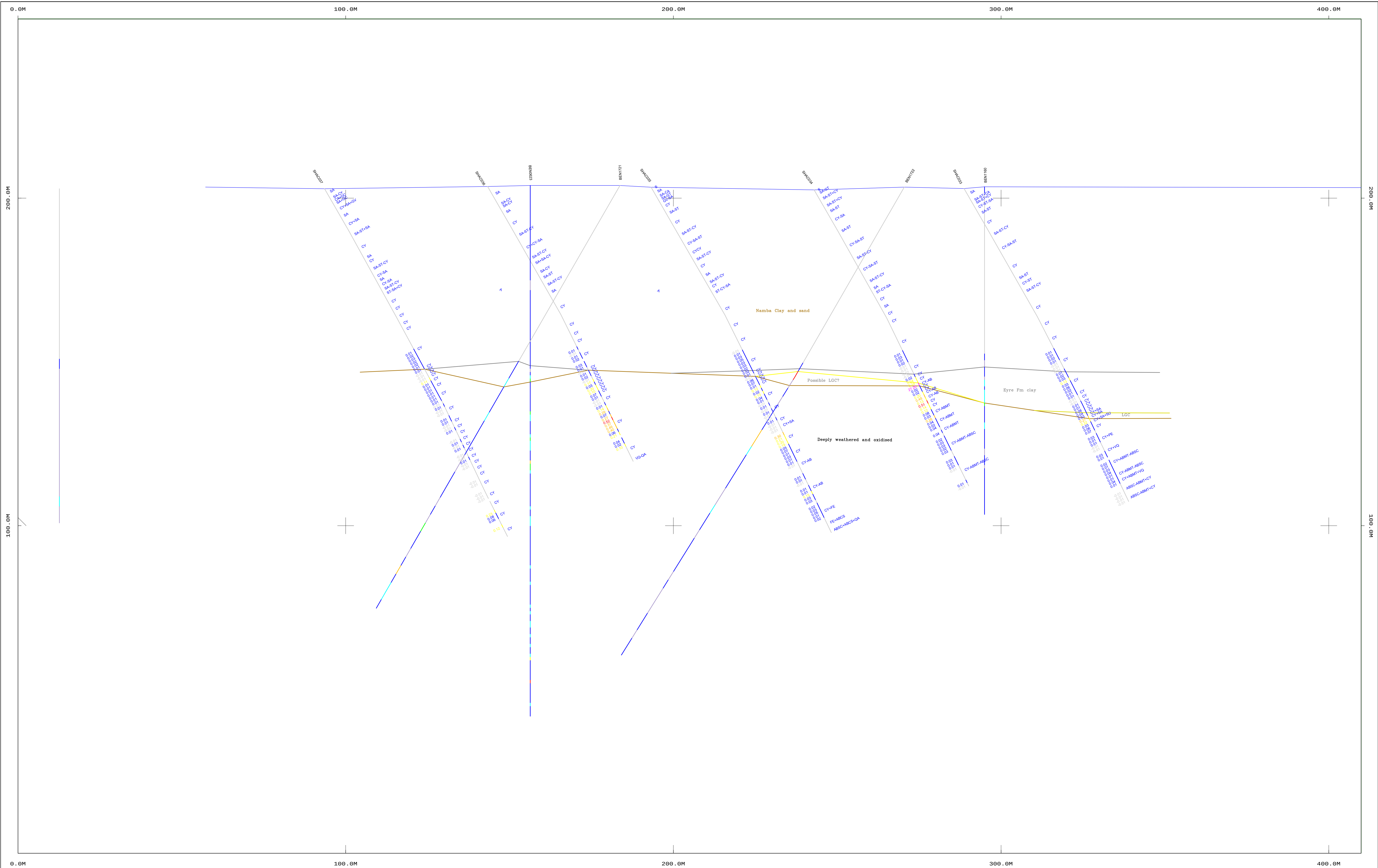
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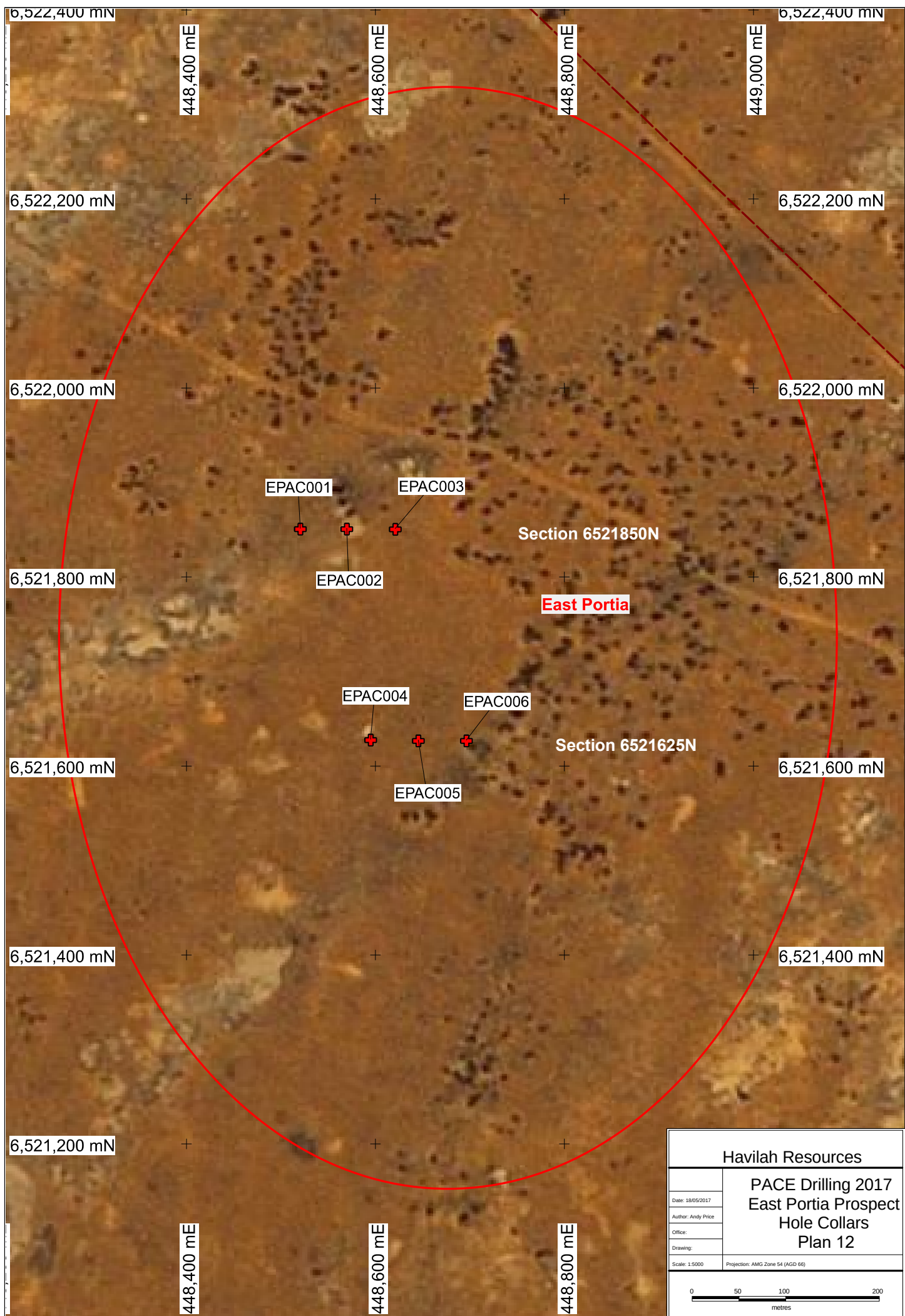
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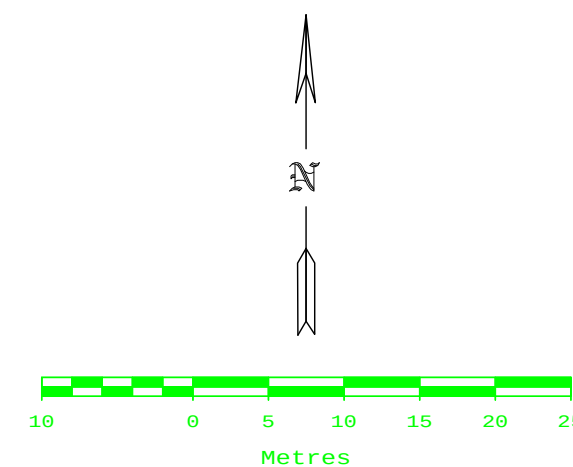
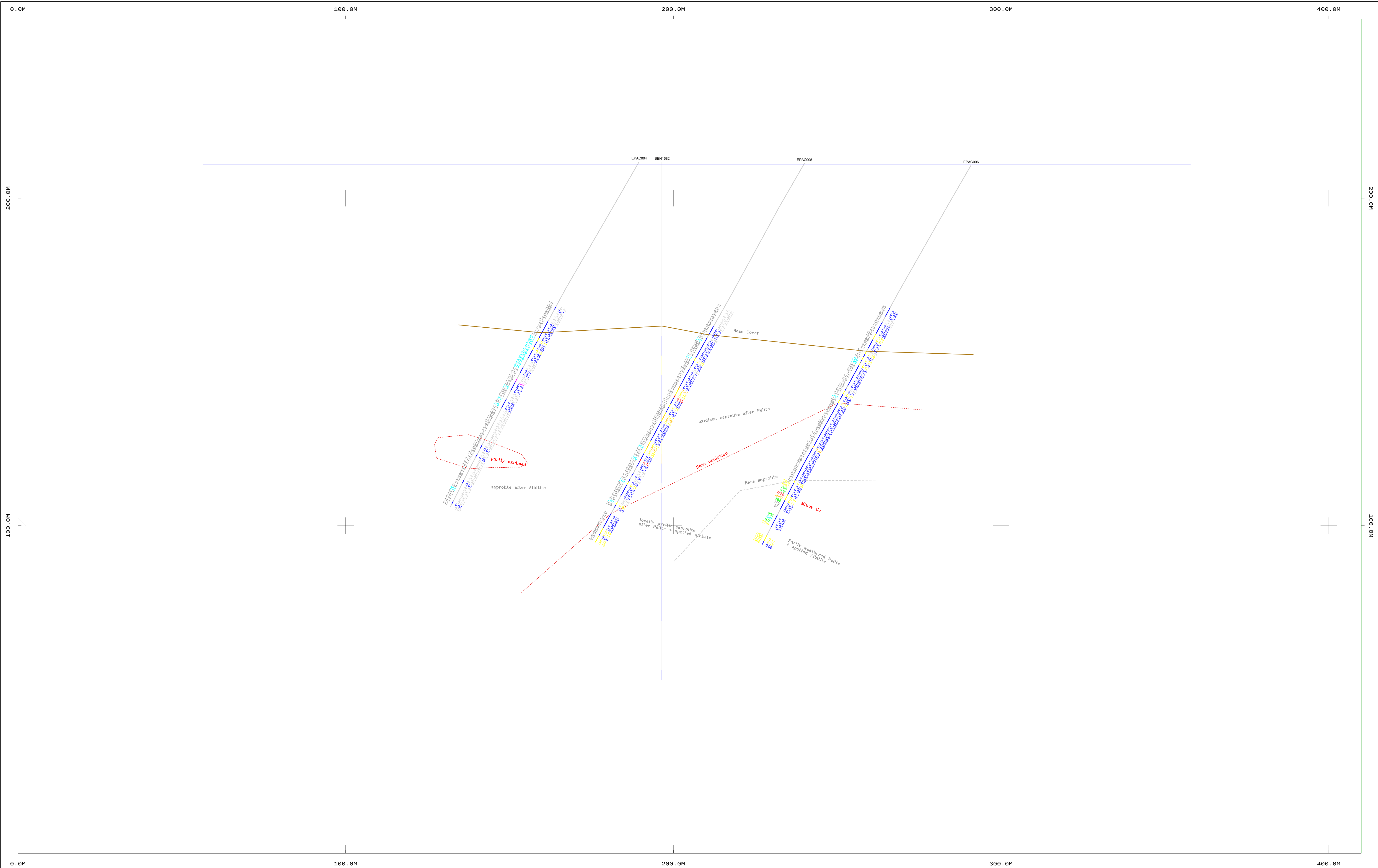


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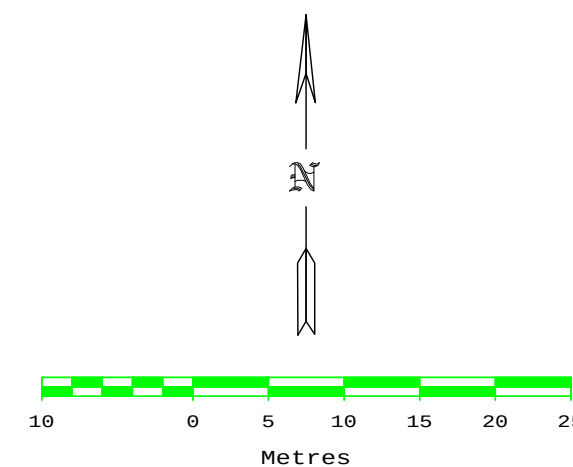
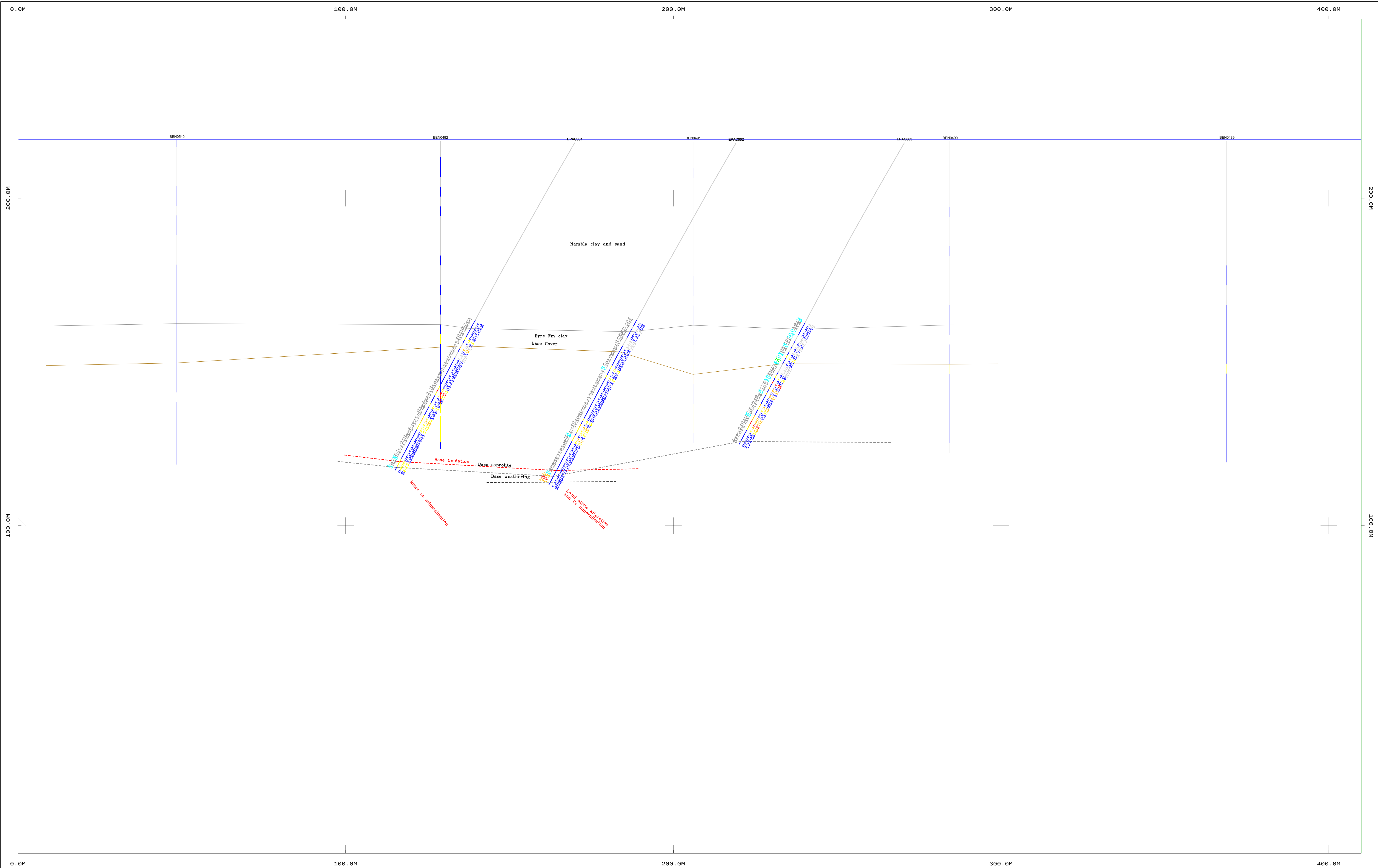


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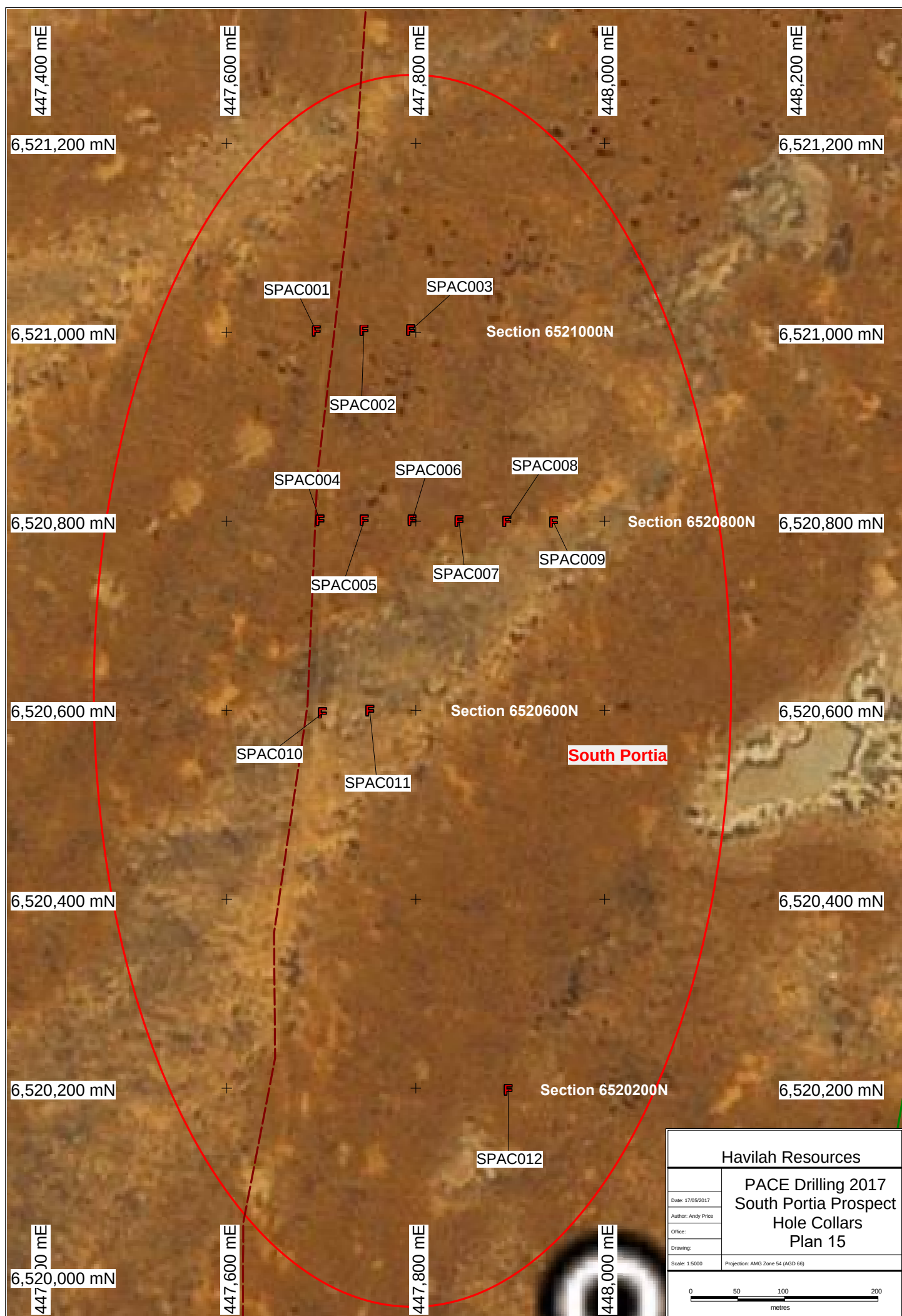


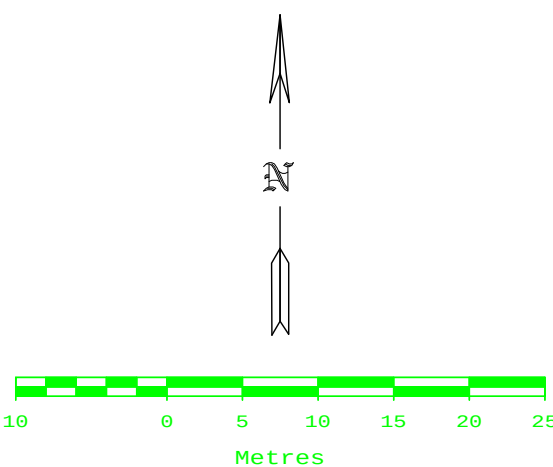
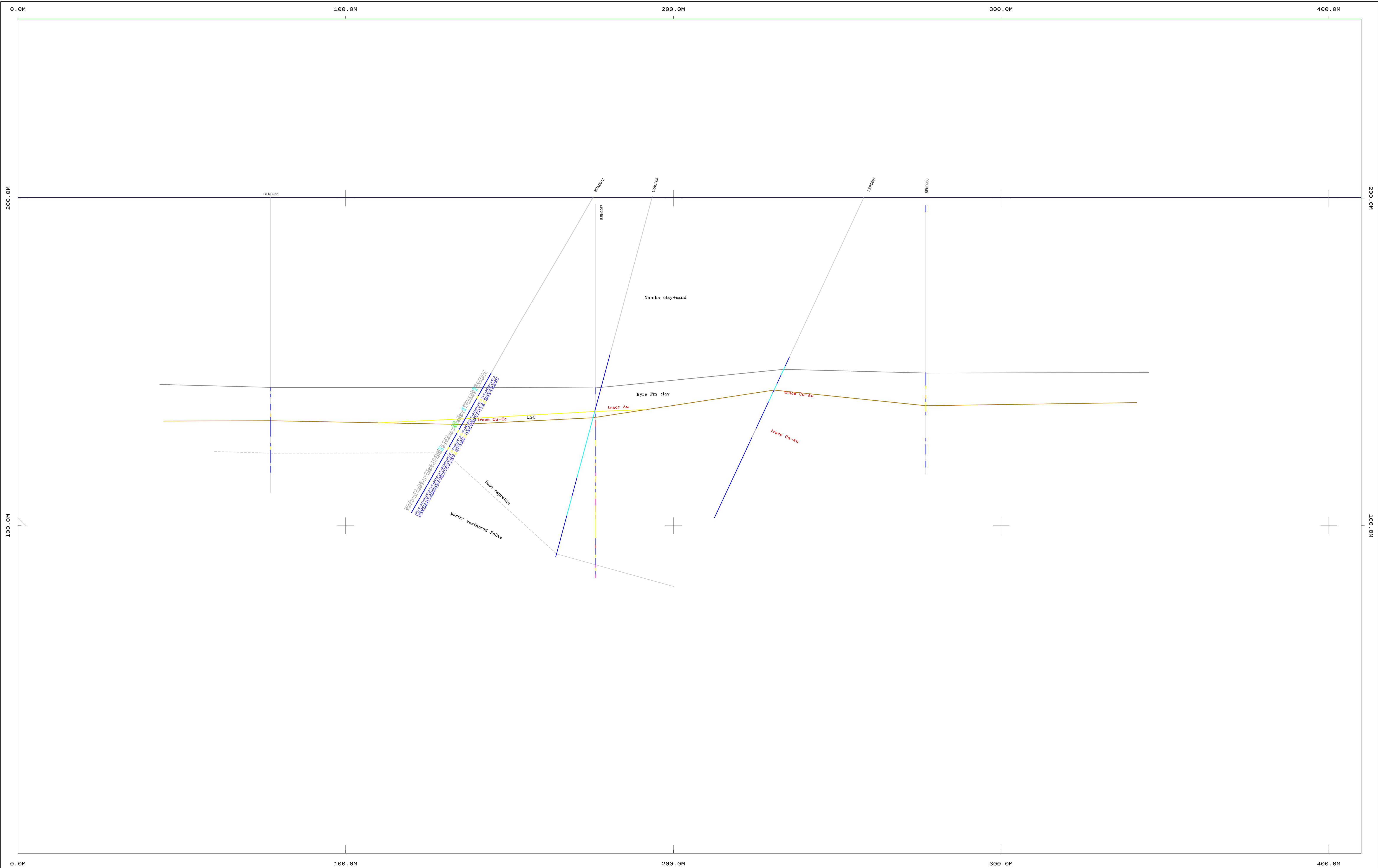


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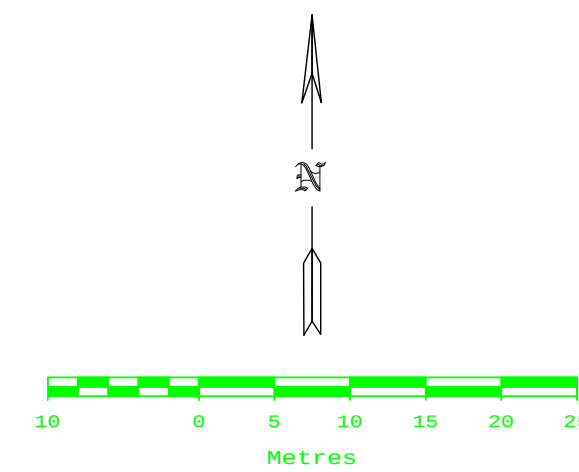
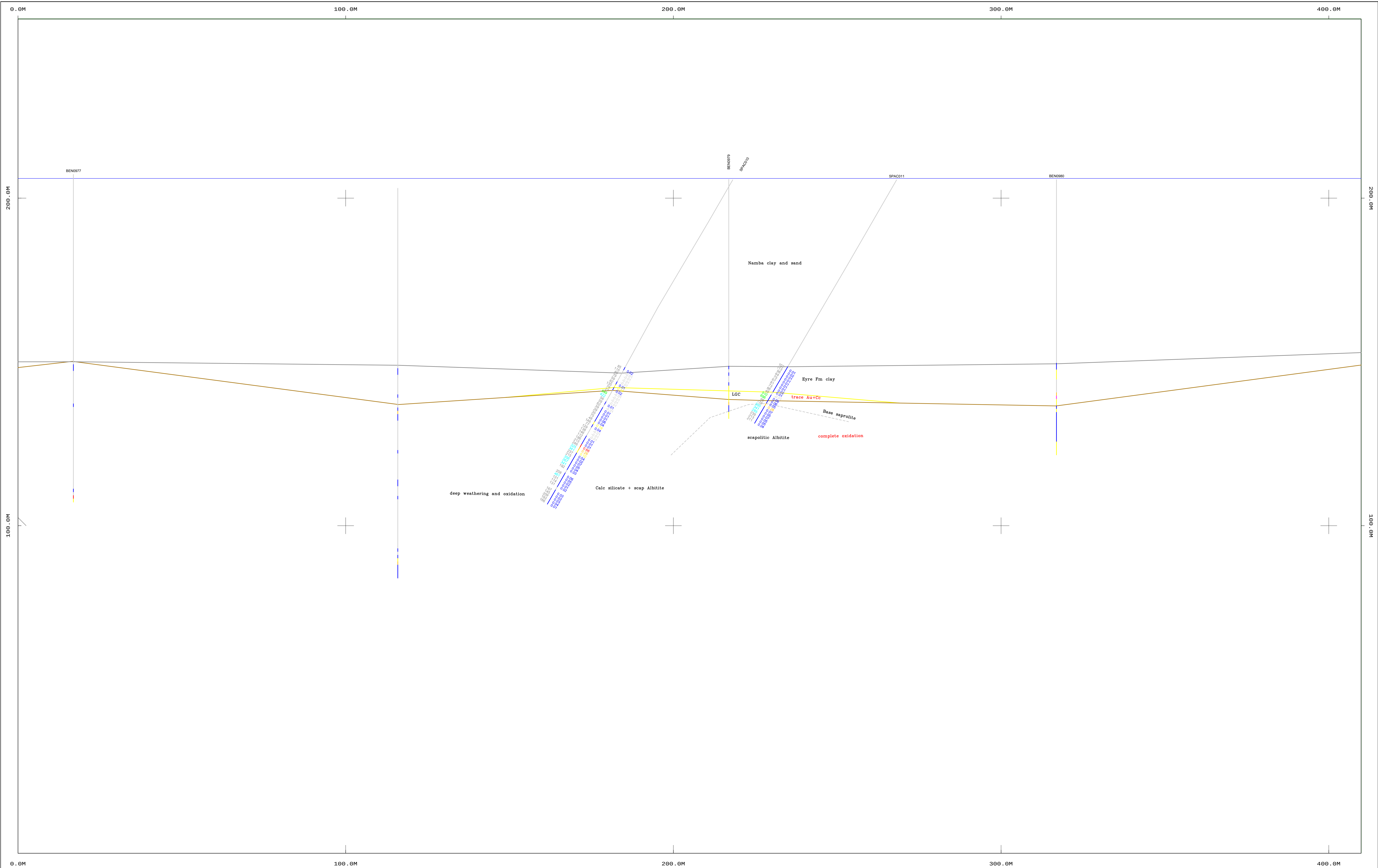


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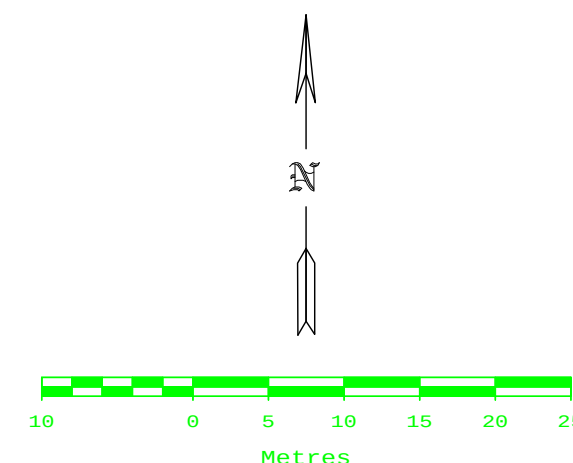
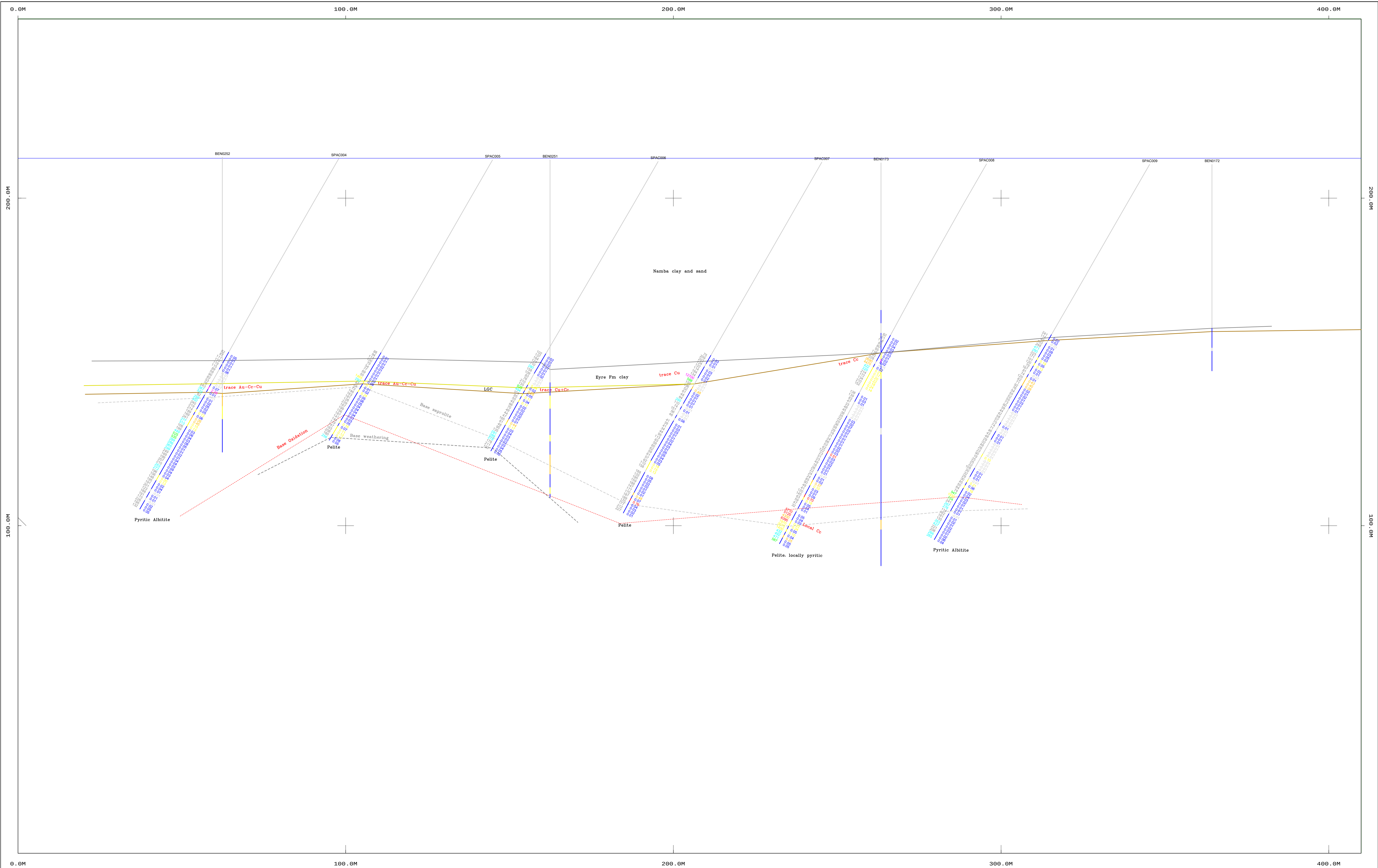




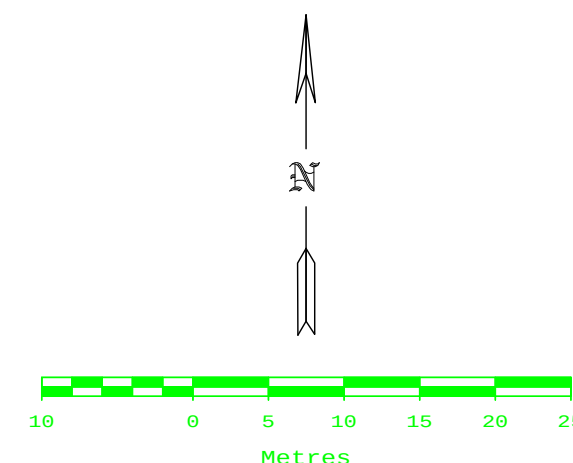
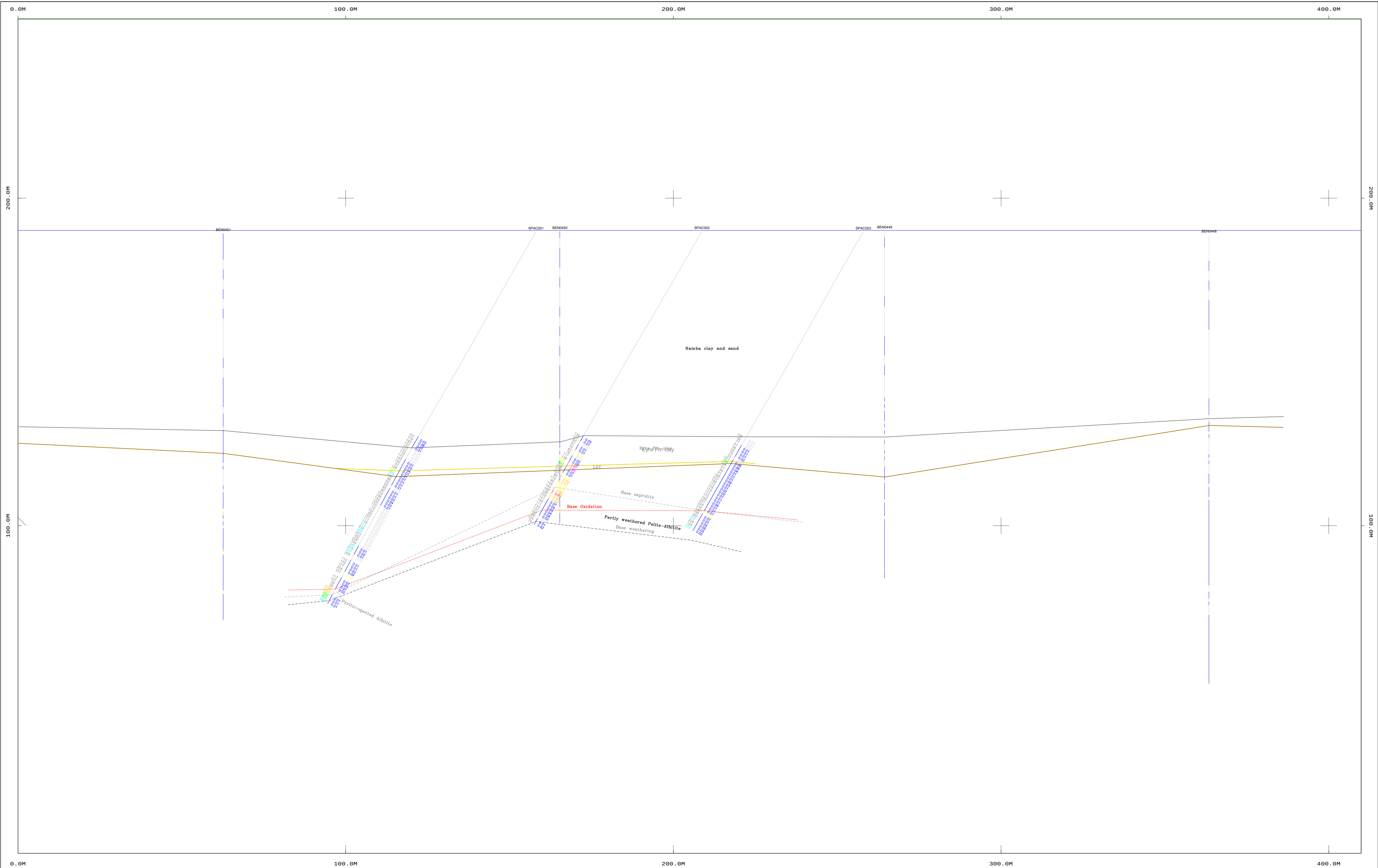
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Revision		Date
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Appendix 1 – Drilling Data

Benagerie Dome EL5873 & ML6346 Drilling Data Attached

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DPY9-44_RC_SASL4_COLL2017C.txt
DPY9-44_DD_SASL4_COLL2017C.txt
DPY9-44_AC_SADG4_ASS2017C.txt
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DPY9-44_Verification_List_2017.txt

PACE DPY9-44 Logging Codes.pdf

PACE DPY9-44 Structural Codes.pdf

PACE DPY9-44 Logging Codes

COLOUR	
code	descr
bk	black
bl	blue
br	brown
cr	cream
gr	green
gy	grey
kh	khaki
ma	magenta
ol	olive
or	orange
pi	pink
pu	purple
re	re
ta	tan
wh	white
ye	yellow
l suffix = light	
d suffix = dark	

SAMPLE SIZE	
code	descr
0	No sample
1	Very poor
3	Under
5	Normal
7	Over
9	Extreme

SAMPLE MOISTURE	
code	descr
0	Bone dry
2	Damp
3	Moist
4	Wet
5	Very wet

SAMPLE TYPE	
code	descr
orig	original
std	standard
dup	duplicate
blk	blank
rs	resplit

OXIDATION	
code	descr
CX	Comp ox
PX	Part ox
FX	Fract ox
NX	Not ox

FORMATION	
code	descr
Q	Quaternary/recent
N	Namba Fm clay
NS	Namba Fm sand
E	Eyre Fm clay
ES	Eyre Fm sand
LGC	Light Grey Clay
GP	Graphitic Pelite
PA	Pyritic Albitite
QA	Quartz Albitite
K	Kalk basement gen
B	Benag basement gen
* suffix with unit code	

LITHOLOGY	
code	descr
Unconsol	
CA	calcrete
CY	clay
GC	gypcrete
GT	grit
GV	gravel
SA	sand
SO	soil
ST	silt

ALTERATION STYLE	
code	descr
BN	Banded
DS	Disseminated
LR	Layer replacement
PA	Patchy
PV	Pervasive
SP	Spots
VS	Selvage to veins

ALTERATION INTENSITY	
code	descr
I	Intense
S	Strong
M	Moderate
W	Weak
V	Very weak - trace

WEATHERING	
code	descr
CW	Completely weathd
PW	Partially weathd
FW	Fracture weathd
NW	Not weathd

LOCATION ACCURACY	
code	descr
GPS	normal GPS
TC	tape+compass
DGPS_CMC	diff GPS - Havilah
DGPS_HAV	diff GPS - CMC

LITHOLOGY	
code	descr
Basement	
AB	albitite - general
ABBI	albitite - biotitic
ABCB	albitite - cb ellipsoids
ABCC	albitite - calc albitite
ABCS	albitite - calc-silicate
ABCT	albitite - cherty
ABEP	albitite - ab ellipsoids
ABGY	albitite - coarse gypsum
ABFL	albitite - flaser bedded
ABHA	albitite - halites
ABLM	albitite - laminated
ABMT	albitite - magnetic
ABPN	albitite - py nodules
ABPY	albitite - pyritic
ABRR	albitite - red rock altered
ABSC	albitite - scapolitic
ABST	albitite - silty
ABSP	albitite - bi spotted
AM	amphibolite / gabbro
BX	breccia zone
BXVQ	quartz breccia
BXSM	semi massive s= breccia
CB	carbonate
CS	calcsilicate
CT	chert
CYNO	clay - nontronitic (green)
FE	lim/hem ironstone
FZ	fault zone
GP	graphitic pelite / black shale
GR	granite
HA	altered rock
MS	massive sulphide
NSR	no sample recovered
OTHR	other / unknown
PE	pelite
PG	pegmatite
PH	phyllite
PM	psammopelite
PS	psammite
QA	quartz albitite
QH	quartz haematite marker
SC	schist
ST	siltstone
VC	vein - carbonate
VP	vein - pyrite
VS	vein - sulphide
VQ	vein - quartz
VQC	vein - quartz carbonate

REGOLITH PROFILE	
CV	Cover sequence
SP	Pallid zone of Upper Saprolite
SM	Mottled zone of Upper Saprolite
SU	Upper Saprolite - general
SL	Lower Saprolite - general
SR	Saprock
FR	Fresh rock

DESCRIPTORS	
code	descr
ab	albitised
ae	ab ellipsoids/lenses
al	altered
an	anastomosing
bd	bedded
bi	biotitic
bn	banded
brk	broken
bx	brecciated
ca	calcareous
ce	carbonate ellipsoids
cem	cemented
cg	coarse grained
cl	chloritised/chloritic
cly	clayey
cn	carbonaceous
cr	crackled
ct	cherty
fb	flaser bedded
fe	ferruginous
fg	fine grained
fo	foliated
fr	fractured
go	goethitic
gr	graphitic
gs	gossanous
he	haematitic
lm	laminated
mg	medium grained
mt	magnetic
mx	massive
pl	plastic
pn	pyrite nodules
py	pyritic
qz	quartzitic
rr	red rock altd
sa	sandy
sc	scapolitic
sh	sheared
si	siliceous/silicd
sk	silky
sl	silty
so	soapy
sp	spotted
sw	stockworked
tk	thickly bedded
tn	thinly bedded
vf	very fine grained
vn	veined
vu	vuggy

COLLECTION METHOD	
code	descr
RS	rifle split
GS	scoop/grab

ROCK MINERALS	
code	descr
ab	albite
act	actinolite
am	amphibole
an	andalusite
at	anatase
bi	biotite
cb	carbonate
ca	calcite
cd	cordierite
cl	chlorite
cpx	clinopyroxene
cs	calcsilicate
cy	clay
dl	dolomite
ep	epidote
fl	fluorite
fs	feldspar
go	goethite
gp	gypsum
gr	graphite
gt	garnet
he	hematite
kf	Kspar
ky	kyanite
li	limonite
mi	mica
mn	mn mins
mt	magnetite
mu	muscovite
no	nontronite
px	pyroxene
qz	quartz
sc	scapolite
sd	siderite
se	sericite
si	silica
sm	sillimanite
su	sulphide
ti	titanite/sphene
to	tourmaline

ALTN TYPE	
code	descr
rr	red rock

MINERALISATION STYLE	
code	descr
ag	aggregates
bl	blebs
bn	banded
bd	bedded
bf	breccia fill
ds	disseminated
ff	fract fill / coating
lm	laminated
lr	layer replacement
ms	massive sulphide
pa	patches / splashes
sm	semi massive sulphide
sw	stockwork
vn	vein

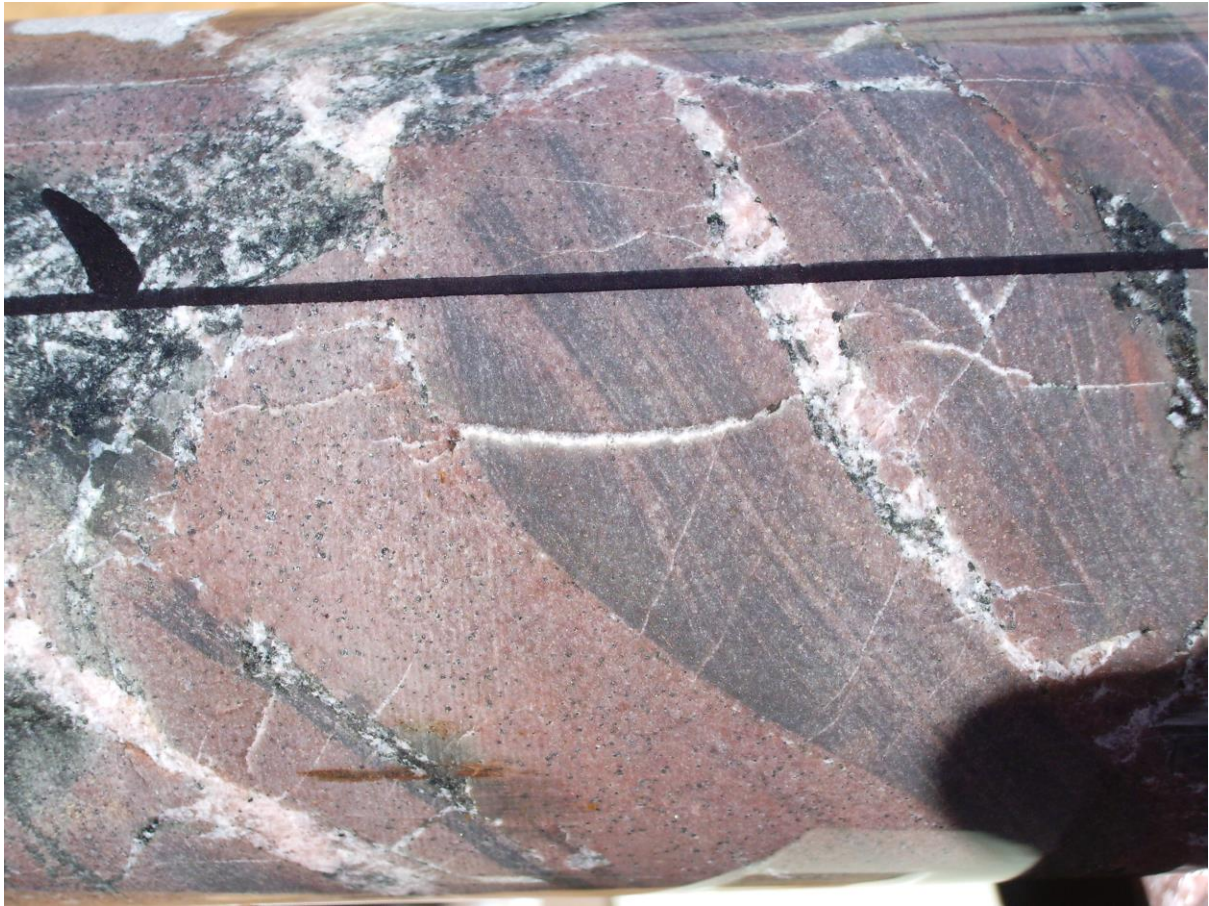
STRUCTURE TYPE	
code	descr
B	Bedding
BX	Breccia
F	Fracture
F1	Bedg plane fract
F2	fract ex ab vein
F3	fract ex qz vein
F4	fract ex py vein
F9	Slickensided fract
FO	Foliation
V	Vein
VA	ab vein
VQ	qz vein
VM	mt vein
VP	py vein
VC	cb vein
S	Shear

ORE MINERALS	
code	descr
as	arsenopyrite
az	azurite
bo	bornite
cc	chalcocite
cr	chrysocolla
cp	chalcopyrite
cu	native Cu
cv	covellite
ga	galena
au	gold
ma	malachite
mo	molybdenite
py	pyrite
po	pyrrhotite
sh	scheelite
sp	sphalerite
su	undiff sulfide
fe	feox after sulfide
fw	feox not after sulfide
mn	manganese oxides
ot	other

Typ_code	Description	Min codes	Comment
B	Bedding		
BX	Breccia		
FT	Fault		
SH	Shear		
FR	Fracture / joint		
V1	Vmp	mt-py-[cb-qz]	dark grey to black
V2	Vac	bi/am-cb-qz-cl-[mt-py]	dark green with chlorite selvages
V3	Vcq	cb-qz-[bi]	cream to white to pale pink

Appendix 2

Bassanio Prospect Core Photos – BADD009



Suspected cross bedding in grey albitite, overprinted by pink calcareous albitite. 247.9m.



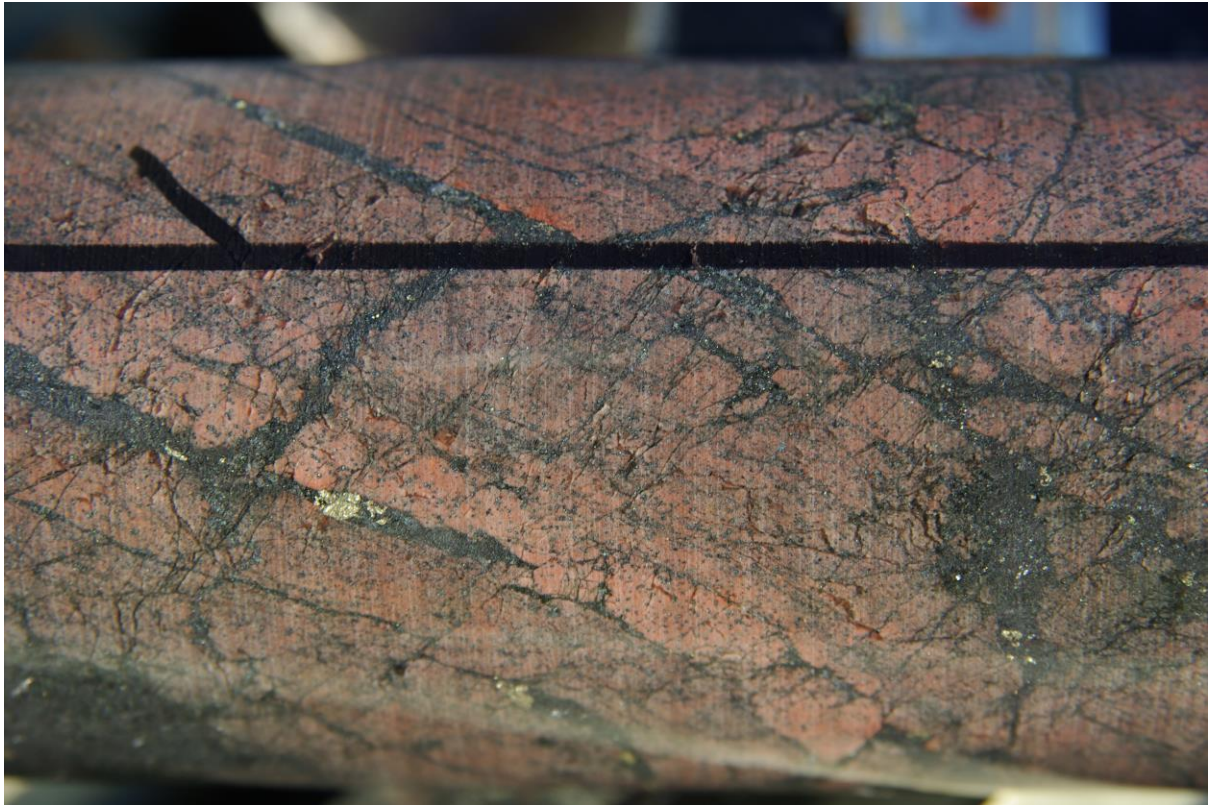
Breccia of "red rock" -magnetite altered albitite with magnetite+-(biotite/amphibole-carbonate-pyrite infill. 306.4m.



Magnetite (+-pyrite) replacement and infill of suspected carbonate beds. 114.1m.



Early purple-grey albitite overprinted by pink albitite (or K-spar?) alteration. 123.8m



Fine magnetite (+pyrite) veinletting and associated disseminated alteration in crackled pink albitite. 152.7m.



Intense fine magnetite replacement fronts emanating from around fine magnetite (+carbonate-pyrite) veins. 198.7m.



Network of thick magnetite-pyrite veins and associated fine disseminated replacement in and orthogonal to bedding. 215.6m



Depth: 110.85 - 114.33

Magnetite replacement of carbonate beds, typical of 107.5 - 169.1m. Weak brecciation and veining.



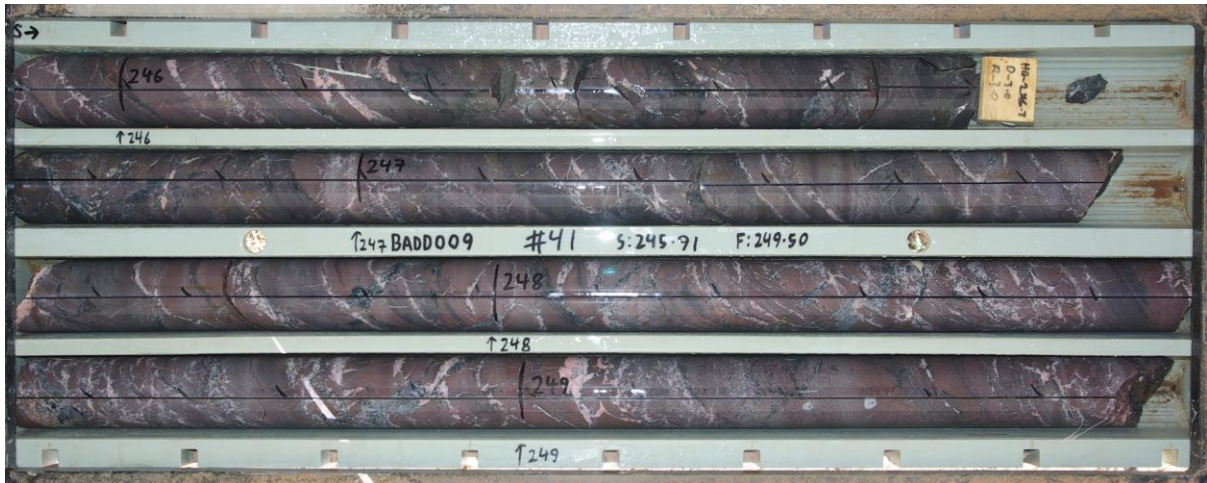
Depth: 152.95 - 156.34

Thick V1 magnetite (+-pyrite) bedding plane infill and orthogonal veining, plus crackle breccia infill, typical of 107.5 - 169.1m.



Depth: 214.38 - 217.85

Deep red-purple intensely red rock and weak-mod magnetite altered very cherty albitite. Crackled-brecciated with V1/V2 mt-py-(bi/am-tr-cb-cl) infill, typical of 169.1 - 224.3m.



Depth: 245.91 - 249.50

Pink haematite stained, thinly bedded to laminated, very calcareous silty to cherty albitite, some of which is alteration, typical of 224.3 - 301.4m



Depth: 278.09 - 281.56

Carbonate (+quartz) veining and breccia infill (V3) in strongly calcareous albitite, typical of 224.3 - 301.4m.



Depth: 319.99 - 323.52

Breccia of red brown strongly red rock altered, very cherty, weak-mod magnetic albitite, with biotite/amphibole?-carbonate-magnetite-pyrite-chlorite infill +-alteration, typical of 301.4 - 324.7m

Appendix 3

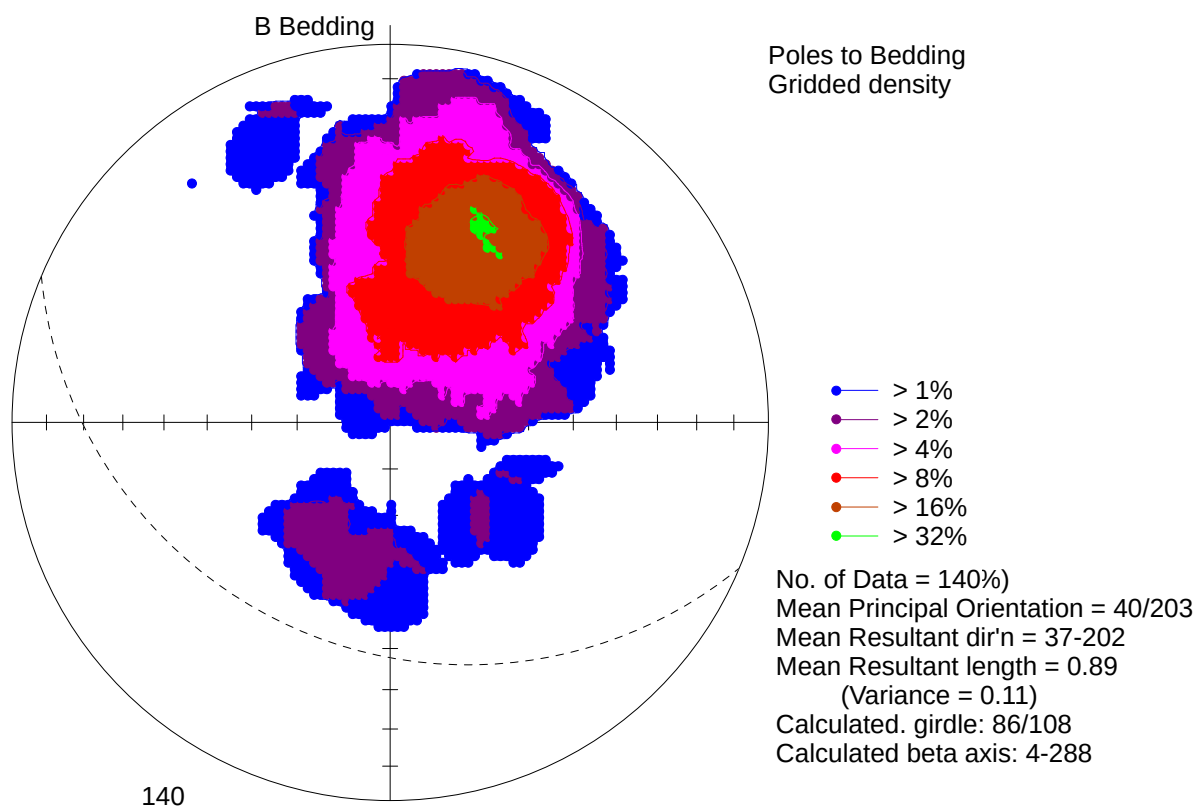
Bassanio Prospect Structural Data

Typ_code	Description	Min codes	Comment
B	Bedding		
BX	Breccia		
FT	Fault		
SH	Shear		
FR	Fracture / joint		
V1	Vmp	mt-py-[cb-qz]	dark grey to black
V2	Vac	bi/am-cb-qz-cl-[mt-py]	dark green with chlorite selvages
V3	Vcq	cb-qz-[bi]	cream to white to pale pink

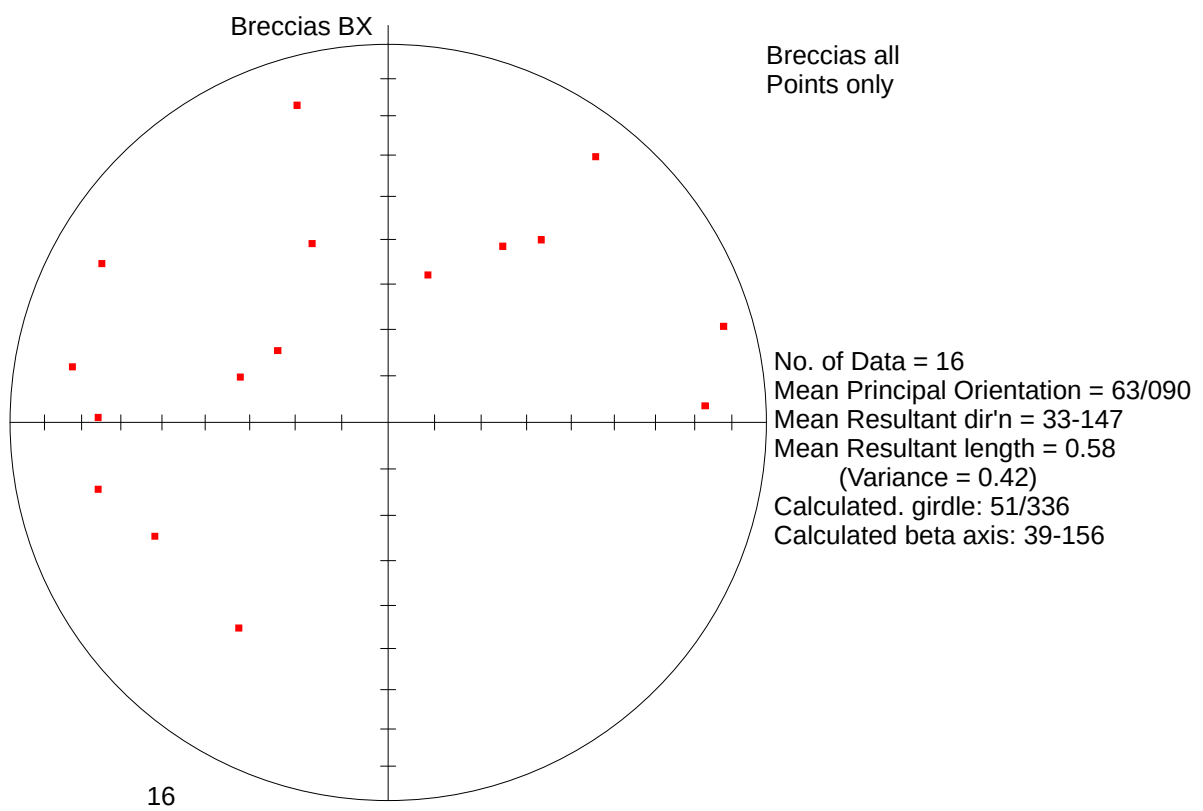
Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	107.6	B	40	75	-61.4	302.6	62	179.5
BADD009	107.6	B	44	75	-61.4	302.6	58.6	177
BADD009	109.6	B	45	112	-61.4	302.6	41.6	203.4
BADD009	111.6	B	47	113	-61.4	302.6	39.6	202.1
BADD009	112.5	B	61	106	-61.4	302.6	33.7	179.7
BADD009	113.4	B	52	105	-61.4	302.6	39.8	190.8
BADD009	114.5	B	50	115	-61.4	302.6	36.6	200.1
BADD009	114.5	B	47	112	-61.4	302.6	40.1	201.3
BADD009	115.8	B	63	103	-61.4	302.6	33.7	175.3
BADD009	117.4	B	59	100	-61.4	302.6	37.3	179.4
BADD009	119.6	B	45	114	-61.4	302.6	40.6	205
BADD009	120.7	B	31	107	-61.4	302.6	55	210.7
BADD009	121.4	B	28	106	-61.4	302.6	58	211.8
BADD009	122.7	B	40	103	-61.4	302.6	49.6	200.7
BADD009	125.7	B	41	110	-61.7	303.3	45.5	206.5
BADD009	126.6	B	42	109	-61.7	303.3	45.2	204.8
BADD009	127.3	B	31	111	-61.7	303.3	53.1	215.1
BADD009	128.6	B	38	129	-61.7	303.3	38.9	226.5
BADD009	129.2	B	37	132	-61.7	303.3	38.4	230.6
BADD009	130.3	B	37	127	-61.7	303.3	40.7	225.4
BADD009	131.6	B	26	113	-61.7	303.3	56.4	220.2
BADD009	132.1	B	41	107	-61.7	303.3	46.9	204.1
BADD009	134.9	B	50	87	-61.7	303.3	48.8	181.8
BADD009	135.3	B	49	75	-61.7	303.3	54.2	174.6
BADD009	136.1	B	43	92	-61.7	303.3	52.2	190.9
BADD009	137.4	B	48	96	-61.7	303.3	46.5	189.7
BADD009	138.8	B	49	86	-61.7	303.3	49.9	181.9
BADD009	139.2	B	56	87	-61.7	303.3	44.2	176.4
BADD009	140.9	B	37	105	-61.7	303.3	51.1	205.6
BADD009	141.2	B	63	108	-61.7	303.3	31.6	178.6
BADD009	141.9	B	62	86	-61.7	303.3	40.3	169.6
BADD009	142.5	B	61	94	-61.7	303.3	38.1	174.7
BADD009	144.8	B	26	79	-61.7	303.3	72.2	191.1
BADD009	146.1	B	29	88	-61.7	303.3	65.6	196.9
BADD009	147.8	B	37	118	-61.7	303.3	44.9	216.9
BADD009	148.3	B	41	112	-61.7	303.3	44.6	208.2
BADD009	154.2	B	49	102	-61.7	303.3	43.1	192.9
BADD009	155.9	B	42	81	-61.7	303.3	57.7	183.5
BADD009	156.9	B	35	105	-61.5	303.3	52.7	206.9
BADD009	158.2	B	44	95	-61.5	303.3	50.1	192.2
BADD009	165.4	B	46	83	-61.5	303.3	53.7	182
BADD009	167.9	B	42	151	-61.5	303.3	26	248.2
BADD009	170	B	50	73	-61.5	303.3	54.3	172.4
BADD009	174.2	B	11	136	-61.5	303.3	59.6	251.1
BADD009	175.8	B	26	50	-61.5	303.3	83.7	167.1
BADD009	176.2	B	42	91	-61.5	303.3	53.5	190.7
BADD009	177.6	B	40	105	-61.5	303.3	48.7	203.1
BADD009	179.8	B	51	123	-61.5	303.3	32.1	205.7
BADD009	180.9	B	62	128	-61.5	303.3	23.9	188.9
BADD009	181.5	B	37	91	-61.5	303.3	57.6	194.3
BADD009	182.2	B	47	103	-61.5	303.3	44.2	195.4
BADD009	183.9	B	36	96	-61.5	303.3	56.1	198.9
BADD009	184.7	B	38	110	-61.5	303.3	47.9	208.9

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	185.2	B	31	98	-61.5	303.3	59.3	203.8
BADD009	186.2	B	31	108	-61.6	303.3	54.6	212.4
BADD009	187.4	B	42	112	-61.6	303.3	43.8	207.2
BADD009	188.7	B	38	108	-61.6	303.3	48.8	207.3
BADD009	189.3	B	33	113	-61.6	303.3	50.5	215.4
BADD009	190.2	B	30	109	-61.6	303.3	54.9	214
BADD009	191.6	B	31	89	-61.6	303.3	63.5	196.5
BADD009	192.2	B	27	78	-61.6	303.3	71.8	189.8
BADD009	193.6	B	20	112	-61.6	303.3	62	222.8
BADD009	194.2	B	45	120	-61.6	303.3	37.7	210.9
BADD009	195.1	B	32	108	-61.6	303.3	53.7	211.7
BADD009	196.3	B	31	95	-61.6	303.3	60.7	201.4
BADD009	197.4	B	36	95	-61.6	303.3	56.5	198.1
BADD009	198.2	B	25	80	-61.6	303.3	72.7	192.4
BADD009	200.9	B	30	110	-61.6	303.3	54.4	214.9
BADD009	202.8	B	39	117	-61.6	303.3	43.8	214.2
BADD009	203.9	B	47	109	-61.6	303.3	41.5	199.9
BADD009	204.3	B	45	110	-61.6	303.3	42.5	202.7
BADD009	205.5	B	48	102	-61.6	303.3	43.9	193.8
BADD009	206.9	B	48	108	-61.6	303.3	41.2	198.2
BADD009	207.2	B	44	118	-61.6	303.3	39.4	210.2
BADD009	208.8	B	46	112	-61.6	303.3	40.8	203.3
BADD009	209.1	B	37	119	-61.6	303.3	44.4	217.7
BADD009	210.1	B	62	94	-61.6	303.3	37.6	173.4
BADD009	211.7	B	46	95	-61.6	303.3	48.5	190.6
BADD009	219.1	B	47	158	-61	303.3	18.8	251.1
BADD009	220.1	B	67	141	-61	303.3	17.7	176.9
BADD009	221.5	B	52	155	-61	303.3	16.3	235.4
BADD009	224.7	B	52	125	-61	303.3	30.6	205
BADD009	225.2	B	53	128	-61	303.3	28.5	205.7
BADD009	226.2	B	60	128	-61	303.3	24.9	192.3
BADD009	228.7	B	29	143	-61	303.3	40.3	248.8
BADD009	229.5	B	74	138	-61	303.3	19.9	156
BADD009	230.5	B	67	143	-61	303.3	16.9	176.9
BADD009	231.2	B	60	135	-61	303.3	21.7	195.9
BADD009	232.3	B	53	132	-61	303.3	26.6	208.8
BADD009	233.3	B	67	128	-61	303.3	22.8	175.8
BADD009	234.8	B	64	112	-61	303.3	30	177.5
BADD009	236	B	67	132	-61	303.3	21.2	176.4
BADD009	236.9	B	54	126	-61	303.3	28.9	202.5
BADD009	238	B	61	122	-61	303.3	27.1	187.4
BADD009	238.6	B	45	131	-61	303.3	32.5	220
BADD009	239.6	B	43	128	-61	303.3	35.4	219.5
BADD009	240.1	B	42	118	-61	303.3	41	211.6
BADD009	241.3	B	35	123	-61	303.3	44.1	222.5
BADD009	242.2	B	44	138	-61	303.3	29.9	228.4
BADD009	243.6	B	28	123	-61	303.3	49.9	227.9
BADD009	244.3	B	29	128	-61	303.3	46.7	232.1
BADD009	245.8	B	32	105	-61	303.3	55.2	208.7
BADD009	246.2	B	47	118	-59.9	303.3	37.5	204.8
BADD009	247.3	B	42	120	-59.9	303.3	40	212
BADD009	248.5	B	39	122	-59.9	303.3	41.3	216.8
BADD009	249.5	B	32	119	-59.9	303.3	48.3	220.2

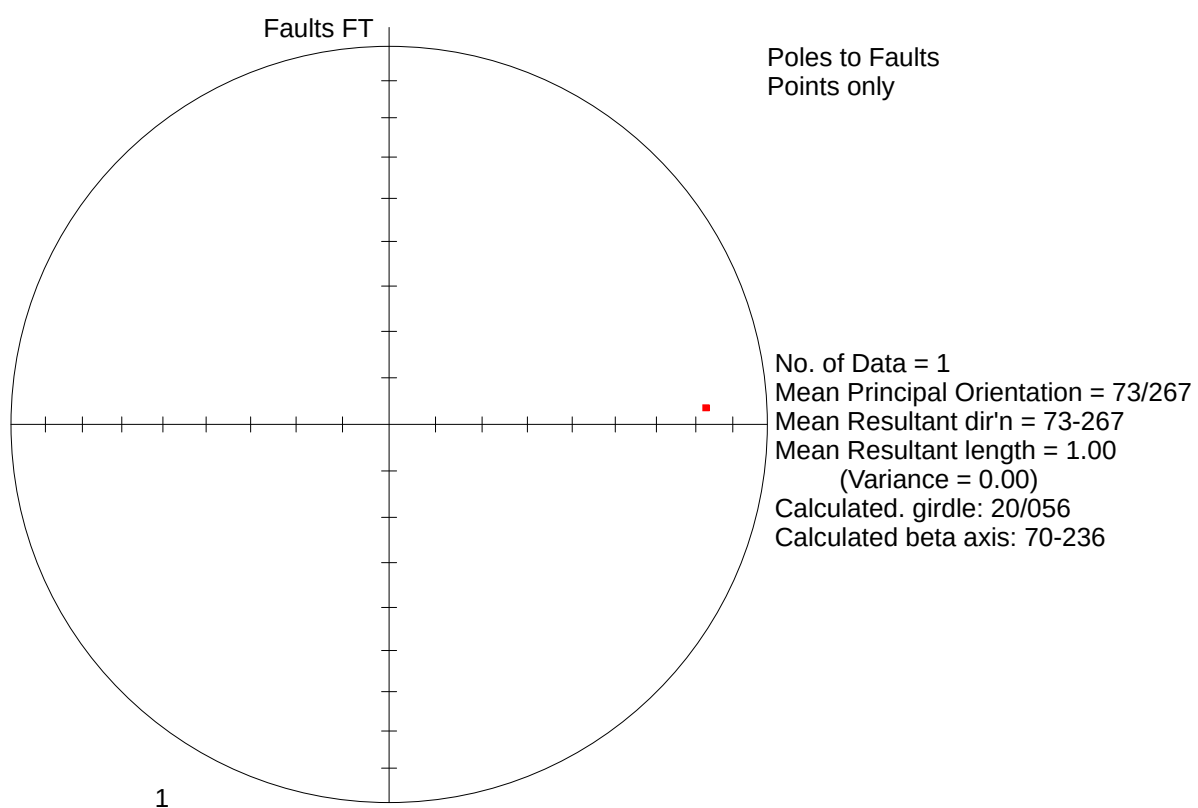
Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	250.7	B	31	145	-59.9	303.3	37	248.6
BADD009	252.3	B	32	162	-59.9	303.3	30.3	272
BADD009	254.7	B	85	146	-59.9	303.3	26	129.6
BADD009	255.7	B	58	142	-59.9	303.3	19.4	202.1
BADD009	257.8	B	73	134	-59.9	303.3	21.6	157.9
BADD009	258.6	B	29	105	-59.9	303.3	57.7	210
BADD009	262.3	B	50	218	-59.9	303.3	23.5	25.5
BADD009	264.2	B	48	142	-59.9	303.3	24.8	224.7
BADD009	265.7	B	45	125	-59.9	303.3	35.3	212.9
BADD009	266.8	B	23	123	-59.9	303.3	53.8	230.4
BADD009	267.8	B	14	83	-59.9	303.3	81.3	200.2
BADD009	270.8	B	42	153	-59.9	303.3	24.3	248.4
BADD009	273.6	B	40	134	-59.9	303.3	34.6	227.3
BADD009	273.7	B	45	148	-59.9	303.3	24.1	236.9
BADD009	276.3	B	44	223	-59.4	303.3	30	21.8
BADD009	278.8	B	61	173	-59.4	303.3	3.8	185.5
BADD009	281.1	B	47	8	-59.4	303.3	73.3	128.9
BADD009	284.3	B	36	288	-59.4	303.3	67.7	67
BADD009	285	B	34	214	-59.4	303.3	33.7	359.7
BADD009	287.2	B	38	111	-59.4	303.3	47.6	207.8
BADD009	288.8	B	12	293	-59.4	303.3	89.1	239
BADD009	291.5	B	32	108	-59.4	303.3	53.8	210.1
BADD009	292.8	B	24	89	-59.4	303.3	70	199.7
BADD009	296.2	B	44	40	-59.4	303.3	71.4	152.4
BADD009	300.4	B	61	274	-59.4	303.3	42.6	77.7
BADD009	302.1	B	45	52	-59.4	303.3	67.2	160.4
BADD009	302.9	B	70	174	-59.4	303.3	10.8	134.2
BADD009	307.7	B	57	228	-58.5	303.3	25.1	50.7
BADD009	310.8	B	23	180	-58.5	303.3	35.4	303.3
BADD009	313.3	B	45	233	-58.5	303.3	34.3	33.9
BADD009	314.7	B	36	195	-58.5	303.3	24.5	333.5
BADD009	315.1	B	28	187	-58.5	303.3	30.8	315.4
BADD009	316.3	B	32	219	-58.5	303.3	37.2	5.1
BADD009	318.3	B	57	158	-58.5	303.3	11.7	211.1



Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	150.8	BX	42	280	-61.7	303.3	58.1	63.7
BADD009	168.1	BX	90	0	-61.5	303.3	28.5	123.3
BADD009	109.3	BX1	40	300	-61.4	302.6	67.6	76.7
BADD009	111	BX1	66	70	-61.4	302.6	42.6	156.9
BADD009	161.7	BX1/2	34	50	-61.5	303.3	76.2	164.1
BADD009	118.9	BX2	47	315	-61.4	302.6	65.7	90.6
BADD009	122.9	BX2	42	330	-61.4	302.6	73.7	99.8
BADD009	124.9	BX2	43	355	-61.4	302.6	75.5	118.8
BADD009	125.2	BX2	37	115	-61.4	302.6	46.3	213.2
BADD009	127.9	BX2	29	115	-61.7	303.3	52.9	220.1
BADD009	129.5	BX2	80	295	-61.7	303.3	33.6	106.8
BADD009	129.7	BX2	55	115	-61.7	303.3	33.2	194.7
BADD009	145.4	BX2	8	100	-61.7	303.3	78.2	218.3
BADD009	151.5	BX2	6	325	-61.7	303.3	72.8	266.6
BADD009	146.5	BX2/4	10	310	-61.7	303.3	81.5	253.5
BADD009	109.5	BX3	30	255	-61.4	302.6	56.8	35.5



Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	151.5	FT	6	325	-61.7	303.3	72.8	266.6



Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	107.6	V1	40	75	-61.4	302.6	62	179.5
BADD009	107.7	V1	7	335	-61.4	302.6	71.1	276.2
BADD009	107.7	V1	10	335	-61.4	302.6	74	276.9
BADD009	107.8	V1	48	85	-61.4	302.6	51.3	181.1
BADD009	108.6	V1	17	195	-61.4	302.6	45.6	322.8
BADD009	108.6	V1	36	295	-61.4	302.6	69.3	71
BADD009	108.6	V1	40	305	-61.4	302.6	69.2	80.4
BADD009	109.2	V1	28	95	-61.4	302.6	63.3	202.4
BADD009	111.1	V1	39	315	-61.4	302.6	73.1	87.5
BADD009	111.3	V1	43	90	-61.4	302.6	53.2	188.5
BADD009	111.4	V1	25	295	-61.4	302.6	79.1	65.8
BADD009	111.9	V1	62	95	-61.4	302.6	37.3	173
BADD009	111.9	V1	32	305	-61.4	302.6	76.5	77
BADD009	112.3	V1	59	105	-61.4	302.6	35.2	182
BADD009	112.3	V1	21	325	-61.4	302.6	87	270.1
BADD009	112.3	V1	35	305	-61.4	302.6	73.8	78.2
BADD009	112.6	V1	21	305	-61.4	302.6	86.6	72.5
BADD009	113	V1	50	120	-61.4	302.6	34.2	203.9
BADD009	113.2	V1	75	115	-61.4	302.6	25.7	155.2
BADD009	113.4	V1	25	305	-61.4	302.6	82.9	74.1
BADD009	114.2	V1	52	100	-61.4	302.6	42	187.5
BADD009	115.8	V1	22	275	-61.4	302.6	73.1	47.7
BADD009	115.8	V1	66	105	-61.4	302.6	31.5	171.3
BADD009	116.3	V1	18	335	-61.4	302.6	81.8	278.6
BADD009	116.3	V1	35	235	-61.4	302.6	43.2	20.9
BADD009	116.9	V1	13	0	-61.4	302.6	74.3	302.6
BADD009	117.5	V1	19	280	-61.4	302.6	78	50.4
BADD009	117.6	V1	30	325	-61.4	302.6	84.2	92.6
BADD009	119.2	V1	45	125	-61.4	302.6	35.4	214.3
BADD009	120.8	V1	15	250	-61.4	302.6	67.3	22.2
BADD009	122.9	V1	42	330	-61.4	302.6	73.7	99.8
BADD009	122.9	V1	42	330	-61.4	302.6	73.7	99.8
BADD009	123.5	V1	36	135	-61.4	302.6	37.8	233.7
BADD009	123.8	V1	57	235	-61.4	302.6	27.6	48.5
BADD009	123.8	V1	18	115	-61.4	302.6	62.3	225.9
BADD009	124.2	V1	38	80	-61.4	302.6	61.6	184.4
BADD009	124.3	V1	20	295	-61.4	302.6	83.6	63.6
BADD009	125.6	V1	49	115	-61.7	303.3	37.2	202.4
BADD009	126.3	V1	39	105	-61.7	303.3	49.4	204.1
BADD009	128.7	V1	32	255	-61.7	303.3	55.2	37.3
BADD009	128.7	V1	43	125	-61.7	303.3	36.9	217.6
BADD009	129.2	V1	68	225	-61.7	303.3	19.6	71.2
BADD009	130.3	V1	41	265	-61.7	303.3	52.4	51.9
BADD009	131.1	V1	24	230	-61.7	303.3	50.4	8.4
BADD009	133	V1	20	355	-61.7	303.3	81.7	298.5
BADD009	133.1	V1	35	265	-61.7	303.3	57.3	47.6
BADD009	133.3	V1	30	155	-61.7	303.3	35.6	264.4
BADD009	134.1	V1	15	130	-61.7	303.3	58.5	243.1
BADD009	135.2	V1	25	275	-61.7	303.3	70.4	49.9
BADD009	136.7	V1	31	325	-61.7	303.3	83	93.6
BADD009	136.8	V1	35	235	-61.7	303.3	43.3	21.3
BADD009	137.9	V1	20	305	-61.7	303.3	87.3	72.8
BADD009	139.9	V1	49	80	-61.7	303.3	52.3	177.9

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	140.4	V1	15	5	-61.7	303.3	76.8	308.2
BADD009	141	V1	49	105	-61.7	303.3	41.8	195.1
BADD009	141.5	V1	28	265	-61.7	303.3	63.2	43.2
BADD009	142.2	V1	61	95	-61.7	303.3	37.8	175.2
BADD009	142.3	V1	41	245	-61.7	303.3	43.2	35.8
BADD009	144.9	V1	45	100	-61.7	303.3	47	195.2
BADD009	144.9	V1	53	260	-61.7	303.3	41.1	59.1
BADD009	145.2	V1	44	100	-61.7	303.3	47.8	196
BADD009	145.2	V1	33	280	-61.7	303.3	65.7	58.3
BADD009	147.7	V1	42	115	-61.7	303.3	42.4	209.8
BADD009	147.7	V1	21	240	-61.7	303.3	57.5	16.6
BADD009	147.9	V1	39	255	-61.7	303.3	49.4	42.4
BADD009	147.9	V1	39	120	-61.7	303.3	42.4	217
BADD009	149.4	V1	6	250	-61.7	303.3	75.3	18.3
BADD009	149.4	V1	52	115	-61.7	303.3	35.1	198.7
BADD009	149.4	V1	20	250	-61.7	303.3	63	25.5
BADD009	152.2	V1	29	290	-61.7	303.3	73.4	64.2
BADD009	152.4	V1	28	90	-61.7	303.3	65.5	199.1
BADD009	152.4	V1	61	230	-61.7	303.3	23.3	53.9
BADD009	152.8	V1	32	110	-61.7	303.3	52.8	213.5
BADD009	152.8	V1	63	280	-61.7	303.3	41.6	81
BADD009	154	V1	32	305	-61.7	303.3	76.3	77.6
BADD009	154.2	V1	20	90	-61.7	303.3	72.4	203.5
BADD009	154.3	V1	71	285	-61.7	303.3	37.5	92.2
BADD009	154.3	V1	23	320	-61.7	303.3	89.4	87
BADD009	155	V1	9	90	-61.7	303.3	82	209
BADD009	155	V1	49	245	-61.7	303.3	37.2	44.1
BADD009	155.8	V1	35	270	-61.7	303.3	59.6	51.6
BADD009	155.9	V1	19	340	-61.7	303.3	82.2	284.2
BADD009	156	V1	48	90	-61.7	303.3	49.1	185.5
BADD009	157	V1	50	110	-61.5	303.3	38.9	197.3
BADD009	157.5	V1	20	120	-61.5	303.3	58.3	230.3
BADD009	157.5	V1	18	290	-61.5	303.3	83.3	59.1
BADD009	166.2	V1	55	220	-61.5	303.3	21.6	34
BADD009	166.3	V1	46	230	-61.5	303.3	32.3	28
BADD009	166.7	V1	25	225	-61.5	303.3	47.3	3.8
BADD009	166.7	V1	30	100	-61.5	303.3	59.2	206.1
BADD009	167.9	V1	34	155	-61.5	303.3	31.7	261.6
BADD009	167.9	V1	15	320	-61.5	303.3	82.7	264.5
BADD009	169.2	V1	13	310	-61.5	303.3	84.1	254.6
BADD009	169.2	V1	39	110	-61.5	303.3	47.1	208
BADD009	172.6	V1	31	210	-61.5	303.3	36.2	349.8
BADD009	172.6	V1	57	50	-61.5	303.3	55.2	153.8
BADD009	173.4	V1	20	270	-61.5	303.3	72.5	43.1
BADD009	174.1	V1	16	240	-61.5	303.3	61.8	14
BADD009	177.5	V1	41	105	-61.5	303.3	47.9	202.3
BADD009	177.6	V1	40	240	-61.5	303.3	41.6	30.7
BADD009	178	V1	30	90	-61.5	303.3	63.9	197.8
BADD009	179.6	V1	19	330	-61.5	303.3	83.9	274.9
BADD009	182	V1	42	105	-61.5	303.3	47.1	201.4
BADD009	182	V1	39	330	-61.5	303.3	76.5	99.7
BADD009	182.4	V1	5	40	-61.5	303.3	73.2	345.2
BADD009	182.4	V1	38	350	-61.5	303.3	80.1	115.3

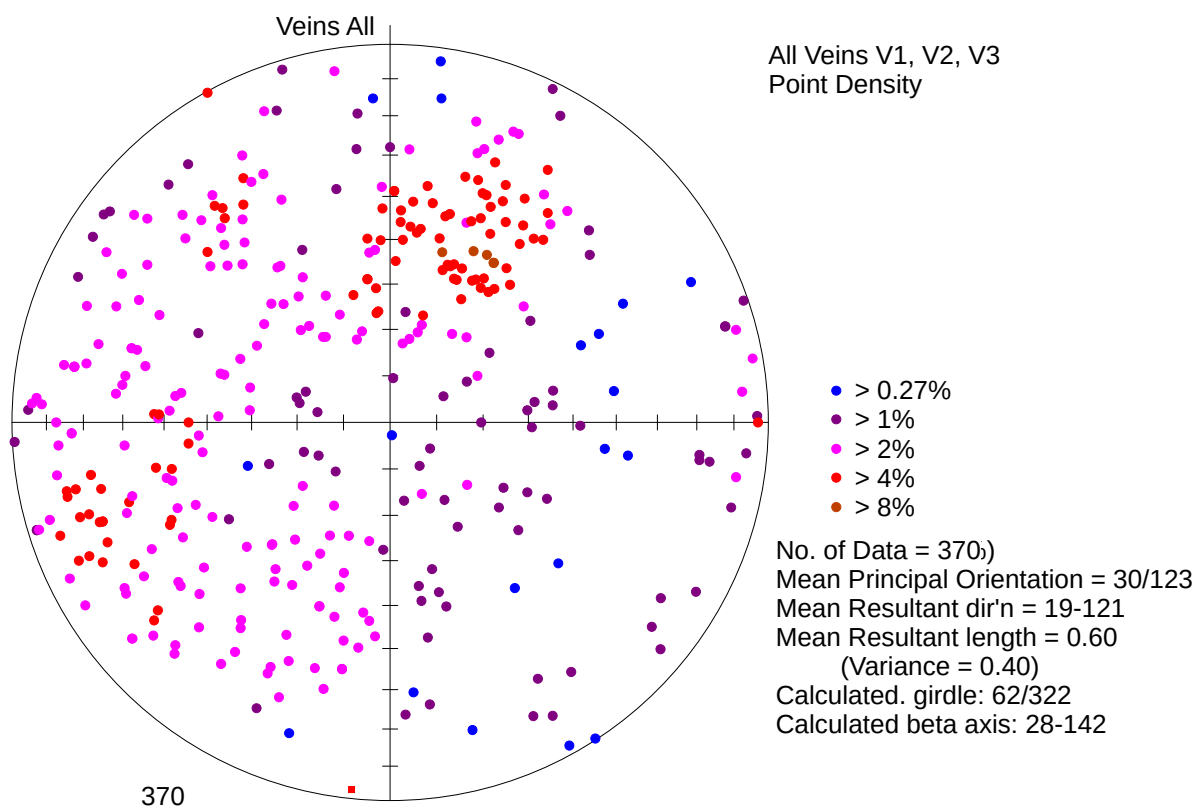
Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	182.7	V1	35	295	-61.5	303.3	70.1	71.1
BADD009	183.1	V1	21	260	-61.5	303.3	66.9	35
BADD009	183.3	V1	45	330	-61.5	303.3	70.7	101.3
BADD009	184.2	V1	80	278	-61.5	303.3	31.3	104
BADD009	184.6	V1	54	284	-61.5	303.3	49.9	75.1
BADD009	185.3	V1	36	93	-61.5	303.3	57.5	196.5
BADD009	188	V1	36	103	-61.6	303.3	52.8	204.6
BADD009	188.3	V1	65	294	-61.6	303.3	44.3	89.7
BADD009	189.4	V1	33	103	-61.6	303.3	55.3	206.8
BADD009	190.7	V1	46	278	-61.6	303.3	54	65.1
BADD009	194.6	V1	56	332	-61.6	303.3	60.3	105.7
BADD009	208	V1	48	253	-61.6	303.3	41.6	49.1
BADD009	208.3	V1	44	113	-61.6	303.3	41.8	206.1
BADD009	209.5	V1	50	120	-61.6	303.3	34.2	204.9
BADD009	210.5	V1	50	304	-61.6	303.3	59.8	85.2
BADD009	211.2	V1	42	8	-61.6	303.3	76.1	129.4
BADD009	213.2	V1	80	130	-61.6	303.3	23.1	143
BADD009	215	V1	68	123	-61.6	303.3	24.1	173.5
BADD009	216.3	V1	27	282	-61	303.3	72.1	56.9
BADD009	216.5	V1	47	152	-61	303.3	21.3	241.5
BADD009	218.4	V1	45	272	-61	303.3	52.6	60.5
BADD009	219.2	V1	46	193	-61	303.3	16.8	336
BADD009	219.3	V1	65	284	-61	303.3	42	85.5
BADD009	220.2	V1	72	54	-61	303.3	41.9	145.2
BADD009	221.2	V1	74	205	-61	303.3	15.8	98
BADD009	221.5	V1	53	272	-61	303.3	46.5	67.2
BADD009	281.3	V1	46	198	-59.4	303.3	17.1	349.9
BADD009	120.5	V1/V2	10	225	-61.4	302.6	60.9	355.4
BADD009	121	V1/V2	32	300	-61.4	302.6	74.7	73
BADD009	121.4	V1/V2	21	110	-61.4	302.6	62.1	219.6
BADD009	121.7	V1/V2	25	110	-61.4	302.6	58.7	217.2
BADD009	123.7	V1/V2	48	220	-61.4	302.6	26.1	20.2
BADD009	133.5	V1/V2	51	90	-61.7	303.3	46.8	182.9
BADD009	133.6	V1/V2	40	300	-61.7	303.3	67.3	77.3
BADD009	134.1	V1/V2	50	345	-61.7	303.3	67.6	112.9
BADD009	135.2	V1/V2	31	225	-61.7	303.3	42.1	7.7
BADD009	136	V1/V2	35	100	-61.7	303.3	55	202.9
BADD009	137.6	V1/V2	7	20	-61.7	303.3	70.4	324.4
BADD009	137.9	V1/V2	65	15	-61.7	303.3	52.8	131.1
BADD009	140.5	V1/V2	24	75	-61.7	303.3	75.7	188.8
BADD009	119.4	V1/V4	35	315	-61.4	302.6	76.9	86.1
BADD009	107.8	V2	29	325	-61.4	302.6	85.2	92.3
BADD009	107.8	V2	48	85	-61.4	302.6	51.3	181.1
BADD009	108	V2	35	100	-61.4	302.6	55.1	202
BADD009	108	V2	32	310	-61.4	302.6	78.2	81
BADD009	108.1	V2	55	325	-61.4	302.6	60.3	100.3
BADD009	108.3	V2	48	335	-61.4	302.6	68.7	104.9
BADD009	108.6	V2	36	295	-61.4	302.6	69.3	71
BADD009	111.1	V2	39	315	-61.4	302.6	73.1	87.5
BADD009	111.8	V2	68	65	-61.4	302.6	42.4	152.8
BADD009	116.2	V2	60	90	-61.4	302.6	40.5	172.9
BADD009	117.5	V2	19	280	-61.4	302.6	78	50.4
BADD009	118.5	V2	3	25	-61.4	302.6	67.2	329.8

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	118.7	V2	33	325	-61.4	302.6	81.4	93.4
BADD009	120.3	V2	28	105	-61.4	302.6	58.5	210.9
BADD009	120.4	V2	53	0	-61.4	302.6	65.6	122.6
BADD009	120.7	V2	30	65	-61.4	302.6	74.7	177
BADD009	120.8	V2	29	225	-61.4	302.6	43.8	5.9
BADD009	121.6	V2	12	255	-61.4	302.6	72.3	25.1
BADD009	122.9	V2	42	330	-61.4	302.6	73.7	99.8
BADD009	123.4	V2	22	250	-61.4	302.6	61.2	26.1
BADD009	127.8	V2	29	115	-61.7	303.3	52.9	220.1
BADD009	130.8	V2	20	235	-61.7	303.3	56.1	11.2
BADD009	130.9	V2	7	335	-61.7	303.3	71.3	277
BADD009	130.9	V2	65	160	-61.7	303.3	9.5	184.3
BADD009	132.8	V2	20	215	-61.7	303.3	48.2	349.5
BADD009	132.8	V2	53	85	-61.7	303.3	47.2	177.9
BADD009	133.1	V2	50	115	-61.7	303.3	36.5	201.2
BADD009	138.3	V2	20	305	-61.7	303.3	87.3	72.8
BADD009	147.5	V2	23	245	-61.7	303.3	58	22.6
BADD009	173.2	V2	69	30	-61.5	303.3	47.7	137.3
BADD009	176.4	V2	35	45	-61.5	303.3	76.8	159.8
BADD009	195.3	V2	34	96	-61.6	303.3	57.7	200.3
BADD009	199.2	V2	61	345	-61.6	303.3	56.8	114.6
BADD009	199.9	V2	39	280	-61.6	303.3	60.6	61.9
BADD009	205.8	V2	52	97	-61.6	303.3	43.2	186.4
BADD009	207.1	V2	45	215	-61.6	303.3	26.1	10.1
BADD009	209.8	V2	48	117	-61.6	303.3	37	205
BADD009	217.6	V2	59	94	-61	303.3	39.9	176.5
BADD009	233.5	V2	60	138	-61	303.3	20.3	197.4
BADD009	278	V2	54	283	-59.4	303.3	51	75.8
BADD009	281.4	V2	52	263	-59.4	303.3	44.2	62.1
BADD009	284.8	V2	48	242	-59.4	303.3	36.9	43.6
BADD009	301.7	V2	36	44	-59.4	303.3	77.8	158.3
BADD009	115.9	V2/4	66	105	-61.4	302.6	31.5	171.3
BADD009	116.6	V2/4	50	140	-61.4	302.6	24.7	221.6
BADD009	146.5	V2/4	10	310	-61.7	303.3	81.5	253.5
BADD009	133.6	V2/V3	10	30	-61.7	303.3	75.4	333.8
BADD009	108.6	V3	43	345	-61.4	302.6	74.8	111.2
BADD009	109.1	V3	18	315	-61.4	302.6	87	260.2
BADD009	109.5	V3	30	255	-61.4	302.6	56.8	35.5
BADD009	109.8	V3	28	275	-61.4	302.6	67.9	50.9
BADD009	109.9	V3	10	65	-61.4	302.6	87.3	5.9
BADD009	109.9	V3	25	185	-61.4	302.6	36.5	310.2
BADD009	111	V3	5	85	-61.4	302.6	87.9	205.8
BADD009	111.1	V3	36	320	-61.4	302.6	77.3	90.3
BADD009	111.2	V3	55	30	-61.4	302.6	61.2	141.6
BADD009	112	V3	41	25	-61.4	302.6	75.6	141.8
BADD009	112.1	V3	60	305	-61.4	302.6	51.4	91
BADD009	112.6	V3	16	305	-61.4	302.6	88.7	250.6
BADD009	113.2	V3	63	305	-61.4	302.6	48.8	93
BADD009	113.9	V3	45	95	-61.4	302.6	49.4	190.6
BADD009	114.2	V3	15	70	-61.4	302.6	86	188
BADD009	114.3	V3	50	115	-61.4	302.6	36.6	200.1
BADD009	114.6	V3	25	140	-61.4	302.6	45.3	247.5
BADD009	114.7	V3	3	305	-61.4	302.6	76.8	245.4

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	115.6	V3	20	235	-61.4	302.6	56	10.6
BADD009	115.6	V3	24	90	-61.4	302.6	69	200.5
BADD009	116.7	V3	51	180	-61.4	302.6	10.3	302.6
BADD009	116.9	V3	22	270	-61.4	302.6	70.7	43.5
BADD009	121.7	V3	10	160	-61.4	302.6	53.4	277.8
BADD009	121.7	V3	56	15	-61.4	302.6	62	132
BADD009	121.8	V3	85	343	-61.4	302.6	33.4	119.9
BADD009	122.7	V3	50	237	-61.4	302.6	32.8	38.8
BADD009	123.6	V3	40	183	-61.4	302.6	21.4	308.8
BADD009	124.6	V3	65	256	-61.4	302.6	32.3	72.5
BADD009	125.2	V3	42	213	-61.4	302.6	27.6	3.3
BADD009	125.3	V3	24	45	-61.4	302.6	87.2	162.8
BADD009	126.2	V3	82	105	-61.7	303.3	27.2	140.3
BADD009	127	V3	24	208	-61.7	303.3	42.2	342.9
BADD009	127.4	V3	71	341	-61.7	303.3	46.6	114.9
BADD009	128.2	V3	47	278	-61.7	303.3	53.2	65.8
BADD009	128.8	V3	20	100	-61.7	303.3	67.7	212.1
BADD009	130.3	V3	64	142	-61.7	303.3	17.2	188.9
BADD009	130.8	V3	81	318	-61.7	303.3	35.4	112.9
BADD009	130.9	V3	23	157	-61.7	303.3	41.7	270.6
BADD009	131.2	V3	38	228	-61.7	303.3	37.6	16.8
BADD009	131.8	V3	36	193	-61.7	303.3	26.9	326.9
BADD009	132.2	V3	78	72	-61.7	303.3	33.8	144.1
BADD009	132.3	V3	21	137	-61.7	303.3	50.2	247.4
BADD009	132.9	V3	74	69	-61.7	303.3	36.9	148.6
BADD009	133.9	V3	83	22	-61.7	303.3	34.8	127.8
BADD009	134.6	V3	50	37	-61.7	303.3	64.4	148.6
BADD009	135	V3	51	187	-61.7	303.3	11.3	326.2
BADD009	135.9	V3	77	308	-61.7	303.3	37.6	106.4
BADD009	137.2	V3	78	217	-61.7	303.3	19.9	101.7
BADD009	138.5	V3	76	309	-61.7	303.3	38.5	105.7
BADD009	139.5	V3	62	287	-61.7	303.3	44.5	83.5
BADD009	146	V3	53	291	-61.7	303.3	53	78.6
BADD009	148.5	V3	17	148	-61.7	303.3	50	261.9
BADD009	149	V3	84	100	-61.7	303.3	27.8	136
BADD009	157.1	V3	10	310	-61.5	303.3	81.4	253.5
BADD009	166.6	V3	24	105	-61.5	303.3	61.9	214.1
BADD009	166.9	V3	35	158	-61.5	303.3	29.9	265.3
BADD009	167.3	V3	26	112	-61.5	303.3	56.9	219.2
BADD009	169.5	V3	72	133	-61.5	303.3	20.5	163.3
BADD009	170	V3	13	28	-61.5	303.3	77.7	331.2
BADD009	171.1	V3	43	68	-61.5	303.3	62	173.4
BADD009	171.1	V3	44	235	-61.5	303.3	36.1	30.2
BADD009	173.5	V3	72	51	-61.5	303.3	42	144.3
BADD009	174.5	V3	80	58	-61.5	303.3	34.7	138.2
BADD009	174.6	V3	20	323	-61.5	303.3	86.7	268.7
BADD009	175.1	V3	56	332	-61.5	303.3	60.4	105.7
BADD009	177.1	V3	42	190	-61.5	303.3	20.4	325
BADD009	177.2	V3	63	25	-61.5	303.3	54	137
BADD009	178.8	V3	62	18	-61.5	303.3	55.7	133.4
BADD009	181.7	V3	51	28	-61.5	303.3	65.3	142.2
BADD009	182.2	V3	42	357	-61.5	303.3	76.4	121
BADD009	183.3	V3	65	308	-61.5	303.3	47.7	96.5

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	183.5	V3	44	165	-61.5	303.3	19.6	269.6
BADD009	187.2	V3	32	232	-61.6	303.3	44.4	16
BADD009	187.3	V3	51	99	-61.6	303.3	43	188.8
BADD009	187.5	V3	56	287	-61.6	303.3	49.3	78.4
BADD009	188.3	V3	16	160	-61.6	303.3	47.7	276.9
BADD009	189.8	V3	34	298	-61.6	303.3	72.1	73
BADD009	192.5	V3	66	218	-61.6	303.3	17	64.6
BADD009	192.8	V3	31	114	-61.6	303.3	51.7	217.8
BADD009	192.9	V3	50	278	-61.6	303.3	50.8	68.1
BADD009	194.6	V3	20	90	-61.6	303.3	72.4	203.4
BADD009	195.7	V3	53	93	-61.6	303.3	44.1	182.9
BADD009	195.8	V3	24	84	-61.6	303.3	71.7	196.3
BADD009	196.2	V3	35	108	-61.6	303.3	51.3	209.6
BADD009	196.8	V3	60	305	-61.6	303.3	51.2	91.6
BADD009	201.3	V3	76	266	-61.6	303.3	30.5	94.9
BADD009	202.3	V3	55	348	-61.6	303.3	63	115.6
BADD009	208.6	V3	66	245	-61.6	303.3	27.7	70.8
BADD009	210.9	V3	45	292	-61.6	303.3	60.2	74.2
BADD009	222.2	V3	31	183	-61	303.3	30	308.4
BADD009	224.2	V3	36	271	-61	303.3	59.5	53.4
BADD009	224.5	V3	80	132	-61	303.3	23.4	142.2
BADD009	228.3	V3	26	232	-61	303.3	49.3	12.3
BADD009	230.3	V3	32	205	-61	303.3	33.2	344
BADD009	231.4	V3	60	35	-61	303.3	56	143.5
BADD009	231.8	V3	23	175	-61	303.3	38.1	295.8
BADD009	231.8	V3	58	332	-61	303.3	59	106.4
BADD009	232.5	V3	50	127	-61	303.3	30.9	209.6
BADD009	233.3	V3	66	112	-61	303.3	29.2	173.9
BADD009	233.4	V3	61	213	-61	303.3	15.8	47.8
BADD009	234.7	V3	62	128	-61	303.3	24.1	187.9
BADD009	235.7	V3	59	135	-61	303.3	22.1	198.3
BADD009	236	V3	52	318	-61	303.3	62.1	95.5
BADD009	236.6	V3	36	3	-61	303.3	82.9	125.7
BADD009	237.4	V3	58	29	-61	303.3	58.8	140.7
BADD009	238.2	V3	54	28	-61	303.3	62.8	141.3
BADD009	239	V3	46	9	-61	303.3	72.7	129.8
BADD009	239.3	V3	23	30	-61	303.3	87.4	330.7
BADD009	239.5	V3	37	358	-61	303.3	81.9	121.6
BADD009	240.1	V3	44	122	-61	303.3	37.5	212.9
BADD009	240.3	V3	44	126	-61	303.3	35.6	216.5
BADD009	240.6	V3	45	38	-61	303.3	69.6	150.9
BADD009	241.2	V3	41	118	-61	303.3	41.7	212.5
BADD009	242.5	V3	79	203	-61	303.3	19.3	110.2
BADD009	243.4	V3	49	225	-61	303.3	27.7	28.3
BADD009	243.6	V3	39	125	-61	303.3	39.9	220.8
BADD009	244.1	V3	43	18	-61	303.3	74.9	136.8
BADD009	244.5	V3	41	118	-61	303.3	41.7	212.5
BADD009	245	V3	60	325	-61	303.3	56	103
BADD009	245.1	V3	54	320	-61	303.3	60.7	97.6
BADD009	246	V3	34	115	-61	303.3	48.7	215.9
BADD009	246.2	V3	81	48	-59.9	303.3	36.6	134.5
BADD009	247.5	V3	44	145	-59.9	303.3	26.2	234.6
BADD009	247.7	V3	34	290	-59.9	303.3	70	67.3

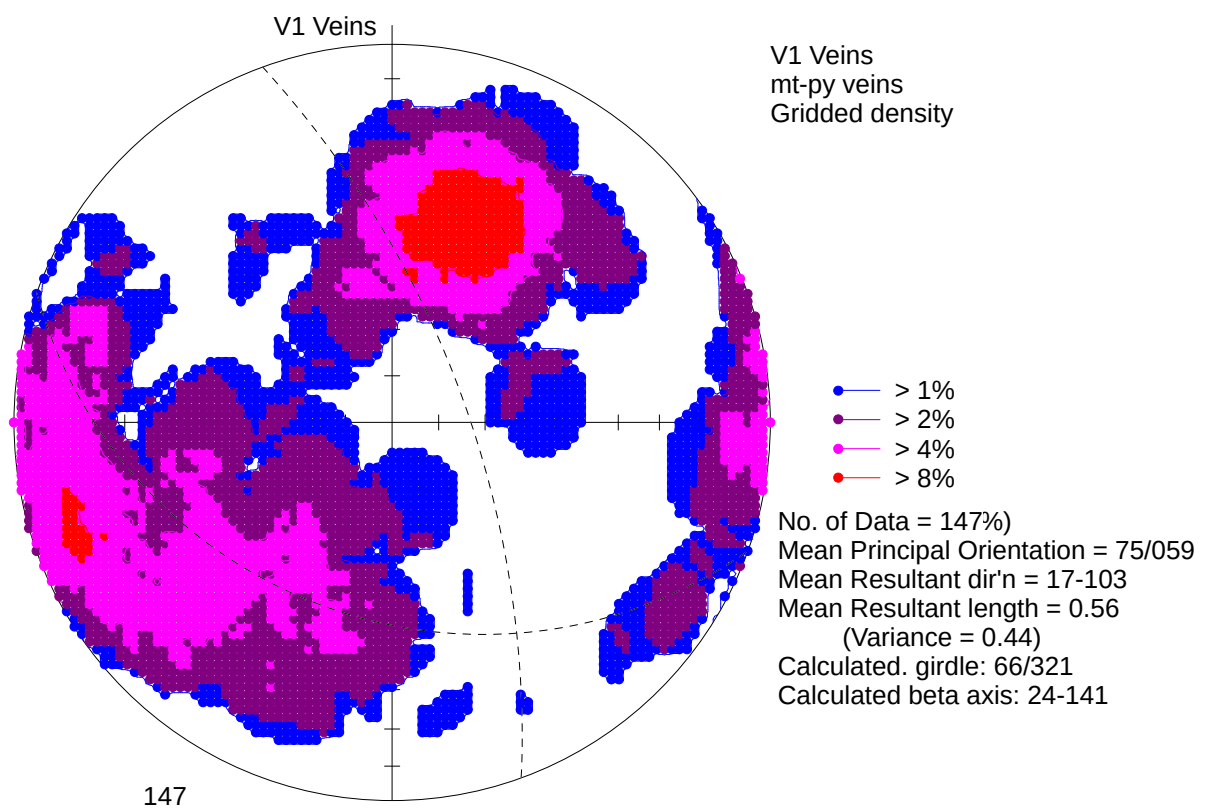
Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	248.3	V3	44	290	-59.9	303.3	61.4	73
BADD009	248.4	V3	45	123	-59.9	303.3	36.3	211.2
BADD009	249.9	V3	38	5	-59.9	303.3	82	127.2
BADD009	251.2	V3	26	207	-59.9	303.3	38.6	344
BADD009	253.5	V3	69	23	-59.9	303.3	50	133.8
BADD009	255.5	V3	48	155	-59.9	303.3	18.7	241.5
BADD009	255.6	V3	58	132	-59.9	303.3	24.2	196.5
BADD009	258	V3	78	212	-59.9	303.3	20.8	105.2
BADD009	259.5	V3	28	292	-59.9	303.3	76	65.8
BADD009	262.5	V3	58	184	-59.9	303.3	2.8	352.3
BADD009	262.5	V3	42	289	-59.9	303.3	62.7	71
BADD009	263.3	V3	52	162	-59.9	303.3	12.7	243.6
BADD009	264.4	V3	52	140	-59.9	303.3	23.3	215.1
BADD009	265.4	V3	27	27	-59.9	303.3	89.6	327.1
BADD009	265.9	V3	46	123	-59.9	303.3	35.7	210
BADD009	266.4	V3	28	282	-59.9	303.3	71.6	57.8
BADD009	266.6	V3	29	152	-59.9	303.3	36.2	259.2
BADD009	267.6	V3	50	353	-59.9	303.3	69.9	118.5
BADD009	268	V3	60	304	-59.9	303.3	52.4	91.7
BADD009	268.3	V3	61	142	-59.9	303.3	18.5	193.3
BADD009	269.4	V3	24	256	-59.9	303.3	62.4	34.1
BADD009	275.1	V3	43	243	-59.9	303.3	40.8	38.1
BADD009	276.3	V3	36	132	-59.4	303.3	38.6	228.8
BADD009	278	V3	36	64	-59.4	303.3	71	173.5
BADD009	278	V3	26	176	-59.4	303.3	33.5	296.7
BADD009	280	V3	67	128	-59.4	303.3	23.8	172.9
BADD009	284.5	V3	39	224	-59.4	303.3	34.2	16.7
BADD009	285.3	V3	4	223	-59.4	303.3	64.4	352.2
BADD009	287.9	V3	61	28	-59.4	303.3	57.6	138.9
BADD009	289	V3	54	71	-59.4	303.3	53.2	167.2
BADD009	289.3	V3	72	143	-59.4	303.3	19.2	157.6
BADD009	289.9	V3	53	42	-59.4	303.3	62.6	150.2
BADD009	290.8	V3	4	228	-59.4	303.3	66.4	357.2
BADD009	291.2	V3	53	18	-59.4	303.3	66.6	134.9
BADD009	291.4	V3	34	281	-59.4	303.3	66.3	60.6
BADD009	291.5	V3	55	102	-59.4	303.3	40	184
BADD009	292.4	V3	27	32	-59.4	303.3	89.6	151.4
BADD009	292.5	V3	70	113	-59.4	303.3	28.7	164.2
BADD009	293.2	V3	26	300	-59.4	303.3	81.4	71.3
BADD009	293.7	V3	26	55	-59.4	303.3	83.4	171.1
BADD009	295.3	V3	28	243	-59.4	303.3	52.5	25.6
BADD009	295.9	V3	11	185	-59.4	303.3	48.5	309.8
BADD009	297.4	V3	31	162	-59.4	303.3	30.8	272.2
BADD009	299.8	V3	31	178	-59.4	303.3	28.4	299.6
BADD009	300.2	V3	26	211	-59.4	303.3	39.6	349.7
BADD009	300.3	V3	52	45	-59.4	303.3	62.8	152.5
BADD009	301.8	V3	23	7	-59.4	303.3	82.6	309.7
BADD009	302	V3	68	305	-59.4	303.3	46.4	98.2
BADD009	302.7	V3	75	102	-59.4	303.3	30.8	152.9
BADD009	303.1	V3	58	38	-59.4	303.3	58.8	145.7
BADD009	304.9	V3	57	22	-59.4	303.3	62.3	136.6
BADD009	308.4	V3	67	38	-58.5	303.3	51.3	141.2



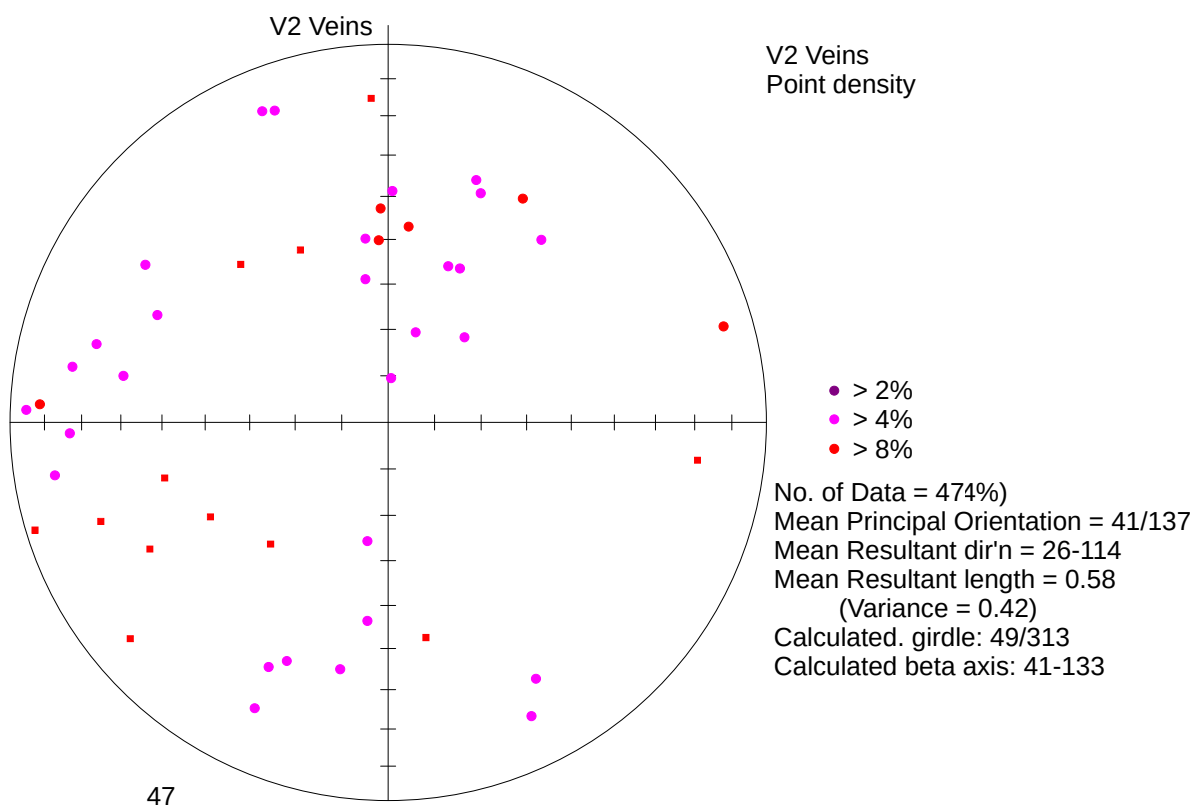
Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	107.6	V1	40	75	-61.4	302.6	62	179.5
BADD009	107.7	V1	7	335	-61.4	302.6	71.1	276.2
BADD009	107.7	V1	10	335	-61.4	302.6	74	276.9
BADD009	107.8	V1	48	85	-61.4	302.6	51.3	181.1
BADD009	108.6	V1	17	195	-61.4	302.6	45.6	322.8
BADD009	108.6	V1	36	295	-61.4	302.6	69.3	71
BADD009	108.6	V1	40	305	-61.4	302.6	69.2	80.4
BADD009	109.2	V1	28	95	-61.4	302.6	63.3	202.4
BADD009	111.1	V1	39	315	-61.4	302.6	73.1	87.5
BADD009	111.3	V1	43	90	-61.4	302.6	53.2	188.5
BADD009	111.4	V1	25	295	-61.4	302.6	79.1	65.8
BADD009	111.9	V1	62	95	-61.4	302.6	37.3	173
BADD009	111.9	V1	32	305	-61.4	302.6	76.5	77
BADD009	112.3	V1	59	105	-61.4	302.6	35.2	182
BADD009	112.3	V1	21	325	-61.4	302.6	87	270.1
BADD009	112.3	V1	35	305	-61.4	302.6	73.8	78.2
BADD009	112.6	V1	21	305	-61.4	302.6	86.6	72.5
BADD009	113	V1	50	120	-61.4	302.6	34.2	203.9
BADD009	113.2	V1	75	115	-61.4	302.6	25.7	155.2
BADD009	113.4	V1	25	305	-61.4	302.6	82.9	74.1
BADD009	114.2	V1	52	100	-61.4	302.6	42	187.5
BADD009	115.8	V1	22	275	-61.4	302.6	73.1	47.7
BADD009	115.8	V1	66	105	-61.4	302.6	31.5	171.3
BADD009	116.3	V1	18	335	-61.4	302.6	81.8	278.6
BADD009	116.3	V1	35	235	-61.4	302.6	43.2	20.9
BADD009	116.9	V1	13	0	-61.4	302.6	74.3	302.6
BADD009	117.5	V1	19	280	-61.4	302.6	78	50.4
BADD009	117.6	V1	30	325	-61.4	302.6	84.2	92.6
BADD009	119.2	V1	45	125	-61.4	302.6	35.4	214.3
BADD009	120.8	V1	15	250	-61.4	302.6	67.3	22.2
BADD009	122.9	V1	42	330	-61.4	302.6	73.7	99.8
BADD009	122.9	V1	42	330	-61.4	302.6	73.7	99.8
BADD009	123.5	V1	36	135	-61.4	302.6	37.8	233.7
BADD009	123.8	V1	57	235	-61.4	302.6	27.6	48.5
BADD009	123.8	V1	18	115	-61.4	302.6	62.3	225.9
BADD009	124.2	V1	38	80	-61.4	302.6	61.6	184.4
BADD009	124.3	V1	20	295	-61.4	302.6	83.6	63.6
BADD009	125.6	V1	49	115	-61.7	303.3	37.2	202.4
BADD009	126.3	V1	39	105	-61.7	303.3	49.4	204.1
BADD009	128.7	V1	32	255	-61.7	303.3	55.2	37.3
BADD009	128.7	V1	43	125	-61.7	303.3	36.9	217.6
BADD009	129.2	V1	68	225	-61.7	303.3	19.6	71.2
BADD009	130.3	V1	41	265	-61.7	303.3	52.4	51.9
BADD009	131.1	V1	24	230	-61.7	303.3	50.4	8.4
BADD009	133	V1	20	355	-61.7	303.3	81.7	298.5
BADD009	133.1	V1	35	265	-61.7	303.3	57.3	47.6
BADD009	133.3	V1	30	155	-61.7	303.3	35.6	264.4
BADD009	134.1	V1	15	130	-61.7	303.3	58.5	243.1
BADD009	135.2	V1	25	275	-61.7	303.3	70.4	49.9
BADD009	136.7	V1	31	325	-61.7	303.3	83	93.6
BADD009	136.8	V1	35	235	-61.7	303.3	43.3	21.3
BADD009	137.9	V1	20	305	-61.7	303.3	87.3	72.8
BADD009	139.9	V1	49	80	-61.7	303.3	52.3	177.9

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	140.4	V1	15	5	-61.7	303.3	76.8	308.2
BADD009	141	V1	49	105	-61.7	303.3	41.8	195.1
BADD009	141.5	V1	28	265	-61.7	303.3	63.2	43.2
BADD009	142.2	V1	61	95	-61.7	303.3	37.8	175.2
BADD009	142.3	V1	41	245	-61.7	303.3	43.2	35.8
BADD009	144.9	V1	45	100	-61.7	303.3	47	195.2
BADD009	144.9	V1	53	260	-61.7	303.3	41.1	59.1
BADD009	145.2	V1	44	100	-61.7	303.3	47.8	196
BADD009	145.2	V1	33	280	-61.7	303.3	65.7	58.3
BADD009	147.7	V1	42	115	-61.7	303.3	42.4	209.8
BADD009	147.7	V1	21	240	-61.7	303.3	57.5	16.6
BADD009	147.9	V1	39	255	-61.7	303.3	49.4	42.4
BADD009	147.9	V1	39	120	-61.7	303.3	42.4	217
BADD009	149.4	V1	6	250	-61.7	303.3	75.3	18.3
BADD009	149.4	V1	52	115	-61.7	303.3	35.1	198.7
BADD009	149.4	V1	20	250	-61.7	303.3	63	25.5
BADD009	152.2	V1	29	290	-61.7	303.3	73.4	64.2
BADD009	152.4	V1	28	90	-61.7	303.3	65.5	199.1
BADD009	152.4	V1	61	230	-61.7	303.3	23.3	53.9
BADD009	152.8	V1	32	110	-61.7	303.3	52.8	213.5
BADD009	152.8	V1	63	280	-61.7	303.3	41.6	81
BADD009	154	V1	32	305	-61.7	303.3	76.3	77.6
BADD009	154.2	V1	20	90	-61.7	303.3	72.4	203.5
BADD009	154.3	V1	71	285	-61.7	303.3	37.5	92.2
BADD009	154.3	V1	23	320	-61.7	303.3	89.4	87
BADD009	155	V1	9	90	-61.7	303.3	82	209
BADD009	155	V1	49	245	-61.7	303.3	37.2	44.1
BADD009	155.8	V1	35	270	-61.7	303.3	59.6	51.6
BADD009	155.9	V1	19	340	-61.7	303.3	82.2	284.2
BADD009	156	V1	48	90	-61.7	303.3	49.1	185.5
BADD009	157	V1	50	110	-61.5	303.3	38.9	197.3
BADD009	157.5	V1	20	120	-61.5	303.3	58.3	230.3
BADD009	157.5	V1	18	290	-61.5	303.3	83.3	59.1
BADD009	166.2	V1	55	220	-61.5	303.3	21.6	34
BADD009	166.3	V1	46	230	-61.5	303.3	32.3	28
BADD009	166.7	V1	25	225	-61.5	303.3	47.3	3.8
BADD009	166.7	V1	30	100	-61.5	303.3	59.2	206.1
BADD009	167.9	V1	34	155	-61.5	303.3	31.7	261.6
BADD009	167.9	V1	15	320	-61.5	303.3	82.7	264.5
BADD009	169.2	V1	13	310	-61.5	303.3	84.1	254.6
BADD009	169.2	V1	39	110	-61.5	303.3	47.1	208
BADD009	172.6	V1	31	210	-61.5	303.3	36.2	349.8
BADD009	172.6	V1	57	50	-61.5	303.3	55.2	153.8
BADD009	173.4	V1	20	270	-61.5	303.3	72.5	43.1
BADD009	174.1	V1	16	240	-61.5	303.3	61.8	14
BADD009	177.5	V1	41	105	-61.5	303.3	47.9	202.3
BADD009	177.6	V1	40	240	-61.5	303.3	41.6	30.7
BADD009	178	V1	30	90	-61.5	303.3	63.9	197.8
BADD009	179.6	V1	19	330	-61.5	303.3	83.9	274.9
BADD009	182	V1	42	105	-61.5	303.3	47.1	201.4
BADD009	182	V1	39	330	-61.5	303.3	76.5	99.7
BADD009	182.4	V1	5	40	-61.5	303.3	73.2	345.2
BADD009	182.4	V1	38	350	-61.5	303.3	80.1	115.3

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	182.7	V1	35	295	-61.5	303.3	70.1	71.1
BADD009	183.1	V1	21	260	-61.5	303.3	66.9	35
BADD009	183.3	V1	45	330	-61.5	303.3	70.7	101.3
BADD009	184.2	V1	80	278	-61.5	303.3	31.3	104
BADD009	184.6	V1	54	284	-61.5	303.3	49.9	75.1
BADD009	185.3	V1	36	93	-61.5	303.3	57.5	196.5
BADD009	188	V1	36	103	-61.6	303.3	52.8	204.6
BADD009	188.3	V1	65	294	-61.6	303.3	44.3	89.7
BADD009	189.4	V1	33	103	-61.6	303.3	55.3	206.8
BADD009	190.7	V1	46	278	-61.6	303.3	54	65.1
BADD009	194.6	V1	56	332	-61.6	303.3	60.3	105.7
BADD009	208	V1	48	253	-61.6	303.3	41.6	49.1
BADD009	208.3	V1	44	113	-61.6	303.3	41.8	206.1
BADD009	209.5	V1	50	120	-61.6	303.3	34.2	204.9
BADD009	210.5	V1	50	304	-61.6	303.3	59.8	85.2
BADD009	211.2	V1	42	8	-61.6	303.3	76.1	129.4
BADD009	213.2	V1	80	130	-61.6	303.3	23.1	143
BADD009	215	V1	68	123	-61.6	303.3	24.1	173.5
BADD009	216.3	V1	27	282	-61	303.3	72.1	56.9
BADD009	216.5	V1	47	152	-61	303.3	21.3	241.5
BADD009	218.4	V1	45	272	-61	303.3	52.6	60.5
BADD009	219.2	V1	46	193	-61	303.3	16.8	336
BADD009	219.3	V1	65	284	-61	303.3	42	85.5
BADD009	220.2	V1	72	54	-61	303.3	41.9	145.2
BADD009	221.2	V1	74	205	-61	303.3	15.8	98
BADD009	221.5	V1	53	272	-61	303.3	46.5	67.2
BADD009	281.3	V1	46	198	-59.4	303.3	17.1	349.9
BADD009	120.5	V1/V2	10	225	-61.4	302.6	60.9	355.4
BADD009	121	V1/V2	32	300	-61.4	302.6	74.7	73
BADD009	121.4	V1/V2	21	110	-61.4	302.6	62.1	219.6
BADD009	121.7	V1/V2	25	110	-61.4	302.6	58.7	217.2
BADD009	123.7	V1/V2	48	220	-61.4	302.6	26.1	20.2
BADD009	133.5	V1/V2	51	90	-61.7	303.3	46.8	182.9
BADD009	133.6	V1/V2	40	300	-61.7	303.3	67.3	77.3
BADD009	134.1	V1/V2	50	345	-61.7	303.3	67.6	112.9
BADD009	135.2	V1/V2	31	225	-61.7	303.3	42.1	7.7
BADD009	136	V1/V2	35	100	-61.7	303.3	55	202.9
BADD009	137.6	V1/V2	7	20	-61.7	303.3	70.4	324.4
BADD009	137.9	V1/V2	65	15	-61.7	303.3	52.8	131.1
BADD009	140.5	V1/V2	24	75	-61.7	303.3	75.7	188.8
BADD009	119.4	V1/V4	35	315	-61.4	302.6	76.9	86.1



Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	107.8	V2	29	325	-61.4	302.6	85.2	92.3
BADD009	107.8	V2	48	85	-61.4	302.6	51.3	181.1
BADD009	108	V2	35	100	-61.4	302.6	55.1	202
BADD009	108	V2	32	310	-61.4	302.6	78.2	81
BADD009	108.1	V2	55	325	-61.4	302.6	60.3	100.3
BADD009	108.3	V2	48	335	-61.4	302.6	68.7	104.9
BADD009	108.6	V2	36	295	-61.4	302.6	69.3	71
BADD009	111.1	V2	39	315	-61.4	302.6	73.1	87.5
BADD009	111.8	V2	68	65	-61.4	302.6	42.4	152.8
BADD009	116.2	V2	60	90	-61.4	302.6	40.5	172.9
BADD009	117.5	V2	19	280	-61.4	302.6	78	50.4
BADD009	118.5	V2	3	25	-61.4	302.6	67.2	329.8
BADD009	118.7	V2	33	325	-61.4	302.6	81.4	93.4
BADD009	120.3	V2	28	105	-61.4	302.6	58.5	210.9
BADD009	120.4	V2	53	0	-61.4	302.6	65.6	122.6
BADD009	120.7	V2	30	65	-61.4	302.6	74.7	177
BADD009	120.8	V2	29	225	-61.4	302.6	43.8	5.9
BADD009	121.6	V2	12	255	-61.4	302.6	72.3	25.1
BADD009	122.9	V2	42	330	-61.4	302.6	73.7	99.8
BADD009	123.4	V2	22	250	-61.4	302.6	61.2	26.1
BADD009	127.8	V2	29	115	-61.7	303.3	52.9	220.1
BADD009	130.8	V2	20	235	-61.7	303.3	56.1	11.2
BADD009	130.9	V2	7	335	-61.7	303.3	71.3	277
BADD009	130.9	V2	65	160	-61.7	303.3	9.5	184.3
BADD009	132.8	V2	20	215	-61.7	303.3	48.2	349.5
BADD009	132.8	V2	53	85	-61.7	303.3	47.2	177.9
BADD009	133.1	V2	50	115	-61.7	303.3	36.5	201.2
BADD009	138.3	V2	20	305	-61.7	303.3	87.3	72.8
BADD009	147.5	V2	23	245	-61.7	303.3	58	22.6
BADD009	173.2	V2	69	30	-61.5	303.3	47.7	137.3
BADD009	176.4	V2	35	45	-61.5	303.3	76.8	159.8
BADD009	195.3	V2	34	96	-61.6	303.3	57.7	200.3
BADD009	199.2	V2	61	345	-61.6	303.3	56.8	114.6
BADD009	199.9	V2	39	280	-61.6	303.3	60.6	61.9
BADD009	205.8	V2	52	97	-61.6	303.3	43.2	186.4
BADD009	207.1	V2	45	215	-61.6	303.3	26.1	10.1
BADD009	209.8	V2	48	117	-61.6	303.3	37	205
BADD009	217.6	V2	59	94	-61	303.3	39.9	176.5
BADD009	233.5	V2	60	138	-61	303.3	20.3	197.4
BADD009	278	V2	54	283	-59.4	303.3	51	75.8
BADD009	281.4	V2	52	263	-59.4	303.3	44.2	62.1
BADD009	284.8	V2	48	242	-59.4	303.3	36.9	43.6
BADD009	301.7	V2	36	44	-59.4	303.3	77.8	158.3
BADD009	115.9	V2/4	66	105	-61.4	302.6	31.5	171.3
BADD009	116.6	V2/4	50	140	-61.4	302.6	24.7	221.6
BADD009	146.5	V2/4	10	310	-61.7	303.3	81.5	253.5
BADD009	133.6	V2/V3	10	30	-61.7	303.3	75.4	333.8

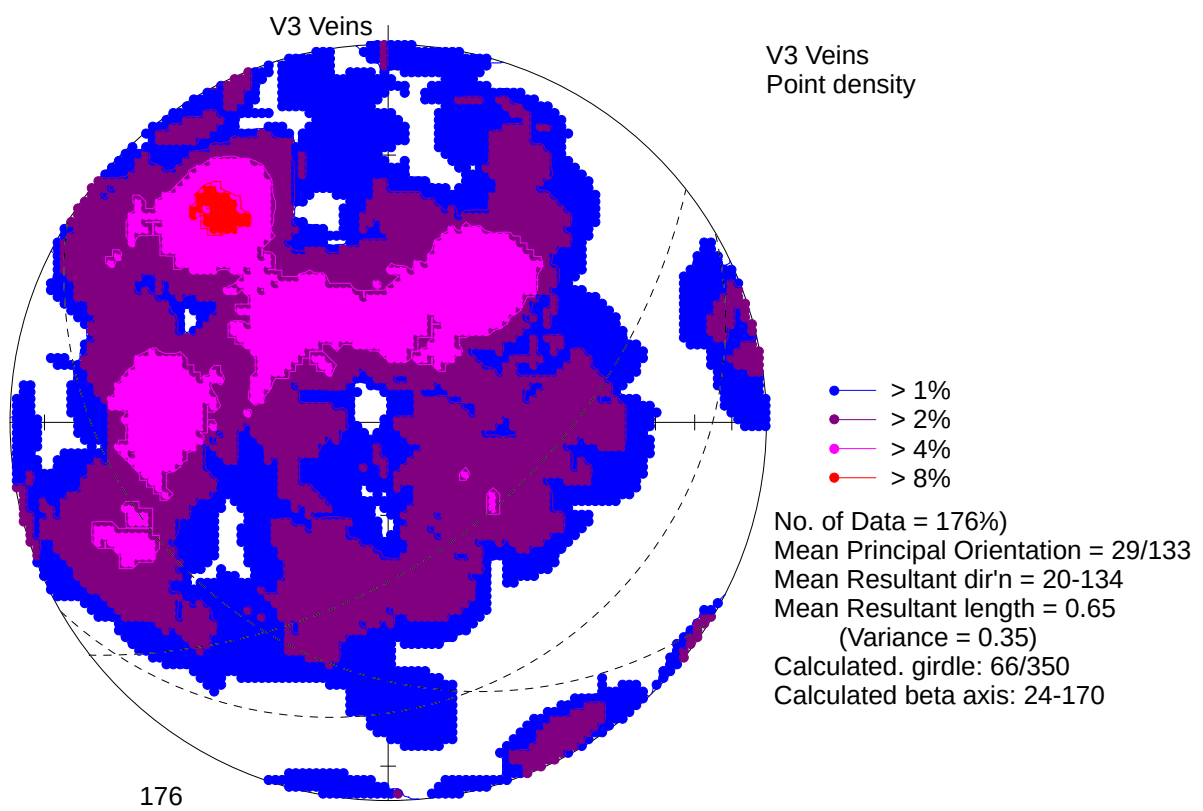


Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	108.6	V3	43	345	-61.4	302.6	74.8	111.2
BADD009	109.1	V3	18	315	-61.4	302.6	87	260.2
BADD009	109.5	V3	30	255	-61.4	302.6	56.8	35.5
BADD009	109.8	V3	28	275	-61.4	302.6	67.9	50.9
BADD009	109.9	V3	10	65	-61.4	302.6	87.3	5.9
BADD009	109.9	V3	25	185	-61.4	302.6	36.5	310.2
BADD009	111	V3	5	85	-61.4	302.6	87.9	205.8
BADD009	111.1	V3	36	320	-61.4	302.6	77.3	90.3
BADD009	111.2	V3	55	30	-61.4	302.6	61.2	141.6
BADD009	112	V3	41	25	-61.4	302.6	75.6	141.8
BADD009	112.1	V3	60	305	-61.4	302.6	51.4	91
BADD009	112.6	V3	16	305	-61.4	302.6	88.7	250.6
BADD009	113.2	V3	63	305	-61.4	302.6	48.8	93
BADD009	113.9	V3	45	95	-61.4	302.6	49.4	190.6
BADD009	114.2	V3	15	70	-61.4	302.6	86	188
BADD009	114.3	V3	50	115	-61.4	302.6	36.6	200.1
BADD009	114.6	V3	25	140	-61.4	302.6	45.3	247.5
BADD009	114.7	V3	3	305	-61.4	302.6	76.8	245.4
BADD009	115.6	V3	20	235	-61.4	302.6	56	10.6
BADD009	115.6	V3	24	90	-61.4	302.6	69	200.5
BADD009	116.7	V3	51	180	-61.4	302.6	10.3	302.6
BADD009	116.9	V3	22	270	-61.4	302.6	70.7	43.5
BADD009	121.7	V3	10	160	-61.4	302.6	53.4	277.8
BADD009	121.7	V3	56	15	-61.4	302.6	62	132
BADD009	121.8	V3	85	343	-61.4	302.6	33.4	119.9
BADD009	122.7	V3	50	237	-61.4	302.6	32.8	38.8
BADD009	123.6	V3	40	183	-61.4	302.6	21.4	308.8
BADD009	124.6	V3	65	256	-61.4	302.6	32.3	72.5
BADD009	125.2	V3	42	213	-61.4	302.6	27.6	3.3
BADD009	125.3	V3	24	45	-61.4	302.6	87.2	162.8
BADD009	126.2	V3	82	105	-61.7	303.3	27.2	140.3
BADD009	127	V3	24	208	-61.7	303.3	42.2	342.9
BADD009	127.4	V3	71	341	-61.7	303.3	46.6	114.9
BADD009	128.2	V3	47	278	-61.7	303.3	53.2	65.8
BADD009	128.8	V3	20	100	-61.7	303.3	67.7	212.1
BADD009	130.3	V3	64	142	-61.7	303.3	17.2	188.9
BADD009	130.8	V3	81	318	-61.7	303.3	35.4	112.9
BADD009	130.9	V3	23	157	-61.7	303.3	41.7	270.6
BADD009	131.2	V3	38	228	-61.7	303.3	37.6	16.8
BADD009	131.8	V3	36	193	-61.7	303.3	26.9	326.9
BADD009	132.2	V3	78	72	-61.7	303.3	33.8	144.1
BADD009	132.3	V3	21	137	-61.7	303.3	50.2	247.4
BADD009	132.9	V3	74	69	-61.7	303.3	36.9	148.6
BADD009	133.9	V3	83	22	-61.7	303.3	34.8	127.8
BADD009	134.6	V3	50	37	-61.7	303.3	64.4	148.6
BADD009	135	V3	51	187	-61.7	303.3	11.3	326.2
BADD009	135.9	V3	77	308	-61.7	303.3	37.6	106.4
BADD009	137.2	V3	78	217	-61.7	303.3	19.9	101.7
BADD009	138.5	V3	76	309	-61.7	303.3	38.5	105.7
BADD009	139.5	V3	62	287	-61.7	303.3	44.5	83.5
BADD009	146	V3	53	291	-61.7	303.3	53	78.6
BADD009	148.5	V3	17	148	-61.7	303.3	50	261.9
BADD009	149	V3	84	100	-61.7	303.3	27.8	136

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	157.1	V3	10	310	-61.5	303.3	81.4	253.5
BADD009	166.6	V3	24	105	-61.5	303.3	61.9	214.1
BADD009	166.9	V3	35	158	-61.5	303.3	29.9	265.3
BADD009	167.3	V3	26	112	-61.5	303.3	56.9	219.2
BADD009	169.5	V3	72	133	-61.5	303.3	20.5	163.3
BADD009	170	V3	13	28	-61.5	303.3	77.7	331.2
BADD009	171.1	V3	43	68	-61.5	303.3	62	173.4
BADD009	171.1	V3	44	235	-61.5	303.3	36.1	30.2
BADD009	173.5	V3	72	51	-61.5	303.3	42	144.3
BADD009	174.5	V3	80	58	-61.5	303.3	34.7	138.2
BADD009	174.6	V3	20	323	-61.5	303.3	86.7	268.7
BADD009	175.1	V3	56	332	-61.5	303.3	60.4	105.7
BADD009	177.1	V3	42	190	-61.5	303.3	20.4	325
BADD009	177.2	V3	63	25	-61.5	303.3	54	137
BADD009	178.8	V3	62	18	-61.5	303.3	55.7	133.4
BADD009	181.7	V3	51	28	-61.5	303.3	65.3	142.2
BADD009	182.2	V3	42	357	-61.5	303.3	76.4	121
BADD009	183.3	V3	65	308	-61.5	303.3	47.7	96.5
BADD009	183.5	V3	44	165	-61.5	303.3	19.6	269.6
BADD009	187.2	V3	32	232	-61.6	303.3	44.4	16
BADD009	187.3	V3	51	99	-61.6	303.3	43	188.8
BADD009	187.5	V3	56	287	-61.6	303.3	49.3	78.4
BADD009	188.3	V3	16	160	-61.6	303.3	47.7	276.9
BADD009	189.8	V3	34	298	-61.6	303.3	72.1	73
BADD009	192.5	V3	66	218	-61.6	303.3	17	64.6
BADD009	192.8	V3	31	114	-61.6	303.3	51.7	217.8
BADD009	192.9	V3	50	278	-61.6	303.3	50.8	68.1
BADD009	194.6	V3	20	90	-61.6	303.3	72.4	203.4
BADD009	195.7	V3	53	93	-61.6	303.3	44.1	182.9
BADD009	195.8	V3	24	84	-61.6	303.3	71.7	196.3
BADD009	196.2	V3	35	108	-61.6	303.3	51.3	209.6
BADD009	196.8	V3	60	305	-61.6	303.3	51.2	91.6
BADD009	201.3	V3	76	266	-61.6	303.3	30.5	94.9
BADD009	202.3	V3	55	348	-61.6	303.3	63	115.6
BADD009	208.6	V3	66	245	-61.6	303.3	27.7	70.8
BADD009	210.9	V3	45	292	-61.6	303.3	60.2	74.2
BADD009	222.2	V3	31	183	-61	303.3	30	308.4
BADD009	224.2	V3	36	271	-61	303.3	59.5	53.4
BADD009	224.5	V3	80	132	-61	303.3	23.4	142.2
BADD009	228.3	V3	26	232	-61	303.3	49.3	12.3
BADD009	230.3	V3	32	205	-61	303.3	33.2	344
BADD009	231.4	V3	60	35	-61	303.3	56	143.5
BADD009	231.8	V3	23	175	-61	303.3	38.1	295.8
BADD009	231.8	V3	58	332	-61	303.3	59	106.4
BADD009	232.5	V3	50	127	-61	303.3	30.9	209.6
BADD009	233.3	V3	66	112	-61	303.3	29.2	173.9
BADD009	233.4	V3	61	213	-61	303.3	15.8	47.8
BADD009	234.7	V3	62	128	-61	303.3	24.1	187.9
BADD009	235.7	V3	59	135	-61	303.3	22.1	198.3
BADD009	236	V3	52	318	-61	303.3	62.1	95.5
BADD009	236.6	V3	36	3	-61	303.3	82.9	125.7
BADD009	237.4	V3	58	29	-61	303.3	58.8	140.7
BADD009	238.2	V3	54	28	-61	303.3	62.8	141.3

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	239	V3	46	9	-61	303.3	72.7	129.8
BADD009	239.3	V3	23	30	-61	303.3	87.4	330.7
BADD009	239.5	V3	37	358	-61	303.3	81.9	121.6
BADD009	240.1	V3	44	122	-61	303.3	37.5	212.9
BADD009	240.3	V3	44	126	-61	303.3	35.6	216.5
BADD009	240.6	V3	45	38	-61	303.3	69.6	150.9
BADD009	241.2	V3	41	118	-61	303.3	41.7	212.5
BADD009	242.5	V3	79	203	-61	303.3	19.3	110.2
BADD009	243.4	V3	49	225	-61	303.3	27.7	28.3
BADD009	243.6	V3	39	125	-61	303.3	39.9	220.8
BADD009	244.1	V3	43	18	-61	303.3	74.9	136.8
BADD009	244.5	V3	41	118	-61	303.3	41.7	212.5
BADD009	245	V3	60	325	-61	303.3	56	103
BADD009	245.1	V3	54	320	-61	303.3	60.7	97.6
BADD009	246	V3	34	115	-61	303.3	48.7	215.9
BADD009	246.2	V3	81	48	-59.9	303.3	36.6	134.5
BADD009	247.5	V3	44	145	-59.9	303.3	26.2	234.6
BADD009	247.7	V3	34	290	-59.9	303.3	70	67.3
BADD009	248.3	V3	44	290	-59.9	303.3	61.4	73
BADD009	248.4	V3	45	123	-59.9	303.3	36.3	211.2
BADD009	249.9	V3	38	5	-59.9	303.3	82	127.2
BADD009	251.2	V3	26	207	-59.9	303.3	38.6	344
BADD009	253.5	V3	69	23	-59.9	303.3	50	133.8
BADD009	255.5	V3	48	155	-59.9	303.3	18.7	241.5
BADD009	255.6	V3	58	132	-59.9	303.3	24.2	196.5
BADD009	258	V3	78	212	-59.9	303.3	20.8	105.2
BADD009	259.5	V3	28	292	-59.9	303.3	76	65.8
BADD009	262.5	V3	58	184	-59.9	303.3	2.8	352.3
BADD009	262.5	V3	42	289	-59.9	303.3	62.7	71
BADD009	263.3	V3	52	162	-59.9	303.3	12.7	243.6
BADD009	264.4	V3	52	140	-59.9	303.3	23.3	215.1
BADD009	265.4	V3	27	27	-59.9	303.3	89.6	327.1
BADD009	265.9	V3	46	123	-59.9	303.3	35.7	210
BADD009	266.4	V3	28	282	-59.9	303.3	71.6	57.8
BADD009	266.6	V3	29	152	-59.9	303.3	36.2	259.2
BADD009	267.6	V3	50	353	-59.9	303.3	69.9	118.5
BADD009	268	V3	60	304	-59.9	303.3	52.4	91.7
BADD009	268.3	V3	61	142	-59.9	303.3	18.5	193.3
BADD009	269.4	V3	24	256	-59.9	303.3	62.4	34.1
BADD009	275.1	V3	43	243	-59.9	303.3	40.8	38.1
BADD009	276.3	V3	36	132	-59.4	303.3	38.6	228.8
BADD009	278	V3	36	64	-59.4	303.3	71	173.5
BADD009	278	V3	26	176	-59.4	303.3	33.5	296.7
BADD009	280	V3	67	128	-59.4	303.3	23.8	172.9
BADD009	284.5	V3	39	224	-59.4	303.3	34.2	16.7
BADD009	285.3	V3	4	223	-59.4	303.3	64.4	352.2
BADD009	287.9	V3	61	28	-59.4	303.3	57.6	138.9
BADD009	289	V3	54	71	-59.4	303.3	53.2	167.2
BADD009	289.3	V3	72	143	-59.4	303.3	19.2	157.6
BADD009	289.9	V3	53	42	-59.4	303.3	62.6	150.2
BADD009	290.8	V3	4	228	-59.4	303.3	66.4	357.2
BADD009	291.2	V3	53	18	-59.4	303.3	66.6	134.9
BADD009	291.4	V3	34	281	-59.4	303.3	66.3	60.6

Hole_ID	Depth	S_typ	Alpha	Beta	Hole_Dip	Hole_Az	Result:dip	Result:dir'n
BADD009	291.5	V3	55	102	-59.4	303.3	40	184
BADD009	292.4	V3	27	32	-59.4	303.3	89.6	151.4
BADD009	292.5	V3	70	113	-59.4	303.3	28.7	164.2
BADD009	293.2	V3	26	300	-59.4	303.3	81.4	71.3
BADD009	293.7	V3	26	55	-59.4	303.3	83.4	171.1
BADD009	295.3	V3	28	243	-59.4	303.3	52.5	25.6
BADD009	295.9	V3	11	185	-59.4	303.3	48.5	309.8
BADD009	297.4	V3	31	162	-59.4	303.3	30.8	272.2
BADD009	299.8	V3	31	178	-59.4	303.3	28.4	299.6
BADD009	300.2	V3	26	211	-59.4	303.3	39.6	349.7
BADD009	300.3	V3	52	45	-59.4	303.3	62.8	152.5
BADD009	301.8	V3	23	7	-59.4	303.3	82.6	309.7
BADD009	302	V3	68	305	-59.4	303.3	46.4	98.2
BADD009	302.7	V3	75	102	-59.4	303.3	30.8	152.9
BADD009	303.1	V3	58	38	-59.4	303.3	58.8	145.7
BADD009	304.9	V3	57	22	-59.4	303.3	62.3	136.6
BADD009	308.4	V3	67	38	-58.5	303.3	51.3	141.2



Appendix 4

DPC Core Library Sample Submissions



Mineral samples submission cover sheet
Department of State Development -Drill Core Library

SUBMITTED MATERIAL STATUS Confidential? Yes ☐/ No ☒ (✓ as applicable)

PROJECT INFORMATION

Tenement/permit no.:EL5873, ML6346.. Project name: ..Benagerie.....
100 000 map sheet(s):benagerie..... Hd: ...OH..... Sec.: ...OH.....
Received from: Company operator: ...Havilah Resources.....
Department/section:N/A..... Ph: ...0497869073.....
Officer: ..Andy Price.....
Fax: Email: ..andrew.price@havilah-resources.com.au.....
Company ref./report ref.:PACE Report DPY 9-44...Havilah Resources

SAMPLE INFORMATION

Classification (i.e. purpose of drillhole/sample – ✓ one only)

Mineral ☒ Engineering ☐ Petroleum ☐ Seismic ☐ Stratigraphic ☐ Groundwater ☐

Target commodity(s) (if applicable)Gold, copper, base metals.....

Hazardous goods Are any of the samples submitted hazardous in nature?

Yes ☐/ No ☒/ Possibly ☐ (✓ as applicable)

If 'Yes' or 'Possibly' please provide information for the following:

1. Nature of hazard e.g. radioactive, asbestiform minerals etc.

2. Have materials safety data sheets (Section 3.5) been submitted to the Drill Core Library prior to delivery?

Yes ☐/ No ☐ (✓ as applicable)

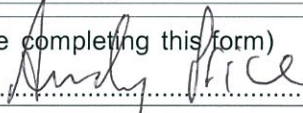
3. Special handling instructions:

Drillhole/sample names/numbers EPAC002, SPAC004, SHAC025, SHAC035, CRRC004

Total number of samples submitted: ..~148.....Drilling date (MM/YY): .02+04+05./..2017.....

Total number of trays/ctns/bags submitted: ...5 boxes.....

AUTHORISATION (Operator representative completing this form)

Print name: Andrew Price..... Signature:  Date: ..26..../06...../2017.....

NOTE: Cores and cuttings must be submitted in approved containers for long term storage.

Drill Core Library use only

No. of trays received: Sample type: core / cut Rack location:

Storage: Temporary / Permanent

No of cartons received: Sample type: core / cut

Suitable containers: Yes / No Suitable labelling: Yes / No Adequate documentation: Yes / No

Date received:/...../..... Manager/Acting Manager:

Disposal schedule

Review 3 months ☐ 6 months ☐ 9 months ☐ 12 months ☐ **Action** Retain / Discard

Date received:/...../..... Authorisation:

[illegible]