ANNUAL REPORT FOR YEAR ENDING 01/02/2018
ML 23839 (MOUNT PORTER)
NORTHERN TERRITORY, AUSTRALIA

by

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SUMMARY

Mineral lease ML 23839, which hosts a modest gold resource at Mount Porter, was granted to Arafura Resources on 2 February 2005 for a period of twenty-five years. In March 2013 Ark Mines Ltd vended into the tenement as part of the overall Arafura's Mount Porter-Frances Creek gold project, which currently comprises six licenses. Four of the licenses are shared with Territory Resources Limited, which they are entitled to the Fe resources.

Ark Mines Ltd agreed to outright purchase of the Mount Porter – Frances Creek gold project on 20 June 2016. The transaction was effected on 7 September 2016. The transaction includes a 2.5% royalty payable by Ark Mines Ltd to Arafura Resources, on gross gold sales of ore mined from the tenements.

To date, Arks activities in the Mount Porter region have been directed at preparing for the commercial exploitation of the Mount Porter gold deposit, and the expansion of that deposit. In the 2017 to 2018 reporting period, these including:

- Continuation of mining feasibility and planning work including:
    - Further pit shell optimisation.
    - Mine scheduling and operational modelling.
    - Further anthropological survey pursuant to receiving AAPA certification C2018-002 in January 2018.
    - Traditional Owner Liaison Committee activity.
    - Maintenance and repair of site access tracks.
    - Completion of a further Fauna survey in accordance with the Mt Porter MMP.
    - Drilling of four RC metallurgical sample holes in MT Porter Central mine area, for 202m from 4 pads.
    - Metallurgical testing, optimisation, regression analysis and modelling.
- Continuation of the Mt Porter South resource development drill programme:
    - Completion of 35 RC holes for 1465m from 23 pads.
    - Commencement of data interpretation and rebuilding of historic data as support.
- Mining was due to commence in July but was suspended when Kirkland Lake Gold imposed a Union Reef treatment rate variation.
    - Commencement of investigations to identify and implement alternative processing.

Digital File Attachments to This Report

Mt Porter Central Metallurgical Drilling Data:

1. ML23839_2018_A_01_DrillCollars.txt
2. ML23839_2018_A_01_DownholeSurveys.txt
3. ML23839_2018_A_01_DownholeGeochem.txt
4. ML23839_2018_A_01_LithoLogs.txt

Mt Porter South Resource Development Drilling Data:

1. ML23839_2018_A_02_DrillCollars.txt
2. ML23839_2018_A_02_DownholeSurveys.txt
3. ML23839_2018_A_02_DownholeGeochem.txt
4. ML23839_2018_A_02_LithoLogs.txt

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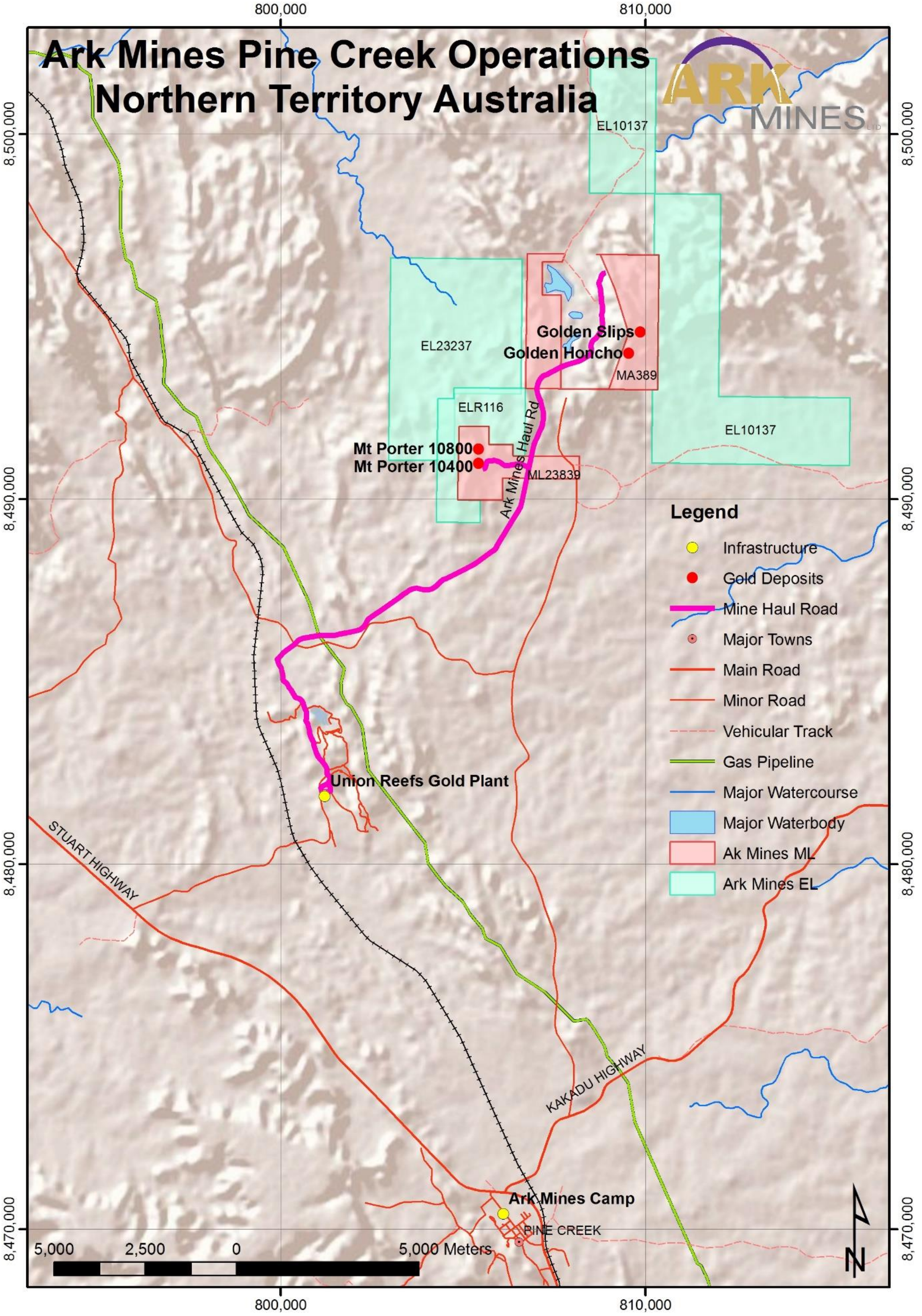

Figure 1: ML 23839 location. Map Grid MGA94 zone 52L

INTRODUCTION

Background

Gold mineralisation was discovered in the Mount Porter region by Gold Fields Exploration Pty Ltd, a subsidiary of Renison Goldfields Consolidated Limited (RGC) in 1984. Initial positive sampling results from exposed quartz reefs at the Mount Porter North prospect (3 kilometres north of Mount Porter) led to more extensive surface rock-chip sampling along the trend of the Mount Porter Anticline to the south. This resulted in the discovery of higher grade gold mineralisation in the "10400 Zone" on the eastern slopes of Mount Porter in 1988 (Dufty, 1989).

The gold mineralisation at Mount Porter was subsequently extensively explored by RGC and their subsidiary, Pine Creek Goldfields Limited (PCG), between 1988 and 1994 during which time PCG exploited the Enterprise, Czarina, International and Gandy's Hill gold deposits ("Enterprise Gold Mine") immediately adjacent to Pine Creek. Exploration by RGC/PCG at Mount Porter included a total of 223 drill holes. The bulk of these holes were completed between 9300-11000N (local grid) in a belt which stretched from 1200 metres south of Mount Porter to 500 metres north of the peak.

Following PCG's final phase of drilling in 1993 (Eupene, 1994), PCG conducted archaeological (Mulvaney, 1993), sacred sites (AAPA), metallurgical (Capps, Mason & Till, 1994) and environmental (Anonymous, 1994) studies and prepared for mining the "10400 Zone", where Sans (1994) estimated there to be an Indicated Resource of 240,000-250,000 tonnes at a grade of 3.6-3.8 g/t Au within 70 metres of the surface, using a 1.5 g/t Au cut-off grade. But PCG's development plans were shelved later in 1994 because the anticipated financial return did not justify the development risk in the economic conditions which prevailed at the time.

Between 1995-1997, an additional 14 drill holes, some as deep as 810 metres, were completed at Mount Porter by Homestake Gold of Australia Limited (Homestake) under a farm-in arrangement with RGC. Homestake explored for major new zones of mineralisation over a one kilometre long section of the Mount Porter mineralised trend, mainly to the north of the 10400 Zone. Homestake had little success with this approach and withdrew from the project in 1998.

Arafura Resources Limited (Arafura) acquired the underlying title, ERL 116, from Iluka Resources Limited (Iluka, formerly RGC) in 2002. In late 2003, Arafura drilled seven core holes into the 10400 Zone resource (Goulevitch, 2004). This infill drilling was undertaken to confirm continuity of the highest grade gold mineralisation, as recommended by Sans (1994), who considered that the establishment of continuity of higher grade mineralisation was critical to the integrity of his resource estimate.

In early 2004, an updated resource estimate was completed by Reseval Pty Ltd (Payne, 2004). Published Identified Resources for the 10400 Zone deposit, calculated in compliance with the requirements of the Code of the Joint Ore Reserve Committee (JORC Code), now stand at:

Cut-off 0.5 g/t Au		**Cut-off 1.7 g/t Au**	
Indicated Resources	694,000 t @ 2.0 g/t Au	Indicated Resources	300,000 t @ 3.1 g/t Au
Inferred Resources	184,000 t @ 1.55 g/t Au	Inferred Resources	55,000 t @ 2.6 g/t Au
TOTAL RESOURCES	**878,000 t @ 1.9 g/t Au**	**TOTAL RESOURCES**	**355,000 t @ 3.0 g/t Au**

In 2005, a review of the geological model for the Mount Porter 10400 Zone gold deposit resulted in the identification of two small targets ("NW" and "SE") which had potential to host minor additional gold resources which could conceivably be extracted at the same time as planned open cut mining of the 10400 Zone resources. Drilling commenced in late-2006 to test these targets but the program was abandoned prematurely after drilling equipment was lost in the fourth hole of the planned 11 hole program. Importantly, the westernmost hole in this program intersected a previously unknown zone of gold mineralisation ("248 Zone") west of and deeper than the Identified Resources in the 10400 Zone (Goulevitch, 2007).

In 2006, Arafura was granted a mineral lease (ML 23839) over the Mount Porter deposit and in early 2007, in accordance with the requirements of the *NT Environmental Assessment Act 1994*, completed a Public Environmental Report (PER) in respect of mining the existing gold resource and processing off-site (MBS Environmental, 2006, 2007). The PER was formally accepted by the NT Government on 19 March 2007 and Commonwealth Government approval of the proposed open-cut development, under the provisions of the *Environmental Protection and Biodiversity Conservation Act 1999*, was issued in June 2007.

Location and access

The Mount Porter gold deposit is located 21 kilometres north of Pine Creek and 165 kilometres southeast of Darwin in the Northern Territory, Australia (see Figure 1).

Access to ML 23839 from Darwin is along the Stuart Highway (225 kilometres) to Pine Creek then north along the Kakadu Highway and unsealed Frances Creek Road for 24 kilometres to a point about 6.5 kilometres past the turn-off to Mount Wells. From here a bush track leads to the prospect area some 3 kilometres distant.

Two mining related operations are currently active in the vicinity of Mount Porter.

Crocodile Gold Corp are conducting milling operations at the Union Reef Gold Mine, 10 kilometres SSW of Mount Porter. Mining operations ceased at Union Reefs in 2003 but the mill was recommissioned in late 2006 (by a previous owner, GBS Gold Australia Pty Ltd) to process ore from several deposits in the Katherine-Adelaide River area.

Territory Resources Limited were mining iron ore at Frances Creek, 4 kilometres NNE of Mount Porter, up until January 2015. Mine products were being trucked along the old railway corridor located between Mount Porter and the Frances Creek Road to a rail siding just north of the Union Reef Mine. From there the ore was railed to Darwin for export to China. Iron ore mining was previously conducted at Frances Creek during 1968-1974.

The Enterprise Gold Mine adjacent to Pine Creek town ceased production in 1995. The Spring Hill gold deposit is ten kilometres to the west, the Union Extended Gold Mine (small past producer) is four kilometres to the west and the old McKinlay (silver, lead), Flora Belle (lead, silver) and Elizabeth (gold) mines are about eight kilometres to the WSW.

Topography and drainage

The Mount Porter area is "an erosion landscape of rugged, dissected ridges, with steep to gently undulating hills, and in the southern portion … within the granite country, of boulder fields and small rocky knolls" (Mulvaney, 1993).

Topography ranges from about 150 metres AHD along the Frances Creek Road in the eastern part of the tenement, to 292.3 metres AHD (592.3 metres local datum) at Mount Porter in the centre of the prospect area. The identified gold resource (the "10400 Zone") is situated between the 200-275 metres AHD (present topography) on the eastern foothills of Mount Porter.

The Frances Creek Road to the east of the tenement and the access road between the Frances Creek Road and the mine site traverse the gently undulating granite country.

Ephemeral gullies drain the prospect area which is in the very upper catchments of Nellie Creek to the south (which drains east over 30-35 kilometres to the Mary River) and Watts Creek to the north (which drains north over 20-30 kilometres to the McKinlay River). The proposed initial 10400 Zone pit and associated waste dumps are likely to be constrained within the gully system which drains south to Nellie Creek. Pre-resource mineralisation is also known within both the Nellie Creek catchment and the Watts Creek catchment and these may provide additional minable resources with further exploration.

Climate

Mount Porter is in the tropical monsoon belt of northern Australia and experiences distinct hot, humid summers ("wet season") and cool, dry winters ("dry season"). Average monthly maximum and minimum temperatures range between 30-36˚C and 12-29˚C respectively, with occasional extremes of >40˚C and <5˚C.

Average rainfall in the region is 1100-1200 millimetres which falls mainly during the period between October and March, and especially during the months of January-March when the area comes under the influence of the sub-tropical NW monsoons and associated tropical low pressure systems and monsoon trough. Peak average monthly rainfall is in February (350 millimetres).

Flora and fauna

"Open to dense eucalypt woodland with tall annual grass understorey" (Mulvaney, 1993) characterises the area of the tenement. This is typical of the "tropical eucalypt woodlands/grasslands" of Top End of the Northern Territory.

A field inspection by EcoFox Enterprises Pty Ltd in April 2004 revealed the following:

- That dominant species adjacent to the 10400 Zone pit area in the reddish soils overlaying the carbonaceous mudstone include Cooktown Ironwood *Erythrophleum chlorostachys*, Stringybark *Eucalyptus tetrodonta*, Woollybutt *E. miniata*, Bloodwood *E. latifolia, E. dicromophloia*, and Carbeen *E. clavigera*. Understorey species include *Acacia* spp., Kurrajong *Brachychiton diversifolius*, Red-flowered Kurrajong *B. paradoxum*, Grevillea *Grevillea* spp., *Hakea* sp., Sandpaper Fig *Ficus scobina*, *Sesbania formosa*, Billy Goat Plum *Terminalia ferdinandiana*, *T. pterocarya*, and Melville Island Beech *Canarium australianum*;

- A range of grass species exists on the site including the common annual *Sorghum intrans*, perennial Sorghum *S. plumosum*, Black Spear Grass *Heteropogon contortus*, *Panicum* sp. *Aristida* sp. and an unidentified perennial species;

- As the reddish soils grade into the grey soils overlaying dolerite and metasediments the woodland opens out and tends to become dominated by Darwin Box *E. tectifica*. Salmon Gum *E. tintinnans* occurs on the granite country on the lower slopes to the southeast of the tenement. These species associations are common within the open eucalypt woodlands that cover most of the Top End.

A more comprehensive account of the flora and fauna of Mount Porter ML 23839 is provided by Reilly, Low and Matthews (2005) who conducted and environmental survey of the landscape, flora and fauna of the Mount Porter project area for inclusion in the PER (MBS Environmental, 2006).

TENURE

Mining/Mineral rights

Mining rights over most of the known gold mineralisation at Mount Porter are held by Ark Mines Ltd under ML 23839 which was granted on 2 February 2005 for a term of 25 years, and transferred to Ark Mines Ltd in June 2016. The lease covers an area of 366 hectares.

Exploration rights to immediately surrounding areas are held by Ark Mines Ltd under ERL 116 which was granted on 12 September 1990 and transferred to Ark Mines Ltd in June 2016.

Land tenure

Background land tenure around ML 23839 and under ERL 116 is Mary River West Pastoral Lease, PPL815 – NT portion 1630, owned by Equest Pty Limited (Gary Hamilton), C/- 9 Pall Mall Avenue, Currumbin, Queensland, 4223.

Native Title

The *Native Title Act 1993* allows input to land use proposals by Native Title Holders or registered Native Title Claimants.

Registered Native Title Claim DC01/6 – Mary River West – C/- Northern Land Council, is in place over NT Portion 1630 which encompasses ML 23839 and surrounding tenement ERL 116.

Prior to the grant of ML 23839, Arafura successfully negotiated a Native Title Compensation Agreement (“ancillary agreement”) with the registered native title claimants and the Northern Land Council (together “the native title parties”) in accordance with the “right to negotiate” provisions of the *Native Title Act 1993*. This agreement is referenced in a “tripartite agreement” between Arafura, the NT Government and the native title parties which is registered with the National Native Title Tribunal.

Native Title is not an issue with respect to exploration activities on ERL 116 as the date of grant of this title precedes introduction of the *Native Title Act 1993*.

Archaeological surveys

Current AAPA Certificate C2004/098 was issued to Arafura on 7 July 2004 for the purpose of “mining” in respect of the current area of ML 23839. There are no registered or recorded aboriginal sacred sites within the area of the application.

Current AAPA Certificate C2003/025 is held by Arafura in respect of ERL 116 for mineral exploration.

Ark Mines updated the AAPA Certificates to reflect change of ownership, and certificate C2018-002 was issued on 9 January, 2018.

An Aboriginal archaeological survey (Mulvaney, 1993) was completed by PCG in 1993 in preparation for planned mining at that time (prior to issue of C1993/197). A similar survey was completed by Gunn (2005) for inclusion in the PER (MBS Environmental, 2006).

GEOLOGICAL SETTING

(updated from Goulevitch 2004)

Regional geology

Stratigraphic relationships and recent geochronological data in the Pine Creek Orogen are summarised in Table 1 and an extract from the 100,000 Pine Creek Geological Series Map is included as Figure 2. Letter abbreviations in Figure 2 are referenced in Table 1 and throughout the text below.

Gold mines and prospects in the Mount Porter region occur in:

- the Mundogie Sandstone (Ppm) and Wildman Siltstone (Pps) of the Mount Partridge Group;
- the middle and upper Koolpin Formation (Psk), Gerowie Tuff (Psg) and Mount Bonnie Formation (Pso) of the South Alligator Group,;
- the Burrell Creek Formation (Pfb) of the Finniss River Group; and
- numerous semi-conformable sills of pre-orogenic Zamu Dolerite (Pdz) which intrude the Koolpin Formation and Gerowie Tuff.

All of these units are part of the Palaeoproterozoic succession of the Pine Creek Orogen which extends from Darwin to Katherine, east into Arnhem Land and west to the coast.

In the Mount Partridge Group, the Mundogie Sandstone consists of up to 500 metres of coarse pebbly feldspathic arkose and quartzitic sandstone with interbedded siltstone and shale (in places carbonaceous) and minor chert and quartz pebble conglomerate. The Wildman Siltstone is comprised of medium and thin bedded and laminated, fine grained pyritic carbonaceous sediments for the most part but with minor sandstone beds and tuffs.

In the South Alligator Group, the Koolpin Formation consists of sulphidic carbonaceous siltstones and mudstones, ferruginous chert, iron formation, carbonates and phyllitic mudstones. Aeromagnetic patterns indicate the presence of pyrrhotite where it is the major sulphide phase in the Koolpin Formation. The Koolpin Formation varies in thickness from less than 100 metres to over 500 metres but its precise thickness in any area is difficult to determine because of the inclusion of sills of pre-tectonic Zamu Dolerite. These can vary in thickness from a few metres to a few hundred metres.

The Burrell Creek Formation in the Finniss River Group is up to 1,500 metres thick and consists dominantly of greywacke, siltstone and mudstone.

The Mount Bonnie Formation is a transitional unit which contains interbedded units of both Koolpin facies and Burrell Creek facies rocks. Its thickness is variable but generally ranges from 200-700 metres. The base of the Mount Bonnie Formation (formerly the Kapalga Formation, Crick *et al.*, 1978) is defined as the base of the lower of two majorgreywacke-mudstone units each generally 20-50 metres thick, which represents the first recognisable input of Burrell Creek facies into the upper part of the South Alligator Group. The two thick greywacke-mudstone units are separated by 30 to 60 metres of laminated siltstone, shale, chert and tuff (Goulevitch, 1980).

The Gerowie Tuff, the only time marker in the South Alligator Group sequence, is up to 400 metres thick and is comprised of tuff, tuffaceous chert and tuffaceous siltstones with lesser amounts of interbedded Koolpin-facies sediments, i.e. laminated chert and carbonaceous siltstone. Bands of tuff, tuffaceous chert and tuffaceous siltstone continue through the Mount Bonnie Formation and, in places, continue into the lower Burrell Creek Formation. Beds of similar tuffaceous chert have been noted in drill core from the hanging wall sequence of Wildman Siltstone at Tom's Gully. This is much lower in the sequence than is normally the case for Gerowie Tuff input.

A sometimes angular and other times conformable contact separates the Wildman Siltstone and Koolpin Formation (Stuart-Smith *et al.,* 1993) and recent geochronological studies suggest this probably marks a major depositional hiatus between about 2030-2020 Ma and 1870-1865 Ma (Worden *et al.,* 2008; Table 1).

The boundaries between the Koolpin Formation, Gerowie Tuff, Mount Bonnie Formation and Burrell Creek Formation are conformable.

Sills and dykes of Zamu Dolerite intruded the South Alligator Group prior to the onset of regional tectonism.

The sediments, volcanics and dolerite sills are moderately to tightly folded about axial planes which strike to the south-south-east, south and south-south-west and dip vertically or steeply either side of vertical. The fold axes plunge northerly or southerly in different parts of the inlier generally at shallow angles. This accounts for the attenuated outcrop pattern. The dominant fold structure in the Mount Porter area is the Mount Porter Anticline which plunges gently to the NNW over a distance of 8 kilometres from the intrusive contact of the Allamber Springs Granite (see below).

Regional lower greenschist grade metamorphism accompanied the folding event during a major episode of deformation between 1865-1847 Ma with peak metamorphism at about 1855 Ma (Worden *et al.*, 2008).

The folded metasediment sequences and metadolerite sills of the Pine Creek Orogen were subsequently intruded by late Palaeoproterozoic granite batholiths and plutons at about 1830-1815 Ma. These intrusions generated aureoles of contact metamorphism, 0.5-2 kilometres wide, in the adjacent metasediments and metadolerites and this overprinted the effects of earlier regional metamorphism. In the Mount Porter area the Allamber Springs Granite (Pgca), a component of the Cullen Batholith (Pgc), is the local expression of this phase of plutonism. This intrusion cuts across the southern part of ERL 116 within a few hundred metres of the 10400 Zone.

Subsequently, an extensive array of north-east and north-west trending dolerite dykes intruded during extensional deformation. These crop out only rarely but are clearly evident on aeromagnetic images because of their magnetic character and continuity over distances up to 100 kilometres.

Mesoproterozoic sandstones, possibly Cambrian carbonate-rich rocks and Cretaceous sandstones and gravel (Czg) probably all covered the Pine Creek Orogen area at later times but these have since been almost entirely removed by erosion, at least around Mount Porter.

GOLD MINERALISATION MODELS IN THE PINE CREEK OROGEN

Goulevitch (1997) has summarised the styles of gold mineralisation in the Pine Creek Orogen and provides a detailed list of references to geological accounts for the various deposits which are mentioned below.

Prior to mining at Rustler's Roost between 1994 and 1998, gold mineralisation in the Pine Creek Orogen was generally categorised into one of the following three dominant geological models:

1. Sheeted and stockwork quartz-sulphide vein systems mainly along major anticlinal hinge lines in the Mount Bonnie Formation, and to a lesser extent in the underlying Gerowie Tuff and overlying Burrell Creek Formation. Mineralisation is preferentially associated with a strong carbonaceous or sulphide component in the host sequence (Woolwonga, Moline) or located where there are marked competency differences between successive layers such as greywacke and shale (Enterprise, Union Reef, Goodall, Mount Todd, Alligator and Faded Lily at Brocks Creek, Chinese Howley, Big Howley, Spring Hill, Yam Creek, Fountain Head, Mount Tymn, Mount Porter North). A dominant linear auriferous quartz-vein structure sub-parallel to the axial plane of the associated anticline has been identified in some deposits (Enterprise, Woolwonga). Bedding conformable quartz reefs are a feature of most deposits of this style and these often thicken and develop to saddle reefs where they pass over fold hinges (Enterprise, Union Reef, Fountain Head, Mt Tymn, Mount Porter North);

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2. Sediment-hosted stratiform gold mineralisation and quartz-sulphide-vein-hosted stratabound gold mineralisation associated with cherty iron formation and carbonaceous mudstone mainly in the Koolpin Formation (Cosmo-Howley, Golden Dyke, Mount Porter, West Koolpin/Taipan at Quest 29) but also to a lesser extent in the Gerowie Tuff (Zapopan) and Mount Bonnie Formation (Northern Hercules, Beef Bucket at Rustler's Roost).

3. Auriferous stratiform, massive to banded, sulphide-silicate-carbonate mineralisation in the Mount Bonnie Formation (Mt Bonnie, Iron Blow, Moline).

As a result of the detailed geological investigations undertaken during mining at Rustler's Roost, and given the physical extent of the resources identified there, sediment-hosted stratiform gold mineralisation associated with cherty dolomitic and sulphidic shale in the Mount Bonnie Formation needs to be added to this list. This model displays elements of the first and second models listed above given that:

- the vast bulk of the mineralisation at Rustler's Roost is situated astride a major anticline (the Dolly Pot Anticline);
- sheeted quartz-sulphide veins host some of the gold mineralisation (in the Backhoe deposit); and
- the gold mineralisation at Rustler's Roost occurs in stacked sediment packages and thus displays both strong stratiform and strong stratabound character.

The Rustler's Roost model could be considered as a link between models 1 and 2 above.

Gold mineralisation models of lesser importance in the Pine Creek Orogen include:

1. Sediment-hosted, isolated, single quartz veins or reefs which generally transgress stratigraphy (BHS, Marrakai, Bandicoot, William, Great Northern, Great Western). Veins are generally only a metre or two thick and are very often banded or laminated. The Tom's Gully reef may be regarded as a near-bedding-conformable example of this model. Reefs of this style may be expressions of reverse faults;
2. Sheeted or stockwork quartz-feldspar-sulphide veins hosted by sills of Zamu Dolerite within the Koolpin Formation and Gerowie Tuff (Chinese Howley South, Margaret Diggings, Quest 29, Maureen);
3. Sediment-hosted, transgressive, linear arsenical ferruginous quartz-breccia reefs which pass across granite boundaries into low-grade linear sericite alteration zones of considerable length (Golden Honcho, Bonrook). This is the only Pine Creek Orogen model in which gold mineralisation demonstrably post-dates granite intrusion.

Most gold mineralisation in the region occurs mostly above the middle of the Koolpin Formation in the South Alligator Group, and in the lower part of the Burrell Creek Formation of the Finniss River Group. Tom's Gully and Golden Honcho are two of the very few exceptions to this generalisation. The Tom's Gully vein occurs in strongly carbonaceous pyritic sediments of the Wildman Siltstone of the Mount Partridge Group. The Golden Honcho reef system at Frances Creek transgresses the contact between the Allamber Springs Granite and the Mundogie Sandstone, also of the Mount Partridge Group.

Of prime importance in understanding the mineralisation at Mount Porter is the Cosmo-Howley/Golden Dyke style of gold mineralisation which is hosted by silicate-sulphide facies cherty iron formations in the middle and upper levels of the Koolpin Formation. Golden Dyke and adjacent smaller deposits produced 25,000 ounces of gold from a stratiform lens of cherty iron formation on the western side of the Golden Dyke Dome. Cosmo Howley produced 369,000 ounces of gold from similarly hosted stratiform mineralisation on the limbs and the crest of the Cosmo Anticline in zones complicated by, strong axial plane faulting.

The syn-orogenic granites (*eg.* Cullen Batholith, Mount Bundey Granite, Mount Goyder Syenite) are regarded by many geologists to be the driving force for gold mineralisation in the Pine Creek Orogen. Mineralisation is thus generally considered to be pre- or syn-intrusion. There is reasonable evidence to interpret that the bulk of the anticline-associated vein-type deposits were deposited during structural reactivation of regional fold structures during granite intrusion, though this has not been established unequivocally. Only the Golden Honcho and Bonrook reefs demonstrably overprint granite intrusion.

GEOLOGY OF THE MOUNT PORTER DEPOSIT

(Goulevitch, 2004; after Eupene, 1994, and Majoribanks, 1994)

The metasedimentary rocks present in the Mount Porter project area belong to the Koolpin Formation of the South Alligator Group. For the most part the Koolpin Formation at Mount Porter is characterised by pyrrhotitic and pyritic carbonaceous shales and siltstones but in the Middle Koolpin Formation, sulphidic laminated chloritic/carbonaceous "shales", with prominently developed “chert” nodules, are ubiquitously present. (In most parts of the Pine Creek Orogen the “chert” nodules are actually comprised of microcrystalline silica but in weakly metamorphosed areas, such as at Rustler’s Roost near Mount Bundey, the nodules are cryptocrystalline and chalcedonic in character. Chert is thus believed to be a pre-cursor for the microcrystalline silica and, for this reason, the term “chert” is applied to all the bedded nodular silica in the Koolpin-facies rocks of the South Alligator Group whether they be in the Koolpin Formation, Gerowie Tuff or Mount Bonnie Formation.

These chloritic chert-shale units in the South Alligator Group appear to be laterally continuous over considerable distances and are widely regarded to be “silicate facies” banded iron formations (BIF), though that has not been unequivocally established. According to Eupene (1994), over the 13 kilometres which separates exposures of Koolpin Formation at the Cosmo Howley and Golden Dyke gold mines, there is good correlation of nine identifiable sub-units of the Middle Koolpin Formation, including five separate iron formation horizons. This subdivision is believed to be useful at least as far east as the Horseshoe Anticline, 10 kilometres west-north-west of Mount Porter and 20 kilometres from Golden Dyke, but a lesser number of sub-units appears to be present at Mount Porter.

Due to perceived structural complexity, a lack of surface exposures and only a limited amount of drill core, the Koolpin Formation stratigraphy at Mount Porter has not yet been fully defined though it does appear that up to three BIF horizons separated by carbonaceous mudstone units may be present in the middle of the Koolpin Formation. These are overlain by a thick sequence of sulphidic (predominantly pyrrhotitic) carbonaceous mudstone. Distinct thick dolomitic marble units are present towards the base of the Koolpin Formation and some dolomitic marble bands, 10-20 centimetres thick, are interbedded with bands of nodular chert in the intervening sequence.

A subdivision of the Koolpin Formation and interleaved sills of Zamu Dolerite at Mount Porter away from the complex structural development in the 10400 Zone is shown in Table 2 as well as thicknesses of the individual units. This demonstrates considerable thickness variations of units over a distance of 1.5 kilometres along the Mount Porter Anticline.

The mineralised Middle Koolpin Formation (informally referred to in this report as “Unit I”) at Mount Porter, is interpreted to extend from the top of the uppermost dolomitic marble layer or band to the base of the massive sulphidic carbonaceous mudstone unit which constitutes the basal unit of the Upper Koolpin Formation. Unit I appears to be more than 45 metres thick on the crest of the Mount Porter Anticline in the 10400 Zone but possibly thinner on the limbs. Eupene (1994) subdivided the nodular cherty iron formations in Unit I into two sub-units separated by an intervening carbonaceous mudstone horizon 3-10 metres thick. He also recognised a biotite hornfels sub-unit below the lower nodular chert sub-unit. This sub-division was not supported by the 2003 drilling in which more carbonaceous zones occurred in different stratigraphic positions in different holes and chert nodules generally occurred sporadically within this zone. Consequently, until more lateral consistency can be established in the stratigraphy of the Middle Koolpin Formation, the entire unit, including variably garnetiferous/carbonaceous biotite hornfels at depth, is referred to as Unit I.

An overlying massive sulphidic carbonaceous mudstone unit comprises the bulk of the Upper Koolpin Formation at Mount Porter and this is informally referred to in this report as “Unit C”. The upper two dolerite sills, Du and Dm (see below) divide Unit C into three sub-units, C1, C2 and C3.

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The Lower Koolpin Formation ("Unit Kl") has not been identified in the 10400 Zone drilling but it has been drilled elsewhere at Mount Porter including in holes MPDH225, 226, 228, 229 and 230 drilled by Homestake. In MPDH225 the unit includes interbedded marble, chloritic cherty (nodular) iron formation and biotite-cordierite-garnet metasiltstone/hornfels and it is in excess of 88 metres thick, of which up to 10 metres occurs above the lower dolerite sill (see below).

Three semi-conformable dolerite sills (metadolerite/amphibolite) have been identified within the Koolpin Formation at Mount Porter. The thickest of these ("Dm", 70-90 metres true thickness) intrudes Unit C about 5-30 metres above the top of Unit I. A thinner dolerite sill ("Du", 10-25 metres true thickness) occurs higher in Unit C and another thin dolerite sill (20-30 metres true thickness) occurs below the uppermost dolomitic marble layer in the Lower Koolpin Formation. Du and Dl may not be as persistent laterally as Dm (Dl does not appear to be present in MPDH226 drilled a few hundred metres east of the 10400 Zone).

Thin (0.5-3 metres thick) fine grained felsic and/or mafic dykes also intrude the mineralised sequence at Mount Porter. These appear to post-date most of the structural development of the area. Some are definitely cut by auriferous massive sulphide veins but generally these dykes are not otherwise mineralised. Most of the felsic dykes in the 10400 Zone appear to be constrained within a 3-5 metre wide zone which extends roughly along 10160E at the surface. This zone dips very steeply to the east at the surface and less steeply to the east at depth.

The primary structure through the Mount Porter prospect is the Mount Porter Anticline, which is a prominent and persistent NNW plunging regional structure (Figure 2). The Mount Porter Anticline appears to have many features which characterise other major fold structures in the Pine Creek Orogen:

- Steeply dipping to slightly overturned but generally regular limbs;
- Complex axial zones, commonly with at least two separate antiform folds;
- Thickening of incompetent units, especially carbonaceous shale, in the axial zone, and disruption of competent units;
- Complex fault zones, frequently intruded by late basic or lamprophyric dykes and/or associated quartz veining and stockworks;
- Evidence of massive brecciation and mineralisation.

At the 10400N Zone, most of the mineralisation intersected to date occurs in a complex multiply hinged fold zone on, and immediately to the west of, the main axis of the Mount Porter Anticline (Figures 3 and 4). This zone is bounded by at least three major faults – a NE trending structure to the southeast (F1), an ESE trending structure to the north at about 10500N (F2) and a major NS trending fault and shear zone to the west on about 10100E (F5). Another major structure (F3), parallel to F2, occurs further to the north at about 10700N.

The Mount Porter Anticline and mineralised metasediment sequence are intruded to the southeast by the Allamber Springs Granite which is a phase of the Cullen Batholith. The NE trending granite contact traverses the southeast portion of the tenement and, on the basis of a drill intersection 500 metres east of the 10400 Zone (MPDH226), dips to the NW at about 40-45˚.

PREVIOUS INVESTIGATIONS

The Mount Porter gold deposit was discovered on the eastern flanks of Mount Porter (292 metres, AHD) in 1988 by Gold Fields Exploration Pty Ltd, a subsidiary of Renison Goldfields Consolidated Limited (RGC) (Dufty, 1989). Initial positive outcrop samples led to more intensive exploration under ELs 4752 and 6530, and ERL 116 over the succeeding decade. ERL 116 remains to this time.

RGC's exploration to the end of 1993 included a total of 223 drill holes (Eupene, 1994). The bulk of these holes were completed between 9300-11000N (local grid) in a belt which stretched from 1,200 metres S of Mt Porter to 500 metres N of the peak.

The final phase of exploration (46 holes) by RGC in 1993-1994 was conducted by their subsidiary, Pine Creek Goldfields Limited, who at the time operated the Enterprise Mine in Pine Creek, 20 kilometres to the south (Eupene, 1994; Majoribanks, 1994). This drilling was concentrated between 10250-10550N ("10400 Zone") where the earlier drilling had identified a coherent zone of relatively high grade (3-4 g/t Au) gold mineralisation at shallow depths (less than 70 metres from the surface). It was after this phase of exploration that the currently identified mineral resources were estimated for the "10400 Zone".

PCG completed ore body modelling of Mount Porter early in 1994 (Sans, 1994). The estimated global resources were:

Cut-off 1.5 g/t Au:	**240,000-250,000 t @ 3.6-3.8 g/t Au**
Cut-off 1.7 g/t Au:	**215,000 t @ 3.9 g/t Au**
Cut-off 2.0 g/t Au:	**176,000 t @ 4.4 g/t Au.**

PCG conducted archaeological, sacred sites, metallurgical and environmental studies and in 1993-94 prepared for mining the "10400 Zone" (Agnew, 1994). But plans were shelved in 1994 because the anticipated financial return of about $1 million did not justify the development risk in the economic conditions which prevailed at the time.

Between 1995 and 1997, an additional 14 drill holes, some as deep as 810 metres (600 metres vertical), were completed by Homestake Gold of Australia Limited (Homestake) under a farm-in arrangement with RGC. Homestake explored for new major zones of mineralisation over a kilometre long section of the Mount Porter mineralised trend, mainly to the north of the 10400 Zone (Stewart, 1996, 1997). Homestake had little success with this approach and withdrew from the project in 1998.

In 2003, Arafura Resources completed a program of 7 inclined HQ core holes (MPDH241-247) totalling 417.5 metres into the 10400 Zone (Goulevitch, 2004) to confirm the continuity of the highest grade gold mineralisation, as recommended by Sans (1994). Results from this program and all earlier investigations were utilised to construct a more reliable geological model as a basis for a new estimate of identified mineral resources by Payne (2004).

A program of 4 inclined RC holes (MPRC248-251) totalling 320.8 metres into two targets ("NW" and "SE" targets) on the margins of the 10400 Zone at Mount Porter was completed by Arafura in 2006 (Goulevitch, 2007). The westernmost hole of the program, MPRC248, intersected a previously unknown zone of gold mineralisation over a 13 metre interval (13 metres @ 3.53 g/t Au) some 20 metres west of and 30 metres deeper than the Identified Resources in the 10400 Zone. This zone (the "248 Zone" – Figure 5) was not intersected in any earlier holes drilled into the western side of the Mount Porter deposit.

WORK COMPLETED DURING 2017-18

In this reporting period Ark's activities at Mount Porter have been directed at continuing preparation for the commercial exploitation of the Mount Porter gold deposit, and resource development drilling on the Mt Porter anticline, to the south of the 10400 zone Mt Porter deposit, towards the boundary between ML23839 and ERL116, as well as drilling for metallurgical sample in the Mount Porter Central deposit (10400 zone). Mining did not commence as expected.

Pre-mining work included:

- Further iterative re-design of the Mt Porter Central pit shell to improve the staged implementation plan, minimise capital risk, and optimise cash flow;
    - From the high level A-pit Shell design originally by CSA global in 2015
    - To a B-it shell encompassing more detailed mine planning by CrossCut Consulting in 2016
    - To a C-Pit two stage nested shell pair by BAM Group based on detailed site, mine and cash flow planning encompassing re-optimisation and cost modelling in 2016.
    - To an updated C-Pit two stage shell pair by CrossCut Consulting, based on the BAM work; optimising project EBITDA by stage one geometry enhancements.
    - In 2017 to a two stage nested D-Pit shell pair by CrossCut Consulting, yielding marginal strip ratio improvement and substantial cash flow improvements, by shifting stage 1 to the higher strip but higher grade western side of the mine design, and stage 2 as the lower strip but lower grade eastern side plus depth completion.
    - The D-Pit shells are slightly smaller and fall within the permitted disturbance area.
- Pit scheduling and operational modelling based on the new D-Pit Shell, including:
    - Monthly production scheduling.
    - Machine optimisation and scheduling.
    - Manpower optimisation and rostering.
    - Machinery supply and contract finalisation.
    - Drill and blast services supply.
- Completion of a third anthropological survey on the Mount Porter area, conducted by the NLC as a requirement of the AAPA for reissue of AAPA certification.
    - The AAPA informed Ark that they were unable to find the two previous anthropological reports held in their custody.
    - The new anthropological report was passed directly to the AAPA, and not released to Ark Mines. The report may be at risk of future loss by the AAPA.
    - The NLC reported that no impediments to AAPA certificate renewal were found.
    - All findings were well aligned with Ark Mines existing archaeological surveys and fall within Ark Mines existing Heritage Management Plan.
- AAPA issued a new certificate, C2018-002, on 9 January, 2018, after Ark Mines April 2016 application:
    - The only condition imposed by the certificate is a request that registered site 5072-92 not be disturbed.
    - Site 5072-92 has been previously identified and is already an exclusion zone under the Ark Mines Heritage Management Plan. The site is not near any potential disturbance areas and is located on the opposite side of the haul road from the mining area.
- Presentation of the Mount Porter Central mine concepts, plans and state of project progression to the Traditional Owners Liaison Committee in consultation with the NLC.
    - The Traditional Owners were pleased with the project to date, the projected progression, and planning for the Mount Porter Mine.
    - The Traditional Owners were pleased with Ark Mines Heritage Management planning and diligence, and pleased with the level of communication and project involvement provided.
- Maintenance and repair was carried out on the existing access track on site, following wet season damage, in preparation for drilling activity.

- Completion of a Fauna Survey in the Mount Porter Mine area, conducted by Northern Resource Consultants.
  - Fauna survey was conducted between 01/05/2017 and 05/05/2017 and included trapping, spotlighting and daylight surveying of mammal, reptile and bird species.
  - Results of the survey are to be added to the Mount Porter MMP environmental data set, in accordance with the Mount Porter MMP, and will also be used for future MMP applications over Mount Porter South and Mount Porter North on both ELR116 and ML23839. The survey is not part of an EIS.
- Drilling was completed on the RC metallurgical holes in the MPC mine area, planned and prepared in 2016 (see Figure 7):
  - RC drilling of 202m on 4 collars by WJ Drilling using 4 inch hammer and Gemco RC rig with auxiliary compressor, static cone split and sampled by metre into pre-numbered calico bags, with duplicates taken and conserved every metre and the reject aliquot conserved every meter in green PVC bags for use as for bulk sample.
  - RTKdGPS 20mm accuracy collar pick up by Land Survey.
  - All logging was carried out on site in conjunction with drilling and all intervals had chips conserved in numbered chip trays.
  - Recovery was periodically tested by mass using spring balance, and estimated by volume between mass testing.
  - All samples assayed by North Australian Laboratories using 50g fire assay with ICP-AAS finish for Au, and one in 5 samples tested for SG by water pycnometry with selection by weathering profile and lithology (see Appendix A).
  - QAQC consisted of certified Gannet standards at 1 in 25, duplicates at 1 in 25, lab replicates on all results above 0.5 g/t with replicates below 0.5 g/t if needed to make up 1 in 25, blank quartz mill flush after every sample, with flush assayed at the beginning and end of every batch.
  - Drill results were good and validate the Mt Porter Central Resource (see Table 5 for intercepts and Appendix A for data summary in local grid.)
- Metallurgical sample was sent to IMO Perth for recovery optimisation testing:
  - Sample for submission was selected with reference to the NAL fire assay return, to reflect low, medium, high and very high grade bands in oxide, fresh and transitional material, then the total available sample was vetted by IMO to ensure adequate testing mass after compositing in each of the 10 grade / oxidation categories (no very high grade oxide or transitional samples were available).

Table 1: Met testing sample composite grade bands and dispatched mass.

	Oxide LG	Oxide MG	Oxide HG	Trans LG	Trans MG	Trans HG	Fresh LG	Fresh MG	Fresh HG	Fresh VHG
Grade	1.03	1.85	7.15	0.86	1.48	2.96	1.05	1.73	3.67	10.74
Intervals	13	6	11	9	5	5	12	17	13	12
Mass kg	52	24	44	36	20	20	48	68	52	48

  - 103 samples for 400kg of material, plus 100L of Union Reefs Plant process water, were dispatched to IMO Perth.
  - IMO generated composites in each grade / oxidation band, and tested all composites for gravity recovery followed by leach testing under 3 different cyanidation, dissolved oxygen regimes, at the optimal P_{80} 75µm grind determined from previous testing, plus a fresh high grade test at a P_{80} 53µm grind (Borger, 2017)

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- Cyanidation, oxygenation testing levels were (Borger 2017):
  - Initial NaCN 350 ppm, maintained at 200 ppm, DO_2 maintained 8 mg/L.
  - Initial NaCN 500 ppm, maintained at 300 ppm, initial DO_2 20 mg/L maintained at 8 mg/L.
  - Initial NaCN 750 ppm, maintained at 500 ppm, DO_2 maintained at 15 mg/L.
- Of these tests, only the high cyanidation gave adequate recoveries. The 53µm grind test showed no significant benefit (see results in Tables 3 and 4).
- Kinetic curves show oxide and transitional ores attain peak recovery within 24 hours residence, and fresh ores show some minor recovery increase up to 48 hours residence (see Figures 3, 4, and 5).

- Regression analysis of the IMO results was conducted by Ark Mines, and the resulting equation for each grade / oxidation band for each test parameter regime was applied to the analogous grade / oxidation bands of the D Shell ore resource, to generate weighted average recoveries reflecting the actual characteristics of the resource (de Chaeney, 2017):
  - This is substantially more accurate than simple average recovery estimation.
  - The results indicate that the high NaCN total gravity plus leach 48 hour recovery would be 78.85%, and 24 hour recovery would be 77.45%, across the ore reserve (Table 2 & Figure 2).

Table 2: Weight averaged regressed recovery of the Mount Porter D Pit shell reserve calculated at 0.1 g/t Au resolution.

							NaCN 750/500				NaCN 500/300			
Type	**COG**	**VOLUME** *bcm*	**TONNES** *dmt*	**SG**	**Au (cut 20)** *g/t*	**Grav Rec** *%*	**48 hr Rec** *%*	**48 hr Leach Only**	**24 hr Rec** *%*	**24 hr Leach Only**	**48 hr Rec** *%*	**48 hr Leach Only**	**24 hr Rec** *%*	**24 hr Leach Only**
Total Ore		**136,398.1**	**364,654.9**	**2.67**	**2.76**	**7.63**	**78.85**	**71.22**	**77.45**	**69.83**	**75.77**	**68.14**	**73.76**	**66.14**
Ox Ore	1.10	34,333.0	68,665.9	2.00	2.09	6.20	92.98	86.78	92.04	85.84	91.34	85.14	90.27	84.07
Fr Ore	1.40	102,065.2	295,989.0	2.90	2.92	7.96	75.57	67.61	74.07	66.11	72.15	64.19	69.94	61.97

Figure 2: Weight averaged regressed recovery comparison by test regime.

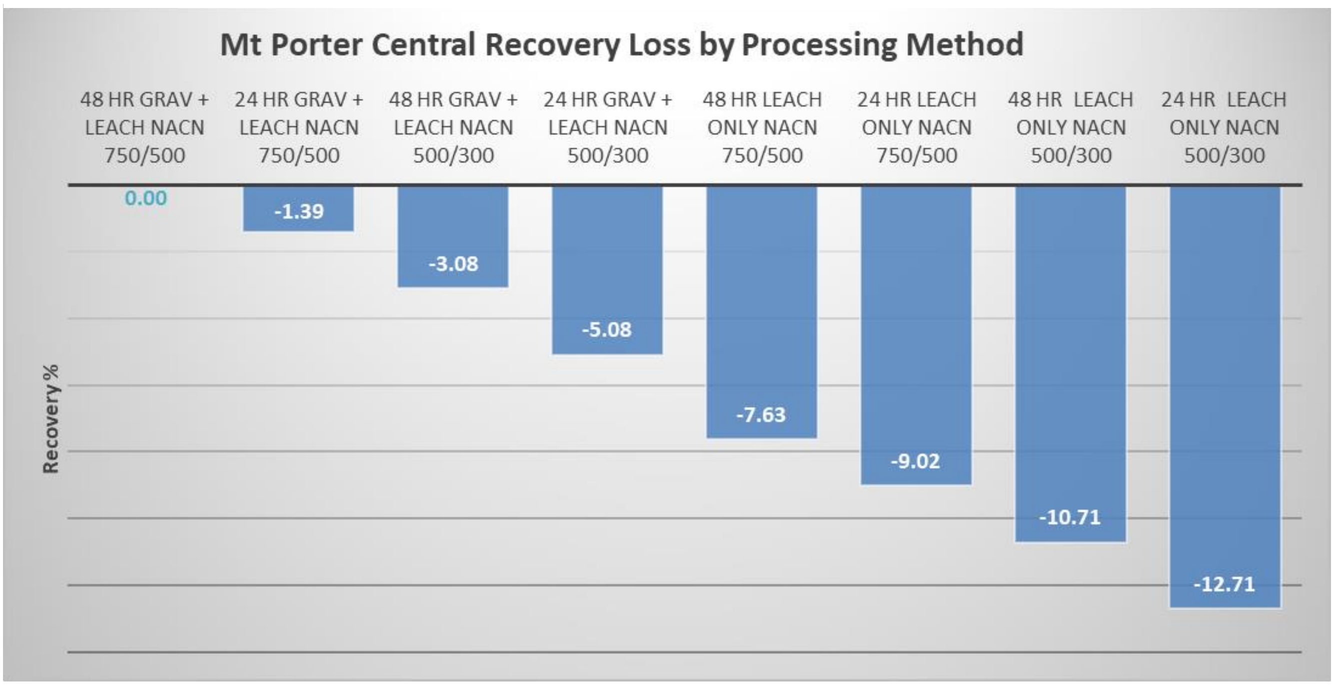

Table 3: Metallurgical results of Mount Porter ore by IMO in 2017.

		Oxide	Oxide	Oxide	Oxide	Oxide	Oxide	Oxide	Oxide	Oxide
		LG	LG	LG	MG	MG	MG	HG	HG	HG
Grind	µm	75	75	75	75	75	75	75	75	75
NaCN	ppm	350/200	750/500 ppm	500/300	350/200	750/500 ppm	500/300	350/200	750/500 ppm	500/300
Dissolved Oxygen	mg/L	8 mg/L	15 mg/L	15-20 then 8	8 mg/L	15 mg/L	15-20 then 8	8 mg/L	15 mg/L	15-20 then 8
Gravity Recovery	0	5.1%	5.4%	5.3%	5.5%	5.8%	6.0%	9.2%	10.1%	10.6%
Recovery 2 hour	2	42.5%	72.6%	60.7%	36.0%	64.6%	35.5%	43.7%	68.3%	71.9%
Recovery 4 hour	4	53.1%	82.7%	71.7%	50.1%	80.2%	71.8%	49.4%	79.8%	77.3%
Recovery 8 hour	8	61.1%	89.0%	78.8%	72.9%	92.5%	93.0%	66.3%	86.9%	83.2%
Recovery 24 hour	24	81.9%	92.4%	88.6%	91.8%	91.9%	94.2%	81.3%	91.3%	86.7%
Recovery 48 hour	48	90.2%	92.6%	90.6%	94.8%	94.7%	93.5%	88.9%	90.3%	88.9%
Calc Head	g/t	1.18	1.12	1.12	2.22	2.14	2.02	6.54	6.04	5.68
Assay Head	g/t	0.99	0.99	0.99	2.02	2.02	2.02	5.66	5.66	5.66
Residue Grade	g/t	0.12	0.08	0.11	0.12	0.11	0.13	0.72	0.59	0.63
Gravity Recovery	g/t	0.06	0.06	0.06	0.12	0.12	0.12	0.60	0.61	0.60
NaCN Consumption 24h	kg/t	0.42	0.78	0.50	0.18	0.31	0.40	0.27	0.27	0.37
NaCN Consumption 48h	kg/t	0.54	0.96	0.55	0.27	0.39	0.46	0.33	0.30	0.34
Lime Consumption 24h	kg/t	7.57	7.30	7.60	5.62	7.55	3.68	3.48	5.08	4.42
Lime Consumption 48 h	kg/t	7.57	7.30	7.60	5.62	7.55	3.68	3.48	5.08	4.42
As	ppm	1,861			1,049			1,392		
S	%	0.73			2.09			2.51		
Sulphide	%	0.53			1.63			2.3		
Sulphate	%	0.2			0.46			0.21		
Total Carbon	%	0.21			0.26			0.97		
Non-Carbonate Carbon	%	0.21			0.22			0.9		

		Transitional	Transitional	Transitional	Transitional	Transitional	Transitional	Transitional	Transitional	Transitional
		LG	LG	LG	MG	MG	MG	HG	HG	HG
Grind	µm	75	75	75	75	75	75	75	75	75
NaCN	ppm	350/200	750/500	500/300	350/200	750/500	500/300	350/200	750/500	500/300
Dissolved Oxygen	mg/L	8	15	15-20 then 8	8	15	15-20 then 8	8	15	15-20 then 8
Gravity Recovery	0	3.7%	4.1%	4.0%	10.0%	10.5%	11.6%	11.2%	9.0%	13.2%
Recovery 2 hour	2	21.8%	74.7%	66.2%	31.2%	69.2%	42.4%	44.6%	47.3%	64.2%
Recovery 4 hour	4	47.7%	76.0%	75.7%	47.1%	76.3%	61.6%	52.6%	59.3%	72.3%
Recovery 8 hour	8	68.6%	90.8%	84.3%	57.5%	85.3%	72.5%	49.0%	67.4%	71.5%
Recovery 24 hour	24	86.5%	88.8%	87.7%	71.1%	87.9%	82.7%	58.7%	74.3%	70.5%
Recovery 48 hour	48	89.5%	91.6%	91.5%	78.9%	89.4%	86.0%	62.6%	76.0%	72.5%
Calc Head	g/t	0.99	0.89	0.92	1.42	1.36	1.23	2.55	3.20	2.19
Assay Head	g/t	0.98	0.98	0.98	1.38	1.38	1.38	2.94	2.94	2.94
Residue Grade	g/t	0.10	0.07	0.07	0.30	0.14	0.17	0.96	0.77	0.60
Gravity Recovery	g/t	0.04	0.04	0.04	0.14	0.14	0.14	0.29	0.29	0.29
NaCN Consumption 24h	kg/t	0.35	0.54	0.38	0.54	0.86	0.53	0.62	1.33	0.66
NaCN Consumption 48h	kg/t	0.49	0.74	0.52	0.56	1.09	0.68	0.83	1.49	0.83
Lime Consumption 24h	kg/t	10.36	10.01	10.68	7.81	8.24	9.11	12.01	9.90	11.35
Lime Consumption 48 h	kg/t	10.36	10.01	10.68	7.81	8.24	9.11	12.01	9.90	11.35
As	ppm	4,355			2,200			3,769		
S	%	0.15			2.35			2.87		
Sulphide	%	0.01			1.82			2.66		
Sulphate	%	0.14			0.53			0.21		
Total Carbon	%	0.26			0.32			0.49		
Non-Carbonate Carbon	%	0.26			0.27			0.4		

		Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh
		LG	LG	LG	MG	MG	MG	MG	HG	HG	HG	HG	HG	VHG	VHG	VHG
Grind	µm	75	75	75	75	75	75	75	75	75	75	75	53	75	75	75
NaCN	ppm	350/200	750/500	500/300	350/200	750/500	500/300	500/300	350/200	750/500 ppm	750/500 ppm	500/300	750/500	350/200	750/500 ppm	500/300
Dissolved Oxygen	mg/L	8 mg/L	15 mg/L	15-20 then 8	8 mg/L	15 mg/L	15-20 then 8	15-20 then 8	8 mg/L	15 mg/L	15 mg/L	15-20 then 8	15 mg/L	8 mg/L	15 mg/L	15-20 then 8
Gravity Recovery	0	11.5%	13.8%	14.0%	7.7%	8.4%	10.3%	8.9%	6.3%	7.0%	6.9%	6.6%	5.5%	7.9%	7.7%	8.1%
Recovery 2 hour	2	46.2%	68.4%	66.3%	56.8%	65.1%	70.8%	61.3%	45.9%	70.7%	68.9%	50.7%	64.9%	29.3%	55.1%	35.5%
Recovery 4 hour	4	55.1%	71.7%	69.2%	61.5%	69.2%	75.3%	65.2%	46.5%	78.7%	76.8%	63.9%	68.1%	36.4%	62.4%	44.6%
Recovery 8 hour	8	64.4%	76.5%	74.4%	67.4%	73.3%	80.0%	69.2%	50.2%	82.0%	79.9%	65.7%	72.9%	45.9%	69.2%	49.1%
Recovery 24 hour	24	72.4%	76.3%	77.3%	67.5%	75.2%	85.9%	74.3%	59.6%	84.3%	82.7%	70.9%	74.4%	55.7%	70.4%	56.4%
Recovery 48 hour	48	75.5%	79.1%	77.4%	75.1%	75.9%	87.1%	75.3%	64.5%	84.1%	82.0%	69.6%	75.4%	57.8%	70.5%	65.7%
Calc Head	g/t	1.09	0.91	0.89	1.96	1.79	1.47	1.70	2.99	2.75	2.82	2.86	3.42	12.31	12.71	12.14
Assay Head	g/t	1.00	1.00	1.00	1.70	1.70	1.70	1.70	3.65	3.65	3.65	3.65	3.65	14.25	14.25	14.25
Residue Grade	g/t	0.27	0.19	0.20	0.49	0.43	0.19	0.42	1.06	0.44	0.51	0.87	0.84	5.19	3.75	4.16
Gravity Recovery	g/t	0.13	0.13	0.12	0.15	0.15	0.15	0.15	0.19	0.19	0.19	0.19	0.19	0.98	0.98	0.99
NaCN Consumption 24h	kg/t	0.63	1.19	0.71	0.40	0.82	0.53	0.53	0.59	1.23	1.23	0.68	1.64	0.84	1.90	1.05
NaCN Consumption 48h	kg/t	0.77	1.48	0.92	0.55	1.57	0.67	0.67	0.80	1.55	1.55	0.76	1.95	1.08	2.32	1.26
Lime Consumption 24h	kg/t	3.18	2.86	3.02	2.79	2.50	2.77	2.77	3.61	3.01	3.01	3.42	3.39	7.80	7.79	8.00
Lime Consumption 48 h	kg/t	3.18	2.86	3.02	2.79	2.50	2.77	2.77	3.61	3.01	3.01	3.42	3.39	7.80	7.79	8.00
As	ppm	18,320			5,187				11,601					27,927		
S	%	0.19			4.22				4.51					9.85		
Sulphide	%	0.04			3.56				4.29					9.15		
Sulphate	%	0.15			0.66				0.22					0.7		
Total Carbon	%	0.76			0.39				0.87					0.49		
Non-Carbonate Carbon	%	I/S			0.31				0.75					0.47		

Table 4: IMO metallurgy composite sample head assays.

ELEMENTS	UNITS	DETECTION	Oxide LG	Trans LG	Fresh LG	Oxide MG	Trans MG	Fresh MG	Oxide HG	Trans HG	Fresh HG	Fresh VHG
Au Average	ppm	0.005	0.99	0.98	1.00	2.02	1.38	1.70	5.66	2.94	3.65	14.25
Au	ppm	0.005	0.918	0.925	1.018	2.05	1.35	1.73	5.26	2.90	3.75	14.25
Au	ppm	0.005	1.07	1.039	0.988	1.99	1.41	1.68	6.06	2.98	3.56	14.25
Ag	ppm	2	X	X	X	X	X	X	X	X	X	X
As	ppm	20	1,861	1,049	1,392	4,355	2,200	3,769	18,320	5,187	11,601	27,927
Cu	ppm	5	340	201	190	313	287	212	402	465	325	749
Sb	ppm	20	X	X	X	X	X	X	X	X	X	X
Te	ppm	20	X	X	X	X	X	X	X	X	X	X
S	%	0.01	0.73	2.09	2.51	0.15	2.35	2.87	0.19	4.22	4.51	9.85
Sulphide	%	0.01	0.53	1.63	2.3	0.01	1.82	2.66	0.04	3.56	4.29	9.15
Sulphate	%	0.01	0.2	0.46	0.21	0.14	0.53	0.21	0.15	0.66	0.22	0.7
Total Carbon	%	0.01	0.21	0.26	0.97	0.26	0.32	0.49	0.76	0.39	0.87	0.49
Non-Carbonate Carbon	%	0.01	0.21	0.22	0.9	0.26	0.27	0.4	I/S	0.31	0.75	0.47

Al	%	0.01	2.61	2.99	3.87	1.64	3.98	2.97	2.84	3.24	3.16	2.87
Ba	ppm	10	69	45	103	153	146	55	121	102	87	62
Bi	ppm	20	X	X	X	X	X	X	30	X	X	39
Ca	%	0.01	0.3	1.16	2.83	0.09	2.36	3.46	0.14	2.4	4.05	2.26
Cd	ppm	5	X	6	X	X	X	X	X	X	X	X
Co	ppm	5	13	16	X	X	25	10	X	12	11	23
Cr	ppm	20	33	41	63	37	72	111	43	42	89	102
Fe	%	0.01	14.34	13.75	13.12	17.31	13.77	13.41	13.87	14.61	15.05	17.06
Li	ppm	5	X	6	22	X	13	17	X	11	14	12
Mg	%	0.01	0.36	1.3	2.31	0.08	1.86	2.23	0.2	1.9	2.3	1.41
Mn	ppm	5	639	1996	2737	95	3150	2867	406	2749	2430	1442
Mo	ppm	5	X	X	X	X	X	X	6	X	X	X
Na	%	0.01	0.02	0.08	0.39	0.02	0.15	0.19	0.03	0.11	0.24	0.14
Ni	ppm	5	49	63	45	38	102	28	33	84	32	75
P	%	0.01	0.04	0.05	0.03	0.03	0.06	0.03	0.03	0.05	0.03	0.03
Pb	ppm	20	X	X	X	X	X	X	25	24	X	X
S	%	0.01	0.8	2.06	2.63	0.13	2.32	2.88	I/S	4.33	4.71	11.18
Sc	ppm	5	X	X	6	X	6	5	7	6	6	5
Sr	ppm	5	20	20	37	38	35	34	33	29	39	31
Ti	ppm	20	1070	1090	1802	788	1407	1203	1171	1274	1234	1113
Tl	ppm	20	X	X	X	X	X	X	X	X	X	X
V	ppm	10	38	27	58	30	43	33	95	38	43	40
Y	ppm	5	11	20	16	8	26	18	11	23	19	16
Zn	ppm	5	244	397	160	204	607	156	157	384	152	131
Zr	ppm	5	31	36	54	29	55	40	40	43	42	38

Figure 3: High NaCN oxide kinetic curves.:

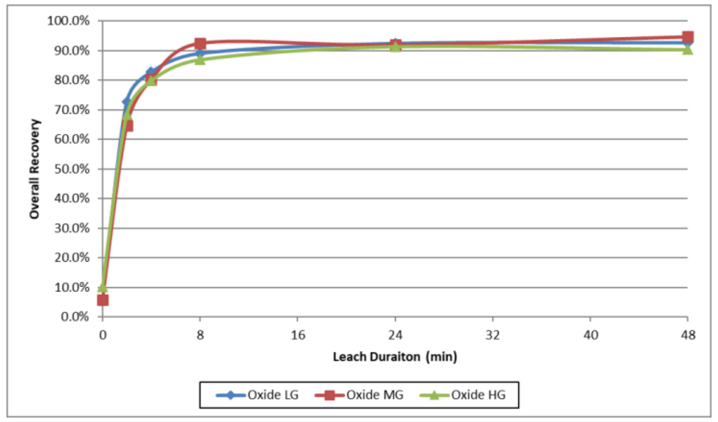

Figure 4: High NaCN transitional kinetic curves.

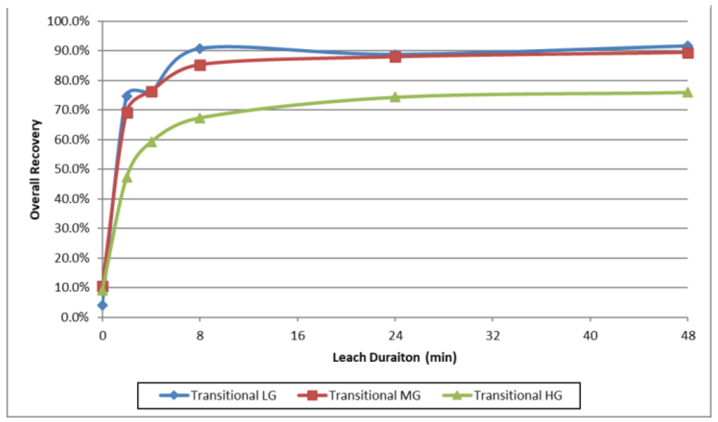

Figure 5: High NaCN fresh kinetic curves.

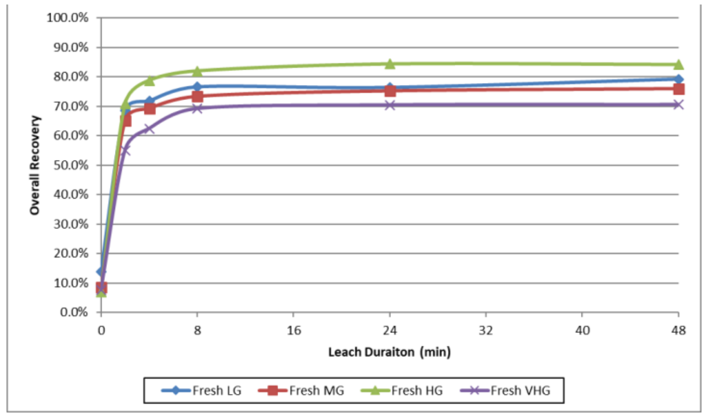

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Table 5: Mt Porter Central 2017 metallurgical (down dip) drilling programme intercepts

BHID	Spatial Data Easting (m)	Northing (m)	Elevation (m)	Azimuth (degrees)	Dip (degrees)	EOH (m)	Intercept Data Method	From (m)	To (m)	Interval (m)	Top Cut Au Grade (Au g/t <= 20)	Raw Au Grade (g/t)
MPRC347	**10,208.176**	**10,375.395**	**521.734**	**269.841**	**59.60**	**44.0**	**RC**	**7**	**41**	**34**	**2.95**	**3.24**
							including	*11*	*14*	*3*	*11.14*	*14.48*
							including	*17*	*21*	*4*	*5.78*	*5.78*
							including	*31*	*33*	*2*	*4.78*	*4.78*
							including	*36*	*37*	*1*	*4.63*	*4.63*
							RC	**43**	**44**	**1**	**0.55**	**0.55**
MPRC348	**10,183.304**	**10,444.524**	**516.647**	**270.841**	**60.50**	**55.0**	**RC**	**5**	**11**	**6**	**1.13**	**1.13**
							including	*9*	*10*	*1*	*3.03*	*3.03*
							RC	**13**	**26**	**13**	**2.37**	**2.37**
							including	*15*	*17*	*2*	*3.61*	*3.61*
							including	*22*	*25*	*3*	*3.50*	*3.50*
							RC	**30**	**37**	**7**	**4.60**	**4.60**
							including	*30*	*32*	*2*	*6.30*	*6.30*
							including	*34*	*37*	*3*	*7.40*	*7.40*
							RC	**40**	**55**	**15**	**2.66**	**2.66**
							including	*40*	*43*	*3*	*4.59*	*4.59*
							including	*47*	*54*	*7*	*3.02*	*3.02*
MPRC349	**10,149.917**	**10,447.246**	**525.362**	**269.591**	**60.25**	**50.0**	**RC**	**17**	**20**	**3**	**0.95**	**0.95**
							including	*17*	*18*	*1*	*1.21*	*1.21*
							RC	**28**	**29**	**1**	**0.74**	**0.74**
							RC	**31**	**44**	**13**	**5.66**	**5.95**
							including	*33*	*39*	*6*	*8.92*	*9.54*
							RC	**47**	**50**	**3**	**0.62**	**0.62**
							including	*47*	*48*	*1*	*1.06*	*1.06*
MPRC350	**10,160.487**	**10,399.534**	**521.287**	**270.341**	**60.00**	**53.0**	**RC**	**20**	**41**	**21**	**2.47**	**2.47**
							including	*24*	*29*	*5*	*6.94*	*6.94*

1. All Au results are based on 50g fire assays with ICP-AAS finish conducted by North Australian Laboratory (NAL) Pine Creek, with a detection limit of 0.01 g/t.
2. All grades are calculated on a 0.50 g/t Au lower cutoff.
3. The maximum internal waste within any given intercept is based on no more than 1 continuous metre of waste below the cutoff grade.
4. All intercept grades are calculated by the length weighted average of the primary Au assay. Repeat and duplicate assays of greater value than the primary (first) assay have not been substituted or averaged into the primary Au grade.
5. All raw grades are based on non top-cut raw primary Au assay data.
6. All top cut grades are based on primary Au assay data with a geostatistically validated top cut of 20 g/t Au applied.
7. All intervals are down hole lengths.
8. All assaying is based on down hole intervals of 1 metre of RC drilled rock chip samples split by static cone splitter.
9. All holes drilled using 4 inch RC face sampling hammer and oriented approximately perpendicular to mineralisation strike and parallel to mineralisation dip for the purpose of maximising returned MET suitable sample.
10. QAQC regime applied comprises:
a) Average of 1 in 5 duplicate samples split by static cone splitter and independently processed and assayed as checks.
b) Average of 1 in 25 replicate assays plus replicates of all assays of greater than 1 g/t Au.
c) Average of 1 in 25 certified Gannet Au standards selected for appropriate grade and mineralisation type.
d) Duplicates of all intervals conserved at Ark Mines storage facility against future QAQC requirements.

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Resource extension development work included:

- Mt Porter South resource development programme recommenced in April 2017:
    - RTKdGPS survey pegging of all collars by Land Survey.
    - Post wet season repair of 23 drill pads built in 2016 by Union Extended.
    - RC drilling of 1465m on 35 collars by WJ Drilling using 4 inch hammer and Gemco RC rig with auxiliary compressor, static cone split and sampled by metre into pre-numbered calico bags, with duplicates taken and conserved every metre (see Figure 6, Appendix B).
    - All logging was carried out on site in conjunction with drilling and all intervals had chips conserved in numbered chip trays.
    - Recovery was periodically tested by mass using spring balance, and estimated by volume between mass testing.
    - All samples assayed by North Australian Laboratories using 50g fire assay with ICP-AAS finish for Au, and 1 in 5 samples tested for SG by pycnometry with selection by weathering profile and lithology (see Appendix B).
    - Water pycnometry was conducted by NAL using deionised water on crushed and pulverised drill cuttings after kiln drying, using a 100ml grade A volumetric flask on a 15g analytical balance weighed charge, degassed by vacuum pump.
    - QAQC consisted of certified Gannet standards at 1 in 25, duplicates at 1 in 25, lab replicates on all results above 0.5 g/t with replicates below 0.5 g/t if needed to make up 1 in 25, blank quartz mill flush after every sample, with flush assayed at the beginning and end of every batch.
    - Background water table quality samples were taken by bailer from 6 completed and air flushed RC holes, after 24 hour recharge, with holes selected to be distributed evenly across the drilled portion of the deposit and samples tested by SGS for pH, conductivity, total alkalinity, bicarbonate alkalinity, carbonate alkalinity, hydroxide alkalinity, total hardness, Cl-, Ca, K, Na, Mg, Sulphate S, total S, Al, B, Fe, Mn, V, Zn, As, Be, Cd, Cr, Co, Cu, Pb, Ni and Hg; both total and dissolved for all elements (see Appendix C).
    - Active drilling was halted on 9 May 2017 due to poor drill performance averaging approximately 40m per day, 80m per day below agreed KPI target average.
    - The remainder of drilling and QAQC programme is expected to be completed in 2018 to 2019.
    - Drilling still to be completed is expected to total 500 to 1000m.
    - Drilling results were better than expected with good potential to develop a small but viable resource addition to the Mt Porter Mine:
        - See Table 6 for significant intercepts.
        - See Appendix B for a total result summary table in local grid.
        - See attachments for drill data tables in MGA94 zone 52L grid.
    - Interpretation and modelling of the drilling results is in progress.
        - Substantial regeneration of historic paper logs has commenced, to support interpretation of the new lithological data.

Figure 6: Mt Porter geology showing drill collar locations.

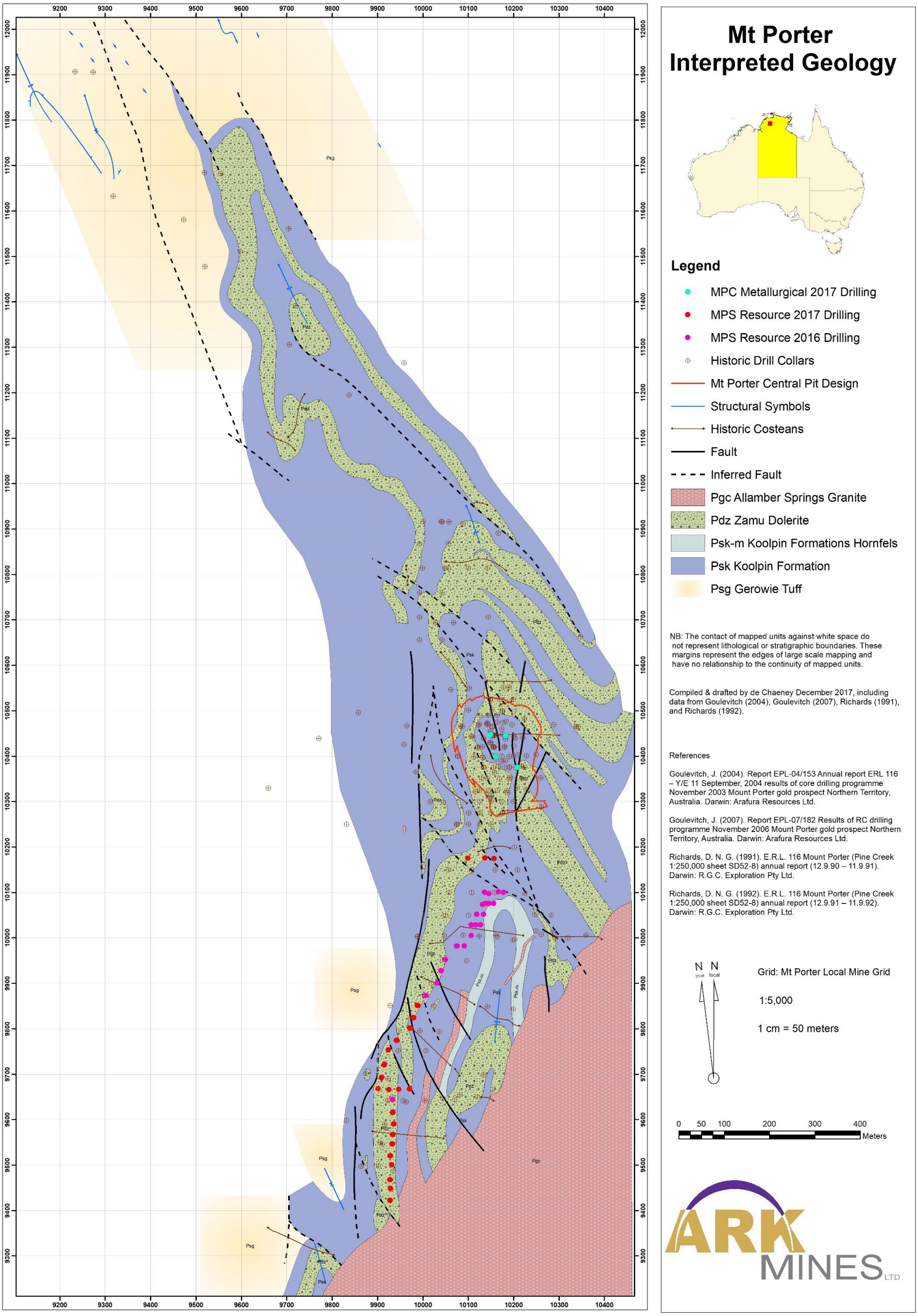

Table 6: Mt Porter South Phase 1 and 2 2017 Drill Programme Significant Intercepts.

	Spatial Data						Intercept Data				
BHID	**Easting**	**Northing**	**Elevation**	**Azimuth**	**Dip**	**EOH**	**Method**	**From**	**To**	**Interval**	**Au Grade**
	(m)	*(m)*	*(m)*	*(degrees)*	*(degrees)*	*(m)*		(m)	(m)	(m)	(g/t)
MPRC267	**10,145.505**	**10,075.932**	**507.859**	**89.341**	**60.25**	**32.0**	**RC**	**6**	**7**	**1**	**0.83**
MPRC269	**10,134.348**	**10,051.750**	**513.667**	**89.841**	**60.25**	**20.0**	**RC**	**3**	**4**	**1**	**1.04**
MPRC270	**10,118.983**	**10,052.147**	**514.149**	**89.341**	**60.50**	**32.0**	**RC**	**14**	**17**	**3**	**1.20**
							including	*15*	*16*	*1*	*1.68*
MPRC271	**10,127.386**	**10,028.722**	**516.416**	**90.341**	**60.50**	**23.0**	**RC**	**8**	**13**	**5**	**1.19**
							including	*11*	*13*	**2**	*1.62*
MPRC272	**10,116.667**	**10,028.249**	**516.949**	**90.341**	**60.00**	**35.0**	**RC**	**8**	**9**	**1**	**2.98**
							RC	**17**	**22**	**5**	**2.13**
							including	*17*	*19*	**2**	*4.48*
							RC	**31**	**32**	**1**	**0.73**
MPRC273	**10,106.857**	**10,028.351**	**518.077**	**89.841**	**78.00**	**35.0**	**RC**	**21**	**24**	**3**	**2.12**
							RC	**33**	**34**	**1**	**0.68**
MPRC274	**10,106.735**	**10,005.191**	**517.513**	**90.841**	**61.00**	**32.0**	**RC**	**3**	**4**	**1**	**0.50**
							RC	**28**	**31**	**3**	**0.66**
							including	*14*	*16*	*2*	*8.95*
MPRC275	**10,091.729**	**9,982.280**	**516.389**	**90.341**	**60.00**	**26.0**	**RC**	**12**	**17**	**5**	**4.13**
							RC	**20**	**21**	**1**	**2.33**
							RC	**20**	**21**	**1**	**2.33**
							RC	**23**	**25**	**2**	**1.30**
							including	*24*	*25*	*1*	*1.92*
MPRC276	**10,075.803**	**9,982.024**	**520.929**	**89.591**	**60.75**	**36.0**	**RC**	**3**	**4**	**1**	**0.75**
							RC	**16**	**19**	**3**	**0.64**
							RC	**21**	**23**	**2**	**0.74**
							RC	**31**	**35**	**4**	**1.47**
							including	*31*	*32*	*1*	*2.25*
MPRC277	**10,074.775**	**9,982.020**	**520.979**	**89.591**	**76.75**	**35.0**	**RC**	**26**	**27**	**1**	**1.84**
MPRC279	**10,050.328**	**9,952.412**	**528.994**	**90.341**	**60.00**	**38.0**	**RC**	**7**	**11**	**4**	**1.63**
							including	*8*	*10*	*2*	*2.54*
							RC	**29**	**30**	**1**	**0.59**
MPRC280	**10,049.467**	**9,952.503**	**529.053**	**90.341**	**75.75**	**53.0**	**RC**	**45**	**47**	**2**	**2.64**
							RC	**50**	**53**	**3**	**0.53**
MPRC282	**10,040.616**	**9,927.988**	**530.630**	**89.841**	**60.00**	**36.0**	**RC**	**16**	**17**	**1**	**0.50**
MPRC283	**10,039.616**	**9,927.985**	**530.630**	**89.841**	**80.50**	**40.0**	**RC**	**7**	**9**	**2**	**1.14**
							including	*8*	*9*	*1*	*1.73*
							RC	**10**	**26**	**16**	**1.02**
							including	*11*	*12*	*1*	*1.73*
							including	*14*	*16*	*2*	*1.64*
							including	*23*	*24*	*1*	*1.43*
							RC	**29**	**30**	**1**	**1.01**
MPRC285	**10,031.792**	**9,900.684**	**529.410**	**90.841**	**60.20**	**45.0**	**RC**	**13**	**19**	**6**	**1.31**
							including	*17*	*19*	*2*	*1.98*
							RC	**41**	**42**	**1**	**0.59**
MPRC287	**10,007.394**	**9,872.960**	**529.921**	**90.841**	**60.20**	**50.0**	**RC**	**15**	**16**	**1**	**0.67**
MPRC288	**10,004.444**	**9,873.003**	**529.921**	**90.841**	**80.50**	**71.0**	**RC**	**38**	**40**	**2**	**0.59**
MPRC290	**9,989.346**	**9,851.287**	**534.907**	**89.841**	**60.00**	**41.0**	**RC**	**8**	**9**	**1**	**1.09**
MPRC291	**9,988.286**	**9,851.354**	**534.999**	**89.841**	**76.00**	**44.0**	**RC**	**42**	**43**	**1**	**0.90**
MPRC297	**9,971.564**	**9,801.136**	**529.969**	**90.591**	**77.00**	**41.0**	**RC**	**39**	**40**	**1**	**0.53**
MPRC299	**9,943.201**	**9,774.274**	**529.736**	**89.341**	**60.00**	**22.0**	**RC**	**3**	**5**	**2**	**0.64**
							RC	**10**	**21**	**11**	**0.92**
							including	*11*	*14*	*3*	*1.31*

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BHID	Spatial Data Easting (m)	Northing (m)	Elevation (m)	Azimuth (degrees)	Dip (degrees)	EOH (m)	Intercept Data Method	From (m)	To (m)	Interval (m)	Au Grade (g/t)
							including	*17*	*18*	*1*	*1.44*
MPRC299B	**9,942.739**	**9,774.193**	**529.724**	**89.341**	**60.00**	**41.0**	**RC**	**9**	**17**	**8**	**1.21**
							including	*10*	*12*	*2*	*1.72*
							including	*14*	*16*	*2*	*1.60*
							RC	**19**	**20**	**1**	**1.66**
							RC	**31**	**33**	**2**	**2.55**
							including	*32*	*33*	*1*	*3.91*
MPRC300	**9,942.139**	**9,774.632**	**529.764**	**89.341**	**76.50**	**40.0**	**RC**	**3**	**6**	**3**	**1.09**
							including	*3*	*5*	*2*	*1.30*
							RC	**25**	**26**	**1**	**0.86**
							RC	**36**	**37**	**1**	**2.38**
MPRC301	**9,924.111**	**9,753.532**	**529.490**	**90.841**	**60.25**	**41.0**	**RC**	**1**	**5**	**4**	**1.49**
							including	*2*	*4*	*2*	*2.18*
							RC	**10**	**14**	**4**	**1.84**
							including	*11*	*13*	*2*	*3.01*
							RC	**21**	**22**	**1**	**0.69**
							RC	**25**	**31**	**6**	**0.69**
							including	*26*	*27*	*1*	*1.76*
							RC	**33**	**36**	**3**	**1.68**
							including	*33*	*35*	*2*	*2.24*
							RC	**40**	**41**	**1**	**0.63**
MPRC302	**9,923.934**	**9,753.245**	**529.510**	**89.841**	**77.00**	**44.0**	**RC**	**17**	**18**	**1**	**1.54**
							RC	**22**	**25**	**3**	**2.30**
							RC	**33**	**34**	**1**	**1.18**
							RC	**39**	**44**	**5**	**0.78**
MPRC304	**9,915.898**	**9,722.495**	**527.511**	**90.591**	**60.25**	**38.0**	**RC**	**27**	**31**	**4**	**0.62**
							RC	**35**	**38**	**3**	**1.86**
MPRC305	**9,915.426**	**9,720.029**	**527.400**	**89.341**	**77.00**	**41.0**	**RC**	**26**	**29**	**3**	**1.10**
							including	*26*	*27*	*1*	*1.67*
							RC	**34**	**35**	**1**	**1.00**
							RC	**38**	**40**	**2**	**0.81**
MPRC306	**9,909.777**	**9,692.674**	**525.844**	**89.841**	**60.25**	**35.0**	**RC**	**13**	**15**	**2**	**1.27**
							including	*13*	*14*	*1*	*1.99*
MPRC307	**9,908.776**	**9,692.408**	**525.805**	**89.341**	**77.00**	**35.0**	**RC**	**23**	**24**	**1**	**0.61**
							RC	**27**	**28**	**1**	**0.58**
MPRC310	**9,947.090**	**9,666.685**	**515.948**	**89.341**	**60.00**	**41.0**	**RC**	**10**	**12**	**2**	**0.67**
							RC	**15**	**16**	**1**	**0.55**
							RC	**21**	**26**	**5**	**0.79**
							including	*25*	*26*	*1*	*1.17*
							RC	**34**	**35**	**1**	**0.95**
MPRC311	**9,971.020**	**9,667.312**	**510.169**	**92.341**	**60.25**	**29.0**	**RC**	**19**	**20**	**1**	**1.23**
MPRC313	**9,933.659**	**9,643.258**	**517.973**	**89.841**	**60.25**	**40.0**	**RC**	**25**	**28**	**3**	**1.29**
							including	*25*	*26*	*1*	*2.44*
							RC	**33**	**35**	**2**	**0.91**
							including	*33*	*34*	*1*	*1.24*
MPRC315	**9,934.165**	**9,616.902**	**516.679**	**89.841**	**60.25**	**41.0**	**RC**	**20**	**22**	**2**	**0.83**
							RC	**26**	**29**	**3**	**1.28**
							including	*26*	*28*	*2*	*1.61*
MPRC316	**9,934.077**	**9,615.217**	**516.510**	**89.841**	**76.75**	**47.0**	**RC**	**27**	**31**	**4**	**1.61**
							including	*27*	*29*	*2*	*2.17*
							RC	**33**	**34**	**1**	**0.51**
MPRC318	**9,936.984**	**9,590.337**	**515.361**	**90.591**	**60.25**	**35.0**	**RC**	**14**	**18**	**4**	**1.54**

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BHID	Spatial Data Easting (m)	Northing (m)	Elevation (m)	Azimuth (degrees)	Dip (degrees)	EOH (m)	Intercept Data Method	From (m)	To (m)	Interval (m)	Au Grade (g/t)
							including	*15*	*17*	*2*	*2.31*
							RC	**20**	**25**	**5**	**0.98**
							including	*21*	*23*	*2*	*1.32*
							including	*24*	*25*	*1*	*1.30*
MPRC319	**9,935.936**	**9,590.403**	**515.378**	**90.591**	**77.50**	**38.0**	**RC**	**22**	**24**	**2**	**0.60**
							RC	**27**	**30**	**3**	**1.36**
							including	*28*	*30*	*2*	*1.75*
MPRC321	**9,934.485**	**9,567.078**	**516.182**	**90.341**	**59.75**	**35.0**	**RC**	**15**	**18**	**3**	**1.53**
							including	*15*	*17*	*2*	*1.81*
							RC	**21**	**26**	**5**	**1.72**
							including	*21*	*24*	*3*	*2.52*
MPRC322	**9,933.529**	**9,566.979**	**516.100**	**90.341**	**77.00**	**38.0**	**RC**	**18**	**21**	**3**	**1.55**
							including	*19*	*21*	*2*	*1.82*
							RC	**26**	**31**	**5**	**3.69**
							including	*27*	*29*	*2*	*8.03*
MPRC324	**9,933.273**	**9,546.167**	**516.812**	**90.841**	**60.50**	**38.0**	**RC**	**14**	**17**	**3**	**0.57**
							RC	**23**	**26**	**3**	**1.43**
							including	*23*	*25*	*2*	*1.85*
MPRC325	**9,932.460**	**9,546.064**	**516.779**	**90.841**	**77.00**	**48.0**	**RC**	**21**	**22**	**1**	**0.56**
MPRC327	**9,928.744**	**9,520.471**	**518.968**	**89.841**	**60.00**	**40.0**	**RC**	**20**	**21**	**1**	**0.65**
							RC	**26**	**29**	**3**	**0.94**
							including	*27*	*28*	*1*	*1.25*
MPRC328	**9,927.831**	**9,520.475**	**518.912**	**89.841**	**77.00**	**47.0**	**RC**	**27**	**32**	**5**	**3.13**
							including	*29*	*32*	*3*	*4.60*
							RC	**37**	**39**	**2**	**1.22**
							including	*37*	*38*	*1*	*1.77*
MPRC329	**9,931.605**	**9,500.253**	**520.097**	**90.041**	**77.00**	**47.0**	**RC**	**14**	**22**	**8**	**2.46**
							including	*14*	*20*	*6*	*2.92*
							RC	**27**	**30**	**3**	**1.04**
							including	*27*	*28*	*1*	*1.80*
MPRC331	**9,928.491**	**9,467.785**	**522.690**	**90.841**	**61.00**	**39.0**	**RC**	**18**	**23**	**5**	**1.49**
							including	*18*	*20*	*2*	*2.10*
							RC	**26**	**28**	**2**	**0.92**
MPRC332	**9,927.488**	**9,467.759**	**522.726**	**90.841**	**77.00**	**44.0**	**RC**	**24**	**30**	**6**	**2.52**
							including	*25*	*29*	*4*	*3.30*
							RC	**35**	**37**	**2**	**1.25**
							including	*36*	*37*	*1*	*1.45*
MPRC334	**9,929.081**	**9,448.389**	**522.786**	**90.591**	**77.00**	**53.0**	**RC**	**27**	**34**	**7**	**1.73**
							including	*30*	*34*	*4*	*2.39*
							RC	**38**	**43**	**5**	**1.42**
							including	*39*	*41*	*2*	*1.95*
MPRC336	**9,928.523**	**9,421.943**	**523.661**	**88.841**	**60.25**	**44.0**	**RC**	**32**	**33**	**1**	**4.19**
							RC	**35**	**36**	**1**	**1.01**
MPRC337	**9,927.669**	**9,421.942**	**523.532**	**88.841**	**77.00**	**56.0**	**RC**	**47**	**53**	**6**	**1.21**
							including	*48*	*50*	*2*	*2.14*

1. All Au results are based on 50g fire assays with ICP-AAS finish conducted by North Australian Laboratory (NAL) Pine Creek, with a detection limit of 0.01 g/t.
2. All grades are calculated on a 0.50 g/t Au lower cutoff.
3. The maximum internal waste within any given intercept is based on no more than 1 continuous metre of waste below the cutoff grade.
4. All intercept grades are calculated by the length weighted average of the primary Au assay. Repeat and duplicate assays of greater value than the primary (first) assay have not been substituted or averaged into the primary Au grade.

5. All raw grades are based on non top-cut raw primary Au assay data.
6. All top cut grades are based on primary Au assay data with a geostatistically validated top-cut of 20 g/t Au applied.
7. All intervals are down hole lengths.
8. All assaying is based on down hole intervals of 1 metre of RC drilled rock chip samples split by static cone splitter.
9. All holes drilled using 4 inch RC face sampling hammer and oriented approximately perpendicular to mineralisation strike and parallel to mineralisation dip for the purpose of maximising returned MET suitable sample.
10. QAQC regime applied comprises:
a) Average of 1 in 5 duplicate samples split by static cone splitter and independently processed and assayed as checks.
b) Average of 1 in 25 replicate assays plus replicates of all assays of greater than 1 g/t Au.
c) Average of 1 in 25 certified Gannet Au standards selected for appropriate grade and mineralisation type.
d) Duplicates of all intervals conserved at Ark Mines storage facility against future QAQC requirements.

Mining Start Up

- Mining at Mt Porter was planned to commence between May and June 2017, but delays with mining equipment hire contract negotiations pushed the start date back to July.
- On July 18th, two days prior to Ark Mines Mt Porter Mine start up, Kirkland Lake Gold submitted a variation on the Union Reefs Toll Treatment Agreement to Ark Mines, imposing a cost increase of 22% to 54%, depending on throughput rate.
- A treatment cost increase of this magnitude was determined to be unsustainable, and when further negotiation with Kirkland Lake Gold failed to achieve a satisfactory resolution, Ark Mines suspended plans to commence mining until a viable alternative treatment option could be developed.
- Planning for alternative treatment of the Mt Porter ore is currently in progress.

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Appendix A: Mount Porter Central Metallurgical Drilling Data Summary (Local Grid)

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC347	10208.176	10375.395	521.734	269.841	59.6	44	0	1										
MPRC347							1	2	0.21			2.74	dolerite		2	15	10	oxide
MPRC347							2	3	0.06				black shale		2	20	10	oxide
MPRC347							3	4	0.21				black shale		2	20	12	oxide
MPRC347							4	5	0.44				black shale		8	10	8	oxide
MPRC347							5	6	0.26				black shale		1	8	10	oxide
MPRC347							6	7	0.4			2.76	black shale		15	12	8	oxide
MPRC347							7	8	4.29	4.05			black shale		2	15	8	oxide
MPRC347							8	9	1.15				black shale		1	10	12	oxide
MPRC347							9	10	0.63				black shale		1	8	10	oxide
MPRC347							10	11	1.76	1.17			black shale		5	8	10	oxide
MPRC347							11	12	30	27.8	28.5	2.66	black shale		75	10	12	oxide
MPRC347							12	13	9.68	9.97	10.3		black shale		20	12	10	oxide
MPRC347							13	14	3.75	3.76			black shale		1	14	12	oxide
MPRC347							14	15	1.73	1.85			black shale		1	20	8	oxide
MPRC347							15	16	1.53	1.61			black shale		75	14	8	oxide
MPRC347							16	17	1.52			2.73	black shale		15	35	10	oxide
MPRC347							17	18	2.43	2.37			black shale	dolerite	2	30	12	oxide
MPRC347							18	19	1.24				black shale		4	12	6	oxide
MPRC347							19	20	16.3	16.3	16.9		black shale		55	15	6	oxide
MPRC347							20	21	3.14	2.75			black shale		4	20	5	oxide
MPRC347				259.241	61.9		21	22	0.67			2.66	black shale		1	10	5	oxide
MPRC347							22	23	0.95				black shale		10	6	5	oxide
MPRC347							23	24	1.1	1.03			black shale		12	6	5	oxide
MPRC347							24	25	1.15	1.29			black shale		1	8	3	transition
MPRC347							25	26	1.2				black shale		2	6	4	transition
MPRC347							26	27	0.85			2.66	black shale		10	12	2	transition
MPRC347							27	28	1.39	1.45			black shale		1	1	1	transition
MPRC347							28	29	1.35				black shale		4	5	1	transition
MPRC347							29	30	0.81				black shale		8	1	2	transition
MPRC347							30	31	0.38				black shale		4	1	1	transition
MPRC347							31	32	6.29	6.17		3.01	black shale		10	0	0	fresh

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC347							32	33	3.26	3.42			black shale		1	4	0	fresh
MPRC347							33	34	1.83	1.9			black shale		20	0	0	fresh
MPRC347							34	35	2.27	1.87			black shale		15	0	0	fresh
MPRC347							35	36	0.41				black shale		0	1	0	fresh
MPRC347							36	37	4.63	5.01	4.84	2.92	black shale		0	0	0	fresh
MPRC347							37	38	0.99				black shale		0	0	0	fresh
MPRC347				281.541	61.5		38	39	0.53				black shale		1	0	0	fresh
MPRC347							39	40	0.39				black shale		70	0	0	fresh
MPRC347							40	41	0.64				black shale		15	0	0	fresh
MPRC347							41	42	0.12			2.73	black shale		5	0	0	fresh
MPRC347							42	43	0.15				black shale		1	0	0	fresh
MPRC347							43	44	0.55	0.61			black shale		1	0	0	fresh
MPRC348	10183.304	10444.524	516.647	270.841	60.5	55	0	1										
MPRC348							1	2	0.37				black shale		0	75	15	oxide
MPRC348							2	3	0.26				black shale		0	78	20	oxide
MPRC348							3	4	0.15				black shale		1	78	18	oxide
MPRC348							4	5	0.24				black shale		4	78	15	oxide
MPRC348							5	6	0.54			2.74	black shale		5	80	12	oxide
MPRC348							6	7	0.6				black shale		20	65	10	oxide
MPRC348							7	8	1.38	1.44			black shale		35	20	15	oxide
MPRC348							8	9	0.71	0.69			black shale		30	20	14	oxide
MPRC348							9	10	3.03	3.07	3.16		black shale		10	40	15	oxide
MPRC348							10	11	0.51			2.62	black shale		2	65	8	oxide
MPRC348							11	12	0.01				black shale		0	60	6	oxide
MPRC348							12	13	0.38				black shale		20	40	10	oxide
MPRC348							13	14	2.81	2.92			black shale		70	18	10	oxide
MPRC348							14	15	0.82				black shale		70	15	8	oxide
MPRC348							15	16	1.52	1.52		2.44	black shale		20	20	6	oxide
MPRC348							16	17	5.7	5.81	5.6		black shale		30	28	6	oxide
MPRC348							17	18	1.13				black shale		1	20	6	oxide
MPRC348				262.341	59.6		18	19	2.15	2.4			black shale		0	12	6	oxide
MPRC348							19	20	2.32	2.3			black shale		0	15	4	transition
MPRC348							20	21	1.62			2.88	black shale		0	5	5	transition
MPRC348							21	22	1.06				black shale		5	5	4	transition
MPRC348							22	23	1.96	1.78			black shale		8	2	4	transition

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC348							23	24	6.43	6.67	6.91		black shale		2	4	4	transition
MPRC348							24	25	2.1	2.17			black shale		8	1	2	transition
MPRC348							25	26	1.14			2.84	black shale		0	0	1	transition
MPRC348							26	27	0.13				black shale		1	0	1	transition
MPRC348							27	28	0.08				black shale		0	0	1	transition
MPRC348							28	29	0.17				black shale		0	0	0	fresh
MPRC348				272.841	59.6		29	30	0.22				black shale		1	0	0	fresh
MPRC348							30	31	5.61	5.5		3.11	black shale		2	0	0	fresh
MPRC348							31	32	6.98	6.8			black shale		0	0	0	fresh
MPRC348							32	33	0.38	0.36			black shale		0	0	0	fresh
MPRC348							33	34	0.67				black shale		10	0	0	fresh
MPRC348							34	35	2.17	2		2.86	black shale		15	0	0	fresh
MPRC348							35	36	17.4	16.3	16.2		black shale		4	0	0	fresh
MPRC348							36	37	2.64	2.57			black shale		20	0	0	fresh
MPRC348							37	38	0.94				black shale		17	0	0	fresh
MPRC348							38	39	0.33				black shale		3	0	0	fresh
MPRC348							39	40	0.38			2.87	black shale		2	0	0	fresh
MPRC348							40	41	1.82	1.85			black shale		1	0	0	fresh
MPRC348							41	42	10.5	11.5			black shale		4	0	0	fresh
MPRC348							42	43	1.46	1.37			black shale		0	0	0	fresh
MPRC348							43	44	1.14	1.17			black shale		10	0	0	fresh
MPRC348							44	45	0.29			3.09	black shale		0	0	0	fresh
MPRC348							45	46	2.2	2.14			black shale		20	0	0	fresh
MPRC348							46	47	0.43				black shale		0	0	0	fresh
MPRC348							47	48	4.47	4.57			black shale		18	0	0	fresh
MPRC348							48	49	1.64	1.6			black shale		24	0	0	fresh
MPRC348							49	50	4.35	4.23	4.45	3.44	black shale		20	0	0	fresh
MPRC348				262.341	59		50	51	3.07	2.86			black shale		10	0	0	fresh
MPRC348							51	52	3.27				black shale		15	0	0	fresh
MPRC348							52	53	0.89				black shale		5	0	0	fresh
MPRC348							53	54	3.48	3.38			black shale		4	0	0	fresh
MPRC348							54	55	0.82			3.36	black shale		0	0	0	fresh
MPRC349	10149.917	10447.246	525.362	269.591	60.25	50	0	1	0.01									
MPRC349							1	2	0.01				black shale		0	18	5	oxide
MPRC349							2	3	0.01				black shale		0	10	6	oxide

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC349							3	4	0.01				black shale		0	10	6	oxide
MPRC349							4	5	0.01				black shale		0	8	5	oxide
MPRC349							5	6	0.01			3.09	black shale		0	10	6	oxide
MPRC349							6	7	0.01				black shale		0	8	6	oxide
MPRC349							7	8	0.01				black shale		0	6	8	oxide
MPRC349							8	9	0.01				black shale		0	6	6	oxide
MPRC349							9	10	0.01				black shale		0	4	6	oxide
MPRC349							10	11	0.01			2.45	black shale		1	4	5	oxide
MPRC349							11	12	0.01				black shale		0	10	5	oxide
MPRC349							12	13	0.01				black shale		0	6	4	oxide
MPRC349							13	14	0.01				black shale		0	8	6	oxide
MPRC349							14	15	0.01				black shale		0	5	8	oxide
MPRC349							15	16	0.01			2.8	black shale		4	8	15	oxide
MPRC349							16	17	0.01				black shale		6	12	10	oxide
MPRC349							17	18	1.21	1.1			black shale		82	6	10	oxide
MPRC349							18	19	0.89				black shale		84	5	10	oxide
MPRC349				264.841	61.6		19	20	0.76	0.76			black shale		20	12	10	oxide
MPRC349							20	21	0.36			2.67	black shale		75	8	12	oxide
MPRC349							21	22	0.3				black shale		15	15	10	oxide
MPRC349							22	23	0.05				black shale	dolerite	15	12	10	oxide
MPRC349							23	24	0.15				black shale	dolerite	0	12	15	oxide
MPRC349							24	25	0.16	0.19			black shale	dolerite	0	8	8	oxide
MPRC349							25	26	0.11			2.75	black shale		1	4	6	transition
MPRC349							26	27	0.11				black shale		0	1	2	transition
MPRC349							27	28	0.02				black shale		1	0	2	transition
MPRC349							28	29	0.74				black shale		0	0	1	transition
MPRC349							29	30	0.15				black shale		0	0	1	transition
MPRC349				265.641	61.3		30	31	0.36			2.82	black shale		2	0	1	transition
MPRC349							31	32	2.1	2.37			black shale		60	0	0	fresh
MPRC349							32	33	2.77	2.63			black shale		10	20	0	fresh
MPRC349							33	34	6.11	6.14			black shale		80	10	0	fresh
MPRC349							34	35	1.42	1.42			black shale		20	2	0	fresh
MPRC349							35	36	14.9	14.8	16.2	3.03	black shale		10	0	0	fresh
MPRC349							36	37	23.7	26.4			black shale		15	0	0	fresh
MPRC349							37	38	3.98	4.38			black shale		50	0	3	fresh

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC349							38	39	7.1	6.65	6.82		black shale		60	0	0	fresh
MPRC349							39	40	1.79	1.68			black shale	dolerite	70	0	0	fresh
MPRC349							40	41	4.56	4.43		3.03	black shale	dolerite	20	0	2	fresh
MPRC349							41	42	2.57	2.47			black shale		40	0	4	fresh
MPRC349							42	43	4.81	4.31	4.3		black shale		5	0	0	fresh
MPRC349							43	44	1.52	1.36			black shale		2	0	1	fresh
MPRC349				265.741	62.3		44	45	0.2				black shale		0	0	0	fresh
MPRC349							45	46	0.22			2.84	black shale		0	0	0	fresh
MPRC349							46	47	0.26				black shale		2	0	0	fresh
MPRC349							47	48	1.06	1.08			black shale		4	0	0	fresh
MPRC349							48	49	0.29				black shale		0	0	0	fresh
MPRC349							49	50	0.51				black shale		1	4	2	fresh
MPRC350	10160.487	10399.534	521.287	270.341	60	53	0	1	0.18				black shale		0	2	6	oxide
MPRC350							1	2	0.19				black shale		0	2	6	oxide
MPRC350							2	3	0.02			2.61	black shale		0	2	6	oxide
MPRC350							3	4	0.05				black shale		1	1	8	oxide
MPRC350							4	5	0.15				black shale		0	0	6	oxide
MPRC350							5	6	0.01				black shale		0	0	8	oxide
MPRC350							6	7	0.01				black shale		1	0	6	oxide
MPRC350							7	8	0.05			2.47	black shale		1	2	6	oxide
MPRC350							8	9	0.02				black shale		0	1	6	oxide
MPRC350							9	10	0.01				black shale		0	0	10	oxide
MPRC350							10	11	0.01				black shale		0	1	8	oxide
MPRC350							11	12	0.05				black shale		1	1	6	oxide
MPRC350							12	13	0.03			2.62	black shale		5	4	8	oxide
MPRC350							13	14	0.07				black shale		3	6	10	oxide
MPRC350							14	15	0.05				black shale		0	5	12	oxide
MPRC350							15	16	0.44	0.38			black shale		1	5	14	oxide
MPRC350							16	17	0.2				black shale	dolerite	1	8	14	oxide
MPRC350							17	18	0.12			2.77	black shale	dolerite	0	6	10	oxide
MPRC350							18	19	0.12				black shale		0	5	10	oxide
MPRC350							19	20	0.15				black shale	dolerite	0	2	8	oxide
MPRC350				264.341	59.5		20	21	0.62				black shale		0	0	2	transition
MPRC350							21	22	0.31				black shale		1	0	5	transition
MPRC350							22	23	1.15	1.1		2.82	black shale		5	10	3	transition

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BHID	MP Local East *m*	MP Local North *m*	MP Local RL *m*	MP Local Azimuth *degrees*	DIP *degrees*	EOH *m*	FROM *m*	TO *m*	AU1 *ppm*	AU2 *ppm*	AU3 *ppm*	SG1	LITH1	LITH2	VQZ *%*	CLAY *%*	FEOX *%*	Weathering
MPRC350							23	24	0.36				black shale		1	4	1	transition
MPRC350							24	25	3.22	3.47			black shale		2	0	1	transition
MPRC350							25	26	17.8	17.1			black shale		2	2	0	fresh
MPRC350							26	27	5.07	5.44			black shale		4	0	0	fresh
MPRC350							27	28	6.66	6.55	6.44	3.08	black shale		1	0	0	fresh
MPRC350							28	29	1.94	1.85			black shale		2	0	1	fresh
MPRC350							29	30	0.98				black shale		0	0	0	fresh
MPRC350							30	31	1.55	1.48			black shale		30	0	0	fresh
MPRC350							31	32	1.15				black shale		5	0	1	fresh
MPRC350							32	33	1.6	1.44		2.9	black shale		4	0	0	fresh
MPRC350							33	34	1.58	1.73			black shale		1	0	0	fresh
MPRC350							34	35	0.65				black shale		0	0	1	fresh
MPRC350				279.341	58.9		35	36	0.55	0.57			black shale		5	0	0	fresh
MPRC350							36	37	2	2.1			black shale		4	0	0	fresh
MPRC350							37	38	2.01	1.97		2.96	black shale		1	0	0	fresh
MPRC350							38	39	0.39				black shale		8	0	0	fresh
MPRC350							39	40	1.35	1.57			black shale		2	0	1	fresh
MPRC350							40	41	0.93				black shale		0	0	0	fresh
MPRC350							41	42	0.12				black shale		4	0	0	fresh
MPRC350							42	43	0.11			2.97	black shale		0	0	0	fresh
MPRC350							43	44	0.13				black shale		3	0	0	fresh
MPRC350							44	45	0.15				black shale		1	0	0	fresh
MPRC350							45	46	0.12				black shale		4	0	0	fresh
MPRC350							46	47	0.25	0.25			black shale		3	0	0	fresh
MPRC350							47	48	0.03			2.73	black shale		1	0	0	fresh
MPRC350							48	49	0.07				black shale		3	0	0	fresh
MPRC350							49	50	0.06				black shale		3	0	0	fresh
MPRC350							50	51	0.02				black shale		2	0	0	fresh
MPRC350				275.841	58.9		51	52	0.03				black shale		3	0	0	fresh
MPRC350							52	53	0.1			2.95	black shale		1	0	0	fresh

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Appendix B: Mount Porter South Resource Development Drilling Data Summary (Local Grid)

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC290	9989.346	9851.287	534.907	89.841	60	41	0	1										
MPRC290							1	2										
MPRC290							2	3	0.16			2.92	black shale		40	30	14	oxide
MPRC290							3	4	0.06			2.97	black shale		1	25	14	oxide
MPRC290							4	5	0.01				black shale		10	20	14	oxide
MPRC290							5	6	0.19	0.16			black shale		2	8	14	oxide
MPRC290							6	7	0.13	0.14		2.91	black shale		0	5	14	oxide
MPRC290							7	8	0.05				black shale		8	8	10	oxide
MPRC290							8	9	1.09	1.07			black shale		5	10	12	oxide
MPRC290							9	10	0.19				black shale		6	15	12	oxide
MPRC290							10	11	0.04				black shale		10	10	8	oxide
MPRC290							11	12	0.16	0.15			black shale		10	10	14	oxide
MPRC290							12	13	0.02			2.81	black shale		20	18	12	oxide
MPRC290							13	14	0.01				black shale		18	14	10	oxide
MPRC290							14	15	0.02				black shale		10	14	12	oxide
MPRC290							15	16	L			2.7	black shale		1	10	10	oxide
MPRC290							16	17	0.01	0.02			black shale		2	12	12	oxide
MPRC290							17	18	L				black shale		2	8	12	oxide
MPRC290							18	19	0.05			2.86	black shale		20	8	12	oxide
MPRC290							19	20	0.04				black shale		10	14	10	oxide
MPRC290							20	21	0.07				black shale		12	12	12	oxide
MPRC290							21	22	0.07			2.64	black shale		40	12	12	oxide
MPRC290				102.341	57.5		22	23	0.01				black shale		5	14	10	oxide
MPRC290							23	24	0.03				black shale		35	6	10	oxide
MPRC290							24	25	0.02			2.74	black shale		10	8	8	oxide
MPRC290							25	26	L				black shale		10	12	10	oxide
MPRC290							26	27	L				black shale		5	6	8	oxide
MPRC290							27	28	L	L			black shale		2	8	6	oxide
MPRC290							28	29	L			2.73	black shale		15	8	8	oxide
MPRC290							29	30	L			2.71	black shale		0	8	10	oxide
MPRC290							30	31	L				black shale		0	8	5	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC290							31	32	L				black shale		0	4	5	oxide
MPRC290							32	33	L				black shale		4	8	6	oxide
MPRC290							33	34	L			2.65	black shale		40	15	8	oxide
MPRC290							34	35	0.02			2.82	black shale		60	10	12	oxide
MPRC290							35	36	0.02				black shale		20	12	14	oxide
MPRC290							36	37	L				black shale		1	12	8	oxide
MPRC290				108.141	55.8		37	38	L			2.73	black shale		0	5	5	oxide
MPRC290							38	39	L				black shale		2	2	6	oxide
MPRC290							39	40	0.01			2.7	black shale		20	8	4	oxide
MPRC290							40	41	0.01				black shale		0.5	4	5	oxide
MPRC291	9988.286	9851.354	534.999	89.841	76	44	0	1	0.03				black shale		0.5	20	10	oxide
MPRC291							1	2	L			2.91	black shale		2	15	8	oxide
MPRC291							2	3	0.04			2.65	black shale		70	18	10	oxide
MPRC291							3	4	0.07			2.78	black shale		60	25	12	oxide
MPRC291							4	5	0.2	0.21		2.86	black shale		68	16	14	oxide
MPRC291							5	6	0.09			3.03	black shale		40	18	14	oxide
MPRC291							6	7	0.1			2.97	black shale		25	25	12	oxide
MPRC291							7	8	0.07			2.89	black shale		30	24	12	oxide
MPRC291							8	9	0.02			2.99	black shale		8	30	12	oxide
MPRC291							9	10	L				black shale		4	25	14	oxide
MPRC291							10	11	0.1	0.08			black shale		68	18	12	oxide
MPRC291							11	12	0.11				black shale		55	24	12	oxide
MPRC291							12	13	0.23			2.82	black shale		60	15	14	oxide
MPRC291							13	14	0.04				black shale		20	20	12	oxide
MPRC291							14	15	0.05			3.06	black shale		5	25	10	oxide
MPRC291							15	16	0.32	0.32			black shale		30	20	12	oxide
MPRC291							16	17	L				black shale		0.5	16	10	oxide
MPRC291							17	18	0.03				black shale		1	16	8	oxide
MPRC291							18	19	L				black shale		5	12	8	oxide
MPRC291							19	20	L			2.86	black shale		20	10	14	oxide
MPRC291							20	21	L			2.96	black shale		0	6	10	oxide
MPRC291							21	22	L				black shale		15	6	12	oxide
MPRC291				83.941	73.7		22	23	0.05	0.06			black shale		8	6	12	oxide
MPRC291							23	24	0.03				black shale		10	12	14	oxide
MPRC291							24	25	L			2.89	black shale		70	14	12	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC291							25	26	L				black shale		10	14	12	oxide
MPRC291							26	27	0.01				black shale		2	8	6	oxide
MPRC291							27	28	L			2.93	black shale		1	6	6	oxide
MPRC291							28	29	L				black shale		0	4	5	oxide
MPRC291							29	30	L				black shale		2	8	8	oxide
MPRC291							30	31	L				black shale		10	8	12	oxide
MPRC291							31	32	L	L			black shale		1	6	6	oxide
MPRC291							32	33	L				black shale		4	7	10	oxide
MPRC291							33	34	L				black shale		2	8	8	oxide
MPRC291							34	35	L			2.82	black shale		0	4	4	oxide
MPRC291							35	36	L				black shale		0	4	2	oxide
MPRC291							36	37	L				black shale		1	6	4	oxide
MPRC291							37	38	L				black shale		5	5	4	oxide
MPRC291							38	39	L				black shale		6	4	4	oxide
MPRC291							39	40	L				black shale		2	5	4	oxide
MPRC291				100.441	72.4		40	41	0.09	0.1			black shale		5	6	6	oxide
MPRC291							41	42	0.07			2.87	black shale		15	6	8	oxide
MPRC291							42	43	0.9	0.94		2.87	black shale		18	4	2	transition
MPRC291							43	44	0.04				black shale		0	2	2	transition
MPRC293	9980.232	9824.472	534.42	90.091	60	44	0	1										
MPRC293							1	2										
MPRC293							2	3	0.11				black shale		6	75	14	oxide
MPRC293							3	4	0.05				black shale		20	65	12	oxide
MPRC293							4	5	0.1			2.84	black shale		4	55	12	oxide
MPRC293							5	6	0.26	0.25			black shale		5	35	12	oxide
MPRC293							6	7	0.2	0.2			black shale		10	40	12	oxide
MPRC293							7	8	0.17			3.02	black shale		10	30	12	oxide
MPRC293							8	9	0.03				black shale		1	15	14	oxide
MPRC293							9	10	0.16				black shale		6	15	14	oxide
MPRC293							10	11	0.4	0.38			black shale		8	17	12	oxide
MPRC293							11	12	0.24				black shale		10	20	14	oxide
MPRC293							12	13	0.19			2.91	black shale		5	15	14	oxide
MPRC293							13	14	0.36	0.34			black shale		6	12	12	oxide
MPRC293							14	15	0.05				black shale		8	12	10	oxide
MPRC293							15	16	0.04				black shale		3	10	12	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC293							16	17	0.05				black shale		8	12	10	oxide
MPRC293							17	18	0.04			3.13	black shale		20	12	10	oxide
MPRC293							18	19	0.05			2.94	black shale		15	14	10	oxide
MPRC293							19	20	0.02				black shale		5	18	12	oxide
MPRC293							20	21	0.02				black shale		1	12	8	oxide
MPRC293							21	22	0.04				black shale		1	10	6	oxide
MPRC293				100.841	58.9		22	23	0.02			2.95	black shale		0	10	8	oxide
MPRC293							23	24	0.03	0.01		2.84	black shale		18	14	10	oxide
MPRC293							24	25	0.03				black shale		5	18	12	oxide
MPRC293							25	26	0.02				black shale		2	12	12	oxide
MPRC293							26	27	0.04				black shale		1	10	14	oxide
MPRC293							27	28	0.03				black shale		1	14	12	oxide
MPRC293							28	29	0.03				black shale		1	12	12	oxide
MPRC293							29	30	0.02			2.78	black shale		2	16	6	oxide
MPRC293							30	31	0.02				black shale		0	6	4	oxide
MPRC293							31	32	0.01				black shale		0	4	2	oxide
MPRC293							32	33	0.02	L			black shale		1	2	2	oxide
MPRC293							33	34	0.01			2.85	black shale		0	1	3	oxide
MPRC293							34	35	0.02				black shale		1	2	6	oxide
MPRC293							35	36	0.03				black shale		10	4	14	oxide
MPRC293							36	37	0.08				black shale		2	2	12	oxide
MPRC293							37	38	0.03				black shale		1	4	8	oxide
MPRC293							38	39	0.02				black shale	aplite	10	2	6	oxide
MPRC293							39	40	0.13			2.83	black shale	aplite	2	6	8	oxide
MPRC293				104.041	56.4		40	41	0.15	0.12		2.92	black shale		50	2	5	oxide
MPRC293							41	42	0.03				black shale		2	2	5	oxide
MPRC293							42	43	0.03				black shale		0	1	4	oxide
MPRC293							43	44	0.02				black shale		0	1	4	oxide
MPRC294	9979.263	9824.465	534.402	90.091	77	48	0	1										
MPRC294							1	2	0.28	0.25			black shale		8	75	14	oxide
MPRC294							2	3	0.08				black shale		4	75	14	oxide
MPRC294							3	4	0.05			3.05	black shale		5	70	8	oxide
MPRC294							4	5	0.02				black shale		4	50	6	oxide
MPRC294							5	6	0.05				black shale		12	40	6	oxide
MPRC294							6	7	0.08			3.12	black shale		50	25	10	oxide

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC294							7	8	0.05	0.05		2.83	black shale		40	28	10	oxide
MPRC294							8	9	0.06				black shale		1	35	8	oxide
MPRC294							9	10					black shale		1	30	8	oxide
MPRC294							10	11	0.05				black shale		25	25	12	oxide
MPRC294							11	12	0.03				black shale		15	20	10	oxide
MPRC294							12	13	0.03				black shale		12	25	10	oxide
MPRC294							13	14	0.02			2.66	black shale		20	38	12	oxide
MPRC294							14	15	0.09			2.85	black shale		65	20	12	oxide
MPRC294							15	16	0.19	0.2		2.83	black shale		20	25	12	oxide
MPRC294							16	17	0.1				black shale		10	25	12	oxide
MPRC294							17	18	0.07				black shale		8	25	12	oxide
MPRC294							18	19	0.11	0.1			black shale		6	20	14	oxide
MPRC294							19	20	0.05			3.13	black shale		15	20	12	oxide
MPRC294							20	21	0.03				black shale		6	16	12	oxide
MPRC294							21	22	0.04				black shale		2	18	10	oxide
MPRC294							22	23	0.06				black shale		1	18	12	oxide
MPRC294				96.841	75.4		23	24	0.04				black shale		2	15	12	oxide
MPRC294							24	25	0.02			2.85	black shale		0	25	8	oxide
MPRC294							25	26	0.03				black shale		0	18	8	oxide
MPRC294							26	27	0.05				black shale		1	14	8	oxide
MPRC294							27	28	0.03				black shale		0	4	6	oxide
MPRC294							28	29	0.03				black shale		1	8	8	oxide
MPRC294							29	30	0.19	0.19			black shale		20	10	12	oxide
MPRC294							30	31	0.29			2.8	black shale		60	18	14	oxide
MPRC294							31	32	0.04			2.87	black shale		1	8	8	oxide
MPRC294							32	33	0.03				black shale		4	8	6	oxide
MPRC294							33	34	0.02				black shale		2	9	8	oxide
MPRC294							34	35	0.02				black shale		0.5	8	6	oxide
MPRC294							35	36	0.02				black shale		0.5	2	4	oxide
MPRC294							36	37	0.01				black shale		0	1	4	oxide
MPRC294							37	38	0.01				black shale		1	0	2	oxide
MPRC294							38	39	0.02				black shale		1	4	4	transition
MPRC294							39	40	0.03				black shale		0.5	15	4	transition
MPRC294							40	41	0.02				black shale		0.5	12	5	transition
MPRC294							41	42	0.05			2.78	black shale		15	12	6	transition

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC294							42	43	0.03				black shale		3	5	1	transition
MPRC294							43	44	0.09			2.81	black shale		1	2	1	transition
MPRC294				103.841	74		44	45	0.3	0.28			black shale		2	1	2	transition
MPRC294							45	46	0.01				black shale		0.5	0	1	transition
MPRC294							46	47	0.02				black shale		0	0	2	transition
MPRC294							47	48	0.18	0.14		2.72	black shale	aplite	15	2	2	transition
MPRC294B	9978.729	9824.479	534.394	90.091	77	48	0	1										
MPRC294B							1	2					black shale		8	75	14	oxide
MPRC294B							2	3	0.09	0.09			black shale		4	75	14	oxide
MPRC294B							3	4	0.05	0.07		2.75	black shale		5	70	8	oxide
MPRC294B							4	5	0.03	0.04			black shale		4	50	6	oxide
MPRC294B							5	6	0.04				black shale		12	40	6	oxide
MPRC294B							6	7	0.08			2.75	black shale		50	25	10	oxide
MPRC294B							7	8	0.05			3.02	black shale		40	28	10	oxide
MPRC294B							8	9	0.04				black shale		1	35	8	oxide
MPRC294B							9	10	0.02				black shale		1	30	8	oxide
MPRC294B							10	11	0.19	0.17			black shale		25	25	12	oxide
MPRC294B							11	12	0.07				black shale		15	20	10	oxide
MPRC294B							12	13	0.04				black shale		12	25	10	oxide
MPRC294B							13	14	0.03			2.75	black shale		20	38	12	oxide
MPRC294B							14	15	0.04			2.85	black shale		65	20	12	oxide
MPRC294B							15	16	0.17	0.19		2.84	black shale		20	25	12	oxide
MPRC294B							16	17	0.09				black shale		10	25	12	oxide
MPRC294B							17	18	0.06				black shale		8	25	12	oxide
MPRC296	9972.783	9801.068	529.806	90.591	60	47	0	1										
MPRC296							1	2										
MPRC296							2	3										
MPRC296							3	4										
MPRC296							4	5	0.04			2.67	black shale		8	65	12	oxide
MPRC296							5	6	0.06				black shale		25	26	6	oxide
MPRC296							6	7	0.11				black shale		45	20	10	oxide
MPRC296							7	8	0.11			2.6	black shale		60	10	12	oxide
MPRC296							8	9	0.03				black shale		20	20	8	oxide
MPRC296							9	10	0.03			2.77	black shale		0	35	14	oxide
MPRC296							10	11	0.08				black shale		20	28	14	oxide

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC296							11	12	0.21	0.23		2.77	black shale		20	25	12	oxide
MPRC296							12	13	0.12				black shale		4	26	12	oxide
MPRC296							13	14	0.07				black shale		4	20	14	oxide
MPRC296							14	15	0.01				black shale		2	15	8	oxide
MPRC296							15	16	0.07				black shale		10	18	12	oxide
MPRC296							16	17	L				black shale		18	16	10	oxide
MPRC296							17	18	L				black shale		12	10	8	oxide
MPRC296							18	19	L			2.72	black shale		20	18	10	oxide
MPRC296							19	20	L				black shale		2	12	8	oxide
MPRC296							20	21	L				black shale		1	6	10	oxide
MPRC296							21	22	L	0.01		2.86	black shale		1	6	10	oxide
MPRC296				102.541	59.3		22	23	L				black shale		5	10	6	oxide
MPRC296							23	24	L				black shale		1	6	6	oxide
MPRC296							24	25	L				black shale		1	8	8	oxide
MPRC296							25	26	L				black shale		1	8	5	oxide
MPRC296							26	27	L				black shale		0	5	8	oxide
MPRC296							27	28	L				black shale		1	5	6	oxide
MPRC296							28	29	L				black shale		0	4	6	oxide
MPRC296							29	30	L			2.76	black shale		6	12	10	oxide
MPRC296							30	31	0.19	0.22		2.71	black shale		55	8	8	oxide
MPRC296							31	32	L				black shale		5	8	8	oxide
MPRC296							32	33	L				black shale		3	6	6	oxide
MPRC296							33	34	L			2.97	black shale		12	5	8	oxide
MPRC296							34	35	L				black shale		10	5	9	oxide
MPRC296							35	36	L				black shale		16	6	8	oxide
MPRC296							36	37	L			2.95	black shale		1	5	8	oxide
MPRC296							37	38	L				black shale		0	6	8	oxide
MPRC296							38	39	L	L			black shale		0	2	5	oxide
MPRC296							39	40	L				black shale		4	1	5	oxide
MPRC296							40	41	L				black shale	aplite	1	1	4	oxide
MPRC296							41	42	L				black shale		0	0	2	transition
MPRC296							42	43	L				black shale	aplite	1	0	1	transition
MPRC296				86.541	55.8		43	44	L				black shale	aplite	8	0	1	transition
MPRC296							44	45	L	L			black shale	aplite	0	1	1	transition
MPRC296							45	46	L			2.7	black shale	microgranite	20	0	0	transition

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC296							46	47	L				aplite		0	0	2	transition
MPRC297	9971.564	9801.136	529.969	90.591	77	41	0	1										
MPRC297							1	2	0.09	0.1			black shale		1	95	2	oxide
MPRC297							2	3	0.07	0.08			black shale		1	92	2	oxide
MPRC297							3	4	0.1			2.83	black shale		2	85	8	oxide
MPRC297							4	5	0.07			2.64	black shale		20	65	10	oxide
MPRC297							5	6	0.03				black shale		20	40	14	oxide
MPRC297							6	7	0.03			2.53	black shale		10	20	12	oxide
MPRC297							7	8	0.03				black shale		8	20	14	oxide
MPRC297							8	9	0.09				black shale		10	35	10	oxide
MPRC297							9	10	0.29	0.27		2.85	black shale		50	35	14	oxide
MPRC297							10	11	0.16				black shale		45	38	14	oxide
MPRC297							11	12	0.15				black shale		25	38	14	oxide
MPRC297							12	13	0.1			2.69	black shale		2	55	12	oxide
MPRC297							13	14	0.09			2.89	black shale		50	35	12	oxide
MPRC297							14	15	0.06				black shale		5	45	14	oxide
MPRC297							15	16	0.04				black shale		2	48	12	oxide
MPRC297							16	17	0.17	0.16		2.66	black shale		20	35	12	oxide
MPRC297							17	18	0.07			2.73	black shale		8	20	14	oxide
MPRC297							18	19	0.03				black shale		4	16	10	oxide
MPRC297							19	20	0.03			2.64	black shale		15	16	12	oxide
MPRC297							20	21	0.09				black shale		4	12	10	oxide
MPRC297							21	22	0.06				black shale		6	10	12	oxide
MPRC297				100.041	76.1		22	23	0.13				black shale		2	12	10	oxide
MPRC297							23	24	0.16	0.15		2.87	black shale		1	10	10	oxide
MPRC297							24	25	0.05				black shale		1	8	8	oxide
MPRC297							25	26	0.02				black shale		0.5	8	6	oxide
MPRC297							26	27	0.02				black shale		0	4	2	oxide
MPRC297							27	28	0.03			2.88	black shale		0	2	4	oxide
MPRC297							28	29	0.04	0.03		2.7	black shale		20	10	10	oxide
MPRC297							29	30	0.04				black shale		2	5	6	oxide
MPRC297							30	31	0.01			2.82	black shale		8	4	8	oxide
MPRC297							31	32	0.03				black shale		10	6	9	oxide
MPRC297							32	33	0.03				black shale		4	4	8	oxide
MPRC297							33	34	0.01				black shale		1	4	4	oxide

BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC297							34	35	0.01			2.92	black shale		0	1	2	oxide
MPRC297							35	36	0.02				black shale		1	1	2	oxide
MPRC297							36	37	0.01			3	black shale		0	0	1	oxide
MPRC297				89.941	73.9		37	38	0.01				black shale		1	0	2	transition
MPRC297							38	39	0.04			2.87	black shale		18	1	2	transition
MPRC297							39	40	0.53	0.54	0.53		black shale		5	0	1	transition
MPRC297							40	41	0.02				black shale		0	1	1	transition
MPRC299	9943.201	9774.274	529.736	89.341	60	22	0	1										
MPRC299							1	2										
MPRC299							2	3										
MPRC299							3	4	0.57				black shale		0	85	14	oxide
MPRC299							4	5	0.7	0.75			black shale		0	85	14	oxide
MPRC299							5	6	0.31				black shale		0	85	14	oxide
MPRC299							6	7	0.48	0.47			black shale		0	87	12	oxide
MPRC299							7	8	0.24				black shale		0	82	12	oxide
MPRC299							8	9	0.27				dolerite		0	80	12	oxide
MPRC299							9	10	0.38			2.75	dolerite		0	85	12	oxide
MPRC299							10	11	0.71				dolerite		0	86	12	oxide
MPRC299							11	12	1.74	1.7			dolerite		2	70	13	oxide
MPRC299							12	13	0.88	0.86			dolerite		0	82	12	oxide
MPRC299							13	14	1.32	1.31			dolerite		0	78	12	oxide
MPRC299							14	15	0.66				dolerite		0	86	12	oxide
MPRC299							15	16	0.48				dolerite		0	82	12	oxide
MPRC299							16	17	0.83	0.88		2.82	dolerite		0	84	12	oxide
MPRC299							17	18	1.44	1.54			dolerite		0	86	12	oxide
MPRC299							18	19	0.46				dolerite		0	86	12	oxide
MPRC299							19	20	0.79	0.8			dolerite		0	86	12	oxide
MPRC299							20	21	0.77	0.71			dolerite		0	87	12	oxide
MPRC299				101.741	63.7		21	22	0.09				dolerite		0	8	12	oxide
MPRC299B	9942.739	9774.193	529.724	89.341	60	41	0	1										
MPRC299B							1	2										
MPRC299B							2	3										
MPRC299B							3	4										
MPRC299B							4	5	0.44				black shale		0	84	14	oxide
MPRC299B							5	6										

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC299B							6	7										
MPRC299B							7	8	0.12				black shale		0	87	12	oxide
MPRC299B							8	9	0.22				dolerite	black shale	0	82	12	oxide
MPRC299B							9	10	0.53			2.63	dolerite		0	78	15	oxide
MPRC299B							10	11	2.38	2.4			dolerite		0	80	13	oxide
MPRC299B							11	12	1.05	1.02			dolerite		1	75	12	oxide
MPRC299B							12	13	0.77			2.67	dolerite		10	70	14	oxide
MPRC299B							13	14	0.59				dolerite		0	86	10	oxide
MPRC299B							14	15	1.34	1.27			dolerite		2	82	10	oxide
MPRC299B							15	16	1.86	1.87			dolerite		0	79	12	oxide
MPRC299B							16	17	1.18	1.19		2.62	dolerite		0	80	12	oxide
MPRC299B							17	18	0.14				dolerite		0	86	10	oxide
MPRC299B							18	19	0.29				dolerite		0	89	10	oxide
MPRC299B							19	20	1.66	1.67			dolerite		0	82	10	oxide
MPRC299B							20	21	0.28				dolerite		0	75	8	oxide
MPRC299B							21	22	0.27				dolerite		0.5	60	8	oxide
MPRC299B				101.741	63.7		22	23	0.1				dolerite		0	80	10	oxide
MPRC299B							23	24	0.02				dolerite		0	70	6	oxide
MPRC299B							24	25	0.06				dolerite		0	80	6	oxide
MPRC299B							25	26	0.09				dolerite		0	82	10	oxide
MPRC299B							26	27	0.19				dolerite		0	65	6	oxide
MPRC299B							27	28	0.02				dolerite		0	50	8	oxide
MPRC299B							28	29	0.18				dolerite		0	60	12	oxide
MPRC299B							29	30	0.12				dolerite		0	40	10	oxide
MPRC299B							30	31	0.07				dolerite		0	45	12	oxide
MPRC299B							31	32	1.18	1.14		2.76	dolerite		1	42	14	oxide
MPRC299B							32	33	3.91	3.91			dolerite		2	45	12	oxide
MPRC299B							33	34	0.31				dolerite		0	46	12	oxide
MPRC299B							34	35	0.31	0.28			dolerite		0	38	15	oxide
MPRC299B							35	36	0.12				dolerite		0	30	45	oxide
MPRC299B							36	37	0.08				dolerite		0	30	14	oxide
MPRC299B				99.341	63.3		37	38	0.07				dolerite	black shale	0	45	14	oxide
MPRC299B							38	39	0.06				black shale	dolerite	1	38	10	oxide
MPRC299B							39	40	0.05			2.53	black shale		2	34	10	oxide
MPRC299B							40	41	0.01				black shale		1	15	2	oxide

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	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC300	9942.139	9774.632	529.764	89.341	76.5	40	0	1										
MPRC300							1	2										
MPRC300							2	3	0.2				dolerite		0	84	14	oxide
MPRC300							3	4	1.26	1.2	1.22		dolerite		2	84	14	oxide
MPRC300							4	5	1.34	1.34	1.35		dolerite		1	84	14	oxide
MPRC300							5	6	0.67	0.63		2.67	dolerite		0	82	12	oxide
MPRC300							6	7	0.4	0.42			dolerite		0	84	12	oxide
MPRC300							7	8	0.21				dolerite		0	84	12	oxide
MPRC300							8	9	0.22				dolerite		0	84	12	oxide
MPRC300							9	10	0.12				dolerite		0	82	12	oxide
MPRC300							10	11	0.26	0.21			dolerite		1	80	12	oxide
MPRC300							11	12	0.15				dolerite		0	82	12	oxide
MPRC300							12	13	0.22				dolerite		0	80	12	oxide
MPRC300							13	14	0.09			2.65	dolerite		0	80	12	oxide
MPRC300							14	15	0.16				dolerite		0	82	12	oxide
MPRC300							15	16	0.2				dolerite		0	82	12	oxide
MPRC300							16	17	0.43	0.4			dolerite		0	80	12	oxide
MPRC300							17	18	0.2				dolerite		0	80	12	oxide
MPRC300							18	19	0.16				dolerite		0	82	12	oxide
MPRC300							19	20	0.06				dolerite		0	82	12	oxide
MPRC300							20	21	0.24	0.2			dolerite		0	80	12	oxide
MPRC300							21	22	0.05				dolerite		0	25	10	oxide
MPRC300							22	23	0.03				dolerite		0	15	8	oxide
MPRC300				86.241	76.9		23	24	0.03			2.87	dolerite		0	12	6	oxide
MPRC300							24	25	0.21				dolerite		0	15	6	oxide
MPRC300							25	26	0.86	0.89			dolerite		0.5	8	4	oxide
MPRC300							26	27	0.07				dolerite		1	4	2	oxide
MPRC300							27	28	0.06				dolerite		0	4	3	oxide
MPRC300							28	29	0.02				dolerite		0	2	2	oxide
MPRC300							29	30	0.15				dolerite		0.5	85	8	oxide
MPRC300							30	31	0.11				dolerite		0	45	6	oxide
MPRC300							31	32	0.17	0.17			dolerite		0	38	12	oxide
MPRC300							32	33	0.1				dolerite		0	20	10	oxide
MPRC300							33	34	0.2	0.2		2.6	dolerite		0	40	14	oxide
MPRC300				92.941	77		34	35	0.16				dolerite		0	6	5	oxide

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	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC300							35	36	0.12				dolerite		0	1	2	transition
MPRC300							36	37	2.38	2.39			dolerite		2	2	1	transition
MPRC300							37	38	0.13				dolerite	aplite	0.5	1	0	fresh
MPRC300							38	39	0.1				dolerite	aplite	0	2	0	fresh
MPRC300							39	40	0.07			2.87	dolerite		0.5	0	0	fresh
MPRC302	9923.934	9753.245	529.51	89.841	77	44	0	1										
MPRC302							1	2										
MPRC302							2	3										
MPRC302							3	4	0.23				black shale		18	70	10	oxide
MPRC302							4	5	0.07			2.65	black shale		0	85	12	oxide
MPRC302							5	6	0.4	0.36			black shale		4	80	12	oxide
MPRC302							6	7	0.31				black shale		0	85	12	oxide
MPRC302							7	8	0.16				black shale		0	88	12	oxide
MPRC302							8	9	0.15				black shale		0	87	12	oxide
MPRC302							9	10	0.15				black shale		0	86	12	oxide
MPRC302							10	11	0.15				black shale		0	75	12	oxide
MPRC302							11	12	0.09			2.73	black shale		0	80	12	oxide
MPRC302							12	13	0.03				black shale		20	70	10	oxide
MPRC302							13	14	0.09			2.7	black shale		32	55	10	oxide
MPRC302							14	15	0.05			2.64	black shale		10	75	12	oxide
MPRC302							15	16	0.22				black shale		0	85	12	oxide
MPRC302							16	17	0.14				black shale		1	82	10	oxide
MPRC302							17	18	1.54	1.55		2.7	black shale		6	78	10	oxide
MPRC302							18	19	0.49	0.54			black shale		1	85	8	oxide
MPRC302							19	20	0.31				black shale	dolerite	1	83	8	oxide
MPRC302							20	21	0.19				black shale		0	84	10	oxide
MPRC302							21	22	0.3				dolerite		0	85	10	oxide
MPRC302				102.941	77		22	23	1.96	1.92		2.65	dolerite		8	82	1	oxide
MPRC302							23	24	2.6	2.58	2.5	2.71	dolerite		0	85	10	oxide
MPRC302							24	25	2.34	2.41	2.22		dolerite		0	84	10	oxide
MPRC302							25	26	0.4				black shale		0	82	12	oxide
MPRC302							26	27	0.45				black shale		0	78	10	oxide
MPRC302							27	28	0.22				dolerite		0	70	8	oxide
MPRC302							28	29	0.18				dolerite		0	10	4	transition
MPRC302							29	30	0.11				dolerite		0	8	3	transition

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC302							30	31	0.1				dolerite		0	4	1	transition
MPRC302							31	32	0.08			2.89	dolerite		0	1	2	transition
MPRC302							32	33	0.38	0.41			dolerite		0	55	8	transition
MPRC302							33	34	1.18	1.2			dolerite	microgranite	0	4	2	transition
MPRC302							34	35	0.14				dolerite		0	1	1	transition
MPRC302							35	36	0.04				dolerite	aplite	0	0	0	fresh
MPRC302							36	37	0.04				dolerite	aplite	0.5	0	0	fresh
MPRC302							37	38	0.06			2.92	dolerite		3	0	0	fresh
MPRC302							38	39	0.06				dolerite	microgranite	1	0	0	fresh
MPRC302							39	40	0.96	0.98		2.84	dolerite	aplite	20	2	0	fresh
MPRC302				103.741	75.8		40	41	0.9	0.85			dolerite	aplite	2	1	0	fresh
MPRC302							41	42	0.48	0.5			dolerite	aplite	1	1	0	fresh
MPRC302							42	43	0.92	0.96			dolerite	aplite	1	1	0	fresh
MPRC302							43	44	0.66	0.69			dolerite		0.5	2	0	fresh
MPRC305	9915.426	9720.029	527.4	89.341	77	41	0	1										
MPRC305							1	2										
MPRC305							2	3	0.03				black shale		0	18	5	oxide
MPRC305							3	4	0.02			2.73	black shale		0	18	5	oxide
MPRC305							4	5	0.02				black shale		0	20	8	oxide
MPRC305							5	6	0.02				black shale		0	50	6	oxide
MPRC305							6	7	0.03				black shale		0	45	6	oxide
MPRC305							7	8	0.05	0.04		2.72	black shale		8	35	10	oxide
MPRC305							8	9	0.04	0.04			black shale		2	20	12	oxide
MPRC305							9	10	0.03	0.02			black shale		0	35	10	oxide
MPRC305							10	11	0.03				black shale		0	30	8	oxide
MPRC305							11	12	0.05				black shale		0	35	10	oxide
MPRC305							12	13	0.03				black shale		2	28	10	oxide
MPRC305							13	14	0.03			2.76	black shale		0	18	10	oxide
MPRC305							14	15	0.06				black shale		0	25	12	oxide
MPRC305							15	16	0.05				black shale		1	25	10	oxide
MPRC305							16	17	0.04				black shale		60	18	10	oxide
MPRC305							17	18	0.06				black shale		0	70	2	oxide
MPRC305							18	19	0.04			2.89	black shale		0	70	3	oxide
MPRC305							19	20	0.03				black shale		0	45	3	oxide
MPRC305							20	21	0.07				black shale		0	20	10	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC305							21	22	0.06				black shale		0	55	8	oxide
MPRC305				87.441	74.3		22	23	0.03				black shale		0	85	6	oxide
MPRC305							23	24	0.03				black shale	dolerite	0	80	10	oxide
MPRC305							24	25	0.19			2.85	black shale	dolerite	0	50	10	oxide
MPRC305							25	26	0.31				black shale	black shale	0	48	12	oxide
MPRC305							26	27	1.67	1.63			dolerite		2	30	14	oxide
MPRC305							27	28	0.93	0.97		2.69	dolerite		5	30	12	oxide
MPRC305							28	29	0.71	0.75			dolerite		1	25	10	oxide
MPRC305							29	30	0.31				dolerite		0	10	8	transition
MPRC305							30	31	0.31				dolerite		25	6	4	transition
MPRC305							31	32	0.44			2.79	dolerite		40	6	3	transition
MPRC305							32	33	0.28				dolerite		2	2	2	transition
MPRC305							33	34	0.14				dolerite		1	1	2	transition
MPRC305				87.841	73.7		34	35	1	1.02		2.87	dolerite		4	1	1	transition
MPRC305							35	36	0.45	0.49			dolerite		1	1	1	transition
MPRC305							36	37	0.28				dolerite		1	0	1	transition
MPRC305							37	38	0.31			2.85	dolerite		10	2	2	transition
MPRC305							38	39	0.81	0.81			dolerite	aplite	2	2	1	transition
MPRC305							39	40	0.8	0.85		2.89	dolerite	aplite	1	2	0	fresh
MPRC305							40	41	0.48	0.45			dolerite	aplite	1	1	0	fresh
MPRC307	9908.776	9692.408	525.805	89.341	77	35	0	1										
MPRC307							1	2	0.01				black shale		0	35	8	oxide
MPRC307							2	3	0.01				black shale		0	50	5	oxide
MPRC307							3	4	0.01			2.6	black shale		0	38	3	oxide
MPRC307							4	5	0.02				black shale		0	42	6	oxide
MPRC307							5	6	0.01				black shale		0	38	6	oxide
MPRC307							6	7	0.01	0.03		2.68	black shale		0	38	4	oxide
MPRC307							7	8	0.03				black shale		40	28	6	oxide
MPRC307							8	9	0.06			2.77	black shale		30	28	8	oxide
MPRC307							9	10	0.04				black shale		2	30	5	oxide
MPRC307							10	11	0.04				black shale		0	45	4	oxide
MPRC307							11	12	0.04				black shale		15	60	3	oxide
MPRC307							12	13	0.03			2.73	black shale		7	20	8	oxide
MPRC307							13	14	0.03			2.98	black shale		20	60	10	oxide
MPRC307							14	15	0.06				black shale		0	65	6	oxide

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	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC307							15	16	0.06				black shale	dolerite	4	68	5	oxide
MPRC307							16	17	0.1	0.13		2.9	dolerite	black shale	2	50	12	oxide
MPRC307							17	18	0.09				dolerite	black shale	0	80	5	oxide
MPRC307							18	19	0.05				dolerite	black shale	0	78	8	oxide
MPRC307							19	20	0.06				dolerite	black shale	0	70	10	oxide
MPRC307							20	21	0.1				dolerite		0	70	10	oxide
MPRC307							21	22	0.19			2.66	dolerite		0	65	8	oxide
MPRC307				95.341	76.9		22	23	0.34	0.28			dolerite		0	62	10	oxide
MPRC307							23	24	0.61	0.66			dolerite		0	58	12	oxide
MPRC307							24	25	0.27				dolerite		0	12	8	oxide
MPRC307							25	26	0.19			2.82	dolerite		0	8	6	oxide
MPRC307							26	27	0.09				dolerite	aplite	0	2	4	oxide
MPRC307							27	28	0.58	0.63			dolerite	aplite	0	1	4	transition
MPRC307							28	29	0.04			2.91	dolerite		0	1	2	transition
MPRC307							29	30	0.23	0.23		3.06	dolerite	microgranite	5	1	2	transition
MPRC307							30	31	0.05				dolerite	aplite	0.5	1	1	transition
MPRC307				95.641	76		31	32	0.03				dolerite		0	0	1	transition
MPRC307							32	33	0.02				dolerite		0	0	0	fresh
MPRC307							33	34	0.06			2.93	dolerite		0	0	0	fresh
MPRC307							34	35	0.05				dolerite		0	0	0	fresh
MPRC308	9901.5	9667.764	526.337	90.841	60	41	0	1										
MPRC308							1	2										
MPRC308							2	3										
MPRC308							3	4	L				black shale		6	70	4	oxide
MPRC308							4	5	L				black shale		1	70	6	oxide
MPRC308							5	6	0.02	0.02		2.62	black shale		0	55	8	oxide
MPRC308							6	7	L				black shale		0	57	10	oxide
MPRC308							7	8	L				black shale		0	52	10	oxide
MPRC308							8	9	L				black shale		0	50	12	oxide
MPRC308							9	10	L				black shale		0	40	10	oxide
MPRC308							10	11	L				black shale		0	35	12	oxide
MPRC308							11	12	L				black shale		1	38	10	oxide
MPRC308							12	13	L				black shale		0	34	12	oxide
MPRC308							13	14	L			2.8	black shale		0	37	14	oxide
MPRC308							14	15	L				dolerite		0	38	14	oxide

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC308							15	16	0.04				dolerite		0	70	10	oxide
MPRC308							16	17	0.02			2.68	dolerite		0	75	12	oxide
MPRC308							17	18	L				dolerite		0	75	12	oxide
MPRC308							18	19	L	0.01			dolerite		2	73	12	oxide
MPRC308							19	20	L				black shale		0	75	12	oxide
MPRC308							20	21	L				black shale		0	75	12	oxide
MPRC308							21	22	L			2.7	black shale		0	75	12	oxide
MPRC308				98.141	60.2		22	23	L				black shale		0	75	12	oxide
MPRC308							23	24	L				black shale		0	75	12	oxide
MPRC308							24	25	0.06				black shale		0	75	12	oxide
MPRC308							25	26	0.01			2.72	black shale		0	74	12	oxide
MPRC308							26	27	0.02				black shale		0	70	12	oxide
MPRC308							27	28	0.24	0.28			black shale		0	68	10	oxide
MPRC308							28	29	0.11				black shale		0	65	10	oxide
MPRC308							29	30	0.02				dolerite		1	60	12	oxide
MPRC308							30	31	0.12			2.76	dolerite		0	50	6	oxide
MPRC308							31	32	0.02				dolerite		0	18	5	oxide
MPRC308							32	33	L				dolerite		0	8	4	oxide
MPRC308							33	34	L				dolerite		0	4	4	oxide
MPRC308							34	35	L			2.93	dolerite		0	2	4	oxide
MPRC308							35	36	L				dolerite		1	4	8	oxide
MPRC308							36	37	0.01			2.88	dolerite	aplite	0	0	2	transition
MPRC308				105.941	58.6		37	38	0.06				dolerite	aplite	1	2	1	transition
MPRC308							38	39	L				dolerite	aplite	0	1	1	transition
MPRC308							39	40	L	L		2.84	dolerite	aplite	1	0	1	transition
MPRC308							40	41	L				dolerite	aplite	1	0	1	transition
MPRC309	9925.471	9665.729	520.476	89.841	60	38	0	1										
MPRC309							1	2										
MPRC309							2	3	0.19	0.19			black shale		0	85	10	oxide
MPRC309							3	4	0.07				black shale		0	87	10	oxide
MPRC309							4	5	0.02				black shale		1	85	10	oxide
MPRC309							5	6	0.14	0.17			black shale		0	88	10	oxide
MPRC309							6	7	L				black shale		0	88	10	oxide
MPRC309							7	8	L			2.58	black shale		0	88	10	oxide
MPRC309							8	9	0.02				black shale		0	86	10	oxide

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC309							9	10	L				black shale		0	84	10	oxide
MPRC309							10	11	0.02				black shale		0	88	10	oxide
MPRC309							11	12	0.04			2.67	black shale		20	68	10	oxide
MPRC309							12	13	L			2.58	black shale		1	86	10	oxide
MPRC309							13	14	L				dolerite		0	84	8	oxide
MPRC309							14	15	L				dolerite		0	82	8	oxide
MPRC309							15	16	L				dolerite		0	80	7	oxide
MPRC309							16	17	0.02	0.05			dolerite		0	87	7	oxide
MPRC309							17	18	L				dolerite		0	88	8	oxide
MPRC309							18	19	L			2.59	black shale		0	87	8	oxide
MPRC309							19	20	L				black shale		5	86	8	oxide
MPRC309							20	21	L				black shale		0	85	8	oxide
MPRC309							21	22	L				black shale		0	88	8	oxide
MPRC309				98.141	60.1		22	23	L				black shale		0	87	8	oxide
MPRC309							23	24	L				black shale		1	88	8	oxide
MPRC309							24	25	L			2.7	black shale		0	88	8	oxide
MPRC309							25	26	L				black shale		0	85	7	oxide
MPRC309							26	27	L				black shale		1	20	5	transition
MPRC309							27	28	L			2.67	black shale		0	10	6	transition
MPRC309							28	29	L				black shale		0	10	5	transition
MPRC309							29	30	0.06	0.04		2.82	black shale		4	6	2	transition
MPRC309							30	31	0.06				black shale		1	8	1	transition
MPRC309							31	32	L				black shale		1	4	0	transition
MPRC309							32	33	L				black shale		0	2	1	transition
MPRC309							33	34	L				black shale		0	1	0	fresh
MPRC309				92.741	57.7		34	35	L			2.88	black shale		0	1	0	fresh
MPRC309							35	36	L				black shale		1	6	0	fresh
MPRC309							36	37	L				black shale		0	1	0	fresh
MPRC309							37	38	L				black shale		0	0	0	fresh
MPRC310	9947.09	9666.685	515.948	89.341	60	41	0	1										
MPRC310							1	2										
MPRC310							2	3										
MPRC310							3	4	0.02				black shale		0	70	4	oxide
MPRC310							4	5	0.01			2.71	black shale		0	60	10	oxide
MPRC310							5	6	L				black shale	dolerite	1	50	12	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC310							6	7	L				black shale		0	40	14	oxide
MPRC310							7	8	L				black shale		0	35	14	oxide
MPRC310							8	9	L			2.59	black shale		2	38	2	oxide
MPRC310							9	10	0.16			2.72	black shale		70	15	8	oxide
MPRC310							10	11	0.65	0.57			black shale		65	18	8	oxide
MPRC310							11	12	0.68	0.72		2.66	black shale		55	20	6	oxide
MPRC310							12	13	0.48			2.82	siltstone		1	12	8	oxide
MPRC310							13	14	0.22				siltstone		0	5	4	oxide
MPRC310							14	15	0.2				siltstone		0	5	5	oxide
MPRC310							15	16	0.55	0.55			siltstone		0	18	6	oxide
MPRC310							16	17	0.19			2.7	siltstone		15	25	10	oxide
MPRC310							17	18	0.05			2.89	black shale		0	28	6	oxide
MPRC310							18	19	0.03				black shale		5	25	8	oxide
MPRC310							19	20	0.12				black shale		3	20	5	oxide
MPRC310							20	21	0.31				black shale		20	22	6	oxide
MPRC310							21	22	0.7	0.77		2.78	black shale		45	25	8	oxide
MPRC310				92.541	58		22	23	0.9	0.86			black shale		20	25	10	oxide
MPRC310							23	24	0.41			2.81	black shale		70	20	6	oxide
MPRC310							24	25	0.76	0.83		2.76	black shale		4	24	8	oxide
MPRC310							25	26	1.17	1.19			black shale		1	15	8	oxide
MPRC310							26	27	0.17				black shale		1	10	5	oxide
MPRC310							27	28	0.09				black shale		1	4	4	transition
MPRC310							28	29	0.08	0.1		2.74	black shale		3	2	4	transition
MPRC310							29	30	0.11				black shale		15	6	2	transition
MPRC310							30	31	0.11				black shale		2	2	2	transition
MPRC310							31	32	0.12			2.77	black shale		10	6	1	transition
MPRC310							32	33	0.12			2.77	black shale		8	2	2	transition
MPRC310							33	34	0.1				black shale		2	1	1	transition
MPRC310							34	35	0.95	0.96		2.69	black shale		2	1	0	fresh
MPRC310							35	36	0.12				black shale		0.5	2	0	fresh
MPRC310							36	37	0.06				black shale		0	1	0	fresh
MPRC310				91.441	55.8		37	38	0.13	0.15		2.77	black shale		1	1	0	fresh
MPRC310							38	39	0.04				black shale		0	1	1	fresh
MPRC310							39	40	0.04				black shale		0	8	0	fresh
MPRC310							40	41	0.07				black shale		0.5	4	0	fresh

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC311	9971.02	9667.312	510.169	92.341	60.25	29	0	1										
MPRC311							1	2										
MPRC311							2	3										
MPRC311							3	4	0.06				black shale		5	60	14	oxide
MPRC311							4	5	0.06			2.63	black shale		2	45	12	oxide
MPRC311							5	6	0.03				black shale		0	30	10	oxide
MPRC311							6	7	0.07				black shale		0	30	10	oxide
MPRC311							7	8	0.1				black shale		0	35	10	oxide
MPRC311							8	9	0.03				black shale		0	18	8	oxide
MPRC311							9	10	0.04				black shale		0	20	10	oxide
MPRC311							10	11	0.18	0.2		2.76	black shale		0	15	8	oxide
MPRC311							11	12	0.04				black shale		0	17	8	oxide
MPRC311							12	13	0.01				aplite	black shale	0	2	5	oxide
MPRC311							13	14	0.02			2.53	aplite		0	4	2	oxide
MPRC311							14	15	0.02				black shale	aplite	0	2	6	oxide
MPRC311							15	16	0.12				black shale		4	8	8	oxide
MPRC311							16	17	0.3	0.22		2.75	black shale		10	6	6	oxide
MPRC311							17	18	0.08				black shale		16	10	6	oxide
MPRC311							18	19	0.14				black shale		10	8	8	oxide
MPRC311							19	20	1.23	1.39		2.81	black shale		30	10	12	oxide
MPRC311							20	21	0.41	0.45			black shale		0	14	12	oxide
MPRC311							21	22	0.2			2.72	black shale		0	5	8	oxide
MPRC311							22	23	0.15				black shale		5	4	5	oxide
MPRC311							23	24	0.03			2.64	black shale		60	2	4	transition
MPRC311							24	25	0.02			2.65	black shale		2	1	3	transition
MPRC311				98.741	57.9		25	26	L				black shale		0	1	1	transition
MPRC311							26	27	L				black shale		0	0	1	transition
MPRC311							27	28	0.01				black shale		0	0	0	fresh
MPRC311							28	29	0.01			2.73	black shale		0	0	0	fresh
MPRC316	9934.077	9615.217	516.51	89.841	76.75	47	0	1										
MPRC316							1	2										
MPRC316							2	3										
MPRC316							3	4	0.06				dolerite		1	85	10	oxide
MPRC316							4	5	0.07				dolerite		0	85	10	oxide
MPRC316							5	6	0.04			2.7	dolerite		0	80	12	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC316							6	7	0.03				dolerite		0	84	10	oxide
MPRC316							7	8	L				dolerite		0	84	10	oxide
MPRC316							8	9	0.03				dolerite		0	80	12	oxide
MPRC316							9	10	0.06	0.05			dolerite		0	80	12	oxide
MPRC316							10	11	0.03				dolerite	black shale	0	75	12	oxide
MPRC316							11	12	0.02				black shale		0	30	5	oxide
MPRC316							12	13	0.03				black shale		1	20	5	oxide
MPRC316							13	14	0.09			2.71	black shale		0	15	6	oxide
MPRC316							14	15	0.04				black shale		0	18	4	oxide
MPRC316							15	16	L	L			black shale		0	8	4	oxide
MPRC316							16	17	0.06				black shale		0	6	8	oxide
MPRC316							17	18	L				black shale		0	6	4	oxide
MPRC316							18	19	0.01	L			black shale		0	5	6	transition
MPRC316							19	20	0.02				black shale		0	4	3	transition
MPRC316							20	21	L			2.58	black shale		0	0	1	transition
MPRC316							21	22	0.06				black shale		0	0	0	fresh
MPRC316							22	23	0.08				black shale		0	0	0	fresh
MPRC316							23	24	0.03				black shale		0	0	0	fresh
MPRC316							24	25	0.01				black shale		1	0	0	fresh
MPRC316				98.141	73.2		25	26	0.04			2.71	black shale		1	0	0	fresh
MPRC316							26	27	0.04				black shale		20	15	0	fresh
MPRC316							27	28	3.1	3.17		2.73	black shale		70	12	0	fresh
MPRC316							28	29	1.23	1.31			black shale		50	8	0	fresh
MPRC316							29	30	1.31	1.31			black shale		20	2	0	fresh
MPRC316							30	31	0.79	0.85		2.99	black shale		16	3	1	fresh
MPRC316							31	32	0.28				black shale		5	1	0	fresh
MPRC316							32	33	0.14			2.86	black shale		1	0	0	fresh
MPRC316							33	34	0.51	0.52			black shale		2	0	0	fresh
MPRC316							34	35	0.25				black shale		12	0	0	fresh
MPRC316							35	36	0.14				black shale		4	0	0	fresh
MPRC316							36	37	0.1				black shale		10	0	0	fresh
MPRC316							37	38	0.06				black shale		6	0	0	fresh
MPRC316							38	39	0.08				black shale		8	0	1	fresh
MPRC316							39	40	0.16	0.14		2.94	black shale		14	0	1	fresh
MPRC316							40	41	0.02				black shale		1	2	0	fresh

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC316							41	42	0.03				black shale		2	0	0	fresh
MPRC316							42	43	0.04				black shale		1	0	0	fresh
MPRC316				103.741	68.8		43	44	0.13				black shale		8	0	0	fresh
MPRC316							44	45	0.13				black shale		1	3	0	fresh
MPRC316							45	46	0.13	0.11			black shale		0	2	0	fresh
MPRC316							46	47	0.19	0.2			black shale		0	3	0	fresh
MPRC318	9936.984	9590.337	515.361	90.591	60.25	35	0	1										
MPRC318							1	2										
MPRC318							2	3										
MPRC318							3	4										
MPRC318							4	5	L				black shale		0	80	12	oxide
MPRC318							5	6	L				black shale		0	20	8	oxide
MPRC318							6	7	L				black shale		2	10	6	oxide
MPRC318							7	8	L			3.25	black shale		0	12	8	oxide
MPRC318							8	9	L				black shale		1	12	10	oxide
MPRC318							9	10	L				black shale		0	8	6	oxide
MPRC318							10	11	L				black shale		0	9	7	oxide
MPRC318							11	12	L				black shale		0	4	3	oxide
MPRC318							12	13	L			3.15	black shale		10	25	8	oxide
MPRC318							13	14	0.21			3.12	black shale		50	30	12	oxide
MPRC318							14	15	0.71	0.81			black shale		55	35	8	oxide
MPRC318							15	16	2.34	2.42			black shale		35	38	14	oxide
MPRC318							16	17	2.28	2.34			black shale	dolerite	10	36	14	oxide
MPRC318							17	18	0.84	0.74			black shale	dolerite	5	36	12	oxide
MPRC318							18	19	0.13			2.92	black shale		1	25	8	oxide
MPRC318							19	20	0.26				black shale		40	28	10	oxide
MPRC318							20	21	0.55			2.86	black shale		70	18	10	oxide
MPRC318							21	22	1.44	1.43			black shale		36	25	12	oxide
MPRC318				106.841	56.9		22	23	1.19	1.19			black shale		5	20	10	oxide
MPRC318							23	24	0.43				black shale		1	14	8	oxide
MPRC318							24	25	1.3	1.21		2.96	black shale		1	18	10	oxide
MPRC318							25	26	0.47				black shale		0	8	8	oxide
MPRC318							26	27	0.13	0.15			black shale		1	4	2	transition
MPRC318							27	28	0.1				black shale		6	2	1	transition
MPRC318							28	29	0.11			2.97	black shale		10	0	1	transition

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC318							29	30	0.19				black shale		1	1	2	transition
MPRC318							30	31	0.27	0.24			black shale		14	2	1	transition
MPRC318				94.741	54.6		31	32	0.16				black shale		3	1	0	fresh
MPRC318							32	33	0.16				black shale		0	1	0	fresh
MPRC318							33	34	0.05				black shale		2	1	0	fresh
MPRC318							34	35	0.08				black shale		0	1	0	fresh
MPRC319	9935.936	9590.403	515.378	90.591	77.5	40	0	1										
MPRC319							1	2										
MPRC319							2	3	0.06				black shale		0	85	12	oxide
MPRC319							3	4	0.05				black shale		0	75	14	oxide
MPRC319							4	5	0.02				dolerite		0	78	14	oxide
MPRC319							5	6	L			2.59	dolerite		20	60	14	oxide
MPRC319							6	7	0.1				dolerite		4	70	12	oxide
MPRC319							7	8	0.09			2.55	black shale		50	40	7	oxide
MPRC319							8	9	L	L			black shale		2	38	6	oxide
MPRC319							9	10	0.03				black shale		0	20	6	oxide
MPRC319							10	11	0.04				black shale		1	20	5	oxide
MPRC319							11	12	0.1			2.96	black shale		0	18	7	oxide
MPRC319							12	13	0.09				black shale		0	18	7	oxide
MPRC319							13	14	0.05				black shale		0	18	10	oxide
MPRC319							14	15	L				black shale		0.5	15	4	oxide
MPRC319							15	16	0.03				black shale		0	10	6	oxide
MPRC319							16	17	0.04				black shale		0	12	10	oxide
MPRC319							17	18	0.03				black shale		8	14	10	oxide
MPRC319							18	19	0.07			2.98	black shale		6	16	8	oxide
MPRC319							19	20	0.46	0.35		2.78	black shale		80	8	6	oxide
MPRC319							20	21	0.36				black shale		18	5	4	transition
MPRC319							21	22	0.35				black shale		2	1	2	transition
MPRC319				84.741	73.7		22	23	0.66	0.61			black shale		3	2	2	transition
MPRC319							23	24	0.54	0.5			black shale		0	2	1	transition
MPRC319							24	25	0.3				black shale		1	1	1	transition
MPRC319							25	26	0.13				black shale		0	1	1	transition
MPRC319							26	27	0.25			3	black shale		0	0	0	fresh
MPRC319							27	28	0.58				black shale		1	2	0	fresh
MPRC319							28	29	1.09	1.18			black shale		0	1	0	fresh

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC319							29	30	2.41	2.37			black shale		0	0	0	fresh
MPRC319							30	31	0.33				black shale		2	0	1	fresh
MPRC319							31	32	0.09	0.09			black shale		2	0	0	fresh
MPRC319							32	33	0.12				black shale		2	0	1	fresh
MPRC319							33	34	0.08			3.01	black shale		0	1	0	fresh
MPRC319				102.841	72.1		34	35	0.06				black shale		1	10	0	fresh
MPRC319							35	36	0.08				black shale		1	0	0	fresh
MPRC319							36	37	0.07				black shale		1	0	0	fresh
MPRC319							37	38	0.06				black shale		0.5	0	0	fresh
MPRC321	9934.485	9567.078	516.182	90.341	59.75	35	0	1										
MPRC321							1	2										
MPRC321							2	3										
MPRC321							3	4										
MPRC321							4	5	0.05	0.05			dolerite		0	85	10	oxide
MPRC321							5	6	0.03			2.62	dolerite		0	80	10	oxide
MPRC321							6	7	L	L			dolerite		0	80	12	oxide
MPRC321							7	8	L				black shale		1	40	6	oxide
MPRC321							8	9	0.02				black shale		0	30	8	oxide
MPRC321							9	10	0.02				black shale		0	15	9	oxide
MPRC321							10	11	0.02				black shale		0	12	10	oxide
MPRC321							11	12	0.16			2.8	black shale		0	10	8	oxide
MPRC321							12	13	0.12				black shale		2	15	12	oxide
MPRC321							13	14	0.1				black shale		30	18	12	oxide
MPRC321							14	15	0.43				black shale		55	18	10	oxide
MPRC321							15	16	1.25	1.27		2.66	black shale		60	25	12	oxide
MPRC321							16	17	2.36	2.3	2.31		black shale		20	28	14	oxide
MPRC321							17	18	0.99	0.95			black shale		10	32	14	oxide
MPRC321							18	19	0.34				black shale		0	12	10	oxide
MPRC321				96.341	59.1		19	20	0.16				black shale		12	8	6	oxide
MPRC321							20	21	0.39				black shale		35	14	8	oxide
MPRC321							21	22	4.93	4.89		2.73	black shale		50	18	8	oxide
MPRC321							22	23	0.59	0.59			black shale		2	8	6	transition
MPRC321							23	24	2.04	2.02	2.03	2.89	black shale		0	15	8	transition
MPRC321							24	25	0.48	0.5			black shale		4	10	6	transition
MPRC321							25	26	0.54	0.45			black shale		6	10	8	transition

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC321							26	27	0.14				black shale		1	3	4	transition
MPRC321							27	28	0.03				black shale		0	2	4	transition
MPRC321							28	29	0.09				black shale		1	5	2	transition
MPRC321							29	30	0.11			2.94	black shale		8	0	1	transition
MPRC321							30	31	0.06				black shale		2	0	1	transition
MPRC321				86.741	56.4		31	32	0.13				black shale		4	0	0	fresh
MPRC321							32	33	0.19				black shale		2	2	0	fresh
MPRC321							33	34	0.11			2.69	black shale		1	1	0	fresh
MPRC321							34	35	0.08				black shale		1	0	0	fresh
MPRC322	9933.529	9566.979	516.1	90.341	77	38	0	1										
MPRC322							1	2										
MPRC322							2	3	0.18	0.1			dolerite		0	80	14	oxide
MPRC322							3	4	0.05				dolerite		1	78	14	oxide
MPRC322							4	5	0.06				dolerite		0	75	12	oxide
MPRC322							5	6	L				dolerite		0	78	14	oxide
MPRC322							6	7	L				dolerite		0	72	11	oxide
MPRC322							7	8	L			2.78	dolerite		5	60	10	oxide
MPRC322							8	9	L				black shale		0	15	5	oxide
MPRC322							9	10	L	L			black shale		0	15	6	oxide
MPRC322							10	11	L				black shale		0	15	10	oxide
MPRC322							11	12	0.09			2.82	black shale		0	60	8	oxide
MPRC322							12	13	0.04				black shale		0	18	8	oxide
MPRC322							13	14	L				black shale		5	10	6	transition
MPRC322							14	15	L				black shale		1	5	4	transition
MPRC322							15	16	0.05			2.6	black shale		1	2	6	transition
MPRC322							16	17	L			2.97	black shale		20	3	8	transition
MPRC322							17	18	L				black shale		2	15	10	transition
MPRC322							18	19	1	1.04		2.73	black shale		70	10	5	transition
MPRC322							19	20	2.3	2.25			black shale		65	18	8	transition
MPRC322							20	21	1.34	1.29			black shale		25	5	5	transition
MPRC322							21	22	0.25				black shale		16	1	2	transition
MPRC322				95.641	74.7		22	23	0.14				black shale		8	2	4	transition
MPRC322							23	24	0.15				black shale		3	2	4	transition
MPRC322							24	25	0.17				black shale		2	1	4	transition
MPRC322							25	26	0.03			2.74	black shale		1	1	2	transition

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC322							26	27	0.76				black shale		6	2	1	transition
MPRC322							27	28	12.9	12.5			black shale		14	1	1	transition
MPRC322							28	29	3.16	3.2			black shale		5	0	0	fresh
MPRC322							29	30	0.7			2.77	black shale		40	1	2	fresh
MPRC322							30	31	0.91	0.89			black shale		2	1	0	fresh
MPRC322							31	32	0.22				black shale		1	2	1	fresh
MPRC322							32	33	0.19				black shale		3	1	0	fresh
MPRC322							33	34	0.16				black shale		2	2	0	fresh
MPRC322				81.841	73.6		34	35	0.06				black shale		1	25	0	fresh
MPRC322							35	36	L				black shale		1	0	1	fresh
MPRC322							36	37	L				black shale		0	0	0	fresh
MPRC322							37	38	0.09				black shale		1	0	0	fresh
MPRC324	9933.273	9546.167	516.812	90.841	60.5	38	0	1										
MPRC324							1	2										
MPRC324							2	3										
MPRC324							3	4										
MPRC324							4	5	0.26			2.78	dolerite		0	90	8	oxide
MPRC324							5	6	0.04				dolerite		0	78	14	oxide
MPRC324							6	7	0.03			2.67	black shale		10	65	10	oxide
MPRC324							7	8	0.06				black shale		1	47	12	oxide
MPRC324							8	9	0.04				black shale		0	60	18	oxide
MPRC324							9	10	0.15				black shale		0	30	10	oxide
MPRC324							10	11	0.05				black shale		1	15	8	oxide
MPRC324							11	12	0.1				black shale		0	28	12	oxide
MPRC324							12	13	0.08				black shale		0	24	10	oxide
MPRC324							13	14	0.08				black shale		5	35	12	oxide
MPRC324							14	15	0.67	0.68			black shale		10	35	14	oxide
MPRC324							15	16	0.09			2.67	black shale		60	28	10	oxide
MPRC324							16	17	0.96	0.95			black shale		10	32	12	oxide
MPRC324							17	18	0.49	0.46		2.7	black shale		4	34	8	oxide
MPRC324							18	19	0.18				black shale		6	20	8	oxide
MPRC324							19	20	0.24				black shale		1	26	6	oxide
MPRC324							20	21	0.32			2.87	black shale		2	25	8	oxide
MPRC324							21	22	0.07				black shale		10	25	7	oxide
MPRC324				95.441	57.3		22	23	0.2				black shale		55	30	10	oxide

BHID	MP Local East *m*	MP Local North *m*	MP Local RL *m*	MP Local Azimuth *degrees*	DIP *degrees*	EOH *m*	FROM *m*	TO *m*	AU1 *ppm*	AU2 *ppm*	AU3 *ppm*	SG1	LITH1	LITH2	VQZ *%*	CLAY *%*	FEOX *%*	Weathering
MPRC324							23	24	1.01	1.12		2.75	black shale		50	30	12	oxide
MPRC324							24	25	2.69	2.57	2.76		black shale		50	25	12	oxide
MPRC324							25	26	0.6				black shale		45	30	10	oxide
MPRC324							26	27	0.39			2.8	black shale		30	24	1	oxide
MPRC324							27	28	0.14				black shale		2	15	8	oxide
MPRC324							28	29	0.03			2.73	black shale		4	15	6	oxide
MPRC324							29	30	0.14				black shale		12	10	4	oxide
MPRC324							30	31	0.09				black shale		15	5	4	transition
MPRC324							31	32	0.11				black shale		8	2	3	transition
MPRC324							32	33	0.2			2.83	black shale	aplite	14	1	1	transition
MPRC324							33	34	0.25	0.25			black shale		2	0	2	transition
MPRC324				95.541	55.3		34	35	0.23				black shale	aplite	1	0	0	fresh
MPRC324							35	36	0.03				black shale	aplite	1	0	0	fresh
MPRC324							36	37	0.04			2.92	black shale	aplite	0	0	0	fresh
MPRC324							37	38	0.02				black shale		0	0	0	fresh
MPRC325	9932.46	9546.064	516.779	90.841	77	48	0	1										
MPRC325							1	2										
MPRC325							2	3										
MPRC325							3	4	0.01				dolerite		0	85	10	oxide
MPRC325							4	5	0.05			2.76	dolerite		1	75	10	oxide
MPRC325							5	6	0.07				dolerite		0	80	12	oxide
MPRC325							6	7	0.09				dolerite		0	80	15	oxide
MPRC325							7	8	0.05				dolerite		0	85	12	oxide
MPRC325							8	9	0.06				black shale		0	70	8	oxide
MPRC325							9	10	0.01				black shale		0	30	6	oxide
MPRC325							10	11	L				black shale		0	22	8	oxide
MPRC325							11	12	0.02				black shale		0	24	5	oxide
MPRC325							12	13	0.02				black shale		0	26	12	oxide
MPRC325							13	14	0.05			2.97	black shale		0	32	14	oxide
MPRC325							14	15	0.09				black shale		0	36	10	oxide
MPRC325							15	16	0.1				black shale		0	18	8	oxide
MPRC325							16	17	0.03				black shale		0	28	14	oxide
MPRC325							17	18	0.12				black shale		0	20	12	oxide
MPRC325							18	19	L				black shale		0	20	8	oxide
MPRC325							19	20	L				black shale		2	28	12	oxide

BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC325							20	21	0.08			2.72	black shale		10	20	14	oxide
MPRC325							21	22	0.56	0.62		2.85	black shale		50	15	2	transition
MPRC325							22	23	0.31	0.4			black shale		45	10	2	transition
MPRC325				95.141	74.4		23	24	0.23				black shale		2	4	1	transition
MPRC325							24	25	0.13				black shale		0	4	0	transition
MPRC325							25	26	0.17				black shale		1	2	1	transition
MPRC325							26	27	0.14			2.98	black shale		1	1	1	transition
MPRC325							27	28	0.13				black shale		1	2	2	transition
MPRC325							28	29	0.03				black shale		1	0	2	transition
MPRC325							29	30	0.12	0.16			black shale		0.5	0	1	transition
MPRC325							30	31	0.12				black shale		5	10	1	transition
MPRC325							31	32	0.07				black shale		2	1	1	transition
MPRC325							32	33	0.09				black shale		0	0	0	fresh
MPRC325							33	34	0.09			2.95	black shale		10	1	0	fresh
MPRC325							34	35	0.07				black shale		15	0	0	fresh
MPRC325							35	36	0.32	0.25			black shale		2	0	1	fresh
MPRC325							36	37	0.04				black shale		1	0	0	fresh
MPRC325							37	38	0.03				black shale		6	0	1	fresh
MPRC325							38	39	0.02				black shale		10	0	0	fresh
MPRC325							39	40	0.06			2.91	black shale		15	0	0	fresh
MPRC325							40	41	0.06				black shale		10	0	2	fresh
MPRC325							41	42	0.07				black shale		10	0	1	fresh
MPRC325							42	43	0.1	0.17			black shale		6	0	1	fresh
MPRC325							43	44	0.07				black shale	microgranite	4	0	0	fresh
MPRC325				99.741	72.4		44	45	0.03				black shale	microgranite	4	0	0	fresh
MPRC325							45	46	0.05				black shale		2	0	0	fresh
MPRC325							46	47	0.01				black shale		1	0	0	fresh
MPRC325							47	48	0.02				black shale		0.5	0	0	fresh
MPRC327	9928.744	9520.471	518.968	89.841	60	40	0	1										
MPRC327							1	2										
MPRC327							2	3										
MPRC327							3	4	0.09			2.64	black shale		0	85	5	oxide
MPRC327							4	5	L				black shale		0	90	8	oxide
MPRC327							5	6	0.07				black shale		0	90	8	oxide
MPRC327							6	7	0.04			2.35	black shale		0	90	7	oxide

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC327							7	8	L			2.45	black shale		0	80	5	oxide
MPRC327							8	9	L				black shale		0	88	6	oxide
MPRC327							9	10	L				black shale		0	85	3	oxide
MPRC327							10	11	L				black shale		0	30	4	oxide
MPRC327							11	12	L				black shale	dolerite	0	10	5	oxide
MPRC327							12	13	L				black shale	dolerite	0	5	3	oxide
MPRC327							13	14	0.02			2.76	black shale		0	5	4	oxide
MPRC327							14	15	L				black shale		0	8	6	oxide
MPRC327							15	16	L				black shale		1	10	8	oxide
MPRC327							16	17	L				black shale		3	8	8	oxide
MPRC327							17	18	0.02			2.72	black shale		10	15	10	oxide
MPRC327							18	19	0.38			2.96	black shale		70	18	10	oxide
MPRC327							19	20	0.29			3.12	black shale		2	8	8	oxide
MPRC327							20	21	0.65	0.66		2.81	black shale		50	15	6	oxide
MPRC327				103.341	58.1		21	22	0.38				black shale		30	20	10	oxide
MPRC327							22	23	0.45	0.44			black shale		2	10	10	oxide
MPRC327							23	24	0.1				black shale		0	4	6	oxide
MPRC327							24	25	0.2				black shale		4	12	8	oxide
MPRC327							25	26	0.25			2.75	black shale		20	12	8	oxide
MPRC327							26	27	0.75	0.75			black shale		1	2	6	oxide
MPRC327							27	28	1.25	1.15			black shale		2	4	6	oxide
MPRC327							28	29	0.83	0.74		2.79	black shale		0	4	6	transition
MPRC327							29	30	0.26				black shale		5	2	6	transition
MPRC327							30	31	0.02				black shale		2	5	7	transition
MPRC327							31	32	L				black shale		0	2	4	transition
MPRC327							32	33	L				black shale		8	0	3	transition
MPRC327							33	34	L				black shale		20	2	3	transition
MPRC327							34	35	0.09			2.8	black shale		18	0	2	transition
MPRC327				101.941	55.9		35	36	L			2.84	black shale		5	0	1	transition
MPRC327							36	37	0.03				black shale	aplite	5	0	0	fresh
MPRC327							37	38	0.01				black shale	aplite	2	0	0	fresh
MPRC327							38	39	L				black shale	aplite	1	0	0	fresh
MPRC327							39	40	0.09				black shale		0	0	0	fresh
MPRC328	9927.831	9520.475	518.912	89.841	77	47	0	1										
MPRC328							1	2										

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC328							2	3					black shale		0	90	8	oxide
MPRC328							3	4	L				black shale		0	85	7	oxide
MPRC328							4	5	L			2.54	black shale		0	85	10	oxide
MPRC328							5	6	L			2.52	black shale		0	82	12	oxide
MPRC328							6	7	L				black shale		0	65	12	oxide
MPRC328							7	8	L				dolerite		0	50	14	oxide
MPRC328							8	9	L				dolerite		0	84	12	oxide
MPRC328							9	10	L				dolerite		0	68	8	oxide
MPRC328							10	11	L			2.63	black shale	dolerite	10	58	10	oxide
MPRC328							11	12	L	L		2.69	black shale	dolerite	0	70	8	oxide
MPRC328							12	13	L				black shale		0	90	8	oxide
MPRC328							13	14	L				black shale		0	85	8	oxide
MPRC328							14	15	0.08				black shale		0	89	5	oxide
MPRC328							15	16	L				black shale		0	90	3	oxide
MPRC328							16	17	L				black shale		0	85	10	oxide
MPRC328							17	18	L	L			black shale		0	15	6	oxide
MPRC328							18	19	L				black shale		0	8	5	oxide
MPRC328							19	20	L				black shale		0	10	4	oxide
MPRC328							20	21	L			2.73	black shale		40	4	8	oxide
MPRC328				98.941	75.8		21	22	L				black shale		2	8	12	oxide
MPRC328							22	23	0.03				black shale		0	4	10	oxide
MPRC328							23	24	0.02				black shale		4	2	2	oxide
MPRC328							24	25	0.02				black shale		0	1	2	oxide
MPRC328							25	26	0.01				black shale		8	3	1	oxide
MPRC328							26	27	0.22				black shale		12	1	3	oxide
MPRC328							27	28	1.26	1.4			black shale		40	1	2	oxide
MPRC328							28	29	0.56	0.57			black shale		20	1	2	transition
MPRC328							29	30	8.84	9.06	8.61	2.86	black shale		60	0	1	transition
MPRC328							30	31	3.8	3.76		2.76	black shale		70	0	2	transition
MPRC328							31	32	1.17				black shale		50	0	1	transition
MPRC328							32	33	0.44			2.94	black shale		0	0	2	transition
MPRC328							33	34	0.37				black shale		5	0	1	transition
MPRC328							34	35	0.1				black shale		0	0	0	fresh
MPRC328							35	36	0.08				black shale		2	0	0	fresh
MPRC328							36	37	0.36			2.88	black shale		45	0	0	fresh

BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC328							37	38	1.77	1.78		2.95	black shale		28	0	0	fresh
MPRC328							38	39	0.66	0.69			black shale		10	0	0	fresh
MPRC328							39	40	0.39				black shale		5	0	0	fresh
MPRC328							40	41	0.44				black shale		10	0	0	fresh
MPRC328							41	42	0.23				black shale		5	0	0	fresh
MPRC328							42	43	0.13			2.82	black shale		3	0	0	fresh
MPRC328							43	44	0.09			2.81	black shale		2	0	0	fresh
MPRC328				102.141	73.7		44	45	0.06				black shale		2	0	1	fresh
MPRC328							45	46	0.1				black shale		3	15	1	fresh
MPRC328							46	47	0.12				black shale		8	5	2	fresh
MPRC329	9931.605	9500.253	520.097	90.041	77	47	0	1										
MPRC329							1	2										
MPRC329							2	3	L				black shale		0	90	5	
MPRC329							3	4	L				dolerite	black shale	0	85	6	oxide
MPRC329							4	5	L			2.49	dolerite		0	80	6	oxide
MPRC329							5	6	L				black shale		0	30	5	oxide
MPRC329							6	7	L				black shale		0	20	5	oxide
MPRC329							7	8	0.11				black shale		0	15	5	oxide
MPRC329							8	9	0.06				black shale		0	5	6	oxide
MPRC329							9	10	0.08				black shale		0	5	5	oxide
MPRC329							10	11	0.07				black shale		0	4	6	oxide
MPRC329							11	12	0.04			2.88	black shale		0	4	5	oxide
MPRC329							12	13	0.03				black shale		0	3	5	oxide
MPRC329							13	14	0.18				black shale		18	10	8	oxide
MPRC329							14	15	5.75	5.58		2.54	black shale		75	12	10	oxide
MPRC329							15	16	1.88	1.75		2.5	black shale		68	20	12	oxide
MPRC329							16	17	1.68	1.58			black shale		68	20	12	oxide
MPRC329							17	18	3.9	3.89	4		black shale		35	18	10	oxide
MPRC329							18	19	1.24	1.15			black shale		55	22	12	oxide
MPRC329							19	20	3.09	2.92			black shale		55	26	14	oxide
MPRC329							20	21	1.45			2.47	black shale		65	18	12	oxide
MPRC329							21	22	0.7				black shale		5	12	7	oxide
MPRC329							22	23	0.08				black shale		1	12	6	oxide
MPRC329							23	24	0.08				black shale		5	12	6	oxide
MPRC329							24	25	0.37				black shale		4	10	7	oxide

BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC329							25	26	0.35				black shale		2	6	5	oxide
MPRC329							26	27	0.32			2.93	black shale		0	3	2	transition
MPRC329							27	28	1.8	1.68		2.92	black shale		60	6	5	transition
MPRC329							28	29	0.63				black shale		1	4	3	transition
MPRC329							29	30	0.69	0.61			black shale		0	21	1	transition
MPRC329							30	31	0.48				black shale		3	1	2	transition
MPRC329							31	32	0.38				black shale		8	0	1	transition
MPRC329							32	33	0.13				black shale		1	0	0	fresh
MPRC329							33	34	0.07				black shale		1	0	0	fresh
MPRC329							34	35	L				black shale		1	0	0	fresh
MPRC329							35	36	L				black shale		1	0	0	fresh
MPRC329							36	37	L				black shale		2	0	1	fresh
MPRC329							37	38	L			2.85	black shale		4	0	1	fresh
MPRC329							38	39	L	L		2.96	black shale		2	0	0	fresh
MPRC329							39	40	L				black shale		1	2	0	fresh
MPRC329							40	41	L				black shale		1	0	0	fresh
MPRC329							41	42	L				black shale		0	0	0	fresh
MPRC329							42	43	L				black shale		1	0	0	fresh
MPRC329							43	44	L				black shale	aplite	1	1	0	fresh
MPRC329				105.441	70.4		44	45	L				black shale	aplite	2	1	0	fresh
MPRC329							45	46	L				black shale	aplite	1	0	0	fresh
MPRC329							46	47	L				black shale	aplite	1	0	0	fresh
MPRC331	9928.491	9467.785	522.69	90.841	61	39	0	1										
MPRC331							1	2										
MPRC331							2	3										
MPRC331							3	4										
MPRC331							4	5	L	L			black shale	dolerite	0	80	12	oxide
MPRC331							5	6	L				dolerite		1	40	8	oxide
MPRC331							6	7	L			2.88	dolerite		1	20	5	oxide
MPRC331							7	8	L			2.81	dolerite		1	20	4	oxide
MPRC331							8	9	L				dolerite	black shale	0	22	5	oxide
MPRC331							9	10	L				black shale		0	15	5	oxide
MPRC331							10	11	L				black shale		0	5	3	oxide
MPRC331							11	12	L				black shale		0	3	6	oxide
MPRC331							12	13	L				black shale		1	3	7	oxide

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC331							13	14	L				black shale		0	3	6	oxide
MPRC331							14	15	L			2.72	black shale		0	4	6	oxide
MPRC331							15	16	L				black shale		0	5	5	oxide
MPRC331							16	17	L				black shale		0	3	5	oxide
MPRC331							17	18	L				black shale		1	8	6	oxide
MPRC331							18	19	1.23	1.31		2.53	black shale		45	15	10	oxide
MPRC331							19	20	2.97	2.82	3.02		black shale		75	12	10	oxide
MPRC331							20	21	0.77	0.87		2.59	black shale		80	10	7	oxide
MPRC331				97.741	57.6		21	22	1.93	1.9			black shale		65	10	6	oxide
MPRC331							22	23	0.53				black shale		2	11	5	oxide
MPRC331							23	24	L				black shale		0	2	4	oxide
MPRC331							24	25	0.15				black shale		0	4	6	oxide
MPRC331							25	26	0.49			2.66	black shale		80	8	5	oxide
MPRC331							26	27	1.04	0.96			black shale		79	12	8	oxide
MPRC331							27	28	0.8	0.83			black shale		5	12	6	oxide
MPRC331							28	29	0.31				black shale		1	8	4	oxide
MPRC331							29	30	0.14			2.79	black shale		5	5	6	oxide
MPRC331							30	31	0.03				black shale		4	4	5	oxide
MPRC331							31	32	L				black shale		8	4	4	oxide
MPRC331							32	33	L				black shale		8	6	5	oxide
MPRC331							33	34	L			2.82	black shale		12	6	5	oxide
MPRC331							34	35	L				black shale		5	5	4	transition
MPRC331				88.741	55.4		35	36	L				black shale		2	5	2	transition
MPRC331							36	37	L				black shale		1	2	0	transition
MPRC331							37	38	L	L		2.77	black shale		10	1	0	transition
MPRC331							38	39	L				black shale		0	0	0	fresh
MPRC332	9927.488	9467.759	522.726	90.841	77	44	0	1										
MPRC332							1	2										
MPRC332							2	3	L				dolerite	black shale	0	87	7	oxide
MPRC332							3	4	L				dolerite		0	85	6	oxide
MPRC332							4	5	L				dolerite		0	82	5	oxide
MPRC332							5	6	L			2.85	dolerite		0	40	4	oxide
MPRC332							6	7	L				dolerite		0	40	6	oxide
MPRC332							7	8	L				dolerite		0	45	5	oxide
MPRC332							8	9	L				dolerite		0	30	4	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC332							9	10	L	L		2.88	dolerite		1	27	4	oxide
MPRC332							10	11	L				dolerite		0	34	6	oxide
MPRC332							11	12	L				dolerite		0	60	7	oxide
MPRC332							12	13	L				black shale	dolerite	0	40	8	oxide
MPRC332							13	14	L				black shale		0	18	6	oxide
MPRC332							14	15	L				black shale		0	12	6	oxide
MPRC332							15	16	L			2.6	black shale		0	10	4	oxide
MPRC332							16	17	L				black shale		0	12	6	oxide
MPRC332							17	18	L				black shale		0	15	8	oxide
MPRC332							18	19	0.09				black shale		0	12	6	oxide
MPRC332							19	20	L	L			black shale		0	8	5	oxide
MPRC332							20	21	L	L			black shale		0	8	5	oxide
MPRC332							21	22	L	L			black shale		0	6	8	oxide
MPRC332							22	23	L				black shale		0	4	6	oxide
MPRC332							23	24	L			2.69	black shale		5	12	8	oxide
MPRC332				83.941	72.8		24	25	1.1	1.12			black shale		1	14	12	oxide
MPRC332							25	26	3.1	3.13		2.67	black shale		84	8	6	oxide
MPRC332							26	27	5.16	4.98	5.24		black shale		10	8	4	transition
MPRC332							27	28	2.81	2.63			black shale		5	2	3	transition
MPRC332							28	29	2.11	2.36			black shale		1	0	1	transition
MPRC332							29	30	0.84				black shale		0	0	2	transition
MPRC332							30	31	0.35				black shale		0	0	1	transition
MPRC332							31	32	0.21				black shale		1	1	1	transition
MPRC332							32	33	0.25				black shale		1	1	2	transition
MPRC332							33	34	0.21				black shale		1	0	0	fresh
MPRC332							34	35	0.32				black shale		5	0	0	fresh
MPRC332							35	36	1.05	1.15			black shale		4	0	0	fresh
MPRC332							36	37	1.45	1.51			black shale		2	0	1	fresh
MPRC332							37	38	0.19				black shale		4	0	0	fresh
MPRC332				81.241	70.6		38	39	0.19				black shale		1	0	0	fresh
MPRC332							39	40	0.2				black shale		1	0	1	fresh
MPRC332							40	41	0.07				black shale		1	0	1	fresh
MPRC332							41	42	0.04				black shale		0.5	0	0	fresh
MPRC332							42	43	0.02				black shale		0	0	0	fresh
MPRC332							43	44	0.05				black shale		0	0	0	fresh

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC334	9929.081	9448.389	522.786	90.591	77	53	0	1										
MPRC334							1	2										
MPRC334							2	3	0.23	0.2			dolerite		0	90	8	oxide
MPRC334							3	4	0.03			2.77	dolerite		0	80	7	oxide
MPRC334							4	5	0.03				dolerite		0	70	7	oxide
MPRC334							5	6	0.06				dolerite		1	74	8	oxide
MPRC334							6	7	0.05				dolerite		2	68	7	oxide
MPRC334							7	8	0.03				dolerite		1	60	7	oxide
MPRC334							8	9	L				dolerite		0	50	8	oxide
MPRC334							9	10	L			2.9	dolerite		10	45	8	oxide
MPRC334							10	11	L				dolerite		1	55	8	oxide
MPRC334							11	12	0.03				dolerite		2	42	8	oxide
MPRC334							12	13	0.02				dolerite		1	38	10	oxide
MPRC334							13	14	L	L			dolerite		0	25	8	oxide
MPRC334							14	15	L				dolerite		0	25	6	oxide
MPRC334							15	16	L				dolerite		0	60	6	oxide
MPRC334							16	17	L			2.81	dolerite		0	35	6	oxide
MPRC334							17	18	L				dolerite	black shale	0	65	12	oxide
MPRC334							18	19	L				black shale		0	55	5	oxide
MPRC334							19	20	0.09				black shale		0	20	4	oxide
MPRC334							20	21	0.04				black shale		4	25	5	oxide
MPRC334							21	22	0.02				black shale		0	25	8	oxide
MPRC334							22	23	L				black shale		0	20	6	oxide
MPRC334							23	24	L	0.01			black shale		0	15	5	oxide
MPRC334				90.041	74.9		24	25	0.07				black shale		0	15	7	oxide
MPRC334							25	26	0.02			2.73	black shale		0	15	8	oxide
MPRC334							26	27	0.03				black shale		0	20	5	oxide
MPRC334							27	28	0.63			2.79	black shale		15	20	3	transition
MPRC334							28	29	1.2	1.16			black shale		10	18	3	transition
MPRC334							29	30	0.73	0.67			black shale		10	10	2	transition
MPRC334							30	31	1.66	1.7			black shale		12	8	2	transition
MPRC334							31	32	2.57	2.39		2.78	black shale		80	5	3	transition
MPRC334							32	33	3.86	3.99		2.88	black shale		60	7	2	transition
MPRC334							33	34	1.48	1.51			black shale		25	7	1	transition
MPRC334							34	35	0.41				black shale		1	3	1	transition

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC334							35	36	0.38				black shale		0	3	0	fresh
MPRC334							36	37	0.14				black shale		0.5	0	0	fresh
MPRC334							37	38	0.32			2.93	black shale		2	2	1	fresh
MPRC334							38	39	0.85	0.92			black shale		1	2	1	fresh
MPRC334							39	40	2.89	2.85		3.07	black shale		8	1	1	fresh
MPRC334							40	41	1.01	1.03			black shale		5	0	0	fresh
MPRC334							41	42	1.03	1.09			black shale		2	0	0	fresh
MPRC334							42	43	1.31	1.31			black shale		1	0	0	fresh
MPRC334							43	44	0.45				black shale		1	0	0	fresh
MPRC334							44	45	0.33				black shale		1	0	0	fresh
MPRC334							45	46	0.04				black shale		2	8	0	fresh
MPRC334							46	47	0.06				black shale		6	4	0	fresh
MPRC334				87.641	72.5		47	48	0.13				black shale		8	0	0	fresh
MPRC334							48	49	0.19				black shale		4	0	0	fresh
MPRC334							49	50	0.14				black shale		10	0	0	fresh
MPRC334							50	51	0.19				black shale		1	0	0	fresh
MPRC334							51	52	0.14				black shale	microgranite	15	0	0	fresh
MPRC334							52	53	0.13	0.1			black shale		1	0	0	fresh
MPRC336	9928.523	9421.943	523.661	88.841	60.25	44	0	1										
MPRC336							1	2										
MPRC336							2	3										
MPRC336							3	4										
MPRC336							4	5										
MPRC336							5	6	0.03				dolerite		1	85	12	oxide
MPRC336							6	7	0.01				dolerite		5	80	12	oxide
MPRC336							7	8	0.02			2.68	dolerite		30	55	10	oxide
MPRC336							8	9	0.01			2.78	dolerite		1	62	8	oxide
MPRC336							9	10	L				dolerite		0	48	8	oxide
MPRC336							10	11	L				dolerite		0	70	6	oxide
MPRC336							11	12	L				dolerite		0	70	5	oxide
MPRC336							12	13	0.01				dolerite		0	70	5	oxide
MPRC336							13	14	L				dolerite		0	72	7	oxide
MPRC336							14	15	L	0.01			dolerite		0	78	8	oxide
MPRC336							15	16	L				dolerite		0	72	10	oxide
MPRC336							16	17	0.02				dolerite		0	80	12	oxide

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BHID	MP Local East m	MP Local North m	MP Local RL m	MP Local Azimuth degrees	DIP degrees	EOH m	FROM m	TO m	AU1 ppm	AU2 ppm	AU3 ppm	SG1	LITH1	LITH2	VQZ %	CLAY %	FEOX %	Weathering
MPRC336							17	18	0.03				dolerite		0	80	8	oxide
MPRC336							18	19	0.02				dolerite		0	80	8	oxide
MPRC336							19	20	L			2.84	dolerite		0	78	8	oxide
MPRC336							20	21	L				dolerite		0	80	10	oxide
MPRC336							21	22	L				dolerite		0	70	10	oxide
MPRC336							22	23	L				dolerite		0	64	8	oxide
MPRC336							23	24	L	L			dolerite		0	60	12	oxide
MPRC336							24	25	L				dolerite		0	58	10	oxide
MPRC336							25	26	L				dolerite		0	65	10	oxide
MPRC336				91.741	60.1		26	27	0.03			2.65	black shale		0	55	6	oxide
MPRC336							27	28	0.06				black shale		0	42	10	oxide
MPRC336							28	29	0.14				black shale		0	35	14	oxide
MPRC336							29	30	0.03				black shale		40	20	9	oxide
MPRC336							30	31	L			2.73	black shale		0	20	5	transition
MPRC336							31	32	0.33				black shale		30	10	2	transition
MPRC336							32	33	4.19	4.21			black shale		20	12	5	transition
MPRC336							33	34	0.31			2.7	black shale		35	12	8	transition
MPRC336							34	35	0.25				black shale		25	8	4	transition
MPRC336							35	36	1.01	1.04			black shale	granite	5	6	6	transition
MPRC336							36	37	0.13			2.64	granite		0	0	0	fresh
MPRC336							37	38	L				granite	black shale	15	4	0	fresh
MPRC336							38	39	0.14			2.66	granite	black shale	20	4	0	fresh
MPRC336							39	40	0.05				black shale		10	8	0	fresh
MPRC336				93.741	59.5		40	41	0.05				granite		15	10	0	fresh
MPRC336							41	42	0.02			2.81	granite		10	10	0	fresh
MPRC336							42	43	0.03				granite		15	2	0	fresh
MPRC336							43	44	L	L			granite		0	4	0	fresh
MPRC337	9927.669	9421.942	523.532	88.841	77	56	0	1										
MPRC337							1	2	0.03				dolerite		0	85	12	oxide
MPRC337							2	3										
MPRC337							3	4										
MPRC337							4	5	L			2.74	dolerite		0	85	10	oxide
MPRC337							5	6	0.02				dolerite		0	76	8	oxide
MPRC337							6	7	L				dolerite		0	78	8	oxide
MPRC337							7	8	L				dolerite		0	85	8	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC337							8	9	L			2.86	dolerite		0	86	7	oxide
MPRC337							9	10	0.07				dolerite		0	84	7	oxide
MPRC337							10	11	0.03			2.78	dolerite		5	75	6	oxide
MPRC337							11	12	0.02				dolerite		4	85	5	oxide
MPRC337							12	13	0.03				dolerite		0	85	5	oxide
MPRC337							13	14	0.03				dolerite		1	78	5	oxide
MPRC337							14	15	L				dolerite		0	55	4	oxide
MPRC337							15	16	L				dolerite		0	62	5	oxide
MPRC337							16	17	L				dolerite		0	70	8	oxide
MPRC337							17	18	L			2.6	dolerite	microgranite	8	56	10	oxide
MPRC337							18	19	L				dolerite		5	55	8	oxide
MPRC337							19	20	L	L			dolerite		1	28	6	oxide
MPRC337							20	21	L				dolerite		1	15	5	oxide
MPRC337							21	22	L				dolerite		0	4	3	oxide
MPRC337							22	23	0.03				dolerite		0	4	4	oxide
MPRC337							23	24	0.04				dolerite		0	2	4	oxide
MPRC337				96.541	77.4		24	25	L				dolerite		0	4	5	oxide
MPRC337							25	26	L			2.87	dolerite		0	2	4	oxide
MPRC337							26	27	0.1				dolerite		0	10	4	oxide
MPRC337							27	28	0.06			2.83	dolerite		8	5	6	transition
MPRC337							28	29	0.02				dolerite		6	2	4	transition
MPRC337							29	30	0.03			2.83	dolerite		12	4	4	transition
MPRC337							30	31	L				dolerite		1	0	2	transition
MPRC337							31	32	0.04				dolerite		0.5	0	1	transition
MPRC337							32	33	0.03				dolerite		0	0	0	fresh
MPRC337							33	34	L	L		2.86	dolerite		0	0	0	fresh
MPRC337							34	35	0.02				dolerite		5	0	0	fresh
MPRC337							35	36	L				dolerite	black shale	2	2	1	fresh
MPRC337							36	37	0.07				dolerite	black shale	0	1	1	fresh
MPRC337							37	38	0.02			2.78	black shale		0	0	0	fresh
MPRC337							38	39	L				black shale		2	0	0	fresh
MPRC337							39	40	0.05			2.75	black shale		20	0	0	fresh
MPRC337							40	41	0.01				black shale		5	0	0	fresh
MPRC337							41	42	0.03				black shale		0	0	0	fresh
MPRC337							42	43	0.03				black shale		0	0	0	fresh

BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC337							43	44	0.02				black shale		0	0	0	fresh
MPRC337							44	45	0.01				black shale		0	0	0	fresh
MPRC337							45	46	0.06				black shale		0.5	0	0	fresh
MPRC337							46	47	0.03				black shale		0	0	0	fresh
MPRC337							47	48	0.65	0.7			black shale		20	0	0	fresh
MPRC337							48	49	2.29	2.15	2.4		black shale		50	0	0	fresh
MPRC337							49	50	1.99	1.92			black shale		40	0	0	fresh
MPRC337							50	51	0.81	0.79			black shale		8	0	1	fresh
MPRC337							51	52	0.72				black shale		25	0	1	fresh
MPRC337							52	53	0.78	0.84			black shale		10	0	0.5	fresh
MPRC337				101.241	74.8		53	54	0.39				black shale		2	0	0	fresh
MPRC337							54	55	0.09				black shale		0	0	1	fresh
MPRC337							55	56	0.03				black shale		0	0	0	fresh
MPRC338	10099.385	10175.669	518.984	90.341	60	44	0	1										
MPRC338							1	2										
MPRC338							2	3										
MPRC338							3	4										
MPRC338							4	5	0.05				black shale		0	86	12	oxide
MPRC338							5	6	0.06			2.52	black shale		30	58	12	oxide
MPRC338							6	7	0.1	0.1	0.11		black shale		10	80	12	oxide
MPRC338							7	8	0.08	0.05			dolerite		0	84	10	oxide
MPRC338							8	9	0.04				dolerite		0	85	10	oxide
MPRC338							9	10	0.02			2.45	dolerite		5	85	10	oxide
MPRC338							10	11	0.01				dolerite		0	76	8	oxide
MPRC338							11	12	0.01				dolerite		0	80	7	oxide
MPRC338							12	13	0.02				dolerite		0	84	8	oxide
MPRC338							13	14	0.01				dolerite		0	84	8	oxide
MPRC338							14	15	0.02				dolerite		0	80	9	oxide
MPRC338							15	16	0.01				dolerite		0	76	9	oxide
MPRC338							16	17	0.02			2.62	dolerite		12	60	10	oxide
MPRC338							17	18	0.02			2.43	dolerite		8	60	12	oxide
MPRC338							18	19	0.01				dolerite		4	55	12	oxide
MPRC338							19	20	0.01				dolerite		8	60	12	oxide
MPRC338							20	21	0.01				dolerite		5	58	12	oxide
MPRC338							21	22	0.01			2.45	dolerite		20	56	12	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC338				110.041	59.6		22	23	0.03			2.45	dolerite		25	45	12	oxide
MPRC338							23	24	0.02				dolerite		2	20	10	oxide
MPRC338							24	25	0.01			2.94	dolerite		0	5	4	oxide
MPRC338							25	26	0.02				dolerite		2	8	5	oxide
MPRC338							26	27	0.01				dolerite		0	6	4	oxide
MPRC338							27	28	0.01			2.79	dolerite		20	35	6	oxide
MPRC338							28	29	0.01				dolerite		1	20	8	oxide
MPRC338							29	30	L				dolerite		0	2	2	oxide
MPRC338							30	31	0.02			3.07	dolerite		0	4	4	oxide
MPRC338							31	32	0.02				dolerite		5	15	10	oxide
MPRC338							32	33	L				dolerite		2	18	12	oxide
MPRC338							33	34	0.02				dolerite		1	10	8	oxide
MPRC338							34	35	0.01				dolerite		1	8	6	oxide
MPRC338							35	36	0.02			2.55	dolerite		10	8	6	oxide
MPRC338							36	37	0.02				dolerite		1	5	5	oxide
MPRC338							37	38	0.03			2.77	dolerite		0	2	5	oxide
MPRC338							38	39	0.03				dolerite		0	0	1	transition
MPRC338							39	40	0.03	0.04			dolerite		18	1	1	transition
MPRC338				108.341	62.3		40	41	0.02			2.72	dolerite	aplite	20	0	1	transition
MPRC338							41	42	0.02			2.72	dolerite	aplite	12	2	2	transition
MPRC338							42	43	0.01				dolerite	aplite	10	1	1	transition
MPRC338							43	44	0.01				dolerite	aplite	4	0	0	fresh
MPRC339	10137.289	10176.162	515.722	88.841	60	41	0	1										
MPRC339							1	2	0.1			2.66	black shale	dolerite	0	35	14	oxide
MPRC339							2	3	0.24	0.25		2.44	black shale	dolerite	1	10	5	oxide
MPRC339							3	4	0.28	0.28			black shale		2	10	6	oxide
MPRC339							4	5	0.3			2.54	black shale		5	10	6	oxide
MPRC339							5	6	0.11			2.65	black shale		20	15	8	oxide
MPRC339							6	7	0.07				black shale		35	20	8	oxide
MPRC339							7	8	0.02			2.69	black shale		50	25	8	oxide
MPRC339							8	9	0.01				black shale		4	35	10	oxide
MPRC339							9	10	0.01			2.83	black shale		0	15	8	oxide
MPRC339							10	11	0.01				black shale		1	15	5	oxide
MPRC339							11	12	L				black shale		1	55	4	oxide
MPRC339							12	13	0.02				black shale		3	25	10	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	m	m	degrees	degrees	m	m	m	ppm	ppm	ppm				%	%	%	
MPRC339							13	14	0.01				black shale		0	10	12	oxide
MPRC339							14	15	0.01				black shale		0	8	12	oxide
MPRC339							15	16	0.01				black shale		0	5	10	oxide
MPRC339							16	17	0.01			2.83	black shale		0	5	12	oxide
MPRC339							17	18	0.01			2.76	black shale		10	8	10	oxide
MPRC339							18	19	0.02				black shale		5	10	10	oxide
MPRC339							19	20	L				black shale		0	5	6	oxide
MPRC339							20	21	L				black shale		0	10	6	oxide
MPRC339							21	22	L				black shale		0	6	4	oxide
MPRC339				102.641	57.2		22	23	0.01				black shale		1	8	6	oxide
MPRC339							23	24	0.03				black shale		0	6	4	oxide
MPRC339							24	25	0.02				black shale		0	8	6	oxide
MPRC339							25	26	L				black shale		0	5	4	oxide
MPRC339							26	27	L	L		2.81	black shale		1	10	12	oxide
MPRC339							27	28	0.08			2.67	black shale		8	10	12	oxide
MPRC339							28	29	0.03				black shale		5	8	12	oxide
MPRC339							29	30	0.02				black shale		0	5	10	oxide
MPRC339							30	31	L				black shale		6	6	10	oxide
MPRC339							31	32	L			2.99	black shale		15	6	8	oxide
MPRC339							32	33	L				black shale		2	5	4	oxide
MPRC339							33	34	0.04			2.87	black shale		5	4	5	oxide
MPRC339							34	35	0.04				black shale		0	5	4	oxide
MPRC339							35	36	L				black shale		0	5	4	oxide
MPRC339							36	37	0.02				black shale		3	2	4	oxide
MPRC339				98.241	55.6		37	38	0.03	0.03		2.72	black shale		2	4	6	oxide
MPRC339							38	39	0.01				black shale		0	2	4	oxide
MPRC339							39	40	0.01				black shale		1	2	4	oxide
MPRC339							40	41	0.04				black shale		0	1	4	oxide
MPRC340	10156.871	10174.307	510.311	88.841	60.25	44	0	1										
MPRC340							1	2										
MPRC340							2	3	0.04				black shale		1	30	10	oxide
MPRC340							3	4	0.02				black shale		0	30	8	oxide
MPRC340							4	5	0.03			2.93	black shale		0	28	6	oxide
MPRC340							5	6	0.02				black shale		0	28	8	oxide
MPRC340							6	7	0.03				black shale		18	30	10	oxide

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BHID	MP Local East	MP Local North	MP Local RL	MP Local Azimuth	DIP	EOH	FROM	TO	AU1	AU2	AU3	SG1	LITH1	LITH2	VQZ	CLAY	FEOX	Weathering
	m	*m*	*m*	*degrees*	*degrees*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*				*%*	*%*	*%*	
MPRC340							7	8	0.05	0.05		2.95	black shale		50	25	10	oxide
MPRC340							8	9	0.05			2.91	black shale		4	35	10	oxide
MPRC340							9	10	0.03				black shale		0	38	10	oxide
MPRC340							10	11	0.04				black shale		12	25	10	oxide
MPRC340							11	12	0.04				black shale		2	25	10	oxide
MPRC340							12	13	0.03				black shale		10	15	10	oxide
MPRC340							13	14	0.09	0.08			black shale		2	20	8	oxide
MPRC340							14	15	0.07	0.07			black shale		0	25	10	oxide
MPRC340							15	16	0.05				black shale		5	35	12	oxide
MPRC340							16	17	0.05			2.71	black shale		20	45	12	oxide
MPRC340							17	18	0.02				black shale		1	65	12	oxide
MPRC340							18	19	0.02			2.82	black shale		55	25	12	oxide
MPRC340							19	20	0.01			2.66	black shale		50	28	12	oxide
MPRC340							20	21	0.02			2.62	black shale		2	60	14	oxide
MPRC340							21	22	0.03				black shale		4	45	14	oxide
MPRC340				97.141	59.6		22	23	0.01				black shale		1	40	14	oxide
MPRC340							23	24	0.02				black shale		0	40	12	oxide
MPRC340							24	25	0.02	0.01			black shale		1	28	10	oxide
MPRC340							25	26	0.02				black shale		1	20	12	oxide
MPRC340							26	27	0.02				black shale		1	25	12	oxide
MPRC340							27	28	0.01				black shale		0	18	10	oxide
MPRC340							28	29	0.03				black shale		0	18	10	oxide
MPRC340							29	30	L			2.77	black shale		0	18	12	oxide
MPRC340							30	31	0.01				black shale		2	22	14	oxide
MPRC340							31	32	0.01				black shale		4	35	12	oxide
MPRC340							32	33	0.02				black shale		6	20	10	oxide
MPRC340							33	34	0.03	0.04			black shale		2	15	10	oxide
MPRC340							34	35	0.02				black shale		1	20	10	oxide
MPRC340							35	36	0.01				black shale		1	15	8	oxide
MPRC340							36	37	0.03				black shale		0	8	6	oxide
MPRC340							37	38	0.03				black shale		2	10	8	oxide
MPRC340							38	39	0.03			2.95	black shale		65	15	12	oxide
MPRC340							39	40	0.04			2.52	black shale		15	18	14	oxide
MPRC340				101.441	58		40	41	L			2.83	black shale		65	20	14	oxide
MPRC340							41	42	0.05	0.04								oxide

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BHID	MP Local East *m*	MP Local North *m*	MP Local RL *m*	MP Local Azimuth *degrees*	DIP *degrees*	EOH *m*	FROM *m*	TO *m*	AU1 *ppm*	AU2 *ppm*	AU3 *ppm*	SG1	LITH1	LITH2	VQZ *%*	CLAY *%*	FEOX *%*	Weathering
MPRC340							42	43	0.05				black shale		1	75	12	oxide
MPRC340							43	44	0.02				black shale		0	70	12	oxide

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Appendix C: Mount Porter South Water Table Samples

			Sample Name	CE127132.001	CE127132.002	CE127132.003	CE127132.004	CE127132.005	CE127132.006
			Description	350	331	329	327	321	318
			Sample Date	24/4/2017	24/4/2017	24/4/2017	24/4/2017	24/4/2017	24/4/2017
			Matrix	Water	Water	Water	Water	Water	Water
Method Name	**Analyte Name**	**Units**	**Reporting Limit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
pH in water	pH**	pH Units	0.1	6.0	6.8	6.9	7.0	7.0	6.9
Conductivity and TDS by Calculation - Water	Conductivity @ 25 C	µS/cm	2	190	250	260	240	240	200
Conductivity and TDS by Calculation - Water	Total Dissolved Solids (by calculation)	mg/L	2	110	150	160	150	150	120
Alkalinity	Total Alkalinity as CaCO3	mg/L	5	10	94	120	120	130	120
Alkalinity	Bicarbonate Alkalinity as CaCO3	mg/L	5	<5	<5	<5	<5	<5	<5
Alkalinity	Carbonate Alkalinity as CaCO3	mg/L	5	<5	<5	<5	<5	<5	<5
Alkalinity	Hydroxide Alkalinity as CaCO3	mg/L	5	<5	<5	<5	<5	<5	<5
Chloride by Discrete Analyser in Water	Chloride, Cl	mg/L	1	3	6	7	5	5	4
Metals in Water (Dissolved) by ICPOES	Calcium, Ca	mg/L	0.1	11	16	15	14	16	12
Metals in Water (Dissolved) by ICPOES	Potassium, K	mg/L	0.1	3.9	6.3	6.6	4.4	3.0	3.4
Metals in Water (Dissolved) by ICPOES	Sodium, Na	mg/L	0.5	4.7	11	11	9.9	9.9	9.4
Metals in Water (Dissolved) by ICPOES	Magnesium, Mg	mg/L	0.1	10	13	14	16	16	12
Metals in Water (Dissolved) by ICPOES	Sulphur as Sulphate, SO4	mg/L	0.5	66	26	24	13	6.9	7.1
Metals in Water (Dissolved) by ICPOES	Total Hardness by Calculation	mg CaCO3/L	1	68	96	97	99	100	79
Metals in Water (Dissolved) by ICPOES	Aluminium, Al	mg/L	0.005	0.010	<0.005	<0.005	<0.005	<0.005	<0.005
Metals in Water (Dissolved) by ICPOES	Boron, B	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Metals in Water (Dissolved) by ICPOES	Iron, Fe	mg/L	0.005	0.015	<0.005	<0.005	<0.005	<0.005	<0.005
Metals in Water (Dissolved) by ICPOES	Manganese, Mn	mg/L	0.005	0.20	0.30	0.28	0.010	0.005	<0.005
Metals in Water (Dissolved) by ICPOES	Vanadium, V	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Metals in Water (Dissolved) by ICPOES	Zinc, Zn	mg/L	0.005	0.058	0.009	0.010	<0.005	<0.005	<0.005
Metals in Water (Total) by ICPOES	Total Aluminium	mg/L	0.005	3.0	20	10	19	10	14
Metals in Water (Total) by ICPOES	Total Boron	mg/L	0.005	<0.005	0.010	<0.005	0.010	<0.005	0.010
Metals in Water (Total) by ICPOES	Total Iron	mg/L	0.005	4.4	30	12	27	15	20
Metals in Water (Total) by ICPOES	Total Manganese	mg/L	0.005	0.24	1.0	0.51	1.0	0.35	0.57
Metals in Water (Total) by ICPOES	Total Vanadium	mg/L	0.005	0.010	0.056	0.037	0.055	0.034	0.035
Metals in Water (Total) by ICPOES	Total Zinc	mg/L	0.005	0.060	0.39	0.12	0.52	0.14	0.18
Metals in Water (Dissolved) by ICPOES-USN	Arsenic, As	mg/L	0.003	3.9	0.12	0.15	0.013	0.026	0.010
Metals in Water (Dissolved) by ICPOES-USN	Beryllium, Be	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Metals in Water (Dissolved) by ICPOES-USN	Cadmium, Cd	mg/L	0.0001	0.014	0.0007	0.0007	0.0002	0.0002	0.0002
Metals in Water (Dissolved) by ICPOES-USN	Chromium, Cr	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Metals in Water (Dissolved) by ICPOES-USN	Cobalt, Co	mg/L	0.001	0.006	0.012	0.011	<0.001	<0.001	<0.001
Metals in Water (Dissolved) by ICPOES-USN	Copper, Cu	mg/L	0.001	0.004	<0.001	0.001	<0.001	<0.001	<0.001
Metals in Water (Dissolved) by ICPOES-USN	Lead, Pb	mg/L	0.001	0.001	0.002	0.002	0.002	0.002	0.002
Metals in Water (Dissolved) by ICPOES-USN	Nickel, Ni	mg/L	0.001	0.018	0.008	0.005	0.003	0.002	0.001
Metals in Water (Total) by ICPOES-USN	Total Arsenic, As	mg/L	0.003	3.9	0.15	0.15	0.026	0.030	0.012
Metals in Water (Total) by ICPOES-USN	Total Beryllium, Be	mg/L	0.0001	0.0001	0.0027	0.0006	0.0021	0.0004	0.0010
Metals in Water (Total) by ICPOES-USN	Total Cadmium, Cd	mg/L	0.0001	0.014	0.0044	0.0012	0.0021	0.0007	0.0006
Metals in Water (Total) by ICPOES-USN	Total Chromium, Cr	mg/L	0.001	0.005	0.055	0.017	0.034	0.017	0.031
Metals in Water (Total) by ICPOES-USN	Total Cobalt, Co	mg/L	0.001	0.007	0.051	0.024	0.048	0.013	0.031
Metals in Water (Total) by ICPOES-USN	Total Copper, Cu	mg/L	0.001	0.028	0.24	0.049	0.17	0.067	0.064
Metals in Water (Total) by ICPOES-USN	Total Lead, Pb	mg/L	0.001	0.004	0.025	0.018	0.16	0.042	0.035
Metals in Water (Total) by ICPOES-USN	Total Nickel, Ni	mg/L	0.001	0.023	0.077	0.023	0.054	0.022	0.027
Mercury (dissolved) in Water	Mercury	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury (total) in Water	Total Mercury	mg/L	0.00005	0.00007	0.00006	<0.00005	0.00006	0.00006	<0.00005

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